

The Health of the Off-reserve Aboriginal Population

- *Inequalities in health persisted between off-reserve Aboriginal and non-Aboriginal people after socio-economic and health behaviour factors were taken into account.*
- *Health determinants such as low socio-economic status, smoking, and obesity were more prevalent in the off-reserve Aboriginal population.*
- *Northern and southern off-reserve Aboriginal people reported similar levels of fair or poor health.*
- *In the provinces, contacts with publicly funded health care professionals were generally similar for the off-reserve Aboriginal and non-Aboriginal populations. In the territories, Aboriginal people living off reserve had fewer contacts with doctors than did non-Aboriginal persons.*

Abstract

Objectives

To compare the off-reserve Aboriginal population with the rest of the Canadian population in terms of health status, health behaviours, and health care utilization.

Data source

Statistics Canada's 2000/01 Canadian Community Health Survey.

Analytical techniques

Age-standardized cross-tabulations were used to compare health status, health behaviours, and health care utilization between the off-reserve Aboriginal and non-Aboriginal populations. Multiple logistic regression was used to determine if, after adjustment for socio-demographic and health behaviour factors, the Aboriginal population had greater odds of reporting selected health outcomes.

Main results

The off-reserve Aboriginal population reported poorer health than the non-Aboriginal population. These inequalities in health persisted after socio-economic and health behaviour factors were taken into account. Contact with a general practitioner at least once in the previous year was similar between off-reserve Aboriginal and non-Aboriginal people living in the provinces. In the territories, Aboriginal people living off reserve had fewer contacts with doctors than did non-Aboriginal persons.

Key words

off-reserve Aboriginal Canadians, health status indicators, health behaviours, health care utilization, income, north

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Overall, Aboriginal people have poorer health than other Canadians.¹ Although the gap in life expectancy between Registered Indians (those persons with legally recognized Indian status, according to the Indian Act of Canada) and the general population is narrowing, the life expectancy of Registered Indians is estimated to be about 6 to 8 years shorter.²⁻⁴ Furthermore, in the past several decades, diseases that were previously rare in Aboriginal communities have become more common.⁵ It is thought that the rise of these "new" diseases, such as diabetes and cardiovascular disease, can be attributed to the rapid social, dietary, and lifestyle changes experienced by some Aboriginal communities over this period.⁶⁻⁸ These health inequalities are explained, in part, by the fact that Aboriginal people have lower socio-economic status than other Canadians, a characteristic that is widely known to be associated with poorer health.^{1,9,10}

Methods

Data sources

This article is based on data from the 2000/01 Canadian Community Health Survey (CCHS). See Annex for a description of the CCHS.

Analytical techniques

The analysis was based on data from 123,994 respondents who indicated their cultural and racial background. The 1,043 respondents who did not indicate their cultural and racial background were excluded. Proportions were estimated from the CCHS sample weights, which sum to the target population at the time of data collection. Confidence intervals for the estimates were calculated with the formula for simple random sampling and incorporated an estimate of design effect of 2, to account for the complex sampling design of the CCHS. In comparisons of any two estimates, the estimates were considered significantly different if their 95% confidence intervals did not overlap.

For the multiple logistic regression analysis, (see *The influence of socio-demographic and health behaviour characteristics on the health status of the off-reserve Aboriginal population*) weights were normalized and 99% confidence intervals were used to test significance. This technique was used because of the complex sampling design of the CCHS.

The age distribution differed between the Aboriginal and non-Aboriginal populations. Therefore, to allow for fair comparisons, all estimates were age-standardized to the Canadian population as measured by the CCHS. See the appendix for unadjusted estimates, percentages and sample sizes.

Limitations

As with all self-reported data, the CCHS results are subject to recall errors and misinterpretation of questions. In addition, cultural differences between Aboriginal and non-Aboriginal people with

respect to the appropriateness of reporting various health conditions, behaviours, and service utilization could affect the results of the analysis. Several studies have shown that cultural groups interpret questions differently and differ in their willingness to respond to sensitive questions.¹¹⁻¹⁵ The extent of these reporting biases is unknown; however, to reduce bias, CCHS questions were thoroughly tested so as to capture accurate and complete responses.

Only respondents who identified their cultural and racial background as "Aboriginal peoples of North America" were considered Aboriginal. Respondents who did not state their cultural and racial background were excluded from the analysis. Some research has shown that respondents' views of their own cultural and racial background change with time,¹⁶ and there could be many reasons why a respondent would choose not to disclose culture and race. The extent to which the Aboriginal respondents to the CCHS represent the entire Canadian off-reserve Aboriginal population is unknown.

Household size and income were used to determine income adequacy. The largest household size category was 5 or more persons. Because off-reserve Aboriginal people are more likely than non-Aboriginal people to live in households with 5 or more people, the number of low-income Aboriginal households might have been underestimated.

A greater proportion of Aboriginal respondents were found at the lower end within each household income category (low, middle, and high), especially for the high-income group. Therefore, the effects of income were not entirely controlled for data presented by income level and for the multiple logistic regression models using these income categories.

Data from the CCHS are cross-sectional, so no temporal or causal relationships among variables can be inferred.

Much of the research on Aboriginal health has focused on Aboriginal people living on reserve, Registered Indians, and the Inuit. In contrast, relatively little is known about the Aboriginal population (including Registered and non-status) living off reserve in cities and towns across Canada. Furthermore, research that compares Aboriginal health with that of the rest of the Canadian population usually controls only for differences in age and does not account for differences in socio-economic status.¹

The Canadian Community Health Survey (CCHS) allows for such an analysis. This article compares the health status of the off-reserve Aboriginal population with that of the non-Aboriginal population by controlling

for differences in age, household income and geographic region. Furthermore, differences in health behaviours and health care utilization are also explored.

In Canada, the Aboriginal population consists of three broad groups: North American Indian, Métis, and Inuit people. Together, they encompass a diverse range of smaller groups differing from each other and from other Canadians in terms of their history, culture, and traditions.^{17,18}

The off-reserve Aboriginal population is much younger than the general population and is disproportionately located in the northern, western, and rural parts of the country.¹⁹ According to the 1996

Census, 46% of the off-reserve Aboriginal population aged 15 or older were Registered. As well, 57% of the Aboriginal population living off reserve indicated they were North American Indian, 38% indicated Métis, and 6% Inuit. Because respondents could give more than one answer, the total adds to more than 100%.

According to the 2000/01 CCHS, an estimated 337,000 people aged 15 or older living off reserve, or about 1.4% of the Canadian population (excluding reserves), indicated that they belonged to an Aboriginal cultural or racial group (see *Defining the off-reserve Aboriginal population*).

Self-perceived health

A measure of health status commonly used in population health surveys is self-perceived health.²⁰ This measure has been shown to be reliable across different cultures.²¹ In 2000/01, 23.1% of Aboriginal people living off reserve rated their health as either fair or poor, a level 1.9 times higher than for the non-Aboriginal population (Table 1). This finding corroborates the results of another study, which examined a different measure of health status; in that study, the premature mortality rate of Registered First Nations people in Manitoba was double that of other Manitoba residents.²

In each geographic region (urban, rural, and the territories), the off-reserve Aboriginal population reported higher levels of fair or poor health than their non-Aboriginal counterpart in that region. As well, the percentage of Aboriginal people reporting fair or poor health did not vary significantly between regions (Table 1).

As household income increased, the proportion of people reporting fair or poor health decreased. However, the gap between Aboriginal and non-Aboriginal people persisted for all three income levels (Chart 1).

Within the off-reserve Aboriginal population, the proportion of people reporting fair or poor health was lower among high-income households than among low- and middle-income households.

