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HEALTH DETERMINANTS FOR FIRST NATIONS IN ALBERTA 2016



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HIGHLIGHTS

FIRST NATIONS IN ALBERTA

- Indigenous and Northern Affairs Canada (INAC) recognizes 45 First Nation communities in Alberta, consisting of 47 bands.
- As of December 31, 2014, 39% of the First Nations people registered to Alberta bands were registered to Treaty 6, 25% to Treaty 7, and 36% to Treaty 8.
- As of December 31, 2014, 66% of First Nations people registered to bands in Treaty 6, 71% in Treaty 7, and 44% in Treaty 8 lived on-reserve.
- The population of status First Nations people registered to Alberta bands increased 3.7-fold from 1974 to 2014.
- Although the First Nations population is aging (median age of 25.9 years in 2014), they remain relatively young compared to Canadians (median age of 39.9 years in 2011) and Albertans (median age of 36.0 years in 2011).

LIVING ARRANGEMENT FOR CHILDREN AGED 14 YEARS AND UNDER

- First Nations children living on-reserve (1.9% in Treaty 6, 2.5% in Treaty 7, and 1.6% in Treaty 8) were less likely to be in foster care than First Nations children living off-reserve (9.2%) in Alberta.
- Although registered First Nations people represented 6% of the children aged 14 years and under in Alberta in 2011, they represented 58% of the child population in foster care in Alberta.

EDUCATION

- First Nations people aged 20 years and over with at least a high school diploma increased from 51% in 2006 to 56% in 2011 for men and from 57% in 2006 to 60% for women in Alberta.
- By age 34 years, First Nations women were more than twice as likely to have completed a bachelor's degree or higher than First Nations men in both on- and off-reserve populations.
- First Nations people aged 25 to 34 years living off-reserve without children were more than 3 times more likely to have a bachelor's degree or higher than those with children (18% versus 6% for women and 7% versus 2% for men) in 2011.
- The most common fields of study for First Nations people in Alberta with a bachelor's degree or higher were education, social sciences, and business administration.
- The proportion of students taking Provincial Achievement Tests in Language Arts among self-identified First Nations, Métis and Inuit students increased from 81% in 2010/2011 to 83% in 2014/2015.
- The proportion of self-identified First Nations, Métis and Inuit students achieving an "acceptable" standard on Grade 6 and 9 Provincial Achievement Tests in Mathematics increased from 43% in 2010/2011 to 46% in 2014/2015, while the proportion of those achieving a standard of "excellence" remained stable at 5%.
- The proportion of self-identified First Nations, Métis and Inuit students who achieved an "acceptable" standard on Diploma Examinations in Language Arts remained stable between 2010/2011 and 2014/2015 at 85%.
- The high school completion rate within 5 years of entering Grade 10 for self-identified First Nations, Métis and Inuit students increased from 45% in 2009/2010 to 53% in 2013/2014.
- The dropout rate for self-identified First Nations, Métis and Inuit students aged 14 to 18 years decreased from 10% in 2009/2010 to 8% in 2013/2014.

INCOME

- From 2005 to 2010, the median after-tax economic family income increased by 11% for both First Nations and non-Aboriginal people in Alberta.
- The median after-tax personal income for First Nations people in Alberta increased for all age and sex groups from 2005 to 2010, with the highest increase (41%) occurring among men aged 55–64 years.

- At the same level of education, First Nations females on-reserve had a higher median after-tax personal income than First Nations males on-reserve in 2010.
- In 2010, the median after-tax economic family income for both First Nations and non-Aboriginal individuals living on-reserve was lower than their counterparts living off-reserve in both Canada and Alberta.
- From 2005 to 2010, the median after-tax personal income increased among First Nations people in Alberta in all educational levels, especially among bachelor's degree holders.
- Among First Nations people in Alberta, the median after-tax family income increased for couple families and female lone-parent families from 2005 to 2010 and slightly decreased in male-lone-parent families.
- Within First Nations population in Alberta, the median economic family income in the bottom 10% income group decreased by 5% from 2005 to 2010; and it increased by 23% in the top 10% income group.
- The proportions of children aged 14 years and under living below after-tax low income measure (LIM-AT) decreased from 2005 to 2010 in First Nations couple families and lone-parent families (on and off-reserve).

LABOUR FORCE ACTIVITY

- First Nations people living on reserves in Alberta experienced lower participation and employment rates and higher unemployment rates than First Nations people living off-reserve in Alberta in both 2006 and 2011.
- The participation rate for First Nations people in all geographic areas increased with the education level attained, with participation rates ranging from 28% to 40% for people without a high school diploma, to 77% to 84% for people with a bachelor's or higher degree in 2011.
- Employment rates for First Nations individuals in all geographic areas increased with the education level attained, with employment rates ranging from 18% to 26% for people without a high school diploma to 74% to 80% for people with a bachelor's or higher degree in 2011.

HOUSING

- In 2011, 18.7% and 14.4% of First Nations people in Alberta and Canada, respectively, lived in crowded housing with an even higher proportion for First Nations people living on-reserve (35% in Alberta and 27% in Canada).

- In 2011, 30% and 25% of First Nations people in Alberta and Canada respectively lived in unsuitable housing, and the proportion was much higher for First Nations people living on-reserve (45% in Alberta and 37% in Canada).
- In 2011, 54% of First Nations people in Alberta and 43% of First Nations people in Canada lived on-reserve in houses requiring major repairs.
- In 2011, more than 50 in every 1,000 First Nations people (8.6% in Alberta and 5.7% in Canada) lived in both unsuitable and crowded housing requiring major repairs.

COMMUNITY WELL-BEING (CWB) INDEX

- The average First Nations CWB index improved for all regions across Canada from 1981 to 2011, with the least improvement occurring in the Prairie provinces.
- The average CWB score gap between First Nations and non-Aboriginal communities in Alberta increased from 1981 to 1991, decreased in 1996 and increased afterwards, with the gap in 2011 being wider than the gap in 1981.
- Labour force activity is the component of CWB index with the highest scores over time in the First Nations communities in Alberta, with scores ranging from 62 to 68 on a possible scale of 100.
- Nearly 44% of First Nations communities in Alberta occupied the lower half of the CWB index range (scores 50 and under).

SELECTED MEASURES OF HEALTH STATUS

- In 2014, life expectancy at birth was approximately 74.3 years for First Nations females, and 69.7 years for First Nations males.
- In 2014, approximately 12 in every 100 live births were preterm births among First Nations women.
- Between 2005 and 2014, the average proportion of preterm live births among First Nations mothers increased with maternal age.
- The proportion of live births to First Nations mothers under the age of 20 years decreased from 21% in 2005 to 15% in 2014.
- The prevalence of diabetes among First Nations people in Alberta increased from 5% in 2004 to 7% in 2013.
- In 2014, the First Nations infant mortality rate was approximately 10 deaths per 1,000 live births.
- The age-adjusted potential years of life lost rate for First Nations people increased from 114 per 1,000 population in 2004 to 147 per 1,000 population in 2008 and decreased to 122 per 1,000 population in 2013.



INTRODUCTION

Health is a “universal human aspiration and a basic human need”¹ and is defined by the World Health Organization as “the state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity”.² Health and health-related behaviours are influenced and shaped by economic, physical and social conditions in which people are born, grow, live, work and age, including the health system.^{1,3} These conditions, commonly referred to as “determinants of health” are collectively and mostly responsible for the systematic, unfair, unjust and avoidable difference in health outcomes (health inequities) seen in people within and between communities, provinces and/or countries.^{3,4}

The Public Health Agency of Canada (PHAC) lists 12 key determinants of health. They are:

- income and social status
- social support networks
- education and literacy
- employment or working conditions
- social environments
- physical environments
- personal health practices and coping skills
- healthy child development
- biology and genetic endowment
- health services
- gender
- culture⁵

1 Marmot, M., & Commission on Social Determinants of Health. (2007). Achieving health equity: from root causes to fair outcomes. *The Lancet*, 370 (9593), 1153-1163.

2 World Health Organization (2015). Health. Retrieved November 16, 2015, from www.who.int/trade/glossary/story046/en/

3 World Health Organization. (2015). *Health topics: Social determinants of health*. Retrieved November 16, 2015, from www.who.int/topics/social_determinants/en/

4 Marmot, M., Friel, S., Bell, R., Houweling, T. A., Taylor, S., & Commission on Social Determinants of Health (CSDH). (2008). Closing the gap in a generation: health equity through action on the social determinants of health. *The Lancet*, 372(9650), 1661-1669

5 Public Health Agency of Canada. (2011). *What determines health?* Retrieved November 16, 2015, from www.phac-aspc.gc.ca/ph-sp/determinants/index-eng.php

The National Aboriginal Health Organization (NAHO) lists 8 additional determinants specific to Aboriginal people, including:

- colonization
- globalization
- migration
- cultural continuity
- access
- territory
- poverty
- self-determination⁶

This report contains information about First Nations communities and population in Alberta. It also presents information on some of the health determinants of First Nations in Alberta based on the accessibility of the data. Where data are available, indicators are analyzed by First Nations identity, age, sex, and/or geographic location.

This report is designed to provide information which can be used as a resource by decision makers and program managers for program and service delivery planning aimed at addressing differences in determinants of health and improving the health and well-being of First Nations individuals and communities in Alberta.

It is our hope that this report will contribute to the discussion and awareness of differences in First Nations health outcomes and determinants in Alberta and lead to actions to decrease the differences.

The topics included in this report are Indigenous population in Canada and First Nations population in Alberta, living arrangement for children aged 14 years and under, education, income, labour force activity, housing, community well-being index and selected measures of health status.

DATA SOURCES AND LIMITATIONS

This subsection focuses on the data sources used in the report. Data for this report were mostly consolidated or analyzed from the following sources:

- Indigenous and Northern Affairs Canada Indian Registry System;
- Indigenous and Northern Affairs Canada Community Well-being Database;
- Statistics Canada, Custom Tables
- Alberta Health Interactive Health Data Application
- Alberta Education's Annual Report (Update) 2014 to 2015.

⁶ National Aboriginal Health Organization. (2015). *How we see it! Broader determinants of health within Aboriginal contexts*. Retrieved November 16, 2015, from www.naho.ca/documents/naho/english/publications/vaccho.pdf

INDIGENOUS AND NORTHERN AFFAIRS CANADA (INAC) INDIAN REGISTRY SYSTEM (IRS)

This data file was obtained from Indigenous and Northern Affairs Canada (INAC), and contains demographic information about First Nations registered to bands in Alberta, irrespective of where they live in Canada.

The counts were extracted from the INAC Indian Registry System (IRS) as of December 31 of the given calendar year, and had not been adjusted for late reporting of births or deaths. Furthermore, they reflect residency codes for individuals affiliated with INAC recognized First Nations communities. As such, on-reserve numbers for each First Nation community should not be taken to represent the true population for the following reasons.

- 1) They contain no information on any Non-Registered individuals who may be living on reserve or crown lands.
- 2) They contain no information on any individuals registered to other bands who may be living on reserve or crown lands.
- 3) Because the item “Reserve & Crown Land” is a roll-up of residency fields in the Indian Registration System, they may include counts pertaining to registrants residing on reserve or crown lands belonging to other bands.

The “Reserve & Crown Land” category may also include individuals living on lands affiliated with First Nations communities operating under Self-Government Agreements.

LIMITATIONS ON INAC IRS DATA

- 1) An individual’s information on the IRS is usually updated on the reporting of a life event to the First Nation’s Indian Registry Administrator (IRA), although some bands may update the system more frequently. Perhaps the greatest limitation on Indian Register data involves the late reporting of these life events. According to recent history, nearly 70% of all births reported in any particular year actually occurred in a prior year. This is not out of the ordinary since it is common practice for children to be registered between the ages of 1 to 5. A second error type is introduced because individuals can remain on the Indian Register for some time after they are deceased. A certificate of death or a confirmation of presumed death is normally required to remove a name from the system.
- 2) A second major limitation involves residency codes. Similar to life events, residency codes tend to be updated by the IRA when a life event is reported (although some bands may again update the system more frequently). This makes it possible for an individual to move back and forth between on- and off-reserve, without having his or her information updated if a life event was not reported. Furthermore, the residency field is optional when the IRA updates the system.

INDIGENOUS AND NORTHERN AFFAIRS CANADA COMMUNITY WELL-BEING DATABASE

The Community Well-Being (CWB) Index was developed by INAC to help measure the quality of life of First Nations and Inuit communities in Canada relative to other communities and over time. INAC used Statistics Canada's Census of Population data and the 2011 National Household Survey data to produce a composite "well being" score for individual communities.

The score is made up of composite indicators of education, housing, income, and labour force activity, each of which is out of 100. The Community Well-Being (CWB) Index is the sum of all composite indicators divided by 4.

CWB index values are determined using the following formulae:

- Education = $\{(2/3 \times \text{Proportion of population 20 and over with at least a high school diploma}) + (1/3 \times \text{Proportion of population 25 and over with at least a bachelor's degree})\} \times 100$
- Housing = $\{(\text{Proportion of people living in dwellings with no more than one person per room} + \text{Proportion of people living in houses not in need of major repairs}) / 2\} \times 100$
- Income = $\{[\text{Log}(\text{income per capita}) - \text{Log}(2,000)] / [\text{Log}(40,000) - \text{Log}(2,000)]\} \times 100$
- Labour Force Activity = $\{(\text{Employment rate among those aged 20 to 65 years} + \text{Labour force participation rate among those ages 20 to 65 years}) / 2\}$

Communities are defined in terms of census subdivisions (CSDs) with a population larger than 65 individuals for CWB index purposes. CSDs are municipalities or areas (such as Indian reserves) that are regarded as the equivalent of municipalities.

LIMITATIONS ON INAC WELL-BEING DATABASE

- 1) Some communities defined as Inuit or First Nations may contain important non-Aboriginal populations.
- 2) Similarly, significant Aboriginal populations exist within some areas defined as Other Canadian Communities.
- 3) CWB index scores for 1986 are not available as information on dwelling conditions was not collected in the 1986 census.

More information on CWB index can be found at Indigenous and Northern Affairs Canada website at www.aadnc-aandc.gc.ca/eng/1100100016643/1100100016644

STATISTICS CANADA, CUSTOM TABLES

We requested and received custom tabulation from Statistics Canada based on 2006 Census of Population and 2011 National Household Survey. The custom tables are CRO0143062_CT.1, CRO0143062_CT.2, CRO0143062_CT.3.1, CRO0143062_CT.3.2, CRO0143062_CT.4, and CRO0143062_CT.5 based on 2011 National Household Survey; and CRO0144447_CT.1R, CRO0144447_CT.2, CRO0144447_CT.3.1R, CRO0144447_CT.3.2R, CRO0144447_CT.4, and CRO0144447_CT.5 based on 2006 Census of Population. All the data provided is assumed to be accurate and valid.

Results involving the use of Statistics Canada custom tables are adapted from one or a combination of the custom tables listed above.

NOTE

- 1) All the geographies requested for this custom tabulation have a global non-response rate (GNR) under 50%.
- 2) In 2011, there were a total of 36 Indian reserves and Indian settlements that were “incompletely enumerated” in the NHS. One of these reserves was in Alberta.
- 3) In 2006, a total of 22 Indian reserves and Indian settlements were incompletely enumerated by the census. 3 of these reserves were in Alberta.
- 4) The First Nations population is derived from First Nations (North American Indian) single identity.
- 5) The non-Aboriginal population is derived from non-Aboriginal identity population and excludes the following sub-populations:
 - Persons who reported being an Aboriginal person, that is, First Nations (North American Indian), Métis, or Inuk (Inuit)
 - Persons who reported Registered or Treaty Indian status, which means that they are registered under the Indian Act of Canada
 - Persons who reported membership in a First Nation or Indian band
- 6) “On-reserve” refers to Indian reserves and settlements and includes 6 census subdivision (CSD) types legally affiliated with First Nations community or Indian bands, They are:
 - Indian reserve (IRI)
 - Indian settlement (S-É) (except for the 5 Yukon settlements of Champagne Landing 10, Klukshu, 2 and One-Half Mile Village, 2 Mile Village and Kloo Lake)
 - Indian government district (IGD)
 - terres réservées aux Cris (TC)

- terres réservées aux Naskapis (TK)
 - Nisga'a land (NL), and the northern village of Sandy Bay in Saskatchewan
- 7) Treaty Areas (6/7/8) are made up of reserve Census Subdivisions (CSDs) and Designated Places (DPLs)
- 8) For the 2011 Census, there were 85 Census Subdivisions (CSD) and 2 Designated Places (DPL) which are the underlying component geographies of Treaty 6, 7, and 8.

For more on the 2011 National Household Survey, visit Statistics Canada website at www12.statcan.gc.ca/nhs-enm/2011/ref/nhs-enm_guide/index-eng.cfm

ALBERTA HEALTH INTERACTIVE HEALTH DATA APPLICATION

Alberta Health's Interactive Health Data Application (IHDA) website is designed to provide information on health status and determinants of health for population groups in Alberta. It contains many health statistics (indicators) on a variety of health-related topics. The data for the last section of this report were adapted and consolidated from IHDA website.

NOTE

- 1) **First Nations Status Assignment:** Each individual on the mid-year population registry file (As of June 30 each year) is assigned a First Nations status if they are on the cumulative First Nations Status Registry. This registry is a listing of all individuals on the Alberta Health Care Insurance Plan (AHCIP) population registry who have ever had been assigned a First Nations group number (or have been on an account where the registrant had a First Nations group number).

For more information about IHDA, visit the Alberta Health website at www.ahw.gov.ab.ca/IHDA_Retrieval/



INDIGENOUS POPULATION IN CANADA AND FIRST NATIONS PEOPLE IN ALBERTA

This section provides a brief introduction to the decline and growth of indigenous population in Canada since time of contact to 2011. The rest of this section is dedicated to the population distribution and growth of First Nations in Alberta.

INDIGENOUS POPULATION IN CANADA

The indigenous people of Canada are sovereign and self-sustaining communities with their own cultures, languages and laws. They lived in peace and had ownership of land and resources within their territories before early contact with the Europeans. A conservative estimate is that 500,000 Indigenous people were here before contact with the Europeans. This number was used by the Royal Commission on Aboriginal Peoples⁷ in 1996, though other sources estimate that the population of Indigenous people was over 2 million before contact.^{8,9}

During the initial 200 to 300 years of contact, imported European diseases such as small pox, tuberculosis, influenza, scarlet fever and measles, which were foreign to Indigenous people, decimated the indigenous population⁷, even driving some communities to extinction.¹⁰ Other factors that contributed to the decline of Indigenous population include displacement of Indigenous people from their traditional land by European settlers, conflicts between indigenous groups, and conflicts between indigenous people and European settlers.¹⁰

The population of indigenous people in Canada was 102,358¹¹ in 1871. This is only about 20% of the conservative estimate of the population before contact. It took more than 120 years from 1871 for the indigenous population to grow back to their pre-contact size of 500,000 people.

7 Royal Commission on Aboriginal Peoples, Dussault, R., & Erasmus, G. (1996). *Report of the Royal Commission on Aboriginal Peoples: Looking forward, looking back*. Ottawa, ON: Indian and Northern Affairs Canada.

8 Thornton, R. (1987). *American Indian holocaust and survival: A population history since 1492*. Norman: University of Oklahoma Press.

9 Saul, J. R. (2014). *The comeback: How Aboriginals are reclaiming power and influence*. Toronto, ON: Penguin Canada

10 Northcott, H. C., & Wilson, D. M. (2008). *Dying and death in Canada*. Toronto, ON: University of Toronto Press.

11 Statistics Canada. (2015). *Censuses of Canada 1665 to 1871: Aboriginal peoples*. Retrieved January 26, 2016, from www.statcan.gc.ca/pub/98-187-x/4151278-eng.htm

Figure 1 shows the population size of indigenous people from 1871 to 2011. The period between 1871 and 1941 saw a slow growth in the indigenous population from 102,257 to 125,521. The slow growth may be attributed to the following factors.

- a high burden of diseases such as tuberculosis and a high mortality rate of indigenous people, especially among children who attended residential schools¹²
- discriminating legislation such as the voluntary enfranchisement in the Gradual Civilization Act of 1857 and the compulsory enfranchisement in the Indian Act of 1876¹³
- residential schools starting in the early 1880s
- creation of the Department of Indian Affairs in 1880 to enforce the laws of the Act

It is during this period of time that the 11 numbered treaties with indigenous people were negotiated and signed (1871 to 1921). These treaties are “solemn agreements that set out promises, obligations and benefits” for Indigenous people and Crown,¹⁴ however some of these promises and obligations are unfulfilled.

The period from 1941 to 1971 saw the population of indigenous people increase almost 2.5-fold from 125,521 to 312,760. This growth can be at least partly attributed to the following factors.

- high birth and fertility rates among indigenous people during that period
- improvement of health care delivery and community infrastructure on-reserve
- the rapid decline of infant mortality rates¹⁵ and the overall mortality rate

The inclusion of Newfoundland in the Canadian Census from 1951 is also a contributing factor to the increase in population size.

The period from 1971 to 2011 saw what INAC¹⁶ describe as population “explosion.” The population of indigenous people grew 4.5 to 5.9-fold, depending on the definition (Aboriginal identity or Aboriginal ancestry) used. The growth can partly be explained by factors such as the following.

- relatively high fertility and birth rates among indigenous people during that period
- improvement of on-reserve health care delivery and community infrastructure
- a decline in the infant mortality rate

12 Bryce, P. H. (1922). *The story of a national crime: An appeal for justice to the Indians of Canada*. Ottawa, ON: James Hope and Sons.

13 Indigenous and Northern Affairs Canada. (2010). *Highlights from the report of the Royal Commission on Aboriginal Peoples*. Retrieved February 2, 2016, from www.aadnc-aandc.gc.ca/eng/1100100014597/1100100014637

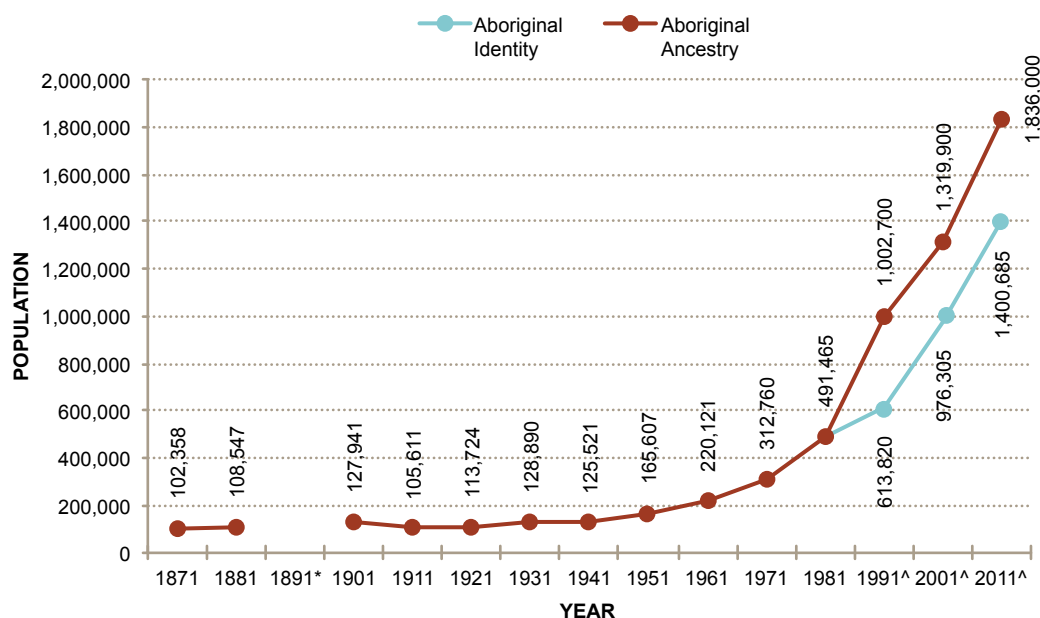
14 INAC.(2010). *Treaties with Aboriginal people in Canada*. www.aadnc-aandc.gc.ca/eng/1100100032291/1100100032292 (Assessed February 02, 2016)

15 Royal Commission on Aboriginal Peoples, Dussault, R., & Erasmus, G. (1996). *Report of the Royal Commission on Aboriginal Peoples: Looking forward, looking back*. Ottawa, ON: Indian and Northern Affairs Canada.

16 Indigenous and Northern Affairs Canada. (2013). *Aboriginal demographics from the 2011 National Household Survey*. Retrieved from www.aadnc-aandc.gc.ca/eng/1370438978311/1370439050610

Part of the growth is also due to legislative changes such as Bill C-31¹⁷ in 1985, which restored Indian status to a number of First Nations people who had lost their Indian Status due to previous discriminatory provisions of the Indian Act and Bill C-3 in 2010. INAC¹⁶ states that a significant proportion of the growth can be attributed to “ethnic mobility (changes in self-reporting of cultural affiliation)”.

FIGURE 1: Indigenous Population, 1871 to 2011



*Data not available for 1891 because no ethnic question was included in census

^Aboriginal Identity (blue) and Aboriginal Ancestry (red)

Source: Statistics Canada. (2014). Section A: Population and Migration, Population (Series A125-163). Retrieved from www.statcan.gc.ca/pub/11-516-x/sectiona/4147436-eng.htm, Statistics Canada: 1991 Aboriginal Peoples Survey, 2001 Census of Population, 2011 National Household Survey; Saku, J. C. (1999). Aboriginal census data in Canada: A research note. *The Canadian Journal of Native Studies*, 19(2), 365-379; and Aboriginal Affairs and Northern Development Canada (2013): Aboriginal Demographics from the 2011 National Household Survey.

17 Indigenous and Northern Affairs Canada. (2010). *The Indian Register*. Retrieved April 10, 2014, from www.aadnc-aandc.gc.ca/eng/1100100032475/1100100032476

FIRST NATIONS COMMUNITIES IN ALBERTA

The Government of Canada entered into various treaties with First Nations communities between 1871 and 1921. First Nations communities gave up large areas of land to the Government of Canada for agriculture, settlement and resource development.¹⁸ In exchange, “the treaties provided for such things as reserve lands and other benefits like farm equipment and animals, annual payments, ammunition, clothing and certain rights to hunt and fish.” The Government of Canada also promised to maintain schools on reserves or provide teachers or educational help to the First Nations communities named in the treaties.¹⁸

Three of the treaties (6, 7 and 8) involved First Nations communities in Alberta. Treaty 6 was signed in August 1876 at Fort Carlton in Saskatchewan and included areas stretching from central Alberta to central Saskatchewan and into Manitoba.¹⁹ Treaty 6 also included the promise of a medicine chest. Treaty 7 was signed in 1877 at the Blackfoot Crossing of the Bow River (present-day Siksika Nation reserve) in Alberta and covers area in southern Alberta.²⁰ Treaty 8 was signed in 1899 at Lesser Slave Lake in Alberta and covers the areas of Northern Alberta, Northwestern Saskatchewan, Northeastern British Columbia, and the Southwest portion of the Northwest Territories.²¹

In Alberta, Treaties 6, 7 and 8 are in the central, southern and northern parts of the province, respectively. Indigenous and Northern Affairs Canada (INAC)²² recognizes 45 First Nations communities in Alberta consisting of 47 bands. The Saddle Lake Cree Nation and Whitefish (Goodfish) Lake First Nation have 2 separate administrations but are considered as one band under the Indian Act and therefore considered as one community by INAC. The Stoney Tribe is considered one community by INAC even though it consists of 3 bands (Bears paw, Chiniki and Wesley). The 45 First Nations communities in Alberta have a total of 140 reserves spread over 812,771 hectares of land²² representing about 1.3% of the total land in Alberta.

There is great cultural diversity within First Nations communities in Alberta as each of the First Nations communities has their own culture, history, language or dialect, and tradition. The most common First Nations languages in Alberta are Blackfoot, Cree, Chipewyan, Dene, Sarcee and Stoney (Nakoda Sioux).²²

The map (Figure 2) shows the 3 treaty areas in Alberta and the First Nations communities in each treaty area.

18 Indigenous and Northern Affairs Canada. (2010). *Treaties with Aboriginal people in Canada*. Retrieved January 19, 2016, from www.aadnc-aandc.gc.ca/eng/1100100032291/1100100032292

19 The Confederacy of Treaty Six First Nations. (n.d.) Welcome to Treaty 6 First Nations. Retrieved January 19, 2016, from www.treatysix.org/

20 Indigenous and Northern Affairs Canada. (2013). *Treaty Texts - Treaty and Supplementary Treaty No. 7*. Retrieved January 19, 2016, from www.aadnc-aandc.gc.ca/eng/1100100028793/1100100028803

21 Treaty 8 First Nations of Alberta. (n.d.). Treaty 8 Alberta Region. Retrieved March 14, 2016, from www.treaty8.ca/Education/Treaty-8-AB-Region

22 Indigenous and Northern Affairs Canada. (2010). *First Nations in Alberta*. Retrieved on October 6, 2015, from www.aadnc-aandc.gc.ca/eng/1100100020670/1100100020675

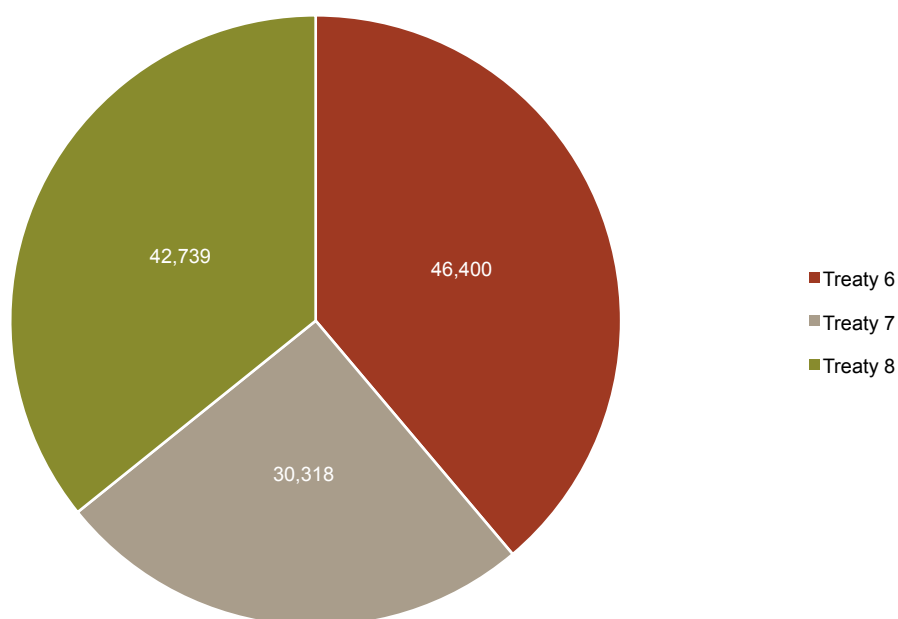
FIGURE 2: Map of First Nations Communities in Alberta



Source: Indigenous and Northern Affairs Canada. (2010). *Alberta First Nations Map*.

INAC's Indian Registry System (IRS) provides membership information for each band. Figure 3 shows that as of December 31, 2014, 39% of the First Nations people registered to Alberta bands were registered to Treaty 6, 25% were registered to Treaty 7, and 36% were registered to Treaty 8.

FIGURE 3: Band Registration by Treaty Area in Alberta, 2014



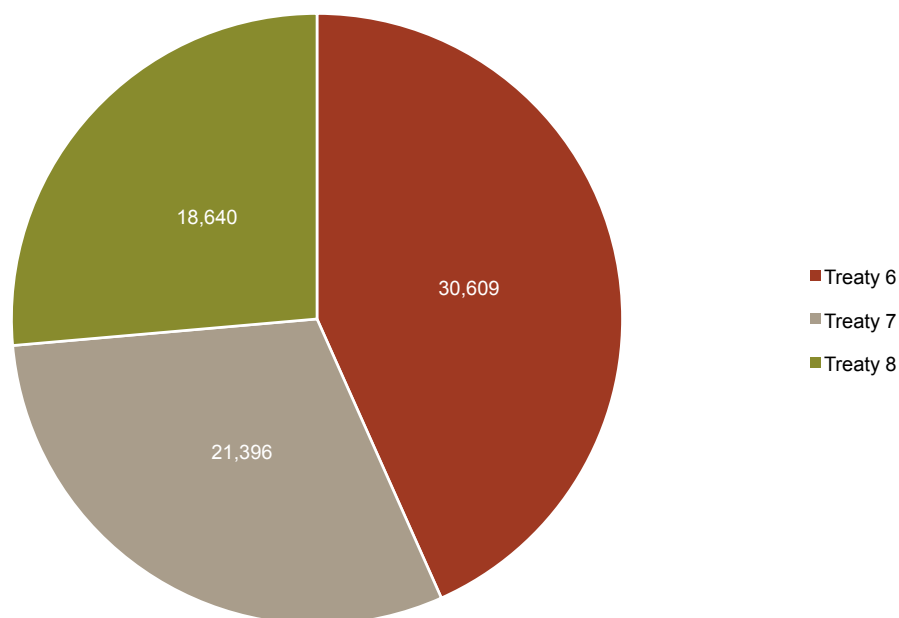
Source: INAC Indian Registry System

INAC's IRS provides residence²³ data to indicate whether an individual is residing on-reserve, on Crown land, or off-reserve. Figure 4 indicates that 43% of First Nations people living on-reserve in Alberta are Treaty 6 members, 30% are Treaty 7 members and 27% are Treaty 8 members.

Figure 3 and Figure 4 show that 66% of First Nations people registered to bands in Treaty 6, 71% in Treaty 7, and 44% in Treaty 8 lived on-reserve as of December 31, 2014. Treaty 8 had the highest proportion of members (7%) living on Crown land with the total on Crown land and on-reserve population being 50% of the total Treaty population (Table 1).

²³ Individual's residency information is usually updated on the reporting of a life event (such as marriage, birth and death) to the First Nation's Indian Registry Administrator, even though some bands may update the system more frequently.

FIGURE 4: On-Reserve First Nations Population by Treaty Area in Alberta, 2014



Source: INAC Indian Registry System

First Nations communities in Alberta vary considerably in size, from Duncan's First Nation with a population of 290, to the Blood Tribe, which had a population of 12,027 as of December 31, 2014. Table 1 provides population data for each of the First Nations communities in Alberta, and membership data for each band including on-reserve, Crown land and off-reserve and total population. Most bands (33 out of 47) have less than 1% of their members residing on Crown land.

Few First Nations communities in Alberta have more than 10% of their population on Crown Land; they include Peerless Trout (81%), Smith's Landing (45%), Lubicon Lake (45%), Athabasca Chipewyan (19%) and Mikisew Cree (18%).

TABLE 1: Population Data for First Nations Communities in Alberta, 2014

COMMUNITIES		ON-RESERVE	ON CROWN LAND	OFF-RESERVE	TOTAL
TREATY 6	Alexander First Nation	1,095	5	1,040	2,140
	Alexis Nakota Sioux Nation	1,172	3	744	1,919
	Beaver Lake Cree Nation	392	10	710	1,112
	Cold Lake First Nations	1,350	4	1,415	2,769
	Enoch Cree Nation	1,651	4	821	2,476
	Ermieskin Cree Nation	3,340	102	1,016	4,458
	Frog Lake First Nation	1,976	4	1,119	3,099
	Heart Lake First Nation	209	0	127	336
	Kehewin Cree Nation	1,162	24	854	2,040
	Louis Bull Tribe	1,733	10	435	2,178
	Montana First Nation	755	1	230	986
	O'Chiese First Nation	896	1	380	1,277
	Paul First Nation	1,366	1	656	2,023
	Saddle Lake Cree Nation	6,396	15	3,759	10,170
	Samson Cree Nation	6,224	12	1,855	8,091
	Sunchild First Nation	892	0	434	1,326
TOTAL		30,609	196	15,595	46,400
TREATY 7	Blood Tribe	8,339	4	3,684	12,027
	Piikani Nation	2,405	0	1,258	3,663
	Siksika Nation	4,058	7	2,972	7,037
	Stoney Tribe (Bears paw Nakoda Sioux First Nation)	1,734	1	140	1,875
	Stoney Tribe (Chiniki Nakoda Sioux First Nation)	1,580	1	151	1,732
	Stoney Tribe (Wesley Nakoda Sioux First Nation)	1,595	5	178	1,778
	Tsuut'ina Nation	1,685	2	519	2,206
TOTAL		21,396	20	8,902	30,318

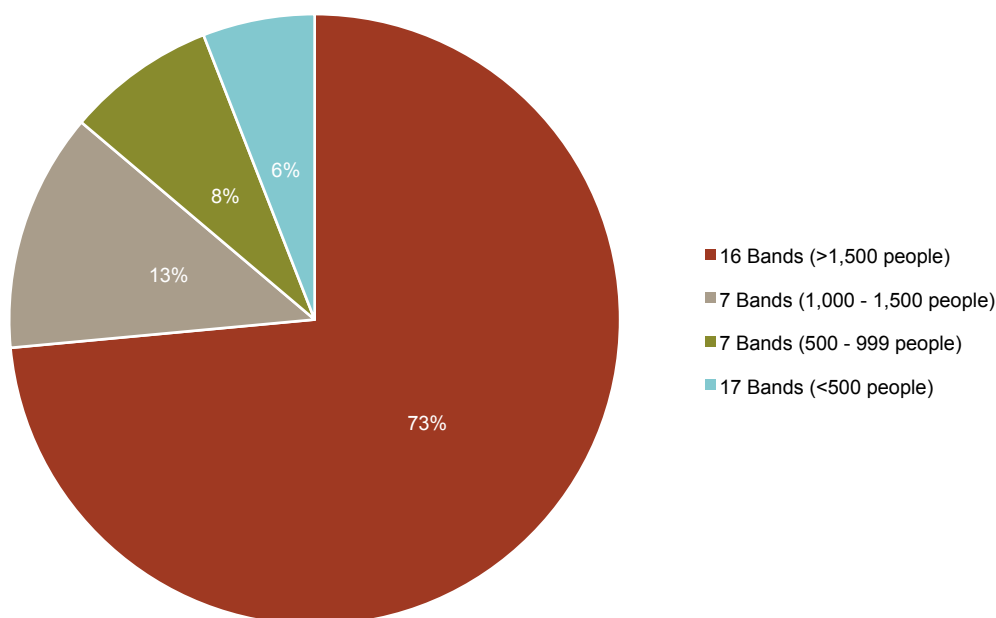
TREATY 8	Athabasca Chipewyan First Nation	30	217	892	1,139
	Beaver First Nation	453	4	588	1,045
	Bigstone Cree Nation	3,005	228	4,358	7,591
	Chipewyan Prairie First Nation	380	0	498	878
	Dene Tha' First Nation	2,039	6	896	2,941
	Driftpile First Nation	936	0	1,697	2,633
	Duncan's First Nation	145	2	143	290
	Fort McKay First Nation	408	7	418	833
	Fort McMurray First Nation	277	3	441	721
	Horse Lake First Nation	476	0	630	1,106
	Kapawe'no First Nation	132	0	233	365
	Little Red River Cree Nation	4,182	419	650	5,251
	Loon River First Nation	471	8	108	587
	Lubicon Lake Band	80	225	198	503
	Mikisew Cree First Nation	220	557	2,198	2,975
	Peerless Trout First Nation	60	717	105	882
	Sawridge First Nation	48	1	424	473
	Smith's Landing First Nation	0	156	185	341
	Sturgeon Lake Cree Nation	1,469	2	1,677	3,148
	Sucker Creek First Nation	771	9	1,964	2,744
	Swan River First Nation	406	1	875	1,282
	Tallcree First Nation	540	3	733	1,276
	Whitefish Lake First Nation (Atikameg)	1,321	223	1,071	2,615
	Woodland Cree First Nation	791	31	298	1,120
	TOTAL	18,640	2,819	21,280	42,739
	TOTAL	70,649	3,035	46,665	120,349*

*Includes 892 Alberta District General List members

Source: INAC Indian Registry System

Figure 5 shows that the majority of First Nations people who live on-reserve in Alberta live in larger communities. In fact, 73% live in the 14 communities (or 16 bands) that have a total on-reserve population of at least 1,500, and 86% live in 21 communities (or 23 bands) with a total on-reserve population over 1,000.

