Published in final edited form as:
Public Health Nurs. 2010 ; 27(6): 520–527. doi:10.1111/j.1525-1446.2010.00894.x.

Mammography Promotion in the Emergency Department: A Pilot Study

Jennifer Hatcher, R.N., Ph.D.[Assistant Professor],
College of Nursing, University of Kentucky, Lexington, Kentucky

Mary K. Rayens, Ph.D.[Professor of Nursing], and
College of Nursing, University of Kentucky, Lexington, Kentucky

Nancy E. Schoenberg, Ph.D.[Marion Pearsall Professor of Behavioral Science]
Department of Behavioral Science, University of Kentucky, Lexington, Kentucky

Abstract

Objectives—The objective of this pilot study is to assess the need, desire, and applicability of a mammography promotion project in the emergency department (ED).

Design and Sample—A convenience sample from the ED of a public University hospital was surveyed to determine their mammography status, interest in a program to promote mammography, and barriers to mammography.

Measures—The survey included demographics information, health care access, including health insurance and primary care provider, mammography status and date of mammogram, as well as a checklist of potential barriers. Participants were also asked whether they would be interested in mammography promotion in this setting.

Results—More than 15% of the 197 women surveyed had never received a mammogram, and more than half had not received 1 in the past year. The most common barriers to mammography were competing demands and money. Three quarters of the women said they would be interested in mammography promotion while waiting for care in the ED.

Conclusions—This study provides promise that mammography promotion activities may be appropriately placed in the ED and provides a solid platform from which researchers and nurses may launch efforts to develop preventive health interventions in innovative public health care settings.

Keywords

emergency department; mammography promotion; vulnerable populations

Breast cancer is the most common cancer among women, accounting for more than one in four cancers diagnosed in women in the United States. An estimated 250,000 new cases of breast cancer were diagnosed in 2009 and more than 40,000 women were expected to die (American Cancer Society [ACS], 2010). Screening mammography, the single most effective method of early detection of breast cancer, is recommended yearly for all women over the age of 40 (ACS, 2000). It can identify cancer several years before physical symptoms occur and may reduce breast cancer mortality by as much as 20–35% in women

Correspondence to: Jennifer Hatcher, College of Nursing, University of Kentucky, Lexington, KY. jhscot2@uky.edu.

aged 50–69 years and 20% in women aged 40–49 years (Elmore, Armstrong, Lehman, & Fletcher, 2005). Because of the increased use of screening mammography and improvements in breast cancer treatments breast, cancer mortality rates are reflective of a steady decline. However, certain vulnerable populations have not benefited from this downward spiral at the same rate as others. This includes minorities, women with lower socioeconomic status, and those who are uninsured and underinsured (Department of Health and Human Services, 2000). In these medically underserved women, the screening rates remain suboptimal and mammography promotion has the potential to substantially reduce the burden of breast cancer and subsequent mortality.

Background

For a variety of reasons, the emergency department (ED) can be a promising site for the placement of mammography promotion projects. First, there are more than 100 million ED visits in the United States per year, with more than 10% of Americans visiting at least annually (Rimple, Weiss, Brett, & Ernst, 2006). The ED is consequently one of the few settings where the medical establishment has access to large numbers of underinsured or uninsured people who may not have access to a regular source of health care. This large volume of patients and the subsequently long waiting periods experienced by those persons make the ED an excellent setting for the receipt of information regarding preventive health care, including mammograms (McCaig & Nawar, 2006; Rhodes, Gordon, Lowe, & The Society of Academic Emergency Medicine Public Health and Education Task Force, 2000).

Second, one of the hallmarks of patients visiting the ED, lack of a regular source of health care, is also one of the strongest predictors of nonadherence to screening mammography guidelines. Research has repeatedly demonstrated that provider recommendation is the single most important factor accounting for the lack of screening mammography (Smith-Bindman et al., 2006).

