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Community-Based Free Prostate Cancer Screening Program

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Abstract

Background: The objective of this study was to demonstrate both the feasibility and importance of a bilingual community-based educational program that offers free prostate cancer screening to Hispanic and black men in a high-risk community.

Methods: The East Harlem Partnership for Cancer Awareness (EHPCA) brought together an academic medical center, public hospital, and two community health centers to offer monthly free prostate cancer screening programs in neighborhood community health centers. The programs included an educational component in Spanish and English, digital rectal examinations (DRE), and blood testing for prostate-specific antigen (PSA).

Results: Participant evaluations of the program demonstrated that the sessions were informative and helpful as well as successful in increasing knowledge about prostate cancer. Almost 90% of the participants chose to undergo a digital examination and PSA test; 4 of 150 participants were diagnosed as having prostate cancer.

Conclusion: Offering free prostate screening is a successful method of reaching men who might otherwise not be tested. We found that men were willing to be tested and follow-up with care, as needed.

Keywords

Prostate cancer; prostate screening; minorities; cancer prevention and control

Prostate cancer is the second leading cause of cancer deaths in men in the United States.¹ Based on this statistic, screening for prostate cancer has been advocated to ensure earlier diagnosis and enhanced survival, but in practice remains a controversial topic.^{2,3} The American Cancer Society (ACS), among many other organizations, recommends an annual serum PSA testing and a DRE starting by age 50 for men with a life expectancy of at least 10 years. Men at higher risk, such as those of African-American ancestry and those with a family history, should start screening at the age of 45. In 2001, in the United States, 57% of men above 50 years of age were reported as having PSA testing and 56% received a DRE.⁴ Studies from the Surveillance Epidemiology and End Results database and the ACS National Prostate Cancer Detection Project indicate that the widespread use of PSA testing has resulted in a dramatic decline in the diagnosis of metastatic disease and more frequent diagnosis of localized cancers compared with historical controls.^{5,6}

Disparities in prostate cancer (and screening) exist for blacks and Hispanics. Across all cancers, blacks are more likely to develop and die from cancer, with the cancer death rate 30% higher compared with whites.⁷ For prostate cancer specifically, blacks have the highest incidence in the world.^{7,8} The 5-year survival rate for prostate cancer in blacks has been consistently lower than that of whites since 1974, despite an increase in overall percent survival.⁹ Blacks report both a family history of prostate cancer more often than whites and are diagnosed at a younger

age.¹⁰ However, blacks are also typically less knowledgeable than whites regarding prostate cancer, often as a result of differences in educational levels and personal experience with prostate cancer screening.¹¹ For Hispanic men, prostate cancer is the most common cancer, yet Hispanic patients are less likely to be identified by screening and more likely to present with symptoms.^{12,13} Advanced-stage prostate cancers are detected more frequently in blacks and Hispanics than in non-Hispanic whites, which can be accounted for by socioeconomic, clinical, and pathologic factors among Hispanics but not blacks.^{14,15} Both blacks and Hispanics generally present with higher stages of disease, that is, progression beyond the prostate, than whites. Thus, they are considerably more difficult to treat and are therefore more likely to suffer disease relapse.¹⁵ Yet, when the appropriate factors were adjusted for, such as socioeconomic and pathology, studies have demonstrated that race was not significantly associated with a poorer clinical outcome or lowered survival rate for blacks than whites.^{16,17} Together these data support the need for education and screening in these populations to lower the stage at diagnosis and enhance the likelihood for successful local treatment.

