

Preparing African-American Men in Community Primary Care Practices to Decide Whether or Not to Have Prostate Cancer Screening

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Background: This study was a randomized trial to test the impact of an informed decision-making intervention on prostate cancer screening use.

Methods: The study population included 242 African-American men from three primary care practices who were 40–69 years of age and had no history of prostate cancer. Participants completed a baseline survey questionnaire and were randomly assigned either to a Standard Intervention (SI) group (N=121) or an Enhanced Intervention (EI) group (N=121). An informational booklet was mailed to both groups. EI group men were also offered a screening decision education session. Two outcomes were considered: 1) complete screening (i.e., having a digital rectal exam (DRE) and prostate specific antigen (PSA) testing), and 2) complete or partial screening (i.e., having a PSA test with or without DRE). An endpoint chart audit was performed six months after initial intervention contact. The data were analyzed via exact logistic regression.

Results: Overall, screening use was low among study participants. EI group men had a screening frequency two times greater than that of SI group men, but the difference was not statistically significant: 8% vs. 4% (OR=1.94) for complete screening, and 19% vs. 10% (OR=2.08) for complete or partial screening. Multivariable analyses showed that being in the EI group and primary care practice were significant predictors of complete or partial screening (OR=3.9 and OR=5.64, respectively).

Conclusion: Prostate cancer screening use may be influenced by exposure to decision education and the influence of screening-related primary care practice factors.

Key words: decision-making ■ decision support techniques ■ mass screening ■ primary healthcare ■ prostatic neoplasms ■ randomized, controlled trial [6 MeSH]

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INTRODUCTION

In 2005, there will be an estimated 232,090 new cases of prostate cancer and 30,350 deaths from this disease in the United States.¹ Prostate cancer is often detected through screening. However, screening for prostate cancer is controversial. Proponents of prostate cancer screening believe that screening with the combination of routine digital rectal examination (DRE) and prostate-specific antigen (PSA) testing is justified for men who have a reasonable life expectancy, particularly those at increased risk on the basis of race and family history.^{2,3} They argue that combined DRE and PSA testing is effective at identifying men with early prostate cancer. They also assert that men who are diagnosed with and treated aggressively for localized prostate cancer have higher survival rates as compared to men diagnosed with late-stage disease.^{4,5} The American Cancer Society and the American Urological Association recommend that healthcare providers offer annual DRE and PSA testing for men who are ≥50 years of age.^{1,6} They also suggest that screening may be initiated at age 45 for African-American men and those who have a family history of prostate cancer.

Caution has been urged regarding prostate cancer screening for several reasons. First, randomized trials have not yet demonstrated that the detection and

treatment of early disease reduces mortality.^{7,8} Results concerning screening efficacy from randomized trials that are now underway are not yet available.⁹⁻¹¹ In addition, indolent tumors that may not have harmed the patient could be detected through screening; and treatment that is unnecessary and can cause serious adverse side effects (e.g., impotence, incontinence, bowel injury) could follow.^{12,13} Guidelines put forward by the U.S. Preventive Services Task Force (USPSTF), the American College of Physicians and the Canadian Taskforce on the Periodic Health Examination do not recommend routine prostate cancer screening.¹⁴⁻¹⁶

While there is no consensus on whether prostate cancer screening should be performed routinely, guidelines agree that objective information about the potential benefits and harms of prostate cancer screening should be provided to asymptomatic men. The USPSTF explicitly recommends that counseling be provided to facilitate informed decision-making about prostate cancer screening. Specifically, the USPSTF calls for “discussion of the uncertainty that precludes a clear recommendation and clinician assistance in determining their preference for or against action in the face of uncertainty.”¹⁷ This recommendation makes explicit the notion that helping people make decisions entails both providing information and clarifying personal values.^{18,19} It is important to note, however, that little guidance has been provided regarding how men can be prepared to make an informed decision about prostate cancer screening.

In this paper, we present results from a randomized, controlled trial designed to test the effect of decision education, an informed decision-making method, on prostate cancer screening use among African-American men. The study also aimed to identify any participant characteristics that might be predictors of screening.

METHODS

In 1997, Thomas Jefferson University received a grant from the Quality Care Research Fund of the Aetna Foundation to develop and test a decision education intervention to facilitate value-based decision-making about having a prostate cancer screening examination. The study, which was approved by the Institutional Review Board of Thomas Jefferson University, recruited 242 consenting African-American men ages of 40–69 from three community-based primary care practices in Philadelphia. Two family medicine physicians participated from the first practice, which was located in North Philadelphia. Two internal medicine physicians and one oncologist participated from the second practice, located in West Philadelphia. Finally, two family medicine physicians participated from the third practice, which was

located in the Germantown area of the city.

At the time this study was initiated, the American Cancer Society recommended offering prostate cancer screening to asymptomatic men ≥ 50 years of age, and suggested that screening be offered to men at increased risk (i.e., African-American men and men with a family history of prostate cancer) beginning at age 40.²⁰ Consequently, eligibility for this study was restricted to patients of the participating practices who were African-American men, ≥ 40 years of age, had no history of prostate cancer or benign prostate hyperplasia, had not undergone a prostate biopsy or prostate ultrasound, had visited one of the participating practices within two years prior to study initiation, and had contact information available at the practice.

