

# Talking About Your Prostate: Perspectives from Providers and Community Members

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**Abstract** Prostate cancer (PrCA) screening is controversial, especially for African-American (AA) men who have higher PrCA incidence and mortality than other racial/ethnic groups. Patient-provider communication is important for the PrCA screening decision process. The study purpose was to better understand the current dialogue between primary care providers (PCPs—physicians and nurse practitioners) and AA men about PrCA prevention and screening. An online survey with 46 PCPs, education sessions (including pre/post surveys) with 56 AA men, and a forum with 5 panelists and 38 AA men for open dialogue were held to examine both provider and community perspectives on PrCA communication needs and practices. PCPs' perceptions of PrCA screening were varied and they used different PrCA screening guidelines in their practices. PCPs and AA men had different experiences with PrCA communication. PCPs reported that they have discussions about PrCA screening and prostate health with AA patients; few AA men reported these same experiences. About 38.0% of PCPs reported that they remain

neutral about PSA testing during discussions; however, only 10.7% of AA men reported that their doctor remained neutral. Prostate health knowledge among AA men increased significantly following participation in the education sessions ( $p < 0.001$ ). AA community members reported high satisfaction regarding the education session and forum. Different recommendations from PCPs may hinder AA men's decisions about PrCA screening. The forum used in this study could be a model for others to help improve patient-provider communication and increase engagement in dialogue about this common cancer.

**Keywords** Prostate cancer · African American · Primary care provider · Education · Patient-provider communication · Community forum

## Introduction

Prostate cancer (PrCA) screening is controversial, especially for African-American (AA) men. PrCA is one of the common cancers that has available screening methods, including prostate-specific antigen (PSA) testing; however, false positives from PSA testing and concerns regarding over-diagnosis and treatment have generated some controversy about screening practices [1]. Professional organizations have changed their guidelines from recommending regular PrCA screening to recommending against PrCA screening for all men (United States Preventive Services Task Force, USPSTF) [2] or emphasizing the importance of having discussions and shared decision making between patients and healthcare providers (American Cancer Society, ACS; American Urological Association, AUA) [3, 4]. Given that the most recent USPSTF guidelines were developed largely based on studies comprised primarily of white men despite AA men's disproportionate mortality burden from PrCA [5], recent research

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has suggested having separate PrCA guidelines for AA men [6].

Shared decision making about PrCA screening and improving awareness of prostate health are important for AA men at high risk for PrCA. Discussions about PrCA screening between patients and healthcare providers, however, are often limited [7, 8]. In addition, AA men and men with lower educational attainment are less likely to receive PrCA information [7]. If AA men do not have appropriate information to engage in shared decision making about PrCA screening, the existing racial disparity in incidence and mortality of PrCA may widen. Previous studies have focused on understanding patient-provider dialogue about PrCA screening and increasing awareness of PrCA screening among AA men [8–10]. Less is known, however, about how AA men communicate with their providers about maintaining prostate health including lifestyle behaviors.

Primary care providers (PCPs) are the medical professionals that patients meet first when they have health concerns. PCPs are likely to be familiar with the patients' overall health condition and health history and influence patients' health behaviors [11]. Thus, this study focused on communication about prostate health and PrCA screening between AA men and PCPs. This study sought to understand the current dialogue between PCPs and AA men about prevention and screening for PrCA and is the first to examine both PCPs' and AA men's perspectives in South Carolina (SC) where AA men have disproportionately high incidence and mortality rates from PrCA [5]. Previous studies have examined PrCA communication from either a community perspective [12, 13] or from providers only [10, 14]; but this study involves both AA community members and PCPs.

## Methods

### Study Participants and Design

This study consisted of an online survey of PCPs, a prostate health education program for AA men, and a community forum with PCPs and community members in upstate SC. PCPs including physicians and nurse practitioners (NPs) were invited to complete an online survey. The survey invitation including the link to the online survey (Qualtrics LLC, Provo, UT) was distributed via listservs of departments of family medicine and internal medicine in major hospitals, associations of physicians and NPs, and the statewide cancer alliance. Survey participants who provided their email address were given an opportunity to receive one of three US\$150 gift cards or one of ten free registrations to a professional meeting focused on cancer education and advocacy.

