Health Indicators 2012

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Institut canadien d'information sur la santé

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It should be noted that the analyses and conclusions in this report do not necessarily reflect the opinions of the experts or their affiliated organizations.

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The health indicators project is a joint effort by CIHI and Statistics Canada that produces information on a broad range of health indicators. Statistics Canada contributed indicators on health status, non-medical determinants of health and community and health system characteristics for the *Heath Indicators 2012* report, including calculations for avoidable mortality indicators. Statistics Canada and CIHI also jointly produce the *Health Indicators* e-publication, which provides additional health indicator data.

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Executive Summary

Health Indicators 2012, the 13th in a series of annual reports, presents the most recent data from the Canadian Institute for Health Information (CIHI) and Statistics Canada on a broad range of measures. The report includes measures that will assist those seeking answers to two fundamental questions: How healthy are Canadians? and How healthy is the Canadian health system?

Each indicator reported falls into one of the five dimensions of the internationally recognized Health Indicator Framework:

- **Health status—**provides information about the health of Canadians, including well-being, human function and selected health conditions.
- **Non-medical determinants of health—**reflects factors outside of the health system that affect health.
- **Health system performance—**provides insight into the quality of health services, including accessibility, appropriateness, effectiveness and patient safety.
- **Community and health system characteristics—**provides contextual information, not direct measures of health status or quality of care.
- **Equity—**a cross-cutting dimension for the four above.

In addition to presenting the most recent indicator results, this report introduces a suite of new acute-care readmission indicators, which will facilitate comprehensive evaluation of readmissions for all patient groups, as well as three new indicators of **avoidable mortality**.

Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care, including prevention. It serves to focus attention on the portion of population health attainment that can potentially be influenced by the health system. The three new indicators presented in the report are

- **Potentially avoidable mortality—**premature deaths that could potentially have been avoided through all levels of prevention (primary, secondary, tertiary);
- **Mortality from preventable causes—**a subset of avoidable mortality that informs efforts to reduce the number of initial cases (that is, incidence reduction); through these efforts, deaths can be prevented by avoiding new cases altogether; and
- **Mortality from treatable causes—**a subset of avoidable mortality that informs efforts to reduce the number of people who die once they have a condition, or case-fatality reduction.

These new Canadian measures provide additional insight into the Canadian health system by focusing attention on the outcomes that may be most closely associated with prevention practices, public health policies and health care provision. As indicators of health system performance, variations in rates of avoidable mortality across jurisdictions identify areas where Canada's health system has made gains, and where gains still can be achieved. In addition to the reporting of the avoidable mortality indicators at the national, provincial/territorial and regional levels, interpretative analysis of these indicators is presented in the In Focus section of the report.

Highlights From In Focus—New Avoidable Mortality Health Indicators for Canada

Premature Mortality

- Premature mortality represents a large burden to Canadians. In 2008, more than 92,700 deaths occurred before the age of 75, which accounted for almost 40% of all deaths in Canada. This translated to 4,471 potential years of life lost (PYLL) per 100,000 Canadians or more than 1.5 million PYLL in Canada in one year.
- In the past 30 years, Canada has made progress in reducing premature mortality, with rates having decreased by 45%. All provinces and most territories have seen declines, with the largest overall declines in Yukon (56%), Quebec (49%) and Ontario (46%).

Avoidable Mortality

- There were 67,127 potentially avoidable deaths in Canada in 2008, which represents 72% of premature deaths.
- Avoidable mortality rates were reduced by half—from 373 per 100,000 in 1979 to 185 per 100,000 in 2008.
- The magnitude and rate of decline by cause of death varied substantially. Circulatory diseases represented the largest cause-specific decrease (72% from 1979 to 2008). Digestive diseases and injuries also saw substantial reductions (61% and 49%, respectively).
- Overall, rates of avoidable mortality were higher for males than females. Over the past 30 years, rates among males have been reduced by more than half (55%) compared with a 43% reduction among females. The narrowing gap in avoidable mortality rates between males and females was primarily due to reductions in mortality from circulatory disease among males.
- International comparison shows variation in rates of potentially avoidable mortality across G7 countries. Canada ranked third lowest, after Japan and France.

Mortality From Preventable Causes

- Mortality from preventable causes decreased by 47%—from 225 per 100,000 in 1979 to 119 per 100,000 in 2008.
- Geographic variations in mortality from preventable causes showed higher rates in Manitoba and Saskatchewan compared with other provinces. One of the main drivers of provincial variations in 2008 was deaths due to injuries. Preventable mortality rates due to injury in these provinces were about twice as high as rates in Ontario and significantly higher than in other provinces.
- Significant socio-economic disparities were observed. The preventable mortality rate for people living in the least affluent neighbourhoods was almost double the rate observed in the most affluent neighbourhoods. Disparities were even more pronounced when the sex gap was considered; the rate for males living in the least affluent neighbourhoods was four times higher than the rate for females living in the most affluent neighbourhoods.

Mortality From Treatable Causes

- In the last three decades, rates of mortality from treatable causes have decreased by 56%—a larger decrease than that associated with rates of preventable mortality. However, reductions in PYLL for preventable mortality were about four times larger (2,170 per 100,000) than PYLL reduction for mortality from treatable causes (538 per 100,000), indicating that reductions in preventable mortality lead to larger gains in potential years of life.
- In 2008, cancers (such as breast cancer) were the main cause of death among females, while circulatory diseases were the main cause of mortality from treatable conditions among males.
- Geographical variation in mortality from treatable causes was observed across Canada and primarily reflects variation in mortality from circulatory diseases. Saskatchewan and Manitoba had the highest rates of mortality from circulatory diseases in 2008.

Policy Implications

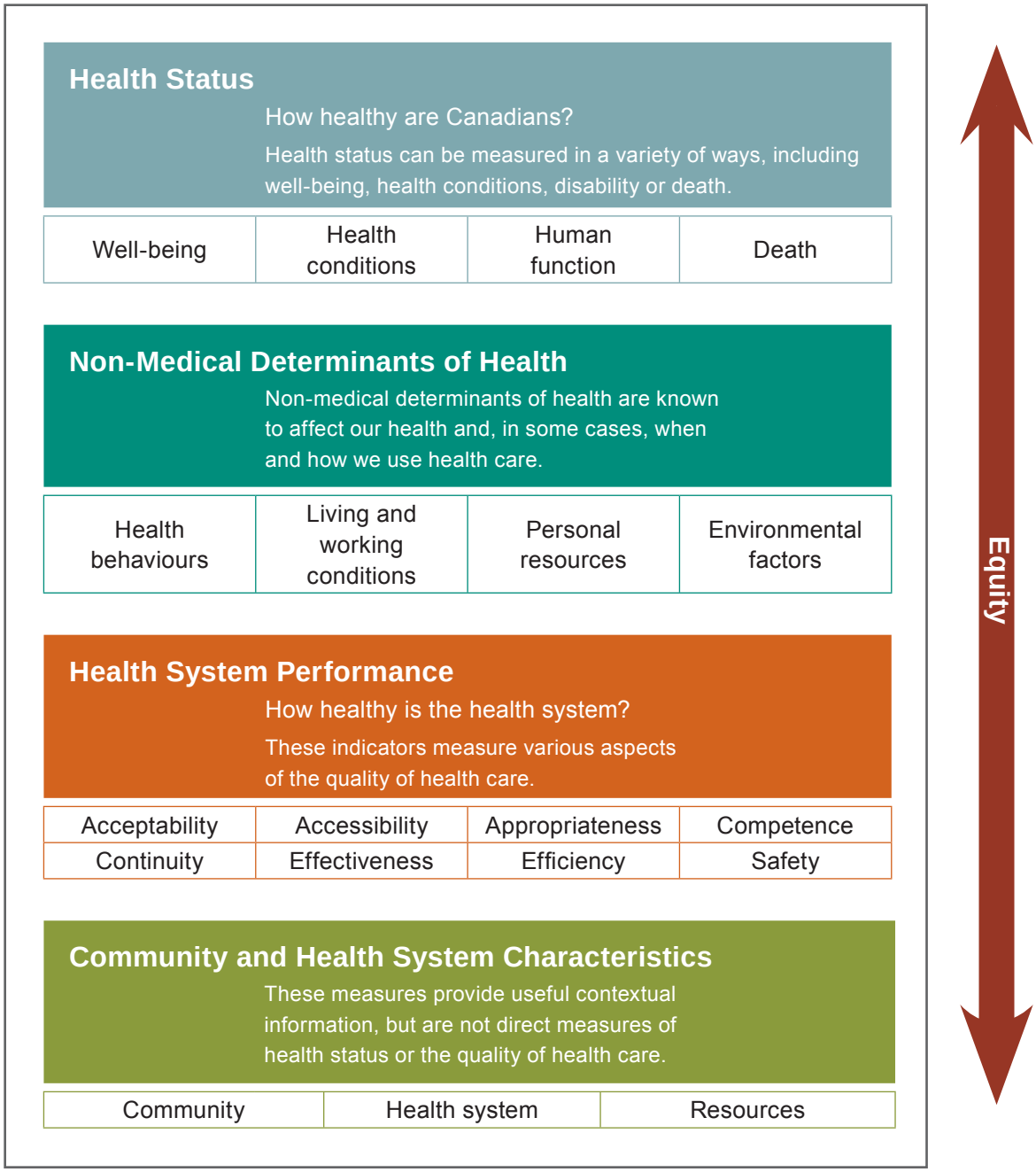
- The avoidable mortality indicators can serve to inform where Canada's health system has made gains and to point to where more work is needed. It can also help to quantify potential gains. For example, in an ideal world where all avoidable mortality in Canada would have been eliminated, life expectancy at birth for the years 2006 to 2008 would have been 85.8 years—4.9 years longer than the actual life expectancy of 80.9 years. Three of the 4.9 years would be attributed to eliminating preventable mortality, and the other 1.9 years would come from eliminating mortality from treatable causes. Analysis of avoidable mortality highlights **the need for prevention**.

- Activities whose primary purpose is prevention may fall outside the jurisdiction of the ministries of health. **Intersectoral collaboration is essential** in order to implement policies outside of health care that are needed to support health. Declines in some areas of avoidable mortality, such as circulatory diseases, resulted from the joint efforts of preventive and curative systems; however, there is still work to be done in the area of prevention. The smoking reduction strategies of the past several decades are another example of what can be achieved through intersectoral collaboration.
- Examining trends and variations in avoidable mortality could help jurisdictions identify areas for improvement. **Learning from the best**, nationally and internationally, may provide insights on successful strategies for reducing avoidable mortality and identify areas for more detailed investigation.
- Rates of avoidable mortality showed gradients by sex and by neighbourhood income quintile. These indicators could be used to target public health programs and policy development to areas where **efforts are needed to close sex and socio-economic gaps**.

Highlights From Other Health Indicators

- For the most recent year of data (2010–2011), there were interjurisdictional variations for all-cause medical, surgical, obstetric and pediatric 30-day acute-care readmission indicators. For example, for 30-day pediatric readmissions, the rate varied across provinces from 6.0% in New Brunswick to 8.7% in Prince Edward Island.
- In the last 10 years, the rate for 30-day in-hospital mortality from heart attacks has decreased by nearly one-third from 11.4% (2000–2001 to 2002–2003) to 7.8% (2008–2009 to 2010–2011).
- Overall, the rate of injury hospitalization in Canada decreased by 13% between 2001–2002 and 2010–2011 (from 589 to 514 per 100,000 population), after aging and population growth were taken into account.

Health Indicator Framework



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In Focus: Avoidable Mortality in Canada

Introduction

The health care industry is one of the largest sectors of the Canadian economy, accounting for 11.9% of gross domestic product in 2009.[1] With health care spending increasing annually in Canada and expected to have reached $200.5 billion in 2011, funders have been turning their attention to questions about health system performance measurement to understand the value of the growing health care expenditures to Canadians. Measuring health system performance, however, is hardly straightforward.[2, 3]

Performance indicators used to assess the many dimensions of the health system over the years have included global measures of population health outcomes, such as life expectancy and premature mortality. The premature mortality rate, which reflects deaths at younger ages, has been used as an overall indicator of the health of the population. It has guided health promotion, disease prevention and policy efforts, and has provided an indication of where further work needs to be done to reduce mortality. Factors that affect mortality in the population include social, economic, environmental, biological and genetic factors. The health system also plays a role.[4–6] While some premature deaths are unavoidable, others can be potentially avoided through public health programs and policies aimed at addressing the social determinants of health or reducing harmful risk factors that contribute to ill health, and/or through the treatment of the existing health condition.

Did You Know?

The terms "health system" and "health care system" are often used interchangeably in the media, everyday discourse and health literature, yet they are distinctly different. Whereas "health care system" is meant to reflect all that is related to the health care services provided by doctors, nurses, hospitals, emergency rooms, rehabilitation and other services, the "health system" encompasses a broader concept. The health system, as defined by the World Health Organization in 2000, includes "all activities whose primary purpose is to promote, restore or maintain health." Therefore, in addition to the provision of care, the health system also includes public health activities of health promotion and disease prevention and other policy initiatives such as road and environmental safety improvement, access to clean water, support for good nutrition and housing.[7]

The concept of avoidable mortality has gained interest in recent years for its potential to link population health outcomes to the functioning of the health system.[8–11] Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions.[10, 12, 13] It is based on the understanding that, in some instances, death can be avoided either by preventing disease onset (also known as incidence reduction) or by averting or delaying death after a condition has developed (also known as case-fatality reduction).[14] In this way, avoidable mortality is limited to causes of death where mechanisms of mortality reduction are known, making the measure more "actionable" than an overall premature mortality indicator.

Action-ability assumes that, once potential actions have been identified, someone or some organization can implement an appropriate plan. For example, preventing disease from happening can be achieved by promoting protective factors that sustain health, and through addressing behavioural and environmental risk factors that make people susceptible to disease. Such disease prevention efforts can range from immunization practices and health promotion and education to global policy initiatives such as road safety and food industry legislation. Many of these efforts—often referred to as primary prevention—also require a will for behavioural change on the part of individuals. On the other hand, the impact of the health care system is felt more directly in the reduction of sickness or the number of deaths after the onset of a disease or a health condition. These actions are also known as secondary and tertiary prevention.

To make the measure of avoidable mortality more actionable for policy-makers and health care system managers and decision-makers, the Canadian indicator of avoidable mortality was divided into mortality from preventable causes, which will inform primary prevention efforts, and mortality from treatable causes, which will inform efforts for case-fatality reduction.

Levels of Prevention Versus Levels of Care

Levels of prevention are commonly defined as[14]

- Primary prevention—a condition is prevented before it develops by addressing its risk or protective factors. The goal is incidence reduction.
- Secondary prevention—early detection or intervention to identify a disease and delay the progression of an early or preclinical disease and minimize disability. The goal is case-fatality reduction.
- Tertiary prevention—interventions that lessen the impact of disability from fully developed disease through eliminating, reducing or managing impairments. The goal is case-fatality reduction.

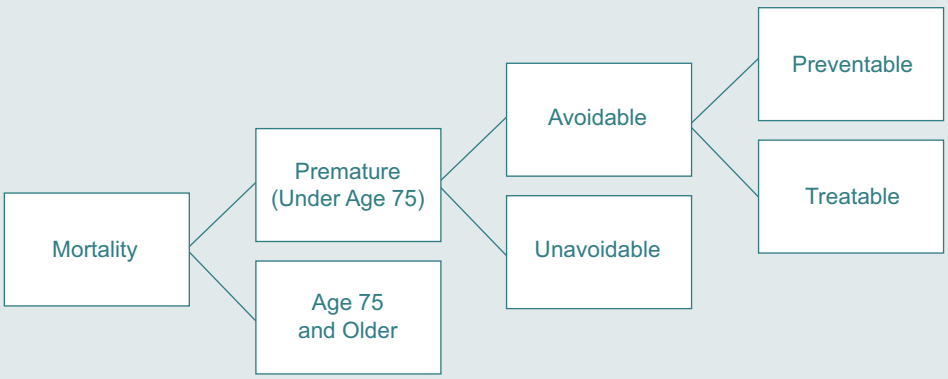
Levels of prevention are not necessarily the same as levels of health care delivery. For example, screening is considered secondary prevention when targeted at the early detection of disease that already exists; however, it is usually done in a primary health care setting.

In this report, deaths that can be avoided by preventing a disease from developing are referred to as **mortality from preventable causes**. These include deaths from conditions considerably linked to modifiable factors, such as smoking (e.g. lung cancer) or excessive alcohol consumption (e.g. liver cirrhosis), as well as deaths related to effective public health interventions, such as vaccinations, or traffic safety legislation (regarding speed limits, seat belts and motorcycle helmets, for example). Deaths from conditions such as breast cancer and appendicitis, where it is reasonable to expect death to be averted or significantly delayed by screening, early detection and appropriate treatment, are referred to as **mortality from treatable causes**. However, it should be fully acknowledged that conditions cannot always be easily separated into preventable and treatable categories. Also, levels of mortality from treatable causes

are to some extent influenced by the levels of disease in the population. See Avoidable Mortality: The Fine Print on page 7 for further methodological information and the appendix for the list of causes of death included in the indicators.

Avoidable Mortality Indicators

Overall mortality can be split into two categories: premature deaths (occurring among those under age 75) and deaths at older ages. Premature deaths can then be divided in two: avoidable and unavoidable. Avoidable mortality can be further split into mortality from preventable or treatable causes. In the literature, mortality from treatable causes is also referred to as mortality amenable to health care interventions.[8, 10] The diagram below depicts how mortality was classified for the purposes of the avoidable mortality indicators.



Source
Adapted from Tobias, 2009.[15]

Like other macro-level measures, the avoidable mortality indicator can identify areas in the health system that would benefit from further analysis and research. These macro-level indicators are sometimes referred to as "tin-openers,"[11, 16] meaning that they are appropriate for monitoring trends and not for explaining them in full.[11]

Researchers have identified the following uses for these measures:

- A monitoring indicator—a "whole-of-system health outcome indicator"—that would act as an initial screen of health system performance;[11]
- A tool to assess the quality and performance of health systems and to track changes over time;[10, 17]
- To estimate and track gains in population health;[18] and
- To identify potential gaps in health care delivery.[19]

There are caveats to consider when interpreting the results of any indicator, including avoidable mortality. It is generally acknowledged, for example, that not all deaths from potentially avoidable causes can actually be avoided. Some deaths from treatable causes may be unavoidable due to late diagnosis or concurrent health problems. Some deaths from preventable causes may have been the result of unpredictable events against which no protective measures could have been taken. Researchers have also expressed concerns about the lack of significant associations between avoidable mortality rates and health care inputs, and have recommended further exploration of this association.[8, 20]

Another caveat relates to the time between the intervention or treatment and the impact on population mortality rates. For instance, the impact of decreased smoking on cardiovascular diseases can take as little as one to two years to manifest itself at the population level, but it can take up to 20 years to see tangible decreases in lung cancer mortality.[11, 21] Moreover, the concept of avoidability can change over time. A primarily preventable condition once considered a "death sentence" for those diagnosed might be deemed treatable years later as research and treatments advance; HIV/AIDS serves as an example (see the case study on page 33). Finally, mortality indicators do not represent the entire picture, given that improvements to quality of life, which are important outcomes, are not reflected in these indicators.[2]

Keeping these considerations in mind, avoidable mortality is a useful performance indicator that can focus attention on the primary purpose of health systems, namely reducing premature death.[22] Several countries use avoidable/amenable mortality measures for evaluating the performance of their health systems. Examples can be found in the *European Community Atlas of "Avoidable Death*,"[23] atlases of avoidable mortality for Australia and New Zealand,[10, 11] and the potentially avoidable deaths indicator reported for the National Healthcare Agreements in Australia.[24] The amenable mortality indicator is also included as part of the U.K.'s National Health Service Outcomes Framework for 2011–2012.[25] A preventable mortality indicator (yet to be developed in the U.K.) is included under one of the domains of the Public Health Outcomes framework.[26] Avoidable mortality indicators have also been used to report on variations in health system performance across countries,[2, 10, 17, 27, 28] as well as variations for different areas within a country[10, 29–32] and across socio-economic and ethnic groups.[10, 11, 13, 18, 33]

Health Indicators 2012 takes up the challenge of reporting potentially avoidable mortality indicators to serve as a stepping stone for continuous reporting and monitoring of health system performance in Canada.

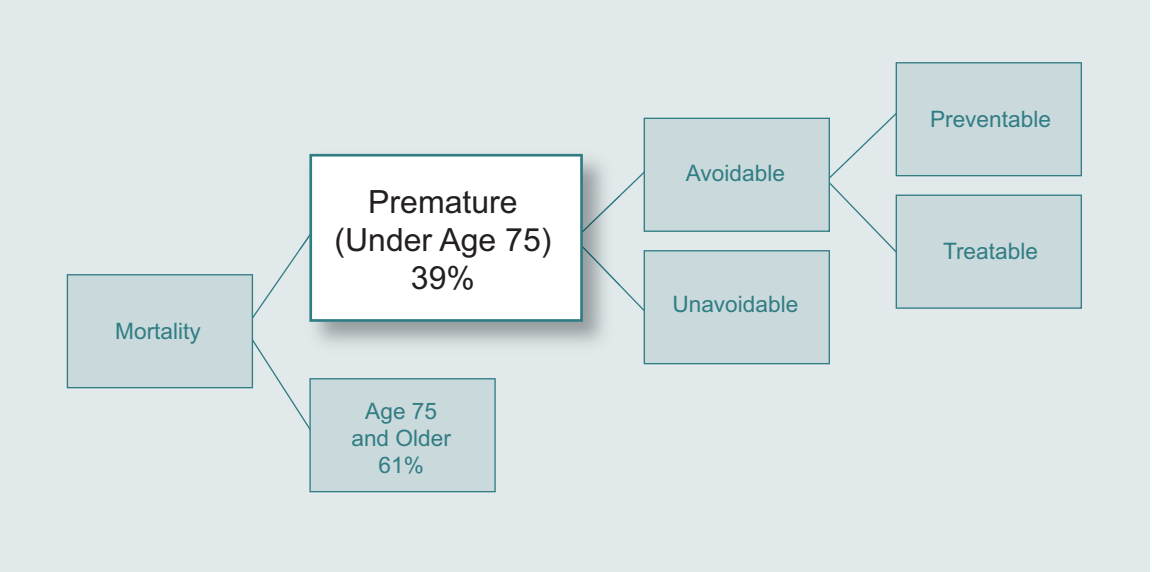
Avoidable Mortality: The Fine Print

The concept of avoidable mortality dates back to 1976. At the time, American researcher David Rutstein and his colleagues at Harvard were working on evaluating the quality of medical care for a medical audit.[11, 12] Through consultation with experts, they created a list of conditions for which deaths were deemed to be "untimely and unnecessary."[12]

Since this pioneering work, the measurement of avoidable mortality has evolved, and efforts have been made over the past 36 years to improve the indicator's applicability to health system performance measurement.[8] For example, when the concept was first developed, the upper limit for deaths considered to be premature was 65 years of age. As life expectancy has increased in the developed world, an upper age limit of 75 was established.[10, 13] Today, age 75 is used as the upper limit; however, it is still regarded as somewhat arbitrary as there are deaths in the over-75 population that can be avoided.[34]

Despite substantial research work in the area of avoidable mortality, there is currently no internationally agreed-upon definition. To avoid duplication of efforts, the Canadian avoidable mortality indicator was established by drawing on more than three decades of research and development, and building on the lists of conditions used to define the Australian Potentially Avoidable Deaths indicator[24] and those proposed by the Office of National Statistics in the U.K.[34] Through careful review of the rationales for inclusion of each condition, as well as expert review, a Canadian list of avoidable mortality was developed to include conditions for which associated deaths were deemed potentially avoidable through prevention or treatment. Deaths were further assigned to one of two subcategories (prevention or treatment) according to the two main mechanisms of mortality reduction (incidence and case-fatality reduction, discussed above). In cases where there were clear arguments for both prevention and treatment components to avoiding mortality, priority was given to prevention. Exceptions were made where a precedent in literature existed (that is, the approach utilized a 50/50 split for deaths due to ischemic heart disease, stroke and diabetes[10]).

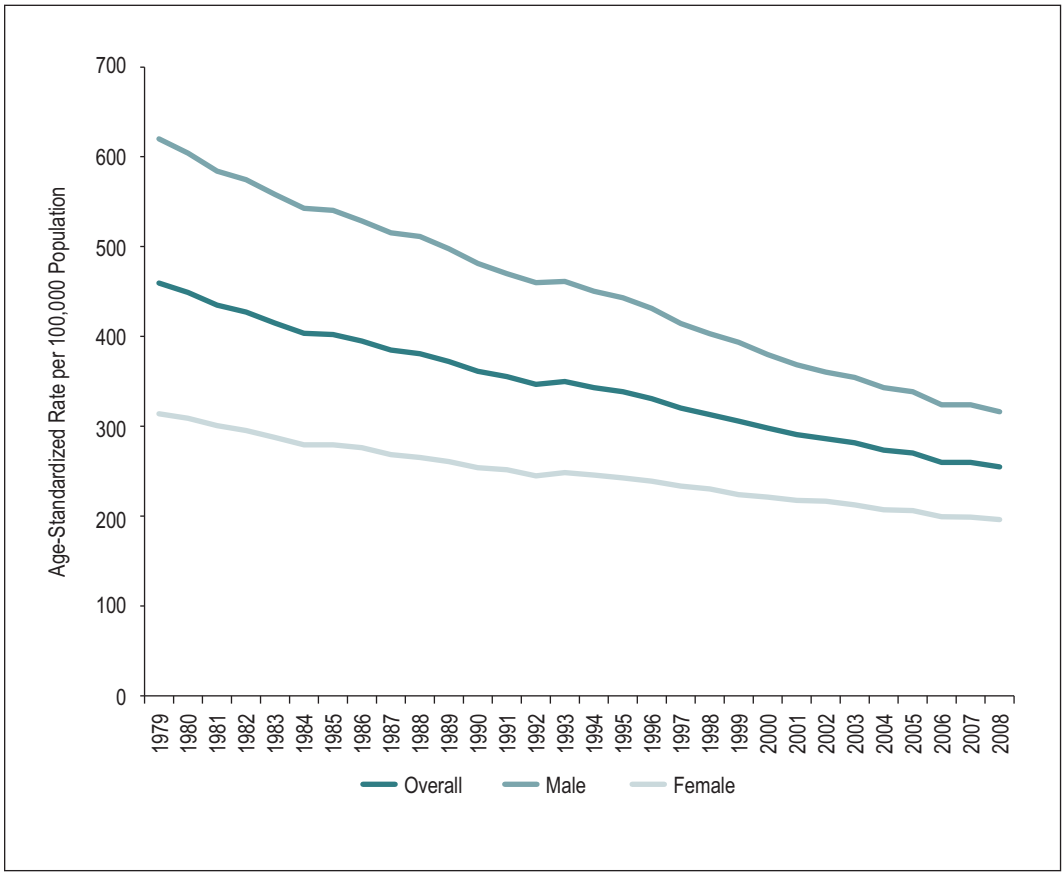
Premature Mortality



Source
2008 Vital Statistics—Death Database, Statistics Canada.

In 2008, 39% of all deaths in Canada occurred before the age of 75. Premature mortality in Canada has been decreasing steadily over the past three decades. After aging and population growth were taken into account, the rate decreased by 45%, from 460 per 100,000 in 1979 to 255 per 100,000 in 2008 (Figure 1). Premature mortality rates were consistently higher for males compared with the rates for females. However, over the past 30 years, the rate for males has decreased by 49%, while the rate for females has decreased by 37%, resulting in a narrowing of the gap. In 1979, the premature mortality rate for males was twice the rate for females; in 2008, the male rate was 1.6 times the female rate.

Figure 1: Premature Mortality, Canada, 1979 to 2008



Source
Vital Statistics—Death Database, Statistics Canada.

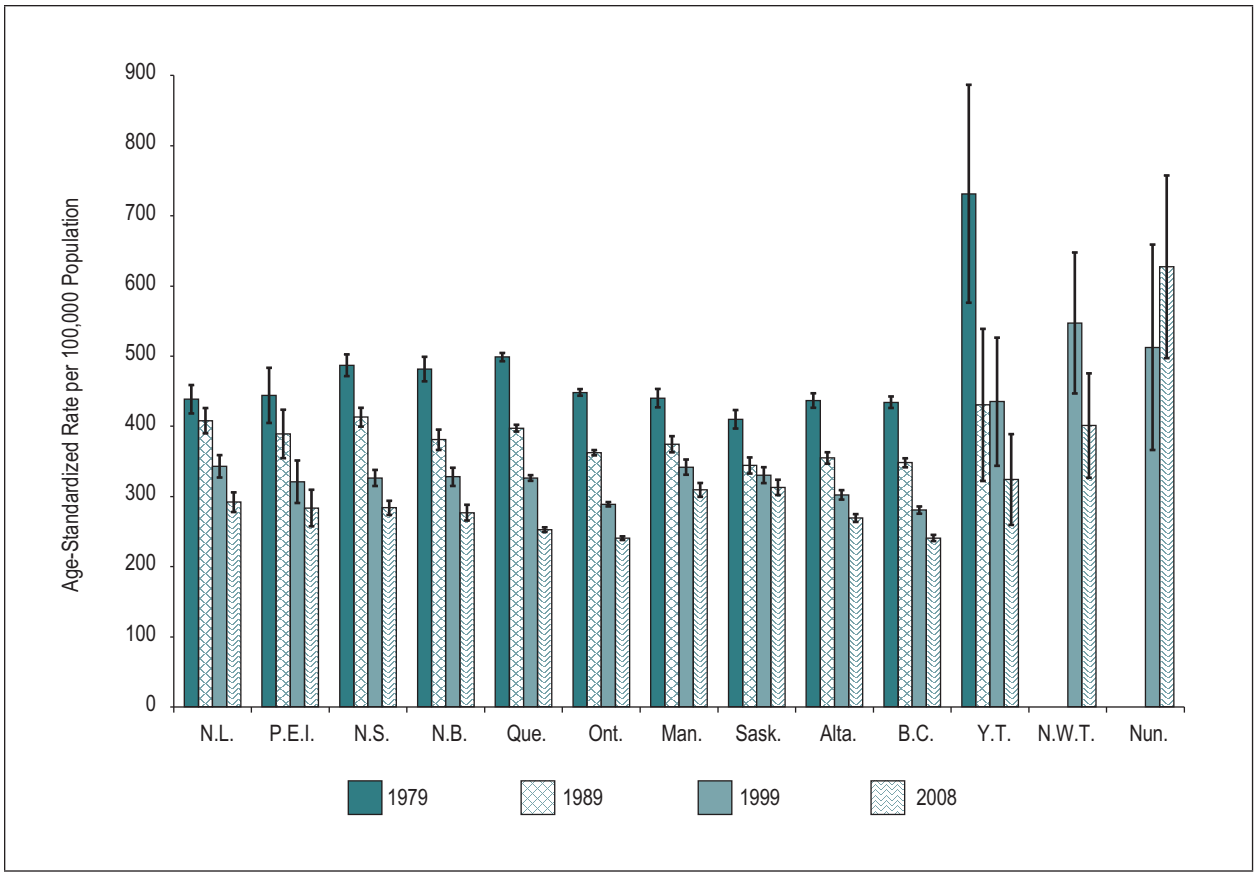
Potential Years of Life Lost

Potential years of life lost (PYLL) is another common way to look at premature mortality. PYLL measures the additional years a person would have lived had he or she not died prematurely (defined as deaths prior to age 75). In practice, this means that a person who died at age 25 would have lost 50 potential years of life. These values of the difference between the actual age at death and age 75 are then summed and divided by the population count. The earlier the age at which a death occurs, the larger the PYLL value and the larger the loss of years of life. By taking into account the degree of prematurity, PYLL can provide information in addition to the number of deaths per population as represented by a mortality rate.

In Canada, there were 8,639 PYLL per 100,000 population in 1979. This decreased to 4,471 PYLL per 100,000 in 2008, after aging and population growth were taken into account. This means that the 45% reduction in the rate of premature mortality between 1979 and 2008 resulted in 4,168 fewer potential years of life lost per 100,000. PYLL statistics for health regions, provinces and territories are provided in the tables in this report beginning on page 50.

Over the past 30 years, rates of premature mortality have been declining in all provinces and most of the territories,[i] with the largest declines in Yukon (56%), Quebec (49%) and Ontario (46%), and the smallest in Saskatchewan (24%) (Figure 2). In 1979, age-standardized rates of premature mortality ranged among the provinces, from 410 per 100,000 in Saskatchewan to 499 per 100,000 in Quebec. In 2008, rates ranged from 241 per 100,000 in Ontario and British Columbia to 313 per 100,000 in Saskatchewan.

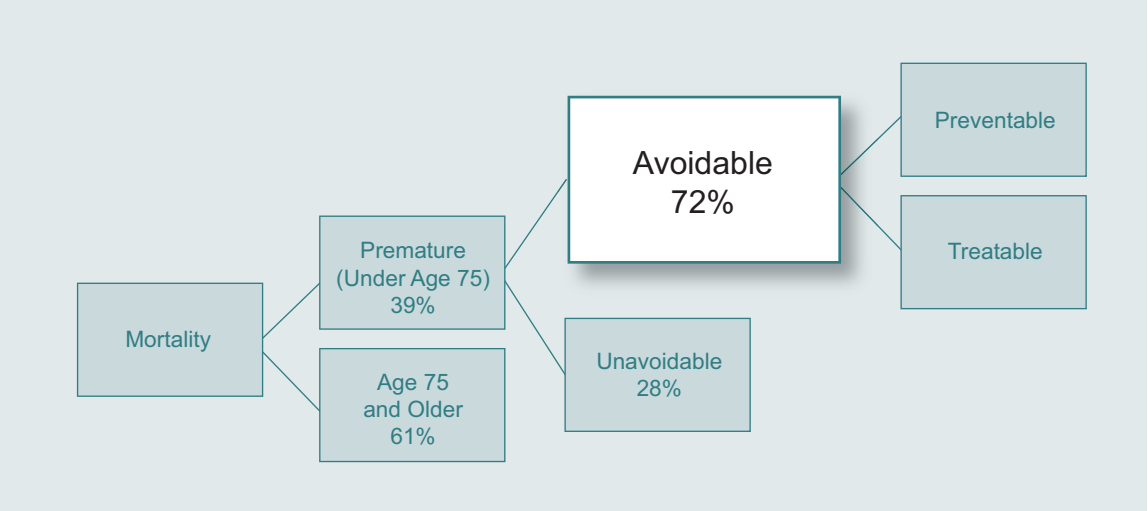
Figure 2: Premature Mortality, by Province/Territory, 1979 to 2008



Notes
I represents 95% confidence intervals.
Data for Nunavut and the Northwest Territories is analyzed for the period 1999 to 2008.
Source
Vital Statistics—Death Database, Statistics Canada.

i. Data for Nunavut and the Northwest Territories is analyzed for the period 1999 to 2008.

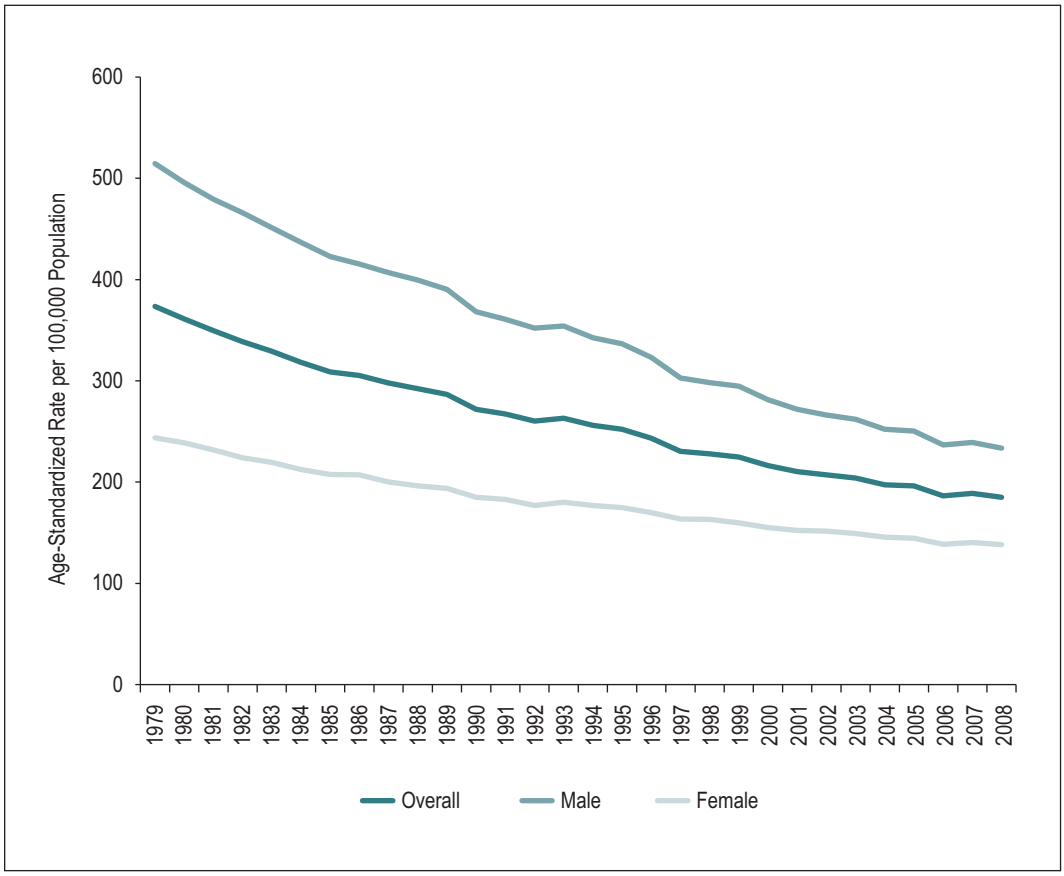
Potentially Avoidable Mortality



Source
2008 Vital Statistics—Death Database, Statistics Canada.

While premature mortality represents all deaths before age 75, potentially avoidable mortality (hereafter referred to as avoidable mortality) is a subset of premature deaths. Avoidable mortality represents deaths that could have been potentially avoided through prevention practices, public health policies, and the provision of timely and effective health care. Avoidable mortality accounted for 72% of all premature deaths in Canada in 2008. Given the relationship between premature and avoidable mortality, it is not surprising that avoidable mortality rates have also decreased in the past 30 years across Canada and within each jurisdiction. From 1979 to 2008, age-standardized rates across Canada decreased by 50%, from 373 per 100,000 to 185 per 100,000 (Figure 3).

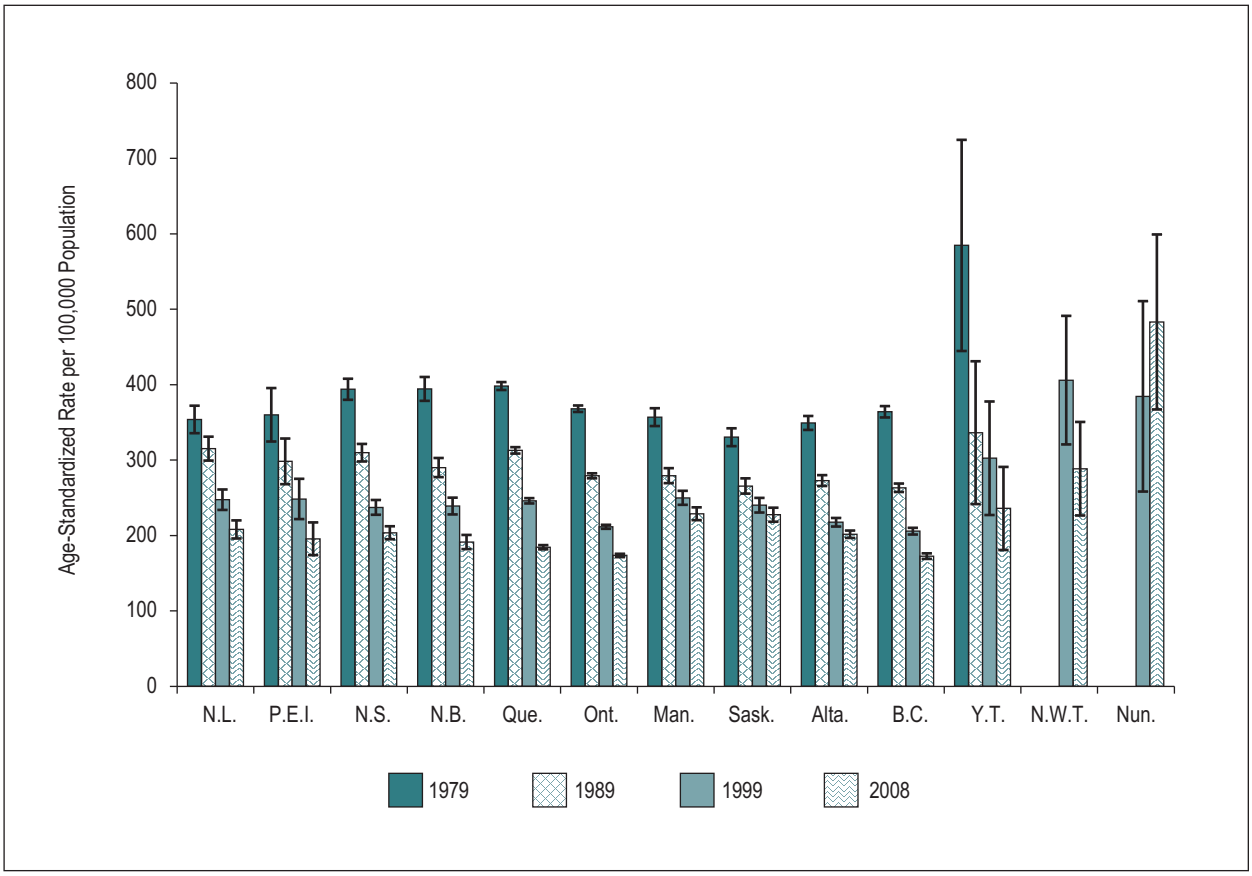
Figure 3: Avoidable Mortality, Canada, 1979 to 2008



Source
Vital Statistics—Death Database, Statistics Canada.

