Curr Cancer Rep, 2021, 3(1): 81-94
DOI: 10.25082/CCR.2021.01.003

RESEARCH ARTICLE

Predictors of prostate cancer screening among African American men treated at an Academic Medical Center in the Southern United States

Steven S. Coughlin[1,2*] **Deepak Nag Ayyala**[1] **John S. Luque**[3] **Justin Xavier Moore**[1,2]

[1] Department of Population Health Sciences, Medical College of Georgia, Augusta University, Augusta, GA, USA
[2] Institute of Public and Preventive Health, Augusta University, Augusta, GA, USA
[3] Institute of Public Health, Florida Agricultural and Mechanical University, Tallahassee, FL USA

***Correspondence to:** Steven S. Coughlin, Department of Population Health Sciences, Medical College of Georgia, Augusta University, 1120 15th Street, Augusta, GA, USA;
Email: scoughlin@augusta.edu

Received: January 19, 2021;
Accepted: March 25, 2021;
Published: April 2, 2021

Citation: Coughlin SS, Ayyala DN, Luque JS, *et al*. Predictors of prostate cancer screening among African American men treated at an Academic Medical Center in the Southern United States. *Curr Cancer Rep*, 2021, **3**(1): 81-94.
https://doi.org/10.25082/CCR.2021.01.003

Abstract: **Background**: The controversy surrounding prostate cancer screening, coupled with the high rates of incidence and mortality among African American men, increase the importance of African American men engaging in an informed decision-making process around prostate cancer screening. **Purpose**: To examine predictors of prostate cancer screening via the prostate-specific antigen (PSA) test. Secondary objectives were to examine whether African American men have been screened for prostate cancer; their confidence in making an informed choice about whether PSA testing is right for them; and whether they have talked with their provider about PSA testing and engaged in an informed decision-making process around prostate cancer screening. **Methods**: We conducted a study among a sample of African American men patients ages $\geq$ 40 years. **Results**: A total of 65 men completed the questionnaire (response rate = 6.5%). The mean age of the men was 64.4 years. Most of the participants (90.8%) reported a regular healthcare provider and that their provider had discussed the PSA test with them (81.3%). About 84.1% of the men ever had a PSA test, but only 38.0% had one in the past year. Most of the men reported that they make the final decision about whether to have a PSA test on their own (36.5%) or after seriously considering their doctor's opinion (28.6%). About 31.8% of the men reported that they share responsibility about whether to have a PSA test with their doctor. About half of the participants (49.2%) reported that they have made a decision about whether to have a PSA test and they are not likely to change their mind. The majority of the men (75%) perceived their risk of prostate cancer to be about the same level of risk as other men who were their age. The men's knowledge of prostate cancer was fair to good (mean prostate cancer knowledge scale = 10.37, SD 1.87). Knowledge of prostate cancer was positively associated with receipt of a PSA test ($p < 0.0206$). **Conclusion**: The modest overall prostate cancer knowledge among these participants, including their risk for prostate cancer, indicates a need for prostate cancer educational interventions in this patient population.

Keywords: African Americans, men, prostate cancer, prostate specific antigen test, screening

1 Introduction

Prostate cancer is the most commonly diagnosed male cancer in the U.S. [1] African American men have the highest prostate cancer incidence rates in the world and the highest prostate cancer mortality rate of any racial/ethnic group in the U.S. [2] African American men are more likely to have locally advanced or metastatic prostate cancer at diagnosis, present at an earlier age, and have suboptimal outcomes to standard treatments [3]. African American men are 2.5 times more likely to die from prostate cancer than white men [1].

African American men are more likely to develop aggressive prostate cancer, yet less likely to be screened despite guidelines recommending shared decision-making about prostate cancer screening and PSA testing [1, 3]. It is unclear whether screening through PSA testing reduces mortality [4]. However, no firm conclusions about the benefits-to harm ratio of PSA screening can be drawn in African American men due to their limited representation in two landmark clinical trials of the effectiveness of prostate cancer screening in reducing mortality from the disease [1]. A more recent study that used Surveillance, Epidemiology, and End Results (SEER) data to investigate survival disparities between African American and white men provided a compelling case for continued PSA testing for African American men [5]. The controversy surrounding prostate cancer screening, coupled with the high rates of incidence and mortality among African American men, make it that much more important for African American men to

engage in an informed decision-making process around prostate cancer screening [6]. Previous studies have suggested that men who are more knowledgeable about prostate cancer are more likely to have been screened [7]. While informed decision-making is the current recommendation for prostate cancer screening, recent studies indicate that many African American men may not be making informed decisions about prostate cancer screening [1]. This is partly due to patients having limited knowledge of prostate cancer screening and African Americans being more likely to have inadequate health care.

We conducted a study of a sample of male, African American patients ages $\geq$ 40 years to examine predictors of prostate cancer screening. Secondary objectives were to examine whether African American men have been screened for prostate cancer; their confidence in making an informed choice about whether PSA testing is right for them; whether they have talked with their provider about PSA testing and engaged in an informed decision-making process around prostate cancer screening. We hypothesized that: H1: African American men who have more decision self-efficacy and less decisional conflict about prostate cancer screening will be more likely to have been screened; and H2: African American men who are more knowledgeable about prostate cancer will be more likely to have been screened.

