

# Formative Evaluation of the Prostate Cancer Screening Practices of African-American Physicians

Leonardo Stroud, MD, MPH; Louie E. Ross, PhD; and Shyanika W. Rose, MA  
Atlanta, Georgia and Durham, North Carolina

The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention, or the U.S. Department of Health and Human Services.

**Background:** Clinical guidelines for using the prostate-specific antigen (PSA) test as a population-based tool vary. This study qualitatively explores the prostate cancer screening practices of African-American primary care physicians.

**Methods:** Eight telephone focus groups were conducted with 41 African-American primary care physicians from 22 states. Data were coded on five major topic areas relative to provider screening practices: use of serum PSA and digital rectal examination (DRE), counseling routine, factors influencing screening practices, familiarity with clinical guidelines, and use of educational materials

**Results:** Almost all (95%) of the physicians routinely recommended and offered prostate cancer screening to their patients, which was universally defined as consisting of both a PSA test and DRE. Most physicians reported offering the PSA test to asymptomatic, non-African-American men beginning around age 50, but African-American men or men with a family history of prostate cancer were offered the PSA test 5–10 years earlier.

**Conclusions:** The observed practice patterns for prostate cancer screening among African-American primary care physicians do not evenly reflect both sides of the PSA screening controversy. For most physicians, concerns about prostate cancer in their patients outweighed concerns about the potential limitations of screening and the untoward side effects of treatment. These physicians adopted a more proactive approach toward use of the PSA test in asymptomatic men irrespective of their race or ethnicity.

**Key words:** prostate cancer ■ screening ■ prostate-specific antigen

## INTRODUCTION

In the United States, prostate cancer is a significant cause of mortality and morbidity. It is the most commonly diagnosed noncutaneous cancer, and only lung cancer causes more cancer-related deaths among men.<sup>1</sup> In 2006, >234,000 new cases will be diagnosed, and >27,000 deaths are expected.<sup>2</sup> It is well established that men of sub-Saharan African descent endure a high burden of prostate cancer.<sup>3–5</sup> In the United States, the incidence of prostate cancer is 60% higher among African Americans than in whites.<sup>1</sup> In addition, the mortality rate for African-American men is more than twice the rate for white men.<sup>1</sup>

Although prostate cancer can be detected early by a prostate-specific antigen (PSA) test alone or in combination with a digital rectal examination (DRE), uncertainty persists about the ability of screening to reduce mortality and morbidity from prostate cancer.<sup>6</sup> Current clinical guidelines for prostate cancer screening vary considerably among professional organizations, but most encourage physicians to discuss the benefits and potential limitations of PSA testing with their patients before offering them the test.<sup>7,8</sup>

Primary care physicians play an important role in providing standard cancer prevention and screening services to patients in the communities they serve. African-American primary care physicians are more likely than other physicians to care for minority, poor and underserved patients<sup>9</sup> (who are likely to be underscreened), and yet little has been reported on their patterns of screening or counseling relative to prostate cancer.

This study qualitatively explores the screening and counseling practices of African-American primary care physicians and the reasons for such practices. Specifically, we examined factors influencing their practices, their familiarity with and adoption of clinical guidelines for prostate cancer screening and their use of educational materials to supplement their practices. An earlier study exploring PSA test use among primarily white physicians identified two distinct screening profiles: routine screeners (physicians who recommended regular PSA screening to asymptomatic men with no known risk factors and  $\geq 10$ -year life expectancy beginning

© 2006. From the Division of Cancer Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA (Stroud, Ross) and Battelle Centers for Public Health Research and Evaluation, Durham, NC (Rose). Send correspondence and reprint requests for *J Natl Med Assoc.* 2006;98:1637–1643 to: Dr. Louie Ross, Division of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, GA 30341-3717; phone: (770) 488-3097; fax: (770) 488-4759; e-mail: lor3@cdc.gov

around age 50) and nonroutine screeners (physicians who generally discussed the implications of screening with men before offering the PSA test but gave no recommendations whether to screen).<sup>10</sup> We sought to determine whether similar patterns were present in a sample of African-American physicians.