Finally, the heightened attention of patients and their caregivers during ED visits may provide an important opportunity for patient education. The treatment of the ED patient may offer a “teachable moment,” when the patient is ready to accept new information (Wei & Camargo, 2000). Patients are more likely to become motivated to make health behavior changes when they are approached during key times when their attention is focused on their health, such as while they are in the ED.

In addition to the need for preventive health care recommendation, persons visiting the ED have demonstrated interest in receiving information related to these services. Llovera, Ward, Ryan, LaTouche, and Sama (2003) conducted a survey to determine which preventive health information the ED populations, both patients and visitors, would be most interested in having available to them while they wait. Of the 878 subjects in the study group, 96% were interested in obtaining information about preventive health issues. Sixty-four percent of the women surveyed were interested in breast cancer screening information (Llovera et al., 2003). Given this interest level, the researchers concluded that the ED is an excellent site for conducting public health education.

The few health promotion interventions undertaken in the ED have highlighted successful programmatic components. Most notably, research has been conducted in the Harlem ED by Friedman and colleagues and by Bernstein and colleagues in an inner-city ED in Boston. Friedman and colleagues (Mandelblatt et al., 1996) concluded that it was feasible to screen for breast and cervical cancer in the ED of a large, urban, public hospital. However, despite the fact that there were large numbers of cases with unmet needs, their outcomes suggest only moderate efficacy. Based on age and screening history, 32% of the 5,830 women seen in the ED during the 23-month study period were eligible for both mammography and

clinical breast exam (CBE). Of these women, only 6% completed mammography and CBE. The researchers found that a key barrier to increasing screening involved engaging ED staff. The triage nurse and other staff members were busy with other patient care needs and were unable to screen all eligible patients (Mandelblatt et al., 1996).

The use of lay health workers (LHW) is one of the ways by which researchers have attempted to overcome the challenge of overcommitted staff involvement in the ED setting. Bernstein, Mutschler, and Bernstein (2000) conducted a study in the ED of Boston Medical Center to test an intervention that used LHW to increase the regularity of mammography in a diverse population of inner-city women, primarily older African American women. LHW's, older African American and Central American women from communities served by the Boston ED, were used to deliver the intervention, which consisted of a structured, brief negotiated interview reviewing the pros and cons of mammography and scheduling mammography appointments. Although 65% of the 90 ED participants had never had a mammogram, 60% of the women reported having a mammogram sometime in the 3 months following the intervention. The researchers concluded that the success of the intervention was attributable to the interactive format and the interchange that took place between peers. They suggest that additional research, including a randomized-controlled trial of several different components of peer-led ED interventions, be undertaken to establish comparative efficacy in this setting.

Research question

The fact that mammography promotion in certain EDs has experienced limited success suggests the need for more focused research in this area. The purpose of this study was to determine whether women visiting the ED for nonurgent care needed, and would be amenable to, an ED-based mammography promotion program. This program would not supply mammograms to the women, but would, with the aid of LHW, promote breast health education, help women navigate barriers to mammography, and aid in scheduling mammograms for future dates. We also sought to identify the specific barriers to mammography experienced by this traditionally underserved group of women. In addition, we wanted to determine the feasibility of an intervention to promote mammography being initiated in the ED using an LHW with minimal involvement of the ED staff, effectively addressing the main limitation of past study, staff engagement.

The theoretical underpinning for this study was the Health Belief Model (HBM). The HBM, one of the most commonly used theoretical frameworks used to study a variety of health behaviors, addresses an individual's perception of the threat posed by a problem (susceptibility, severity), the benefits of avoiding the threat, and the factors that influence the decision to act (barriers, cues to action, and self-efficacy) (National Institutes of Health, 2005). For this pilot study, we focused on the barriers to mammography experienced by this vulnerable group. Perceived barriers can be defined as emotional, physical, or structural concerns related to mammography behaviors, including pain, fear of radiation, and cost (Vadaparampil, Champion, Miller, Menon, & Sugg Skinner, 2005).