FIGURE 5: On-Reserve First Nations Population Distribution by Total On-Reserve Community Size in Alberta, 2014



Source: INAC Indian Registry System

POPULATION GROWTH OF FIRST NATIONS PEOPLE REGISTERED TO ALBERTA BANDS

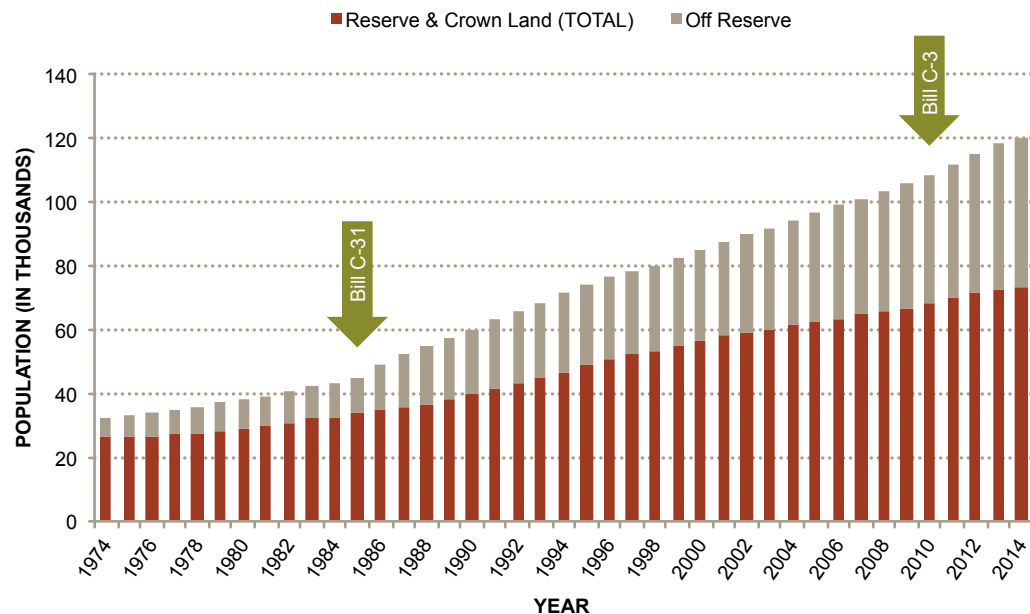
The population growth in First Nations people registered to Alberta bands between 1974 and 2014 can be defined by 3 distinctive time periods (Figure 6).

- The population grew slowly by just under 13,000, from 32,437 in 1974 to 45,270 in 1985, representing an average annual growth rate of 3.1%.
- The period between 1985 and 1991 saw the population of First Nations people registered to Alberta bands grow faster (especially among those living off-reserve) at an average annual growth rate of 5.7%.
- This growth may be due to the passage and impact of Bill C-31²⁴ in 1985, which restored Indian status to a number of First Nations individuals who had lost their Indian Status due to previous discriminatory provisions of the Indian Act.

²⁴ Indigenous and Northern Affairs Canada. (2010). *The Indian Register*. Retrieved April 10, 2014, from www.aadnc-aandc.gc.ca/eng/1100100032475/1100100032476

- ④ The third period (between 1991 and 2014) saw relatively slower growth at an average annual growth rate of 3.3% compared to the previous period.
- ④ The population of status First Nations registered to Alberta bands increased almost 4-fold (3.7 times) from 32,437 in 1974 to 120,349 in 2014 (2.8 times for those on-reserve or Crown land and 7.8 times for those off-reserve).

FIGURE 6: Population of First Nations People Registered to Alberta Bands by Residence, 1974 to 2014



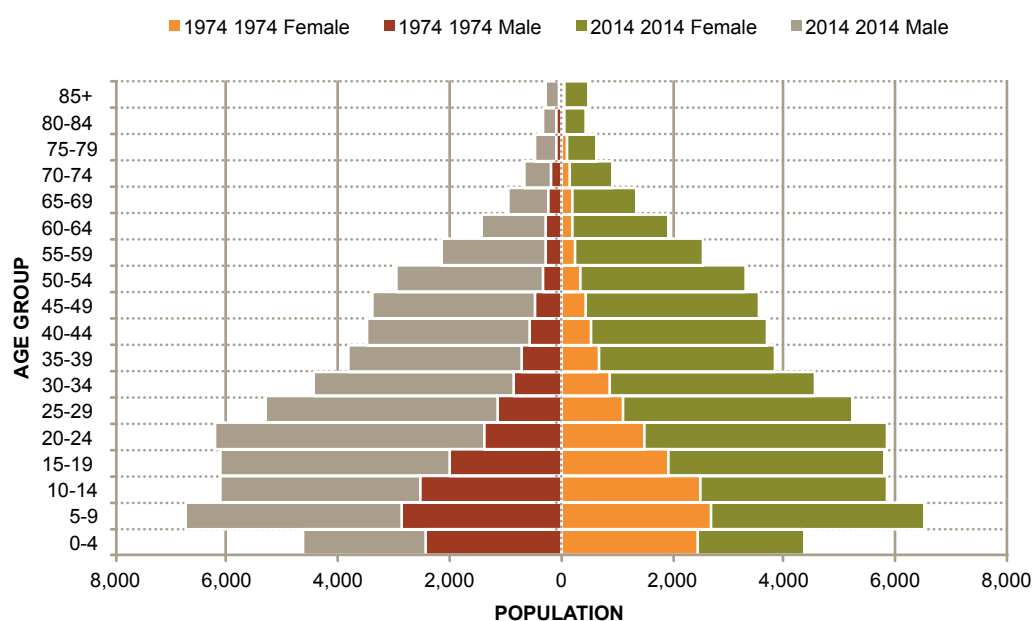
Source: INAC Indian Registry System

The population pyramid (Figure 7) shows the age and sex distribution of First Nations people registered to Alberta bands. It has a triangular shape with a very large base, which indicates a younger population. The 0 to 4 years age group appears smaller, which may be partially due to delays in reporting births to the Indian Registry System.

The age and sex distribution of the First Nations' population has changed significantly over the last 4 decades. In 1974, approximately 48% of First Nations people were under the age of 15 years, while only 28% of First Nations people were under the age of 15 years in 2014. On the other hand, approximately 8% of First Nations people in 2014 were over the age of 60 years, while 5% were over the age of 60 years in 1974. A significant increase in the proportion of First Nations people aged 45 to 64 years was seen between 1974 (8%) and 2014 (18%).

The number of individuals aged 45 to 64 years as a percentage of those aged 15 to 64 years (called the working age) is an indicator of the aging of the working-age population. In 1974, First Nations people aged 45 to 64 years made up approximately 16% of the First Nations working-age population, and this proportion increased to over 26% in 2014. These changes can have serious implications for policy, planning, development and delivery of programs and services for First Nations.

FIGURE 7: Changes in the Age Structure of the Population of First Nations People Registered to Alberta Bands, 1974 and 2014



Source: INAC Indian Registry System

The median age of First Nations people in 1974 was 15.9 years, which is ten years younger than the median age of 25.9 years for First Nations people in 2014. Although the First Nations population is aging, they remain relatively young compared to Canadians overall (median age of 39.9 years in 2011) and Albertans²⁵ (median age of 36.0 years in 2011).

The change in the age structure of First Nations population may be due to many factors including a decreased or relatively stable fertility rate, an increase in life expectancy due to improvement in health and well-being, net migration as a result of Bill C-31 and Bill C-3, and events²⁶ that promote the image and pride of First Nations.

25 Statistics Canada. (2013). *Population estimates, age distribution and median age as of July 1, 2011, Canada, provinces and territories*. Retrieved January 28, 2014, from www.statcan.gc.ca/daily-quotidien/110928/t110928a3-eng.htm

26 Guimond, E., Kerr, D., & Beaujot, R. (2004). Charting the growth of Canada's Aboriginal populations: Problems, options and implications. *Canadian Studies in Population*, 31, 55-82.



LIVING ARRANGEMENTS FOR CHILDREN AGED 14 YEARS AND UNDER

Children's living arrangements can influence their behaviour, health and well-being.^{27,28} Studies^{27,28} have shown that children living with stepfamilies, grandparents, single mothers and those in foster care have poorer health than those living with both biological parents. A study among First Nations in Canada found that youth who lived with their biological parents were less likely engage in suicide ideation and parasuicide compared those living in other arrangements.²⁹

Amato²⁸ showed that differences in health outcomes between children living with both biological parents and single parents may be due to factors such as economic hardship, quality of parenting and exposure to stress. Children who live with both biological parents often experienced less economic hardships, a higher standard of living, more effective parenting, and less exposure to stressful events and circumstances, compared to children who live with single parents.²⁸

Children's living arrangements are influenced by many factors such as parental death, divorce, re-partnering, common-law partnerships, birth to lone parents and multigenerational families. In this section, we look at the living arrangement for First Nations children aged 14 years and under in Alberta.

27 Ziolo-Guest, K. M., & Dunifon, R. E. (2014). Complex living arrangements and child health: Examining family structure linkages with children's health outcomes. *Family Relations*, 63, 424-437.

28 Amato, P. R. (2005). The impact of family formation change on the cognitive, social, and emotional well-being of the next generation. *The Future of Children*, 15(2), 75-96.

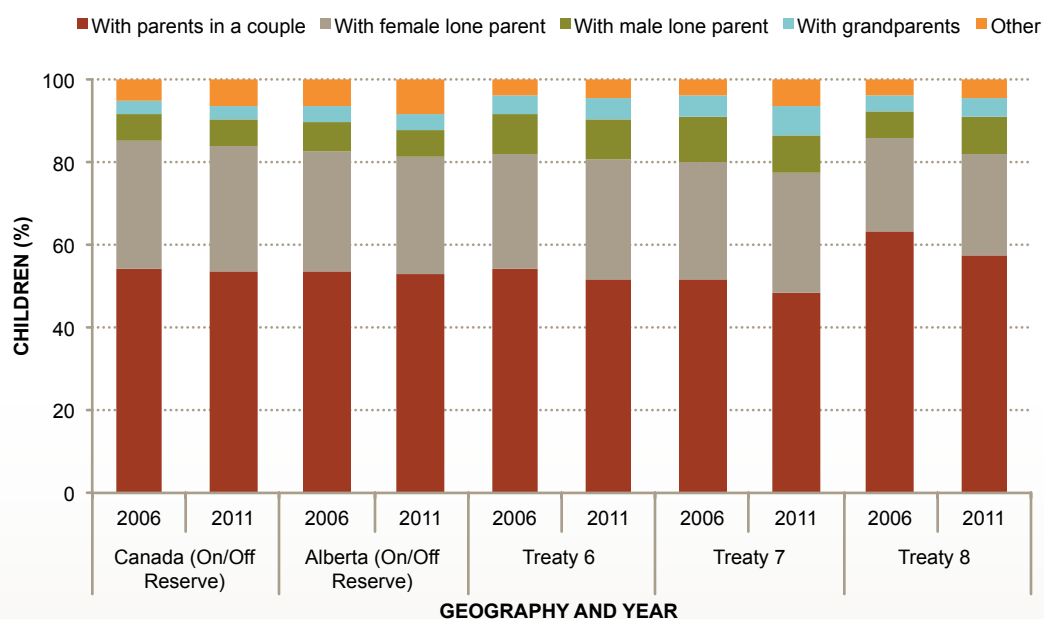
29 First Nations Information Governance Centre. (2014). *Youth resilience and protective factors associated with suicide in First Nations communities*. Retrieved from www.afnigc.ca/main/includes/media/pdf/digital%20reports/Youth%20Resilience%20FINAL%20PAPER_Mar%202014.pdf.

The proportion of First Nations children who lived with parents (in a couple) in 2011 was slightly lower than 2006, as shown in Figure 8.

- Treaty 6: 51.9% vs. 54.4%
- Treaty 7: 48.4% vs. 51.9%
- Treaty 8: 57.7% vs. 63.4%
- Alberta: 53.2% vs. 53.7%
- Canada: 53.6% vs. 54.2%

First Nations children in Treaty 8 reserves were more likely to live with both parents and less likely to live with grandparents or lone parents than those in Treaty 6 and Treaty 7.

FIGURE 8: Living Arrangement of First Nations Children Aged 14 Years and Under by Geography, 2006 and 2011

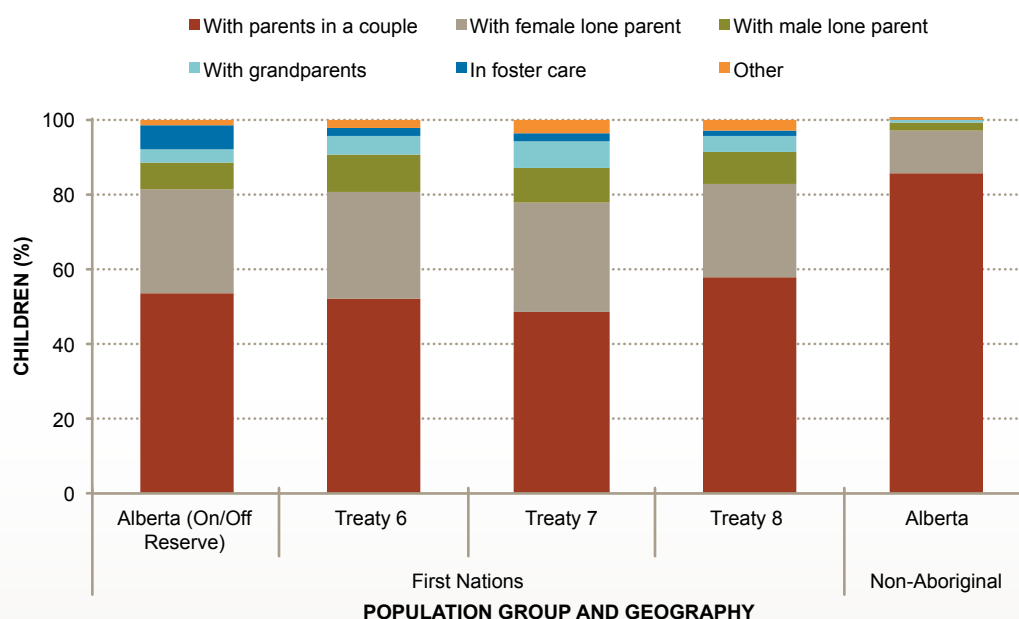


Source: Statistics Canada, Custom Tables

Figure 9 shows the variation in living arrangements of children aged 14 years and under for First Nations and non-Aboriginal people in Alberta in 2011.

- While 54% of First Nations children lived with parents (in a couple), 86% of non-Aboriginal children lived with parents (in a couple) in 2011 in Alberta.
- First Nations children living on-reserve (1.9% in Treaty 6, 2.5% in Treaty 7, and 1.6% in Treaty 8) were less likely to be in foster care than those living off-reserve (9.2%) in Alberta.
- First Nations children (6.2%) were over 30 times more likely to be in foster care than non-Aboriginal children in Alberta in 2011.
- First Nations children living on-reserve (5.2% in Treaty 6, 6.8% in Treaty 7, and 4.5% in Treaty 8) were more likely to live with their grandparents than those living off-reserve (2.9%) in Alberta.

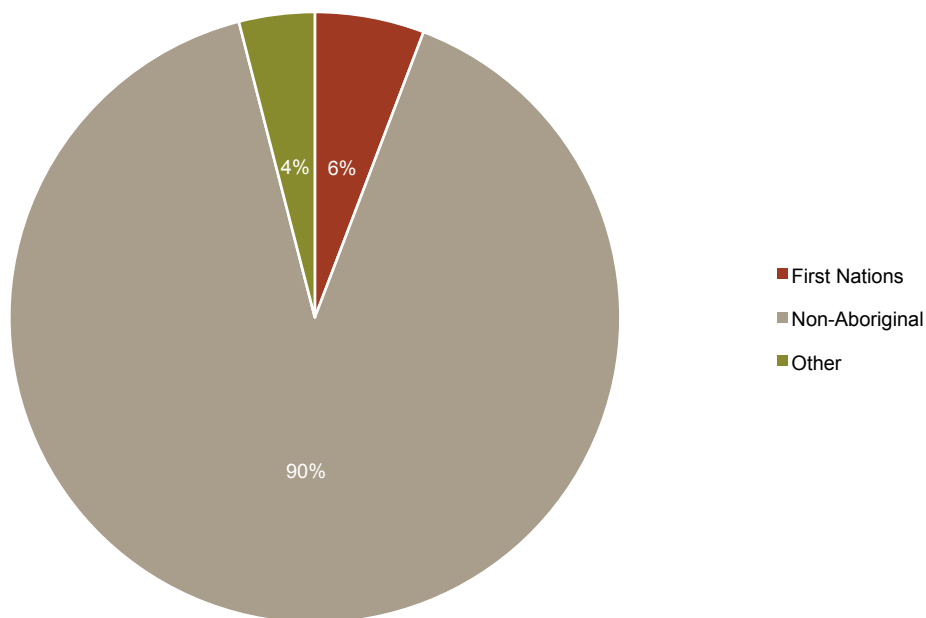
FIGURE 9: Living Arrangement of Children Aged 14 Years and Under in Alberta by Population Group, 2011



Source: Statistics Canada, Custom Tables

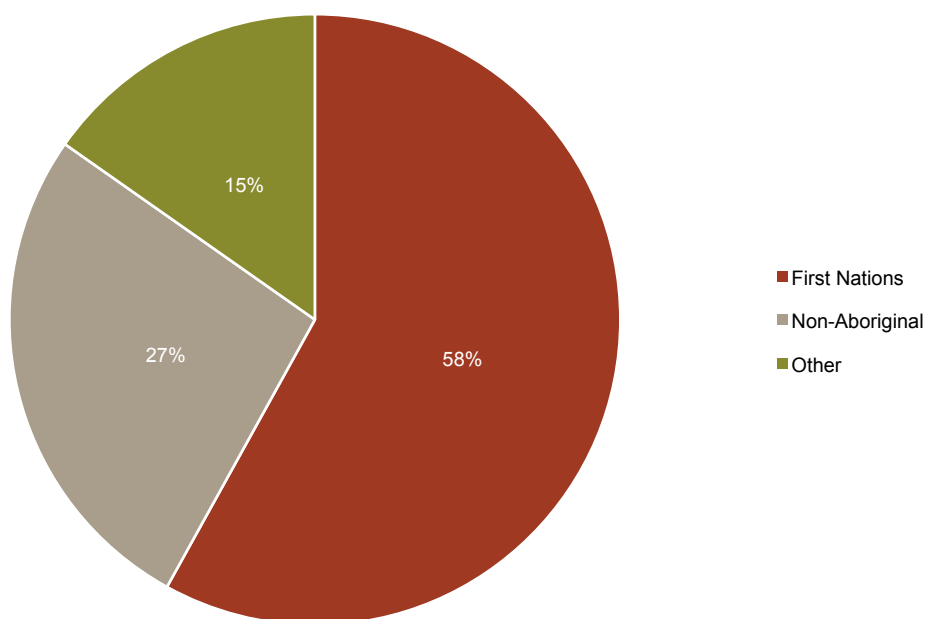
Figure 10 shows the percentage distribution of children aged 14 years and under in Alberta by population group and Figure 11 shows the percentage distribution of children aged 14 years and under in foster care by population group. Although registered First Nations represented 6% of the children aged 14 years and under population in Alberta in 2011, they represented 58% of the child population in foster care in Alberta (Figures 10 and 11).

FIGURE 10: Proportion of Children Aged 14 Years and Under in Alberta by Population Group, 2011



Source: Statistics Canada, Custom Tables

FIGURE 11: Proportion of Children Aged 14 Years and Under in Foster Care in Alberta by Population Group, 2011

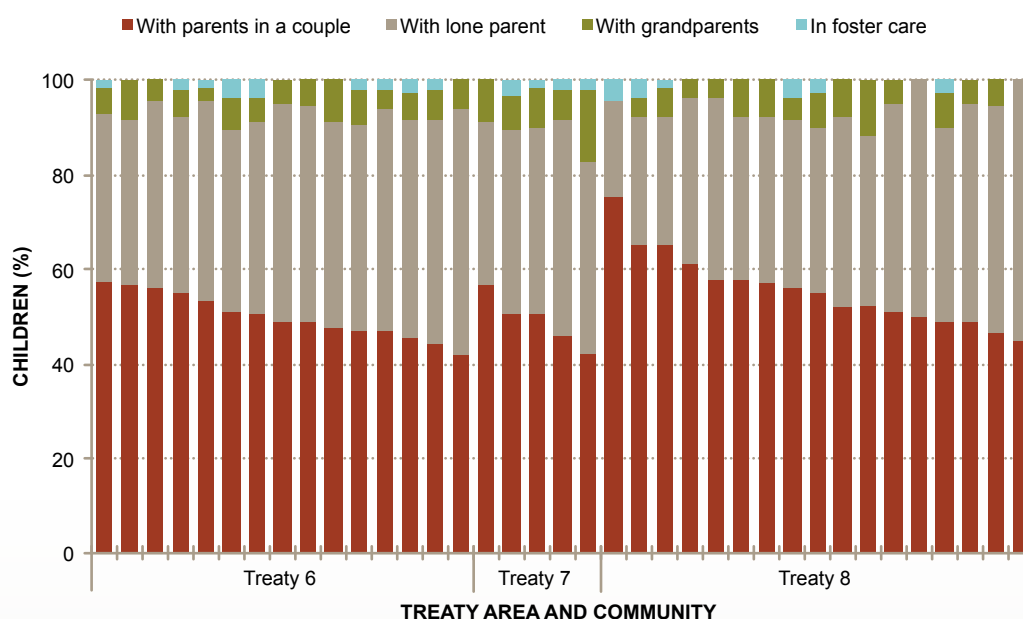


Source: Statistics Canada, Custom Tables

Figure 12 shows the living arrangement for children of all ages with First Nations, Métis or Inuit identity living in First Nations communities in Alberta by Treaty Area. Living arrangements for children vary within and between Treaty areas. For example, the proportion of children with First Nations, Métis or Inuit identity who lived with parents (in a couple) on-reserve in 2011 varied from 57% to 42% in Treaty 6, 57% to 42% in Treaty 7, and 76% to 45% in Treaty 8 in Alberta.

It should be noted that majority of the children with First Nations, Métis or Inuit Identity in these communities are First Nations. The data is as presented because data for only First Nations Identity was not available at the time of writing this report.

FIGURE 12: Living Arrangement of Children of All Ages with First Nations, Métis or Inuit Identity by Treaty Area and Community, Alberta, 2011



Source: Adapted from Statistics Canada. (2013). *2011 National Household Survey Aboriginal population profile* (Catalogue No. 99-011-X2011007). Retrieved from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/index.cfm?Lang=E.



EDUCATION

The relationship between education attainment and health is well-known and established. Cutler and Lleras-Muney³⁰ using data from the National Health Interview Survey (NHIS) in the United States showed that people with higher levels of education:

- have lower morbidity risk from most acute and chronic diseases such as heart diseases, stroke, hypertension, diabetes emphysema and asthma attacks;
- are less likely to smoke, to drink excessively, to be overweight or obese and to use illegal drugs;
- are more likely to exercise, and to obtain preventative care such as flu shots, vaccines, mammograms, pap smears and colonoscopies;
- are more likely to use seat belts;
- are less likely to report anxiety, depression and poor health;
- spend fewer days off work due to illness; and
- are less likely to die within 5 years of survey interview.

The impact of education on health may be direct, such as education affecting a person's ability to understand and use the health care system and health information, and communicate with health professionals effectively.³¹

The impact can also be indirect, such as education impacting a person's ability to secure employment and hence a person's income; this in turn influences a person's material and physical conditions such as nutritional intake, housing conditions, air and water quality, and proper sewage disposal.³¹

30 Cutler, D. M., & Lleras-Muney, A. (2006). *Education and health: Evaluating theories and evidence* (NBER Working Paper No. 12352). Cambridge, MA: National Bureau of Economic Research.

31 Andersen, A. M. N., & Mortensen, L. H. (2006). *Socioeconomic inequality in birth outcomes: What do the indicators tell us, and where do we find the data?* *Canadian Medical Association Journal*, 174, 1429-1430

This section examines the educational attainment of First Nations people in Alberta and provincial achievement scores of self-identified First Nations Métis and Inuit students in Alberta.

EDUCATIONAL ATTAINMENT

This sub-section explores the educational attainment of First Nations people in Alberta. The highest level of education attained refers to a person's most advanced certificate, diploma or degree. The general hierarchy used in deriving educational attainment level "(high school graduation, trades, college, university) is loosely tied to the 'in-class' duration of the various types of education.

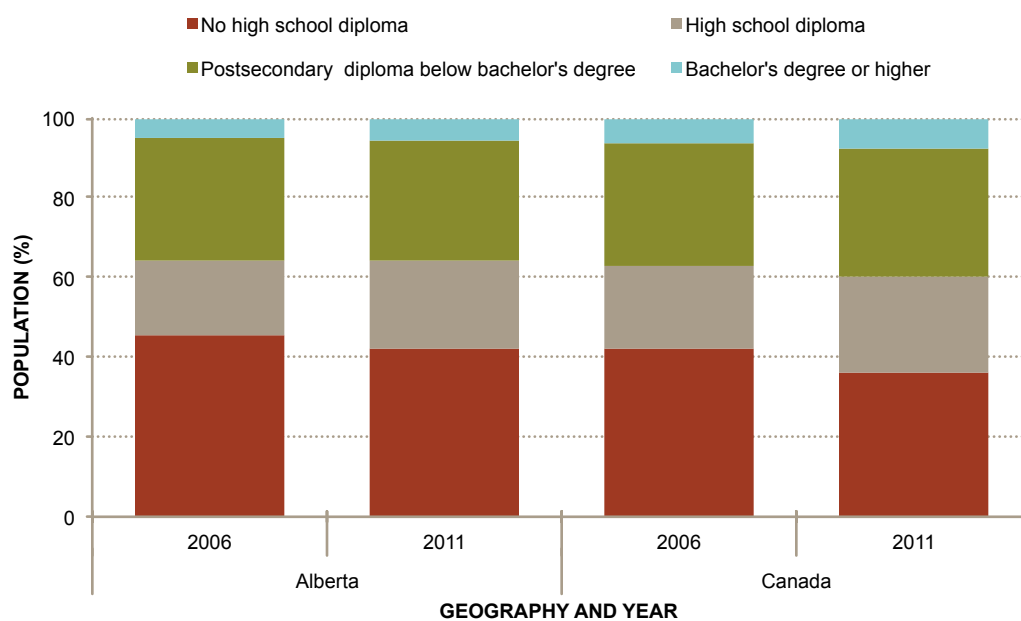
At the detailed level, someone who has completed one type of certificate, diploma or degree will not necessarily have completed the credentials listed below it in the hierarchy. For example, a registered apprenticeship graduate may not have completed a high school certificate or diploma, nor does an individual with a master's degree necessarily have a 'certificate or diploma above the bachelor's level.' Although the hierarchy may not fit all programs perfectly, it gives a general measure of educational attainment"³²

Figure 13 shows the highest level of education completed among the First Nations population aged 20 years and over in Alberta and Canada in census periods, 2006 and 2011.

- The proportion of First Nations population aged 20 years and over without a high school diploma decreased from 46% in 2006 to 42% in 2011 in Alberta and from 42% in 2006 to 36% in Canada.
- The proportion of First Nations people with high school diploma or higher in Alberta was lower than the proportion in Canada in both census years.

32 Statistics Canada. (2013). *National Household Survey dictionary, 2011* (Catalogue No. 99-000-X2011001). Retrieved December 8, 2015, from www12.statcan.gc.ca/nhs-enm/2011/ref/dict/99-000-x2011001-eng.pdf

FIGURE 13: Highest Level of Education Attained for Population Aged 20 Years and Over, First Nations People in Alberta and Canada, 2006 and 2011

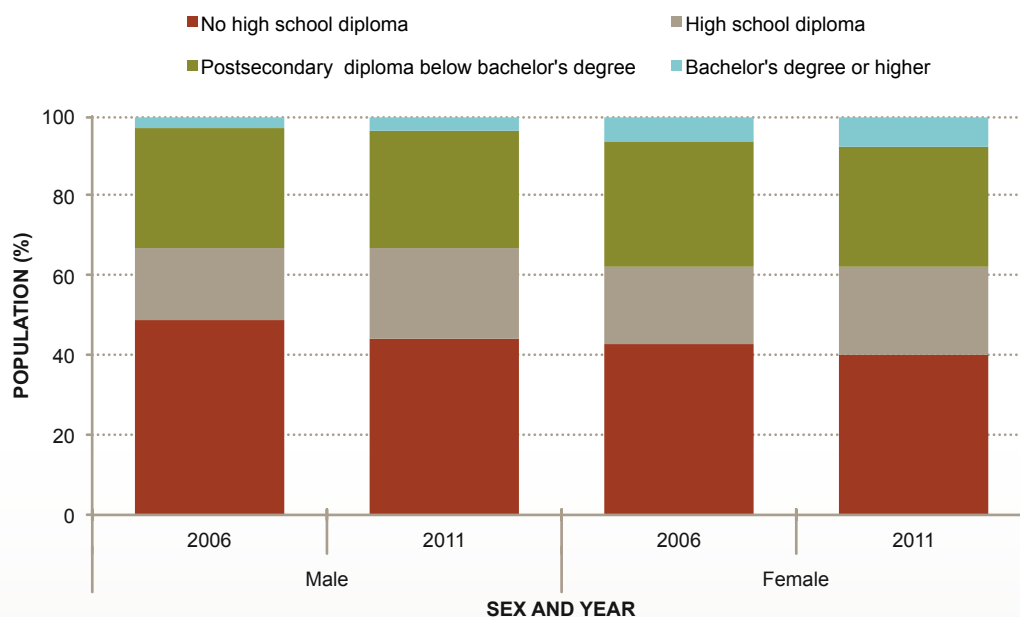


Source: Statistics Canada, Custom Tables

Figure 14 demonstrates the highest level of education completed among the First Nations population aged 20 years and over in Alberta by sex in 2006 and 2011. Details are:

- First Nations people aged 20 years and over without a high school diploma decreased from 49% in 2006 to 44% in 2011 for men and from 43% in 2006 to 40% for women in Alberta.
- First Nations women aged 20 years and over in Alberta were 2 times more likely to have completed a bachelor's degree or higher than First Nations men in both 2006 and 2011.
- First Nations women aged 20 years and over in Alberta were more likely to have a high school diploma or higher degree than First Nations men in both 2006 and 2011, with the gap decreasing in 2011.

FIGURE 14: Highest Level of Education Attained for Population Aged 20 Years and Over, First Nations in Alberta by Sex, 2006 and 2011

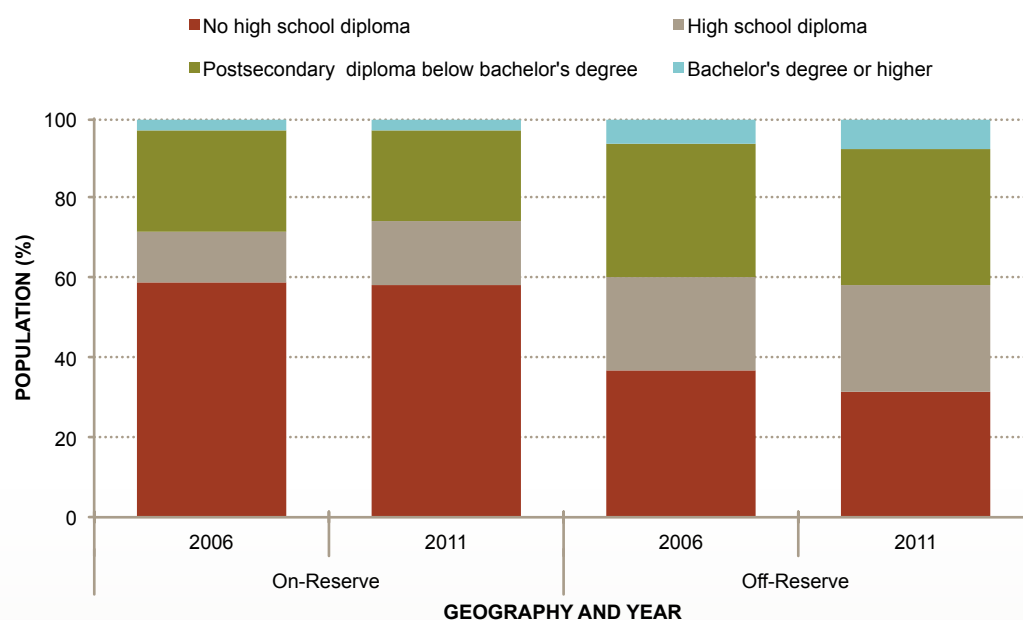


Source: Statistics Canada, Custom Tables

Figure 15 shows the highest level of education completed among the First Nations population aged 20 years and over in Alberta by area of residence (on- and off-reserve) in 2006 and 2011. Details are:

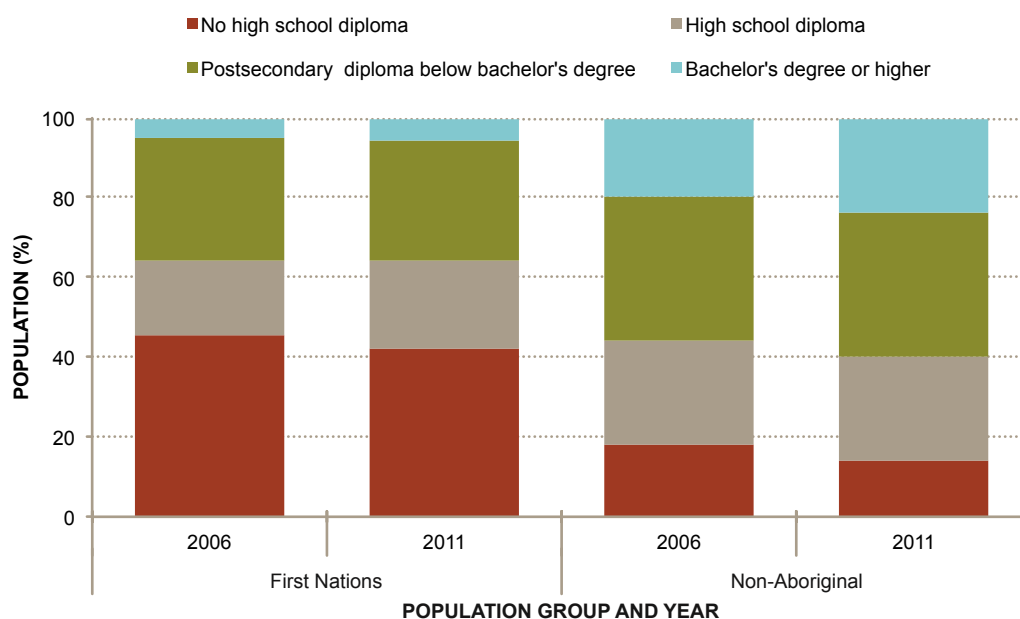
- The proportion of First Nations population aged 20 years and over without a high school diploma living off-reserve in Alberta decreased from 37% in 2006 to 32% in 2011.
- The proportion of those living on-reserve decreased from 59% in 2006 to 58% in 2011.
- More First Nations with a high school diploma or higher lived off-reserve than on-reserve at each education level in both census years.

FIGURE 15: Highest Level of Education Attained for Population Aged 20 Years and Over, First Nations in Alberta, On- and Off-Reserve, 2006 and 2011



Source: Statistics Canada, Custom Tables

FIGURE 16: Highest Level of Education Attained for Population Aged 20 Years and Over in Alberta, First Nations and Non-Aboriginal, 2006 and 2011



Source: Statistics Canada, Custom Tables

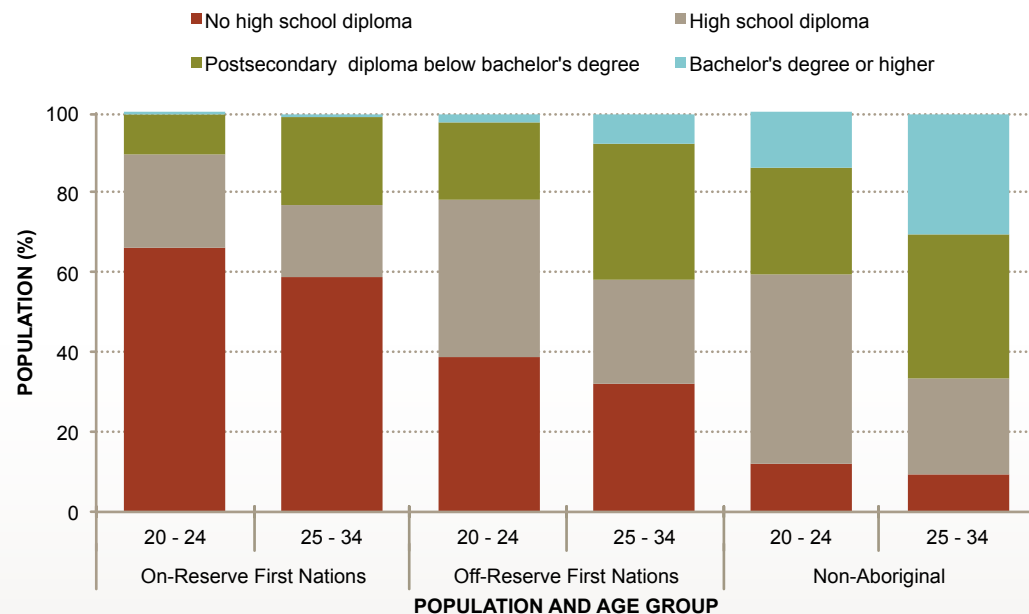
The greatest disparity found between education levels of First Nations and non-Aboriginal peoples occurs between those who have completed a bachelor's degree or higher, followed by those who have not completed high school.

The proportion of First Nations aged 20 years and over in Alberta without a high school diploma was 2 to 3 times higher than their non-Aboriginal counterparts in both 2006 and 2011. First Nations were 4 times less likely to have completed a bachelor's degree or higher than non-Aboriginals in Alberta in both 2006 and 2011 (Figure 16).

Figure 17 shows the differences in educational attainment level between First Nations and non- Aboriginal people in Alberta in 2011.

- While by age 24, 12% of non-Aboriginal people did not have a high school diploma, 39% of First Nations people off-reserve and 66% of First Nations people on-reserve did not have a high school diploma.
- Although the proportion of First Nations people without a high school diploma improves by age 34 to 32% of those off-reserve and 59% for those on-reserve, it remains significantly higher than the degreeless rate for non-Aboriginal people of the similar age in Alberta.
- Between the ages of 25 and 34, 8% of First Nations individuals off-reserve and 1% of First Nations individuals on-reserve had a bachelor's degree or higher, compared to 31% of non-Aboriginal individuals.

FIGURE 17: Highest Level of Education Attained for Population Aged 20 to 34 Years in Alberta, First Nations and Non-Aboriginal, 2011

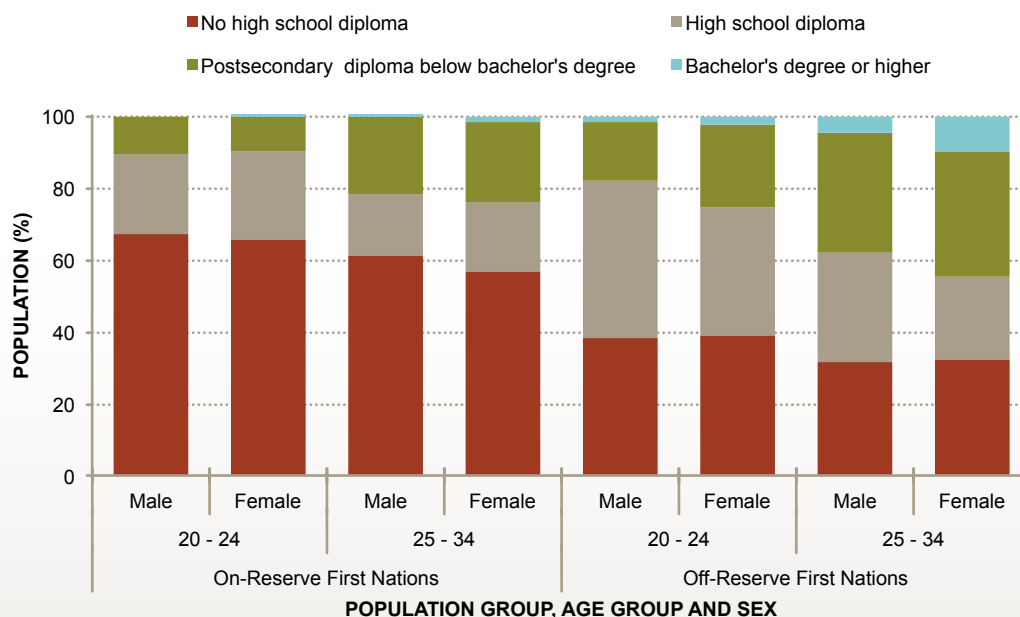


Source: Statistics Canada, Custom Tables

In 2011, the highest levels of education attained can be summarized as follows.

- The proportion of First Nations people on-reserve in Alberta aged 25 to 34 years without a high school diploma was higher among men (61%) than women (57%).
- The proportion of First Nations people on-reserve in Alberta aged 25 to 34 years without a high school diploma was similar for First Nations men (67%) and women (66%) aged 20 to 24 years (Figure 18).
- Among First Nations people living off-reserve, the proportion of those without a high school diploma was similar for men and women aged 20 to 24 years (39%) and 25 to 34 years (32%).
- By age 34, First Nations women were more than 2 times likely to have completed a bachelor's degree or higher than First Nations men both on- and off-reserve.
- In 2011, while 1 in every 10 First Nations women aged 25 to 34 years living off-reserve had at least a bachelor's degree, only 1 in 50 First Nations women aged 25 to 34 years living on-reserve had a bachelor's degree or higher.