## METHODS

Between August and September 2003, eight telephone focus groups were conducted with 41 African-American primary care physicians who practiced in 22 states. The groups consisted of 3–6 participants, and sessions lasted an average of 1 hour. A professional

**Table 1. Characteristics of physicians who participated in the focus groups**

Characteristic	Total (n=41)	
	N	%
Primary Care Specialist		
Family physician	18	43.9
General practitioner	3	7.3
General internist	19	46.3
Other	1	2.5
Average Number of Hours in Direct Patient Care		
20–29	3	7.3
30–39	8	19.5
40–49	16	39.0
>49	14	34.2
Practice Setting		
Solo practice	18	43.9
Single-specialty group practice	7	17.1
Multispecialty group practice	10	24.4
Staff model HMO	2	4.9
Other model HMO	0	0.0
Mixed model practice	1	2.4
Other	2	4.9
Unknown	1	2.4
Conduct Health Maintenance Exams		
Yes	41	100.0
No	0	0.0
Follow Formal Prostate Cancer Screening Guidelines		
Yes	23	56.1
No	18	43.9
Proportion (%) of Patients, Male		
21–30	11	26.8
31–40	24	58.6
>40	6	14.6
Proportion (%) of Male Patients Aged 40–70 Years		
20–30	7	17.1
31–40	11	26.8
41–50	9	22.0
>50	14	34.1
Proportion (%) of Male Patients Aged 40–70 Years Considered Black or African-American		
<10	2	4.9
10–25	8	19.5
26–50	10	24.4
51–75	4	9.8
>75	17	41.4
Physician Gender		
Male	23	56.1
Female	18	43.9
Physician Age (Years)		
25–34	6	14.6
35–44	13	31.7
45–54	12	29.3
55–64	3	7.3
>64	5	12.2
Unknown	2	4.9

moderator facilitated all the discussions. Telephone focus group methodology was chosen to facilitate the assembly of physicians from diverse geographic locations, foster the anonymity of its participants and enhance the participation of professionals with exceptionally demanding schedules.

## Participants

All of the participating physicians met the following criteria: specialized in general practice, family practice or internal medicine; practiced medicine full- or part-time in the United States; and served a patient population that included African-American men aged  $\geq 40$ . Participants were selected from a random sample of physicians drawn from the National Medical Association (NMA) member list. The NMA is a professional organization of licensed physicians whose principal mission is to “promote(s) the collective interests of physicians and patients of African descent.” For more details on the process of selecting the sample, the reader is referred to the companion article on methods in this journal.<sup>11</sup>

## Study Protocol

The moderator followed a semistructured discussion guide that explored five major topic areas relative to provider prostate cancer screening practices: current use of PSA and DRE, counseling routine, factors most influencing screening practices, familiarity with relevant clinical guidelines, and use of educational materials or informational tools. The moderator asked all participants to describe the racial/ethnic composition of their practices, their screening protocol for high-risk patients and the influence of promotional activities (i.e., health fairs) in their respective communities on their screening practices. Additional themes were assessed through free-flowing discussion in which the moderator frequently summarized commentary and probed for alternative points of view. To protect anonymity, participants were encouraged to use only their first names. The sessions were scheduled and tape-recorded by a commercial telephone-conferencing service.

## Coding and Analysis

Tapes of the sessions were transcribed and summarized by the research team to identify important themes and concepts that emerged from the focus group discussions. Subsequently, three members of the team reviewed the transcripts, sorted the data and established coding categories based on the five research topic areas. The reviewers then met to compare the codes and resolve any discrepancies in coding. Next, members of the research team organized the coding categories into a code book. The code book was pilot tested and revised by the team based on the utility and relevance of its codes. Based on the finalized code book, two coders independently analyzed each of the focus group discussions. Pair agreement reached 82% overall across all

focus groups, respectively. When the primary coders disagreed, the third coder was consulted and a consensus reached. All coding data were entered and analyzed using QSR N6® (QSR International Pty LTD, Victoria, Australia), a software program for qualitative analyses.

The code book was organized around the following five topics explored by the moderator: current PSA and DRE screening practices, counseling routine, factors influencing PSA screening practices, familiarity with clinical guidelines, and use of educational materials in practice.

### **Current PSA test and DRE screening practices.**

All elements of practices related to prostate cancer screening were abstracted, including specific recommendations made by the clinician, age range for which screening was offered, reasons not to screen, frequency of screening, procedures for following up abnormal test results and opportunities to offer screening.

