

Family Physician Self-Efficacy With Screening for Inherited Cancer Risk

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ABSTRACT

BACKGROUND Recent evidence has shown low and inconsistent rates of family history screening among generalist physicians. Little has been done to investigate the physician factors likely to mediate this behavior. We investigated family physicians' beliefs about screening their patients for inherited cancer risk, measuring their perceptions of self-efficacy and the importance of screening.

METHODS We mailed a cross-sectional, 1-page questionnaire to all active members (691) of the Massachusetts Academy of Family Physicians, measuring their attitudes about predictive genetic cancer screening.

RESULTS We received responses from 300 of the 691 members (43%). Although 87% believed screening to be important, less than two thirds believed they were effective in screening.

CONCLUSIONS Many family physicians lack confidence in their ability to screen patients for a family history of cancer despite recognizing its importance to their practice.

Ann Fam Med 2004;2:130-132. DOI: 10.1370/afm.60.

INTRODUCTION

As advances are made in the scope and effectiveness of tailoring prevention efforts to the degree of familial or genetic cancer risk, the ability to screen patients for such risk will become increasingly important. Screening in the context of this study refers to the process of collecting and recognizing patient family histories that warrant further assessment for a hereditary cancer syndrome, such as hereditary breast and ovarian cancer.

Much of the research on incorporating screening for genetic cancer risk into primary care practice has been conducted in Great Britain. English and Scottish general practitioners show low rates of history taking for a family history of cancer,¹ lack confidence in their ability to screen for multifactorial disorders,² and have a high frequency of inappropriate referrals to genetic specialists.^{3,4} Even so, educational support and guideline interventions in their health care systems can be effective in improving these behaviors.⁴⁻⁷ US primary care physicians have also shown deficiencies in family history taking for cancer risk and in genetic referral patterns.⁸ Direct observation of US family practices also has found infrequent and brief overall family history-taking efforts.⁹

The attitudes and beliefs that physicians hold might be important determinants of their screening behavior for a family history of cancer. For example, physicians who believe it is not important to their own practice to screen for cancer risk might be less likely to do so. Even when physicians believe in the importance of screening, those who lack confidence in their ability to screen for cancer risk (self-efficacy) might be more hesitant to do so. Consistent with social cognitive theory, self-efficacy has a strong influence on human behavior,^{10,11} including physician practice behavior.¹²

Conflicts of interest: none reported

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US family physicians' views of the importance of screening for cancer risk and their self-efficacy in performing this task are not known. Understanding these perceptions will guide the effective translation of predictive genetics into primary care prevention.

Table 1. Percentage of Distribution in Response to Self-Efficacy and Perceived Importance (N = 295)

Belief Item	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree
I can effectively screen my patients for an inherited risk of cancer	9.8	51.8	32.9	5.5
I consider this important to my practice	44.4	42.4	11.2	2.0

METHODS

We conducted a survey of the Massachusetts Academy of Family Physicians (MAFP) in the summer of 2002. We mailed an initial questionnaire to all members ($n = 691$) with 2 follow-up contacts to nonresponders at 3-week intervals. A physician identification tag was linked to the MAFP demographic database for comparison of responders and nonresponders.

We measured perceptions on a 4-point Likert scale in response to the following statements: "I can effectively screen my patients for an inherited risk of cancer" (self-efficacy), and "I consider this important to my practice" (perceived importance). On pilot testing of the survey items and cover letter, respondents consistently interpreted screening for "inherited cancer risk" to mean recognizing individual patients whose family history warrants further genetic evaluation and counseling.

We used *t* test and chi-square analyses for associations involving continuous and categorical variables, respectively. Post hoc power calculations were included for each null association.

This study was approved by the Boston University Institutional Review Board.

RESULTS

Three hundred family physicians returned the questionnaire (43% response rate). The relative proportion of women was higher among responders (46.1% vs 36.0%; $P < .01$) but did not differ from nonresponders with regard to mean age (44.7 vs 45.9 years; $P = .72$) and year of medical school graduation (1985.1 vs 1984.9; $P = .79$).

The frequency and distributions for the questionnaire items are shown in Table 1. Most (86.8%) agreed that screening patients for inherited cancer risk was important to their practice. Only 61.6%, however, were confident of their own screening effectiveness. Those agreeing that screening was important were more likely to feel confident in their ability to screen than those who disagreed with the importance of screening to their practice (67% vs 25%, $P < .001$).

Compared with physicians who perceived them-

selves as ineffective, those who perceived themselves as effective in screening did not differ significantly by sex (43% vs 41% female; $P = .95$; power = 0.95), mean age (44.7 vs 45.9 years; $P = .27$; power = 0.49), or mean year of medical school graduation (1985.4 vs 1984; $P = .21$; power = 0.49).

DISCUSSION

Although the physicians sampled believed that screening for an inherited risk of cancer is important, many reported they lack this skill. Self-efficacy is particularly responsive to intervention, and improving self-efficacy leads to behavior change.¹¹ We have reported elsewhere that our respondents were optimistic their patients, if found to have inherited cancer susceptibility, would respond by increasing preventive behaviors.¹³ Our findings suggest that many practicing family physicians would welcome strategies to improve their effectiveness in screening their patients for an inherited risk of cancer.

It is not known how the perceptions of nonresponders differ from responders or how physicians from different geographic regions would respond. We believe any response bias is likely to overestimate enthusiasm for predictive genetics, and a responder group therefore self-selects for those more likely to perceive screening as important. We found that lower perceived importance is associated with lower self-efficacy. If this finding holds for nonresponders, then the discussion here might underestimate the true potential for supporting family physicians in screening for genetic risk.

Future research should focus on supporting physicians' actual and perceived skills relevant to screening for inherited cancer risk, because many of these physicians already believe that such screening is important to their practice.

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Key words: Genetics; cancer/prevention & control; primary health care; medical history taking; behavior

Submitted December 2, 2002; submitted, revised, May 13, 2003; accepted May 26, 2003.


Acknowledgments: The authors thank Joe Stone for his support in completing this survey in the Massachusetts Academy of Family Physicians.

Funding support: This work was supported by the American Academy of Family Physicians and the Massachusetts Academy of Family Physicians by a Research Stimulation Matching Grants Award. Dr. Gramling received support from a National Research Service Award (T32 PE 10028-04) and a National Cancer Institute training award (R25 CA87972-02) during the course of the study development, data collection and/or analysis.

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