2 Methods

Data are from the African American Men's Health Survey, a cross-sectional study among male, African American patients seen at Augusta University Health. Non-institutionalized men were eligible to take part in the study if they were at least 40 years of age and resided in Augusta-Richmond County or Columbia County, Georgia, or in Aiken County, South Carolina.

The patients were identified using electronic medical records. Data were collected using postal survey questionnaires. The mailings were sent to 1,000 randomly sampled potential research participants. A sequential mailing protocol was followed using a modified Dillman method [8]. An advance letter was mailed to the men by the study principal investigator (SSC). The letter provided information about the study (purpose, potential benefits, and risks). Three weeks later, a survey consent letter (Appendix) was mailed to those who had not opted out along with a copy of the survey questionnaire (Appendix) and a pre-addressed, stamped return envelope. Those who had not opted out or returned a completed questionnaire were sent a reminder postcard three weeks later.

Outcome measures: Information about prostate cancer screening was collected via postal survey. The subjects were asked: Have you ever had a PSA test? (yes / no) and whether they had a PSA test in the past year. They were also asked Do you have a regular health care provider (*e.g.*, doctor, nurse practitioner, physician assistant)? (yes / no) Has a health care provider such as a doctor or nurse ever talked to you about a PSA test? (yes / no) Questions also assessed men's self-reported levels of prostate cancer knowledge, decision self-efficacy, decisional conflict, control preferences, stage of decision making, and perceived risk related to prostate cancer screening using established reliable scales and measures [9–11]. Decisional conflict was determined by an existing 10-item Likert-type scale [9]. Stage of decision making was determined by one question with six response options to measure different stages of making a decision about the PSA test in the next 12 months, with higher values indicating greater certainty in making a decision about screening (whether to receive it or not).

Descriptive analyses and logistic regression methods were used to examine predictors of prostate cancer screening. In bivariate analyses, levels of statistical significance were determined using the one-sided Wilcoxon rank-sum test. We considered $\alpha = 0.05$ as the level of statistical significance. Levels of statistical significance were determined using Wald chi-square tests and Log-likelihood ratio tests. We present adjusted odds ratios (OR) and 95% confidence Intervals (95% CI) from logistic regression analyses. The goodness-of-fit of the model model was examined using the Log-likelihood ratio test. The study was approved by the Augusta University Institutional Review Board.

3 Results

A total of 65 men completed the study questions (response rate = 6.5%). The mean age of the men was 64.4 years (Table 1). Of the 65 surveyed participants, the majority of participants had two persons living within a household (n = 35, 59.3%), were retired (n = 28, 46.7%), were married or with partner (n = 41, 65.1%), had a HS educational level (n = 16, 25.4%), and reported good general health (n = 33, 53.4%).

Table 1 Characteristics of study participants, African American Men's Health Survey (n = 65)

Characteristic	All n (%)
Mean age (SD)* (N = 58)	64.44 (9.32)
Annual Income (N = 60)	
< $20,000	9 (15.0)
$20,000 $34,999	4 (6.7)
$35,000 - $49,999	8 (13.3)
$50,000 - $64,999	9 (15.0)
$65,000 - $79,999	11 (18.3)
$80,000+	8 (13.3)
Missing	11 (18.3)
Number of people in household (N = 59)	
1	13 (22.0)
2	35 (59.3)
3+	11 (18.7)
Employment status (N = 60)	
Retired	28 (46.7)
Employed	10 (16.7)
On disability	16 (26.7)
Temporarily unemployed	6 (10.0)
Marital status (N = 63)	
Married/Partner	41 (65.1)
Single	12 (19.1)
Widowed	3 (4.8)
Separated/Divorced	7 (11.1)
Education (N = 63)	
Less than HS	8 (12.7)
HS or equivalent	16 (25.4)
Some college	15 (23.8)
Associate degree	7 (11.1)
Bachelor degree	9 (14.3)
Graduate degree	8 (12.7)
Perceived general health (N = 63)	
Excellent	1 (1.6)
Very good	8 (12.7)
Good	33 (52.4)
Fair	16 (25.4)
Poor	5 (7.9)

Notes: * SD: standard deviation

As shown in Table 2, most of the participants (90.8%) reported a regular healthcare provider and that their provider had discussed the PSA test with them (81.3%). About 84.1% of the men had had a PSA test, but only 38.0% had one in the past year. About one-fifth of the men (21.9%) had a positive family history of prostate cancer. Most of the men reported that they make the final decision about whether to have a PSA test on their own (36.5%) or after seriously considering their doctor's opinion (28.6%). About 31.8% of the men reported that they share responsibility about whether to have a PSA test with their doctor. About half of the participants (49.2%) reported that they have made a decision about whether to have a PSA test and they are not likely to change their mind. The majority of the men (75%) perceived their risk of prostate cancer to be about the same level of risk as other men who were their age. The men's knowledge of prostate cancer was fair to good (mean prostate cancer knowledge scale = 10.37, SD 1.87).

Additional analyzes were performed to examine factors associated with prostate cancer knowledge (results not shown). Knowledge of prostate cancer was positively associated with receipt of a PSA test ($p < 0.0206$). No significant associations were observed between decision self-efficacy or decisional conflict and receipt of a PSA test ($p > 0.05$).

