

THE IMPORTANCE AND CHALLENGES ASSOCIATED WITH RECRUITING AFRICAN AMERICAN DONORS FOR BLOOD DONATION IN THE UNITED STATES

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INTRODUCTION: BACKGROUND

- Blood match compatibility is not based on race or ethnicity
 - However, persons of the same race/ethnicity typically have similar rare antigens in their blood.
- Blood transfusions between a donor and recipient with similar antigens can reduce the risk of fatal transfusion related complications or fatalities.¹¹

INTRODUCTION: BACKGROUND

- Minority populations, especially African Americans, donate blood products infrequently.
- Possibly due to:
 - Decreased rates of eligibility and increased donor deferral,
 - Varying motivators,
 - and fear and mistrust in the healthcare system.
- In addition, different marketing strategies and education strategies may improve donation rates.

INTRODUCTION: PURPOSE

- To affirm the importance and need for a greater amount of blood donations from African Americans.
- To determine what barriers prevent this population from donating blood.
- To explore new strategies that could improve donor recruitment

METHODS

- This paper consisted of a literature review.
- Data was collected from the National Institutes of Health (NIH), the Central Blood Bank, the American Red Cross, Medscape and more.
- Search terms included “blood donations”, “minority blood donations”, “sickle cell disease”, “rare blood antigens”, “motivating donation factors”, “donation deferral rates.”
- Only articles and studies conducted in the past 30 years were included.

LITERATURE REVIEW: INTRO

- 14 studies were analyzed regarding this topic.
- Many of which offered their own hypothesis for this lack of African American blood donations.

LITERATURE REVIEW: INTRO

- African Americans donate blood less frequently than Caucasians.
- 2016 Study by Dr. Edward L. Murphy and Dr. Beth Shaz: analyzed 1,288,998 donations from 729,068 donors.¹⁵
- Results:
 - 5.8% of the donations were from African American donors and 86.7% were from Caucasian donors.¹⁵
 - Regional differences in African American donation rates.
 - Southeastern blood centers had the highest African American donation rates of 16%

BARRIERS TO AFRICAN AMERICAN BLOOD DONATION

BARRIER #1: AFRICAN AMERICANS HAVE LOWER HEMOGLOBIN LEVELS COMPARED TO OTHER RACIAL/ETHNIC GROUPS AND ARE MORE LIKELY TO BE DEFERRED

- Racial and ethnic groups have differing rates at which they are eligible to donate.
- The Food and Drug Administration (FDA) sets forth blood donation eligibility requirements for donation and transfusion.¹⁸
- One of the most common reasons for deferral is a donor's hemoglobin levels being too low.
 - Minimum hemoglobin level is 12.5 g/dl for whole blood donation regardless of sex, ethnicity or race.¹⁸

BARRIER #1: AFRICAN AMERICANS HAVE LOWER HEMOGLOBIN LEVELS COMPARED TO OTHER RACIAL/ETHNIC GROUPS AND ARE MORE LIKELY TO BE DEFERRED

- 2014 study by Dr. Alan Mast:
- Studied the prevalence of low hemoglobin deferrals
- Results:
 - Of the 1,263,131 donation attempts there were:
 - 10,305 deferred African American women (a 29.2% deferral rate)
 - 543 deferred African American men (a 2.4% deferral rate)
 - As compared to:
 - 93,372 deferred Caucasian women (a 16.6% deferral rate)
 - 8,784 deferred Caucasian men (a 1.6% deferral rate).¹
- Average hemoglobin levels for an African American donor was typically 1.5-1.7 g/dl lower than that of Caucasian donors¹

BARRIER #2: AFRICAN AMERICANS MAY HAVE DIFFERENT BARRIERS AND MOTIVATORS FOR DONATING

- Primary reason for donating blood may vary between different racial groups.
- 2015 study by Dr. Grossman:
- Telephone survey of 162 African American women ages 18 to 30 years old in the St. Louis metropolitan area.²²
- “What would you say are the main reasons that prevent you from donating?”
 - Inconvenience (19%), fear of needles (16%), takes too much time (15%), fear of contracting disease (12%), and fear of discovering that they have a disease (7%).²²
- “What do you think are the most important things that could be done to significantly increase blood donations in the black community?”
 - Increased awareness of need (43%), move convenient locations (19%), encouragement by pastor (17%), assurance that it is safe (12%), incentives (5%).²²

BARRIER #2: AFRICAN AMERICANS MAY HAVE DIFFERENT BARRIERS AND MOTIVATORS FOR DONATING

- 2012 study by T. N. Muthivhi:
- Analyzed the prevalence of Black South African donations and what motivates and deters them to donate blood.⁶
 - 62% of blood donations were collected from Caucasian donors
 - Whom make up 11% of the population in South Africa.⁶
 - 24% of blood was collected from black donors
 - Whom make up 83% of the population in South Africa.⁶

BARRIER #2: AFRICAN AMERICANS MAY HAVE DIFFERENT BARRIERS AND MOTIVATORS FOR DONATING

- 2012 study by T. N. Muthivhi continued:
- Strongest motivators were:
 - Promotional communications (27.7%)
 - General advertising, direct marketing and incentives (20.1%)
 - Such as: gift items, money, recognition, health check-up, infectious disease screening, etc.)⁶
 - Altruism 16.5%.⁶
 - Convenience of the collection site 6.7%⁶
- Strongest deterrents were:
 - Fear (40.7%)
 - Negative attitudes (14.1%)⁶
- Unique to Black South Africans → historic discrimination that may have lingering effects