Participants for the prostate health education program were recruited utilizing flyers which were distributed through

prostate awareness meetings, medical facilities, community centers, churches, fitness centers, barber shops, thrift stores, and local pharmacies. We invited provider survey participants and education program participants to the community forum. All participants provided informed consents before the education program and the community forum. Community members received an incentive of US\$20 after the education program and US\$25 following the forum. The study design and survey instruments were reviewed and approved by the university's Institutional Review Board (IRB) and IRBs of other hospitals if required by partner organizations.

### Primary Care Provider Survey

The PCP survey consisted of 26 questions. The online survey asked PCPs about sex, race/ethnicity, years in practice, specialty, characteristics of practice (location, type, community setting), percentage of AA among male patients aged 40 years or older, and if they had family members or friends who were diagnosed with or died of PrCA. Respondents were also asked about their self-rated knowledge of PrCA screening guidelines using a 5-point scale ranging from "no knowledge at all" to "a great deal of knowledge" [10]. They were asked about PrCA guidelines they used in their practice and resources they relied on to learn about new evidence regarding PrCA screening guidelines [15, 16]. Seven items assessed PCPs' PrCA screening practice with patients in general (4 items) [17, 18] and their perceptions of PrCA screening (3 items) using 5-point Likert scales ranging from "strongly agree" to "strongly disagree" [16, 18, 19]. PCPs' discussions with AA patients about PrCA screening and prostate health (7 items) [10, 16, 19, 20], perceived barriers to communicating with AA patients regarding PrCA screening/health (6 items; using a 5-point Likert scale ranging from "strongly agree" to "strongly disagree") [21, 22], perceptions of the importance of strategies for helping AA men make a decision regarding PrCA screening (5 items; using a 5-point Likert scale ranging from "not at all important" to "very important") [21, 22], and awareness of nutritional counseling services to treat obesity that is covered by SC Healthy Connections Medicaid were also assessed (1 item).

### Prostate Health Education Program

The education program, offered twice in 1 week, was developed to address general information about the prostate, PrCA screening, physical activity, and nutrition related to prostate health, and communication with PCPs [13]. The education program was delivered by a NP working in cancer survivorship, a local prostate health community educator and support group leader, and a university PrCA researcher. Each session lasted approximately 90 min.

Participants were asked to complete a survey before and after the education program. Both pre- and post-tests included the same 20 knowledge questions: 13 true/false statements and 7 multiple-choice questions about prostate health and PrCA. Additionally, the pre-test included 10 items about communication issues including the following: having a regular doctor (yes/no); whether they have enough information to make a healthcare decision; if they were encouraged by their doctor to look for health information; needed to have someone's help for reading written materials from their doctor; thought their doctor spends enough time with them during appointment (5-point Likert scales ranging from "never" to "always"); their role in making their own healthcare decisions; received advice from their doctor regarding reducing PrCA risk within 12 months (yes/no); discussed PrCA screening with their doctor within 12 months (yes/no); doctor's recommendation about getting a PSA test; and if they feel more comfortable going to a doctor of the same race (a 5-point Likert scale from "strongly disagree" to "strongly agree"). Current methods of receiving prostate health information were asked using a multiple-choice question and their preferred method for receiving prostate health information was asked using a single-choice question. Demographic information including year of birth, employment, marital status, household income, education level, health insurance, and diagnosis of PrCA were asked in the pre-test.

#### *Community-Provider Forum*

We held a community forum 1 month following the education program to facilitate discussion between PCPs and community members about prostate health. Participants from the PCP survey and community education program were invited to the forum. One family medicine physician, two NPs, a registered dietitian, and an instructor from a local nursing school comprised the provider panel, and 38 community members participated in the forum. The research team presented overall findings from the PCP survey and education program surveys and then moderated an open discussion between the panel and community members. Community members were given opportunities to ask questions of the panel. The discussion was recorded and transcribed verbatim.

A satisfaction survey was conducted with community members following the forum. The survey asked about their satisfaction with the education session and community forum overall, presenters/speakers, content, and opportunity to ask questions using 5-point Likert scales from "least satisfied" to "most satisfied." Changes made after participation in the education program were asked in an open-ended question. Their intention to work with PCPs regarding decisions about PrCA screening, intention to be screened for PrCA, and plans to address prostate health were also asked. Participants were

asked to recommend ways to increase prostate health dialogue in their community in an open-ended question.