When logistic regression models were fitted to the data, only one of the covariates show a significant association with the subject's history of ever taking a PSA test the odds of the subjects taking a PSA test increase significantly when their health care provider talked about the PSA test (Table 3). The odds ratio with and without talking about the PSA test is 56.4, with a 95% confidence interval of 7.5-773.7. Among participants whose healthcare provider talked about the PSA test, 50 out of 52 (96.1%) had a PSA test. For participants whose healthcare provider never talked about a PSA test, only 3 out of 11 (27.3%) had a PSA test.

Table 2 Health characteristics and study variables among African American men seen at Augusta University Health (n = 65)

Characteristic	n (%)
Have a regular healthcare provider (N = 65)	59 (90.8)
Healthcare provider discussed PSA test (N = 64)	52 (81.3)
Ever had a PSA test (N = 63)	53 (84.1)
Had a PSA test in the past year (N = 50)	19 (38.0)
Family history of prostate cancer (N = 64)	14 (21.9)
Control preferences (N = 63)	
I make the final decision on my own	23 (36.5)
I made a decision after seriously considering my doctor's opinion	18 (28.6)
My doctor and I share responsibility for the decision	20 (31.8)
I prefer that the doctor make the decision after seriously considering my opinion	1 (1.6)
I prefer that the doctor make the decision	1 (1.6)
Stage of decision-making scale (N = 61)	
I haven't thought about it	10 (16.4)
I haven't thought about it, but I am interested in learning more	9 (14.8)
I have started to think about it, but I haven't made a decision	6 (9.8)
I have thought about it and I am close to making a decision	3 (4.9)
I have made a decision, but I am willing to reconsider	3 (4.9)
I have made a decision and I am not likely to change my mind	30 (49.2)
Perceived risk of prostate cancer scale (N = 60)	
Much lower risk	7 (11.7)
A little lower risk	7 (11.7)
About the same level of risk	45 (75.0)
A little higher risk	1 (.17)
Knowledge About Prostate Cancer	Correct Response
Most men diagnosed as having prostate cancer die of something else (N = 60)	28 (46.7)
Men are more likely to die because of prostate cancer than because of heart disease (N = 59)	45 (76.3)
It is possible to have prostate cancer if a man dos not have any symptoms (N = 60)	53 (88.3)
Prostate cancer is one of the least common cancers among men (N = 59)	42 (71.2)
If you have an abnormal PSA test result, your doctor may recommend that you have a prostate biopsy (N = 60)	56 (93.3)
The PSA test will find all prostate cancers (N = 60)	44 (73.3)
A prostate biopsy can tell you with more certainty whether you have prostate cancer than a PSA test (N = 59)	53 (89.8)
Loss of sexual function is a possible side effect of prostate cancer treatments (N = 60)	51 (85.0)
Problems with urination are possible side effects of prostate cancer treatments (N = 59)	49 (83.1)
The risk of developing prostate cancer increases with age (N = 61)	55 (90.2)
The risk of developing prostate cancer is higher in African American men as compared with men from other racial/ethnic groups (N = 56)	50 (89.3)
The risk of developing prostate cancer increases if you have a father or brother who has had prostate cancer (N = 61)	46 (75.4)
Diet rich in fruits is likely to reduce risk for developing prostate cancer (N = 60)	38 (63.3)
	Mean (SD)
Decision self-efficacy (N = 56)	38.98 (6.79)
Decisional conflict (N = 55)	33.93 (4.98)

Notes: N: the total sample. f: the frequency or correct response for Knowledge About Prostate Cancer questions (%: the relative frequency).

4 Discussion

In a survey sample among 65 African American men from the south, we observed a high prevalence (84.1%) of men that have been screened for prostate cancer. A number of reasons have been noted in the literature for the prostate cancer disparity among African American men including inadequate knowledge about prostate cancer; presentation at a later stage of prostate cancer, and more aggressive tumors in African Americans (12-14). In the current study, the majority of the participants (81.3%) reported that a health care provider such as a doctor or nurse had talked to them about a PSA test, and few of the men indicated that their health care provider had failed to encourage them to ask questions or express any concerns they had about PSA testing. Woods-Burnham *et al.* [1] found that less than half of African American men engage in conversations about prostate cancer with a healthcare provider. The U.S. Preventive Services Task Force and the American Cancer Society recommend that men engage in informed decision making with their healthcare provider after learning about the benefits and harms of prostate cancer screening [15, 16]. Potential barriers to informed decision making about PSA testing are patient-related (*e.g.*, decreased self-efficacy, fear, medical distrust) and physician-related (*e.g.*, limited availability, lack of knowledge, subpar interpersonal skills) [17]. Potential barriers to prostate cancer screening include lack of health insurance and poorer access to health care [18].