Methods

Design and sample

Using a prospective survey study design, we enrolled a convenience sample of women who presented to the ED of a public hospital with nonurgent complaints and those who were seated in the waiting area, during representative shifts, over a 6-month period in 2007. By recruiting the women seated in the waiting area as well as those being treated for nonurgent complaints, we sought to capture the population most likely to have long wait times and

therefore be receptive to preventive health care messages and also those most likely to belong to the vulnerable group that might use the ED as their primary source of care. We enrolled English-speaking women who met the age eligibility guidelines for mammography from the ACS: annual mammograms for women aged 40 and older (Smith, Cokkinides, & Eyre, 2006).

The study was conducted in a University ED in a southeastern state with 40 beds, which provided services to more than 45,000 patients in 2006, with more than 8,500 of those women being 40 years of age or above. All protocols were approved by the University's Institutional Review Board (IRB).

The persons responsible for collecting the data for this study were African American women. There were at least three data collectors during the course of the study, including the PI of the study. They used the following methods to identify women for the study: first, the data collector would inquire at triage if eligible women were present in treatment rooms. This allowed the ED staff to screen for the urgency of the patient's complaints and to examine demographic criteria commonly collected at triage. Next, she approached women seated in the waiting area and asked whether they would be willing to participate in the study. She then screened those women for age eligibility. As per the IRB review, no written informed consent was required, since the survey was anonymous.

The data collectors instructed participants in a standardized fashion, using an approved script, about completing the survey, and obtained verbal consent for participation. If a woman expressed interest in participating, the survey questions were read aloud and her responses were written down on the forms or the participant was allowed to mark her own answers after she read the questions aloud. To ensure privacy, each participant was interviewed in a private area.

Measures

In addition to demographic questions, participants were asked about their health care access, including health insurance and whether they have a primary care provider. Participants were asked whether they had ever had a mammogram, whether they had had one in the past year; if they had not had one in the past year, they were asked to choose all that applied from a checklist of potential barriers to mammography. The barriers listed were those most commonly presented in the literature (Ahmed, Fort, Malin, & Hargreaves, 2009; Bernstein et al., 2000; Champion & Springston, 1999); barriers included "time/competing demands," "money," and "fear." The number of items included on the checklist was 10, with one of them being "other reason" and another being "no reason for not having one." The total number of barriers was calculated by summing up the number of chosen items for each participant who had not had a mammogram in the past 12 months, excluding the "no reason for not having one" item (since this did not refer to a barrier). Participants were asked whether they would be interested in the following while waiting for care in the ED: (1) receiving information about mammography and (2) assistance with making appointments for mammography or other health care. Participants were given a US$20.00 cash incentive.

Analytic strategy

Data from the anonymous survey were summarized using descriptive statistics, including means and standard deviations (*SD*s) (for continuous variables) or frequency distributions (for categorical variables). The two-sample *t* test and Pearson's product-moment correlation were used to test for relationships between the barriers scale and demographic factors, as an assessment of validity. Data analysis was conducted using SAS for Windows, v. 9.1 (SAS Institute, 2002–2003).

Results

During the 6-month study period, 197 eligible women were enrolled in this pilot study. The demographic characteristics are summarized in Table 1. More than three quarters of the participants were White, and about half were married or partnered. The majority had at least a high school diploma, and half of those who had finished high school had also received at least some postsecondary education. Most had an annual income under US$30,000. The majority had health insurance coverage (81.2%) and a primary care provider (85.8%) and indicated they had not been seen in the ED in the past 3 months.