Chronic conditions

In 2000/01, 60.1% of the off-reserve Aboriginal population but only 49.6% of the non-Aboriginal population reported at least one chronic condition (see *Definitions*). Three chronic conditions that are known to be more prevalent in the Aboriginal population were selected for further analysis: high blood pressure, diabetes, and arthritis.^{22,23} Of these three conditions, arthritis had the highest prevalence in the Aboriginal population (26.4%), followed by high blood pressure (15.4%) and diabetes (8.7%). The prevalence of each

Defining the off-reserve Aboriginal population

The term "Aboriginal" has many different meanings, depending on the context and who is using the term. For this article, the term encompasses only Aboriginal people living off reserve in households. In the Canadian Community Health Survey (CCHS), respondents were first asked the following question: "To which ethnic or cultural group(s) did your *ancestors* belong? (For example: French, Scottish, Chinese)" By first asking a respondent about his or her ancestors' background, it was assumed that the next question would be clearer to the respondent. That question, which was used to define Aboriginal people for this article, read: "People living in Canada come from many different cultural and racial backgrounds. Are you ... Aboriginal peoples of North America (North American Indian, Métis, Inuit/Eskimo)?" The question incorporated a list of 12 categories (including the one quoted here), and multiple responses were permitted. Any respondent who answered yes to being a member of the Aboriginal peoples of North America was considered Aboriginal. For this analysis there were 3,555 respondents (representing 337,000 people) who indicated being an Aboriginal person of North America. Within this group, there were 573 respondents (representing 88,000 people in the Canadian population) who reported a combination of Aboriginal and non-Aboriginal racial background. Respondents who answered this question but did not indicate having an Aboriginal culture or race were considered non-Aboriginal. There were 1,043 respondents (representing 196,000 people in the Canadian population) who chose not to answer this question. These respondents were excluded from the analysis.

The CCHS data collection method and the definition of Aboriginal people used for this article (see above) differ from those of the 1996 Census.²⁴ For collecting data, the CCHS used personal or telephone interviews, whereas the Census used self-completed questionnaires. For defining Aboriginal people, the CCHS used the concept of cultural and racial background, whereas the 1996 Census used the concept of identity (whereby respondents identified themselves as being Aboriginal). The CCHS estimated that there were 337,000 Aboriginal people aged 15 or older living off reserve. In contrast, the 1996 Census estimated there were 374,400 people who identified themselves as Aboriginal. Therefore, caution should be used when comparing data from the CCHS and the Census.

of these conditions was higher in the off-reserve Aboriginal population than the non-Aboriginal population (Table 1). The disparity was greatest for diabetes, for which the prevalence within the Aboriginal population was double that within the non-Aboriginal population. However, this ratio for diabetes was lower than that observed in two previous studies: in one,

Definitions

To measure *self-perceived health*, respondents were asked "In general, would you say your health is excellent, very good, good, fair, or poor?" Responses were grouped into three categories: poor or fair, good, and very good or excellent.

Canada was divided into three *geographic regions*. Respondents living in the Yukon, the Northwest Territories, or Nunavut were classified as the territories. In the provinces, respondents living in either a Census Metropolitan area (CMA) or a Census Agglomeration area (CA) were classified as urban, and those living outside a CMA or CA but within a province were classified as rural. Generally, a CMA is a geographic area with a population of at least 100,000 and a CA is a geographic area of at least 10,000 people. See the 1996 Census Dictionary²⁴ for complete definitions of a CMA and CA.

Household income was based on total annual income and number of household members. The following income groups were derived:

Household income group	People in household	Total household income
Low	1 or 2	Less than \$15,000
	3 or 4	Less than \$20,000
	5 or more	Less than \$30,000
Middle	1 or 2	\$15,000 to \$29,999
	3 or 4	\$20,000 to \$39,999
	5 or more	\$30,000 to \$59,999
Highest	1 or 2	\$30,000 or more
	3 or 4	\$40,000 or more
	5 or more	\$60,000 or more

Respondents aged 25 or older were grouped into four categories according to the highest level of *education* attained: less than secondary school graduation, secondary school graduation, some post-secondary education, and post-secondary graduation.

Respondents aged 15 to 75 were grouped into five categories according to their *work status* over the past year: worked entire year, worked part of the year and looked for work part of the year, worked part of the year and did not look for work, did not work during the past year and looked for work, and did not work during the past year and did not look for work.

To measure the prevalence of *chronic conditions*, respondents were asked if they had any long-term conditions that had lasted or were expected to last 6 months or more and that had been diagnosed by a health care professional. A checklist of conditions was read to the respondents. Conditions considered in this analysis were asthma, fibromyalgia, arthritis or rheumatism, back problems (excluding fibromyalgia and arthritis or rheumatism), high blood pressure, migraine headaches, chronic bronchitis, emphysema or chronic obstructive pulmonary disease, diabetes, epilepsy, heart disease, cancer, stomach or intestinal ulcers, effects of a stroke, urinary incontinence, Alzheimer's disease or any other dementia, cataracts, and glaucoma. Respondents were classified as having either none or at least one of these conditions in 2000/01.

The CCHS measures a *major depressive episode* by means of a subset of questions from the Composite International Diagnostic Interview, according to the method of Kessler et al.²⁵ The questions cover a cluster of symptoms for depressive disorder, which are listed in the *Diagnostic and Statistical Manual of Mental Disorders*, third revised edition.²⁶ Responses to these questions are scored and transformed into a probability estimate of a diagnosis of major depressive episode. If the estimate was 0.9 or greater (that is, 90% certainty of a positive diagnosis), the respondent was considered to have experienced a major depressive episode in the previous 12 months.

To measure *long-term activity restriction*, respondents were asked "Does a long-term physical or mental condition or health problem reduce the amount or kind of activity you can do at home, at work or school, or other activities,

for example, transportation or leisure?" Long-term conditions refer to conditions that have lasted or are expected to last 6 months or more. Respondents who indicated that their activities were often affected were considered to have a long-term activity restriction.

Respondents were classified into five groups on the basis of their *smoking status*. Those who usually smoked 20 or more cigarettes a day were defined as heavy smokers. Daily smokers (fewer than 20 cigarettes a day) were classified as light smokers. Respondents who currently smoked but not daily were classified as occasional smokers. Former daily smokers were those who had smoked daily at some point in the past, but not at the time of their interview. All other respondents were considered never to have smoked daily.

To derive respondents' level of *physical activity*, their energy expenditure was estimated for each activity in which they engaged during leisure time. Energy expenditure was calculated by multiplying the number of times a respondent engaged in an activity over a 12-month period (a 3-month recall period multiplied by 4) by the average duration in minutes and the energy cost of the activity (expressed in kilocalories expended per kilogram of body weight per hour of activity). To calculate the average daily energy expenditure for the activity, the yearly estimate was divided by 365. This calculation was repeated for all leisure time activities reported, and the resulting estimates were summed to provide the aggregate average daily energy expenditure. Respondents with an estimated energy expenditure below 1.5 kcal/day were considered physically inactive, those with an estimated energy expenditure of 1.5 to 2.9 kcal/day, moderately active, and those with an estimated energy expenditure of 3.0 kcal/day or more, active. This index does not take into account physical activity in the workplace.

Body mass index (BMI) was calculated by dividing weight in kilograms by the square of height in metres. Three weight categories were identified: acceptable or underweight (BMI less than 25), overweight (BMI 25 to less than 30), and obese (BMI 30 or more). Pregnant women were excluded from this aspect of the analysis.

To establish *type of drinker*, respondents were asked "During the past 12 months, how often did you drink alcoholic beverages?" They were categorized as being weekly drinkers, former drinkers (those who did not drink in the past 12 months, but did drink at some point in the past), or occasional drinkers or abstainers (less than once a week or never drank).

Heavy drinking was measured by asking respondents the number of times they had consumed five or more alcoholic drinks on one occasion in the past 12 months. Those who answered once a month or more often were classified as *heavy drinkers*.

Respondents' *contact with health care professionals* was determined by asking "In the past 12 months, how many times have you seen, or talked on the telephone, about your physical, emotional, or mental health with" any of a list of several health care professionals? Respondents were asked to exclude instances when they were admitted for an overnight stay in a health care facility. The list of health care professionals consisted of family doctor or general practitioner, eye specialist (such as an ophthalmologist or optometrist), any other medical doctor (such as a surgeon, allergist, orthopedist, gynecologist, or psychiatrist), nurse for care or advice, and dentist or orthodontist.

To determine whether a person had a *regular doctor*, respondents were asked "Do you have a regular medical doctor?"

