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Physician behaviors to promote informed decisions for prostate cancer screening: A National Research Network study

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Abstract

Background—Clinical guidelines for prostate cancer screening (PCS) advise physicians to discuss the potential harms and benefits of screening. However, there is a lack of training programs for informed decision making (IDM), and it is unknown which IDM behaviors physicians have the most difficulty performing. Identifying difficult behaviors can help tailor training programs.

Purpose—In the context of developing a physician IDM program for PCS, we aimed to describe physicians' use of nine key IDM behaviors for the PCS discussion and to examine the relation between the behaviors and physician characteristics.

Methods—A cross-sectional sample of The American Academy of Family Physicians National Research Network completed surveys about their behavior regarding PCS (N=246; response rate=58%). The surveys included nine physician key IDM behaviors for PCS and a single-item question describing their general practice style for PCS.

Results—The most common IDM behavior was to invite men to ask questions. The two least common reported behaviors concerned patients uncertain about screening (i.e., arrange follow up and provide additional information for undecided men). Physicians reported difficulty with these

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two behaviors regardless whether they reported to discuss or not to discuss PCS with patients. Reported use of key IDM behaviors was associated with a general practice style for PCS and being affiliated with a residency training program.

Conclusions—Physician training programs for IDM should include physician skills to address the needs of patients uncertain about screening. Future research should determine whether if actual behavior is associated with self-reported behavior for the PCS discussion.

INTRODUCTION

Clinical guidelines for the early detection of prostate cancer emphasize the need for primary care physicians to advise men about the potential harms and benefits of screening [1–4]. Results from national studies suggest that most physicians (70–80%) do discuss prostate cancer screening (PCS) with patients [5 6], but there is evidence that the discussions are not well balanced. In one study, men reported that physicians were more likely to discuss the benefits of screening (71.4%) than the risks (32.0%) [6]. Moreover, lack of time for an adequate discussion is a common barrier cited by physicians [7–9].

Most of the research and training for informed decision making (IDM) has focused on the patient. Patient decision aids, or tools that help inform patients about options, clarify values, and guide them in deliberating and communicating during the decision-making process, are shown to be effective in promoting informed or shared decision-making [10]. While patient decision aids may help physicians achieve more balanced discussions and reduce the time needed to educate men about PCS, primary care physicians still need training to help facilitate the process and to best advise the patient in a tailored fashion that is specific to the man's clinical situation. Yet there is little evidence of effective physician training programs [11 12] or consistent methods for evaluating physician behavior [11].

In the context of developing a provider IDM training program for PCS that included a patient decision aid, we identified nine key behaviors to assess physicians' use of an IDM process for PCS. We then conducted a national survey to describe the use of these behaviors among primary care physicians and to examine the relation between the behaviors, general practice style for PCS, and physician characteristics. We aimed to use this information to identify which behaviors were most important to emphasize in physician training programs and to discover if certain groups of physicians need different training based on current key behavior use.

METHODS

Development of key behaviors for informed decision making

In a separate study we developed a physician intervention consisting of two parts: a decision aid provided to the patient for his review before the clinical visit and a training session for the physician on IDM for PCS. To evaluate the training session, we sought to identify the essential physician behaviors purportedly required to successfully conduct IDM with patients. We drew from several sources: reports of the U.S. Preventive Services Task Force (USPSTF) and Community Preventive Services Task Force on shared decision making and IDM [13 14], tenets of informed consent, a provider-based IDM trial [15], constructs from

cancer screening decision aid trials [10], the “5 A’s” used to structure tobacco cessation counseling [16], and consultation with practicing physicians and medical decision-making experts. The key behaviors identified were: 1) “tell men there is a decision to make”, 2) “tell men that experts disagree about whether men should be screened”, 3) “make sure men have information on benefits and risks”, 4) “question men about their understanding”, 5) “ask men what they think about screening,” 6) “invite men to ask questions”, 7) “refer undecided men to other sources”, 8) “plan follow-up for undecided men”, and 9) “document the discussion in the patient’s chart”.

Study design and study population

This cross-sectional study surveyed primary care members of the American Academy of Family Physicians National Research Network (AAFP NRN). In July 2007, the AAFP NRN project team invited physicians by email to complete an online survey and subsequently sent out two email reminders. The team then mailed study packets (invitations, surveys, and return envelopes) to non-respondents and members without email addresses. A final packet was mailed to all non-responders in January 2008. The AAFP and Baylor College of Medicine Institutional Review Boards approved this study. Detailed study procedures are elsewhere [17].