Demographic variables related to having had a mammogram in the past year included marital status, having health insurance, having a primary care provider, and age. Fifty-six percent of married women had had a mammogram in this time period, compared with 41% of unmarried women ($\chi^2 = 4.6$, $p = .03$); 53% of those with health insurance had had a mammogram, compared with 26% of those without ($\chi^2 = 8.8$, $p = .003$); 53% of those with a primary care provider had had one, compared with 19% of those without ($\chi^2 = 10.3$, $p = .001$); and women who had received a mammogram in the past year were significantly older ($M = 55.4$, $SD = 9.8$) than those who had not ($M = 51.6$, $SD = 10.5$; $t = 2.6$, $p = .01$). Other demographics, including race/ethnicity, education, and household income, were not related to mammogram status in the past year. Although marital status was not associated with whether a participant had ever had a mammogram, the other demographics related to mammogram status in the past year were also associated with the indicator for whether the woman had ever had a mammogram: a higher percentage of women with health insurance and a primary care provider had ever received a mammogram, and the average age of women who had ever received one was higher than the mean age of those who had not.

More than 15% (15.8%) of the women in this study had never received a mammogram, and more than half (51.5%) had not received one in the past year (see Table 2). There was considerable interest in receiving information about mammography while awaiting care in the ED: about three quarters of the women said they would be somewhat (23%) to very interested (53%) in receiving this information. More than 80% said it would be somewhat (20%) to very helpful (63%) to have assistance in scheduling appointments for mammography or other health care while waiting for care in the ED, and most said they would be very likely to go to the appointments made while waiting in the ED (87%). The levels of interest in an ED-based mammography promotion program are summarized in Table 2.

The women were asked to indicate any factors that were barriers to having mammography in accordance with screening guidelines, and these are shown in decreasing prevalence in Table 3. Of the 100 women who had not received a mammogram in the past year, the most frequently chosen barrier was inadequate time and competing demands (29%), followed by lack of money (26%), fear (21%), and discomfort (18%). Less frequently described barriers included problems with transportation and childcare or eldercare issues. Sixteen percent said there was no reason for not having had a mammogram, 11% said they had some reason other than those included in the checklist for not having had one, and 4% said they did not have a need for a mammogram. None of the participants selected racism or discrimination as a barrier for mammography.

Of the nine barriers for not having had a mammogram in the past year (including “other reason,” but not including “none—no reason for not having one,” since this is not an actual barrier), the average number chosen by the participants was 1.33 ($SD = 0.92$), with a range from 0 to 5. More than half of the sample ($N = 53$) chose exactly one of the barrier items. There was a significant difference in household income between those who listed money as

a barrier to mammography, with lower average income among those who chose this item, compared with those who did not choose it ($t = 4.2$, $p = .0001$). There was a negative correlation between household income and the number of barriers chosen from the checklist ($r = -.22$, $p = .05$); women with a lower socioeconomic status were more likely to report a greater number of barriers to mammography in the past year. Since only those women who had not had a mammogram in the past year completed these items, it was not possible to determine whether the number of barriers differed between those who had had a mammogram within the prescribed length of time and those who had not.

Discussion

The first step in providing a health promotion service in the ED involves assessment of the need, desire, and applicability of that program for the population to be served. This pilot study addresses all three of these areas. First, it provides strong support for the need for mammography promotion in women waiting for care in the ED. The women surveyed were far below the national standard for mammography utilization set by Healthy People 2010 of 70% of women over the age of 40 being screened at least every other year (Department of Health and Human Services, 2000). The ACS found that nationally in 2006, 58.3% of women report having an annual mammogram (ACS, 2007). In our sample of women visiting the ED for nonurgent care, only 48% report having had one in the past year, with 16% of the overall sample having never had one. This disparity between the national average and the average rate of mammography usage for women visiting the ED in our study suggests that this group of women is at a high risk for underutilization of screening mammography and therefore later stage detection of breast cancer. Although we lack research on the personal characteristics of ED patients regarding their barriers to mammography, researchers examining this population point out certain common characteristics related to inadequate screening, such as lack of insurance, limited access to primary care, and being a member of racial and ethnic minority groups (Stiffler & Gerson, 2006). This is reflected in this sample of women as well, where those who do not have insurance or a primary care provider remain significantly more likely to not have had a mammogram according to ACS guidelines. Interestingly, for the group of women in this study, more than 80% of them do report having some form of insurance. This is not dissimilar to the national average, where only about 17% of patients visiting the ED report being uninsured (Pitts, Niska, Xu, & Burt, 2008). Rather than system barriers, the most common barriers these participants report are time, competing demands, money, and fear, suggesting that they underutilize preventive care due to both socioeconomic disadvantage and personal situations and beliefs. In addition, women may consider a specialist providing care a primary care provider. This person would not, however, recommend preventive care measures, given their specific disease focus. Further, more than 80% of these women also report having a primary care provider. The very fact that these women are seeking nonurgent care from the ED contradicts this finding. Further exploration of this paradoxical finding and other combinations of factors that make it difficult for this population to obtain mammograms would be helpful in developing targeted interventions that address the issues that are most salient for the women and understanding how they seek care and what the best avenues for preventive care recommendations are.