#### **Data Analysis**

Descriptive statistics were used to generate frequencies, percentages, means, and standard deviations as appropriate for the PCP survey and education program surveys. For the PCP survey, 5-point Likert scale items were converted to numeric values (e.g., 1 = strongly disagree; 5 = strongly agree). PCPs' knowledge of, resources for, and practices and beliefs about PrCA screening, perceived barriers to communication with AA patients, and importance of strategies to help AA patients making a PrCA screening decision were compared between physicians and NPs using chi-square, Fisher's exact, or *t* tests as appropriate. For the 20 knowledge items administered to education program participants, a correct response was given a score of 1 and an incorrect, missing, or "I do not know" responses were given a score of 0. The total test score (range 0–20) was calculated by sum of scores of the 20 knowledge questions. Pre- and post-test scores were compared using paired *t* tests. SAS 9.4 (SAS Institute Inc., Cary, NC) was used for analysis and statistical significance was set at  $p < 0.05$ .

#### **Results**

##### **Study Participant Demographics**

###### *Primary Care Provider Survey Respondents*

A total of 46 PCPs, including 18 physicians (39.1%), 19 NPs (41.3%), and 9 others (19.6%; 4 physician assistants, 3 registered nurses, and 2 unknown) participated in the PCP survey. Most respondents were female (67.4%). On average, they were in practice for 14.2 years (ranged 1–40 years). Their specialty areas were family practice (65.2%), internal medicine (23.9%), general practice (6.5%), and others (4.4%). Most PCPs were with single (46.7%) or multi (33.3%) specialty practice, 13.3% of them had solo practices, and 6.7% were with other types of practice. Most of their practices were located in suburban (54.4%) or rural (26.1%) areas. They reported that 30.3% of their male patients aged 40 or older were AA. Most of the PCPs were non-Hispanic whites (80.4%), followed by AAs (13.0%), Hispanics/Latinos (4.4%), and Asians (2.2%). About half of the PCPs (46.7%) reported that they had family members or friends who were diagnosed with or died of PrCA.

###### *Prostate Health Education Program Participants*

Fifty-eight men participated in the education program. Our resulting analytic sample excluded two men who were not

AA. Participants were between 34 and 80 years of age (mean age 58.0 years). Half of participants were employed (full-time 35.9%, part-time 13.2%), 35.9% were retired, and 15.1% were unemployed. About one third of participants were single or never married (31.5%), 44.4% were married, and 24.1% were divorced, separated, or widowed. About 31.5% of participants had annual household income less than US\$10,000. One fourth had household income between US\$10,000 and US\$29,999 (24.1%), 16.7% had US\$30,000–US\$49,000, and 27.8% had over US\$50,000. There were 11.1% of participants with less than a high school education; one third of participants completed high school or GED (33.3%); 18.5% had some college, technical, or vocational training; and 37.0% had a bachelor's degree or higher. One third had only private health insurance (32.7%), 21.2% had only public insurance, 26.9% had both private and public health insurance, and 19.2% were uninsured. About 69.2% of participants had a regular (primary care) doctor. Among the participants, 11.1% were PrCA survivors and 3.7% reported that they were going through PrCA treatment.

Fifty-one AA participants (91% of total participants) in the education program completed both pre- and post- tests on prostate health knowledge. The percentage of correct responses on the pre-test was 58.8% (range 15–95%). The correct response rate on the post-test increased significantly to 71.8% (range 35–100%,  $p < 0.001$ ) (data not shown).

### Provider Survey Findings

None of the PCPs perceived that they did not have knowledge about PrCA screening guidelines. NPs were more likely than physicians to perceive that they had little knowledge (26.3%, 5.6%, respectively,  $p = 0.006$ , Table 1). PrCA screening guidelines from the USPSTF were used the most in practices (63.0%), followed by ACS (41.3%), AUA (26.1%), Centers for Disease Control and Prevention (CDC; 19.6%), and National Comprehensive Cancer Network (NCCN, 4.4%) guidelines. NPs used ACS guidelines more than physicians (52.6%, 22.2%, respectively;  $p = 0.057$ ); while USPSTF guidelines were reported significantly more often by physicians than NPs (94.4%, 47.4%, respectively,  $p = 0.002$ ; providers could select multiple guidelines). Major resources that PCPs used for PrCA screening information were professional journals (78.3%), professional websites/listservs (63.0%), online/in-person continuing medical education (45.7%), and scientific meetings/conferences (39.1%). About 5% of PCPs mentioned brochures/booklets, popular media, and drug or pharmaceutical representatives as resources for PrCA screening. There were nonsignificant differences in use of PrCA screening resources between physicians and NPs (data not shown). When asked about their practices related to PrCA screening (from 1 = strongly disagree to 5 = strongly agree), PCPs tended to provide/recommend PrCA screening to