FIGURE 18: Highest Level of Education Attained for First Nations Population Aged 20 to 34 Years in Alberta by Sex and Geography, 2011

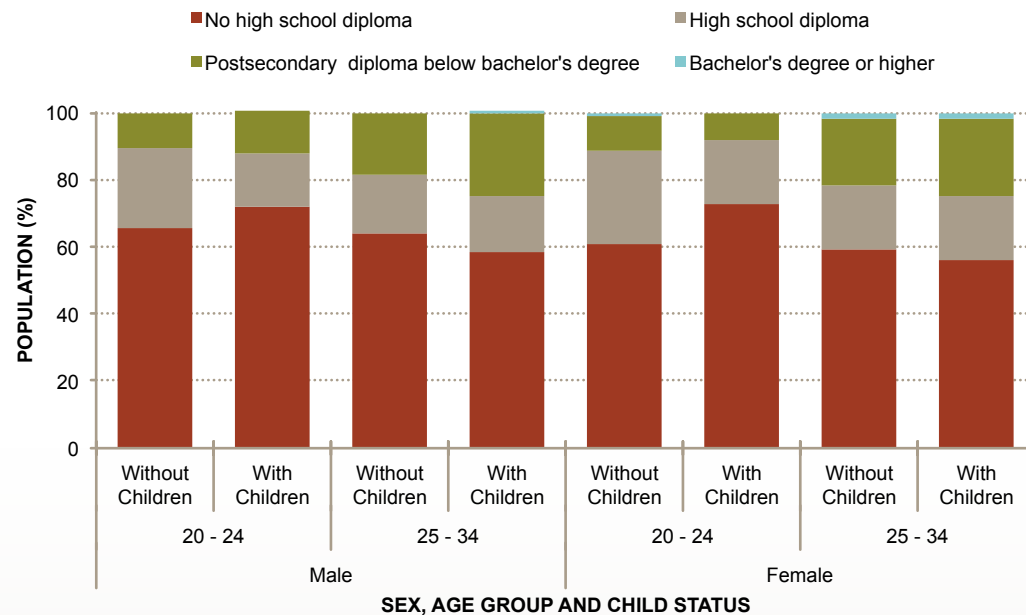


Source: Statistics Canada, Custom Tables

Figure 19 explores the relationship between educational attainment and having children by age group and sex among First Nations people living on-reserve.

- The proportion of First Nations men aged 20 to 24 years without a high school diploma was higher among those with children (72%) than those without children (66%).
- Similarly the proportion of First Nations women aged 20 to 24 years without a high school diploma was higher among those with children (72%) than those without children (61%).
- Among First Nations people aged 25 to 34 years living on-reserve, more people with children (42% of men and 44% of women) had at least a high school diploma than those without children (36% of men and 41% of women).

FIGURE 19: Highest Level of Education Attained for First Nations Population Aged 20 to 34 Years Living On-Reserve in Alberta by Sex, Age group and Children Status, 2011

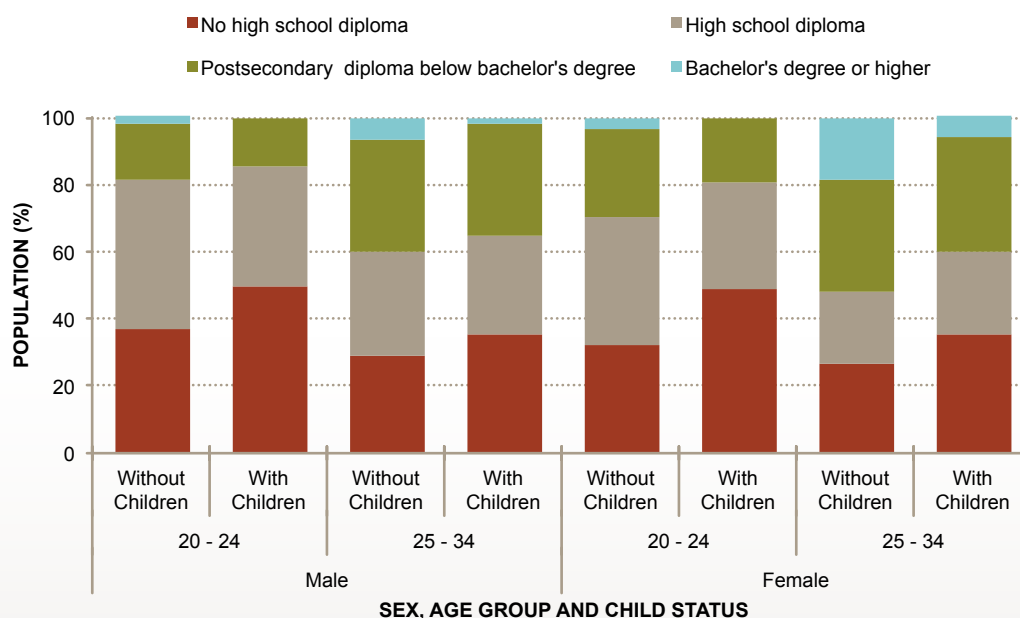


Source: Statistics Canada, Custom Tables

Figure 20 shows the relationship between educational attainment and having children by age group and sex among First Nations people living off-reserve.

- The proportion of First Nations men aged 20 to 24 years without a high school diploma was higher among those with children (49%) than those without children (37%).
- Similarly the proportion of First Nations women aged 20 to 24 years without a high school diploma was higher among those with children (49%) than those without children (32%).
- Among First Nations people aged 25 to 34 years living off-reserve, a higher proportion of those with children (36% of men and 35% of women) did not have a high school diploma, compared to those without children (29% of men and 27% of women).
- First Nations people aged 25 to 34 years living off-reserve without children were more than 3 times likely to have bachelor's degree or higher (18% versus 6% for women and 7% versus 2% for men) in 2011.

FIGURE 20: Highest Level of Education Attained for First Nations Population Aged 20 to 34 Years Living Off-Reserve in Alberta by Sex, Age group and Children Status, 2011



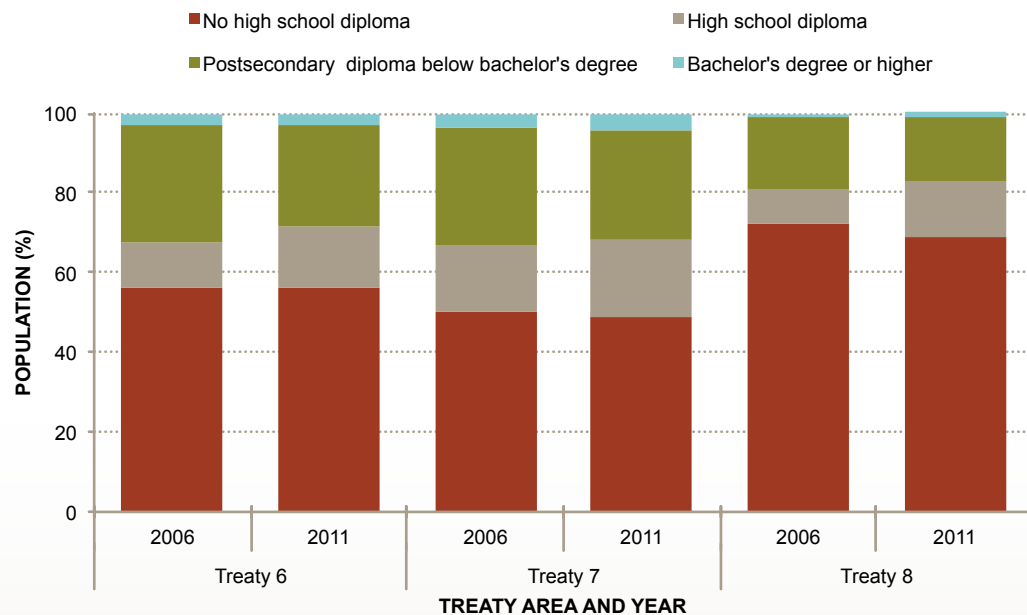
Source: Statistics Canada, Custom Tables

Figure 21 shows the Treaty comparison by level of education attained in 2006 and 2011 among First Nations people aged 20 years and over. The proportion of First Nations people aged 20 years and over without a high school diploma

- decreased from 72% in 2006 to 69% in 2011 in Treaty 8;
- decreased slightly from 50% in 2006 to 49% in 2011 in Treaty 7; and
- remained relatively unchanged in Treaty 6 at 56%.

A higher percentage of First Nations individuals living in Treaty 7 have completed high school and other higher levels of education than in Treaty 6 and Treaty 8. Treaty 7 had the highest proportion of individuals in each level of education completed in both 2006 and 2011.

FIGURE 21: Highest Level of Education Attained for First Nations Population Aged 20 Years and Treaty Area in Alberta, 2006 and 2011



Source: Statistics Canada, Custom Tables

TABLE 2: Proportions of First Nations Population Aged 20 Years and over with Bachelor's Degree or Higher in Alberta by Top 5 Fields of Study, Geography and Sex, 2011

FIELD OF STUDY	RANK COLOUR	ON-AND OFF-RESERVE	ON-RESERVE	OFF-RESERVE	WOMEN	MEN
Education	1	24.8%	31.7%	22.5%	27.4%	16.8%
Social and behavioural sciences and law	2	21.9%	12.0%	24.0%	21.5%	23.7%
Business, management and public administration	3	19.8%	30.3%	17.3%	22.6%	14.2%
Humanities	4	9.5%	10.6%	9.2%	9.4%	
Health and related fields	5	8.9%	5.6%	9.5%	9.0%	8.2%
Architecture, engineering, and related technologies						11.6%

Source: Statistics Canada, Custom Tables

In 2011, the most common fields of study for First Nations in Alberta with a bachelor's degree or higher were education, social sciences, and business administration (Table 2).

PROVINCIAL ACHIEVEMENT SCORES

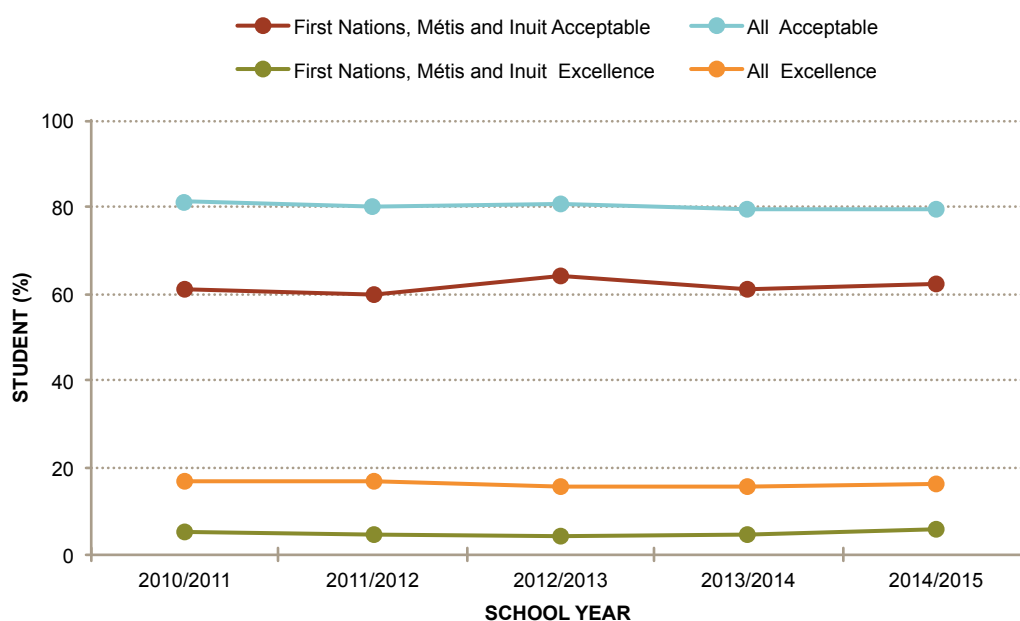
Alberta Education conducts standardized Provincial Achievement Tests for students in Grades 6 and 9 in mathematics, language arts, science and social studies, based on the provincial curriculum. Alberta achievement test results provide a snapshot of students' performance in relation to provincial "acceptable" and "excellence" standards.

An "acceptable" standard in a course in a specific grade indicates an adequate understanding of the core knowledge and adequate basic skills essential to that course.³³ A standard of "excellence" in a course in a specific grade indicates a consistent deeper understanding of the concepts of the course with the ability to integrate information from the course and evaluate it from various points of view.³³

The proportion of students taking Provincial Achievement Tests in language arts among self-identified First Nations, Métis, and Inuit students increased from 80.9% in 2010/2011 to 83.4% in 2014/2015, and remained relatively stable at 90% among all students over the same period in Alberta.³³

³³ Alberta Education. (2015). *Annual report update, 2014-15*. Retrieved December 18, 2015, from education.alberta.ca/annual-reports/reports-and-updates/everyone/downloads/

FIGURE 22: Proportion of Students who Achieved Standards on Grade 6 and 9 Provincial Achievement Tests in Language Arts, 2011 to 2015



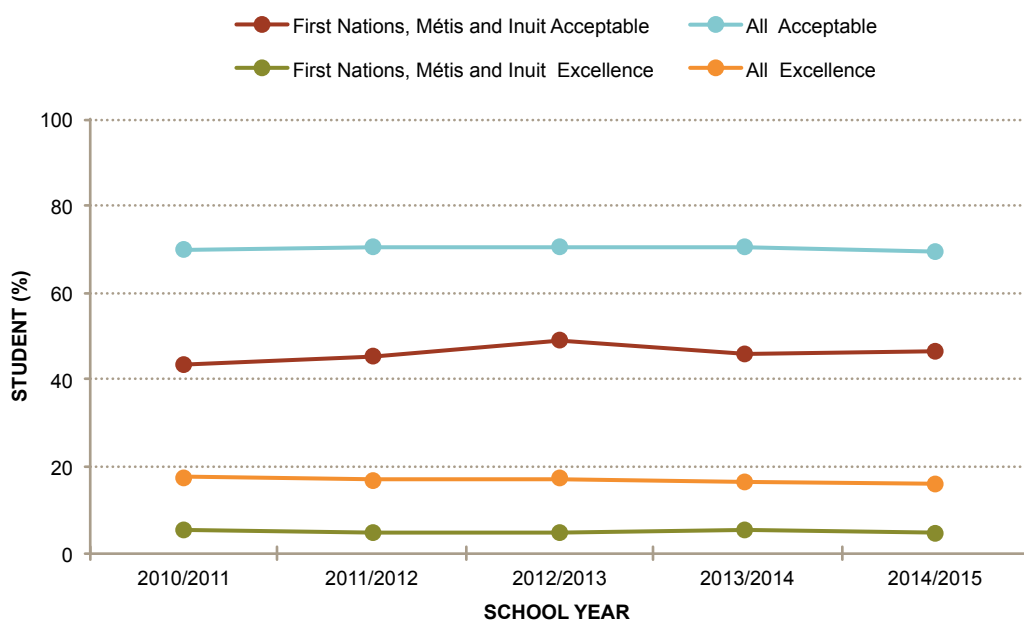
Source: Adapted from Alberta Education. (2015). *Annual report update, 2014-15*. Retrieved from education.alberta.ca/annual-reports/reports-and-updates/everyone/downloads/

Figure 22 shows the overall results on Grade 6 and 9 Provincial Achievement Tests in language arts at both the “acceptable” and “excellence” standard levels. Details are as follows.

- The proportion of self-identified First Nations, Métis and Inuit students achieving “acceptable” standards in language arts slightly increased from 61.1% in 2010/2011 to 62.4% in 2014/2015
- The proportion of self-identified First Nations, Métis and Inuit students achieving “excellence” standards in language arts slightly increased from 5.1% in 2010/2011 to 5.8% in 2014/2015
- The proportion of all students achievement in both standards have slightly decreased in Alberta over time.
- The proportion of all students achieving an “acceptable” standard in language arts is about 1.3 times the proportion of self-identified First Nations, Métis and Inuit students achieving the same standard.
- The proportion of all students achieving an “excellence” standard in language arts is 3 to 4 times the proportion of self-identified First Nations, Métis and Inuit students achieving the same standard.

The proportion of students taking Provincial Achievement Tests in mathematics among self-identified First Nations, Métis and Inuit students increased from 80.5% in 2010/2011 to 83.8% in 2014/2015, while it remained relatively stable at 90% among all students over the same period in Alberta.³⁴

FIGURE 23: Proportion of Students who Achieved Standards on Grade 6 and 9 Provincial Achievement Tests in Mathematics, 2011 to 2015



Source: Adapted from Alberta Education. (2015). *Annual report update, 2014-15*. Retrieved from education.alberta.ca/annual-reports/reports-and-updates/everyone/downloads/

Figure 23 shows the overall results on Grade 6 and 9 Provincial Achievement Tests in mathematics at both the “acceptable” and “excellence” standard levels. Details are as follows

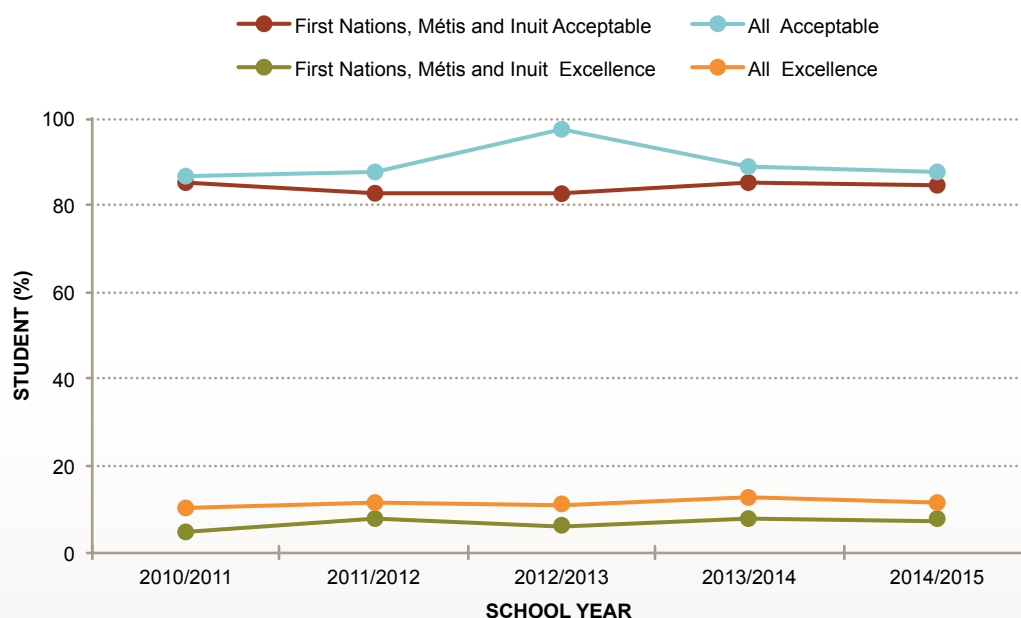
- The proportion of self-identified First Nations, Métis and Inuit students achieving “acceptable” standard increased from 43% in 2010/2011 to 46% in 2014/2015.
- The proportion of self-identified First Nations, Métis and Inuit students achieving the standard of “excellence” remained stable at 5% in the same period.
- The proportion of all students achieving standards of “acceptable” and of “excellence” in mathematics decreased in 2014/2015 compared to the previous years.

³⁴ Alberta Education. (2015). *Annual report update, 2014-15*. Retrieved December 18, 2015, from education.alberta.ca/annual-reports/reports-and-updates/everyone/downloads/

- The proportion of all students achieving “acceptable” standards in mathematics is 1.4 to 1.6 times the proportion of Self-identified First Nations, Métis and Inuit students achieving the same standard.
- The proportion of all students achieving “excellence” standards in mathematics is 3 to 4 times the proportion of Self-identified First Nations, Métis and Inuit students achieving the same standard

Figure 24 shows that the proportion of self-identified First Nations, Métis and Inuit students who achieved an “acceptable” standard on Diploma Examinations in Language Arts have remained stable between 2010/2011 and 2014/2014 at 85%, while those achieving the standard of “excellence” increased from 4% in 2010/2011 to 8% in 2013/2014 and have since remained stable. The proportion of all students achieving standards of “acceptable” and “excellence” slightly increased in 2014/2015 compared to 2010/2011.

FIGURE 24: Proportion of Students who Achieved Standards on Diploma Examinations in Language Arts, 2011 to 2015

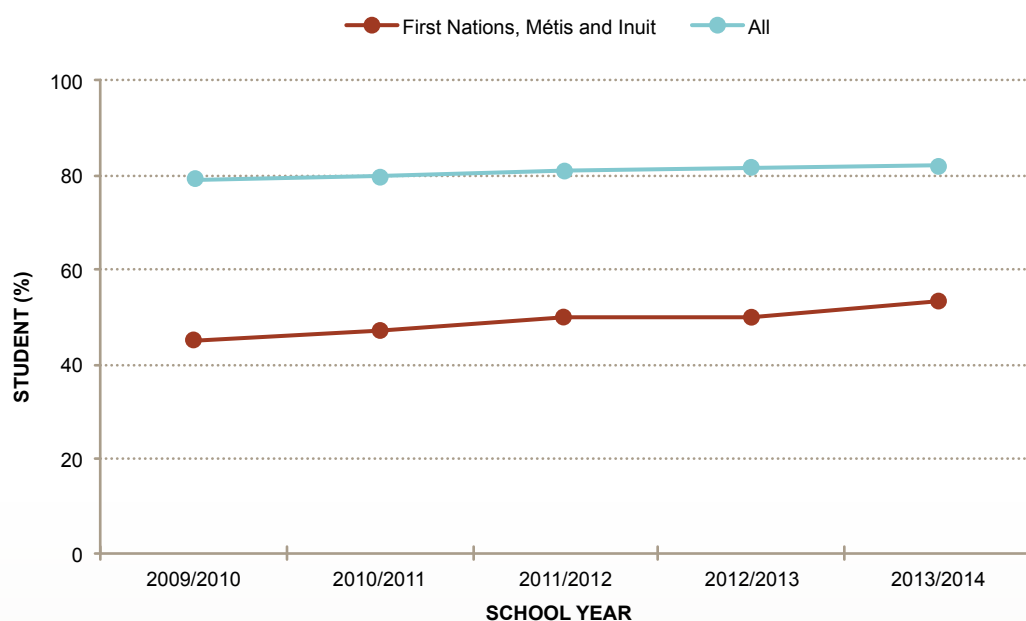


Source: Adapted from Alberta Education. (2015). *Annual report update, 2014-15*. Retrieved from education.alberta.ca/annual-reports/reports-and-updates/everyone/downloads/

The high school completion rate within 5 years of entering Grade 10 for self-identified First Nations, Métis and Inuit students increased from 45% in 2009/2010 to 53% in 2013/2014 while the completion rate among all students in Alberta increased from 79% in 2009/2010 to 82% in 2013/2014 (Figure 25). The provincial high school completion rates within 5 years of entering Grade 10 for all students were more than 1.5 times higher than for self-identified First Nations, Métis and Inuit students.

The gap in the school completion rate within 5 years of entering Grade 10 between all students and self-identified First Nations, Métis and Inuit students decreased over time.

FIGURE 25: Proportion of Students Who Completed High School within 5 Years of Entering Grade 10 in Alberta, 2010 to 2014

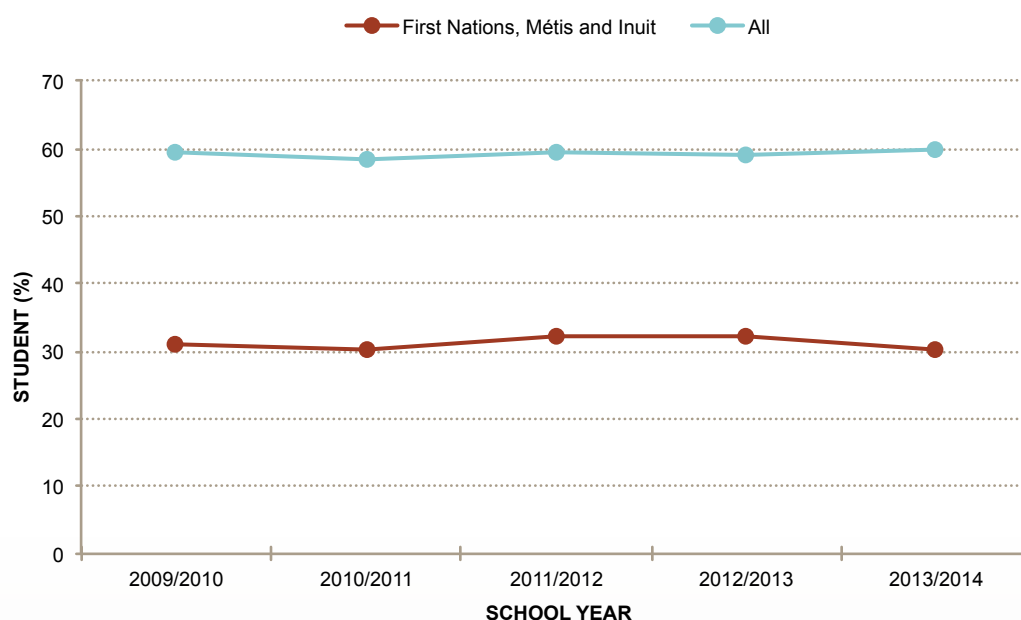


Source: Adapted from Alberta Education. (2015). *Annual report, 2014-15*. Retrieved from education.alberta.ca/annual-reports/reports-and-updates/everyone/downloads/

The proportion of self-identified First Nations, Métis and Inuit students and all students who enroll in post-secondary programs (includes attending a publicly funded post-secondary institution in Alberta or registering in an Alberta apprenticeship program) within 6 years of entering Grade 10 in Alberta has remained stable over the last 5 years (Figure 26).

Between 2010 and 2015, approximately 3 in 10 self-identified First Nations, Métis and Inuit students and 6 in 10 of all students enrolled in post-secondary programs within 6 years of entering Grade 10 in Alberta.

FIGURE 26: Proportion of Students Who Enroll in Post-Secondary Programs within 6 Years of Entering Grade 10 in Alberta, 2009/2010 to 2013/2014



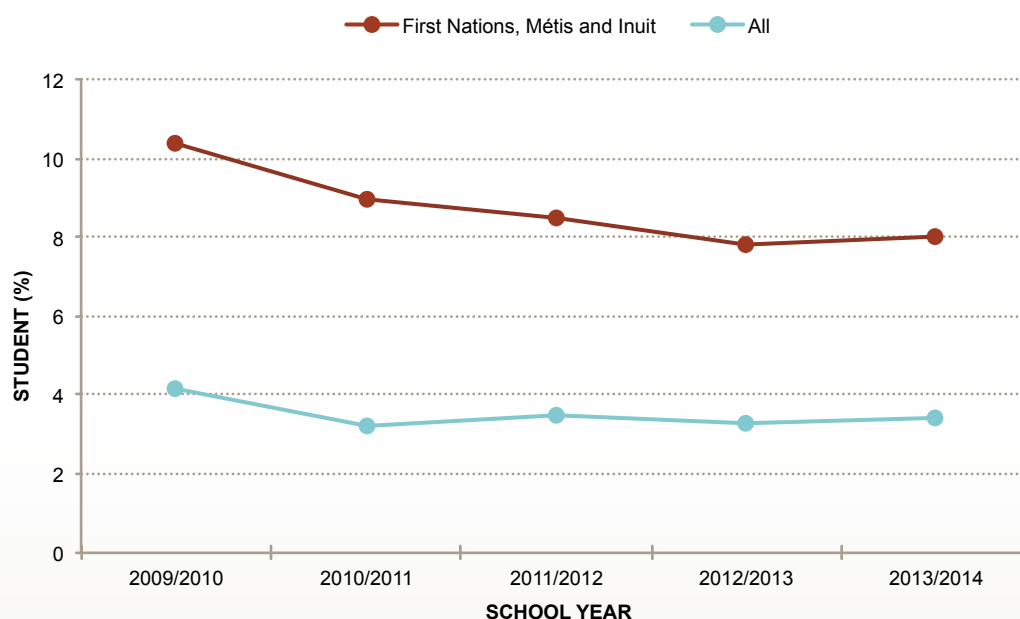
Source: Adapted from Alberta Education. (2015). *Annual report, 2014-15*. Retrieved from education.alberta.ca/annual-reports/reports-and-updates/everyone/downloads/

Self-identified First Nations, Métis and Inuit students aged 14 to 18 years students are more than twice as likely to drop out of high school, compared to all students in Alberta of the same age group (Figure 27).

- The dropout rate for Self-identified First Nations, Métis and Inuit students aged 14 to 18 years decreased from 10% in 2009/2010 to 8% in 2013/2014.
- The dropout rate decreased from 4% in 2009/2010 to 3% in 2013/2014 for all students in Alberta.

According to the Alberta Education Annual Report, 2014 to 2015, the dropout rate is an indicator of how well the needs of students at risk of not completing high school are being addressed by the K–12 education system.³⁵

FIGURE 27: Proportion of Students Aged 14 to 18 Years Who Dropped Out of High School in Alberta, 2009 to 2010 to 2013 to 2014



Source: Adapted from Alberta Education. (2015). *Annual report, 2014-15*. Retrieved from education.alberta.ca/annual-reports/reports-and-updates/everyone/downloads/

³⁵ Alberta Education. (2015). *Annual report, 2014-15*. Retrieved December 18, 2015, from education.alberta.ca/annual-reports/reports-and-updates/everyone/downloads/

In summary, First Nations people in Alberta have a higher rate of high school dropout and people without a high school diploma than general Alberta population. First Nations in Alberta have lower rates of:

- enrolling in post-secondary programs
- completing high school
- attaining “acceptable” or “excellence” standards in Provincial Achievement Tests
- achieving higher educational qualifications.

Because higher education influences health directly and indirectly, it will be important for programs and policy makers to address barriers that prevent First Nations people in Alberta from attaining higher education. Some of those barriers identified by Kendall³⁶ include:

- historical barriers such First Nations people being forced to give up their treaty status for higher education
- the Indian residential school system
- geographic/demographic barriers such as living in remote areas without schools or higher school of learning
- social/cultural barriers such as racism and government discriminatory funding policies of Aboriginal institutions

Other barriers include schools’ socio-economic environments,³⁷ housing, social conditions and poverty.³⁸



36 Kendall, P. (2009). *Pathways to health and healing: 2nd report on the health and well-being of Aboriginal people in British Columbia*. Victoria, BC: British Columbia Ministry for Healthy Living and Sport.

37 Johnson, D. (2007). *School grades: Identifying Alberta's best public schools* (C.D. Howe Institute Backgrounder No. 104). Ottawa, ON: C.D. Howe Institute.

38 Richards, J. (2008). *Closing the Aboriginal/non-Aboriginal education gaps* (C.D. Howe Institute Backgrounder No. 116). Ottawa, ON: C.D. Howe Institute.



INCOME

Income has a significant impact on the health and well-being of individuals and populations.^{39,40} Income also affects:

- other social determinants of health, such as food security, environment, housing, education and literacy.
- health behaviours such as the types of food chosen and the physical activities undertaken.

This section presents data about First Nations income changes between 2005 and 2010, as well as income differences between First Nations and non-Aboriginal people with the intention to provide information for community planning.

In this section, income is defined as *the sum of the income received during a given year from various sources*.⁴¹ There are 2 main sources of income, each with a few sub-categories:⁴²

Market income

- Employment income, i.e., wages and salaries and self-employment income
- Investment income, e.g., dividends/interest on bonds, deposits and savings certificates
- Other incomes, e.g. retirement pensions, superannuation and annuities including those from RRSPs and RRIFs

39 World Health Organization. (n.d.). *Health impact assessment (HIA): The determinants of health*. Retrieved October 15, 2015, from www.who.int/hia/evidence/doh/en/

40 Public Health Agency of Canada. (2013). *What makes Canadians healthy or unhealthy?* Retrieved October 15, 2015, from www.phac-aspc.gc.ca/ph-sp/determinants/determinants-eng.php

41 Exceptions: withdrawals from Registered Retirement Savings Plans (RRSPs) and other saving plans, capital gains, cash inheritances, lottery/gambling winnings and lump sum insurance settlements as well as goods and services produced for barter, goods produced for own consumption, etc. See Statistics Canada. (2013). *Income reference guide: National Household Survey, 2011* (Catalogue No. 99-014-X2011006). Retrieved October 15, 2015, from www12.statcan.gc.ca/nhs-enm/2011/ref/guides/99-014-x/99-014-x2011006-eng.pdf

42 Statistics Canada. (2013). *Income reference guide: National Household Survey, 2011* (Catalogue No. 99-014-X2011006). Retrieved October 15, 2015, from www12.statcan.gc.ca/nhs-enm/2011/ref/guides/99-014-x/99-014-x2011006-eng.pdf.

Government transfer payment income

- Old Age Security pension and Guaranteed Income Supplement
- Canada Pension Plan or Quebec Pension Plan
- Employment Insurance
- Child benefits
- GST/QST/HST credit

Family income⁴³ and **household income** are commonly used measures for assessing a family or a household income as income may be pooled to pay for family or household expenses such as food or rent. Family income and household income depict the available money that a family or a household can spend.

After-tax income is also a commonly used measure for comparison because it takes into account total income including government transfers, less income tax paid.

Median income⁴⁴ is the point where half of the population earn more and half of the population earn less. Median is a more accurate indicator than average because income can be skewed by either a higher or a lower income level.

Note that non-monetary income (such as goods and services produced for barter, goods produced for own consumption) is not considered as income in this report.

This section includes income by age and sex, income by residence, income by education, income by family characteristics and population in the top and bottom income bracket.

43 Economic family refers to a group of 2 or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law, adoption or a foster relationship. By contrast, census family refers to a married couple (with or without children), a common-law couple (with or without children) or a lone-parent family. The concept of economic family may refer to a larger group of persons than does the census family concept. Private household refers to a person or a group of persons (other than foreign residents) who occupy the same private dwelling and do not have a usual place of residence elsewhere in Canada. Every person is a member of one and only one household. See Statistics Canada. (2012). *Census dictionary: Census year, 2011* (Catalogue No. 98-301-X2011001). Retrieved October 15, 2015, from www12.statcan.gc.ca/census-recensement/2011/ref/dict/98-301-X2011001-eng.pdf

44 In this section, median after-tax personal income is derived using the distribution of persons aged 15 years and over with income. Median after-tax economic family income is derived using the distribution of persons aged 15 years and over with and without income. Median after-tax household income is derived using the distribution of households.

INCOME OVERVIEW

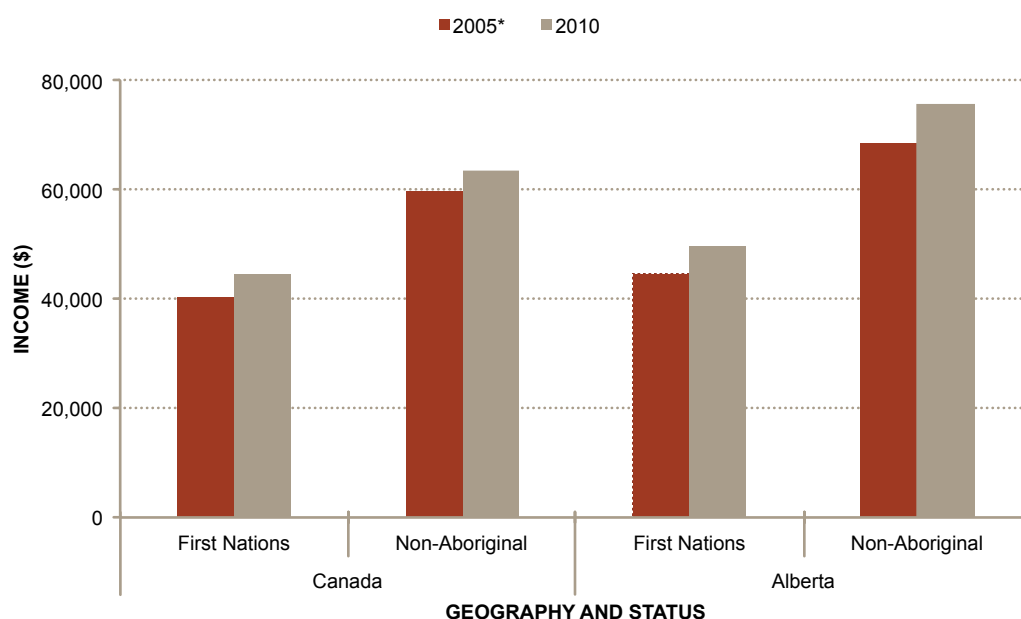
In 2010, about 88% of First Nations and 95% of non-Aboriginal individuals aged 15 and over received some form of income in Alberta.⁴⁵ These percentages were similar to those of First Nations and non-Aboriginal peoples in Canada as a whole (90% and 95% respectively).

Figure 28 shows the median after-tax economic family income among First Nations and non-Aboriginal peoples in Canada and Alberta in 2005 and 2010. Details are as follows.

- The median after-tax economic family income in Alberta was higher than in Canada for both First Nations and non-Aboriginal peoples in 2005 and 2010.
- In 2010, the median after-tax economic family income for First Nations people was \$49,698 in Alberta and \$44,647 in Canada.
- The median after-tax economic family income in 2010 was higher than it was in 2005 across all the populations.
- The median after-tax economic family income of persons aged 15 years and over increased 11% for both First Nations and non-Aboriginal population in Alberta.
- In Canada, the median after-tax economic family income increased 10% for First Nations and 6% for non-Aboriginal population.
- A significant family income gap exists between First Nations and non-Aboriginal peoples.
- In 2010, the median after-tax economic family income of First Nations people aged 15 years and over was 35% less than that of non-Aboriginal peoples in Alberta.
- Similarly, the median after-tax economic family income of First Nations people was 30% less than that of non-Aboriginal peoples in Canada in 2010.

45 Statistics Canada, Custom Tables.

FIGURE 28: Median After-Tax Economic Family Income of Persons Aged 15 Years and Over, First Nations and Non-Aboriginal Population in Canada and Alberta, 2005 and 2010



*Constant 2010 dollars

Source: Statistics Canada, Custom Tables

The Alberta First Nations Information Governance Centre (AFINGC) reported that the majority of First Nations received at least 2 sources of income and 84% of First Nations received government transfers⁴⁶

Transfer payments were introduced by Government of Canada to readdress income inequality. These programs make up an important component of Canada's social safety net. Through transfer payments and taxes, market income is redistributed from the more affluent to the less affluent.

⁴⁶ Pace, D., & Konczi, A. E. (2012). *First Nations regional health survey (RHS) 2008/10: Alberta report 2012*. Retrieved from www.afnigc.ca/main/index.php?id=home&content=home

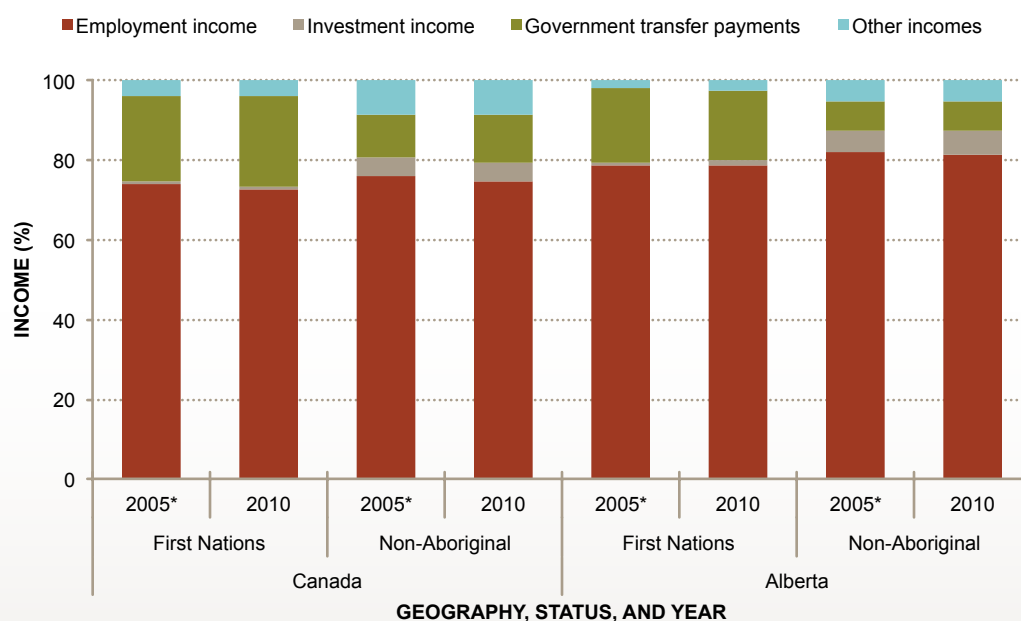
Figure 29 shows the relative share of each income component for both First Nations and non-Aboriginal peoples in Alberta and Canada in 2005 and 2010. Overall, the share of each component remained stable from 2005 to 2010 in both First Nations and non-Aboriginal peoples.

The most significant amount of income was earned through employment. Figure 29 also shows that government transfers made up a larger proportion of the income of First Nations people. In 2010, government transfers made up 17% of income for First Nations and 7% of income for non-Aboriginal peoples in Alberta.

