We are making considerable strides in increasing uptake of colorectal cancer (CRC) screening in Canada, but overall uptake is still quite low. 32.2% of asymptomatic people aged 50 to 74 have been screened, and an additional 7.5% of people are up-to-date for other reasons.

Organized screening programs make a difference — they increase awareness, understanding and the propensity to get screened and allow us to measure the impact and quality of screening.

The fecal occult blood test (FOBT) has strong scientific evidence to support it and is the entry screening tool in all of the organized programs in Canada.

Canadians are not deterred from CRC screening because of the tests, and they believe people should be screened for CRC.

That said, Canadians in the target age group (50 to 74) mistakenly believe that “screening” means testing after they develop symptoms and so may not think screening messages are actually meant for them.

People are not embarrassed to talk to their physicians about screening for CRC and look to them for recommendations about screening.

We have an opportunity to increase the slope and speed of the trajectory of CRC screening in Canada.
Introduction

Colorectal cancer (CRC) is a disease that presents challenges now, and will in the years to come. As our second leading cause of cancer death, it is a serious threat to the health of Canadians. On the other hand, we are beginning to see progress on several fronts — and this progress is likely to change the deadly statistics for the better. And, perhaps most importantly, there is a great deal that can be done by health professionals across Canada to accelerate our progress.

This is why, in this first Cancer Control Spotlight, we are highlighting screening for CRC. Public awareness initiatives that are emerging may result in Canadians bringing questions to their health professionals. More information is available on Canadian screening than ever before, with the Statistics Canada release of 2008 screening data from the Canadian Community Health Survey (CCHS) and the release of the Partnership’s recent survey of public attitudes towards CRC screening. In the next few pages, we will highlight some of the most current information available in Canada. We will also update you on the progress of the CRC screening programs in Canada and the launch of a new website to assist Canadians in accessing and understanding CRC screening.

QUICK STATS ON COLORECTAL CANCER

• In 2009, an estimated 12,100 men and 9,900 women were diagnosed with CRC in Canada.
• Of these, 94% were 50 years of age and older.
• In the same year, it was estimated that more than 9,000 Canadian lives were claimed by CRC, making it the second leading cause of cancer death in Canada.

The incidence rate (age-adjusted rate of those being newly diagnosed in the population) has been stable in Canada for the last decade. Meanwhile, in the United States, rates for new diagnoses of CRC have declined between 1998 and 2006, for both men and women. Mortality rates have been declining in both countries. Further bulletins will examine these trends — and potential reasons for them — in more detail.
What is the case for screening?

CRC screening allows the detection of polyps before they become malignant, or the identification of a malignancy, usually earlier than would be the case without screening. FOBT refers to fecal tests that may include guaiac tests (gFOBT) or fecal immunochemical tests (FIT). Of all the tests available for CRC screening, FOBT has the highest level of evidence and efficacy. There is strong randomized controlled trial and systematic review evidence that screening using an FOBT reduces mortality from the disease and some suggestion that it can reduce incidence as well.

While there are guidelines for screening that have been developed in various jurisdictions and by various specialty organizations, national screening recommendations for CRC have been in place in Canada for just under ten years. The FOBT is recommended as the entry screening test in the Canadian guidelines.

Flexible sigmoidoscopy is currently being assessed as an adjunct to FOBT through several randomized controlled trials in Europe. Final results are not yet available from most of these trials.

Colonoscopy is the diagnostic test that is generally recommended as follow-up for abnormal FOBT screening results. It also has a role as a screening tool for individuals who are considered to be of higher risk (e.g., strong family history, inherited syndromes or benign polyps, inflammatory bowel disease) or for follow-up of people with a past diagnosis of CRC.

Virtual colonoscopy or colonography are new technologies that incorporate examination of computer-generated images of the colon “created” by specialized software and equipment using data obtained from an abdominal CT. These images require expert interpretation and simulate the findings of a traditional colonoscopy. If lesions are found, a conventional colonoscopy is required. The virtual colonoscopy is not currently recommended as a screening test.