patients with a family history of PrCA and AA patients. NPs were significantly more likely to provide/recommend PrCA screening to average-risk patients compared with physicians (mean 3.2 vs. 4.3, respectively;  $p = 0.010$ ). On average, PCPs indicated agreement with the statement that an early diagnosis of PrCA was beneficial. NPs were more likely to agree with the benefit of an early diagnosis of PrCA ( $p = 0.018$ ) and helpfulness of PrCA screening in reducing PrCA mortality among average-risk patients ( $p = 0.008$ ) than physicians. On average, PCPs neither agreed nor disagreed with the statement “PrCA screening decision making is difficult due to lack of scientific evidence of survival benefit.” For most statements regarding barriers to communicating about PrCA screening with AA patients, PCPs neither agreed nor disagreed (Table 1). The statement receiving the highest score (indicating more agreement) was “Patients lack information about PrCA screening.” NPs were significantly more likely than physicians to agree with patients' negative perception about PrCA screening as a barrier ( $p = 0.010$ ). When asked about the importance of strategies for helping AA patients make a PrCA screening decision (from 1 = not at all important to 5 = very important), making simple and short informational materials about PrCA screening available had the highest score (mean 4.4), followed by more accessible and available information in a variety of forms and languages (mean 4.2), and communication through printed materials (mean 4.1). There was no difference between physicians and NPs about the importance of these strategies (Table 1).

### Community Education Program Findings

Most community members expressed positive experiences regarding communication with doctors. More than 70% of participants reported that they always (38.5%) or often (32.7%) had enough information to make a decision about their health. One fourth sometimes had enough information and 3.8% of participants rarely or never had enough information. Participants reported that their doctor encouraged them to look for health information always (29.4%), often (29.4%), or sometimes (19.6%), while 21.6% of participants were rarely or never encouraged by their doctor. About 23.5% of participants reported that they felt more comfortable seeing a doctor of the same race, while other participants did not feel this same way (neutral 47.1%, disagree 29.4%) (Table 2).

Community members obtained PrCA information from their regular doctor the most (60.4%), followed by health educator (47.2%), television (41.5%), magazines (30.2%), the Internet (26.4%), radio (24.5%), e-mail (18.9%), newspapers (15.1%), and text messages (3.8%). Six percent of participants reported that they did not receive any information. As a preferred source of PrCA information, regular doctor was reported most often (53.6%), followed by health educator (23.2%), the Internet (17.9%), and e-mail (16.1%) (data not in tables).

**Table 1** Primary care providers' prostate cancer screening knowledge, practices, and beliefs,  $N = 46$ ,  $N$  (%), mean  $\pm$  standard deviation