Finally, this study demonstrated considerable interest among participants in the ED. Those surveyed, more than half of whom had not met mammography guidelines as established by the ACS, were very interested in a program to promote mammography that would be offered while they wait for care. This is consistent with other studies that have found that ED patients and their friends and families want information about preventing disease and injury (Llovera et al., 2003). Surveys of noncritically ill patients and waiting room occupants indicate this desire for information on a variety of preventive health issues, including mammography (Llovera et al., 2003; Rodriguez, Kreider, & Baraff, 1995). Cummings,

Francescutti, Predy, and Cummings (2006) conducted a feasibility study in the ED to identify health risks and offer interventions to adult patients on a variety of preventive health measures, including Pap (Papanicolaou) testing. They concluded that ED patients were willing to participate in health promotion and disease prevention projects. While this enthusiasm may not directly translate into increased mammography rates, it is certainly encouraging and points to the need for targeted research and interventions aimed at the needs of this group.

Limitations

Along with the promising findings, some study limitations must be acknowledged. First is the low percentage of non-White participants in our sample. While this was reflective of the demographics of that particular ED and the region, nationally, the ED visit rate for Black persons is about double the rate for White persons in all age groups (Pitts et al., 2008). In addition, the exclusion of non-English speakers limits the generalizability of these findings to an important segment of ED utilizers. Also, although we surveyed women during all shifts and used various data collectors, no data were collected regarding refusal rates or reasons. Women who were not included may therefore differ from those willing to be surveyed. Future studies should involve refusal rates and reasons if possible. Finally, since the checklist of barriers was compiled from reasons listed in the literature, it represents an initial attempt at developing a scale to measure this phenomenon. Given that the items represented a variety of sources of impediments to mammography, including socioeconomic or time pressure issues as well as emotional ones, it did not make conceptual sense to assess this scale for reliability as we would not expect items this diverse to be internally consistent. Future studies may focus on a particular type of potential barrier (e.g., fear) with the goal of developing a multi-item scale to measure various aspects of this one type of barrier. This would allow for the psychometric testing of the scale, including reliability assessment. Future work in the area of barriers to mammography would also benefit from assessing which of these potential barriers make having a mammogram most difficult, even among those women who had had a mammogram in the past 12 months. This assessment of barriers, even among those who are compliant with mammography screening guidelines, would allow for the comparison of those who are compliant and those who are not on the particular barriers that are perceived by each group.

Conclusions

This study provides promise that mammography promotion activities may be appropriately placed in the ED. The Society for Academic Emergency Medicine and Public Health and Education Task Force Preventive Services Work Group issued a report in 2000 suggesting that EDs are an excellent venue for provision of certain preventive care services (Irvin, 2000). Despite this recommendation and the long wait times (and therefore opportunities) for nonurgent care in this setting, very few attempts have been made to establish programs to promote preventive services such as mammography in these settings. Practical issues such as interest by persons in this acute care setting, involvement of ED staff, and identification of specific and perhaps unique barriers to utilization of preventive services by this population may be related to this lack of intervention administration.

