

Demographic and Health Status Data for Calgary Zone Indigenous Population

Prepared for the Calgary Zone Indigenous
Health Action Planning Committee as an
Addendum to the Health Action Plan

"Aistowaípiiyaóp" "Walking Together"

"Barhe Ināzebīche"

"Átł̄isilāts'ādīł̄í"

Calgary Zone Indigenous Health Action Plan: Creating a New
Path to Indigenous Health in the Calgary Zone

January 30, 2020

Table of Contents

- INTRODUCTION** 4
- METHODS** 4
- LIMITATIONS** 4
- FINDINGS** 5
- SUMMARY INFOGRAPHIC** 6
 - A. Demographic Data** 9
 - Population size 9
 - Age 10
 - Aging Population 11
 - Education 11
 - Employment and Income 12
 - Language 12
 - B. Health Outcomes Data** 13
 - Maternal and Child Health 13
 - Mortality Rates 14
 - Cancer 16
 - Other Chronic Conditions 18
 - Addictions and Mental Health 19
 - Emergency Department Utilization 19
 - C Risk Factors** 21
 - Smoking 21
 - Alcohol Consumption 21
- CONCLUSION** 22
- REFERENCES** 23
- APPENDIX 1** 25

Calgary Zone Indigenous Health Action Planning

January 22, 2020

This report was prepared by Folake Arinde, Program Evaluation Specialist, Research and Innovation, Population, Public, and Indigenous Health (PPIH), in consultation with Dr. Sandra Johansen, Scientist, Research and Innovation, PPIH, Penny Morelyle, Senior Planner, System & Service Planning, Planning & Performance and the Calgary Zone Indigenous Health Action Plan Working Group.

CONTACT

For more information about this document, please contact:

Folake Arinde, BSc, MPH
Program Evaluation Specialist
Research and Innovation, PPIH
Alberta Health Services
Folake.Arinde@ahs.ca

INTRODUCTION

This document summarizes available health data for the Indigenous populations within Alberta Health Services (AHS) Calgary Zone. The document will serve as an addendum to the Calgary Zone Indigenous Health Action Plan, which is being developed to support improvement of health outcomes for Calgary Zone's Indigenous Population, by identifying priority health concerns and co-designing solutions with key stakeholders. This summary document is intended to support the identification of priority health issues that could be addressed in the health action plan.

METHODS

The Senior Planner (Planning and Performance, AHS) consulted with the Project Working Group to determine data requirements for identifying the priority health areas of concern among Calgary Zone's Indigenous populations. The Senior Planner then held follow-up discussions with the project's Evaluation Team to seek the team's guidance in generating a list of indicators for which data could be gathered. Following those discussions, the Evaluation Team recommended the following indicators:

- Demographic information
- Population growth
- Basic social determinants of health
- Language
- Mental Health
- Suicide
- Chronic conditions
- Emergency Room (ER) utilization

Sources of data identified included AHS, Government of Alberta, Alberta First Nations Information Governance Centre, Statistics Canada, and Health Canada. The websites of these agencies/organizations, as well as online search engines and existing project documents, were searched to extract data relevant to the indicators identified.

LIMITATIONS

- Very limited health data were found for Calgary Zone's Indigenous population. As such, proxy data (e.g., provincial or national Indigenous health data) are presented for some indicators.
- Among the three Indigenous groups, more data were found for First Nations, relative to the other two groups. In particular, limited health data were found for Alberta's Inuit population.
- The age of some of the data presented was also a limitation. While some data sets were relatively recent, some data sets were much older, with some as old as 10 years.

Calgary Zone Indigenous Health Action Planning

- Comparing data across population groups was not always feasible due to differences in how some indicators were defined across data sources.

FINDINGS

The data are summarized below under three subheadings:

- A. Demographic data (which include data on population size, age, education and employment),
- B. Health outcomes data (which include data on maternal child health, mental health, and select chronic diseases), and
- C. Risk factors (include data on smoking and alcohol consumption).

Overview of Calgary Zone Indigenous groups

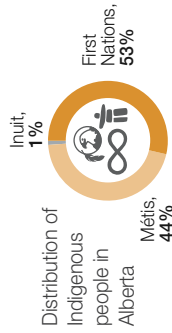
Calgary Zone is home to the following Indigenous groups:

- Treaty 7 First Nations, which include:
 - Stoney Nakoda Nations: Chiniki, Bearspaw, Wesley;
 - Tsuut'ina Nation;
 - Siksika Nation;
- the Métis people and Métis Region 3;
- Inuit people; and
- Urban and non-status Indigenous peoples.

Calgary Zone INDIGENOUS HEALTH At a Glance

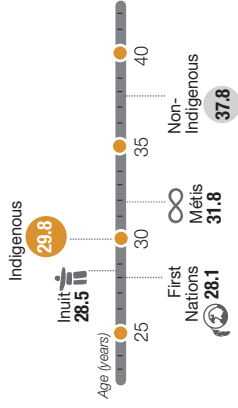
People

In 2016,
258,640
Indigenous people
lived in the Alberta.