Other incomes include: non-governmental retirement pensions and non-governmental other money income such as retirement pensions, superannuation and annuities including those from RRSPs and RRIFs. In 2010, other incomes made up

- 4% and 2% of income for First Nations in Canada and Alberta respectively.
- 8% and 5% of income for non-Aboriginal peoples in Canada and Alberta respectively

FIGURE 29: Composition of After-Tax Personal Income, First Nations and Non-Aboriginal Population in Canada and Alberta, 2005 and 2010



*Constant 2010 dollars

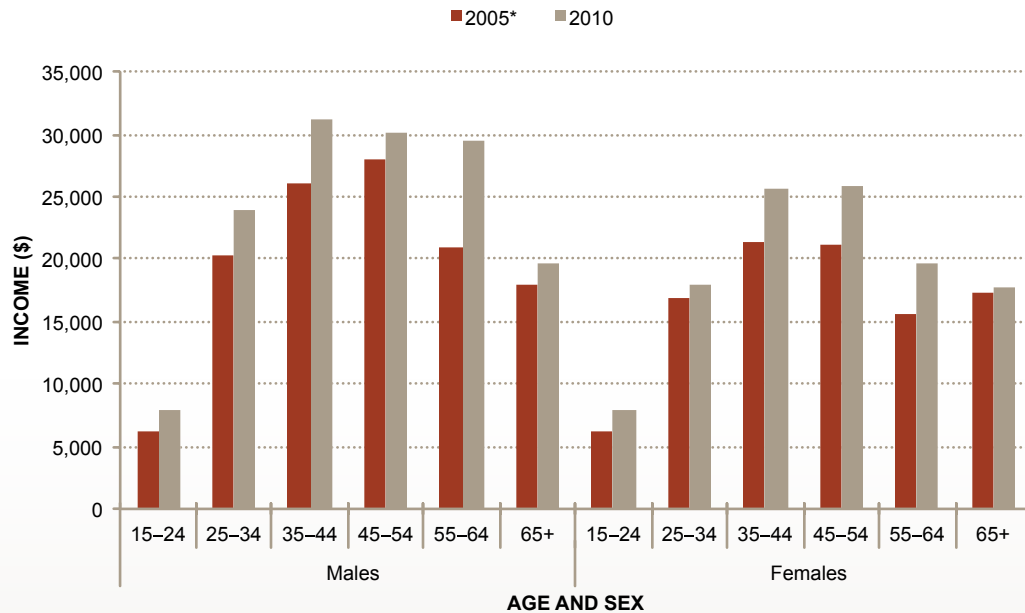
Source: Statistics Canada, Custom Tables

INCOME BY AGE AND SEX

Figure 30 displays the median after-tax personal income for First Nations people in Alberta across all age groups for both females and males in 2005 and 2010. Details are as follows.

- Overall, a large income disparity existed among different age groups and between females and males.
- First Nations people aged 35 to 54 years tended to earn more than younger and older First Nations people.
- Excluding the 15 to 24 age group, the median after-tax personal income for males was significantly higher than that for females in every age group.
- Between 2005 and 2010, the median after-tax personal income increased across all groups, with the highest increase (41%) occurring among men aged 55 to 64 years.

FIGURE 30: Median After-Tax Personal Income by Age and Sex, First Nations People in Alberta, 2005 and 2010



*Constant 2010 dollars

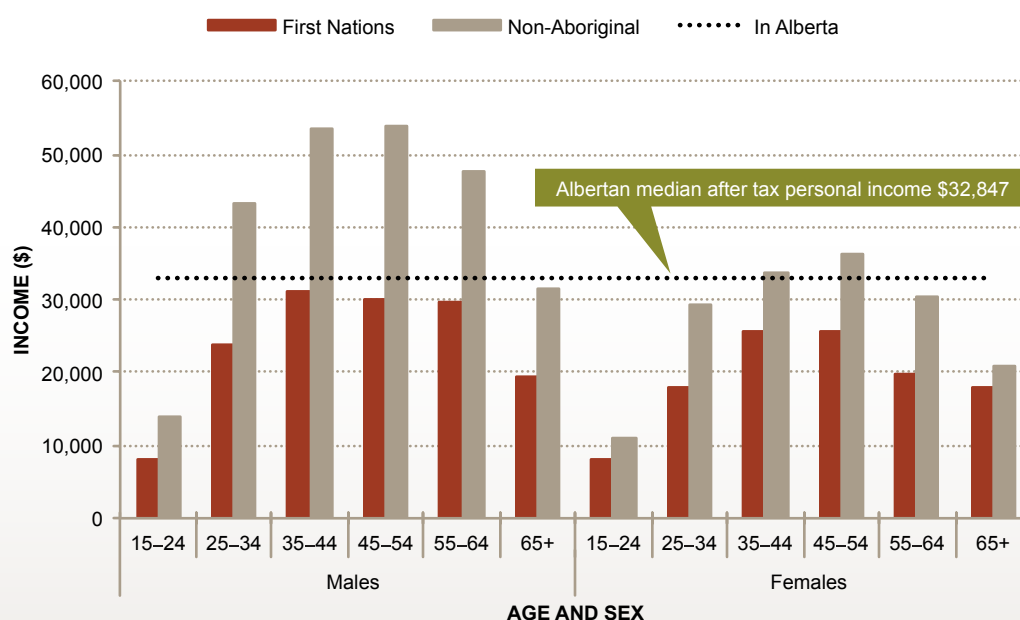
Source: Statistics Canada, Custom Tables

Figure 31 shows median after-tax personal income by age and sex in 2010 for First Nations and non-Aboriginal people in Alberta.

First Nations people had lower median after-tax personal income than non-Aboriginal people across all age and sex groups in 2010. Income gap details are as follows.

- The median after-tax personal income difference was smaller between First Nations and non-Aboriginal females than between First Nations and non-Aboriginal males.
- The sex gap for income was higher in the non-Aboriginal population than in First Nations population. The highest median after-tax personal income occurred among First Nations men aged 35 to 44 years, First Nations women aged 45 to 54 years, and non-Aboriginal men and women aged 45 to 54 years.
- The median after-tax personal incomes for First Nations people across all age groups and sex were lower than the overall Albertan median after-tax personal income of \$32,847.
- The non-Aboriginal female median after-tax personal incomes were less than the Alberta median after-tax personal income for all age groups except for the 35 to 54 age groups.

FIGURE 31: Median After-Tax Personal Income by Age and Sex, First Nations and Non-Aboriginal People in Alberta, 2010



Source: Statistics Canada, Custom Table

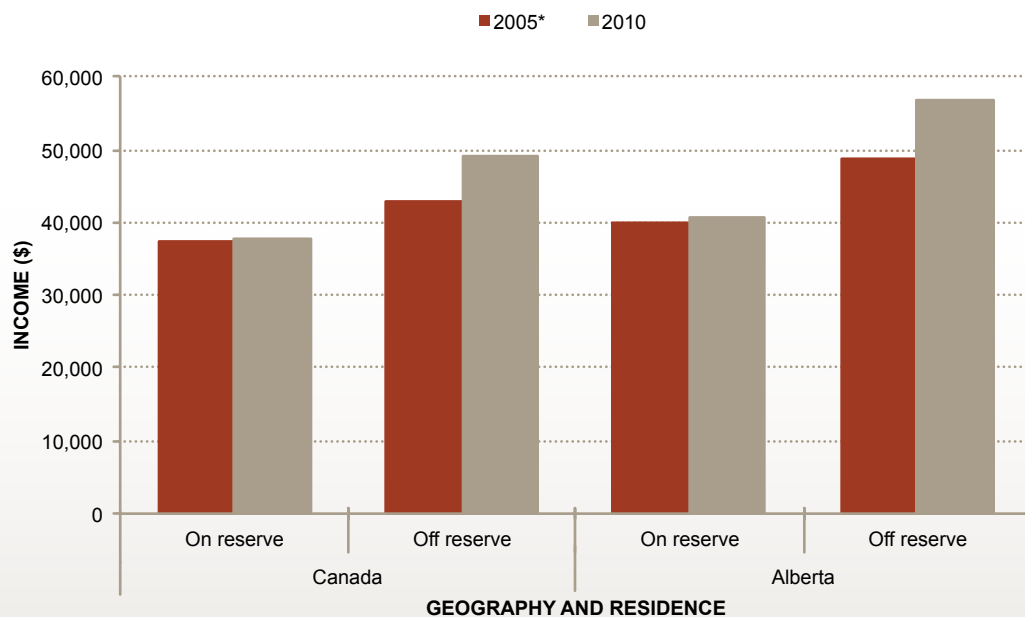
INCOME BY RESIDENCE

First Nations people live in all parts of Canada, from remote and isolated reserves to large urban centres. The following 4 figures examine the median after-tax income for First Nations people living on- and off-reserve.

For First Nations people in Canada and Alberta, the median after-tax economic family income increased both on-reserve and off-reserve from 2005 to 2010 (Figure 32), with higher increases occurring off-reserve.

- In 2010, the median after-tax economic family income for First Nations people in Alberta increased by 16% for those off-reserve and 2% for those on-reserve in Alberta compared to 2005.
- The median after-tax economic family income for First Nations people on both on- and off-reserve were higher in Alberta compared Canada in both 2005 and 2010.
- In both 2005 and 2010, the median after-tax economic family income for First Nations people on-reserve was lower compared to their counterparts off-reserve in both Alberta and Canada.

FIGURE 32: Median After-Tax Economic Family Income of Persons Aged 15 Years and over by Residence, First Nations People in Canada, and Alberta, 2005 and 2010



*Constant 2010 dollars

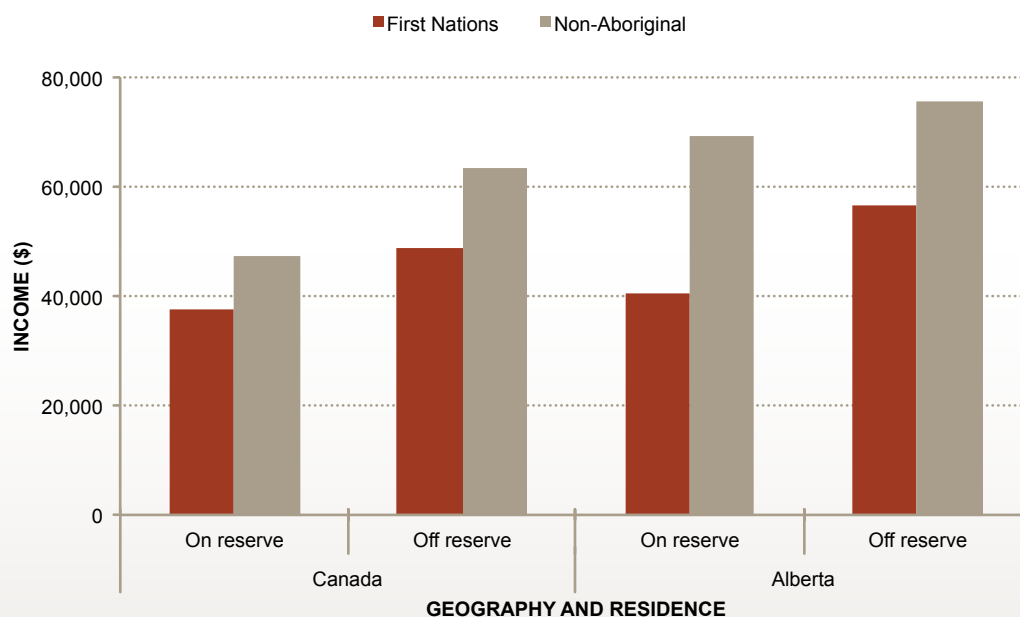
Source: Statistics Canada, Custom Tables

Figure 33 shows median after-tax economic family income for First Nations and non-Aboriginal people aged 15 years and over by on- and off-reserve residence in Alberta and Canada in 2010.

- In 2010, the median after-tax economic family income for both First Nations and non-Aboriginal individuals living on-reserve was lower than their counterparts living off-reserve in Canada and Alberta.
- The median after-tax economic family income for First Nations people was \$40,584 on-reserve and \$56,896 off-reserve in Alberta.
- Similarly, non-Aboriginal individuals living on-reserve (\$69,471) also had a lower after-tax economic family median income than those living off-reserve (\$75,909) in Alberta.

Although living on- versus off-reserve impacts family income levels, as shown in Figure 33, it cannot fully explain income differences between First Nations and non-Aboriginal peoples as non-Aboriginal peoples were likely to make more income than First Nations people living in the same area. This suggests that there are other factors contributing to the income difference between First Nations and non-Aboriginal people.

FIGURE 33: Median After-Tax Economic Family Income of Persons Aged 15 Years and over by Residence for First Nations and Non-Aboriginal Population in Canada and Alberta, 2010

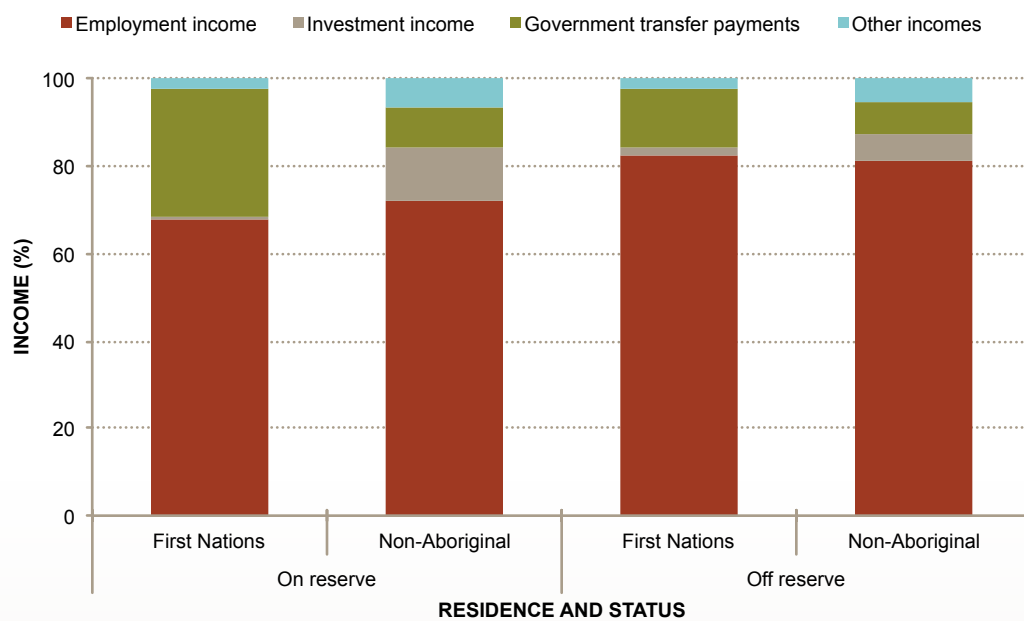


Source: Statistics Canada, Custom Tables

Figure 34 shows the relative share of each income component for both First Nations and non-Aboriginal peoples living on- and off-reserve in Alberta in 2010. Details are as follows:

- Overall, the share of employment component for both First Nations and non-Aboriginal people was lower on-reserve (68% to 72%) than off-reserve (81% to 82%).
- The proportion for government transfer payments was higher for First Nations than for non-Aboriginal peoples.
- Among First Nations people, government transfer payment was significant higher on-reserve (30%) than off-reserve (13%).

FIGURE 34: Composition of After-Tax Personal Income, First Nations and Non-Aboriginal Population on- and off-reserve in Alberta, 2010

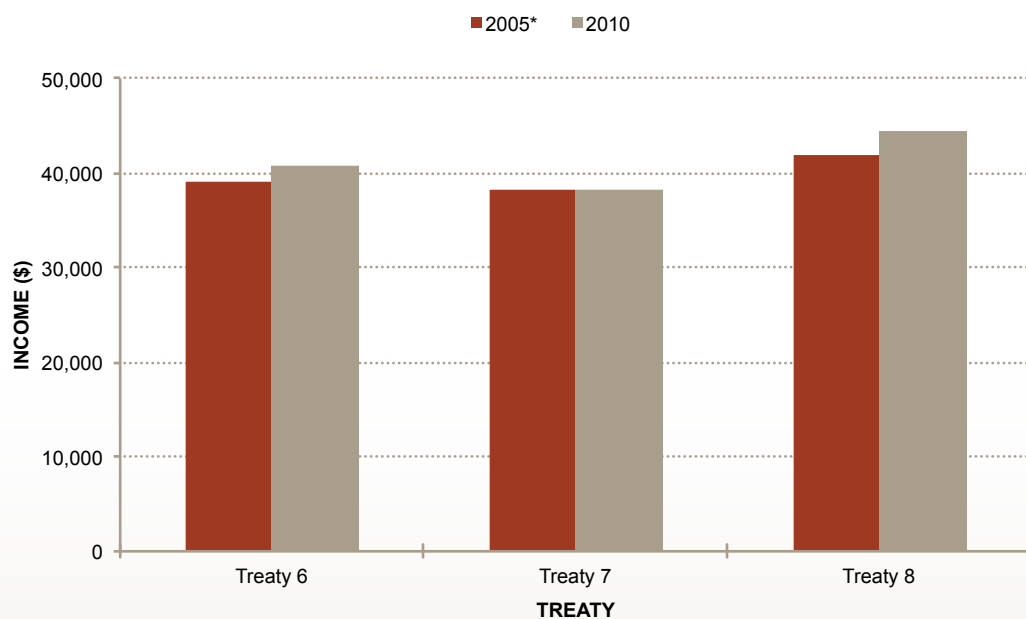


Source: Statistics Canada, Custom Tables

Figure 35 shows the median after-tax economic family income for First Nations people in Treaty 6, Treaty 7, and Treaty 8 in 2005 and 2010. Details are as follows:

- The median after-tax economic family income in 2010 was higher than it was in 2005 in Treaty 6 and Treaty 8, while it remained relatively stable in Treaty 7.
- The median after-tax economic family income of persons aged 15 years and over increased by 4% in Treaty 6 and by 6% in Treaty 8.
- Treaty 8 had the highest median after-tax economic family income in both 2005 and 2010 compared to Treaty 6 and Treaty 7.
- In 2010, the median after-tax economic family income was \$44,550 in Treaty 8, \$38,139 in Treaty 7 and \$40,699 in Treaty 6, compared to 56,896 for First Nations people off-reserve (Figure 33 and Figure 35).

FIGURE 35: Median After-Tax Economic Family Income of Persons Aged 15 Years and Over, First Nations People in Treaty 6, 7, and 8, 2005 and 2010



*Constant 2010 dollars

Source: Statistics Canada, Custom Tables

Figure 36 shows the range of the median after-tax household income for First Nations, Métis and Inuit people in First Nations communities⁴⁷ in Alberta in 2010. Overall, median after-tax incomes for First Nations, Métis and Inuit households in all First Nations communities were lower than the median after-tax household income for Albertans (\$68,086) in 2010.

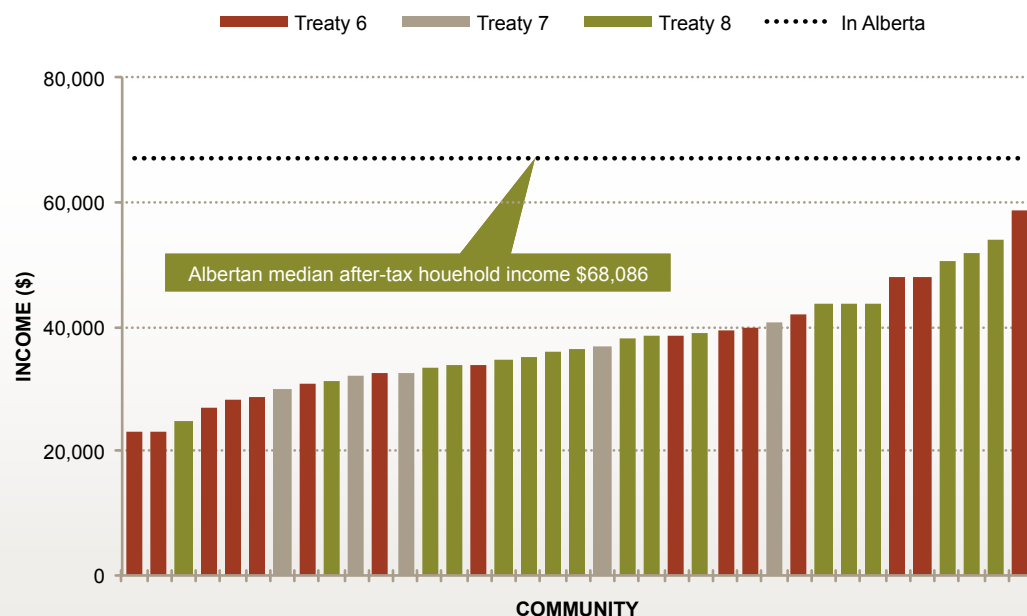
The median after-tax household income range for First Nations, Métis and Inuit people in Treaty 6 and in Alberta are the same and ranged from \$23,180 to \$58,666

Although median after-tax household income differences existed between the communities in Treaty 7 for First Nations, Métis and Inuit people, they were not as significant as those within Treaty 6 or Treaty 8. The median after-tax household income for First Nations, Métis and Inuit people in Treaty 7 ranged from \$29,877 to \$40,846.

The median after-tax household income in Treaty 8 for First Nations, Métis and Inuit people, ranged from \$24,851 to \$53,975. The 3 communities with the highest household incomes in Treaty 8 are located in proximity to Alberta's oil sands.

It should be noted that majority of First Nations, Métis or Inuit people living in First Nations communities in Alberta are First Nations. The data is as presented because data for only First Nations was not available at the time of writing this report.

FIGURE 36: Median After-Tax Household Income for First Nations, Métis and Inuit people by First Nations Community, Alberta, 2010



Source: Adopted from Statistics Canada, 2011 National Household Survey, Statistics Canada Catalogue no. 99-011-XWE2011007

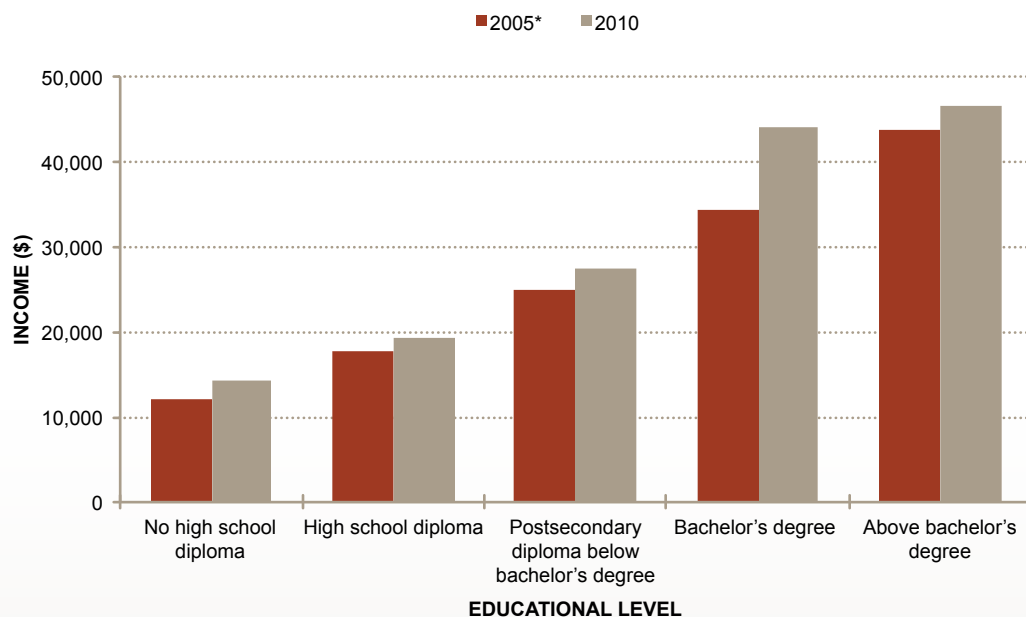
⁴⁷ First Nations communities are Indian band areas in the census/NHS. The data for the Indian band areas are for the total First Nations, Métis and Inuit population living in the communities. First Nations living in a community may not necessary be registered member of Indian band. See Statistics Canada. (2015). The list of Indian band areas and the census subdivisions they include. Retrieved October 15, 2015, from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/help-aide/a-tab.cfm?Lang=E

INCOME BY EDUCATION

As described in the education section, educational attainment among First Nations people lagged behind non-Aboriginal individuals. In this subsection, we explore the relationship between income and education attainment among First Nations people in Alberta.

Figure 37 shows the median after-tax personal income across all levels of education for First Nations people in Alberta in both 2005 to 2010. The median after-tax personal income increased in all levels of education from 2005 to 2010, especially among First Nations people with a bachelor's degree (by 28%). The figure also demonstrates that there was a positive relationship between income and educational attainment. For example, the median after-tax income for bachelor's degree holders was \$24,765 more than it was for high school graduates in 2010.

FIGURE 37: Median After-Tax Personal Income by Educational Level, First Nations Individuals in Alberta, 2005 and 2010



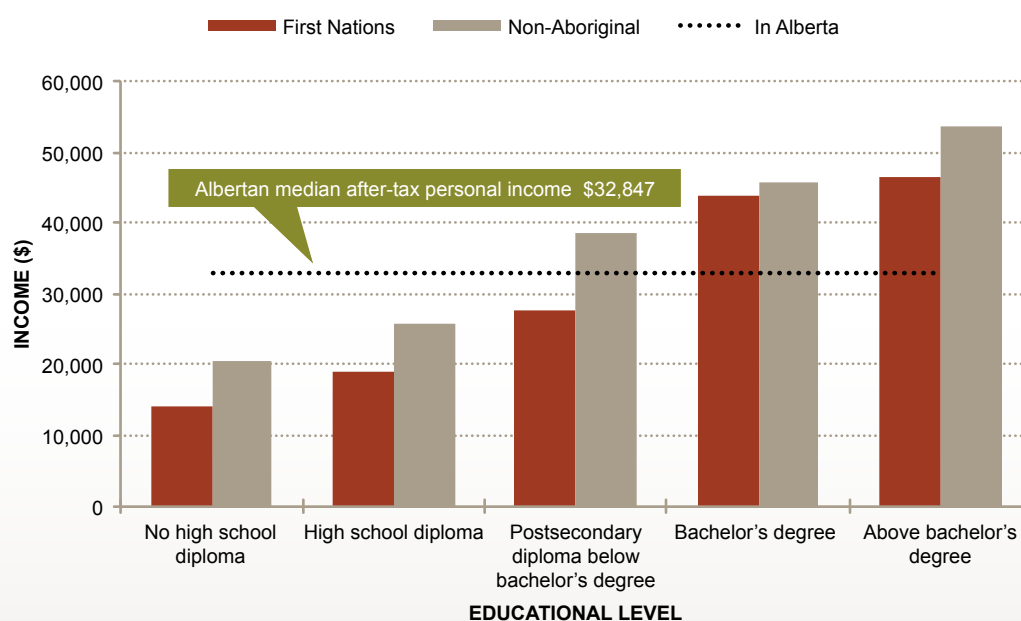
*Constant 2010 dollars

Source: Statistics Canada, Custom Tables

Figure 38 presents the median after-tax personal income across all levels of education for First Nations and non-Aboriginal peoples in 2010. This figure reveals that First Nations individuals made far less than non-Aboriginal individuals even when both had the same level of education. This income gap was highest among those with postsecondary education. The median after-tax personal income difference between First Nations and non-Aboriginal individuals was \$1,760 for bachelor's degree holders and it was \$10,994 for those with postsecondary education. The median after-tax income of First Nations individuals with at least a bachelor's degree was higher than the median after-tax income of Albertans.

Figure 37 and Figure 38 show that educational attainment has a significant impact on how much one can earn and hence the need to promote higher educational attainment. Figure 38 shows educational attainments can only partially explain the income differences between First Nations and non-Aboriginal people in Alberta, as First Nations individuals made far less than non-Aboriginal individuals with the same level of education attainment.

FIGURE 38: Median After-Tax Personal Income by Education Level, First Nations and Non-Aboriginal People in Alberta, 2010



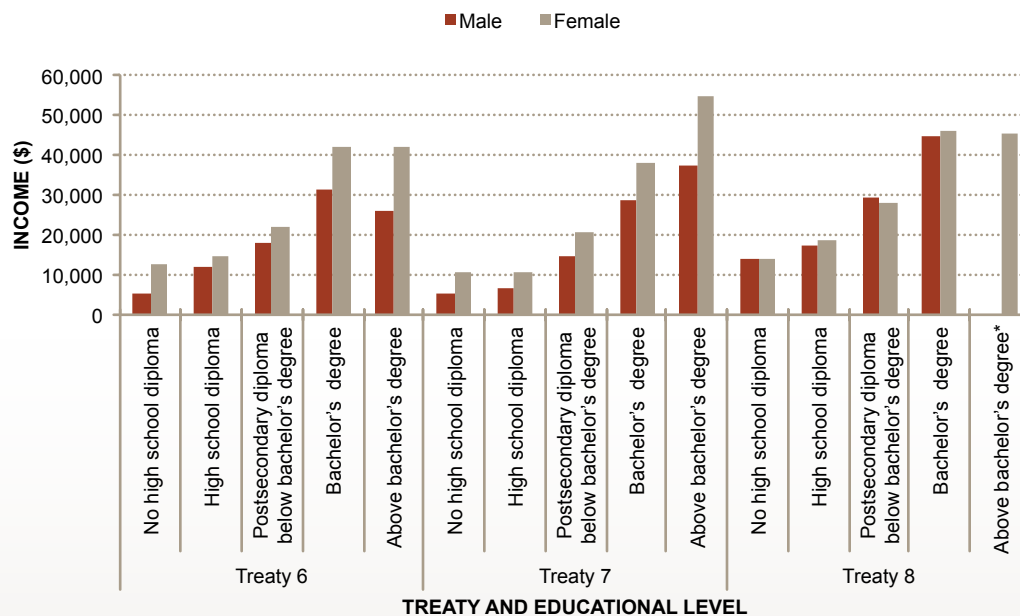
Source: Statistics Canada, Custom Tables

INCOME BY SEX, RESIDENCE AND EDUCATION

Figure 39 shows the median after-tax personal income for First Nations males and females by the level of education in all treaty areas. In Treaty 6 and Treaty 7, First Nations females had a higher median after-tax personal income across all levels of educational attainment than First Nations males. The income difference was more significant among those with a bachelor's or higher degree. In Treaty 8, First Nations females who had either a high school education or a bachelor's degree had a slightly higher median after-tax income than First Nations males with the same level of educational attainment. On the other hand, First Nations males who did not have at least a high school diploma or had finished postsecondary education below bachelor's degree had a slightly higher median after-tax income than First Nations females with the same level of education in Treaty 8.

In Treaty 8, First Nations females who had either a high school education or a bachelor's degree had a slightly higher median after-tax income than First Nations males with the same level of educational attainment. On the other hand, First Nations males who did not have at least a high school diploma or had finished postsecondary education below bachelor's degree had a slightly higher median after-tax income than First Nations females with the same level of education in Treaty 8.

FIGURE 39: Median After-Tax Personal Income by Treaty Area, Education Level, and Sex, First Nations Individuals in Alberta, 2010



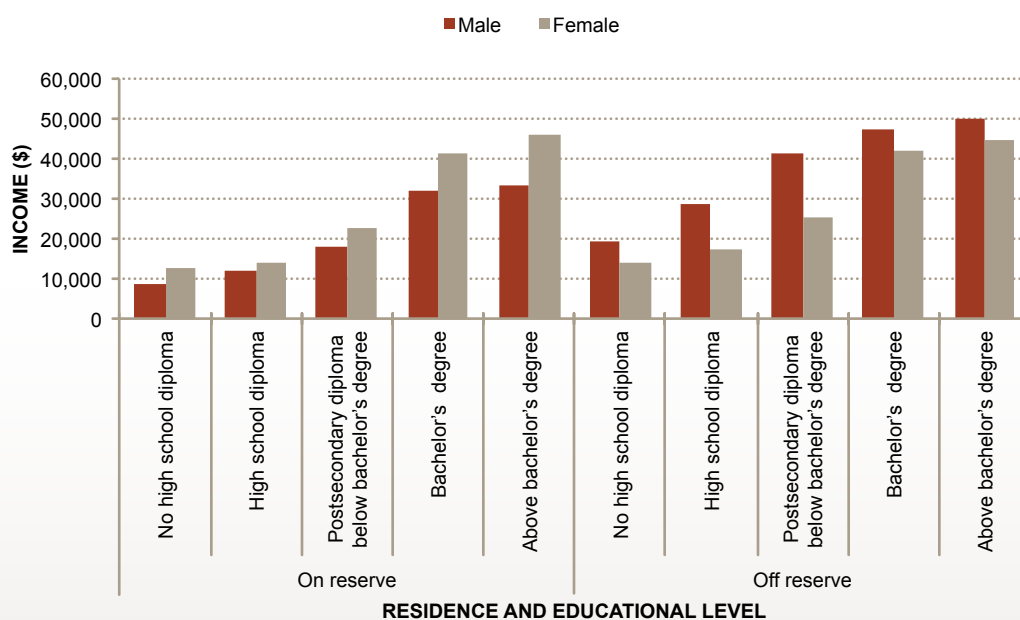
*Data suppressed for males

Source: Statistics Canada, Custom Tables

Figure 40 shows the median after-tax personal income for First Nations males and females on-reserve versus off-reserve across all educational attainments.

- Overall, First Nations females had a higher median after-tax personal income across all levels of education than First Nations males on-reserve.
- However, First Nations females had a lower median after-tax personal income across all levels of education than First Nations males off-reserve.
- The sex median after-tax personal income difference on-reserve was more pronounced among those with at least a bachelor's degree.
- The sex median after-tax personal income gap off-reserve was more evident among those with lower than bachelor's degree.
- With the exception of females with higher than bachelor's degree, the median after-tax personal income on-reserve was lower than off-reserve for First Nations with the same sex and level of education (Figure 40).

FIGURE 40: Median After-Tax Personal Income by Residence, Education Level, and Sex, First Nations Individuals in Alberta, 2010

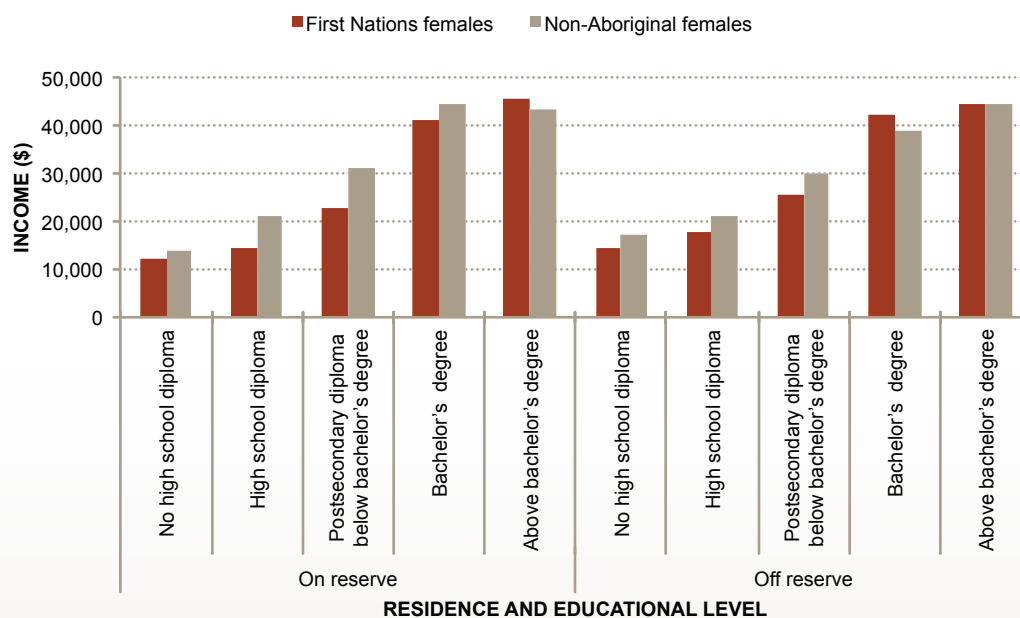


Source: Statistics Canada, Custom Tables

Figure 41 displays median after-tax personal income in 2010 by residence (on- and off-reserve) and highest level of education attained by First Nations and non-Aboriginal females in Alberta.

- First Nations females on-reserve with higher than a bachelor's degree had a higher median after-tax personal income than their non-Aboriginal females counterparts.
- First Nations females off-reserve with at least a bachelor's degree had a higher median after-tax personal income than their non-Aboriginal colleagues.
- This finding that First Nations females with a better education had a higher median income than their non-aboriginal counterparts has been reported in other studies.⁴⁸
- First Nations females had a lower median after-tax personal income on-reserve than those off-reserve, with the exception of First Nations females with a degree above bachelor's education.

FIGURE 41: Median After-Tax Personal Income by Residence and Education Level, First Nations and non-Aboriginal Females in Alberta, 2010

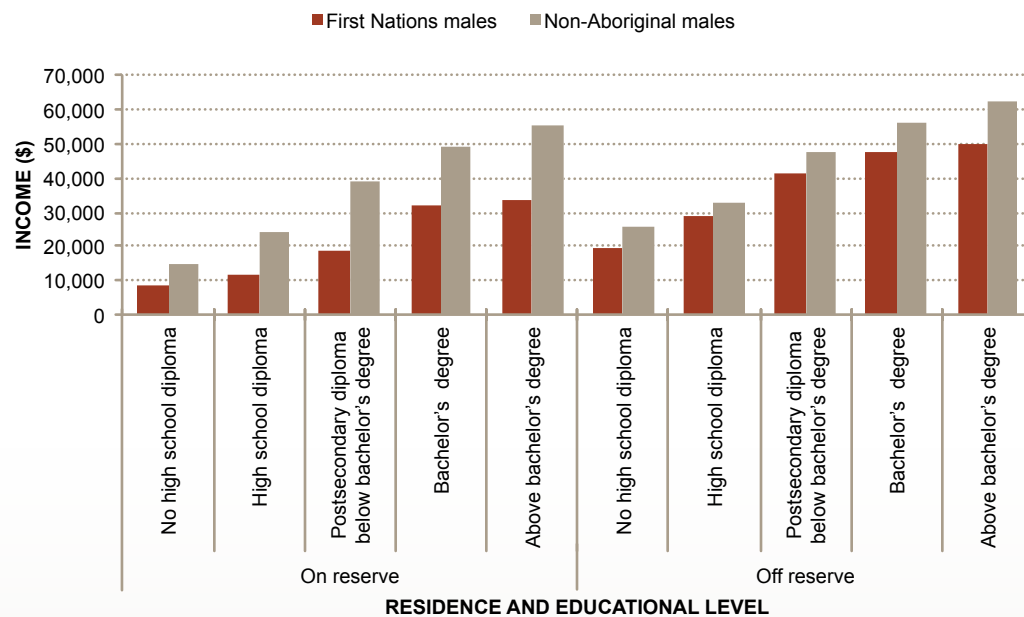


Source: Statistics Canada, Custom Tables

48 Wilson, D., & Macdonald, D. (2010). *The income gap between Aboriginal peoples and the rest of Canada*. Ottawa, ON: Canadian Centre for Policy Alternatives. Retrieved October 15, 2015, from www.policyalternatives.ca/sites/default/files/uploads/publications/reports/docs/Aboriginal%20Income%20Gap.pdf

Figure 42 displays the median after-tax personal income in 2010 for First Nations and non-Aboriginal males by residence (on- and off-reserve) and highest level of educational attainment. Both on- and off-reserve, First Nations males had lower median after-tax personal incomes than non-Aboriginal males with the same level of education. The median after-tax personal income gaps between First Nations and non-Aboriginal males are higher for those living on-reserve than those living off-reserve. The median after-tax income for First Nations males was 34% to 53% less than non-Aboriginal males on-reserve, and 12% and 26% less than non-Aboriginal males off-reserve depending on the level of education attainment. The median after-tax income for First Nations males off-reserve was higher than First Nations males on-reserve with the same level of education.

FIGURE 42: Median After-Tax Personal Income by Residence and Education Level, First Nations and non-Aboriginal Males in Alberta, 2010



Source: Statistics Canada, Custom Tables

INCOME BY FAMILY CHARACTERISTICS

This section focuses on the median after-tax economic family income across different types of families, namely, couple families (i.e. common-law marriages and married spouses) and lone-parent families (i.e., male lone-parents and female lone-parents).

Among First Nations people in Alberta, the median after-tax family income increased for couple families and female lone-parent families from 2005 to 2010 and slightly decreased in male-lone-parent families (Figure 43). The median after-tax economic family income of families living without children was higher than families living with children for every family type in both 2005 and 2010. Married spouses had the highest median after-tax economic family income, followed by common-law parents, male lone-parents and female lone-parent families among families living with children. A similar trend was observed among families living without children.

