

This is the second in a series of information bulletins published by the Office of the Chief Medical Officer of Health on population health indicators in New Brunswick. This issue focuses on mental health, including the latest data and trend information on the burden of mental conditions in the province.

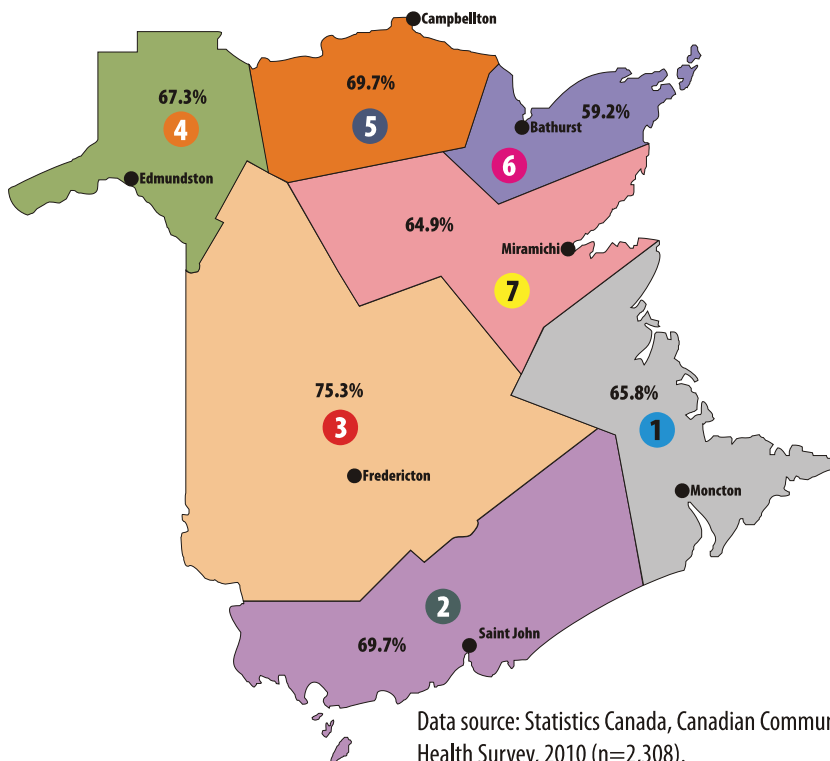
Mental Health in New Brunswick

Mental disorders are common to all societies and cause immense suffering. People with these disorders often experience poor quality of life, poor physical health

and premature death. Mental health affects individuals and their families and has a substantial impact on society, making this a public health imperative. According to Health Canada, one in five Canadians will personally experience a mental illness during their lifetime.¹ Many more will be indirectly affected through illness in a family member, friend or colleague. Mental illnesses affect women and men of all ages, regardless of education, income level or culture. The economic cost in Canada was assessed to be at least \$7.9 billion in 1998, of which 59 per cent consisted of direct health care costs and 41 per cent was attributed to indirect costs related to disability and premature death.²

In 2010, 68.3 per cent of New Brunswickers 12 and older who participated in the Canadian Community Health Survey (CCHS) reported their mental health status as being excellent or very good (females: 67.4 percent; males: 69.3 per cent).³ Figure 1 shows the breakdown by health region. The CCHS provides a general indication of the population suffering from some form of mental disorder, mental or emotional problems, or distress.

Figure 1: Percentage of the population reporting their mental health status as excellent or very good, by health region, New Brunswick, 2010