To measure *unmet health care needs*, respondents were asked "During the past 12 months, was there ever a time when you felt that you needed health care but didn't receive it?" Respondents who answered "yes" were asked the reasons for the most recent episode. The reasons were classified into three groups, depending on whether they were due to *service availability* (service not available where or when required or waiting time too long), *accessibility* (cost or transportation), or *acceptability* (responses that concerned attitudes and competing responsibilities).

Table 1
Health status indicators, household population aged 15 or older, by off-reserve Aboriginal status and geographic region, Canada, 2000/01

	Canada		Provinces				Territories(T)		Regional comparison for Aboriginal population†
	Aboriginal	Non-Aboriginal	Urban areas (U)		Rural areas (R)		Aboriginal	Non-Aboriginal	
			Aboriginal	Non-Aboriginal	Aboriginal	Non-Aboriginal			
	%	%	%	%	%	%	%	%	
Self-perceived health									
Very good or excellent	42.4*	61.2	43.2*	61.5	42.8*	60.2	38.2*	60.3	
Good	34.4*	26.6	34.8*	26.5	31.5	27.1	40.2*	28.6	R<T
Fair or poor	23.1*	12.2	22.0*	12.1	25.8*	12.7	21.6*	11.1	
One or more chronic conditions	60.1*	49.6	62.6*	49.4	59.6*	50.3	45.2	48.0	U,R>T
Type of chronic condition									
High blood pressure	15.4*	13.2	15.7	13.2	15.8	13.4	12.7	12.7	
Diabetes	8.7*	4.3	8.8*	4.2	9.2*	4.6	4.3 ^{E1}	4.0	U,R>T
Arthritis	26.4*	15.8	28.7*	15.6	24.7*	16.9	15.9	16.9	U,R>T
Long-term activity restriction	16.2*	10.3	15.5*	10.2	18.1*	10.5	13.4	11.6	
Major depressive episode in past 12 months‡	13.2*	7.3	13.8*	7.4	13.1*	6.8	9.0	7.5	

Data source: 2000/01 Canadian Community Health Survey

Note: Percentages have been age-standardized to the total Canadian population.

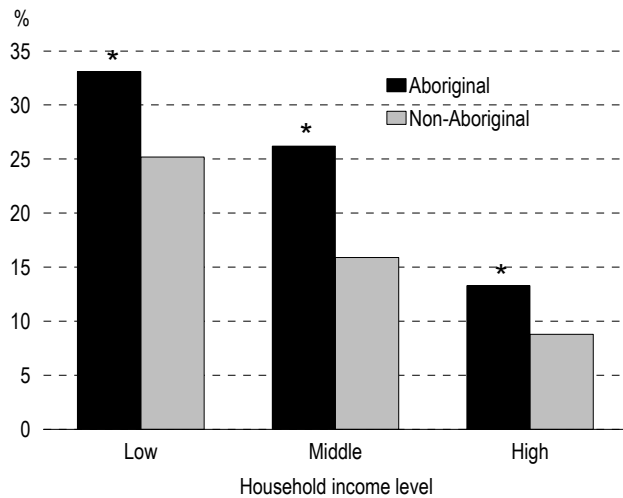
† Only significant differences between geographic regions are reported for the Aboriginal population.

‡ Excludes two health regions: Brant Public Health Unit, Ontario and Northern Health Services Branch, Saskatchewan.

* Significantly different from the non-Aboriginal estimate.

E1 Coefficient of variation between 16.6% and 25.0%.

Chart 1
Percentage of those reporting fair or poor health by household income and off-reserve Aboriginal status, Canada, 2000/01



Data source: 2000/01 Canadian Community Health Survey

Note: Percentages have been age-standardized to the Canadian population.

* Significantly different from the non-Aboriginal estimate.

the prevalence of diabetes among Registered First Nations people in Manitoba was 4.2 times that of the non-Aboriginal population,² and in the other, the rate for the on-reserve Aboriginal population was 3.3 times (for males) or 5.3 times (for females) the rate for the non-Aboriginal population.²³

In urban and rural areas, the off-reserve Aboriginal population reported higher levels of chronic conditions than their non-Aboriginal counterparts (Table 1). However, in the territories, Aboriginal and non-Aboriginal people reported similar levels of chronic conditions. In contrast, in an earlier study, Aboriginal northerners reported lower levels of chronic conditions than other territorial residents.²⁷

The off-reserve Aboriginal population living in the territories had a lower prevalence of chronic conditions than the provincial off-reserve Aboriginal population (Table 1). Similarly, another study found that northern Manitoba Aboriginal communities reported better health status than southern Manitoba Aboriginal communities.² This pattern may indicate that northern Aboriginal communities have not experienced lifestyle changes to the same degree as southern ones.^{28,29} Another explanation could be that northern Aboriginal people have less opportunity to be diagnosed with a chronic condition because of their infrequent contacts with doctors.²⁷ Furthermore, cultural differences in

reporting health-related information between northern (primarily Inuit) and southern (primarily First Nations and Métis) populations might also explain these differences.²⁷

Off-reserve Aboriginal people in low- and middle-income households reported higher levels of chronic conditions than other Canadians with the same socio-economic status (Chart 2). Aboriginal and non-Aboriginal Canadians in high-income households reported similar levels of chronic conditions.

The benefit of high income was also apparent within the off-reserve Aboriginal population, where the high-income population had a lower percentage of people reporting one or more chronic conditions than the low- and middle-income populations.

Long-term activity restriction

In 2000/01, 16.2% of the off-reserve Aboriginal population reported a long-term activity restriction (see Definitions), 1.6 times higher than the non-Aboriginal population (Table 1). This ratio was smaller than that reported in a previous study, in which the disability rate for the Aboriginal population was 2.4 times higher than the rate for all Canadians.³⁰

The off-reserve Aboriginal population living in the provinces had higher levels of activity restriction than their non-Aboriginal provincial counterparts. However, in the territories, Aboriginal and non-Aboriginal residents reported similar levels of activity restriction (Table 1).

The middle-income off-reserve Aboriginal population had a higher proportion of activity restriction than other middle-income Canadians (Chart 3); for the other income groups, levels of activity restriction were similar between off-reserve Aboriginal and non-Aboriginal populations.

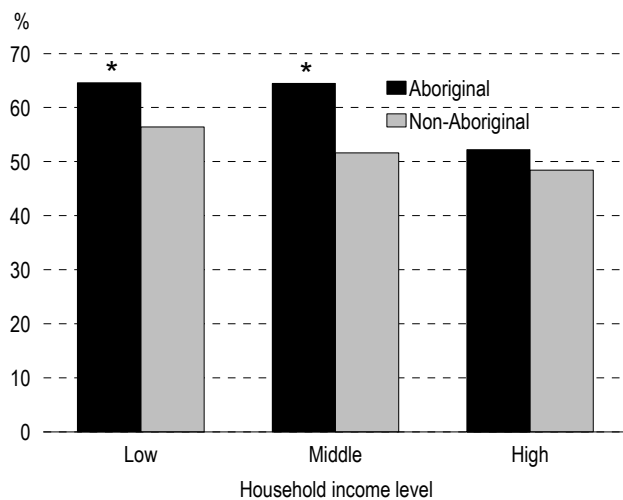
Within the off-reserve Aboriginal population, people in the high-income group reported lower levels of activity restriction than those in low- and middle-income households.

Depression

In 2000/01, 13.2% of the off-reserve Aboriginal population had experienced a major depressive episode in the past year (see Definitions), 1.8 times higher than the non-Aboriginal population (Table 1). Other researchers have documented high levels of mental health problems in Canadian Aboriginal communities.^{1,31,32} One study found that in northwestern Ontario, depression appeared to be under-diagnosed within the Aboriginal population.³³

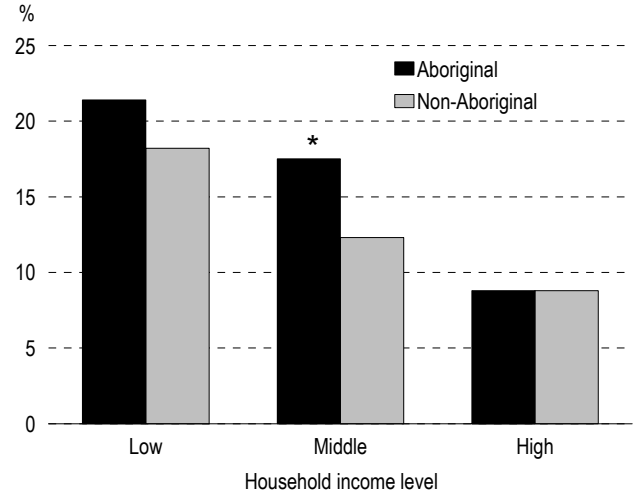
In the provinces, the prevalence of depression was higher within the off-reserve Aboriginal population than the non-Aboriginal population, but in the territories, the prevalence was similar for these two groups (Table 1). However, the percentage of the off-reserve Aboriginal population that had experienced a depressive episode did not vary significantly by region.