Many of the respondents in the current study had modest knowledge of prostate cancer and prostate cancer screening. Knowledge of prostate cancer has been positively associated with prostate cancer screening in some but not all studies of African American men [18, 19]. Patient's

Table 3 ORs and associated 95% CIs from univariable logistic regression models and associated p-values to examine association of different covariates with the subject taking a PSA test

Characteristic	OR (95% CI)	p-value	Overall p-value
Age (continuous)	1.03 (0.95 1.13)	0.491	0.491
Annual Income			
< $20,000 (Referent)	1.00		0.325
$20,000 $34,999	1.00 (0.06 26.86)	1.000	
$35,000 - $49,999	2.33 (0.18 58.01)	0.529	
$50,000 - $64,999	Undefined	-	
$65,000 - $79,999	0.58 (0.06 4.19)	0.601	
$80,000+	Undefined	-	
Education			
Less than HS (Referent)	1.00		0.609
HS or equivalent	2.60 (0.26 27.19)	0.398	
Some college	2.60 (0.26 27.19)	0.398	
Associate degree	1.00 (0.09 11.32)	1.000	
Bachelor degree	Undefined	0.994	
Graduate degree	2.8 (0.21 70.84)	0.448	
History of prostate cancer in immediate family	3.00 (0.49 58.02)	0.307	0.307
Health care provider talked about a PSA test	66.77 (11.47 618.94)	< 0.001	< 0.001
Perceived risk of prostate cancer scale			
Much lower risk (Referent)	1.00		0.521
A little lower risk	Undefined	0.994	
About the same level of risk	Undefined	0.994	
A little higher risk	Undefined	1.000	
Prostate cancer knowledge scale	1.32 (0.88 1.99)	0.169	0.169
Decisional conflict	1.02 (0.88 1.21)	0.775	0.775
Decision self-efficacy	0.96 (0.82 1.02)	0.493	0.493

Notes: Undefined denotes estimates either with extreme/infinity values or too small.

lack of knowledge about prostate cancer and medical recommendations about prostate cancer screening may be a barrier to making an informed decision about PSA testing [19, 20]. A systematic review of 33 papers examined knowledge, awareness, and beliefs about prostate cancer and prostate cancer screening; knowledge of prostate cancer risk, symptoms, diagnostic methods and treatment options were found to contribute to greater willingness to be screened for prostate cancer [21]. Older and low-income African American study participants tend to have less knowledge about prostate cancer, risk factors, and prostate cancer screening than their white counterparts [22, 23]. In addition to younger age and higher income, greater educational attainment may be positively associated with knowledge about the prostate gland and prostate cancer screening tests [20, 24].

The three major risk factors for prostate cancer are age, race, and family history [19]. Compared to other men their age, few (1.7%) of the men in the current study perceived their risk of prostate cancer to be high or a little high. In an analysis of data from the 2003 Health Information National Trends Study, only 18% of African American men perceived themselves to be more likely to get prostate cancer than the average man of the same age, despite statistics to the contrary [25].

With respect to limitations, misclassification bias is a possibility due to the use of self-reported information. In addition, participation bias may also influence the interpretations of these results as men had to mail in their responses. Furthermore, the results of this study may not be generalizable to other populations of African American men. However, even with the limited sample size, we observed that the sample was diverse across socioeconomic factors including income and education.

In conclusion, the low overall prostate cancer knowledge among these participants, including their risk for prostate cancer, indicates a need for prostate cancer educational interventions in this patient population.

References

[1] Woods-Burnham L, Stiel L, Wilson C, *et al*. Physician consultations, prostate cancer knowledge, and PSA screening of African American men in the era of shared decision-making. American Journal of Men's Health, 2018, **12**(4): 751-759.
https://doi.org/10.1177/1557988318763673

[2] Howlader N, Noone AM, Krapcho M, *et al.* SEER cancer statistics review, 1975-2009 Bethesda, MD: National Cancer Institute, 2012.

[3] Smith ZL, Eggener SE and Murphy AB. African-American prostate cancer disparities. Current urology reports, 2017, **18**(10): 81-90. https://doi.org/10.1007/s11934-017-0724-5

[4] American Cancer Society. Cancer facts & figures for African Americans 2013-2014. Atlanta: American Cancer Society, 2013.

[5] Powell IJ, Vigneau FD, Bock CH, *et al*. Reducing prostate cancer racial disparity: evidence for aggressive early prostate cancer PSA testing of African American men. Cancer Epidemiology, Biomarkers & Prevention, 2014, **23**(8): 1505-1511. https://doi.org/10.1158/1055-9965.EPI-13-1328

[6] Holt CL, Le D, Saunders DR, *et al*. Informed decision-making and satisfaction with a church-based men's health workshop series for African-American men: men-only *vs*. mixed-gender format. Journal of Cancer Education, 2015, **30**(3): 530-534. https://doi.org/10.1007/s13187-014-0731-x

[7] Pedersen VH, Armes J and Ream E. Perceptions of prostate cancer in Black African and Black Caribbean men: a systematic review of the literature. Psycho-Oncology, 2012, **21**(5): 457-468. https://doi.org/10.1002/pon.2043

[8] Dillman DA. Mail and Internet Surveys. 2nd ed. Hoboken, NJ: John Wiley & Sons, Inc. 2007.

[9] O'Connor AM. Validation of a decisional conflict scale. Medical Decision Making, 1995, **15**(1): 25-30. https://doi.org/10.1177/0272989X9501500105

[10] Degner LF, Sloan JA and Venkatesh P. The Control Preferences Scale. Canadian Journal of Nursing Research, 1997, **29**(3): 21-43. https://doi.org/10.1037/t22188-000

[11] Luque JS, Ross L and Gwede CK. Prostate cancer education in African American barbershops: baseline client survey results and differences in decisional conflict and stage of decision making. American Journal of Men's Health, 2016, **10**(6): 533-536. https://doi.org/10.1177/1557988316630952

[12] Odedina FT, Scrivens J, Emanuel A, *et al*. A focus group study of factors influencing African-American men's prostate cancer screening behavior. Journal of the National Medical Association, 2004, **96**(6): 780-788.