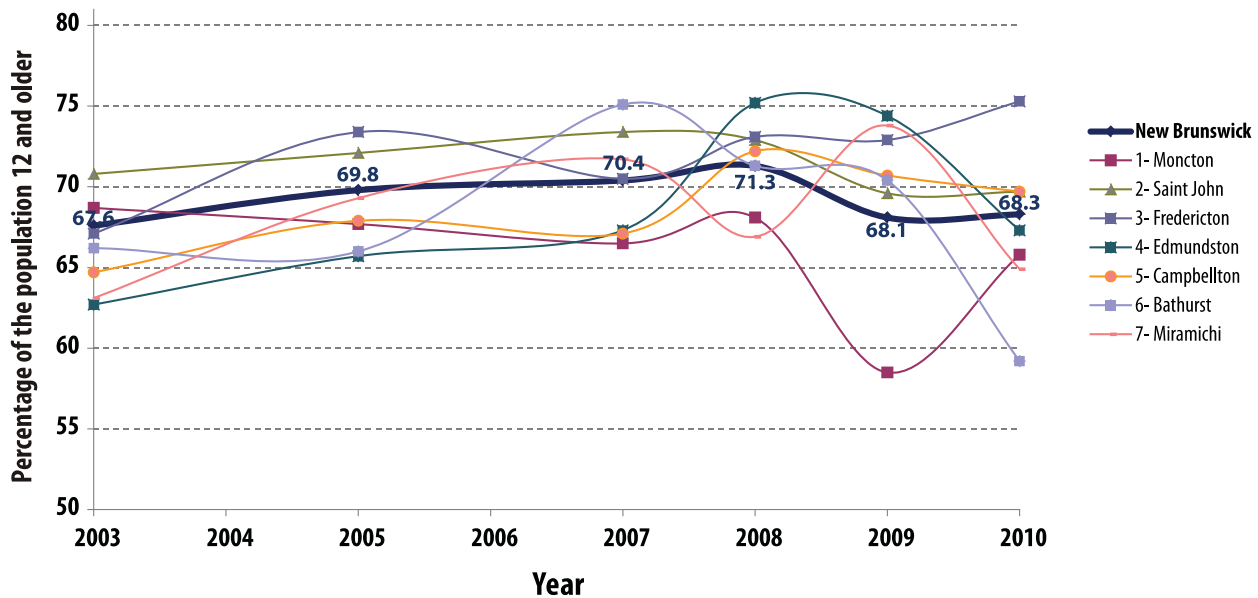
Trends in perceived mental health status

The proportion of the New Brunswick population reporting excellent or very good mental health remained relatively stable comparing the 2003 and 2010 rounds of the CCHS: 67.6 and 68.3 per cent, respectively (Figure 2).³ Slight fluctuations were observed over time, with the proportion having decreased somewhat

from the 2008 to the 2010 survey, partly due to an overall decrease in reports of psychological well-being in the populous Health Region 1. A previous analysis of CCHS data suggested that people in some parts of New Brunswick, notably Health Region 1, have higher risk of depression.⁴ Some fluctuations in observed rates are

expected to occur throughout the province due to the small population size and thereby small survey sample size, which may result in random variations from year to year in the results. Differences across health regions and over time should therefore be interpreted with caution.

Figure 2: Trends in the percentage of the population reporting their mental health status as excellent or very good, by health region, New Brunswick, 2003-10



Percentage of the population 12 and older

	2003	2005	2007	2008	2009	2010
New Brunswick	67.6	69.8	70.4	71.3	68.1	68.3
1-Moncton	68.7	67.7	66.5	68.1	58.5	65.8
2-Saint John	70.8	72.1	73.4	72.9	69.6	69.7
3-Fredericton	67.1	73.4	70.5	73.1	72.9	75.3
4-Edmundston	62.7	65.7	67.3	75.2	74.4	67.3
5-Campbellton	64.7	67.9	67.1	72.2	70.7	69.7
6-Bathurst	66.2	66.0	75.1	71.3	70.4	59.2
7-Miramichi	63.1	69.3	71.7	66.9	73.8	64.9

Data source: Statistics Canada, Canadian Community Health Survey (annual component - released June 21, 2011).

