



Addressing Breast Cancer Disparities through a Culturally Competent Neighborhood Door-to-Door Outreach: The Impact of Education and Preventive Screening in Underserved Areas

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BACKGROUND

Disparities related to the detection of breast cancer in underserved populations persist despite efforts to reach this target group and increase mammography utilization.

Screening mammography reduces breast cancer mortality for women aged 39-69² and early detection through screening is correlated with increased survival; however, underserved minority women often lack the education and the access to care needed for effective prevention.

There is a paucity of research on the effectiveness and suitability of existing breast cancer early detection outreach approaches.

Improving access to mammography and primary care and removing language barriers to screening (especially for economically disadvantaged and uninsured women) are vital to increasing breast cancer screening rates².

To address the disparity challenge, we proposed a quantifiable and targeted neighborhood door-to-door breast cancer awareness and education intervention, which mobilized communities and resources and provided screening mammograms with a continuum of care outreach program.



One in Eight women will be diagnosed with breast cancer over her lifetime.

GOALS AND OBJECTIVES

- To quantify the following changes in an underserved population of women as a result of our intervention:
 - Breast health awareness
 - Screening rates
 - Breast cancer detection rates
- To provide evidence of the impact of neighborhood race and ethnicity on a study participants' engagement with the program.



METHODS

Single-family home neighborhoods targeted for the intervention had a high incidence of late-stage breast cancer and median income at 200% of the poverty level.

Trained volunteers were assembled into culturally and linguistically appropriate teams prior to deployment to conduct the intervention.

Door-to-door outreach was conducted during 45 intervention days and 15 screening days during 2011-2012.

Florida Counties	3
Intervention Days	45
Screening Days	15
Households Visited	21,079
Volunteers	2,025
Women Interviewed	5,441
Post-Visit Phone Surveys Conducted 30-60 days later	1,871

Breast health educational packages were provided to all households where doors were opened and an adult woman resided. Unanswered doors received door-hangers with breast health information.

Volunteers used a WBHI-designed instrument to pre-qualify women for screening and schedule screening appointments. Women eligible for a screening mammogram were uninsured, ≥40 years of age, had not been screened in the previous year, were not pregnant or breast-feeding, were without breast implants, and had no history of breast surgery or biopsy.

All program elements including screenings were provided to eligible participants at no cost to them.

Neighborhood mobile mammography visits from collaborating hospital partners or transportation to local facilities was provided within 1-3 weeks of the home visit, followed by system navigation to assure proper follow-up.

Requisite care was provided for additional diagnostic procedures and treatment.

WBHI staff conducted follow-up phone surveys 30-60 days after the visit to obtain feedback from participants about the effectiveness of the visit and educational materials.



RESULTS

NEIGHBORHOOD REPORT:

- We found that 70% of all women ≥40 years of age had health insurance and there were no significant differences between the neighborhoods visited.
- 44% of all women ≥40 years of age reported having a recent mammogram, regardless of insurance status
 - Women from "Hispanic" neighborhoods reported the highest rate (52%)
 - Women from "Other" neighborhoods reported the lowest rate (38%)



- 54% of insured women ≥40 years of age reported having an annual mammogram
 - Women from "Hispanic" neighborhoods reported a significantly higher rate (69%)
 - Women from "Black" and "Other" neighborhoods reported lower rates (53% and 50% respectively)
 - The American Cancer Society reported 55% in 2010¹



- 23% of uninsured women ≥40 years of age reported having an annual mammogram
 - Women residents of "Black" neighborhoods reported the highest rate (27%)
 - Women residents of "Hispanic" and "Other" neighborhoods reported significantly lower rates (21% and 17% respectively)
 - The American Cancer Society reported 17% in 2010¹
- 29% of uninsured women ≥40 years of age reported NEVER having a mammogram and there were no significant differences between the neighborhoods visited.

DETECTION RATE:

- One woman was diagnosed with breast cancer immediately after the WBHI-provided screening mammogram (0.24%).
 - This is higher than the 2006-2010 U.S. incidence rates (Hispanic 0.09%, Black 0.12%, White non-Hispanic 0.13%)

2011-2012 Aggregate Data	TOTALS	
	#	%
Households Visited	21,638	100
Target Underserved Population: Households with at least 1 uninsured woman ≥40 years of age ^a	1,017	13
# of women <u>eligible</u> for a WBHI screening mammogram	643	63
# of appointments made for a screening mammogram	581	90
# of completed screening mammograms	409	70
New Immediate Diagnoses of Breast Cancer	1	0.24

SCREENING RATES:

The WBHI study increased the breast cancer screening rate for the neighborhoods visited 2.8-fold from 23% to 64%

- Despite the equal access to screening, significant disparities exist amongst the screening rates for women living in "Hispanic" (50%) and "Black" (63%) neighborhoods compared to women from "Other" neighborhoods (70%).

