Current awareness in Canada of clinical practice guidelines for colorectal cancer screening

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Introduction: The Canadian Task Force on Preventive Health Care (CTF-PHC) recently revised its screening recommendations for colorectal cancer (CRC). We wished to assess the effect of this change on the screening beliefs and clinical practice of primary care physicians. **Methods:** We surveyed 160 primary-care physicians, quasi-randomly sampled, in June–July 2001 and again in April–July 2002, 9 months after publication of the guidelines. Descriptive statistics and McNemar χ^2 analyses were carried out on data from physicians who responded to both surveys. **Results:** Of the those sampled, 47% responded to both surveys. After the publication of the CTF-PHC guidelines, the proportion reporting that they recommend CRC screening to their patients at average risk increased from 43% to 60% ($p = 0.02$). Before publication of the revised guidelines 48% stated that the CTF-PHC did not support screening, compared with 24% afterward ($p = 0.01$). CTF-PHC guidelines were acknowledged by 30% to be a source of CRC screening information. Around 9 months post-publication, 24% of the physicians stated their awareness of the revised screening guidelines. The most commonly cited reasons for not recommending CRC screening to average-risk patients were that the evidence is inconclusive and that CTF-PHC guidelines do not support screening. **Conclusions:** After publication of the revised CTF-PHC guidelines more primary-care physicians reported that they recommend CRC screening to their average-risk patients. The belief that the evidence is inconclusive nevertheless remains a considerable barrier to implementation. To increase the use of screening for CRC, additional strategies are required.

Introduction : Le Groupe d'étude canadien sur les soins de santé préventifs (GEC-SSP) a révisé récemment ses recommandations sur le dépistage du cancer colorectal (CCR). Nous voulions évaluer l'effet de ce changement sur les hypothèses relatives au dépistage et sur la pratique clinique des médecins de première ligne. **Méthodes :** Nous avons sondé 160 médecins de première ligne, choisis presque au hasard, avant le 21 juillet et de nouveau d'avril à juillet 2002, neuf mois après la publication des lignes directrices. On a établi des statistiques descriptives et procédé à des analyses McNemar χ^2 de données provenant des médecins ayant répondu aux deux sondages. **Résultats :** Parmi les médecins sondés, 47 % ont répondu aux deux questionnaires. Après la publication des lignes directrices du GEC-SSP, la proportion des répondants qui ont signalé recommander le dépistage du CCR à leurs patients à risque moyen est passée de 43 % à 60 % ($p = 0{,}02$). Avant la publication des lignes directrices révisées, 48 % avaient déclaré que le GEC-SSP n'appuyait pas le dépistage, comparativement à 24 % après la publication ($p = 0{,}01$). Les lignes directrices du GEC-SSP ont été reconnues par 30 % comme une source d'information sur le dépistage du CCR. Environ neuf mois après la publication, 24 % des médecins ont déclaré connaître les lignes directrices révisées sur le dépistage. Comme raisons évoquées le plus couramment pour ne pas recommander le dépistage du CCR aux patients à risque moyen, on a affirmé que les données probantes ne sont pas concluantes et que les lignes directrices du GEC-SSP n'appuient pas le dépistage. **Conclusions :** Après la publication des lignes directrices révisées du GEC-SSP, plus de médecins de premier recours ont dit recommander le dépistage du CCR à leurs patients à risque moyen. La croyance selon laquelle les données probantes ne sont pas concluantes demeure néanmoins un obstacle important à la mise en œuvre des lignes directrices. D'autres stratégies s'imposent afin d'étendre le dépistage du CCR.