Chart 2
Percentage of those reporting one or more chronic conditions, by household income off-reserve and Aboriginal status, Canada, 2000/01



Data source: 2000/01 Canadian Community Health Survey
Note: Percentages have been age-standardized to the Canadian population.
* Significantly different from the non-Aboriginal estimate.

Chart 3
Percentage of those reporting long-term activity restriction, by household income and off-reserve Aboriginal status, Canada, 2000/01



Data source: 2000/01 Canadian Community Health Survey
Note: Percentages have been age-standardized to the Canadian population.
* Significantly different from the non-Aboriginal estimate.

Among low- and middle-income households, an Aboriginal person living off reserve was more likely than a non-Aboriginal person to have experienced a depressive episode. Among high-income households, Aboriginal and non-Aboriginal people reported similar levels of depression (Chart 4).

Health Determinants

There are many determinants of health. One well-known link is that between low socio-economic status and poor health.^{7,9,18} In this article, socio-economic status was primarily measured using household income. However, both educational attainment and employment status are presented here and used in the logistic regression models (see *The influence of socio-demographic and health behaviour characteristics on the health status of the off-reserve Aboriginal population*). In 2000/01, the off-reserve Aboriginal population, as a whole and in the various geographic regions, had lower levels of education attainment and household income and was less likely to have worked the entire year than the non-Aboriginal population (Table 2). Previous research has also shown that the Aboriginal population has a lower socio-economic status than the non-Aboriginal population.^{1,10}

Within the off-reserve Aboriginal population there were some differences in socio-economic status by

region. Aboriginal people living in the provinces were more likely to have graduated from secondary school than those living in the territories. However, despite this difference in educational attainment, household income and work status were generally similar across all regions (Table 2).

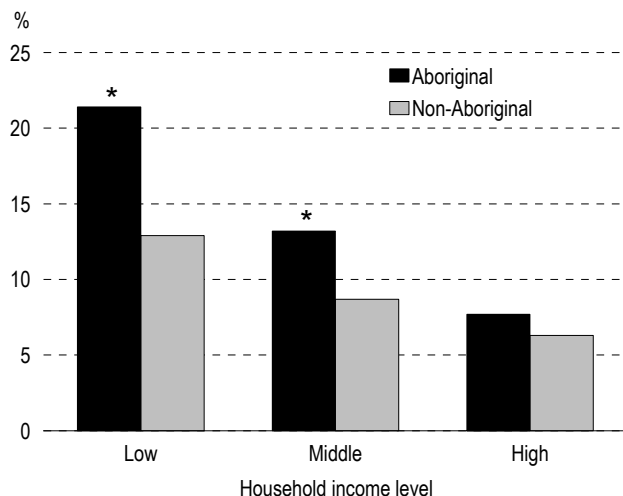
In addition to socio-economic status, many health behaviours have been associated with health status. For example, smoking has been associated with certain types of cancer, heart disease, and stroke.³⁴ In 2000/01, 51.4% of the off-reserve Aboriginal population were smokers - 1.9 times higher than the non-Aboriginal population. The majority were light daily smokers (27.2%), followed by heavy daily smokers (14.3%) and occasional smokers (9.9%). The largest difference between the off-reserve Aboriginal and non-Aboriginal populations was observed for light daily and occasional smokers (Table 2). Numerous other studies have reported high smoking rates within the Aboriginal population.^{7,27,35,36} Furthermore, it appears that smoking rates among Aboriginal people are not decreasing.³⁷

In all geographic regions, the off-reserve Aboriginal population was more likely to be current smokers than the non-Aboriginal population. Within the off-reserve Aboriginal population, the highest smoking rate was found in the territories (58.7%); the provincial rate was about 50%. These rates are similar to earlier estimates.^{27,36}

Research has shown that being physically active has positive health benefits such as reducing the risk of heart disease.^{6,38} Reported leisure-time physical activity was one health behaviour for which there was little difference between the off-reserve Aboriginal and non-Aboriginal populations. In 2000/01, 23.3% of the off-reserve Aboriginal population was active and 54.1% was inactive (the remaining group was moderately active). In the provinces, there was little difference between the off-reserve Aboriginal and non-Aboriginal populations, but in the territories, Aboriginal people were less likely to be active than other northern residents (Table 2).

Being overweight or obese (see *Definitions*) has been associated with several chronic conditions, such as asthma, high blood pressure, and diabetes.³⁹ In 2000/01, 33.5% of off-reserve Aboriginal people were overweight and an additional 24.7% were obese. Off-reserve Aboriginal people were just as likely as non-Aboriginal people to be overweight and 1.8 times more likely to be obese (Table 2). Several studies have documented that Aboriginal children and adults weigh more than other Canadians.^{7,35,40} The exact reasons are not known, but genetic and environmental factors and rapid changes in lifestyle and diet have been suggested.^{8,41} In the territories, Aboriginal and non-

Chart 4
Percentage of those experiencing a major depressive episode in past year by household income and off-reserve Aboriginal status, Canada, 2000/01



Data source: 2000/01 Canadian Community Health Survey
Note: Percentages have been age-standardized to the Canadian population. Excludes two health regions (Brant Public Health Unit, Ontario and Northern Health Services Branch, Saskatchewan).
* Significantly different from the non-Aboriginal estimate.

Aboriginal residents reported similar levels of obesity (Table 2), but in the provinces, off-reserve Aboriginal people were more likely to be obese than non-Aboriginal counterparts.

In 2000/01, a smaller proportion of off-reserve Aboriginal people than non-Aboriginal people reported weekly drinking. This pattern held for all three geographic regions, the largest difference occurring in the territories (Table 2). In fact, northern Aboriginal residents living off reserve were less likely to drink weekly than Aboriginal people living off reserve in the provinces. This difference may be due in part to liquor

restrictions in the territories.²⁷ Although off-reserve Aboriginal people were less likely than the rest of the Canadian population to be weekly drinkers, they did report higher levels of heavy drinking (Table 2). Similarly, another study found that alcohol consumption was less frequent among Aboriginal women in northern Quebec but that they consumed higher quantities of alcohol.³⁵ Within the off-reserve Aboriginal population, the proportion of heavy drinkers was similar across the three geographic regions. In the north, Aboriginal and non-Aboriginal people reported similar levels of heavy drinking.

Table 2
Health determinants, household population aged 15 or older, by off-reserve Aboriginal status and geographic region, Canada, 2000/01