FIGURE 43: Median After-Tax Economic Family Income of Persons Aged 15 Years and over by Family Type, First Nations People in Alberta, 2005 and 2010



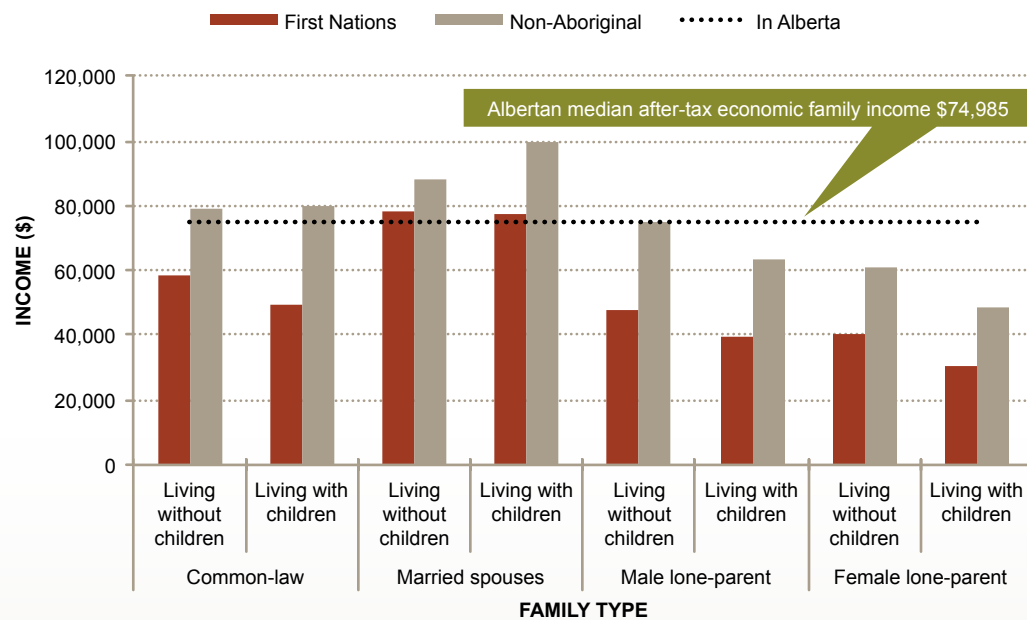
*Constant 2010 dollars

Source: Statistics Canada, Custom Tables

Figure 44 indicates that the median after-tax economic family income among First Nations people was lower than it was among non-Aboriginal families in all economic family types in Alberta in 2010. Further details as are follows.

- Families headed by couples fared better financially than lone-parent families.
- Single-father families fared better financially than single-mother families.
- In lone-parent families, those without children fared better financially than those with children.
- Among First Nations people, only married-spouse families had median after-tax family income higher than the Alberta median.

FIGURE 44: Median After-Tax Economic Family Income of Persons Aged 15 Years and over by Family Type, First Nations and Non-Aboriginal people in Alberta, 2010



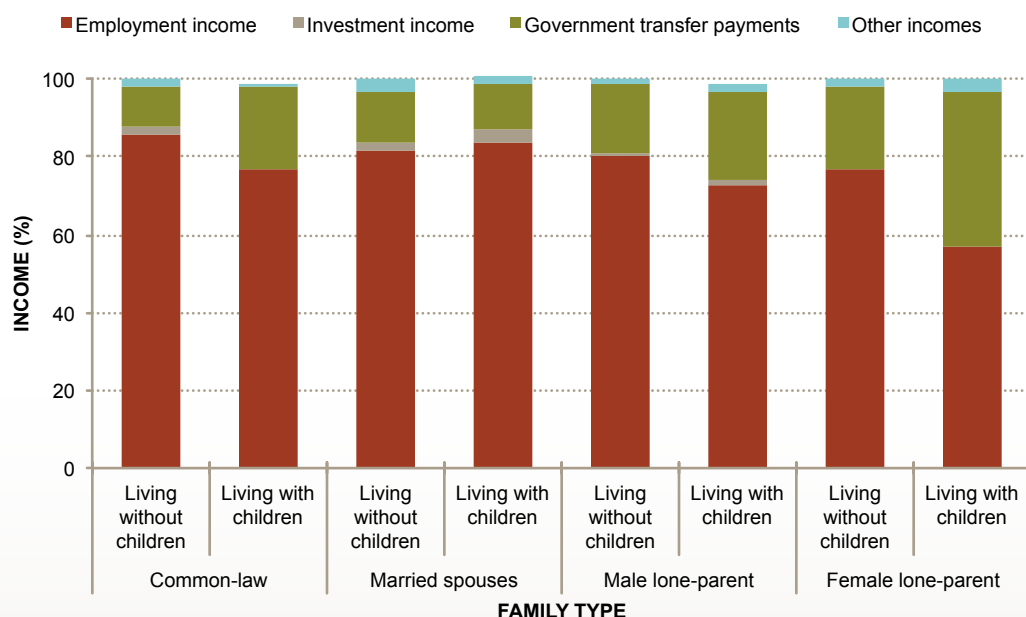
Source: Statistics Canada, Custom Tables

Although employment income was the major source of income, the share of income varied across different types of families. With the exception of married-spouse families, individuals without children had a higher share of employment income than individuals with children (Figure 45 and Figure 46).

Among First Nations people, female lone parents with children had the lowest share of employment income (57%) and a large proportion of their income was received from government transfers (40%) (Figure 45).

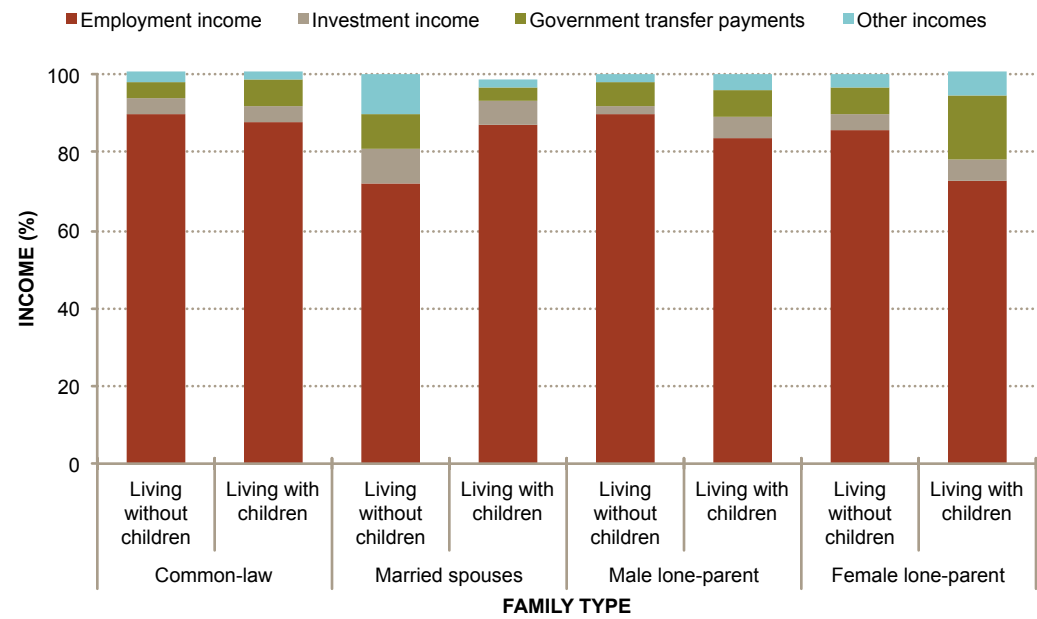
In contrast, among non-aboriginal peoples, married spouses without children had the lowest share of employment income (72%) and the remaining income came in almost equal proportions from the other 3 components, i.e. government transfers (9%), investments (9%), and others (10%) (Figure 46).

FIGURE 45: Composition of After-Tax Personal Income by Family Type, First Nations People in Alberta, 2010



Source: Statistics Canada, Custom Tables

FIGURE 46: Composition of After-Tax Personal Income by Family Type, Non-Aboriginal People in Alberta, 2010



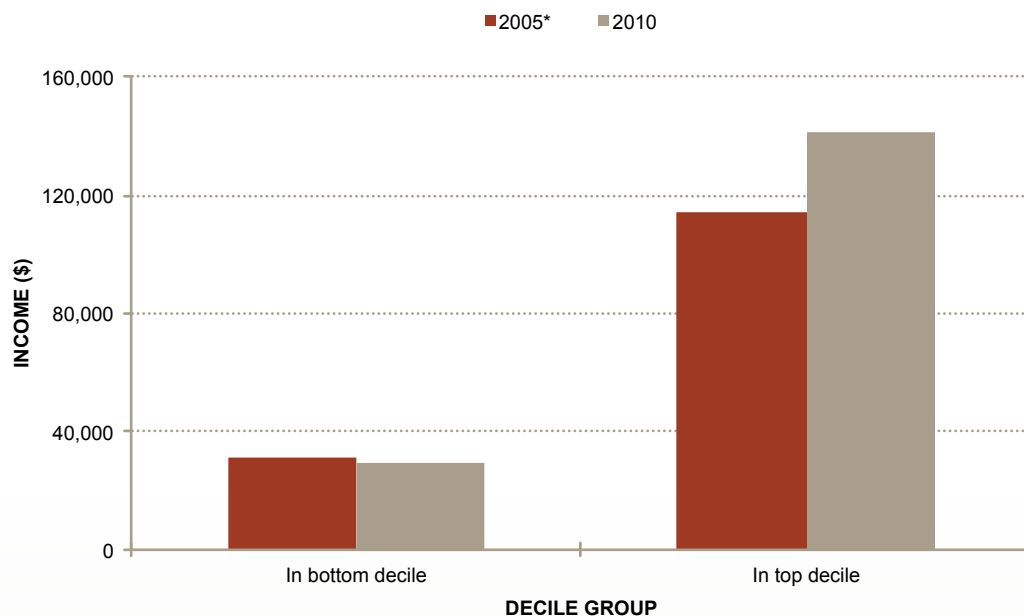
Source: Statistics Canada, Custom Tables



POPULATION IN THE TOP AND BOTTOM INCOME BRACKETS

Figure 47 exhibits the median after-tax family income for First Nations individuals whose income was either in the top 10% income bracket or the bottom 10% income bracket in Alberta in both 2005 and 2010. In 2010, the median economic family income decreased by 5% in the bottom 10% income group and increased by 23% in the top 10% income group from 2005 (Figure 45). This indicates that the median after-tax family income gap between the top 10% and the bottom 10% income group grew between the 2 census periods.

FIGURE 47: Median After-Tax Economic Family Income of Persons Aged 15 Years and over by Income Decile Group, First Nations People in Alberta, 2005 and 2010



*Constant 2010 dollars

Source: Statistics Canada, Custom Tables

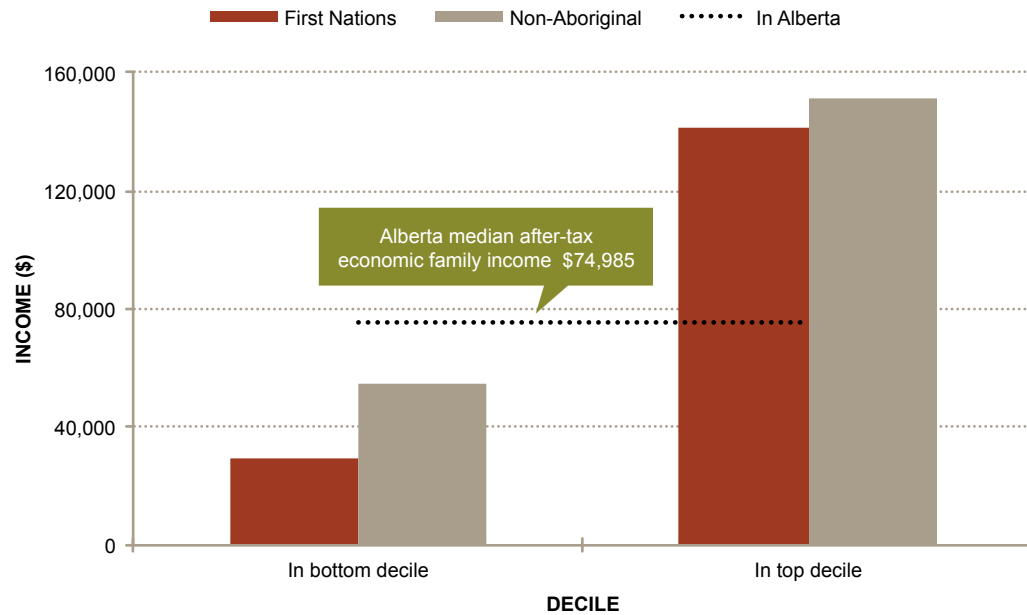
For individuals whose after-tax economic family incomes were in the bottom 10% income bracket in Alberta:

- The median after-tax family income for non-Aboriginal people (\$54,493) was nearly 2 times that of First Nations people (\$29,835) in 2010.
- When compared to the Albertan median as a whole (\$74,985), the median after-tax economic family incomes for non-Aboriginal people in the bottom 10% income bracket was 27% lower (Figure 48).

For individuals whose after-tax economic family incomes were in the top 10% income bracket:

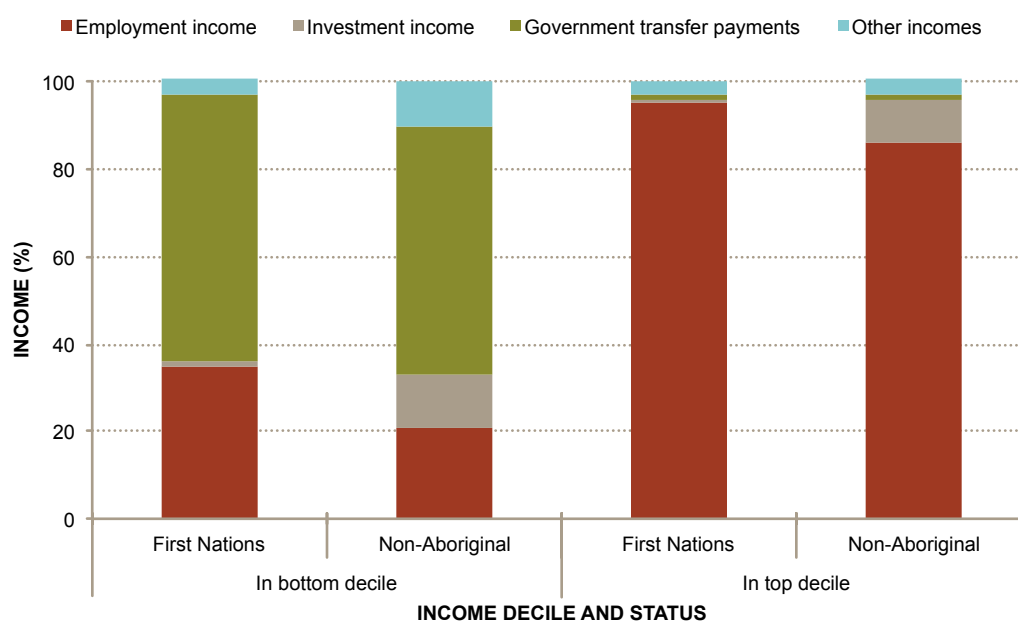
- The median after-tax family income of First Nations people was 7% lower than it was for non-Aboriginal peoples (\$141,140 versus 151,491).
- The median after-tax family income was about 2 times that of the Albertan median economic family income. In fact, the income from the top 10% in Alberta made up 33% of the total income in Alberta in 2010.

FIGURE 48: Median After-Tax Economic Family Income of Persons Aged 15 Years and over by Income Decile Group, First Nations and Non-Aboriginal People in Alberta, 2010



Source: Statistics Canada, Custom Tables

FIGURE 49: Composition of After-Tax Personal Income by Income Decile Group, First Nations and Non-Aboriginal People in Alberta, 2010



Source: Statistics Canada, Custom Tables

People in the top 10% income bracket reported that about nine-tenths of their income came from employment (95% for First Nations and 86% for non-Aboriginal peoples), while those in the bottom 10% received about 60% of their income from government transfers (61% for First Nations and 57% for non-Aboriginal peoples) (Figure 49). This phenomenon reflects the important leveraging role of government transfers in providing additional income supplements for the economically disadvantaged.

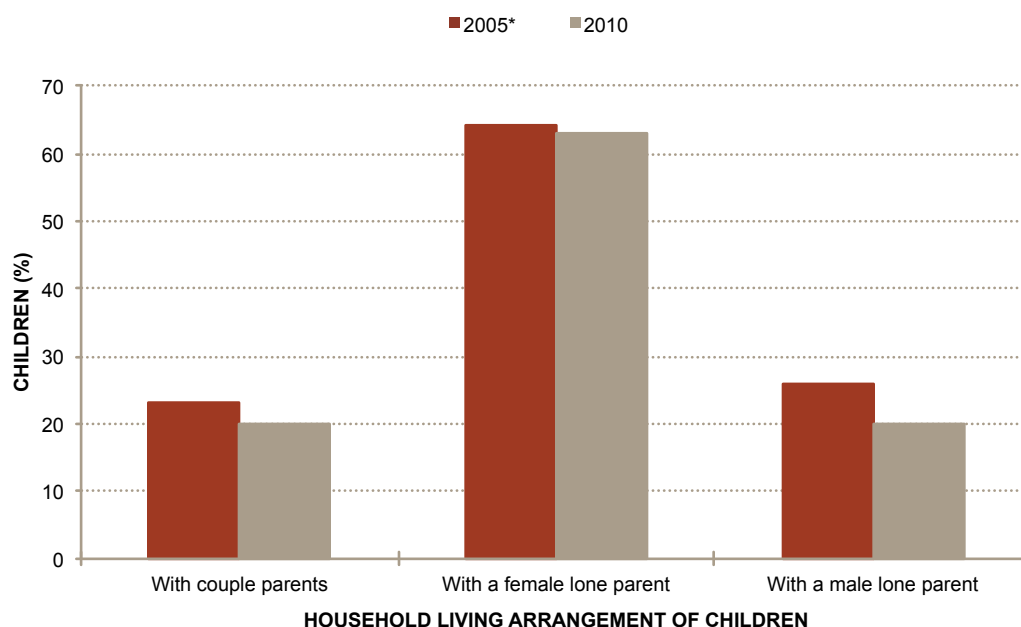
Statistics Canada uses the low income thresholds such as after-tax low income measure (LIM-ATs)⁴⁹ to present the extent to which some individuals are less well-off than others. The low income measure (LIM) means that a household earns less than 50% of the median income of the “equivalent” households.^{50,51}

49 Low-income concepts are not applied in the territories and in certain areas based on census subdivision type (such as Indian reserves). The existence of substantial in-kind transfers (such as band housing) and sizeable barter economies or consumption from own production (such as product from hunting or fishing) could have made the interpretation of low-income rates more difficult.

50 Statistics Canada. (2013). *Income reference guide: National Household Survey, 2011* (Catalogue No. 99-014-X2011006). Retrieved October 15, 2015, from www12.statcan.gc.ca/nhs-enm/2011/ref/guides/99-014-x/99-014-x2011006-eng.pdf

51 Statistics Canada. (2013). *National Household Survey dictionary, 2011* (Catalogue No. 99-000-X2011001). Retrieved October 15, 2015, from www12.statcan.gc.ca/nhs-enm/2011/ref/dict/99-000-x2011001-eng.pdf

FIGURE 50: Proportion of First Nations' Children Aged 14 Years and under Living below LIM-AT by Household Living Arrangement in Census Families, Alberta, 2005 and 2010



*Constant 2010 dollars

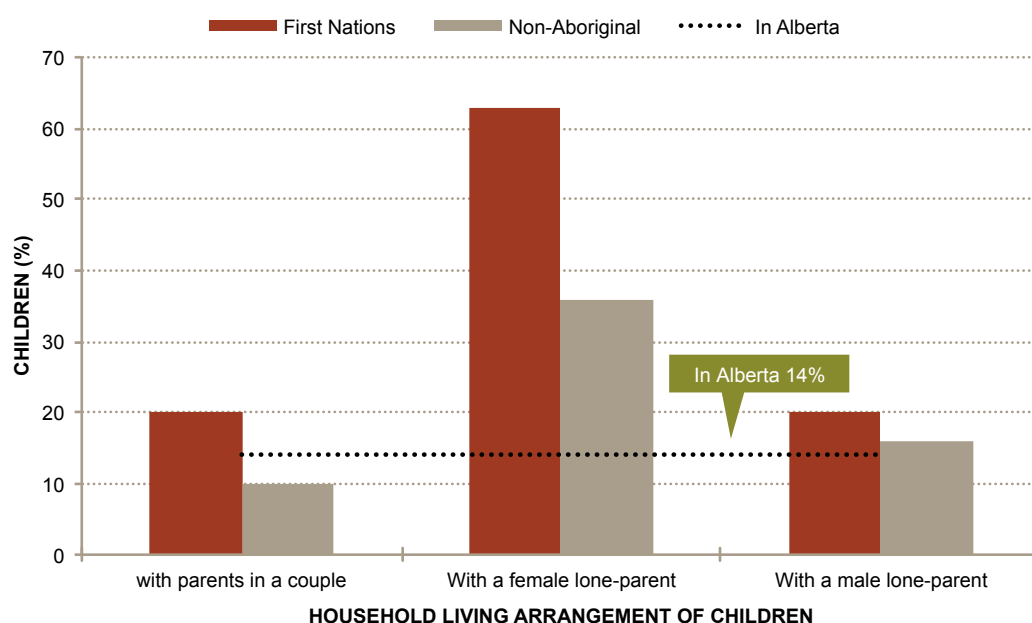
Source: Statistics Canada, Custom Tables

In 2010, the LIM-AT threshold was \$19,460 for a household with a single person, \$27,521 for a household with 2 members, and \$38,920 for a household with 4 members.⁵²

Figure 50 shows that the proportions of children aged 14 years and under living below LIM-AT decreased from 2005 to 2010 in First Nations couple families and lone-parent families, especially in male lone-parent families (26% in 2005 and 20% in 2010).

52 Statistics Canada. (2016). Table 3.2 Low-income measures thresholds (LIM-AT, LIM-BT and LIM-MI) for households of Canada, 2010. Retrieved October 15, 2015, from www12.statcan.gc.ca/nhs-enm/2011/ref/dict/table-tableau/t-3-2-eng.cfm

FIGURE 51: Proportion of First Nations' Children and Non-Aboriginal's Children Aged 14 Years and under Living below LIM-AT by Household Living Arrangement in Census Families, Alberta, 2010



Source: Statistics Canada, Custom Tables

Figure 51 shows children aged 14 years and under with First Nations and non-Aboriginal parent(s) living below LIM-AT across various census family types in 2010. Overall, 14%⁵³ of children in Alberta lived below LIM-AT. The proportion of children living below LIM-AT was disproportionate to First Nations census families.⁵⁴ For example, 63% of children living with a First Nations female lone-parent were living below LIM-AT while 36% of children living with a non-Aboriginal female lone-parent were living below LIM-AT.

One component of government transfers is through the Income Assistance program provided by Indigenous and Northern Affairs Canada (INAC) to First Nations communities. Income Assistance is offered to eligible individuals and families on-reserve to support their basic and special needs and to support access to services to help them transition to, and remain in, the workforce.⁵⁵

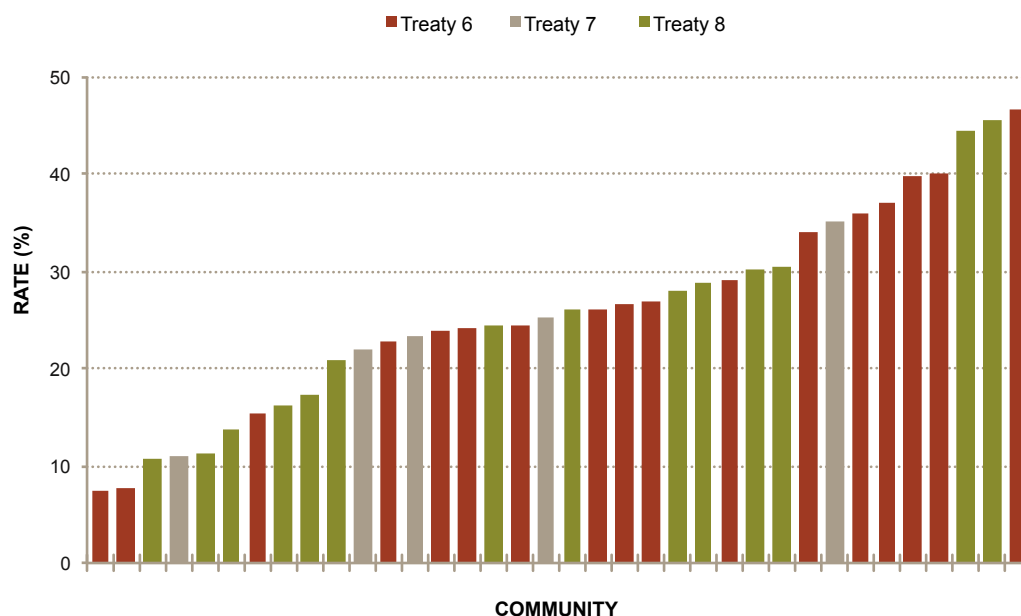
The on-reserve income support dependency rate is the percentage of on-reserve population with income assistance. Figure 52 shows that the income support dependency rate varied between First Nations communities and treaty areas in Alberta in 2015/ 2016. Most communities that had a low income support rate also had a high median family income (Figure 36 and Figure 52).

53 The proportion of children aged 14 years and under living below LIM-AT out of all children in census families and persons in foster care where LIM-AT is applicable.

54 Children in census families refers to blood, step or adopted sons and daughters (regardless of age or marital status) who are living in the same dwelling as their parent(s), as well as grandchildren in households where there are no parents present. See Statistics Canada. (2012). *Census dictionary: Census year, 2011* (Catalogue No. 98-301-X2011001). Retrieved October 15, 2015, from www12.statcan.gc.ca/census-recensement/2011/ref/dict/98-301-X2011001-eng.pdf

55 Aboriginal Affairs and Northern Development Canada. (2012). *National social programs manual*. Retrieved October 15, 2015, from www.aadnc-aandc.gc.ca/eng/1335464419148/1335464467186#chp2

FIGURE 52: Income Support Dependency Rate by First Nations Community in Alberta, 2015/2016



Source: Indigenous and Northern Affairs Canada, Alberta Region Income Assistance Dependence Rate. (2015). *Income Assistance dependency rate as reported by communities administering the Income Assistance Program for the 2015/2016 fiscal year*. Unpublished raw data

In summary, both a higher level of education and a sufficient income are keys to better health.⁵⁶

Educational attainment clearly has a role in shaping income levels, yet a secure income also enables one to afford a better education. Income levels are lower for First Nations than for non-Aboriginal people in Alberta and Canadians. The difference can be partially explained by the lower education attainment and remote and isolated places of residence.

First Nations' demography and family structure differ from their non-Aboriginal counterparts; this difference may also contribute to the income differences between First Nations and non-Aboriginal people. In addition, the proportion of children aged 14 years and under living below LIM-AT is more prevalent in First Nations communities. This situation requires First Nations communities, First Nations organizations, and all levels of governments to work together to address low income and education attainment levels among First Nations people.

⁵⁶ Centers for Disease Control and Prevention. (2012, May 16). *Higher education and income levels keys to better health, according to annual report on nation's health* [Press release]. Retrieved from www.cdc.gov/media/releases/2012/p0516_higher_education.html



LABOUR FORCE ACTIVITY

Good health is positively associated with higher labour force participation and hence higher productivity.^{57,58} The conditions, nature and quality of employment can impact health as it can provide “financial security, social status, personal development, social relations, and self-esteem and protection from physical and psychosocial hazards”.⁵⁹ In this section we look at labour force measures (participation, employment, and unemployment rates) among First Nations people in vAlberta.

The following definitions are used in this section.

- The **labour force** consists of the “civilian non-institutional population 15 years and over who are either employed or unemployed” and searching for work.⁶⁰
- The **participation rate** is the number of people in the labour force as a percentage of the population aged 15 years and over.
- The **employment rate** is the number of people employed as a percentage of the population aged 15 years and over.
- The **unemployment rate** is the number of unemployed people who are looking for work as a percentage of the labour force.

The participation and employments rates of First Nations people were lower in 2011 than 2006 in Canada, Alberta, and the 3 treaty areas in Alberta. First Nations employment and participation rates were higher in Alberta than in Canada. However, employment and participation rates of First Nations people in Treaty 6, Treaty 7 and Treaty 8 were lower than for First Nations in Canada overall (Figure 53).

57 Novignon, J., Novignon, J., & Arthur, E. (2015). Health status and labour force participation in Sub-Saharan Africa: A dynamic panel data analysis. *African Development Review/Revue africaine de développement*, 27, 14-26.

58 Cai, L., & Kalb, G. (2006). Health status and labour force participation: Evidence from Australia. *Health Economics*, 15, 241-261.

59 Marmot, M., Friel, S., Bell, R., Houweling, T. A., Taylor, S., & Commission on Social Determinants of Health. (2008). Closing the gap in a generation: Health equity through action on the social determinants of health. *The Lancet*, 372, 1661-1669.

60 Statistics Canada. (2015). Glossary – L. Retrieved October 20, 2015, from www.statcan.gc.ca/eng/nea/gloss/gloss_l

Unemployment rates decreased for First Nations people in Treaty 6, Treaty 7 and Treaty 8 in 2011 compared to 2006, even though it increased for First Nations people in Alberta. Unemployment rates for First Nations people were higher for those who live on reserves compared to those in Alberta in general (Figure 53).

First Nations people living on reserves in Alberta experienced lower participation and employment rates, and a higher unemployment rate, than First Nations people living off-reserve in Alberta in both 2006 and 2011 (Figure 53).

FIGURE 53: Labour Force Status of First Nations People by Geography, 2006 and 2011

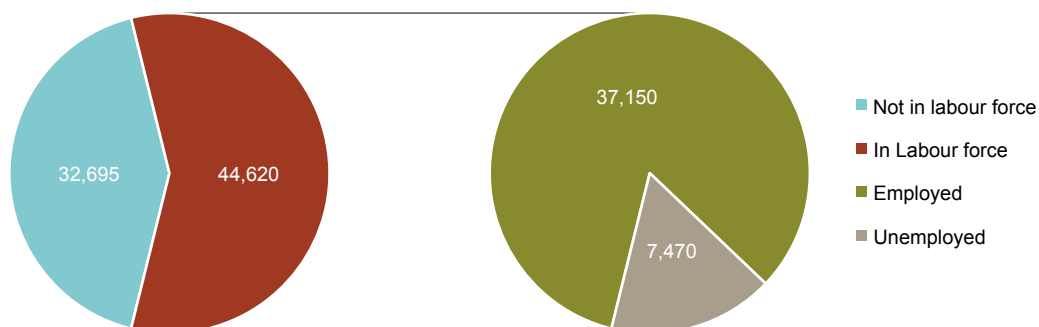


Source: Statistics Canada, Custom Tables

In 2011, the estimated total population of First Nations people who were aged 15 years and over in Alberta was 77,315, out of which 44,620, or 58%, were participating in the labour force. The remaining 42% (32,695 First Nations individuals) were not participating in the labour force, typically because they were students, not seeking employment, or retired.

Out of those who were participating in the labour force, 37,150 were employed representing an employment rate of 48% and 7,470 identified themselves as unemployed, representing an unemployment rate of 17% (Figure 54).

FIGURE 54: Labour Force Status of First Nations People in Alberta, 2011

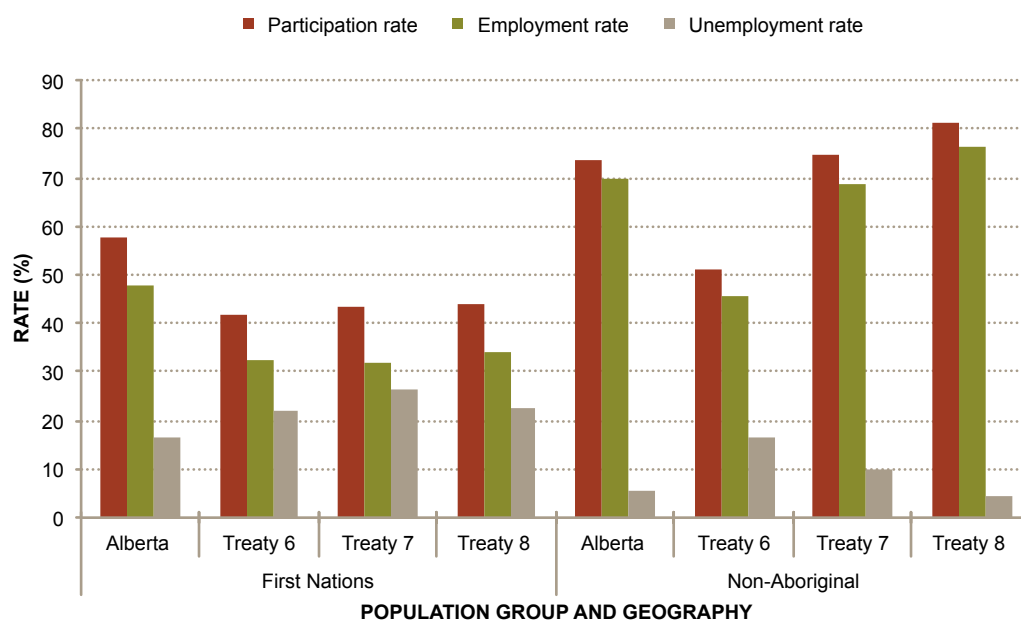


Source: Statistics Canada, Custom Tables

In 2011, the participation and employment rates for First Nations people were lower than for non-Aboriginal individuals living in the same area in Alberta.

The unemployment rate for First Nations people was higher than for non-Aboriginal people living in the same area in Alberta in 2011. While labour force measures were relatively similar across treaty areas for First Nations people, considerable differences existed among non-Aboriginal individuals across treaty areas in 2011 in Alberta. The gaps in labour force measures between First Nations and non-Aboriginal people were much higher in Treaty 7 and Treaty 8 than in Treaty 6 (Figure 55).

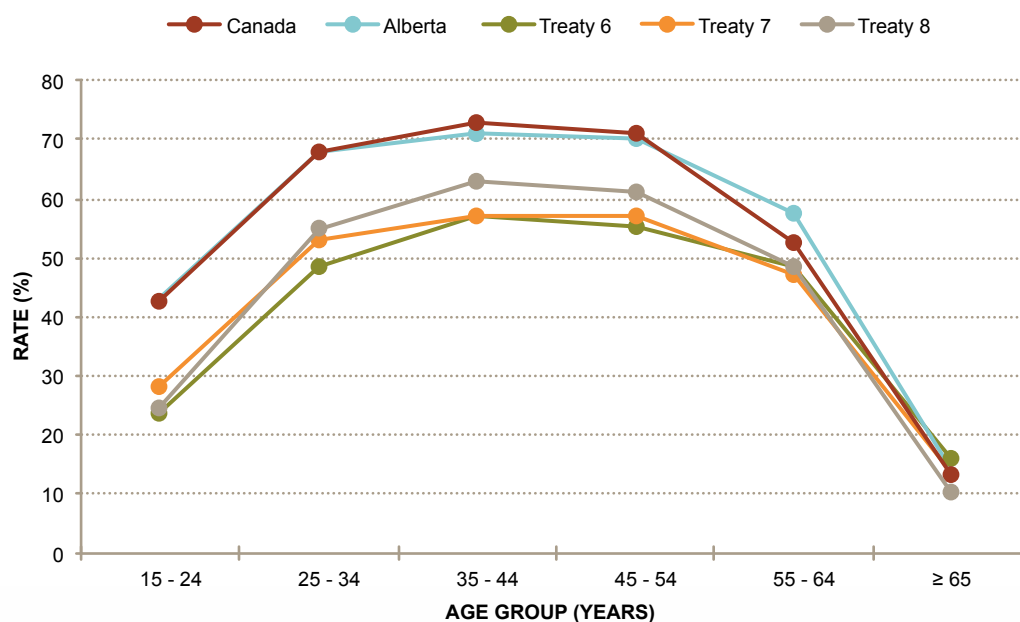
FIGURE 55: Labour Force Status by Population Group and Geography, 2011



Source: Statistics Canada, Custom Tables

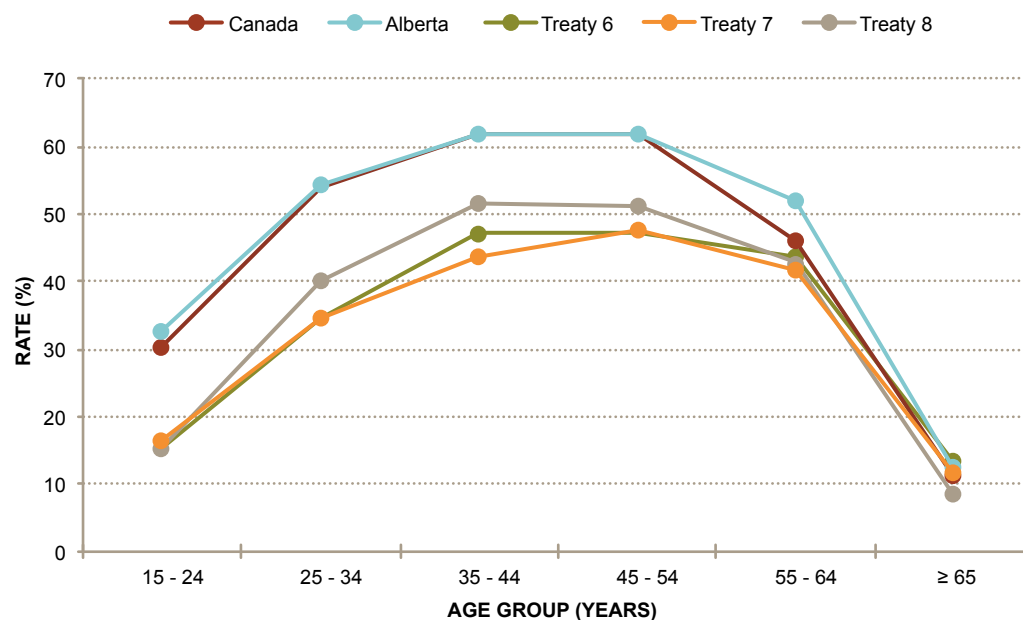
In 2011, the participation rate in the labour force for First Nations people in all geographic areas increased from the 15 to 24 years age group to the 35 to 44 years age group and decreased to 65 years and older age group (Figure 56). Except for the 65 years and older age group, the participation rates in all treaty areas were lower than in Alberta and Canada for every age-group in 2011 for First Nations people. The participation rate for First Nations people was lowest in the 65 years and older age group followed by the 15 to 24 years age groups, because most people in these age groups are retired (≥ 65 years) or students (15 to 24 years).

FIGURE 56: Participation Rate of First Nations People in the Labour Force by Age Group and Geography, 2011



Source: Statistics Canada, Custom Tables

FIGURE 57: Employment Rate of First Nations People by Age Group and Geography, 2011

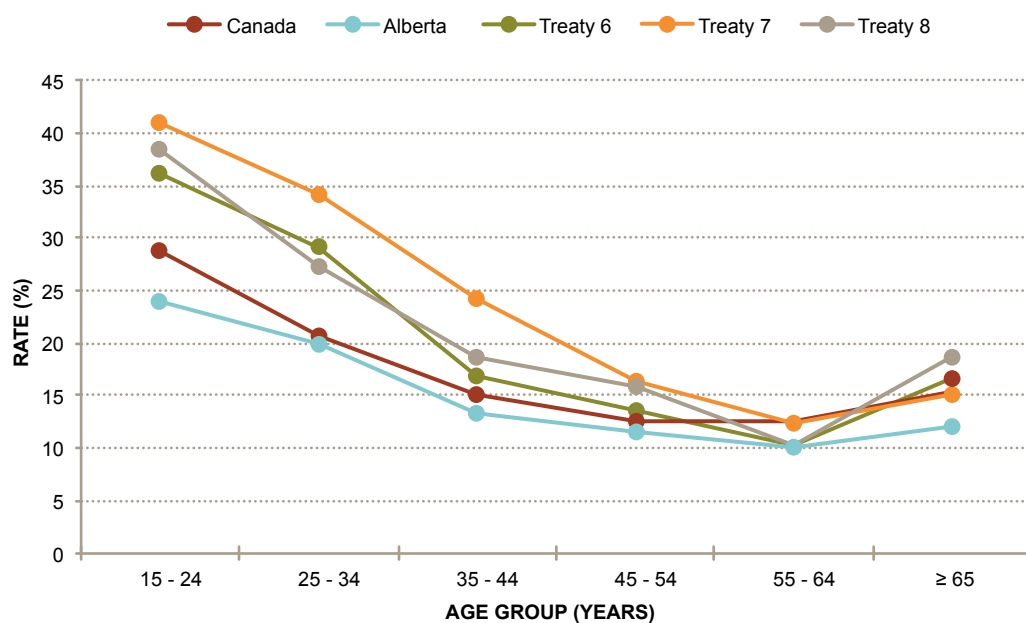


Source: Statistics Canada, Custom Tables

In 2011, the employment rate for First Nations people in all geographic areas increased from the 15 to 24 years age group to the 44 to 54 years age group (35 to 44 years age group for Treaty 8) and decreased to 65 years and older age group (Figure 57). Except for the 65 years and older age group, employment rates in all treaty areas were lower than in Alberta and Canada for every age group in 2011 for First Nations people. The employment rate for First Nations people was lowest in the 65 years and older age group followed by the 15 to 24 years age groups.

Figure 58 shows that excluding the 65 years and older age group, unemployment rates among First Nations people decreased with increasing age across all geographic areas. Among First Nations people aged 15 to 54 years, unemployment rates in the treaty areas were higher than in Alberta and Canada.

