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A Statistical Profile on the Health of First Nations in Canada

Determinants of Health, 1999 to 2003

Canada

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HIGHLIGHTS

- The proportion of Registered Indians on-reserve holding a university certificate, diploma or degree is lower than the equivalent proportion of other Canadians (22.7% vs. 5.1%). The proportion of Registered Indians on-reserve with less than a high school graduation certificate is higher than the equivalent Canadian proportion (48.6% vs. 22.5%).

- The proportion of Registered Indians on-reserve that has graduated from high school by age 20 is lower than the equivalent proportion of other Canadians (36.0% vs. 84.6%).

- The post-secondary education attainment rate for the Registered Indian population has increased from 20% in 1996 to 23% in 2001.

- The Registered Indian on-reserve unemployment rate is nearly four times that of the general Canadian rate (27.7% vs. 7.3%).

- The employment rate for Registered Indians on-reserve is lower than the general Canadian rate (37.4% vs. 61.7%).

- The Registered Indian labour force participation rate on-reserve is lower than for the general Canadian population (51.8% vs. 66.5%).

- Compared to 1996, on-reserve Registered Indians in 2001 had better labour force participation (51.5% in 1996 and 51.8% in 2001), a higher employment rate (36.7% in 1996 and 37.4% in 2001) and a lower unemployment rate (28.7% in 1996 and 27.7% in 2001).

- The median annual income for Registered Indians on-reserve is lower than that of the general Canadian population ($10,631 vs. $22,274).

- The overall smoking rate among First Nations adults (58.8%) is higher than the Canadian rate (24.2%).

- The overall rate of reported alcohol consumption is lower for the First Nations population compared to the general Canadian population. However, the proportion of First Nations who reported heavy drinking on a weekly basis (16.0%) is double that of those in the general Canadian population (7.9%).

- First Nations adults generally have higher body mass indexes (BMIs) than the general Canadian population, with 73.0% being at least overweight, compared to 48.0% of other Canadians, a difference of 25.0 percentage points.

- The condom usage rate among First Nations adults on-reserve is 44.1%.

Highlights

- First Nations females aged 40 years and over are less likely than their counterparts in the general Canadian population to have had a mammogram in their lifetime, with the largest gap between females aged 50-59 years (73.3% for First Nations vs. 88.3% for the general Canadian population).

- Over half of Registered Indians on-reserve learned English as their sole mother tongue. Forty-four per cent of Registered Indians on-reserve learned an Aboriginal language as their mother tongue, either alone or in combination with English or French.

- The proportion of Aboriginal on-reserve households that are below the Canada Mortgage and Housing Corporation (CMHC) adequacy standard is over ten times that of households in the general off-reserve population (22.4% vs. 2.0%).

- In 1996, more Aboriginal households on-reserve were below at least one core housing standard compared to 2001 (50% vs. 28%). In addition, on-reserve households that were below both the adequacy standard and the suitability standard in 2001 (5%) have improved in comparison to 1996 (12%).

- Nearly a quarter of First Nations housing units have a water supply that is inadequate in terms of volume and/or health requirements.

INTRODUCTION

This report presents a national description of the non-medical determinants of health among First Nations people on-reserve in Canada, including education, labour force characteristics, personal health practices, culture and physical environment. These determinants of health are in keeping with the health determinants model that is complementary to Aboriginal perspectives of wellness – one that encompasses physical, social, emotional and spiritual domains.

This report differs from previous editions of *A Statistical Profile on the Health of First Nations in Canada*, as each chapter is now being published as a stand-alone report.

The publication of this report would not be possible without the contribution of Health Canada's First Nations and Inuit Health Branch (FNIHB) and Regions and Programs Branch (RAPB), Indian and Northern Affairs Canada (INAC), the Assembly of First Nations (AFN), the Public Health Agency of Canada (PHAC), and the Health Data Technical Working Group. Their hard work and dedication is gratefully acknowledged and further listed in the **Acknowledgements** section of this report.

Background

At every stage of life, health is determined by complex interactions between social and economic factors, the physical environment and individual behaviour. These factors are often referred to as 'determinants of health' and they do not exist in isolation from each other. It is the combined influence of the determinants of health that helps determine overall health status.[1]

PHAC summarizes the determinants of health into twelve general categories:

1. Education
2. Labour force characteristics
3. Income
4. Personal health practices
5. Health services
6. Culture
7. Physical environment
8. Social support networks
9. Social environments
10. Child development
11. Biology and genetic endowment
12. Gender

As data for First Nations are unavailable for all 12 categories, this report focuses on the first seven of these categories. While this report does not have a section dedicated to gender, differences between males and females are discussed throughout.

Health Canada Activities

The First Nations and Inuit Health Branch of Health Canada supports the delivery of public health and health promotion services on-reserve and in Inuit communities, and provides some targeted services off-reserve and in urban centres. It provides drug, dental and ancillary health services, regardless of residence. FNIHB also provides primary care services on-reserve in remote and isolated areas, where there are no provincial services readily available. As of May 2008, FNIHB funded over 500 health facilities across the country, including 74 nursing stations, 222 health centres, 41 alcohol and drug treatment centres, and 9 solvent abuse centres. Home and community care were provided in 600 communities, and primary health care was provided in approximately 200 remote communities.

First Nations and Inuit health programs are delivered across the country through the collaborative efforts of headquarters and regional employees working in partnership with First Nations and Inuit communities. Regional offices are located in every province, with the exception of the Atlantic provinces, which are represented by the Atlantic Region located in Halifax, Nova Scotia. The Northern Region (formerly the Northern Secretariat) – located in Ottawa and Whitehorse – is responsible for programs in the Northwest Territories, the Yukon and Nunavut. Each region has it own unique characteristics. First Nations and Inuit Health regional staff (members of the Regions and Programs Branch) have a critical role to play in ensuring that programs and services effectively respond to the needs of communities within their jurisdiction.

In order to effectively carry out its role, FNIHB, as with First Nations and Inuit communities, needs information on population health status, health determinants and risk factors. To this end, the regional offices collect and report information from various sources. Territories are not required to report vital statistics as they have responsibility for primary health care; however, mandatory reporting requirements are in place for FNIHB-funded programs including communicable disease control and environmental health initiatives.

Communicable disease control includes reporting on immunization levels (by age, sex and antigen). This reporting may be required by provincial regulations. For diseases with epidemic potential, the provincial, territorial and regional offices require notification within 24 hours. It should be noted that legislation to support communicable disease control is under the domain of provincial and territorial governments.

Environmental health information, in relation to FNIHB programs, includes the total number and percentage of facilities meeting provincial, territorial or federal health and environmental standards for food services, water supply, sewage and garbage, pollution and hazardous substances. Within 24 hours, communities must also notify HC of any environmental hazards or conditions that may have significant environmental impacts, including the steps taken to remedy the situation.

Further information on the past and present role of HC in delivering services to First Nations and Inuit peoples and communities can be found on the FNIHB website at http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/fnihb-dgspni/services_e.html.

Provincial and Territorial Activities

Health care in Canada is largely under provincial and territorial jurisdiction. As such, First Nations and Inuit individuals obtain much of their care from the provincial and/or territorial health systems, including hospitals or physicians in private practice, and these data are held in provincial/territorial databases. Other health services (such as dental care, prescriptions and medical supplies) as well as allied health services situated outside of hospitals (such as mental health services, community-based prevention and home care) are generally not provided by provincial governments to First Nations on-reserve. The costs of these additional health services fall to the federal jurisdiction, under the policy of Health Canada. For example, the federal government pays for health professionals such as dentists, dental therapists and optometrists who provide services to remote and isolated communities on a visiting basis, or for First Nations and Inuit travelling to larger centres for specialized/emergency treatments.

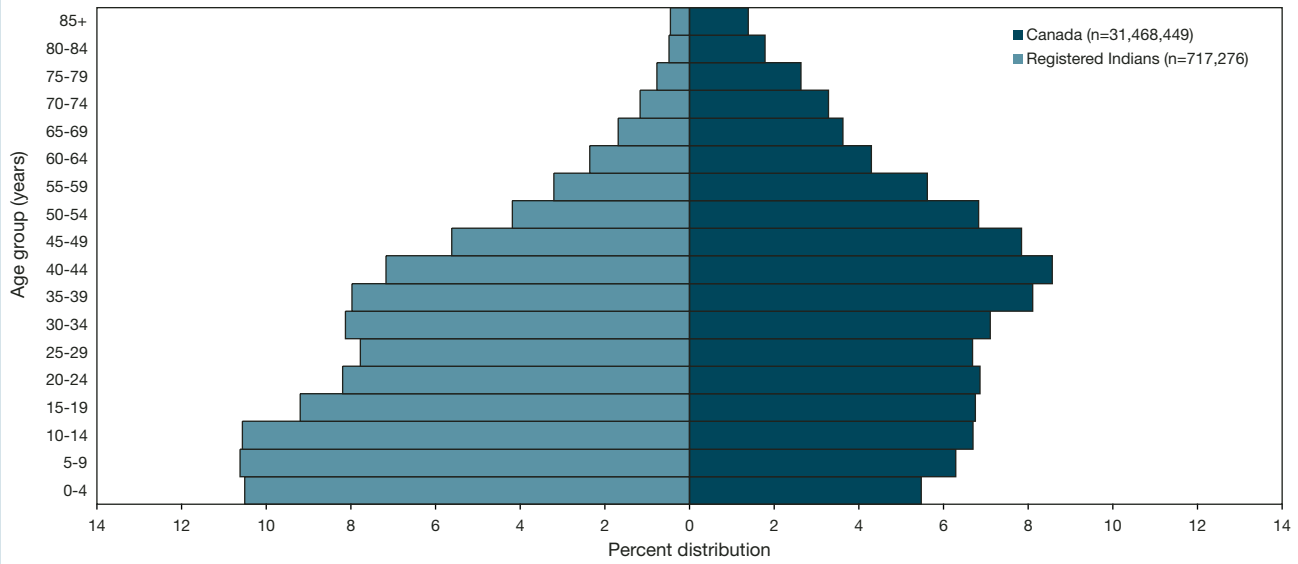
Population Trends by Age and Sex

In monitoring the health of First Nations and making comparisons to the general Canadian population, it is necessary to consider the differences in population composition. As such, the distributions of both the First Nations and the total Canadian populations are presented below (**Figure 1**).

Indian and Northern Affairs Canada (INAC), produces an estimate of the Registered Indian population based on the Indian Register. The Indian Register is a list of all persons registered under the Indian Act. In 2002, the estimated population of Registered Indians both on- and off-reserve numbered 717,276*. The estimated proportion of Registered Indians living on-reserve (60.3%) was greater than that living off-reserve (39.7%). The population consisted of 50.8% females and 49.2% males. Nearly half (49.1%) of the population was under the age of 25 years. Males outnumbered females in all age groups 29 years of age or younger.

The Registered Indian population was younger than the general Canadian population. A peak was observed in the age distribution of the Registered Indian population between the ages of 0 and 14 years, accounting for 31.7% of the total population, whereas the age distribution of the general Canadian population peaked between the ages of 35 and 49 years, representing 24.5% of the total population. The greatest difference in the population distribution occurred for the youngest age group (0 to 4 years) where the proportion within the Registered Indian population was nearly double that of the general Canadian population (10.5% vs. 5.5%).

Figure 1. Age Distribution of First Nations and Canadian Populations, 2002



Source: Population Projections of Registered Indians, 2000-2021, INAC, 2002; Statistics Canada, CANSIM Table 051-0001.

*Indian and Northern Affairs Canada. 2004. Basic Departmental Data, 2003. Ottawa: Public Works and Government Services Canada. Catalogue no. R12-7/2003E.

DATA SOURCES

Survey Data

The majority of data in this report comes from one of two sources: the 2001 Census of Population from Statistics Canada, and the 2002-03 First Nations Regional Longitudinal Health Survey (RHS), which is under the direction of the First Nations Information Governance Committee (FNIGC). National RHS data are housed at the AFN.

In addition to the Census of Population and the RHS, other survey data sources, such as the Aboriginal Peoples Survey (APS), the Canadian Community Health Survey (CCHS) and the Youth In Transition Survey (YITS) were used in this report.

Census of Population

The latest Census for which we have information is the 2006 Census of Population. This report, however, uses information from the 2001 Census of Population. Since data from the CCHS are based on 2003 and those from the RHS are based on 2002-03, it is more appropriate to use census data from approximately the same time period. Future editions of *A Statistical Profile on the Health of First Nations in Canada* will report on Census data as appropriate for comparison to other equivalent data from that time frame. The Census provides dwelling and population counts for Canada every five years, but it also provides a variety of demographic, social and economic information about the population of Canada, including information on the Aboriginal population. While the Census is intended to cover every resident of Canada, the 'long' Census form, which includes most of the socio-economic content, is typically administered to every fifth household in Canada. In certain areas, including First Nations reserves, the long form is administered to every household in order to obtain a large enough sample to cover smaller sub-populations.

The Census includes a number of different questions that can be used to identify different First Nations populations. This report looks at the Registered Indian population living on-reserve. The count for Registered Indians is based on the number of individuals who stated "Yes" to the question "Is this person a Treaty Indian or a Registered Indian as defined by the Indian Act of Canada?" This count of 623,870[2] for year 2006, and 558,175[3] for year 2001, is lower than the projected Indian Register count of 703,800[4] as produced by INAC for the year 2001. A number of factors can contribute to the difference between these counts. They include underestimation due to non-participating or incompletely enumerated reserves and survey under coverage. Traditionally, a number of First Nations reserves do not participate in the Census. There were 22 incompletely enumerated communities in the 2006 Census, down from 30 in 2001 and 77 in 1996.[5] Exclusion of Registered Indians residing outside of Canada and in institutions on Census Day, and other methodological differences between the Census and the Indian Register are also attributable factors.[6]

When tabulating the on-reserve population, Statistics Canada includes all of the people living in any of the eight types of census subdivision legally affiliated with First Nations or Indian Bands.[7] The "Registered Indians On-Reserve" population used in this report is Statistics Canada's on-reserve population who self-identified as Treaty or Registered Indians.

Census data are based on the self-reported Treaty or Registration status of First Nations on-reserve. Because of this, it is possible for respondent error and other factors to affect the Registered Indian on-reserve count. However, one notable benefit of

using Census data is that comparable data for the Canadian population are readily available from the same source. For all tables and graphs using the 2001 Census, the comparative population used is the total Canadian population.

First Nations Regional Longitudinal Health Survey

Data on personal health practices, physical activity, nutrition, body mass index (BMI) and health services access were adapted from the 2002-03 RHS, which is the only First Nations-governed national health survey in Canada. This survey collects detailed data on the health and well-being of First Nations in Canada. As such, the RHS questionnaire includes content on chronic conditions, health practices, injury, mental health, access to health care and the socio-economic determinants of health. The RHS is a longitudinal survey that commenced as a pilot survey in 1997 with its first cycle conducted in 2002-03. All sampling was based on the INAC Indian Register counts of those living on-reserve or on Crown Land. Sampling targets were adopted to ensure reliable estimation of specific sex/age groups for longitudinal coverage at the regional level and cross-sectional coverage at the sub-regional level.

The overall design of the survey employed a stratified two-stage sampling method: 1) selection of a sample of communities with equal probability within each size class within each sub-region, then 2) stratification of each community by gender/age group.[8] For each sub-region, cross-sectional estimates were derived for each gender/age group. An over sampling of adults aged 55 years and over was incorporated to increase the population representation of the group within the over 18 group from 5% to 10%. This sampling method ensured proportional representation of varying community sizes – large (1500+ people), medium (300-1499 people) and small (<300 people). Communities with less than 75 persons were excluded. A national questionnaire comprising three instruments – Adult (18 years and over), Youth (12 to 17 years), and Child (0 to 11 years) – was administered as the common, core component. Regional modules were developed for 7 out of 10 provinces. These modules were administered immediately following the national questionnaire. Individual responses were weighted to reflect, with greater accuracy, the representation of the population by the sample.

Overall, 238 First Nations communities participated in the RHS.[8] A total of 22,602 surveys were completed, which included 10,962 adults, 4,983 youth and 6,657 children. All three surveys combined accounted for 5.9% of First Nations living in First Nations communities in Canada, with coverage rates ranging from 2.1% in Ontario to 53.8% in Newfoundland. The final sample (N = 22,602) represented 80% of the intended target sample (N = 28,178). The final sample of 22,602 covered First Nations living in private dwellings in 10 provinces and 2 territories, but excluded Nunavut and residents of collective dwellings. An off-reserve sample estimated at less than 1% of the total sample was included. This inclusion considered First Nations living temporarily off-reserve and those living close to reserve boundaries who accessed reserve-based services. There was non-participation of two First Nations sub-regions, specifically the James Bay Cree of Northern Quebec and the Innu of Labrador. Together, these sub-regions represent 10 out of 607 target communities.

