

## Patient Navigation to Improve Breast Cancer Screening in Bosnian Refugees and Immigrants

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**Abstract** Refugee women have low breast cancer screening rates. This study highlights the culturally competent implementation and reports the outcomes of a breast cancer screening patient navigation program for refugee/immigrant women from Bosnia. Refugees/immigrant women from Bosnia age 40–79 were contacted by a Serbo-Croatian speaking patient navigator who addressed patient-reported barriers to breast cancer screening and, using individually tailored interventions, helped women obtain screening. The proportion of women up-to-date for mammography was compared at baseline and after 1-year using McNemar's Chi-Square test. 91 Serbo-Croatian speaking women were eligible for mammography screening. At baseline, 44.0% of women had a mammogram within the previous year, with the proportion increasing to 67.0% after 1-year ( $P = 0.001$ ). A culturally-tailored, language-concordant navigator program designed to overcome specific barriers to breast cancer screening can significantly improve mammography rates in refugees/immigrants.

**Keywords** Refugees · Breast cancer · Mammograms · Patient navigation

### Introduction

Since 1990 when Harold Freeman introduced patient navigation to improve breast cancer care in African American women in Harlem, New York [1], it has been successfully used to improve cancer prevention, diagnosis and treatment in disadvantaged populations [2–4]. Refugee and immigrant women are particularly vulnerable populations due to hardships of migration, conditions prior to immigration and lack of healthcare access after forced migration [5]. Many do not speak English, have dealt with war trauma and never had cancer screening prior to coming to the United States. Some are unwilling to undergo screening due to cultural beliefs, embarrassment, apprehension about discrimination [6], and fear of getting a cancer diagnosis [7]. A study done in a Texas refugee health screening clinic showed that 86% of newly arrived refugee women eligible for breast cancer screening from Cuba, Bosnia and Vietnam, had never had a mammogram [8].

During the last two decades, 168,644 refugees from Bosnia and other former Yugoslavian counties have immigrated to the United States [9]. Over 800 of these refugees and immigrants receive their medical care at Massachusetts General Hospital Chelsea HealthCare Center (MGH Chelsea). Analysis of preventive cancer care at MGH Chelsea revealed that women speaking Serbo-Croatian had lower mammography rates (44%) as compared to English (65%) and Spanish (65.5%) speaking patients. This report presents the effects of a culturally tailored navigator program for breast cancer screening in Serbo-Croatian speaking women refugees and immigrants.

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## Methods

The study setting was MGH Chelsea, an urban community health center in Massachusetts. Women were eligible if they were 40–79 years of age, self identified as speaking Serbo-Croatian, receiving primary care at the health center and overdue or had never had a mammogram. Patients were excluded if they were acutely ill, had dementia, metastatic cancer, schizophrenia, end stage disease or bilateral mastectomy. All study activities were approved by the MGH Institutional Review Board.

## Intervention

A young bi-lingual college educated woman from former Yugoslavia was recruited as the patient navigator. She received extensive training in breast cancer prevention, treatment and patient navigation. She worked with the social worker/training coordinator learning to develop trusting relationships with patients and use motivational interviewing techniques to connect with and coach them. She learned to schedule and provide support at patients' mammogram appointments. The navigator was supervised by the PI, the training coordinator and community health team director.

Initial patient contact was made over the phone or in person in the patients' native language. The navigator talked with patients about preventive care and the importance of routine mammograms. She explored each patient's specific barriers to screening and supported them in scheduling a mammogram. Often the process of convincing a patient to go for a mammogram took several phone calls of encouragement, reassurance, calming fears, and stressing the importance of taking care of their own and their families' health. To further reach out to women, the navigator made home visits and organized breast health educational group sessions in community settings where women supported each other about getting their mammograms.

Interventions were tailored to individual patients' needs to ease the process of undergoing screening. Interventions might include scheduling appointments, making reminder calls, arranging transportation, resolving insurance issues and/or accompanying patients who were afraid or felt unable to navigate the mammogram appointment on their own. As part of this intervention, culturally appropriate educational materials in Serbo-Croatian were developed with input and feedback from the women.

## Data Analysis

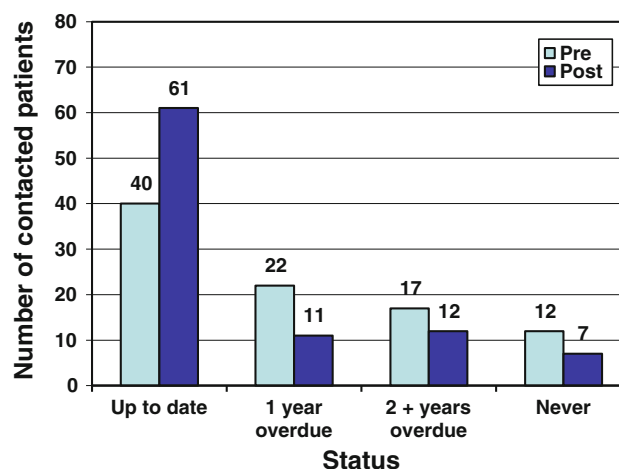
Patient characteristics and baseline mammography data were obtained from an electronic central data repository at

Partners Healthcare. The primary outcome was the proportion of patients who completed a mammogram in the prior year and after 1-year of follow-up. McNemar's Chi-square test was used to compare the proportion of patients screened before and after the implementation of the patient navigator program. Chi-square analyses were used to explore any differences in demographic characteristics (re-coded into bivariate variables) between patients completing screening and not completing screening.