[13] Barber KR, Shaw R, Folts M, *et al*. Differences between African-American and Caucasian men participating in a community-based prostate cancer screening program. Journal of Community Health, 1998, **23**(6): 441-451. https://doi.org/10.1023/A:1018758124614

[14] Smith GE, DeHaven MJ, Grundig JP, *et al*. African American males and prostate cancer: assessing knowledge levels in the community. Journal of the National Medical Association, 1997, **89**(6): 387-391.

[15] US Preventive Services Task Force. Prostate Cancer: Screening, May 8, 2018. https://www.uspreventiveservicestaskforce.org/uspstf/document/RecommendationStatementFinal/prostate-cancer-screening

[16] American Cancer Society. American Cancer Society Recommendations for Prostate Cancer Early Detection. https://www.cancer.org/cancer/prostate-cancer/detection-diagnosis-staging/acs-recommendations.html

[17] Owens OL, Friedman DB, Brandt HM, *et al*. Digital solutions for informed decision making: an academic-community partnership for the development of a prostate cancer decision aid for African American men. American Journal of Men's Health, 2016, **10**(3): 207-219. https://doi.org/10.1177/1557988314564178

[18] Agho AO and Lewis MA. Correlates of actual and perceived knowledge of prostate cancer among African Americans. Cancer Nursing, 2001, **24**(3): 165-71. https://doi.org/10.1097/00002820-200106000-00001

[19] Sellers DB and Ross LE. African American men, prostate cancer screening and informed decision making. Journal of the National Medical Association, 2003, **95**(7): 618-624.

[20] Winterich JA, Grzywacz JG, Quandt SA, *et al*. Men's knowledge and beliefs about prostate cancer: education, race, and screening status. Ethnicity & disease, 2009, **19**(2): 199-203. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2699598/

[21] Pedersen VH, Armes J and Ream E. Perceptions of prostate cancer in Black African and Black Caribbean men: a systematic review of the literature. Psycho-Oncology, 2012, **21**(5): 457-468. https://doi.org/10.1002/pon.2043

[22] Ukoli FA, Patel K, Hargreaves M, *et al*. A tailored prostate cancer education intervention for low-income African Americans: impact on knowledge and screening. Journal of Health Care for the Poor and Underserved, 2013, **24**(1): 311-331. https://doi.org/10.1353/hpu.2013.0033

[23] Steele CB, Miller DS, Maylahn C, *et al*. Knowledge, attitudes, and screening practices among older men regarding prostate cancer. American Journal of Public Health, 2000, **90**(10): 1595-1600. https://doi.org/10.2105/AJPH.90.10.1595

[24] Hararah MK, Pollack CE, Garza MA, *et al*. The relationship between education and prostate-specific antigen testing among urban African American Medicare beneficiaries. Journal of Racial and Ethnic Health Disparities, 2015, **2**(2): 176-183. https://doi.org/10.1007/s40615-014-0061-z

[25] Shavers VL, Underwood W and Moser RP. Race/ethnicity and the perception of the risk of developing prostate cancer. American Journal of Preventive Medicine, 2009, **37**(1): 64-67. https://doi.org/10.1016/j.amepre.2009.03.007

(Edited by Snowy Wang)

Appendix

A Consent Letter

Dear xxx,

Researchers at Augusta University are conducting a health survey of African American men by mail. The survey asks questions about health status, medical history, prostate cancer screening, and smoking. It should take you about 45 minutes to complete. The results of this study will be used to obtain scientific information about the health of African American men who reside in Augusta and surrounding areas of Georgia and South Carolina. Through your participation we hope to understand the health of African American men so that prevention and treatment efforts can be improved. Results from the study will be published in scientific journals and presented at scientific conferences.

There are no known risks to you if you decide to participate in this survey other than potential, minor psychological distress. Some of the questions deal with sensitive subjects, including your physical and mental health, so we can get a more complete understanding of your health. Some people get distressed when answering these types of questions. There is no direct benefit to you for participating in this study. You will not be compensated for your participation in this research. I will not share any information that identifies you with anyone outside my research group at Augusta University.

This survey is voluntary and there is no penalty if you do not participate. It's up to you whether to answer the survey. You can skip any questions that you don't want to answer. If you do not participate, your decision will not adversely affect your relationship with Augusta University, if any. If you decide to take part in this study, you will be contacted in 4 to 5 years for a follow-up survey so that we can learn about changes in health over time. You may also receive information about additional health studies you may be eligible to participate in.

The data you provide will be stored at Augusta University. Your name and contact information will be stored separately in a locked cabinet for approximately 4 to 5 years. The data will be made available to other researchers for other studies following the completion of this research study and will not contain information that could identify you.

I hope you will take the time to complete this survey. A pre-addressed, stamped return envelope is enclosed for your convenience. If you have any questions or concerns about completing survey, about being in this study, or to receive a summary of my findings you may contact me at (706) 721-2270. If you have any questions or concerns about the "rights of research subjects", you may contact the Augusta University IRB Office at (706) 721-1483.

