



2021 LEAD Capstone Poster Session

Diversifying the Blood Donor Pool: Promoting Minority Donations in the DFW Metroplex

Nicole De Simone, MD, MPH

Associate Professor

Department of Pathology



Abstract

- Complications of blood transfusion can be minimized by transfusing blood collected from donors of the same race/ethnicity as the patient
- Our current blood supply does not mirror the diversity of the DFW metroplex
- Develop an initiative to increase minority blood donations to help close this gap



Objectives

- To increase blood donations in minority populations
- To better serve ALL of our patients and minimize risks with transfusion



Background Information

- Transfusion 101: It's Not Just ABO and Rh that Matter!
 - There are 43 blood system groups and 345 red cell antigens (minor blood antigens)
 - The 43 systems are genetically determined
 - Some antigens/lack of these antigens are unique to specific racial and ethnic groups
 - ✦ African Americans: Lack the Duffy and U antigens
 - Duffy antigen is a receptor for malaria-lack of Duffy confers protection against infection
 - ✦ Caucasians: Kell b and Vel antigens
 - ✦ Hispanics: Diego b
 - ✦ Asian: Jknull blood type
- Transfusion 101: Alloimmunization-Risk of Transfusion
 - With transfusion, patients are exposed to RBC antigens they lack and thus can form antibodies against these antigens
 - Once an antibody is identified, that patient **MUST** receive RBCs that lack that antigen



Background Information

- Sickle Cell Disease (SCD) affects 1 in 400 African Americans and other minority populations
- Chronic transfusion therapy (CTT) is used in subset of patients who have experienced stroke
 - Stroke typically occurs in childhood
 - CTT is indefinite: exposure to thousands of pRBC units over a patient's lifetime
- Increased risk for alloimmunization:
 - Donor pool is predominantly Caucasian
 - Chronic inflammatory state of SCD leads to increased alloimmunization rates
- If multiple antibodies form, finding matched blood can be difficult and sometimes is not feasible
- Prevention of alloimmunization is key for our patients with SCD who are on CTT



Background Information

Our Community and Our Blood Donors

- 2020 U.S Census- Dallas County population:
 - 22% African American/Black
 - 40% Hispanic
- 2021 Carter BloodCare donor data (self-identification):
 - 10% African American/Black
 - 15% Hispanic
 - Other racial and ethnic groups are underrepresented among blood donors

Barriers to Minority Blood Donations:

- Medical mistrust
- Lack of awareness of need for diversity within donor pool
- Never being asked to donate
- Beliefs that African American participants' blood was unwanted and thrown away
- Fear of the donation process



Specific Aims

- To educate our community on the need for diversification of our blood supply
- To debunk any misperceptions regarding blood donation
- To build relationships between our blood donor center and all of our community



Project Plan

Create Outreach Program

- Craft educational materials that promote awareness of need for minority blood donations and address concerns regarding blood donation
- Identify patients with sickle cell disease and their physicians to share “their story”
- Enlist community leaders and key influencers to promote our program
- Develop measures to assess impact of various components of program

Community Outreach

- Provide education and promote awareness in the Community
- Participate in local community events
- Schedule face-to-face presentations and informal roundtable discussions at churches or town halls
- Arrange seminars at local colleges and universities through their student organizations or departments of institutional diversity and inclusion
- Engage patients and their families at UT Southwestern’s Red Bird facility
- Provide reading or video material that can be shared physically or electronically
- Use social media to promote awareness

Measure Impact & Build Partnerships

- Evaluate for successes and failures
- Engage community for additional feedback
- Keep communication lines open with the community to demonstrate our commitment and to build strong relationships to inspire lifetime donors



Application of What You Learned at LEAD

- Using executive presence to gain support of key stakeholders
- Tailoring communication based on DISC profiles
- How and why to delegate tasks and responsibilities



Proposed Budget

- “All Hands on Deck”
 - Volunteers to develop educational materials and perform face-to-face outreach activities
- Use of Carter BloodCare resources
 - Website design
 - Marketing





Innovation and Significance

- Address an underlying cause of health care disparity
- Strengthen connections within our community to educate and dispel medical mistrust and misunderstandings
- Increase our community blood donor pool
- Diversify our blood products so that they better match the needs of our patients
- Have better clinical outcomes for our patients



References

- Spratling R, Lawrence R. Facilitators and Barriers to Minority Blood Donations. Nursing Research. May/June 2019 Vol 68 No.3
- Makin J, Francis K, et al. Interventions to Increase Blood Donation among Ethnic/Racial Minorities: A Systematic Review. Journal of Environmental and Public Health. Vol 19.
- Delaney, M. Blood Donation for All: Inclusivity Is Important to the Blood Supply. Blood Transfus 2021; 19:1-2.
- Frye V, Caltabiano M, Kessler D et al. Evaluating a Program To Increase Blood Donation Among Racial and Ethnic Minority Communities in New York City. Transfusion. 2014 Dec;54(12):3061-7.
- Shaz B, Hillyer C. Minority Donation in the United States: Challenges and Needs. Curr Opin Hematol. 2010 November; 17(6) 544-549.