The largest decreases in rates of avoidable mortality by jurisdiction were in Yukon, Quebec, Ontario and British Columbia, with provincial variations remaining similar to those observed for premature mortality (Figure 4).

Figure 4: Avoidable Mortality, by Province/Territory, 1979 to 2008



Notes

I represents 95% confidence intervals.

Data for Nunavut and the Northwest Territories is analyzed for the period 1999 to 2008.

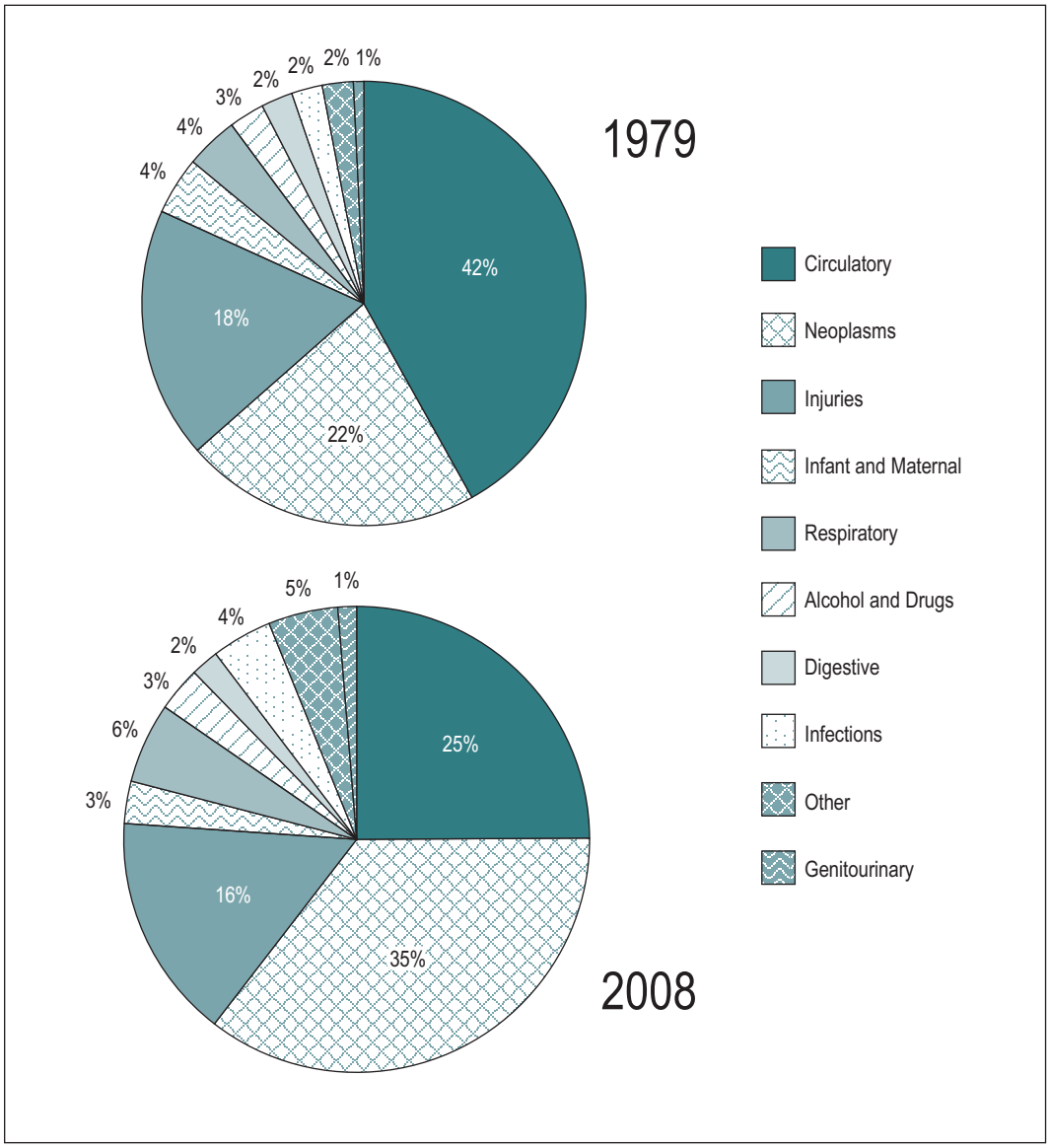
Source

Vital Statistics—Death Database, Statistics Canada.

Causes of Death

A closer look at conditions that comprise avoidable mortality can help identify areas where progress has been made and continued improvements can be realized. Figure 5 shows the proportional contribution of disease groups to overall avoidable mortality in 1979 and in 2008. In 1979, the main causes of avoidable mortality were circulatory diseases (42%), neoplasms (22%) and injuries (18%). Thirty years later, in 2008, while the major causes remained the same, the proportional distribution among them had changed. Due to substantial reductions in mortality from circulatory causes, deaths due to neoplasms accounted for the highest percentage (35%) of avoidable mortality.

Figure 5: Avoidable Mortality, by Cause of Death, Canada, 1979 and 2008



Note
The charts show a proportional distribution of causes of death. Therefore, an increased proportion of neoplasms in 2008 does not mean that the rate of death due to neoplasm has actually increased.
Source
Vital Statistics—Death Database, Statistics Canada.

Figure 5 suggests that efforts to reduce mortality from circulatory diseases have had tangible results. Over a 30-year period, avoidable mortality rates from circulatory diseases decreased 72%, after aging and population growth were taken into account (see Case Study: Ischemic Heart Disease). This represents the largest drop among all causes of avoidable mortality. Avoidable mortality rates from digestive disorders (61%), injuries (49%), alcohol and drug use (46%) and infant and maternal disorders (45%) also saw substantial decreases, while avoidable mortality from other causes saw more modest decreases.

Case Study: Ischemic Heart Disease—Preventable and Treatable

Cardiovascular diseases (CVDs) are one of the main causes of death in Canada, with ischemic heart disease (IHD) accounting for more than 50% of all CVD deaths in 2008.[35] IHD mortality rates have decreased substantially over the past few decades.[36] This overall decrease has been attributed almost equally to primary prevention, with reductions in risk factors and changes in lifestyle (48%), and better treatment (43%).[37]

Controlling modifiable cardiovascular risk factors such as tobacco smoking, diabetes, elevated blood cholesterol, high blood pressure, obesity and low physical activity has been demonstrated to reduce IHD risk.[38–40] One meta-analysis found that a reduction of one unit (1 mmol/L) in mean plasma cholesterol was associated with about one-sixth to one-half reduction in IHD mortality, depending on age.[41] The decreased prevalence of smoking over the last five decades has also contributed to lowering the risk of ischemic heart disease.[40, 42] Though the overall prevalence of high blood pressure in Canada has been on the rise,[40] a study showed that an absolute decrease of 1.4 mm Hg in systolic blood pressure was reported between 1994 and 2005, which was associated with a 20% reduction in IHD mortality.[37] Moreover, the percentage of Canadians who are aware of their high blood pressure but are not being treated is decreasing.[40]

In addition to risk factor reduction strategies that target changing individuals' behaviours, initiatives at the population level that focus on supporting healthy behaviours also have contributed to lowering the prevalence of many risk factors. Examples of such initiatives include the 2006 regulations governing trans fats in processed foods, which pushed food agencies to comply with recommended levels (2% to 5% of total fat),[43] and the efforts of the Health Canada–established Sodium Working Group to reduce the daily sodium intake of Canadians.[44] The availability of unhealthy foods for purchase in schools has also been under examination. In 2008, the *Healthy Food for Healthy Schools Act* was passed in Ontario, which required foods sold in the province's schools to meet a particular nutritional standard with limited trans fats.[45]

With respect to improvements in health care and new treatments, changes in traditional pharmacology treatments have played a role in reducing IHD mortality.[46] For example, in Ontario, use of cholesterol-lowering medications among patients with ischemic heart disease increased from 8% to 78% between 1994 and 2005, which was associated with a 9% mortality reduction. Treatment of acute myocardial infarction patients with beta blockers has also grown, from 40% in 1994 to 82% in 2005.[37] The timely use of thrombolytic therapy[47] and interventional procedures such as percutaneous coronary intervention has also played a role in the secondary prevention of IHD mortality.[48, 49]

This example illustrates how joint efforts of public health policies and effective and timely health care can reduce mortality and bring about changes to the health of the population.

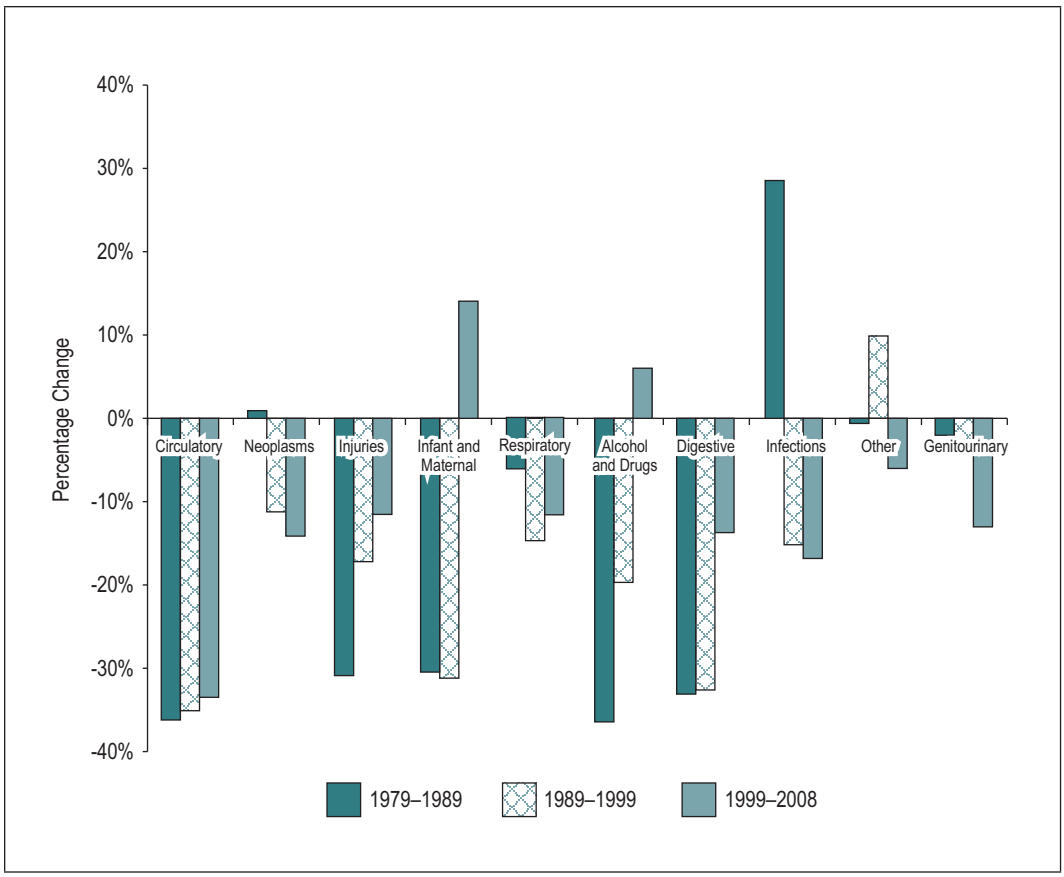
In the current Canadian definition of avoidable mortality, deaths due to IHD are assigned equally to the treatable and preventable categories.

An additional way to gain insight into these cause-specific mortality trends is to examine the progress of reductions in avoidable mortality by 10-year periods (see Figure 6). These trends show that avoidable mortality rates due to circulatory diseases had steady and consistent reductions of more than 30% each decade. The picture is different for injuries. From 1979 to 1989, there was a 30% reduction in avoidable mortality rates due to injuries, while reductions in the subsequent two decades were 17% and 12%, respectively (Figure 6).

Reverse trends were observed for several conditions. Specifically, after two decades of reductions, there were increases in avoidable mortality rates from 1999 to 2008 for infant and maternal conditions, as well as for alcohol and drug use disorders.

Despite improvements in avoidable mortality for most conditions, reductions in deaths from circulatory causes were the main driver of the downward trend for avoidable mortality. If mortality rates from circulatory disease remained unchanged for this 30-year period, the overall reduction in avoidable mortality would have been 19%, and not the observed 50%.

Figure 6: Changes in Age-Standardized Rates of Avoidable Mortality From 1979 to 2008, by Cause of Death, Canada



Source
Vital Statistics—Death Database, Statistics Canada.

Sex Gap

Avoidable mortality accounted for approximately 83% of all premature deaths among males in 1979. By 2008, it had decreased nine percentage points to 74%. A similar decline occurred among females during the same time period. In 1979, avoidable mortality accounted for approximately 78% of premature deaths among females; by 2008, it accounted for 70% of premature deaths (see Figure 3). In the next section, the sex gap for preventable and treatable mortality is examined in more depth.

Mortality From Preventable and Treatable Causes

The concept of avoidable mortality can be more informative when mechanisms of action can be identified. For this reason, specific sub-indicators were developed for mortality from preventable and treatable causes.

Mortality from preventable causes (or preventable mortality) includes deaths from diseases with well-established and significant modifiable risk factors. In the World Health Organization's report *Global Health Risks*, the leading risk factors for mortality in higher-income countries, including Canada, were tobacco use and high blood pressure, followed by overweight and obesity, physical inactivity, high blood glucose, high cholesterol, low fruit and vegetable intake, exposure to urban air pollution, alcohol use and occupational risk factors. Among high-income countries, it has been estimated that, in 2004, these 10 risk factors accounted for 28% of deaths or 3.3 years of life-expectancy lost.[50]

Case Study: Lung Cancer—Preventable

The decrease in lung cancer deaths exemplifies targeted successful intersectoral collaboration to reduce rates of cigarette smoking—the primary risk factor associated with the disease. In Canada, lung cancer is the leading cause of cancer mortality.[51] Lung cancer mortality remains high due to the absence of reliable screening methods to identify and treat cases in early stages.[52] For example, in 2007–2008, 48% of cases in Canada were diagnosed in stage four, the last and most advanced of four possible stages.[53] Hence, the best way to reduce mortality is to prevent the disease itself. Risk factors such as second-hand tobacco smoke and occupational exposures,[54] low fruit and vegetable consumption, and indoor radon exposure are associated with lung cancer.[52] However, globally, 71% of lung cancer cases can be attributed to smoking tobacco.[50]

Canada has introduced a number of policies aimed at reducing smoking prevalence and, by extension, the illnesses associated with smoking. These include taxation increases that have seen taxes representing at least 70% of the price of cigarettes and changes to laws banning smoking, first in government buildings, then bans in public spaces in many municipalities across Canada.[55, 56] Mass advertising campaigns and smoking-related health education materials have evolved over the years and today target specific groups, such as youth. There is also evidence that health care practitioners are instrumental in helping patients quit smoking.[57, 58]

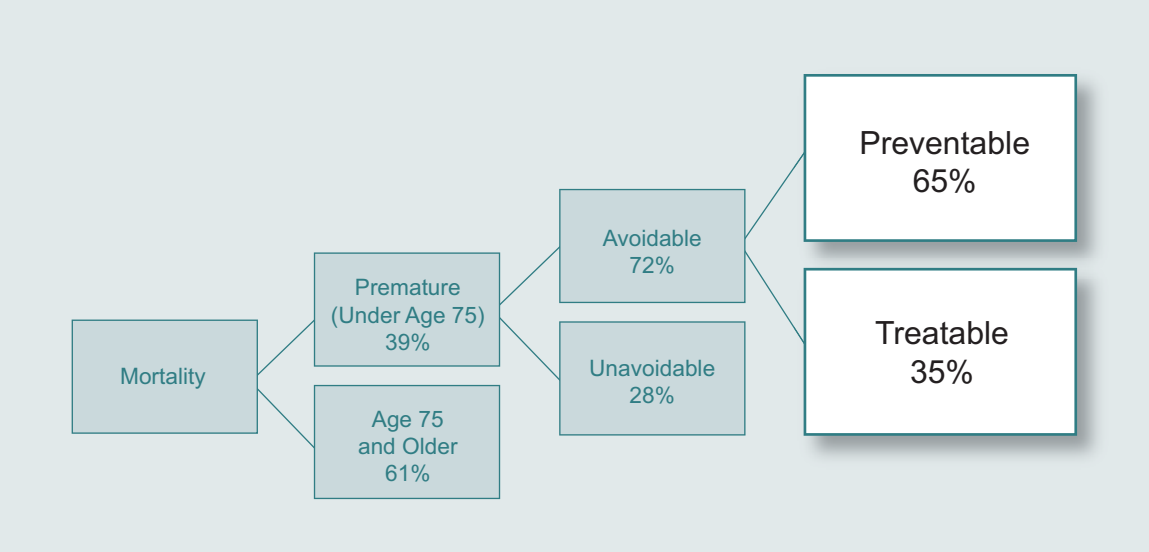
Over the past 50 years, smoking prevalence has dropped from 50% in 1965 to less than 20% in 2008.[42] The rate of decline has been more pronounced in males than in females; for females, the decline started later. Given that the induction period between tobacco consumption and lung cancer development ranges from 16 to 26 years (an average of 21 years),[21] the impact of smoking reductions are not seen immediately at the population level. In fact, it was not until the late 1980s that the rate of lung cancer mortality started to decline among males. For females, the reductions in smoking rates have not yet been translated into lung cancer mortality reductions; however, the rate of increase has slowed in the last decade.[51]

The results of efforts to reduce smoking rates and therefore rates of premature death from lung cancer demonstrate the potential for success through a combination of individual choices and behaviour changes, and concerted and coordinated programs and policies both within and outside of the health care sector to influence risk behaviours.

In the current Canadian definition of avoidable mortality, lung cancer is assigned to the preventable category.

The second subset of avoidable deaths—mortality from treatable causes—includes premature deaths that potentially could be averted by screening, early detection and successful treatment with timely and effective health care interventions. The impact of the health care system should be felt most directly in this area of avoidable deaths, while recognizing that other factors such as levels of disease in the population also may influence the rates.

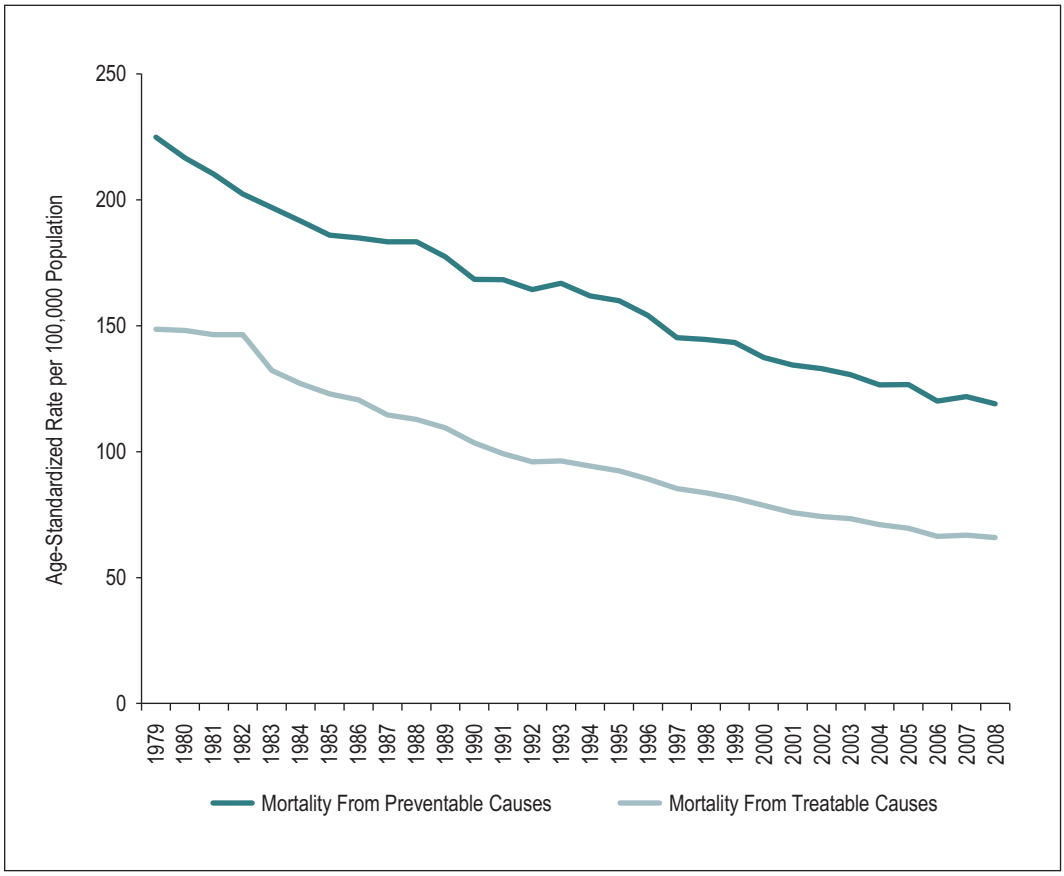
In 2008, preventable mortality represented 65% of avoidable mortality, and mortality from treatable causes represented the remaining 35% of avoidable deaths in Canada.



Note
For conditions where both prevention and treatment components to avoiding mortality exist, priority was given to prevention (see Avoidable Mortality: The Fine Print).
Source
2008 Vital Statistics—Death Database, Statistics Canada.

Age-standardized rates for both preventable mortality and mortality from treatable causes have been declining in Canada. Over the 30-year period from 1979 to 2008, the preventable mortality rate decreased 47%—from 225 to 119 per 100,000—and rates of mortality from treatable causes decreased 56%—from 149 to 66 per 100,000 (Figure 7). These reductions were also evident in the measurement of PYLL. From 1979 to 2008, PYLL decreased by 2,170 per 100,000 for preventable mortality and by 538 per 100,000 for mortality from treatable causes. In relative terms, reductions in PYLL were larger for preventable mortality (51%) than for mortality from treatable causes (30% reduction). This indicates that reductions in preventable mortality lead to larger decreases in potential years of life lost.

Figure 7: Mortality From Preventable and Treatable Causes, Canada, 1979 to 2008

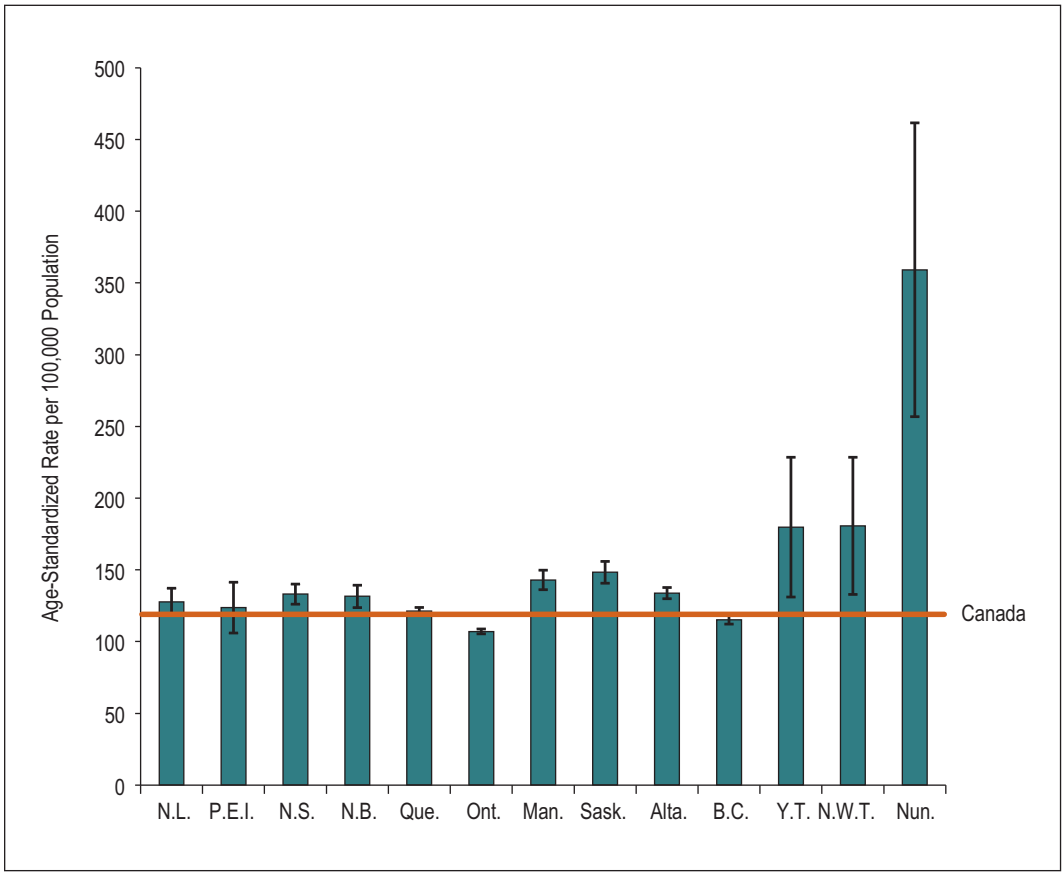


Source
Vital Statistics—Death Database, Statistics Canada.

Geographic Variations

In 2008, the provincial age-standardized rate of **preventable mortality** ranged from 107 per 100,000 in Ontario to 148 per 100,000 in Saskatchewan. For the territories, the rate ranged from 180 per 100,000 in Yukon and the Northwest Territories to 359 per 100,000 in Nunavut (Figure 8).

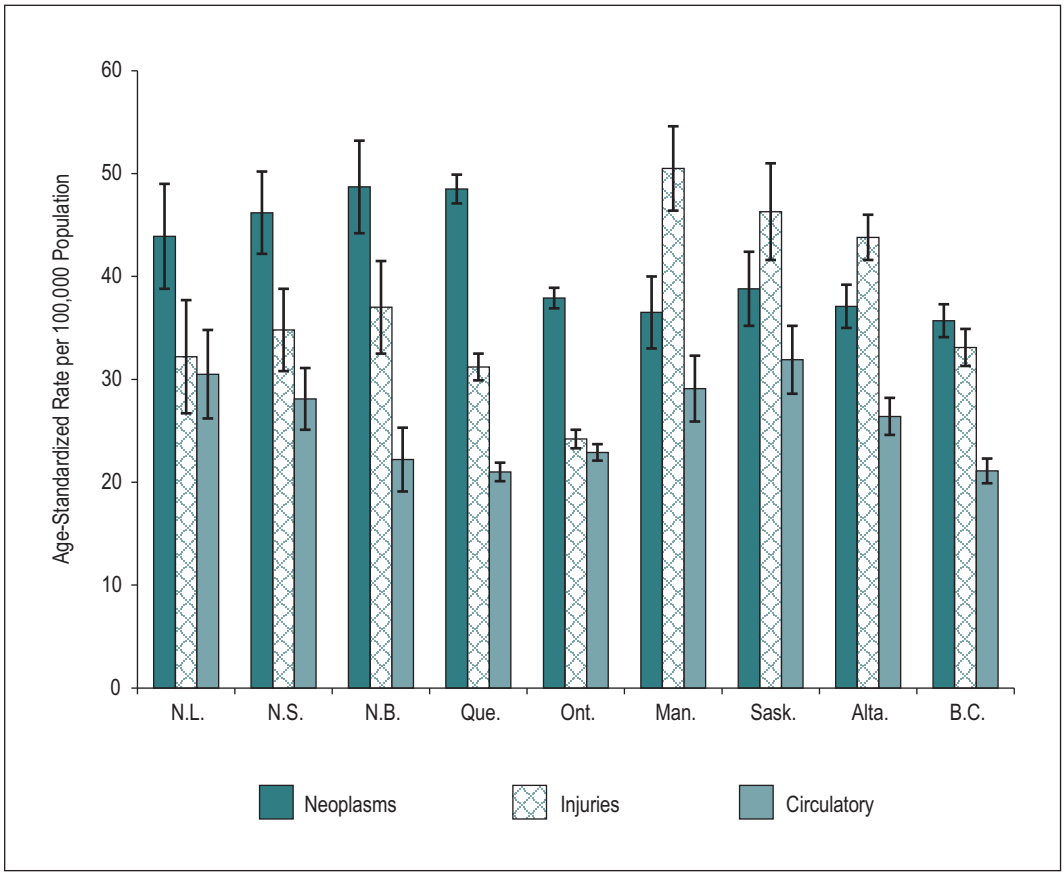
Figure 8: Preventable Mortality, by Province/Territory, 2008



Note
I represents 95% confidence intervals.
Source
Vital Statistics—Death Database, Statistics Canada.

A closer look at the leading causes of preventable mortality shows that the main driver of provincial variation in 2008 was deaths due to injuries and, to some degree, neoplasms. Age-standardized preventable mortality rates due to injury in Manitoba and Saskatchewan were almost twice as high as the rate in Ontario and significantly higher than the rates in most other provinces. An east-to-west difference in the causes of preventable mortality was also evident. Among the three leading causes of preventable mortality, rates of death due to neoplasms were higher in the Atlantic provinces and Quebec, while mortality rates due to injuries were higher in many of the western provinces (Saskatchewan, Manitoba and Alberta) (Figure 9). Among other causes of preventable death, British Columbia and Manitoba had higher rates of death due to infections. Examining the causes of preventable mortality can help jurisdictions identify areas where targeted prevention strategies could lead to continued reductions in preventable mortality.

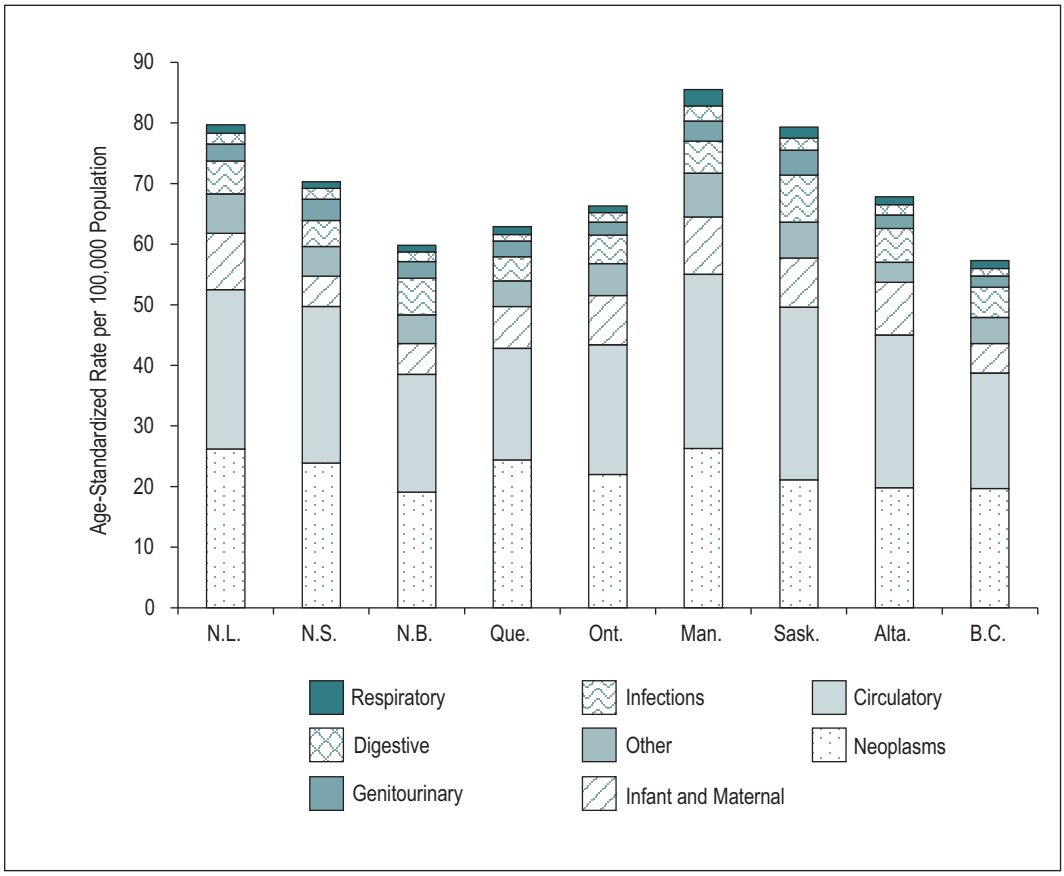
Figure 9: Preventable Mortality for Selected Causes, by Province, 2008



Notes
I represents 95% confidence intervals.
P.E.I. and the territories are not shown due to small number of deaths.
Source
Vital Statistics—Death Database, Statistics Canada.

There were also geographic variations in **mortality from treatable causes**, with provincial rates ranging from 57 per 100,000 in British Columbia to 86 per 100,000 in Manitoba. Examining the causes contributing to these provincial differences showed that rates of death due to circulatory diseases were highest in Saskatchewan and Manitoba, and mortality rates due to neoplasms and infant and maternal causes were highest in Manitoba and Newfoundland and Labrador (Figure 10).

Figure 10: Mortality From Treatable Causes, by Province, 2008



Note
P.E.I. and the territories are not shown due to small number of deaths.
Source
Vital Statistics—Death Database, Statistics Canada.

While these results provide a current snapshot, provincial trends from 1979 to 2008 show improvements over time. Overall and across all jurisdictions, avoidable mortality rates have declined. However, the gains by jurisdictions varied greatly and have been more pronounced in mortality from treatable causes than from preventable causes (Figure 11).

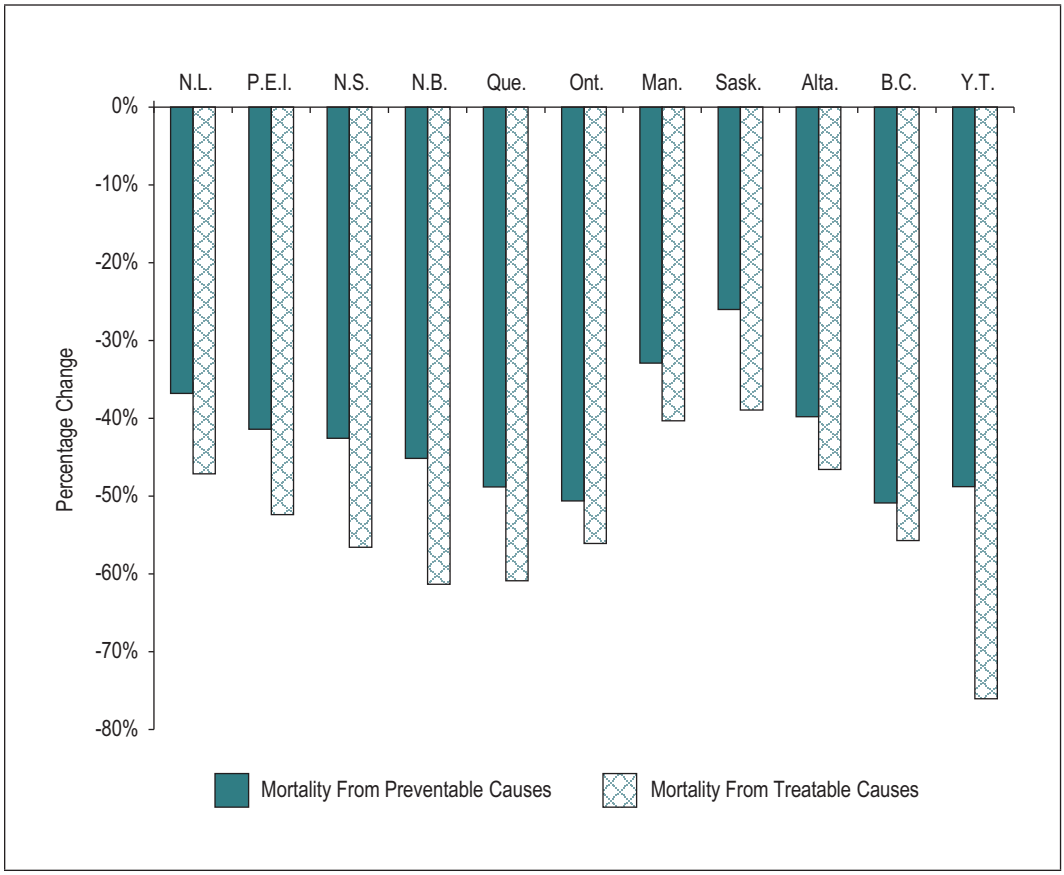
Among the provinces, decreases in age-standardized rates of **preventable mortality** since 1979 were greatest in Ontario and British Columbia (51%) and Quebec (49%). Death due to circulatory diseases was the main driver for the decrease in mortality among all three provinces.

Over the past three decades, age-standardized rates of **mortality from treatable causes** have decreased in all Canadian provinces and territories (except Nunavut).[ii] For the provinces, decreases ranged from 39% in Saskatchewan to 61% in New Brunswick and Quebec (Figure 11). In the territories, Yukon had a notable decrease of 76%. The substantial decrease in New Brunswick can be attributed to reductions

ii. Data for Nunavut and the Northwest Territories is analyzed for the period 1999 to 2008.

in mortality due to circulatory diseases (75%) and neoplasms (53%). Quebec also had a substantial decrease in deaths due to circulatory diseases (78%) but a smaller decrease in mortality from neoplasms (34%). Ontario and British Columbia saw large decreases in mortality from circulatory and digestive disorders. The decreasing rate of deaths due to infant and maternal causes also contributed to the declines in mortality from treatable causes in most provinces.

Figure 11: Changes in Age-Standardized Rates of Mortality From Preventable and Treatable Causes, 1979 to 2008, by Province/Territory



Note
Data for Nunavut and the Northwest Territories is not presented as it cannot be analyzed for the whole study period.
Source
Vital Statistics—Death Database, Statistics Canada.

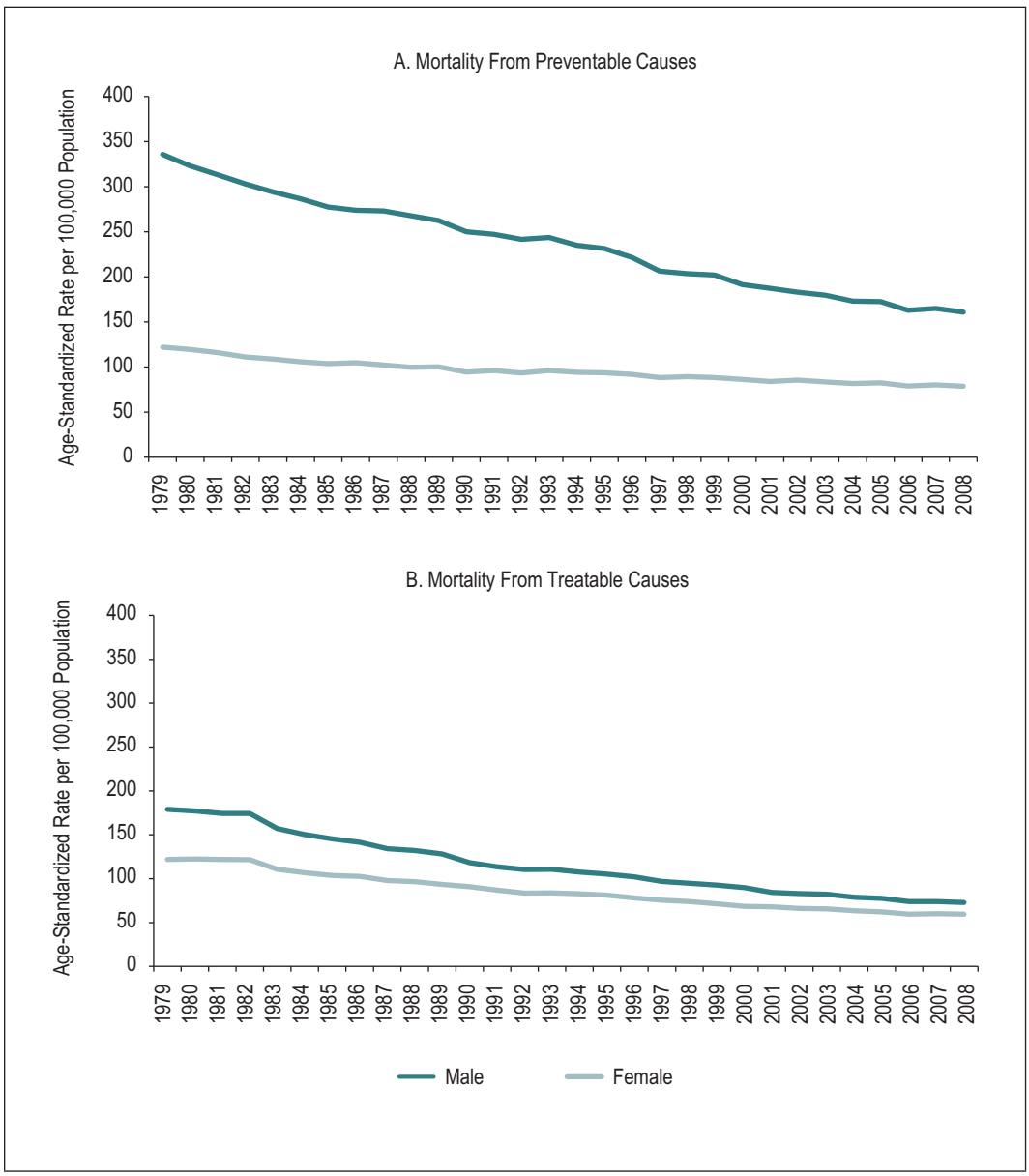
Sex Gap

Between 1979 and 2008, males consistently had higher mortality rates for both treatable and preventable causes. In fact, the preventable mortality rate for males was more than twice that for females. Over the past 30 years, the age-standardized rate of preventable mortality for males decreased by 52%—from 336 per 100,000 in 1979 to 161 per 100,000 in 2008. For females, the drop was much less pronounced,

at 36%—from 122 per 100,000 in 1979 to 79 per 100,000 in 2008. The faster rate of decline for preventable mortality for males has resulted in a narrowing of the sex gap (Figure 12 A).

