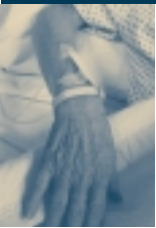


A series of essays giving the research evidence
behind Canadian healthcare debates



Myth: An ounce of prevention buys a pound of cure

“There are enormous potential benefits to be derived from health and wellness promotion, disease and injury prevention, public health and health protection and population health strategies, measured primarily in terms of improving the health of Canadians, *but also in terms of their positive long-term financial impact on the health care system.*”

— Senator Michael Kirby,
Senate Standing Committee on
Social Affairs, Science and Technologyⁱ

Serious illness takes a heavy toll on individuals, their families, and society. So it makes sense to invest in stopping illness before it happens, with strategies from public health programs that ensure we have safe food and clean water to direct disease-prevention efforts such as mass vaccination programs. In addition, programs that educate people on how lifestyle affects health and what they can do to keep themselves healthy provide important benefits to Canadians.

Penny-wise and pound-foolish?

While the over-arching goal of any health promotion or disease prevention measure is improved health, supporters say that investing money in these programs is also old-fashioned fiscal common sense. They argue that failing to invest in these programs now is penny-wise but pound-foolish, that spending less now means we will spend more in the future.ⁱⁱ

After all, mass vaccination of infants saves money by reducing the number of cases of measles and mumps — not to mention the classic example of smallpox, which was eradicated in 1980 and has incurred no prevention or treatment costs in more than 20 years. And helping pregnant women stop smoking also saves money, because they give birth to stronger, healthier babies that incur fewer healthcare costs.^{iii, iv}



Unfortunately, this evidence does not support the broader argument that prevention and promotion will always save money. Few diseases can be eradicated like smallpox, and postponing a chronic illness is not the same as eliminating it. The so-called “Iron Law of Epidemiology” — that one out of one die — will always apply.

Getting in the Action

Given the current epidemic of obesity in Canada, many experts are working to encourage physical activity. And studies in the United States and Canada also suggest millions of dollars in direct medical costs could be saved every year if people were as active as each country’s federal guidelines suggest.^{v, vi} After all, shouldn’t a population that is less obese require less healthcare?

However, these studies often fail to account for implementation costs, the cost of treating injuries associated with exercise, such as broken bones and muscle strains,^{vii} the cost of treating people for any condition as they live longer, or the fact that many programs promoting healthy behaviour just end up preaching to the converted.^{viii}

In fact, demonstrating the economic impact of physical fitness may always be an elusive goal. Properly conducted randomized controlled trials



of exercise are difficult because it's hard to ensure the control group doesn't change. ParticipAction, the classic Canadian health promotion program, was never rigorously evaluated, and it would have actually been very difficult — with national programs where there can be no control group, there is no way to properly determine if they cause Canadians to exercise more, and if this prevents illness and saves healthcare costs. Without these experiments, the health and cost benefits of these programs remain largely anecdotal.^{ix}

Easing the Pressure

It's easier to test clinically delivered disease prevention programs for their health benefits, but the cost benefits are still elusive. One example is hypertension, or high blood pressure. Heart disease is the single greatest cause of death in Canada, accounting for 37 percent of all deaths,ⁱ so it is important to identify warning signs, such as hypertension, and treat them before they lead to heart attacks and strokes.

Unfortunately, treatment for hypertension is complex and expensive — right from the initial testing. Many people become so nervous at the thought of seeing the doctor that their blood pressure goes up when they're at the doctor's office, only to drop back to normal once they get home. This means people must be re-tested at least twice more to ensure they are not "false positives."^{vii} Not only have they cost the system for the extra tests, but they experience unnecessary stress as well. (The numbers can be significant for other diseases as well; for screening mammography, it is estimated that between 80 and 93 percent of suspicious or positive results are false positives.^x)

Furthermore, treatment for hypertension usually involves many doctors' visits, lab tests, and medication that patients must take for the rest of their lives. This can cost the system a lot — one provincial drug plan spent more than \$127 million on cardiovascular drugs alone in 1999,^{xi} and one review shows hypertension drugs can cost anywhere from \$3,800 to \$93,000 per life-year saved.ⁱⁱⁱ And while this is certainly cost-effective for older patients, it is a bit more questionable for a forty-year-old with only mild hypertension, as the cost of 10, 20, even 30 years of preventive treatment goes far beyond the one-time cost of treating a heart attack.^{xii} Finally, not all people with hypertension will follow their treatment regimens, leaving them at high risk while incurring costs to the system.^{vii}

In general, preventing fatal diseases means the healthcare system can end up spending more,

because people live longer and become vulnerable to conditions such as mental illness, respiratory disease, and joint and bone problems. These diseases account for about the same proportion of healthcare budgets as cancer and heart disease.ⁱ However, because they are less fatal, they may cost more in the long term.^{xiii}

Penny foolish?

Leading longer, healthier lives is in itself justification for disease prevention and health promotion. And it is important to remember that just because something costs money doesn't mean it isn't cost-effective. Thus, supporters of health promotion and illness prevention don't need to depend on cost-saving rhetoric to make their arguments, and they probably shouldn't, because the evidence is simply not there.

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