Many barriers to general or prostate cancer screening have been reported, including time constraints, financial restrictions, language, lower educational attainment, perceptions on cancer survivability, and ethnic beliefs.^{18,19} Time restraints were the most frequent self-reported reason men gave for failure to participate. Follow-up reminders, such as a phone call, were found to increase participation. Financial reimbursement of the cost associated with a screening was also found to be critical, which indicates that financial constraints play a large role in seeking screening.¹⁸

Increasing knowledge of prostate cancer in conjunction with screening is one of the key methods available that can improve prostate cancer outcomes among races, as seen in studies with blacks and Hispanics. For example, prostate cancer educational seminars in community settings were found to substantially increase awareness and knowledge on prostate cancer in blacks.⁸ Whereas 58% of blacks are receiving PSA testing, which is comparable to the national average for all men, only 50% were reported as having an annual DRE²⁰ and studies have shown that both the PSA and DRE should be performed together for maximal efficacy.²¹⁻²³ In one study, only 53% of Hispanics surveyed ever reported having a DRE and only 68% had heard of the procedure.²⁴ Increased education about prostate cancer and screening options is critical for populations at risk, such as blacks and Hispanics. Currently, there is limited information on Hispanics and prostate cancer screening, which further complicates the situation because the magnitude of the disparity in the Hispanic population is not well known.

East Harlem, New York, is a community composed primarily of blacks and Hispanics of a lower socioeconomic status, a significant factor for poorer cancer outcomes. Although there may be some genetic components, such as greater susceptibility to cancer or increased malignancy of prostate cancer, the fact remains that educational disparities, financial constraints, and barriers to health care resources limit prostate cancer screening in the East Harlem community. The Prostate Screening Program of the EHPCA seeks to address the need for prostate cancer screening and improved outcomes in the black and Hispanic populations. The purpose of this article is to demonstrate the feasibility and importance of a bilingual, community-based educational program that offers prostate cancer screening to Hispanic and black men in a high-risk community.

METHODS

Community participation in project

The EHPCA was formed in 1999 to address disparities in cancer screening and prevention. As described elsewhere,²⁵ the partnership further developed collaborations between an academic medical center (the Mount Sinai School of Medicine), a public hospital, and two community

health centers. These four sites, combined, deliver the majority of primary care to East Harlem residents. The overall aims of the EHPCA are to educate the East Harlem community to increase screening rates and to identify barriers to screening and appropriate health care for prostate cancer through free educational seminars and screenings (including both PSA and DRE) at community locations.

The EHPCA was assisted by its Community Advisory Board (CAB). The CAB was formed in 1999, before the submission of any grants. Through the Mount Sinai community relations department, and with the leadership at our partnership sites, local community members, clergy, politicians, social service agencies, senior citizen centers, and other grassroots leaders were asked to join. CAB meetings, held in the community, are conducted quarterly. All aspects of our work have been guided by members of the CAB. As the Prostate Screening Program was developed, our CAB members contributed to the content of the educational materials and assisted in publicizing the events, recruiting participants, and ensuring that the prostate educational programs were well received by the community.

The Screening program

The prostate screening program was held at least monthly in East Harlem community health centers and advertised to the East Harlem community in a variety of formats: newspaper, posters, distributing flyers on the street, during weekly presentations in the community, one-on-one sessions, and word-of-mouth through friends and family. We also used radio announcements, as well as flyers in neighborhood barbershops and at the livery cab offices. To encourage participation, we used promotional offers such as free food and a surprise gift bag. The program consisted of two parts, an educational seminar and a screening session. Although the ACS recommends screening begin at age 50 (or 45 if in a high-risk group), we did not limit participation. Generally, men were above the recommended age, but there were a few men screened below the age of 40.

A physician educator conducted the educational seminar, which was also translated into Spanish by a health educator. During the development of the educational programs, the material was translated by a bilingual staff member, and backtranslated. Although the material was prepared for a sixth-grade reading level, all of the material was presented orally to assist in comprehension. Before the start of the educational seminar, the participants signed a clinical consent form and then answered an anonymous registration survey and five item pretest on prostate cancer knowledge. The institutional review board waived the need for research consent. The seminar began with a slideshow, developed in conjunction with the ACS, presenting facts on prostate cancer in both English and Spanish, including (1) current statistics on prostate cancer relevant to the underserved population; (2) understanding the anatomy and physiology of the prostate; (3) mechanism of cancer (growth, metastasis); (4) signs and symptoms of prostate cancer; (5) barriers to screening; (6) risk factors; (7) prevention with respect to diet, lifestyle, and screening; (8) types of screening and their importance; (9) procedure for a positive screening result; and (10) several alternate cancer resources (e.g., phone, internet) followed by a question-and-answer period. Print educational materials on prostate cancer and other common health issues were also available for the participants. At the end of the educational seminar, the participants completed a posttest on prostate cancer knowledge, which was identical to the pretest that was previously administered. The participants also completed program evaluations. Health educators assisted participants, individually, with the completion of the printed forms.