Overall, the sex gap has been much narrower historically for mortality from treatable causes than from preventable causes and has remained fairly narrow over time (Figure 12 B). In 1979, the male–female ratio was 1.5; in 2008, it had changed a fraction to 1.2. Over the last 30 years, age-standardized rates of mortality from treatable causes dropped by 59% for males—from 179 per 100,000 in 1979 to 73 per 100,000 in 2008. The rate for females saw a reduction of 51%—from 122 per 100,000 in 1979 to 60 per 100,000 in 2008 (Figure 12 B).

Figure 12: Mortality From Preventable and Treatable Causes, by Sex, Canada, 1979 to 2008



Source
Vital Statistics—Death Database, Statistics Canada.

A closer look at the causes of mortality from preventable and treatable causes provides further insight into the sex gaps. In 2008, male rates of **preventable mortality** from alcohol and drug use disorders and injuries were more than 2.5 times the rate for females. The male mortality rate from circulatory diseases was 2.4 times the rate for females, while the mortality rate from preventable cancers (mainly lung cancer) was 1.6 times higher. In terms of the trend over time, similar decreases were observed for most causes of preventable deaths for both males and females. For cancers and respiratory disorders, mortality rates for females have increased since 1979 (Figure 13).

For **mortality from treatable causes** in 2008, neoplasms (see Case Study: Breast Cancer) were the main causes of death among females, while circulatory diseases were the main causes of mortality from treatable conditions among males (Figure 14).

Case Study: Breast Cancer—Treatable

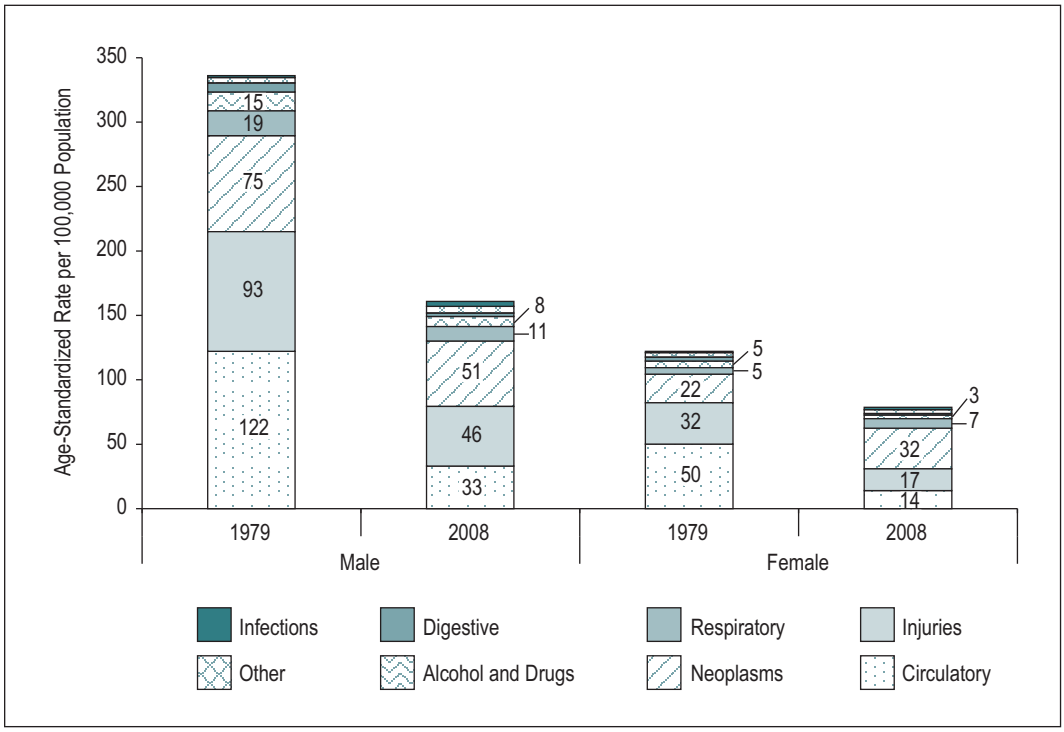
Breast cancer mortality in Canada has been significantly impacted by early detection through case-finding and treatment. In Canada, a woman's lifetime probability of developing breast cancer is 1 in 9, with a 1 in 29 chance of dying from it. It is the second most common cause of cancer deaths in women.[51] Several of the key risk factors for developing breast cancer, including older age and family history of breast cancer, are not modifiable.[52] Modifiable risk factors (such as alcohol consumption, hormone replacement therapy and physical inactivity) account for approximately 27% of new breast cancer cases.[59] As a result, efforts to improve breast cancer survival in recent years have focused on identifying cases at the early stages through screening, as well as on new treatments for breast cancer (use of adjuvant therapies such as hormonal therapy, chemotherapy and radiotherapy following surgery).[51, 60, 61] If detected and treated in stage one (the earliest of four stages), breast cancer has a five-year relative survival rate of 100%, while if detected in stage four, the survival rate drops to 19.9%.[62]

The first formal mammography screening program for breast cancer was established in 1988 in British Columbia. Other provinces soon followed and programs received a major funding boost in 1992 with the launch of the Canada Breast Cancer Initiative.[63] In 2008, 72.5% of women age 50 to 69 reported having had a mammogram in the past two years, which translates to approximately 2.8 million mammograms.[64]

Mortality from breast cancer has been declining since the late 1980s/early 1990s. During the same time period, the incidence of breast cancer increased and has since remained stable. The observed trend in incidence is due to a combination of increasing mammography screening uptake and fluctuating patterns in the use of hormone replacement therapy.[51] The combination of a declining mortality with an increase in incidence suggests that improved survival may account for the decline in the breast cancer mortality rate.

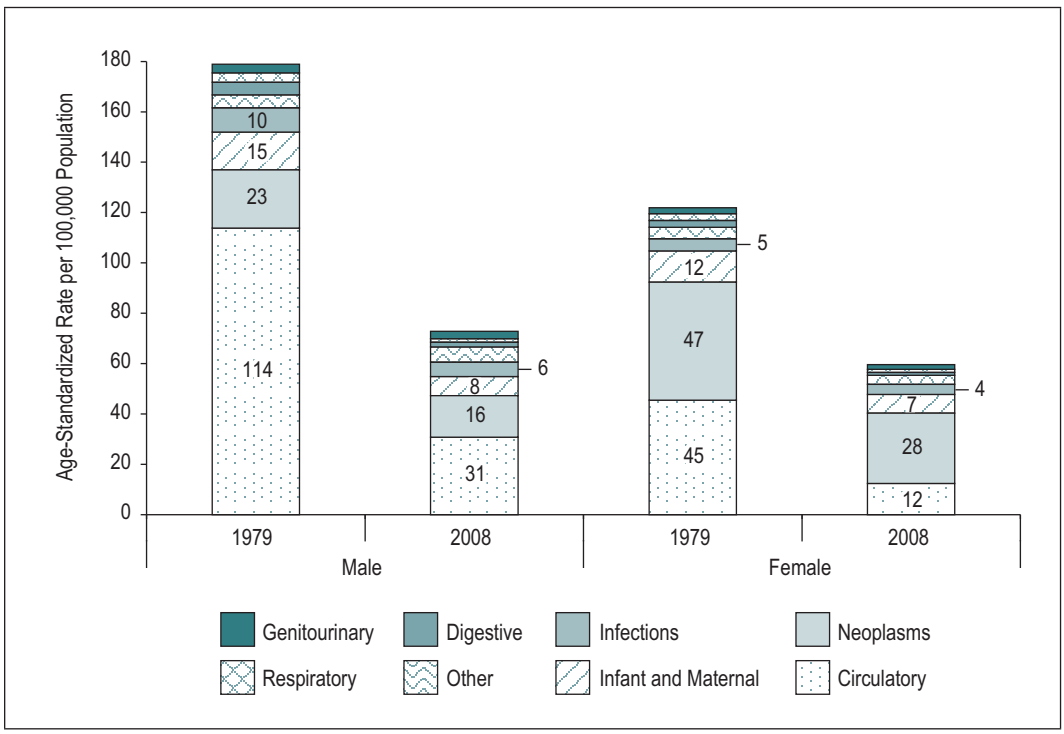
In the current Canadian definition of avoidable mortality, breast cancer is assigned to the treatable category because of the evidence for the impacts of screening mammography and treatment.[61]

Figure 13: Mortality From Preventable Causes, by Sex, Canada, 1979 and 2008



Source
Vital Statistics—Death Database, Statistics Canada.

Figure 14: Mortality From Treatable Causes, by Sex, Canada, 1979 and 2008



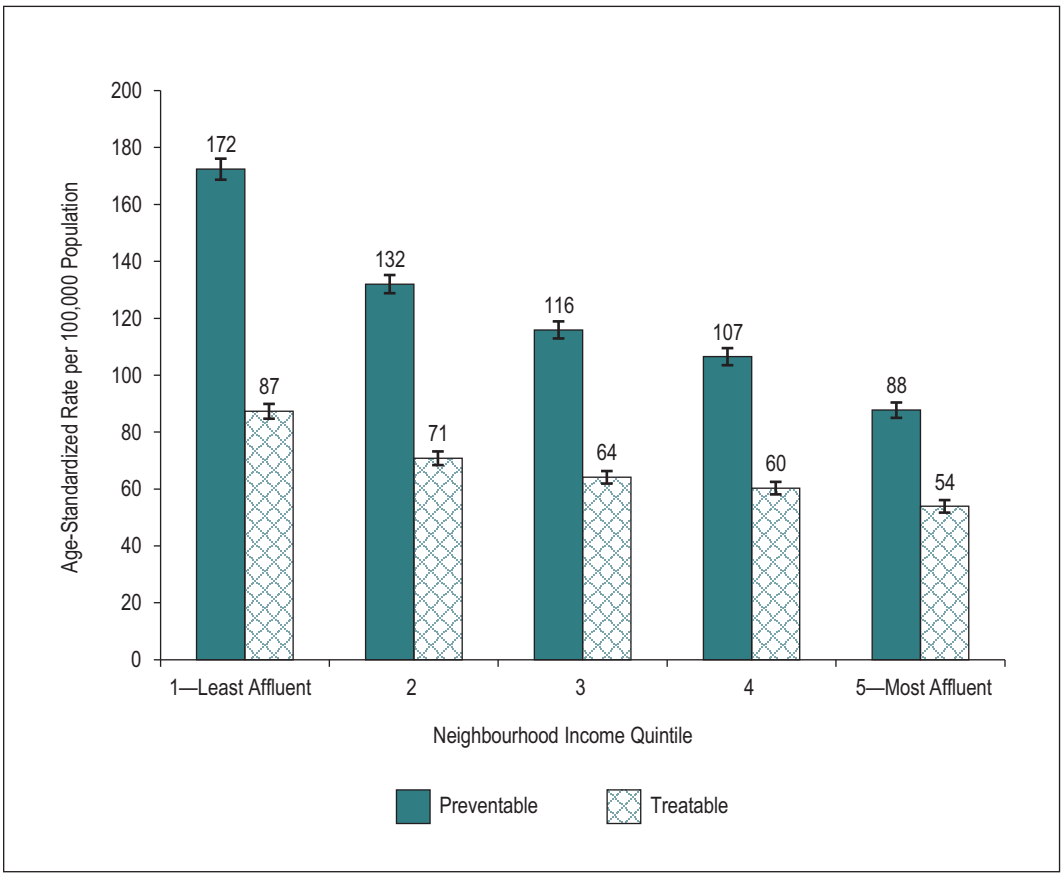
Source
Vital Statistics—Death Database, Statistics Canada.

Socio-Economic Disparities

For both preventable mortality and mortality from treatable causes, there were gradients in the rates by socio-economic group, as measured by neighborhood income quintile. Mortality rates were consistently higher among people living in the least affluent neighbourhoods, with rates gradually decreasing as socio-economic status increased. Socio-economic gradients were steeper for preventable mortality than for mortality from treatable causes. In the period 2005 to 2007, the age-standardized rate of preventable mortality for people living in the least affluent neighbourhoods was almost twice the rate in the most affluent neighbourhoods. For mortality from treatable causes, this ratio was 1.6 (Figure 15).

Disparities for preventable mortality were even more pronounced when the sex gap was considered: the rate for males living in the least affluent neighbourhoods was four times higher than the rate for females living in the most affluent neighbourhoods. For mortality from treatable causes, this ratio was 2.

Figure 15: Mortality From Preventable and Treatable Causes, by Neighbourhood Income Quintile, Canada, 2005 to 2007



Notes

I represents 95% confidence intervals.

Rates are calculated based on three years of pooled data (2005 to 2007).

Source

Vital Statistics—Death Database, Statistics Canada.

How Does Canada Compare Internationally?

When data is available, international comparisons provide an additional perspective on how Canada's health system is performing, relative to other industrialized countries.

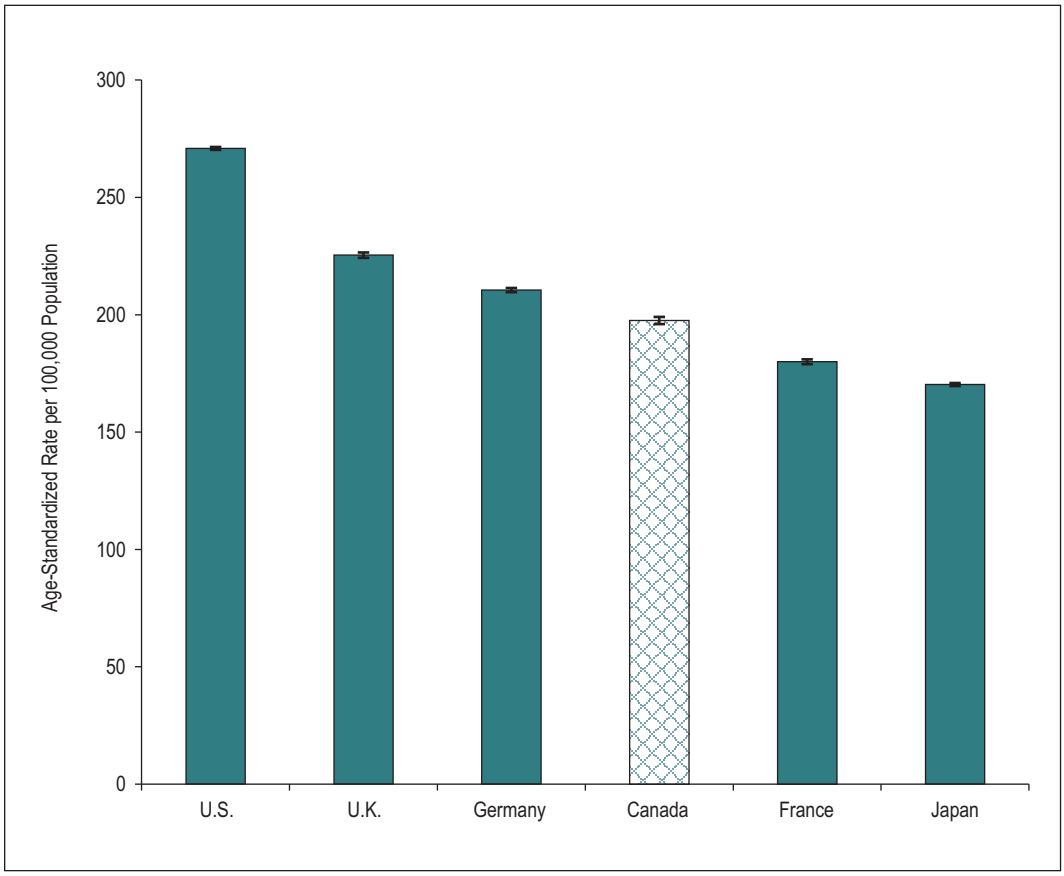
In order to compare Canada's rates of avoidable mortality with those of other G7 countries, the mortality database of the World Health Organization (WHO) was used and the Canadian definition of avoidable mortality was applied to the other countries. This database hosts data from the national vital registration systems of the different countries. Due to the nature of the database, it was not possible to apply the Canadian definition to calculate results for preventable and treatable subsets of avoidable mortality, or to calculate time trends for data that used the ICD-9 coding system. 2004 was the latest common year for which data was available in all G7 countries, except Italy.

Using this methodology, in 2004, the United States had the highest avoidable mortality rate of 271 per 100,000 population; Japan had the lowest rate of 170 per 100,000. Canada ranked third lowest, after Japan and France (Figure 16).

While comparing Canada's avoidable mortality rate to that of other countries provides an overall picture, comparing provincial results can provide insight into the performance of the provincial health systems. For example, Newfoundland and Labrador's rate of avoidable mortality in 2004 (228 per 100,000) was about the same as that of the U.K. (225 per 100,000)—the second worst performer among G7 countries—while British Columbia (183 per 100,000) had a rate similar to that of France (180 per 100,000)—the second best performer.

International comparisons are not without challenges and cautions, particularly given that there is no internationally agreed-upon definition for this indicator. There may be cross-national differences in coding practices, and timeliness of the data is often an issue. Despite these challenges, international comparisons remain of interest when assessing health system performance.

Figure 16: Avoidable Mortality, G7 Countries, 2004



Notes
I represents 95% confidence intervals.
Rates were age-standardized to 1991 Canadian standard population using direct method of standardization.
2004 data for Italy was not available.
Source
WHO, Department of Health Statistics and Informatics Mortality Database.

Summary

In 2008, there were more than 238,600 deaths in Canada, 39% of which were among those under the age of 75. Of these premature deaths, it is estimated that 72% were potentially avoidable, with 65% of these being preventable and 35% treatable.

These 2008 rates, both for males and females, are substantially lower than the rates seen in 1979. On all measures—avoidable mortality and mortality from both preventable and treatable causes—age-standardized death rates and potential years of life lost have decreased over the past 30 years. The magnitude and rate of decline by cause have varied substantially. Deaths due to circulatory diseases and injuries had the most significant decreases. In 2008, cancers, injuries and circulatory diseases were the main causes of preventable mortality for both males and females. Circulatory diseases played a larger role in mortality from treatable causes among males, whereas for females it was cancer.

As others who have looked at avoidable mortality have found, aggregate measures conceal a great deal of variation. This is also true in looking at avoidable deaths on a national scale. Across the Canadian provinces, rates of avoidable mortality in 2008 varied from 173 per 100,000 in Ontario and British Columbia to 229 per 100,000 in Manitoba. For preventable causes, provincial rates ranged from 107 per 100,000 in Ontario to 148 per 100,000 in Saskatchewan, and for treatable causes from 57 per 100,000 in British Columbia to 86 per 100,000 in Manitoba.

Socio-economic disparities and sex gaps for avoidable mortality were also identified, with rates being higher among males than females and for those living in the least affluent neighbourhoods (compared with those living in the most affluent neighbourhoods). The gaps for preventable mortality were more pronounced than for mortality from treatable causes. Noting that variation in morbidity rates will account for some of the variation, additional examination of these measures at the jurisdiction level and by contributing conditions can serve to inform policy.[17]

Implications for Health and Social Policy and the Provision of Care

Consistent with the application of the concept of reducing avoidable deaths in other countries, the new avoidable mortality indicators provide additional insight into the Canadian health system. These measures can be used to assess the impact of prevention strategies and the outcomes of health policy decisions and health care provision. The avoidable mortality indicators can serve to inform where Canada's health system has made gains and to point to where more work is needed. It can also help to quantify potential gains. For example, in an ideal world where all avoidable mortality in Canada would have been eliminated, life expectancy at birth for the years 2006 to 2008 would have been 85.8 years—4.9 years longer than the actual life expectancy of 80.9 years. Three of the 4.9 years would be attributed to eliminating preventable mortality, and the other 1.9 years would come from eliminating mortality from treatable causes. This larger potential gain from eliminating preventable mortality emphasizes the need to focus on disease prevention.

A plea for prevention. The 1974 Lalonde report, based on data from 40 years ago, highlighted the "paradox of everyone agreeing to the importance of research and prevention yet continuing to increase disproportionately the amount of money spent on treating existing illness."[4] Quantifying avoidable mortality for Canadian jurisdictions and dividing avoidable mortality into mortality from treatable and from preventable causes highlights once again the importance of prevention. While declines in some areas of avoidable mortality, such as circulatory diseases, resulted from the joint efforts of preventive and curative systems, there is still work to be done in the area of prevention. For example, higher rates among males in avoidable mortality can be attributed primarily to the higher rates of the preventable subset of avoidable mortality. Furthermore, the female rate of mortality from preventable causes differs only slightly

from the rate from treatable causes, while for males the rate of preventable mortality is more than twice the rate of mortality from treatable causes. This highlights a significant area for potential health gains.

With respect to the preventable causes of mortality, a large body of literature has explored the links between health behaviours, risk-factor reduction strategies and health outcomes. Where this knowledge is available and variation in rates of preventable causes of mortality are found, targeted (therefore, more cost-effective) risk-factor reduction strategies may be supported. For example, higher rates of avoidable mortality among males can be attributed primarily to their higher rates of preventable deaths. The introduction of graduated licences, for example, that limit riskier night-time driving among young and new drivers has resulted in saved lives and reductions in the need for more costly (and not guaranteed as successful) treatment options once an incident occurs.[65]

Need for collaboration. Given the broad definition of the health system, activities whose primary purpose is to promote health may fall outside the jurisdiction of the ministries of health. Continued dialogue is essential in order to identify and address policies outside of health care that are needed to support health. The tobacco reduction strategies of the past several decades best exemplify what can be achieved through intersectoral collaboration.[55]

Awareness of variation and past trends. Policy-makers, and health care planners and providers require factual information on the magnitude and variation in avoidable mortality rates. Variation in rates of avoidable mortality across Canada flag possible issues and identify areas for more detailed investigation. Examining variations in the causes of avoidable mortality could help jurisdictions identify areas for improvement. Examination of the trends in avoidable mortality could also provide insight on the areas where progress has been made and where continued improvements are needed. Jurisdictions that have seen significant gains may have important knowledge to share about their approach with those jurisdictions where gains have been less striking.

Addressing health disparities. Rates of avoidable mortality overall and for most causes show gradients by neighbourhood income quintile, as do many other health system performance measures. The gap between socio-economic groups is most pronounced for mortality from preventable causes. The reduction of health disparities has emerged as a major and worldwide public health objective[66, 67] that spans prevention, access to health care and the provision of care. This indicator and cause-specific avoidable mortality measure could be used to target public health programs and policy development to areas where significant gains need to be realized to close the gap.

Future research. Future research should seek to understand more clearly the relationship between avoidable mortality rates and specific prevention strategies and specific health care interventions. As research more clearly identifies the link between prevention, treatment efforts and avoidable mortality, the definition of the indicators will need to be reviewed and revised. This final case study on HIV/AIDS demonstrates how the definition of avoidable mortality may evolve over time.

Case Study: HIV—When Preventable and Treatable Change Over Time

The case of HIV/AIDS provides an interesting picture of a condition for which "preventability" and "treatability" have changed over time. On a global scale, the condition can be described as having undergone five periods: silent spread, recognition, intense discovery, global mobilization and discoveries of ending the problem (through public education, blood testing and antiviral treatment).[68] When Canada's first HIV case was diagnosed in 1982,[69] the disease's cause and mode of transmission were unknown and treatment options were limited. As a result, mortality rates[iii] were high. Once the modes of disease transmission and spread were determined in the mid-1980s,[68, 70] it became apparent that HIV/AIDS could be prevented through protected sex, safe blood transfusions and general avoidance of the modes of transmission, making prevention the most significant, and possibly the only, way to reduce mortality.

The most notable decreases in the incidence of HIV/AIDS occurred among men who have sex with men (MSM). In the early 1980s, 80% of all reported cases were among this group.[71] Recent statistics from 2009 show that the number of reported HIV cases among MSM has decreased and the group now accounts for less than half (42%) of all cases.[71, 72] Decreases in the number of reported cases also occurred among other exposure categories, including injection drug users.[71, 72] Preventive efforts and educational initiatives may have had a role in the decrease in reported HIV cases.[73, 74]

A major treatment breakthrough, however, occurred in the mid-1990s, when new highly active antiretroviral therapy (HAART) was shown to be associated with a decrease in incidence of opportunistic infections, thus resulting in lower mortality rates.[68, 75, 76] After the introduction of HAART, the number of AIDS cases in Canada declined remarkably between 1996 and 1998.[71] The effect of HAART treatment is also reflected in the Canadian mortality rates for HIV/AIDS, which echoes the AIDS incidence pattern.

In the current Canadian definition of avoidable mortality, HIV/AIDS is assigned to the preventable category because of its highly preventable nature. However, this case study highlights the need for periodic review of the indicator definitions as an understanding of etiology and treatment options evolve over time.[77]

iii. Age-standardized mortality rates were calculated with the WHO's Department of Health Statistics and Informatics Mortality Database (July 1, 2010, update) and Statistics Canada's CANSIM Table 102-0521.

Appendix: List of Causes of Death for Avoidable Mortality Indicator

Causes of Death	ICD-9 Codes	ICD-10 Codes	Preventable (Incidence Reduction)	Treatable (Case-Fatality Reduction)
Infections				
Enteritis and other diarrhoeal disease	001–009	A00–A09	x	
Tuberculosis	010–018 137	A16–A19 B90 J65		x
Vaccine-preventable diseases	032, 033, 036 ,037 038.2 041.5, 045 052, 055, 056 481, 482.2, 487 320.0, 320.1	A35–A37, A39 A40.3, A41.3 A49.2, A80 B01, B05, B06 J09–J11, J13, J14 G00.0, G00.1	x	
Selected invasive bacterial infections	034.1 482.8 041.0	A38, A48.1 A49.1		x
Sepsis	038 (except 038.2)	A40 (except A40.3) A41 (except A41.3)		x
Malaria	084	B50–B54		x
Meningitis	320.2,3,8,9	G00.2,3,8,9		x
Cellulitis	035 681, 682	A46 L03		x
Pneumonia	480, 482.0,1,3,4 483, 485, 486, 514	J12, J15, J16, J18		x
Sexually transmitted infections, except HIV/AIDS	131, 054.1,7 078.1, 090–098 099.0,1,2,8,9	A50–A60, A63, A64	x	
Viral hepatitis	070	B15–B19	x	
HIV/AIDS	042.0–044.9	B20–B24	x	
Neoplasms				
Lip, oral cavity and pharynx cancer	140–149	C00–C14	x	
Esophageal cancer	150	C15	x	
Stomach cancer	151	C16	x	
Colorectal cancer	153, 154	C18–C21		x
Liver cancer	155	C22	x	
Lung cancer	162	C33, C34	x	
Melanoma skin cancer	172	C43	x	
Non-melanoma skin cancer	173	C44	x	
Malignant neoplasm of breast	174	C50		x (female only)
Cervical cancer	180	C53		x
Uterus cancer	179, 182	C54, C55		x
Testicular cancer	186	C62		x

Causes of Death	ICD-9 Codes	ICD-10 Codes	Preventable (Incidence Reduction)	Treatable (Case-Fatality Reduction)
Neoplasms (cont'd)				
Bladder cancer	188	C67		x
Thyroid cancer	193	C73		x
Hodgkin's disease	201	C81		x
Leukemia	204.0,1; 205.1	C91.0, C91.1, C92.1		x (age <45)
Benign neoplasms	210–229	D10–D36		x
Diseases of the Circulatory System				
Rheumatic heart disease	391–398	I01, I02, I05–I09	x	
Hypertensive diseases	401 402–405	I10 I11–I13, I15		x
Cerebrovascular diseases	430–432 433, 434, 436–438	I60–I62 I63–I64, I67, I69	x (50%)	x (50%)
Ischaemic heart disease	410–414 423.0,9; 429.5,6,8	I20–I25	x (50%)	x (50%)
Other atherosclerosis	440, 443.9	I70, I73.9	x (50%)	x (50%)
Aortic aneurysm	441	I71	x	
Venous thromboembolism	415 451 453.9	I26 I80 I82.9	x	
Diseases of the Respiratory System				
Chronic obstructive pulmonary disorders	490–492, 496	J40–J44	x	
Asthma and bronchiectasis	493, 494	J45, J47		x
Acute lower respiratory infections	466.0	J20, J22		x
Upper respiratory infections	034.0, 460–465 470–478	J00–J06 J30–J39		x
Lung diseases due to external agents	117.3, 495 500–508 511.0, 518.3	C45, J60–J64, J66–J70, J82, J92	x	
Adult respiratory distress syndrome	518.5	J80		x
Pulmonary oedema	518.4	J81		x
Abscess of lung and mediastinum; pyothorax	513, 510	J85, J86		x
Other pleural disorders	511.9, 512	J90, J93, J94		x
Other respiratory disorders	518.0,1,2,8 519.1,3,4,8,9	J98		x

Causes of Death	ICD-9 Codes	ICD-10 Codes	Preventable (Incidence Reduction)	Treatable (Case-Fatality Reduction)
Diseases of the Digestive System				
Peptic ulcer disease	531–534	K25–K28		x
Diseases of appendix; hernia; disorders of gallbladder, biliary tract and pancreas	540–543 550–553 574–576 577	K35–K38 K40–K46 K80–K83 K85.0,1,3,8,9 K86.1,2,3,8,9		x
Chronic liver disease (excluding alcohol-related disease)	571.4,5,9	K73, K74.0,1,2,6	x	
Diseases of the Genitourinary System				
Nephritis and nephrosis	580–583	N00–N07		x
Renal failure	584–586	N17–N19		x
Obstructive uropathy, urolithiasis and prostatic hyperplasia	590.8, 591, 592 593.3,5,7; 594 598, 599.6, 600	N13, N20, N21, N23 N35, N40		x
Inflammatory diseases of genito-urinary system	099.4, 614, 615 616.0,2,3,4,5	N34.1, N70–N73 N75.0, N75.1, N76.4 N76.6		x
Disorders resulting from impaired renal tubular function	588	N25		x
Infant and Maternal Causes				
Complications of perinatal period	771.3	A33		x
	363.4 760–779 (except 779.4)	H31.1 P00–P96	x	
Congenital malformations, deformations and chromosomal anomalies	740–759	Q00–Q99		x
Pregnancy, childbirth and the puerperium	630–676	O00–O99		x
Unintentional Injuries				
Transport accidents	E800–E848	V01–V99	x	
Falls	E880–E886, E888	W00–W19	x	
Other external causes of accidental injury	E887, E900–E909 E911–E928	W20–W64 W75–W99 X10–X39, X50–X59	x	
Drowning	E910	W65–W74	x	
Fires and flames	E890–E899	X00–X09	x	
Accidental poisonings	E850–E858 E860–E869	X40–X49	x	

Causes of Death	ICD-9 Codes	ICD-10 Codes	Preventable (Incidence Reduction)	Treatable (Case-Fatality Reduction)
Injuries of Undertermined Intent				
Injuries of undetermined intent	E980–E989	Y10–Y34	x	
Intentional Injuries				
Suicide and self-inflicted injuries	E950–E959	X60–X84, Y87.0	x	
Assault	E960–E969	X85–X99 Y00–Y09, Y87.1	x	
Alcohol and Drug Use Disorders				
Alcohol-related diseases, excluding external causes	291, 303, 305.0 357.5, 425.5 535.3 571.0,1,2,3	F10, G31.2 G62.1, I42.6 K29.2 K70, K85.2, K86.0	x	
Drug use disorders	292, 304 305 (except 305.0,1)	F11–F16, F18, F19	x	
Nutritional, Endocrine and Metabolic Disorders				
Nutritional deficiency anaemia	280, 281	D50–D53	x	
Thyroid disorders	240.0,9 241.0,1,9 242–246	E00–E07		x
Diabetes mellitus	250	E10–E14	x (50%)	x (50%)
Adrenal disorders	255	E24, E25, E27		x
Congenital metabolic disorders	271.0,1	E74.0, E74.2		x
Neurological Disorders				
Epilepsy	345	G40, G41		x
Disorders of Musculoskeletal System				
Osteomyelitis	730.0,1,2,3	M86		x
Adverse Effects of Medical and Surgical Care				
Drugs, medicaments and biological substances causing adverse effects in therapeutic use	E930–E949	Y40–Y59	x	
Misadventures to patients during surgical and medical care	E870–E876	Y60–Y66, Y69	x	
Medical devices associated with adverse incidents in diagnostic and therapeutic use	No corresponding codes	Y70–Y82	x	
Surgical and other medical procedures as the cause of abnormal reaction	E878, E879	Y83, Y84	x	

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Health Indicators
Region by Region

Health indicators are standardized measures of various aspects of health and health care that can be used to monitor the health status of the population and the performance and characteristics of the health system over time and across the country. As in previous years, the *Health Indicators* annual report provides up-to-date comparable information for health regions, provinces and territories. This information can be used by jurisdictions to evaluate progress and identify areas for improvement.

There's More on the Web

CIHI and Statistics Canada jointly produce and maintain the *Health Indicators* e-publication. This free web-based product provides data for a broad range of health indicators from both CIHI and Statistics Canada in one integrated online publication. This interactive online resource provides easy access to the most recent health indicator results, as well as to data for all available years, maps, technical notes and other important information.

***Health Indicators* e-publication:** To find more information on the latest readings on the health of Canadians—region by region—please visit www.cihi.ca/indicators or www.statcan.gc.ca.

What Are Health Regions?

Health regions are administrative bodies, legislated by the provincial ministries of health. They are defined by geographical areas and are responsible for providing health services to their residents. The role of health regions in determining how resources are allocated and their relationship with local hospitals vary by province.

For this report, data is provided for all regions with a population of at least 50,000. In addition, data for the smaller regions, as well as for Nova Scotia zones and Ontario public health units, is included in the *Health Indicators* e-publication (www.cihi.ca/indicators or www.statcan.gc.ca). Please see page 104 for a map of all the health regions in Canada.

Interpreting the Indicators

Unless otherwise specified, health indicators are reported based on where a patient lives, not where he or she was hospitalized. Consequently, these figures reflect the experience of residents of a region regardless of where they were treated, even if it was outside their own province, rather than showing the activity of hospitals in a given region. Confidence intervals are provided for most indicators to aid interpretation. The width of the confidence interval illustrates the degree of variability associated with the rate. Indicator values are estimated to be accurate within the upper and lower confidence intervals 19 times out of 20 (95% confidence interval).

Symbols and Abbreviations

..	Figures not available
*	Figures suppressed due to small numbers or incomplete data
▼	Interpret with caution
95% CI	95% confidence interval
✦	Statistically significantly different from the national (Canada) rate (p≤0.05)
ASSS	Agence de la santé et des services sociaux
HSDA	Health service delivery area
LHIN	Local health integration network
RHA	Regional health authority

Map Code	Health Region	Legend Name	Population ('000) 2010	Population Age 65+ (%) 2010	Dependency Ratio 2010
Newfoundland and Labrador		**N.L.**	**511**	**15.4**	**56.3**
1011	Eastern Regional Integrated Health Authority	Eastern	303	14.2	53.6
1012	Central Regional Integrated Health Authority	Central	93	18.3	61.8
1013	Western Regional Integrated Health Authority	Western	77	17.7	61.4
Prince Edward Island		**P.E.I.**	**144**	**15.6**	**64.0**
Nova Scotia		**N.S.**	**946**	**16.2**	**59.3**
1211	South Shore District Health Authority	South Shore	58	20.9	63.4
1212	South West Nova District Health Authority	South West Nova	59	18.9	65.8
1223	Annapolis Valley District Health Authority	Annapolis Valley	83	18.3	68.0
1234	Colchester East Hants Health Authority	Colchester East Hants	74	16.3	64.2
1258	Cape Breton District Health Authority	Cape Breton	123	19.0	68.1
1269	Capital District Health Authority	Capital	423	12.8	51.3
New Brunswick		**N.B.**	**754**	**15.9**	**59.3**
1301	Zone 1	Zone 1 (Moncton area)	204	15.7	56.5
1302	Zone 2	Zone 2 (Saint John area)	176	15.3	62.2
1303	Zone 3	Zone 3 (Fredericton area)	174	14.4	58.9
1306	Zone 6	Zone 6 (Bathurst area)	78	18.0	57.3
Quebec		**Que.**	**7,929**	**15.4**	**59.4**
2401	ASSS du Bas-Saint-Laurent	Bas-Saint-Laurent	201	18.7	63.1
2402	ASSS du Saguenay–Lac-Saint-Jean	Saguenay–Lac-Saint-Jean	273	17.0	61.4
2403	ASSS de la Capitale-Nationale	Capitale-Nationale	694	16.9	56.6
2404	ASSS de la Mauricie et du Centre-du-Québec	Mauricie et Centre-du-Québec	495	18.3	64.0
2405	ASSS de l'Estrie	Estrie	310	16.6	63.1
2406	ASSS de Montréal	Montréal	1,934	15.0	54.7
2407	ASSS de l'Outaouais	Outaouais	364	12.4	55.5
2408	ASSS de l'Abitibi-Témiscamingue	Abitibi-Témiscamingue	146	14.5	62.0
2409	ASSS de la Côte-Nord	Côte-Nord	96	13.8	60.3
2411	ASSS de la Gaspésie–Îles-de-la-Madeleine	Gaspésie–Îles-de-la-Madeleine	94	19.5	60.8
2412	ASSS de Chaudière-Appalaches	Chaudière-Appalaches	405	16.0	62.1
2413	ASSS de Laval	Laval	399	15.4	64.4
2414	ASSS de Lanaudière	Lanaudière	464	13.9	60.6
2415	ASSS des Laurentides	Laurentides	549	14.1	60.7
2416	ASSS de la Montérégie	Montérégie	1,441	14.6	61.6
Ontario		**Ont.**	**13,286**	**14.0**	**59.3**
3501	Erie St. Clair LHIN	Erie St. Clair	643	15.5	65.3
3502	South West LHIN	South West	952	15.5	64.2
3503	Waterloo Wellington LHIN	Waterloo Wellington	747	12.5	58.9
3504	Hamilton Niagara Haldimand Brant LHIN	Hamilton Niagara Haldimand Brant	1,404	15.7	63.9
3505	Central West LHIN	Central West	842	10.7	57.0
3506	Mississauga Halton LHIN	Mississauga Halton	1,157	11.0	58.4
3507	Toronto Central LHIN	Toronto Central	1,185	13.7	52.6
3508	Central LHIN	Central	1,733	12.3	55.9
3509	Central East LHIN	Central East	1,553	14.1	58.3
3510	South East LHIN	South East	489	17.5	63.9
3511	Champlain LHIN	Champlain	1,245	13.7	57.1
3512	North Simcoe Muskoka LHIN	North Simcoe Muskoka	455	15.6	64.0
3513	North East LHIN	North East	565	17.4	63.3
3514	North West LHIN	North West	240	14.8	64.8
Manitoba		**Man.**	**1,239**	**13.9**	**66.3**
4610	Winnipeg RHA	Winnipeg	698	13.9	58.9
4615	Brandon RHA	Brandon	51	14.8	63.2
4625	South Eastman Health	South Eastman	68	10.7	75.6
4630	Interlake RHA	Interlake	83	15.7	71.7
4640	RHA—Central Manitoba Inc.	Central	109	13.3	79.9
4645	Assiniboine RHA	Assiniboine	70	18.8	79.8

Map Code	Health Region	Legend Name	Population ('000) 2010	Population Age 65+ (%) 2010	Dependency Ratio 2010
Saskatchewan		**Sask.**	**1,048**	**14.6**	**68.6**
4701	Sun Country Health Region	Sun Country	54	16.9	73.9
4702	Five Hills Health Region	Five Hills	53	18.9	74.6
4704	Regina Qu'Appelle Health Region	Regina	260	13.7	61.7
4705	Sunrise Health Region	Sunrise	54	21.9	83.0
4706	Saskatoon Health Region	Saskatoon	315	12.8	60.8
4709	Prince Albert Parkland RHA	Prince Albert	78	15.5	80.2
4710	Prairie North Health Region	Prairie North	71	12.9	77.3
Alberta		**Alta.**	**3,735**	**10.7**	**54.9**
4831	South Zone	South Zone	282	13.6	66.5
4832	Calgary Zone	Calgary Zone	1,388	9.6	50.5
4833	Central Zone	Central Zone	452	12.4	62.3
4834	Edmonton Zone	Edmonton Zone	1,174	11.1	53.0
4835	North Zone	North Zone	426	9.0	60.4
British Columbia		**B.C.**	**4,550**	**15.0**	**57.2**
5911	East Kootenay HSDA	East Kootenay	80	16.1	60.8
5912	Kootenay Boundary HSDA	Kootenay Boundary	80	18.3	62.9
5913	Okanagan HSDA	Okanagan	351	20.2	67.5
5914	Thompson Cariboo Shuswap HSDA	Thompson/Cariboo/Shuswap	223	17.0	62.4
5921	Fraser East HSDA	Fraser East	285	14.4	65.2
5922	Fraser North HSDA	Fraser North	610	11.7	50.2
5923	Fraser South HSDA	Fraser South	714	15.6	66.5
5931	Richmond HSDA	Richmond	197	12.7	51.6
5932	Vancouver HSDA	Vancouver	659	12.0	41.6
5933	North Shore/Coast Garibaldi HSDA	North Shore	285	15.4	58.2
5941	South Vancouver Island HSDA	South Vancouver Island	372	17.2	55.4
5942	Central Vancouver Island HSDA	Central Vancouver Island	265	20.0	66.7
5943	North Vancouver Island HSDA	North Vancouver Island	121	17.1	63.3
5951	Northwest HSDA	Northwest	76	11.7	62.8
5952	Northern Interior HSDA	Northern Interior	144	11.9	58.0
5953	Northeast HSDA	Northeast	69	8.7	58.8
Yukon		**Y.T.**	**35**	**8.5**	**47.6**
Northwest Territories		**N.W.T.**	**44**	**5.5**	**55.4**
Nunavut		**Nun.**	**33**	**3.1**	**79.8**
Canada		**Canada**	**34,254**	**14.2**	**59.0**

Population

The number of people living in a geographic area. A population's size and age–sex composition may affect the health status of a region and its need for health services. Population data also provides the denominators used to calculate rates for most health and social indicators.