For the present report we only use results from the Adult survey (18 years and over). Results from the RHS are taken from the *Results for Adults, Youth and Children Living in First Nations Communities* report.[9]

Aboriginal Peoples Survey

The APS is a post-censal survey conducted by Statistics Canada, targeting individuals aged 15 years and over who report being Aboriginal according to their Census responses.[10] This survey is more detailed than the Census, examining a variety of issues concerning life for Aboriginal peoples. Similar to the Census, the APS asks respondents if they are a Treaty or Registered Indian. It is the information concerning the on-reserve population who report being a Treaty or Registered Indian that is used in this report. Based on data from the 2001 Census, the estimated on-reserve Registered Indian population was 274,215.[11]

As the APS is a post-censal survey, reserves that were incompletely enumerated in the 2001 Census were not included in the APS.[10] Additionally, the sampling strategy for the 2001 APS focused on large reserves (enough to cover 50% to 55% of the on-reserve population) in each province. In cases where large reserves were not willing to participate, it was necessary to select smaller reserves. However, there were a large number of reserves that did not participate in the APS, particularly in Québec, where only the James Bay Cree of Northern Quebec participated. Specifically, out of the 145 First Nations communities selected nationally for the APS, 123 participated in the survey. The total sample size for individuals living on reserve was 31,484, of which 28,001 individuals (88.9%) responded to the survey.[11] In total, the APS covered 14.9% of the reserves participating in the 2001 Census, which represents 44% of the on-reserve Census population.

As a result of these non-participating reserves, the statistics for the APS can be considered representative only of those communities that participated in the survey. As such, information from the APS should be interpreted with some caution.

Canadian Community Health Survey

The CCHS is a cross-sectional survey conducted by Statistics Canada that collects information related to health status (e.g., disease prevalence), health care utilization and health determinants (e.g., smoking status, heavy drinking, sexual health practices) for the Canadian population.[12] This report uses data from Cycle 2.1, conducted in 2003.

The CCHS collects information on persons aged 12 and older, living in private occupied dwellings, covering all provinces and territories. The sampling frame excludes individuals living on Indian Reserves and on Crown Lands, institutional residents, full-time members of the Canadian Armed Forces, and residents of certain remote regions.[12] As such, information taken from the CCHS was used in this report as general population comparisons to data from the 2002-03 RHS.

As previously mentioned, the CCHS targets persons aged 12 years or older. The RHS adult survey instrument, however, collects information on persons aged 18 years and older. Hence, in order to enable direct comparison with RHS data on First Nations adults, CCHS data were restricted to the 18 years and older population.

In general, questions on health conditions, health status and health practices are similar enough between the CCHS and the RHS to allow direct comparison between the surveys.

In some cases, however, recoding of CCHS response categories was necessary to enable such comparison.

Data from the CCHS are used throughout this report. In keeping with established data collection definitions, what is referred to as 'general Canadian population' excludes data on First Nations living on-reserve.

Youth In Transition Survey

The YITS is a longitudinal survey that began in 2000 by Statistics Canada and Human Resources Development Canada. This survey is designed to look specifically at changes that youth experience, such as the transitions between education, training and work. The 2000 cycle of YITS was directed at a cohort of youth aged 18 to 20 years of age. For the present report, information on youth at 20 years of age was used. The sampling frame for YITS was based on the household sampling frame of the Labour Force Survey, and a total of 23,592 individuals participated in the initial 2000 cycle.

Administrative Data

Indian and Northern Affairs Canada

Information on community services is from the Housing and Assets Infrastructure Inventory. INAC provides funding assistance for various community infrastructure services, which are managed by the First Nations communities themselves. INAC monitors the level of service and reports on the service adequacy. Factors specific to each particular indicator are discussed in the **Methods and Limitations** section of this report.

Health Canada

FNIHB considers community remoteness in the health care funding process. FNIHB defines community remoteness based on the distance from physician services and accessibility to the community.

METHODS AND LIMITATIONS

Socio-economic Status

All socio-economic indicators, unless otherwise stated, include the population 15 years and over, which is the standard 'adult' population to whom the socio-economic questions of the Census are addressed. Certain indicators of education, labour force and income, include different age groups - 25 to 64 years to capture the 'working age' population, and 15 to 24 years to capture the 'youth' population.

Calculations using Census data are generally proportions, calculated for both the Registered Indian on-reserve population and the total Canadian population.

Labour Force Statistics

Labour force statistics include the following indicators:

- ***Unemployment rate:*** the percentage of persons aged 15 years and over, who are currently unemployed and looking for work.
- ***Employment rate:*** the percentage of persons aged 15 years and over, who are working for pay or self-employed.
- ***Labour force participation rate:*** the percentage of persons aged 15 years and over, who are either employed or currently looking for work. It excludes those not looking for work, such as full-time students, retired persons or discouraged workers.

Income

Income includes money received from all sources. In addition to proportions of the population by income bracket, this report examines median income. The median income marks the middle point where exactly half of the population earns less and half earns more. The median, rather than the average, is the preferred statistic to use when describing the income of a population since average income is sensitive to extreme values.

Language

Language statistics include all Aboriginal languages, and not just First Nations languages.

Housing

Housing statistics are based on Census data, but they are calculated by the Canada Mortgage and Housing Corporation (CMHC), which classifies homes based on its own criteria for determining housing conditions. CMHC looks at three housing indicators to determine what it calls core-housing needs: adequate, suitable and affordable dwellings. The statistics for these housing indicators are calculated for Aboriginal homes on-reserve, compared to all Canadian households. A household is considered Aboriginal if at least one parent in a family household, or 50% of the residents of a family or non-family household identify as Aboriginal. Although this report looks only at First Nations or Registered Indians, it should be noted that the vast majority of the on-reserve Aboriginal population are Registered Indians, so these numbers would not include significant numbers of non-First Nations.

Health Practices and Services

Unless otherwise stated, indicators on health practices and services include the population 18 years and over.

Personal Health Practices

These are practices and choices that individuals make that affect their health. This report examines smoking, alcohol use, physical activity, nutrition and, sexual behaviour. It also examines how physical activity and nutrition relate to BMI.

Health Services

Health services include a variety of ways an individual might interact with the health care system. Diagnostic services, including mammogram and the Papanicolaou (Pap) test are examined.

Community Infrastructure

All indicators of community services and infrastructure are based on the proportion of INAC-defined sites that have been served by particular systems, and/or the adequacy of these systems. Every system has different classification criteria for each category, which is further defined in the **Results and Discussion** section.

These community infrastructure data are presented either for individual households or First Nations sites. 'Site' refers to a First Nations settlement. A First Nation or Band may include more than one location or site with different community services. Each of these sites would be counted separately.

Water

INAC classifies the adequacy of First Nations water supply along two criteria: quantity and quality.

- ***Quantity of water supply:*** refers to whether a housing unit's water supply satisfies the volume requirements of the Levels of Service Standard (LSS)[13] for adequate hygiene and safety purposes.

- ***Quality of water supply:*** refers to whether a housing unit's water supply satisfies the health-related requirements of the *Guidelines for Canadian Drinking Water Quality* (FPT Committee on Drinking Water 2007). Although these guidelines also set out aesthetic objectives, a household's water supply is not deemed inadequate if the aesthetic objectives are not met.

Sewage

First Nations sewage service is classified by INAC into two groups based on the adequacy of service.

- ***Adequate sewage service:*** sewage effluent is discharged to a collection and/or treatment system consistent with provincial or territorial practice, the *Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments*, and the LSS set out by INAC.

- ***Inadequate sewage service:*** sewage effluent is discharged to a collection and/or treatment system inconsistent with provincial or territorial practice, the *Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments* or the LSS set by INAC, and poses a health or environmental threat.

This classification rating refers to the infrastructure only, as service cannot be deemed inadequate due to poor operator technique, neglect, or poor operation. It is not an indicator of sewage service delivery.

Fire

INAC classifies fire protection services into two groups based on the adequacy of service.

- ***Adequate fire protection services:*** services have been inspected and meet the LSS set by INAC, or the site has a mutual aid or other municipal agreement to provide service.
- ***Inadequate fire protection services:*** services have been inspected and do not meet the LSS, or have not been inspected.

Community Remoteness

FNIHB classifies First Nations communities into one of four types:

- ***Non-isolated:*** communities that are accessible by road and are less than 90 kilometres from physician services.
- ***Semi-isolated:*** communities that have road access, but the nearest physician services are farther than 90 kilometres away.
- ***Isolated:*** communities that have scheduled flights and good telephone service, but no road access.
- ***Remote isolated:*** communities that have no scheduled flights or road access and minimal telephone and radio service.

Comparisons

In general, we compare the prevalence of various health behaviours among First Nations to the prevalence in the general Canadian population. Such comparisons can be made using either differences or ratios. In this report, differences are preferred, since they estimate the absolute gap between the populations. The differences incorporate the *absolute* prevalence of the health determinant or behaviour, while ratios present only the *relative* prevalence. Suppose the prevalence of unhealthy behaviour "A" was 4% in First Nations and 1% in the general population. The prevalence ratio of 4 seems notable, but the prevalence difference shows us that the gap (excess prevalence in First Nations) is only 3 percentage points. Contrast this with a prevalence of behaviour "B" of 40% in First Nations but 20% in the general population. Here the prevalence ratio is only 2, but the difference shows us that 20% more of the First Nations population than of the general population engages in behaviour "B", and provides a basis for estimating the magnitude of any intervention that is indicated.

RESULTS AND DISCUSSION

Education

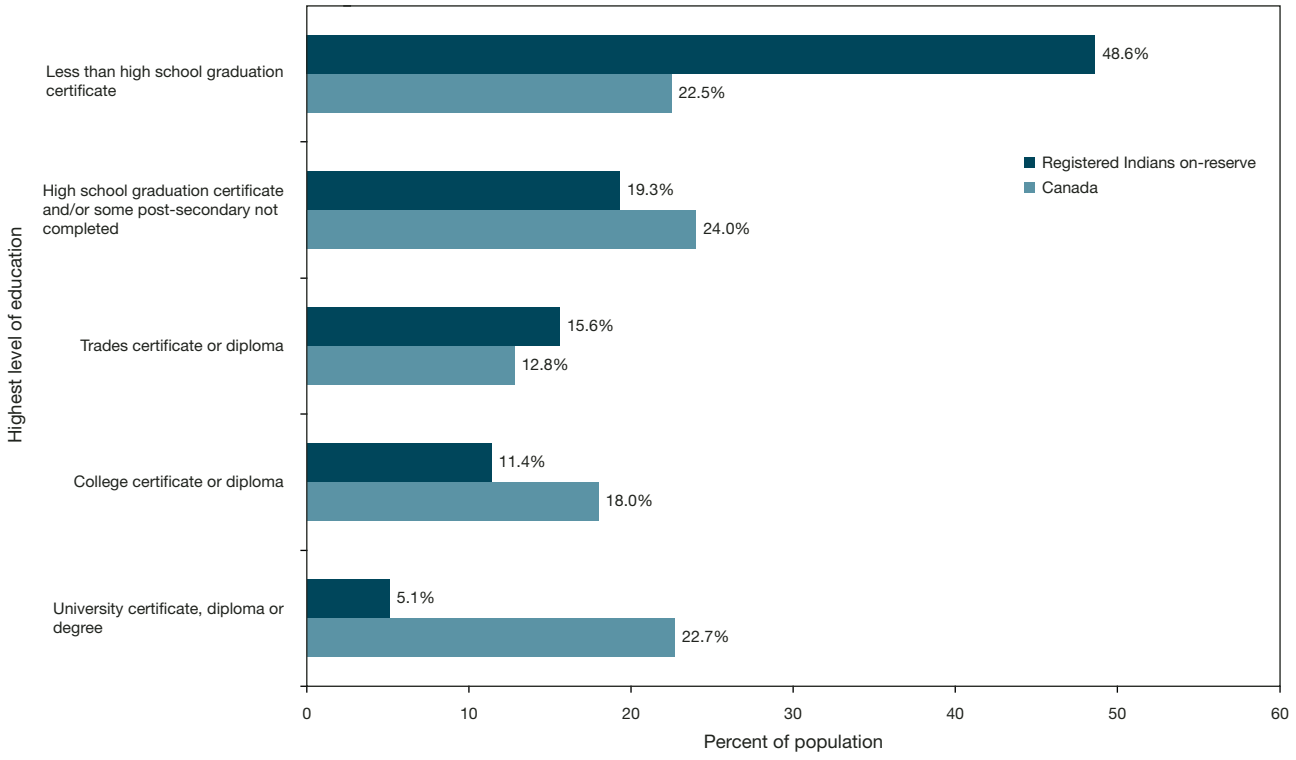
Limitations of the data sources used for indicators on education are presented in the **Data Sources** and **Methods and Limitations** sections of this report.

Education is a catalyst for success in the labour market, and plays a pivotal role in a person's ability to get a stable, well-paid job.[14] Although First Nations emphasize the importance of traditional teaching and the passing on of traditional knowledge, formal education is still considered essential for First Nations to participate fully in the Canadian economy. Having an educated population can also facilitate economic opportunities in First Nations communities. This report includes the highest level of education of working-age people and the high school education status of youth.

Figure 2 shows the educational attainment of Registered Indians and Canadians between 25 and 64 years of age. This age range is intended to reflect the working age population, and excludes younger people, many of whom are still in school, and the elderly.

With the exception of trades certificates or diplomas, the educational attainment of Regis-

Figure 2. Educational Attainment of Registered Indians[1] On-reserve and Canada[2], Aged 25 to 64 Years, 2001



[1]Registered Indian status based on self-reporting of the respondent.
[2]Total general Canadian population living off-reserve.

Source: Statistics Canada, 2001 Census of Population, catalogue no. 97F0011XCB2001058.

tered Indians on-reserve lags behind that of other Canadians. The percentage of Registered Indians on-reserve holding a university certificate, diploma, or degree is 17.6 points lower than the equivalent proportion of other Canadians. Similarly, the percentage of Registered Indians with less than a high school graduation certificate is 26.1 percentage points higher than the equivalent percentage of their Canadian counterparts.

Table 1 shows that Registered Indian females on-reserve have higher rates of education than Registered Indian males in most categories above high school graduation.

High School Completion

Figure 3 shows the high school education status of Registered Indians on-reserve and Canadian youth aged 20 years. Half (49.7%) of Registered Indian youth on-reserve aged 20 years have not completed high school, compared to 12.0% of the general population. Moreover, Registered Indians on-reserve (13.1%) are more likely to still be in high school at 20 years of age than the overall population (3.3%).

The percentage of Registered Indians on-reserve that graduated from high school by age 20 is 48.6 points lower than the equivalent percentage of other Canadians. As shown in Table 2, among 20 year-old Registered Indians on-reserve, females are more likely than males to have graduated high school, and less likely to have dropped out. This mirrors the findings for the Canadian population.[15]

A person's education level is positively associated with health status and health-promoting behaviours. Educational attainment is widely acknowledged as an important determinant of socio-economic status and income, which are both key determinants of health.[1] High levels of formal education are needed to participate in

Table 1. Educational Attainment of Registered Indians[1] On-reserve and Canada[2], Aged 25 to 64 Years, 2001

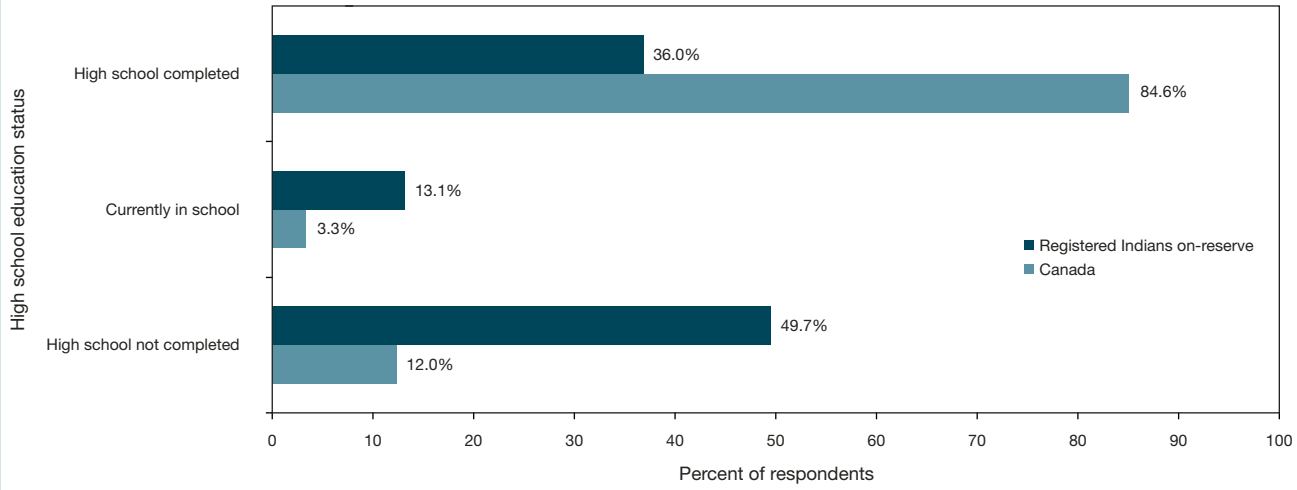
	Registered Indians on-reserve			Canada		
	Both sexes combined	Males	Females	Both sexes combined	Males	Females
Less than high school graduation certificate	48.6%	51.3%	45.9%	22.5%	23.2%	21.8%
High school graduation certificate only	6.6%	6.6%	6.5%	14.5%	13.1%	15.8%
Some postsecondary education	12.7%	11.5%	14.0%	9.5%	9.4%	9.6%
Trades certificate or diploma	15.6%	19.1%	12.1%	12.8%	16.5%	9.3%
College certificate or diploma	11.4%	8.5%	14.4%	18.0%	15.1%	20.8%
University certificate or diploma below bachelor's degree	1.8%	1.1%	2.4%	2.9%	2.4%	3.4%
University degree (total)	3.3%	2.0%	4.7%	19.8%	20.3%	19.3%
Bachelor's degree	2.6%	1.5%	3.8%	13.5%	13.3%	13.6%
University certificate above bachelor's degree	0.4%	0.2%	0.5%	2.0%	1.9%	2.2%
Master's degree	0.3%	0.2%	0.4%	3.6%	4.1%	3.2%
Earned doctorate	0.0%	0.0%	0.0%	0.7%	1.0%	0.4%

[1]Registered Indian status based on self-reporting of the respondent.
[2]Total general Canadian population living off-reserve.