Sincerely,

Steven S. Coughlin, PhD
Professor of Epidemiology
Department of Population Health Sciences
Medical College of Georgia
Augusta University
1120 15th Street, AE-1042
Augusta, GA 30912

B African American men's health survey

QUESTIONNAIRE

MARKING INSTRUCTIONS

- While you can use a pen, please use a PENCIL in case you want to change an answer.
- Please do NOT use felt tip pens.
- Make solid, heavy "X" marks in the box.
- Please erase cleanly any mark you wish to change.
- Please do not make any stray marks on this form.

(This page will be kept separately from the rest of the pages to protect your privacy)

PLEASE PRINT

Name: _____ (First) _____ (Middle) _____ (Last)
Address: _____ (City) _____ (State) _____ (Zip Code)
Best telephone numbers to reach you at: (_____) _____-_____
☐ Cellular ☐ Home ☐ Work
(_____) _____-_____
☐ Cellular ☐ Home ☐ Work
Email address: _____
Before you begin the survey, please respond to the following statements.
1. I am 40 years of age or older
a. Yes
b. No
2. I live in Augusta-Richmond County or surrounding areas of Georgia or South Carolina.

a. Yes
b. No

If you answered No to either statement above, you do not need to complete the rest of the survey. Please return the survey in the postage paid envelope. We thank you for your time.

If you answered Yes to each statement above, you should complete the full survey.

PLEASE START HERE

3. In general, would you say your overall health is:
☐ 1- Excellent
☐ 2- Very good
☐ 3- Good
☐ 4- Fair
☐ 5- Poor

4. How much **bodily** pain have you had **during the past 4 weeks**:
☐ 1- None
☐ 2- Very mild
☐ 3- Mild
☐ 4- Moderate
☐ 5- Severe
☐ 6- Very Severe

5. For how long (if at all) has your **health limited you** in **each** of the following activities?

	Limited for more than 3 months	Limited for 3 months or less	Not limited at all
a. The kinds or amounts or vigorous activities you can do, like lifting heavy objects, running or participating in strenuous sports	0 – 1	0 – 2	0 – 3
b. The kind or amounts of moderate activities you can do, like moving a table, carrying groceries, or bowling	0 – 1	0 – 2	0 – 3
c. Walking uphill or climbing a few flights of stairs	0 – 1	0 – 2	0 – 3
d. Bending, lifting, or stooping	0 – 1	0 – 2	0 – 3
e. Walking one block	0 – 1	0 – 2	0 – 3
f. Eating, dressing, bathing, or using the toilet	0 – 1	0 – 2	0 – 3

6. Does your health **keep** you from working at a job, doing work around the house, or going to school?
☐ 1- YES, for more than 3 months
☐ 2- YES, for 3 months or less
☐ 3- NO

7. Have you been unable to do **certain kinds or amounts** of work, housework, or schoolwork because of your health?
☐ 1- YES, for more than 3 months
☐ 2- YES, for 3 months or less
☐ 3- NO

For **each** of the following questions, please mark the circle for the **one** answer that comes **closest** to the way you have been feeling **during the past month**.

	All of the time	Most of the time	A good bit of the time	Some of the time	A little of the time	None of the time
8. How much of the time, during the past month, has your **health limited your social activities** (like visiting with friends or close relatives)?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
9. How much of the time, during the past month, have you been a very nervous person?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
10. During the past month, how much of the time have you felt calm and peaceful?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
11. How much of the time, during the past month, have you felt downhearted and blue?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
12. During the past month, how much of the time have you been a happy person?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
13. How often, during the past month, have you felt so down in the dumps that nothing could cheer you up?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6

14. Please mark the square that best describes whether **each** of the following statements is true or false for you.

	Definitely true	Mostly true	Not sure	Mostly false
a. I am somewhat ill	☐ 1	☐ 2	☐ 3	☐ 4
b. I am as healthy as anybody I know	☐ 1	☐ 2	☐ 3	☐ 4
c. My health is excellent	☐ 1	☐ 2	☐ 3	☐ 4
d. I have been feeling bad lately	☐ 1	☐ 2	☐ 3	☐ 4

15. Do you drink alcohol on a regular basis (irrespective of amount of alcohol consumed)?
a. Yes
b. No
c. Prefer not to answer

HEALTH INFORMATION

Please mark an X beside each of the health conditions that you discussed with a healthcare provider and indicate the date (month/year) it was first noted.

☐ High blood pressure
☐ High cholesterol
☐ Stomach problem
☐ Lung/breathing problem
☐ Rheumatoid arthritis
☐ Congestive heart failure
☐ Heart attack
☐ Stroke
☐ Chronic bronchitis
☐ Emphysema
☐ Asthma
☐ Bladder/kidney problem
☐ Depression
☐ Anxiety
☐ Diabetes/sugar problem
☐ Osteoporosis
☐ Cancer (Specify type) _____
☐ Other _____

Are you currently taking medications for any of the conditions below? Please CHECK ALL that apply

☐ Diabetes
☐ High blood pressure
☐ High cholesterol
☐ Other (Please specify)_____

Do you have any other condition or illness that was not checked above?
If so, what is it? _____

PROSTATE CANCER SCREENING

16. Have you ever heard of a PSA or prostate-specific antigen test?
a) yes
b) no
17. Have you ever had a PSA test?
a) yes
b) no (**skip to 19**)
18. When did you have your most recent PSA test?
a) a year ago or less
b) more than 1 but not more than 2 years ago
c) more than 2 but not more than 5 years ago
d) over 5 years ago

The next few questions are about discussions that health care providers might have had with you about the PSA test.