Baseline Survey

Eligible patients were asked to complete a baseline survey questionnaire by phone or by responding to a mailed questionnaire (see Appendix for text of baseline questionnaire.) The telephone survey was administered by trained interviewers from a professional survey company—Mathematica Policy Research Inc., Princeton, NJ. Questionnaire administration was carried out in six waves, between August 1999 and July 2000. The baseline survey included a brief screener to verify eligibility, as well as a number of items that operationalized constructs grounded in the Preventive Health Model (PHM).²¹

Drawing on earlier health behavior models (i.e., Health Belief Model, Theory of Reasoned Action, Social Cognitive Theory), the PHM was originally conceived in the late 1980s²² to identify both internal and external factors that influence health-related action. The PHM also incorporated the notion that observed behavior reflects the dynamic interplay of representations that are part of the self-system. According to the PHM, the self-system includes sociocultural background (e.g., experience related to demographic and socioeconomic characteristics, personal and family medical history, and past health behavior); cognitive and affective representations about disease, risk and related health behaviors; and the social support and influence of significant others, including family members and healthcare providers.²³ The PHM has been useful in predicting outcomes, such as cancer-screening intention and utilization.^{24,25}

The original model assumed that when facing a given health problem (e.g., risk for chronic disease), people form an intention to act (e.g., to screen or not to screen) based on the interaction of different representations operating in the self-system. Implementation of an action plan and outcomes appraisal follows, and experience, in turn, shapes the self-system.²¹ Further conceptual development of the PHM in light of

multiattribute theory²⁶⁻³¹ has led to an elaboration of the model to include decision-making about behavioral alternatives. This process is viewed as including preference clarification and behavioral alternative selection. The current form of the PHM is shown below in Figure 1.

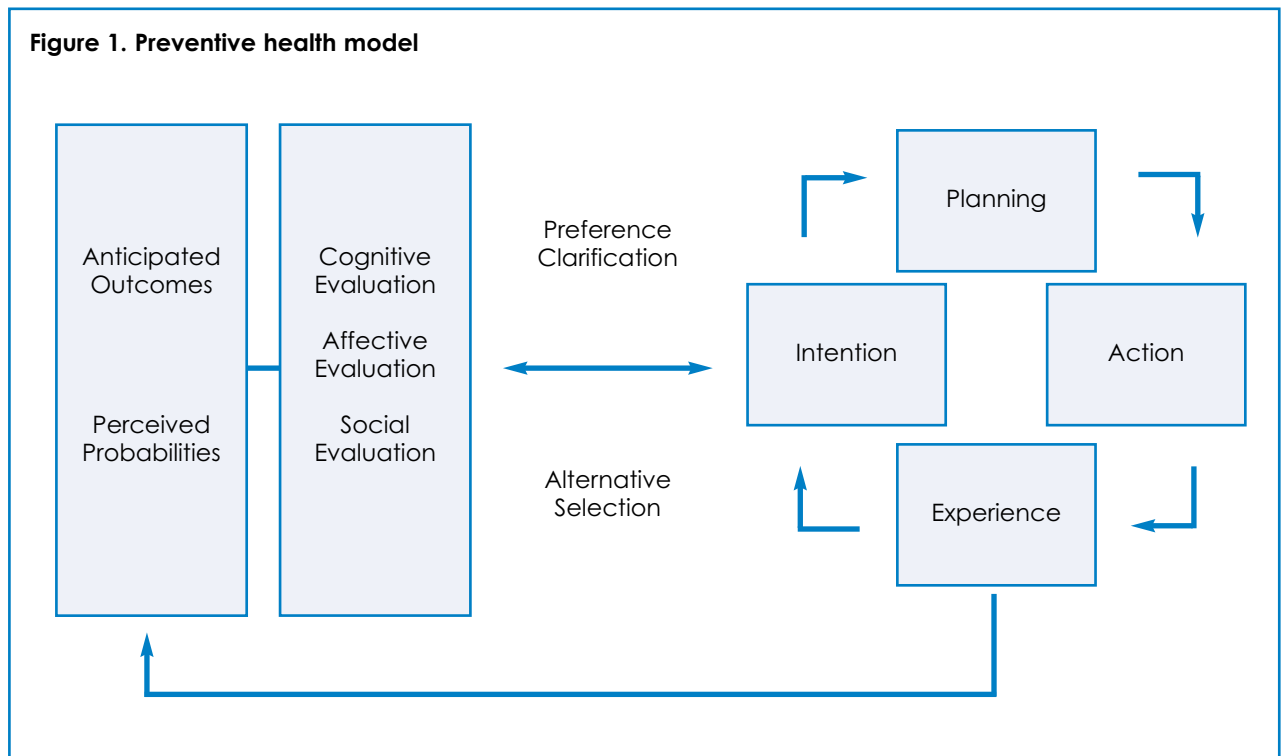
In accordance with the PHM, survey data were collected on personal background characteristics (including sociodemographics), family history of prostate cancer, and personal history of prostate cancer screening. The survey also included a number of items on personal attitudes and beliefs about prostate cancer and screening, each measured on a four-point Likert-type scale (1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree). Based on *a priori* defined constructs and subsequent factor analysis, four scales were defined: perceived salience and coherence of screening (eight items, Cronbach's $\alpha=0.80$), worries and concerns about prostate cancer and screening-related risks (seven items, $\alpha=0.63$), perceived susceptibility to prostate cancer (three items, $\alpha=0.66$), and intention to have prostate cancer screening (four items, $\alpha=0.88$). Scale scores were computed as an average of scale items and only when more than half of the items had no missing values. Before the computation of each scale, items were recoded as necessary, so that higher scale scores were expected to correlate with screen use (e.g., higher scores on the "intention" scale were expected to be associated with higher likelihood of screening). Additional single items

were used to measure participant belief in the curability of prostate cancer, perceived ease of arranging to have prostate cancer screening (self-efficacy), and social support and social influence related to prostate cancer screening.