Note:
Column percentages may not add up to 100% due to rounding.

Source: Statistics Canada, 2001 Census of Population, catalogue no. 97F0011XCB2001058.

Figure 3. High School Education Status of Youth, Registered Indians[1] On-reserve (2001) and Canada[2] (1999), Aged 20 Years



[1]Registered Indian status based on self-reporting of the respondent.
[2]Total general Canadian population living off-reserve.

Source: Statistics Canada, 2001 Aboriginal People's Survey, special tabulations; Bowlby and McMullen, 2002, At a Crossroads: First Results for the 18 to 20-Year-old Cohort of the Youth in Transition Survey. Human Resources and Development Canada and Statistics Canada.

Note:
Caution should be exercised in generalizing the characteristics of the reserves that participated in APS to the entire on-reserve population in Canada. Any aggregation of APS reserve data is only representative of the reserves that participated in APS and cannot be considered representative of the total on-reserve population.

Table 2. High School Education Status of Youth, Registered Indians[1] On-reserve (2001) and Canada[2] (1999), by Sex, Aged 20 Years

	Registered Indians on-reserve			Canada		
	Both sexes combined	Males	Females	Both sexes combined	Males	Females
High school completed	36.0%	32.9%	38.9%	84.6%	81.4%	88.1%
Currently in school	13.1%	14.1%*	13.3%*	3.3%	3.9%	2.7%
High school not completed	49.7%	52.9%	46.7%	12.0%	14.7%	9.2%

[1]Registered Indian status based on self-reporting of the respondent.
[2]Total general Canadian population living off-reserve.
* Use with caution

Notes:
1. Percentages may not add up to 100%, due to rounding.
2. Caution should be exercised in generalizing the characteristics of the reserves that participated in APS to the entire on-reserve population in Canada. Any aggregation of APS reserve data is only representative of the reserves that participated in APS and cannot be considered representative of the total on-reserve population.

Source: Statistics Canada, 2001 Aboriginal People's Survey, special tabulations; Bowlby and McMullen, 2002, At a Crossroads: First Results for the 18 to 20-Year-old Cohort of the Youth in Transition Survey. Human Resources and Development Canada and Statistics Canada.

many skilled and knowledge-based sectors of the labour force, which can lead to increased employment, more secure and higher paying jobs, and ultimately higher income. These factors combine to positively affect other determinants of health.

First Nations have lower levels of achievement than the general population in virtually all types of education, particularly at the university level. First Nations youth are less likely to graduate from high school and, those who do tend to take longer to receive their high school diplomas. A higher proportion of First Nations individuals have trades training compared to the general population. Having a high proportion of individuals with trades training does not compensate for the deficit at the other advanced levels: only 32.1% of First Nations have a trades or college certificate or diploma or a university certificate, diploma or degree, compared to 53.5% of the general population. However, increases have been observed in the post-secondary education attainment rates for the Registered First Nations population between 1996 and 2001 (20% to 23%, respectively).[4] In addition to this increase in educational attainment rates, an increase in the proportion of students enrolled in First Nations-managed and federal elementary/secondary schools has been reported.[4]

Labour Force Characteristics

Limitations of the data sources used for indicators on labour force characteristics are presented in the **Data Sources** and **Methods and Limitations** sections of this report. Employment, unemployment and labour force participation rates are also defined in these sections.

Employment status and the type of job can have an effect on a person's overall health. A better paying job can have positive effects on a person's overall quality of life, though certain jobs may also pose health risks (e.g. higher rates of injury, exposure to toxins). The employment and unemployment of a population have a direct impact on the overall health of a population.

The unemployment rate is a key indicator of the health of the economy and of society more generally. As shown in **Figure 4**, the Registered Indian on-reserve unemployment rate is 20.4 percentage points higher than the Canadian rate (27.7% compared to 7.3%). For Registered Indians on-reserve, males (32.7%) are more likely than females (21.7%) to be unemployed (**Table 3**). The general Canadian population shows the same pattern, but the gap is much larger for the Registered Indian on-reserve population: Registered Indian males have an unemployment gap of over 10 percentage points compared to Registered Indian females.

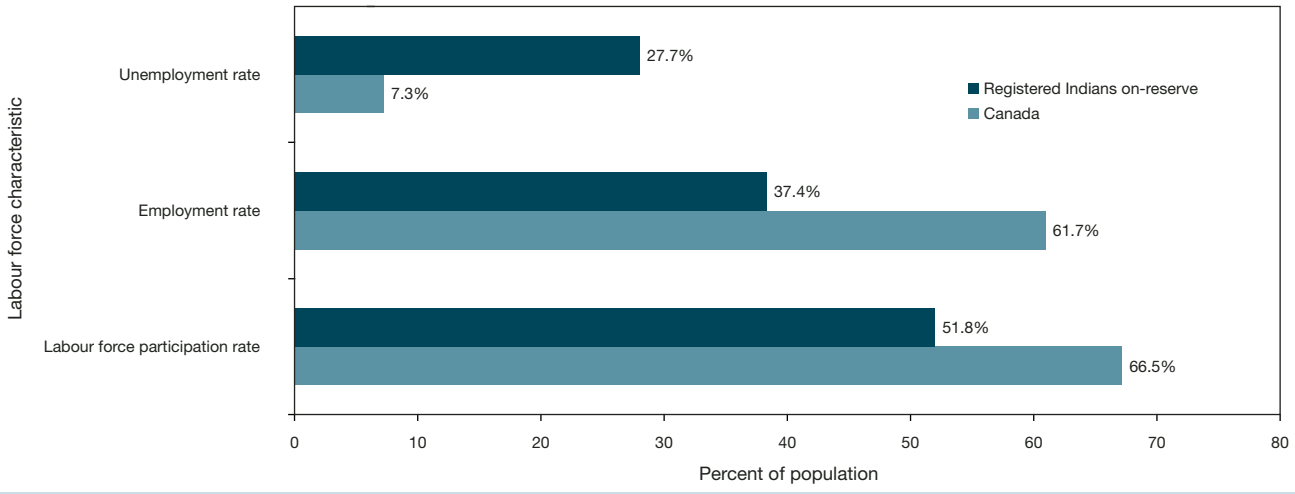
The employment rate for on-reserve Registered Indians is 24.3 percentage points lower than the Canadian rate. There is a less than one percent gap in employment between Registered Indian males and females, compared to the Canadian figures, where the employment rate is over 10 percentage points higher for males.

The on-reserve Registered Indian labour force participation rate is 14.7 percentage points lower than the Canadian population. Although the gap in labour force participation between males and females is smaller for the Registered Indian on-reserve population than for Canada, the participation rate for Registered Indian males is almost 10 percentage points higher than for Registered Indian females.

Youth

Figure 5 looks at select labour force indicators for Registered Indian youth aged 15 to 24 years living on-reserve, as well as their counterparts in the general Canadian population. As the figure shows, the Registered Indian on-reserve youth

Figure 4. Labour Force Characteristics for Registered Indians[1] On-reserve and Canada[2], Aged 15 Years and Over, 2001



[1]Registered Indian status based on self-reporting of the respondent.
[2]Total general Canadian population living off-reserve.

Source: Statistics Canada, 2001 Census of Population, catalogue no. 97F0011XCB2001062.

unemployment rate is 27.5 percentage points higher than the comparable Canadian rate. The on-reserve Registered Indian youth employment rate is 37.4 percentage points lower than the Canadian rate. The on-reserve Registered Indian youth labour force participation rate is 32.9 percentage points lower than the Canadian rate.

For Registered Indian youth living on-reserve (15 to 24 years), the unemployment gap between them and the general population is moderately higher than the total population aged 15 years and over (20.4% vs. 27.5%), but the disparities in employment rate and participation rate are much larger. As with adults, young on-reserve Registered

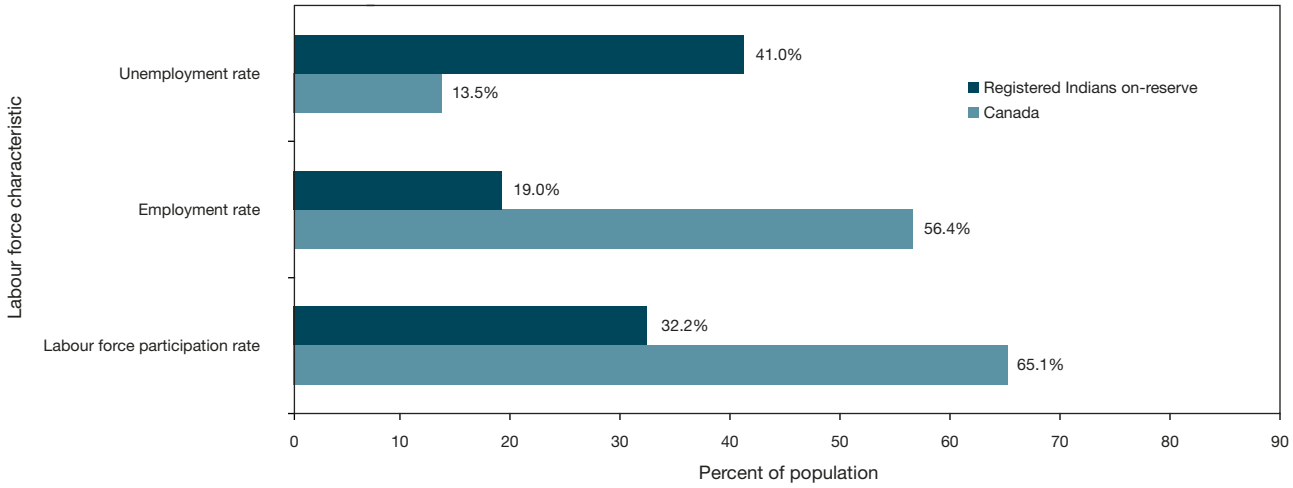
Table 3. Labour Force Characteristics for Registered Indians[1] On-reserve and Canada[2], by Sex, Aged 15 Years and Over, 2001

	Registered Indians on-reserve			Canada		
	Both sexes combined	Males	Females	Both sexes combined	Males	Females
Total in the labour force	89,900	49,020	40,880	15,758,870	8,390,285	7,368,590
Employed	64,995	32,995	32,000	14,609,885	7,766,430	6,843,450
Unemployed	24,900	16,025	8,875	1,148,985	623,850	525,140
Not in the labour force	83,755	38,445	45,320	7,930,020	3,129,380	4,800,640
Unemployment rate	27.7%	32.7%	21.7%	7.3%	7.4%	7.1%
Employment rate	37.4%	37.7%	37.1%	61.7%	67.4%	56.2%
Labour force participation rate	51.8%	56.0%	47.4%	66.5%	72.8%	60.6%

[1]Registered Indian status based on self-reporting of the respondent.
[2]Total general Canadian population living off-reserve.

Source: Statistics Canada, 2001 Census of Population, catalogue no. 97F0011XCB2001062.

Figure 5. Labour Force Characteristics for Registered Indians[1] On-reserve and Canada[2], Aged 15 to 24 Years, 2001



[1]Registered Indian status based on self-reporting of the respondent.
[2]Total general Canadian population living off-reserve.

Source: Statistics Canada, 2001 Census of Population, catalogue no. 97F0011XCB2001062.

Indian males have higher labour force participation and slightly higher employment rates than young on-reserve Registered Indian females, but also higher unemployment rates (Table 4).

Canada's First Nations, having a relatively young population compared to the general Canadian population, represent a potential pool of skilled labour that could make valuable contributions in reducing Canada's expected labour shortages due to the aging population.[16] Health Canada, through its Aboriginal Health Human Resources Initiative (AHHRI), fosters a potential pool of skilled labour by building a foundation of First

Table 4. Labour Force Characteristics for Registered Indians[1] On-reserve and Canada[2], by Sex, Aged 15 to 24 Years, 2001

	Registered Indians on-reserve			Canada		
	Both sexes combined	Males	Females	Both sexes combined	Males	Females
Total in the labour force	15,285	8,460	6,825	2,563,215	1,323,035	1,240,175
Employed	9,020	4,700	4,325	2,217,815	1,136,370	1,081,445
Unemployed	6,260	3,760	2,495	345,395	186,665	158,735
Not in the labour force	32,135	15,755	16,380	1,372,420	684,495	687,925
Unemployment rate	41.0%	44.4%	36.6%	13.5%	14.1%	12.8%
Employment rate	19.0%	19.4%	18.6%	56.4%	56.6%	56.1%
Labour force participation rate	32.2%	34.9%	29.4%	65.1%	65.9%	64.3%

[1]Registered Indian status based on self-reporting of the respondent.
[2]Total general Canadian population living off-reserve.

Source: Statistics Canada, 2001 Census of Population, catalogue no. 97F0011XCB2001062.

Nations, Inuit and Métis health human resources. The AHHRI aims to increase the healthcare capacity of the First Nations, Inuit and Métis populations by increasing the number of Aboriginal students entering into health career studies, by increasing the number of post-secondary institutions that support students pursuing such career studies, and by supporting the retention of health care workers working in First Nations and Inuit communities.

Educational outcomes among First Nations must be considered especially in light of educational needs for the labour force. The even greater disparity in employment and labour force participation rates in the youth population compared to the working-age population suggests that more information is needed to explain these gaps.

As noted earlier, on-reserve Registered Indian males of working age (25 to 64 years) are more likely than females to be unemployed. This difference could possibly be due to the higher percentage of Registered Indian males participating in the labour force.

Despite inequalities in labour force characteristics between on-reserve Registered Indians and the general Canadian population, these characteristics of on-reserve Registered Indians in 2001 have improved since 1996. Compared to 1996, on-reserve Registered Indians in 2001 had better labour force participation (51.5% in 1996 and 51.8% in 2001), a higher employment rate (36.7% in 1996 and 37.4% in 2001) and a lower unemployment rate (28.7% in 1996 and 27.7% in 2001).[17]

One potentially important aspect of labour force characteristics of the First Nations population that is not captured in this report is the proportion of people who hunt, fish and gather traditional foods for their own use. These productive activities do not generate income and are not reflected in labour force participation. The corresponding statistics, therefore, may exaggerate the gap between First Nations and the general Canadian population.

Income

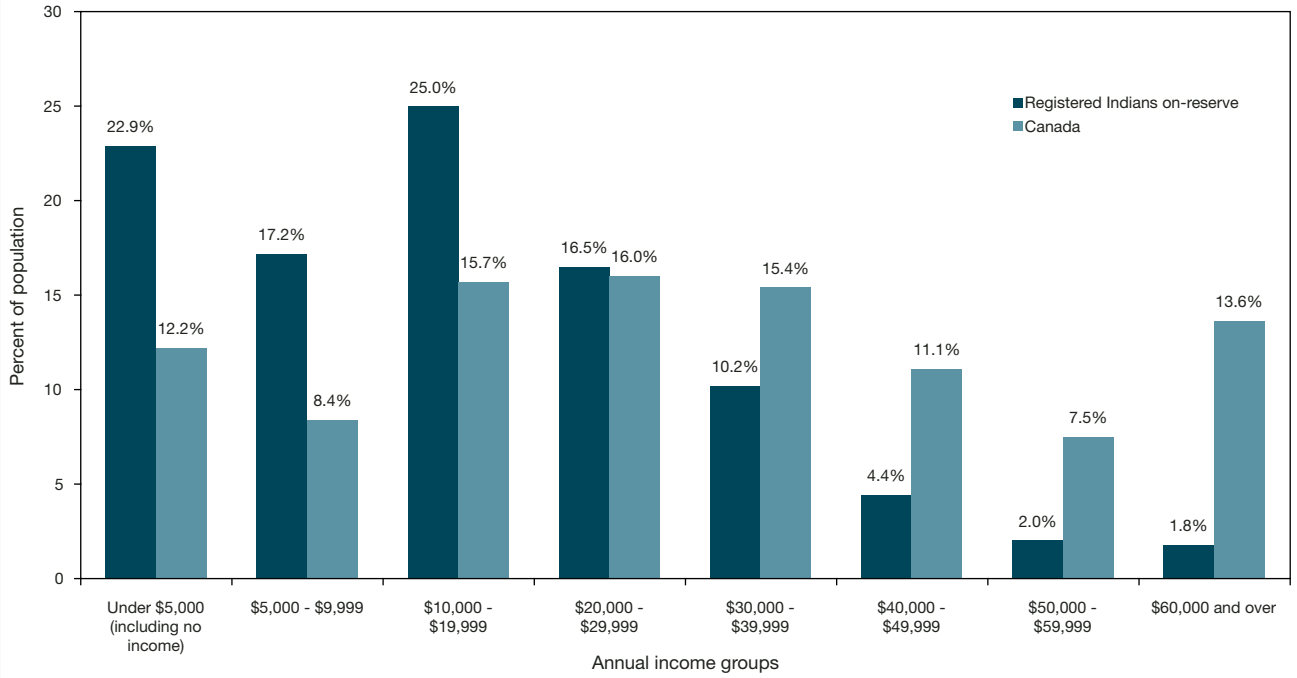
Limitations of the data sources used for indicators on income are presented in the **Data Sources** and **Methods and Limitations** sections of this report.

