

Profiles on Health

November 2016

Ischemic heart disease in New Brunswick

Ischemic heart disease is the most common type of cardiovascular disease in Canada and other industrialized countries [1,2]. It refers to problems with the circulation of blood to the heart, causing symptoms such as angina (chest pain) and dyspnea (shortness of breath). It can lead to myocardial infarction, commonly known as a heart attack, and sudden death.

Ischemic heart disease is largely preventable by acting on its modifiable risk factors, such as high blood pressure, high cholesterol, diabetes, smoking, stress, excessive alcohol consumption, physical inactivity and being overweight or obese.

One in 10 New Brunswickers 20 and older has ischemic heart disease

Provincial chronic disease surveillance data indicate an estimated 65,930 New Brunswickers 20 and older have been diagnosed with ischemic heart disease, or about one in every 10 persons (Figure 1).

The number of persons with ischemic heart disease has been increasing in recent years, as more people are living longer with this condition. Prevalence increased by four per cent over three years, from 103 to 107 cases per 1,000 population 20 and older.

Given the province's aging population, and the fact that the occurrence of heart disease increases with age, New Brunswick's crude (unadjusted) prevalence rate is expected to increase. To control for changes in demographics, comparisons are made using age-adjusted rates, which are calculated by weighting the number of



A schoolgirl plays with a soccer ball during an outdoor physical education class. Physical activity can reduce the risk of many forms of heart disease later in life.

Image courtesy of Centers for Disease Control and Prevention.

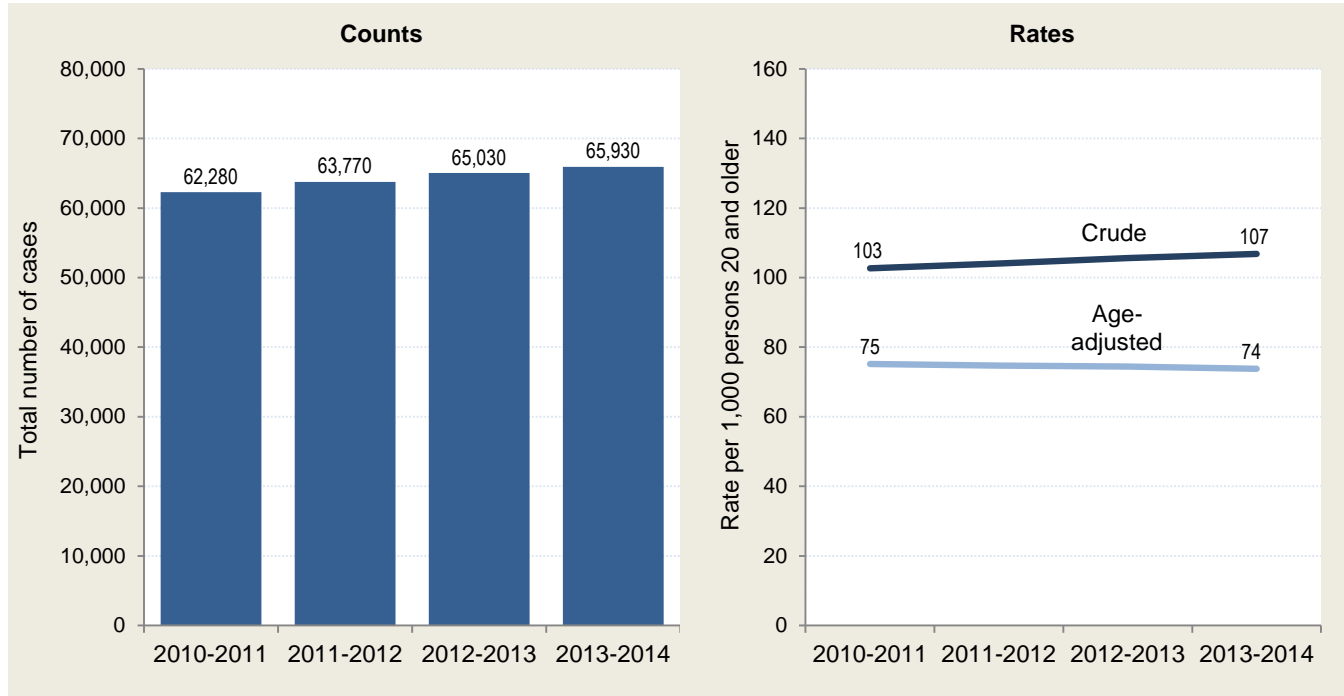
cases occurring at different ages against a standard population.