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Colorectal cancer (CRC) is the third most common cancer and the second most frequent cause of cancer-related deaths in Canada.[1] In 1994 the Canadian Task Force on the Periodic Health Examination (since renamed the Canadian Task Force on Preventive Health Care, or CTF-PHC) stated that evidence for CRC screening of asymptomatic individuals 40 years of age or older was insufficient to support the inclusion or exclusion of fecal occult blood testing (FOBT), sigmoidoscopy or colonoscopy.[2] Since then, evidence from randomized controlled trials and case–control studies has shown that screening can reduce the incidence of CRC and prevent CRC-related deaths among those at average risk.[3–7] As a result, in 2001 CTF-PHC published amended recommendations for CRC screening. The revised guidelines state that there is "good evidence to include multiphasic screening with [FOBT] and fair evidence to include flexible sigmoidoscopy in the periodic health examination for average-risk individuals at least 50 years of age."[8] For colonoscopy, the recommendations remain unchanged from 1994, as the guidelines hold that evidence is still insufficient to include or exclude this manœuvre as an initial screening modality.

Established in 1976, CTF-PHC is a scientific panel developing evidence-based clinical practice guidelines for preventive interventions.[9] Although much effort and many resources have been put into guideline development, effective implementation remains a formidable challenge. Despite their purpose, insufficiencies in general awareness, agreement, adoption and adherence have given clinical practice guidelines less influence than intended over the clinical behaviour of primary care physicians.[10] It is unknown whether this holds true in Canada for the recent CRC screening recommendations. Our objectives were to document the self-reported application of current CRC screening recommendations by Canadian primary care physicians, awareness of the revised CTF-PHC CRC screening guidelines and influence on primary care practices after the publication.

Methods

Before the publication of CTF-PHC's clinical practice guidelines[11,12] and about 9 months after, 160 primary-care physicians were surveyed. Sampling was quasi-randomized by selecting the first primary-care physician on every fourth page of the 2001 *Canadian Medical Directory*.[13] Data were included only from primary care physicians currently in practice in Canada who responded to both questionnaires.

Questionnaires in both surveys were mailed with postage-paid return envelopes. The pre-publication questionnaires were sent in June and July of 2001. Two weeks after the first mail-out, nonrespondents were telephoned to confirm their availability and mailing address, and the initial survey mailed to them a second time. The follow-up questionnaires were sent in April through July of 2002.

The questionnaires were developed for this study. The first contained 3 sections, on beliefs (5 statements about the benefits of, evidence for and guidelines about CRC screening, indicated on a 5-point Likert scale: strongly agree to strongly disagree), current practice (questions about participants' current recommendations for CRC screening), and demographic and practice characteristics. The follow-up questionnaire also included a fourth section asking about their awareness of CTF-PHC's recently revised CRC screening guidelines.

Responses were entered into 1997 Microsoft Access software and analyzed with SAS V8. Associations between the physicians' beliefs, demographics and practice characteristics were assessed with analysis of variance (ANOVA). McNemar χ^2 analyses were conducted to identify changes in the self-reported behaviour and beliefs of the physicians from the first to the second questionnaire.

Results

From the initial 160 potential subjects, 31 (19%) were excluded: 16 were not primary care physicians; 13 were not in practice (retired, taking a sabbatical or on maternity leave); and 2 responded to the initial questionnaire after publication of the revised guidelines. Of the remaining 129 physicians, 76 (59%) responded to the first and 60 (47%) to both questionnaires; thus, the responses of 60 primary care physicians were included in the analysis. Table 1 shows their demographics and practice characteristics.

About 80% of respondents believed that CRC is a common cause of death and that early detection of CRC leads to improved outcomes (Table 2). A smaller proportion felt that there is good evidence supporting screening and that clinical practice guidelines are available. These opinions did not vary according to year of graduation, academic affiliation or type of practice.

From the initial questionnaire, 44% reported that they recommend CRC screening to their average-risk patients, compared with 60% from the follow-up questionnaire ($p = 0.02$).