Sources: Demography Division, Statistics Canada. Data is derived from the census and administrative sources on births, deaths and migration. Population estimates for health regions in B.C. were provided by BC Stats. Population estimates for health regions in Quebec were derived from census division population estimates provided by the Institut de la statistique du Québec.

Dependency ratio

The ratio of the combined population age 0 to 19 and the population age 65 and older to the population age 20 to 64. This ratio is presented as the number of dependants for every 100 people in the working-age population. Canadians age 65 and older and those younger than age 20 are more likely to be socially and/or economically dependent on working-age Canadians, and they may also put additional demands on health services.

Source: Demography Division, Statistics Canada.

Map Code	Health Region	Premature Mortality 2006–2008 Age-Standardized Mortality Rate per 100,000	95% CI	Age-Standardized PYLL† per 100,000	95% CI
Newfoundland and Labrador		***307**	**(298–315)**	***5,317**	**(5,067–5,567)**
1011	Eastern	*309	(298–320)	*5,183	(4,865–5,501)
1012	Central	*281	(263–298)	4,811	(4,254–5,368)
1013	Western	*310	(290–331)	*5,497	(4,835–6,160)
Prince Edward Island		***279**	**(264–294)**	**4,612**	**(4,208–5,017)**
Nova Scotia		***289**	**(283–294)**	***4,772**	**(4,610–4,933)**
1211	South Shore	265	(243–286)	4,825	(4,086–5,563)
1212	South West Nova	*287	(265–310)	4,619	(3,990–5,248)
1223	Annapolis Valley	271	(252–290)	4,744	(4,170–5,319)
1234	Colchester East Hants	*292	(271–314)	4,922	(4,336–5,508)
1258	Cape Breton	*366	(348–384)	*6,532	(5,972–7,092)
1269	Capital	*270	(261–280)	*4,182	(3,969–4,395)
New Brunswick		***279**	**(273–286)**	***4,850**	**(4,661–5,040)**
1301	Zone 1 (Moncton area)	254	(241–266)	4,617	(4,254–4,979)
1302	Zone 2 (Saint John area)	*302	(288–316)	4,897	(4,522–5,272)
1303	Zone 3 (Fredericton area)	*294	(279–308)	*4,925	(4,535–5,315)
1306	Zone 6 (Bathurst area)	*227	(209–245)	*3,978	(3,434–4,522)
Quebec		**257**	**(255–259)**	***4,382**	**(4,327–4,436)**
2401	Bas-Saint-Laurent	252	(240–264)	4,773	(4,385–5,161)
2402	Saguenay–Lac-Saint-Jean	268	(257–278)	4,855	(4,533–5,178)
2403	Capitale-Nationale	*245	(239–251)	*4,101	(3,919–4,283)
2404	Mauricie et Centre-du-Québec	*280	(272–288)	*5,184	(4,930–5,439)
2405	Estrie	*244	(234–254)	4,428	(4,143–4,713)
2406	Montréal	*253	(249–257)	*4,162	(4,059–4,264)
2407	Outaouais	*294	(284–304)	4,455	(4,221–4,689)
2408	Abitibi-Témiscamingue	*280	(265–295)	4,826	(4,417–5,235)
2409	Côte-Nord	*309	(289–329)	*5,476	(4,911–6,040)
2411	Gaspésie–Îles-de-la-Madeleine	*329	(309–349)	*6,379	(5,687–7,071)
2412	Chaudière-Appalaches	*233	(224–241)	*4,203	(3,960–4,445)
2413	Laval	*222	(214–230)	*3,783	(3,550–4,016)
2414	Lanaudière	*267	(259–276)	4,352	(4,129–4,575)
2415	Laurentides	*268	(260–275)	4,534	(4,323–4,745)
2416	Montérégie	*249	(244–254)	*4,143	(4,020–4,265)
Ontario		***246**	**(244–247)**	***4,182**	**(4,141–4,224)**
3501	Erie St. Clair	*274	(267–281)	4,530	(4,347–4,713)
3502	South West	260	(254–266)	4,474	(4,313–4,635)
3503	Waterloo Wellington	*224	(218–231)	*3,739	(3,578–3,900)
3504	Hamilton Niagara Haldimand Brant	*264	(259–268)	4,421	(4,293–4,549)
3505	Central West	*201	(195–207)	*3,683	(3,524–3,843)
3506	Mississauga Halton	*186	(181–191)	*3,057	(2,940–3,174)
3507	Toronto Central	*223	(219–228)	*3,819	(3,692–3,946)
3508	Central	*176	(172–180)	*3,017	(2,916–3,117)
3509	Central East	*225	(221–230)	*3,908	(3,788–4,028)
3510	South East	*283	(275–291)	*4,925	(4,681–5,170)
3511	Champlain	*232	(228–237)	*3,822	(3,693–3,950)
3512	North Simcoe Muskoka	263	(254–271)	4,451	(4,217–4,685)
3513	North East	*309	(302–317)	*5,445	(5,206–5,683)
3514	North West	*330	(317–343)	*6,829	(6,415–7,244)
Manitoba		***310**	**(304–316)**	***5,799**	**(5,637–5,961)**
4610	Winnipeg	*293	(286–301)	*5,232	(5,029–5,434)
4615	Brandon	*299	(271–327)	4,795	(4,131–5,460)
4625	South Eastman	*231	(208–254)	*3,640	(3,124–4,156)
4630	Interlake	*333	(311–355)	*5,966	(5,283–6,650)
4640	Central	*283	(264–302)	*5,475	(4,943–6,007)
4645	Assiniboine	*305	(282–328)	*5,903	(5,172–6,635)

Map Code	Health Region	Premature Mortality 2006–2008 Age-Standardized Mortality Rate per 100,000	95% CI	Age-Standardized PYLL† per 100,000	95% CI
Saskatchewan		**305**	**(299–312)**	**5,931**	**(5,750–6,113)**
4701	Sun Country	274	(249–299)	4,998	(4,276–5,720)
4702	Five Hills	283	(257–309)	5,139	(4,403–5,876)
4704	Regina	291	(278–303)	5,480	(5,129–5,830)
4705	Sunrise	308	(282–333)	5,632	(4,830–6,434)
4706	Saskatoon	279	(268–291)	5,055	(4,759–5,351)
4709	Prince Albert	342	(318–366)	7,266	(6,507–8,025)
4710	Prairie North	365	(338–392)	7,724	(6,936–8,512)
Alberta		**268**	**(265–271)**	**4,990**	**(4,906–5,074)**
4831	South Zone	280	(268–291)	5,470	(5,147–5,793)
4832	Calgary Zone	221	(216–226)	3,903	(3,782–4,025)
4833	Central Zone	298	(288–307)	5,624	(5,366–5,883)
4834	Edmonton Zone	258	(252–264)	4,685	(4,539–4,830)
4835	North Zone	318	(307–328)	6,103	(5,835–6,372)
British Columbia		**244**	**(242–247)**	**4,411**	**(4,337–4,485)**
5911	East Kootenay	303	(281–324)	5,863	(5,173–6,553)
5912	Kootenay Boundary	296	(275–317)	5,410	(4,763–6,057)
5913	Okanagan	253	(244–262)	4,731	(4,438–5,024)
5914	Thompson/Cariboo/Shuswap	303	(290–316)	5,936	(5,526–6,346)
5921	Fraser East	278	(267–290)	5,001	(4,698–5,303)
5922	Fraser North	216	(209–223)	3,531	(3,360–3,702)
5923	Fraser South	229	(222–236)	4,092	(3,915–4,269)
5931	Richmond	155	(145–165)	2,707	(2,411–3,003)
5932	Vancouver	218	(211–224)	3,985	(3,801–4,170)
5933	North Shore	209	(200–219)	3,736	(3,443–4,028)
5941	South Vancouver Island	228	(220–237)	4,208	(3,947–4,469)
5942	Central Vancouver Island	278	(267–289)	5,568	(5,179–5,957)
5943	North Vancouver Island	279	(262–295)	5,128	(4,617–5,638)
5951	Northwest	344	(319–369)	6,283	(5,612–6,954)
5952	Northern Interior	335	(318–352)	5,801	(5,352–6,251)
5953	Northeast	343	(315–370)	6,487	(5,785–7,188)
Yukon		**367**	**(326–409)**	**6,745**	**(5,687–7,802)**
Northwest Territories		**403**	**(358–448)**	**7,523**	**(6,595–8,450)**
Nunavut		**603**	**(526–680)**	**12,371**	**(10,974–13,769)**
Canada		**259**	**(258–259)**	**4,533**	**(4,506–4,560)**

† Potential years of life lost.

Premature mortality

Premature deaths are those of individuals who are younger than age 75. Expressed as the age-standardized mortality rate and potential years of life lost (PYLL) per 100,000 population. PYLL is the number of years of potential life not lived when a person dies before age 75. Premature mortality is an overall indicator of population health that reflects deaths at younger ages. It can be used to guide efforts on health promotion and disease prevention.

Note: Rates are based on three years of pooled data.

Source: Vital Statistics—Death Database, Statistics Canada.

	Life Expectancy at Birth (Years) 2006–2008			Perinatal Mortality 2008	Infant Mortality 2008
	Male	Female	Both	Rate per 1,000 Total Births	Rate per 1,000 Live Births
N.L.	76.2	80.9	78.5	6.9	5.1
P.E.I.	77.5	82.9	80.2	3.4	2.0
N.S.	77.4	82.3	79.9	5.6	3.5
N.B.	77.6	82.7	80.2	4.3	3.2
Que.	78.6	83.3	81.0	5.3	4.3
Ont.	79.0	83.4	81.3	6.5	5.3
Man.	76.9	82.0	79.5	9.0	6.5
Sask.	76.9	82.1	79.5	6.8	6.2
Alta.	78.3	83.0	80.6	7.0	6.2
B.C.	79.2	83.6	81.4	4.8	3.7
Y.T.				8.0	5.4
N.W.T.	72.5	78.5	75.2	13.8	9.7
Nun.				8.7	16.1
Canada	**78.5**	**83.1**	**80.9**	**6.2**	**5.1**

	Cancer Incidence, 2009					
	All Cancers		Bronchus and Lung		Colon Excluding Rectum	
	Rate	95% CI	Rate	95% CI	Rate	95% CI
N.L.	570.7	(549.9–591.5)	76.4	(68.8–84.0)	57.9	(51.2–64.5)
P.E.I.	570.5	(531.1–609.9)	96.4	(80.2–112.6)	49.6	(38.0–61.2)
N.S.	570.9	(555.6–586.1)	87.5	(81.5–93.5)	49.8	(45.3–54.3)
N.B.	586.4	(569.1–603.7)	91.4	(84.6–98.3)	46.6	(41.7–51.5)
Que.	. .	.. ..	. .	.. ..	. .	.. ..
Ont.	496.6	(492.7–500.4)	60.3	(58.9–61.6)	40.9	(39.8–42.0)
Man.	493.7	(481.2–506.2)	69.0	(64.3–73.6)	44.9	(41.1–48.6)
Sask.	495.7	(482.1–509.3)	64.3	(59.4–69.2)	41.9	(37.9–45.8)
Alta.	399.8	(393.3–406.2)	49.6	(47.3–51.8)	29.6	(27.9–31.4)
B.C.	484.1	(477.7–490.6)	62.2	(59.9–64.5)	37.7	(35.9–39.5)
Y.T.	383.3	(317.2–449.5)	71.3	(45.7–106.1)	23.8	(10.3–46.8)
N.W.T.	293.1	(242.3–343.9)	32.1	(17.5–53.8)	29.8	(15.8–50.9)
Nun.	167.7	(123.0–212.5)	49.7	(28.4–80.7)	18.6	(6.8–40.6)
Canada	. .	.. ..	. .	.. ..	. .	.. ..

	Breast		Cervix Uteri		Prostate	
	Rate	95% CI	Rate	95% CI	Rate	95% CI
N.L.	*	* *	5.9	(4.0–8.4)	97.8	(89.2–106.4)
P.E.I.	*	* *	4.3	(1.6–9.3)	101.3	(84.7–118.0)
N.S.	*	* *	4.0	(2.9–5.6)	76.5	(70.9–82.0)
N.B.	*	* *	3.1	(1.9–4.6)	94.6	(87.7–101.6)
Que.	. .	.. ..	. .	.. ..	. .	.. ..
Ont.	69.5	(68.1–70.9)	4.7	(4.4–5.1)	68.7	(67.3–70.1)
Man.	*	* *	4.2	(3.0–5.3)	58.9	(54.6–63.2)
Sask.	*	* *	4.0	(2.9–5.4)	70.3	(65.1–75.4)
Alta.	54.0	(51.7–56.4)	4.4	(3.8–5.1)	59.3	(56.8–61.7)
B.C.	65.3	(62.9–67.7)	3.9	(3.3–4.4)	71.2	(68.7–73.7)
Y.T.	*	* *	*	* *	59.4	(36.3–91.8)
N.W.T.	*	* *	*	* *	*	* *
Nun.	*	* *	*	* *	*	* *
Canada	. .	.. ..	. .	.. ..	. .	.. ..

Life expectancy at birth

Life expectancy is the number of years a person would be expected to live starting from birth and is calculated on the basis of the mortality statistics for a given observation period. A widely used indicator of the health of a population, life expectancy measures quantity rather than quality of life.

Note: Rates are based on three years of pooled data.

Sources: Vital Statistics—Death Database and Demography Division (population estimates), Statistics Canada.

Perinatal mortality

Rate of stillbirths and early neonatal deaths (deaths in the first week of life) per 1,000 total births (including stillbirths). Stillbirths are defined as death at gestational age of 28 weeks or more. This indicator reflects standards of obstetric and pediatric care, as well as the effectiveness of public health initiatives.

Sources: Vital Statistics—Birth, Death and Stillbirth Databases, Statistics Canada.

Infant mortality

Infants who die in the first year of life, expressed as a rate per 1,000 live births. A long-established measure, not only of child health, but also of the well-being of a society. This indicator reflects the level of mortality, health status and health care of a population as well as the effectiveness of preventive care and the attention paid to maternal and child health.

Sources: Vital Statistics—Birth and Death Databases, Statistics Canada.

Cancer incidence

Rate of new primary sites of cancer (malignant neoplasms) per 100,000 population, for all cancers and selected specific sites.

Sources: Vital Statistics, Cancer Database, Canadian Cancer Registry and Demography Division (population estimates), Statistics Canada.

	Self-Reported Conditions			
	Youth Body Mass Index (Age 12–17) (25 or Greater) 2010		Adult Body Mass Index (Age 18+) (25 or Greater) 2010	
	%	95% CI	%	95% CI
N.L.	33.2	(24.2–42.2)	63.2	(59.9–66.5)
P.E.I.	24.0 ▼	(11.5–36.6)	56.6	(52.2–61.1)
N.S.	23.4 ▼	(15.4–31.5)	61.1	(58.0–64.1)
N.B.	20.1 ▼	(13.1–27.1)	62.8	(59.9–65.7)
Que.	20.5	(16.1–24.9)	51.8	(50.3–53.3)
Ont.	20.1	(17.2–22.9)	52.6	(51.3–54.0)
Man.	21.7	(14.7–28.7)	60.7	(57.6–63.7)
Sask.	22.9	(16.3–29.4)	58.9	(56.2–61.6)
Alta.	18.6	(13.7–23.5)	51.6	(49.5–53.7)
B.C.	16.4	(12.1–20.7)	44.4	(42.5–46.3)
Y.T.	35.0 ▼	(18.4–51.5)	51.8	(47.0–56.7)
N.W.T.	28.4 ▼	(16.7–40.2)	54.2	(47.9–60.6)
Nun.	*	* *	60.1	(49.4–70.7)
Canada	**20.0**	**(18.2–21.9)**	**52.3**	**(51.6–53.0)**

	Diabetes (Age 12+) 2010		High Blood Pressure (Age 12+) 2010	
	%	95% CI	%	95% CI
N.L.	8.3	(6.9–9.7)	24.2	(21.9–26.4)
P.E.I.	8.5	(6.0–10.9)	18.4	(15.4–21.3)
N.S.	8.3	(7.0–9.6)	20.5	(18.7–22.2)
N.B.	8.0	(6.7–9.4)	22.0	(19.9–24.0)
Que.	5.5	(5.0–6.0)	17.1	(16.1–18.2)
Ont.	7.2	(6.6–7.9)	17.6	(16.7–18.4)
Man.	6.1	(4.9–7.3)	16.9	(15.0–18.9)
Sask.	7.2	(5.8–8.5)	18.3	(16.5–20.0)
Alta.	5.4	(4.5–6.3)	15.1	(13.8–16.4)
B.C.	5.2	(4.5–6.0)	14.9	(13.8–16.1)
Y.T.	5.5 ▼	(3.0–7.9)	11.3	(7.8–14.8)
N.W.T.	4.0 ▼	(1.9–6.1)	11.9	(9.1–14.8)
Nun.	*	* *	9.0 ▼	(4.8–13.1)
Canada	**6.4**	**(6.1–6.7)**	**17.1**	**(16.7–17.6)**

	Asthma (Age 12+) 2010		Chronic Obstructive Pulmonary Disease (Age 35+) 2010	
	%	95% CI	%	95% CI
N.L.	8.0	(6.4–9.7)	5.2	(3.6–6.7)
P.E.I.	10.1	(7.4–12.8)	4.3 ▼	(2.8–5.7)
N.S.	9.4	(7.8–11.0)	5.6	(4.5–6.8)
N.B.	8.6	(7.1–10.1)	5.6	(4.2–6.9)
Que.	8.6	(7.8–9.4)	4.3	(3.6–4.9)
Ont.	8.3	(7.7–8.9)	4.4	(4.0–4.9)
Man.	9.8	(8.2–11.5)	4.9	(3.5–6.4)
Sask.	8.2	(6.8–9.5)	4.7	(3.2–6.1)
Alta.	9.5	(8.2–10.7)	3.4	(2.7–4.1)
B.C.	7.5	(6.5–8.4)	3.7	(2.9–4.4)
Y.T.	10.5	(7.1–13.9)	4.7 ▼	(2.4–7.0)
N.W.T.	6.8	(4.8–8.8)	*	* *
Nun.	*	* *	*	* *
Canada	**8.5**	**(8.1–8.8)**	**4.3**	**(4.0–4.6)**

The data presented here represents a sample of a wider range of the health status indicators that are available in the *Health Indicators* e-publication.

www.cihi.ca or www.statcan.gc.ca

Youth body mass index

Proportion of household population age 12 to 17 with a body mass index (BMI) of 25 or greater. According to the World Health Organization and Health Canada guidelines, a BMI of 25 or greater is classified as overweight or obese, which is associated with increased health risk. BMI is calculated from weight and height collected from respondents by dividing body weight (in kilograms) by height (in metres) squared.

Source: Canadian Community Health Survey, Statistics Canada.

Adult body mass index

Proportion of household population age 18 and older with a body mass index (BMI) of 25 or greater. According to the World Health Organization and Health Canada guidelines, a BMI of 25 or greater is classified as overweight or obese, which is associated with increased health risk. BMI is calculated from weight and height collected from respondents by dividing body weight (in kilograms) by height (in metres) squared.

Source: Canadian Community Health Survey, Statistics Canada.

Diabetes

Proportion of household population age 12 and older that reported being diagnosed by a health professional as having diabetes. This includes females 15 and older who reported being diagnosed with gestational diabetes.

Source: Canadian Community Health Survey, Statistics Canada.

High blood pressure

Proportion of household population age 12 and older that reported being diagnosed by a health professional as having high blood pressure.

Source: Canadian Community Health Survey, Statistics Canada.

Asthma

Proportion of household population age 12 and older that reported being diagnosed by a health professional as having asthma.

Source: Canadian Community Health Survey, Statistics Canada.

Chronic obstructive pulmonary disease

Proportion of household population age 35 and older that reported being diagnosed by a health professional with chronic bronchitis, emphysema or chronic obstructive pulmonary disease (COPD).

Source: Canadian Community Health Survey, Statistics Canada.

Map Code	Health Region	Injury Hospitalization 2010–2011 Age-Standardized Rate per 100,000	95% CI
Newfoundland and Labrador		**525**	**(505–544)**
1011	Eastern	ˆ485	(461–510)
1012	Central	ˆ419	(375–464)
1013	Western	ˆ631	(574–689)
Prince Edward Island		**ˆ603**	**(564–642)**
Nova Scotia		**ˆ492**	**(478–505)**
1211	South Shore	565	(505–624)
1212	South West Nova	507	(453–561)
1223	Annapolis Valley	507	(462–553)
1234	Colchester East Hants	516	(465–567)
1258	Cape Breton	ˆ589	(545–632)
1269	Capital	ˆ425	(406–444)
New Brunswick		**ˆ583**	**(566–600)**
1301	Zone 1 (Moncton area)	ˆ457	(429–486)
1302	Zone 2 (Saint John area)	497	(465–529)
1303	Zone 3 (Fredericton area)	ˆ640	(604–677)
1306	Zone 6 (Bathurst area)	ˆ592	(535–649)
Quebec		**514**	**(509–519)**
2401	Bas-Saint-Laurent	ˆ659	(625–694)
2402	Saguenay–Lac-Saint-Jean	ˆ688	(657–718)
2403	Capitale-Nationale	512	(496–528)
2404	Mauricie et Centre-du-Québec	ˆ634	(612–656)
2405	Estrie	ˆ630	(603–657)
2406	Montréal	ˆ398	(390–406)
2407	Outaouais	ˆ445	(424–466)
2408	Abitibi-Témiscamingue	ˆ793	(748–839)
2409	Côte-Nord	ˆ609	(560–658)
2411	Gaspésie–Îles-de-la-Madeleine	ˆ822	(763–881)
2412	Chaudière-Appalaches	ˆ546	(524–568)
2413	Laval	ˆ424	(405–443)
2414	Lanaudière	ˆ467	(447–486)
2415	Laurentides	ˆ567	(547–586)
2416	Montérégie	ˆ528	(516–539)
Ontario		**ˆ407**	**(403–410)**
3501	Erie St. Clair	ˆ422	(407–437)
3502	South West	512	(499–526)
3503	Waterloo Wellington	ˆ392	(379–406)
3504	Hamilton Niagara Haldimand Brant	ˆ495	(484–506)
3505	Central West	ˆ334	(322–347)
3506	Mississauga Halton	ˆ326	(316–336)
3507	Toronto Central	ˆ357	(347–367)
3508	Central	ˆ306	(298–314)
3509	Central East	ˆ339	(330–347)
3510	South East	ˆ424	(407–441)
3511	Champlain	ˆ386	(376–397)
3512	North Simcoe Muskoka	ˆ478	(459–497)
3513	North East	ˆ637	(617–657)
3514	North West	ˆ801	(765–836)
Manitoba		**ˆ621**	**(607–634)**
4610	Winnipeg	ˆ457	(442–472)
4615	Brandon	ˆ602	(539–666)
4625	South Eastman	ˆ618	(558–677)
4630	Interlake	ˆ681	(623–740)
4640	Central	ˆ726	(676–775)
4645	Assiniboine	ˆ736	(673–799)

Map Code	Health Region	Injury Hospitalization 2010–2011 Age-Standardized Rate per 100,000	95% CI
Saskatchewan		**772**	**(756–788)**
4701	Sun Country	1,061	(975–1,146)
4702	Five Hills	815	(739–891)
4704	Regina	772	(739–805)
4705	Sunrise	1,002	(919–1,085)
4706	Saskatoon	560	(535–585)
4709	Prince Albert	721	(661–781)
4710	Prairie North	868	(799–936)
Alberta		**698**	**(690–707)**
4831	South Zone	825	(792–858)
4832	Calgary Zone	557	(544–569)
4833	Central Zone	875	(848–901)
4834	Edmonton Zone	627	(613–641)
4835	North Zone	1,048	(1,016–1,079)
British Columbia		**554**	**(547–560)**
5911	East Kootenay	779	(718–839)
5912	Kootenay Boundary	705	(645–764)
5913	Okanagan	645	(619–672)
5914	Thompson/Cariboo/Shuswap	684	(650–718)
5921	Fraser East	634	(606–661)
5922	Fraser North	536	(519–554)
5923	Fraser South	530	(514–546)
5931	Richmond	340	(316–365)
5932	Vancouver	397	(383–412)
5933	North Shore	527	(501–553)
5941	South Vancouver Island	515	(493–538)
5942	Central Vancouver Island	618	(588–648)
5943	North Vancouver Island	676	(629–723)
5951	Northwest	1,096	(1,018–1,175)
5952	Northern Interior	812	(765–859)
5953	Northeast	667	(604–730)
Yukon		**1,156**	**(1,034–1,278)**
Northwest Territories		**1,222**	**(1,104–1,340)**
Nunavut		**1,042**	**(891–1,193)**
Canada		**514**	**(512–516)**

Injury hospitalization

Age-standardized rate of acute care hospitalization due to injury resulting from the transfer of energy (excludes poisoning and other non-traumatic injuries), per 100,000 population. This indicator contributes to an understanding of the adequacy and effectiveness of injury prevention efforts, including public education, product development and use, community and road design, and prevention and treatment resources.

Sources: National Trauma Registry, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	Hospitalized Acute Myocardial Infarction Event 2010–2011		Hospitalized Stroke Event 2010–2011	
		Age-Standardized Rate per 100,000	95% CI	Age-Standardized Rate per 100,000	95% CI
Newfoundland and Labrador		**†320**	**(304–335)**	**†146**	**(136–157)**
1011	Eastern	†323	(302–343)	†157	(143–172)
1012	Central	†364	(326–401)	133	(110–155)
1013	Western	†267	(232–302)	133	(109–157)
Prince Edward Island		**†312**	**(283–340)**	**128**	**(110–146)**
Nova Scotia		**†260**	**(250–270)**	**122**	**(115–129)**
1211	South Shore	†334	(292–377)	†175	(145–204)
1212	South West Nova	†309	(267–351)	128	(102–154)
1223	Annapolis Valley	†273	(239–307)	115	(93–138)
1234	Colchester East Hants	†317	(276–358)	150	(123–178)
1258	Cape Breton	†338	(306–369)	126	(108–145)
1269	Capital	†187	(173–200)	†113	(102–124)
New Brunswick		**†266**	**(254–277)**	**†133**	**(125–141)**
1301	Zone 1 (Moncton area)	†255	(233–277)	122	(107–137)
1302	Zone 2 (Saint John area)	†234	(211–257)	123	(107–139)
1303	Zone 3 (Fredericton area)	†339	(311–367)	127	(110–144)
1306	Zone 6 (Bathurst area)	228	(197–259)	125	(102–148)
Quebec		**†214**	**(211–217)**	..	..
2401	Bas-Saint-Laurent	226	(206–245)	..	..
2402	Saguenay–Lac-Saint-Jean	217	(200–234)	..	..
2403	Capitale-Nationale	207	(197–218)	..	..
2404	Mauricie et Centre-du-Québec	†252	(239–266)	..	..
2405	Estrie	†285	(267–303)	..	..
2406	Montréal	†194	(188–200)	..	..
2407	Outaouais	217	(201–233)	..	..
2408	Abitibi-Témiscamingue	†270	(243–297)	..	..
2409	Côte-Nord	238	(206–270)	..	..
2411	Gaspésie–Îles-de-la-Madeleine	†378	(342–415)	..	..
2412	Chaudière-Appalaches	198	(184–211)	..	..
2413	Laval	†165	(152–177)	..	..
2414	Lanaudière	†273	(257–289)	..	..
2415	Laurentides	†186	(174–197)	..	..
2416	Montérégie	210	(202–217)	..	..
Ontario		**207**	**(205–210)**	**125**	**(123–127)**
3501	Erie St. Clair	†250	(237–262)	†142	(133–151)
3502	South West	210	(201–220)	126	(119–133)
3503	Waterloo Wellington	200	(189–211)	124	(115–132)
3504	Hamilton Niagara Haldimand Brant	†245	(237–253)	127	(122–133)
3505	Central West	200	(190–211)	†139	(129–148)
3506	Mississauga Halton	†170	(162–178)	125	(118–132)
3507	Toronto Central	†154	(147–161)	121	(114–128)
3508	Central	†154	(148–161)	119	(113–124)
3509	Central East	†191	(183–198)	124	(118–130)
3510	South East	218	(205–230)	127	(118–137)
3511	Champlain	†196	(188–204)	†105	(99–110)
3512	North Simcoe Muskoka	†274	(259–289)	120	(110–130)
3513	North East	†330	(316–344)	†144	(135–154)
3514	North West	†327	(304–351)	†163	(146–179)
Manitoba		**†248**	**(239–257)**	**126**	**(119–133)**
4610	Winnipeg	†225	(214–237)	123	(115–132)
4615	Brandon	†144	(110–179)	107	(78–135)
4625	South Eastman	†266	(221–311)	†162	(127–197)
4630	Interlake	†305	(267–342)	106	(83–128)
4640	Central	†289	(254–323)	109	(88–129)
4645	Assiniboine	209	(175–242)	127	(101–152)

Map Code	Health Region	Hospitalized Acute Myocardial Infarction Event 2010–2011 Age-Standardized Rate per 100,000	95% CI	Hospitalized Stroke Event 2010–2011 Age-Standardized Rate per 100,000	95% CI
Saskatchewan		**209**	**(200–218)**	**128**	**(121–135)**
4701	Sun Country	✦158	(124–192)	112	(83–140)
4702	Five Hills	244	(204–285)	123	(93–152)
4704	Regina	✦189	(171–206)	127	(112–142)
4705	Sunrise	182	(149–216)	144	(113–175)
4706	Saskatoon	✦180	(164–196)	125	(112–138)
4709	Prince Albert	✦252	(216–287)	140	(111–168)
4710	Prairie North	✦283	(239–328)	141	(111–171)
Alberta		**✦196**	**(191–201)**	**✦119**	**(115–123)**
4831	South Zone	225	(207–244)	112	(99–125)
4832	Calgary Zone	✦159	(151–167)	✦113	(106–120)
4833	Central Zone	✦249	(233–265)	131	(119–142)
4834	Edmonton Zone	✦186	(177–195)	118	(111–125)
4835	North Zone	✦259	(240–277)	137	(124–151)
British Columbia		**✦163**	**(159–167)**	**✦119**	**(116–122)**
5911	East Kootenay	✦246	(213–280)	107	(85–130)
5912	Kootenay Boundary	✦265	(232–297)	135	(112–158)
5913	Okanagan	✦183	(170–196)	129	(119–140)
5914	Thompson/Cariboo/Shuswap	210	(191–228)	122	(108–137)
5921	Fraser East	197	(180–214)	✦145	(131–160)
5922	Fraser North	✦134	(124–144)	✦138	(127–148)
5923	Fraser South	✦158	(148–167)	117	(109–125)
5931	Richmond	✦125	(109–142)	109	(94–125)
5932	Vancouver	✦136	(127–146)	✦112	(103–120)
5933	North Shore	✦159	(145–173)	113	(101–125)
5941	South Vancouver Island	✦118	(108–129)	✦101	(91–111)
5942	Central Vancouver Island	✦187	(172–202)	114	(102–126)
5943	North Vancouver Island	✦184	(161–207)	125	(106–144)
5951	Northwest	212	(175–248)	133	(104–162)
5952	Northern Interior	204	(178–229)	111	(91–131)
5953	Northeast	209	(167–252)	117	(84–150)
Yukon		**213**	**(149–278)**	**126**	**(76–176)**
Northwest Territories		**✦299**	**(219–380)**	**✦253**	**(177–328)**
Nunavut		**200**	**(86–314)**	**184**	**(70–299)**
Canada		**209**	**(207–210)**	**124**	**(123–125)**

Hospitalized acute myocardial infarction event

Age-standardized rate of new acute myocardial infarction (AMI) events admitted to an acute care hospital, per 100,000 population age 20 and older. New event is defined as a first-ever hospitalization for an AMI or a recurrent hospitalized AMI occurring more than 28 days after the admission for the previous event in the reference period. AMI is one of the leading causes of morbidity and death. This indicator is important for planning and evaluating preventive strategies, allocating health resources and estimating costs.

Sources: Discharge Abstract Database, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Hospitalized stroke event

Age-standardized rate of new stroke events admitted to an acute care hospital, per 100,000 population age 20 and older. New event is defined as a first-ever hospitalization for stroke or a recurrent hospitalized stroke occurring more than 28 days after the admission for the previous event in the reference period. Stroke is one of the leading causes of long-term disability and death. This indicator is important for planning and evaluating preventive strategies, allocating health resources and estimating costs.

Note: Rates for Quebec are not available due to differences in data collection; the Canada rate does not include Quebec.

Source: Discharge Abstract Database, Canadian Institute for Health Information.

Hospitalized Acute Myocardial Infarction Event, 2010–2011							
	Neighbourhood Income Quintile†						
	Q1 95% CI	Q2 95% CI	Q3 95% CI	Q4 95% CI	Q5 95% CI	Disparity Rate Ratio 95% CI	Potential Rate Reduction (%) 95% CI
N.L.	364 *(328–400)*	312 *(278–346)*	275 *(243–306)*	313 *(279–348)*	295 *(260–331)*	++1.23 *(1.05–1.44)*	5.3% *(-5.1%–14.9%)*
P.E.I.	351 *(276–427)*	326 *(255–396)*	369 *(295–443)*	392 *(315–470)*	259 *(201–316)*	1.36 *(1.00–1.85)*	++23.7% *(6.4%–38.2%)*
N.S.	282 *(258–306)*	288 *(264–312)*	273 *(250–297)*	250 *(228–272)*	228 *(205–250)*	++1.24 *(1.09–1.41)*	++14.1% *(6.0%–21.5%)*
N.B.	304 *(276–333)*	283 *(257–310)*	285 *(257–313)*	242 *(218–267)*	247 *(220–275)*	++1.23 *(1.06–1.42)*	9.4% *(-0.1%–18.1%)*
Que.	248 *(240–255)*	227 *(220–234)*	213 *(206–221)*	218 *(211–226)*	188 *(181–195)*	++1.32 *(1.25–1.38)*	++14.3% *(11.3%–17.3%)*
Ont.	254 *(247–260)*	224 *(218–230)*	222 *(216–228)*	198 *(192–203)*	178 *(173–183)*	++1.43 *(1.37–1.48)*	++17.2% *(15.0%–19.4%)*
Man.	315 *(288–342)*	274 *(252–296)*	232 *(212–251)*	243 *(222–263)*	220 *(200–239)*	++1.43 *(1.27–1.62)*	++14.1% *(6.9%–20.8%)*
Sask.	278 *(252–304)*	215 *(194–235)*	182 *(163–201)*	205 *(185–226)*	178 *(158–197)*	++1.56 *(1.35–1.81)*	++15.7% *(6.9%–23.8%)*
Alta.	222 *(210–234)*	201 *(190–213)*	223 *(210–236)*	194 *(182–206)*	171 *(159–182)*	++1.30 *(1.19–1.42)*	++15.6% *(10.3%–20.6%)*
B.C.	192 *(183–202)*	178 *(169–186)*	177 *(168–186)*	158 *(150–167)*	139 *(131–147)*	++1.38 *(1.28–1.49)*	++17.6% *(13.2%–21.8%)*
Y.T.	*	*	*	*	*	*	*
N.W.T.	*	*	*	*	*	*	*
Nun.	*	*	*	*	*	*	*
Canada	**247** ***(243–251)***	**222** ***(219–226)***	**217** ***(213–220)***	**203** ***(200–207)***	**180** ***(177–184)***	**++1.37** ***(1.34–1.40)***	**++15.8%** ***(14.3%–17.2%)***

Injury Hospitalization, 2010–2011							
	Neighbourhood Income Quintile†						
	Q1 95% CI	Q2 95% CI	Q3 95% CI	Q4 95% CI	Q5 95% CI	Disparity Rate Ratio 95% CI	Potential Rate Reduction (%) 95% CI
N.L.	524 *(479–570)*	519 *(473–565)*	498 *(452–543)*	581 *(531–630)*	512 *(468–557)*	1.02 *(0.91–1.16)*	2.7% *(-5.1%–10.0%)*
P.E.I.	773 *(665–881)*	620 *(525–715)*	701 *(601–801)*	616 *(522–710)*	559 *(470–648)*	++1.38 *(1.12–1.71)*	++14.3% *(1.2%–26.0%)*
N.S.	563 *(529–596)*	531 *(498–563)*	491 *(459–522)*	492 *(460–524)*	473 *(441–506)*	++1.19 *(1.09–1.30)*	++7.2% *(1.3%–12.7%)*
N.B.	667 *(625–709)*	640 *(598–682)*	613 *(572–653)*	587 *(547–628)*	541 *(503–579)*	++1.23 *(1.12–1.35)*	++11.3% *(5.5%–16.8%)*
Que.	576 *(564–587)*	549 *(538–560)*	526 *(515–537)*	538 *(526–550)*	480 *(468–491)*	++1.20 *(1.16–1.24)*	++10.2% *(8.3%–12.1%)*
Ont.	481 *(473–489)*	414 *(407–422)*	418 *(410–426)*	407 *(399–414)*	397 *(390–405)*	++1.21 *(1.18–1.24)*	++6.2% *(4.6%–7.8%)*
Man.	1,079 *(1,036–1,122)*	601 *(570–631)*	571 *(541–601)*	494 *(467–522)*	532 *(501–563)*	++2.03 *(1.89–2.18)*	++18.9% *(14.6%–23.1%)*
Sask.	1,205 *(1,155–1,254)*	774 *(736–812)*	700 *(664–736)*	675 *(639–711)*	707 *(668–746)*	++1.70 *(1.59–1.82)*	++12.9% *(8.5%–17.2%)*
Alta.	869 *(847–890)*	701 *(682–720)*	713 *(693–732)*	704 *(684–724)*	679 *(659–700)*	++1.28 *(1.23–1.33)*	++7.4% *(4.9%–9.9%)*
B.C.	636 *(620–652)*	582 *(566–598)*	592 *(576–607)*	591 *(575–608)*	554 *(537–571)*	++1.15 *(1.10–1.19)*	++6.3% *(3.7%–8.8%)*
Y.T.	*	*	*	*	*	*	*
N.W.T.	*	*	*	*	*	*	*
Nun.	*	*	*	*	*	*	*
Canada	**618** ***(612–623)***	**528** ***(523–534)***	**521** ***(516–526)***	**515** ***(509–520)***	**487** ***(482–492)***	**++1.27** ***(1.25–1.29)***	**++8.8%** ***(7.9%–9.7%)***

† Age-standardized rates per 100,000 population.

Neighbourhood income quintile

Small geographic areas divided into five roughly equal population groups. Quintile 1 refers to the least affluent neighbourhoods, while quintile 5 refers to the most affluent. The quintiles were constructed according to the methods developed at Statistics Canada.

Disparity rate ratio (RR)

Ratio of a health indicator rate for the least affluent neighbourhood income quintile (Q1) to the rate for the most affluent neighbourhood income quintile (Q5). It provides a summary measure of the magnitude of the socio-economic disparity for a health indicator in a jurisdiction. It should be evaluated together with other measures, such as the indicator rate for each neighbourhood income quintile as well as the potential rate reduction. The 95% confidence interval (CI) is provided to assist interpretation. When the 95% CI does not contain a value of 1, RR indicates a statistically significant disparity between Q1 and Q5 rates within the jurisdiction, as indicated by the ** symbol.

Potential rate reduction (PRR)

Reduction in a health indicator rate that would occur in the hypothetical scenario that each neighbourhood income group experienced the rate of the most affluent neighbourhood income quintile (Q5), expressed as a percentage. This measure is based on the concept of the excess morbidity or mortality that could be prevented and provides a summary measure of the overall effect of socio-economic disparities on a health indicator. It should be evaluated together with other measures, such as the indicator rate for each neighbourhood income quintile as well as the disparity rate ratio. The 95% CI is provided to assist interpretation. When the 95% CI does not contain a value of 0, PRR indicates a statistically significant potential reduction in the overall indicator rate within the jurisdiction, as indicated by the ** symbol.