	Canada		Provinces				Territories (T)		Regional comparison for Aboriginal population†
	Aboriginal	Non-Aboriginal	Urban areas (U)		Rural areas (R)		Aboriginal	Non-Aboriginal	
			Aboriginal	Non-Aboriginal	Aboriginal	Non-Aboriginal			
	%	%	%	%	%	%	%	%	
Education (aged 25+)									
Less than secondary school graduation	43.9*	23.1	39.6*	20.9	48.0*	32.1	61.3*	18.8	U,R<T
Secondary school graduation	13.5*	19.4	14.3*	19.5	13.8*	19.2	6.7*	13.8	U,R>T
Some post-secondary education	10.2*	6.7	11.4*	6.8	9.0	6.0	4.0	4.5	U,R>T
Post-secondary graduation	32.5*	50.8	34.6*	52.8	29.3*	42.6	28.0*	62.8	
Household income									
Low	27.3*	10.1	28.0*	9.7	23.3*	11.5	32.1*	9.7	R<T
Middle	24.8*	19.9	23.5*	18.6	26.1	25.0	29.1*	14.2	
High	37.0*	60.1	38.4*	61.9	36.2*	53.1	31.3*	66.6	
Missing	10.9	9.9	10.0	9.8	14.4*	10.4	7.5	9.6	R>T
Work status past year (aged 15 to 75)									
Worked entire year	38.1*	53.2	39.6*	53.8	36.2*	50.5	35.5*	52.7	
Worked part of year and looked for work	13.4*	8.3	12.4*	8.0	15.1*	9.4	15.8	10.8	
Worked part of year and did not look for work	13.2	14.6	11.8	14.3	14.9	15.8	17.5	19.0	
Did not work and looked for work	4.6*	1.7	5.9*	1.7	1.8 ^{E2}	1.5	3.7	1.9 ^{E2}	U>R
Did not work and did not look for work	30.7*	22.3	30.3*	22.2	31.9*	22.7	27.4*	15.6	
Smoking status									
Light daily smoker	27.2*	12.6	26.9*	12.4	24.4*	13.2	38.0*	15.8	U,R<T
Heavy daily smoker	14.3*	9.5	14.1*	8.8	16.0*	12.4	10.6	12.5	
Occasional smoker	9.9*	4.4	10.4*	4.5	8.4*	4.1	10.1*	4.8	
Former daily smoker	23.5	23.2	21.8	22.8	27.2	24.9	23.0	23.2	
Never smoked daily	25.2*	50.2	26.8*	51.5	23.9*	45.3	18.3*	43.7	U>T
Physical activity									
Active	23.3	21.8	23.3	21.9	23.5	21.5	20.3*	29.0	
Moderately active	22.6	23.5	23.0	23.6	23.3	22.8	18.1	24.1	
Inactive	54.1	54.7	53.8	54.5	53.2	55.7	61.6*	47.0	
Body mass index									
Acceptable or underweight	41.8*	54.3	41.9*	55.6	40.7*	48.8	41.8	48.5	
Overweight	33.5	31.7	32.5	31.1	35.8	34.0	33.7	31.5	
Obese	24.7*	14.0	25.6*	13.2	23.5*	17.3	24.5	20.1	
Alcohol consumption									
Weekly drinker	27.2*	38.4	29.4*	39.0	26.0*	36.0	14.6*	41.3	U,R>T
Former drinker	22.7*	11.9	21.0*	11.5	22.8*	13.4	31.7*	14.6	U,R<T
Less than weekly drinker or abstainer	50.1	49.8	49.6	49.5	51.2	50.6	53.6*	44.2	
Heavy drinker	22.6*	16.1	22.5*	15.6	22.9*	18.3	24.4	24.3	

Data source: 2000/01 Canadian Community Health Survey

Note: Percentages have been age-standardized to the total Canadian population.

† Only significant differences between geographic regions are reported for the Aboriginal population.

* Significantly different from the non-Aboriginal estimate.

E2 Coefficient of variation between 25.1% and 33.3%.

The influence of socio-demographic and health behaviour characteristics on the health status of the off-reserve Aboriginal population

To examine whether the off-reserve Aboriginal population had greater odds of reporting a health outcome than the non-Aboriginal population after adjustment for socio-demographic and health behaviour variables, four series of multiple logistic regression models were run, one series for each of four specific health outcomes. In each model, the dependent variable was the percentage of the population reporting the health outcome of interest. The four health outcomes were fair or poor health, one or more chronic conditions, long-term activity restriction, and major depressive episode in the past year. In the first set of regression models (age/sex), these four outcomes were examined separately with adjustment for age, sex, and Aboriginal status. The second set of models (socio-demographic) built on the age/sex models by including the following variables: geographic region (urban, rural, territories), marital status (single, married, previously married, not stated), educational status (less than secondary school graduation, secondary school graduation, some post-secondary education, post-secondary graduation), income level (low, middle, high, not stated), and work status (worked entire year, worked part of year and looked for work, worked part of year and did not look for work, had no job in past 12 months and looked for work, had no job in past 12 months and did not look for work). The final set of models (health behaviours) included all of the variables in the previous models as well as the following factors: physical activity (inactive, moderately active, active), smoking status (heavy daily smoker, light daily smoker, occasional smoker, former daily smoker, never smoked daily), body mass index (acceptable or underweight, overweight, obese), and heavy drinking.

The age/sex models showed that the off-reserve Aboriginal population had greater odds of reporting fair or poor health, one or more chronic conditions, long-term activity restrictions, and experiencing a major depressive episode. The odds ratios for the Aboriginal population ranged from 1.6 (for one or more chronic conditions) to 2.3 (for fair or poor health) (Table 3).

Within the off-reserve Aboriginal population, the odds ratios after adjustment for selected socio-demographic variables were lower than the odds ratios in the age/sex models, which indicates that part of the difference in health status between the Aboriginal and non-Aboriginal populations can be attributed to differences in these socio-demographic variables. On average, the Aboriginal population had about 1.5 times greater odds of reporting any of the four health outcomes than the non-Aboriginal population.

In the health behaviour models, the odds ratios for the off-reserve Aboriginal population were lower than the corresponding odds ratios in the socio-demographic model. However, the Aboriginal population still had greater odds of reporting fair or poor health, one or more chronic conditions, and experiencing a depressive episode than the non-Aboriginal population. The odds ratios for long-term activity restriction were no longer statistically different between the off-reserve Aboriginal and non-Aboriginal populations. On average, the Aboriginal population had about 1.3 times greater odds of reporting one of these health outcomes than the non-Aboriginal population.

These results suggest that differences in health status between the Aboriginal and non-Aboriginal populations can be partly explained by their differences in age, socio-demographic, and health behaviour characteristics, as measured by this analysis.

Table 3

Adjusted odds ratios for selected health status variables, by off-reserve Aboriginal status, with adjustment for socio-economic and health behaviours, household population aged 15 or older, Canada, 2000/01

Off-reserve Aboriginal status	Fair or poor health		One or more chronic conditions		Long-term activity restriction		Major depressive episode in past year [†]	
	Odds ratio	99% confidence interval	Odds ratio	99% confidence interval	Odds ratio	99% confidence interval	Odds ratio	99% confidence interval
Age/sex model								
Non-Aboriginal [‡]	1.0	...	1.0	...	1.0	...	1.0	...
Off-reserve Aboriginal	2.3*	1.9, 2.7	1.6*	1.4, 1.9	1.8*	1.5, 2.2	1.9*	1.6, 2.3
Socio-demographic model								
Non-Aboriginal [‡]	1.0	...	1.0	...	1.0	...	1.0	...
Off-reserve Aboriginal	1.5*	1.3, 1.8	1.5*	1.3, 1.7	1.4*	1.1, 1.7	1.5*	1.3, 1.9
Health behaviours model								
Non-Aboriginal [‡]	1.0	...	1.0	...	1.0	...	1.0	...
Off-reserve Aboriginal	1.3*	1.1, 1.7	1.3*	1.1, 1.5	1.2	1.0, 1.5	1.3*	1.1, 1.6

Data source: 2000/01 Canadian Community Health Survey

Note: Independent variables in each model (as follows) are not presented except for off-reserve Aboriginal status.

Age/sex model: independent variables = off-reserve Aboriginal status, age, sex

Socio-demographic model: independent variables = off-reserve Aboriginal status, age, sex, geographic region, marital status, education, household income, work status.

Health behaviours model: independent variables = off-reserve Aboriginal status, age, sex, geographic region, marital status, education, household income, work status, smoking, physical activity, body mass index, heavy drinking.

[†] Excludes two health regions: Brant Public Health Unit, Ontario and Northern Health Services Branch, Saskatchewan.

[‡] Reference category for which odds ratio is always 1.0.

* The off-reserve Aboriginal population has a significantly greater odds ratio than the non-Aboriginal population.

