

EVALUATING A PROGRAM TO INCREASE BLOOD DONATION AMONG RACIAL AND ETHNIC MINORITY COMMUNITIES IN NEW YORK CITY



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ABSTRACT

Background: Individuals with sickle cell disease (SCD), thalassemia, and leukemia often require frequent transfusion and run the risk of erythrocyte alloimmunization. In order to prevent alloimmunization or when alloimmunization is present, phenotype matched/antigen negative RBCs are transfused. To increase the probability of a phenotypical match, donors and recipients should share the same racial and/or ethnic background. Because the majority of patients with SCD are of African and Hispanic descent, a donor base of racial and ethnic minority donors providing an adequate supply of antigen negative RBC units that can be phenotypically matched is required to meet the needs of frequently transfused patients.

Methods: The New York Blood Center (NYBC) began the PreciseMatch® program in 2005 to increase donation among racial and ethnic minority groups. To evaluate the program, we conducted a systematic analysis of program documentation; focus group results; and collections data by race and ethnicity over time.

Results: The program missed the operationalized goal, a collective quarterly collection of 150 incremental units from African American and Hispanic/Latino donors, by 25%. Significant time and effort was involved in cultivating the community connections that facilitated new drives with high proportions of racial and ethnic minority donors.

Conclusions: Although PreciseMatch® fell short of targets, it has served as a foundation for relationships with the communities required to ensure a diverse donor pool. Further research is needed to understand better how to increase minority donation using existing infrastructure and in the face of market pressures to collect blood as efficiently as possible.

BACKGROUND

Blood transfusion is critical to patient care, particularly among patients with blood diseases requiring frequent transfusion. Individuals with sickle cell disease (SCD), thalassemia, and leukemia often require frequent transfusion and run the risk of erythrocyte alloimmunization. In order to prevent alloimmunization or when alloimmunization is present, phenotype matched/antigen negative RBCs are transfused. A donor base resulting in an adequate supply of antigen negative units, which can be phenotypically matched for the chronically transfused population, particularly SCD patients, is necessary. In order to supply these units to patients, units from minority donors must be available; however, minority donors are underrepresented in the donor pool. In 2005, the New York Blood Center (NYBC) created the PreciseMatch® program to maintain an adequate supply of antigen negative RBCs, particularly for the use in SCD and other chronically transfused patients, and increase capacity to meet compatible blood needs of the diverse population of New York City (NYC).

PROGRAM PURPOSE & COMPONENTS

In 2008, with New York State Health Foundation support, the PreciseMatch® program added three outreach coordinators who:

- (1) Provided education and outreach in the target communities to address myths and misperceptions about blood collection;
- (2) Promoted awareness of the need for blood donation among the African American/Black, Hispanic/Latino and other racially/ethnically diverse communities; and
- (3) Built partnerships with communities and leaders, in order to make any donation increases sustainable.

Outreach to community leaders at churches, community centers and local businesses; face-to-face presentations at community events, health expos, and street fairs; and educational presentations at high schools, colleges, and civic, religious and community-based organizations were conducted. Marketing materials developed included a presentation, posters and branded/marketing materials in English and Spanish. Brochures featured three SCD patients. Over 10,000 were distributed at local events and blood drives beginning in 2009. Drives were held at the Harlem Week festival, Hispanic Heritage Month, National Minority Health Month, the Puerto Rican Day Parade, Sickle Cell Month, World Sickle Cell Day and the Martin Luther King Jr.. Press releases were picked up by a major media service and were covered in all local Spanish language newspapers. Commercials ran 75 times on local radio stations 107.5 FM (WBSL) and 1190 AM (WLIB), stations with large African American/Black audiences, and about 24 times on A.M. affiliate WWRL.

EVALUATION METHODS

The guiding evaluation questions were: 1) by what process did PreciseMatch® implement program components; and 2) did the program reach its collection goals. We systematically reviewed the following: documentation of program implementation (e.g., numbers of meetings and community forums held, educational events delivered, blood drives conducted, etc.); focus group results of the marketing materials; and collections data on donations by racial and ethnic minority groups before, during and after the PreciseMatch® program. Data included outreach coordinator activity documentation and NYBC collections data.