Self-Reported Health Behaviours				
	Smoking (Age 12+) 2010		Heavy Drinking (Age 12+) 2010	
	%	95% CI	%	95% CI
N.L.	23.0	(20.4–25.5)	23.8	(21.4–26.1)
P.E.I.	23.6	(19.8–27.3)	18.1	(14.7–21.4)
N.S.	23.2	(20.6–25.8)	20.2	(17.8–22.6)
N.B.	22.5	(20.4–24.6)	20.6	(18.5–22.8)
Que.	23.3	(22.1–24.6)	17.7	(16.7–18.8)
Ont.	19.3	(18.4–20.3)	16.1	(15.3–16.9)
Man.	18.8	(16.5–21.0)	19.0	(16.8–21.1)
Sask.	22.8	(20.1–25.5)	18.9	(16.4–21.3)
Alta.	22.7	(20.9–24.4)	19.5	(17.8–21.2)
B.C.	17.4	(16.0–18.8)	15.7	(14.4–17.1)
Y.T.	27.9	(23.8–31.9)	26.3	(21.8–30.7)
N.W.T.	41.7	(36.0–47.4)	35.5	(30.8–40.3)
Nun.	54.4	(48.0–60.8)	12.9 ▼	(7.6–18.1)
Canada	**20.8**	**(20.2–21.3)**	**17.3**	**(16.9–17.8)**

	Fruit and Vegetable Consumption (Age 12+) (5+ per Day) 2010		Physical Activity During Leisure Time (Age 12+) (Active/Moderately Active) 2010	
	%	95% CI	%	95% CI
N.L.	28.6	(25.7–31.4)	47.8	(45.0–50.5)
P.E.I.	35.4	(31.5–39.3)	50.2	(46.1–54.4)
N.S.	34.9	(32.2–37.7)	53.4	(50.4–56.4)
N.B.	37.5	(34.9–40.2)	52.0	(49.0–54.9)
Que.	50.4	(49.0–51.8)	49.7	(48.2–51.3)
Ont.	42.8	(41.4–44.2)	50.4	(49.2–51.7)
Man.	34.6	(31.6–37.6)	53.8	(50.4–57.3)
Sask.	37.9	(35.4–40.3)	50.5	(47.8–53.3)
Alta.	40.7	(38.6–42.9)	55.9	(53.7–58.2)
B.C.	42.3	(40.4–44.3)	58.3	(56.6–59.9)
Y.T.	52.5	(46.8–58.3)	61.7	(56.1–67.3)
N.W.T.	26.9	(22.1–31.6)	50.5	(44.7–56.3)
Nun.	22.8	(16.1–29.4)	46.1	(34.6–57.5)
Canada	**43.3**	**(42.5–44.0)**	**52.1**	**(51.4–52.8)**

	Bicycle Helmet Use (Age 12+) 2010		Exposure to Second-Hand Smoke (Age 12+) (At Home) 2010	
	%	95% CI	%	95% CI
N.L.	41.1	(33.7–48.5)	6.5	(4.7–8.3)
P.E.I.	53.5	(45.6–61.4)	5.0 ▼	(3.1–6.9)
N.S.	68.0	(62.2–73.7)	8.6	(6.6–10.7)
N.B.	53.1	(48.2–58.1)	6.6	(5.1–8.1)
Que.	28.4	(26.4–30.4)	8.7	(7.8–9.6)
Ont.	33.8	(32.0–35.6)	5.0	(4.5–5.6)
Man.	19.9	(16.3–23.5)	5.7	(4.2–7.3)
Sask.	24.1	(20.3–27.9)	6.3	(4.8–7.8)
Alta.	46.6	(43.2–50.0)	5.8	(4.6–7.0)
B.C.	61.3	(58.3–64.3)	2.8	(2.2–3.4)
Y.T.	57.1	(47.5–66.7)	7.3 ▼	(4.8–9.8)
N.W.T.	28.7	(22.7–34.7)	6.8 ▼	(3.2–10.4)
Nun.	*	* *	*	* *
Canada	**37.3**	**(36.3–38.3)**	**5.9**	**(5.5–6.2)**

The data presented here represents a sample of a wider range of the non-medical determinants of health that are available in the *Health Indicators* e-publication.

www.cihi.ca or www.statcan.gc.ca

Smoking

Proportion of household population age 12 and older that reported being a current smoker on either a daily or occasional basis.

Source: Canadian Community Health Survey, Statistics Canada.

Heavy drinking

Proportion of household population age 12 and older that reported drinking five or more drinks on at least one occasion per month in the past 12 months.

Source: Canadian Community Health Survey, Statistics Canada.

Fruit and vegetable consumption

Proportion of household population age 12 and older that reported consuming fruits and vegetables five or more times per day, on average.

Source: Canadian Community Health Survey, Statistics Canada.

Physical activity during leisure time

Proportion of household population age 12 and older that reported active or moderately active levels of physical activity, based on their responses to questions about the frequency, duration and intensity of their participation in leisure-time physical activity over the past three months.

Source: Canadian Community Health Survey, Statistics Canada.

Bicycle helmet use

Proportion of household population age 12 and older that reported always wearing a helmet when riding a bicycle in the last 12 months.

Source: Canadian Community Health Survey, Statistics Canada.

Exposure to second-hand smoke at home

Proportion of non-smoking population age 12 and older that reported that at least one person smoked inside their home every day or almost every day.

Source: Canadian Community Health Survey, Statistics Canada.

Map Code	Health Region	Potentially Avoidable Mortality 2006–2008 Age-Standardized Mortality Rate per 100,000	95% CI	Age-Standardized PYLL† per 100,000	95% CI
Newfoundland and Labrador		**220**	**(213–227)**	**3,967**	**(3,745–4,190)**
1011	Eastern	224	(215–234)	3,944	(3,656–4,232)
1012	Central	188	(174–203)	3,287	(2,814–3,759)
1013	Western	224	(206–242)	4,204	(3,608–4,799)
Prince Edward Island		**201**	**(188–214)**	**3,468**	**(3,104–3,832)**
Nova Scotia		**208**	**(203–213)**	**3,586**	**(3,443–3,729)**
1211	South Shore	189	(170–207)	3,577	(2,937–4,217)
1212	South West Nova	212	(193–232)	3,518	(2,974–4,061)
1223	Annapolis Valley	195	(179–211)	3,427	(2,940–3,914)
1234	Colchester East Hants	216	(198–235)	3,813	(3,281–4,344)
1258	Cape Breton	266	(250–281)	4,893	(4,399–5,388)
1269	Capital	191	(184–199)	3,130	(2,941–3,319)
New Brunswick		**195**	**(190–201)**	**3,502**	**(3,339–3,665)**
1301	Zone 1 (Moncton area)	178	(167–188)	3,416	(3,097–3,734)
1302	Zone 2 (Saint John area)	209	(197–221)	3,512	(3,191–3,833)
1303	Zone 3 (Fredericton area)	200	(188–212)	3,424	(3,097–3,751)
1306	Zone 6 (Bathurst area)	163	(148–178)	2,905	(2,433–3,377)
Quebec		**188**	**(186–189)**	**3,375**	**(3,326–3,424)**
2401	Bas-Saint-Laurent	187	(176–197)	3,805	(3,450–4,161)
2402	Saguenay–Lac-Saint-Jean	191	(182–201)	3,674	(3,387–3,961)
2403	Capitale-Nationale	174	(168–179)	3,147	(2,984–3,311)
2404	Mauricie et Centre-du-Québec	205	(198–212)	4,009	(3,782–4,237)
2405	Estrie	177	(169–185)	3,394	(3,138–3,649)
2406	Montréal	184	(181–188)	3,164	(3,072–3,255)
2407	Outaouais	216	(207–225)	3,348	(3,143–3,554)
2408	Abitibi-Témiscamingue	216	(202–229)	3,888	(3,515–4,260)
2409	Côte-Nord	235	(218–253)	4,398	(3,882–4,914)
2411	Gaspésie–Îles-de-la-Madeleine	246	(228–263)	4,940	(4,308–5,571)
2412	Chaudière-Appalaches	169	(162–176)	3,305	(3,082–3,527)
2413	Laval	162	(155–169)	2,944	(2,732–3,156)
2414	Lanaudière	197	(190–205)	3,436	(3,231–3,640)
2415	Laurentides	197	(191–204)	3,500	(3,310–3,690)
2416	Montérégie	181	(177–185)	3,160	(3,051–3,270)
Ontario		**177**	**(176–179)**	**3,159**	**(3,122–3,196)**
3501	Erie St. Clair	198	(192–204)	3,351	(3,192–3,509)
3502	South West	186	(181–191)	3,342	(3,200–3,484)
3503	Waterloo Wellington	160	(155–166)	2,772	(2,632–2,913)
3504	Hamilton Niagara Haldimand Brant	190	(186–194)	3,325	(3,212–3,439)
3505	Central West	146	(141–151)	2,846	(2,702–2,989)
3506	Mississauga Halton	131	(126–135)	2,288	(2,183–2,392)
3507	Toronto Central	164	(160–168)	2,942	(2,829–3,056)
3508	Central	124	(121–127)	2,269	(2,179–2,360)
3509	Central East	163	(159–167)	2,957	(2,850–3,064)
3510	South East	203	(196–210)	3,673	(3,458–3,889)
3511	Champlain	165	(161–169)	2,812	(2,700–2,924)
3512	North Simcoe Muskoka	192	(185–199)	3,430	(3,218–3,642)
3513	North East	230	(223–237)	4,188	(3,976–4,399)
3514	North West	248	(236–259)	5,415	(5,042–5,788)
Manitoba		**226**	**(221–231)**	**4,492**	**(4,346–4,637)**
4610	Winnipeg	210	(204–216)	3,986	(3,805–4,168)
4615	Brandon	216	(192–240)	3,710	(3,114–4,307)
4625	South Eastman	159	(140–178)	2,585	(2,145–3,025)
4630	Interlake	241	(222–260)	4,668	(4,050–5,285)
4640	Central	210	(194–227)	4,203	(3,731–4,675)
4645	Assiniboine	236	(215–256)	4,843	(4,171–5,515)

Map Code	Health Region	Potentially Avoidable Mortality 2006–2008 Age-Standardized Mortality Rate per 100,000	95% CI	Age-Standardized PYLL† per 100,000	95% CI
Saskatchewan		**222**	**(217–228)**	**4,552**	**(4,391–4,714)**
4701	Sun Country	197	(175–218)	3,836	(3,191–4,481)
4702	Five Hills	196	(175–217)	3,635	(3,001–4,269)
4704	Regina	208	(197–218)	4,023	(3,720–4,325)
4705	Sunrise	222	(200–244)	4,462	(3,719–5,205)
4706	Saskatoon	198	(189–208)	3,810	(3,549–4,071)
4709	Prince Albert	268	(247–290)	5,940	(5,244–6,636)
4710	Prairie North	272	(249–296)	6,177	(5,461–6,893)
Alberta		**198**	**(195–201)**	**3,870**	**(3,795–3,945)**
4831	South Zone	203	(194–213)	4,251	(3,961–4,540)
4832	Calgary Zone	161	(157–166)	2,995	(2,887–3,104)
4833	Central Zone	221	(213–229)	4,416	(4,183–4,650)
4834	Edmonton Zone	189	(184–194)	3,541	(3,414–3,668)
4835	North Zone	243	(234–253)	4,908	(4,665–5,150)
British Columbia		**172**	**(170–174)**	**3,143**	**(3,080–3,205)**
5911	East Kootenay	214	(196–232)	4,249	(3,666–4,831)
5912	Kootenay Boundary	205	(188–223)	3,623	(3,107–4,139)
5913	Okanagan	172	(164–180)	3,228	(2,982–3,474)
5914	Thompson/Cariboo/Shuswap	213	(202–224)	4,245	(3,898–4,591)
5921	Fraser East	199	(190–209)	3,572	(3,316–3,827)
5922	Fraser North	153	(147–159)	2,516	(2,373–2,660)
5923	Fraser South	164	(158–169)	2,966	(2,816–3,116)
5931	Richmond	113	(104–121)	2,041	(1,778–2,304)
5932	Vancouver	157	(151–162)	2,965	(2,805–3,125)
5933	North Shore	147	(139–155)	2,704	(2,454–2,954)
5941	South Vancouver Island	156	(148–163)	2,975	(2,752–3,197)
5942	Central Vancouver Island	188	(178–197)	3,716	(3,404–4,027)
5943	North Vancouver Island	196	(182–210)	3,613	(3,181–4,046)
5951	Northwest	247	(226–268)	4,475	(3,910–5,041)
5952	Northern Interior	237	(222–252)	3,994	(3,626–4,363)
5953	Northeast	242	(219–265)	4,766	(4,162–5,370)
Yukon		**270**	**(234–305)**	**5,335**	**(4,374–6,296)**
Northwest Territories		**291**	**(253–328)**	**5,914**	**(5,088–6,740)**
Nunavut		**474**	**(405–543)**	**9,664**	**(8,424–10,905)**
Canada		**187**	**(186–188)**	**3,428**	**(3,404–3,452)**

† Potential years of life lost.

Potentially avoidable mortality

Deaths before age 75 that could potentially have been avoided through all levels of prevention (primary, secondary, tertiary). Expressed as the age-standardized mortality rate and potential years of life lost (PYLL) per 100,000 population. PYLL is the number of years of potential life not lived when a person dies before age 75. Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions. It serves to focus attention on the portion of population health attainment that can potentially be influenced by the health system.

Note: Rates are based on three years of pooled data.

Source: Vital Statistics—Death Database, Statistics Canada.

Map Code	Health Region	Avoidable Mortality From Preventable Causes 2006–2008 Age-Standardized Mortality Rate per 100,000	95% CI	Age-Standardized PYLL† per 100,000	95% CI
Newfoundland and Labrador		**132**	**(127–138)**	**2,285**	**(2,133–2,437)**
1011	Eastern	133	(126–140)	2,124	(1,943–2,306)
1012	Central	114	(102–125)	2,061	(1,702–2,420)
1013	Western	140	(126–154)	2,566	(2,138–2,994)
Prince Edward Island		**126**	**(116–136)**	**2,174**	**(1,903–2,445)**
Nova Scotia		**136**	**(132–140)**	**2,359**	**(2,249–2,469)**
1211	South Shore	132	(117–148)	2,629	(2,091–3,167)
1212	South West Nova	146	(129–162)	2,550	(2,088–3,013)
1223	Annapolis Valley	130	(116–143)	2,390	(1,995–2,786)
1234	Colchester East Hants	143	(128–158)	2,509	(2,099–2,920)
1258	Cape Breton	166	(153–178)	3,063	(2,691–3,435)
1269	Capital	123	(117–129)	2,002	(1,859–2,145)
New Brunswick		**134**	**(129–138)**	**2,393**	**(2,267–2,520)**
1301	Zone 1 (Moncton area)	123	(115–132)	2,328	(2,086–2,570)
1302	Zone 2 (Saint John area)	143	(133–153)	2,367	(2,117–2,618)
1303	Zone 3 (Fredericton area)	135	(125–145)	2,268	(2,021–2,516)
1306	Zone 6 (Bathurst area)	110	(98–123)	2,088	(1,704–2,471)
Quebec		**124**	**(122–125)**	**2,149**	**(2,113–2,184)**
2401	Bas-Saint-Laurent	131	(122–140)	2,690	(2,404–2,975)
2402	Saguenay–Lac-Saint-Jean	128	(120–135)	2,391	(2,175–2,606)
2403	Capitale-Nationale	115	(111–120)	2,002	(1,885–2,118)
2404	Mauricie et Centre-du-Québec	141	(136–147)	2,693	(2,521–2,864)
2405	Estrie	121	(114–128)	2,276	(2,080–2,472)
2406	Montréal	117	(114–119)	1,877	(1,815–1,940)
2407	Outaouais	145	(138–152)	2,273	(2,112–2,433)
2408	Abitibi-Témiscamingue	147	(136–159)	2,672	(2,371–2,973)
2409	Côte-Nord	161	(147–175)	2,911	(2,520–3,302)
2411	Gaspésie–Îles-de-la-Madeleine	167	(153–182)	3,209	(2,760–3,659)
2412	Chaudière-Appalaches	114	(109–120)	2,142	(1,979–2,305)
2413	Laval	103	(97–108)	1,678	(1,539–1,818)
2414	Lanaudière	135	(129–141)	2,299	(2,142–2,457)
2415	Laurentides	132	(126–137)	2,258	(2,117–2,399)
2416	Montérégie	117	(114–120)	1,990	(1,910–2,071)
Ontario		**110**	**(109–111)**	**1,851**	**(1,826–1,875)**
3501	Erie St. Clair	126	(121–131)	2,084	(1,968–2,199)
3502	South West	118	(114–121)	2,037	(1,936–2,137)
3503	Waterloo Wellington	100	(96–104)	1,665	(1,566–1,764)
3504	Hamilton Niagara Haldimand Brant	121	(118–124)	2,047	(1,967–2,127)
3505	Central West	86	(82–90)	1,486	(1,396–1,577)
3506	Mississauga Halton	77	(74–80)	1,235	(1,167–1,303)
3507	Toronto Central	101	(98–104)	1,693	(1,619–1,767)
3508	Central	72	(70–75)	1,204	(1,147–1,260)
3509	Central East	101	(98–104)	1,644	(1,576–1,712)
3510	South East	131	(126–137)	2,203	(2,058–2,348)
3511	Champlain	100	(97–104)	1,614	(1,540–1,688)
3512	North Simcoe Muskoka	123	(117–128)	2,111	(1,961–2,262)
3513	North East	149	(144–155)	2,615	(2,466–2,765)
3514	North West	167	(157–176)	3,759	(3,459–4,058)
Manitoba		**143**	**(139–147)**	**2,813**	**(2,703–2,922)**
4610	Winnipeg	130	(125–135)	2,311	(2,188–2,434)
4615	Brandon	139	(120–158)	2,325	(1,874–2,777)
4625	South Eastman	102	(86–117)	1,562	(1,237–1,886)
4630	Interlake	152	(137–168)	3,032	(2,544–3,520)
4640	Central	132	(119–145)	2,596	(2,235–2,957)
4645	Assiniboine	155	(138–172)	3,298	(2,752–3,843)

Map Code	Health Region	Avoidable Mortality From Preventable Causes 2006–2008 Age-Standardized Mortality Rate per 100,000	95% CI	Age-Standardized PYLL† per 100,000	95% CI
Saskatchewan		**142**	**(138–147)**	**3,020**	**(2,892–3,149)**
4701	Sun Country	128	(110–145)	2,663	(2,124–3,203)
4702	Five Hills	115	(98–132)	2,307	(1,794–2,820)
4704	Regina	132	(124–141)	2,551	(2,324–2,778)
4705	Sunrise	141	(123–158)	2,933	(2,344–3,521)
4706	Saskatoon	123	(115–130)	2,426	(2,225–2,627)
4709	Prince Albert	174	(156–192)	4,083	(3,504–4,662)
4710	Prairie North	184	(165–203)	4,413	(3,804–5,022)
Alberta		**131**	**(129–133)**	**2,532**	**(2,475–2,589)**
4831	South Zone	138	(130–146)	2,872	(2,645–3,100)
4832	Calgary Zone	106	(102–109)	1,924	(1,843–2,004)
4833	Central Zone	146	(140–153)	2,970	(2,784–3,156)
4834	Edmonton Zone	123	(119–127)	2,230	(2,138–2,323)
4835	North Zone	165	(157–172)	3,451	(3,249–3,652)
British Columbia		**114**	**(112–116)**	**2,078**	**(2,031–2,125)**
5911	East Kootenay	155	(140–171)	3,277	(2,762–3,791)
5912	Kootenay Boundary	142	(127–157)	2,727	(2,268–3,185)
5913	Okanagan	116	(110–122)	2,175	(1,987–2,364)
5914	Thompson/Cariboo/Shuswap	148	(139–156)	3,021	(2,741–3,301)
5921	Fraser East	134	(126–142)	2,452	(2,245–2,658)
5922	Fraser North	103	(98–108)	1,645	(1,539–1,751)
5923	Fraser South	104	(100–109)	1,855	(1,745–1,965)
5931	Richmond	70	(63–77)	1,192	(1,020–1,363)
5932	Vancouver	101	(97–106)	1,810	(1,706–1,914)
5933	North Shore	97	(90–104)	1,812	(1,619–2,005)
5941	South Vancouver Island	102	(96–108)	1,944	(1,785–2,102)
5942	Central Vancouver Island	128	(121–136)	2,537	(2,293–2,782)
5943	North Vancouver Island	133	(122–144)	2,447	(2,117–2,778)
5951	Northwest	175	(157–193)	3,309	(2,820–3,797)
5952	Northern Interior	160	(148–172)	2,733	(2,441–3,024)
5953	Northeast	160	(141–179)	3,259	(2,773–3,744)
Yukon		**184**	**(154–213)**	**3,796**	**(3,025–4,568)**
Northwest Territories		**190**	**(160–219)**	**4,090**	**(3,414–4,767)**
Nunavut		**344**	**(285–404)**	**6,837**	**(5,791–7,883)**
Canada		**120**	**(120–121)**	**2,141**	**(2,124–2,159)**

† Potential years of life lost.

Avoidable mortality from preventable causes

Mortality from preventable causes is a subset of potentially avoidable mortality, representing deaths before age 75 that could potentially have been prevented through primary prevention efforts. Expressed as the age-standardized mortality rate and potential years of life lost (PYLL) per 100,000 population. PYLL is the number of years of potential life not lived when a person dies before age 75. This indicator informs efforts to reduce the number of initial cases (that is, incidence reduction); through these efforts, deaths can be prevented by avoiding new cases altogether.

Note: Rates are based on three years of pooled data.

Source: Vital Statistics—Death Database, Statistics Canada.

Map Code	Health Region	Avoidable Mortality From Treatable Causes 2006–2008 Age-Standardized Mortality Rate per 100,000	95% CI	Age-Standardized PYLL† per 100,000	95% CI
Newfoundland and Labrador		**88**	**(83–92)**	**1,682**	**(1,520–1,845)**
1011	Eastern	91	(85–97)	1,819	(1,595–2,043)
1012	Central	74	(65–83)	1,200	(902–1,498)
1013	Western	84	(73–95)	1,616	(1,206–2,025)
Prince Edward Island		**75**	**(67–83)**	**1,294**	**(1,052–1,537)**
Nova Scotia		**72**	**(69–75)**	**1,227**	**(1,135–1,318)**
1211	South Shore	56	(46–66)	925	(584–1,267)
1212	South West Nova	67	(56–77)	967	(681–1,254)
1223	Annapolis Valley	65	(56–75)	1,036	(751–1,322)
1234	Colchester East Hants	74	(63–84)	1,303	(966–1,641)
1258	Cape Breton	100	(90–109)	1,803	(1,482–2,125)
1269	Capital	68	(63–73)	1,125	(1,001–1,249)
New Brunswick		**61**	**(58–64)**	**1,108**	**(1,005–1,212)**
1301	Zone 1 (Moncton area)	54	(49–60)	1,088	(881–1,295)
1302	Zone 2 (Saint John area)	66	(59–73)	1,145	(944–1,346)
1303	Zone 3 (Fredericton area)	65	(58–72)	1,145	(933–1,357)
1306	Zone 6 (Bathurst area)	52	(44–61)	*802	(530–1,075)
Quebec		**64**	**(63–65)**	**1,227**	**(1,193–1,260)**
2401	Bas-Saint-Laurent	56	(50–61)	1,116	(904–1,328)
2402	Saguenay–Lac-Saint-Jean	64	(59–69)	1,283	(1,094–1,473)
2403	Capitale-Nationale	58	(55–62)	1,146	(1,030–1,261)
2404	Mauricie et Centre-du-Québec	64	(60–67)	1,316	(1,167–1,466)
2405	Estrie	56	(52–61)	1,118	(954–1,282)
2406	Montréal	68	(66–70)	1,286	(1,219–1,354)
2407	Outaouais	71	(66–76)	1,076	(948–1,204)
2408	Abitibi-Témiscamingue	68	(61–76)	1,216	(996–1,435)
2409	Côte-Nord	74	(65–84)	1,487	(1,150–1,824)
2411	Gaspésie–Îles-de-la-Madeleine	78	(68–88)	1,731	(1,287–2,174)
2412	Chaudière-Appalaches	55	(51–59)	1,163	(1,011–1,314)
2413	Laval	60	(55–64)	1,265	(1,106–1,425)
2414	Lanaudière	62	(58–66)	1,130	(1,001–1,260)
2415	Laurentides	66	(62–69)	1,242	(1,114–1,369)
2416	Montérégie	64	(62–66)	1,170	(1,096–1,244)
Ontario		**67**	**(66–68)**	**1,308**	**(1,281–1,335)**
3501	Erie St. Clair	72	(68–76)	1,267	(1,158–1,376)
3502	South West	68	(65–71)	1,305	(1,204–1,406)
3503	Waterloo Wellington	60	(57–64)	1,107	(1,008–1,207)
3504	Hamilton Niagara Haldimand Brant	69	(67–72)	1,279	(1,199–1,359)
3505	Central West	60	(57–63)	1,360	(1,248–1,471)
3506	Mississauga Halton	53	(51–56)	1,053	(974–1,132)
3507	Toronto Central	63	(60–66)	1,249	(1,164–1,335)
3508	Central	51	(49–54)	1,066	(995–1,136)
3509	Central East	62	(60–65)	1,314	(1,231–1,396)
3510	South East	72	(68–76)	1,471	(1,311–1,630)
3511	Champlain	65	(62–67)	1,198	(1,114–1,282)
3512	North Simcoe Muskoka	69	(65–74)	1,319	(1,169–1,468)
3513	North East	81	(77–85)	1,573	(1,423–1,722)
3514	North West	81	(74–87)	1,656	(1,434–1,879)
Manitoba		**83**	**(80–86)**	**1,679**	**(1,583–1,775)**
4610	Winnipeg	81	(77–84)	1,676	(1,542–1,809)
4615	Brandon	77	(63–91)	1,365	(978–1,751)
4625	South Eastman	58	(46–69)	1,023	(725–1,322)
4630	Interlake	88	(77–100)	1,636	(1,257–2,015)
4640	Central	78	(68–88)	1,607	(1,303–1,911)
4645	Assiniboine	81	(69–92)	1,545	(1,152–1,939)

Map Code	Health Region	Avoidable Mortality From Treatable Causes 2006–2008 Age-Standardized Mortality Rate per 100,000	95% CI	Age-Standardized PYLL† per 100,000	95% CI
Saskatchewan		**80**	**(77–83)**	**1,532**	**(1,434–1,630)**
4701	Sun Country	68	(56–81)	1,154	(803–1,504)
4702	Five Hills	81	(67–94)	1,302	(936–1,668)
4704	Regina	76	(69–82)	1,472	(1,271–1,672)
4705	Sunrise	81	(68–94)	1,530	(1,076–1,984)
4706	Saskatoon	76	(70–81)	1,384	(1,218–1,551)
4709	Prince Albert	94	(82–107)	1,857	(1,471–2,243)
4710	Prairie North	88	(75–101)	1,747	(1,372–2,122)
Alberta		**67**	**(66–69)**	**1,339**	**(1,290–1,387)**
4831	South Zone	66	(60–71)	1,378	(1,199–1,557)
4832	Calgary Zone	55	(53–58)	1,072	(999–1,144)
4833	Central Zone	75	(70–80)	1,446	(1,305–1,588)
4834	Edmonton Zone	66	(63–68)	1,311	(1,224–1,398)
4835	North Zone	79	(73–84)	1,457	(1,322–1,592)
British Columbia		**58**	**(56–59)**	**1,065**	**(1,023–1,106)**
5911	East Kootenay	59	(49–68)	972	(699–1,245)
5912	Kootenay Boundary	63	(54–72)	897	(659–1,134)
5913	Okanagan	56	(52–60)	1,053	(895–1,210)
5914	Thompson/Cariboo/Shuswap	65	(60–71)	1,210	(1,007–1,413)
5921	Fraser East	65	(60–71)	1,120	(969–1,271)
5922	Fraser North	50	(47–54)	872	(775–968)
5923	Fraser South	60	(56–63)	1,111	(1,008–1,213)
5931	Richmond	43	(37–48)	850	(651–1,048)
5932	Vancouver	56	(52–59)	1,155	(1,033–1,276)
5933	North Shore	50	(45–55)	892	(733–1,052)
5941	South Vancouver Island	53	(49–58)	1,028	(872–1,185)
5942	Central Vancouver Island	59	(54–64)	1,178	(984–1,372)
5943	North Vancouver Island	63	(55–71)	1,166	(887–1,445)
5951	Northwest	72	(61–84)	1,167	(881–1,452)
5952	Northern Interior	77	(69–86)	1,262	(1,037–1,487)
5953	Northeast	83	(69–96)	1,507	(1,148–1,867)
Yukon		**86**	**(66–107)**	**1,539**	**(966–2,112)**
Northwest Territories		**100**	**(78–123)**	**1,804**	**(1,332–2,275)**
Nunavut		**130**	**(94–166)**	**2,827**	**(2,159–3,496)**
Canada		**66**	**(66–67)**	**1,286**	**(1,270–1,303)**

† Potential years of life lost.

Avoidable mortality from treatable causes

Mortality from treatable causes is a subset of potentially avoidable mortality, representing deaths before age 75 that could potentially have been avoided through secondary or tertiary prevention. Expressed as the age-standardized mortality rate and potential years of life lost (PYLL) per 100,000 population. PYLL is the number of years of potential life not lived when a person dies before age 75. The indicator informs efforts aimed at reducing the number of people who die once they have the condition, or case-fatality reduction.

Note: Rates are based on three years of pooled data.

Source: Vital Statistics—Death Database, Statistics Canada.

Map Code	Health Region	Hospitalized Hip Fracture Event 2010–2011 Age-Standardized Rate per 100,000	95% CI	Wait Time for Hip Fracture Surgery (Proportion With Surgery Within 48 Hours) 2010–2011 Risk-Adjusted Rate (%)	95% CI
Newfoundland and Labrador		**546**	**(496–596)**	**77.6**	**(73.9–81.3)**
1011	Eastern	566	(498–635)	73.1	(68.3–78.0)
1012	Central	444	(348–541)	88.2	(79.2–97.1)
1013	Western	631	(504–759)	81.5	(73.0–90.0)
Prince Edward Island		**508**	**(421–594)**	**79.6**	**(72.7–86.5)**
Nova Scotia		**478**	**(446–510)**	**79.9**	**(77.2–82.7)**
1211	South Shore	413	(307–519)	89.3	(77.7–100.0)
1212	South West Nova	448	(335–560)	93.7	(84.1–100.0)
1223	Annapolis Valley	596	(482–710)	94.0	(86.3–100.0)
1234	Colchester East Hants	483	(365–601)	70.9	(60.5–81.3)
1258	Cape Breton	527	(440–614)	85.9	(79.4–92.5)
1269	Capital	442	(389–494)	66.9	(62.0–71.9)
New Brunswick		**474**	**(438–511)**	**81.3**	**(78.1–84.4)**
1301	Zone 1 (Moncton area)	413	(350–477)	80.5	(74.5–86.6)
1302	Zone 2 (Saint John area)	522	(441–603)	83.1	(76.0–90.3)
1303	Zone 3 (Fredericton area)	583	(495–671)	78.9	(72.6–85.1)
1306	Zone 6 (Bathurst area)	320	(232–408)	93.7	(82.6–100.0)
Quebec		**399**	**(389–409)**	..	..
2401	Bas-Saint-Laurent	386	(329–443)	..	..
2402	Saguenay–Lac-Saint-Jean	340	(290–391)	..	..
2403	Capitale-Nationale	412	(378–446)	..	..
2404	Mauricie et Centre-du-Québec	383	(346–420)	..	..
2405	Estrie	351	(304–399)	..	..
2406	Montréal	442	(420–464)	..	..
2407	Outaouais	405	(348–463)	..	..
2408	Abitibi-Témiscamingue	437	(352–522)	..	..
2409	Côte-Nord	328	(232–423)	..	..
2411	Gaspésie–Îles-de-la-Madeleine	412	(323–500)	..	..
2412	Chaudière-Appalaches	376	(332–420)	..	..
2413	Laval	390	(344–437)	..	..
2414	Lanaudière	391	(343–439)	..	..
2415	Laurentides	393	(350–437)	..	..
2416	Montérégie	404	(378–430)	..	..
Ontario		**432**	**(424–441)**	**78.7**	**(77.9–79.5)**
3501	Erie St. Clair	483	(444–523)	77.3	(73.7–80.9)
3502	South West	491	(458–524)	63.8	(61.0–66.6)
3503	Waterloo Wellington	495	(453–536)	92.2	(88.8–95.6)
3504	Hamilton Niagara Haldimand Brant	443	(418–469)	80.5	(78.2–82.9)
3505	Central West	367	(329–405)	66.0	(61.6–70.5)
3506	Mississauga Halton	387	(355–419)	78.3	(74.6–82.0)
3507	Toronto Central	382	(355–409)	79.4	(76.5–82.3)
3508	Central	416	(390–441)	81.2	(78.7–83.7)
3509	Central East	413	(388–437)	77.3	(74.8–79.7)
3510	South East	482	(438–525)	81.2	(77.5–84.9)
3511	Champlain	411	(383–439)	85.9	(83.1–88.6)
3512	North Simcoe Muskoka	472	(425–519)	72.5	(68.3–76.8)
3513	North East	482	(441–523)	81.2	(77.6–84.7)
3514	North West	538	(467–609)	82.2	(76.6–87.9)
Manitoba		**504**	**(474–535)**	**87.0**	**(84.6–89.4)**
4610	Winnipeg	507	(467–547)	86.6	(83.5–89.7)
4615	Brandon	685	(515–854)	93.5	(83.1–100.0)
4625	South Eastman	325	(201–448)	*	**
4630	Interlake	457	(345–568)	94.5	(84.4–100.0)
4640	Central	413	(317–509)	78.5	(69.6–87.5)
4645	Assiniboine	467	(363–572)	90.2	(81.9–98.5)

Map Code	Health Region	Hospitalized Hip Fracture Event 2010–2011 Age-Standardized Rate per 100,000	95% CI	Wait Time for Hip Fracture Surgery (Proportion With Surgery Within 48 Hours) 2010–2011 Risk-Adjusted Rate (%)	95% CI
Saskatchewan		**✦492**	**(461–524)**	**✦77.1**	**(74.6–79.6)**
4701	Sun Country	476	(353–599)	87.7	(78.0–97.4)
4702	Five Hills	✦641	(499–783)	✦68.2	(59.9–76.6)
4704	Regina	✦528	(460–596)	82.5	(77.5–87.6)
4705	Sunrise	447	(338–557)	76.6	(67.7–85.4)
4706	Saskatoon	488	(426–549)	✦73.1	(68.0–78.1)
4709	Prince Albert	350	(253–447)	79.9	(68.8–91.0)
4710	Prairie North	342	(235–449)	74.2	(61.5–86.9)
Alberta		**✦466**	**(446–485)**	**✦83.1**	**(81.4–84.9)**
4831	South Zone	✦544	(478–610)	✦85.9	(80.9–90.8)
4832	Calgary Zone	453	(419–487)	✦86.0	(82.9–89.1)
4833	Central Zone	452	(401–502)	✦74.4	(69.8–79.0)
4834	Edmonton Zone	438	(404–471)	✦84.5	(81.4–87.7)
4835	North Zone	✦542	(471–614)	77.7	(72.1–83.4)
British Columbia		**451**	**(437–466)**	**81.0**	**(79.7–82.3)**
5911	East Kootenay	522	(410–634)	84.9	(76.2–93.6)
5912	Kootenay Boundary	459	(359–559)	✦92.4	(83.3–100.0)
5913	Okanagan	462	(417–507)	80.6	(76.7–84.5)
5914	Thompson/Cariboo/Shuswap	506	(437–574)	82.7	(76.8–88.6)
5921	Fraser East	451	(391–511)	✦70.3	(64.5–76.2)
5922	Fraser North	467	(421–513)	✦70.6	(66.6–74.6)
5923	Fraser South	431	(395–467)	✦66.3	(62.7–70.0)
5931	Richmond	✦329	(265–394)	✦88.0	(80.2–95.8)
5932	Vancouver	✦395	(355–434)	83.6	(79.7–87.6)
5933	North Shore	490	(430–549)	84.4	(79.4–89.3)
5941	South Vancouver Island	464	(417–511)	✦90.4	(86.5–94.2)
5942	Central Vancouver Island	✦517	(461–574)	✦91.3	(86.9–95.7)
5943	North Vancouver Island	530	(434–625)	✦94.7	(87.1–100.0)
5951	Northwest	561	(401–721)	✦67.5	(55.2–79.7)
5952	Northern Interior	✦552	(442–662)	87.7	(79.0–96.3)
5953	Northeast	431	(266–597)	*	**
Yukon		**382**	**(141–623)**	*****	******
Northwest Territories		**✦967**	**(565–1,369)**	**66.8**	**(47.1–86.5)**
Nunavut		*****	******	*****	******
Canada		**439**	**(434–445)**	**80.1**	

Hospitalized hip fracture event

Age-standardized rate of new hip fractures admitted to an acute care hospital, per 100,000 population age 65 and older. New event is defined as a first-ever hospitalization for hip fracture or a subsequent hip fracture occurring more than 28 days after the admission for the previous event in the reference period. Hip fractures represent a significant health burden for seniors and for the health system. As well as causing disability or death, hip fracture may have a major effect on independence and quality of life. This indicator is important for planning and evaluating preventive strategies, allocating health resources and estimating costs.

Sources: Discharge Abstract Database, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Wait time for hip fracture surgery

Proportion with surgery within 48 hours: Risk-adjusted proportion of hip fracture patients age 65 and older who underwent hip fracture surgery within 48 hours of admission. While some hip fracture patients need medical treatment to stabilize their condition before surgery, research suggests patients typically benefit from timely surgery in terms of reduced morbidity, mortality, pain and length of stay in hospital, as well as improved rehabilitation. This indicator is intended to provide a comparable measure of access to care across the country and to be used as a tool to identify opportunities for improvement, using a national data source.

Note: Rates for Quebec are not available due to differences in data collection; the Canada rate does not include Quebec.
Source: Discharge Abstract Database, Canadian Institute for Health Information.

Map Code	Health Region	Ambulatory Care Sensitive Conditions 2010–2011 Age-Standardized Rate per 100,000	95% CI	Caesarean Section 2010–2011 %	95% CI
Newfoundland and Labrador		**461**	**(443–479)**	**31.9**	**(30.5–33.2)**
1011	Eastern	408	(386–431)	31.8	(30.1–33.5)
1012	Central	527	(479–574)	33.1	(29.7–36.5)
1013	Western	530	(480–579)	31.0	(27.4–34.6)
Prince Edward Island		**515**	**(478–552)**	**31.8**	**(29.4–34.3)**
Nova Scotia		**334**	**(323–345)**	**27.2**	**(26.3–28.1)**
1211	South Shore	337	(290–384)	25.2	(20.9–29.5)
1212	South West Nova	480	(426–534)	31.4	(27.0–35.8)
1223	Annapolis Valley	316	(280–352)	26.4	(23.3–29.6)
1234	Colchester East Hants	322	(283–360)	28.6	(25.3–31.8)
1258	Cape Breton	506	(466–546)	28.1	(25.3–30.9)
1269	Capital	227	(213–242)	26.4	(25.1–27.7)
New Brunswick		**474**	**(459–489)**	**27.4**	**(26.4–28.4)**
1301	Zone 1 (Moncton area)	381	(355–408)	29.7	(27.6–31.7)
1302	Zone 2 (Saint John area)	430	(400–461)	21.6	(19.7–23.5)
1303	Zone 3 (Fredericton area)	520	(487–553)	28.6	(26.5–30.7)
1306	Zone 6 (Bathurst area)	511	(462–560)	27.9	(24.1–31.7)
Quebec		**289**	**(285–292)**	**23.0**	**(22.7–23.3)**
2401	Bas-Saint-Laurent	322	(299–346)	22.1	(20.2–24.0)
2402	Saguenay–Lac-Saint-Jean	412	(388–436)	20.8	(19.3–22.4)
2403	Capitale-Nationale	231	(220–242)	24.4	(23.4–25.4)
2404	Mauricie et Centre-du-Québec	313	(298–328)	20.0	(18.8–21.1)
2405	Estrie	310	(291–329)	19.7	(18.3–21.1)
2406	Montréal	258	(251–265)	24.4	(23.9–25.0)
2407	Outaouais	315	(296–333)	26.8	(25.4–28.1)
2408	Abitibi-Témiscamingue	414	(382–447)	23.5	(21.4–25.5)
2409	Côte-Nord	463	(421–505)	18.6	(16.2–20.9)
2411	Gaspésie–Îles-de-la-Madeleine	583	(538–628)	28.2	(24.9–31.4)
2412	Chaudière-Appalaches	261	(246–276)	24.1	(22.8–25.3)
2413	Laval	198	(185–212)	23.0	(21.8–24.3)
2414	Lanaudière	291	(276–307)	19.4	(18.3–20.5)
2415	Laurentides	271	(257–284)	20.6	(19.6–21.7)
2416	Montérégie	299	(290–307)	23.0	(22.3–23.7)
Ontario		**274**	**(271–277)**	**28.4**	**(28.2–28.7)**
3501	Erie St. Clair	321	(308–335)	26.0	(24.9–27.1)
3502	South West	302	(292–313)	22.6	(21.8–23.5)
3503	Waterloo Wellington	245	(233–256)	26.9	(25.9–27.8)
3504	Hamilton Niagara Haldimand Brant	322	(312–331)	28.2	(27.5–29.0)
3505	Central West	261	(249–272)	30.8	(30.0–31.7)
3506	Mississauga Halton	196	(188–204)	27.2	(26.4–28.0)
3507	Toronto Central	244	(235–253)	29.9	(29.1–30.7)
3508	Central	180	(174–187)	29.2	(28.5–29.8)
3509	Central East	252	(244–260)	30.3	(29.6–31.0)
3510	South East	330	(314–346)	27.7	(26.3–29.0)
3511	Champlain	247	(238–256)	29.6	(28.8–30.4)
3512	North Simcoe Muskoka	329	(312–345)	30.5	(29.1–31.9)
3513	North East	476	(459–494)	29.5	(28.3–30.8)
3514	North West	531	(502–560)	24.8	(23.1–26.4)
Manitoba		**329**	**(319–339)**	**21.5**	**(20.9–22.2)**
4610	Winnipeg	241	(229–253)	22.5	(21.5–23.4)
4615	Brandon	380	(326–435)	28.9	(25.5–32.3)
4625	South Eastman	236	(198–274)	17.9	(15.5–20.2)
4630	Interlake	349	(311–387)	17.7	(15.1–20.3)
4640	Central	336	(301–371)	21.8	(19.8–23.8)
4645	Assiniboine	500	(447–553)	25.6	(22.6–28.5)

Map Code	Health Region	Ambulatory Care Sensitive Conditions 2010–2011 Age-Standardized Rate per 100,000	95% CI	Caesarean Section 2010–2011 %	95% CI
Saskatchewan		**478**	**(464–491)**	**22.1**	**(21.4–22.8)**
4701	Sun Country	520	(459–580)	23.0	(19.8–26.1)
4702	Five Hills	435	(378–493)	30.3	(26.7–34.0)
4704	Regina	504	(476–532)	22.3	(20.9–23.7)
4705	Sunrise	716	(646–785)	28.4	(24.7–32.0)
4706	Saskatoon	296	(277–316)	22.4	(21.1–23.7)
4709	Prince Albert	495	(445–544)	15.6	(13.4–17.7)
4710	Prairie North	631	(570–691)	21.1	(18.9–23.3)
Alberta		**309**	**(303–314)**	**27.7**	**(27.3–28.1)**
4831	South Zone	431	(406–455)	24.3	(22.9–25.6)
4832	Calgary Zone	237	(229–246)	28.4	(27.7–29.0)
4833	Central Zone	408	(389–427)	28.5	(27.3–29.7)
4834	Edmonton Zone	240	(230–249)	27.8	(27.1–28.6)
4835	North Zone	551	(527–575)	26.9	(25.8–27.9)
British Columbia		**263**	**(258–267)**	**31.8**	**(31.3–32.2)**
5911	East Kootenay	458	(411–505)	33.7	(30.4–37.0)
5912	Kootenay Boundary	316	(277–356)	27.3	(23.7–30.8)
5913	Okanagan	312	(294–331)	29.4	(27.7–31.1)
5914	Thompson/Cariboo/Shuswap	324	(301–347)	32.9	(30.8–35.0)
5921	Fraser East	333	(312–354)	31.0	(29.4–32.5)
5922	Fraser North	223	(210–235)	34.3	(33.1–35.6)
5923	Fraser South	253	(242–265)	33.0	(31.9–34.0)
5931	Richmond	156	(138–175)	31.9	(29.6–34.2)
5932	Vancouver	200	(189–211)	32.8	(31.6–34.0)
5933	North Shore	214	(196–231)	33.9	(31.9–35.9)
5941	South Vancouver Island	181	(166–195)	32.9	(31.2–34.6)
5942	Central Vancouver Island	298	(277–319)	26.8	(24.9–28.7)
5943	North Vancouver Island	297	(267–326)	28.8	(26.0–31.6)
5951	Northwest	520	(470–570)	24.1	(21.3–26.9)
5952	Northern Interior	497	(460–533)	27.5	(25.3–29.7)
5953	Northeast	380	(332–428)	29.8	(27.0–32.7)
Yukon		**504**	**(428–580)**	**20.0**	**(15.9–24.1)**
Northwest Territories		**644**	**(552–736)**	**20.4**	**(17.4–23.4)**
Nunavut		**913**	**(760–1,066)**	**8.7**	**(6.7–10.7)**
Canada		**299**	**(297–301)**	**26.9**	**(26.7–27.0)**

Ambulatory care sensitive conditions

Age-standardized acute care hospitalization rate for conditions where appropriate ambulatory care prevents or reduces the need for hospitalization, per 100,000 population younger than age 75. Hospitalizations for ambulatory care sensitive conditions are considered to be an indirect measure of access to appropriate primary health care. While not all admissions for these conditions are avoidable, appropriate ambulatory care could potentially prevent the onset of this type of illness or condition, control an acute episodic illness or condition, or manage a chronic disease or condition.