... Not applicable

Health care utilization

In addition to supplying measures of health status and health determinants, the CCHS allowed analysis of health care utilization. Previous research has shown that for the Aboriginal population, geographic location affects a person's use of physician services.¹⁸ In the territories, the Aboriginal population reported fewer contacts with general practitioners and dentists and more contacts with nurses than other territorial residents.²⁷ In a more recent study, reported levels of visiting a physician were similar for Registered First Nations people in Manitoba and other Manitobans (81.5% versus 83.0%).²

In 2000/01, 76.8% of the off-reserve Aboriginal population reported seeing a general practitioner at least once in the previous 12 months, a proportion not significantly different from that for the non-Aboriginal population. However, the Aboriginal population living in the territories was much less likely to have had contact with a general practitioner than other northern residents (58.8% versus 75.9%). The proportion of provincial Aboriginal people living off reserve who reported having a regular doctor was slightly lower than for other provincial residents. However, the greatest disparity was found in the territories, where only 31.1% of off-reserve Aboriginal people but 67.0% of non-Aboriginal northerners reported having a regular doctor.

Contacts with eye specialists and other medical doctors were generally similar for off-reserve Aboriginal and non-Aboriginal people living in the provinces. In the territories, Aboriginal people reported fewer contacts with other medical doctors. Contacts with nurses were somewhat higher for Aboriginal people living in the provinces and much higher for those living in the territories (Table 4).

The off-reserve Aboriginal population was less likely to have contact with dentists, who are not publicly funded, than the non-Aboriginal population. This was true for all geographic regions. Past research has indicated that on-reserve Aboriginal people have poor dental health and are in need of dental services.⁴²

In 2000/01, 19.6% of off-reserve Aboriginal people cited an unmet health care need, a proportion higher than for the non-Aboriginal population. Research has shown that individuals with poor health are more likely than individuals with good health to cite unmet needs.⁴³ Therefore, the higher proportion found in the off-reserve Aboriginal population could, in part, be the result of differences in health status between Aboriginal and non-Aboriginal people. Further analysis which controlled for differences in self-perceived health showed that off-reserve Aboriginal people continued to cite an unmet health care need more frequently than non-Aboriginal people (data not shown).

Table 4
Health care utilization, household population aged 15 or older, by off-reserve Aboriginal status and geographic region, Canada, 2000/01

	Canada		Provinces				Territories (T)		Regional comparison for Aboriginal population†
	Aboriginal	Non-Aboriginal	Urban areas (U)		Rural areas (R)		Aboriginal	Non-Aboriginal	
			Aboriginal	Non-Aboriginal	Aboriginal	Non-Aboriginal			
	%	%	%	%	%	%	%	%	
Contact with health care professionals in past 12 months									
General practitioner	76.8	78.7	79.4	79.3	76.4	76.5	58.8*	75.9	U,R>T
Eye specialist	37.9	38.0	37.1	38.3	40.0	36.9	35.3	39.1	
Other medical doctor	24.7*	28.9	26.3	29.9	23.6	25.4	15.1*	24.1	U,R>T
Nurse	16.8*	9.8	12.6*	9.5	16.3*	10.9	49.0*	22.0	U,R<T
Dentist	45.2*	59.4	46.6*	61.5	41.6*	50.9	45.0*	53.5	
Has a regular doctor	76.4*	83.9	81.5	84.0	79.0*	83.6	31.1*	67.0	U,R>T
Unmet health care needs	19.6*	12.7	18.8*	12.7	21.3*	12.8	18.4	13.6	
Acceptability‡	51.3	46.3	56.0	46.7	43.0	44.9	37.2	36.9	
Availability‡	47.5	50.9	42.8	50.1	51.4	53.6	59.1	62.2	
Accessibility‡	16.9*	11.9	18.9	12.4	16.1	10.0	8.8	7.6 ^{E2}	

Data source: 2000/01 Canadian Community Health Survey

Note: Percentages have been age standardized to the total Canadian population.

† Only significant differences between geographic regions are reported for the Aboriginal population.

‡ Multiple responses permitted.

* Significantly different from the non-Aboriginal estimate.

E2 Coefficient of variation between 25.1% and 33.3%.

The type of unmet health care needs most often cited by the off-reserve Aboriginal population related to acceptability (51.3%) and availability (47.5%) reasons; similar levels to the non-Aboriginal population. However, accessibility reasons, such as cost and transportation, were more likely cited among off-reserve Aboriginal people than non-Aboriginal people (Table 4). A previous report found that off-reserve Aboriginal people had a higher prevalence of acceptability-related unmet needs than did non-Aboriginal people, a relationship that held when the effects of household income and health status were considered.⁴³

Regardless of geographic region, off-reserve Aboriginal people were more likely to cite an unmet health care need than non-Aboriginal people. The type of unmet needs cited appeared to differ between urban Aboriginal and urban non-Aboriginal people, however, the differences did not reach significance (Table 4).

Concluding remarks

Through their responses to the CCHS, the off-reserve Aboriginal population as a whole reported poorer health than the non-Aboriginal population. This overall difference held true for those living in the provinces and for those in low- or middle-income households. However, it was not always the case for those living in the territories or in high-income households, for whom only self-perceived health (one of the four health status measures analyzed here) was significantly worse than among their non-Aboriginal counterparts.

Within the off-reserve Aboriginal population, those living in high-income households had better health than those living in low- and middle-income households. As well, the territorial off-reserve Aboriginal population reported fewer chronic conditions than their southern counterparts.

Generally, health determinants such as low socio-economic status, smoking, and obesity were more

common in the off-reserve Aboriginal population than the non-Aboriginal population.

In the multivariate analysis (see *The influence of socio-demographic and health behaviour characteristics on the health status of the off-reserve Aboriginal population*), which controlled for socio-economic and health behaviour variables, the off-reserve Aboriginal population had greater odds of reporting fair or poor health, one or more chronic conditions, long-term activity restriction, and experiencing a major depressive episode in the previous year. With the exception of long-term activity restriction, these odds ratios were significant. Many of the health inequalities that exist between the Aboriginal and non-Aboriginal populations were attributable to differences in socio-economic and health behaviour characteristics.

Contacts with publicly funded health care professionals were generally similar between off-reserve Aboriginal and non-Aboriginal people living in the provinces. In the territories, Aboriginal people living off reserve were much less likely to have seen either a general practitioner or another medical doctor and were much less likely to have a regular doctor. Contacts with dentists (who are not publicly funded) were significantly lower for the off-reserve Aboriginal population regardless of where they lived. Overall, off-reserve Aboriginal Canadians reported a higher proportion of unmet health care needs than the non-Aboriginal population.

This article is a first attempt to compare the off-reserve Aboriginal population with the non-Aboriginal population in terms of health status, health behaviours, and health care utilization with adjustment for age, income, and geographic region. Further analyses examining these health inequalities in greater detail and monitoring Aboriginal health over time would prove beneficial.

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Appendix

Table A

Sample size and estimated population (unadjusted) for health indicators, off-reserve Aboriginal population aged 15 or older living in households, by geographic region, Canada, 2000/01