Table 1

Baseline Characteristics of the 60 Primary Care Physicians Surveyed

Characteristic	No. (and %)
Male	45 (75)
Female	15 (25)
Year of graduation	
Earlier than 1975	18 (30)
1975–1989	30 (50)
1990 or later	12 (20)
Community population	
Less than 10 000	17 (28)
10 000–99 999	12 (20)
100 000 or more	31 (52)
Group practice	33 (55)
Solo practice	27 (45)
Teaching affiliation	11 (18)
Full-time practice	47 (78)

Table 2

Current Beliefs* Reported by Primary Care Physicians About Colorectal Cancer and Clinical Practice Guidelines

Statement	Response*	June–July 2001 No. (and %)	April–July 2002 No. (and %)
Colorectal cancer is a common cause of death.	Agree	51 (86)	52 (87)
	Neutral	3 (5)	5 (8)
	Disagree	5 (8)	3 (5)
Early detection of colorectal cancer leads to improved outcomes.	Agree	52 (88)	55 (92)
	Neutral	4 (7)	2 (3)
	Disagree	3 (5)	3 (5)
There is good evidence that colorectal cancer screening is beneficial.	Agree	39 (67)	46 (78)
	Neutral	14 (24)	9 (15)
	Disagree	5 (9)	4 (7)
There are practice guidelines available on colorectal cancer screening.	Agree	31 (53)	37 (64)
	Neutral	18 (30)	17 (29)
	Disagree	10 (17)	4 (7)
I find practice guidelines useful in clinical decision-making.	Agree	37 (65)	not included
	Neutral	15 (26)	
	Disagree	5 (9)	

* Responses from primary care physicians ranged from (1) strongly agree to (5) strongly disagree, recategorized as Agree = 1 or 2; Neutral = 3; Disagree = 4 or 5.

Table 3

Current Colorectal Cancer Screening Recommendations by Primary Care Physicians Responding to Both Surveys

Statement and response		June–July 2001 No. (and %)	April–July 2002 No. (and %)	*p* value
I recommend colorectal cancer screening for patients with no risk factors.	Yes	26 (44)	36 (60)	0.02
	No	33 (56)	24 (40)	
If yes — I recommend that screening begins at the age of 50 years.	Yes	20 (77)	30 (86)	
	No	6 (23)	5 (14)	
If yes — I usually recommend screening with these test(s):				
Fecal occult blood test		21 (81)	30 (77)	
Colonoscopy		8 (31)	13 (34)	
Flexible sigmoidoscopy		7 (27)	10 (26)	
Barium enema		4 (15)	6 (16)	
Rigid sigmoidoscopy		0	0	
If no — I do not recommend screening because:				
Evidence is inconclusive		15 (47)	10 (40)	
CTF guidelines do not support screening		16 (48)	6 (24)	0.01
Patients are uncomfortable with the tests		8 (24)	6 (24)	
Lack of accessibility of screening tests		10 (30)	7 (29)	
Don't know		0	1 (4)	

CTF = Canadian Task Force on Preventive Health Care.

Table 4

Awareness Among Respondents of the Colorectal Cancer Screening Guidelines Issued by the Canadian Task Force on Preventive Health Care

Statement	Response	No. (and %)
Are you aware of the recent guidelines for colorectal cancer screening published by the Canadian Task Force on Preventive Health Care in the past 6 months?	Yes	14 (24)
	No	45 (76)
If yes: Have you read the full text or the summary of the guidelines?	Yes	11 (79)
	No	2 (21)
As a result of these guidelines, have you changed your practice regarding colorectal cancer screening?	Yes	9 (64)
	No	5 (36)

Of those who recommend screening, over 75% prescribe initial screening with FOBT in patients at least 50 years of age (Table 3). In the first survey the reason most commonly cited for not recommending CRC screening to their average-risk patients was because CTF-PHC guidelines at the time did not support screening (48%). This decreased to 24% after the publication of the revisions ($p = 0.01$). Other reasons included inconclusive evidence (40%), the lack of accessibility of tests (30%) and patient discomfort (24%).