Higher social and economic status has been shown to be associated with better health.[1] Income influences living conditions, quality of housing, and the ability to afford sufficient good food, all of which affect health status.

Figure 6 shows the annual income groups for Registered Indians on-reserve and the general Canadian population aged 25 to 64 years. A higher proportion of Registered Indians on-reserve fall into the lower income groups from no income to $29,999. The largest gap is found in the under $5,000 income group where 22.9% of Registered Indians, compared to 12.2% of the general Canadian population whose income falls within this category. In contrast, a higher proportion of the general Canadian population is found in the higher income groups ($30,000 to greater than $60,000). The percentage of Registered Indians on-reserve earning $60,000 and over (1.8%) is 12 points lower than the equivalent percentage in the general Canadian population (13.6%).

As **Figure 7** shows, the median annual income of the Registered Indian on-reserve population ($10,631) is $11,643 less than that of the Canadian population ($22,274). The median annual income of the on-reserve Registered Indian male population is almost $19,000 less than that of other Canadian males. The gap between females is less pronounced, at just over $6,000. Nevertheless, Canadian females make almost 60% more than their on-reserve Regis-

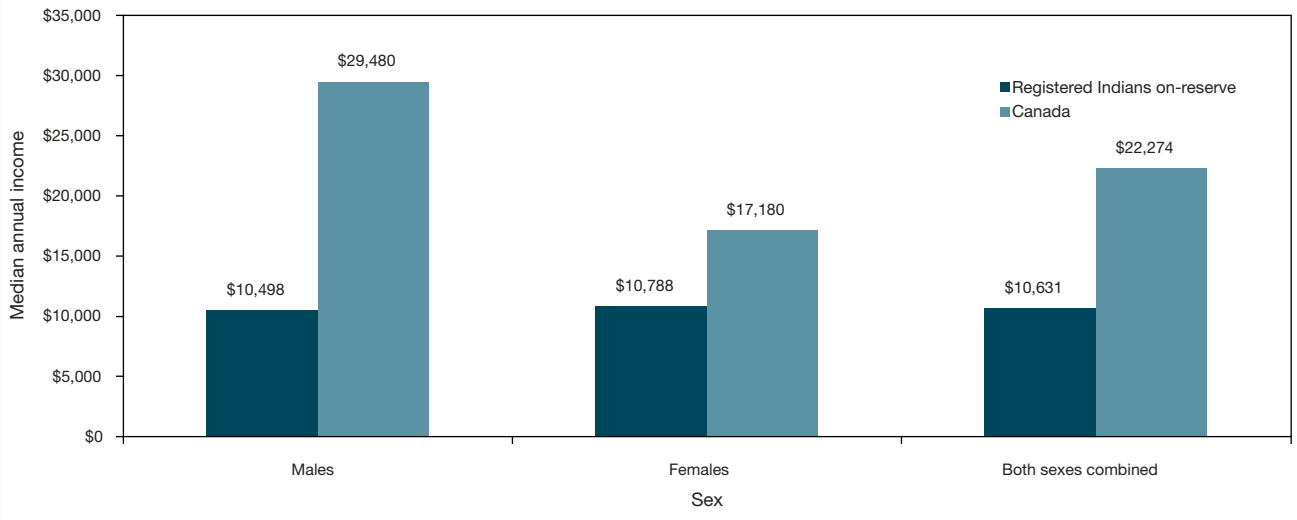
Figure 6. Annual Income Groups for Registered Indians[1] On-reserve and Canada[2], 25 to 64 Years, 2000



[1]Registered Indian status based on self-reporting of the respondent.
[2]Total general Canadian population living off-reserve.

Source: Statistics Canada, 2001 Census of Population, catalogue no. 97F0011XCB01062.

Figure 7. Median Annual Income for Registered Indians[1] On-reserve and Canada[2], Aged 15 Years and Over, 2000



[1]Registered Indian status based on self-reporting of the respondent.
[2]Total general Canadian population living off-reserve.

Source: Statistics Canada, 2001 Census of Population, catalogue no. 97F0011XCB01062.

tered Indian counterparts. For on-reserve Registered Indian males and females, there does not appear to be the same gap as observed between males and females in the Canadian population.

As mentioned earlier, an individual's employment status and the type of job that the individual has can have an effect on the person's overall health. Better educational outcomes may translate to better opportunities in the labour force and, in turn, a better paying job. The interplay of education, income and occupation contribute to the overall health of individuals.

One result of the educational disparities is the lower income of First Nations. In addition to the direct economic implications, these conditions leave First Nations less equipped to take on opportunities in the ever-changing labour market. Compared to the general population, the much smaller male-female income gap in First Nations presumably relates to their more equal participation in the labour force. The source of income may also be a factor: social benefits (71.0%) constitute a higher proportion of income than employment income (56.6%) among First Nations adults.[9]

Personal Health Practices

Limitations of the data sources used for indicators on personal health practices are presented in the **Data Sources** and **Methods and Limitations** sections of this report.

Personal health practices, sometimes known as behavioural risk factors, are the countless choices throughout a person's life such as smoking, alcohol use or physical activity that can have both positive and negative effects on an individual's health.

Smoking

The overall smoking (daily and occasional smoking) rate among First Nations living on-reserve (58.8%) is 34.6 percentage points higher than the Canadian rate of 24.2%.[9,18] Of those who smoke, most smoke on a daily basis, in both the First Nations population and the general Canadian population. As shown in **Figure 8**, 46.0% of First Nations on-reserve report smoking on a daily basis compared to 19.0% in the general population.

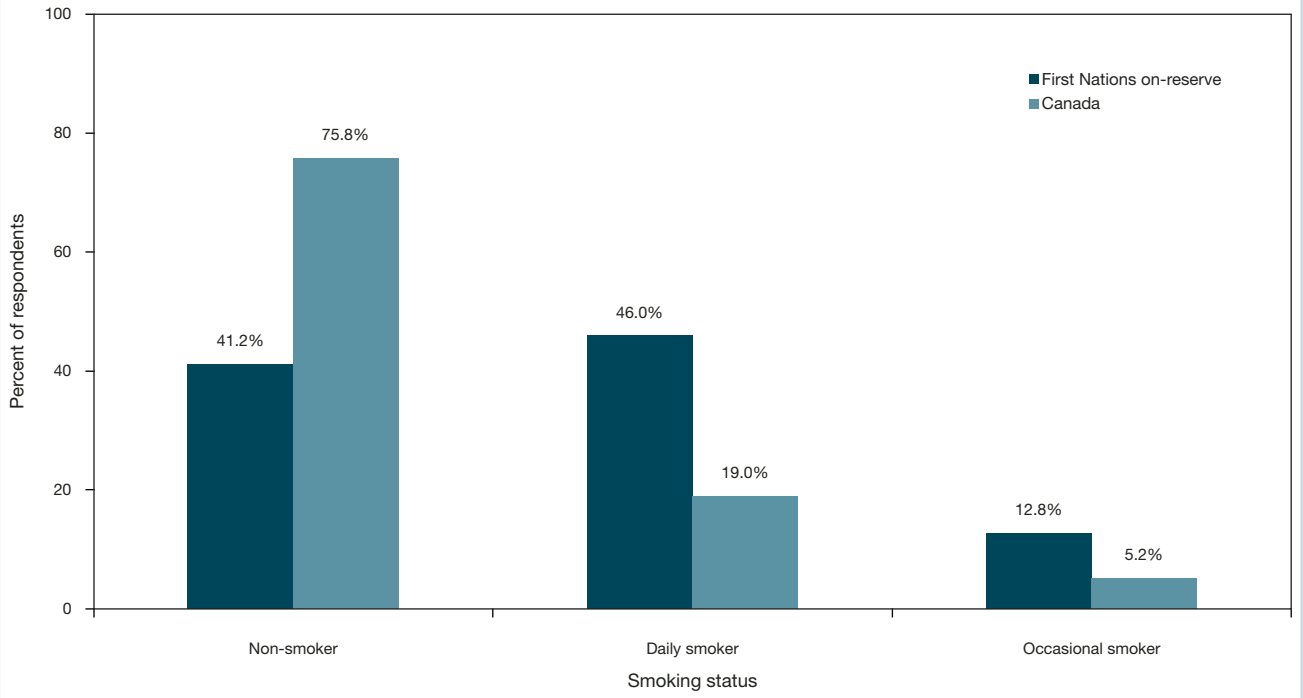
The 2002-03 RHS reports that there is little difference between the smoking rate in First Nations on-reserve males (59.3%) and females (58.3%).[9] In the general population, the gender gap is larger where 26.5% of males smoke compared to 22.0% of females.[18]

Table 5 shows the smoking status of First Nations on-reserve adults by age group. The overall prevalence of smoking (daily or occasional) among First Nations falls consistently with age, from 69.8% among 18 to 29 year olds to 24.2% among those aged 60 years and over. The Canadian rate is similar but it peaks at the 30 to 39 year age group (26.7%), and then begins to fall with increasing age.[18] First Nations on-reserve adults under the age of 50 report the highest rates of daily smoking (53.9% of those 18 to 29 years old, 49.1% of those 30 to 39 years old, and 49.6% of those 40 to 49 years old). First Nations seniors aged 60 years and older report the highest levels of non-smoking (71.9%) and the lowest levels of daily (23.5%) and occasional (4.6%) smoking.

Alcohol Use

The misuse of alcohol is known to have a number of negative effects on people. Long-term alcohol abuse can cause liver damage, stomach problems, brain damage and sexual dysfunction.[19,20] Alcohol use during pregnancy can cause a variety of developmental, behaviour and cognitive impairments in unborn babies, known as fetal alcohol spectrum disorder.[21]

Figure 8. Smoking Status among Adults, First Nations On-reserve (2002-03) and Canada[1] (2003), Aged 18 Years and Over



[1]Total general Canadian population living off-reserve.

Source: First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005; Statistics Canada, Canadian Community Health Survey 2003.

Table 5. Smoking Status of First Nations On-reserve (2002-03) and Canada[1] (2003), by Age Group, Aged 18 Years and Over

	First Nations on-reserve						Canada					
	All ages (18+)	18 to 29 years	30 to 39 years	40 to 49 years	50 to 59 years	60+ years	All ages (18+)	18 to 29 years	30 to 39 years	40 to 49 years	50 to 59 years	60+ years
Non smoker	41.2%	30.3%	36.3%	39.2%	55.2%	71.9%	75.8%	68.5%	73.4%	72.1%	76.9%	87.7%
Daily smoker	46.0%	53.9%	49.1%	49.6%	33.6%	23.5%	19.0%	21.6%	20.8%	22.9%	19.9%	10.6%
Occasional smoker	12.8%	15.9%	14.6%	11.2%	11.2%	4.6%	5.2%	9.9%	5.9%	5.0%	3.2%	1.8%

[1]Total general Canadian population living off-reserve.

Note:
Column percentages may not add up to 100% due to rounding.

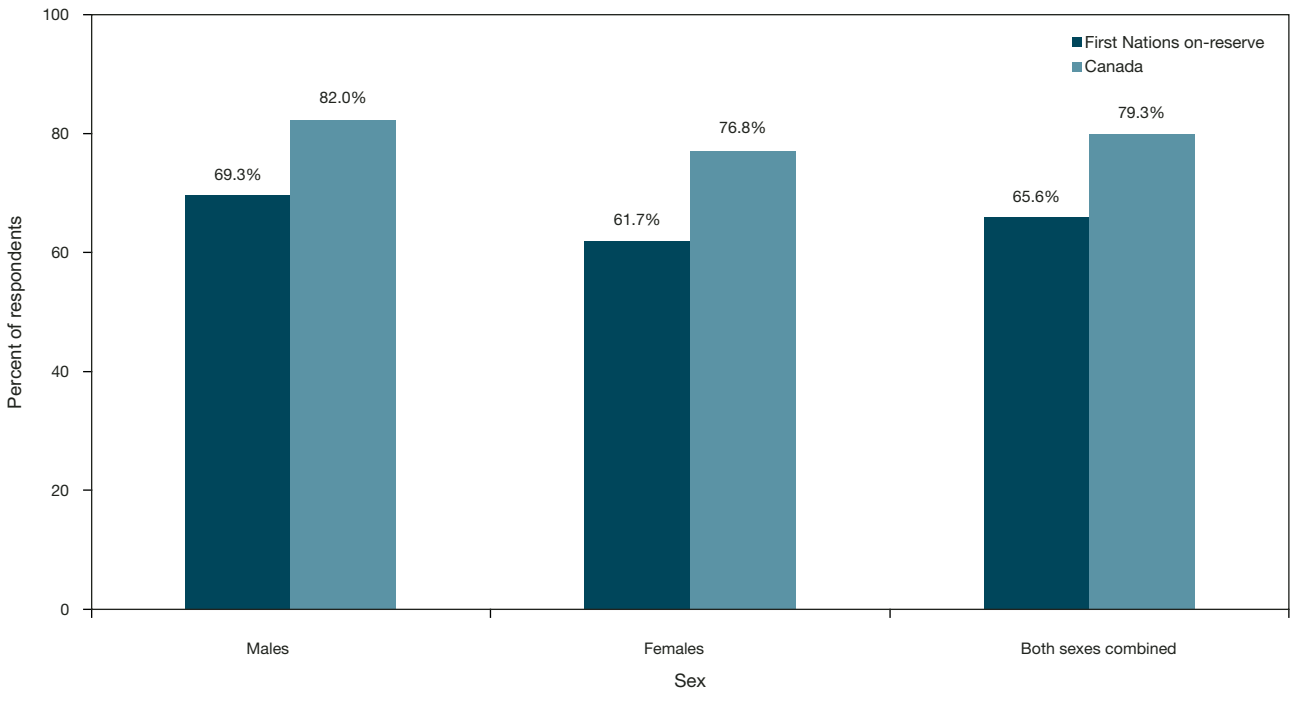
Source: First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005; Statistics Canada, Canadian Community Health Survey 2003.

For both males and females, the proportion reporting alcohol consumption is lower for the First Nations on-reserve population compared to the general Canadian population. As shown in **Figure 9**, 65.6% of First Nations adults living on-reserve reported consuming alcohol in the 12 months preceding the survey (69.3% for males and 61.7% for females). These proportions are lower than the 79.3% for the general Canadian population (82.0% for males and 76.8% for females).

First Nations adults aged 18 years to 29 years were more likely to report alcohol consumption, as shown in **Figure 10**. The proportion of reported alcohol consumption falls consistently with increasing age to 36.3% among those aged 60 years and over.

Though there are lower rates of overall alcohol consumption among First Nations adults on-reserve (18 years and over), the proportion of those reporting heavy drinking is higher among First Nations than the general population. As shown in **Figure 11**, the proportion of First Nations who reported heavy drinking (defined as having five or more drinks on one occasion) on a weekly basis (16.0%) is double that of those in the general Canadian population (7.9%). The largest difference is among females where 10.2% of First Nations females reported heavy drinking on a weekly basis compared to 3.3% in the general Canadian population.

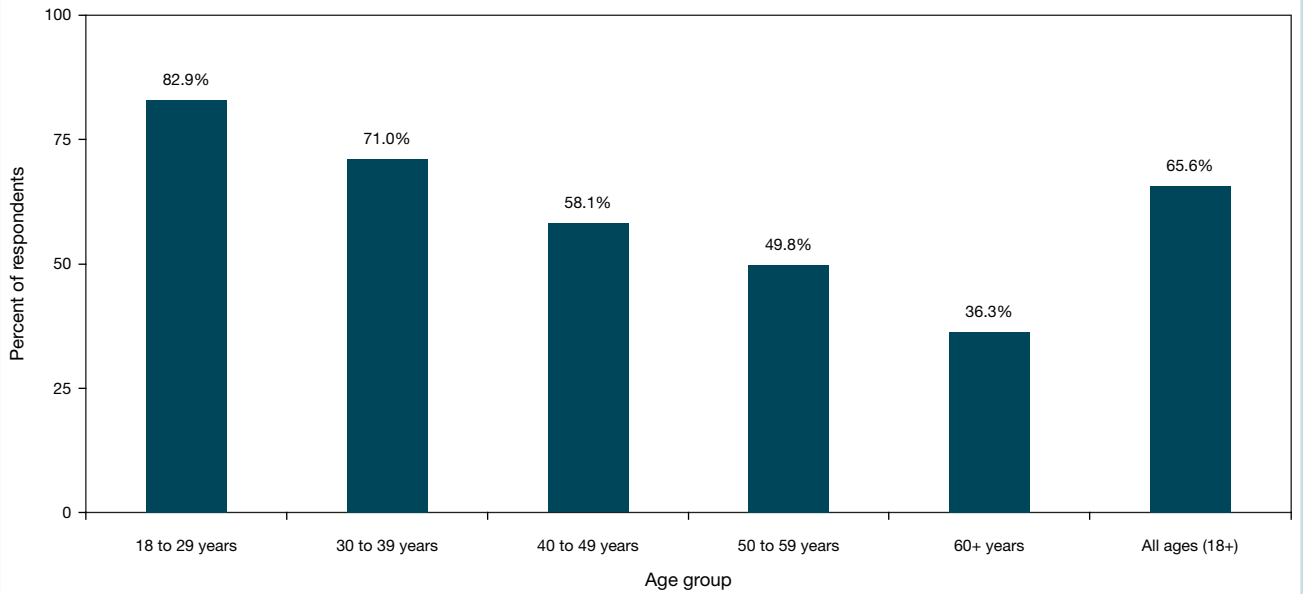
Figure 9. Alcohol Consumption in the Past 12 Months, First Nations On-reserve (2002-03) and Canada[1] (2003), Aged 18 Years and Over



[1]Total general Canadian population living off-reserve.

