CRC Screening

Do *you* have the time?

Point of View

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Colorectal cancer (CRC) is the third ranking, potentially life-threatening malignancy in men and women. Because it occurs in both sexes, only lung cancer will be more common in primary care.

Identifying and removing adenomatous polyps from the colon could prevent 95% of CRC cases.

Unlike lung, br… has tr…

…etween 30% …es will be fatal. The pri… of CRC screening is to reduce this nuge and unnecessary mortality.

Stanley's case

- Stanley, 56, rarely visits your office, but now he is frightened.
- His sister, 64, visited you with blood on the tissue paper after having a bowel movement.
- Hemorrhoid… th…

…moved

…concerned that he is at high risk …r colon cancer as well because of comments made by the surgeon who operated on his sister.

There's more to Stanley on page 58.

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How should we perform now?

A recent nationwide survey showed 56% of Canadian primary-care physicians are committed to CRC screening in their practices. They estimate a capture of 60% of opportunities among targeted patients.

Ontario identified the greatest system barriers, while the Maritime provinces reported the highest level of public willingness to screen. Unfortunately, physicians on the eastern side of

our country had the lowest familiarity with locally accepted guidelines for CRC screening despite a high willingness of their patients to participate.

A smaller survey of teaching practices revealed a gap between physicians' estimates of effectiveness and their actual performance. CRC screening was a service in 100% of these academic practices and the surveyed physicians estimated a capture of over 60%. A review of their medical records found their actual performance varied widely from an average of 10% to 15% of opportunities captured and an outlier who achieved a 70% capture.

What are the challenges?

This information helps us understand the incredible potential of CRC screening as well as the substantial room for improvement in our performance. What will we do to narrow this performance gap and capture this opportunity?

To achieve success we need more than new knowledge—we must commit to CRC screening in the way we have committed to breast and cervical cancer screening. We will need skill in risk assessment, as well as knowledge of the screening protocols and tools.

Finally, the biggest challenge will be changing our practice processes to incorporate effective CRC screening. We will need to identify target patients for screening, track their progress and provide unfailing followup with the results of interventions and recommendations for further tests or periodic screening. This is not an easy task and we will need help.

These tasks can be delegated to our office staff:

- careful documentation in a section of our medical records dedicated to preventive strategies,
- folders dedicated to sending reminders for high-risk situations and
- prompts attached to target files for patients on our daily schedule.

Many family physicians find it useful to attach CRC screening services to periodic health examinations. This is a great idea, but we need ways to find those who fail to attend such appointments.

Table 1

The individual risk assessment

The individual risk assessment categorizes the target person as average or higher risk.

It determines the:

- method,
- timing
- frequency of testing.

Risk is based upon:

- age (increasing risk with age)
- personal history (personal factors increasing risk)
- family history (25% of colorectal cancer & 5% of all cases are due to special risk from cancer family syndromes).

More on Stanley

Stanley's risk is average and he qualifies for screening by one of the four choices because he is older than 40. He elected to have colonoscopy, of which the results were normal, so he will be recalled for repeat testing in ten years.

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How can CRC be prevented?

CRC prevention may involve several strategies:

- Reducing fats and red meats over a lifetime may help but, no benefit from high-fibre diets have been found.
- Exercise, reducing alcohol consumption and not using tobacco products reduces CRC risk along with the other health benefits of these strategies.
- Low-dose folic acid supplementation and diets higher in calcium are helpful for this and other reasons.
- Estrogen replacement therapy, non-steroidal anti-inflammatory drugs and acetylsalicylic acid have demonstrated benefits in preventing CRC, but these strategies need to be balanced against potential risks.

While these strategies help prevent CRC, the real opportunities lie in a comprehensive primary-care program of CRC screening for the early detection of CRC and adenomatous polyps.

What about CRC screening?

The high incidence of CRC has caused experts to describe the lowest level of risk as average. There will be two groups of patients: one for average-risk individuals and a second for higher-risk patients.

Table 2

Determinants of risk

Patient age affects risk	• 1/1000 in 30s • 1/500 in 40s • 1/125 in 50s
Personal history can change risk	• Inflammatory bowel disease • Adenomatous polyps • Previous colorectal cancer
Family history	• Colorectal cancer or adenomatous polyps • Cancer family syndromes: - Familial adenomatous polyposis - Attenuated adenomatous polposis coli - Hereditary non-polyposis colon cancer.

Table 3

Screening average risk individuals

Test choices	• FOB—every two years • Flexible sigmoid every five years (+/- FOB every two years) • Double contrast barium enema every 5 years • Colonoscopy every 10 years
Start at age 50 if:	No added risk factors (allows one second-degree relative with CRC or AP)
Start at age 40 if:	• One first-degree relative affected after age 60 or • Two or more second-degree relatives affected with CRC or AP

FOB: Fecal occult blood
CRC: Colorectal cancer
AP: Adenomatous polyp

The method, timing and frequency of CRC screening are determined by an individual risk assessment (Table 1), designed to risk-stratify an individual and determine the method, timing and frequency of the screening test.

The primary determinants of risk include the person's age, personal history and family history (Table 2). Risk increases with age and, by itself, becomes significant at age 50. Personal history and family history can further increase that risk.

Table 4

Screening for higher risk individuals

Test choices

- Due to family history—colonscopy (variable intervals)
- CFS—flexible sigmoid or colonoscopy for selected groups

Higher risk due to

- Personal history:
  - 1-2 tubular adenomas < 1cm—colonoscopy every 5 years
  - > 2 APS or any polyp > 1 cm—colonoscopy every 3 years
  - If many, advanced or large polyps—regular colonoscopy
  - CRC—colonoscopy at 0, 3 and 5 years
  - IBD—periodic c-scope after 10 years
- Family history:
  - One first-degree relative affected (CRC or APs) before age 60 or two or more first-degree relatives affected at any age
  - Start at age 40 or 10 years before index case
  - Test by colonoscopy every 5 years
- Higher risk due to CFS:
  - FAP: Genetic counseling & age 10—annual flexible sigmoid
  - AAPC: Genetic counseling & age 16—annual flexible sigmoid
  - HNPCC: Genetic counseling & age 20—annual colonoscopy

CFS: Cancer family syndrome
APS: Adenomatous polyps
CRC: Colerectal cancer
IBD: Inflammatory bowel disease
FAP: Familial adenomatous polyposis
AAPC: Attenuated adenomatous polyposis coli
HNPCC: Hereditary nonpolyposis colon cancer
AP: Adenomatous polyp

The recommendation is to start screening average-risk individuals at age 50 (Table 3). There are four choices used for the average-risk individual for CRC screening:

- fecal occult blood testing (FOBT) every two years,
- flexible sigmoidoscopy every five years,
- double contrast barium enema every five years and
- colonoscopy every 10 years.

Screening begins at age 40 (then every five years) if CRC or adenomatous polyp has affected one first-degree relative older than 60 or more than one second-degree relative. Colonoscopy is recommended as the screening test of choice for most high-risk patients (Table 4).

Practitioners may find it helpful to keep the recommendations for CRC screening close to the point of care since the recommendations can be difficult to recall.

When to stop screening patients?

It will take 10 years to capture the benefits of CRC screening, so it is reasonable to continue screening individuals who are predicted to have more than ten years to live. Dx