

Attitudes, knowledge and practice of CRC screening among GPs in Queensland

BACKGROUND

Colorectal cancer (CRC) is the most common invasive cancer in Australia. Randomised trials have shown that mortality from CRC can be reduced with the use of screening modalities such as faecal occult blood testing (FOBT). This study sought to determine current attitudes, knowledge and practices of general practitioners in relation to CRC screening.

METHODS

A cross sectional survey of 1500 GPs in Queensland.

RESULTS

Responses were received from 769 (55.6%) GPs. Fifty-three percent of GPs recommended using FOBT for asymptomatic patients over 50 years of age and 18.6% would recommend colonoscopy in such patients. Compared to a previous survey, GPs are now more likely to use FOBT (RR: 2.01, 95% CI: 1.58–2.56). Two-thirds (66.7%) would support a population based screening program using FOBT, an increase of 16% over 3 years.

DISCUSSION

Current use of FOBT in asymptomatic patients, support for population based FOBT, and knowledge of the benefits of CRC screening has increased significantly from previous surveys.

Colorectal cancer (CRC) is the most common invasive cancer in Australia with a lifetime risk of one in 17 for men and one in 26 for women.¹ In 2000 12 405 cases of CRC were diagnosed in Australia (age standardised rate 46.5 per 100 000) and there were 4718 CRC deaths (age standardised rate 16.8 per 100 000).¹

Randomised trials have shown that screening by annual or biennial faecal occult blood test (FOBT) can reduce deaths from CRC by 15 to 33%,²⁻⁷ and Australia is now introducing such a program for those aged 55 years and over. Currently the national program will offer FOBT kits to individuals turning 55 and 65 years of age along with those who participated in the pilot program. The program will undergo evaluation in 2008 to identify which age groups should be targeted for the complete program.⁸

Colorectal cancer screening guidelines have been produced by numerous bodies including the National Health and Medical Research Council (NHMRC)⁹ which recommends: the use of FOBT at least every 2 years for asymptomatic patients from the age of 50 years, and sigmoidoscopy (preferably flexible) should be

considered every 5 years from the same age (as does The Royal Australian College of General Practitioners [RACGP]¹⁰). Other medical bodies have made recommendations including the Gut Foundation of Australia (GFA), which recommends annual FOBT for average risk individuals aged over 40 years and the Australian Gastroenterology Institute (AGI), which does not recommend screening for asymptomatic individuals over 50 years of age.¹⁰⁻¹²

Surveys of GPs' attitudes to screening for CRC have had mixed results. Studies of attitudes, knowledge and practices of GPs in relation to CRC screening found approximately 38–48% of GPs considered screening with FOBT practical for asymptomatic patients.¹³⁻¹⁷ The most recent survey carried out of GPs in Queensland indicated that 30% reported using FOBT for asymptomatic patients over 50 years of age, while 50.5% supported a population based FOBT screening program.¹⁸

The aim of this study was to examine changes in current knowledge, attitudes and practices of CRC screening among Queensland GPs.

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Methods

Participants

In August 2002 we selected at random from the Australian Medical Publishing Company (AMPCo) list, 1500 of the 3585 practising doctors in Queensland listed as currently employed in general practice. Doctors randomly selected for the study were comparable to the total group in relation to gender ($\chi^2=0.02$, $p=0.88$), age ($\chi^2=2.3$, $p=0.81$) and division of general practice ($\chi^2=1.7$, $p=0.65$). Questionnaires were mailed to GPs and if no response was received after 2 weeks, a reminder letter and survey was sent. Two weeks later, if no response was obtained, the GP was telephoned and asked if they would return the questionnaire.

Of a total 1500 GPs mailed, 118 (7.9%) were found to be ineligible. Of the remaining 1382 (92.1%), replies were received from 769 (55.6%). Responding GPs were comparable to nonresponders in relation to age ($\chi^2=4.6$, $p=0.47$) and division of general practice ($\chi^2=0.92$, $p=0.82$). Women GPs were more likely to respond than their male counterparts ($\chi^2=3.2$, $p=0.07$).

The questionnaire

Survey questions were designed by an expert working group to elicit knowledge, attitudes and current practice in relation to CRC screening, and the impact of CRC screening guidelines. To facilitate comparison of data we included a sub-set of questions used in a survey conducted in 1999.¹⁸

Current strategies used for CRC screening

General practitioners were asked about their current CRC screening strategy for asymptomatic patients over 40 years of age,

those over 50, and those with a significant family history of CRC.