Source: Chart adapted from First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005; Statistics Canada, Canadian Community Health Survey 2003.

Figure 10. Alcohol Consumption in the Past 12 Months, First Nations On-reserve, by Age Group, Aged 18 Years and Over, 2002-03



Source: First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005.

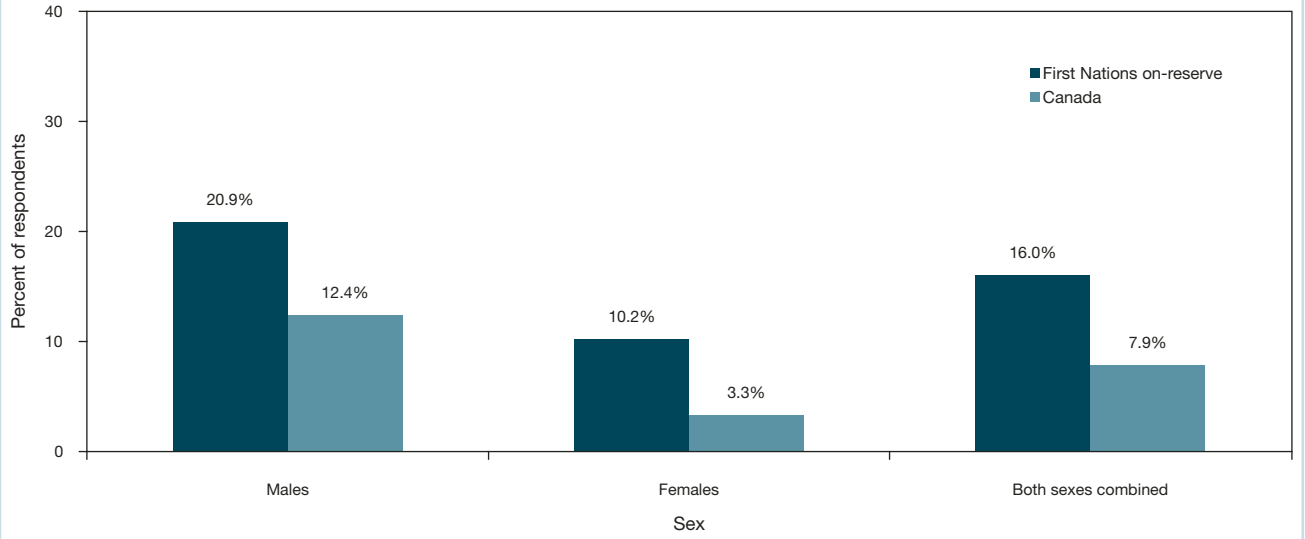
Physical Activity, Nutrition and BMI

Maintaining a healthy weight is closely linked with health status and the occurrence of certain chronic diseases. Being physically active and having a healthy diet can help an individual maintain a healthy weight. The RHS indicates that overall, 21.3% First Nations adults on-reserve reported sufficient physical activity that meets commonly accepted guidelines.[22,23] As shown in **Figure 12**, First Nations males (26.7%) were more likely than First Nations females (15.2%) to report sufficient activity. Furthermore, the difference between the sexes is more pronounced among younger adults and those aged 60 years and over.[9]

The RHS indicates that roughly one-third, or 35.4%, of First Nations adults on-reserve reported that they always or almost always eat a nutritious and balanced diet, whereas 52.7% report that they sometimes do. Almost one-tenth, or 9.1%, reported that they rarely do, and 2.8% claim to never eat a nutritious and balanced diet. The proportion of adults always or almost always eating a nutritious and balanced diet generally increases with age, from 25.0% among those aged 18 years to 29 years to 53.9% among those aged 60 years and over.

Data on body mass from the RHS are classified according to the *Canadian Guidelines for Body Weight Calculation in Adults*.[24] The BMI is a ratio of a person's weight and height. Though BMI is not a direct measure of body fat, it is a widely investigated and to date, a useful indicator of health risk associated with being underweight and overweight. The guidelines categorize BMI into four groups: underweight (BMI <18.5), normal weight (BMI 18.5 to 24.9), overweight (BMI 25.0 to 29.9) and obese (BMI ≥ 30.0). Based on these guidelines, and shown in **Figure 13**, First Nations adults (18 years and over) living on-reserve are generally less likely than adults in the general Canadian population (20 to 64 years)

Figure 11. Heavy Drinking[1] on a Weekly Basis among Drinkers, First Nations On-reserve (2002-03) and Canada[2] (2003), Aged 18 Years and Over



[1]Heavy drinking is defined as having five or more drinks on one occasion.
[2]Total general Canadian population living off-reserve.

Note:
Includes only those persons who reported drinking in the year prior to the survey.

Source: First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005; Statistics Canada, Canadian Community Health Survey 2003.

to be of normal weight. In addition, more First Nations adults than their Canadian counterparts are considered obese. Thus, 73.0% of First Nations adults are heavier than normal weight, compared to the already high figure of 48.0% among other Canadians, a difference of 25.0 percentage points. The RHS also reported that almost one-third (31.2%) are in obese classes I and II (BMI 30.0 to 39.9) and 4.8% are deemed morbidly obese (obese class III, BMI 40.0 and greater).

Overall, First Nations on-reserve males (41.8%) are more likely than females (31.1%) to be overweight, but females (34.3%) are more likely than males (28.6%) to be obese.[9] In contrast, males in the general population are more likely than females to be classified as both overweight and obese.[25]

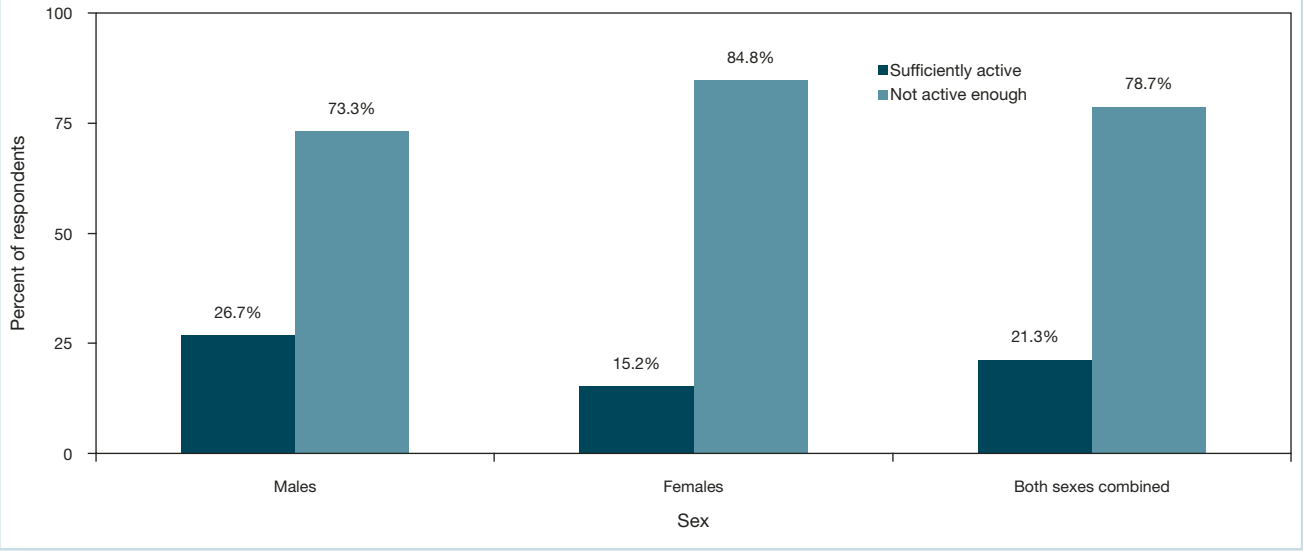
Sexual Health Practices

Results of the RHS indicate that nearly three quarters (73.7%) of adults aged 18 and over are sexually active, as defined by respondents reporting sexual activity in the 12 months preceding the survey. Additionally, more First Nations males (80.3%) than females (66.8%) reported being sexually active.

Figure 14 shows that the prevalence of having three or more different partners over a twelve-month period is higher among sexually active First Nations adults (13.0%) than among sexually active general Canadian adults (5.6%).

Among First Nations, males are more likely to report having three or more partners (18.4%) compared to females (6.9%), a difference of 11.5%. The difference between the sexes is similar

Figure 12. Proportion of First Nations On-reserve Reporting Sufficient Activity, by Sex, Aged 18 Years and Over, 2002-03



Note:
In the RHS, the criterion for sufficient activity was defined as reporting at least 30 minutes of moderate to vigorous activity (i.e. that results in an increase in heart rate and breathing) for 4 or more days of the week.

Source: Chart adapted from First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005.

to the general population where 8.2% of males and 3.1% of females reported having three or more partners (a difference of 5.1%).

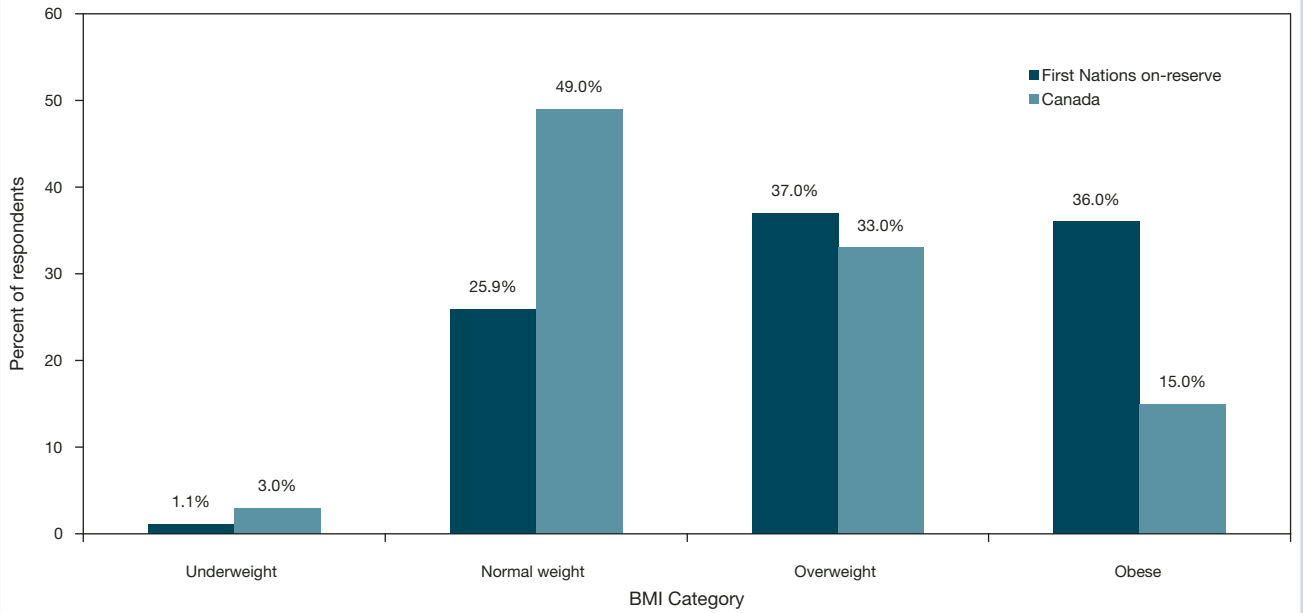
The use of condoms has long been supported as one of the most effective ways to avoid the transmission or acquisition of sexually transmitted infections, including HIV. As shown in **Table 6**, 44.1% of First Nations who reported having had sexual intercourse in the past 12 months reported that they/their partner used a condom at least on one occasion as a means of birth control or protection.

Among those who reported having had sexual intercourse in the past 12 months, only 10.6% reported condom use most of the time.[9] Of those who reported not always using a condom, 9.9% of respondents between the ages of 18 to 29 years stated that it was due to the influence of alcohol or drug use. Across all age groups, 6.6% reported they did not want to use a condom; 4.0% reported that their partner did not want to use one; 3.6% thought they were safe; and 3.4% stated that they/their partner wanted to get pregnant.

Personal health practices might be considered lifestyle choices, but a variety of other factors can affect an individual's choice (e.g., disposable income, amount of free time, access to recreational facilities, access to information and resources, child care, health care, etc.). Thus, personal health practices are as much a function of the environment as of the individual.

Tobacco has a strong positive cultural context, and a long tradition of use among many First Nations peoples.[26] But the non-ceremonial use of cigarettes and other tobacco products may present a potential health risk for First Nations. Smoking has been identified as a risk factor for lung and other cancers, coronary heart disease, high blood

Figure 13. Distribution of Body Mass Index among Adults, First Nations On-reserve (2002-03) and Canada[1] (2003), Aged 18 Years and Over



[1]Total general Canadian population living off-reserve.

Note:
RHS data based on self-reported height and weight of all respondents aged 18 years and older. CCHS data based on reported height and weight of respondents aged 20 to 64 years.

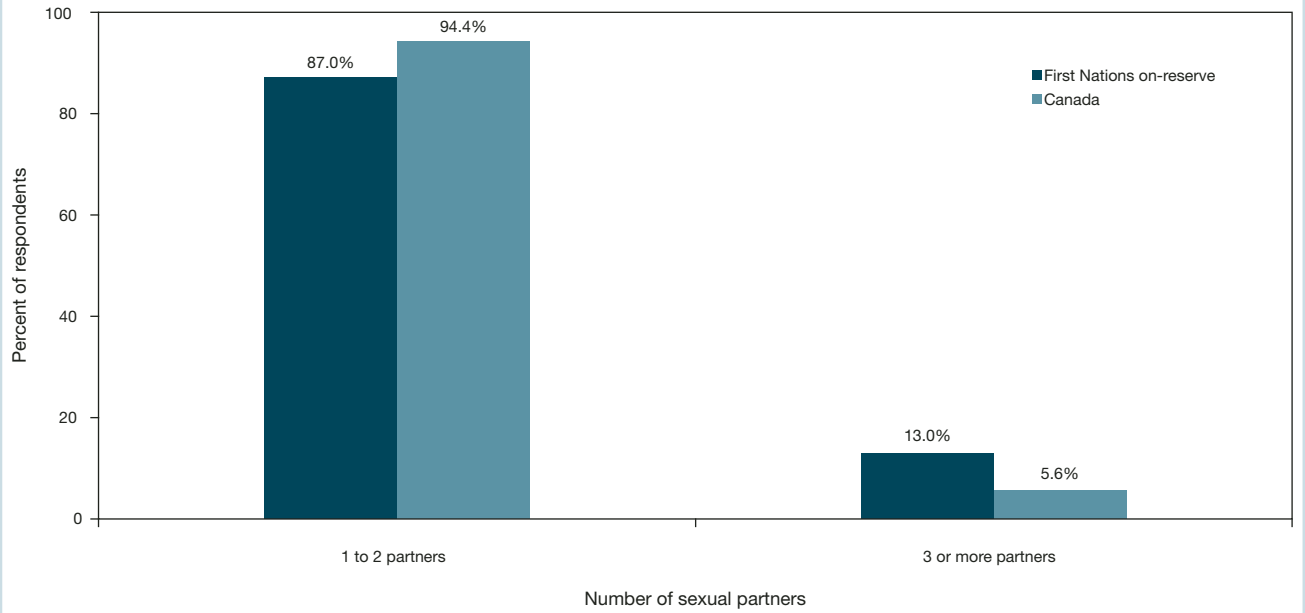
Source: First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005; Craig, C.L. and Cameron, C. (2004) Increasing physical activity: Assessing trends from 1998-2003. Ottawa, ON: Canadian Fitness and Lifestyle Research Institute, 2004, based on data from Canadian Community Health Survey 2000/01.

pressure, emphysema, chronic bronchitis and a variety of other conditions, and has, therefore, a major effect on health and on demand for health care as smokers develop these conditions.[27] The prevalence of smoking falls with increasing age among First Nations, unlike the general Canadian population, which peaks in the 30 to 39 age group. Little interpretation is possible with cross-sectional data for one year; further years of data will be required to determine if overall smoking prevalence will increase over time.

Excessive use of alcohol, as discussed earlier, can have a number of effects, both in terms of physical health as well as the social and cultural effects of alcoholism. Compared to other Canadians, fewer First Nations adults report drinking alcohol. However, a higher proportion of First Nations reported drinking heavily, which can cause many health problems as well as serious socio-economic problems.[28]

Obesity is increasingly recognized as a major problem in Canada, and its prevalence is also observed at high levels in the First Nations population, where well over one-third are considered obese. This not only puts First Nations at higher risk of hypertension, coronary heart disease and certain cancers,[24] but it may also increase the already high prevalence of diabetes among First Nations,[9] along with all the health complications related to this chronic disease.

