

# Mammography Screening: Addressing Myths and Other Reasons for Noncompliance

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## Abstract

In the Kaiser Permanente (KP) Georgia Region, a program of extensive mailings, call center contacts, and other avenues of patient education has been designed to increase the number of women having mammograms and to decrease the mortality rate from breast cancer. Citing statistics from various studies nationwide and in the Atlanta area, the authors outline some reasons for patient resistance to mammography and describe the resulting development of a "patient fact sheet" and other interventions intended to increase the rate of screening mammograms conducted in our target population of KP members.

## Introduction

Breast cancer is the second leading cause of cancer deaths among women in the United States.<sup>1</sup> According to the 2001 United States Cancer Statistics published by the Centers for Disease Control and Prevention (CDC), the nationwide age-adjusted rate of breast cancer is 127.2 cases per 100,000 population for that year.<sup>1</sup> The incidence rate for the same period in Atlanta, GA, was 134.1 cases per 100,000 population.<sup>1</sup> African-Americans in Atlanta had a lower age-adjusted rate: 110.2 cases per 100,000 population.<sup>1</sup>

Screening with mammography has been shown to reduce breast cancer mortality by detecting small, nonpalpable regions of breast cancer at an early stage.<sup>2</sup> According to the 2002 Behavioral Risk Factor Surveillance System (BRFSS) (a survey conducted by the CDC), only 62.9% of age-appropriate females interviewed in Georgia reported receiving

a mammogram in their lifetime—and of these women, 63.5% had this screening examination within the past year.<sup>3</sup>

The Kaiser Permanente (KP) Georgia Region Program is directed to reach women aged 50 years and older. Inreach and outreach activities are implemented to improve access to mammography services and to increase educational awareness for clinicians as well as for KP members. These interventions are common in many KP Regions and have achieved varying degrees of success. This study addresses barriers to screening in the population who remain unscreened despite exposure to robust inreach and outreach efforts.

## Program Background and Components

The KP Georgia Region's Breast Health and Cancer Detection Program was established in 1997 to

address the breast cancer screening rate in women aged 50 and older. Steps were taken to develop a plan that would increase the screening rate by incorporating specific care initiatives implemented annually into the delivery process.

The program consists of distinct member-focused and clinician-focused interventions. The member-focused interventions include display of screening guidelines on clinic walls as a reminder for screening, breast health posters placed in women's restrooms for convenient viewing, and brochures on breast health placed in examination rooms. Articles on breast health are published in the *Partners in Health* member newsletter, and brochures on breast health are mailed annually in May to women aged 50 and older who have not received a screening mammogram since January of the prior year. Every fall, letters containing information about mammography location sites and scheduling instructions are mailed from primary care practitioners to their adult female patients who have not received a screening mammogram since January of the prior year.

In addition, from March to December, outreach phone calls to book appointments are placed by call center nurses to unscreened women aged 52 to 69 years (the population specified in the Health Plan Em-

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ployer Data and Information Set, HEDIS) to schedule a mammogram appointment or to document the reason for refusal to schedule a mammogram. A maximum of three telephone attempts are made to each person. If more than one call is needed, additional calls are scheduled one month apart to limit the likelihood of not contacting the woman. After three failed attempts, the patient's name is sent to the health care team for follow-up by letter or by telephone. Most calls are completed by October.

Practitioner interventions implemented so far include articles published in the monthly medical group newsletter to describe breast cancer screening guidelines and the procedure for ordering mammograms. Bright, orange-colored chart flags are affixed to the medical records of women who are overdue for a screening mammogram. This flag alerts health care practitioners to recommend mammography screening during medical visits, when the

practitioner can also discuss reasons why the patient has not had a mammogram. For instance, she may have had a previous "bad" or painful experience. Practitioners also receive inservice lectures about the mammography screening guidelines yearly.

Mammography screening rates for women aged 52 to 69 years old during the first five years of the program reflected measurable progress: From a preprogram screening rate of 73.8% (in 1996), the screening rate rose to 74.5% in its first year (1997) and in three of the four subsequent years, ending in a rate of 82.% for 2001. Intervening rates were 80.6% (in 1998), 84.3% (in 1999), and 83.2% (in 2001).

This observed improvement in mammography screening rates for the period 1996 to 2001 was statistically significant at the 95% level ( $p < 0.05$ ).

Despite all the interventions, however, almost 20% of the patient pool persistently remains unscreened.

**Table 1. Breast Cancer Screening Initiative: myths and other reasons explaining why women refused to have a mammogram**

Have a pacemaker	Breasts too small
Not interested	Not recommended by PCP
Bad experience	Don't believe in them
Controversy over frequency	Too painful
Fear of finding a lump	

PCP = primary care practitioner

Recently studies have examined factors influencing mammography usage (eg, age, race, ethnicity, socioeconomic status, and practitioner referral), but little is known about the reasons individual patients oppose having a screening examination and how to approach their concerns.<sup>1,4</sup> This article therefore describes the process used to identify and address these concerns.