	Canada			Provinces						Territories		
	Sample size		Estimated population	Urban areas			Rural areas			Sample size		Estimated population
		'000	%	Sample size	Estimated population	%	Sample size	Estimated population	%	Sample size	'000	%
Total	3,555	337	100.0	1,369	218	100.0	1,164	89	100.0	1,022	30	100
Sex												
Male	1,567	158	47.0	555	101	46.3	499	43	47.7	513	15	50.2
Female	1,988	179	53.0	814	117	53.7	665	47	52.3	509	15	49.8
Age group												
15-24	869	82	24.4	328	53	24.1	261	21	23.9	280	8	28.4
25-34	908	83	24.5	356	54	24.8	283	21	23.2	269	8	25.7
35-44	766	81	24.0	311	53	24.2	232	22	24.4	223	6	21.5
45-54	507	53	15.8	206	35	16.2	185	14	16.2	116	3	11.5
55-64	265	20	6.0	83	12 ^{E1}	5.5 ^{E1}	114	6	7.1	68	2	6.5
65+	240	18	5.3	85	11	5.2	89	5	5.1	66	2	6.5
Marital status												
Married or common-law	1,551	161	47.9	526	97	44.7	539	49	54.6	486	15	51.4
Separated, divorced, widowed	580	46	13.7	262	33	15.2	200	10	11.6	118	3	9.0
Single (never married)	1,420	129	38.4	578	87	40.1	425	30	33.8	417	12	39.6
Education (aged 25+)												
Less than secondary school graduation	1,216	95	38.0	383	56	34.3	401	27	40.9	432	12	57.8
Secondary school graduation	296	35	14.2	136	23	14.2	112	11	16.3	48	2	7.3
Some post-secondary education	246	30	12.1	130	22	13.7	79	7	10.4	37	1	4.4
Post-secondary graduation	872	89	35.7	375	61	37.8	284	21	32.4	213	6	30.4
Household income												
Low	1,130	91	27.1	482	63	28.7	304	19	21.6	344	9	31.6
Middle	880	82	24.3	323	51	23.3	282	23	25.2	275	9	28.7
High	1,153	127	37.8	428	83	38.1	398	35	38.8	327	10	32.5
Missing	392	36	10.8	136	21	9.8	180	13	14.4	76	2	7.2
Work status past year (aged 15 to 75)												
Worked entire year	1,244	128	39.2	486	85	40.6	425	32	37.7	333	10	33.4
Worked part of year and looked for work	541	50	15.5	168	29	13.8	176	16	18.4	197	6	19.2
Worked part of year and did not look for work	551	49	15.0	201	28	13.5	170	15	17.1	180	6	20.2
Did not work and looked for work	169	19	5.7	82	15	7.3	32	2 ^{E2}	2.3 ^{E2}	55	1	4.8
Did not work and did not look for work	894	80	24.5	376	52	24.9	298	21	24.5	220	6	22.3
Self-perceived health												
Very good or excellent	1,549	157	46.6	612	103	47.2	492	41	46.1	445	13	43.6
Good	1,293	120	35.5	474	77	35.1	398	31	34.9	421	12	40.5
Fair or poor	712	60	17.9	283	39	17.7	273	17	19.0	156	5	15.9
One or more chronic conditions	1,727	180	53.8	752	122	56.3	616	47	53.6	359	10	35.4
Type of chronic condition												
High blood pressure	392	36	10.6	147	24	10.8	163	10	10.9	82	2	8.2
Diabetes	210	19	5.6	96	12	5.6	86	6	6.6	28	1 ^{E1}	2.8 ^{E1}
Arthritis	618	64	19.0	278	44	20.4	236	17	18.6	104	3	10.1
Long-term activity restriction	459	45	13.4	198	29	13.4	176	13	15.0	85	2	8.4
Major depressive episode in past 12 months[†]	413	46	14.3	195	32	15.1	129	11	13.9	89	3	9.1

Health of the off-reserve Aboriginal population

	Canada			Provinces						Territories		
	Sample size		Estimated population '000 %	Urban areas		Rural areas				Sample size		Estimated population '000 %
	Sample size	Estimated population		Sample size	Estimated population	Sample size	Estimated population	Sample size	Estimated population			
Smoking status												
Light daily smoker	1,220	106	31.5	429	68	31.4	336	25	28.1	455	13	42.4
Heavy daily smoker	459	46	13.7	177	28	13.1	177	15	16.3	105	3	9.8
Occasional smoker	393	36	10.8	162	24	11.0	118	9	10.0	113	4	12.2
Former daily smoker	658	63	18.8	257	39	18.0	242	19	21.7	159	5	15.9
Never smoked daily	810	85	25.2	338	57	26.5	289	21	24.0	183	6	19.7
Physical activity												
Active	842	80	26.0	336	51	25.9	282	22	26.8	224	6	24.0
Moderately active	738	72	23.3	294	46	23.4	268	20	24.1	176	5	20.5
Inactive	1,723	156	50.7	644	100	50.7	552	40	49.1	527	15	55.4
Body mass index												
Acceptable or underweight	1,473	146	45.2	575	96	45.5	455	37	43.7	443	13	48.1
Overweight	1,087	103	32.0	419	66	31.6	377	28	33.2	291	9	31.0
Obese	787	74	22.8	309	48	22.9	272	20	23.1	206	6	21.0
Alcohol consumption												
Weekly drinker	766	92	27.5	344	64	29.6	266	23	26.3	156	5	15.6
Former drinker	799	62	18.5	274	38	17.6	259	16	18.1	266	8	25.8
Less than weekly drinker or abstainer	1,962	181	54.1	738	114	52.8	636	50	55.6	588	17	58.6
Heavy drinker	941	87	26.1	375	56	26.0	297	23	25.9	269	8	27.5
Contact with health care professionals in past 12 months												
General practitioner	2,491	249	74.4	1,086	167	77.1	858	66	74.4	547	16	54.1
Eye specialist	1,280	118	35.1	510	75	34.4	451	34	38.4	319	9	30.4
Other medical doctor	776	84	25.0	371	60	27.5	256	20	22.5	149	4	14.8
Nurse	877	56	16.5	184	26	12.1	209	15	16.8	484	14	47.7
Dentist	1,663	164	48.9	685	109	50.0	507	41	46.3	471	14	48.2
Has a regular doctor	2,216	247	73.2	1,073	170	77.9	865	68	76.4	278	9	29.4
Unmet health care needs												
Acceptability [‡]	697	69	20.4	287	44	19.9	234	20	22.3	176	5	18.4
Availability [‡]	331	36	52.4	158	26	58.8	104	9	42.2	69	2	39.3
Accessibility [‡]	354	31	44.4	131	18	40.6	115	10	48.0	108	3	61.0
Accessibility [‡]	108	11	15.4	49	7 ^{E1}	15.6 ^{E1}	46	4 ^{E2}	17.6 ^{E1}	13	0	6.0

Data source: 2000/01 Canadian Community Health Survey

Note: Values in each category may not add up to the total because missing data (non-response) are not presented for most variables.

[‡] Excludes two health regions: Brant Public Health Unit, Ontario and Northern Health Services Branch, Saskatchewan.

[‡] Multiple responses permitted.

^{E1} Coefficient of variation between 16.6% and 25.0%.

^{E2} Coefficient of variation between 25.1% and 33.3%.

Table B
Sample size and estimated population (unadjusted) for health indicators, non-Aboriginal population aged 15 or older living in households, by geographic region, Canada, 2000/01