Physician survey

The survey asked physicians to self-report how often they engaged in each of the nine key behaviors for PCS. The five possible responses ranged from 1-“never” to 5-“always”. To identify a general practice style for PCS, physicians were asked a single-item question, “Which approach best describes your usual practice regarding prostate-specific antigen (PSA) screening with age-appropriate men who have no other risk factors?” The six response options were: 1) “I generally do not order the PSA test nor discuss the possible harms and benefits with the patient”, 2) “I generally order the PSA test without discussing the possible harms and benefits with the patient”, 3) “I generally discuss the possible harms and benefits of PSA screening with the patient, and then recommend the test”, 4) “I generally discuss the possible harms and benefits of PSA screening with the patient, and then recommend against the test”, 5) “I generally discuss the possible harms and benefits of PSA screening with the patient and then let him decide whether or not to have the test”, and 6) “Other”. Finally, respondents were asked for their total years in practice, gender, and whether their practice was a residency training site.

Statistical analysis

To compare the physicians’ general practice style for PCS across each of the nine key behaviors, we used the three most commonly reported styles. For this analysis of variance, each of the nine behaviors was treated as continuous (values = 1 to 5) and all statistical significance testing was set at $p < .05$.

Additionally, we dichotomized the behaviors to represent physicians who frequently endorsed behaviors (responded as “often” or “always”) and those who did not (responded as “never”, “rarely”, or “sometimes”). To determine the total number of behaviors endorsed, we summed the nine dichotomized behaviors.

RESULTS

Description of the study respondents

Of the 426 then-current AAFP NRN members, 246 (57.7%) completed the questionnaire. Members reported an average of 19.4 years in practice (SD = 8.9, range = 2 to 68 years). Respondents were predominately male (71.5%), and a little less than half reported residency training site affiliation (45.9%). Overall, the characteristics of the respondents to the survey were similar to the larger population of AAFP members [17].

General practice style for prostate cancer screening

Almost half of respondents reported that they discuss PCS with patients and allow the patient to decide (47.5%); the others were almost evenly divided between screening without discussion (24.2%) or discussing PCS and then recommending screening (23.0%). Few respondents reported that they discuss screening with patients and then recommend against it (3.7%) or that they neither screen nor discuss screening (0.2%).

Reported use of key informed decision-making behaviors

Overall, the most common self-reported behaviors were “invite men to ask questions” (M = 4.27) and “tell men that there is a decision to make” (M = 3.98). The least common were “refer undecided men to other sources” (M = 2.71), “plan follow-up for undecided men” (M = 2.94), and “question men about understanding” (M = 3.17). Mean scores for each of the nine behaviors were significantly different across the three general practice styles for PCS (Table 1). Post-test comparisons revealed significant mean differences for each of the nine behaviors between physicians who reported that they screen without discussion and physicians who reported that they discuss screening and recommend the PSA test or let the patient decide (all $p < .05$). When comparing the two general practice styles for PCS that include discussion of screening (i.e., recommend PSA test and let patient decide), the two groups differed significantly on three of the nine key behaviors: “tell men there is a decision to make” ($p = .03$), “tell men that experts disagree” ($p < .001$), and “ask men what they think about screening” ($p = .05$). Those that recommend the PSA test had higher means for the three behaviors compared to those that let the patient decide.

Dichotomized key behavior responses resulted in the total sample endorsing five of the nine behaviors (M = 4.90, SD = 2.70). No gender differences were observed for endorsing behaviors ($F(1,217) = 2.55$, $p = .11$), but there were differences for whether the practice was a residency training site ($F(1,217) = 40.70$, $p < .001$). Those who reported practicing at a residency training site endorsed more behaviors (M = 6.05, SD = 2.23) compared to physicians who did not report practicing at such a site (M = 3.92, SD = 2.69).

Endorsement differed across general practice style for PCS ($F(2,220) = 74.97$, $p < .001$) (Figure 1). Physicians who reported that they discuss screening and then let the patient decide endorsed a mean of 6.22 of nine behaviors (SD = 2.05), followed by those who reported that they discuss screening and then recommend PCS who were full point lower (M = 5.13, SD = 2.22). Physicians who reported that they screen without discussion endorsed few behaviors (M = 2.07, SD = 2.05).