### Methods for Identifying Barriers to Mammography

The group targeted to receive all of the outreach initiatives initially consisted of all 11,321 women who,

**Table 2. Fact sheet: women's explanations for resisting mammography**

<p><b>"Mammograms hurt."</b> To get a good picture of the breast, the breast tissue must be pulled from the chest wall and pressed down for a few seconds. Some women find this to be uncomfortable. To help ease the discomfort, we suggest that you:</p> <ul style="list-style-type: none"> <li>• Take ibuprofen two hours before your appointment.</li> <li>• Cut down or stop eating/drinking caffeine three to five days before the appointment.</li> <li>• Make your appointment for one to two weeks after the first day of your period.</li> </ul> <p><b>"No one in my family has breast cancer."</b> More than 75% of women diagnosed with breast cancer have no family history of this disease. The two biggest risk factors for breast cancer are being a woman and advancing age.</p> <p><b>"I'm too young/old to get breast cancer."</b> As a woman ages, her chance of getting breast cancer increases. Seventy-five percent of breast cancer diagnoses are made in women over the age of 50.</p> <p><b>"If I am going to get breast cancer, there is nothing I can do about it."</b> We don't know what causes breast cancer, but we do know that the earlier the breast cancer is found, the more treatment options are available. And the earlier a breast cancer is found, the better the chance of saving the breast and the woman's life. Women with breast cancer diagnosed early have a five-year survival rate greater than 96%. Early detection is important.</p>	<p><b>"Having too many mammograms can cause breast cancer."</b> The amount of radiation exposure from a mammogram is 0.2 rads—less than received for a dental x-ray film.</p> <p><b>"I don't have time to get a mammogram."</b> If a family member needed an exam, you probably would ensure that an appointment was made. You are important. Make time to take care of "YOU."</p> <p><b>"My breasts are too small to get a mammogram."</b> Everyone has a different body shape. The mammography technician is trained to do mammograms on women with different-sized breasts.</p> <p><b>"I have a pacemaker."</b> Mammograms will not hurt your pacemaker. Just make sure to let the technician know that you have one.</p> <p><b>"I am confused about how often I should get a mammogram."</b> We recommend:</p> <ul style="list-style-type: none"> <li>• Women aged 40 and older should get a mammogram every one to two years.</li> <li>• Women at <b>high risk*</b> should get a mammogram every year. This practice should begin five years before the age your mother or sister was diagnosed.</li> </ul> <p><b>*High risk:</b> You have a history of breast cancer; or your mother, sister, or daughter has had breast cancer; or someone in your family has the breast cancer gene.</p>
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in the first quarter of 2002, were aged 50 years or older, had been continuously enrolled in the Health Plan for at least the past two years, and had not received screening mammography since January 1, 2001. The outreach initiatives included receiving a mailed brochure

... women underestimated their risk for breast cancer and did not understand that the risk of breast cancer increases with age.<sup>4</sup>

about breast health, having an orange flag placed in their medical record, and receiving telephone contact by a call center nurse. By October of the same year, 3579 (31.6%) of the 11,321 women remained unscreened. These 3579 women thus became the new target population for receiving additional outreach. During a brainstorming session with the Breast Cancer Screening Work Group (BCSWG), we decided to examine why these 3579 unscreened women had not sought the screening examination.

Because the call center nurses documented the responses of the women who declined to schedule the screening examination, we considered these responses as constituting a database of “reasons” for analysis (Table 1). A review of those responses indicated that beliefs or past experience regarding breast health or mammography screening served as barriers to early-detection behavior. These findings prompted the patient

education coordinator, in collaboration with the BCSWG, to develop a fact sheet that would serve as a tool for clarifying false beliefs and emphasizing the benefits of screening mammography (Table 2).

The fact sheet was included with the annual letter mailed to the 3579 women in October 2002—signed by each woman’s primary care practitioner—indicating that a mammogram was needed. The letter also included the KP *Health Line* phone number for scheduling an appointment and a list of locations where mammograms could be obtained.

### Results and Discussion

During the period November 11, 2002, through February 9, 2003—when use of the fact sheet was implemented—441 (12.32%) of the 3579 women in the study group had a screening mammogram. Of these 441 women, 107 had not received screening mammography since 1995, and 97 had no record of ever receiving mammogram while enrolled in the KP system (Table 3).

The reasons given by women in our study for not obtaining mammograms echoed those reported in recent literature.<sup>5-7</sup> Specifically, women underestimated their risk for breast cancer and did not understand that the risk of breast cancer increases with age.<sup>4</sup>

This feedback was precisely the type that encouraged KP to develop an outreach tool addressing existing myths and other reasons for resisting mammography. We could not determine which of the initiatives, if any, affected the decision of the 441 women to be screened. However, the KP Georgia Region believes that barriers to screening must be continually identified and that approaches must be developed to address those barriers.

In May 2003, therefore, the fact sheet was formatted into a brochure and is now used as an annual reminder for the target group of women to schedule screening mammography for themselves at the recommended intervals. ♦

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**Table 3. Rate of screening mammography among women screened during the study period**

Year	Number (%) of women screened
2000	228 (51.7)
1999	63 (14.3)
1998	23 (5.2)
1997	13 (2.9)
1996	7 (1.6)
pre-1995	10 (2.3)
No record	97 (22)
Total	441 (100)