Once adjusting for population aging, the rate of heart disease in New Brunswick is seen to have been holding steady, even dropping slightly (Figure 1).

Each year 4,160 new cases of ischemic heart disease are diagnosed

In 2013-2014 there were 4,160 new diagnoses of ischemic heart disease in the province, down five per cent from 4,410 new cases three years earlier (Figure 2). The downward trend holds when adjusting for changes in demographics.

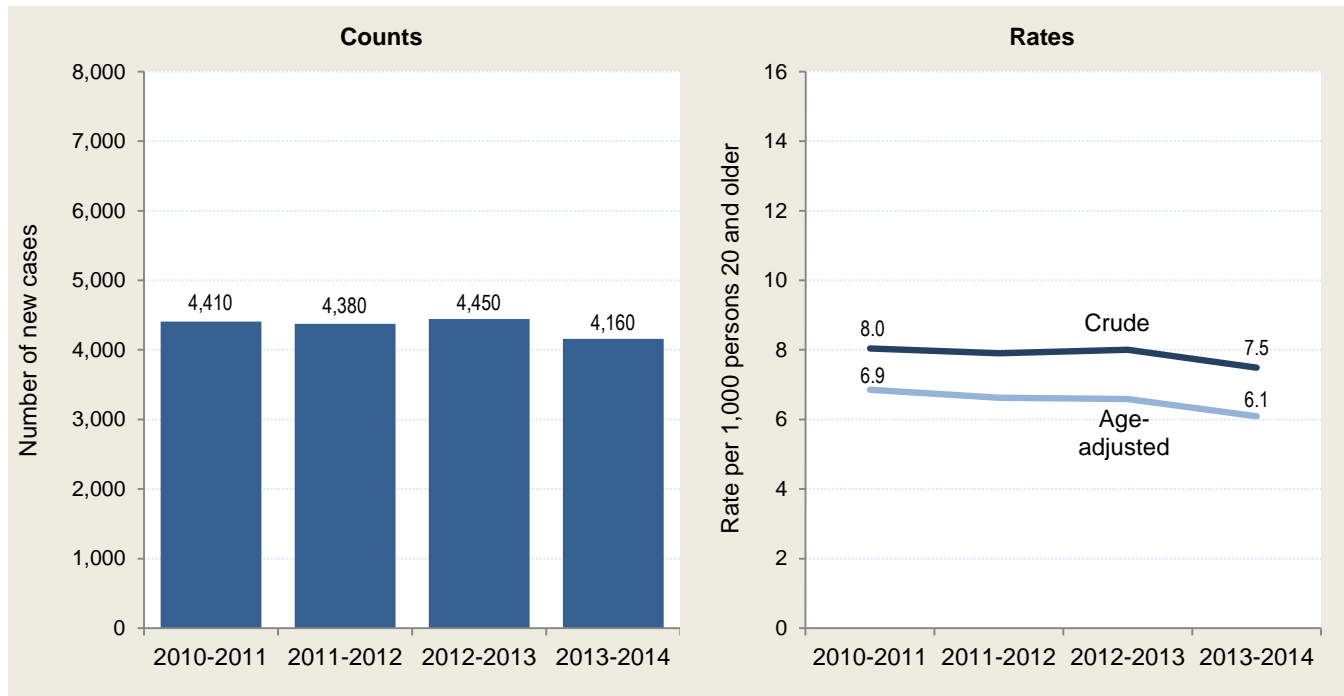
Figure 1: Trends in the prevalence of ischemic heart disease in New Brunswick, 2010-2011 to 2013-2014



Note: Data on physician-diagnosed ischemic heart disease among New Brunswick residents 20 and older based on tracking of individuals' interactions with the health-care system integrating various health administrative databases. Age-adjusted rates are standardized against the Canadian reference demographic structure, to allow for meaningful comparisons over time.

Source: New Brunswick Department of Health, using the Canadian Chronic Disease Surveillance System infrastructure and case definitions.

Figure 2: Trends in the incidence of ischemic heart disease in New Brunswick, 2010-2011 to 2013-2014



Note: Data on physician-diagnosed ischemic heart disease among New Brunswick residents 20 and older based on tracking of individuals' interactions with the health-care system integrating various health administrative databases. Age-adjusted rates are standardized against the Canadian reference demographic structure, to allow for meaningful comparisons over time.