- The largest impact of the WBHI was in the "Other" neighborhoods with a 4.1-fold increase in screening rates

Uninsured Women ≥40	Neighborhood Ethnicity Data			
	All Neighbor hoods	"Black"	"Hispanic"	"Other"
who had a recent* mammogram pre-visit	23%	27%	21%	17%
who received a mammogram post-visit	64%	63%	50%	70%
<small>* recent is defined by the ACS guideline as within one (1) year</small>				
		2.4-times increase	2.4-times increase	4.1-times increase

- Women who had a mammogram prior to the visit were much more likely (64%) to participate in the WBHI screening mammogram program, than women who had never had a mammogram (40%).
- Disparities amongst the screening rates for women from "Hispanic" and "Black" neighborhoods continues to exist with the women who have never had a mammogram.

Uninsured Women ≥40	Neighborhood Ethnicity Data Groups			
	All Neighbor hoods	"Black"	"Hispanic"	"Other"
who NEVER had a mammogram	29%	29%	29%	28%
who received their 1 st mammogram post-visit	40%	36%	34%	48%
		1.3-times increase	1.6-times increase	3.0-times increase

- Overall, 70% of the women who scheduled appointments during the Outreach, completed their screening mammogram appointment, and the neighborhood culture moderated these responses:
 - 55% of women from "Hispanic" neighborhoods completed their screening mammogram appointments
 - 74% of women from "Black" neighborhoods completed their appointment
 - 73% of women from "Other" neighborhoods completed their appointment
- This trend held true regardless of a woman's past history with mammograms.

Uninsured Women ≥40 without a recent mammogram.....	Neighborhood Ethnicity Data Groups			
	All Neighbor hoods	"Black"	"Hispanic"	"Other"
who Scheduled an appointment	90%	86%	90%	96%
who Completed their appointment ^a	70%	74%	55%	73%

- Engagement with the program depended in large part on whether a woman had ever had a mammogram.
 - 63% of the eligible women with at least one mammogram in their lifetime, scheduled appointments with the Outreach.
 - Only 30% of eligible woman who had never had a mammogram, scheduled appointments with the Outreach.

- The appointment completion rates also differed by a woman's past experience with mammograms:
 - 73% of women with a past mammogram completed appointments, whereas, only 64% of inexperienced women completed their mammogram.

Uninsured Women ≥40 without a recent mammogram, but had at least 1 prior	Neighborhood Ethnicity Data			
	All Neighborhoods	"Black"	"Hispanic"	"Other"
who Scheduled an appointment	63%	61%	60%	67%
who Completed their appointment ^a	73%	74%	59%	77%

^a of the women who scheduled appointments

Uninsured Women ≥40 without any prior mammogram	Neighborhood Ethnicity Data			
	All Neighborhoods	"Black"	"Hispanic"	"Other"
who Scheduled an appointment	30%	29%	33%	28%
who Completed their appointment ^a	64%	70%	45%	66%

^a of the women who scheduled appointments

RAISING AWARENESS:

- The educational packages delivered during the outreach were found useful by a vast majority of women and also raised awareness through women speaking with other women about breast health.
 - Women's responses and perceived benefit to receiving educational packages differed according to neighborhood race and ethnicity.

	All Neighborhoods	"Black"	"Hispanic"	"Other"
Benefited from the Visit and the Educational Package	80%	70%	85%	88%
Spoke with other women about breast health	59%	54%	57%	65%

CONCLUSIONS

- Our door-to-door outreach model increased the breast cancer screening rate in this underserved population, thus showing that this type of intervention can be effective in closing the health disparity gap.
- Educational packages presented in a face-to-face format within a door-to-door context were found useful by most women and raised awareness not only amongst those targeted directly, but through a ripple effect, an impact was observed throughout entire communities.
- Our findings highlight disparities beyond a woman's access to breast healthcare and education by showing that neighborhood culture moderates responses to outreach intervention and breast healthcare.
- It is possible that given equal access to care, disparities in using screening mammography will persist.
- Thus, educational methods tailored further to specific racial, ethnic and cultural characteristics may play a significant role in closing disparity gaps.
- Education will be the key to reducing disparities as more data is collected on the psychosocial reasons behind a woman's decision about breast healthcare.
- Our outreach showed that increasing access, awareness and cultural sensitivity does remove some of the barriers that make it difficult for some women to get breast cancer screening.

REFERENCES:
American Cancer Society Breast Cancer Facts and Figures 2013-2014
<http://www5.komen.org/BreastCancer/DisparitiesInBreastCancerScreening.html>