Staff from Mount Sinai and the local community health center was responsible for promoting the event as well as running the screening sessions, performing the DREs, and drawing blood for PSA testing, the cost of which was paid for by the Foundation for Medical Evaluation and Early Detection. The results of the clinical examinations were mailed to the addresses provided

by the participants. When warranted, follow-up biopsies were offered and performed at the Mount Sinai School of Medicine (by SJH).

We report here the data collected (registration information, pre- and posttest data, and evaluations) for the period from April 2002 through May 2003. During this 14-month period, 150 men completed the pre- and posttests. Attendance at each program ranged from 2 participants to 20. Weather was often a confounding factor, with lower attendance in very cold or very hot weather. Analyses were conducted with SPSS software (Version 11.5) and included frequency distributions and paired *t*-tests (pretest and posttest knowledge scores).

RESULTS

The participant breakdown ($N = 150$) by ethnicity reflected that of the East Harlem community and was composed primarily of Hispanics (59%) and blacks (31%); 12 were white and 2 reported other ethnicity. In addition, 66% lived outside of East Harlem and more than half of the participants were identified as Spanish speaking (56%). The ages spanned from 34 to 86 years old (a few men were below the recommended screening age), with a mean age of 58 years. The uninsured rate was high for both black participants (50%) and Hispanic participants (53%). When asked about screening, only 28% had never been screened. However, only 40% of men who reported previous screening were current for having had both a DRE and PSA test within the past year.

Most participants were recruited to the prostate screening program by an advertisement placed in the newspaper, flyers/posters distributed in the community, or through word-of-mouth by friends and family (> 70%). Another significant proportion of participants heard of the prostate screening program through “other means,” which includes methods such as promotion during one-on-one health counseling sessions and in neighborhood barbershops. The pretest and posttest demonstrated a general improvement in knowledge on prostate cancer after the educational seminar, from 62.9% correct to 82.5% correct ($P < .001$; Table 1).

Participant evaluations of the program generally demonstrated that the men felt the program was both informative and helpful, with 98% of participants responding that the program was easy to understand, 89% reporting that the presentation was informative, and 91% responding that they would recommend this program to others. Several participants also expressed interest in health programs on other topics and would take home materials that we provided. A few of the participants brought their wives and some inquired about programs for their wives. After the educational component of the program, almost 90% chose to be screened via both PSA testing and DRE; the remaining chose only a PSA or DRE test. Of the 150 participants who underwent any screening (DRE, PSA, or both), 14 had an abnormal DRE (only 2 of which were suspicious) and 15 had an elevated PSA. Only 121 participants had complete information linking results with ethnicity (Table 2). All were contacted for follow-up and eight patients choose to have a biopsy preformed at the Mount Sinai Medical Center. Of these, four men were diagnosed with prostate cancer.

DISCUSSION

Advertising was a key factor in determining participation. Advertisements were made in both English and Spanish, a consideration that was essential because Hispanics comprise nearly half of the East Harlem community²⁶ and more than half of the participants identified Spanish as their primary language. Our data indicated that the newspaper was the most effective means of recruiting to the prostate screening program, followed by the distribution of flyers and passing the word to friends and family. Interestingly, “other means,” namely, word of mouth, were the next most common way participants were recruited to the program, which

demonstrates the unpredictable nature of advertising and emphasizes the need to use a variety of advertising methods when announcing the program. This is especially important given the fact that illiteracy or poor literacy was an issue for some of the participants. Recently, more participants have been reporting that they heard about the program through the radio, which is utilized with varying frequency depending on ethnicity.²⁷