Study Intervention

Survey respondents were randomly assigned at the time of baseline survey completion to either a Standard Intervention (SI) group or an Enhanced Intervention (EI) group. Stratified randomization by practice and cohort (18 strata: three primary care practices and six patient contact waves) was carried out. Men in both the SI and EI groups were mailed a copy of a prostate cancer informational booklet. The booklet described the prostate gland and its function, mentioned possible prostate-related problems (including prostate cancer), described risk factors and symptoms of prostate cancer, explained early detection screening, discussed the pros and cons of screening, reviewed possible follow-up tests in response to abnormal screening results, and summarized treatment options for early and late prostate cancer.

In addition to receiving the booklet, men in the EI group were contacted via telephone by a trained health educator one month after booklet mailing to arrange for a decision education session about prostate cancer screening. Decision education is a method that was developed to enable individuals to consider available information about a healthcare decision, along with personal values related to avail-



able alternatives, in order to clarify personal preference and, as a result, make an informed decision.³²⁻³⁶

Details about the preference scoring process and

algorithm used in this study have been provided elsewhere.³¹ Briefly, the decision education session initially involved eliciting the major decision factors influencing the participant's decision to have or not to have screening. The participant then identified his top three decision factors, reported the strength of their influence (how strongly each one influenced him either for or against screening), and finally indicated the relative importance of each factor through a process of pairwise comparisons. All these personal judgments were entered into a preprogrammed hand-held calculator, and a screening decision preference score was computed. At the conclusion of the session, the health educator shared the preference score with the participant and discussed its interpretation (whether it suggested a preference to screen, ambivalence or a preference not to screen). Finally, the participant was encouraged to make a final decision about screening use in consultation with his primary care physician.

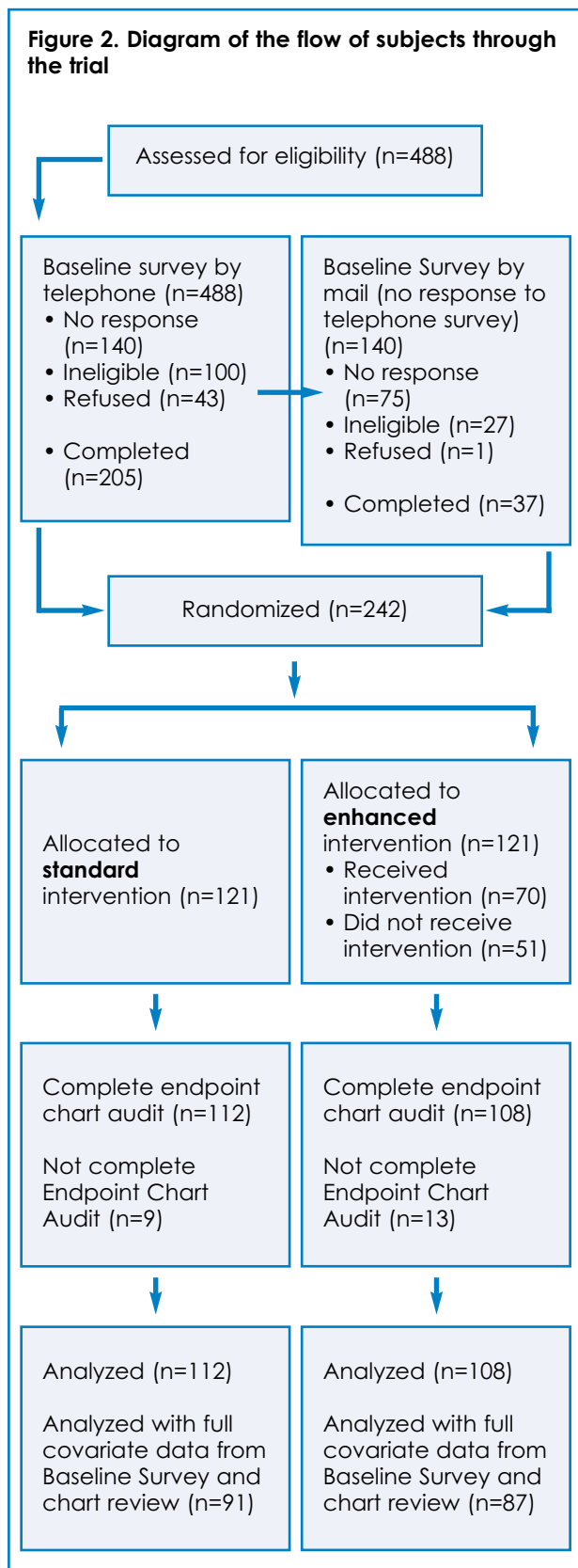
Endpoint Chart Audit

Trained research project personnel visited the participating primary care practices and carried out a medical chart review for each participant to record any documented evidence of DRE and/or PSA test performance. Chart reviews were performed 6–11 months after the informational booklet was mailed (median = eight months). Data were recorded for prostate cancer screening procedures that were performed both before and after each participant's study enrollment.