FIGURE 58: Unemployment Rate of First Nations People by Age Group and Geography, 2011

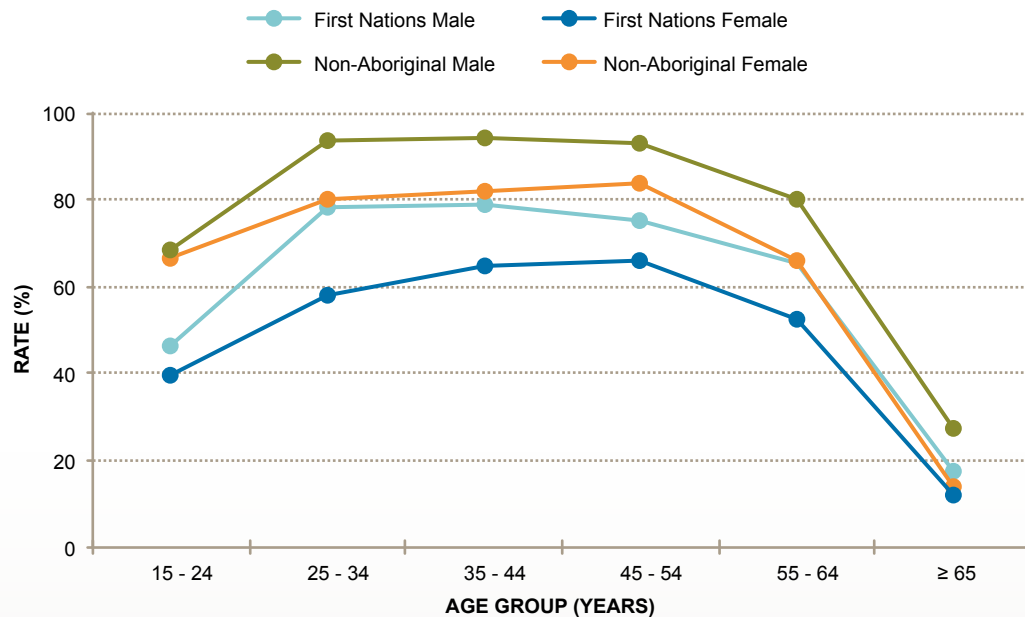


Source: Statistics Canada, Custom Tables

Figure 59 demonstrates that the participation rate for women was lower than men for all age groups in Alberta for both First Nations and non-Aboriginal individuals in 2011. First Nations People had lower participation rate than non-Aboriginal people, with First Nations men having lower participation rates than non-Aboriginal women for all age groups except the 65 years and older age group.

The gap in participation rates between males and females was highest in the 25 to 34 years age group, followed by 35 to 44 years age group, then 55 to 64 years age group among First Nations people. However, among non-Aboriginal individuals the gap in participation rate between males and females was highest in the 55 to 64 years age group, followed by 25 to 34 years age group, then 65 years and older age group (Figure 59).

FIGURE 59: Participation Rate by Age, Population Group and Sex, Alberta, 2011

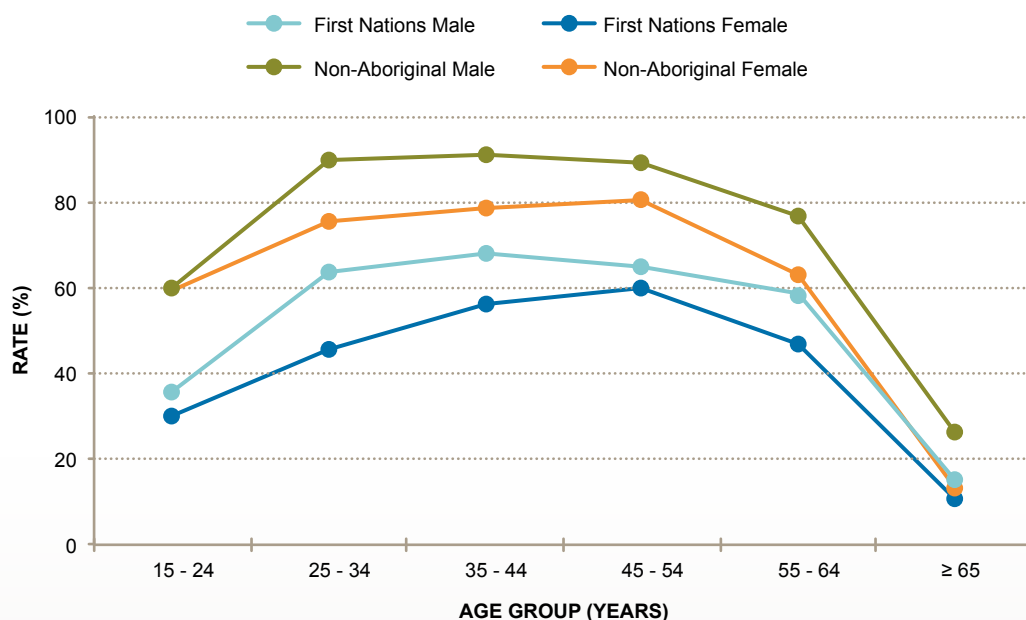


Source: Statistics Canada, Custom Tables

Figure 60 demonstrates that the employment rate for women was lower than that for men for all age groups in Alberta for both First Nations and non-Aboriginal individuals in 2011. First Nations people had lower employment rates than non-Aboriginal people, with First Nations men having employment rates lower than non-Aboriginal women for all age groups except the 65 years and older age group.

The gap in the employment rate between males and females was highest in the 25 to 34 years age group, followed by 45 to 54 years age group, then the 35 to 44 years age group among First Nations people. Among non-Aboriginal individuals the gap in the employment rate between males and females was highest in the 55 to 64 years age group, followed by 65 years and older age group, then the 34 to 44 years age group (Figure 60).

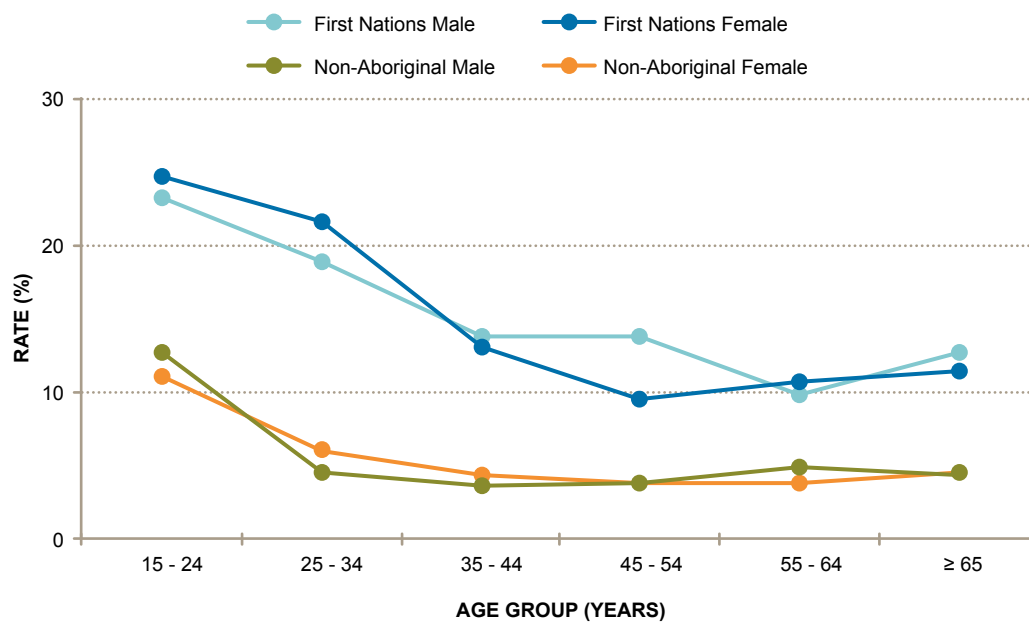
FIGURE 60: Employment Rate by Age, Population Group and Sex, Alberta, 2011



Source: Statistics Canada, Custom Tables

Figure 61 illustrates that unemployment rates among First Nations people were higher than non-Aboriginal individuals in Alberta for all age groups in 2011.

FIGURE 61: Unemployment Rate by Age, Population Group and Sex, Alberta, 2011

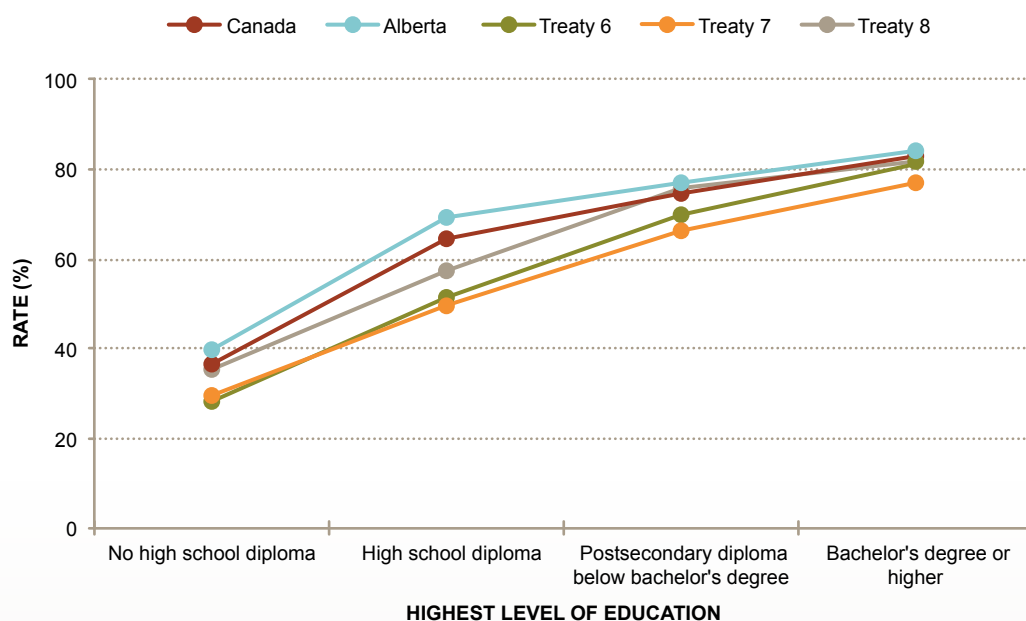


Source: Statistics Canada, Custom Tables

Figure 62 shows that the participation rate for First Nations people in all geographic areas increased with education attainment.

- Participation rates range from 28% to 40% for people without a high school diploma to 77% to 84% for people with Bachelor's or higher degree in 2011.
- First Nations people on-reserve in Alberta had lower participation rate at all education levels compared to the overall First Nations population in Alberta; the greatest differences occur among those with high school diploma.
- Among First Nations people living on-reserve in Alberta, those in Treaty 8 had the highest participation rate across all levels of education.

FIGURE 62: Participation Rate of First Nations People by Education Level and Geography, 2011

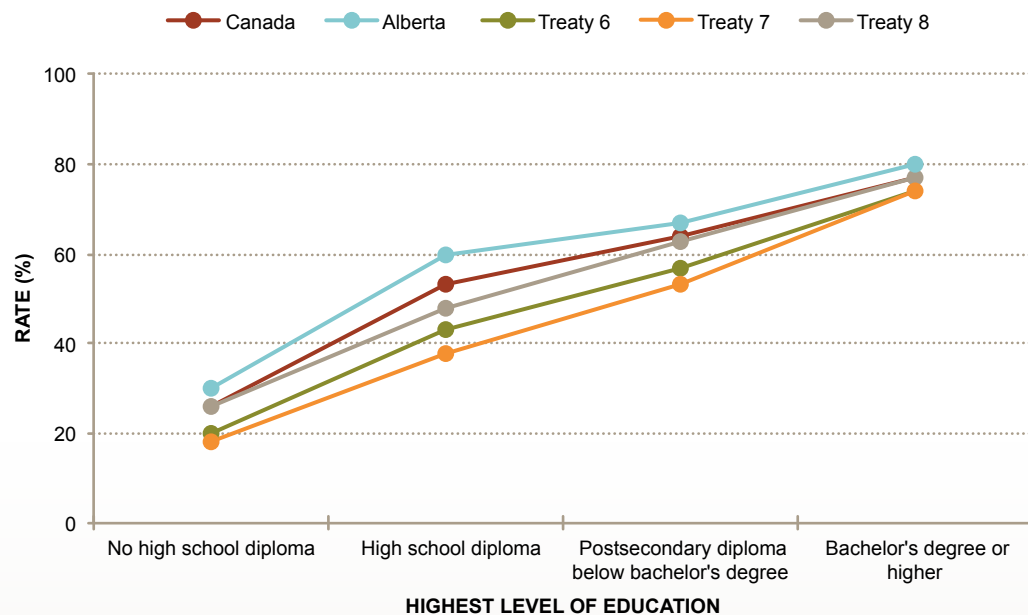


Source: Statistics Canada, Custom Tables

Employment rates for First Nations people in all geographic areas increased with education attainment. Further details are as follows.

- Employment rates range from 18% to 26% for people without a high school diploma to 74% to 80% for people with Bachelor's or higher degree in 2011 (Figure 63).
- First Nations people on-reserve in Alberta had lower employment rates at all education levels compared to the general First Nations population in Alberta; the greatest differences occur among those with high school diploma.
- Among First Nations people living on-reserve in Alberta, those in Treaty 8 had the highest employment rate across all levels of education and those in Treaty 7 had the lowest

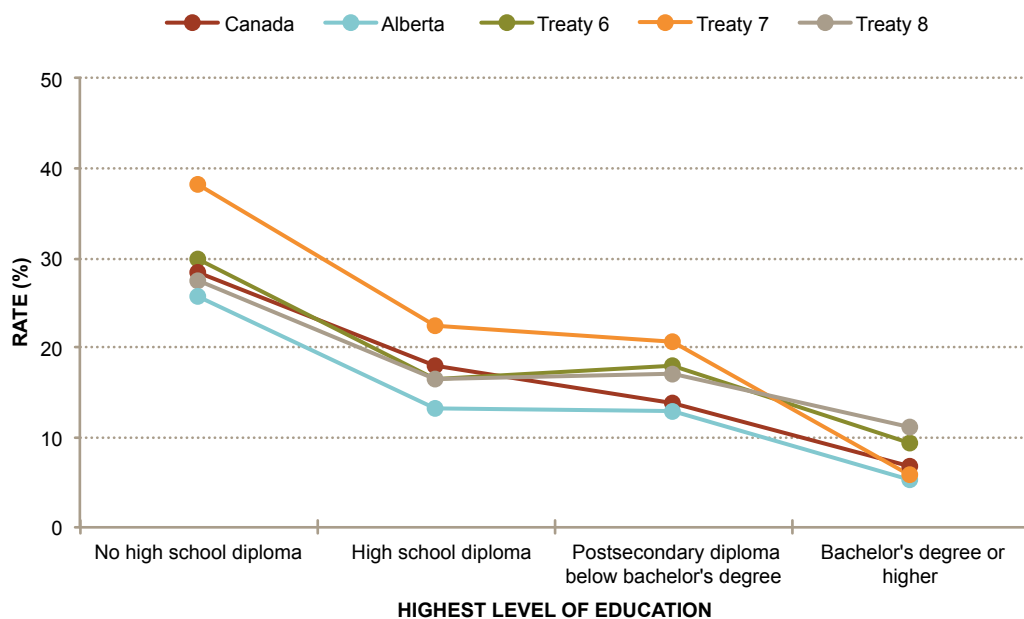
FIGURE 63: Employment Rate of First Nations People by Education Level and Geography, 2011



Source: Statistics Canada, Custom Tables

In general, Figure 64 shows that the unemployment rate for First Nations people in all geographic areas decreased with the level of education attainment in 2011. The unemployment rates for First Nations people with no high school diploma were at least 2 times higher than those with at least a bachelor's degree across all geographic areas. Unemployment rates for First Nations people living on-reserve were higher than those living off-reserve in Alberta for all education levels in 2011.

FIGURE 64: Unemployment Rate of First Nations People by Level of Education and Geography, 2011

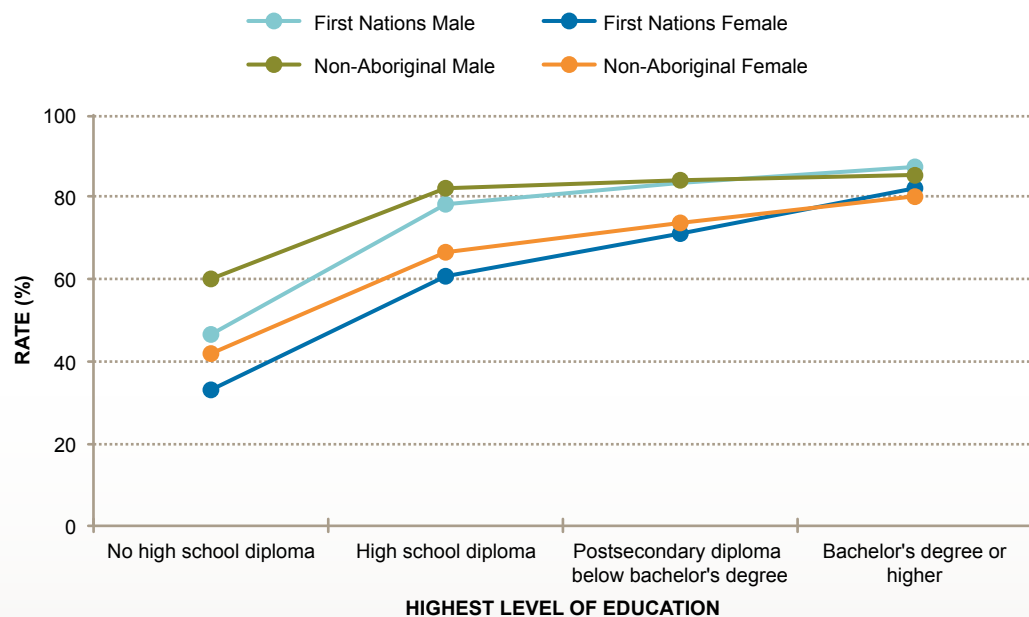


Source: Statistics Canada, Custom Tables

Figure 65 demonstrates that participation rate in the labour force increased with a higher level of educational attainment in 2011 in Alberta.

- The female participation rate was lower than men for all levels of education in Alberta for both First Nations and non-Aboriginal people in 2011.
- First Nations people had lower participation rate than non-Aboriginal individuals of the same sex with less than a bachelor's degree.
- However, among those with at least a bachelor's degree, First Nations people had a higher participation rate than non-Aboriginal individuals of the same sex.
- The sex participation gap decreased with educational attainment among non-Aboriginal people but was highest among those with only a high school diploma for First Nations people in Alberta (Figure 65).

FIGURE 65: Participation Rate by Level of Education, Population Group and Sex, Alberta, 2011

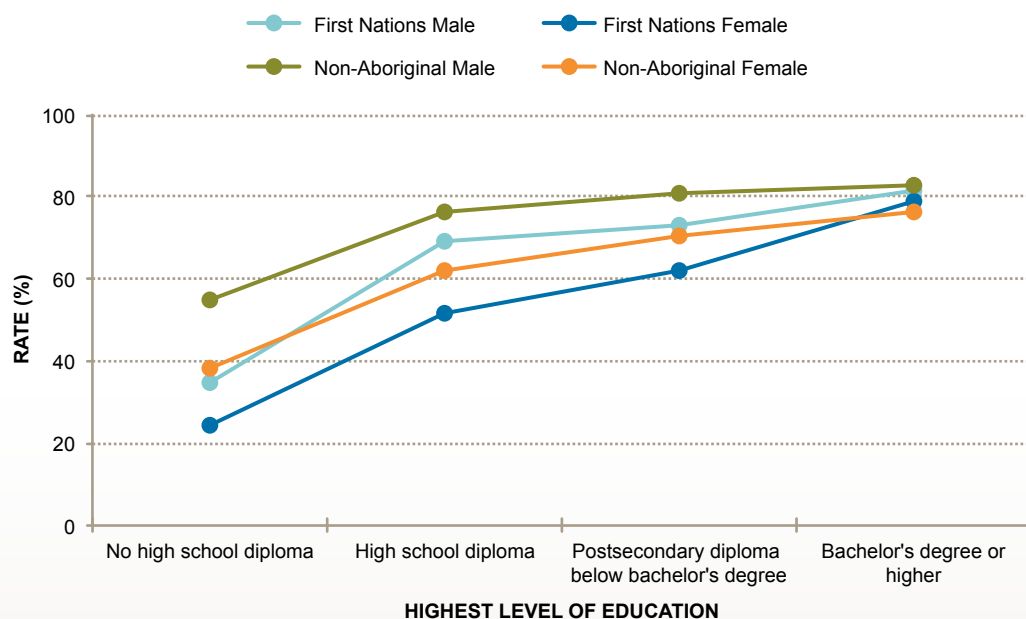


Source: Statistics Canada, Custom Tables

Figure 66 shows that the employment rate increased with a higher level of educational attainment in 2011 in Alberta. Details are as follows.

- Employment rates for women were lower than men for all levels of education in Alberta for both First Nations and non-Aboriginal people in 2011.
- First Nations men had lower employment rate than non-Aboriginal men for all levels of education.
- First Nations women had lower employment rate than non-Aboriginal women with less than a bachelor's degree.
- The sex gap in employment rates decreased with educational attainment among non-Aboriginal people but was highest among those with only high school diploma for First Nations people in Alberta (Figure 66).

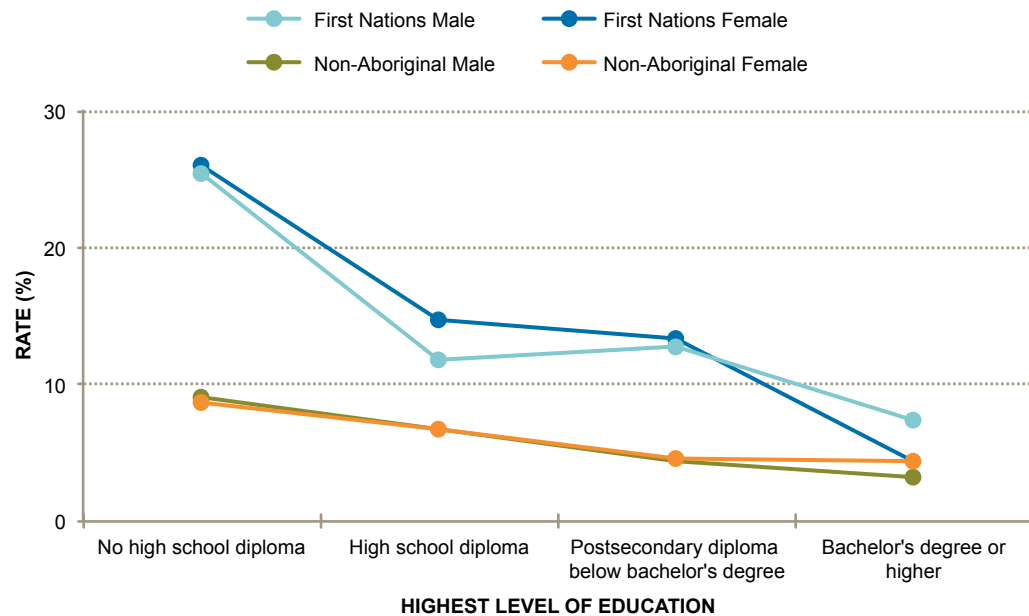
FIGURE 66: Employment Rate by Level of Education, Population Group and Sex. Alberta, 2011



Source: Statistics Canada, Custom Tables

Figure 67 illustrates that unemployment rates among First Nations people were higher than non-Aboriginal people in Alberta for all levels of education. The unemployment rate decreased with higher levels of educational attainment for non-Aboriginal people and First Nations women.

FIGURE 67: Unemployment Rate by Level of Education, Population Group and Sex, Alberta, 2011

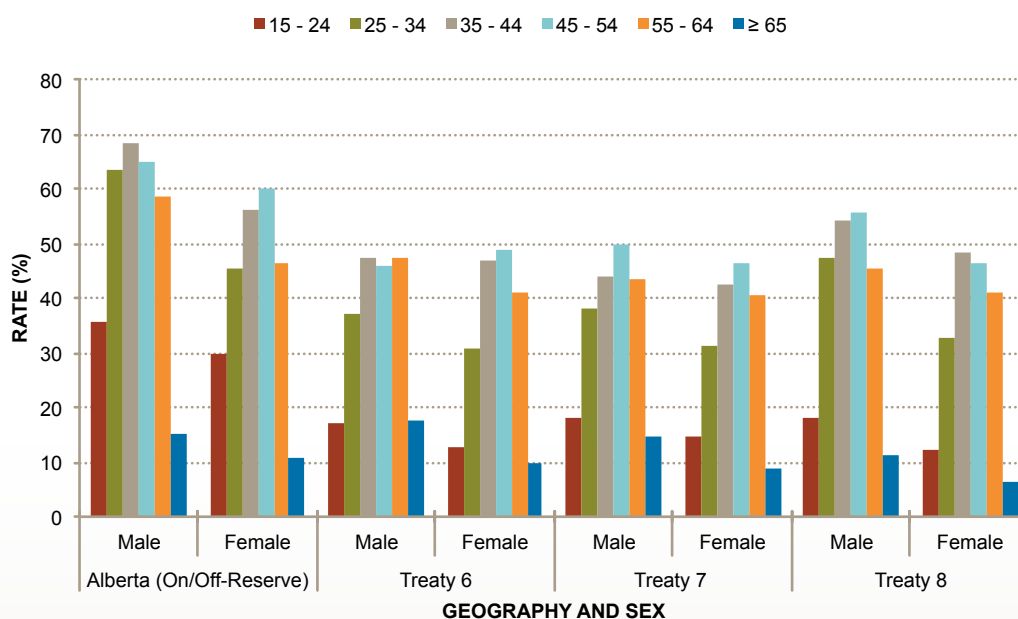


Source: Statistics Canada, Custom Tables

Figure 68 shows sex difference in 2011 employment rates for First Nations people by geographic areas in Alberta by age. Details are as follows.

- With the exception of First Nations women aged 45 to 54 years in Treaty 6, First Nations men had higher employment rates compared to women in all geographic areas and all age groups in 2011.
- The gender difference was highest among the 25 to 34 year age group in all geographic areas except in Treaty 6 where it occurred among those aged 65 years and older.
- With the exception of the 65 years and older group, employment rates of First Nations people living in any of the reserves in Alberta was lower than those living off-reserve in Alberta for every age group.

FIGURE 68: Employment Rate for First Nations People by Age, Geography and Sex, 2011

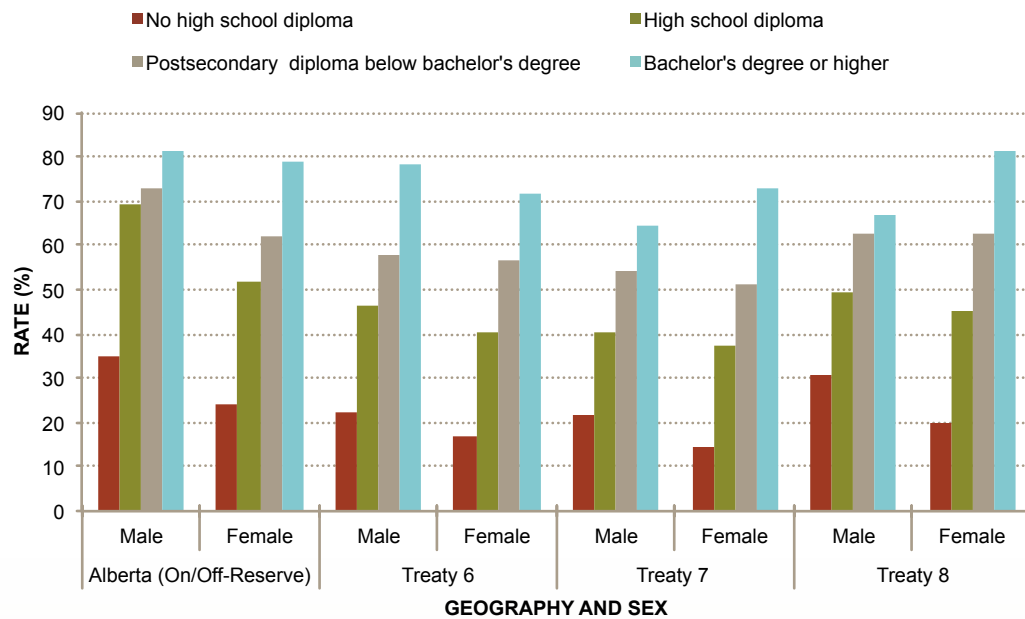


Source: Statistics Canada, Custom Tables

Figure 69 shows gender differences in 2011 employment rates for registered First Nations people by geographic areas in Alberta and educational attainment. The employment rate for First Nations people increased with higher levels of educational attainment irrespective of sex and geography.

With the exception of First Nations women with a bachelor's degree or higher in Treaty 7 and Treaty 8, First Nations men had higher employment rates than First Nations women with the same level of education in all geographic areas.

FIGURE 69: Employment Rate for First Nations by Highest Level of Education, Geography and Sex, 2011

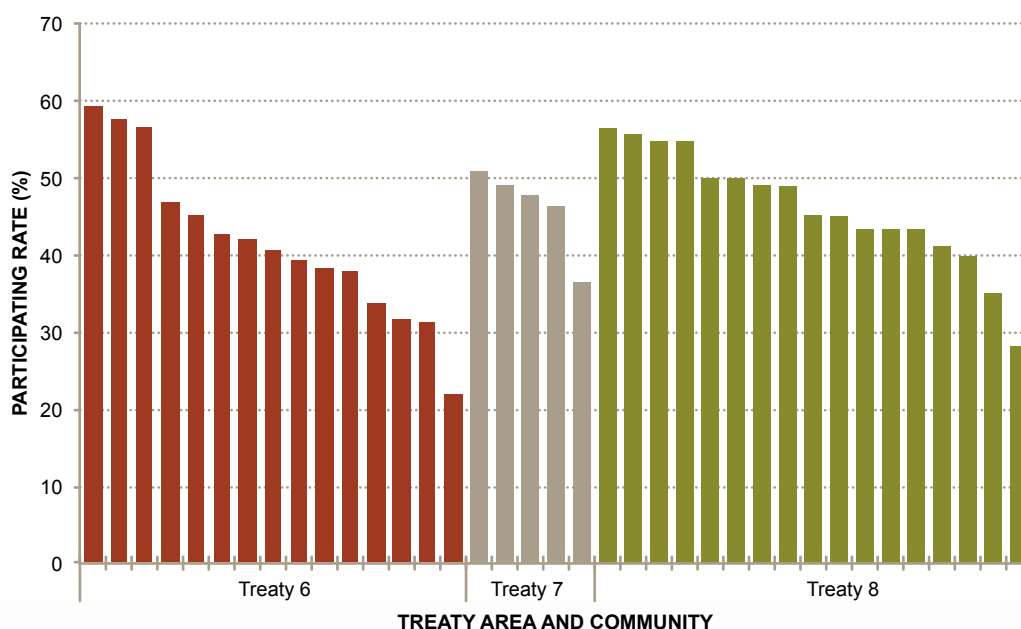


Source: Statistics Canada, Custom Tables

Figures 70, 71, and 72 show participating, employment and unemployment rates respectively, for people with First Nations, Métis, and Inuit identity people aged 15 years and over living in First Nations communities in Alberta by Treaty Area. It is evident that variations in participating, employment and unemployment rates exist within and between Treaty areas.

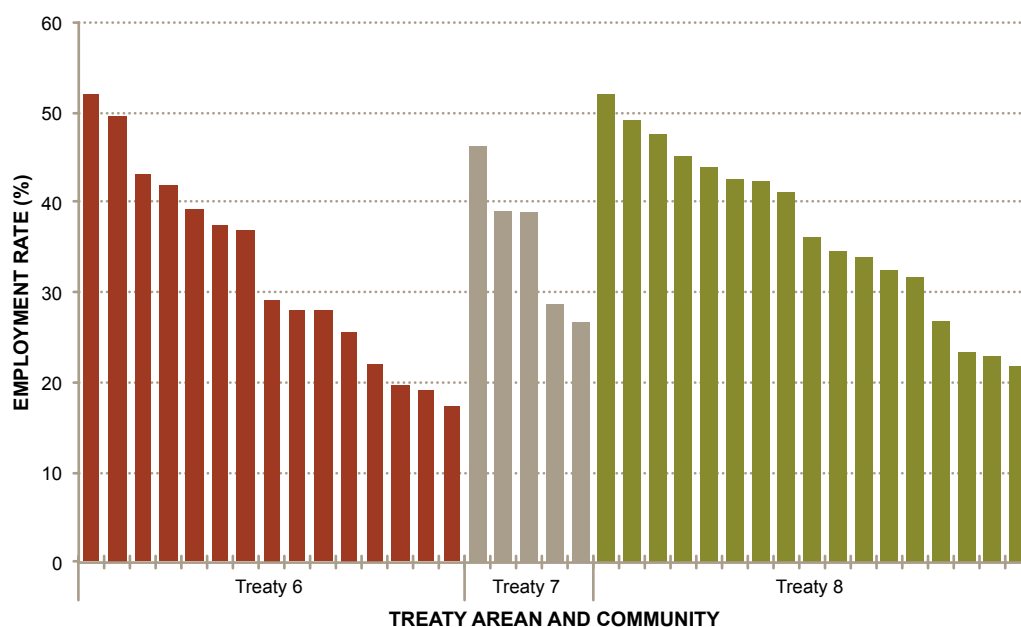
It should be noted that the majority of the people with First Nations, Métis or Inuit Identity people in these communities are First Nations people. The data is as presented because data for only First Nations Identity was not available at the time of writing this report.

FIGURE 70: Participation Rate for Individuals with First Nations, Métis, and Inuit Identity people by Treaty Area and Community, 2011



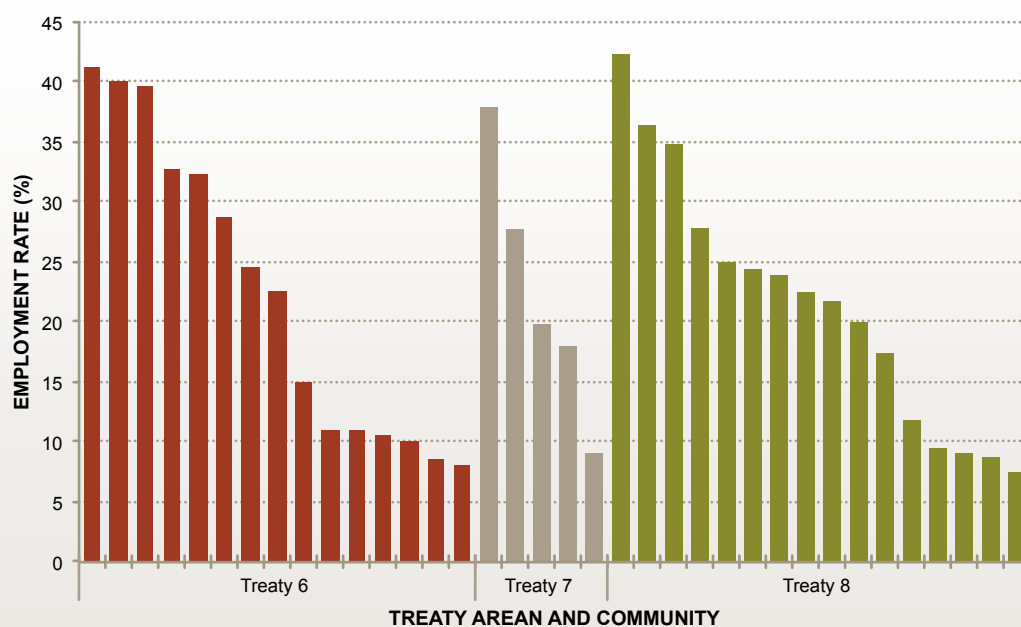
Source: Adapted from Statistics Canada. (2013). 2011 *National Household Survey Aboriginal population profile* (Catalogue No. 99-011-X2011007). Retrieved from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/index.cfm?Lang=E

FIGURE 71: Employment Rate for Individuals with First Nations, Métis, and Inuit Identity People by Treaty Area and Community, 2011



Source: Adapted from Statistics Canada. (2013). 2011 *National Household Survey Aboriginal population profile* (Catalogue No. 99-011-X2011007). Retrieved from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/index.cfm?Lang=E

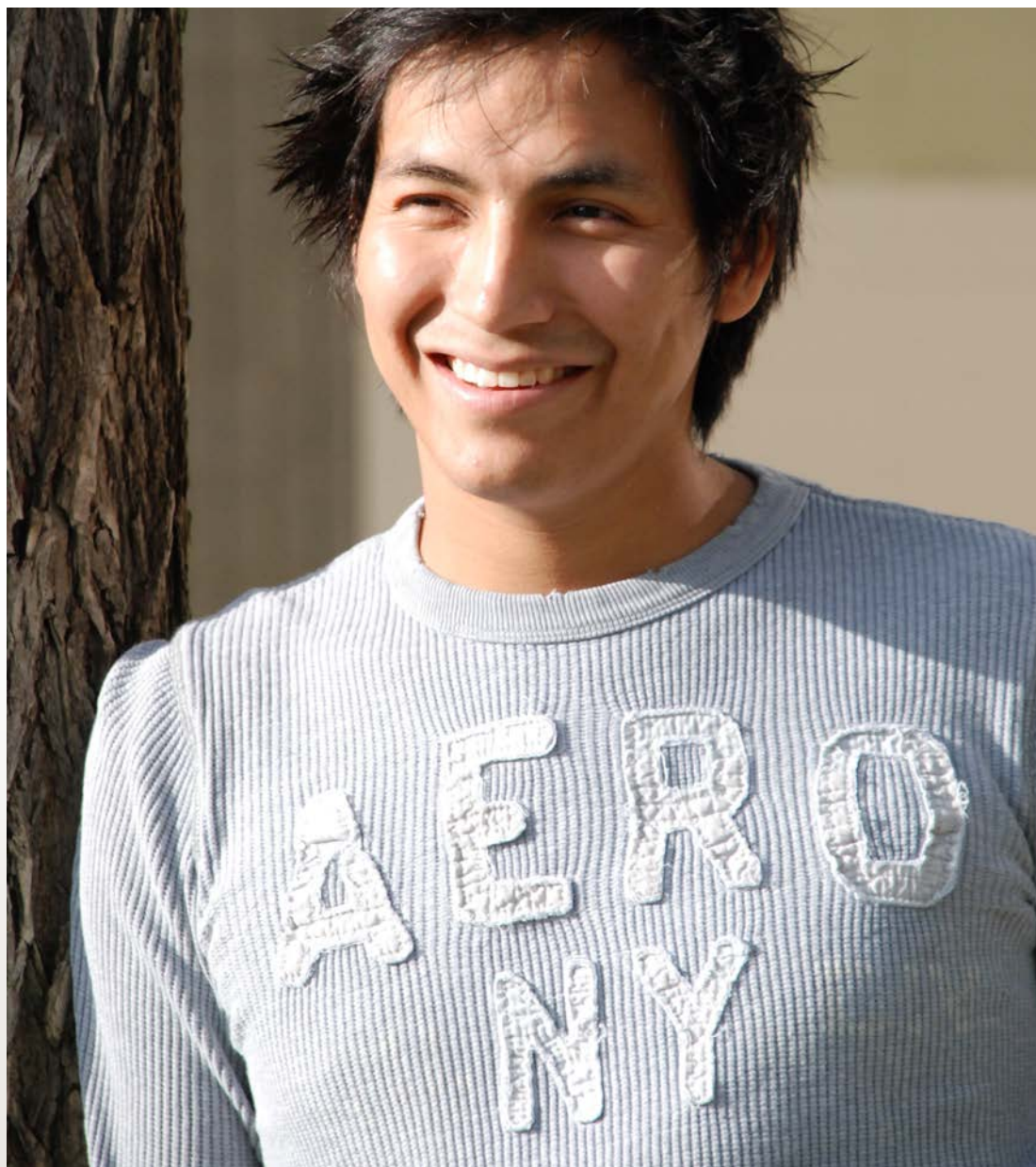
FIGURE 72: Unemployment Rate for Individuals with First Nations, Métis, and Inuit Identity People by Treaty Area and Community, 2011



Source: Adapted from Statistics Canada. (2013). 2011 *National Household Survey Aboriginal population profile* (Catalogue No. 99-011-X2011007). Retrieved from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/index.cfm?Lang=E

In summary, youth (15 to 24 years) unemployment in 2011 was higher than other age groups for all population groups. Moreover, youth unemployment is higher among First Nations individuals than non-Aboriginal individuals in Alberta and even much higher for those living on-reserve in Alberta. Employment and labour market participation rates in 2011 were lower for people without a high school diploma or equivalency certificate for all population groups compared to other levels of education attainment, but were much lower for First Nations people.

Attainment of a high school diploma or equivalency certificate significantly increased employment and participation rates and also reduced the unemployment rates among First Nations and non-Aboriginal people in Alberta.





HOUSING

Access to a culturally peaceful and dignifying place of living (housing) is a basic human right protected under the United Nations and international human right law.⁶¹ This includes housing that is habitable, affordable, secure and accessible to services, materials, facilities and infrastructure such as safe drinking water, energy for cooking, heating, lighting, food storage, refuse disposal, health care, schools and employment opportunities.