Screening guidelines for Canadians at average risk of CRC

CANADIAN TASK FORCE ON PREVENTIVE HEALTH CARE, 2001

- There is good evidence to support annual or biennial FOBT.
- There is fair evidence to include flexible sigmoidoscopy in the periodic health examination of patients aged 50 years or older.
- There is insufficient evidence to include or exclude colonoscopy as an initial screening test.

NATIONAL COMMITTEE ON COLORECTAL CANCER SCREENING, 2002

- Recommends biennial (at minimum) FOBT for average-risk people aged 50 to 74.
- Follow-up of positive FOBT by colonoscopy.
- Recommends screening occur in organized provincial programs, with ongoing evaluation.
ARE WE MAKING PROGRESS IN MEETING THE GUIDELINES?

Several researchers who have looked at screening rates since the introduction of national screening recommendations in Canada have noted quite low uptake of the recommendations.\textsuperscript{14,15} But we are moving in the right direction. The first national data on screening for CRC was made available in 2008 through Statistics Canada. Where data are available, the trends seen over time show an increasing rate of asymptomatic Canadians being screened for CRC in most provinces (Figures 1 and 2).\textsuperscript{*}

\textbf{Figure 1:} Individuals aged 50 to 74 reporting FOBT in the past 2 years and/or sigmoidoscopy/colonoscopy in the past 5 years for asymptomatic reasons, by year

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Individuals aged 50 to 74 reporting FOBT in the past 2 years and/or sigmoidoscopy/colonoscopy in the past 5 years for asymptomatic reasons, by year}
\end{figure}

\textbf{Figure 2:} Individuals aged 50 to 74 reporting FOBT in the past 2 years and/or sigmoidoscopy/colonoscopy in the past 5 years for asymptomatic reasons, by year

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2.png}
\caption{Individuals aged 50 to 74 reporting FOBT in the past 2 years and/or sigmoidoscopy/colonoscopy in the past 5 years for asymptomatic reasons, by year}
\end{figure}

Many people who are “up-to-date” in CRC screening may have had the tests for symptoms, follow-up of disease or for other reasons. If, however, we focus our attention only on those who report that they had \textit{no symptoms} at the time of being tested, uptake of screening in Canada in 2008 is about 32.2%. For programs trying to reach the healthy population, this number reflects our success in reaching that group. The highest rates are seen in Manitoba and Ontario (46.6% and 44.7% respectively), which were the first two provinces to actively launch screening programs (Figure 3).

\* Figure 1 provides information for provinces and territories where three years of data are available, while Figure 2 shows data for provinces and territories where one or two years of data are available.
The rate of CRC screening in Canada also lags behind screening rates for breast and cervical cancers. In 2008, 72% of women aged 50 to 69 reported being up-to-date for routine screening mammography, and 76.5% of women aged 18 to 69 reported up-to-date cervical cancer screening.\(^\text{17}\) This isn’t surprising, as screening guidelines for cervical and breast cancer have been in place longer than for CRC. In 1990, when organized screening programs for breast cancer were just being launched in Canada, screening rates for mammography were similar to what we see for CRC currently (about 40%).\(^\text{18}\) We now have an opportunity to increase the trajectory of uptake for CRC screening – in order to steepen the potential reductions in mortality.

**Figure 3:** Individuals aged 50 to 74 reporting FOBT in the past 2 years and/or sigmoidoscopy/colonoscopy in past 5 years for asymptomatic reasons, by province/territory