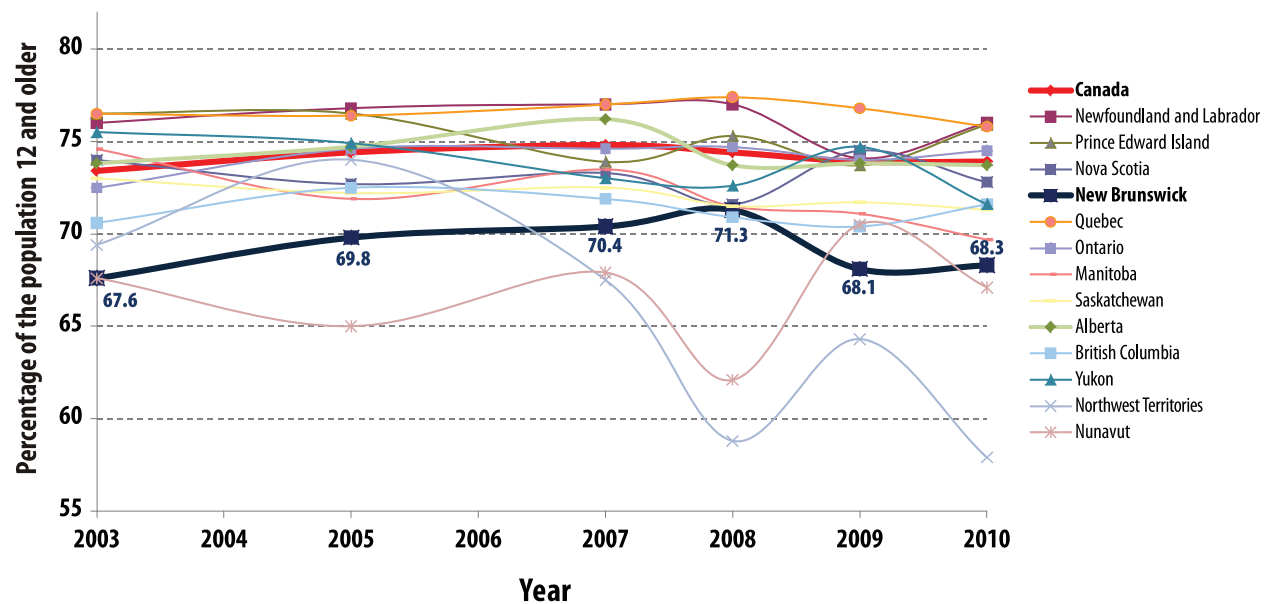
Comparison of perceived mental-health status with other provinces and territories

The proportion of the New Brunswick population reporting positive mental health status in the CCHS remained below the national average across the period between 2003 and 2010 (Figure 3).³ In 2010, New Brunswick experienced the third-lowest proportion among the provinces and territories;

only the Northwest Territories and Nunavut had poorer mental health status reported. As identified by the Public Health Agency of Canada, a number of factors can potentially influence differences in mental-health outcomes observed at the population level. These include social and economic inequities,

physical environments, personal health practices and coping skills, biology and genetics, gender, child development, cultural differences, growing urban-rural splits, health services, and social processes that affect the conditions of people's lives.⁵

Figure 3: Trends in the percentage of the population reporting their mental health status as excellent or very good, by province and territory, Canada, 2003-10



Percentage of the population 12 and older

	2003	2005	2007	2008	2009	2010
Canada	73.4	74.4	74.8	74.4	73.9	73.9
Newfoundland and Labrador	76.0	76.8	77.0	77.0	74.1	76.0
Prince Edward Island	76.5	76.5	73.9	75.3	73.7	75.9
Nova Scotia	74.0	72.7	73.3	71.6	74.5	72.8
New Brunswick	67.6	69.8	70.4	71.3	68.1	68.3
Quebec	76.5	76.4	77.0	77.4	76.8	75.8
Ontario	72.5	74.6	74.6	74.7	74.0	74.5
Manitoba	74.6	71.9	73.5	71.5	71.1	69.7
Saskatchewan	73.0	72.2	72.5	71.5	71.7	71.3
Alberta	73.8	74.7	76.2	73.7	73.8	73.7
British Columbia	70.6	72.5	71.9	70.9	70.4	71.6
Yukon	75.5	74.9	73.0	72.6	74.7	71.6
Northwest Territories	69.4	74.0	67.5	58.8	64.3	57.9
Nunavut	67.6	65.0	67.9	62.1	70.5	67.1

Data source: Statistics Canada, Canadian Community Health Survey (annual component - released June 21, 2011).