	Total ( $n = 46$ )	Physicians ( $n = 18$ )	Nurse practitioners ( $n = 19$ )	$p^a$
Knowledge of prostate cancer screening guidelines				
No knowledge at all	0 (0.0)	0 (0.0)	0 (0.0)	0.006
A little knowledge	7 (15.2%)	1 (5.6)	5 (26.3)	
A moderate amount of knowledge	29 (63.0%)	11 (61.1)	13 (68.4)	
A great deal of knowledge	10 (21.7%)	6 (33.3)	1 (5.3)	
Practices <sup>b</sup>				
More likely provide/recommend prostate cancer screening if a patient has a family history of prostate cancer	4.6 $\pm$ 0.8	4.6 $\pm$ 0.8	4.6 $\pm$ 1.0	0.915
More likely provide/recommend prostate cancer screening if a patient is an African-American	4.3 $\pm$ 0.8	4.3 $\pm$ 0.6	4.5 $\pm$ 1.0	0.611
Provide/recommend prostate cancer screening to average risk patients	3.8 $\pm$ 1.2	3.2 $\pm$ 1.4	4.3 $\pm$ 0.8	0.010
Recommend both DRE and PSA testing for annual prostate cancer screening to patients	3.5 $\pm$ 1.4	3.1 $\pm$ 1.6	3.7 $\pm$ 1.2	0.231
Beliefs <sup>b</sup>				
An early diagnosis of prostate cancer is beneficial because it provides opportunities for treatment and planning to patients and their family	4.2 $\pm$ 1.1	3.8 $\pm$ 1.2	4.6 $\pm$ 0.8	0.018
Prostate cancer screening helps reduce prostate cancer mortality in average risk patients age 50 years and older.	3.8 $\pm$ 1.2	3.3 $\pm$ 1.2	4.3 $\pm$ 0.9	0.008
Prostate cancer screening decision is difficult due to lack of scientific evidence of survival benefit	3.0 $\pm$ 1.3	3.2 $\pm$ 1.3	2.9 $\pm$ 1.4	0.460
Barriers to communicating with African-American patients regarding prostate cancer screening <sup>b</sup>				
Patients' insurance may not cover prostate cancer screening	3.0 $\pm$ 1.0	2.8 $\pm$ 1.0	3.2 $\pm$ 1.1	0.265
Patients lack information about prostate cancer screening	3.8 $\pm$ 0.8	3.7 $\pm$ 1.0	3.9 $\pm$ 0.8	0.337
Patients have low literacy or low health literacy	3.3 $\pm$ 1.1	3.3 $\pm$ 1.0	3.6 $\pm$ 1.1	0.399
Patients have negative perceptions about prostate cancer screening	3.2 $\pm$ 1.1	2.7 $\pm$ 1.0	3.6 $\pm$ 1.2	0.010
Patients lack confidence in or lack of trust medical research	2.8 $\pm$ 1.0	2.7 $\pm$ 0.8	3.2 $\pm$ 1.1	0.098
Patients have fear of having prostate cancer screening	3.3 $\pm$ 1.1	3.1 $\pm$ 0.9	3.5 $\pm$ 1.2	0.177
Strategies for helping African-American men make a decision about prostate cancer screening <sup>c</sup>				
Make prostate cancer screening information more accessible and available in a variety of forms and languages	4.2 $\pm$ 0.9	4.2 $\pm$ 0.7	4.2 $\pm$ 1.0	0.976
Make prostate cancer screening information materials simple and short	4.4 $\pm$ 0.7	4.3 $\pm$ 0.7	4.6 $\pm$ 0.8	0.213
Provide patient education and seminars through community outreach	3.9 $\pm$ 1.1	4.1 $\pm$ 1.0	3.9 $\pm$ 1.0	0.506
Communicate through printed materials	4.1 $\pm$ 0.9	4.1 $\pm$ 0.8	4.2 $\pm$ 0.8	0.711
Communicate through mass media	3.9 $\pm$ 1.1	3.6 $\pm$ 1.3	4.2 $\pm$ 0.9	0.125

<sup>a</sup> Comparison between physicians and nurse practitioners, Fisher's exact test or  $t$  test

<sup>b</sup> 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree

<sup>c</sup> 1 = not at all important, 2 = slightly important, 3 = moderately important, 4 = important, and 5 = very important

### Comparing Provider and Community Survey Results

Table 3 presents similar questions that were asked of both PCPs and AA men. Most PCPs (97.8%) indicated that they routinely discussed PrCA screening with their patients while 56.0% of community members reported that they

ever had a discussion about PrCA screening with their doctor. About 62.2% of PCPs reported that they talked with their AA patients about ways to maintain prostate health specifically during the last 12 months. About 36.0% of community members received advice about reducing PrCA risk during this same period.

**Table 2** African-American men's perceptions of communication with doctors,  $N = 56$ ,  $N (\%)^a$ 

	<b>Always</b>	<b>Often</b>	<b>Sometimes</b>	<b>Rarely</b>	<b>Never</b>
I have enough information to make a decision about my health care	20 (38.5)	17 (32.7)	13 (25.0)	1 (1.9)	1 (1.9)
My doctor encourages me to look for health information	15 (29.4)	15 (29.4)	10 (19.6)	5 (9.8)	6 (11.8)
I need to have someone help me when I read instructions, pamphlets, or other written material from my doctor	7 (13.7)	2 (3.9)	9 (17.7)	13 (25.5)	20 (39.2)
My doctor spend enough time with me during my appointment	17 (34.7)	16 (32.7)	10 (20.4)	4 (8.2)	2 (4.1)
	<b>Strongly agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly disagree</b>
I feel more comfortable going to a doctor who is of the same race as me	0 (0.0)	12 (23.5)	24 (47.1)	15 (29.4)	0 (0.0)