<table>
<thead>
<tr>
<th>Province/Territory</th>
<th>Per cent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>QC</td>
<td>16.2</td>
</tr>
<tr>
<td>PEI</td>
<td>21.8</td>
</tr>
<tr>
<td>NS</td>
<td>21.4</td>
</tr>
<tr>
<td>YK</td>
<td>21.2</td>
</tr>
<tr>
<td>MB</td>
<td>25.6</td>
</tr>
<tr>
<td>SK</td>
<td>28.1</td>
</tr>
<tr>
<td>AB</td>
<td>28.4</td>
</tr>
<tr>
<td>BC</td>
<td>28.6</td>
</tr>
<tr>
<td>ON</td>
<td>30.6</td>
</tr>
<tr>
<td>NB</td>
<td>31.2</td>
</tr>
<tr>
<td>NWT</td>
<td>44.7</td>
</tr>
<tr>
<td>NUNB</td>
<td>46.6</td>
</tr>
</tbody>
</table>

* suppressed due to small cell sizes

**Data Source:** CCHS 2008

As noted, some people undergo testing for symptoms, for follow-up, or other reasons. In the 2008 CCHS survey, just under 40% of all adults aged 50 to 74 had had either an FOBT test in the past two years or a sigmoidoscopy/colonoscopy in the past 5 years for any reason, including symptoms (Figure 4). Again, for those undergoing testing for any reason, the highest rates of uptake are seen in Manitoba and Ontario (54.6% and 50.4% respectively). Our CRC screening rates lag behind those in the United States, where those reporting up-to-date CRC screening (for any reason) have increased from 37.6% to 44.2% between 2000 and 2005 for adults aged 50 to 64 and from 48.7% to 56.4% for adults 65 and older.\(^\text{16}\)

**Figure 4:** Individuals aged 50 to 74 reporting FOBT in past 2 years and/or sigmoidoscopy/colonoscopy in past 5 years for any reason, by province/territory

<table>
<thead>
<tr>
<th>Province/Territory</th>
<th>Per cent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>QC</td>
<td>27.6</td>
</tr>
<tr>
<td>YK</td>
<td>29.8</td>
</tr>
<tr>
<td>NWT</td>
<td>31.5</td>
</tr>
<tr>
<td>PEI</td>
<td>32.3</td>
</tr>
<tr>
<td>NB</td>
<td>32.6</td>
</tr>
<tr>
<td>NL</td>
<td>34.1</td>
</tr>
<tr>
<td>AB</td>
<td>35.3</td>
</tr>
<tr>
<td>BC</td>
<td>36.6</td>
</tr>
<tr>
<td>SK</td>
<td>38.3</td>
</tr>
<tr>
<td>ON</td>
<td>39.7</td>
</tr>
<tr>
<td>MB</td>
<td>50.4</td>
</tr>
<tr>
<td>NUNB</td>
<td>54.6</td>
</tr>
</tbody>
</table>

* suppressed due to small cell sizes

**Data Source:** CCHS 2008
What CRC screening tests are being used in Canada?

There are variations across the country regarding which test is more likely to be used among those who report having had CRC testing for any reason (the CCHS survey does not distinguish between sigmoidoscopy and colonoscopy) (Figure 5). The use of FOBT is the approach that is consistent with Canadian guidelines and requires a lower capacity for endoscopy within a province than if endoscopy was widely used as an entry level test. In Quebec, Saskatchewan and the Atlantic provinces, endoscopy tends to be more commonly used among people being tested for any reason. In fact, while the total screening rates are lower than the national average in New Brunswick and Newfoundland, their endoscopy rates are higher than in many western provinces where overall CRC testing rates are higher.

WHO ARE WE MISSING?

Among the healthy asymptomatic population in Canada, men and women are almost equally likely to be screened for CRC. The greatest differences between men and women are seen in Nova Scotia where screening rates for men are about 5% higher, in Alberta where they are 4.4% higher in men, and in PEI where screening rates are 3.6% higher in women.

Canadians are more likely to be screened for CRC as they get older. Among those aged 60 to 74, 39.6% of asymptomatic Canadians report being screened compared to 29.2% of those aged 50 to 59. A similar pattern is seen in all provinces with the exception of Nova Scotia where screening rates are slightly higher among younger people (26.1% and 24.2% for those 50 to 59 and 60 to 74, respectively). Similar age-related patterns are observed in the United States. 19

Figure 5: Individuals aged 50 to 74 reporting CRC testing for any reason, by test type and province/territory

WHO ARE WE MISSING?

