

Why don't family physicians follow clinical practice guidelines for cancer screening?



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Canadian family physicians have been fortunate to have the Canadian Task Force on the Periodic Health Examination to systematically review relevant evidence and publish clinical practice guidelines.¹ Ideally, physicians will adopt guidelines backed by good or fair evidence (grade A or B recommendations respectively) and will not waste resources on manoeuvres that are recommended for exclusion on the basis of fair or good evidence (grade D or E recommendations respectively). But this is not happening. In many cases family physicians do not adhere to cancer screening guidelines backed by good evidence,² and in others they perform screening that is recommended for exclusion.³

Two examples help to illustrate this problem. First, the rate of screening mammography for Ontario women 40 to 49 years of age hardly differs from that for women 50 to 69 years of age, even though screening is a grade D recommendation for the first group and a grade A recommendation for the second.⁴ Nationally, 59% of women 40 to 49 years of age report ever having undergone mammography.⁵ Second, although screening for prostate-specific antigen (PSA) is recommended for exclusion (grade D), the rate of PSA screening is growing almost exponentially:⁶⁻⁸ as of 1995, 20% of Canadian men had undergone at least one PSA test, and two-thirds of these tests were for screening.⁹ Although there is some evidence of benefit, the decision to screen involves more than just analysing the evidence. It includes personal judgements about outcomes and risks of both screening and treatment.¹⁰

Family physicians, the primary cancer screeners in Canada, are frequently not following the task force guidelines, so considerable resources may be spent on inappropriate manoeuvres. From an evidence-based perspective, resources should be spent on interventions that have proven most effective, that is, manoeuvres supported by good or fair evidence.

The task force guidelines for cancer contain few "positive" recommendations for screening: only 6 of the 27 cancer-related guidelines are grade A or B recommendations; 10 are "uncertain" grade C recommendations, and 11 are grade D or E recommendations.¹ The questions are these: How and why are cancer screening decisions made by family physicians, given that screening behaviour frequently differs from the guidelines?

Most of the literature on the determinants of cancer screening by family physicians deals with variables associated with adherence or nonadherence to commonly recommended guidelines (grade A and B recommendations), in particular whether the variables were facilitators or barriers to adoption of the guidelines. None of the studies identified dealt with factors associated with adopting the "negative" (grade D and E) recommendations. In one study all 5 of the screening manoeuvres (for all types of disease) with which physicians most commonly disagreed were grade C recommendations.³ Disagreement was greatest for cancer screening guidelines.³

Some conceptual frameworks are emerging to explain physicians' level of compliance with clinical practice guidelines. Canadian investigators such as Battista and associates¹¹ have examined the determinants of primary medical practice in cancer prevention and have proposed a model for classifying perceived barriers to cancer prevention behaviour. Another, more recently described model is the "awareness-to-adherence" model,¹² which involves 5 cognitive steps in adopting clinical practice guidelines: pre-awareness, awareness, agreement, adoption and adherence. This model also includes factors that facilitate or inhibit this process (e.g., physician, patient and practice characteristics; practice vaccination policies; features of the environment). Although attractive, this model was designed for and tested only on guidelines for childhood vaccination.

We propose a combination of these conceptual frameworks. This would include

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4 domains in a model of the determinants of cancer screening in primary care: physician characteristics, patient characteristics, social factors and practice characteristics.

The important physician characteristics that are positively associated with performing preventive manoeuvres are perceived effectiveness of the manoeuvres,¹³ agreement with guidelines,¹⁴ level of continuing medical education¹¹ and perceived probability of disease.¹⁵ Characteristics associated with disagreement with recommended guidelines include older age,¹⁶ male sex¹⁷ and not having completed a postgraduate residency program.¹⁸

The patient characteristics that affect prevention screening relate to physicians' knowledge and perception of their patients: knowledge of patients' wishes;¹⁹ desire to avoid complaints from patients;²⁰ knowledge of patients' social circumstances and support systems, as well as length and quality of the patient-physician relationship;²¹ and patients' fear of and willingness to tolerate procedures.^{16,22}

Mittman and colleagues²³ have suggested a model that includes 3 types of social influence: interpersonal (academic detailing, training, consultations with specialists and socialization programs), persuasion (opinion leaders, continuous quality improvement, study groups and rounds) and mass media. Also included are perceived endorsement of a manoeuvre by more than one organization,²⁴ endorsement of the guideline by colleagues and consistency of practice among peers,²⁵ and consistency of the guideline with local practice.²⁵

Important practice characteristics that affect preventive screening behaviours are type of practice (group or solo),¹¹ payment system (fee-for-service or salary),¹⁵ perceived time to perform the test,²⁶ access to current information²⁷ and costs of the manoeuvre.²²

Two words of caution: although recent research supports this model, most of it relates to clinical practice guidelines in general, rather than those specifically for cancer, and most reflects only the viewpoint of the physician.

The challenges for future research are several. The assumption that physicians scrutinize and incorporate new evidence into practice is not supported by the findings to date. There are many other more powerful determinants of screening behaviour in primary care than simply the existence of evidence or guidelines. However, there is little research on the factors associated with adopting "negative" guidelines (grade D or E) or dealing with uncertain ones (grade C). The following questions need to be answered:

- Why don't family physicians follow cancer screening guidelines backed by good evidence, and why do they sometimes perform cancer screening that is not recommended?
- How do family physicians make cancer screening decisions when the guideline is uncertain (grade C)?
- How can physicians' cancer screening behaviour be changed to maximize the application of preventive resources to manoeuvres supported by good or fair evidence and to reduce the use of tests for which there is little or poor evidence?

Research on the determinants of cancer screening must be broadened to include physician, patient, social and practice factors that all appear to influence the adoption of guidelines.

Only when this research is complete can interventions be developed to change physician and patient behaviour. Authors of clinical practice guidelines, those organizing continuing education and health care policy-makers need to be aware of the lack of research in this area and the requirement that interventions aimed at changing behaviour must be based on sound research.

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