<sup>a</sup> Totals in each column may vary due to missing data

Sixty percent of PCPs reported that they tried to encourage AA men to undergo PSA testing; about 37.8% of PCPs remained neutral during the discussion; only 2.2% of them did not encourage AA patients getting tested. A majority of community members felt that their PCPs recommended a PSA test (71.4%) and 17.9% of them reported that their PCPs did not recommend a PSA test. About 60.9% of PCPs indicated that they made a PrCA screening decision together with their patients and/or patients' family members, while only 34.0% of community members thought that their healthcare decision in general was made together with their doctor. Community

members more often reported that healthcare decisions were made by the patient rather than by their doctor (36.2%, 29.8% respectively).

### Community Forum Discussion Topics

The community forum lasted 1.5 h. During the community forum, community members asked panelists about prostate health information they encountered on the Internet, television, and other media. The most frequent questions were related to practical ways to maintain a healthy diet and engage in

**Table 3** Comparison of primary care providers' and African-American men's perceptions about prostate cancer communication

Primary care providers ( $n = 46$ )	$N (\%)^a$	African-American men ( $n = 56$ )	$N (\%)^a$
Routinely discuss prostate cancer screening with African-American patients to involve the patient in the discussion about screening	44 (97.8)	Have discussed prostate cancer screening with my doctor	28 (56.0)
Usual policy when discussing PSA testing with African-American patients		Doctor recommended me getting a PSA test	
Try to talk the patient into getting the test	27 (60.0)	Recommended	20 (71.4)
Try to talk the patient out of getting the test	1 (2.2)	Did not recommend	5 (17.9)
Remain neutral	17 (37.8)	Neither recommended nor not recommended	3 (10.7)
Decision making for prostate cancer screening for African-American patients		Decision making for own health care	
I (mostly) decide	10 (21.8)	My doctor keeps me informed but makes decisions based on what is best for me	14 (29.8)
I decide together with the patient and/or his family member(s)	28 (60.9)	My doctor discusses options with me and then we come to a decision together	16 (34.0)
The patient and/or his family member(s) (mostly) decides	8 (17.4)	My doctor tells me my pros and cons and then I decide what to do	17 (36.2)
Talked with African-American patients about ways to maintain prostate health during the last 12 months	28 (62.2)	Received advice about reducing prostate cancer risk from my doctor during the last 12 months	18 (36.0)

<sup>a</sup> Totals in each column may vary due to missing data

regular exercise. Community members also had questions about what they should do when hearing differing opinions from different PCPs. One of the PCP panelists recommended that men get a second opinion and said, “I think that’s what is very important for any person, is that you’ll be able – you’re given information to try to take control of your health in the way that you think is best, you and your family think is best, for you.” Panelists also emphasized the importance of communication with PCPs, “If they [PCPs] have not said that [about your prostate health] to you, you owe it to them [the PCP] to [ask so they] tell you – talk to you, give you the facts.” Other questions were about how to get screened for free/low cost, sexual dysfunction related to PrCA treatment, and women’s roles in men’s health.

### Education Program and Forum Satisfaction Survey

Thirty-seven participants who attended both the education program and the community forum completed the satisfaction survey following the forum. All participants indicated that they were satisfied with the education program and the community forum. When asked through an open-ended question what they had done after attending the education program, participants reported that they talked about prostate health with their PCPs and other men ( $n = 7$ ), changed diets and engaged in exercise ( $n = 6$ ), sought more information about prostate health ( $n = 5$ ), and made an appointment for PrCA screening ( $n = 4$ ). Most participants indicated that if they were asked to make a decision about PrCA screening, they wanted to get screened (88.6%). When asked what they planned to do in the future, participants reported they would continue to get screened (75.7%), search for more information about PrCA (59.5%), encourage others to talk to their PCPs about PrCA screening (59.5%) or to get screened (54.1%), talk with their PCPs about PrCA screening (51.4%), encourage (51.4%) or help (46.0%) others to learn more about PrCA talk about prostate health (48.7%) and prostate health disparities (40.5%) in their community, and make an informed decision about PrCA screening (46.0%). One third planned to get screened for the first time (32.4%). Participants gave recommendations about ways to increase prostate health dialogue in their community, including targeting AA communities through faith-based organizations and churches.

