
THE COST OF CHRONIC DISEASE
in
CANADA

EXECUTIVE SUMMARY

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Four types of chronic disease – cardiovascular disease, cancers, chronic obstructive pulmonary disease, and diabetes – kill an estimated 153,000 Canadians every year, account for nearly three-quarters of all deaths in the country, and are the major causes of premature death and hospitalization. The biggest killer is cardiovascular disease (heart disease, stroke, and atherosclerosis), which claimed the lives of 76,321 Canadians in 2000, and accounted for 35% of all deaths in the country. Cancer kills an estimated 62,600 Canadians every year, accounting for 29% of all deaths in the country.¹

Other chronic conditions disable many more Canadians. Arthritis and rheumatism afflict 14% of Canadians, with Nova Scotians having the highest rates at 20%. Nearly 13% of Canadians (11.4% of males and 13.9% of females) suffer from high blood pressure, with Nova Scotia once more the highest at 16.2% and Alberta lowest at 10.5%; 14% have chronic back problems with Saskatchewan having the highest rate at 17%.² Sixteen percent of all Canadians have a long-term limitation or handicap that interferes with their activity at home, school, or work. Chronic conditions are becoming increasingly common.³

Medical care costs for people with chronic diseases account for 42% of total direct medical care expenditures, or \$39 billion a year in Canada.⁴ Because of the debilitating nature of these illnesses, and because cancer and heart disease kill so many at an early age, the indirect costs of chronic illness due to productivity losses are particularly high, accounting for over 65% of total indirect costs – \$54.4 billion annually. Premature death due to cancer alone costs the Canadian economy \$11.6 billion each year, while musculoskeletal disorders such as arthritis and osteoporosis cost the economy \$14.9 billion due to disability, the single largest cost component for any category of illness. Circulatory diseases cost Canada almost \$12.8 billion a year in productivity losses (all costs in C\$2002).⁵

Combining direct medical costs (\$38.9 billion) and indirect productivity losses (\$54.4 billion), the total economic burden of seven types of chronic illness (cardiovascular diseases, cancer, chronic respiratory ailments, diabetes, musculoskeletal disorders, diseases of the nervous system and sense organs, and mental illness), exceeds \$93 billion a year.

¹ Federal, Provincial and Territorial Advisory Committee on Population Health, *Statistical Report on the Health of Canadians*, Health Canada and Statistics Canada, Ottawa, 1999, pages 291, 318, and 287 (hereafter referenced as Health Canada, *Statistical Report*); Heart and Stroke Foundation of Canada, *The Changing Face of Heart Disease and Stroke in Canada 2000*, Ottawa, October, 1999, page 76; National Cancer Institute of Canada, *Canadian Cancer Statistics 2002*, Toronto, April 2002, page 24-25; Statistics Canada, *Canada at a Glance*, 2nd edition, page 7, at: http://collection.nlc-bnc.ca/100/201/301/statcan/can_at_glance/12-581-XIE.pdf.

² Statistics Canada, *Canadian Community Health Survey, 2000/01*.

³ Health Canada, *Statistical Report*, page 268.

⁴ Estimate extrapolated from Health Canada, *The Economic Burden of Illness 1998*, Ottawa, 2002, (EBIC 98).

⁵ Productivity loss cost estimates are from Health Canada, *The Economic Burden of Illness 1998*, Ottawa, 2002.

These seven chronic diseases account for 66% of productivity losses due to premature death, 65% of productivity losses due to disability, and more than half of the total economic burden of illness in Canada (estimated at \$174.7 billion in 2002\$ by EBIC 98⁶), including both direct and indirect costs. They cost the country the equivalent of 9% of its GDP annually. All categories of chronic disease combined are estimated to account for over 53% of the total economic burden of illness in Canada. Cardiovascular diseases alone cost Canada almost \$25 billion a year in direct and indirect costs, cancer costs another \$17.1 billion, and musculoskeletal diseases (such as arthritis and osteoporosis) add another \$19.7 billion in costs.

It is estimated that 40% of chronic illness can be prevented. Epidemiological studies indicate that 25% of all direct medical costs – or nearly \$9.7 billion (C\$2002) a year in Canadian costs of chronic diseases – are attributable to a small number of excess risk factors such as smoking, obesity, physical inactivity, and poor nutrition.⁷

Socio-economic causes of chronic illness, such as poverty, inequality, and poor education, and environmental causes such as exposure to toxic pollutants, are also modifiable. Low-income women under the age of 40 are 62% more likely to be hospitalized than higher income women; over the age of 40, they are 92% more likely to be hospitalized. Those with low incomes and without a high school diploma have been found to use physician services much more frequently than those with higher incomes and with a B.A. And low-income groups have higher rates of smoking, obesity, physical inactivity, and cardiovascular risk. A York University study attributed 6,366 deaths and \$4 billion a year in health care costs to poverty-related heart disease in Canada.⁸

The Cost of Chronic Disease study was originally done for Nova Scotia, and this report is the first to present estimates for Canada. It indicates that Canada's high rates of chronic illness can be reduced through concerted health promotion initiatives that reduce risk behaviours and conditions. The evidence demonstrates that the country's escalating health care costs can be significantly lowered by improving the health of the population and thereby reducing the need and demand for medical care.

⁶ EBIC 98 refers to Health Canada, *The Economic Burden of Illness 1998*, Ottawa, 2002.

⁷ Goetzel, Ron, (ed.), "The Financial Impact of Health Promotion," *American Journal of Health Promotion* 15 (5), May/June, 2001.

⁸ References to these and other studies on the socio-economic determinants of illness are in Part III of this report.