Knowledge and use of FOBT

We asked GPs if they had ever used, or currently use, FOBT for their patients and how strongly they agreed or disagreed with the statements: 'Populations screened for CRC with FOBT have lower mortality from CRC than those not screened'; and 'CRC detected by FOBT is less advanced than CRC detected in patients presenting with symptoms'. Additionally, GPs were asked how often asymptomatic patients over 50 years of age should be screened with FOBT, whether they would support a population based FOBT screening program for those aged over 50 years, and reasons for supporting or not supporting such a program.

CRC guidelines

Information was sought on the number, type and usefulness of CRC guidelines GPs recalled receiving.

Data analysis

Descriptive analyses were used to examine GPs' characteristics. Measures of association between variables of interest were assessed using Chi-square tests. To examine changes in attitudes, practice and knowledge of CRC screening between a similar survey conducted in 1999 and this survey, rate ratios with 95% confidence intervals were calculated. All analyses were undertaken using Statistical Package for the Social Sciences (SPSS) (Version 11.5, SPSS Inc. Chicago, IL).

Ethics approval

This study was approved by the Human Research Ethics Committee of the Queensland University of Technology.

Results

Characteristics of sample

Approximately two-thirds (63.1%) of the 769 respondents were men and mean age was 47 years.

Current strategies for CRC screening

One quarter (26.4%) of GPs recommended some form of screening for asymptomatic patients over 40 years of age and about two-thirds (66.4%) recommended screening for those aged over 50 (Table 1). The most common forms of screening recommended for those over 50 years of age were FOBT (53.1%), digital rectal examination (DRE) (25.9%), and colonoscopy (18.6%). Nearly all GPs (97.4%) recommended colonoscopy for patients with a significant family history.

Just over half (53.1%) of GPs reported they currently recommend FOBT for asymptomatic patients over 50 years of age. Considerable variability was seen across divisions of general practice, ranging from 80% in Cairns to around 38% in Bundaberg and Sunshine Coast divisions.

Current attitudes toward FOBT population based screening

Two-thirds of GPs (66.7%) said they would support population based FOBT screening for persons over 50 years of age, and a quarter (24%) indicated they were unsure. The most common reasons given for supporting a screening program were that the procedure is noninvasive (87.9%), is less expensive than other screening methods (80.7%), and is simple and quick (78.1%).

Of the 254 GPs who would not support or were unsure about supporting such a program, 68.1% indicated this was due to the number of

Table 1. Percentage reporting colorectal cancer screening strategies used by Queensland GPs in 2002

	Do not recommend screening	DRE	FOBT	Sigmoidoscopy	Double contrast barium enema	Colonoscopy	Other*
Asymptomatic patients over 40 years	73.6	11.6	18.1	0.7	0.1	4.8	2.8
Asymptomatic patients over 50 years	30.6	25.9	53.1	1.9	0.5	18.6	3.8
Patients with a significant family history	1.3	24.4	27.2	6.0	3.4	97.4	2.2

* Other strategies included referral, abdominal palpation, blood tests, inform test

Table 2. Changes in GPs' attitudes, practices and knowledge of CRC screening 1999–2002

	Tong et al, 2004 ¹⁸		Present study		RR	95% CI
	n=284*	%	n=769**	%		
Location of training						
Australia	216	81.5	666	76.9	1.0	
Overseas	49	18.5	155	20.4	1.02	0.72–1.46
Possess CRC guidelines ⁺						
No	131	47.6	44	7.5	1.0	
Yes	144	52.3	544	71.2	3.58	3.26–3.92
Have used FOBT						
No	57	20.1	94	12.3	1.0	
Yes	226	79.9	672	87.7	1.50	1.23–1.83
Currently use FOBT ⁺⁺						
No	185	69.3	346	46.9	1.0	
Yes	82	30.7	392	53.1	2.01	1.58–2.56
Recommended frequency of screening with FOBT						
Not at all	51	18.5	44	5.8	0.38	0.25–0.60
12 monthly	71	25.7	340	45.2	1.19	0.81–1.90
Every 2 years	42	15.3	162	21.5	1.0	
Every 3–5 years	25	9.1	47	6.2	0.59	0.30–1.16
Not sure	87	31.5	160	21.1	0.58	0.43–0.79
Belief in earlier stage detection						
Agree	147	59.5	460	60.6	1.0	
Unsure	77	31.2	244	32.1	1.01	0.73–1.39
Disagree	23	9.3	55	7.2	0.82	0.27–2.54
Belief in mortality reduction						
Agree	101	35.7	475	62.4	1.0	
Unsure	163	57.6	260	34.2	0.46	0.36–0.57
Disagree	19	6.7	26	3.4	0.42	0.08–2.04
Support for population based FOBT program						
No	42	14.8	71	9.3	1.0	
Not sure	98	34.6	183	24.0	1.07	0.70–1.74
Yes	143	50.5	508	66.7	1.69	1.33–2.14

* Numbers do not always add up to 284 because of missing responses to some questions
** Numbers do not always add up to 769 because of missing responses to some questions
+ GP has at least one guideline
++ Currently use FOBT for asymptomatic patients 50 years and over

false positives and false negatives, 37.1% said their patients found it difficult to comply with instructions, and 27.6% said such a program was not cost effective.