19. Do you have a regular health care provider (e.g., doctor, nurse practitioner, PA)?
a) yes
b) no
20. Has a health care provider such as a doctor or nurse ever talked to you about a PSA test?
a) yes
b) no (**skip to 23**)
21. Thinking about the last time a health care provider talked to you about a PSA test, which of the following statements best describes your health care provider's recommendation about PSA tests?
a) that you should have a PSA test
b) that you should not have a PSA test
c) your health care provider did not make a recommendation
22. Thinking about the last time a health care provider talked to you about a PSA test, did your health care provider encourage you to ask questions or express any concerns you had about PSA testing? Would you say
a) yes, definitely
b) yes, somewhat, or
c) no, not at all
d) DID NOT HAVE ANY QUESTIONS OR CONCERNS ABOUT PSA

My Confidence in making an informed choice **Decision Self-Efficacy Scale**

Below are listed some things involved in making an informed choice. Please show how confident you feel in doing these things by circling the number from 0 (not at all confident about PSA testing or not getting it) to 4 (very confident) for each item below.

I feel confident that I can:

23. Get the facts about the prostate cancer screening decisions choices available to me	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident
24. Get the facts about the benefits of each choic	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident
25. Get the facts about the risks and side effects of each choice, whether or not to get prostate cancer screening	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident
26. Understand the information enough to be able to make a choice	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident
27. Ask questions without feeling dumb	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident
28. Express my concerns about each choice	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident
29. Ask for advice	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident
30. Figure out the choice that best suits me	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident
31. Handle unwanted pressure from others in making my choice	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident
32. Let my healthcare provider know what's best for me	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident
33. Delay my decision if I feel I need more time	Not at all confident	Somewhat not confident	Neutral	Somewhat confident	Very confident

Please answer the following questions about how confident you are about making an informed decision about prostate cancer screening: ***Decisional Conflict Scale***

34. I'm aware of the choices I have for prostate cancer screening.	Strongly disagree	Disagree	Agree	Strongly agree
35. I feel I know the benefits of prostate cancer screening.	Strongly disagree	Disagree	Agree	Strongly agree
36. I feel I know the risks and side effects of prostate cancer screening.	Strongly disagree	Disagree	Agree	Strongly agree
37. I know how important the benefits are for prostate cancer screening.	Strongly disagree	Disagree	Agree	Strongly agree
38. I am clear about which risks and side effects matter most to me for prostate cancer screening.	Strongly disagree	Disagree	Agree	Strongly agree
39. I have enough support from others to make a choice.	Strongly disagree	Disagree	Agree	Strongly agree
40. I choose without pressure from others.	Strongly disagree	Disagree	Agree	Strongly agree
41. I have enough advice to make an informed choice.	Strongly disagree	Disagree	Agree	Strongly agree
42. I am satisfied with my decision.	Strongly disagree	Disagree	Agree	Strongly agree
43. I expect to stick with my decision.	Strongly disagree	Disagree	Agree	Strongly agree

We are interested in how satisfied you are with your decision about prostate cancer screening. Please indicate how much you agree or disagree with the following statements ***Satisfaction with Decision Scale (post-test only)***

44. I am satisfied that I was adequately informed about the issues important to my decision about screening for prostate cancer.	Strongly disagree	Disagree	Agree	Strongly agree
45. The decision I made about prostate cancer screening was the best decision possible for me personally.	Strongly disagree	Disagree	Agree	Strongly agree
46. I am satisfied that my decision about prostate cancer screening was consistent with my personal values.	Strongly disagree	Disagree	Agree	Strongly agree
47. I expect to continue to carry out the decision I made about prostate cancer screening.	Strongly disagree	Disagree	Agree	Strongly agree
48. I am satisfied that this was my decision to make.	Strongly disagree	Disagree	Agree	Strongly agree
49. I am satisfied with my decision about prostate cancer screening.	Strongly disagree	Disagree	Agree	Strongly agree

50. Who should make medical decisions? **Control Preferences Scale**
a) I make the final decision on my own
b) I made a decision after seriously considering my doctor's opinion
c) My doctor and I share responsibility for the decision
d) I prefer that the doctor make the decision after seriously considering my opinion
e) I prefer that the doctor make the decision
51. When you think about getting a PSA test in the next 12 months, which sentence best describes you? **Stage of Decision Making Scale**
a) I haven't thought about it
b) I haven't thought about it, but I am interested in learning more
c) I have started to think about it, but I haven't made a decision
d) I have thought about it and I am close to making a decision
e) I have made a decision, but I am willing to reconsider
f) I have made a decision and I am not likely to change my mind

52. What do you think is your risk of developing prostate cancer compared to other men your age?

Perceived Risk of Prostate Cancer Scale a) Much lower risk
b) A little lower risk
c) About the same level of risk
d) A little higher risk
e) Much higher risk

