Improving Mammography rates for African American Women: Sisters Educated in Emergency Departments

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Breast Cancer

- One of the leading causes of preventable cancer death among women
- Rates of breast cancer have been declining for certain groups since early 1990’s
Breast Cancer & African American Women

- Incidence rate in African American women is 3% lower than in white women expect in 7 US states (Alabama, Kentucky, Louisiana, Mississippi, Missouri, Oklahoma, and Tennessee)
- Breast cancer death rates are 42% higher in African American women compared to white women
Breast cancer survival

- The overall 5-year relative survival rate for breast cancer diagnosed in 2005-2011 was 80% for African American women compared to 91% for white women.
**Mammography Promotion**

- Single most effective method of early breast cancer detection
- Early detection of breast cancer by mammography may also lead to a greater range of treatment options, including less-aggressive surgeries and therapies
Despite similar mammography rates, breast cancer is detected at an advanced stage more often in black than in white women.

African American women experience longer intervals between mammograms and lack timely follow-up of suspicious results.

African American women are more likely than white women to overestimate mammography utilization.
Promoting Mammography in African American Women Visiting the ED

Sisters Educated in Emergency Departments
Emergency Departments

- 100 million ED visits per year in the U.S.
- Large numbers of underinsured or uninsured
- May not have access to a regular source of health care
- Prolonged waiting periods
- Teachable moment
Study 1: Examine the barriers and benefits that influence the use of screening mammography among African American women in order to inform studies 2 & 3.

Study 2: Develop and evaluate culturally tailored, stage appropriate mammography educational materials for African American women to determine cultural acceptability, readability, and applicability for women visiting the Emergency Department.

Study 3: Compare in a randomized controlled trial the receipt of a screening mammogram in a group of African American women receiving a culturally tailored, stage-matched peer educator breast cancer intervention versus those receiving tailored educational materials only.
Recruited from hospital Emergency Department:
- Many women, particularly those who do not have access to a regular source of care, use the ED as their sole source of medical care
- Average wait time for persons visiting the ED is more than three hours

**Inclusion Criteria**
- English speaking
- 40 + years
- African American
- Have visited the ED for non urgent care in the past 6 months
Study 1: Qualitative exploration

- Qualitative descriptive study:
  - In-depth qualitative interviews using a semi-structured interview guide
    - Examine cultural, social, and personal factors that are considered either barriers or benefits of mammography use among African American women who visit the ED
Sample (n=39)

- **Age ranges**
  - 42-79 years (mean age 57)
    - 42 to 49 (10)
    - 50 to 59 (17)
    - 60 to 79 (12)

- **Level of education**
  - <12th grade (8%)
  - High school graduate (44%)
  - >high school (39%)

- **Marital Status**
  - Married/partnered (41%)
  - Single/never married (10%)
  - Separated/divorced (33%)
  - Widowed (10%)

- **Income**
  - < 10,000 (5%)
  - 10,999 to 19,999 (28%)
  - 20,000 to 29,999 (13%)
  - ≥ 30,000 (25%)
Data Analysis

- **Nvivo**
- **Stage I**: Created textual summaries of transcripts
- **Stage II**: In-depth analysis by independent researchers to identify and code key phrases, sentences, and paragraphs
- **Final stage**: the domains and dimensions of the PEN-3 models were utilized as pre-determined categories for sorting codes
PEN-3 Findings

- **Perceptions**
  - Individually held knowledge, attitudes, values or beliefs stated by participants that facilitate or hinder personal motivation and decision making to maintain or change mammography beliefs or practices

- **Enablers**
  - Societal, systematic or structural influences that may enhance or create barriers to maintain or change health/illness beliefs and practices

- **Nurturers**
  - Supportive and/or discouraging influences that a person may receive from significant others
Perceptions, Enablers, & Nurturers

- Fear
- Fatalism
- Knowledge
- Insurance/Money
- Access to care
- Racism
- Provider factors
  - Recommendations
  - Cultural sensitivity
  - Mammography experiences
- Family history of breast cancer
- Influence of social network
- Shared stories of mammography from friends and relatives
Positive findings: could and should be reinforced

Negative findings: could be examined and might offer opportunities for revision, including new messages, education, and/or different responses that may balance or mediate challenges
Development Example

- Fear
  - Positive/motivator
    - *Reinforce* the risk of women dying from breast cancer if left undetected
- Stories from community members
  - Negative recollections of mammography experiences
    - Provide positive stories by screened women to revise
Focus group

- Focus group of 8 women who had recently received care in the ED
- Input on peer led MI
- Input on brochure to be developed
Tailored Brochures

As with many types of cancer, medical experts do not know exactly what causes breast cancer.