Statistical Analyses

The behavioral outcome of this study had two definitions. The *complete screening* definition required the participant to have both a DRE and a PSA test within six months *after* the mailing of the informational booklet. This definition is consistent with prostate cancer screening guidelines and was considered *a priori* as the primary behavioral outcome. The *complete or partial screening* definition defined screening as either: 1) having a PSA test within six months *after* booklet mailing irrespective of a DRE, or 2) having a PSA test within six months *before* booklet mailing and having a DRE within six months *after* booklet mailing. This *complete or partial* definition recognizes that a PSA test alone is often done to screen for prostate cancer in routine care, while DRE alone is typically not considered sufficient as a screening modality. Furthermore, this definition allowed for initiation of testing (PSA) prior to study enrollment and its completion (DRE) during the study follow-up period. Such a relaxed definition has been used to define screening use in prior studies of prostate cancer screening.

Figure 2. Diagram of the flow of subjects through the trial



The study was designed to have 80% power to detect a 15% absolute difference in prostate cancer screening utilization (i.e., complete screening) between the two study groups (e.g., 15% vs. 30%), using a Chi-squared test with alpha of 0.05. Because of the unexpectedly low frequency of screening, Fisher's exact test and exact logistic regression were used in the analyses (LogXact-4, Cytel Software Corp.). The main analyses were conducted according to the intent-to-treat principle, although a small number of men had to be excluded because their medical charts could not be located for an endpoint chart audit. Stepwise multivariable analyses to identify predictors of screening use were carried out among the subset of participants with full baseline data. Variables whose p values were less than 0.05 were retained in the model.

RESULTS

Initially, 488 African-American men aged 40–69 years were identified as potential study participants. Figure 2 shows the trial recruitment steps that eventually yielded a total of 286 men who fulfilled all eligibility criteria. Of these men, 242 (85%) agreed to participate and were randomly assigned to either an SI group (N=121) or EI group (N=121).

Characteristics of the study population are summarized in Table 1. Most participants were <60 years of age (mean = 52), had no education beyond high school and were married. At baseline, study subjects reported strong beliefs in the importance of screening (“salience and coherence” scale) and the curability of prostate cancer, low concerns about screening (“worries and concerns” scale), and a strong intention to screen (“intention” scale). The three study practices were comparable on all these patient characteristics, with the exception of education (only 26% of the practice 1 patients had educa-

tion beyond high school, compared to 48% and 49% in the other two practices; p=0.001). The two study groups were generally comparable on the measured baseline characteristics, except that the EI group consisted of relatively more men who were educated beyond high school (p=0.012) and who were married (p=0.046).

Table 1. Baseline characteristics of trial participants (N=242)

	Enhanced Intervention (n=121)	Standard Intervention (n=121)
<i>Practice, n (%)</i>		
Practice 1	52 (43)	53 (44)
Practice 2	22 (18)	22 (18)
Practice 3	47 (39)	46 (38)
<i>Age, n (%)</i>		
40–49 years	61 (50)	48 (40)
50–59	40 (33)	45 (37)
60–69	20 (17)	28 (23)
<i>Education, n (%)</i>		
≤12 years	64 (53)	84 (69)
>12	57 (47)	37 (31)
<i>Marital Status, n (%)</i>		
Not married	37 (31)	52 (43)
Married	84 (69)	68 (57)
<i>Family History of Prostate Cancer, n (%)</i>		
No	114 (94)	108 (89)
Yes	007 (06)	13 (11)
<i>PSA Test and DRE in Past Year, n (%)</i>		
No	98 (81)	103 (85)
Yes	23 (19)	18 (15)
Salience and coherence, mean ± sd*	3.7 ± 0.5	3.6 ± 0.5
Worries and concerns, mean ± sd*	3.2 ± 0.5	3.1 ± 0.6
Perceived susceptibility, mean ± sd*	1.7 ± 0.7	1.6 ± 0.7
Curability of prostate cancer, mean ± sd*	3.8 ± 0.5	3.7 ± 0.6
Self-efficacy, mean ± sd*	3.3 ± 1.0	3.4 ± 1.0
Social support (family), mean ± sd*	3.2 ± 1.1	3.4 ± 0.9
Social support (doctor), mean ± sd*	3.4 ± 0.9	3.2 ± 1.0
Social influence (family), mean ± sd*	2.7 ± 1.3	3.0 ± 1.2
Social influence (doctor), mean ± sd*	3.7 ± 0.7	3.7 ± 0.7
Intention to screen, mean ± sd*	3.4 ± 0.8	3.3 ± 0.8

* sd: standard deviation

Intent-to-Treat Analyses of Intervention Effect

Prostate cancer screening utilization was assessed through chart audits. Because medical charts for 22 men (nine men in the SI group and 13 men in the EI group) could not be located, the effective sample size for the main analyses was 220 (112 men in the SI group and 108 men in the EI group). Exclusion of these 22 men did not materially affect the comparability of the two study groups as presented in Table 1. Table 2 presents the results for the intervention impact on behavioral outcomes. For both the complete and the complete or partial screening outcomes, screening use among the EI group was twice as high as among the SI group, although neither difference reached statistical significance ($p=0.279$ and 0.081 , for the two outcomes, respectively).

