

## Correspondance

## Show some compassion

Although I am not a physician, I frequently read my husband's copy of *CMAJ*. I have generally found the journal to be informative and interesting. However, I was appalled at the recent death notice for Suzanne Killinger-Johnson.<sup>1</sup> There was absolutely no need to indicate the nature of her death or to mention that her child's life was also taken. Suicide for whatever reason is tragic, and it is obvious that Killinger-Johnson was suffering from some form of mental anguish. To indicate that she died "apparently as a result of postpartum depression"<sup>1</sup> trivializes her illness. Why could the writer not simply have said that she died under tragic circumstances, instead of casting a dark cloud over her name once again? I hope that Killinger-Johnson's spouse does not receive a copy of this magazine; I think he would be appalled at the lack of compassion and empathy shown toward his family. I hope that in the future more thought is put into writing about the loss of medical colleagues.

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## [Editors' note:]

Several editors debated whether our obituary should refer to the tragic circumstances surrounding Suzanne Killinger-Johnson's death. One proposal was simply to announce her death and ignore these facts. In the end, we decided that this would do no one a service. Shrouding such events in silence in our view perpetuates the stigma that still, unfortunately, accompanies mental illness and suicide. We also felt that omitting any reference to the death of Killinger-Johnson's child would be disrespectful of the importance of that young life. Physicians experience medical problems every bit as severe as those faced by their patients.

We hope that acknowledging such incidents when they occur will raise an awareness that may, perhaps, help to prevent future tragedies.

## Screening for colorectal cancer

Kenneth Marshall's views on screening for colorectal cancer<sup>1,2</sup> are a welcome breath of fresh air in the triumphalist haze propagated by Sidney Winawer and Ann Zauber.<sup>3</sup> In the real world, it is extremely important to balance potential benefit with risk. In the case of screening for colorectal cancer the benefits are very small and the risks anything but insignificant. It is astonishing that Winawer and Zauber in their rebuttal state that "medical harms have been studied and have not been demonstrated."<sup>4</sup> One of the studies they quote in support of this statement clearly demonstrated a complication rate of 0.5% from colonoscopy; of the patients with complications 85% required surgical intervention.<sup>5</sup> This is a very serious toll that might be acceptable for patients under investigation for cancer but is unacceptable for the large number of people who have a colonoscopy as a result of a false-negative occult blood screen.

Nobody will argue against Winawer and Zauber's closing statement that "losing even one life prematurely is a tragedy,"<sup>4</sup> but this argument does not overcome the naïveté of their case in the light of the very small benefit, the substantial harm and the enormous opportunity cost of screening for colorectal cancer.

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Sidney Winawer and Ann Zauber claim that screening for colorectal cancer with the fecal occult blood test will save 12 325 life-years per 100 000 people screened annually and that it costs less than \$20 000 per life-year saved.<sup>1</sup> I submit that neither conclusion is tenable.

For colorectal cancer screening to save life-years, lives have to be saved. However, no colorectal cancer screening trial has shown a reduction in mortality. Indeed, when the results from the 3 published randomized controlled trials of screening with the fecal occult blood test are combined they fail to show any trend toward mortality reduction: of the 137 377 patients who were screened, 25 609 died; of the 121 348 patients who were not screened, 22 158 died.<sup>2-4</sup> Thus, there were 186.41 deaths per 1000 people in the screened groups and 182.60 deaths per 1000 people in the unscreened groups.

The conclusion seems unavoidable: screening with the fecal occult blood test changes the way people die, in that it modestly reduces the rate of deaths from colorectal cancer, but it fails to save lives. The published evidence fails to support the claim that any life-years are saved by colorectal cancer screening or that screening is cost-effective. Since no lives are saved, the cost per year of life saved is incalculable.

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In their rebuttal of Kenneth Marshall's arguments against fecal occult blood screening for colon cancer,<sup>1</sup> Sidney Winawer and Ann Zauber accuse Marshall of using "misleading data, unfounded assumptions and exaggerations to support his bias against screening."<sup>2</sup> It seems to us, however, that in their main article supporting the use of fecal occult blood screening for colorectal cancer,<sup>3</sup> it is Winawer and Zauber who use misleading data, unfounded assumptions and exaggerations to bolster their bias in favour of such screening.

For example, Winawer and Zauber state that screening "was associated with the largest reduction in mortality (by 33%)."<sup>3</sup> We agree with Marshall<sup>4</sup> that it is the absolute reduction — the actual number of people who benefit — that counts, not the relative reduction rate that Winawer and Zauber quote. If disease Y caused 3 deaths per year in Canada and it was proven that some sort of expensive and potentially harmful screening program could reduce this rate to 2 deaths per year, would Winawer and Zauber advocate adoption of this program? After all, the program would achieve a 33% reduction in mortality, although only 1 life would be saved.