Source: New Brunswick Department of Health, using the Canadian Chronic Disease Surveillance System infrastructure and case definitions.

The incidence of ischemic heart disease has been dropping steadily in New Brunswick during the past two decades, likely the result of a combination of factors, including lower smoking rates and better clinical management of individuals with the disease [1].

Higher rates of heart disease in New Brunswick are associated with population aging

The provincial trend of increasing prevalence of ischemic heart disease concurrent to declining incidence parallels the national trend, albeit at a higher level [3,4]. The prevalence and incidence rates are higher in New Brunswick compared to the Canadian averages (crude rates of 84 and 5.8 per 1,000, respectively, in 2011-2012) [3].

Since ischemic heart disease is strongly related to age, provinces and territories with disproportionately older populations are expected to have higher disease rates. New Brunswick's population is older than the national average (20 versus 17 per cent 65 years of age and older) [5], so the provincial rates of ischemic heart disease are expected to be higher.

Predicting future trends of heart disease is challenging

Heart health is associated with a range of biological, lifestyle, social, economic and environmental factors. Declining incidence of ischemic heart disease in New Brunswick and Canada is cause for celebration, but not for complacency. It is difficult to predict whether the downward trend will continue in the future, given the aging of the population and increasing rates of adult obesity and diabetes, two major risk factors for heart disease [1,2,4,6].

Moreover, evidence shows not all population groups are benefiting from the progress made to date. Individuals with less education and income are more likely to have risk factors for heart disease than those in more affluent groups [1,6].

Ischemic heart disease, including acute myocardial infarction, remains a leading cause of death in New Brunswick – the cause of 408 deaths (6.0 per cent of all deaths) in 2014 [7].

Reducing the burden of heart disease and improving the health of the population while enhancing sustainability of the health-care system is a collective challenge. Ongoing surveillance of ischemic heart disease in New Brunswick helps to ensure that short- and long-term objectives for better heart health results can be met.

For more information:

New Brunswickers may make the following contacts:

- In person: speak to a health-care provider
- Telephone: Tele-Care at **811** (24 hours a day)

Information and resources for individuals and health-care professionals about chronic disease prevention and management are available at:

- Government of New Brunswick, Chronic Disease Prevention and Management (www2.gnb.ca/content/gnb/en/departments/health/patientinformation/PrimaryHealthCare/What_is_Primary_Health_Care.html)
- Heart and Stroke Foundation (www.heartandstroke.com)

About the data

Measures of the incidence and prevalence of ischemic heart disease in New Brunswick were calculated using custom extracts of anonymized records from different provincial administrative databases, including the health insurance registry, physician billing and hospital discharge abstract databases, drawing on Canadian Chronic Disease Surveillance System (CCDSS) infrastructure, privacy protocols and case definitions. The CCDSS identifies people with diagnosed heart disease using an algorithm validated through a collaborative network supported by the Public Health Agency of Canada. The reference period “20XX-20YY” indicates a fiscal year running from April 1, 20XX to March 31, 20YY.

Trends in incidence and prevalence rates may reflect true change in population health status, but may also be a function of change in administrative data characteristics or collection methods. Factors such as coding/classification systems, clinical practices or billing methods may influence the rates that are estimated from administrative data. Comparisons with previously published rates by the Department of Health or the Public Health Agency of Canada must be made with caution; rates in this report are definitive should a discrepancy exist.

References

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2. Public Health Agency of Canada, *Tracking Heart Disease and Stroke in Canada*. Ottawa, 2009.
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4. Robitaille C, Dai S, Waters C, “Ischemic heart disease prevalence and incidence in Canada.” *Canadian Journal of Cardiology*, 2014; 30(10): S75-S76.
5. Statistics Canada, “Table 051-0001: Estimates of population, by age group and sex for July 1, Canada, provinces and territories.” *CANSIM* [online database]. Ottawa (<http://www5.statcan.gc.ca/cansim>, accessed Sept. 30, 2016).
6. New Brunswick Department of Health, “Diabetes in New Brunswick.” *Profiles on Health*, October 2016. Fredericton (<http://www2.gnb.ca/content/gnb/en/departments/health/Publications.html>).
7. Service New Brunswick, *Vital Statistics: Annual Statistics*. Fredericton (<http://www.snb.ca/e/1000/1000-01/e/annual-e.asp>, accessed Sept. 30, 2016).

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