DISCUSSION

In this study, we aimed to describe primary care physicians' use of nine key behaviors for promoting informed decisions about PCS. Overall, physicians only endorsed about half of these behaviors, suggesting that the decision-making process between physicians and patients may be enhanced by teaching physicians to engage in more of the behaviors, some of which could be increased by the use of decision aids. Our results suggest that for all physicians, IDM programs should include training on how to make follow-up plans for undecided men and provide resources for men to help make screening decisions (e.g., websites, decision aids). Training programs should also teach physicians skills on how to check men's understanding about the risks and benefits of screening.

Previously, we identified several general practice styles used by physicians when discussing PCS with their patients [18 19]. The single-item question about general practice style for PCS was able to group physicians who discuss screening and those who don't according to self-report of ordering PSA tests, screening high-risk men, and attitudes about screening. In our current study, we compared key behavior use across general practice style for PCS and found that this single item was able to classify physicians according to reported behavior use. Therefore, the single-item indicator may be of use to generally classify physicians for their PCS style when time is a limiting factor for assessment.

We found few differences between the two general practice styles that discuss screening (i.e., recommend screening or let the patient decide). These differences may be an interesting research finding, but may not inform intervention development because the differences are for key behaviors that are reported to be done frequently for both of the style groups. But, the broader finding that many physicians engage in some shared decision-making behaviors infrequently has greater implications for intervention development.

We found that the total number of behaviors endorsed was associated with practicing at a residency-training site affiliation, but not with gender. Other researchers have also found the discussion to be associated with practice setting (i.e., multi-group versus solo practice) but not with gender [5]. One explanation for the differences by setting is that certain settings may have screening discussions as a standard of care. Similarly, residency-training sites may emphasize patient-centered care through physician-patient communication skills training as part of the curriculum. Outside of residency training sites there is a lack of physician incentives for performing IDM behaviors.

The primary limitation of our study is our use of self-report instead of observation, thus introducing the potential for over reporting of more desirable behavior. For example, a recent study that analyzed audio-recorded encounters to measure IDM found that the process for PCS was quite low and that there was little meaningful content during the discussion [20]; however, that study did not assess physicians' self-report of the behaviors. Because of the tendency of over report, we chose a conservative cut off to dichotomize IDM behavior endorsement. That is, we included responses of "sometimes" as *not* endorsing a behavior (included with responses of "rarely" or "never") instead of endorsing a behavior (responses with "often" and "always").

Another limitation is that organizations have issued new guidelines for PCS since our study was conducted. The USPSTF now recommends *against* PSA-based screening, while acknowledging that some patients themselves may bring up questions about screening and that some physicians will still offer the test [1]. For those who offer the test, the USPSTF suggests that physicians should be prepared to engage in a shared decision-making process. Based on our results, we recommend that provider-based interventions should teach physicians how to engage patients in the decision-making process, share values and preferences, and provide resources and follow up to patients not ready to make a decision about screening.

In particular, we believe that training programs should offer ways to help facilitate IDM for undecided men. Because the new USPSTF guideline conflicts with conventional wisdom that "prevention is always beneficial," there is the potential for more men to be confused about screening, question screening, and bring it up to their doctor. This may lead to more men being uncertain about screening. Current training programs do not address what to do with and how to follow up with undecided men [11].

The nine IDM behaviors we identified can be used to describe physicians' use of IDM process and to evaluate provider decision-making programs. The single-item general practice style for PCS may provide a quick assessment of a physician's general practice style for PCS. Future research should determine whether actual physician IDM behavior is associated with reported behaviors and general practice styles for PCS and explore the needs of the undecided after an IDM process.

