Should Canadians be offered systematic screening for colorectal cancer?

It has been 5 years since the committee struck by Health Canada to study the issue of a national colorectal cancer screening program filed its report. This committee recommended screening for colorectal cancer for all Canadians 50 to 74 years old. This recommendation was endorsed by the Canadian Cancer Society and is printed, every spring, in its annual report.

In 2007, the Ontario government incorporated colorectal cancer screening into its health policies. No doubt, the initiative taken by the Ontario government will soon weigh heavily on every jurisdiction in the country. And yet, it is a wrong-headed policy that has been adopted for the wrong reasons. Its implementation will require resources that are already extremely scarce in far too many other health care sectors.

We should not be asking healthy Canadians to get screened for colorectal cancer once they reach the age of 50 for reasons that have to do with both the natural history of the disease and the limitations of the recommended screening test.

Absolute risk of mortality

In public health, it is never appropriate to launch a program to prevent early mortality due to a specific cause in segments of the population already affected by high mortality due to all sorts of causes. It is a consequence of aging that larger numbers of people will die from an increasing number of causes, which is to say that the contribution that a specific cause makes to general mortality quickly becomes negligible. In this context, focusing on prevention of mortality caused by a specific disease becomes futile, even when a validated test is available. That is the first problem with colorectal cancer screening. Even if this screening were applied correctly, it would have no effect on the absolute risk of dying. This phenomenon was in fact noted by the researchers in Minnesota who were the first to determine that it was possible to reduce mortality from colorectal cancer with the fecal occult blood test.

It is estimated that, in 2007, 72,700 Canadians died of cancer; of these, 8700 (12%) died from colorectal cancer. About 86% of deaths from colorectal cancer occur in the seventh, eighth, and ninth decades of life (7450/8700). Mortality due to all other causes is also increasing steadily in all of these age groups such that even if screening for colorectal cancer were widely accepted by the population and applied meticulously, it would not be possible to obtain a measurable reduction in the absolute risk of dying. Because this is an absurd eventuality, the principles framing public health practices should prohibit us from organizing this screening.

Test limitations

It gets worse. Although the test recommended for this screening, the fecal occult blood test, is capable of reducing mortality from colorectal cancer by 30%, it is a bad test because of the high number of false-positive results it produces. Think of the suffering that all these false-positive results create in a population for whom the mere possibility of cancer is a tragedy in and of itself. Some health professionals have taken heart from the fact that methods of validating positive results have become more reliable and more widely available. But this seems to me to be a rationalization after the fact. The methods for confirming a diagnosis are neither pleasant nor completely safe. The National Committee estimates that, during the first 10 years of a widely used screening program, these methods will cause 75 deaths and 611 perforations. This is an exorbitant price to pay for a reduction in general mortality so minuscule that it cannot be measured.

Appropriate use of resources

And what of the considerable increase in the use of health services that such a program would no doubt
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Conclusion
Currently in Canada, we do not have extensive experience with an organized colorectal cancer screening program. Recently, Ontario, Manitoba, and Alberta launched colorectal cancer screening initiatives. We will need to monitor the development of these experiments as well as new technological developments. The reduction in mortality from breast cancer and cervical cancer owing, in part, to women’s participation in early screening is encouraging us to take action. Cancer organizations, public health authorities, and medical professionals all need to work together.\(^2,9,10\)

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Competing interests
None declared

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cause? Given the bottlenecks that are already affecting too many health care sectors, how can we justify preparing for what could be a veritable tsunami of requests for gastroenterology services? And what of the work that will fall to family physicians in managing the follow-up from this screening, which will be weighted toward the very great majority of those who receive positive test results? It is truly unfortunate that all the energy that family physicians will devote to supporting these patients, whom they have sent on ill-fated diagnostic journeys, will result in painful experiences that will probably ruin the quality of life of a substantial portion of their patients’ remaining days.

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References

CLOSEING ARGUMENTS

• Colorectal cancer screening meets all the conditions for creation of an effective screening program.
• This program would make it possible to reduce mortality due to colorectal cancer, which is responsible for 8700 deaths each year in Canada, by at least 17%.
• Family physicians should support the creation of a structured screening program and encourage their patients to participate in it.

CLOSEING ARGUMENTS

• Colorectal cancer screening does not reduce the absolute risk of mortality.
• The fecal occult blood test is not a good screening test; it produces too many false-positive results.
• Verification of positive fecal occult blood test results requires painful procedures that are not risk free for too many patients who are already vulnerable because of their age.