Sources: Discharge Abstract Database, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Caesarean section

Proportion of women delivering babies in acute care hospitals by Caesarean section. Caesarean section rates provide information on the frequency of surgical birth delivery relative to all modes of birth delivery. Since unnecessary Caesarean section delivery increases maternal morbidity/mortality and is associated with higher costs, Caesarean section rates are often used to monitor clinical practices, with an implicit assumption that lower rates indicate more appropriate, as well as more efficient, care.

Sources: Discharge Abstract Database, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	30-Day Acute Myocardial Infarction In-Hospital Mortality 2008–2009 to 2010–2011		30-Day Stroke In-Hospital Mortality 2008–2009 to 2010–2011	
		Risk-Adjusted Rate (%)	95% CI	Risk-Adjusted Rate (%)	95% CI
Newfoundland and Labrador		**8.0**	**(7.1–8.8)**	**[E]19.9**	**(18.1–21.6)**
1011	Eastern	7.8	(6.7–9.0)	[E]19.0	(16.7–21.3)
1012	Central	8.7	(6.9–10.5)	[E]24.8	(20.9–28.7)
1013	Western	6.9	(4.5–9.4)	18.0	(13.3–22.7)
Prince Edward Island		**8.1**	**(6.4–9.9)**	**18.7**	**(15.4–22.1)**
Nova Scotia		**7.3**	**(6.6–8.0)**	**[E]18.9**	**(17.5–20.2)**
1211	South Shore	5.6	(3.4–7.8)	16.3	(12.0–20.6)
1212	South West Nova	7.5	(5.2–9.8)	[E]22.4	(18.0–26.9)
1223	Annapolis Valley	[E]5.2	(3.1–7.4)	18.3	(14.0–22.7)
1234	Colchester East Hants	6.6	(4.6–8.5)	18.7	(14.2–23.3)
1258	Cape Breton	8.0	(6.4–9.7)	16.0	(12.4–19.5)
1269	Capital	7.3	(6.0–8.6)	[E]18.7	(16.3–21.1)
New Brunswick		**7.7**	**(6.9–8.5)**	**16.3**	**(14.8–17.8)**
1301	Zone 1 (Moncton area)	7.3	(5.8–8.9)	16.4	(13.5–19.2)
1302	Zone 2 (Saint John area)	8.3	(6.6–10.0)	18.5	(15.3–21.7)
1303	Zone 3 (Fredericton area)	7.7	(6.1–9.2)	15.9	(12.6–19.1)
1306	Zone 6 (Bathurst area)	9.5	(6.8–12.2)	17.5	(12.9–22.0)
Quebec		..	.. ..	..	.. ..
2401	Bas-Saint-Laurent	..	.. ..	..	.. ..
2402	Saguenay–Lac-Saint-Jean	..	.. ..	..	.. ..
2403	Capitale-Nationale	..	.. ..	..	.. ..
2404	Mauricie et Centre-du-Québec	..	.. ..	..	.. ..
2405	Estrie	..	.. ..	..	.. ..
2406	Montréal	..	.. ..	..	.. ..
2407	Outaouais	..	.. ..	..	.. ..
2408	Abitibi-Témiscamingue	..	.. ..	..	.. ..
2409	Côte-Nord	..	.. ..	..	.. ..
2411	Gaspésie–Îles-de-la-Madeleine	..	.. ..	..	.. ..
2412	Chaudière-Appalaches	..	.. ..	..	.. ..
2413	Laval	..	.. ..	..	.. ..
2414	Lanaudière	..	.. ..	..	.. ..
2415	Laurentides	..	.. ..	..	.. ..
2416	Montérégie	..	.. ..	..	.. ..
Ontario		**[E]8.1**	**(7.9–8.3)**	**15.9**	**(15.6–16.3)**
3501	Erie St. Clair	8.3	(7.4–9.1)	15.8	(14.3–17.2)
3502	South West	8.3	(7.5–9.0)	[E]17.9	(16.6–19.1)
3503	Waterloo Wellington	7.9	(7.0–8.8)	16.6	(15.0–18.2)
3504	Hamilton Niagara Haldimand Brant	8.0	(7.4–8.5)	16.5	(15.4–17.5)
3505	Central West	7.1	(6.1–8.0)	[E]14.3	(12.7–15.9)
3506	Mississauga Halton	7.9	(7.0–8.7)	15.9	(14.6–17.3)
3507	Toronto Central	7.6	(6.8–8.3)	[E]14.7	(13.5–15.9)
3508	Central	[E]8.7	(8.1–9.4)	[E]13.5	(12.4–14.6)
3509	Central East	7.9	(7.3–8.6)	15.4	(14.4–16.5)
3510	South East	8.6	(7.7–9.6)	[E]19.7	(18.0–21.4)
3511	Champlain	7.3	(6.6–8.0)	15.9	(14.6–17.2)
3512	North Simcoe Muskoka	[E]9.1	(8.0–10.1)	14.7	(12.9–16.5)
3513	North East	[E]9.7	(8.9–10.5)	[E]18.8	(17.3–20.3)
3514	North West	6.7	(5.5–7.9)	15.6	(13.2–18.0)
Manitoba		**[E]7.0**	**(6.4–7.6)**	**16.2**	**(15.0–17.4)**
4610	Winnipeg	[E]6.1	(5.3–6.9)	[E]14.1	(12.5–15.6)
4615	Brandon	7.6	(4.7–10.6)	17.7	(11.5–23.9)
4625	South Eastman	8.2	(5.1–11.3)	18.7	(13.1–24.3)
4630	Interlake	8.1	(5.8–10.4)	18.1	(13.1–23.1)
4640	Central	[E]10.2	(8.1–12.3)	15.6	(11.5–19.7)
4645	Assiniboine	8.6	(6.0–11.1)	[E]26.6	(22.0–31.2)

Map Code	Health Region	30-Day Acute Myocardial Infarction In-Hospital Mortality 2008–2009 to 2010–2011 Risk-Adjusted Rate (%)	95% CI	30-Day Stroke In-Hospital Mortality 2008–2009 to 2010–2011 Risk-Adjusted Rate (%)	95% CI
Saskatchewan		**7.6**	**(6.9–8.4)**	**16.3**	**(15.0–17.5)**
4701	Sun Country	7.9	(4.6–11.2)	17.1	(11.2–23.0)
4702	Five Hills	8.4	(5.6–11.1)	14.8	(9.8–19.7)
4704	Regina	8.4	(6.9–9.9)	18.5	(15.9–21.2)
4705	Sunrise	10.1	(7.4–12.8)	18.6	(14.2–23.1)
4706	Saskatoon	6.8	(5.4–8.2)	♦12.7	(10.3–15.1)
4709	Prince Albert	7.4	(4.9–9.9)	18.3	(13.8–22.9)
4710	Prairie North	7.5	(4.7–10.3)	16.3	(11.2–21.5)
Alberta		**♦6.7**	**(6.2–7.1)**	**♦14.2**	**(13.4–15.0)**
4831	South Zone	8.7	(7.3–10.1)	16.1	(13.4–18.7)
4832	Calgary Zone	♦5.5	(4.6–6.4)	♦11.6	(10.2–13.0)
4833	Central Zone	8.4	(7.2–9.5)	♦18.5	(16.4–20.6)
4834	Edmonton Zone	♦6.0	(5.2–6.8)	♦13.0	(11.6–14.4)
4835	North Zone	6.9	(5.4–8.4)	18.2	(15.6–20.9)
British Columbia		**7.7**	**(7.4–8.1)**	**15.9**	**(15.3–16.5)**
5911	East Kootenay	7.1	(4.7–9.4)	20.4	(15.8–25.0)
5912	Kootenay Boundary	7.4	(5.2–9.6)	19.8	(15.9–23.8)
5913	Okanagan	♦6.5	(5.4–7.6)	14.5	(12.7–16.3)
5914	Thompson/Cariboo/Shuswap	8.8	(7.3–10.2)	15.2	(12.7–17.8)
5921	Fraser East	7.9	(6.4–9.3)	17.0	(14.6–19.4)
5922	Fraser North	8.3	(7.1–9.6)	15.6	(13.8–17.4)
5923	Fraser South	7.1	(6.1–8.1)	15.7	(14.1–17.4)
5931	Richmond	♦10.3	(8.1–12.5)	♦12.4	(9.4–15.4)
5932	Vancouver	7.6	(6.5–8.7)	14.4	(12.7–16.1)
5933	North Shore	7.3	(5.8–8.8)	♦13.2	(10.8–15.5)
5941	South Vancouver Island	7.7	(6.3–9.1)	♦20.7	(18.6–22.9)
5942	Central Vancouver Island	8.2	(6.8–9.6)	14.2	(11.8–16.5)
5943	North Vancouver Island	6.9	(4.4–9.4)	♦19.9	(16.4–23.5)
5951	Northwest	8.7	(4.9–12.6)	20.6	(15.2–26.0)
5952	Northern Interior	9.7	(7.2–12.3)	16.3	(12.4–20.2)
5953	Northeast	11.4	(7.5–15.4)	21.1	(13.8–28.4)
Yukon		*	**	**19.9**	**(11.8–28.0)**
Northwest Territories		*	**	**♦7.2**	**(3.3–14.7)**
Nunavut		*	**	*	**
Canada		**7.8**		**16.0**	

30-day acute myocardial infarction in-hospital mortality

The risk-adjusted rate of all-cause in-hospital death occurring within 30 days of first admission to an acute care hospital with a diagnosis of acute myocardial infarction (AMI, or heart attack). Rates are based on three years of pooled data.

Note: Rates for Quebec are not available due to differences in data collection; the Canada rate does not include Quebec.
Source: Discharge Abstract Database, Canadian Institute for Health Information.

30-day stroke in-hospital mortality

The risk-adjusted rate of all-cause in-hospital death occurring within 30 days of first admission to an acute care hospital with a diagnosis of stroke. Rates are based on three years of pooled data.

Note: Rates for Quebec are not available due to differences in data collection; the Canada rate does not include Quebec.
Source: Discharge Abstract Database, Canadian Institute for Health Information.

Map Code	Health Region	Acute Myocardial Infarction Readmission 2008–2009 to 2010–2011 Risk-Adjusted Rate (%)	95% CI	30-Day Medical Readmission 2010–2011 Risk-Adjusted Rate (%)	95% CI
Newfoundland and Labrador		**5.2**	**(4.6–5.9)**	**13.8**	**(13.3–14.3)**
1011	Eastern	5.0	(4.1–5.8)	13.2	(12.5–13.9)
1012	Central	5.3	(4.0–6.7)	15.1	(14.1–16.2)
1013	Western	5.2	(3.5–7.0)	13.5	(12.3–14.6)
Prince Edward Island		**4.8**	**(3.5–6.2)**	**13.7**	**(12.8–14.5)**
Nova Scotia		**4.5**	**(4.0–5.1)**	**12.1**	**(11.7–12.5)**
1211	South Shore	5.3	(3.5–7.1)	11.3	(9.7–12.8)
1212	South West Nova	4.6	(2.7–6.6)	12.2	(10.9–13.6)
1223	Annapolis Valley	4.9	(3.1–6.7)	12.1	(10.7–13.5)
1234	Colchester East Hants	5.8	(4.0–7.6)	12.7	(11.1–14.2)
1258	Cape Breton	4.7	(3.4–6.0)	12.8	(11.8–13.8)
1269	Capital	3.3	(2.2–4.4)	10.8	(10.0–11.6)
New Brunswick		**4.6**	**(4.0–5.3)**	**13.0**	**(12.6–13.4)**
1301	Zone 1 (Moncton area)	3.9	(2.7–5.2)	12.7	(12.0–13.5)
1302	Zone 2 (Saint John area)	2.2	(0.9–3.6)	12.1	(11.2–13.0)
1303	Zone 3 (Fredericton area)	5.1	(3.8–6.4)	13.4	(12.6–14.2)
1306	Zone 6 (Bathurst area)	4.0	(1.9–6.1)	12.9	(11.8–14.1)
Quebec		..	.. ..	**13.0**	**(12.9–13.2)**
2401	Bas-Saint-Laurent	..	.. ..	13.1	(12.4–13.8)
2402	Saguenay–Lac-Saint-Jean	..	.. ..	13.2	(12.6–13.9)
2403	Capitale-Nationale	..	.. ..	11.6	(11.1–12.1)
2404	Mauricie et Centre-du-Québec	..	.. ..	13.2	(12.6–13.7)
2405	Estrie	..	.. ..	14.2	(13.6–14.8)
2406	Montréal	..	.. ..	12.8	(12.5–13.1)
2407	Outaouais	..	.. ..	12.5	(11.7–13.2)
2408	Abitibi-Témiscamingue	..	.. ..	13.5	(12.6–14.4)
2409	Côte-Nord	..	.. ..	14.7	(13.6–15.8)
2411	Gaspésie–Îles-de-la-Madeleine	..	.. ..	15.0	(14.2–15.9)
2412	Chaudière-Appalaches	..	.. ..	13.0	(12.4–13.6)
2413	Laval	..	.. ..	12.6	(11.9–13.3)
2414	Lanaudière	..	.. ..	12.0	(11.4–12.7)
2415	Laurentides	..	.. ..	13.1	(12.5–13.7)
2416	Montérégie	..	.. ..	13.0	(12.7–13.3)
Ontario		**4.0**	**(3.9–4.2)**	**13.3**	**(13.2–13.4)**
3501	Erie St. Clair	4.9	(4.2–5.7)	12.8	(12.4–13.3)
3502	South West	3.8	(3.2–4.4)	13.7	(13.3–14.1)
3503	Waterloo Wellington	3.9	(3.1–4.7)	12.0	(11.5–12.6)
3504	Hamilton Niagara Haldimand Brant	3.6	(3.0–4.1)	12.9	(12.6–13.3)
3505	Central West	4.1	(3.3–4.9)	12.6	(12.0–13.1)
3506	Mississauga Halton	3.0	(2.2–3.7)	12.2	(11.7–12.6)
3507	Toronto Central	4.1	(3.3–4.8)	14.3	(13.9–14.7)
3508	Central	3.6	(3.0–4.3)	13.3	(13.0–13.7)
3509	Central East	3.8	(3.3–4.4)	12.8	(12.4–13.1)
3510	South East	4.1	(3.3–4.9)	12.7	(12.1–13.2)
3511	Champlain	3.0	(2.4–3.6)	13.6	(13.2–14.0)
3512	North Simcoe Muskoka	3.3	(2.4–4.2)	13.4	(12.8–13.9)
3513	North East	6.7	(6.0–7.3)	14.7	(14.3–15.2)
3514	North West	5.6	(4.5–6.6)	15.1	(14.5–15.7)
Manitoba		**4.7**	**(4.1–5.3)**	**13.7**	**(13.3–14.0)**
4610	Winnipeg	3.2	(2.4–4.0)	11.7	(11.1–12.2)
4615	Brandon	*	**	11.3	(9.5–13.1)
4625	South Eastman	*	**	14.1	(12.5–15.7)
4630	Interlake	6.8	(5.0–8.7)	15.4	(14.3–16.6)
4640	Central	6.6	(4.8–8.4)	15.1	(14.0–16.2)
4645	Assiniboine	5.6	(3.5–7.7)	15.0	(13.9–16.1)

Map Code	Health Region	Acute Myocardial Infarction Readmission 2008–2009 to 2010–2011 Risk-Adjusted Rate (%)	95% CI	30-Day Medical Readmission 2010–2011 Risk-Adjusted Rate (%)	95% CI
Saskatchewan		**4.6**	**(4.0–5.2)**	**✦15.1**	**(14.8–15.4)**
4701	Sun Country	*	**	✦15.3	(14.0–16.5)
4702	Five Hills	*	**	14.6	(13.2–15.9)
4704	Regina	3.2	(1.9–4.6)	✦14.9	(14.3–15.6)
4705	Sunrise	5.2	(2.7–7.6)	✦17.6	(16.7–18.6)
4706	Saskatoon	4.1	(2.9–5.3)	✦14.8	(14.1–15.5)
4709	Prince Albert	4.5	(2.5–6.6)	12.9	(11.6–14.2)
4710	Prairie North	5.9	(3.6–8.2)	14.1	(12.8–15.4)
Alberta		**✦3.1**	**(2.7–3.5)**	**✦13.0**	**(12.7–13.2)**
4831	South Zone	3.4	(2.2–4.6)	13.2	(12.5–13.9)
4832	Calgary Zone	✦3.2	(2.5–3.9)	✦11.7	(11.3–12.2)
4833	Central Zone	3.8	(2.9–4.8)	✦14.2	(13.7–14.7)
4834	Edmonton Zone	✦2.1	(1.4–2.8)	✦12.2	(11.8–12.6)
4835	North Zone	4.1	(3.0–5.2)	✦14.6	(14.1–15.2)
British Columbia		**3.8**	**(3.4–4.1)**	**✦14.1**	**(14.0–14.3)**
5911	East Kootenay	3.9	(2.1–5.8)	14.4	(13.2–15.7)
5912	Kootenay Boundary	5.7	(3.9–7.5)	14.0	(12.6–15.3)
5913	Okanagan	4.4	(3.5–5.4)	✦14.1	(13.6–14.7)
5914	Thompson/Cariboo/Shuswap	4.3	(3.1–5.6)	✦14.6	(13.8–15.4)
5921	Fraser East	4.2	(2.9–5.5)	✦14.5	(13.8–15.2)
5922	Fraser North	3.5	(2.4–4.7)	✦14.7	(14.1–15.3)
5923	Fraser South	4.0	(3.1–4.9)	13.8	(13.3–14.3)
5931	Richmond	2.9	(0.8–5.0)	✦14.8	(13.7–15.9)
5932	Vancouver	✦2.8	(1.8–3.9)	✦14.5	(14.0–15.1)
5933	North Shore	✦2.5	(1.2–3.8)	✦14.5	(13.7–15.2)
5941	South Vancouver Island	✦2.4	(1.1–3.6)	✦11.4	(10.7–12.1)
5942	Central Vancouver Island	3.8	(2.7–5.0)	13.5	(12.8–14.2)
5943	North Vancouver Island	4.5	(2.6–6.4)	13.9	(12.8–15.0)
5951	Northwest	*	**	✦15.9	(14.6–17.1)
5952	Northern Interior	4.6	(2.9–6.4)	✦14.9	(13.9–15.8)
5953	Northeast	*	**	15.0	(13.4–16.7)
Yukon		*****	******	**13.4**	**(11.4–15.5)**
Northwest Territories		*****	******	**14.6**	**(12.8–16.3)**
Nunavut		*****	******	**15.4**	**(13.1–17.7)**
Canada		**4.1**		**13.4**	

Acute myocardial infarction readmission

The risk-adjusted rate of unplanned readmission following discharge for acute myocardial infarction (AMI, or heart attack). Rates are based on three years of pooled data.

Note: Rates for Quebec are not available due to differences in data collection; the Canada rate does not include Quebec.

Sources: Discharge Abstract Database and National Ambulatory Care Reporting System, Canadian Institute for Health Information; Alberta Ambulatory Care Reporting System, Alberta Health and Wellness.

30-day medical readmission

Risk-adjusted rate of unplanned readmission for adult medical patient group. Non-elective return to an acute care hospital for any cause is counted as a readmission if it occurs within 30 days of discharge from the index episode of inpatient care. Urgent, unplanned readmissions to acute care facilities are increasingly being used to measure institutional or regional quality of care and care coordination. While not all unplanned readmissions are avoidable, interventions during and after a hospitalization can be effective in reducing readmission rates.

Sources: Discharge Abstract Database and National Ambulatory Care Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	30-Day Surgical Readmission 2010–2011 Risk-Adjusted Rate (%)	95% CI	30-Day Obstetric Readmission 2010–2011 Risk-Adjusted Rate (%)	95% CI
Newfoundland and Labrador		**6.3**	**(5.8–6.7)**	**‡2.7**	**(2.4–3.1)**
1011	Eastern	6.3	(5.8–6.9)	‡2.9	(2.4–3.3)
1012	Central	6.4	(5.4–7.3)	2.7	(1.9–3.5)
1013	Western	6.1	(5.0–7.2)	2.5	(1.5–3.5)
Prince Edward Island		**6.1**	**(5.2–6.9)**	**2.1**	**(1.4–2.8)**
Nova Scotia		**6.2**	**(5.9–6.5)**	**2.3**	**(2.0–2.5)**
1211	South Shore	‡4.9	(3.8–6.1)	2.9	(1.6–4.1)
1212	South West Nova	5.8	(4.5–7.0)	1.3	(0.0–2.5)
1223	Annapolis Valley	‡5.4	(4.3–6.4)	‡4.0	(3.2–4.9)
1234	Colchester East Hants	5.5	(4.4–6.6)	2.1	(1.3–2.9)
1258	Cape Breton	6.2	(5.4–7.0)	2.4	(1.6–3.3)
1269	Capital	6.7	(6.2–7.2)	2.2	(1.8–2.5)
New Brunswick		**6.4**	**(6.1–6.7)**	**2.2**	**(1.9–2.5)**
1301	Zone 1 (Moncton area)	6.6	(5.9–7.2)	2.2	(1.6–2.9)
1302	Zone 2 (Saint John area)	6.6	(5.9–7.2)	1.9	(1.3–2.6)
1303	Zone 3 (Fredericton area)	‡7.4	(6.6–8.1)	2.1	(1.5–2.8)
1306	Zone 6 (Bathurst area)	‡5.4	(4.5–6.3)	2.4	(1.4–3.5)
Quebec		**‡6.1**	**(6.0–6.2)**	**2.0**	**(1.9–2.1)**
2401	Bas-Saint-Laurent	6.1	(5.5–6.8)	1.9	(1.2–2.7)
2402	Saguenay–Lac-Saint-Jean	6.2	(5.6–6.8)	2.4	(1.8–2.9)
2403	Capitale-Nationale	‡5.6	(5.2–6.0)	1.9	(1.5–2.3)
2404	Mauricie et Centre-du-Québec	6.6	(6.1–7.0)	1.6	(1.1–2.0)
2405	Estrie	6.8	(6.3–7.3)	‡1.2	(0.6–1.8)
2406	Montréal	‡6.1	(5.8–6.3)	2.2	(2.0–2.4)
2407	Outaouais	‡5.2	(4.6–5.8)	1.5	(1.1–2.0)
2408	Abitibi-Témiscamingue	7.2	(6.3–8.0)	‡1.2	(0.5–1.9)
2409	Côte-Nord	‡7.8	(6.8–8.8)	‡3.1	(2.2–3.9)
2411	Gaspésie–Îles-de-la-Madeleine	‡7.7	(6.9–8.6)	1.9	(0.9–2.8)
2412	Chaudière-Appalaches	6.0	(5.5–6.5)	1.6	(1.1–2.1)
2413	Laval	6.0	(5.5–6.6)	2.2	(1.7–2.7)
2414	Lanaudière	‡5.5	(5.0–6.0)	1.8	(1.3–2.2)
2415	Laurentides	‡5.7	(5.3–6.2)	2.5	(2.0–2.9)
2416	Montérégie	‡5.9	(5.7–6.2)	2.0	(1.8–2.2)
Ontario		**6.6**	**(6.5–6.7)**	**‡1.8**	**(1.7–1.9)**
3501	Erie St. Clair	6.3	(5.9–6.7)	‡0.9	(0.6–1.2)
3502	South West	6.9	(6.5–7.2)	1.9	(1.6–2.2)
3503	Waterloo Wellington	‡5.7	(5.3–6.2)	1.8	(1.5–2.1)
3504	Hamilton Niagara Haldimand Brant	6.5	(6.2–6.8)	‡1.7	(1.4–1.9)
3505	Central West	6.7	(6.2–7.1)	1.8	(1.5–2.1)
3506	Mississauga Halton	6.3	(5.9–6.7)	‡1.5	(1.3–1.8)
3507	Toronto Central	‡7.4	(7.0–7.7)	‡2.5	(2.2–2.7)
3508	Central	6.4	(6.1–6.7)	‡1.7	(1.5–1.9)
3509	Central East	‡5.9	(5.6–6.2)	1.8	(1.6–2.0)
3510	South East	6.7	(6.2–7.1)	2.3	(1.9–2.8)
3511	Champlain	6.9	(6.5–7.2)	1.9	(1.6–2.1)
3512	North Simcoe Muskoka	6.8	(6.3–7.3)	‡1.5	(1.0–1.9)
3513	North East	‡7.5	(7.1–7.8)	‡1.6	(1.2–1.9)
3514	North West	‡7.9	(7.3–8.5)	2.5	(2.0–2.9)
Manitoba		**6.2**	**(5.9–6.5)**	**‡2.4**	**(2.2–2.5)**
4610	Winnipeg	‡5.5	(5.1–5.9)	‡2.6	(2.3–2.9)
4615	Brandon	6.6	(5.2–8.0)	1.1	(0.0–2.2)
4625	South Eastman	6.7	(5.3–8.0)	2.5	(2.0–3.1)
4630	Interlake	6.4	(5.3–7.5)	2.3	(1.4–3.1)
4640	Central	7.2	(6.2–8.2)	‡2.6	(2.1–3.2)
4645	Assiniboine	6.9	(5.8–8.0)	1.8	(0.9–2.7)

Map Code	Health Region	30-Day Surgical Readmission 2010–2011 Risk-Adjusted Rate (%)	95% CI	30-Day Obstetric Readmission 2010–2011 Risk-Adjusted Rate (%)	95% CI
Saskatchewan		**✦7.5**	**(7.2–7.8)**	**2.2**	**(2.0–2.4)**
4701	Sun Country	7.2	(5.9–8.4)	✦3.5	(2.6–4.4)
4702	Five Hills	7.7	(6.5–8.9)	*	**
4704	Regina	✦7.3	(6.7–7.9)	2.1	(1.7–2.6)
4705	Sunrise	✦8.7	(7.6–9.8)	✦3.1	(2.1–4.1)
4706	Saskatoon	6.5	(5.9–7.1)	2.1	(1.6–2.5)
4709	Prince Albert	7.3	(6.1–8.5)	1.9	(1.1–2.6)
4710	Prairie North	✦7.8	(6.6–9.0)	2.5	(1.9–3.1)
Alberta		**6.4**	**(6.3–6.6)**	**1.8**	**(1.7–2.0)**
4831	South Zone	6.7	(6.1–7.4)	1.6	(1.1–2.0)
4832	Calgary Zone	✦5.8	(5.5–6.2)	1.8	(1.6–2.0)
4833	Central Zone	✦7.1	(6.6–7.5)	✦1.5	(1.2–1.8)
4834	Edmonton Zone	6.5	(6.1–6.8)	2.0	(1.8–2.2)
4835	North Zone	✦7.2	(6.7–7.8)	2.1	(1.8–2.3)
British Columbia		**✦7.0**	**(6.8–7.1)**	**✦2.4**	**(2.3–2.5)**
5911	East Kootenay	7.1	(6.0–8.2)	2.5	(1.6–3.3)
5912	Kootenay Boundary	7.2	(6.1–8.2)	✦3.4	(2.4–4.3)
5913	Okanagan	✦7.9	(7.5–8.4)	2.4	(1.9–2.8)
5914	Thompson/Cariboo/Shuswap	6.9	(6.2–7.6)	2.1	(1.5–2.7)
5921	Fraser East	✦7.8	(7.2–8.5)	2.4	(1.9–2.8)
5922	Fraser North	7.0	(6.5–7.4)	✦2.5	(2.2–2.7)
5923	Fraser South	6.6	(6.1–7.0)	✦2.4	(2.1–2.7)
5931	Richmond	6.7	(5.8–7.5)	2.3	(1.6–3.1)
5932	Vancouver	✦7.0	(6.6–7.5)	✦2.5	(2.2–2.9)
5933	North Shore	7.1	(6.5–7.8)	2.1	(1.5–2.7)
5941	South Vancouver Island	✦5.7	(5.2–6.2)	2.0	(1.6–2.5)
5942	Central Vancouver Island	✦7.3	(6.8–7.9)	✦2.7	(2.2–3.3)
5943	North Vancouver Island	6.5	(5.6–7.4)	✦2.9	(2.2–3.7)
5951	Northwest	✦8.3	(7.2–9.5)	2.4	(1.5–3.2)
5952	Northern Interior	6.9	(6.1–7.8)	2.2	(1.6–2.9)
5953	Northeast	6.5	(5.0–8.0)	1.7	(0.8–2.6)
Yukon		**7.7**	**(5.7–9.6)**	**2.6**	**(1.3–3.8)**
Northwest Territories		**✦9.0**	**(7.2–10.8)**	**1.5**	**(0.6–2.4)**
Nunavut		**7.6**	**(5.2–9.9)**	**✦1.0**	**(0.3–1.6)**
Canada		**6.5**		**2.0**	

30-day surgical readmission

Risk-adjusted rate of unplanned readmission for adult surgical patient group. Non-elective return to an acute care hospital for any cause is counted as a readmission if it occurs within 30 days of discharge from the index episode of inpatient care. Urgent, unplanned readmissions to acute care facilities are increasingly being used to measure institutional or regional quality of care and care coordination. While not all unplanned readmissions are avoidable, interventions during and after a hospitalization can be effective in reducing readmission rates.

Sources: Discharge Abstract Database and National Ambulatory Care Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

30-day obstetric readmission

Risk-adjusted rate of unplanned readmission for obstetric patient group. Non-elective return to an acute care hospital for any cause is counted as a readmission if it occurs within 30 days of discharge from the index episode of inpatient care. Urgent, unplanned readmissions to acute care facilities are increasingly being used to measure institutional or regional quality of care and care coordination. While not all unplanned readmissions are avoidable, interventions during and after a hospitalization can be effective in reducing readmission rates.

Sources: Discharge Abstract Database and National Ambulatory Care Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	30-Day Pediatric Readmission 2010–2011		30-Day Readmission for Mental Illness 2010–2011	
		Risk-Adjusted Rate (%)	95% CI	Risk-Adjusted Rate (%)	95% CI
Newfoundland and Labrador		**6.7**	**(5.8–7.5)**	**11.0**	**(9.4–12.7)**
1011	Eastern	6.5	(5.4–7.6)	✦7.7	(4.7–10.8)
1012	Central	✦9.1	(7.0–11.2)	10.7	(6.4–15.1)
1013	Western	4.7	(2.1–7.3)	14.1	(11.4–16.7)
Prince Edward Island		**✦8.7**	**(7.2–10.1)**	**12.3**	**(10.2–14.4)**
Nova Scotia		**✦7.7**	**(7.0–8.4)**	**11.8**	**(10.5–13.0)**
1211	South Shore	✦10.8	(7.9–13.7)	16.5	(10.1–22.8)
1212	South West Nova	7.7	(4.9–10.5)	8.1	(4.1–12.1)
1223	Annapolis Valley	6.2	(3.7–8.6)	✦26.4	(21.4–31.4)
1234	Colchester East Hants	6.0	(3.7–8.3)	9.6	(4.0–15.3)
1258	Cape Breton	8.1	(6.5–9.7)	11.3	(8.7–13.9)
1269	Capital	✦8.0	(6.9–9.0)	10.7	(8.5–13.0)
New Brunswick		**✦6.0**	**(5.4–6.6)**	**11.0**	**(9.9–12.1)**
1301	Zone 1 (Moncton area)	7.0	(5.8–8.1)	10.1	(7.7–12.4)
1302	Zone 2 (Saint John area)	5.6	(4.2–7.0)	✦6.9	(3.3–10.5)
1303	Zone 3 (Fredericton area)	✦5.0	(3.5–6.5)	9.3	(6.4–12.1)
1306	Zone 6 (Bathurst area)	5.8	(4.0–7.5)	13.0	(10.1–15.8)
Quebec		**✦6.4**	**(6.2–6.6)**	**11.2**	**(10.8–11.5)**
2401	Bas-Saint-Laurent	✦5.0	(3.5–6.4)	13.4	(11.4–15.4)
2402	Saguenay–Lac-Saint-Jean	✦7.8	(6.9–8.8)	12.9	(11.4–14.5)
2403	Capitale-Nationale	7.0	(6.3–7.7)	✦8.6	(7.0–10.1)
2404	Mauricie et Centre-du-Québec	5.9	(5.1–6.7)	✦13.3	(12.0–14.5)
2405	Estrie	5.9	(4.8–7.1)	✦13.4	(11.8–15.0)
2406	Montréal	6.4	(5.9–7.0)	✦8.7	(7.7–9.8)
2407	Outaouais	5.7	(4.6–6.7)	✦8.9	(6.9–11.0)
2408	Abitibi-Témiscamingue	5.8	(4.6–7.0)	13.0	(10.6–15.4)
2409	Côte-Nord	✦4.4	(2.7–6.0)	✦7.9	(4.8–10.9)
2411	Gaspésie–Îles-de-la-Madeleine	7.7	(6.0–9.5)	9.7	(6.6–12.8)
2412	Chaudière-Appalaches	6.7	(5.8–7.6)	11.9	(10.5–13.2)
2413	Laval	7.2	(6.1–8.3)	9.6	(7.4–11.8)
2414	Lanaudière	6.2	(5.3–7.0)	✦13.5	(12.0–15.0)
2415	Laurentides	✦5.3	(4.4–6.1)	✦9.2	(7.7–10.8)
2416	Montérégie	6.5	(6.0–7.0)	11.3	(10.4–12.2)
Ontario		**✦7.0**	**(6.8–7.1)**	**11.5**	**(11.2–11.8)**
3501	Erie St. Clair	7.3	(6.5–8.1)	✦8.5	(7.0–10.0)
3502	South West	✦7.7	(7.1–8.4)	10.4	(9.1–11.6)
3503	Waterloo Wellington	6.9	(6.1–7.6)	11.5	(10.1–12.9)
3504	Hamilton Niagara Haldimand Brant	6.8	(6.3–7.3)	10.7	(9.7–11.6)
3505	Central West	6.9	(6.2–7.5)	10.7	(9.3–12.1)
3506	Mississauga Halton	7.1	(6.5–7.7)	10.5	(9.1–11.8)
3507	Toronto Central	7.2	(6.5–7.9)	✦13.3	(12.3–14.3)
3508	Central	7.0	(6.5–7.5)	11.8	(10.8–12.8)
3509	Central East	6.9	(6.3–7.4)	11.2	(10.2–12.1)
3510	South East	6.5	(5.4–7.6)	11.2	(9.5–12.8)
3511	Champlain	6.1	(5.4–6.7)	10.9	(9.9–12.0)
3512	North Simcoe Muskoka	7.2	(6.2–8.3)	✦9.7	(8.1–11.2)
3513	North East	7.0	(6.2–7.8)	✦14.5	(13.5–15.5)
3514	North West	✦7.8	(6.8–8.8)	12.6	(11.0–14.2)
Manitoba		**6.9**	**(6.3–7.4)**	**✦8.9**	**(7.9–9.8)**
4610	Winnipeg	6.4	(5.5–7.3)	✦8.3	(7.0–9.7)
4615	Brandon	6.5	(3.7–9.2)	10.2	(6.3–14.0)
4625	South Eastman	6.2	(4.1–8.3)	9.3	(3.3–15.2)
4630	Interlake	5.2	(3.1–7.4)	✦5.8	(1.0–10.6)
4640	Central	6.4	(4.7–8.1)	11.7	(7.2–16.1)
4645	Assiniboine	8.8	(6.7–10.9)	12.8	(9.2–16.5)

Map Code	Health Region	30-Day Pediatric Readmission 2010–2011 Risk-Adjusted Rate (%)	95% CI	30-Day Readmission for Mental Illness 2010–2011 Risk-Adjusted Rate (%)	95% CI
Saskatchewan		**7.5**	**(7.0–7.9)**	**10.5**	**(9.6–11.4)**
4701	Sun Country	4.8	(2.7–7.0)	8.1	(3.4–12.8)
4702	Five Hills	7.5	(5.9–9.0)	11.4	(7.9–14.9)
4704	Regina	7.4	(6.6–8.3)	10.1	(8.2–12.1)
4705	Sunrise	6.0	(4.2–7.7)	11.6	(7.7–15.6)
4706	Saskatoon	7.7	(6.7–8.8)	8.4	(6.1–10.7)
4709	Prince Albert	8.4	(7.0–9.7)	12.4	(9.5–15.3)
4710	Prairie North	6.3	(4.8–7.7)	9.6	(6.6–12.7)
Alberta		**6.1**	**(5.8–6.4)**	**9.7**	**(9.1–10.3)**
4831	South Zone	6.1	(5.1–7.1)	10.1	(8.5–11.7)
4832	Calgary Zone	5.8	(5.3–6.4)	9.3	(8.3–10.3)
4833	Central Zone	6.0	(5.2–6.8)	9.2	(7.4–11.0)
4834	Edmonton Zone	6.0	(5.4–6.6)	8.4	(7.2–9.7)
4835	North Zone	6.8	(6.1–7.5)	12.3	(10.9–13.7)
British Columbia		**6.1**	**(5.7–6.4)**	**13.0**	**(12.6–13.5)**
5911	East Kootenay	3.6	(1.5–5.7)	15.0	(12.2–17.9)
5912	Kootenay Boundary	5.4	(2.8–8.0)	16.7	(13.8–19.5)
5913	Okanagan	6.0	(4.9–7.2)	14.0	(12.6–15.5)
5914	Thompson/Cariboo/Shuswap	6.1	(4.7–7.6)	12.3	(10.4–14.2)
5921	Fraser East	6.0	(4.8–7.1)	13.1	(11.4–14.8)
5922	Fraser North	5.8	(4.8–6.9)	12.8	(11.5–14.1)
5923	Fraser South	6.5	(5.8–7.3)	12.0	(10.8–13.2)
5931	Richmond	5.9	(4.0–7.8)	15.7	(13.4–18.1)
5932	Vancouver	6.0	(4.9–7.1)	13.4	(12.4–14.5)
5933	North Shore	5.6	(4.2–7.0)	13.9	(12.0–15.8)
5941	South Vancouver Island	6.1	(5.0–7.2)	12.4	(10.8–14.0)
5942	Central Vancouver Island	6.4	(5.1–7.7)	12.2	(10.3–14.0)
5943	North Vancouver Island	5.1	(2.9–7.3)	11.9	(8.6–15.2)
5951	Northwest	7.8	(6.0–9.7)	10.2	(7.7–12.8)
5952	Northern Interior	5.9	(4.5–7.4)	12.3	(10.3–14.2)
5953	Northeast	5.5	(3.1–7.9)	12.1	(9.0–15.1)
Yukon		**4.1**	**(0.4–7.7)**	**10.0**	**(5.9–14.2)**
Northwest Territories		**8.1**	**(5.9–10.3)**	**11.8**	**(9.1–14.5)**
Nunavut		**7.2**	**(5.4–9.0)**	**10.2**	**(5.6–14.9)**
Canada		**6.7**		**11.4**	

30-day pediatric readmission

Risk-adjusted rate of unplanned readmission for pediatric patient group. Non-elective return to an acute care hospital for any cause is counted as a readmission if it occurs within 30 days of discharge from the index episode of inpatient care. Urgent, unplanned readmissions to acute care facilities are increasingly being used to measure institutional or regional quality of care and care coordination. While not all unplanned readmissions are avoidable, interventions during and after a hospitalization can be effective in reducing readmission rates.

Sources: Discharge Abstract Database and National Ambulatory Care Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

30-day readmission for mental illness

Risk-adjusted rate of readmission following discharge for a mental illness. A case is counted as a readmission in a general hospital if it is for a selected mental illness diagnosis and if it occurs within 30 days of discharge from the index episode of inpatient care. High rates of 30-day readmission could be interpreted as being a direct outcome of poor coordination of services and/or an indirect outcome of poor continuity of services after discharge.

