Effect of Uniform Consensus Recommendations for PCa Screening in Older Population: Differential Effects and Perceptions of Healthcare Providers and Patients

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OBJECTIVES To develop and distribute consensus recommendations to encourage a uniform approach to screening for prostate cancer (PCa) in men >75 years old. We also surveyed healthcare providers and men >75 years old to determine whether provider attitudes toward continued PCa screening in older men had changed.

METHODS We mailed surveys to 2809 Iowa providers to assess their practice toward PCa screening and adoption of the consensus recommendations. The results were compared with those from a preintervention survey. We also surveyed 9000 Iowa men >75 years old to determine whether their providers had changed their screening methods.

RESULTS A total of 614 providers (29%) and 1650 men (18%) >75 years old responded. Only 48% of providers intended to screen men >75 years old, which was reduced from the 63% reported in the preintervention survey. Of the 31% of providers who had knowledge of the consensus recommendations, 72% indicated they had adopted, or intended to adopt, the recommendations. Of the men >75 years old, 84% had undergone a prostate-specific antigen test during their life, and 75% had continued to be screened after 75 years of age. Also, 54% indicated that their provider had discussed screening when they turned 75. Only 18% noted a change in their physician's approach to PCa screening after the consensus recommendations had been released.

CONCLUSIONS Provider-based education can assist in formulating a thoughtful approach to screening and treatment of older men. A combination of patient- and provider-directed education could help to encourage focused and appropriate PCa screening in older men. UROLOGY 73: 603–608, 2009. © 2009 Elsevier Inc.

Prostate cancer screening is controversial owing to the lack of high-level evidence indicating a survival benefit. Indirect evidence has supported the initiation of routine screening, including the observed reductions in prostate cancer (PCa) mortality in areas that have introduced such screening programs.[1] However, most current evidence, as well as that which is likely to become available from 2 randomized trials (Prostate, Lung, Colon, and Ovary screening trial and European Study of Screening for Prostate Cancer), have been restricted to men 40-75 years old. The benefit of screening for PCa in U.S. men >75 years old is uncertain given that the average life expectancy at this age is about 10 years.[2] Despite the lack of information and any distinct support for continued screening beyond age 75, many men appear to be undergoing continued prostate-specific antigen (PSA) testing or screening well into their 80s.[3,4]

In a previous survey, we found that within a single state (Iowa), PSA-based screening of older men was preferred by many physicians, particularly primary care physicians.[5] To address the inconsistencies in approach to PCa screening and treatment in men >75 years old, we developed a set of consensus recommendations

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through a grassroots effort that involved all potential stakeholders, with the assistance of experts (see Appendix). We decided on this approach instead of a set of recommendations generated by an expert panel owing to the lack of high-level evidence to support any strict guidelines and fragmented expert opinion and to enhance "buy in" among the various parties involved. We recognized that these recommendations could not strictly be construed as practice guidelines because of the lack of a strong evidentiary basis. The Iowa Prostate Cancer Consensus (IPCC) Recommendations broadly outlined steps that would ensure more informed decision making, as well as a more discretionary approach to PCa screening in older men, taking into account comorbidities and functional status.[6]

These recommendations were then publicized to all healthcare providers in the state of Iowa through various media outlets, continuing medical education events, direct mailing, and focus groups. We sought to evaluate the effect of these recommendations on stated PCa screening practices by a repeat survey of healthcare providers who had previously been surveyed at baseline. We also surveyed a random sample of older men in Iowa. Our expectation was that increasing awareness and developing a set of recommendations would result in decreased PCa screening rates among older men by healthcare providers and that patients themselves would perceive a change in the screening recommendations given by their healthcare providers.

MATERIAL AND METHODS

The institutional review board of the University of Iowa approved this project.

Survey

Two separate surveys were conducted as part of this study using the modified Dillman method.[7] The healthcare providers' survey was conducted among Iowa physicians and physician assistants listed in the Iowa Physician Information System. Those practicing family medicine, general internal medicine, geriatrics, hematology, oncology, preventive medicine, public health, radiation oncology, and urology were mailed an internally reviewed and validated survey consisting of 18 questions pertaining to demographics, patient flow, proportion of elderly patients, screening practices, and the receipt and implementation of the IPCC recommendations. A repeat mailing was sent to nonresponders after 4 weeks.

A second survey, containing 11 questions on age, perception of their provider's approach to PCa screening, family history of PCa, and physician-provided educational material on PCa, was mailed to a random sample of 10% of all men >75 years of age in Iowa, chosen from voter registration lists. A repeat mailing was sent to nonresponders after 4 weeks.

Statistical Analysis

The returned healthcare provider surveys were entered into an Access database. The demographics of the nonresponding providers were obtained from the informed patient records database and the Health Care Directory of Wellmark Blue Cross and Blue Shield insurance company.

Logistic regression analysis, accounting for the correlation within practice clinics, was used to estimate the effect of different covariates, including age, sex, and specialty, on PCa screening patterns in men aged ≥75 years. The outcome measure was the stated preference for routine screening for PCa in men >75 years (yes/no). Additional analyses were performed to evaluate other outcomes such as the adoption of the IPCC recommendations. A generalized linear model with a log-it link function was fit to the data. Model estimates were obtained using generalized estimating equations to account for the correlation among physician practices within the same clinic.[8] A compound symmetric structure was specified for the within-cluster correlation in the generalized estimating equation analysis.

Logistic regression analysis was also used to estimate the effect of age, regular healthcare visits, family history of PCa, and patients' perception of a change in PCa screening practices by their healthcare provider during the previous year. Model estimates were obtained using the maximal likelihood method. A χ^2 test was used to determine the probability of family history as a factor affecting the screening practices.

All statistical tests were 2-sided and performed at the 5% level of significance using the Statistical Analysis Systems, version 9.0, statistical software package (SAS Institute, Cary, NC).

RESULTS

Healthcare Provider Survey

The response rate was 29% (614/2089). We excluded 32 providers from the final analysis because they had retired or were practicing nonclinical medicine. Our respondent and nonrespondent populations were significantly different ($P < .005$) in age, sex, and specialty, with respondents being more often men (74% vs 59%), within the 30-40 age group (23% vs 11%), and within the urology subspecialty (6% vs 2%).

The responses to the survey are shown in Fig. 1. Most respondents (82%) reported that less than one half of their patients were >75 years. Of the respondents, 84% routinely screened for PCa in all eligible men, defined as those >50 years or >45 years with risk factors. Nearly 48% (n = 279) regularly screened patients >75 years old for PCa, and 265 (95%) of these used both PSA and digital rectal examination for screening. Only 106 (19%) reported obtaining material describing the IPCC recommendations and reviewing it, and 71 (12%) said that they had reviewed it on-line or heard about it through secondary sources. Most providers (72%) who were aware of the IPCC recommendations reported adopting them into practice. The main objections to not adopting the guidelines were patient resistance (16%), disagreement with the guidelines (9%), and insufficient supporting evidence (6%).

Estimates from the regression analysis of the odds of routine PCa screening in elderly men are provided in Table 1. Physician age, degree, and practice specialty