Among the healthy asymptomatic population in Canada, men and women are almost equally likely to be screened for CRC. The greatest differences between men and women are seen in Nova Scotia where screening rates for men are about 5% higher, in Alberta where they are 4.4% higher in men, and in PEI where screening rates are 3.6% higher in women.

Canadians are more likely to be screened for CRC as they get older. Among those aged 60 to 74, 39.6% of asymptomatic Canadians report being screened compared to 29.2% of those aged 50 to 59. A similar pattern is seen in all provinces with the exception of Nova Scotia where screening rates are slightly higher among younger people (26.1% and 24.2% for those 50 to 59 and 60 to 74, respectively). Similar age-related patterns are observed in the United States. 19

Figure 6: Individuals aged 50 to 74 reporting FOBT in the past 2 years and/or sigmoidoscopy/colonoscopy in past 5 years for asymptomatic reasons, by income, education and geography

Data Source: CCHS 2008
Other social determinants are commonly associated with screening uptake. In Canada, for those being screened when they have no symptoms, people in the higher income quintiles are more likely to report CRC screening than those in lower income quintiles (Figure 6). A quarter of those in the lowest income group in Canada report being screened for CRC compared to about 38% of Canadians in the highest income quintile. These findings show a similar pattern to findings for cervical screening and for mammography where screening rates are reduced in the lowest two quintiles. A higher level of education increases the likelihood of getting screened for CRC. Canadians living in rural areas have slightly lower CRC screening rates than urban Canadians (Figure 6).

What do Canadians think about CRC screening?

Do Canadians believe that CRC is an important health problem? Are they aware that any screening tests exist? Or do they know about the tests and choose not to use them for various reasons? We need to know the answers to these questions, as they will frame the content of awareness campaigns. The answers can also be helpful for primary care providers to have a sense of what the general population is thinking and can inform their conversations with individual patients.

The Colon Cancer Screening in Canada Survey* was undertaken in March and April of 2009. 3,153 Canadians aged 45 to 74 were interviewed regarding their understanding and attitudes about getting screened for CRC. The aim of the survey is to provide baseline information for our partners in the provinces as they plan and implement CRC screening programs and to guide national awareness campaigns.

DISPELLING MYTHS ABOUT CRC SCREENING

MYTH: CANADIANS ARE NOT AWARE OF CRC SCREENING

In fact, the majority of Canadians aged 50 to 74 (80.9%) are aware that tests exist to screen for CRC (Figure 7). The level of knowledge about CRC screening tests among Canadians varies somewhat across the country. Most people think of colonoscopy when they are asked to describe available tests (unaided). Even when the names of the tests are described to them, a minority of Canadians are familiar with the FOBT. This means it is important that patients understand what is meant when they are encouraged to get a “screening test” — they may be imagining something quite a bit more involved than a simple FOBT. It also points to the need to focus on the test type in public messaging about screening.

Figure 7: Percentage of individuals aged 50 to 74 who are aware that tests exist to screen for CRC and are aware of FOBT and colonoscopy

Data Source: Colon Cancer Screening in Canada Survey, 2009

* Conducted by Angus Reid Public Opinion and the Applied Health Research Centre at St. Michael’s Hospital on behalf of the Partnership, the survey used random digit dialing methodology. The margin of error for sampling variability was +/-2.1% points, and the results were weighted using the 1996 Canadian census data to ensure sample representativeness of the Canadian population aged 45 to 74.
While the majority of Canadians are aware of tests to screen for CRC, there is considerable variation in how people speak about CRC. In fact, more people refer to CRC as “colon cancer”, not colorectal cancer. This is the reason that several provincial screening programs use the term colon cancer or “Colon Cancer Check” to be more recognizable to the general public (Figure 8).