Sources: Discharge Abstract Database, National Ambulatory Care Reporting System and Ontario Mental Health Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	Patients With Repeat Hospitalizations for Mental Illness 2009–2010 Risk-Adjusted Rate (%)	95% CI	Self-Injury Hospitalization 2010–2011 Age-Standardized Rate per 100,000	95% CI
Newfoundland and Labrador		**12.0**	**(10.2–13.8)**	**[E]83**	**(74–93)**
1011	Eastern	9.8	(6.6–13.0)	71	(59–82)
1012	Central	11.2	(7.5–15.0)	78	(54–102)
1013	Western	[E]15.7	(12.4–18.9)	[E]123	(92–154)
Prince Edward Island		**12.2**	**(9.9–14.5)**	**[E]44**	**(32–57)**
Nova Scotia		**10.0**	**(8.6–11.3)**	**60**	**(55–66)**
1211	South Shore	8.6	(2.7–14.6)	[E]34	(16–52)
1212	South West Nova	10.2	(5.5–14.9)	74	(44–104)
1223	Annapolis Valley	6.8	(0.8–12.7)	[E]40	(23–57)
1234	Colchester East Hants	[E]4.6	(2.0–10.2)	70	(47–93)
1258	Cape Breton	12.6	(9.8–15.4)	[E]101	(77–125)
1269	Capital	8.7	(6.4–11.0)	[E]53	(45–61)
New Brunswick		**10.4**	**(9.2–11.5)**	**[E]77**	**(69–84)**
1301	Zone 1 (Moncton area)	8.4	(6.1–10.8)	[E]51	(40–62)
1302	Zone 2 (Saint John area)	[E]3.8	(0.2–7.3)	[E]88	(71–105)
1303	Zone 3 (Fredericton area)	9.5	(6.6–12.3)	68	(53–82)
1306	Zone 6 (Bathurst area)	13.5	(10.3–16.6)	73	(49–97)
Quebec		**[E]10.2**	**(9.7–10.6)**	**[E]58**	**(56–60)**
2401	Bas-Saint-Laurent	13.0	(10.8–15.1)	78	(63–93)
2402	Saguenay–Lac-Saint-Jean	[E]12.9	(11.1–14.8)	[E]90	(76–104)
2403	Capitale-Nationale	[E]6.6	(5.1–8.0)	60	(53–66)
2404	Mauricie et Centre-du-Québec	[E]14.0	(12.6–15.4)	[E]91	(81–101)
2405	Estrie	10.4	(8.5–12.2)	[E]80	(68–92)
2406	Montréal	[E]8.2	(7.2–9.2)	[E]23	(20–25)
2407	Outaouais	[E]6.2	(4.1–8.3)	66	(57–76)
2408	Abitibi-Témiscamingue	11.9	(9.1–14.7)	[E]118	(97–139)
2409	Côte-Nord	10.4	(7.4–13.3)	83	(61–105)
2411	Gaspésie–Îles-de-la-Madeleine	11.0	(7.8–14.2)	[E]127	(97–157)
2412	Chaudière-Appalaches	[E]12.5	(10.9–14.0)	[E]98	(86–109)
2413	Laval	9.0	(6.7–11.2)	[E]18	(13–23)
2414	Lanaudière	10.4	(8.7–12.0)	62	(53–70)
2415	Laurentides	[E]8.7	(7.1–10.3)	59	(52–67)
2416	Montérégie	10.5	(9.6–11.5)	62	(57–67)
Ontario		**10.5**	**(10.2–10.9)**	**[E]63**	**(62–65)**
3501	Erie St. Clair	[E]8.3	(6.8–9.9)	60	(53–67)
3502	South West	9.8	(8.5–11.1)	68	(62–74)
3503	Waterloo Wellington	9.8	(8.2–11.4)	[E]74	(67–81)
3504	Hamilton Niagara Haldimand Brant	[E]9.4	(8.4–10.5)	[E]74	(69–79)
3505	Central West	9.5	(8.0–11.0)	[E]49	(43–54)
3506	Mississauga Halton	10.9	(9.5–12.3)	[E]38	(34–42)
3507	Toronto Central	[E]13.5	(12.3–14.6)	[E]50	(46–55)
3508	Central	10.4	(9.2–11.5)	[E]38	(35–41)
3509	Central East	11.0	(9.9–12.1)	[E]48	(44–52)
3510	South East	[E]8.4	(6.6–10.2)	72	(63–81)
3511	Champlain	10.2	(9.0–11.3)	[E]52	(48–57)
3512	North Simcoe Muskoka	9.1	(7.4–10.8)	[E]132	(120–145)
3513	North East	[E]12.6	(11.5–13.8)	[E]160	(147–173)
3514	North West	10.8	(9.0–12.6)	[E]188	(167–210)
Manitoba		**[E]9.7**	**(8.7–10.7)**	**[E]58**	**(53–63)**
4610	Winnipeg	[E]9.0	(7.7–10.3)	[E]43	(37–48)
4615	Brandon	11.2	(7.0–15.3)	73	(46–100)
4625	South Eastman	6.0	(0.4–11.6)	[E]41	(23–59)
4630	Interlake	[E]5.8	(1.4–10.3)	[E]40	(24–56)
4640	Central	7.5	(2.9–12.2)	[E]34	(20–47)
4645	Assiniboine	11.7	(7.8–15.7)	50	(28–72)

Map Code	Health Region	Patients With Repeat Hospitalizations for Mental Illness 2009–2010 Risk-Adjusted Rate (%)	95% CI	Self-Injury Hospitalization 2010–2011 Age-Standardized Rate per 100,000	95% CI
Saskatchewan		**11.2**	**(10.2–12.3)**	**✦85**	**(78–91)**
4701	Sun Country	12.8	(6.7–18.8)	88	(57–119)
4702	Five Hills	✦17.9	(13.8–22.0)	76	(47–105)
4704	Regina	10.1	(8.0–12.3)	71	(59–82)
4705	Sunrise	14.2	(10.0–18.4)	78	(46–109)
4706	Saskatoon	✦7.8	(5.6–10.1)	62	(52–72)
4709	Prince Albert	12.1	(8.8–15.4)	66	(43–88)
4710	Prairie North	12.6	(9.2–16.0)	✦174	(137–212)
Alberta		**✦9.6**	**(9.0–10.2)**	**✦60**	**(58–63)**
4831	South Zone	✦13.5	(11.7–15.3)	✦101	(87–114)
4832	Calgary Zone	10.5	(9.4–11.5)	✦40	(36–43)
4833	Central Zone	✦7.3	(5.5–9.0)	68	(59–76)
4834	Edmonton Zone	✦8.4	(7.3–9.6)	✦59	(54–63)
4835	North Zone	✦9.0	(7.4–10.7)	✦99	(88–109)
British Columbia		**✦12.7**	**(12.2–13.2)**	**✦76**	**(73–79)**
5911	East Kootenay	12.8	(9.4–16.2)	87	(63–112)
5912	Kootenay Boundary	8.6	(5.4–11.8)	74	(50–98)
5913	Okanagan	✦13.2	(11.6–14.8)	✦120	(106–134)
5914	Thompson/Cariboo/Shuswap	✦13.0	(10.9–15.1)	✦105	(88–122)
5921	Fraser East	✦13.0	(11.2–14.7)	✦91	(78–103)
5922	Fraser North	✦12.9	(11.4–14.4)	✦54	(47–61)
5923	Fraser South	✦12.7	(11.4–14.1)	✦79	(71–86)
5931	Richmond	12.4	(9.4–15.3)	✦44	(34–54)
5932	Vancouver	✦13.7	(12.5–15.0)	✦44	(38–50)
5933	North Shore	✦14.1	(12.0–16.2)	59	(48–69)
5941	South Vancouver Island	10.6	(8.8–12.4)	70	(60–80)
5942	Central Vancouver Island	11.3	(9.2–13.4)	✦120	(103–136)
5943	North Vancouver Island	✦6.0	(2.6–9.3)	✦95	(73–117)
5951	Northwest	✦17.9	(14.8–20.9)	✦210	(168–252)
5952	Northern Interior	12.9	(10.8–15.1)	✦122	(100–143)
5953	Northeast	11.2	(7.9–14.5)	✦43	(25–61)
Yukon		**✦4.7**	**(2.0–10.5)**	**✦178**	**(127–229)**
Northwest Territories		**13.3**	**(9.8–16.7)**	**✦260**	**(207–314)**
Nunavut		**7.4**	**(2.9–12.0)**	**✦296**	**(231–360)**
Canada		**10.8**		**66**	**(65–67)**

Patients with repeat hospitalizations for mental illness

Risk-adjusted percentage of individuals who had three or more episodes of care for a selected mental illness over all those who had at least one episode of care for a selected mental illness in general hospitals within a given year. This indicator is considered an indirect measure of appropriateness of care. Variations in this indicator across jurisdictions may reflect differences in the services that help individuals with mental illness remain in the community for a longer period of time without the need for hospitalization.

Sources: Discharge Abstract Database, National Ambulatory Care Reporting System and Ontario Mental Health Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Self-injury hospitalization

Age-standardized rate of hospitalization in a general hospital due to self-injury, per 100,000 population age 15 and older. Self-injuries may be the result of suicidal and/or self-harming behaviours. In many cases, they can be prevented by early recognition of, intervention for and treatment of mental illnesses. While some risk factors are beyond the control of the health system, high rates of self-injury hospitalization could be interpreted as being the result of the system's failure to prevent self-injuries that are severe enough to require hospitalization.

Sources: Discharge Abstract Database, National Ambulatory Care Reporting System and Ontario Mental Health Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	Mental Illness Hospitalization 2010–2011 Age-Standardized Rate per 100,000	95% CI	Mental Illness Patient Days 2010–2011 Age-Standardized Rate per 10,000	95% CI
Newfoundland and Labrador		**417**	**(388–445)**	**492**	**(443–541)**
1011	Eastern	188	(167–209)	242	(206–279)
1012	Central	560	(476–645)	714	(577–851)
1013	Western	916	(793–1,040)	1,322	(1,056–1,588)
Prince Edward Island		**870**	**(794–947)**	**884**	**(780–989)**
Nova Scotia		**379**	**(360–399)**	**607**	**(544–670)**
1211	South Shore	295	(229–361)	573	(384–762)
1212	South West Nova	634	(530–738)	692	(538–846)
1223	Annapolis Valley	275	(180–369)	251	(176–325)
1234	Colchester East Hants	304	(246–362)	447	(315–579)
1258	Cape Breton	662	(587–737)	1,129	(913–1,345)
1269	Capital	262	(241–284)	555	(451–658)
New Brunswick		**588**	**(562–615)**	**834**	**(763–906)**
1301	Zone 1 (Moncton area)	487	(443–530)	731	(638–824)
1302	Zone 2 (Saint John area)	285	(252–319)	736	(516–956)
1303	Zone 3 (Fredericton area)	419	(376–461)	546	(467–626)
1306	Zone 6 (Bathurst area)	831	(723–938)	1,202	(991–1,412)
Quebec		**435**	**(428–442)**	**894**	**(867–922)**
2401	Bas-Saint-Laurent	707	(641–773)	1,060	(919–1,202)
2402	Saguenay–Lac-Saint-Jean	807	(746–869)	1,191	(1,061–1,321)
2403	Capitale-Nationale	329	(310–348)	743	(673–813)
2404	Mauricie et Centre-du-Québec	649	(610–687)	991	(869–1,113)
2405	Estrie	655	(607–703)	1,447	(1,292–1,603)
2406	Montréal	252	(242–261)	811	(747–874)
2407	Outaouais	387	(358–415)	540	(483–596)
2408	Abitibi-Témiscamingue	627	(558–696)	837	(638–1,036)
2409	Côte-Nord	728	(649–806)	1,797	(1,020–2,575)
2411	Gaspésie–Îles-de-la-Madeleine	675	(586–764)	921	(712–1,131)
2412	Chaudière-Appalaches	684	(643–724)	1,132	(1,025–1,238)
2413	Laval	274	(251–298)	843	(721–965)
2414	Lanaudière	504	(468–539)	905	(802–1,009)
2415	Laurentides	392	(366–417)	936	(830–1,042)
2416	Montérégie	474	(456–492)	888	(828–947)
Ontario		**409**	**(403–414)**	**485**	**(475–496)**
3501	Erie St. Clair	390	(367–414)	651	(580–723)
3502	South West	414	(394–433)	489	(456–523)
3503	Waterloo Wellington	393	(370–415)	380	(348–411)
3504	Hamilton Niagara Haldimand Brant	463	(446–481)	489	(461–517)
3505	Central West	338	(319–357)	374	(345–402)
3506	Mississauga Halton	275	(261–289)	348	(319–377)
3507	Toronto Central	394	(376–412)	514	(481–546)
3508	Central	292	(280–304)	360	(338–381)
3509	Central East	367	(352–381)	443	(405–481)
3510	South East	385	(358–412)	447	(405–489)
3511	Champlain	385	(367–402)	493	(462–524)
3512	North Simcoe Muskoka	556	(522–590)	434	(397–472)
3513	North East	976	(927–1,025)	1,203	(1,108–1,298)
3514	North West	865	(799–932)	914	(760–1,067)
Manitoba		**511**	**(493–530)**	**787**	**(740–834)**
4610	Winnipeg	441	(419–463)	885	(814–956)
4615	Brandon	765	(657–873)	1,209	(961–1,458)
4625	South Eastman	270	(214–325)	339	(235–443)
4630	Interlake	351	(294–408)	416	(313–519)
4640	Central	295	(247–344)	284	(204–364)
4645	Assiniboine	675	(581–769)	779	(601–957)

Map Code	Health Region	Mental Illness Hospitalization 2010–2011 Age-Standardized Rate per 100,000	95% CI	Mental Illness Patient Days 2010–2011 Age-Standardized Rate per 10,000	95% CI
Saskatchewan		**601**	**(578–624)**	**769**	**(725–813)**
4701	Sun Country	541	(451–632)	704	(536–872)
4702	Five Hills	859	(716–1,002)	1,095	(865–1,325)
4704	Regina	535	(493–577)	803	(717–889)
4705	Sunrise	724	(608–839)	1,073	(803–1,343)
4706	Saskatoon	347	(318–375)	697	(613–781)
4709	Prince Albert	818	(715–920)	704	(579–828)
4710	Prairie North	904	(787–1,021)	807	(633–982)
Alberta		**423**	**(413–432)**	**661**	**(636–687)**
4831	South Zone	737	(689–786)	988	(889–1,087)
4832	Calgary Zone	371	(357–386)	728	(679–776)
4833	Central Zone	419	(392–446)	549	(492–607)
4834	Edmonton Zone	339	(323–354)	608	(565–651)
4835	North Zone	620	(583–657)	499	(452–546)
British Columbia		**594**	**(582–606)**	**734**	**(713–755)**
5911	East Kootenay	815	(710–919)	442	(365–518)
5912	Kootenay Boundary	844	(725–963)	651	(535–767)
5913	Okanagan	765	(717–812)	800	(724–876)
5914	Thompson/Cariboo/Shuswap	674	(618–729)	620	(552–689)
5921	Fraser East	633	(585–682)	720	(641–799)
5922	Fraser North	534	(505–564)	682	(627–737)
5923	Fraser South	503	(475–530)	666	(617–716)
5931	Richmond	411	(363–460)	377	(317–437)
5932	Vancouver	590	(562–619)	949	(884–1,014)
5933	North Shore	496	(453–539)	638	(557–720)
5941	South Vancouver Island	543	(505–580)	942	(840–1,044)
5942	Central Vancouver Island	616	(562–670)	827	(710–944)
5943	North Vancouver Island	485	(424–547)	567	(442–691)
5951	Northwest	1,019	(892–1,146)	852	(696–1,008)
5952	Northern Interior	847	(768–926)	768	(672–865)
5953	Northeast	831	(722–941)	770	(605–935)
Yukon		**778**	**(632–925)**	**591**	**(396–787)**
Northwest Territories		**1,424**	**(1,235–1,612)**	**1,062**	**(580–1,545)**
Nunavut		**736**	**(606–866)**	**452**	**(337–567)**
Canada		**467**	**(464–471)**	**678**	**(669–687)**

Mental illness hospitalization

Age-standardized rate of separations from general hospitals through discharge or death following a hospitalization for a selected mental illness, per 100,000 population age 15 and older. The hospitalization rate in general hospitals is a partial measure of hospital utilization in acute settings. This indicator may reflect differences between jurisdictions, such as the health of the population, differing health service delivery models and variations in the availability and accessibility of specialized, residential and/or ambulatory and community-based services.

Sources: Discharge Abstract Database and Ontario Mental Health Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Mental illness patient days

Age-adjusted rate of total number of days in general hospitals for selected mental illness, per 10,000 population age 15 and older. The patient days rate in general hospitals is a partial measure of hospital utilization in acute settings. This indicator may reflect differences between jurisdictions, such as the health of the population, differing health service delivery models and variations in the availability and accessibility of specialized, residential and/or ambulatory and community-based health services.

Sources: Discharge Abstract Database and Ontario Mental Health Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	Hip Replacement 2010–2011 Age-Standardized Rate per 100,000	Hip Replacement 2010–2011 95% CI	Knee Replacement 2010–2011 Age-Standardized Rate per 100,000	Knee Replacement 2010–2011 95% CI
Newfoundland and Labrador		**70**	**(63–77)**	**136**	**(126–146)**
1011	Eastern	74	(63–84)	129	(116–142)
1012	Central	77	(60–95)	141	(119–163)
1013	Western	57	(42–73)	146	(120–172)
Prince Edward Island		**78**	**(63–93)**	**140**	**(121–160)**
Nova Scotia		**109**	**(103–116)**	**180**	**(172–189)**
1211	South Shore	153	(123–183)	244	(209–279)
1212	South West Nova	85	(63–108)	118	(93–143)
1223	Annapolis Valley	106	(85–128)	172	(145–198)
1234	Colchester East Hants	112	(88–135)	163	(135–191)
1258	Cape Breton	128	(109–148)	208	(184–231)
1269	Capital	103	(93–114)	189	(175–204)
New Brunswick		**100**	**(93–108)**	**150**	**(141–158)**
1301	Zone 1 (Moncton area)	119	(104–134)	141	(125–157)
1302	Zone 2 (Saint John area)	90	(75–104)	187	(167–208)
1303	Zone 3 (Fredericton area)	105	(89–120)	184	(163–205)
1306	Zone 6 (Bathurst area)	77	(58–96)	97	(76–117)
Quebec		**71**	**(69–73)**	**116**	**(113–118)**
2401	Bas-Saint-Laurent	89	(77–101)	170	(153–187)
2402	Saguenay–Lac-Saint-Jean	68	(58–78)	149	(135–162)
2403	Capitale-Nationale	64	(58–70)	103	(96–110)
2404	Mauricie et Centre-du-Québec	64	(57–71)	130	(121–140)
2405	Estrie	77	(68–87)	117	(105–129)
2406	Montréal	63	(60–67)	85	(81–89)
2407	Outaouais	100	(89–111)	179	(164–194)
2408	Abitibi-Témiscamingue	61	(48–75)	104	(87–121)
2409	Côte-Nord	67	(50–84)	198	(169–227)
2411	Gaspésie–Îles-de-la-Madeleine	48	(35–61)	112	(93–132)
2412	Chaudière-Appalaches	80	(71–88)	134	(123–145)
2413	Laval	70	(61–78)	92	(82–102)
2414	Lanaudière	78	(70–87)	116	(106–126)
2415	Laurentides	83	(75–90)	122	(112–132)
2416	Montérégie	75	(71–80)	122	(116–128)
Ontario		**109**	**(107–111)**	**181**	**(179–184)**
3501	Erie St. Clair	119	(110–128)	210	(199–221)
3502	South West	132	(125–140)	205	(195–214)
3503	Waterloo Wellington	122	(114–131)	169	(158–179)
3504	Hamilton Niagara Haldimand Brant	123	(117–129)	214	(206–222)
3505	Central West	68	(62–75)	173	(163–184)
3506	Mississauga Halton	97	(90–103)	145	(137–153)
3507	Toronto Central	94	(88–100)	112	(106–119)
3508	Central	91	(86–96)	143	(136–149)
3509	Central East	100	(94–105)	183	(176–190)
3510	South East	126	(116–136)	256	(243–270)
3511	Champlain	110	(104–116)	179	(171–187)
3512	North Simcoe Muskoka	141	(130–152)	195	(182–208)
3513	North East	125	(116–134)	250	(237–262)
3514	North West	163	(146–180)	231	(211–250)
Manitoba		**121**	**(114–128)**	**181**	**(173–189)**
4610	Winnipeg	117	(109–126)	170	(159–180)
4615	Brandon	128	(94–162)	158	(121–194)
4625	South Eastman	102	(74–131)	212	(171–253)
4630	Interlake	106	(84–128)	202	(172–232)
4640	Central	131	(107–155)	225	(194–257)
4645	Assiniboine	129	(103–156)	148	(121–175)

Map Code	Health Region	Hip Replacement 2010–2011 Age-Standardized Rate per 100,000	Hip Replacement 2010–2011 95% CI	Knee Replacement 2010–2011 Age-Standardized Rate per 100,000	Knee Replacement 2010–2011 95% CI
Saskatchewan		**128**	**(121–136)**	**210**	**(200–219)**
4701	Sun Country	117	(88–146)	165	(129–200)
4702	Five Hills	129	(99–159)	221	(182–260)
4704	Regina	115	(101–130)	190	(172–208)
4705	Sunrise	134	(105–162)	222	(185–259)
4706	Saskatoon	133	(119–147)	217	(198–235)
4709	Prince Albert	121	(94–147)	211	(177–244)
4710	Prairie North	133	(103–163)	187	(151–222)
Alberta		**117**	**(113–121)**	**174**	**(169–179)**
4831	South Zone	144	(129–160)	280	(258–301)
4832	Calgary Zone	116	(109–123)	162	(154–170)
4833	Central Zone	133	(121–145)	225	(209–240)
4834	Edmonton Zone	110	(103–117)	146	(138–153)
4835	North Zone	107	(95–119)	160	(145–174)
British Columbia		**108**	**(105–111)**	**156**	**(152–159)**
5911	East Kootenay	139	(114–164)	241	(208–274)
5912	Kootenay Boundary	145	(121–169)	166	(140–192)
5913	Okanagan	129	(118–140)	195	(182–209)
5914	Thompson/Cariboo/Shuswap	136	(121–151)	156	(140–172)
5921	Fraser East	96	(84–108)	190	(173–207)
5922	Fraser North	86	(78–94)	120	(110–130)
5923	Fraser South	94	(87–102)	168	(158–178)
5931	Richmond	63	(51–75)	103	(87–119)
5932	Vancouver	65	(59–72)	93	(84–101)
5933	North Shore	117	(104–129)	152	(137–166)
5941	South Vancouver Island	129	(118–141)	124	(113–135)
5942	Central Vancouver Island	124	(112–137)	165	(151–179)
5943	North Vancouver Island	165	(142–187)	172	(151–194)
5951	Northwest	132	(103–160)	277	(236–318)
5952	Northern Interior	173	(149–197)	332	(300–365)
5953	Northeast	128	(94–161)	194	(154–234)
Yukon		**120**	**(74–166)**	**212**	**(151–273)**
Northwest Territories		**139**	**(85–193)**	**126**	**(77–176)**
Nunavut		**108**	**(34–182)**	**490**	**(328–652)**
Canada		**100**	**(99–101)**	**160**	**(159–161)**

Hip replacement

Age-standardized rate of unilateral or bilateral hip replacement surgery performed on inpatients in acute care hospitals, per 100,000 population age 20 and older. Hip replacement surgery has the potential to improve functional status, reduce pain and contribute to other gains in health-related quality of life. Wide inter-regional variation in hip replacement rates may be attributable to numerous factors, including the availability of services, provider practice patterns and patient preferences.

Sources: Discharge Abstract Database, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Knee replacement

Age-standardized rate of unilateral or bilateral knee replacement surgery performed on patients in acute care hospitals or same-day surgery facilities, per 100,000 population age 20 and older. Knee replacement surgery has the potential to improve functional status, reduce pain and contribute to other gains in health-related quality of life. Wide inter-regional variation in knee replacement rates may be attributable to numerous factors, including the availability of services, provider practice patterns and patient preferences.

Sources: Discharge Abstract Database and National Ambulatory Care Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	Percutaneous Coronary Intervention 2010–2011 Age-Standardized Rate per 100,000	95% CI	Coronary Artery Bypass Graft Surgery 2010–2011 Age-Standardized Rate per 100,000	95% CI
Newfoundland and Labrador		**146**	**(136–156)**	**75**	**(68–83)**
1011	Eastern	141	(128–155)	73	(63–83)
1012	Central	180	(155–206)	88	(70–105)
1013	Western	126	(101–152)	68	(51–85)
Prince Edward Island		**177**	**(155–199)**	**60**	**(47–73)**
Nova Scotia		**174**	**(166–182)**	**56**	**(51–60)**
1211	South Shore	149	(120–179)	60	(41–78)
1212	South West Nova	179	(147–212)	51	(34–68)
1223	Annapolis Valley	179	(151–207)	57	(42–72)
1234	Colchester East Hants	211	(177–245)	52	(35–68)
1258	Cape Breton	172	(149–195)	65	(52–78)
1269	Capital	169	(156–182)	53	(46–61)
New Brunswick		**201**	**(191–211)**	**71**	**(65–77)**
1301	Zone 1 (Moncton area)	194	(175–214)	80	(68–92)
1302	Zone 2 (Saint John area)	229	(207–252)	78	(65–91)
1303	Zone 3 (Fredericton area)	218	(195–241)	79	(65–92)
1306	Zone 6 (Bathurst area)	221	(190–253)	74	(57–92)
Quebec		..	.. ..	**60**	**(59–62)**
2401	Bas-Saint-Laurent	..	.. ..	58	(48–68)
2402	Saguenay–Lac-Saint-Jean	..	.. ..	56	(47–64)
2403	Capitale-Nationale	..	.. ..	59	(53–65)
2404	Mauricie et Centre-du-Québec	..	.. ..	62	(55–69)
2405	Estrie	..	.. ..	45	(38–53)
2406	Montréal	..	.. ..	58	(55–62)
2407	Outaouais	..	.. ..	53	(45–61)
2408	Abitibi-Témiscamingue	..	.. ..	61	(48–74)
2409	Côte-Nord	..	.. ..	73	(55–91)
2411	Gaspésie–Îles-de-la-Madeleine	..	.. ..	77	(61–93)
2412	Chaudière-Appalaches	..	.. ..	65	(57–72)
2413	Laval	..	.. ..	57	(49–64)
2414	Lanaudière	..	.. ..	61	(54–69)
2415	Laurentides	..	.. ..	62	(56–69)
2416	Montérégie	..	.. ..	67	(63–72)
Ontario		**174**	**(171–176)**	**68**	**(66–69)**
3501	Erie St. Clair	169	(159–179)	81	(74–88)
3502	South West	139	(132–147)	68	(63–74)
3503	Waterloo Wellington	108	(100–116)	62	(55–68)
3504	Hamilton Niagara Haldimand Brant	200	(192–207)	83	(78–88)
3505	Central West	191	(180–201)	69	(62–75)
3506	Mississauga Halton	156	(148–164)	73	(68–79)
3507	Toronto Central	153	(145–160)	46	(41–50)
3508	Central	155	(148–161)	56	(52–60)
3509	Central East	165	(158–171)	60	(56–64)
3510	South East	207	(194–219)	103	(94–111)
3511	Champlain	188	(180–196)	52	(48–57)
3512	North Simcoe Muskoka	184	(171–197)	89	(80–98)
3513	North East	246	(233–258)	68	(62–75)
3514	North West	284	(262–306)	105	(92–119)
Manitoba		**168**	**(160–175)**	**72**	**(67–77)**
4610	Winnipeg	169	(158–179)	71	(64–78)
4615	Brandon	80	(53–108)	55	(34–77)
4625	South Eastman	204	(165–243)	93	(65–120)
4630	Interlake	192	(161–223)	78	(59–97)
4640	Central	155	(128–181)	65	(49–82)
4645	Assiniboine	169	(138–200)	63	(45–80)

Map Code	Health Region	Percutaneous Coronary Intervention 2010–2011 Age-Standardized Rate per 100,000	95% CI	Coronary Artery Bypass Graft Surgery 2010–2011 Age-Standardized Rate per 100,000	95% CI
Saskatchewan		**205**	**(196–214)**	**79**	**(73–85)**
4701	Sun Country	133	(101–166)	77	(54–101)
4702	Five Hills	138	(107–170)	60	(40–80)
4704	Regina	187	(169–205)	91	(79–104)
4705	Sunrise	150	(120–181)	80	(58–102)
4706	Saskatoon	238	(219–257)	63	(53–73)
4709	Prince Albert	235	(200–271)	95	(73–118)
4710	Prairie North	172	(138–206)	57	(38–77)
Alberta		**169**	**(165–174)**	**43**	**(40–45)**
4831	South Zone	144	(129–160)	49	(40–58)
4832	Calgary Zone	151	(143–158)	35	(32–39)
4833	Central Zone	178	(164–192)	49	(41–56)
4834	Edmonton Zone	171	(163–180)	44	(39–48)
4835	North Zone	239	(221–257)	51	(42–60)
British Columbia		**164**	**(160–168)**	**58**	**(56–61)**
5911	East Kootenay	142	(116–168)	45	(30–59)
5912	Kootenay Boundary	134	(110–158)	49	(34–63)
5913	Okanagan	151	(139–163)	42	(36–48)
5914	Thompson/Cariboo/Shuswap	141	(126–156)	44	(36–52)
5921	Fraser East	240	(221–259)	75	(64–86)
5922	Fraser North	184	(172–196)	68	(61–76)
5923	Fraser South	181	(171–191)	66	(60–72)
5931	Richmond	147	(129–166)	49	(38–60)
5932	Vancouver	126	(117–136)	54	(48–61)
5933	North Shore	128	(115–142)	60	(51–70)
5941	South Vancouver Island	155	(143–168)	48	(41–55)
5942	Central Vancouver Island	194	(179–210)	65	(56–74)
5943	North Vancouver Island	176	(152–199)	62	(49–75)
5951	Northwest	163	(131–195)	93	(69–117)
5952	Northern Interior	184	(160–207)	77	(62–93)
5953	Northeast	216	(173–258)	64	(40–89)
Yukon		**176**	**(120–232)**	**38**	**(13–63)**
Northwest Territories		**220**	**(155–285)**	**63**	**(27–98)**
Nunavut		**112**	**(46–179)**	**72**	**(15–129)**
Canada		**173**	**(171–174)**	**63**	**(62–64)**

Percutaneous coronary intervention

Age-standardized rate of percutaneous coronary intervention (PCI) performed on patients in acute care hospitals, same-day surgery facilities or catheterization laboratories, per 100,000 population age 20 and older. In many cases, PCI serves as a nonsurgical alternative to coronary artery bypass graft (CABG) surgery and is undertaken for the purpose of opening obstructed coronary arteries. The choice of revascularization mode (that is, PCI or CABG) depends on numerous factors, including severity of coronary artery disease, physician preferences, availability of services, referral patterns and differences in population health and socio-economic status.

Note: Rates for Quebec are not available due to differences in data collection; the Canada rate does not include Quebec.

Sources: Discharge Abstract Database and National Ambulatory Care Reporting System, Canadian Institute for Health Information.

Coronary artery bypass graft surgery

Age-standardized rate of coronary artery bypass graft (CABG) surgery performed on inpatients in acute care hospitals, per 100,000 population age 20 and older. As with other types of surgical procedures, variations in CABG surgery rates can be attributed to numerous factors, including differences in population demographics and health status, physician practice patterns and availability of services. In cases amenable to treatment with less invasive procedures, percutaneous coronary intervention (PCI), an alternative treatment to improve blood flow to the heart muscle, may be used. Variations in the extent to which PCI is utilized may result in variations in bypass surgery.

Sources: Discharge Abstract Database, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	Cardiac Revascularization 2010–2011 Age-Standardized Rate per 100,000	95% CI	Hysterectomy 2010–2011 Age-Standardized Rate per 100,000	95% CI
Newfoundland and Labrador		**221**	**(208–233)**	**410**	**(381–438)**
1011	Eastern	214	(197–231)	375	(341–410)
1012	Central	267	(237–298)	456	(384–528)
1013	Western	194	(164–225)	504	(420–588)
Prince Edward Island		**236**	**(211–261)**	**407**	**(350–463)**
Nova Scotia		**229**	**(219–239)**	**415**	**(394–437)**
1211	South Shore	206	(171–240)	354	(269–438)
1212	South West Nova	231	(194–267)	521	(420–622)
1223	Annapolis Valley	235	(203–266)	628	(528–728)
1234	Colchester East Hants	262	(224–299)	533	(445–622)
1258	Cape Breton	238	(211–264)	497	(426–567)
1269	Capital	221	(206–236)	286	(261–312)
New Brunswick		**271**	**(259–283)**	**399**	**(376–423)**
1301	Zone 1 (Moncton area)	274	(251–297)	430	(384–476)
1302	Zone 2 (Saint John area)	306	(280–333)	372	(327–417)
1303	Zone 3 (Fredericton area)	295	(268–321)	329	(285–373)
1306	Zone 6 (Bathurst area)	296	(259–332)	404	(331–478)
Quebec		..	.. ..	**300**	**(294–306)**
2401	Bas-Saint-Laurent	..	.. ..	421	(371–471)
2402	Saguenay–Lac-Saint-Jean	..	.. ..	458	(414–503)
2403	Capitale-Nationale	..	.. ..	250	(232–269)
2404	Mauricie et Centre-du-Québec	..	.. ..	387	(357–417)
2405	Estrie	..	.. ..	451	(410–492)
2406	Montréal	..	.. ..	201	(191–211)
2407	Outaouais	..	.. ..	260	(233–286)
2408	Abitibi-Témiscamingue	..	.. ..	494	(433–556)
2409	Côte-Nord	..	.. ..	328	(272–385)
2411	Gaspésie–Îles-de-la-Madeleine	..	.. ..	424	(353–495)
2412	Chaudière-Appalaches	..	.. ..	413	(380–447)
2413	Laval	..	.. ..	249	(226–273)
2414	Lanaudière	..	.. ..	338	(311–364)
2415	Laurentides	..	.. ..	325	(301–349)
2416	Montérégie	..	.. ..	310	(296–325)
Ontario		**240**	**(237–243)**	**308**	**(304–313)**
3501	Erie St. Clair	250	(237–262)	431	(404–458)
3502	South West	206	(197–215)	386	(365–407)
3503	Waterloo Wellington	169	(159–179)	396	(373–420)
3504	Hamilton Niagara Haldimand Brant	282	(273–291)	361	(345–377)
3505	Central West	257	(245–270)	258	(241–275)
3506	Mississauga Halton	227	(218–237)	218	(205–232)
3507	Toronto Central	198	(189–206)	173	(161–184)
3508	Central	210	(202–217)	233	(222–244)
3509	Central East	224	(216–231)	322	(308–336)
3510	South East	304	(289–319)	374	(345–404)
3511	Champlain	238	(229–247)	331	(315–347)
3512	North Simcoe Muskoka	269	(254–284)	385	(355–414)
3513	North East	312	(298–326)	497	(465–529)
3514	North West	389	(363–415)	272	(237–307)
Manitoba		**238**	**(229–248)**	**380**	**(362–399)**
4610	Winnipeg	239	(227–251)	340	(318–362)
4615	Brandon	136	(101–170)	460	(362–559)
4625	South Eastman	294	(247–342)	406	(324–488)
4630	Interlake	270	(233–306)	458	(377–540)
4640	Central	218	(187–249)	443	(376–511)
4645	Assiniboine	232	(196–268)	548	(451–645)

Map Code	Health Region	Cardiac Revascularization 2010–2011 Age-Standardized Rate per 100,000	95% CI	Hysterectomy 2010–2011 Age-Standardized Rate per 100,000	95% CI
Saskatchewan		**✦281**	**(270–292)**	**✦435**	**(414–457)**
4701	Sun Country	211	(171–250)	✦544	(435–654)
4702	Five Hills	✦194	(157–232)	✦694	(570–818)
4704	Regina	✦276	(254–298)	✦386	(346–425)
4705	Sunrise	230	(192–268)	✦608	(493–722)
4706	Saskatoon	✦297	(276–319)	✦381	(345–417)
4709	Prince Albert	✦325	(283–367)	296	(231–360)
4710	Prairie North	228	(188–267)	✦615	(511–719)
Alberta		**✦211**	**(206–217)**	**✦371**	**(361–382)**
4831	South Zone	✦192	(174–210)	✦508	(461–554)
4832	Calgary Zone	✦185	(177–194)	✦303	(288–318)
4833	Central Zone	226	(211–241)	✦515	(480–551)
4834	Edmonton Zone	✦215	(205–224)	341	(324–359)
4835	North Zone	✦289	(269–309)	✦479	(443–515)
British Columbia		**✦221**	**(216–225)**	**✦299**	**(291–307)**
5911	East Kootenay	✦185	(156–215)	328	(263–393)
5912	Kootenay Boundary	✦183	(155–211)	393	(317–468)
5913	Okanagan	✦193	(179–206)	✦387	(351–422)
5914	Thompson/Cariboo/Shuswap	✦185	(168–202)	✦470	(419–521)
5921	Fraser East	✦311	(289–333)	✦507	(463–550)
5922	Fraser North	✦250	(236–264)	✦216	(198–234)
5923	Fraser South	246	(234–258)	✦272	(252–291)
5931	Richmond	✦194	(173–216)	✦167	(140–194)
5932	Vancouver	✦178	(167–190)	✦152	(137–166)
5933	North Shore	✦188	(172–204)	✦198	(173–223)
5941	South Vancouver Island	✦201	(187–216)	302	(273–330)
5942	Central Vancouver Island	✦258	(240–276)	✦498	(450–547)
5943	North Vancouver Island	235	(209–262)	✦440	(374–506)
5951	Northwest	256	(216–296)	✦410	(332–488)
5952	Northern Interior	260	(232–288)	✦658	(586–730)
5953	Northeast	277	(228–326)	334	(260–407)
Yukon		**214**	**(153–275)**	**356**	**(252–460)**
Northwest Territories		**283**	**(209–357)**	**334**	**(239–428)**
Nunavut		**177**	**(91–263)**	**258**	**(132–383)**
Canada		**235**	**(233–237)**	**325**	**(322–328)**

Cardiac revascularization

Age-standardized rate of coronary artery bypass graft (CABG) surgery performed on inpatients in acute care hospitals or percutaneous coronary intervention (PCI) performed on patients in acute care hospitals, same-day surgery facilities or catheterization laboratories, per 100,000 population age 20 and older. The choice of revascularization mode (that is, PCI or CABG) depends on numerous factors, including severity of coronary artery disease, physician preferences, availability of services, referral patterns and differences in population health and socio-economic status. The combined cardiac revascularization rate represents total activity of cardiac revascularization in a jurisdiction.

Note: Rates for Quebec are not available due to differences in data collection; the Canada rate does not include Quebec.

Sources: Discharge Abstract Database and National Ambulatory Care Reporting System, Canadian Institute for Health Information.

Hysterectomy

Age-standardized rate of hysterectomy provided to patients in acute care hospitals or same-day surgery facilities, per 100,000 women age 20 and older. Similar to other types of surgical procedures, variations in hysterectomy rates can be attributed to numerous factors, including differences in population demographics and health status, physician practice patterns and availability of services.