The intervention was not delivered to 51 (42%) of the EI group men, mainly because it proved difficult to contact study participants after the baseline survey and, for those who were contacted, to find a suitable time in order to conduct the decision education session. Of the 70 (58%) EI group men who underwent decision education, 50 men received it over the phone and 20 received it in-person. Consequently, secondary analyses were carried out to assess the effect of the intervention actually delivered. Using the complete screening definition, screening use among EI group men who had a decision education session was higher (9.8%) than that of EI group men who did not have a session (6.4%) and of SI group men (4.5%). Interestingly, EI group men who had a decision education session via phone had higher screening use compared to those who had an in-person session (11% vs. 6%). However, these differences across the actual intervention received were not statistically significant ($p=0.379$).

Multivariable Analyses of Screening Predictors

Multivariable analyses were performed for 178 of the 220 study participants included in the main analyses. Men included in the multivariable analyses (that is, 91 men in the SI group and 87 men in the EI group) had complete baseline survey and endpoint chart audit data. These men were included in further analyses to investigate predictors of screening use. Study participants included in these analyses were similar with respect to measured background characteristics to those who were excluded.

Table 3 presents the univariable and multivariable logistic regression results for the complete or partial screening outcome. This outcome was selected for presentation, because this definition of screening is closer to actual prostate cancer screening in community primary care practices and is comparable to screening utilization definitions used in other trials of decision aids. In these analyses, exposure to decision education and participating primary care practice were both found to be significant predictors of screening use ($p=0.007$ and $p=0.005$, respectively).

DISCUSSION

In the main intent-to-treat analyses, we found that the decision education intervention seemed to double prostate cancer screening for both study definitions of screening (complete and complete or partial). However, this effect was not statistically significant, partly due to a loss of power because of the unexpectedly low overall screening frequency in the study sample. Secondary multivariable modeling of predictors of complete or partial screening was performed among the subset of study participants who had complete baseline survey and endpoint chart audit data. In those analyses, the intervention effect appeared much stronger and statistically significant. Although, the study subgroup of the multivariable analyses was not very different from the entire study sample in terms of measured character-

Table 2. Main analyses of screening utilization: comparison of enhanced and standard intervention groups on the study outcomes (N=220)

Intervention	Complete Screening				Complete or Partial Screening			
	n (%) Screened	OR*	(95% CI) [†]	p	n (%) Screened	OR*	(95% CI) [†]	p
Standard (N=112)	5 (4.5)	1.00	Reference		11 (9.8)	1.00	Reference	
Enhanced (N=108)	9 (8.3)	1.94	(0.56, 7.63)	0.279	20 (18.5)	2.08	(0.89, 5.09)	0.081

* OR: odds ratio; † 95% CI: 95% confidence interval

istics, unmeasured variables and/or chance might have contributed to the somewhat discrepant results. However, our study results were quite consistent in

the sense that, irrespective of outcome definition or analytic approach, the intervention appeared to increase screening utilization; the discrepancy

Table 3. Predictors of complete or partial screening (N=178)

	% Screened	OR*	Univariable (95% CI) [†]	p	OR*	Multivariable (95% CI) [†]	p
<i>Intervention Group</i>							
Standard	6.6	1.00	Reference	0.004	1.00	Reference	0.007
Enhanced	21.8	3.93	(1.41, 12.70)		3.90	(1.37, 12.90)	
<i>Practice</i>							
Practice 1	5.1	1.00	Reference	0.004	1.00	Reference	0.005
Practice 2	14.3	3.04	(0.52, 17.07)		2.99	(0.50, 17.84)	
Practice 3	23.6	5.66	(1.72, 24.40)		5.64	(1.67, 24.80)	
<i>Age</i>							
40–49 years	14.4	1.30	(0.36, 5.99)	0.960			
50–59	14.3	1.25	(0.31, 6.02)				
60–69	11.8	1.00	Reference				
<i>Education</i>							
≤12 years	10.2	1.00	Reference	0.079			
>12	20.0	2.19	(0.86, 5.74)				
<i>Marital Status</i>							
Not married	15.9	1.00	Reference	0.654			
Married	13.0	0.80	(0.31, 2.13)				
<i>Family History of Cancer</i>							
No	14.9	1.00	Reference	0.474			
Yes	5.9	0.36	(0.01, 2.53)				
<i>PSA Test and DRE in Past Year</i>							
No	14.2	1.00	Reference	1.000			
Yes	13.3	0.93	(0.21, 3.09)				
<i>Salience and Coherence</i>							
		1.19	(0.47, 3.66)	0.747			
<i>Worries and Concerns</i>							
		0.88	(0.40, 2.00)	0.764			
<i>Perceived Susceptibility</i>							
		0.92	(0.47, 1.76)	0.826			
<i>Curability of Prostate Cancer</i>							
		1.07	(0.50, 2.88)	1.000			
<i>Self-Efficacy</i>							
		0.87	(0.57, 1.37)	0.504			
<i>Social Support</i>							
Family		0.72	(0.46, 1.15)	0.173			
Doctor		1.58	(0.89, 3.12)	0.143			0.117
<i>Social Influence</i>							
Family		1.20	(0.82, 1.85)	0.144			0.364
Doctor		0.58	(0.31, 1.10)	0.054			
<i>Intention to Screen</i>							
		1.36	(0.78, 2.61)	0.313			

* OR: odds ratio (for attitudinal variables, measured on a four-point scale, odds ratios refer to a one-point increment); † 95% CI: 95% confidence interval

between findings was confined to the exact magnitude of this increase (twofold versus fourfold).