Housing is a major contributor to the health and well-being of individuals, communities and nations.⁶² Poor housing conditions are associated with a number of adverse health outcomes, such as respiratory illness, cardiovascular diseases, communicable diseases and injuries, and airborne infections such as tuberculosis.⁶³ Poor housing can also create stress, anxiety and unhealthy means of coping such as alcohol, drug and substance abuse.⁶² This section provides information on 3 key indicators:

- crowded housing
- housing suitability
- dwellings requiring major repairs

CROWDED HOUSING

Statistics Canada defines ‘crowding’ as more than one person per room.⁶⁴ The number of rooms is calculated by counting the kitchen, bedrooms, living room and finished basement rooms but excluding bathrooms, halls, laundry room and attached sheds. Therefore, a typical 3-bedroom house with a living room and a kitchen would be deemed able to accommodate 5 individuals and the same dwelling would be defined as crowded if 6 or more individuals were residing in it.

61 Office of the United Nations High Commissioner for Human Rights. (2014). *The right to adequate housing* (Fact Sheet No. 21 (Rev.1)). Geneva: United Nations..

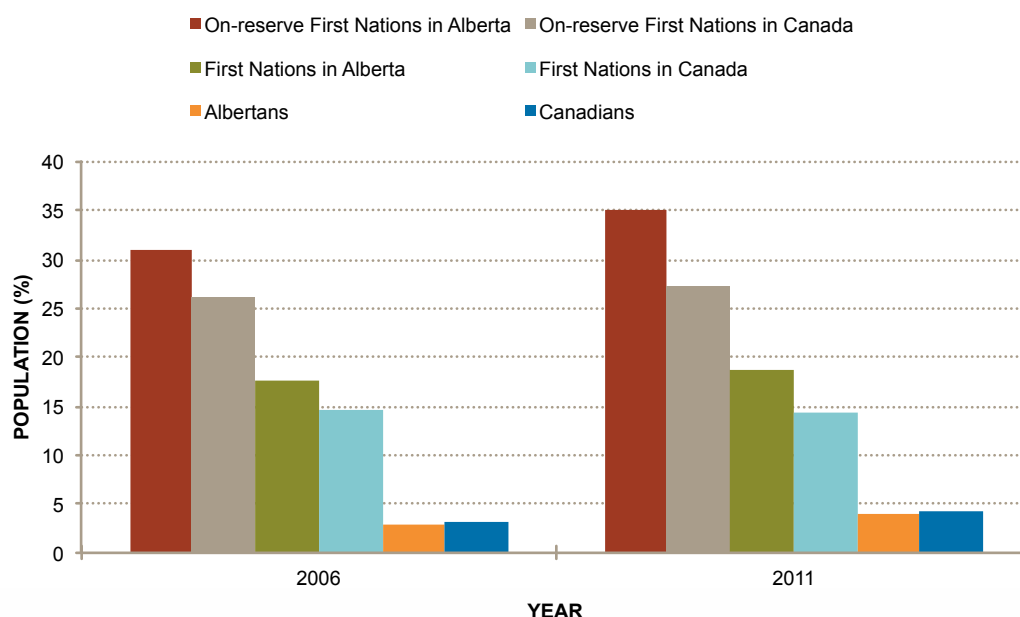
62 Mikkonen, J., & Raphael, D. (2010). *Social determinants of health: The Canadian facts*. Toronto, ON: York University School of Health Policy and Management.

63 World Health Organization (n.d). Health impact assessment: housing and health. Retrieved March 17, 2015, from www.who.int/hia/housing/en/

64 Statistics Canada. (2008). *Aboriginal peoples in Canada in 2006: Inuit, Métis and First Nations, 2006 Census* (Catalogue No. 97-558-XIE). Ottawa, ON: Statistics Canada.

Figure 73 reveals that much higher proportions of First Nations people are living in crowded homes in comparison to the general Albertan and Canadian populations. In 2011, while 4.0% and 4.3% of the population in Alberta and Canada respectively lived in crowded housing, 18.7% and 14.4% of First Nations people in Alberta and Canada respectively lived in crowded housing. The proportion is much higher for First Nations people living on-reserve (35.0% in Alberta and 27.2% in Canada). The proportion of the population living in crowded housing increased for almost all population groups between 2006 and 2011.

FIGURE 73: Percentage of population living in dwellings with more than 1 person per room, 2006 and 2011



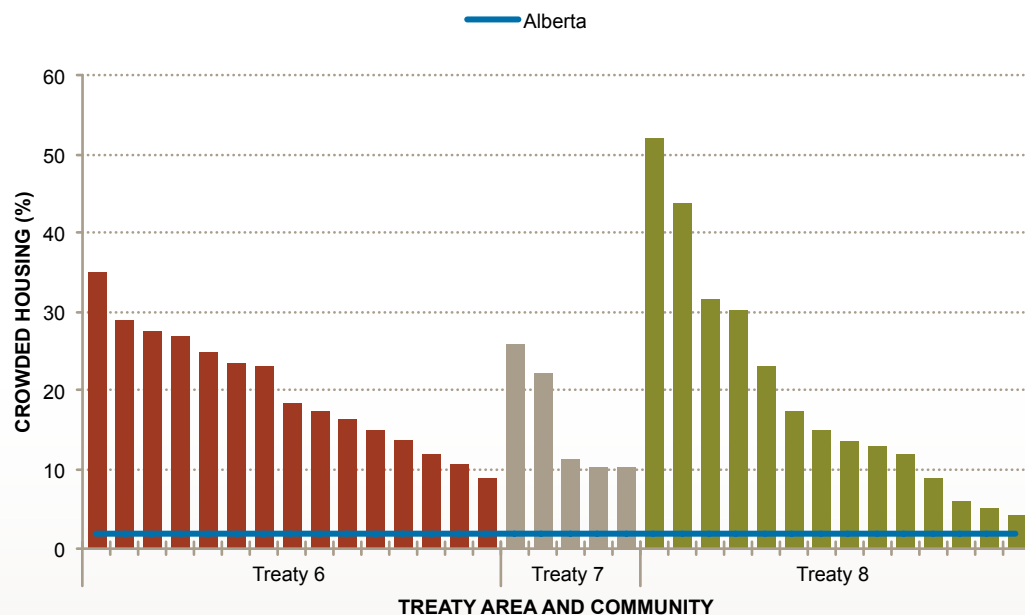
Source: Adapted from Statistics Canada. (2013). *2011 National Household Survey: Data tables* (Catalogue No. 99-011-X2011035). Retrieved from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/dt-td/Rp-eng.

Figure 74 provides information for First Nations communities in Alberta within each Treaty area with crowded housing compared to crowded housing in Alberta in 2011. The graphs show that issues around crowded housing vary considerably by community, as follows.

- In Treaty 6, crowded housing varied from about 9% to 35% of the dwellings.
- Treaty 7 contained 10% to 26% crowded housing.
- Similarly, in Treaty 8, crowded housing varied significantly across communities ranging from 3 communities where there was no crowded housing to a community where 52% of the dwellings were crowded.

In general, most First Nations communities in Alberta had a higher proportion of crowded housing than the rest of Alberta (1.9%) and Canada (2.0%) in 2011.

FIGURE 74: Proportion of dwellings with more than 1 person per room in First Nations communities in Alberta, 2011



Source: Adapted from Statistics Canada. (2013). *2011 National Household Survey Aboriginal population profile* (Catalogue No. 99-011-X2011007). Retrieved from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/index.cfm?Lang=E.

UNSUITABLE HOUSING

Statistics Canada⁶⁵ and the Canada Mortgage and Housing Corporation⁶⁶ define “suitable housing” as housing that has enough bedrooms for the size and make-up of resident households, according to National Occupancy Standard (NOS) requirements. “Enough bedrooms,” based on NOS requirements, means one bedroom for:

- each cohabiting adult couple
- each single parent of any age
- each adult 18 years of age and over
- same-sex pair of children under age 18
- 2 opposite-sex children under 5 years of age

An exception to the above is a household of 1 individual can occupy a bachelor or studio unit (a unit without a bedroom).

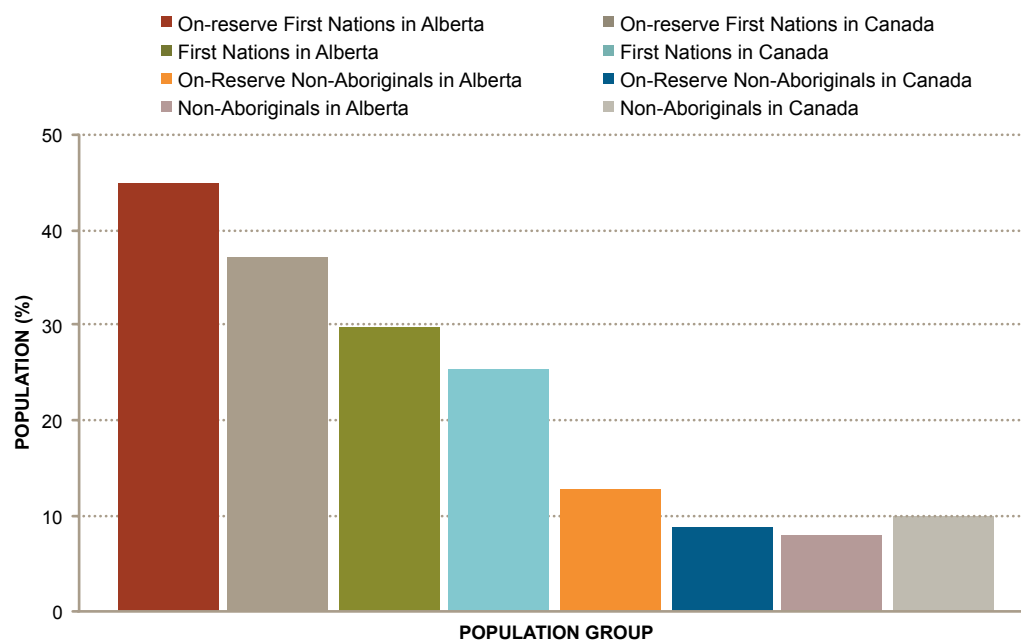
Figure 75 demonstrates that more First Nations people in Alberta lived in unsuitable housing compared to First Nations people in Canada overall. Figure 75 shows that a higher proportion of First Nations people lived in unsuitable homes in comparison to their non-Aboriginal counterparts in 2011.

In 2011, 30% and 25% of First Nations people in Alberta and Canada respectively lived in unsuitable housing, and the proportion was higher for First Nations people living on-reserve (45% in Alberta and 37% in Canada). 8% and 10% of the non-aboriginal population in Alberta and Canada respectively lived in unsuitable housing.

65 Statistics Canada. (2013). *Housing suitability of private household*. Retrieved June 27, 2014, from www.statcan.gc.ca/concepts/definitions/dwelling-logement-06-eng.html

66 Canada Mortgage and Housing Corporation. (2014). *Housing in Canada online*. Retrieved June 27, 2014, from cmhc.beyond2020.com/HiCDefinitions_EN.html

FIGURE 75: Percentage of population living in unsuitable housing, 2011

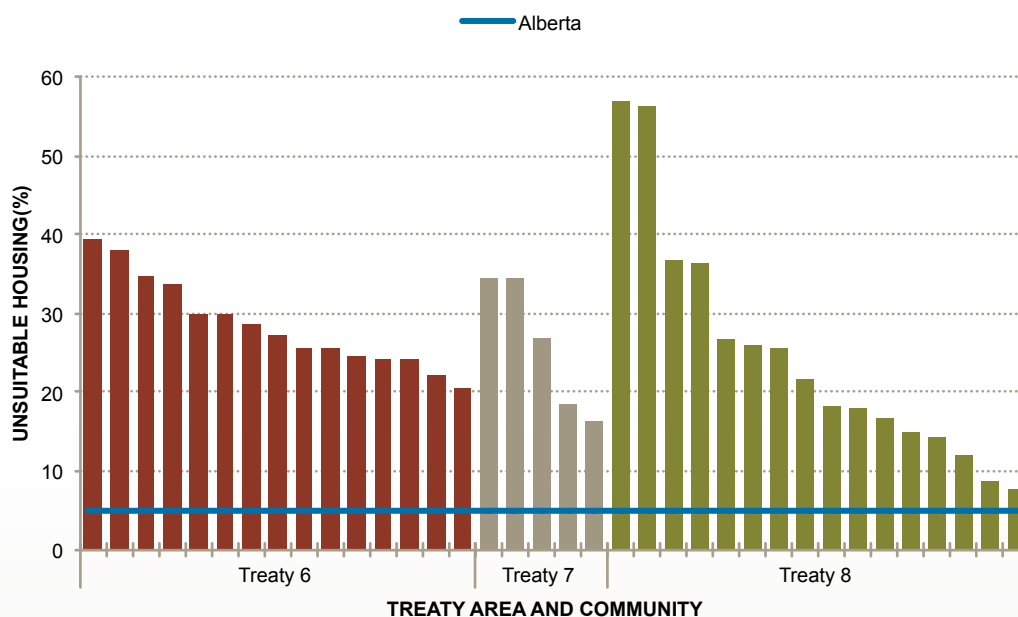


Source: Adapted from Statistics Canada. (2013). *2011 National Household Survey: Data tables* (Catalogue No. 99-011-X2011035). Retrieved from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/dt-td/Rp-eng.

Figure 76 provides information on the proportion of unsuitable housing in First Nations communities compared to unsuitable housing in Alberta in 2011. The graph shows that unsuitable housing varies considerably by community, as follows.

- In Treaty 6, unsuitable housing varied from 21% to 39%.
- In Treaty 7, unsuitable housing varied from 16% to 35%.
- Unsuitable housing varied significantly across communities in Treaty 8 ranging from communities with no unsuitable housing to a community where 57% of the houses were unsuitable.
- Unsuitable housing rates overall were 5.0% and 6.0% in Alberta and Canada respectively in 2011.

FIGURE 76: Percentage of housing deemed unsuitable in First Nations communities in Alberta, 2011



Source: Adapted from Statistics Canada. (2013). *2011 National Household Survey Aboriginal population profile* (Catalogue No. 99-011-X2011007). Retrieved from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/index.cfm?Lang=E.

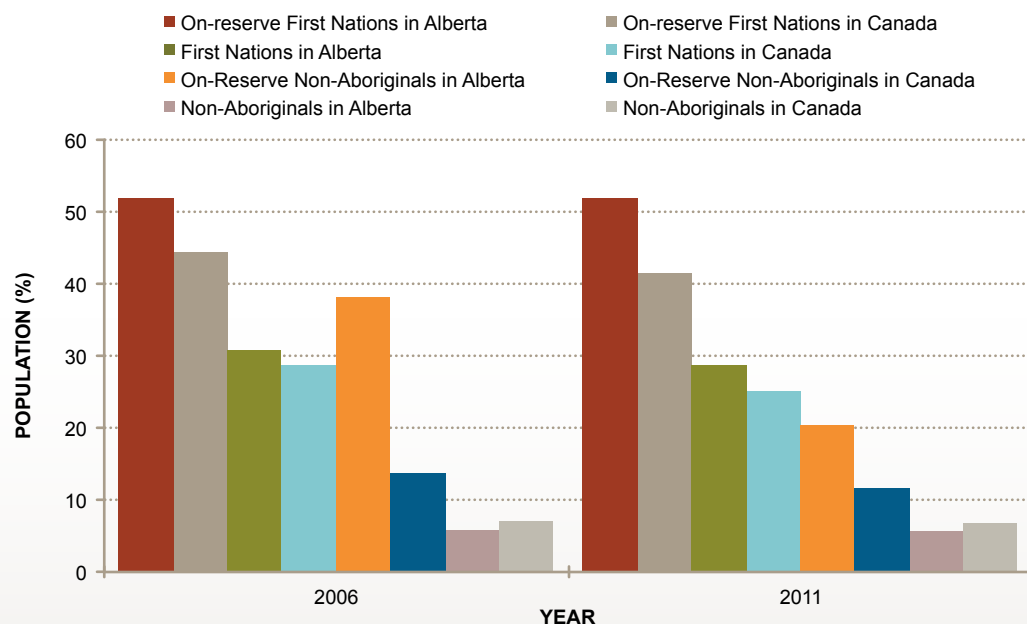
DWELLINGS REQUIRING MAJOR REPAIRS

The third key housing indicator is “dwellings requiring major repairs”,⁶⁷ which is defined as dwellings that require major repairs to defective plumbing or electrical wiring and/or structural repairs to walls, floors or ceilings, and others.

Figure 77 shows the percentage of people living in houses requiring major repairs. The graph shows significant differences between First Nations and non-Aboriginal people in both Alberta and Canada. In 2011, just over 1 in 20 non-Aboriginal individuals in Alberta (6%) and Canada (7%) lived in houses requiring major repairs, compared to well over 1 in 4 for First Nations people in Alberta (30%) and in Canada (26%). Similar differences were observed in 2006.

This figure also illustrates differences among First Nations people depending on where they live. In 2011, 54% of First Nations people in Alberta and 43% of First Nations people in Canada lived on-reserve in houses requiring major repairs, while 21% of non-Aboriginal people in Alberta and 12% of non-aboriginal people in Canada lived on-reserve in houses requiring major repairs.

FIGURE 77: Percentage of population living in homes that require major repairs, 2006 and 2011



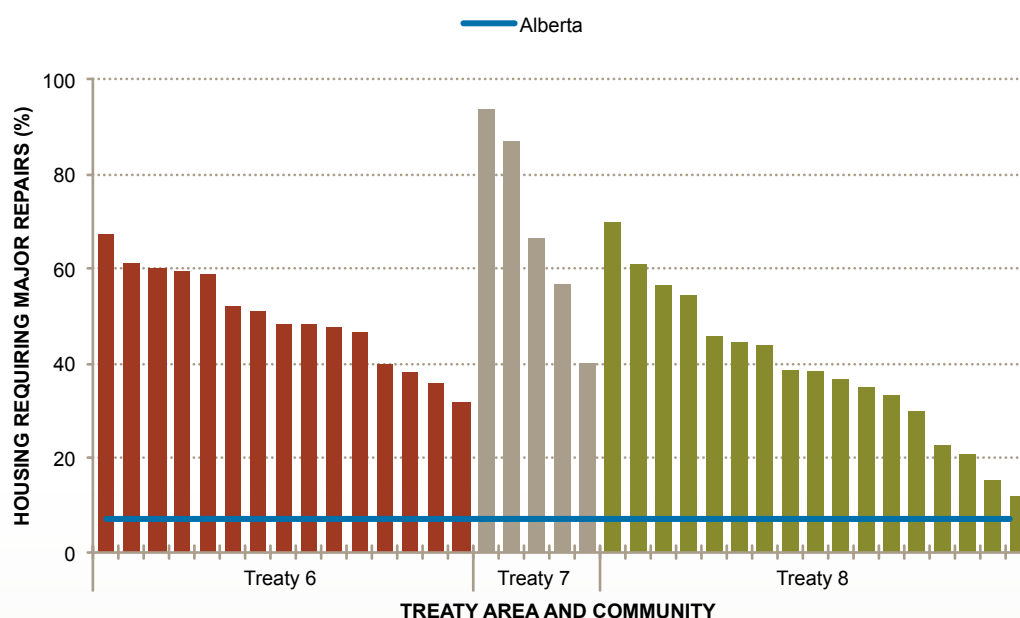
Source: Adapted from Statistics Canada. (2013). *2011 National Household Survey: Data tables* (Catalogue No. 99-011-X2011035). Retrieved from [www12.statcan.gc.ca/nhs-enm/2011/dp-pd/dt-td/Rp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=1&PID=107555&PRID=0&PTYPE=105277&S=0&SHOWALL=0&SUB=0&Temporal=2013&THEME=94&VID=0&VNAMEE=&VNAMEF=](http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/dt-td/Rp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=1&PID=107555&PRID=0&PTYPE=105277&S=0&SHOWALL=0&SUB=0&Temporal=2013&THEME=94&VID=0&VNAMEE=&VNAMEF;); Statistics Canada. (2008). *2006 Census of population* (Catalogue No. 97-558-XCB2006022). Retrieved from www12.statcan.gc.ca/census-recensement/2006/dp-pd/tbt/Rp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=1&PID=92766&PRID=0&PTYPE=88971,97154&S=0&SHOWALL=0&SUB=0&Temporal=2006&THEME=73&VID=0&VNAMEE=&VNAMEF=

⁶⁷ Statistics Canada. (2008). *Aboriginal peoples in Canada in 2006: Inuit, Métis and First Nations, 2006 Census* (Catalogue No. 97-558-XIE). Ottawa, ON: Statistics Canada.

Figure 78 examines the proportion of houses requiring major repairs by Treaty Area and community. Housing requiring major repairs varies significantly across First Nations communities between and within Treaty areas. In 2011, housing requiring major repairs ranged as follows.

- 32% to 68% in Treaty 6
- 40% to 94% in Treaty 7
- 12% to 70% in Treaty 8
- 7.0% in Alberta overall
- 7.4% in Canada overall

FIGURE 78: Percentage of dwellings requiring major repairs in First Nations communities, in Alberta, 2011

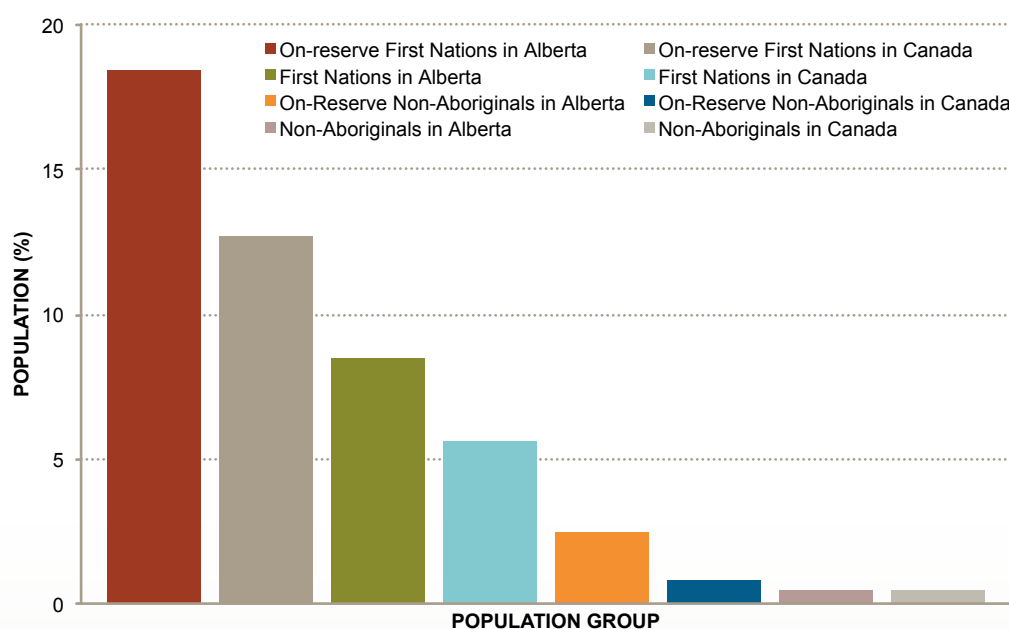


Source: Adapted from Statistics Canada. (2013). *2011 National Household Survey Aboriginal population profile* (Catalogue No. 99-011-X2011007). Retrieved from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/index.cfm?Lang=E.

Figure 79 shows the a higher proportion of First Nations people live in unsuitable and crowded housing requiring major repairs in comparison to their non-Aboriginal counterparts.

- In 2011, more than 50 in every 1,000 First Nations people (8.6% in Alberta and 5.7% in Canada) lived in unsuitable and crowded housing requiring major repairs.
- Less than 5 in every 1, 000 non-Aboriginal people (0.48% in Alberta and 0.46% in Canada) lived in both unsuitable and crowded housing requiring major repairs.
- The proportion of people living in unsuitable housing is much higher for First Nations people living on-reserve (18.7% in Alberta and 12.9% in Canada).

FIGURE 79: Percentage of population living in unsuitable and crowded housing requiring major repairs, 2011



Source: Adapted from Statistics Canada. (2013). *2011 National Household Survey: Data tables* (Catalogue No. 99-011-X2011035). Retrieved from www12.statcan.gc.ca/nhs-enm/2011/dp-pd/dt-td/Rp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=1&PID=107555&PRID=0&PTYPE=105277&S=0&SHOW-ALL=0&SUB=0&Temporal=2013&THEME=94&VID=0&VNAMEE=&VNAMEF.

ASSOCIATION BETWEEN HOUSING CONDITIONS AND FAMILY SIZE, EDUCATION, LABOUR FORCE ACTIVITY AND INCOME

From the First Nations communities data used, we observe a strong positive correlation between communities with crowded housing and unsuitable housing.

That is to say, communities with a higher proportion of crowded housing were correlated with communities with a higher proportion of unsuitable housing. Communities that had a higher proportion of census families with 5 or more children were correlated with communities with a higher proportion of crowded housing and unsuitable housing.

Communities with a higher proportion of people aged 15 years and over without a certificate, diploma or degree were moderately correlated with communities with higher proportion of crowded housing and unsuitable housing.

Communities with better housing conditions were moderately correlated to communities with:

- a higher proportion of people aged 15 years and over and employed
- a higher proportion of people aged 15 years and over and participating in the labour force
- a higher median and average income for those aged 15 years and over (not shown)

In a nutshell, housing conditions for First Nations people are much poorer than for general Albertans and Canadians and even worse for First Nations people living on-reserve, although the issue varies considerably across First Nations communities.

Even though housing conditions for Albertans are better than Canadians in general, First Nations people in Alberta have much poor housing conditions compared to First Nations people in Canada.

As housing is an absolute necessity for living a healthy life,⁶⁸ it is essential for programs and policy makers to address poor housing conditions of First Nations people in Alberta, especially those living on-reserve, in order to improve the health and well-being of First Nations people in Alberta.

68 Mikkonen, J., & Raphael, D. (2010). *Social determinants of health: The Canadian facts*. Toronto, ON: York University School of Health Policy and Management.



COMMUNITY WELL-BEING INDEX

The previous sections of this report examined some indicators of determinants of health for First Nations people in Alberta, in detail. In 2004, Indigenous and Northern Affairs Canada (INAC) developed the community well-being (CWB) index; a summary measure made up of education, income, housing and labour force activity as one of the means to “provide a more systematic understanding of the socio-economic conditions in First Nations and Inuit communities relative to other Canadian communities”⁶⁹ and over time.

The CWB index uses only the education, income, housing and labour force activity dimensions of well-being, because those are the dimensions measured by Census or the National Household Survey which are the primary source of First Nations and other Canadian community data over time.⁶⁹

The CWB index is a single number, ranging from zero to 100. The components of the CWB index are equally weighted and are described as follows.

- The **Income component** is defined in terms of total income per capita (i.e. a community’s total income divided by its population)
- The **Education component** is defined in terms of 2 variables:
 - 1) **High school:** the proportion of the population aged 20 years and over that has at least graduated with a high school certificate.
 - 2) **University:** the proportion of the population aged 25 years and over that has obtained at least a bachelor’s level degree
- The **Housing component** is defined in terms of 2 variables:
 - 1) **Housing quantity:** the proportion of the population living in a crowded dwelling
 - 2) **Housing quality:** the proportion of the population living in a dwelling requiring no major repairs

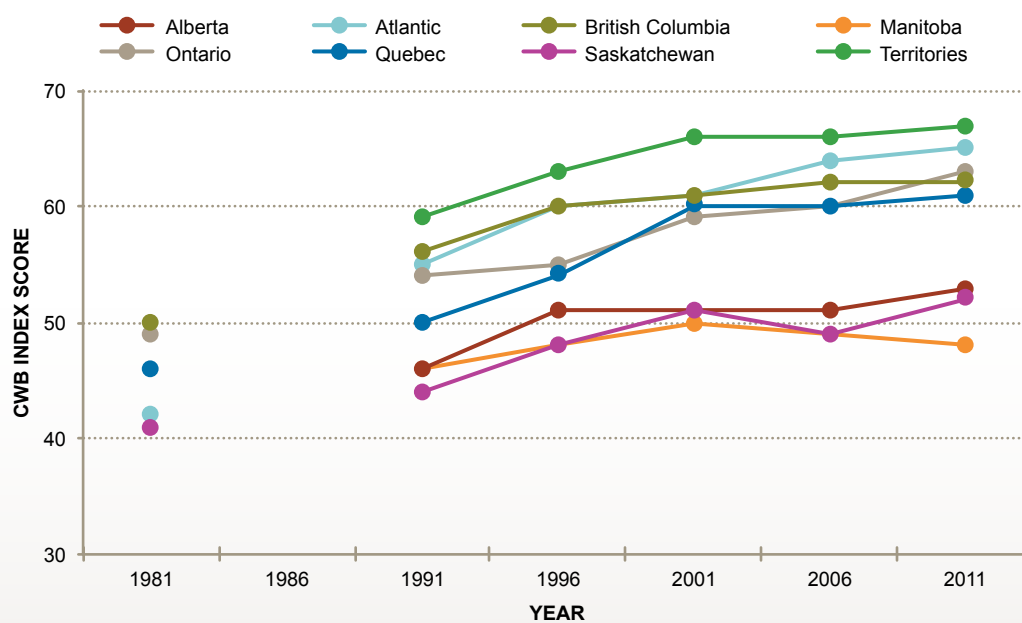
⁶⁹ Indigenous and Northern Affairs Canada. (2015). The community well-being index (CWB): Frequently asked questions. Retrieved December 21, 2015, from www.aadnc-aandc.gc.ca/eng/1421245446858/1421245712063

④ The **Labour Force Activity component** is defined in terms of 2 variables:

- 1) **Labour force participation:** the proportion of the population aged 20 to 65 years, that participated in the labour force during the week before the Census day
 - 2) **Employment:** the percentage of participants aged 20 to 65 years involved in the labour force that were employed during during the week before the Census day
 - 3) In this section we present the Community Well-Being index for First Nations communities in Alberta and compare it with First Nations communities in Canada overall, and with non-Aboriginal communities in Alberta. Generally speaking, details are as follows.
- The average First Nations CWB index improved for all regions from 1981 to 2011, with the least improvement occurring in the Prairie Provinces (Figure 80).
 - First Nations communities in the Prairies had lower year-to-year average CWB index scores than other regions and provinces.
 - The gap between First Nations communities in the Prairie Provinces and other regions and provinces increased over time from 1981 to 2011.
 - Among First Nations communities in the Prairies, Alberta had the highest census year-to-census year average CWB index score



FIGURE 80: Average Regional Community Well-Being Scores, First Nations Communities, 1981 to 2011

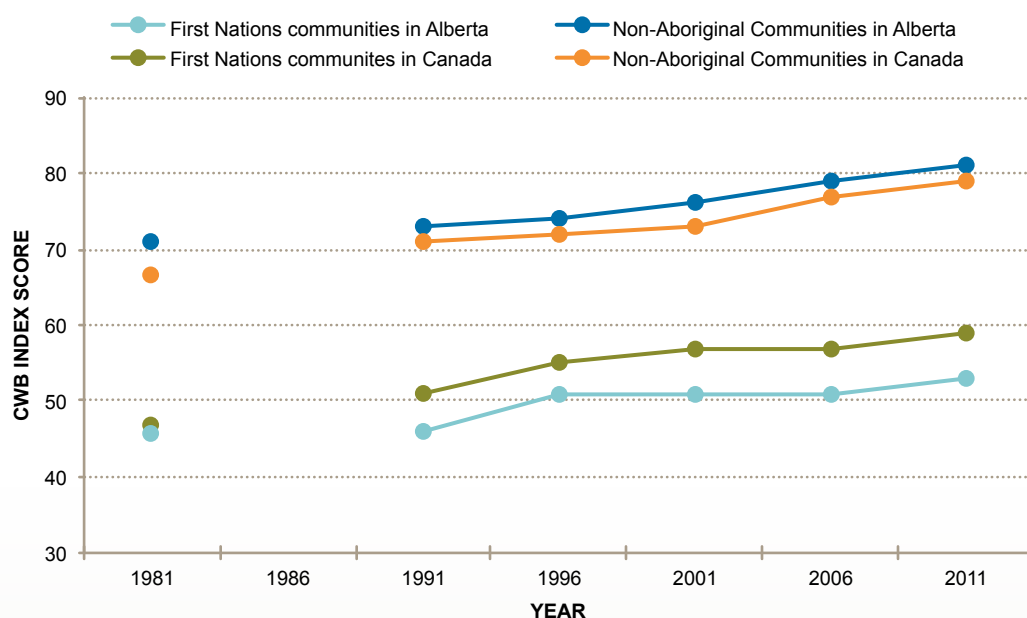


Source: Indigenous and Northern Affairs Canada, Community Well-Being Database

The national and Alberta provincial trend shows that First Nations communities had lower average CWB index scores than non-Aboriginal communities. Details are as follows.

- The gap in the average CWB index score between First Nations and non-Aboriginal communities at the national level was lower than in Alberta for all years from 1981 to 2011.
- The average CWB score gap between First Nations and non-Aboriginal communities in Alberta increased between 1981 and 1991, decreased in 1996 and increased afterwards.
- The gap in 2011 was wider than the gap in 1981 (Figure 81).

FIGURE 81: Average Community Well-Being Scores, First Nations and Non-Aboriginal Communities, 1981 to 2011



Source: Indigenous and Northern Affairs Canada, Community Well-Being Database

Figures 82 and 83 show the trends in average in each component score of the CWB index from 1981 to 2011 in both First Nations and non-Aboriginal communities in Alberta. Details are as follows:

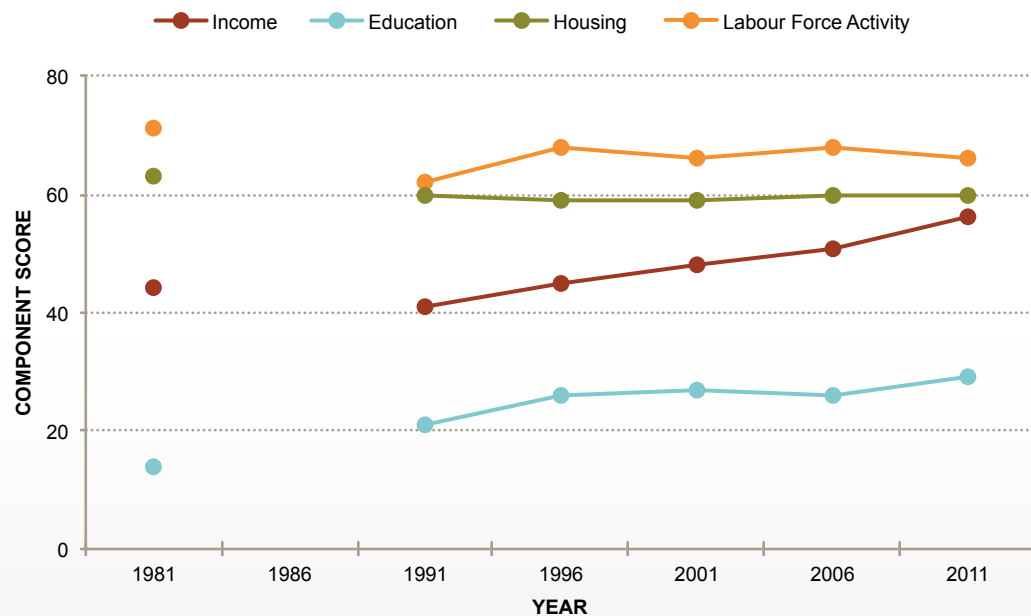
- Labour force activity is the component of the CWB index with the highest scores over time for the First Nations communities in Alberta, with scores ranging between 62 and 68.
- In non-Aboriginal communities, housing was the component of CWB index with the highest scores over time.

- Both First Nations and non-Aboriginal communities had steady increase in their income and education component scores between 1981 and 2011.
- The housing component scores have been stable for the last 25 years in Alberta for both First Nations and non-Aboriginal communities.

Figures 82 and 83 also show the disparity between First Nations and non-Aboriginal communities in Alberta across all component scores. In 2011, compared to non-Aboriginal communities in Alberta, the average component scores in First Nations communities were:

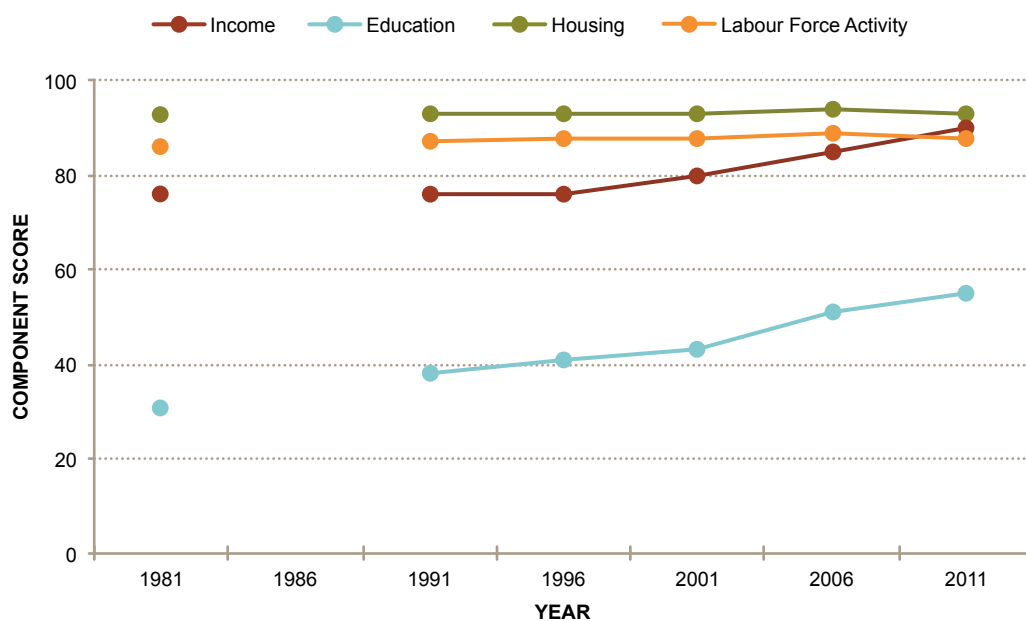
- 34 points lower for income
- 33 points lower for housing
- 26 points lower for education
- 22 points lower for labour force activity

FIGURE 82: Comparison of Community Well-Being Component Scores, First Nations Communities in Alberta, 1981 to 2011



Source: Indigenous and Northern Affairs Canada, Community Well-Being Database

FIGURE 83: Comparison of Community Well-Being Component Scores, Non-Aboriginal Communities in Alberta, 1981 to 2011

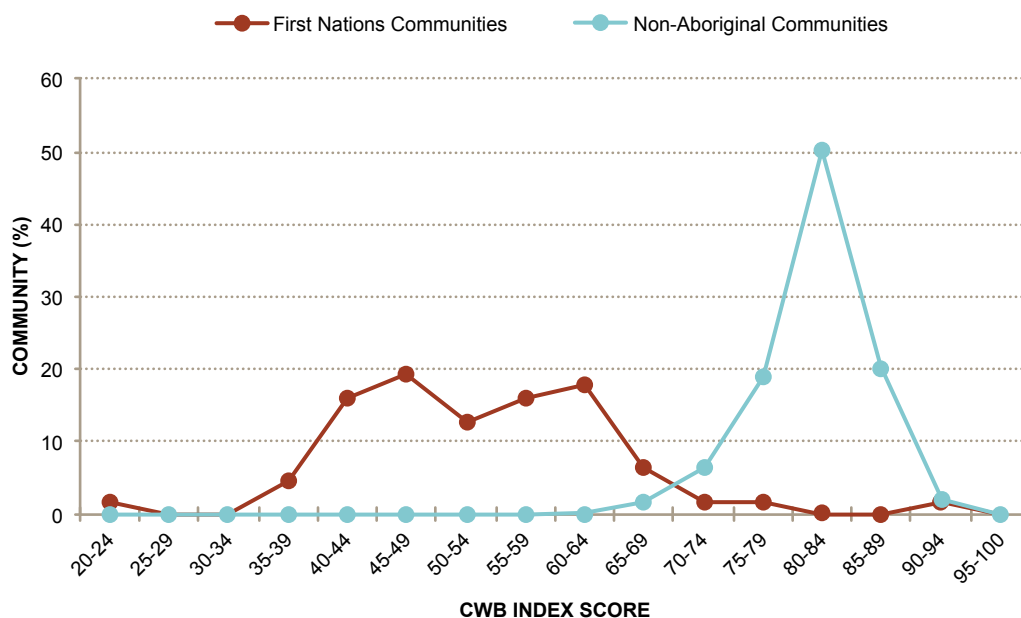


Source: Indigenous and Northern Affairs Canada, Community Well-Being Database

Figure 84 shows the variation in distribution of CWB index scores in 2011 between First Nations and non-Aboriginal communities in Alberta.

- Nearly 44% of First Nations communities in Alberta occupied the lower half of the CWB index range (scores 50 and under).
- First Nations communities are concentrated on the lower end of the CWB index range, and non-Aboriginal communities are at the high end.
- Only one First Nations community scored among the top 50 CWB index scores in Alberta.

FIGURE 84: Distribution of Communities in Alberta by Community Well-Being Index Score, 2011



Source: Indigenous and Northern Affairs Canada, Community Well-Being Database

The average First Nations CWB index improved for Treaty 7 and Treaty 8 in Alberta between 1981 and 2011 (Figure 85).