## Results

Of 95 self-identified Serbo-Croatian speaking women eligible for breast cancer screening, four moved or were no longer receiving care at MGH Chelsea. Mean age of participants was 54 years (median = 52, range: 40–78); 73% were married, 56% identified as Muslim, 58.3% finished high school or had some college and 48% had private insurance. Participants had been patients at MGH Chelsea on average 5.5 years (range 0–10 years). At baseline, 44% of Serbo-Croatian speaking patients had received a mammogram within the last year. After 1-year of follow-up, the proportion of patients with screening in the past year increased to 67% (McNemar's Chi-square:  $P = 0.001$ ). Figure 1 shows mammography status of women enrolled in the navigator program at baseline and after 1 year. The number of women who were up-to-date with mammography screening increased from 40 to 61. Of twelve Serbo-Croatian speaking women who had never had mammogram, five obtained it during this year of the patient navigation program.

Chi-square tests of demographic characteristics and mammography completion at baseline and follow-up were conducted. Educational status (high school or more) was



**Fig. 1** Mammogram status of women pre- and post-research year ( $n = 91$ )

associated ( $P = 0.043$ ) with up-to-date mammography at the end the study. However, age, marital status, religion, insurance status, or number of years as a patient at the MGH Chelsea at the start and end of the study were not associated with mammography status.

## Discussion and Conclusion

Despite the fact that many Serbo-Croatian speaking women in the study had been in the country and receiving care at MGH Chelsea for over 5 years, baseline data showed that only 44% had received a mammogram within the last year. Therefore it was critical that the first patient contacts made over the phone or in person, begin to develop a trusting relationship. Of particular note is that the process of convincing patients to go for a mammogram often took several navigator phone calls, consisting of encouragement and reassurance, allaying the patient's fears, highlighting the quality of the US medical system and stressing the importance of taking care of their own and their families' health and well-being. To further reach out to women, the navigator organized breast health educational group sessions in community settings, particularly the church attended by many of the patients (and the navigator), and even made home visits.

Using this approach, patient navigation improved mammography rates in refugees and immigrants from the former Yugoslavia. Women responded favorably to the intensive attention given them by the navigator who shared their culture and language and whose sincerity and genuineness helped form trusting relationships. During only one year with this program we were able to raise screening rates and eliminate the disparity that existed between these women and English and Spanish speaking patients at the health center.

A limitation of this study is that it was performed in one health center, used one patient navigator and targeted refugees from one country, therefore, it might not be generalizable to other populations in other settings. We did not explore women's experiences of the intervention and what aspects most influenced their decision. We could not always distinguish which women were refugees and which were immigrants. However, all women in our study had left Bosnia during or after the war and had similar experiences in their home country and during migration, regardless of their official immigrant status.

Although there have been several studies showing the efficacy of patient navigation in cancer prevention and care [2–4] this is one of the first to present successful use of a patient navigation approach to improve breast cancer care in refugee women. To be successful the patient navigator program has to be culturally tailored to the population served. One of the key cultural components of this program

was that the navigator was a woman who not only spoke the language, but was born in the same country and displaced because of the Bosnian war just like the women she worked with.

In addition, some studies have suggested the importance of the navigator's her (him)self as being critical to success in this role [10], and this navigator was like a "member of the family" to participants. The navigator shared her knowledge about health care and beliefs around the screening in Bosnia and compared it to the US system and beliefs.. This helped frame why something that might not have seemed necessary when the women lived in Bosnia can be seen as important now that they live in America. Her knowledge of the culture, history and understanding the beliefs and specific barriers refugee women faced, enabled the navigator to develop trusting relationships and provide emotional and logistical support to overcome barriers to care and facilitate access to cancer prevention for the women.

This study has reinforced the idea that culturally tailored navigator programs can be used successfully with refugee populations to improve breast cancer screening and reduce disparities. Future studies should explore similarities and differences in barriers and in how refugee women from different countries perceive prevention and health care. Further understanding of what aspects of patient navigator interventions most support these vulnerable women to engage in breast cancer screening and how these women experience patient navigation is needed to develop effective programs for different refugee populations and decrease disparities that currently exist.

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