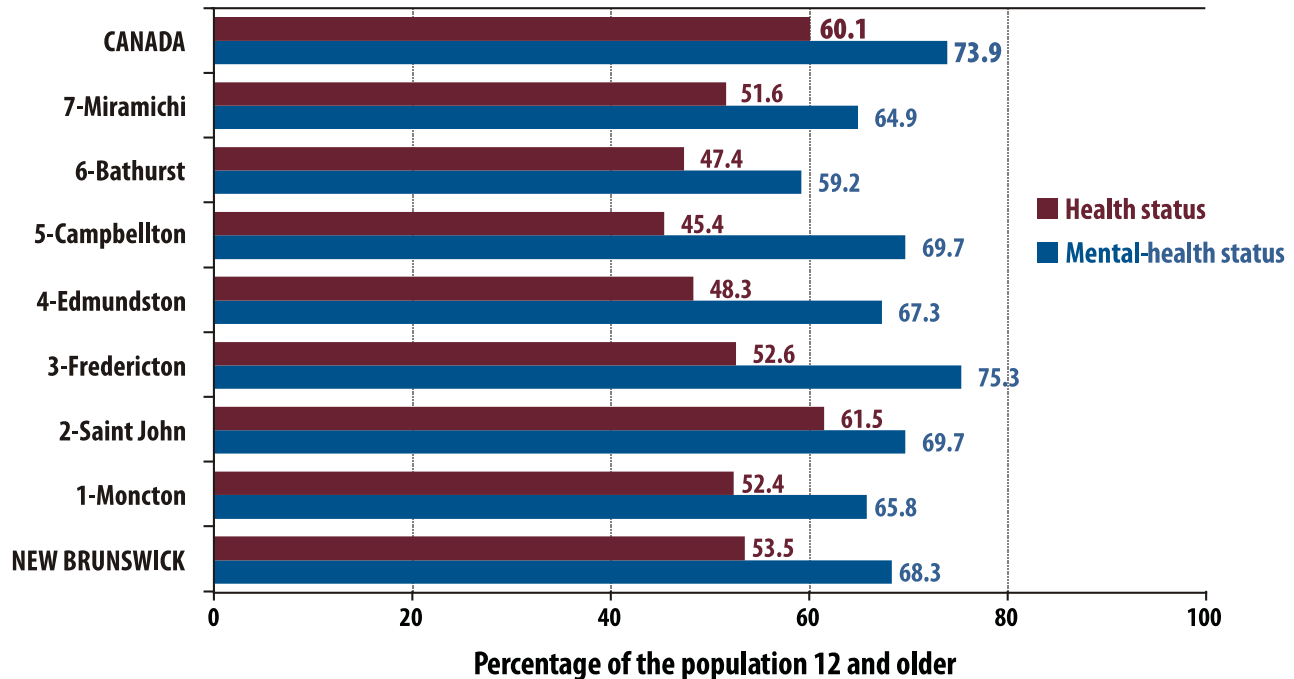
Comparison of perceived mental-health status with overall health status

Mental health is closely associated with overall health. In the CCHS, overall health status refers to a person's perceived physical, mental and social well-being. In New Brunswick, 53.5 per cent of respondents to the 2010 survey reported their overall health status as excellent or very good (females: 54.1 per

cent; males: 52.8 per cent).³ As expected, this was lower than the proportion reporting their mental health status as excellent or very good. The difference between the proportions reporting positive general health status versus positive mental health status was similar comparing New Brunswick

and Canada (difference of approximately 14 percentage points) (Figure 4). Within New Brunswick, the region with the highest proportion reporting positive general health status was Health Region 2, where was also found a relatively higher proportion reporting positive mental-health status.

Figure 4: Percentage of the population reporting their general health status and mental-health status as excellent or very good, by health region, New Brunswick, 2010



Data source: Statistics Canada, Canadian Community Health Survey, 2010.