Figure 14. Number of Sexual Partners in the Past 12 Months among Adults, First Nations On-reserve (2002-03) and Canada[1] (2003), Aged 18 Years and Over



[1]Total general Canadian population living off-reserve.

Note:
RHS includes all respondents aged 18 years and older who reported having had sexual intercourse in the 12 months preceding the survey. CCHS includes only those respondents aged 18 to 49 years.

Source: First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005; Statistics Canada, Canadian Community Health Survey 2003.

Table 6. Reported Use of a Condom as a Means of Birth Control or Protection, First Nations On-reserve, by Age and Sex, 2002-03

	Sex/Age										
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Both sexes combined (18+)
	18 to 29 years	18 to 29 years	30 to 39 years	30 to 39 years	40 to 49 years	40 to 49 years	50 to 59 years	50 to 59 years	60+ years	60+ years	
Yes	72.6%	61.4%	49.4%	27.4%	28.1%	14.7%	19.2%	*	43.5%	*	44.1%
No	27.4%	38.6%	50.6%	72.6%	71.9%	85.3%	80.8%	89.6%	56.5%	87.9%	55.9%

*Counts too low to be included.

Note:
Based on responses to the question: "Which of the following birth control or protection method do you and/or your partner(s) use?" This question does not differentiate between a habitual and an occasional use of condom.

Source: First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005.

Increasing physical activity and maintaining a nutritious and balanced diet may be ways to help reduce the prevalence of these health conditions.

First Nations report a greater number of sexual partners than what is observed for the general Canadian population, which may facilitate the spread of sexually transmitted infections, including HIV. However, increasing condom use may help prevent such infections.

Health Services

Limitations of the data sources used for indicators on health services are presented in the **Data Sources** and **Methods and Limitations** sections of this report.

Health services involve a number of different services available to individuals. These can frequently be divided into preventive services (which are designed to maintain health), diagnostic services (which are designed to identify illness and potential illness as early as possible), and therapeutic services (which are designed to treat ill health). Use of hospital services will be reported in a separate volume of this report. The focus of this section is on mammography, the Pap test, and the digital rectal exam, three diagnostic services that are used to identify cancer of the breast, the cervix, and the prostate, respectively.

Mammography

In 2001-02, organized breast cancer screening programs, which included a bilateral, two-view screening mammogram, existed in all provinces and two territories in Canada.[29] At this time, asymptomatic women between the ages of 50 and 69 years of age with no prior diagnosis of breast cancer were targeted for the program. During this time period, screening practices for women outside of this target age range varied by province/territory. In most regions, women who were still eligible were recalled every two years for a routine screen.

Figure 15 shows that for all females aged 40 and over, those in the general Canadian population are more likely than their First Nations counterparts to have had a mammogram in their lifetime. The largest gap exists among females aged 50 to 59 years, where 73.3% of First Nations reported having a mammogram in their lifetime, compared to 88.3% of females in the general population.

Papanicolaou (Pap) test

Overall, 89.4% of First Nations females aged 18 years and over reported ever having a Pap test compared to 87.7% of females in the general Canadian population (**Figure 16**). A higher proportion of First Nations females between the ages of 18 and 29 (87.2%) reported ever having a Pap test than females aged 18 to 29 in the general Canadian population (74.2%). Conversely, this rate is higher among females aged 60 and over in the general Canadian population (86.1%) than among First Nations females in the same age group (74.0%).

In 2003, 17.1% of females aged 18 and over in the general Canadian population who reported not having a Pap test done in the past 3 years also reported that the reason was due to a hysterectomy. Unfortunately, comparable data are not available for First Nations females. Hence, when interpreting the rates, one must consider those who reported not having a Pap test because they did not need one.

Digital rectal exam (DRE)

Prostate cancer is the most commonly diagnosed cancer among Canadian males, excluding non-melanoma skin cancer.[30] The mortality rate associated with prostate cancer for First Nations males is higher than that of males in the general Canadian population.[31] The prostate specific

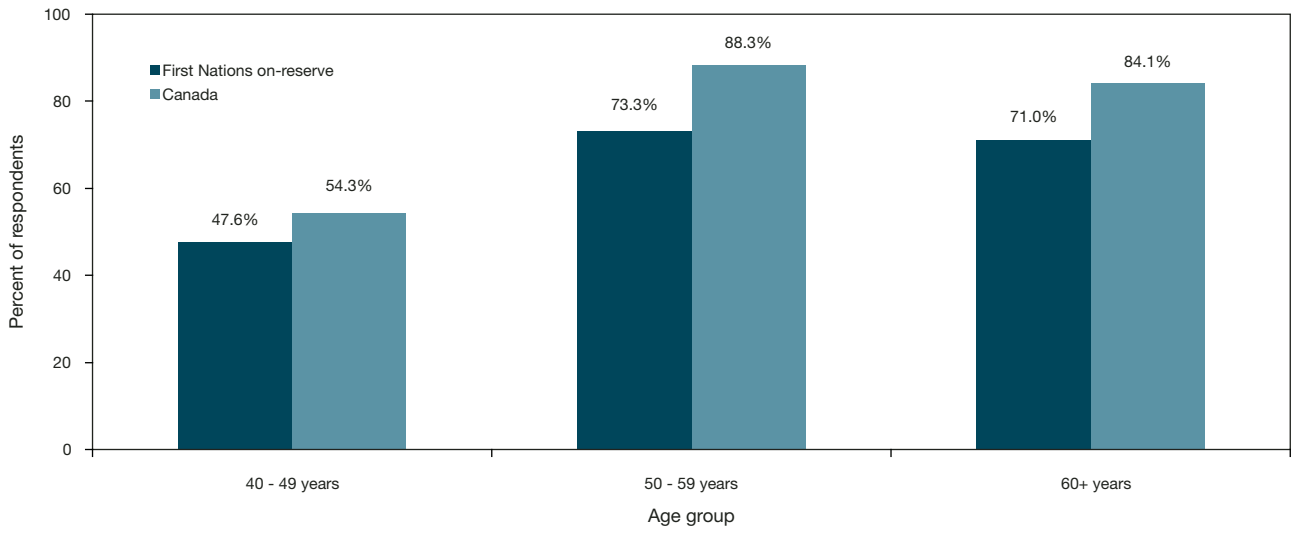
antigen test together with the digital rectal exam, has been associated with the detection of early-stage, treatable cancers.[30]

Data from the RHS indicate that 13.8% of First Nations males on-reserve reported having a DRE done in the 12 months prior to the survey.[9] Though the proportions are similar among age groups, older adults were more likely to report having a DRE than younger adults (16.9% among males aged 60 years and over vs. 13.1% among those aged 40 to 49 years).

First Nations are in a unique position in terms of health care in Canada. As with all Canadians, they are entitled to universal health care administered through the provincial health care systems. In addition, Registered Indians also receive health coverage from the Federal Government for certain medically necessary services not normally covered by the universal health care system, such as prescription drug coverage, dental and vision care, as well as coverage for emergency transport. In approximately 200 First Nations communities Health Canada provides primary health care, as well as home and community care in over 600 communities. A concern of the many First Nations who live in remote communities is access to health services. In many remote communities, primary care is provided chiefly by nurse practitioners, while patients with emergencies are transported to facilities in larger centres.

Disease screening is a fundamental aspect of the health care system, as the early detection of many conditions can have a major effect on the treatment and prognosis of patients. For all age groups, fewer First Nations females report having mammograms than do other Canadian females, perhaps reflecting the fact that the mortality rate for breast cancer among First Nations females is less than half that of other Canadian females.[31] Another factor that may contribute to fewer First Nations females reporting having mammograms

Figure 15. Proportion of Females who reported ever having a Mammogram in their Lifetime, First Nations On-reserve (2002-03) and Canada[1] (2003), Aged 40 Years and Over



[1]Total general Canadian population living off-reserve.

Source: First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005; Statistics Canada, Canadian Community Health Survey 2003.

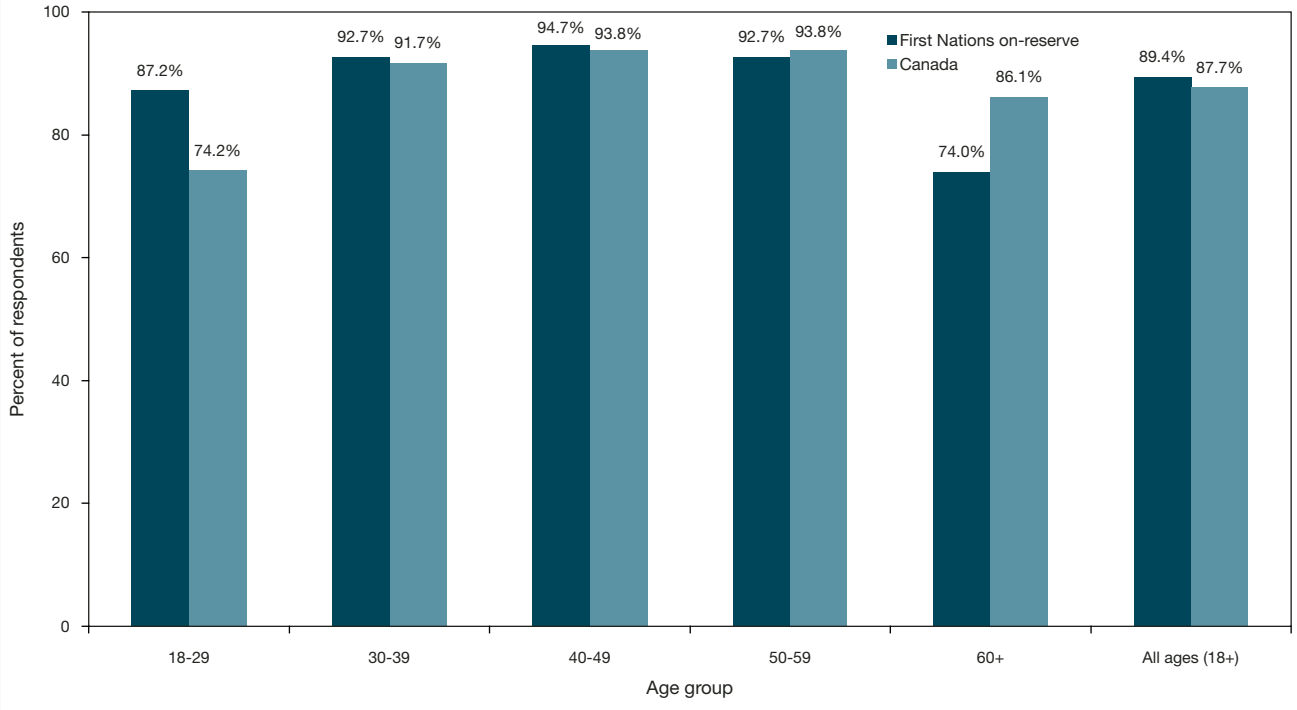
is difficulty in accessing screening services, including availability of services, transportation barriers, economic barriers and cultural appropriateness of these services.[9] By comparison, First Nations females have similar or higher rates of Pap tests than other Canadian females for all age groups below the age of 60. The high rate of cervical smears is reassuring, in view of the higher number of sexual partners. Risky sexual behaviour, such as multiple partners and limited condom use, can facilitate the spread of human papillomavirus, an agent that causes genital warts or other consequences such as cervical cancer.[32] Increasing the rates of DREs may help reduce the gap in prostate cancer mortality rates between First Nations males and their counterparts in the general Canadian population.

Culture

Limitations of the data sources used for indicators on culture are presented in the **Data Sources** and **Methods and Limitations** sections of this report.

Culture and tradition are integral components of First Nations' holistic approach to health and well-being. The lack of cultural connection is frequently cited as a primary cause of many of the social problems facing First Nations. Preservation of culture can be difficult to measure due to the multifaceted and varied dimensions of a culture. One of the more common indicators of preservation of First Nations culture is the use of Aboriginal language.

Figure 16. Proportion of Females who reported ever having a Pap Test, First Nations On-reserve (2002-03) and Canada[1] (2003), Aged 18 Years and Over



[1]Total general Canadian population living off-reserve.

Source: First Nations Information Governance Committee (FNIGC). First Nations Regional Longitudinal Health Survey (RHS) 2002-03; Results for Adults, Youth and Children Living in First Nations Communities. Assembly of First Nations, November 2005; Statistics Canada, Canadian Community Health Survey 2003.

Figure 17 shows the prevalence of mother tongue of the First Nations population. Less than half of Registered Indians learn an Aboriginal language as their mother tongue. According to Statistics Canada, mother tongue refers to the first language learned at home in childhood and still understood by the individual at the time of the census.

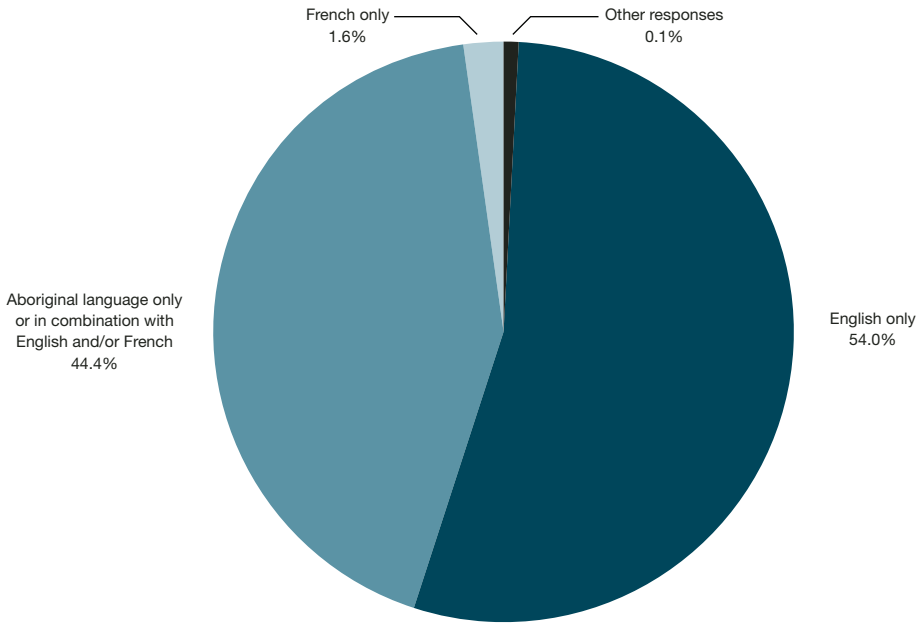
The majority of First Nations languages spoken in Canada are known by a relatively small number of speakers. Only a few First Nations languages have an adequate population of speakers needed to maintain the transfer of the language.

Among Registered Indians on-reserve, the top five most common Aboriginal languages reported as mother tongue are:

- Cree: 49,675 speakers
- Ojibway: 13,680 speakers
- Oji-Cree: 9,000 speakers
- Montagnais-Naskapi: 7,640 speakers
- Mi'kmaq: 6,620 speakers

These five languages cover three-quarters of the Registered Indian population on-reserve who learned an Aboriginal language as their sole mother tongue (Figure 18). The remaining quarter speak a wide variety of Aboriginal languages, many of which have fewer than 1,000 speakers.[33]

Figure 17. Languages Learned as Mother Tongue, Registered Indians[1] On-reserve, 2001



N = 274,220 respondents
[1]Registered Indian status based on self-reporting of the respondent.

Note:
Due to certain individuals stating Registered Indian status in combination with various Aboriginal identity groups, this graph includes all Aboriginal languages (including Inuit and Métis languages).

Source: Statistics Canada, 2001 Census of Population, catalogue no. 97F0011XCB2001056.

Aboriginal language, in the overall context of culture, is seen as one of the most important aspects of uniting and defining a society. It provides a link to the past, and a traditional view of the world. The retention of Aboriginal traditional languages has been identified as a potentially vital part of maintaining their culture and passing it on to the next generation.[9]

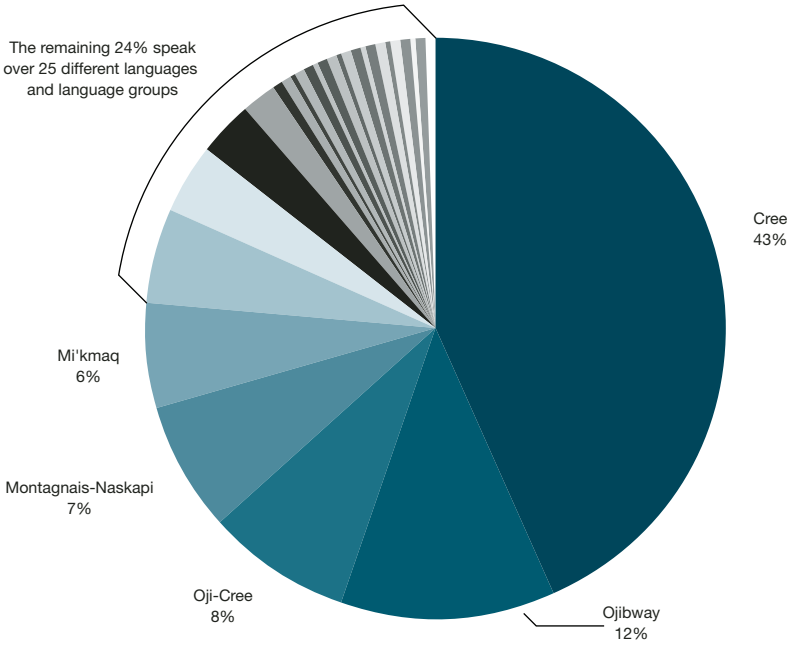
Less than half of Registered Indians on-reserve report an Aboriginal language as their mother tongue. Although there were almost 115,000 Aboriginal speakers on reserve in 2001, the distribution of languages shows that this number is spread out over a very large number of distinct languages, and only a handful of these have enough speakers who can continue to maintain the transfer of these languages.