Sources: Discharge Abstract Database and National Ambulatory Care Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	Inflow/Outflow Ratio, 2010–2011					
		Overall	Hip Replacement	Knee Replacement	Hysterectomy	Percutaneous Coronary Intervention	Bypass Surgery
Newfoundland and Labrador		..	..	..	..	..	..
1011	Eastern	1.10	1.02	0.99	1.06	1.79	1.85
1012	Central	0.84	0.91	1.07	0.91	0.00	0.00
1013	Western	0.94	1.00	0.98	1.01	0.00	0.00
Prince Edward Island		**0.91**	**0.94**	**0.97**	**0.92**	**0.00**	**0.00**
Nova Scotia		..	..	..	..	..	..
1211	South Shore	0.67	0.00	0.00	0.81	0.00	0.00
1212	South West Nova	0.75	0.00	0.00	0.79	0.00	0.00
1223	Annapolis Valley	0.96	1.72	1.94	1.30	0.00	0.00
1234	Colchester East Hants	0.60	0.00	0.00	0.98	0.00	0.00
1258	Cape Breton	0.91	1.01	1.06	0.74	0.00	0.00
1269	Capital	1.43	1.55	1.34	1.23	2.91	3.17
New Brunswick		..	..	..	..	..	..
1301	Zone 1 (Moncton area)	1.11	1.19	1.23	1.27	0.00	0.00
1302	Zone 2 (Saint John area)	1.15	1.03	0.98	0.94	3.97	4.20
1303	Zone 3 (Fredericton area)	0.92	1.08	1.08	0.97	0.00	0.00
1306	Zone 6 (Bathurst area)	0.92	1.10	0.94	0.82	0.00	0.00
Quebec		..	..	..	..	..	..
2401	Bas-Saint-Laurent	0.92	0.95	0.98	0.96	..	0.00
2402	Saguenay–Lac-Saint-Jean	1.00	1.00	1.05	1.03	..	1.02
2403	Capitale-Nationale	1.32	1.15	1.09	1.38	..	2.62
2404	Mauricie et Centre-du-Québec	0.90	0.95	1.04	0.96	..	0.00
2405	Estrie	1.09	0.65	0.57	1.05	..	1.78
2406	Montréal	1.40	1.83	1.79	1.66	..	2.99
2407	Outaouais	0.78	0.73	0.82	0.51	..	0.00
2408	Abitibi-Témiscamingue	0.97	0.92	1.07	1.00	..	0.00
2409	Côte-Nord	0.78	0.80	0.81	0.75	..	0.00
2411	Gaspésie–Îles-de-la-Madeleine	0.73	0.56	0.67	0.69	..	0.00
2412	Chaudière-Appalaches	0.78	1.13	1.15	0.73	..	0.00
2413	Laval	0.76	0.37	0.61	0.82	..	0.00
2414	Lanaudière	0.72	0.66	0.60	0.64	..	0.00
2415	Laurentides	0.76	0.58	0.70	0.63	..	0.00
2416	Montérégie	0.78	0.69	0.69	0.77	..	0.00
Ontario		..	..	..	..	..	..
3501	Erie St. Clair	0.88	0.87	0.89	0.88	0.58	0.00
3502	South West	1.07	0.99	0.97	1.11	1.04	1.47
3503	Waterloo Wellington	0.90	0.96	0.99	0.91	1.49	1.41
3504	Hamilton Niagara Haldimand Brant	1.00	0.96	0.94	1.03	0.99	1.12
3505	Central West	0.76	0.73	0.75	0.58	0.00	0.00
3506	Mississauga Halton	0.96	0.83	0.93	0.78	1.57	1.38
3507	Toronto Central	1.88	2.49	2.65	2.53	3.03	4.41
3508	Central	0.89	0.86	0.97	0.91	0.83	1.03
3509	Central East	0.82	0.75	0.86	0.80	0.47	0.00
3510	South East	0.95	1.00	1.02	1.03	0.93	0.96
3511	Champlain	1.11	1.03	1.02	1.13	1.12	1.48
3512	North Simcoe Muskoka	0.87	0.66	0.71	0.91	0.00	0.00
3513	North East	0.93	0.70	0.75	0.90	0.92	0.84
3514	North West	0.91	0.95	1.00	0.71	0.78	0.00
Manitoba		..	..	..	..	..	..
4610	Winnipeg	1.40	1.61	1.64	1.57	1.84	1.91
4615	Brandon	1.62	0.97	2.16	2.02	0.00	0.00
4625	South Eastman	0.60	0.00	0.00	0.27	0.00	0.00
4630	Interlake	0.54	0.00	0.00	0.19	0.00	0.00
4640	Central	0.79	1.21	0.84	0.28	0.00	0.00
4645	Assiniboine	0.55	0.00	0.00	0.11	0.00	0.00

Map Code	Health Region	Inflow/Outflow Ratio, 2010–2011 Overall	Hip Replacement	Knee Replacement	Hysterectomy	Percutaneous Coronary Intervention	Bypass Surgery
Saskatchewan		. .	. .	. .	. .	. .	. .
4701	Sun Country	0.55	0.00	0.00	0.31	0.00	0.00
4702	Five Hills	0.83	0.43	0.36	0.87	0.00	0.00
4704	Regina	1.22	1.27	1.29	1.26	1.78	1.88
4705	Sunrise	0.83	0.00	0.00	1.11	0.00	0.00
4706	Saskatoon	1.37	2.06	2.09	1.52	1.91	2.11
4709	Prince Albert	0.99	0.58	0.71	0.84	0.00	0.00
4710	Prairie North	1.06	0.00	0.00	1.46	0.00	0.00
Alberta		. .	. .	. .	. .	. .	. .
4831	South Zone	0.93	1.03	1.24	0.97	0.00	0.00
4832	Calgary Zone	1.07	1.14	1.04	1.06	1.44	1.60
4833	Central Zone	0.80	0.61	0.65	0.77	0.00	0.00
4834	Edmonton Zone	1.24	1.23	1.26	1.26	1.87	1.83
4835	North Zone	0.79	0.69	0.71	0.60	0.00	0.00
British Columbia		. .	. .	. .	. .	. .	. .
5911	East Kootenay	0.84	0.74	0.81	0.68	0.00	0.00
5912	Kootenay Boundary	0.84	0.73	0.77	0.84	0.00	0.00
5913	Okanagan	1.03	1.02	1.04	1.01	1.58	0.00
5914	Thompson/Cariboo/Shuswap	0.92	0.51	0.58	0.97	0.00	0.00
5921	Fraser East	0.91	0.81	0.83	0.89	0.00	0.00
5922	Fraser North	1.03	0.70	0.82	0.83	2.24	2.05
5923	Fraser South	0.78	0.51	0.65	0.64	0.00	0.00
5931	Richmond	0.96	1.43	2.26	0.96	0.00	0.00
5932	Vancouver	1.62	3.77	2.74	2.55	3.65	4.33
5933	North Shore	0.88	0.72	0.94	0.73	0.00	0.00
5941	South Vancouver Island	1.15	0.96	0.92	1.07	2.44	3.24
5942	Central Vancouver Island	0.84	0.81	0.84	0.87	0.00	0.00
5943	North Vancouver Island	0.86	1.01	1.26	1.01	0.00	0.00
5951	Northwest	0.84	0.31	0.51	0.95	0.00	0.00
5952	Northern Interior	0.90	0.65	0.86	0.76	0.00	0.00
5953	Northeast	0.84	0.78	0.91	0.83	0.00	0.00
Yukon		**0.83**	**0.00**	**0.51**	**0.88**	**0.00**	**0.00**
Northwest Territories		**0.96**	**0.80**	**1.13**	**0.91**	**0.00**	**0.00**
Nunavut		**0.44**	**0.00**	**0.00**	**0.18**	**0.00**	**0.00**
Canada		. .	. .	. .	. .	. .	. .

Inflow/outflow ratio

A ratio of the number of discharges from relevant facilities (acute care/same-day surgery) within a given region divided by the number of discharges generated by residents of that region. An overall ratio is calculated for discharges associated with any diagnosis or procedure for acute care discharges only and separately for hip replacement, knee replacement, hysterectomy, percutaneous coronary intervention (PCI) and coronary artery bypass surgery procedures from all relevant facilities. A ratio of less than one indicates that health care utilization by residents of a region exceeded care provided within that region, suggesting an outflow effect. A ratio greater than one indicates that care provided by a region exceeded the utilization by its residents, suggesting an inflow effect. A ratio of one indicates that care provided by a region is equivalent to the utilization by its residents, suggesting that inflow and outflow activity, if it exists at all, is balanced. A ratio of zero is an indication that none of the institutions in the region provided the service and residents received care outside of their region.

Note: The PCI inflow/outflow ratios for Quebec are not available due to differences in data collection.

Sources: Discharge Abstract Database and National Ambulatory Care Reporting System, Canadian Institute for Health Information; Fichier des hospitalisations MED-ÉCHO, ministère de la Santé et des Services sociaux du Québec.

Map Code	Health Region	General/Family Physicians 2010 Rate per 100,000	General/Family Physicians 2010 95% CI	Specialist Physicians 2010 Rate per 100,000	Specialist Physicians 2010 95% CI
Newfoundland and Labrador		**118**	**(109–128)**	**108**	**(99–117)**
1011	Eastern	120	(107–132)	137	(124–150)
1012	Central	116	(94–138)	66	(50–83)
1013	Western	121	(97–146)	75	(56–94)
Prince Edward Island		**89**	**(74–105)**	**77**	**(62–91)**
Nova Scotia		**114**	**(107–121)**	**111**	**(105–118)**
1211	South Shore	117	(89–145)	55	(36–74)
1212	South West Nova	90	(66–115)	43	(26–59)
1223	Annapolis Valley	104	(82–126)	75	(56–94)
1234	Colchester East Hants	89	(68–111)	46	(31–62)
1258	Cape Breton	103	(85–121)	78	(62–94)
1269	Capital	131	(120–141)	172	(159–184)
New Brunswick		**109**	**(101–116)**	**97**	**(90–104)**
1301	Zone 1 (Moncton area)	108	(94–123)	119	(104–134)
1302	Zone 2 (Saint John area)	105	(89–120)	113	(97–129)
1303	Zone 3 (Fredericton area)	105	(89–120)	72	(59–84)
1306	Zone 6 (Bathurst area)	111	(87–134)	82	(62–102)
Quebec		**111**	**(109–114)**	**114**	**(111–116)**
2401	Bas-Saint-Laurent	139	(122–155)	99	(86–113)
2402	Saguenay–Lac-Saint-Jean	118	(105–131)	81	(70–92)
2403	Capitale-Nationale	153	(143–162)	179	(169–189)
2404	Mauricie et Centre-du-Québec	100	(91–108)	76	(68–84)
2405	Estrie	132	(119–145)	142	(128–155)
2406	Montréal	120	(115–125)	209	(203–216)
2407	Outaouais	97	(86–107)	55	(47–62)
2408	Abitibi-Témiscamingue	130	(112–149)	84	(69–99)
2409	Côte-Nord	143	(119–167)	61	(45–76)
2411	Gaspésie–Îles-de-la-Madeleine	190	(162–218)	88	(69–107)
2412	Chaudière-Appalaches	107	(97–117)	74	(65–82)
2413	Laval	89	(80–99)	69	(61–77)
2414	Lanaudière	81	(73–89)	54	(47–60)
2415	Laurentides	88	(80–96)	48	(43–54)
2416	Montérégie	93	(88–98)	62	(58–67)
Ontario		**92**	**(90–94)**	**97**	**(96–99)**
3501	Erie St. Clair	69	(62–75)	57	(51–62)
3502	South West	91	(85–98)	110	(103–116)
3503	Waterloo Wellington	83	(76–89)	60	(55–66)
3504	Hamilton Niagara Haldimand Brant	83	(78–88)	100	(95–105)
3505	Central West	65	(60–71)	44	(39–48)
3506	Mississauga Halton	76	(71–81)	61	(57–66)
3507	Toronto Central	160	(153–167)	296	(286–305)
3508	Central	83	(79–87)	70	(66–74)
3509	Central East	71	(67–76)	58	(54–61)
3510	South East	111	(102–120)	109	(99–118)
3511	Champlain	118	(112–124)	130	(124–137)
3512	North Simcoe Muskoka	88	(80–97)	54	(47–60)
3513	North East	94	(86–102)	65	(58–72)
3514	North West	107	(94–121)	62	(52–72)
Manitoba		**99**	**(93–104)**	**89**	**(83–94)**
4610	Winnipeg	104	(96–111)	143	(134–152)
4615	Brandon	143	(110–176)	84	(59–109)
4625	South Eastman	66	(47–85)	*	**
4630	Interlake	83	(64–103)	17	(8–26)
4640	Central	90	(72–107)	17	(10–25)
4645	Assiniboine	99	(76–122)	*	**

Map Code	Health Region	General/Family Physicians 2010 Rate per 100,000	95% CI	Specialist Physicians 2010 Rate per 100,000	95% CI
Saskatchewan		**95**	**(89–101)**	**75**	**(69–80)**
4701	Sun Country	69	(47–91)	*	**
4702	Five Hills	75	(52–99)	40	(23–56)
4704	Regina	99	(87–112)	86	(75–97)
4705	Sunrise	72	(49–95)	24	(11–37)
4706	Saskatoon	117	(105–129)	143	(130–156)
4709	Prince Albert	104	(81–126)	47	(32–63)
4710	Prairie North	84	(63–106)	18	(8–28)
Alberta		**109**	**(106–113)**	**103**	**(99–106)**
4831	South Zone	94	(82–105)	59	(50–68)
4832	Calgary Zone	117	(111–122)	123	(117–129)
4833	Central Zone	90	(82–99)	33	(28–38)
4834	Edmonton Zone	120	(114–127)	145	(138–152)
4835	North Zone	84	(75–93)	22	(17–26)
British Columbia		**119**	**(116–122)**	**96**	**(93–98)**
5911	East Kootenay	149	(122–176)	43	(29–58)
5912	Kootenay Boundary	156	(128–183)	50	(35–66)
5913	Okanagan	121	(109–132)	88	(78–97)
5914	Thompson/Cariboo/Shuswap	109	(96–123)	58	(48–68)
5921	Fraser East	92	(81–103)	45	(37–53)
5922	Fraser North	83	(76–91)	75	(68–81)
5923	Fraser South	79	(73–86)	48	(43–53)
5931	Richmond	88	(75–101)	65	(53–76)
5932	Vancouver	169	(159–178)	264	(251–276)
5933	North Shore	130	(116–143)	69	(59–78)
5941	South Vancouver Island	157	(145–170)	127	(116–139)
5942	Central Vancouver Island	129	(116–143)	62	(53–71)
5943	North Vancouver Island	152	(130–174)	66	(52–81)
5951	Northwest	152	(124–180)	26	(15–38)
5952	Northern Interior	125	(107–143)	55	(43–67)
5953	Northeast	95	(72–118)	13	(5–21)
Yukon		**180**	**(135–224)**	**29**	**(11–47)**
Northwest Territories		**55**	**(33–77)**	**23**	**(9–37)**
Nunavut		**30**	**(11–49)**	*	**
Canada		**104**	**(103–105)**	**101**	**(100–102)**

Physicians

General/family physicians (family medicine and emergency family medicine specialists) and **specialist physicians** (medical, surgical and laboratory specialists) on December 31 of the reference year, per 100,000 population. The data includes active physicians in clinical practice and those not working in a clinical practice. Active physicians are defined as physicians who have an MD degree, are registered with a provincial/territorial medical college and have a valid mailing address. The data excludes residents and non-licensed physicians who requested that their information not be published in the *Canadian Medical Directory* as of December 31 of the reference year. Generally, specialist physicians include certificants of the Royal College of Physicians and Surgeons of Canada (RCPSC) and/or the Collège des médecins du Québec (CMQ), with the exception of Saskatchewan, Newfoundland and Labrador, Nova Scotia, New Brunswick, Yukon and Alberta, where specialists also include physicians who are licensed as specialists but who are not certified by the RCPSC or the CMQ (that is, non-certified specialists). For all other jurisdictions, non-certified specialists are counted as general practitioners. With the exception of the criteria just noted, all other physicians are counted as family practitioners, including certificants of the College of Family Physicians of Canada. For further methodological information, please see *Supply, Distribution and Migration of Canadian Physicians* (www.cihi.ca). Physician-to-population rates are useful indicators and are published by a variety of agencies to support health human resources planning. However, due to differences in CIHI's data collection, processing and reporting methodology, CIHI's results may differ from provincial and territorial data. Readers are cautioned to avoid inferences regarding the adequacy of provider resources based on supply ratios alone.

Source: Scott's Medical Database, Canadian Institute for Health Information.

Selected Health Professionals† 2010											
	Nurses										
	RNs	LPNs	Pharmacists	Dentists	Dental Hygienists	Dietitians	Occupational Therapists	Physio-therapists	Chiro-practors	Optometrists	Psychologists
N.L.	1,181	490	122	35	30	31	32	40	11	10	41
P.E.I.	1,026	411	118	51	59	47	31	41	6	13	25
N.S.	972	374	122	56	69	50	41	57	12	11	52
N.B.	1,076	372	96	42	54	45	42	61	8	15	48
Que.	835	255	96	53	66	34	48	48	15	16	94
Ont.	717	229	80	64	90	24	33	42	31	14	25
Man.	935	220	107	51	54	32	43	58	21	10	20
Sask.	907	259	118	37	48	29	26	55	18	13	45
Alta.	766	195	103	55	70	27	40	56	25	14	66
B.C.	679	181	89	66	70	24	37	62	23	12	23
Y.T.	1,041	184	70	117	79			93	20	17	..
N.W.T.	1,443	197	39	122	53	24	27	..	..	0	165
Nun.		..	90	198	15			..	..	0	60
Canada	**783**	**237**	**92**	**58**	**75**	**28**	**38**	**49**	**23**	**14**	**47**

† Rates per 100,000 population.

Health Expenditure										
Total Health Expenditure										
	Current Dollars ($ '000,000)			GDP (%)	Public Sector (%)	By Use of Funds (Percentage Distribution of $ '000,000), 2009				
	Actual 2009	Forecast 2010	Forecast 2011	2009	2009	Institutional Services	Professional Services	Drugs	Public Health	Capital and Other Health
N.L.	3,000	3,298	3,500	12.0	77.1	53.3	17.4	15.0	3.5	10.8
P.E.I.	779	842	873	16.4	73.4	41.6	20.1	15.6	4.7	18.0
N.S.	5,332	5,691	5,930	15.6	69.0	45.7	21.0	17.3	2.4	13.6
N.B.	4,302	4,550	4,784	15.6	69.9	45.2	21.5	17.1	3.5	12.7
Que.	38,191	40,010	41,926	12.6	71.9	41.1	21.6	19.6	4.3	13.4
Ont.	71,811	75,469	77,438	12.4	68.5	35.9	26.2	16.9	7.1	13.9
Man.	7,314	7,655	8,059	14.3	74.8	42.7	20.9	13.5	7.2	15.7
Sask.	5,818	6,309	6,788	10.3	76.9	40.5	22.4	14.2	9.6	13.3
Alta.	21,519	23,891	24,936	8.7	72.9	39.5	26.1	13.3	7.0	14.1
B.C.	22,972	24,031	25,097	12.0	71.0	38.5	24.0	13.0	6.8	17.7
Y.T.	278	301	314	13.7	79.9	37.7	17.0	9.2	19.4	16.7
N.W.T.	432	439	452	10.5	84.4	47.7	17.1	6.9	8.1	20.2
Nun.	365	367	401	24.2	93.2	46.7	17.2	5.8	9.5	20.8
Canada	**182,113**	**192,854**	**200,499**	**11.9**	**70.9**	**39.0**	**24.2**	**16.2**	**6.3**	**14.3**

	Public Sector Health Expenditure by Use of Funds ($ per Capita), 2009					Private Sector Health Expenditure by Use of Funds ($ per Capita), 2009				
	Institutional Services	Professional Services	Drugs	Public Health	Capital and Other Health	Institutional Services	Professional Services	Drugs	Public Health	Capital and Other Health
N.L.	2,881	701	280	209	483	267	325	606	0	153
P.E.I.	2,018	710	255	260	813	277	399	607	0	183
N.S.	2,262	724	350	137	445	332	472	633	0	321
N.B.	2,305	731	271	203	500	288	502	708	0	233
Que.	1,759	627	421	208	491	246	429	533	0	164
Ont.	1,597	871	355	388	555	374	571	575	0	211
Man.	2,231	794	311	429	721	327	461	496	0	226
Sask.	2,022	822	362	540	599	267	445	442	0	155
Alta.	2,071	898	298	412	597	244	634	479	0	230
B.C.	1,790	618	225	351	673	194	619	445	0	236
Y.T.	2,398	984	394	1,602	1,221	718	425	361	0	159
N.W.T.	3,855	1,403	364	801	1,919	864	288	318	0	77
Nun.	5,090	1,761	348	1,081	2,277	199	189	304	0	79
Canada	**1,810**	**771**	**342**	**338**	**567**	**297**	**534**	**535**	**0**	**207**

Health professionals

Registered nurses (RNs), **licensed practical nurses (LPNs)**, **pharmacists** (with the exception of Quebec and Nunavut), **physiotherapists** and **occupational therapists** (with the exception of Quebec): rates reflect health professionals registered with active-practising status and who are employed in these health professions. For other health professionals, data reflects personnel regardless of employment status and includes the number of active registered **dentists**, registered **dental hygienists**, registered **dietitians**, registered **chiropractors**, active registered **optometrists** and active registered **psychologists**.

Notes: Personnel-per-population rates are revised annually using the most recent Statistics Canada population estimates and therefore may differ slightly from previously published figures. Rates may differ from data published by provincial/territorial regulatory authorities due to CIHI's collection, processing and reporting methodology. Please consult *Canada's Health Care Providers, 2000 to 2009—A Reference Guide* for more detailed methodological notes, data quality issues and profession-specific information, or contact us at hpdb@cihi.ca.

Sources: Health Personnel Database, Canadian Institute for Health Information; Statistics Canada, *Quarterly Demographic Estimates* 24, 4 (March 2011), catalogue no. 91-002-X.

Total health expenditure

Total health expenditure includes any type of expenditure for which the primary objective is to improve or prevent the deterioration of health status. Presented in current dollars and as a proportion of gross domestic product (GDP). This definition allows economic activities to be measured according to primary purpose and secondary effects. Activities that are undertaken with the direct purpose of improving or maintaining health are included. Other activities are not included, even though they may impact health. For example, funds aligning with housing and income support policies that have social welfare goals as their primary purpose are not considered to be health expenditures, yet they are recognized as powerful factors in determining population health.

Source: National Health Expenditure Database, Canadian Institute for Health Information.

Proportion of public sector

Public-sector health expenditure presented as a proportion of total health expenditure.
Public sector includes health care spending by governments and government agencies.

Source: National Health Expenditure Database, Canadian Institute for Health Information.

Total health expenditure by use of funds

Percentage distribution of total health expenditure by health-spending category. **Institutional services** includes hospitals and residential care types of facilities that are approved, funded or operated by provincial/territorial governments. **Professional services** includes expenditures on primary professional fees paid to physicians in private practice as well as for the services of privately practising dentists, denturists, chiropractors and other health professionals. This category does not include the remuneration of health professionals on the payrolls of hospitals or public-sector health agencies. Physician expenditures generally represents amounts that flow through provincial medical care plans. **Drugs** includes expenditures on prescribed drugs and non-prescribed products purchased in retail stores. This category does not include drugs dispensed in hospitals and other institutions. **Public health** is that provided by governments and governmental agencies and includes expenditures for items such as food and drug safety, health inspections, health promotion, community mental health programs, public health nursing, measures to prevent the spread of communicable diseases and other related activities. **Capital and other health** includes expenditure on construction, machinery, equipment and some software for hospitals, clinics, first-aid stations and residential care facilities (capital); the cost of providing health insurance programs by the government and private health insurance companies, and all costs for the infrastructure to operate health departments (administration expenditures); and, at the aggregate level, expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care (other health).

Source: National Health Expenditure Database, Canadian Institute for Health Information.

General Notes

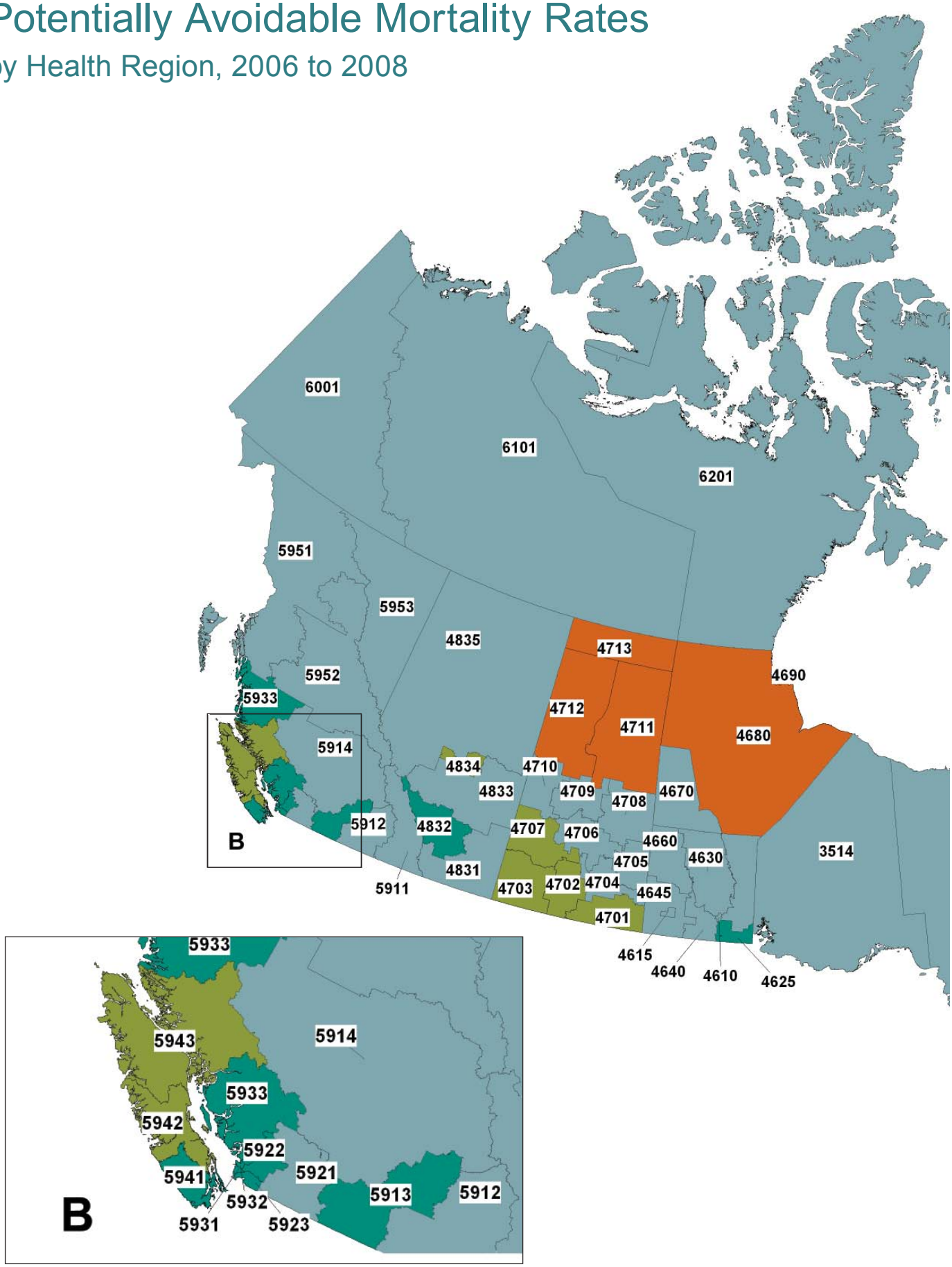
- The methodology used for the indicators was designed to maximize inter-regional, interprovincial and interterritorial comparability given the characteristics of available national data sets. For this reason, there may be differences between definitions, data sources and extraction procedures used in some local, regional or provincial/territorial reports when compared with those described here. In addition, discrepancies may exist due to ongoing updates to the databases. Data presented here includes the latest updates available at the time of publication.
- Health regions are defined by provincial governments as areas of responsibility for regional health boards (that is, legislated) or as regions of interest to health care authorities. In order to determine what health region a patient belongs to, postal codes are first mapped to census geography using Statistics Canada's Postal Code Conversion File (PCCF, Vintage May 2011) and then to a health region using another Statistics Canada product, "Health Regions: Boundaries and Correspondence With Census Geography." Boundaries are those that were in effect as of December 2007, with the exception of Alberta zones, which are current as of December 2010.
- In Nova Scotia, there are new region codes for district health authorities and zones. Names remain unchanged.
- Data for regions with a population of at least 50,000 is reported. This threshold ensures stability in rates and reduces the risk of suppression stemming from privacy and confidentiality issues.
- Records with invalid, missing or partial postal codes cannot be mapped to a health region and therefore are not included in the regional rates. However, they are included in the provincial rates when possible. Non-Canadian residents are excluded from Canada rates; they are identified by mini–postal codes relating to one of the U.S. states or by a postal code value or other relevant data element indicating out-of-country residents.
- For indicators under the Equity dimension, patients were assigned neighbourhood-level income quintiles using Statistics Canada's Postal Code Conversion File Plus (PCCF+, version 5J). The postal code of a patient's place of residence at the time of hospitalization was mapped to the smallest geographical unit available for analysis in the 2006 Canadian census—the dissemination area (DA)—and the corresponding neighbourhood income quintile of that DA was assigned to the patient.
- Unless otherwise specified, hospitalizations include discharges and deaths for inpatients in acute care hospitals for the reference period. Same-day surgery (outpatient) cases are included in several indicators. Patients admitted to non–acute care hospitals (for example, chronic care, psychiatric or rehabilitation facilities) are not included in the totals.
- For procedure-derived indicators (for example, hip and knee replacement, percutaneous coronary intervention and coronary artery bypass), rates are based on the total number of discharges rather than the total number of interventions. For example, a bilateral knee replacement provided at the same admission is counted as one event. Procedure-derived indicators include discharges from acute care hospitals and same-day surgery facilities, where applicable.

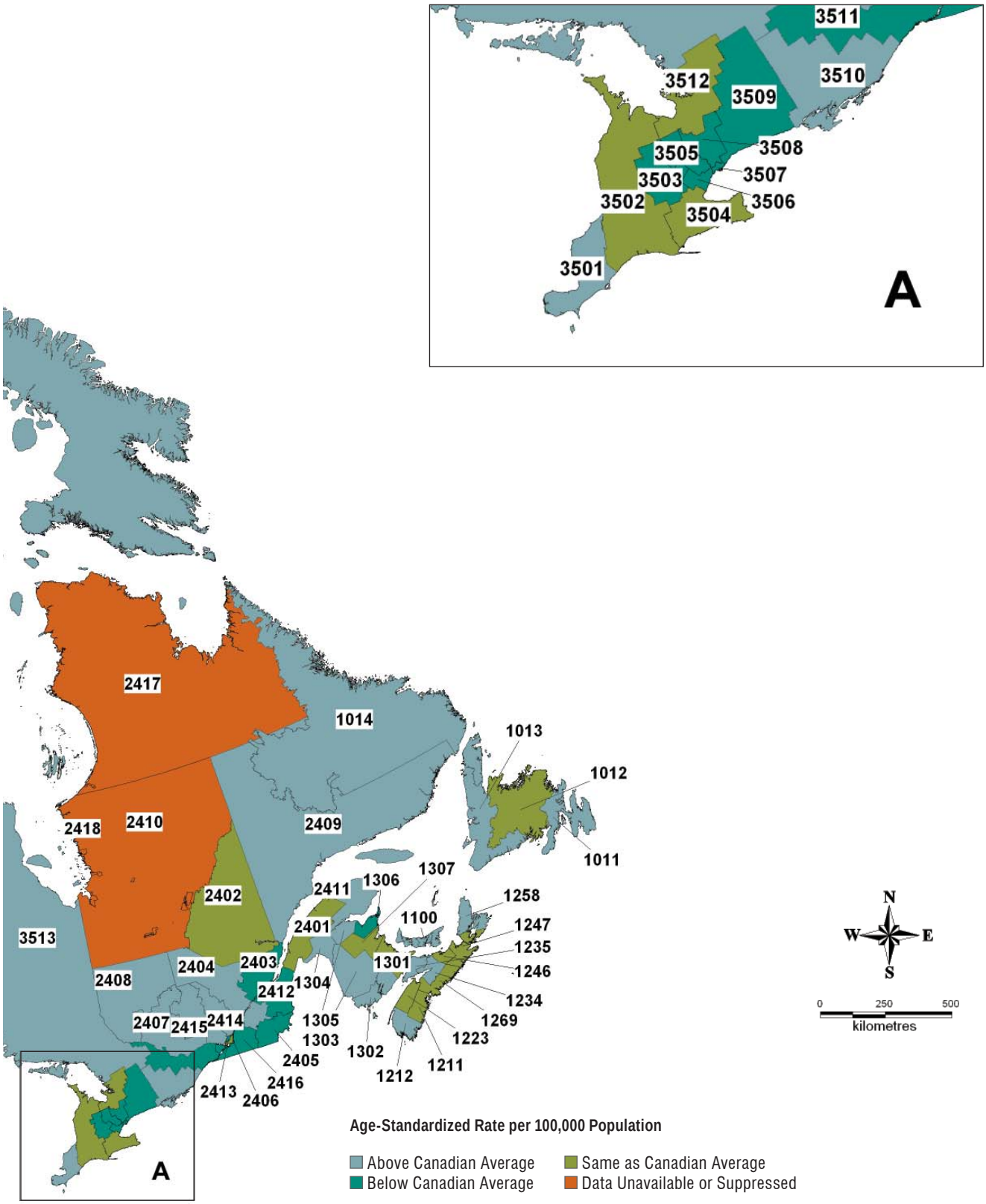
- For the mental health–related indicators (30-day readmission for mental illness [MI], repeat hospitalizations for MI, MI hospitalization, MI patient days and self-injury hospitalization), the population of interest includes discharges from general hospitals. All free-standing psychiatric hospitals identified by the owners of the databases used were not included. For the Discharge Abstract Database (DAD), these include all institutions identified as psychiatric hospitals; for hospitalization data from Quebec (MED-ÉCHO), these include all *centres hospitaliers de soins psychiatriques*. A list of psychiatric hospitals in the Ontario Mental Health Reporting System (OMHRS) was provided by the OMHRS program area at CIHI. Specialized acute services can be provided in general hospitals or psychiatric hospitals, and service delivery may differ slightly across jurisdictions. Therefore, interjurisdictional comparisons should be done with caution.
- The mental illnesses selected for the mental health–related indicators (except self-injury hospitalization) are substance-related disorders; schizophrenia, delusional and non-organic psychotic disorders; mood disorders; anxiety disorders; and selected disorders of adult personality and behaviour.
- Weyburn Mental Health Centre in Saskatchewan is now included in all mental health–related indicators (30-day readmission for MI, repeat hospitalizations for MI, MI hospitalization, MI patient days and self-injury hospitalization). As a result, rates for Sun Country Health Region (4701) are not comparable with those reported in previous years.
- For 30-day readmission for MI, MI hospitalization, MI patient days and self-injury hospitalization for North East LHIN, rates for 2009–2010 and 2010–2011 are not comparable. This is because Brant Community Healthcare System—Brantford General Hospital did not submit its 2009–2010 data to the Ontario Mental Health Reporting System as of the reporting deadline for the *Health Indicators 2011* report.
- Asthma, hysterectomy and prostatectomy readmissions and in-hospital hip fracture indicators are discontinued as of the *Health Indicators 2012* report. These indicators will continue to be reported in the Canadian Hospital Reporting Project (hospitalreporting@cihi.ca).
- Standardized rates are adjusted by age (collapsed to five-year groupings) using a direct method of standardization based on the July 1, 1991, Canadian population.
- Due to differences in data submission, the same Manitoba resident treated in and outside of the province could not be identified as the same individual. This may affect a small number of cases for indicators that require tracking patients beyond one hospitalization.
- See the *Health Indicators* e-publication (www.cihi.ca or www.statcan.gc.ca) for diagnosis and procedure codes used to extract the indicator data, detailed definitions and technical notes. Indicator rates for years prior to those appearing in this publication are also available in the e-publication.

Indicator Index

Potentially Avoidable Mortality Rates

by Health Region, 2006 to 2008





Age-Standardized Rate per 100,000 Population

- Above Canadian Average
- Same as Canadian Average
- Below Canadian Average
- Data Unavailable or Suppressed

Notes

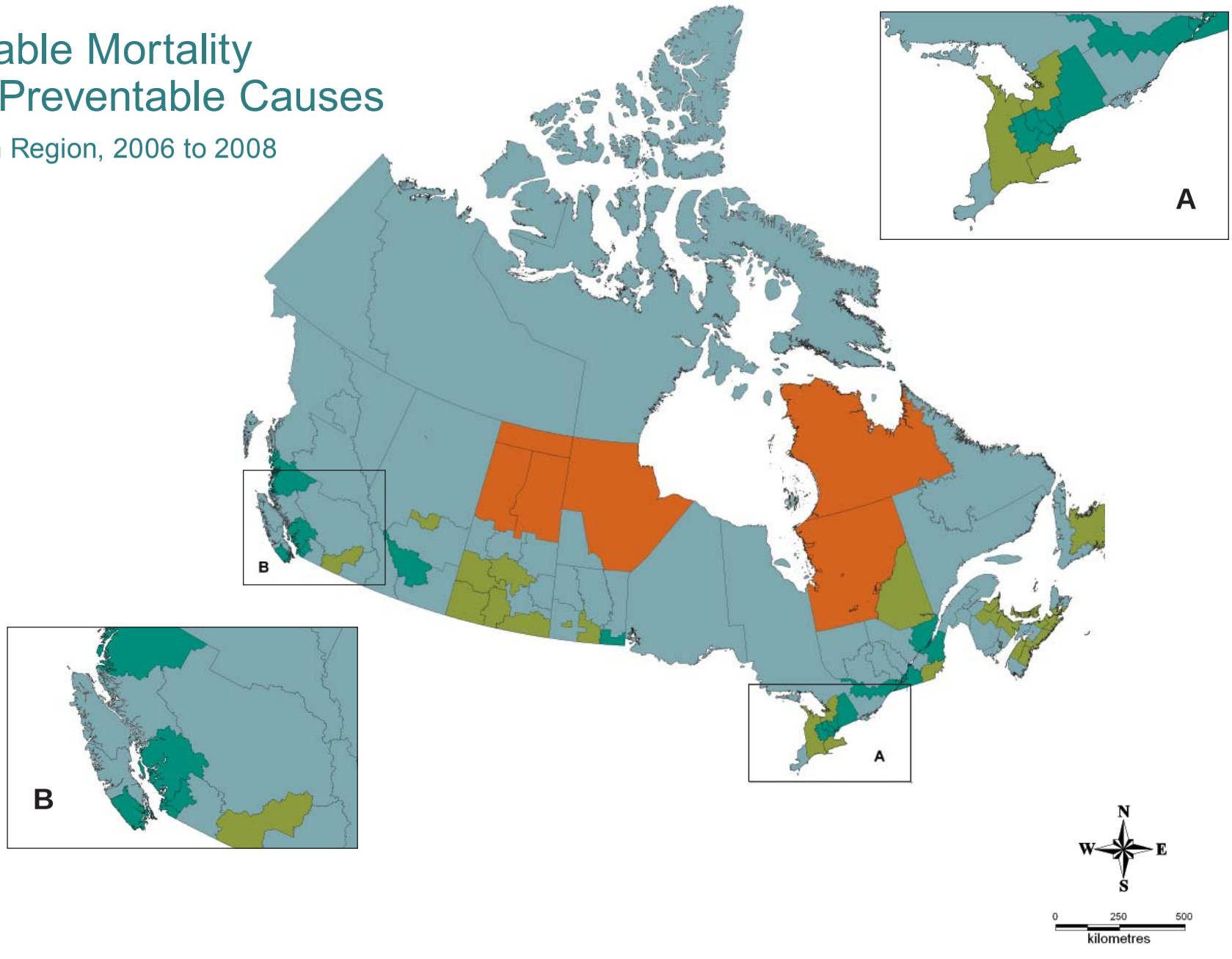
For Prince Edward Island (1100), Yukon (6001), the Northwest Territories (6101) and Nunavut (6201), the data on the map represents the entire province or territory. Rates for smaller regions (population between 20,000 and 50,000) are available in the e-publication at www.cihi.ca.

Source

Vital Statistics—Death Database, Statistics Canada.

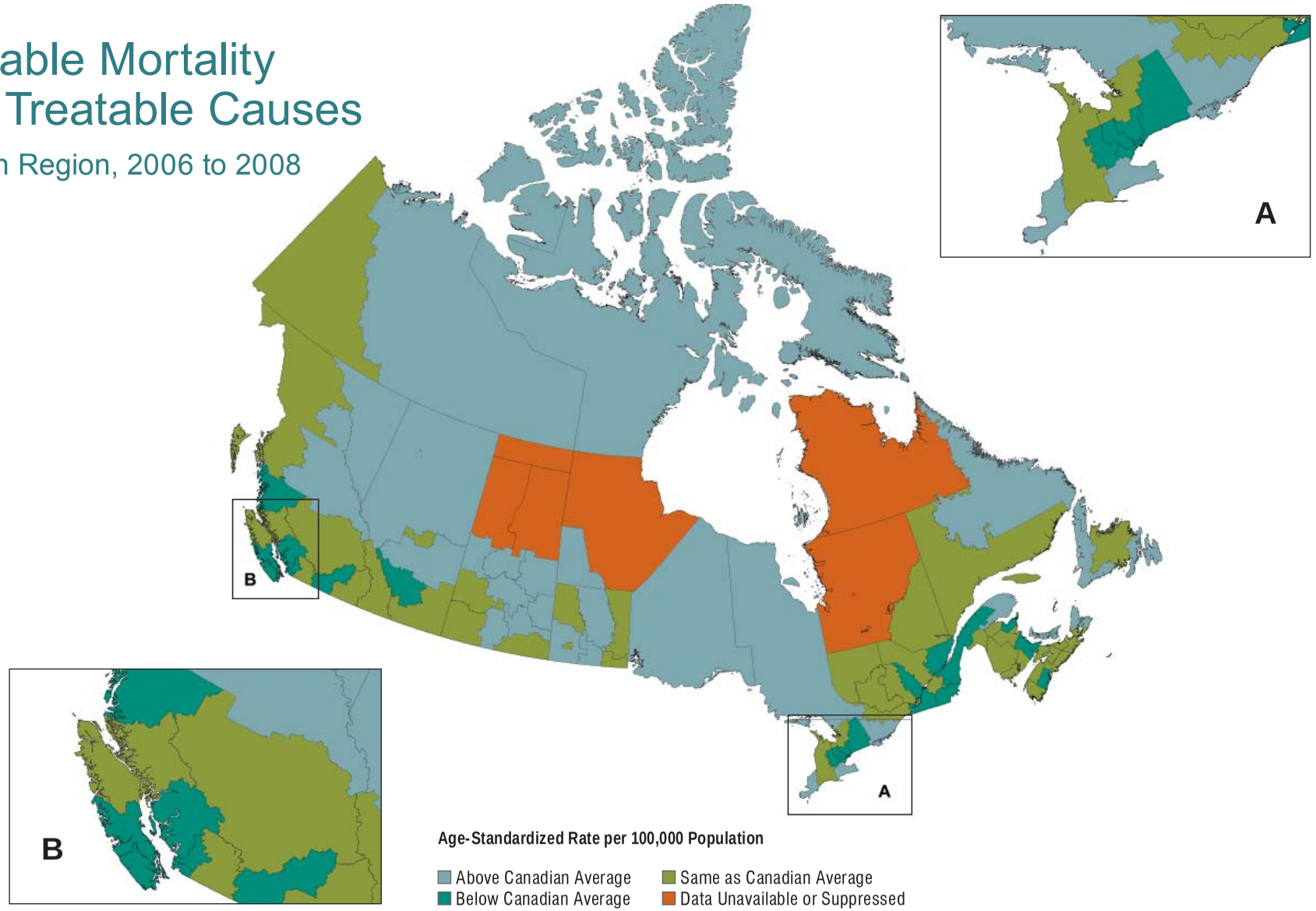
Avoidable Mortality From Preventable Causes

by Health Region, 2006 to 2008



Avoidable Mortality From Treatable Causes

by Health Region, 2006 to 2008



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From cover to e-cover

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