Hospitalizations due to mental and behavioural disorders

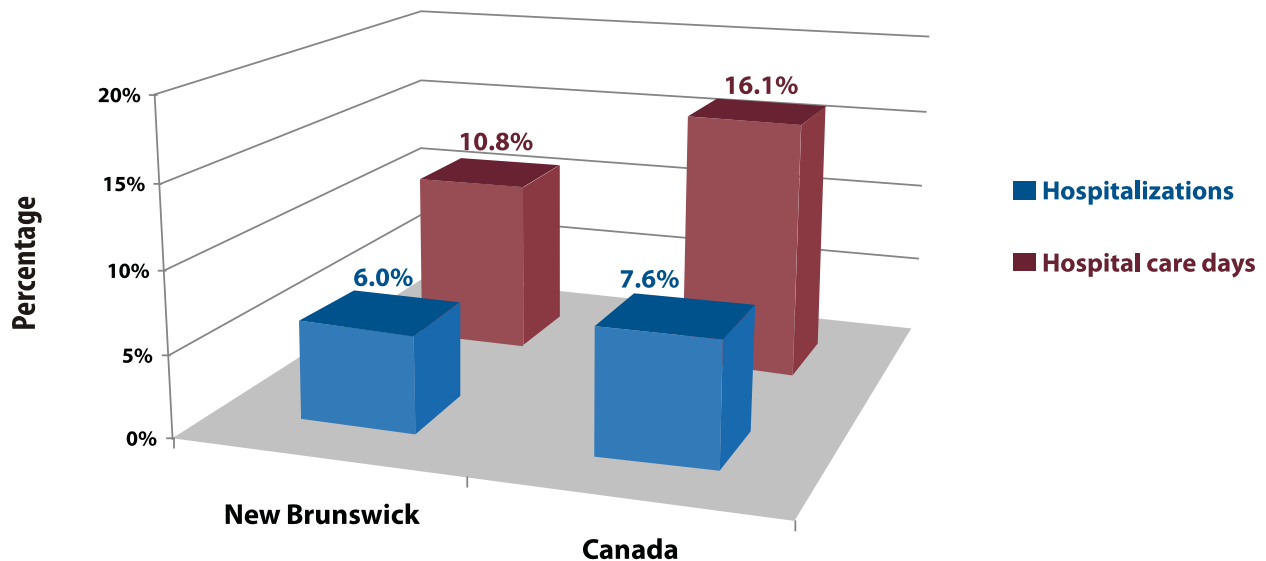
As with other health conditions, mental conditions can result in help-seeking, diagnosis and treatment, including, in some cases, hospitalization. There is no one data source or indicator that ties these complex dimensions into a single construct. The main basis for categorizing and analysing information on the burden of different health conditions in Canada and New Brunswick through clinical and medical services data is the *International Classification of Diseases and Related Health Problems* (ICD), adopted by the World Health Organization as the

global standard for diagnostic classification and coding.⁶ The tenth revision, adapted and known in Canada as ICD-10-CA, categorizes mental and behavioural disorders associated with different causes, including physiological disturbances, physical factors, psychoactive substance use, and emotional or stress-related conditions.

During the 2005-06 fiscal year, more than 5,000 acute-care hospitalizations in New Brunswick were due to mental and behavioural disorders (ICD-10-CA: F00-F99),

accounting for 6.0 per cent of all hospitalizations due to diseases, injuries and related health problems that year (excluding pregnancies, childbirths and newborns) (Figure 5). The burden of mental and behavioural disorders was further assessed by looking at the total number of hospital care days attributable to these disorders. For the same year, mental and behavioural disorders accounted for 10.8 per cent of overall days spent in New Brunswick hospitals. These figures were lower than the national figures of 7.6 and 16.1 per cent, respectively.⁷

Figure 5: Percentage of hospitalizations and care days due to mental and behavioural disorders, New Brunswick and Canada, 2005-06



Source: Office of the Chief Medical Officer of Health and Public Health Agency of Canada, using acute care inpatient data from the Hospital Discharge Abstract Database for the 2005-06 fiscal year.

Note: Hospitalizations are based on the most responsible diagnosis for the length of stay in hospital. Excludes pregnancies, childbirths and newborns.