**Counseling routine.** The following elements related to provider counseling procedures were explored: manner in which the topic of prostate cancer screening was introduced to the patient, time-frame counseling was offered to patient (in context of the visit), and the types of conversations physicians have with patients regarding prostate cancer screening.

**Factors influencing practices.** Nine determinants of screening were revealed: physician experience, patients' expectations, scientific evidence, perceived community standards of care, clinical guidelines, practice values, concerns about malpractice liability, practice mandates or protocols, and cost considerations. Determinants were rated as being major if mentioned by 5–8 groups, moderate if mentioned by 2–4 groups, or minor if mentioned by only one group.

**Familiarity with clinical guidelines.** Comments related to the differences in existing screening guidelines were coded as demonstrating or not demonstrating awareness of the lack of consensus in those recommendations. In addition, the accuracy of participants' descriptions of the guidelines was assessed.

**Use of educational materials.** Comments related to the types of educational materials used or desired when discussing prostate cancer screening with patients were coded. Other related items addressed were content, source or format of the materials.

## RESULTS

### Characteristics of Participants

There were 41 participants—23 men and 18 women (Table 1). Focus groups ranged from 3–6 physicians, with an average of five. Of physicians whose age was known, essentially half (19/39) were in the 25–44-year age range. The majority of participating physicians were either general internists (46%) or family practitioners (44%). Almost three-fourths of the physicians spent  $\geq 40$

hours in direct patient care per week. Twenty-one (51%) of the respondents indicated that their patient population was predominantly African-American, while a greater part of the remainder described their practice as racially mixed. African Americans aged 40–70 years comprised more than half of the male patient population in a slight majority of the physician practices. More than half (23/41) of the physicians practiced in the south, and just four (10%) practiced in the west.

## Current PSA Screening Practices

Almost all (39/41) of the physicians routinely recommended and offered the PSA test to their patients. Although specific screening criteria varied, the physicians regularly recommended the PSA test to their patients after they reached a particular age. A majority (78%) of the physicians began to recommend the test to their African-American patients at age 40, but a noteworthy percentage (12%) began to recommend it to these patients at age 35 if there was a family history of prostate cancer. One physician even routinely recommended the PSA test to his African-American patients beginning at age 30. Even so, the physicians typically recommended the PSA test to African-American men 5–10 years earlier than men of other racial or ethnic groups.

For men who were not African-American, the majority (51%) of respondents began to recommend and offer the PSA test to these men at age 50. However, the remainder (49%) of physicians recommended screening this group before age 50, even as early as age 40. Several of the physicians who adopted this pattern of screening younger, non-African-American men were in practices consisting mostly of African-American patients.

With regard to when screening should no longer be offered, recommendations were not as clear. Only three respondents said they would stop screening at a predetermined age (i.e., 75 years). Most did not select an absolute cutoff; instead, they said they would assess the overall health status of the patient before deciding whether to screen. Almost one-half of the physicians acknowledged that they would not screen a patient who was in a nursing home, frail or in poor health.

Most respondents who recommended the PSA test said they try to do a PSA test on their patients annually, regardless of race or ethnicity. In all but two focus groups, physicians agreed that they attempted to maximize screening opportunities by offering screening at annual health maintenance examinations and during initial, follow-up and acute care visits. This opportunistic-type of screening was an important issue for several physicians.

## Current DRE Practices

Physicians in all of the focus groups considered the DRE an important component of evaluating the prostate gland. Screening for prostate cancer was defined clearly

as including both the PSA test and the DRE. Although several physicians expressed concern about the accuracy or validity of the DRE, most continued to use it in combination with the PSA test or as a substitute for the PSA test. When DRE was used as a substitute, physicians typically used it to assess the prostate gland in patients who fell outside the “standard” age parameters for screening (i.e., they were <40 or >70 years old).

## Counseling Routine

Most physicians (85%) reported discussing screening for prostate cancer with their age-appropriate patients before offering the tests. The issues most often discussed included: 1) the intended purpose and diagnostic accuracy of the PSA test, 2) the importance of screening in relation to patient’s risk profile, and 3) the potential costs to the patient if the PSA test is not covered by his insurance. Typically, the approach was directed towards explaining the reasons the patient should have the PSA test. Only a few physicians reported discussing the pros and cons of screening, and expressly involving their patients in the decision to be screened.

