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Title: Breast Cancer and Family History: An Educational Intervention to Improve Breast Cancer Awareness and Screening in Underserved Communities

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Background – Breast Cancer is one of the most common cancers diagnosed among women in the United States. Though incidence is highest among White/Caucasian women, mortality is highest among Black/African American women; with rates of 29.5 per 100,000 women, compared to White/Caucasian (20.8 per 100,000 women) and Hispanic women (14.2 per 100,000 women). Black/African American women are likely to be diagnosed in later stages of cancer development and have more aggressive types such as Triple Negative Breast Cancer. Family history is the strongest risk factor for breast cancer, therefore understanding its importance is crucial to improving awareness and screening in underserved communities.

Objectives- To 1) educate women on the importance of genealogy as a risk factor for breast cancer and to enhance communication between women, their families, and their medical providers 2) Compare the effectiveness of two remote education strategies when delivered by peers versus research team members.

Methods- This remote education trial is based on principles of community-based participatory research. Our team consists of various local partners, medical professionals, and community members. Focus groups of African American women were key to developing a curriculum that highlights the importance of family history as a risk factor for breast cancer and includes tools to collect family history information that can be discussed with one's provider. Eligibility criteria include being a woman over 40 years of age, never being diagnosed with cancer, and living in one of 16 ZIP codes in the City of Buffalo or City of Niagara Falls, NY. The trial uses a 2x2 design to randomize women into one of 4 possible educational modalities. The curriculum is delivered by one of two remote methods: either a 2hr-group session conducted through Zoom or a series of one-on-one phone calls. Furthermore, the education is delivered by either patient ambassadors (trained community members) or a research team member. Assessments include pre, post-education, and follow-up surveys to assess demographics, health history, recent health behaviors, breast screening habits and history, future screening intentions, knowledge about breast health and family history, as well as rate their experience in the education program.

Preliminary Results-This program is ongoing. To date, 48 women (M= 57.8yr) have enrolled in the education trial and 28 have completed the education and post-education survey. Participants are racial/ethnically diverse (72% minority), well educated, employed/retired, and all reported a current source of healthcare. While all planned to see their doctor in the next year, only 80% regularly see an OBGYN. Ninety-eight percent of participants have ever had a mammogram; reporting 5 mammograms in the past 6 years on average. Forty-five percent reported a family history of breast cancer diagnoses, 18% with 2 or more affected relatives, and another 25% have a positive family history of ovarian cancer. Despite these rates of family history and no racial/ethnic differences in reported family history nor regular OBGYN care, only 3 white participants (6%) had ever discussed the possibility of receiving genetic counseling and testing for their personal breast cancer risk with their doctor (p=0.021).

Post-education, 86% of participants reported learning new information, 82% rated the usefulness of the education as 'above average' or 'excellent', with only 4% reporting any of the information being confusing. All participants said they felt comfortable talking about breast health, regardless of their assigned group. Within 1 week of the education completion, 55% had already discussed family history with their family, but this did not differ by group or facilitator type (p>0.05). While 3-mo post-education outcomes of the study are not yet available, they are sure to be encouraging and will help to inform our understanding of the effectiveness of remote education strategies to improve family history knowledge and screening for breast cancer, among underserved communities.