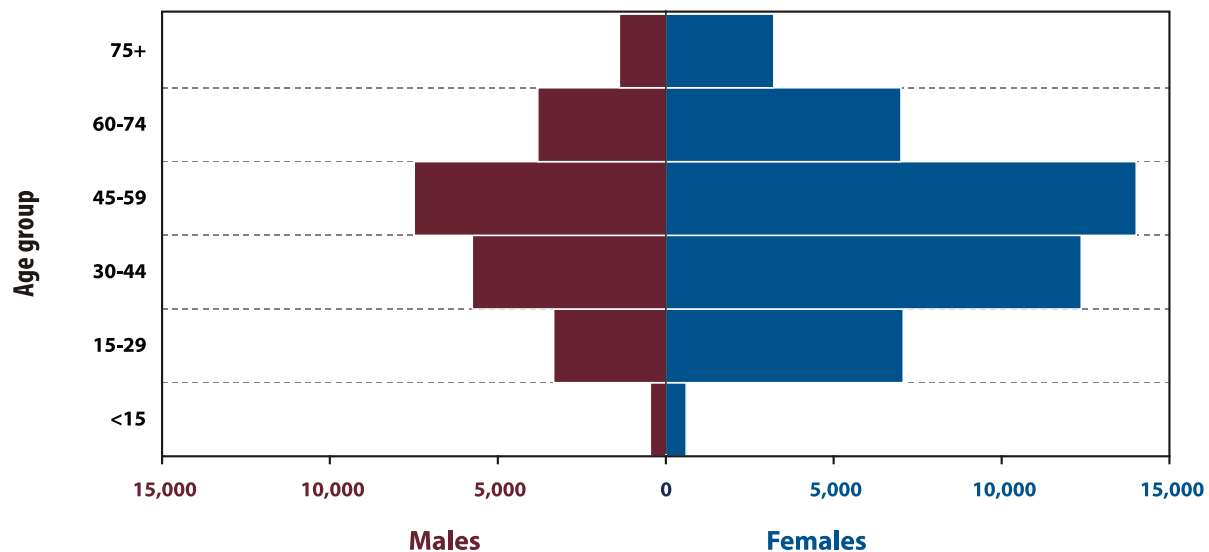
Mood and anxiety disorders

Mood disorders (e.g., depression, bipolar disorder, mania, dysthymia) and anxiety disorders (e.g., phobia, obsessive compulsive disorder, panic disorder) are the most common groups of mental illnesses.¹ Between 2005-06 and 2008-09, an annual average of 66,353 New Brunswickers (89 per 1,000 population) were hospitalized or received other

forms of medical attention for mood or anxiety disorders (ICD-10-CA: F30-F39, F40-F48, F68). These disorders are characterized by episodes (often recurrent) in which a person's mood and activity level are significantly disturbed or out of the person's normal character. According to medical services data, mood and anxiety disorders can

strike at any age. In 2008-09, the largest proportion of individuals who received medical care for such conditions in New Brunswick was women 30 to 59 (40 per cent) (Figure 6). Regardless of age, females were about twice as likely as males to receive medical attention for mood and anxiety disorders.

Figure 6: Number of persons receiving medical attention for a mood or anxiety disorder, by age group and sex, New Brunswick, 2008-09



Source: Office of the Chief Medical Officer of Health, using data from inpatient hospitalization records (including acute, chronic, long term and rehabilitative care), the Medicare Resident Registry and the Health Insurance Claims Database for the 2008-09 fiscal year.

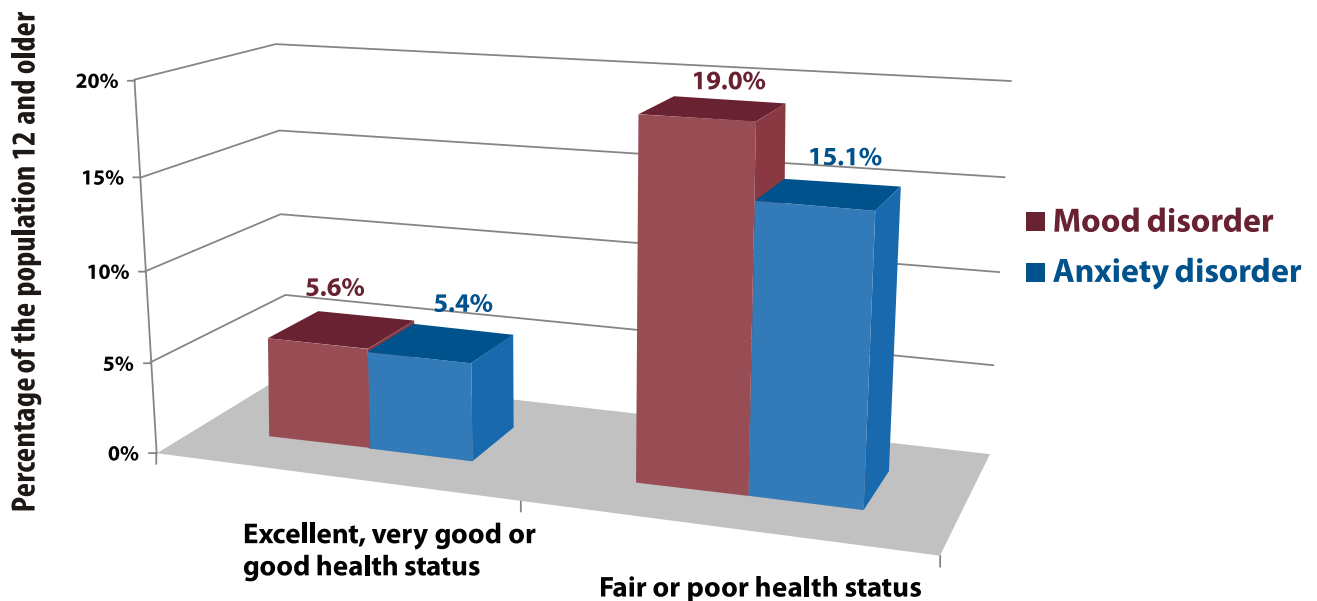
Note: Data are based on the number of residents having received medical care at least once in the year according to the main or underlying diagnosis.