We do know that bumping, bruising, pricking, or touching the breast does not cause breast cancer. We also know that you cannot "catch" breast cancer from another person.

**Symptoms of breast cancer**

Most of the time, early breast cancer does not have any symptoms. It is painless, however. Breast cancer can sometimes cause changes in your breast that a lump.

**Who should get a mammogram?**

- Do you have a family history of breast cancer?
- Are you over the age of 40?
- Have you had a mammogram?
- Have you had breast surgery?
- Have you had breast cancer?

**What is a mammogram?**

- A mammogram is a type of x-ray that can be used to detect breast cancer.
- A mammogram can show if a lump is cancerous or not.

*"I was afraid to get a mammogram because I have large breasts and I had heard it would be very painful. It was over before I knew it. The whole thing only took a few minutes and I can rest easy knowing I don't have breast cancer."*

*"I was 42 when I found out I had cancer. I was a single mother with a 10 year old daughter. To be here for my daughter is worth every one of the treatments I went through. I am just glad they found it early."*

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Study Design:
- Three armed RCT comparing the effects of brief MI delivered by a community health worker in the ED vs. culturally tailored brochure vs. usual care control group
- N=96
- Data collection at baseline and three months post intervention
- Participant incentive $25 per time point
Recruitment strategies

- RA present in ED lobby at various times of day for six months
- Approach women who are visibly non distressed and determine age eligibility
- Work with triage nurse to identify patients who are eligible and have non urgent complaints
- $25 cash or visa cash card incentive
Random assignment to 1 of 3 TX groups:

- **Usual care (n=33):** standard information
- **Brochures (n=30):** tailored from focus groups
- **Brief Motivational Interviews (n=33):** based on qualitative interviews and focus groups
Measures

- Enrollment
  - Sociodemographic characteristics
  - History of mammography
  - Barriers, benefits, and susceptibility checklist

- Post Intervention
  - Screening status
  - Barriers, benefits and susceptibility checklist
## Group Comparisons of Sociodemographics at Baseline (n=96)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Combined group (N = 96)</th>
<th>Motivational interview (n = 33)</th>
<th>Targeted brochure (n = 30)</th>
<th>Control (n = 33)</th>
<th>Chi-square p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>20.8</td>
<td>18.2</td>
<td>16.7</td>
<td>27.3</td>
<td>0.5</td>
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<tr>
<td>Post-secondary education</td>
<td>52.1</td>
<td>57.6</td>
<td>43.3</td>
<td>54.6</td>
<td>0.5</td>
</tr>
<tr>
<td>Income &lt; $40K</td>
<td>84.1</td>
<td>83.3</td>
<td>92.9</td>
<td>76.7</td>
<td>0.3(^a)</td>
</tr>
<tr>
<td>Have health insurance</td>
<td>65.6</td>
<td>57.6</td>
<td>76.7</td>
<td>63.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Have a primary care provider</td>
<td>65.6</td>
<td>57.6</td>
<td>66.7</td>
<td>72.7</td>
<td>0.4</td>
</tr>
<tr>
<td>Ever had a mammogram</td>
<td>76.0</td>
<td>78.8</td>
<td>70.0</td>
<td>78.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Likely to have a mammogram in the next 6 months</td>
<td>90.0</td>
<td>96.8</td>
<td>82.1</td>
<td>90.3</td>
<td>0.2(^a)</td>
</tr>
</tbody>
</table>
Pre-Intervention: Mammography status at 3 months by group

* $p = .4$ for Fisher’s exact test
Post-Intervention: Mammography Status at 3 months, by Group

- Motiv interview
- Targeted brochure
- Control

Had a mammogram in last 3 months
Did not have one during study period

*p = .9 for chi-square test
Discussion

- Women who use the ED as a regular source of care are not getting mammograms
- It is feasible to recruit this hard to reach population in the ED
- LHWs are a powerful motivational factor
- More intense intervention doses are needed for this vulnerable group
Conclusions from all three studies

- Unique subsets of vulnerable populations experience complex health disparities that deserve closer examinations
- Variations of existing interventions may be effective in targeting these groups
- Programs of research to address health disparities need to be targeted to the unique needs of groups such as African American women who visit the ED for non urgent care