Figure 8: Terminology Canadians aged 50 to 74 use to refer to CRC

*8.5% said they “never discuss this type of cancer” and 6.5% said they “don’t know” or refused to answer the question.

Data source: Colon Cancer Screening in Canada Survey, 2009

On the contrary, the vast majority of Canadians understand the benefits of screening and value the potential of detecting CRC early (Figure 9). Nearly all agree that detecting CRC early greatly improves the chances of survival, and 92.5% agree that CRC can be treated successfully if found early.

Figure 9: Percentage of individuals aged 50 to 74 agreeing (strongly or moderately) to statements about CRC

When the implementation of CRC screening programs was being discussed in some Canadian provinces, the “ick” factor was brought up by healthcare providers as the main barrier to more widespread use of FOBT moving forward. This perception of patient embarrassment and anxiety as a barrier to screening was held by 55.6% of primary care physicians interviewed in the United States. But when asked about this, only 8.5% of Americans older than 50 expressed any such concern about FOBT.

In Canada, only 12.4% of people strongly agree that the test “grossed them out”, and just over 5% strongly agree with the statement that they would be embarrassed to discuss CRC testing with their physicians. These findings suggest that Canadians are not deterred from screening because of the tests.
For Canadians aged 50 to 74 who have discussed CRC with their doctors, the majority (71.7%) are up-to-date in their CRC screening compared to (32.6%) of those who say they have not had this discussion with their doctor.

**THE ROLE OF THE HEALTHCARE PROVIDER**

Canadians look to their physicians or healthcare providers for CRC screening advice. The survey shows that Canadians aged 50 to 74 are far more likely to be screened for CRC when they have a conversation about it with their doctor. This supports previous research that points to the key role of physician referral for CRC screening and patient compliance with CRC screening guidelines. Among those who report having been screened, the most common reason for doing so is that the person’s doctor has advised it (27.4%) (Figure 10).

For people who had not been screened, being afraid and/or embarrassed is not seen to be a barrier at all (4.1%), while not being told to do so by their doctors or rarely having contact with the doctor (32.5%) is one of the most common reasons given for why they have not been tested for CRC (Figure 11).

**Figure 10: Most common motivators for CRC screening among those aged 50 to 74 who reported being screened, by gender**

<table>
<thead>
<tr>
<th>Motivator</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor told me</td>
<td>32.0</td>
</tr>
<tr>
<td>My age</td>
<td>23.1</td>
</tr>
<tr>
<td>CRC risk factor or family history</td>
<td>27.4</td>
</tr>
<tr>
<td>Signs/symptoms</td>
<td>20.8</td>
</tr>
<tr>
<td>Being proactive/preventative</td>
<td>21.0</td>
</tr>
<tr>
<td>CRC screening recommended by doctor</td>
<td>25.8</td>
</tr>
<tr>
<td>I don't see the need, no symptoms</td>
<td>18.3</td>
</tr>
<tr>
<td>Don't know of any tests or how to get tests</td>
<td>25.2</td>
</tr>
<tr>
<td>Afraid or embarrassed</td>
<td>20.4</td>
</tr>
<tr>
<td>Lack of time</td>
<td>20.0</td>
</tr>
</tbody>
</table>

**Figure 11: Barriers to CRC screening among those aged 50 to 74 who have not been screened**

Data Source: Colon Cancer Screening in Canada Survey, 2009

While a discussion between the individual and their doctor is the strongest driver of getting screened for CRC, only three in ten participants aged 50 to 74 recalled ever having had a discussion about getting screened with their doctor.
AND A FINAL BARRIER: PEOPLE DON’T ALWAYS KNOW WHAT WE MEAN WHEN WE SAY “SCREENING”

Most (83.5%) Canadians surveyed (50 to 74) think that people their age should get screened for CRC. But the problem is this: many Canadians (60.0%) do not understand that screening occurs before symptoms of CRC have developed (Figure 12). Among those not screened for CRC, not seeing the need/lack of symptoms is the most common reason given for why they have not been screened. We need to be clear about this: screening is a “health” behaviour that is not linked to symptoms.