Data from the 2007-08 CCHS further revealed that New Brunswickers 12 and older reporting their overall health status as excellent, very good or good were much less likely to report having ever been diagnosed by a health-care professional with a mood disorder compared to

those with fair or poor perceived health status, a difference that was statistically significant (5.6 versus 19.0 per cent; $p < 0.0001$) (Figure 7). A similar pattern held for those reporting having ever been diagnosed with an anxiety disorder (5.4 versus 15.1 per cent; $p < 0.0001$).

In Canada, the impact of depression and other mood disorders on job performance has been estimated to be greater than that of chronic physical conditions such as arthritis, hypertension, back problems and diabetes.⁸

Figure 7: Percentage of the population reporting having ever been diagnosed with a mood or anxiety disorder, by perceived health status, New Brunswick, 2007-08



Source: Office of the Chief Medical Officer of Health, using data from the Canadian Community Health Survey (2007 and 2008 annual components).

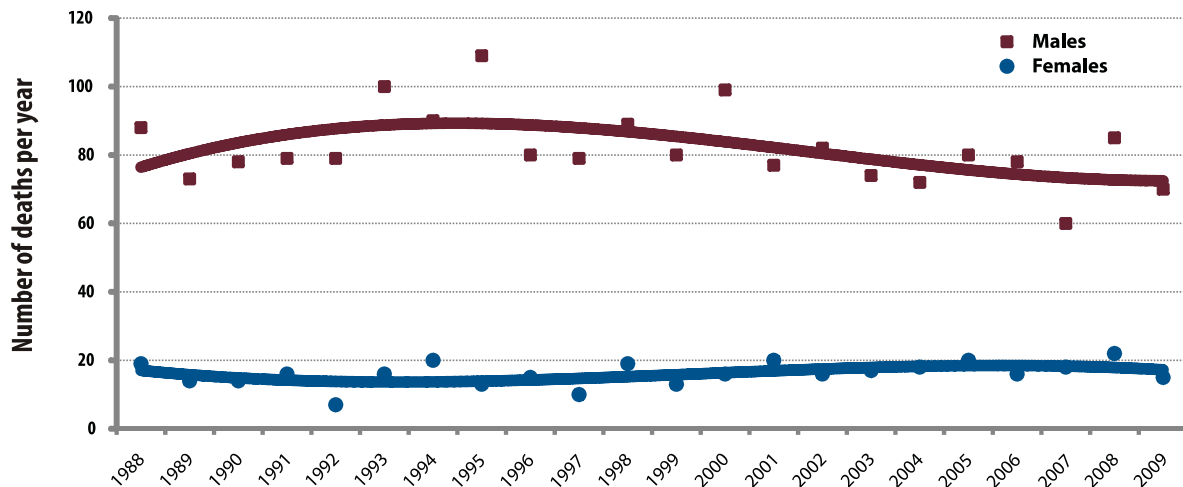
Suicide and self-inflicted injuries

The ICD also classifies injuries and other external causes of bodily harm according to the underlying circumstances, notably whether they were purposely self-inflicted, most likely the manifestation of a mental disorder. Between 2005 and 2009, the average annual number of deaths among New Brunswickers due to intentional self-harm (ICD-10: X60-X84) was 93, down from 98 for the previous five-year period (2000 to 2004) and 101 for the five-year period before that (1995 to 1999). Males were about four times as likely as females to die from suicide or self-inflicted injuries (Figure 8), a trend consistent with that observed nationally.⁹