With almost 50 years of combined experience in a rural family practice setting, we share Marshall's concerns<sup>4</sup> that results obtained in tertiary care hospitals may not necessarily be extrapolated to the primary care setting, where the staff may have less expertise, motivation and experience than the staff in tertiary care settings.

We are concerned that the current state of technology — a fecal occult blood screen of low predictive value, followed by an invasive test — is not

sufficiently mature for a full-blown societal commitment to a massive screening program.

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The opposing views expressed by Sidney Winawer and Ann Zauber<sup>1</sup> and Kenneth Marshall<sup>2</sup> on colorectal cancer screening stem from a common problem in screening programs, namely that "screening for cancer has always been highly controversial, partly because the procedure is for seemingly healthy people, for whom the benefit should be clear cut. Evidence of this benefit is, however, for the group as a whole. At the individual level, prediction of who will benefit and who will suffer more harm than good is impossible. The balance between favourable and unfavourable effects is delicate."<sup>3</sup>

Technical details such as annual versus biennial and unhydrated versus hydrated aside, population-based studies have shown that fecal occult blood testing is efficacious.<sup>4-6</sup> Although there are no published cost-effectiveness studies of colorectal cancer screening in Canada, it is unlikely that Canadian findings would differ from those in other countries, where studies have consistently shown support for testing.<sup>7-10</sup> Most articles suggest that colorectal cancer screening is acceptable to the medical community. But are we, the medical community, the ones who should ultimately decide?

The acceptability of screening to

targeted individuals is poorly understood.<sup>11</sup> People will probably participate in population-based screening programs because participation is recommended, rather than from a true understanding of the risks and benefits. A 39% reduction in cause-specific colorectal cancer mortality for people who comply with screening guidelines, as quoted by Winawer and Zauber, makes screening a seemingly easy sell. Marshall, however, points out that in the context of the larger picture of overall mortality, colorectal cancer screening has little impact. What information should be presented to the person offered screening?

Before a decision is made about population-based colorectal cancer screening, more should be learned about its acceptability to the target population. An attempt should be made to fully inform a representative sample of this community of the risks and benefits of colorectal cancer screening from both a population and individual perspective and then survey their attitudes. This information can then be used to shape policy. Let the people decide.

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**S**idney Winawer and Ann Zauber state that no cardiopulmonary deaths occurred after the 13 000 colonoscopies in the Minnesota trial.<sup>1</sup> However, it is not known how many patients may have suffered a cardiovascular event related to colonoscopy that may have contributed to death at a later time. As summarized by Atkin,<sup>2</sup> the reduction in deaths from colorectal cancer in the Minnesota trial in the screened group was precisely offset by an increase in mortality from cardiac ischemia; similarly, an increase in cardiovascular deaths in the screened group more than offset any reduction in deaths from colorectal cancer in the study from the Danish center of Funen.<sup>3</sup> The contribution of ischemic cardiovascular events to the overall increase in noncolorectal cancer mortality reported in the study from Nottingham is unknown.<sup>4</sup>

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#### [Drs. Winawer and Zauber respond:]

**C**harles Wright, Brian Budenholzer, Gordon Brock, Vydas Gurekas and Steven Latosinsky state

that colorectal screening is associated with substantial harms and few benefits. They do not support the views of the Ontario Expert Panel on Colorectal Cancer Screening, which, after reviewing all the evidence on benefit and harms, recommended colorectal cancer screening with fecal occult blood testing for average-risk people 50 years old and older.<sup>1</sup> The US Preventive Services Task Force, the American Cancer Society, an Australian task force, the European Group for Colorectal Cancer Screening and a consortium of US gastroenterology and surgical societies also recommended screening.<sup>2</sup> The evidence included a 33% reduction in mortality for annual fecal occult blood test screening.<sup>3</sup> If this reduction in mortality were applied to Ontario, approximately 750 fewer people would die of colorectal cancer each year.

Ultimately all of us will die. The goal of a screening program is to postpone death and provide for quality life-years. The letter writers argue that colorectal cancer screening does not have significant benefits, has no impact on total mortality, carries excessive harms and is too costly. This is an extremely negative perspective that dismisses the strong evidence in favour of screening that has accumulated over the past 25 years.

The lack of a demonstrated impact on overall mortality emphasized by Latosinsky and Budenholzer is understandable considering that colorectal cancer mortality represents only 3% of overall mortality. We do not argue against strategies that would reduce mortality from other causes; individual evidence-based mortality-reducing strategies should be incorporated into an integrated program of wellness. The goal of a screening trial is to reduce mortality from the disease under study without causing any excess mortality. This goal was met by all 3 fecal occult blood test trials. Mandel recently showed that fecal occult blood testing reduces the incidence of, as well as mortality from, colorectal cancer.<sup>4</sup> Although Atkin noted that there was a slight increase in the number of deaths

from ischemic heart disease in the screening trials,<sup>5</sup> this difference was not statistically significant.<sup>6</sup>