This study was conducted by trained data collectors and required very little staff involvement. This approach was well received by both the staff and the participants. In addition, only women or visitors with persons presenting for nonurgent complaints were surveyed. These women and visitors were experiencing long wait times and seemed eager to participate in the survey. These findings provide a solid platform from which to launch future efforts to promote preventive health interventions in an ED setting.

References

Ahmed NU, Fort J, Malin A, Hargreaves M. Barriers to mammography screening in a managed care population. Public Administration and Management. 2009; 13(1):7–39.

American Cancer Society [ACS]. The breast cancer resource center. Cancer Resource Center; 2000. Retrieved from http://www3.cancer.org/cancerinfo/load?cont.asp?st=wi&ct=5&language=english

American Cancer Society [ACS]. Cancer facts & figures 2007. Atlanta, GA: Author; 2007.

American Cancer Society [ACS]. Breast cancer facts & figures 2009–10. Atlanta, GA: Author; 2010.

Bernstein J, Mutschler P, Bernstein E. Keeping mammography referral, appointments: Motivation, health beliefs, and access barriers experienced by older minority women. Journal of Midwifery and Women's Health. 2000; 45(4):308–313.

Champion VL, Springston J. Mammography adherence and beliefs in a sample of low income African-American women. International Journal of Behavioral Medicine. 1999; 6(3):228–240. [PubMed: 16250677]

Cummings GE, Francescutti LH, Predy G, Cummings G. Health promotion and disease prvention in the emergency department: A feasibility study. Canadian Journal of Emergency Medicine. 2006; 8(2):100–105. [PubMed: 17175870]

Elmore JG, Armstrong K, Lehman CD, Fletcher SW. Screening for breast cancer. Journal of American Medical Association. 2005; 293:1245–1256.

Irvin C. Public health preventive services, surveillance and screening: The emergency departments potential. Academic Emergency Medicine. 2000; 7:1421–1423. [PubMed: 11099434]

Llovera I, Ward MF, Ryan JG, LaTouche T, Sama A. A survey of the emergency department population and their interest in preventive health education. Academic Emergency Medicine. 2003; 10(2):155–160. [PubMed: 12574014]

Mandelblatt J, Freeman H, Winczewski D, Cagney K, Williams S, Trowers R, et al. Implementation of a breast and cervical cancer screening program in a public hospital emergency department. Annals of Emergency Medicine. 1996; 28(5):493–498. [PubMed: 8909269]

McCaig, L.; Nawar, E. National hospital ambulatory medical care survey: 2004 emergency department summary; Advance Data. 2006. p. 1-29.Retrieved from http://www.cdc.gov/nchs/data/ad/ad372.pdf

National Institutes of Health. Theory at a glance. A guide for health promotion practice. 2. Hyattsville, MD: U.S. Department of Health and Human Services; 2005.

Pitts, S.; Niska, R.; Xu, J.; Burt, C. National hospital ambulatory medical care survey: 2006 emergency department summary; National Health Statistics Reports. 2008. p. 1-38.Retrieved from http://www.cdc.gov/nchs/data/nhsr/nhsr007.pdf

Rhodes KV, Gordon JA, Lowe RA. The Society of Academic Emergency Medicine Public Health and Education Task Force. . Preventive care in the emergency department, part I: Clinical preventive services—Are they relevant to emergency medicine? Academic Emergency Medicine. 2000; 7(9): 1036–1041. [PubMed: 11044001]

Rimple D, Weiss SJ, Brett M, Ernst AA. An emergency department-based vaccination program: Overcoming the barriers for adults at high risk for vaccine-prventable diseases. Academic Emergency Medicine. 2006; 13(9):921–930.