An increase in screening utilization appears consistent with several reports in the literature on decision aids. For example, in a study conducted in Canada, Davison et al.³⁷ found that men who were scheduled for a periodic health exam and received print and verbal information about the pros and cons of prostate cancer screening displayed a greater tendency to have screening than men who were provided with general health information (28% and 21%, respectively). The racial/ethnic composition of study participants was not reported. Volk et al.³⁸ tested the effect of a videotape decision aid on promoting informed decision-making about prostate cancer screening. Findings from that study showed that although exposure to the intervention lessened screening use overall, African-American men who viewed the videotape were significantly more likely to have PSA testing than white men. In a study conducted among African-American men in Chicago, Myers et al.³⁹ reported that participants who received information about prostate cancer screening delivered via mail and phone contacts were significantly more likely to visit a urology clinic and have a screening exam than men who received print materials alone. Elsewhere, Weinrich et al.⁴⁰ reported on the impact of peer-educator and client-navigator interventions among African-American men in community settings on prostate cancer screening use. Both intervention approaches, which included the provision of a voucher for free prostate cancer screening, served to increase screening use. Findings reported in the current study are inconsistent, however, with other studies that have shown a dampening effect of exposure to decision aids on screening.⁴¹⁻⁴⁸

Conflicting results may be due to differences in the extent to which different intervention modalities adequately convey the pros and cons of screening.⁴⁹ Differential effects of interventions may also be mediated by factors associated with the race and/or ethnicity of study participants. It is possible that exposure to information that highlights the screening controversy may lead average-risk white men to be more cautious about screening, but the same intervention may serve to increase interest in taking preventive action among African-American men (and possibly other high-risk groups). More targeted research is needed to characterize the informational content of decision aids and to better delineate factors that encourage or discourage screening utilization in special populations.

The impact of decision education might have been diluted by the fact that prostate cancer screening was not directly offered as part of our study. Rather, study participants were informed that they

could arrange to have screening by contacting their primary care physician office. No attempt was made by the project staff to facilitate this contact or to schedule a screening exam for the men. In other randomized trials of screening decision aids, an opportunity to screen was routinely offered.

A further limitation of our study was the fact that many EI group participants did not actually receive decision education, and of those who did, some received it over the phone and some in-person. The mode of delivery of the decision education might have modified a potential intervention effect. It may be that decision education delivered by phone serves as a behavioral prompt, while that delivered face-to-face results in a more thorough exploration of the pros and cons of screening and, as a result, tends to dampen interest in screening. However, the numbers of participants in each group were too small to reach definitive conclusions in our study.

To facilitate delivery of decision education, future studies should consider conducting in-person education sessions in a healthcare setting (perhaps coinciding with a subject's routine visit to the physician's office), in order to fully explore personal values related to screening. The importance of facilitating informed decision-making about prostate cancer screening has been highlighted by recent research that raises additional questions regarding the value of prostate cancer screening.⁵⁰ Future studies should also seek to assess measures, such as participant change in knowledge, decisional conflict and satisfaction, with intervention methods.

In our study, screening utilization differed substantially across the three participating primary care practices, possibly because of differences in patient populations or idiosyncratic practice patterns. In a recent study of individuals with insurance, Franks et al.⁵¹ reported that the socioeconomic status of patients and their primary care practices were positively associated with preventive care (e.g., mammography, Pap smears, diagnostic testing). In our study, patient education level, a variable sometimes used as a proxy measure of socioeconomic status in the absence of other data, was higher in the two practices where screening rates were highest. However, patient education was not a significant predictor of screening utilization, and the differential level of patient education across practices did not appear to be a confounder of the intervention effect (i.e., controlling for this variable did not account for the screening utilization differences across practices). Informal reports from providers indicated that they supported prostate cancer screening for African-American patients, beginning at age 40, particularly at the two family medicine practices (practices 1 and 3). However, with only three participating practices

B. SCREENER

B.1 Are you 40 to 69 years of age?
 YES 01
 NO 00 → **SKIP TO B.7**

B.2 What is your race or ethnic background?
 White/Non-Hispanic 01 → **SKIP TO B.7**
 Black or African American 02
 Hispanic/Latino 03
 Asian or Pacific Islander 04
 Native American / American Indian 05
 OTHER (SPECIFY) 06
 DON'T KNOW -1

B.3 Do you have, or have you ever had, prostate cancer?
 YES 01 → **SKIP TO B.7**
 NO 00
 Don't know -1

B.4 Have you ever been told by a doctor that you have an enlarged prostate?
 This is called benign prostatic hyperplasia or BPH.
 YES 01 → **SKIP TO B.7**
 NO 00
 Don't know -1

B.5 Have you ever had a prostate ultrasound exam?
 YES 01 → **SKIP TO B.7**
 NO 00
 Don't know -1

B.6 Have you ever had a prostate biopsy?
 YES 01 → **SKIP TO B.7**
 NO 00
 Don't know -1 → **GO TO C.1**

B.7 Thank you for your time and interest. This is a survey of African American men who are between 40 and 69 years of age and have never had prostate cancer or BPH.