BARRIER #3: AFRICAN AMERICANS RESPOND DIFFERENTLY TO VARIOUS MARKETING STRATEGIES IMPLEMENTED BY BLOOD DONATION CENTERS

- There is a poor response to current marketing strategies.
- 2007 study by Dr. Shaz found that:
 - 43% of African Americans donors preferred to receive donation reminders in the mail, as compared to 27% of Caucasians.²³
 - 31% African Americans responded well to free health screenings, as compared to 24% of Caucasian donors.²³
 - 20% of African Americans donors preferred race-specific marketing campaigns that place an emphasis in community involvement by the American red cross.²³

STRATEGIES TO INCREASE AFRICAN AMERICAN BLOOD DONATION

STRATEGY #1: HEMOGLOBIN EDUCATION PROGRAMS MAY IMPROVE AFRICAN AMERICAN ELIGIBILITY

- There is a need for improved hemoglobin education based training programs
 - Focus on improving the quality of phlebotomy training and education on the causes and treatments for low hemoglobin, so that they can relay that information to their donors.
- *Hemoglobin Fact Sheet* and a support center phone number (1-866-236-3276)
- Study from December 2008 to March 2009:
 - Goal: Identify strategies to improve the health of blood donors deferred for low hemoglobin.³
 - Results: Little to no consistency regarding how low hemoglobin information was provided
 - 58% of donors said the blood donation center provided verbal information regarding ways to increase their hemoglobin/hematocrit.³
 - 85% of donors were given a written pamphlet regarding foods rich in iron.³
 - 33% of donors said they were provided with a handout that described the different causes of low hemoglobin.³

STRATEGY #2: DEVELOP NEW MARKETING STRATEGIES THAT FOCUS ON RECRUITMENT OF AFRICAN AMERICAN BLOOD DONORS

- Study by Dr. Beth Shaz:
 - Surveyed members of 15 African American churches in Atlanta, Georgia.²¹
- Results:
 - Most African American donors prefer to donate by being asked from a religious group.
 - 13% of donors cited their reason for donating was to receive special recognition or award
 - 8% of donors cited their reason was to receive free gifts.²¹
- African American churches are a great place to recruit minority blood donors
 - 90% of African Americans report a religious affiliation and more than 50% of African Americans attend religious services at least once per week.²¹

DISCUSSION: SHORTAGE OF AFRICAN AMERICAN BLOOD DONATIONS

- This blood supply shortage is clearly significant across the U.S. as evident from the 14 studies analyzed in this literature review.
- In the large metropolitan area of Atlanta, Georgia, there was an uneven donation representation from the population.²⁰
 - Of the 389,340 donors in this study, only 16.3% were African American and 77.7% were Caucasian.²⁰
 - Even though in Atlanta 54% of the population is African American, 38.4% is Caucasian, 36.3% is non-Hispanic, and 5.2% is Hispanic or Latino.¹⁷

DISCUSSION: LOW HEMOGLOBIN DEFERRALS

- African Americans hemoglobin levels are on average 1.5-1.7 g/dl lower than that of Caucasian donors.¹
- Opportunity for the FDA to change it's policy and decrease the hemoglobin cut-off value
- Etiology of low hemoglobin in African Americans is unknown
 - Opportunity for new research regarding the cause of anemia unique to African Americans.
- Why is this important?
 - Once a potential donor is deferred for low hemoglobin, approximately 30% donate less over the following four to five years as compared to had they not been deferred.¹

DISCUSSION: MOTIVATORS AND DETERRENENTS FOR DONATING BLOOD

- African Americans respond differently to various motivators
 - Such as: influence from a church pastor, gifts, or monetary incentives
- Unique reasons that prevent them from donating
 - Such as: fear of contracting a disease or fear of discovering they have a disease
- Limitations with Dr. Grossman's telephone survey study previously discussed:²²
 - Age range of African American women ages 18 to 30
 - Small sample size

DISCUSSION: HEMOGLOBIN EDUCATION BASED TRAINING PROGRAMS

- New training programs with the goal of:
 - Improving the quality of phlebotomy training and education on the causes and treatments for low hemoglobin.
- Current hemoglobin education methods are inconsistent between phlebotomists
 - Can lead to confusion for the donor or a deficiency of information.
- Further exploration on the use of electronic media and connection to support groups or medical consultation.³

DISCUSSION: MODIFYING MARKETING STRATEGIES

- By adapting marketing strategies, blood donation centers could increase donation rates and generate consistent future donors.
- Mailed donation appointment reminders, race-specific marketing campaigns, and donor center community involvement increased African American donation rates.²³
- Limitation - this study compared a small range of marketing strategies.
 - Data would have improved had it compared wider range of media format and at different locations
 - Mailed donation reminders, Phone call reminders, Email reminders, Text message reminders etc.
 - Churches, community centers, and businesses in African American communities.
- More research is needed to determine what changes in marketing would best impact African American blood donation rates.

CONCLUSION

- Barriers:
 - Lower blood donation eligibility rates
 - Lower than average hemoglobin levels
 - Increased rate of deferrals
 - Unique motivators and deterrents to donating that are not being addressed
- Solutions:
 - Improve the quality of phlebotomy training and education on the causes and treatments for low hemoglobin, so that they can relay that information to their donors
 - FDA must consider decreasing the minimum hemoglobin level restrictions for African American donors
 - There is a need to further explore the motivators and deterrents for African American which would improve donor recruitment
- Based on the data and information collected and analyzed in this literature review, it was determined that there was sufficient evidence to address the purpose statement of this literature review.

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