- The average CWB index scores for Treaty 6 communities decreased from 48.8 in 1981 to 45.5 in 1991, increased thereafter to 49.6 in 2006, and slightly decreased to 48.9 in 2011.
- In Treaty 7, the average CWB index scores decreased from 49.5 in 1981 to 48.0 in 1991, then increased to 54.3 in 1996, and then decreased to 51.5 in 2001 and remained relatively afterward.
- In Treaty 8, the average CWB index score increased from 43.3 in 1981 to 55.7 in 2011.

FIGURE 85: Comparison of Average First Nations Community Well-Being Index Scores by Treaty Area in Alberta, 1981 to 2011

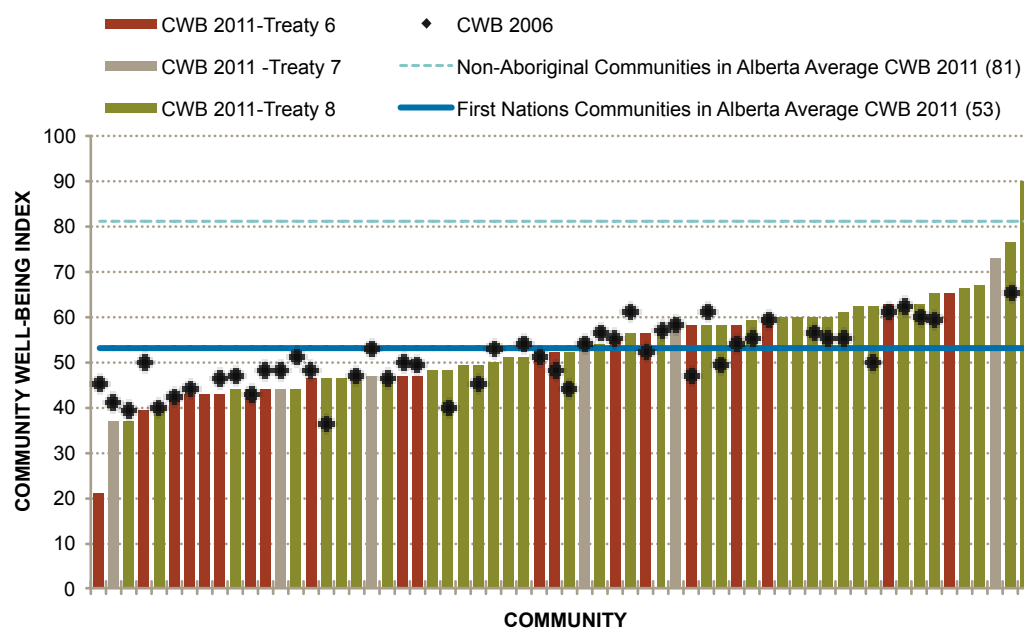


Source: Indigenous and Northern Affairs Canada, Community Well-Being Database

Figure 86 shows that the overall 2011 CWB scores in First Nations communities in Alberta range from 21 to 90.

From 2006 to 2011, the average CWB index scores for First Nations communities increased from 51 to 53 while CWB index score in non-Aboriginal communities also increased from 79 to 81. The 28-point gap between the average CWB score in First Nations and non-Aboriginal communities in Alberta in 2006 remained unchanged in 2011.

FIGURE 86: Comparison of Community Well-Being Index for First Nations Communities in Alberta, 2006 and 2011



Source: Indigenous and Northern Affairs Canada, Community Well-Being Database

The increasing trend in socioeconomic well-being scores is reflective of the resiliency and determination of First Nations communities in Alberta to improve factors associated with community well-being. Although examining CWB is useful in showing trends in socio-economic well-being over time and where improvements/challenges may exist, there are challenges in using the CWB index to assess overall well-being of First Nations communities.



SELECTED MEASURES OF HEALTH STATUS

The measurement of the exact impact of a particular determinant of health on the health conditions of individuals or community is complex to establish. This is in part due to the complex relationships between the health determinants themselves, and also the complex relationships between the health determinants and health conditions. However, it is well known that health determinants influence the health status of individuals and communities.

Differences in some health determinants between First Nations and non-Aboriginal populations in Alberta have been examined in the previous sections of this report. In this section we examine differences in the health statuses of First Nations and non-Aboriginal populations in Alberta.

It is practically impossible to completely describe the health status of individuals or communities using a particular indicator, because health is a complex concept involving the complete state of physical, mental, social and emotional well-being, and not merely the absence of disease or infirmity.⁷⁰

However, there are many quantitative and qualitative indicators that are generally accepted and used by programs, health professionals and researchers for describing the health of individuals or communities. In this section we use some of these health indicators to describe the health trends of First Nations people in Alberta and to describe the health differences between First Nations people and non-First Nations people in Alberta.

The health indicators considered in this section are:

- life expectancy at birth
- preterm births
- age of mother at birth
- prevalence of diabetes
- infant mortality
- premature deaths
- mortality trends
- mortality by selected causes

70 World Health Organization. (2015). Health. Retrieved November 16, 2015, from www.who.int/trade/glossary/story046/en/

LIFE EXPECTANCY AT BIRTH

Life expectancy at birth measures the average number of years a newborn would live if he/she was exposed to the prevailing mortality conditions at the time of birth over his/her lifetime. It is a measure that uses mortality trends across all age groups and is internationally recognized as one of the basic indicators of population health.⁷¹

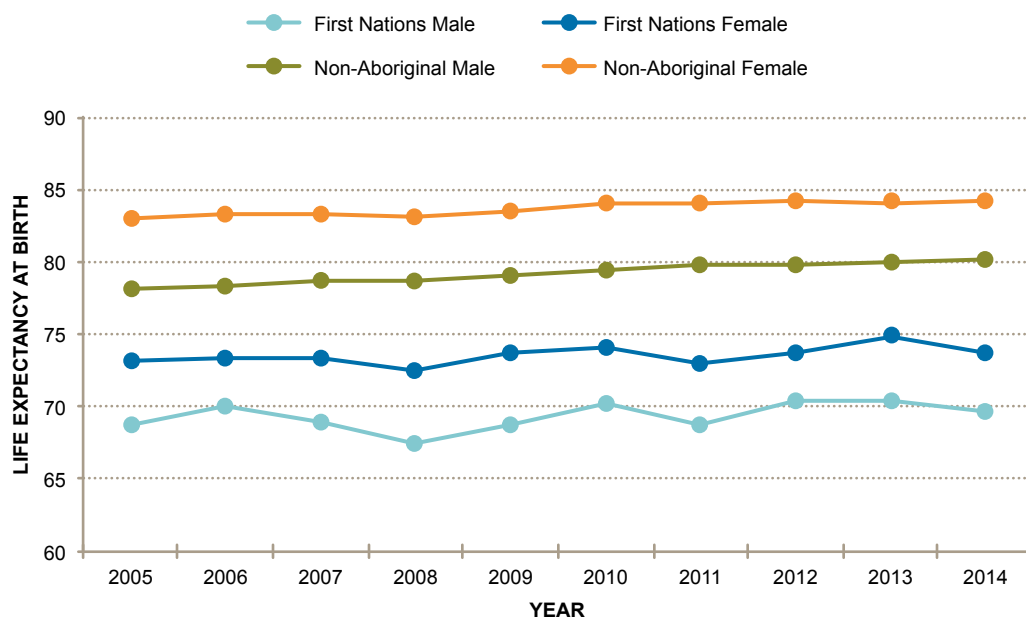
Figure 87 illustrates the estimated life expectancy at birth for First Nations people and Non-First Nations people in Alberta between 2005 and 2014. The life expectancy of First Nations people in Alberta is significantly lower than that of Non-First Nations people in Alberta, and the gap remains relatively unchanged between 2005 and 2014. As with Non-First Nations people in Alberta, First Nations females had higher life expectancy at birth than First Nations males for all years between 2005 and 2014.

- In 2005 in Alberta, the life expectancy at birth was approximately 73.2 years for First Nations females, 68.7 years for First Nations males, 83.0 years for Non-First Nations females and 78.1 years for Non-First Nations males.
- In 2014 in Alberta, the life expectancy at birth was approximately 73.8 years for First Nations females, 69.7 years for First Nations males, 84.3 years for Non-First Nations females and 80.1 years for Non-First Nations males.

The differences in life expectancy at birth could be due to many factors including differences in leading causes of death, infant mortality rate, and access to health and wellness services and programs between the population groups.

71 Toson, B., & Baker, A. (2003). *Life expectancy at birth: Methodological options for small populations*. (National Statistics Methodological Series No. 33). Newport, UK: Office for National Statistics.

FIGURE 87: Life Expectancy at Birth by Population Group in Alberta, 2005 to 2014



Source: Alberta Health Interactive Health Data Application

PRETERM BIRTH

The preterm birth percent is the proportion of live births occurring prior to 37 weeks of gestation. Complications associated with preterm births are the leading cause of death among children under 5 years of age worldwide⁷² and are a leading cause of infant mortality in industrialized countries.⁷³ Preterm babies are at a greater risk than full-term babies of developing serious health problems later in life, such as respiratory and gastrointestinal complications, immunologic deficiencies, motor, cognitive, hearing, vision, and growth problems.⁷³

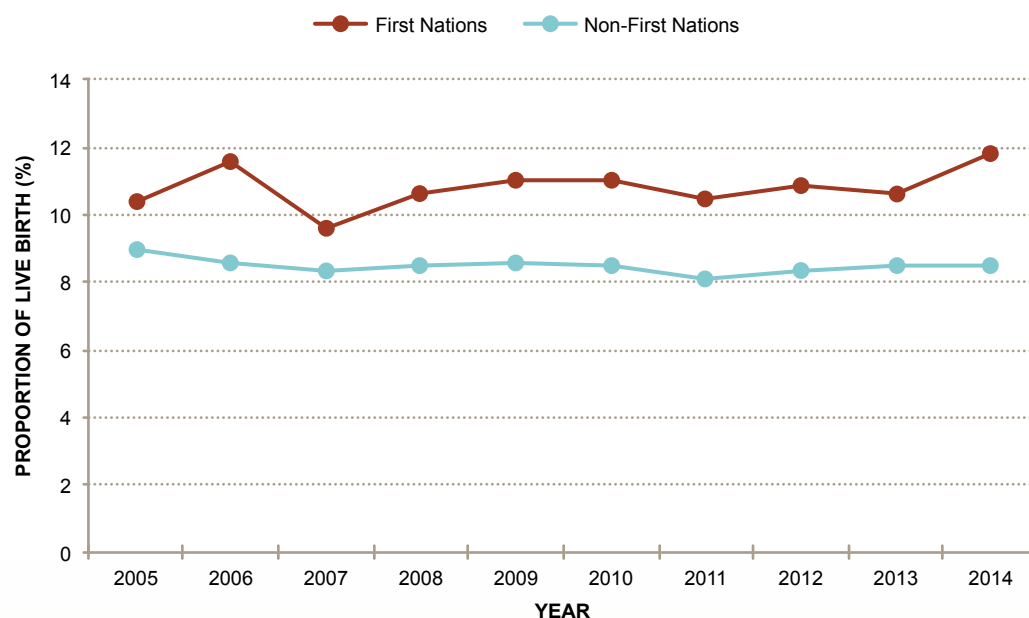
72 World Health Organization. (2015). *Preterm birth* (Fact Sheet No. 363). Retrieved December 3, 2015, from www.who.int/mediacentre/factsheets/fs363/en/

73 Liu, S., Allen, A., & Fraser, W. (2008). Fetal and infant health outcomes. In Public Health Agency of Canada, *Canadian Perinatal Health Report, 2008 Edition* (pp. 123-126). Ottawa, ON: Public Health Agency of Canada.

First Nations people had a significantly higher proportion of preterm births compared to Non-First Nations people in Alberta between 2005 and 2014, as shown in Figure 88. Details include:

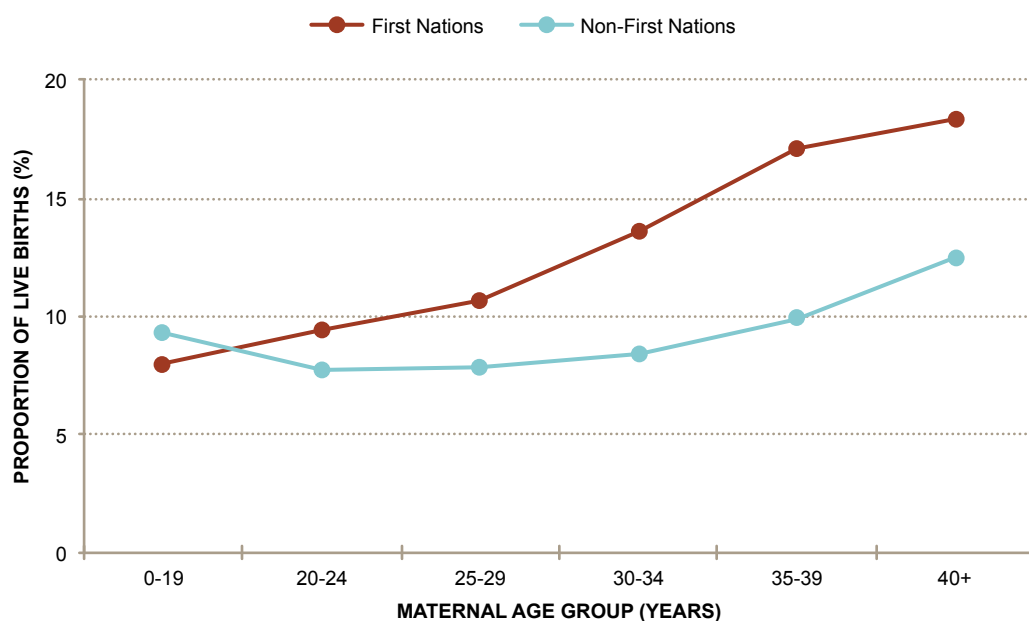
- Excluding 2007, the proportion of preterm births among First Nations people was statistically similar across all years between 2005 and 2014.
- In 2014, approximately 12 in every 100 live births were preterm births among First Nations people, while 9 in every 100 live births were preterm births among non-First Nations people (Figure 88).

FIGURE 88: Proportion of Preterm Births by Population Group in Alberta, 2005 to 2014



Source: Alberta Health Interactive Health Data Application

FIGURE 89: Average Proportion of Preterm Births by Maternal Age and Population Group in Alberta, 2005 to 2014



Source: Alberta Health Interactive Health Data Application

Between 2005 and 2014, the average proportion of preterm live births among First Nations mothers increased with maternal age (Figure 89). Details are as follows.

- Among Non-First Nations mothers, those aged 20 to 29 years had the lowest average proportion of preterm live births and those age 40 years and older had the highest average proportion.
- The average proportion of preterm live births was significantly higher in First Nations mothers aged 20 years and over than Non-First Nations mothers of similar age.
- Conversely, preterm births were more common in non-First Nations mothers aged 19 years and younger than in First Nations mothers of the same age group.

AGE DISTRIBUTION OF MOTHERS AT BIRTH

The age of mother at pregnancy and birth can affect the health of the mother and baby. A study by the Canadian Institute for Health Information (CIHI)⁷⁴ found that pregnant women aged 35 and older, compared to women aged 20 to 34, have:

- double the risk of developing gestational diabetes
- double the risk for placenta previa
- double the risk of preterm births
- a higher risk for many labour complications and interventions
- an increased likelihood for caesarean delivery
- a higher risk of delivering babies with chromosomal defects, and higher risk of delivering small-for-gestational-age babies

Teenage pregnant women are more likely to:

- give birth to a low birth weight baby
- more likely to live in deprived conditions
- more likely to lack education and training to improve their socio-economic conditions

Babies of teenage mothers are also at a higher risk of having congenital anomalies and of infant death.⁷⁵

74 Canadian Institute for Health Information. (2011). *In due time: Why maternal age matters*. Retrieved December 3, 2015, from secure.cihi.ca/estore/productFamily.htm?locale=en&pf=PFC1656

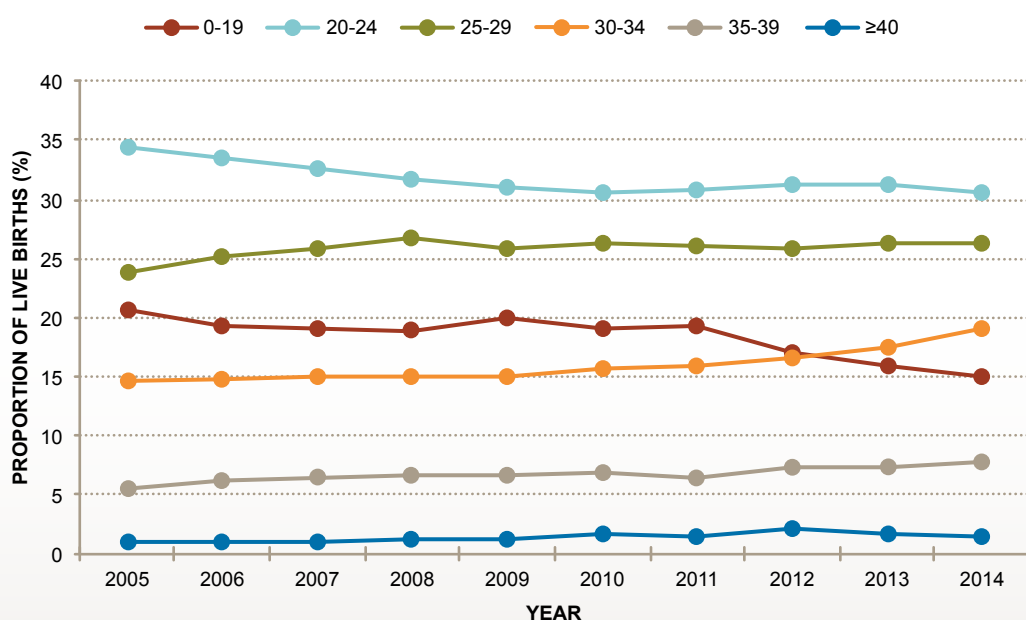
75 Botting, B., Rosato, M., & Wood, R. (1998). Teenage mothers and the health of their children. *Population Trends*, 93(Autumn), 19-28.

Figure 90 illustrates the proportion of live births for First Nations mothers in Alberta by maternal age group from 2005 to 2014. Details are as follows:

- The proportion of live births to First Nations mothers under the age of 20 years decreased from 21% in 2005 to 15% in 2014.
- Similarly the proportion of live births to mothers aged 20 to 24 years decreased from 34% in 2005 to 31% in 2014.
- In 2014, 55% of live births were to mothers over the age of 24 years and 45% to mothers aged 24 years and under. Compare this to 2005, when 45% of live births were to mothers over the age of 24 years, and 55% to mothers aged 24 years and under.

Further analysis needs to be done to ascertain whether the proportion of teenage pregnancies and pregnancies for mothers under the age of 25 years also decreased between 2005 and 2014, as live births do not account for spontaneous and induced abortions, still births, and ectopic pregnancies.

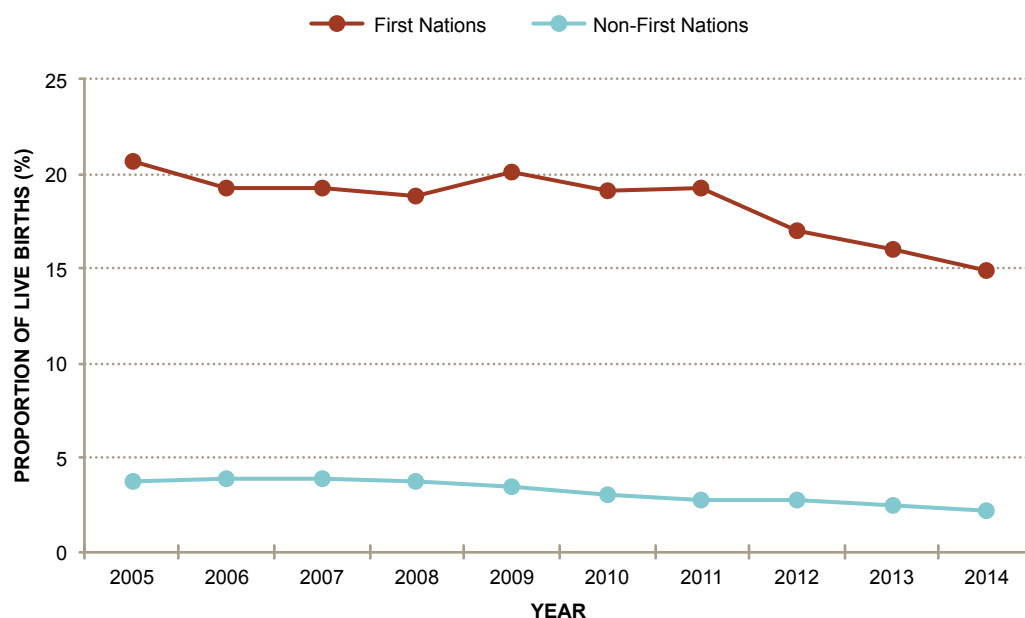
FIGURE 90: Proportion of Live Births by Age, First Nations Mothers in Alberta, 2005 to 2014



Source: Alberta Health Interactive Health Data Application

Although the proportion of live births to mothers under the age of 20 years among First Nations people in Alberta decreased between 2005 and 2014, it still remains 5 to 7 times higher than non-First Nations mothers in Alberta (Figure 91).

FIGURE 91: Proportion of Live Births to Mothers under the Age of 20 years by Population Group in Alberta, 2005 to 2014



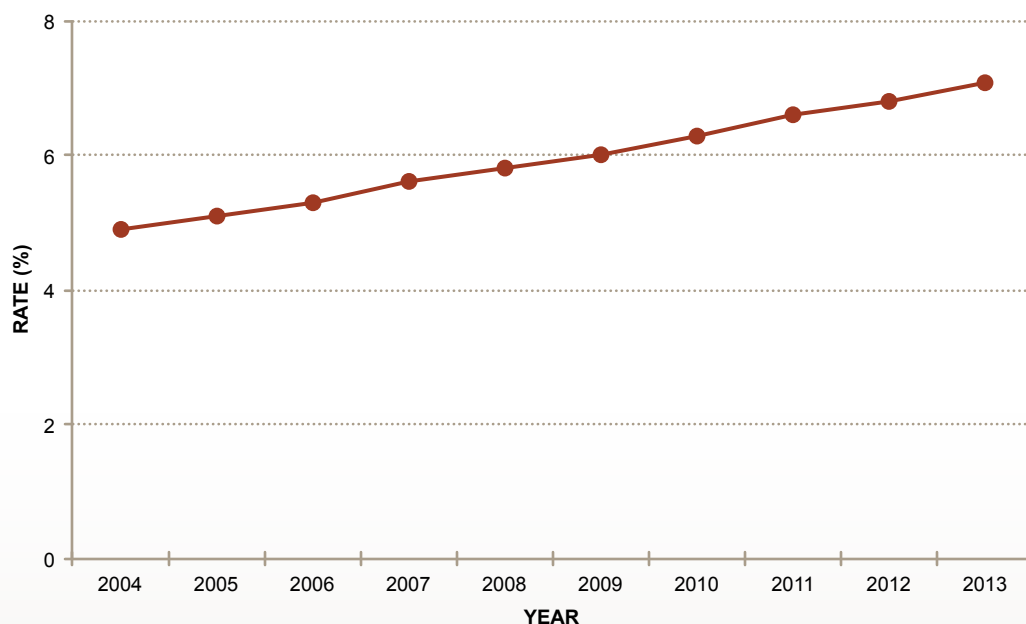
Source: Alberta Health Interactive Health Data Application

PREVALENCE OF DIABETES

Diabetes is “a chronic and sometimes fatal disease characterized by elevated blood glucose, which, if not managed properly, damages blood vessels, organs and nerves”.⁷⁶ Apart from the health risk of developing complications from diabetes, diabetes can have an impact on economic realities for both individuals and communities. For example, in 2010, diabetes cost the Canadian healthcare system and economy \$11.7 billion. It cost individuals an out-of-pocket expense of \$1,798 on average in 2010, with diabetes complications accounting for almost 80% of the cost.⁷⁶

The prevalence rate of diabetes is the proportion of the population living with diabetes in a given year. The prevalence of diabetes rates shown here do not include people with undiagnosed diabetes and prediabetes. Figure 92 shows that the prevalence of diabetes among First Nations people in Alberta increased from 5% in 2004 to 7% in 2013.

FIGURE 92: Prevalence of Diabetes among First Nations People in Alberta, 2004 to 2013



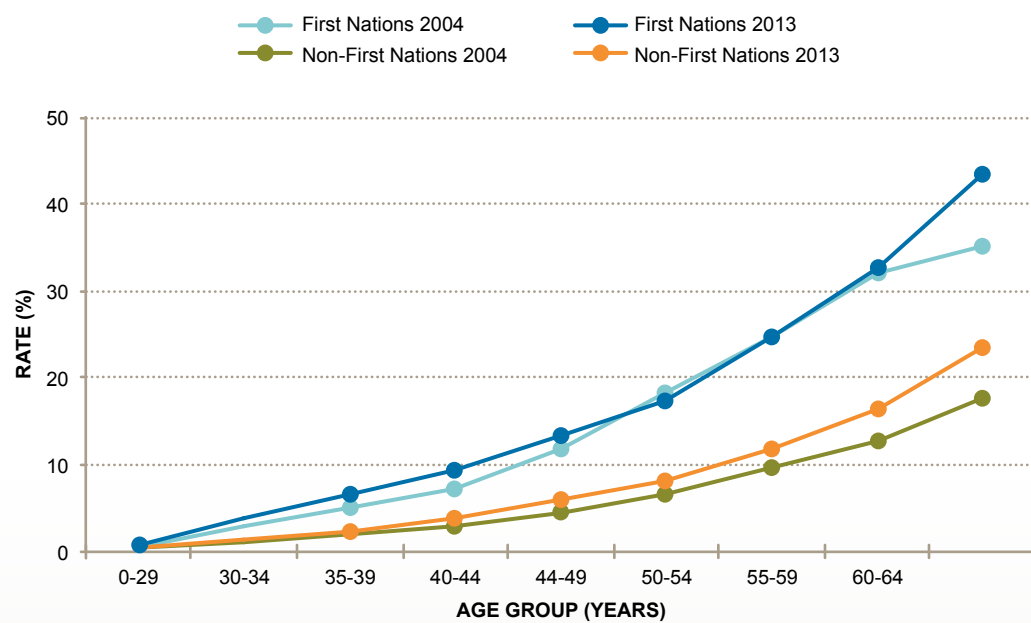
Source: Alberta Health Interactive Health Data Application

⁷⁶ Canadian Diabetes Association. (2012). *Diabetes: Canada at the tipping point—charting a new path*. Toronto, ON: Canadian Diabetes Association.

Figure 93 shows the prevalence of diabetes within specified age groups for 2004 and 2013 in Alberta for First Nations people and non-First Nations people. It shows that:

- Older people are more likely to live with diabetes than younger ones for both First Nations people and non-First Nations people.
- First Nations people in every age group were more likely to have diabetes than non-First Nations people.
- Excluding First Nations people aged 50 to 64 years, the prevalence of diabetes in 2013 was slightly higher than in 2004 for all age groups for both First Nations people and non-First Nations people in Alberta.

FIGURE 93: Prevalence of Diabetes by Age Group and Population Group in Alberta, 2004 and 2013



Source: Alberta Health Interactive Health Data Application

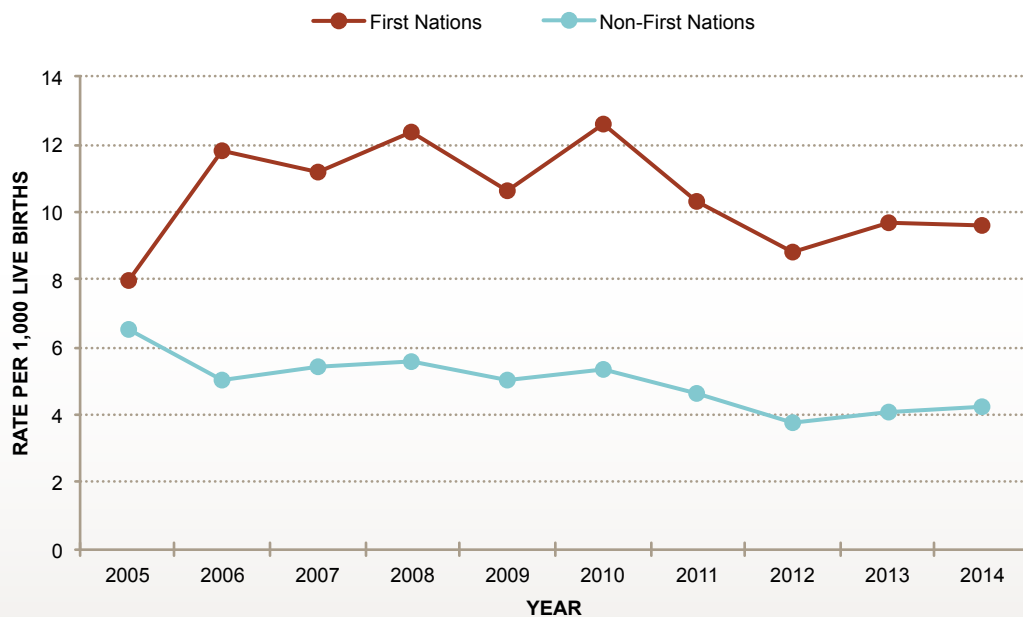
INFANT MORTALITY

Infant mortality rate is the number of infants who die before they are 1 year old, per 1,000 live births in a given year. It is one of the indicators widely used to measure the health and well-being of populations. First Nations people in Alberta had a significantly higher infant mortality rate than Non-First Nations people in Alberta between 2006 and 2014.

- In 2014, the infant mortality rate among First Nations people was approximately 10 deaths per 1,000 live births, which was more than twice the mortality in Non-First Nations infants (4 per 1,000 live births) in Alberta.
- In general, both the First Nations infant and the Non-First Nations infant mortality rates showed a decreasing trend between 2006 and 2014 (Figure 93).

Some of the leading causes of infant mortality are birth defects, preterm births, sudden infant death syndrome, maternal complications of pregnancy, asphyxia and injuries.⁷⁷ Factors that contribute to infant mortality include poor social and physical environmental, maternal substance use and maternal health.

FIGURE 94: Infant Mortality Rate by Population Group in Alberta, 2005 to 2014



Source: Alberta Health Interactive Health Data Application

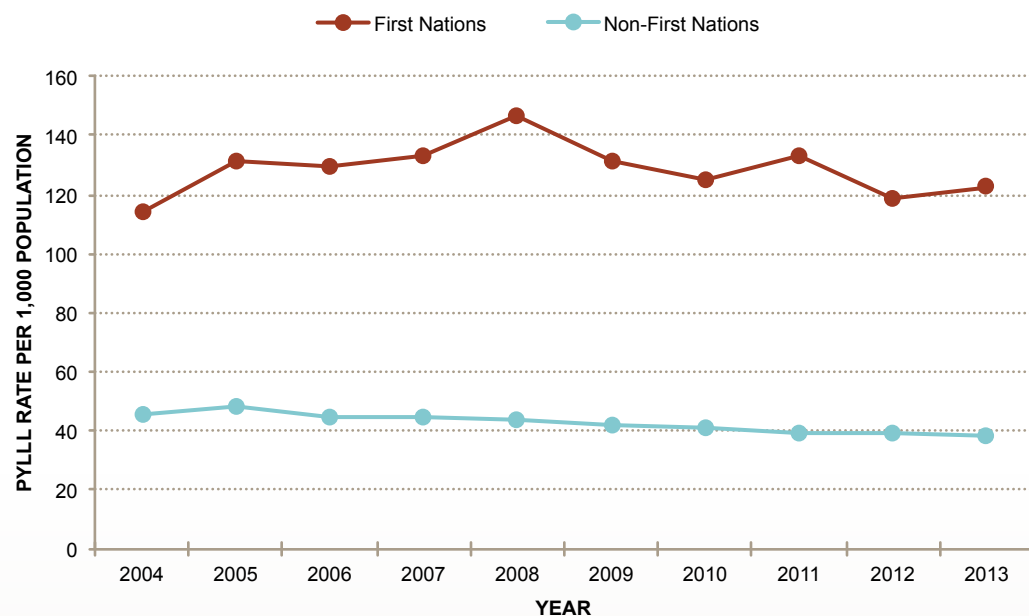
⁷⁷ Centers for Disease Control and Prevention. (2015). *Infant mortality*. Retrieved October 13, 2015, from www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm

PREMATURE DEATHS

Potential years of life lost (PYLL) is an indicator of premature death and represents the number of years lost when individuals die before they are 75 years old. Age 75 is an arbitrary cut-off point consistent with a recent Canadian report.^{78,79}

PYLL gives more weight to causes of death that occur at a younger age than those occurring during older age. The age-adjusted PYLL rates for First Nations people increased from 114 per 1,000 population in 2004 to 147 per 1,000 population in 2008, then decreased to 122 per 1,000 population in 2013. The age-adjusted PYLL rates were 2 to 3 times higher for First Nations people than non-First Nations people in Alberta between 2000 and 2013 (Figure 95)

FIGURE 95: Age-Adjusted PYLL Rate by Population Group in Alberta, 2004 to 2013



Source: Alberta Health Interactive Health Data Application

78 Canadian Institute for Health Information, & Statistics Canada. (2012). *Health Indicators 2012*. Retrieved March 18, 2012, from secure.cihi.ca/free_products/health_indicators_2012_en.pdf

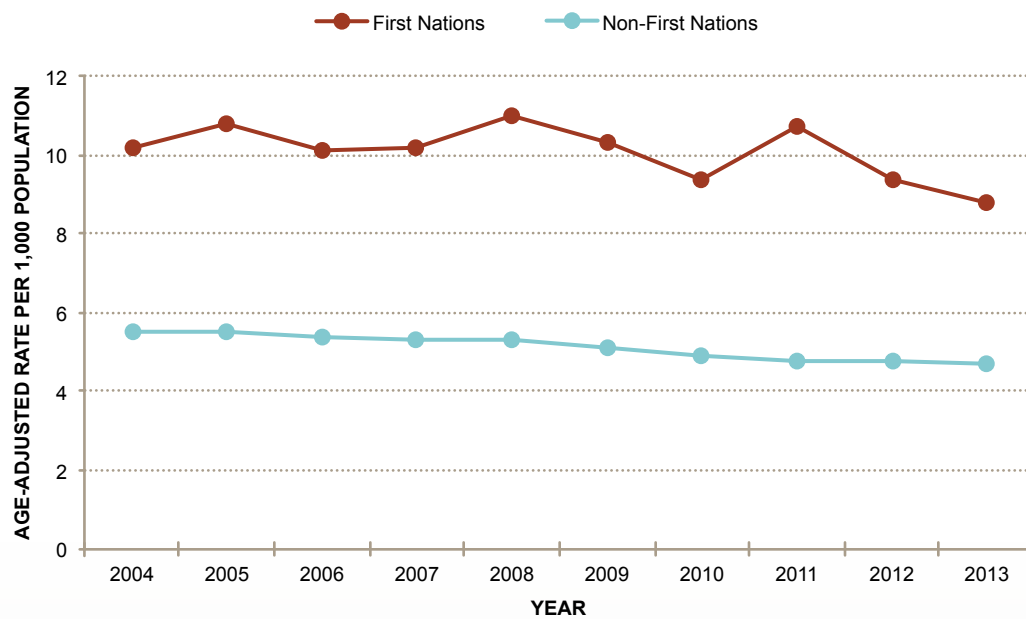
79 Alberta Health Interactive Health Data Application. See www.ahw.gov.ab.ca/IHDA_Retrieval/

MORTALITY TRENDS

The death rate among both First Nations people and Non-First Nations people in Alberta shows a decreasing trend from 2004 to 2013, when it is adjusted for age using the 1991 Canadian census population (Figure 96). The age-adjusted death rates among First Nations people were 70% to 122% higher than the rate among non-First Nations people in Alberta between 2004 and 2013.

The crude death rates (i.e. number of deaths per 1,000 population) among First Nations people in Alberta, however, increased from 4 per 1,000 population in 2004 to 5 per 1,000 in 2013.⁸⁰

FIGURE 96: Age-Adjusted Death Rate by Population Group in Alberta, 2004 to 2013



Source: Alberta Health Interactive Health Data Application

80 Alberta Health Interactive Health Data Application. See www.ahw.gov.ab.ca/IHDA_Retrieval/

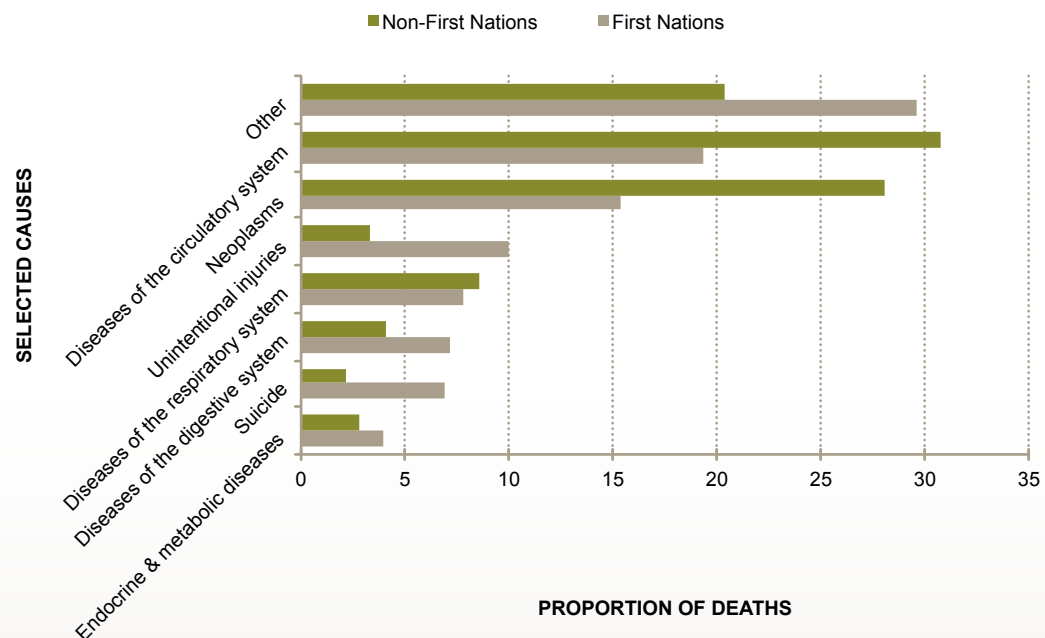
MORTALITY BY SELECTED CAUSES

Figure 96 shows the proportion of deaths in Alberta by selected causes of mortality in 2013. Details are as follows.

- Diseases of the circulatory system accounted for 31% of deaths among Non-First Nations people and 19% of death among First Nations people in Alberta in 2013.
- The proportion of deaths due to suicide (7%) in First Nations people was 3 times higher than the proportion in Non-First Nations people (2%).
- Similarly, the proportion of deaths due to unintentional injuries in First Nations people (10%) was 3 times higher than in Non-First Nations people (3%).

Deaths from unintentional injuries and suicide are preventable.

FIGURE 97: Proportion of Deaths by Selected Causes and Population Group in Alberta, 2013



Source: Alberta Health Interactive Health Data Application



There has been improvement in some of the selected health status measures considered in the section for First Nations people in Alberta. These include:

- an increase in life expectancy at birth between 2005 and 2014
- a relatively stable preterm birth rate between 2005 and 2014
- a decline in the proportion of live births to mothers under the age of 20 years
- a decline in the age- adjusted mortality rate between 2004 and 2014

While these improvements are in the right direction, there is still much work to be done. This is because there exist significant health disparities between First Nations people in Alberta and non-First Nations people in Alberta for all the indicators considered. For example:

- Life expectancy at birth for non-First Nations people in Alberta in 2014 was 10 years longer than First Nations people in Alberta.
- The age-adjusted mortality rate for First Nations people in Alberta was almost double the rate among non-First Nations in 2014.

Comparing the life expectancy at birth in 2013 and the age-adjusted mortality rate in 2012 of First Nations and Non-First Nations in Alberta to other countries of the world, analysts at Alberta Health⁸¹ and the Alberta First Nations Information Government Centre found that:

- The life expectancy for non-First Nations people in Alberta was comparable to countries such as Australia, Singapore, and Sweden, while that of First Nations people in Alberta was comparable to countries such as Guatemala, Paraguay, and Cambodia.⁸²
- The age-adjusted mortality rate for non-First Nations people in Alberta was comparable to countries such as Iceland, Spain, and Israel, while that of First Nations people was comparable to countries such as Guatemala, Malaysia, and Jordan.⁸³

81 Health Trends are sent out weekly by Alberta Health. Alberta Health has a website for health trends but have not been updated with latest reports (see www.health.alberta.ca/newsroom/health-trends.html)

82 Alberta Health and the Alberta First Nations Information Government Centre (2016, January 12). *First Nations – Health Trends Alberta :Life expectancy for First Nations in Alberta*

83 Alberta Health and the Alberta First Nations Information Government Centre (2016, February 23). *First Nations – Health Trends Alberta: Mortality Rates in First Nations in Alberta*