Physical Environment

Limitations of the data sources used for indicators on physical environment are presented in the **Data Sources** and **Methods and Limitations** sections of this report.

The physical environment encompasses a number of things, from housing quality, clean air and water, sanitation services and the security of community infrastructure. Dangers in the physical environment can range from a simple lack of sanitation to contaminants in the air,

Figure 18. Distribution of Aboriginal Languages Learned as Mother Tongue, Registered Indians[1] On-reserve, 2001



N = 114,475 respondents
[1]Registered Indian status based on self-reporting of the respondent.

Note:
1. Includes single responses only; does not include individuals who declared more than one mother tongue.
2. Due to certain individuals stating Registered Indian status in combination with various Aboriginal identity groups this graph includes all Aboriginal languages (including Inuit and Métis languages).

Source: Statistics Canada, 2001 Census of Population, catalogue no. 97F0011XCB2001056.

water, food or soil that can cause a variety of adverse health effects, including cancers, birth defects, respiratory illness and gastro-intestinal ailments.[34-37] In addition to these potential physical risks, the physical environment, such as the house one lives in, can significantly influence psychosocial well-being.

Housing

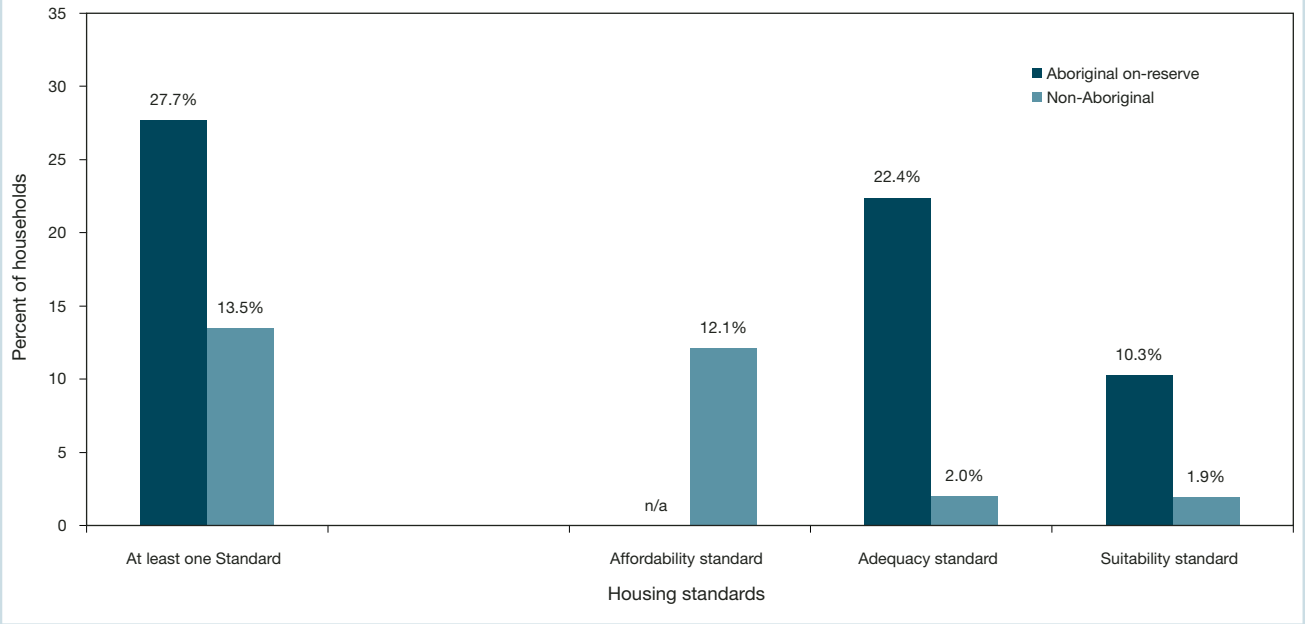
Good housing is that which is affordable, is in good repair, and is big enough for the size of the household. Poor housing quality can affect the quality of the indoor air, or allow the growth of mould, or the manifestation of other harmful agents. Overcrowding can contribute to a host of physical ailments (such as communicable diseases like tuberculosis) as well as psychological effects, such as stress between household members.

Housing that costs too much can strain a family's ability to buy food or other necessities.

CMHC looks at three housing indicators to determine what it calls core housing needs:

- ***Adequate dwellings:*** dwellings that are reported by their residents as not requiring any major repairs.
- ***Suitable dwellings:*** dwellings that have enough bedrooms for the size and make-up of resident households, according to the National Occupancy Standard requirements, determined by CMHC.
- ***Affordable dwellings:*** dwellings that cost less than 30% of before-tax household income.

Figure 19. Percentage of Aboriginal On-reserve and Non-Aboriginal Households Below Core Housing Standards, 2001



Note:
The affordability standard cannot be calculated for Aboriginal on-reserve households, since many homes on-reserve are paid for through band housing arrangements.

Source: Canada Mortgage and Housing Corporation. 2004. "Aboriginal Households". 2001 Census Housing Series Issue 6: Revised, Socio-Economic Series 04-036 (Revised 2005).); Canada Mortgage and Housing Corporation. 2004. "The Adequacy, Suitability and Affordability of Canadian Housing". 2001 Census Housing Series: Issue 3 Revised, Socio-Economic Series 04-007 (Revised 2005).

As shown in **Figure 19**, 13.5% of non-Aboriginal households are below at least one core housing standard. Of the on-reserve Aboriginal households, almost a third (27.7%) are below at least one standard. These two figures are not directly comparable because most of the substandard off-reserve dwellings fail the affordability standard, an indicator that cannot be measured for the on-reserve population.

Aboriginal households on-reserve are more frequently below the adequacy or suitability standard than general Canadian off-reserve households. The proportion of on-reserve Aboriginal households that are below the adequacy standard is more than ten times that of households in the general off-reserve population. The proportion below the suitability standard is over five times greater than the proportion of households off-reserve.

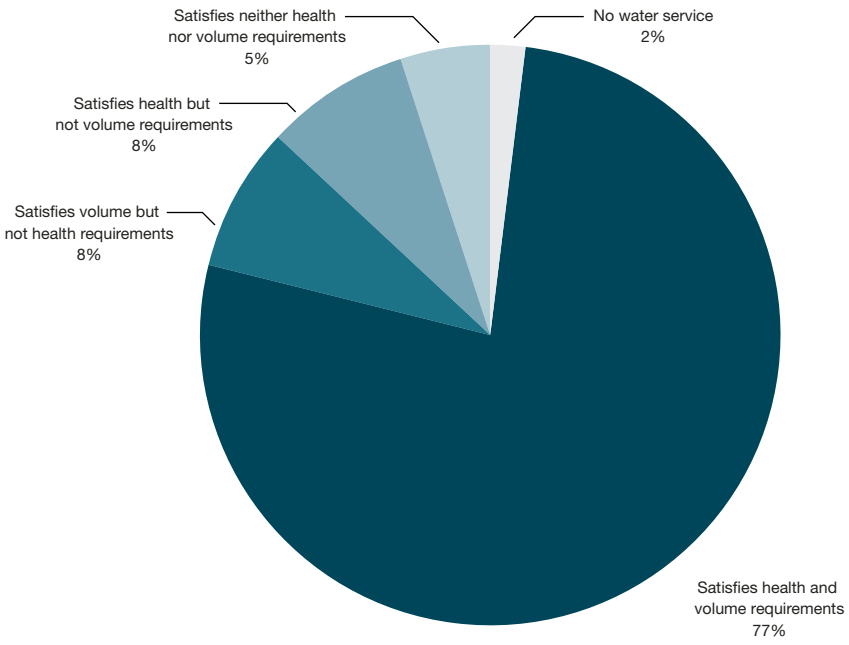
Community services refer to a number of services that provide sanitation, safety, and basic community infrastructure. Lack of access to these services can contribute to the outbreak of communicable diseases, or simply lead to a more physically dangerous environment in the community.

Water

INAC classifies the adequacy of First Nations water supply along two criteria:

- ***Quantity of water supply:*** refers to whether a housing unit's water supply satisfies the volume requirements of the Levels of Service

Figure 20. Quantity and Quality of Water Services, First Nations On-reserve Housing Units, 2001-02



N = 91,652 housing units

Note:
Excludes dwellings in the Northwest Territories, Nunavut and Inuit communities of Northern Quebec, as well as dwellings of bands under the James Bay and Northern Quebec Agreement, self-government bands in the Yukon and the Sechelt Band.

Source: Indian and Northern Affairs Canada, Housing and Infrastructure Assets Inventory.

Standard (LSS)[13] for adequate hygiene and safety purposes.

- ***Quality of water supply:*** refers to whether a housing unit's water supply satisfies the health-related requirements of the *Guidelines for Canadian Drinking Water Quality* (FPT Committee on Drinking Water 2007). Although these guidelines also set out aesthetic objectives, a household's water supply is not deemed inadequate if the aesthetic objectives are not met.

Figure 20 shows that nearly a quarter of First Nations on-reserve households have water that is deficient in quantity or quality.

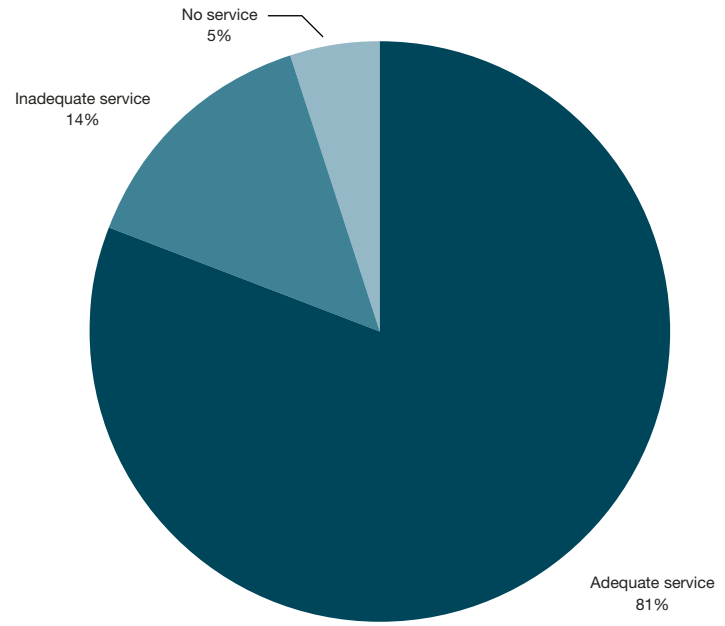
Sewage

INAC categorizes the adequacy of First Nations sewage service into two groups:

- ***Adequate sewage service:*** sewage effluent is discharged to a collection and/or treatment system consistent with provincial or territorial practice, the *Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments*, and the LSS set out by INAC.

- ***Inadequate sewage service:*** sewage effluent is discharged to a collection and/or treatment system inconsistent with provincial or territorial practice, the *Guidelines for Effluent Quality and Wastewater Treatment at Federal*

Figure 21. Adequacy of Sewage Effluent Services, First Nations On-reserve Housing Units, 2001-02



N = 91,652 housing units

Note:
Excludes dwellings in the Northwest Territories, Nunavut and Inuit communities of Northern Quebec, as well as dwellings of bands under the James Bay and Northern Quebec Agreement, self-government bands in the Yukon and the Sechelt Band.

Source: Indian and Northern Affairs Canada, Housing and Infrastructure Assets Inventory.

Establishments or the LSS set by INAC, and poses a health or environmental threat.

This classification rating refers to the infrastructure only as service cannot be deemed inadequate due to poor operator technique, neglect, or poor operation. It is not an indicator of sewage service delivery.

Well over three-quarters of First Nations on-reserve households have adequate sewage effluent services (**Figure 21**). Nearly one-fifth have deficient sewage effluent systems.

Fire Services

The adequacy of fire protection services are classified into two groups by INAC:

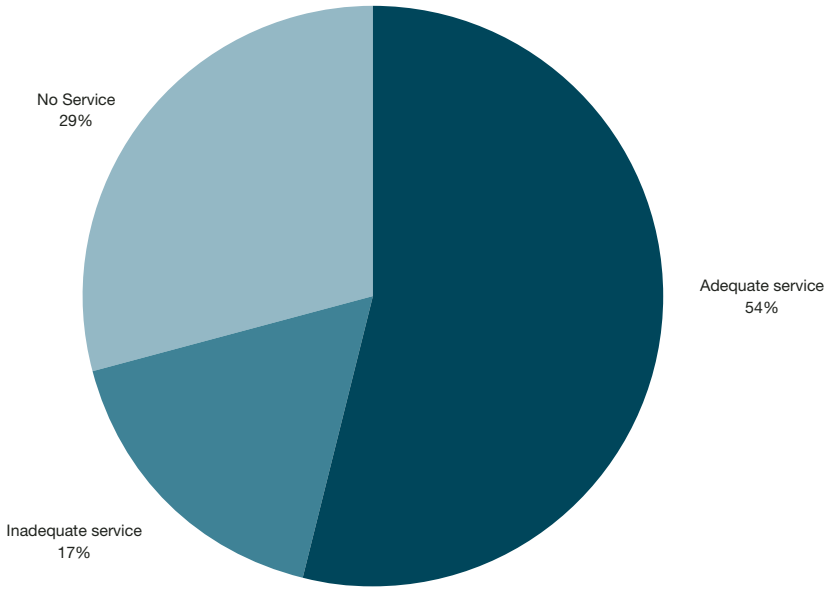
- ***Adequate fire protection services:*** services have been inspected and meet the LSS set by INAC, or the site has a mutual aid or other municipal agreement(s) to provide service.
- ***Inadequate fire protection services:*** services have been inspected and do not meet the LSS, or have not been inspected.

Figure 22 illustrates nearly half of sites under INAC jurisdiction have inadequate fire services.

Community Isolation

As mentioned previously, the First Nations and Inuit Health Branch classifies First Nations communities into one of four types:

Figure 22. Fire Protection Services on INAC-administered First Nations Sites[1], 2001-02



N = 950 sites

[1]"Site" refers to a First Nations settlement. A First Nation or Band may include more than one location or site with different community services. Each of these sites would be counted separately.

Note:
Excludes communities in the territories, the Inuit communities of Nunavik (northern Quebec) and the communities under the James Bay and Northern Quebec Agreement.

Source: Indian and Northern Affairs Canada, Housing and Infrastructure Assets Inventory.

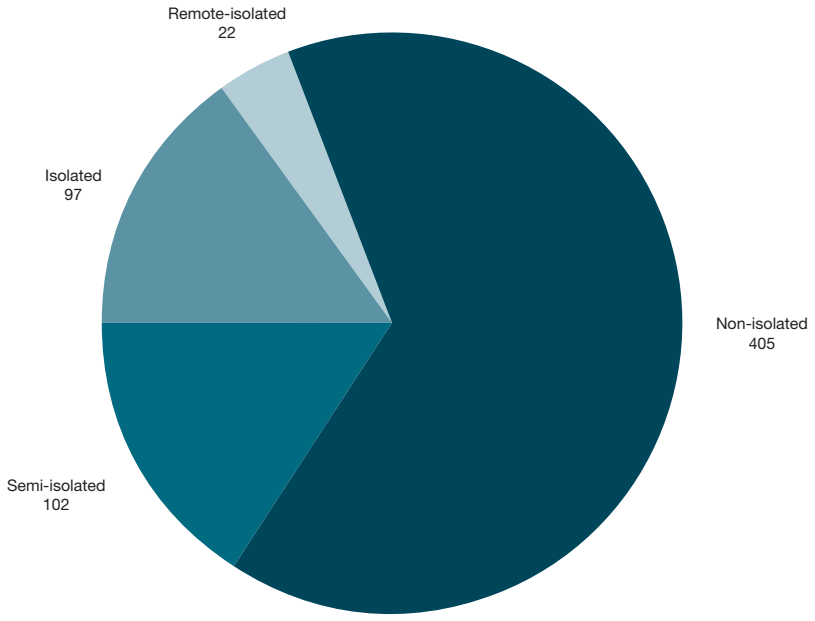
- ***Non-isolated:*** communities that are accessible by road and are less than 90 kilometres from physician services.
- ***Semi-isolated:*** communities that have road access, but the nearest physician services are farther than 90 kilometres away.
- ***Isolated:*** communities that have scheduled flights and good telephone service, but no road access.
- ***Remote isolated:*** communities that have no scheduled flights or road access and minimal telephone and radio service.

The majority of communities, or 64.7%, are non-isolated (**Figure 23**). The numbers of semi-isolated and isolated communities are similar, at roughly 16% each. Remote-isolated communities make up fewer than 4% of communities.

Table 7 provides a breakdown of the numbers of First Nations communities by type and region. As shown, most First Nations communities are considered non-isolated. Isolated communities are scattered across the country, but most are found in Ontario (27.8%) and Manitoba (24.7%).