Discussions about screening were most often initiated by the physicians, but several noted an increasing trend for patients to inquire about the PSA test. Physician-initiated discussions were more likely to occur during the review of systems of the health history. Some physicians believed it important to introduce the topic of screening for prostate cancer to their younger patients to begin to prepare them for the associated procedures, especially the DRE.

Among 15% of physicians, there was little or no discussion with patients about the PSA test before ordering it. In most instances, the PSA test was ordered as part of a routine blood work-up. These physicians generally reported waiting until after receiving results before having any type of discussion. One participant stated, “Given the kind of time constraints we have these days, I don’t invite that conversation. I generally tell them, ‘Let’s get the PSA and hopefully it’ll be normal. If it isn’t then we have to have a more prolonged conversation.’”

Many physicians said that patients were willing to be screened for prostate cancer and that refusal of the procedure was not a problem in their practice. Patients willing to be screened were characterized as well informed, inquisitive and health conscious. In addition, the physicians believed that messages about prostate cancer provided through media sources have educated patients and thereby influenced their requests or expectations to be screened.

## Reasons for Screening Practices

Physicians reported a variety of factors that influenced their screening practices. Major factors included scientific evidence, clinical guidelines, patient requests,

and experience (both professional and personal). Moderate factors were cost considerations, practice values, practice protocols and perceived community standards of care. Concerns about malpractice liability were rated as a minor factor. We provided additional information below on the four factors categorized as major influences.

**Scientific evidence.** Thirty-one physicians (76%) listed scientific evidence as an influence on their screening practices. The issues on which they were influenced by such evidence included the high prevalence and mortality of prostate cancer among African Americans, the merits (earlier detection) and limitations (high false-positive rate) of the PSA test, and best treatment options following abnormal results. Some physicians also cited the current lack of scientific evidence specific to African Americans as an influence. Physicians expressed interest seeing more studies addressing the biologic aggressiveness of disease in African Americans, the utility of using race-specific PSA levels and the health-related quality of life outcomes in African Americans following various treatment options.

**Patient requests.** Requests to be screened constituted the most important patient-specific influence on screening. Factors cited to contribute to men's increased demand for screening included their heightened awareness of prostate cancer through community outreach activities and media exposure, more active involvement in health care decision making, and pressures from spouses or other family members to take the tests. Less commonly mentioned were patient refusals of DRE, and patients' perceptions that screening would be of little benefit to them.

**Experience.** Sixteen physicians across five focus groups discussed the influence of their professional or personal experience. Residency training, clinical experiences, involvement in research on prostate cancer, and personal experience with the disease—either through the diagnoses of family members or friends—were described as influential.

**Familiarity with clinical guidelines.** Although the physicians said they were familiar with the recommendations of various professional organizations, most did not cite language specific to the guidelines. The guidelines most often cited were those issued by the American Cancer Society, the American Urological Association and the U.S. Preventive Services Task Force. Other guidelines that were referenced included those from the American Academy of Family Physicians, American College of Physicians and the American Geriatric Society.

Twenty-three (56%) physicians specified that clinical guidelines affected their screening practices; however, they did not provide reasoning for selecting particular guidelines. Only five physicians stated that the guidelines did not influence their practice patterns.

Opinions regarding the guidelines varied. Descriptive terms used included confusing, vague, conflicting and

too conservative. Many physicians were aware of the lack of consensus among professional organizations on guidelines for PSA screening. Some physicians described how this lack of consensus affected their screening practices. Most of these physicians explained that their practices were determined by looking at the guidelines and applying them to their practice based on factors such as clinical experience, common sense and patient attributes (age, race/ethnicity, health status, existing comorbidities), since the guidelines do not agree.

## Use of Educational Materials

Although brochures, pamphlets and anatomical models were reportedly used by some physicians, most of the physicians did not use any educational materials. However, the majority of physicians expressed interest in having print materials in their offices to help explain prostate cancer and the PSA test. Physicians were particularly interested in materials for low-literacy populations (written in multiple languages) and from credible sources such as government agencies. They were also interested in providing communities, especially African-American communities, with support materials such as videos and print materials for community outreach activities (i.e., health fairs).

For those who were not interested in using materials, reasons offered included the preference to dialogue with their patients about prostate cancer, the dissatisfaction with the quality of materials examined or the perception that the viewpoints expressed were imbalanced.