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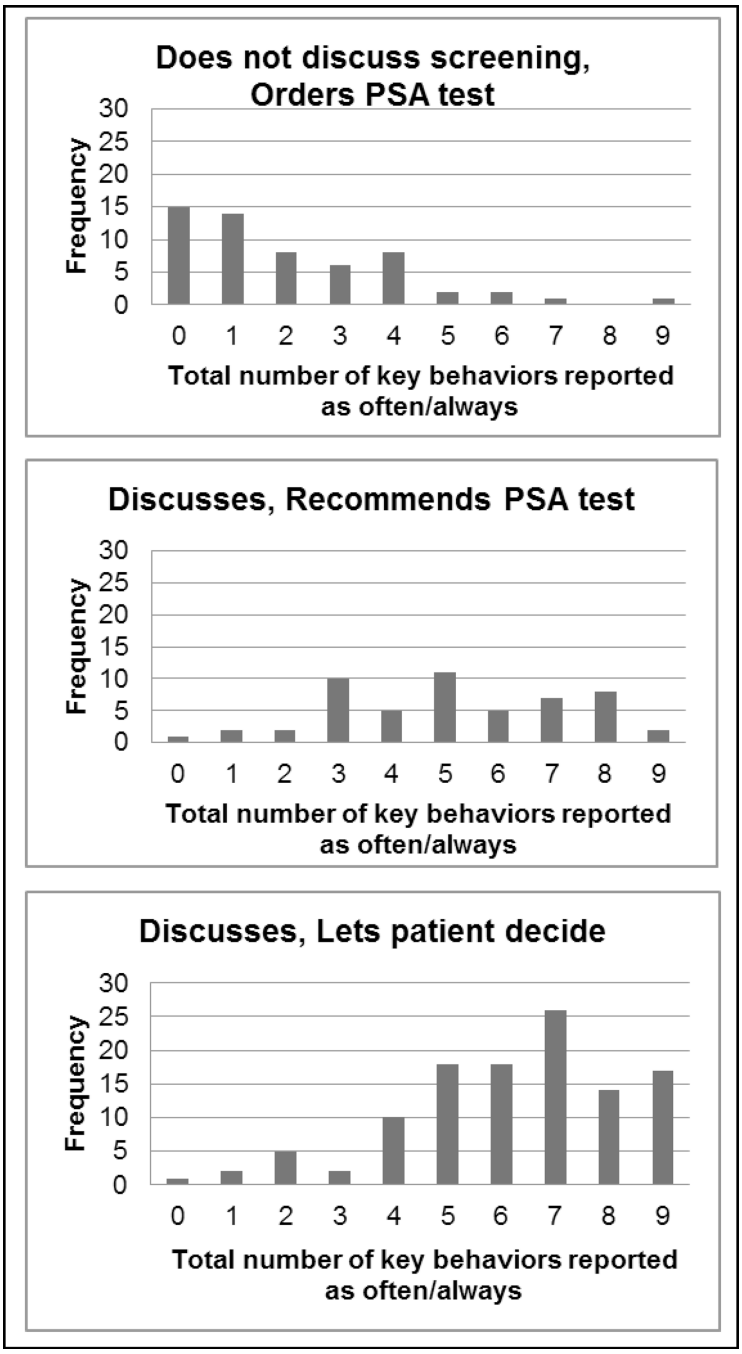

Figure 1.
Number of endorsed behaviors for informed decision making, by general practice style for prostate cancer screening

Table 1

Reported use of key behaviors for informed decision making, by general practice style for prostate cancer screening

	General practice style for prostate cancer screening[a]					
	Does not discuss screening		Discusses screening			
	Orders PSA test n = 59		Recommends PSA test n = 55		Lets patient decide n = 116	
Key behavior[b]	***Mean***	***SD***	***Mean***	***SD***	***Mean***	***SD***
Tell men there is a decision to make	2.97[c]	1.01	4.09	0.87	4.43	0.65
Tell men experts disagree	2.58	0.91	3.48[c]	1.09	4.34	0.73
Make sure men have info on benefits/risks	2.34[c]	0.91	3.93[c]	0.87	4.12	0.84
Question/check men about understanding	2.12	0.77	3.35	1.04	3.61	0.94
Invite men to ask questions	3.68	1.12	4.51	0.66	4.45[c]	0.73
Ask men what they think about screening	2.66	0.99	3.45	1.14	3.85[d]	0.94
Refer undecided men to other sources	2.08	0.97	2.76	1.00	3.00[c]	1.04
Plan follow up for undecided men	2.56	1.18	3.15	1.06	3.04[d]	1.15
Document discussion in chart	3.10	1.34	3.93	1.05	4.07[c]	0.83

[a] Responses based on a 1 to 5 response scale (“never,” “rarely,” “sometimes,” “often,” and “always”).

[b] All p-values were significant at $p < .001$ except for “Plan follow up for undecided men,” significant at $p = .011$.

[c] One response missing.

[d] Two responses missing.