My Knowledge about Prostate Cancer **Prostate Cancer Knowledge Scale**

53. Most men diagnosed as having prostate cancer die of something else _____
54. Men are more likely to die because of prostate cancer than because of heart disease _____
55. It is possible to have prostate cancer if a man does not have any symptoms _____
56. Prostate cancer is one of the least common cancers among men _____
57. If you have an abnormal PSA test result, your doctor may recommend that you have a prostate biopsy _____
58. The PSA test will find all prostate cancers _____
59. A prostate biopsy can tell you with more certainty whether you have prostate cancer than a PSA test _____
60. Loss of sexual function is a possible side effect of prostate cancer treatments _____
61. Problems with urination are possible side effects of prostate cancer treatments _____
62. The risk of developing prostate cancer increases with age _____
63. The risk of developing prostate cancer is higher in African American men as compared with men from other racial/ethnic groups _____
64. The risk of developing prostate cancer increases if you have a father or brother who has had prostate cancer _____
65. Diet rich in fruits is likely to reduce risk for developing prostate cancer _____
66. Do you have a history of prostate cancer in your immediate family (such as a father, brother)?
a) yes
b) no
67. What is your height? (please enter your height in feet and inches)
_____ _____ _____
Q68. How much do you weigh? (Please enter your weight in pounds)
_____ _____ _____
Q69. How do you describe your weight? (Circle correct answer)
a. Very underweight
b. Slightly underweight
c. About the right weight
d. Slightly overweight
e. Very overweight
f. Prefer not to answer
Q70. Which are the following are you trying to do about your weight? (Circle correct answer)
a. Lose weight
b. Stay the same
c. Gain weight
d. Not trying to do anything about my weight
e. Prefer not to answer

TOBACCO USE

Q71. Have you ever smoked a cigarette?
a. Yes
b. No
Q72. If answered yes on Q71, Have you smoked 100 cigarettes (5 packs) in your lifetime?
c. Yes
d. No
Q73. If answered yes on Q71. Do you now smoke cigarettes?
a. Every day
c. Some days
d. Not at all
Q74. If answered yes on Q71. How old were you the first time you smoked part or all of a cigarette?
OR
Q74. If answered yes on Q71. How old were you when you first started smoking fairly regularly?
Q75. How many cigarettes smoked per day when you smoked fairly regularly _____
Q.76. [On the days that you smoke] How soon after you wake up do you typically smoke your first cigarette of the day? Please enter the number of minutes or hours _____
Q.77. In the past 12 months, how many times have you stopped smoking for one day or longer because you were trying to quit?
a. 0 times
b. 1 time
c. 2-3 times
d. 4 or more times
Q78. When do you plan to quit smoking for good?
a. In the next 7 days
b. In the next 30 days
c. In the next 6 months
d. In the next year

e. More than one year from now
f. I never plan to quit smoking

E-cigarette use

Q79. Have you ever used Vaporizers, E-Cigarettes, and other Electronic Nicotine Delivery Systems (ENDS) some brand examples include JUUL, NJOY, Blu, Vuse, MarkTen, Logic, Vapin Plus, eGo, Halo, GreenSmoke, Fin, and KangerTech.
Yes
No
Q80. Have you ever used Vaporizers, E-Cigarettes, and other ENDS fairly regularly?
Yes
No
Q81. Do you now use Vaporizers, E-Cigarettes, and other ENDS?
Everyday
Somedays
Not at all
Q82. Have you ever smoked little filtered cigars or cigarillos, some brand names include Black and Mild, White Owl, and Swisher Sweets?
Yes
No
Q83. Have you ever smoked little filtered cigars or cigarillos, some brand names include Black and Mild, White Owl, and Swisher Sweets fairly regularly?
Yes
No
Q84. Do you now smoke little filtered cigars or cigarillos, some brand names include Black and Mild, White Owl, and Swisher Sweets?
Everyday
Somedays
Not at all
Q85. Have you ever used Smokeless Tobacco Products, Including Dip, Snuff, Snus, and Chewing Tobacco?
Yes
No
Q86. Have you ever used Smokeless Tobacco Products, Including Dip, Snuff, Snus, and Chewing Tobacco fairly regularly?
Yes
No
Q87. Do you now use Smokeless Tobacco Products, Including Dip, Snuff, Snus, and Chewing Tobacco?
Everyday
Someday
Not at all
E-cigarettes/ENDS are considered tobacco products by the FDA because most of them contain nicotine, which comes from tobacco. There are increasing concerns about the health risks associated with use of e-cigarettes/ENDS. You can find out more about these issues by clicking on the Advisory on E-Cigarette Use among Youth issued by the U.S. Surgeon General, and the Severe Pulmonary Disease Associated with Using E-Cigarette products issued by the Centers for Disease Control & Prevention (CDC).

DEMOGRAPHICS

88. Age: _____ years
89. Race/Ethnicity
a) African American
b) Afro-Caribbean
c) Afro-Haitian
d) Afro-Hispanic
e) African
f) Other
90. Marital status:
a. Single
b. Married
c. Partner
d. Separated
e. Divorced
f. Widowed
g. I choose not to answer
91. Education
f. Less than High School degree
g. High School Degree or equivalent (e.g., GED)
h. Some College but no degree
i. Associate Degree
j. Bachelor Degree
k. Graduate Degree
l. I choose not to answer
92. Annual household income

m. < $20,000
n. $20,000 - $34,999
o. $35,000 - $49,999
p. $50,000 - $64,999
q. $65,000 - $79,999
r. $80,000 to $99,00
s. $100,000 or more
t. I choose not to answer
u. I don't know
93. Number of people in household: _____
94. Employment status:
v. Temporarily unemployed
w. Employed (> 20 hours / week)
x. Homemaker
y. On disability
z. Retired

That's all the questions we have for you. Thank you for your time.