Although the prostate screening program was free, extensive involvement within the community was needed to get men to come to the screening program. The programs were held at well-known community health centers and advertised through community newspapers and local radio stations. This may also have contributed to attendance from men outside of the immediate East Harlem community. Approaching the community through familiar and trusted institutions, such as a popular local Spanish newspaper, not only aims the advertisement at the target population, but it also gives a certain sense of authenticity and quality assurance. Mistrust of the medical community is one of the major known barriers that prevents some black and Hispanic patients from seeking health care, including prostate cancer screening.^{28,29} Undocumented Hispanics fear deportation and often forge an imaginary link between medical establishments and the government. The inability to speak English and trust of traditional remedies also contribute to mistrust, a problem that is especially seen in East Harlem.²⁸

One of the major reported reasons that men fail to participate in screenings are related to time problems,¹⁸ which can include financial difficulties (would have to take time off from work), information/education limitations (because it does not seem important enough), and health care access issues (do not have a regular physician). The prostate screening program sought to streamline the process for participants in several ways. The screening program was held during the evening, after conventional work hours. The simple fact that the prostate screening program was free permitted many of the men to participate, especially because more than half of the participants reported they had no insurance. The additional benefit of having a physician on site for the screening helped to ease the burden on the participants because they did not have to locate a physician on their own. The fewer tasks the participant has to complete, the greater the likelihood that the participant will complete all of the tasks. In this case, all the participant had to do was attend an educational seminar and undergo the screening. It is also important that the material presented during the educational seminar and question-and-answer session was relevant, up-to-date, easy to understand, and in both English and Spanish.

Overall, participants were very satisfied with the prostate screening program and have told their friends and family. This is evidenced by the fact that 90% of the men decided to be screened following the educational presentation, and of those, about 90% agreed to both the DRE and PSA. Given the underserved nature of the population in East Harlem, we were surprised that only 27% of the participants had never been screened before, indicating that in addition to ours, efforts had been made to reach out to this population by other groups. Along the same lines, baseline knowledge about prostate cancer was higher than we expected (pretest score of 62.9%). Both of these points must be taken in the context of the potential bias of the sample, however. These are men who sought a screening intervention, 70% of whom had participated in a screening intervention before. That said, the educational program did improve the knowledge base by almost 20 percentage points. Furthermore, because the majority of the participants were not adherent to ACS screening guidelines related to annual screening, there is obvious room for enhancement of understanding through the maintained presence of the educational program.

The success of the program has moved us to considering expansion into new venues to host the program, namely to move out of the health center environment and into community-based locations, such as churches. We are also looking into additional recruiting efforts, such as recruiting famous prostate cancer survivors to attend and speak during the program and

tailoring advertisements to newspapers catering to the African-American community to further assist this at-risk population. Television is another untapped media that provides a major source of health information for people of all ethnicities and is second only to the advice of health professionals.²⁷ Finally, to ensure yearly participation we are contacting past participants by mail in 3-month blocks alerting them to the upcoming screening dates.

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Table 1

pretest and posttest Questions

Question	pretest (% correct)	posttest (% correct)
Please check two types of tests used to detect prostate cancer.	52.0	80.7
What are some symptoms a man may experience if he has prostate problems?	58.7	78.7
African-American men have one of the highest rates of prostate in the world.	62.3	85.3
Surgery is the only treatment for prostate cancer	69.3	69.3
Men who eat less animal fat in their diet can lower their risk of prostate cancer.	70.0	86.0
Total Score ($n = 92$; $P < .001$)	62.9	82.5

Table 2

demographic and Clinical Findings

Race/Ethnicity	Total Number	dRE Normal	dRE Abnormal	pSA Normal	pSA Abnormal
Hispanic	72	60	8	64	5
Black	38	31	5	31	7
White/Other	11	10	0	8	2
Total	121	101	13	103	14

Note. Based on 121 participants; 8 biopsies performed, 4 cancers detected; 94% chose to have a DRE (7 did not); 97% chose to have a PSA (4 did not).