Figure 12: Perceptions of when screening first occurs among Canadians aged 50 to 74

- Don’t know: 15.7%
- After they experience symptoms: 44.3%
- When they are well, before they experience symptoms: 40.0%

Data Source: Colon Cancer Screening in Canada Survey, 2009

ORGANIZED CRC SCREENING IN CANADA

As of early 2010, organized screening programs were established across the country with ten provinces and one territory having announced or currently running organized CRC screening programs or pilot programs. The goal of the provincial CRC screening programs is to increase access to high-quality CRC screening for eligible Canadians and thus reduce mortality due to the disease. Each program follows the recommendations for CRC screening set out in the 2002 population-based guidelines. While all programs use the FOBT as the entry test, some are using guaiac tests and others are using immunochemical tests. Each province’s context is different, and so there are variations in the specific components of the screening programs in place. Different recruitment strategies are used to encourage Canadians to get checked, and there currently isn’t any Canadian evidence about which of these strategies will optimize uptake and follow-up.

In late 2007, the Partnership launched the National Colorectal Cancer Screening Network (NCCSN). The network brings CRC screening program representatives together from across Canada to address gaps in CRC screening and to facilitate the use of best practices, which will support the development of evidence-based screening programs and policy. The NCCSN brought together a working group to identify quality determinants (including quality indicators) for organized CRC screening programs in Canada. Providing a uniform way of reporting on program status and allowing them to meaningfully compare performance across jurisdictions (and internationally) is the first step in the process of building the evidence base for future decisions. See Quality Determinants for Colorectal Cancer Screening in Canada (www.partnershipagainstcancer.ca/screening_resources).
How can Canadians start the “Colonversation”?  

Conversation is critical. Finding the right words may not seem easy, but a simple conversation about getting checked for colon cancer can save a life. To help Canadians have this life-saving conversation, the Partnership’s NCCSN has launched the ‘Colonversation’ Campaign. The first of its kind, the CRC screening awareness campaign includes an important new national online resource – colonversation.ca – that is devoted entirely to colon cancer screening. Visitors can learn why, where and how to get screened; make use of educational videos; and share the news through Facebook, YouTube and Twitter.

The main hub of the campaign is the website, which is housed on cancerview.ca. It brings together the best of what Canada currently has to offer in colon screening information, and fills in gaps in information and resources. The purpose is to encourage discussion, to inform, and ultimately to increase participation in CRC screening. The national website offers many useful features to support your education efforts, including:

- Instructional videos on doing a stool test at home and on how colonoscopy works
- Plain language information, as recommended by the Canadian Public Health Association
- Clear guidelines about who should get screened and when
- Information and statistics supporting screening recommendations in each province

All Canadians are encouraged to have ‘colonversations’ and those over 50 are encouraged to ask their doctors for the simple screening test they can do at home.

Taking action to increase CRC screening

We have made progress in increasing uptake of CRC screening, but there is still a long way to go. The findings from the survey are encouraging: people are generally aware of screening for CRC, recognize that screening tests exist and see the value in being screened. The barriers to screening – lack of knowledge about FOBT and a belief that screening is linked to symptoms – can be easily addressed in conversations. And healthcare providers should know that patients are very likely to accept their encouragement to get screened.
REFERENCES


Please visit the Colonversation site at: www.colonversation.ca.
This document can be found at: www.cancerview.ca.

This document has been made possible through a financial contribution from Health Canada, through the Canadian Partnership Against Cancer. The views expressed herein represent the views of the Canadian Partnership Against Cancer. The Canadian Partnership Against Cancer would like to acknowledge and thank the individuals and organizations that have contributed to the development of this report. The contents of this publication may be reproduced in whole or in part, provided the intended use in for non-commercial purposes and full acknowledgement is given to the Canadian Partnership Against Cancer.