Some communities are more vulnerable than others. In particular, according to data from Vital Statistics, between 2000 and 2009 the annual suicide rate was three times higher among residents of First Nations compared to the provincial average: 3.6 versus 1.2 per 10,000 population. National data have also revealed suicide rates several times higher among First Nations youth compared to non-Aboriginal youth, linked to factors such as stress, poverty and acculturation.¹⁰ A study on the personal and social circumstances leading to suicides and suicide attempts in New Brunswick reported that 97 per cent of all suicide victims

had at least one mental-health problem, while 75 per cent had two or more.¹¹ The same study reported the main factors that preceded suicide included depression, alcohol and drug use, failed relationships, work or money problems, loss of physical autonomy and loss of freedom (real or perceived). The cost of each suicide death in New Brunswick has been estimated at \$849,878 – partly (1%) direct costs for health care services, autopsies, funerals and police investigations but mostly (99%) the value of lost productivity due to premature death.¹²

Figure 8: Annual number of deaths due to suicide and self-inflicted injuries, by sex, New Brunswick, 1988-2009



Source: Office of the Chief Medical Officer of Health, using data from Vital Statistics.
Note: Lines on the chart statistically describe the average movements of the number of deaths due to intentional self-harm by sex during the period of observation.

Data sources and limitations

Data on self-reported health status and mental health status were drawn from the Canadian Community Health Survey, compiled by Statistics Canada. Persons living on First Nations and on Crown land, residents of institutions, full-time members of the Canadian Armed Forces, residents of certain remote regions and persons younger than 12 were excluded from the survey samples. Self-reported health status is a subjective measure; trends across regions and over time should be interpreted with caution as the measure is subject to sample variability as well as differences in health standards and perceptions of wellbeing.

Data on hospitalizations for New Brunswick were collated by the Office of the Chief Medical Officer of Health (OCMOH) using custom extractions of anonymized records from the Hospital Discharge Abstract

Database (DAD). The data were based on the most responsible clinical diagnosis for the length of stay in hospital (excluding emergency and ambulatory care) among New Brunswick residents with a valid Medicare number. Information on undiagnosed individuals with mental and behavioural disorders, or on individuals who were not admitted for acute hospital care in the province, was not captured. Data were not captured in the DAD for regular members of the Canadian Armed Forces and the Royal Canadian Mounted Police as well as for inmates of federal penitentiaries.

Data on medical attention for mood and anxiety disorders were collated by the OCMOH using custom extractions of anonymized records from the DAD, the Medicare Resident Registry and the Health Insurance Claims Database. The data cover diagnoses of

mood and anxiety disorders by a medical practitioner among New Brunswick residents with a valid Medicare number. Individuals with at least one inpatient hospitalization (for acute care, continuing care or rehabilitation) containing specific clinical diagnoses or at least one visit with a physician in a fee-for-service arrangement with specific diagnostic or service descriptions on the insurance claim within the fiscal year were considered as cases having received medical attention for mood or anxiety episode(s).

Mortality data for New Brunswick were collated by the OCMOH using custom extractions of anonymized records from the Vital Statistics database. Information on the underlying circumstances would be recorded in this database only when identified in the medical observations surrounding the death.

References

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- ¹² Clayton D, Barceló A. "The cost of suicide mortality in New Brunswick, 1996." *Chronic Diseases in Canada*, 20(2):89-95. Ottawa, Health Canada, 1999.

For more information about public health programs and surveillance in New Brunswick:
<http://www.gnb.ca/publichealth>

For information about suicide prevention in New Brunswick:
<http://www.gnb.ca/0055/index-e.asp>

The Action Plan for Mental Health in New Brunswick 2011-18:
<http://www.gnb.ca/0055/action-e.asp>

For more information about mental health and ways to contribute to the cause of *mental health for all*, visit the Canadian Mental Health Association:
<http://cmha.ca>