The relative magnitudes of benefits and harms are a personal judgement. We believe the benefits are large; Wright, Brock and Gurekas, and Prasad Koduri see them as small. We agree that all screening programs have harms.<sup>3</sup> The intent of our statement regarding harms was to indicate that these harms do not erase the benefits; colorectal cancer screening has a net benefit.<sup>7</sup> A study of harms and benefits in a large colorectal cancer screening trial demonstrated no investigation-related mortality.<sup>7</sup> Of the 6 colonoscopy complications, 5 were in patients from whom polyps were removed.<sup>7</sup> Since polypectomy has been shown to reduce the incidence of colorectal cancer,<sup>8</sup> harms were almost entirely in patients who were most likely to benefit. In that trial the number screened to prevent 1 colorectal cancer death was 747 in 7.8 years, and 1 person was harmed for every colorectal cancer death prevented.<sup>7</sup> These data refute the argument that the harms of screening equal the benefits. This trial utilized primary care physicians in the community, which addresses the statement by Brock and Gurekas that all trials were in tertiary care settings and thus the findings cannot be extrapolated to community settings.

We agree with Latosinsky that colorectal cancer screening is costly, but so is the management of advanced colorectal cancer. Colorectal cancer screening has been shown to be cost-effective in the United States;<sup>3</sup> Ontario needs to determine whether this is true for its population. We certainly agree that people living in Ontario should be given the facts regarding benefits and harms and they should decide if they wish to be screened. We stated in our commentary that "ensuring that patients are fully informed about the harms and benefits of screening is an essential part of the screening strategy." Adverse consequences of screening must be recognized by community physicians and the public as part of a can-

cer prevention approach that has an overall benefit.<sup>7</sup>

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**Is it health care or is it health?**

In the past 2 years, *Maclean's* has used a composite scoring system to rank health care services in Canada.<sup>1</sup> However, the *Maclean's* scoring system includes components that are influenced by factors other than health care services. For example, life expectancy,<sup>2</sup> low birth weight,<sup>3</sup> and avoidable hospitalizations<sup>4</sup> are all influenced strongly by socioeconomic factors such as income, employment and education.

We examined the relationship between each of average income, percent unemployment and the percentage of

the population with a postsecondary education, and the *Maclean's* score for the same 50 health regions that the magazine studied. We obtained these socioeconomic data from Statistics Canada.<sup>5</sup> For each relationship we calculated the Pearson correlation coefficient and associated *p* value. We found a significant linear relationship between each of the socioeconomic factors and the *Maclean's* score (*r* = 0.49 and *p* < 0.001 for average income, *r* = -0.70 and *p* < 0.001 for percent unemployment (Fig. 1), *r* = 0.52 and *p* < 0.001 for the percentage of the population with a postsecondary education).

Our findings highlight a need for caution when translating descriptions of health services into an overall assessment of health care. We recommend, along with others,<sup>6</sup> that reports of clinical performance be adjusted for socioeconomic factors so that disparities in health care due to these factors can be emphasized and addressed.

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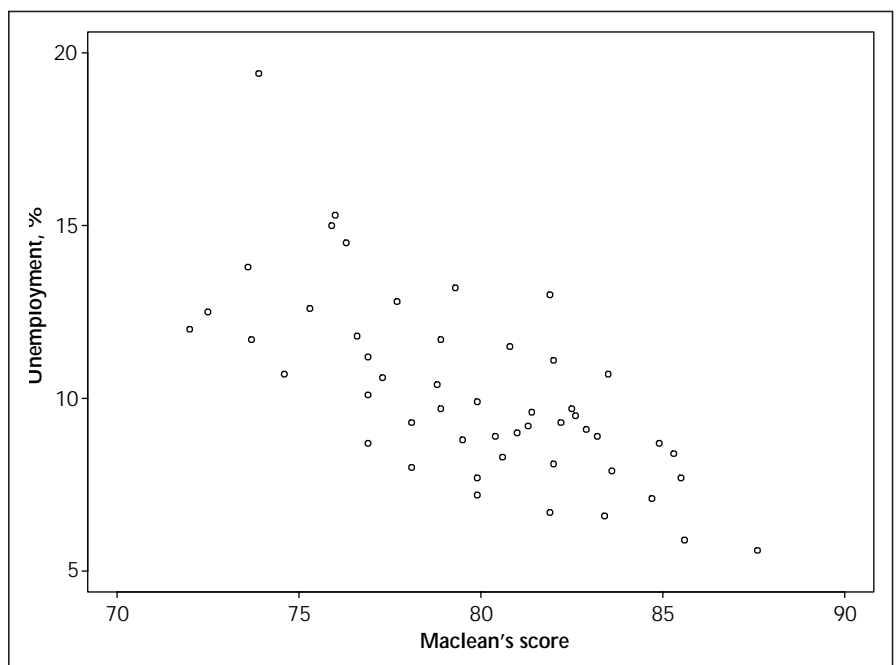


Fig. 1: Correlation between percent unemployment and the *Maclean's* score for the 50 regions studied by the magazine.