C. SCREENING HISTORY

I am going to ask some questions about your experience with screening for prostate cancer.

C.1 In the past 12 months, have you had a rectal exam as part of a prostate cancer screening examination? This is when a physician or urologist puts a finger in the rectum (rear-end) to do an examination.
 YES 01 → **SKIP TO C.1a**
 NO 00 → **SKIP TO C.2**
 Don't know -1

C.1a When was the exam done?
 Month Year
 _____ | _____ |
 _____ | _____ |
 Don't know -1

C.2 In the past 12 months, have you had a blood test called a prostate specific antigen or PSA test as part of a prostate cancer screening examination?
 YES 01 → **SKIP TO C.2a**
 NO 00 → **SKIP TO C.3**
 Don't know -1

C.2a When was the exam done?
 Month Year
 _____ | _____ |
 _____ | _____ |
 Don't know -1

C.3 Did a doctor ever tell your father that he had prostate cancer?
 YES 01
 NO 00
 Don't know -1

C.4 Do you have any brothers who were ever told by a doctor that they have prostate cancer?
 YES 01
 NO 00
 Don't know -1
 NO BROTHERS -4

C.5 What, if anything, are you doing to protect yourself from developing prostate cancer?
 RECORD VERBATIM

CIRCLE ALL THAT APPLY

WATCHING WHAT I EAT / REDUCING FAT INTAKE 01
 INCREASING FIBER 01
 GETTING REGULAR EXERCISE 02
 TAKING VITAMINS / NUTRITIONAL SUPPLEMENTS 03
 OTHER (SPECIFY) 04
 DOING NOTHING IN PARTICULAR 00
 DON'T KNOW -1

D. TMSI

Imagine you have an appointment to talk with your doctor about whether or not to have a prostate screening exam. I am going to read a short list of statements, each of which may or may not describe what you might do before your appointment.

ASK SCALE IN TWO PARTS: TRULY/FALSE, THEN PROBABLY / DEFINITELY-
 RECORD ONE CODE PER ITEM

First, (READ D.1) Would you say true or false? Is that definitely (true/false) or probably (true/false)? Next, (READ D.2) REPEAT SCALE AFTER EACH STATEMENT AS NECESSARY.

		CIRCLE ONE PER ITEM			
		Definitely True	Probably True	Probably False	Definitely False
D.1	I would plan to ask the doctor as many questions as possible about prostate screening.	01	02	04	00
D.2	I would try to get as much information about prostate screening as possible from other sources before seeing the doctor.	01	02	04	00
D.3	I would wait and let the doctor tell me what is important to know about prostate screening.	01	02	04	00
D.4	I would try to think about things other than prostate screening.	01	02	04	00

E. AFFECT (LEWENTHAL)

Next, I am going to ask you about your recent thoughts concerning prostate cancer.
 (READ STATEMENT) Would you say not at all, a little, a moderate amount, or a lot?

		CIRCLE ONE PER ITEM			
		Not at all	A little	A moderate amount	A lot
E.1	During the past four weeks, how much have you thought about prostate cancer?	01	02	03	04
E.2	During the past four weeks, how much have thoughts about prostate cancer affected your mood?	01	02	03	04
E.3	During the past four weeks, how much have thoughts about prostate cancer affected your ability to perform daily activities?	01	02	03	04

F. KNOWLEDGE, ATTITUDES, AND BELIEFS ABOUT PROSTATE SCREENING

ASK SCALE IN TWO PARTS: AGREE/DISAGREE, THEN HOW STRONGLY. RECORD ONE CODE PER ITEM.

I am now going to read you some statements about prostate cancer and prostate screening. Please tell me whether you agree or disagree with each statement. First, (READ F.1) Do you agree or disagree with this statement? Do you strongly or not at all (agree/disagree)? Next, (READ F.2) REPEAT SCALE AFTER EACH STATEMENT AS NECESSARY.

		CIRCLE ONE ON EACH LINE			
		Strongly Disagree	Not at all Disagree	Not at all Agree	Strongly Agree
F.1	The doctor I see is likely to think I should go through prostate screening (with a rectal exam and PSA blood test).	01	02	03	04
F.2	I believe it is likely that I will get prostate cancer at some time in the future.	01	02	03	04
F.3	Being treated for prostate cancer is likely to increase my chances of living a healthier life.	01	02	03	04
F.4	Arranging my schedule to go through prostate screening would be an easy thing for me to do.	01	02	03	04
F.5	I am bothered by the possibility that prostate screening might be physically uncomfortable.	01	02	03	04
F.6	I intend to have a prostate screening examination in the next six months.	01	02	03	04
F.7	I think the benefits of prostate screening outweigh any difficulty I might have in going through the tests.	01	02	03	04
F.8	I have more important things to do than go for prostate screening.	01	02	03	04
F.9	I want to do what members of my immediate family think I should do about prostate screening.	01	02	03	04
F.10	I think prostate screening would be painful.	01	02	03	04
F.11	If I have prostate cancer, I would just as soon not know about it.	01	02	03	04
F.12	If I am meant to get prostate cancer, I will get it no matter what I do.	01	02	03	04
F.13	Being treated for prostate cancer is likely to increase my chances of living a longer life.	01	02	03	04
F.14	Having a prostate screening test makes sense to me.	01	02	03	04