The most commonly reported sources of information about CRC screening were continuing medical education events (73%), journal articles (68%) and colleagues (52%). The CTF-PHC guidelines were less frequently reported as a source (30%). After publication, 24% of respondents were aware of the revised CTF-PHC CRC screening guidelines (Table 4); these individuals were distributed across the demographic and practice categories. Of the 14 respondents who were aware, 11 had read the summary or full text of the guidelines, and 9 reported that the guidelines had influenced their CRC screening practices in general terms. Nevertheless, when the responses from the first and second questionnaire were compared only 3 physicians (4%) indicated that they had changed their practices because of the revised guidelines.

Discussion

The results of this study suggest that within 1 year of the publication of the revised CTF-PHC guidelines for CRC screening, there was a significant increase in self-reported routine CRC screening recommendations by this sample of Canadian primary-care physicians. Understanding how this change may have been influenced by the publication of the recent guidelines is more complex. Even though 76% of respondents were unaware of the publication of the revised CRC screening guidelines, after the revised

guidelines were published there was nevertheless a statistically significant 24% reduction in the number of physicians citing CTF-PHC recommendations as a reason for not recommending routine screening. Despite the 16% increase in self-reported CRC screening recommendation after the publication of the guidelines, 40% of the respondents still reported that they did not routinely recommend CRC screening to individuals 50 years of age or older. The physicians' clinical behaviour was self-reported and may be more indicative of the physicians' overall belief of the relative screening benefits versus the risks for an age-appropriate general population rather than accurately reflecting actual practice.[14] As well, the period from publication of the guidelines to the follow-up questionnaires was short and may not have been long enough to expect a change in clinical behaviour — although conversely, with time there might be a drop-off in awareness of the benefits of screening.

This study had a small sample size and a relatively low response rate. The response rate was influenced by our inclusion of only those who responded to both questionnaires. However, the distribution of demographics, geographic and practice characteristics of the 60 physicians included in the analysis (Table 1) are representative of Canada's primary-care physicians.[15] Responses to the initial questionnaire from the 16 physicians who did not respond to the follow-up questionnaire were similar to those of the respondents included in the analysis.

Our results demonstrate that this sample of primary care physicians believe in the benefits of early detection and prevention of CRC, but with less agreement about the availability and usefulness of clinical practice guidelines to guide decision-making. Concerns about a lack of usefulness of CRC screening guidelines may be related to numerous factors. Before publication of the revised CTF-PHC screening guidelines, Canadian primary-care physicians reported that they perceived the guidelines for FOBT to be controversial, unclear or conflicting.[16] Physicians' CRC screening recommendations may also be influenced by their belief that there is a lack of public acceptance of the available tests[17] plus their own ambivalence about the value of the available screening modalities, especially FOBT.[8] Some physicians see guidelines as threatening their clinical independence, or may be influenced by local social norms.[10,18,19] Three main factors that have been found to determine the acceptability of preventive guidelines for primary care physicians are the approval of peers and local experts, and an absence of controversy.[18,19]

CTF-PHC guidelines are not consistently implemented for other preventive health-care recommendations as well.[20–22] In a systematic review of implementation strategies, Davis and Taylor-Vaisey[10] described 2 stages of implementation for clinical practice guidelines. The first involves primary dissemination by means of publication, to increase awareness, improve knowledge and predispose individuals to a change in behaviour. However, it is necessary to move beyond the first to the second stage, which requires active implementation that enables and reinforces change in the clinical setting. A recent systematic review[23] assessing interventions directed at primary care physicians to improve the delivery of preventive care concluded that there is no solid basis for assuming that any individual or package of interventions is most effective, although tailoring them to address barriers identified in a particular setting is important.

Conclusions

Although more physicians reported that they recommend CRC screening to their average-risk patients after the publication of the CTF-PHC guidelines, the belief that the evidence is inconclusive remains a serious barrier to the implementation of CRC screening. It is important for general surgeons to familiarize themselves with the quality of current evidence supporting the various modalities for CRC screening: as local experts, they can play a credible role in increasing levels of awareness and acceptance of routine CRC screening that is appropriate to their locality, among primary care physicians as well as the general population.

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