Rodriguez R, Kreider WJ, Baraff LJ. Need and desire for preventive care measures in emergency department patients. Annals of Emergency Medicine. 1995; 26:615–620. [PubMed: 7486372]

Smith-Bindman R, Miglioretti DL, Lurie N, Abraham L, Barbash R, Strzekzyk J, et al. Does utilization of screening mammography explain racial and ethnic differences in breast cancer. Annals of Internal Medicine. 2006; 144(8):541–553. [PubMed: 16618951]

Smith RA, Cokkinides V, Eyre HJ. American cancer society guidelines for the early detection of cancer, 2006. CA: A Cancer Journal for Clinicians. 2006; 56(1):11–25. [PubMed: 16449183]

Stiffler KA, Gerson LW. Health promotion and disease prevention in the emergency department. Emergency Medicine Clinics of North America. 2006; 24:849–869. [PubMed: 16982343]

U.S. Department of Health and Human Services. Healthy People 2010: Understanding and improving health. Washington, DC: Author; 2000.

Vadaparampil ST, Champion VL, Miller TK, Menon U, Skinner CS. Using the Health Belief Model to examine differences in adherence to mammography among African-American and Caucasian women. Journal of Psychosocial Oncology. 2005; 21(4):59–79.

Wei HG, Camargo CA Jr. Patient education in the emergency department. Academic Emergency Medicine. 2000; 7(6):710–717. [PubMed: 10905653]

TABLE 1

Demographic and Health Care Characteristics of the Sample (N = 197)

Variable	*n*	%
Race/ethnicity		
American Indian	1	0.5
Black	41	20.9
White	154	78.6
Married/partnered		
Yes	96	48.7
No	101	51.3
Education		
Less than high school	43	22.1
High school diploma	76	39.0
At least some postsecondary education	76	39.0
Household income		
Less than US$10,000	31	20.7
US$10,000–19,999	40	26.7
US$20,000–29,999	13	8.7
US$30,000–39,999	21	14.0
US$40,000 and above	45	30.0
Do you have health insurance?		
Yes	160	81.2
No	37	18.8
Do you have a primary care provider?		
Yes	169	85.8
No	28	14.2
How many times in the ED in last 3 months?		
0	102	53.7
1	47	24.7
2	22	11.6
3 more	19	10.0

Note. ED = emergency department.

TABLE 2

Mammography History and Interest in Assistance in Scheduling Mammography and Other Health Care Appointments While Awaiting Care in the Emergency Department (ED) (N = 197)

Mammography variable	*n*	%
Have you ever had a mammogram?		
Yes	165	84.2
No	31	15.8
Have you had a mammogram in the last year?		
Yes	94	48.5
No	100	51.5
How interested would you be in receiving information about mammography while awaiting care in the ED?		
Very interested	105	53.3
Somewhat interested	45	22.8
Not very interested	21	10.7
Not at all interested	26	13.2
How helpful would it be to have assistance with scheduling appointments for mammography or other health care while you wait for care in the ED?		
Very helpful	124	62.9
Somewhat helpful	40	20.3
Not very helpful	16	8.1
Not at all helpful	17	8.6
If you made appointments for mammography or other health care while waiting in the ED, how likely are you to go to these appointments?		
Very likely	171	87.2
Somewhat likely	15	7.7
Not very likely	7	3.6
Not at all likely	3	1.5

TABLE 3

Barriers to Having Had a Mammography in the Last Year, as Indicated by Those Who Had Not Had a Mammogram in the Past 12 Months, Arranged From Most to Least Frequent (N = 100)[a]

Variable	*n*	%
Time/competing demands		
Yes	29	29.0
No	71	71.0
Money		
Yes	26	26.0
No	74	74.0
Fear		
Yes	21	21.0
No	79	79.0
Discomfort		
Yes	18	18.0
No	82	82.0
None—no reason for not having one		
Yes	16	16.0
No	84	84.0
Transportation problem		
Yes	14	14.0
No	86	86.0
Other reason		
Yes	11	11.0
No	89	89.0
Childcare/eldercare issues		
Yes	10	10.0
No	90	90.0
No need for one		
Yes	4	4.0
No	96	96.0
Discrimination/racism		
Yes	0	0.0
No	100	100.0

Note.

[a]Participants checked all of the barriers that prevented them from having a mammogram; hence, the total is >100%.