## CONCLUSION AND RECOMMENDATION

African-American physicians participating in the focus groups were highly supportive of screening and provided screening with both DRE and PSA to almost all men in their practices annually. For asymptomatic non-African-American men with no known risk factors, screening is most often initiated at age 50. For African-American men, however, screening tends to start 5–10 years earlier. These practices appear to be driven by concerns about the higher risk for prostate cancer mortality among African-American men. Of particular interest, however, was our finding that a large percentage of physicians also screen their non-African-American patients before age 50. Those physicians were more likely to screen all men at younger ages. This could be a consequence of the high proportion of African Americans in their practice population. Our findings also suggest that some physicians opportunistically screen men whom they consider to have a low likelihood of return to take advantage of any interface the men may have with the healthcare system.

African-American primary physicians generally discuss screening with patients before recommending that it be performed; however, in most instances, the coun-

selling practices do not conform to the model of shared decision-making recommended by some prostate cancer screening guidelines.<sup>12</sup> It seems to be common practice to describe the importance of the PSA test and then make firm recommendations in favor of taking it, leaving little opportunity for the patient to refuse.

Our study indicates that scientific evidence, guidelines, patient expectations and experience most influence decisions to screen men for prostate cancer. This finding is comparable to the practice patterns of routine screeners in the prior focus group (mostly white physicians) in that experience and patient demand were the major factors driving screening patterns. This characterization notwithstanding, African-American primary care physicians appear to be similar to nonroutine screeners in the previous study in that scientific evidence was found to be a major factor influencing practice patterns.<sup>10</sup> Interestingly, there appear to be different forces driving this factor among the participants of the two studies. In the previous study, the lack of conclusive evidence supporting the benefits of PSA was the most frequently cited type of scientific evidence motivating screening patterns. In this study, however, the physicians appear to be largely aware of the controversy surrounding the PSA test, but their concerns about prostate cancer in their African-American patients seem to outweigh concerns that the PSA test may have limitations. In addition, many physicians expressed their concerns about the lack of scientific evidence on screening and treatment outcomes specific to African Americans (i.e., age-specific PSA levels, quality of life), and they see a need for such evidence to support the establishment of screening and treatment guidelines for African Americans. Finally, as a less pressing point, it appears that the screening practices of our participants are being influenced by the consequences of community outreach programs and activities, something that did not emerge as a factor in the previous study.<sup>10</sup>

Our physicians do not use a wide range of educational materials but indicate they are supportive of providing such materials to patients, if they are available and accessible. Materials targeting low-literacy populations and persons who speak languages other than English are considered priority. Printed materials are the preferred format. Optimal materials are described as concise, easy to read and adept at explaining the importance of the PSA test and DRE.

Based on the results of this study, we identify the following next steps and priorities for research:

1. conduct a survey with a large sample of African-American primary care physicians to generate more generalizable data since the findings from this study may not be representative of African-American primary care physicians nationally;
2. expand the scientific evidence on the efficacy of

screening and treatment relative to age and race, and elicit feedback from physicians on how guidelines for prostate cancer should be used to conduct screening and treatment of African-American patients;

3. increase the presence of educational materials for physicians and their patients in clinical practices and communities by targeting African-American physician practices and dispersing information about available resources of educational materials on prostate cancer for men and their families in this setting. African-American physicians may serve as a practical vehicle in which to reach African-American patients both because of the higher presence of these patients in their practices and the interest these physicians have in this topic. Our study indicates that African-American physicians do not currently use a wide range of materials but would be supportive of providing such materials to patients if they were available. There are particular needs for low literacy, multilingual materials from a credible source that would explain prostate cancer screening to patients; and
4. promote better provider-patient communication about the pros and cons of prostate cancer screening by providing African-American physicians with information on the current recommendations on prostate cancer screening for populations that mirror their own. Providing such information in a format that can be shared with patients can also help to promote shared decision-making among patients. For example, the Centers for Disease Control and Prevention's (CDC's) *Screening for Prostate Cancer: Sharing the Decision* ([www.cdc.gov/cancer/prostate/screening/index.htm](http://www.cdc.gov/cancer/prostate/screening/index.htm)) targets physicians and was developed to help them explain to patients more effectively prostate cancer and screening. In this way, the CDC can assist in ensuring that all men are given adequate information regarding the risks and benefits of screening.

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