The original program goals called for increases in the proportions of African American donors by approximately 2% and Hispanic/Latino donors by 3% from 2008 levels.

MARKETING MATERIALS

Graphic 1. Black History Month T-shirt Message



MARKETING MATERIALS

Graphic 2. PreciseMatch® Presentation



RESULTS

Focus Groups on PreciseMatch® Program Marketing Materials

Two groups were held with African American/Black donors, and two with non-donors, with @8 people per group. The groups focused on donation perceptions; reasons for/barriers to donation; donation in the community. Donor groups shared first donation stories. Non-donor groups explored whether barriers were insurmountable and what might motivate them to consider donating.

Established **donation barriers** (fear of needles, fainting, convenience) and **facilitators** (altruism, personal connection) were described. Factors more common among African Americans included distrust of medical care system and increased deferrals.

The meaning and impact of each marketing message was discussed. The materials included a poster, brochure and DVD; as well, a Black History T-shirt (Graphic 1) was discussed. The poster featured a SCD patient, who has worked closely with NYBC, smiling with the words “Blood donors helped save my life” next to it. Participants reacted to the message, visuals and format of each piece.

Participants noted that the **healthy appearance of the patient featured made the message less compelling**; further the “call to action” was unclear. Images on the brochure of **representatives of racially and ethnically diverse communities were viewed positively**; the message on the Black History t-shirt (Graphic 1) was judged as being too subtle to be understood.

PreciseMatch® Program Outreach and Education Goals

Implementation data indicated that educational presentations were made to over 22 educational institutions, 22 churches and places of worship, 6 health care organizations, 17 community groups and 12 civic groups.

RESULTS, Cont.

PreciseMatch® Program Outreach and Education Goals, Cont.

Coordinators built relationships with 18 community leaders, which often took several weeks or months to establish, but led to presentations where NYBC had not worked previously.

Presentations described: how the majority of transfusions can be matched with “familiar” blood types (O, O+, A, A+, B, etc.), but that 5% of patients need more closely “matched” blood; the role of antigens and specific antigen combinations in the matching process; and rare blood is found more often among African American/Black and Hispanic/Latino people, thus the need for more donors (Graphic 2).

PreciseMatch® Program Donation Goals

The original program goals were operationalized as a collective goal of 150 “incremental units” (50 incremental units per coordinator each month) from African American and Hispanic/Latino donors. Incremental units were defined as: 1) the difference in the number of African American and Hispanic/Latino American donors they recruited relative to a drive conducted with the same group, but prior to the involvement of the outreach coordinator; and 2) the number of donors at any new groups running blood drives arranged by the outreach coordinator.

Table I: Collections of Incremental Units

	April 09	May 09	June 09	July 09	Aug 09	Sept 09	Oct 09	Nov 09	Dec 09	Jan 10	Feb 10	Mar 10	April 10	May 10	total
Manhattan	61	0	56	52	66	22	52	5	28	122	53	11	0	38	566
Brooklyn	82	0	0	64	32	60	157	46	82	30	18	0	2	93	666
Bronx	0	87	47	0	3	69	27	46	6	3	0	6	48	0	342
Monthly Totals (goal 150)	143	87	103	116	101	151	236	97	116	155	71	17	50	131	1574

An incremental increase of 1,574 units missed the goal by 526 units or 25%. (Table 1) The average incremental unit was 112, @40 units short. The coordinators ran successful drives with high proportions of minority and first time donors with a higher than average proportion of rare blood. Across drives, 43% and 38% of the donors were African American or Latino, compared with 9% and 12%, in a typical NYBC drive during the same period. Nearly 75% were first time donors, as compared with 17% of typical NYBC drive donors. Fifteen percent were rare blood donors, as compared with 4% of typical NYBC drive donors.

CONCLUSIONS

Despite successes, high deferral rates and the time required to set up new drives were major challenges to the PreciseMatch® program. Maintaining the increase in drives required sustained, institutional support, which was impossible once funding from the state foundation stopped. In the face of market pressures to collect blood in the most cost-effective and efficient way possible, higher risk and higher resource drives (i.e., too few successful collections) were deemphasized. Further research is needed to develop cost-effective and sustainable approaches.

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