	Canada			Provinces						Territories			
	Sample size	Estimated population		Urban areas		Rural areas		Sample size	Estimated population		Sample size	Estimated population	
		'000	%	'000	%	'000	%		'000	%			
Total	120,439	24,114	100.0	76,638	19,259	100.0	42,546	4,815	100.0	1255	39	100.0	
Sex													
Male	55,463	11,845	49.1	34,716	9,396	48.8	20,119	2,428	50.4	628	21	53.3	
Female	64,976	12,268	50.9	41,922	9,862	51.2	22,427	2,387	49.6	627	18	46.7	
Age Group													
15-24	17,763	4,106	17.0	11,813	3,296	17.1	5,786	804	16.7	164	6	14.1	
25-34	18,089	4,045	16.8	12,000	3,323	17.3	5,808	714	14.8	281	9	22.0	
35-44	24,537	5,206	21.6	15,900	4,204	21.8	8,301	991	20.6	336	11	26.9	
45-54	21,073	4,361	18.1	13,347	3,485	18.1	7,450	867	18.0	276	9	22.1	
55-64	15,181	2,799	11.6	9,214	2,172	11.3	5,848	623	13.0	119	4	9.8	
65+	23,796	3,598	14.9	14,364	2,779	14.4	9,353	817	17.0	79	2	5.0	
Marital Status													
Married or common-law	66,427	14,680	60.9	40,595	11,512	59.8	25,161	3,143	65.3	671	25	62.2	
Separated, divorced, widowed	23,666	3,050	12.7	15,399	2,480	12.9	8,076	565	11.8	191	4	10.6	
Single (never married)	30,201	6,362	26.4	20,552	5,249	27.3	9,258	1,103	22.9	391	11	27.2	
Education (aged 25+)													
Less than secondary school graduation	27,884	4,599	23.2	14,989	3,264	20.6	12,736	1,330	33.6	159	5	14.6	
Secondary school graduation	18,695	3,840	19.4	12,058	3,090	19.5	6,495	745	18.8	142	5	13.8	
Some post-secondary education	6,666	1,318	6.6	4,551	1,082	6.8	2,057	234	5.9	58	2	4.8	
Post-secondary graduation	48,349	10,067	50.8	32,643	8,393	53.0	14,986	1,652	41.7	720	22	66.8	
Household income													
Low	15,882	2,432	10.1	9,598	1,866	9.7	6,175	563	11.7	109	3	7.6	
Middle	26,468	4,802	19.9	15,389	3,578	18.6	10,905	1,219	25.3	174	5	12.6	
High	65,758	14,488	60.1	44,046	11,935	62.0	20,830	2,524	52.4	882	28	71.9	
Missing	12,331	2,392	9.9	7,605	1,879	9.8	4,636	509	10.6	90	3	7.9	
Work status past year (aged 15 to 75)													
Worked entire year	55,055	12,042	53.1	36,189	9,817	54.1	18,144	2,202	49.1	722	23	59.0	
Worked part of year and looked for work	9,024	1,867	8.2	5,557	1,456	8.0	3,336	407	9.1	131	4	11.4	
Worked part of year and did not look for work	15,925	3,293	14.5	9,788	2,585	14.3	5,909	701	15.6	228	7	18.3	
Did not work and looked for work	1,822	383	1.7	1,240	314	1.7	560	68	1.5	22	1 ^{E2}	1.9 ^{E2}	
Did not work and did not look for work	28,158	5,077	22.4	17,558	3,962	21.8	10,484	1,111	24.8	116	4	9.4	
Self-perceived health													
Very good or excellent	70,072	14,739	61.1	45,221	11,869	61.6	24,039	2,844	59.1	812	25	64.5	
Good	33,091	6,419	26.6	20,780	5,086	26.4	11,993	1,323	27.5	318	11	26.6	
Fair or poor	17,235	2,950	12.2	10,613	2,300	11.9	6,497	647	13.4	125	4	8.9	
One or more chronic conditions	64,681	11,901	49.6	40,577	9,412	49.1	23,541	2,471	51.7	563	17	43.2	
Type of chronic condition													
High blood pressure	18,822	3,196	13.3	11,399	2,493	13.0	7,306	699	14.5	117	4	8.9	
Diabetes	6,069	1,033	4.3	3,651	793	4.1	2,376	239	5.0	42	1	2.9	
Arthritis	23,744	3,831	15.9	14,421	2,960	15.4	9,161	867	18.0	162	5	12.9	
Long-term activity restriction	14,441	2,477	10.3	9,174	1,948	10.1	5,152	526	10.9	115	4	9.2	
Major depressive episode in past 12 months¹	9,137	1,735	7.3	6,215	1,417	7.5	2,821	315	6.6	101	3	8.1	

Health of the off-reserve Aboriginal population

	Canada			Provinces						Territories		
			%	Urban areas		Rural areas				%		
	Sample size	Estimated population		Sample size	Estimated population	Sample size	Estimated population	Sample size	Estimated population			
	'000		'000	%	'000	%	'000	%	'000	%		
Smoking status												
Light daily smoker	15,493	3,027	12.6	9,949	2,402	12.5	5,327	619	12.9	217	6	16.0
Heavy daily smoker	12,684	2,282	9.5	7,544	1,692	8.8	4,978	585	12.2	162	5	13.1
Occasional smoker	4,951	1,062	4.4	3,228	868	4.5	1,662	192	4.0	61	2	5.3
Former daily smoker	30,579	5,609	23.3	19,052	4,366	22.7	11,248	1,235	25.7	279	9	21.8
Never smoked daily	56,510	12,081	50.2	36,724	9,890	51.5	19,255	2,173	45.2	531	17	43.8
Physical activity												
Active	25,436	4,832	21.8	16,386	3,861	21.8	8,738	961	21.4	312	10	28.3
Moderately active	27,073	5,214	23.5	17,473	4,188	23.7	9,287	1,017	22.7	313	9	25.9
Inactive	60,781	12,163	54.8	38,014	9,642	54.5	22,235	2,504	55.9	532	16	45.8
Body mass index												
Acceptable or underweight	60,105	12,727	54.2	40,017	10,439	56.6	19,494	2,269	48.4	594	19	49.2
Overweight	38,478	7,463	31.8	23,749	5,848	31.2	14,354	1,603	34.2	375	12	31.1
Obese	18,310	3,308	14.1	10,647	2,487	13.2	7,420	813	17.4	243	8	19.8
Alcohol consumption												
Weekly drinker	43,359	9,231	38.4	28,815	7,503	39.1	14,027	1,711	35.6	517	17	43.1
Former drinker	16,814	2,864	11.9	9,954	2,192	11.4	6,705	668	13.9	155	5	12.2
Less than weekly drinker/Abstainer	59,936	11,957	49.7	37,665	9,516	49.5	21,693	2,424	50.5	578	18	44.8
Heavy drinker	19,878	3,860	16.1	12,413	3,010	15.7	7,145	839	17.5	320	10	26.1
Contact with health care professionals in past 12 months												
General practitioner	95,695	18,948	78.7	61,433	15,220	79.2	33,336	3,699	77.0	926	29	73.5
Eye specialist	47,432	9,171	38.1	30,402	7,341	38.1	16,571	1,815	37.7	459	15	36.9
Other medical doctor	33,570	6,978	29.0	22,643	5,738	29.8	10,638	1,231	25.6	289	9	22.7
Nurse	13,043	2,353	9.8	7,885	1,820	9.5	4,853	525	10.9	305	8	21.4
Dentist	66,867	14,292	59.3	45,523	11,853	61.6	20,645	2,417	50.2	699	22	56.0
Has a regular doctor	102,467	20,234	83.9	65,675	16,155	83.9	36,007	4,053	84.2	785	25	64.5
Unmet health care needs												
Acceptability [†]	15,848	3,064	12.7	10,448	2,455	12.8	5,193	603	12.5	207	6	14.6
Availability [‡]	7,169	1,445	46.9	4,732	1,167	47.3	2,355	275	45.3	82	2	40.3
Accessibility [‡]	8,372	1,547	50.2	5,417	1,220	49.5	2,816	323	53.2	139	4	64.9
Accessibility [‡]	1,865	369	12.0	1,320	309	12.5	532	60	9.9	13	0 ^{E2}	6.1 ^{E2}

Data source: 2000/01 Canadian Community Health Survey

Note: Values in each category may not add up to the total because missing data (non-response) are not presented for most variables.

[†] Excludes two health regions (Brant Public Health Unit, Ontario and Northern Health Services Branch, Saskatchewan).

[‡] Multiple responses permitted.

E2 Coefficient of variation between 25.1% and 33.3%.

Annex

Many analyses presented in this Health Reports Supplement are based on Statistics Canada's Canadian Community Health Survey (CCHS). Data collection for cycle 1.1 of the CCHS began in September 2000 and was conducted over 14 months. The CCHS covers the household population aged 12 or older in all provinces and territories, except persons living on Indian reserves, on Canadian Forces Bases, and in some remote areas.

Cycle 1.1 of CCHS was designed to collect information at the health region level.¹ For administrative purposes, each province is divided into health regions (HR); each territory is designated as a single HR. When cycle 1.1 of the CCHS was designed, there were 139 health regions in Canada. The CCHS combines data collection for the Burntwood and Churchill health regions in Manitoba because of Churchill's small population. There are two remote health regions for which the CCHS does not collect data: the Région du Nunavik and the Région des Terres-Cries-de-la-Baie-James, both in Québec.

The CCHS uses the area frame designed for the Labour Force Survey as its primary sampling frame. A multistage stratified cluster design was used to

sample dwellings within the area frame. A list of the dwellings was prepared, and a sample of dwellings was selected from the list. The majority (83%) of the sampled households came from the area frame, and face-to-face interviews were held with respondents randomly selected from households in this frame. In some HRs, a random digit dialling (RDD) and/or list frame of telephone numbers was also used. Respondents in the telephone frames, who accounted for the remaining 17% of the targeted sample, were interviewed by telephone.

In approximately 82% of the households selected from the area frame, one person was randomly selected; two people were randomly chosen in the remaining households. For households selected from the telephone frames, one person was randomly chosen. The response rate was 84.7%. The responding sample size for cycle 1.1 was 131,535. A total of 6.3% of interviews were obtained by proxy.

References

- 1 Béland Y. Canadian Community Health Survey— Methodological overview. *Health Reports* (Statistics Canada, Catalogue 82-003) 2002; 13(3): 9-14.