### Discussion

This multi-phase study involved surveys with both PCPs and AA men, an education program for AA men on PrCA screening and prevention, and a forum that helped facilitate dialogue between providers and AA men. Findings demonstrate that PCPs have varied perceptions of PrCA screening and current guidelines. PCPs’ and AA men’s experiences discussing

PrCA screening and prostate health also varied. AA men demonstrated increased knowledge on PrCA and prostate health following the education program and the forum was an opportunity to provide an open dialogue between community members and PCPs.

PCPs perceived that they had good knowledge about PrCA screening guidelines. Interestingly, they followed screening guidelines but guideline use differed significantly between physicians and NPs. In addition, NPs had more positive perceptions about the benefits of PrCA screening compared with physicians. Guidelines used in practices as well as PCPs’ perceptions of PrCA screening may result in different recommendations and communication patterns with their patients [14]. In addition to varied guidelines used in practices, PCPs’ beliefs and perceptions about PrCA screening may influence PCP-patient communication [14]. In a previous study, PCPs had discussions about the risks of PSA testing with their patients; however, they still wanted patients to be screened [14]. PCPs’ screening recommendations can greatly influence patients’ decisions, including decisions of AA men [23, 24]. During our forum, AA community members expressed concerns about differing opinions they received from different PCPs. Conflicting recommendations from PCPs combined with confusing PrCA screening information available in the media [25] can lead to difficulty in making decisions regarding screening. Decision aids and education are shown to help AA men evaluate different opinions from PCPs based on their own condition, values, preferences, and goals [26].

PCPs and AA community members reported different experiences regarding PrCA communication. More PCPs reported that they had PrCA screening discussions with AA patients, remained neutral about PSA testing, made shared decisions, and talked about prostate health with AA patients; however, fewer community members reported these same experiences with their doctor. We asked AA men on the survey about their experiences only with their doctors; thus, a direct comparison between AA men and all PCP types is limited. Nevertheless, one of the possible explanations of these differences is that the neutral position of PCPs might be unclear to patients and could potentially be considered an opposition to PSA testing. Another reason could be limited understanding of information provided by PCPs to AA men. PCPs indicated lack of information about PrCA screening among AA patients was a barrier to communicating with them about the screening process. Developing plain language and culturally appropriate resources about PrCA screening could be beneficial for AA communities and patients as they face the screening decision and help empower them to engage in shared decision making with PCPs [27].

The most frequent question that AA men had at the community forum was about lifestyle changes, especially diet. PCP survey results indicated that among those who provided prostate health information to AA patients, approximately half

discussed nutritional information. Lifestyle modifications to include weight management, healthy diet, regular exercise, and smoking cessation can maintain/improve prostate health as well as overall health [28]. PrCA screening discussions could be combined with conversations about tangible recommendations for healthier lifestyles that can address both PrCA prevention and overall health of AA patients. For example, the American College of Sports Medicine and the ACS both recommend a minimum of 150 min of weekly aerobic activity along with resistance training twice weekly for cancer survivors and for general health of all peoples [29]. Similarly, evidence-based dietary recommendations from the ACS [29] and the American Institute for Cancer Research/World Cancer Research Fund [30] or referrals to registered dietitians for weight management could be incorporated into PCP interactions with patients.

This study has limitations. Some of the questions asked of AA community members were about their relationship with physicians/doctors, rather than other PCPs such as NPs. Our study participants might have a different relationship with NPs than with physicians. Participants of the education program and PCP surveys were not patient-PCP dyads, thus comparisons between the two groups do not necessarily represent AA men's actual relationship with their PCPs/patients. In addition, sample sizes were relatively small. Despite these limitations, this study is one of the first to involve both AA community members and PCPs engaging in prostate health dialogue as part of the study. Forums can encourage public engagement in health issues and broaden understanding of health issues by multiple stakeholders including PCPs and patients [31]. The forum used in this study could be incorporated into interventions and educational offerings about other health issues as a framework to encourage both AA community members and PCPs to improve their willingness to engage in dialogue about sensitive health issues like PrCA.

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