The effect of the physical environment on individual and population health can sometimes be difficult to quantify, as a myriad of factors affect overall health in many different ways. Housing conditions are one aspect of environment that has been noted to have important connections with health.[38] Housing constitutes a physical as well as a cultural space in which individuals and families live. The physical

Figure 23. Number of First Nations Communities, by Degree of Isolation, 2003



N= 626 communities

Note:
The number of communities is as of December 31, 2003.

Source: Health Canada, First Nations and Inuit Health Branch, Community Planning and Management System.

condition of a dwelling, as well as its suitability as a living space for the household that resides within it, can have significant effects on people's wellness.

As mentioned earlier in this report, overcrowded conditions facilitate the transmission of infectious diseases,[39] and cause stress and friction between household members. On-reserve households experience both overcrowding and poor states of repair much more frequently than homes in the rest of Canada.[40] While this cannot be considered the direct cause, this observation is consistent with a number of social and health problems documented in First Nations communities. However, a comparison between 1996 and 2001 Census housing data suggests improvements in on-reserve housing conditions.[41] In 1996, more Aboriginal households on-reserve were below at least one core housing standard compared to 2001 (50% vs. 28%). In addition, on-reserve households that were below both the adequacy standard and the suitability standard in 2001 (5%), have improved in comparison to 1996 (12%).

Water and sanitation services are considered an essential part of preventing occurrences of communicable diseases, and a lack of these basic services is a risk factor for disease outbreaks.[42] Almost one quarter of First Nations housing units under INAC administration have inadequate or no water services and approximately one-fifth have inadequate or no sewage services. Inadequate water and sanitation services present a threat to human health and the environment in these communities.[43] While a little over half of the sites under INAC jurisdiction have fire services, there remain nearly half that have no or deficient fire services. This places these sites at risk for injury or death due to fire.

Table 7. Distribution of First Nations Communities, by Type of Community and Region, 2003

	Number of communities				
	Non-isolated	Semi-isolated	Isolated	Remote isolated	Total
Yukon	3	9	3	0	15
Pacific	156	31	15	8	210
Alberta	31	19	4	4	58
Saskatchewan	62	13	8	2	85
Manitoba	27	12	24	1	64
Ontario	78	12	27	7	124
Quebec	16	6	15	0	37
Atlantic	32	0	1	0	33
Total	405	102	97	22	626

Note:
The number of communities is as of December 31, 2003.

Source: Health Canada, First Nations and Inuit Health Branch, Community Planning and Management System.

ADDITIONAL INDICATORS

The following determinants of health are not measured in this report, but we mention them to provide a more complete picture of the range of factors that can influence health.

Social Support Networks

Having family, friends and other social resources in the community help people cope with troubles in their lives, and can have a positive effect on mental, spiritual and even physical health. First Nations, in particular, place a strong emphasis on family and the community, as opposed to the individual.

Social Environments

Social environment refers to the larger community environment, such as community services, levels of community involvement and stewardship, general safety and community response to crime and victimization. In recent years First Nations have been working to take increased control of various community services, including health services, cultural centres, and self-government.[44]

Child Development

Researchers increasingly see an individual's development from early childhood as key to future healthy development. Neo and post-natal care such as community-based birthing and breastfeeding are considered essential for healthy child development. For older children, fostering socialization and preparing children for school is an important part of early childhood development programs.

Health Canada plays a role in the healthy development of First Nations, Inuit and Métis children through the Aboriginal Head Start On Reserve Program. This program is designed to prepare young Aboriginal children for their school years, by meeting their emotional, social, health, and nutritional and psychological needs. It also fosters the development of skills of the parents, which contribute to their child's healthy development.

Biology and Genetic Endowment

Many factors that influence health are rooted in the biological conditions that can affect a person's basic development *in utero*. Smoking during pregnancy can lead to low birth weight,[45,46] which is linked to a variety of health risks later in life. Alcohol consumption during pregnancy, even in moderate amounts, can lead to fetal alcohol spectrum disorder, which can lead to myriad developmental difficulties.[21]

One instance of genetic predisposition to disease that may have implications for First Nations is the 'hefty fetal phenotype' hypothesis, and its relation to the development of type 2 diabetes. This hypothesis attempts to explain how an ancient survival mechanism, which may have evolved to produce well-nourished infants, has become a modern liability leading to increased rates of gestational and type 2 diabetes in susceptible populations. It posits that poor fetal and infant nutrition can lead to permanent changes in various internal systems that may leave an individual particularly vulnerable to developing type 2 diabetes, particularly if the individual becomes overweight or obese in later life.[47-50]

Gender

Gender is a contributor to, if not a, fundamental determinant of health. Besides biological differences, males and females typically have different life experiences, all of which have significant effects on health. This report does not specifically examine the effects of gender on health; however,

much of the statistical information presented includes data categorized by sex, results of which indicate the influence of gender on specific outcomes including but not limited to education, employment and personal health practices.

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GLOSSARY

Aboriginal Household: A household is considered Aboriginal if at least one parent in a family household, or 50% of the residents of a family or non-family household identify as Aboriginal.

Aboriginal Peoples: Aboriginal peoples are the descendants of the original inhabitants of North America. The Constitution of Canada recognizes three groups of Aboriginal peoples—Indians, Métis and Inuit. These three separate peoples have unique heritages, languages, cultural practices and spiritual beliefs.

Adequate Dwellings: Dwellings that do not require any major repairs, as reported by their residents.

Adequate Fire Protection Services: Adequate fire protection services are those that have been inspected and meet the Levels of Service Standard set by INAC, or the site has a mutual aid or other municipal agreement to provide service.

Adequate Sewage Service: Sewage service is deemed adequate when sewage effluent is discharged to a collection and/or treatment system that is consistent with provincial or territorial practice, the Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments, and the Level of Service Standards set out by INAC.

Affordable Dwellings: Dwellings that cost less than 30% of before-tax household income, as defined by CMHC.

Bill C-31: Bill C-31 is the pre-legislation name of a 1985 amendment to the *Indian Act*. The amendment was designed to eliminate several discriminatory provisions from the *Indian Act* concerning the unjust removal of First Nations people from the Indian Register, such as the removal of an Indian woman and her children if she were to marry a non-Indian. The major impact of Bill C-31 has been the restoration of Indian status to people who lost it under the Act's unjust provisions. Approximately 105,000 people have regained or acquired Indian status since the passage of the bill in 1985. For further information please see www.ainc-inac.gc.ca/pr/ra/sab/sab_e.pdf.

BMI: The BMI is a ratio of weight-to-height. The BMI (weight (kg)/height $(m)^2$) is not a direct measure of body fat but it is the most widely investigated and most useful indicator, to date, of health risk associated with under and overweight.

Census: An enumeration of a population, originally intended for purposes of taxation and military service. Census enumeration of a population usually records identities of all persons in every place of residence, with age, or birth date, sex, occupation, national origin, language, marital status, income, and relationship to head of household in addition to information on the dwelling place[1]. The national Census of Population provides dwelling and population counts for Canada every five years, but it also provides a variety of demographic, social and economic information about the population of Canada. The most recent census was on May 16, 2006.

Crown Land: Land where title is held by her majesty (the Crown), but has not been officially set aside for the use and benefit of a band (or bands).

Determinant: Any factor, whether event, characteristic, or other definable entity, that brings about change in a health condition or other defined characteristic.[1]

Difference: The value obtained by subtracting one quantity by another.

Employment Rate: The percentage of persons aged 15 years and over who are working for pay or in self-employment.

Fetal Alcohol Spectrum Disorder: An umbrella term used to describe the range of disabilities and diagnoses that result from drinking alcohol during pregnancy.

First Nation: A term that came into common usage in the 1970s to replace the word 'Indian,' which many people found offensive. Although the term 'First Nation' is widely used, no legal definition of it exists. Many Indian people have also adopted the term 'First Nation' to replace the word 'Band' in the name of their community. Both Status and non-Status Indian people in Canada are referred to as 'First Nations people(s)'. In the Canadian Census of Population, 'North American Indian' is the term used for this population.

Hefty Fetal Phenotype Hypothesis: This hypothesis attempts to explain how an ancient survival mechanism, which may have evolved to produce well-nourished infants, has become a modern liability leading to increased rates of gestational and type 2 diabetes in susceptible populations.[2]

HIV/AIDS: HIV - the Human Immunodeficiency Virus - is a virus that attacks the immune system, resulting in a chronic, progressive illness that leaves people vulnerable to opportunistic infections and cancers. When the body can no longer fight infection, the disease is known as AIDS, which stands for Acquired Immunodeficiency Syndrome. On average, it takes more than 10 years to progress from initial HIV infection to AIDS.[3]

Inadequate Fire Protection Services: Inadequate fire protection services are those that have been inspected and do not meet the Levels of Service Standard, or have not been inspected.

Incomplete Enumeration: Incomplete enumeration refers to Indian reserves and settlements that did not participate in the Census of Population as enumeration was not permitted, or it was interrupted before completion.

Inadequate Sewage Service: Sewage service is deemed inadequate when sewage effluent is discharged to a collection and/or treatment system that is inconsistent with provincial or territorial practice, the Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments or the standards set by INAC, and poses a health or environmental threat.

Indian: Indian is a term that describes all the Aboriginal people in Canada who are neither Inuit nor Métis. Indian peoples are one of three groups recognized as Aboriginal in the *Constitution Act* of 1982. The Act specifies that Aboriginal people in Canada comprise Indians, Inuit and Métis people. In addition, there are three legal definitions that apply to Indians in Canada: Status Indians, non-Status Indians and Treaty Indians. In the Canadian Census of Population, 'North American Indian' is the term used for this population.

Indian Act: The Indian Act is Canadian federal legislation that sets out certain obligations of the federal government toward First Nations people. It also regulates the management of Indian reserve lands. The Act has been amended several times, most recently in 1985.

Indian Register: The Indian Register is the official record kept by Indian and Northern Affairs Canada of all Status/Registered Indians in Canada.

Indian Status: An individual's legal status as an Indian, as defined by the *Indian Act*.

Innu: The Innu are comprised of Naskapi and Montagnais First Nations (Indian) people who live in Eastern Quebec and Labrador, distinct from Inuit.

Inuit: An Aboriginal people in northern Canada who live above the tree line in Nunavut, the Northwest Territories, and northern Quebec and Labrador. The word means 'people' in Inuktitut, the Inuit language. The singular of Inuit is Inuk.

Isolated Communities: Isolated communities have scheduled flights and good telephone service, but no road access.

Labour Force Participation Rate: The percentage of persons aged 15 years and over whom either are employed or currently looking for work. It excludes those not looking for work, such as full-time students, retired persons or discouraged workers.

Median: Median is the simplest division of a set of measurements into two parts – the lower and upper half. The point on the scale that divides the group in this way is called the 'median'.[1]

Mortality: Mortality is the number of deaths due to a given disease or other condition in a given population at a designated time. It is often expressed as a rate per 100,000.

Mother Tongue: Mother tongue refers to the first language learned at home in childhood and still understood.

Non-Isolated Communities: Non-isolated communities are accessible by road and are less than 90 kilometres from physician services.

Non-Status Indian: The *Indian Act* defines a Non-status Indian as an Indian person who is not registered under the *Indian Act*. This may be because his or her ancestors were never registered, or because he or she lost Indian status under former provisions of the *Indian Act*.

Off-Reserve: A term used to describe people, services or objects that are not part of a reserve but that relate to a First Nation.

On-Reserve: A term used to describe First Nations people that live on a reserve, land set aside by the Federal Government for the use and occupancy of an Indian group or band.

Prevalence: The number of instances of a given disease or other condition in a given population at a designated time is described as prevalence. It is often expressed as a rate per 100,000.

Quality Of Water Supply: The quality of a water supply refers to whether a housing unit's water supply satisfies the health-related requirements of the Guidelines for Canadian Drinking Water Quality (FPT Committee on Drinking Water 2007).

Quantity Of Water Supply: The quantity of a water supply refers to whether a housing unit's water supply satisfies the health-related requirements of the Guidelines for Canadian Drinking Water Quality (FPT Committee on Drinking Water 2007).

Rate: The proportion of a group affected over a period of time such as a year. It is usually expressed as cases (or deaths, separations, etc.) per 100,000 (population) per year.

Ratio: The value obtained by dividing one quantity by another; a general term of which rate, proportion, percentage, etc., are subsets.[1]

Region: Defined as a First Nations and Inuit Health Branch administrative area that in most cases corresponds to a province. Newfoundland and Labrador, Nova Scotia, New Brunswick and Prince Edward Island are often grouped

as the Atlantic Region. Similarly the Yukon, the Northwest Territories and Nunavut are grouped under the Northern Region (formerly the Northern Secretariat). British Columbia has historically been referred to as the Pacific Region.

Registered Indian: See *Status Indian*.

Remote Isolated Communities: Remote isolated communities have no scheduled flights or road access and minimal telephone and radio service.

Reserve: Land set aside by the federal government for the use and occupancy of an Indian group or band.

Risk Factor: A risk factor is a factor associated with an increased chance of getting a disease; it may be a cause or simply a risk marker. Factors associated with decreased risk are known as protective factors.

Semi-Isolated Communities: Semi-isolated communities also have road access, but the nearest physician services are farther than 90 kilometres away.

Status (Registered) Indian: A Status (Registered) Indian is an Indian person who is registered under the *Indian Act*. The Act sets out requirements for determining who is a Status Indian.

Suitable Dwellings: Dwellings that have enough bedrooms for the size and make-up of resident households, as defined by CMHC.

Treaty Indian: A Status Indian who belongs to a First Nation that signed a treaty with the Crown.

Unemployment Rate: The percentage of persons aged 15 years and over who are currently unemployed and looking for work.

Vital Statistics: Vital statistics are systematically tabulated information concerning births, marriages, divorces, separations, and deaths based on registrations of these vital events.[1]

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ACRONYMS USED IN THIS REPORT

AFN	Assembly of First Nations
AHHRI	Aboriginal Health Human Resources Initiative
APS	Aboriginal Peoples Survey
BMI	Body Mass Index
CANSIM	Canadian Socio-economic Information Management System
CCHS	Canadian Community Health Survey
CMHC	Canadian Mortgage and Housing Corporation
DRE	Digital Rectal Exam
FNCHI	First Nations Comparable Health Indicators
FNIGC	First Nations Information Governance Committee
FNIHB	First Nations and Inuit Health Branch
FPT	Federal/Provincial/Territorial
HIV	Human Immunodeficiency Virus
INAC	Indian and Northern Affairs Canada
LSS	Levels of Service Standard
Pap	Papanicolaou
PHAC	Public Health Agency of Canada
RAPB	Regions and Programs Branch
RHS	First Nations Regional Longitudinal Health Survey
YITS	Youth In Transition Survey

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ADDITIONAL RESOURCES

Federal Government

First Nations and Inuit Health Branch: www.hc-sc.gc.ca/ahc-asc/branch-dirgen/fnihb-dgspni/index-eng.php

Non-insured Health Benefits Program: www.hc-sc.gc.ca/ahc-asc/branch-dirgen/fnihb-dgspni/nihbd-dssna/index-eng.php

Population Health, Public Health Agency of Canada: www.phac-aspc.gc.ca/ph-sp/index-eng.php

Maternal and Infant Health Section: www.phac-aspc.gc.ca/rhs-ssg/index.html

Disease Surveillance on-line: www.phac-aspc.gc.ca/surveillance-eng.php

Health Care System (Reports and Publications): www.hc-sc.gc.ca/hcs-sss/pubs/index-eng.php

Aboriginal Canada portal (Health and Social Services): www.aboriginalcanada.gc.ca/acp/site.nsf/en/ao20017.html

Indian and Northern Affairs Canada (Publications): http://www.ainc-inac.gc.ca/ai/pubs/index-eng.asp

Statistics Canada: www.statcan.ca

2001 Census (Aboriginal tables): www12.statcan.ca/english/census01/Products/standard/themes/ListProducts.cfm?Temporal=2001&APATH=3&THEME=45&FREE=0

Health Indicators (Canada): www.statcan.ca/english/freepub/82-221-XIE/01002/toc.htm

Provincial Reports

British Columbia Vital Statistics: www.vs.gov.bc.ca/stats/indian/index.html

Northwest Territories Health and Social Services: www.hlthss.gov.nt.ca/

Manitoba Centre for Health Policy (Publications): mchp-appserv.cpe.umanitoba.ca/deliverablesList.html

Aboriginal Organizations

National Aboriginal Health Organization: www.naho.ca/english/

Assembly of First Nations: www.afn.ca/article.asp?id=103

Inuit Tapiriit Kanatami: www.itk.ca/index.html

International

Indian Health Service Annual Report (United States—American Indian and Alaska Natives): www.ihs.gov/NonMedicalPrograms/IHS_Stats/index.cfm?module=hqPub&option=index

Australia Indigenous HealthInfoNet: www.healthinfonet.ecu.edu.au

New Zealand Ministry of Health, Maori Health: www.maorihealth.govt.nz/

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Alberta Region

Canada Place, Suite 710
9700 Jasper Avenue
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Manitoba and Saskatchewan Region

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Tel: (613) 952-0088
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www.hc-sc.gc.ca/ahc-asc/branch-dirgen/pacrb-dgapcr/reg/on_e.html

Quebec Region

Complexe Guy-Favreau, East Tower
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www.hc-sc.gc.ca/ahc-asc/branch-dirgen/pacrb-dgapcr/reg/qc_e.html

Atlantic Region

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