CRC guidelines

We found 71.2% of GPs indicated that they had received at least one type of guideline for CRC screening. Of those, 53.8% were RACGP guidelines and 33.7% were NHMRC. Others included GFA (26.8%), AGI (24.7%), and 27.8% could not recall which one(s) they had received. The most useful guidelines nominated by GPs

in this study were RACGP (31.2%), NHMRC (14%), GFA (14.1%) and AGI (12.7%). A small number (5%) said they did not find any of the guidelines useful.

Current attitudes, beliefs and support for CRC screening

Significantly more GPs now report that they currently use FOBT for asymptomatic patients over 50 years of age (RR: 2.01, 95% CI 1.58–2.56), indicating that GPs now have a two-fold increased likelihood of currently using FOBT, representing an increase of some

20% since 1999.¹⁷ In relation to knowledge about current recommended FOBT screening frequency, GPs are now 50% less likely to be unsure about the recommended frequency (RR=0.58, 95% CI: 0.43–0.79). In 1999, 40.9% of GPs indicated they screen with FOBT either annually or biennially, increasing to 66.6% in this study. Overall support for a population based FOBT screening program has increased by 16% since 1999¹⁸ and GPs now have a 1.7 fold increased likelihood of supporting such a program (RR: 1.69, 95% CI: 1.33–2.14) (*Table 2*).

Discussion

Use of FOBT in asymptomatic patients over 50 years of age appears to be increasing, at least in Queensland. In our study, over half the GPs (53%) indicated they currently use FOBT in this group of patients. This is higher than that previously reported with figures ranging from 14–30% for GPs who recommend FOBT for asymptomatic standard risk patients.^{16–19} Community based studies have found that about 50% of those aged over 50 years had some knowledge about FOBT and approximately 18% recall having an FOBT in the past. Importantly participants reported that the motivation to participate in screening for CRC is a result of a recommendation from their GP.²⁰

Screening asymptomatic patients with colonoscopy also appears to be increasing in frequency. Approximately 19% of our sample would recommend such a procedure. Encouragingly, nearly our entire sample (97.4%) would recommend colonoscopy for patients with a significant family history, which is in agreement with the majority of current guidelines.^{9,12}

We found a number of significant changes among GPs in relation to current practice, knowledge of, and attitudes toward screening for CRC. General practitioners are now more likely to have ever used FOBT and less likely to recommend a sub-optimal FOBT screening frequency.¹⁸

At present, knowledge and a positive attitude toward FOBT is high and consistent with increasing support for population based FOBT screening in asymptomatic patients over 50 years of age. Over two-thirds of our sample indicated that they would support such a program; a significant increase over the past few years.¹⁸

We found over 70% of GPs had received some form of CRC guideline, representing a significant increase from previous studies in Queensland.¹⁸ More than half our sample recalled receiving guidelines produced by the RACGP, a significant increase to that found in Tong et al,¹⁸ while only one-third said they recalled receiving guidelines from NHMRC, some 2 years after their release. It is possible that GPs recalled only the most recent guidelines, ie. those produced by the RACGP.

Despite this, it appears that GPs have become more aware of the evidence for and the benefits of screening using FOBT.

Some limitations may apply to this study. Our response rate of 56% is similar to that of other studies involving GPs or physicians,^{16–19,21} however, this may result in some degree of bias and limited generalisability of the results. We were able to compare demographics of responding GPs with nonresponders and found both groups comparable for age and division of general practice. It is possible that responding GPs may have more interest in issues relating to screening for CRC. If this is the case, then the true proportion of GPs who would recommend using FOBT for asymptomatic patients over 50 years of age may be lower. Additionally, as we were unable to validate the questions relating to the use of FOBT using pathology laboratory data, the true rate of FOBT use may be overestimated within this study.

Implications for general practice

- Colorectal cancer is the most common invasive cancer in Australia.
- The National Bowel Screening Program, which recommends FOBT every 2 years after 50 years of age, is about to be launched.
- GPs are integral to the success of this screening program and have been increasing their ordering of FOBT.

Conflict of interest: none declared.

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