CIRCLE ONE ON EACH LINE

Strongly Disagree	Sort of Disagree	Sort of Agree	Strongly Agree
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F.18 I believe that going through prostate screening would help me to be healthy. 01 02 03 04

F.16 I don't plan on having a prostate screening examination in the next six months. 01 02 03 04

F.17 Men who go through prostate screening will have more problems than men who do not go through screening. 01 02 03 04

F.19 I want to do what the doctor I see thinks I should do about prostate screening. 01 02 03 04

F.20 If I get prostate cancer, nothing can be done to cure me of the disease. 01 02 03 04

F.21 I think African American men are more likely to develop prostate cancer than white men. 01 02 03 04

F.22 I am afraid that if I have a prostate screening test, the test result will show that I have prostate cancer. 01 02 03 04

F.23 Going through prostate screening would be embarrassing. 01 02 03 04

F.24 I think it is likely that I will develop prostate cancer. 01 02 03 04

F.25 I believe that prostate screening is an effective way to find prostate cancer early. 01 02 03 04

F.26 In the next six months, I intend to discuss prostate screening with a physician. 01 02 03 04

F.27 Members of my immediate family are likely to think I should go through prostate screening. 01 02 03 04

F.28 Because I don't have any prostate problems, it isn't necessary for me to be tested for prostate cancer. 01 02 03 04

F.29 I believe that when prostate cancer is found early, it can be cured. 01 02 03 04

F.30 I believe that I can protect myself from prostate cancer by going through screening. 01 02 03 04

F.31 I think that men who have a father or brother with prostate cancer are more likely to develop prostate cancer than men who do not have a father or brother with prostate cancer. 01 02 03 04

F.32 In the next six months, I don't plan on talking to my doctor about prostate cancer. 01 02 03 04

G. DECISION FACTORS

Some things that you think are important might make you lean towards having a prostate cancer screening exam. Other things might make you lean towards NOT having an exam. I will read a list of statements. Please tell me if you agree or disagree with each statement and whether it makes you lean towards having or not having an exam.

(READ ITEM) A. Do you agree or disagree with this? B. Does that make you lean towards having an exam, not having an exam, or does it have no effect on you?

	A			B				
	Agree	Disagree	Don't know	Lean towards having	Lean to not having	No effect	Don't know	
G.1 I am interested in knowing if I have prostate cancer.	01	02	-1	02	06	01	-1	
G.2 I am concerned about the cost of having an exam.	01	02	-1	02	06	01	-1	
G.3 I am interested in having an exam only if I am certain that the results will be good for me.	01	02	-1	02	06	01	-1	
G.4 I am concerned about the physical discomfort of having an exam.	01	02	-1	02	06	01	-1	
G.5 I am interested in protecting my health.	01	02	-1	02	06	01	-1	
G.6 I am concerned about finding the time to have an exam.	01	02	-1	02	06	01	-1	
G.7 I am interested in improving my current physical ability to control when I urinate.	01	02	-1	02	06	01	-1	
G.8 I am concerned about the embarrassment of having an exam.	01	02	-1	02	06	01	-1	
G.9 I am interested in improving my physical ability to have sexual intercourse.	01	02	-1	02	06	01	-1	
G.10 I am worried that I could die from prostate cancer.	01	02	-1	02	06	01	-1	
G.11 Is there anything else that might make you lean towards having or not having an exam?				01	06			
G.12 What is it?				SKIP TO H.1				
G.13 Are there factors that make you lean towards having an exam or not having an exam?				01	06			
				SKIP TO H.1				

H. BELIEF (APPRaisal SUPPORT)

Next, I will read a short list of statements, each of which may or may not be true about you.

ANSWER IN TWO PARTS: "TRUE/FALSE, THEN PROBABLY / DEFINITELY. RECORD ONE CODE FOR EACH.

First, READ H.1. What you say true or false? Is that definitely (or probably) true or probably (or false)? Next, READ H.2. REPEAT SCALE AFTER EACH STATEMENT AS NECESSARY.

CIRCLE ONE FOR EACH				
Definitely True	Probably True	Probably False	Definitely False	
H.1	01	02	01	03
H.2	01	02	01	03

I. FRO (HELP AND SUPPORT)

Now, I'm going to read a list of statements that apply to families. By family, I mean your extended family, including your parents, siblings and brothers, and children.

(READ STATEMENT) Would you say this is "not at all true", "fairly true", "somewhat true", or "very true" and about your family.

CIRCLE ONE FOR EACH				
Not at all True	Fairly True	Somewhat True	Very True	
I.1	01	02	01	04
I.2	01	02	01	04

J. BACKGROUND INFORMATION

J.1 What is the highest grade of regular school you have completed?

Grade school _____ 1 2 3 4 5 6 7 8
 High school _____ 9 10 11 12
 College _____ 13 14 15 16
 Post college _____ 17 18 19 20

J.2 What is your current marital situation? Are you ...

Married _____ 01
 Widowed _____ 02
 Divorced _____ 03
 Separated _____ 04
 Never married, or _____ 05
 Living as married? _____ 06

J.3 What is your date of birth?

Month _____ Day _____ Year _____

J.4 In what state were you born? State _____

J.5 In what city or town were you born? City / town _____

END: This completes the survey. We want to thank you for taking the time to help us with this project.

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