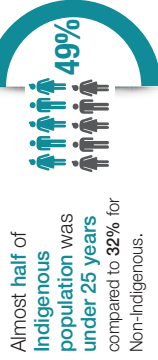


In 2018, almost
1 in 5
of Alberta's First Nations population
lived in the Calgary Zone
(Alberta First Nations Population: 165,156)

Age Characteristics, 2016



First Nations were the youngest of the three groups.



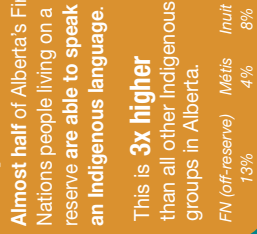
Calgary Zone is home to the following Indigenous groups:

- Treaty 7 First Nations (FN)

Stoney Nakoda Nations (Chiniki, Bearspaw, Wesley)	4,715	5,352
Tsuut'ina Nation	1,522	2,132
Siksika Nation	3,826	6,988
Alberta	19,497	26,751
- On reserve
- Registered
- Métis people and Métis Region 3
- Inuit people
- Urban and non-status Indigenous peoples

Language

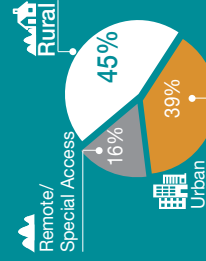
45% Almost half of Alberta's First Nations people living on a reserve are able to speak an Indigenous language.



Indigenous languages most widely spoken

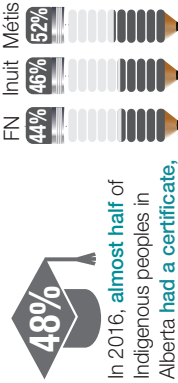


Nearly half of First Nations adults living in First Nations communities live in rural settings.



Socio-Economic Status

Education (ages 25-64 years)



High school completion rates increased between 2006 and 2016.

10%

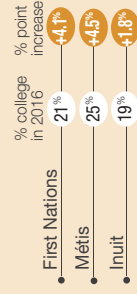
Compared to males, First Nations females are more likely to complete a post-secondary education.



Most common post-secondary qualification

College 53%

The percentage of college diplomas among Indigenous peoples increased between 2006 and 2016.



Métis people with post-secondary qualifications who were employed.



Calgary Zone

INDIGENOUS HEALTH

At a Glance

Health Outcomes

Maternal & Child Health

53% of registered First Nations women living on-reserve **never smoked during their pregnancy.**
Of those who smoked during pregnancy, nearly half said they smoked daily.

74% of pregnant Métis women **do not smoke.**

80% of pregnant Métis women **do not drink.**

5.7 per 100,000 deliveries

Maternal mortality rate for First Nations in Alberta (2007-2011)

Some factors associated with First Nations maternal mortality rate

- ✓ access to health care
- ✓ prenatal care
- ✓ health professionals during delivery
- ✓ safe therapeutic abortion services

Pregnancy complications among First Nations women in Alberta **increased.** (2007-2011)

14% Hypertension

Consistently highest in women aged over 35 years.

149% Diabetes

Consistently highest in women aged 40-44 years.

40% of cases were due to pre-eclampsia

In 2018, **13%** of live births among First Nations were **premature** as compared to 8.8% of non-First Nations.

Most commonly reported cause of infant death: **immaturity**

40% of births

The second leading cause of infant death was

16%



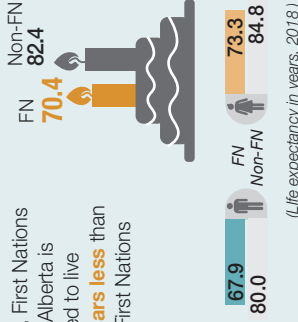
Sudden Infant Death Syndrome (SIDS)

11% SIDS deaths accounted for of all FN infant deaths from 2001 to 2011

First Nations **babies** born in Alberta **who will not live past their first birthday**

9.2 deaths per 1,000 live births compared to 4.4 of 1,000 for non-First Nations. (2017)

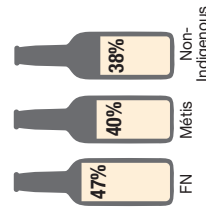
At birth, First Nations child in Alberta is **11.9 years less** than a Non-First Nations child.



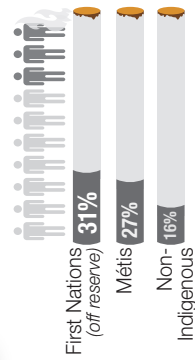
Risk Factors

41% First Nations people were **non-drinkers.**
Métis **34%** Non-Indigenous **36%** (ages 12-24)

Almost **1 in 2** First Nations people reported **heavy drinking**

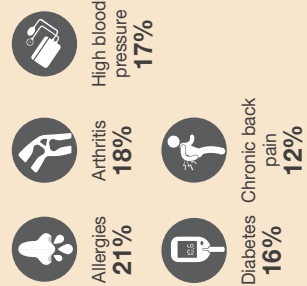


Indigenous people who reported that they **smoked daily.** (ages 12+)



Chronic Conditions

Most commonly reported chronic conditions among First Nations adults in 2015



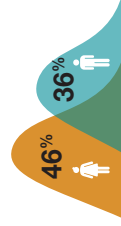
Nearly two-thirds of First Nation adults reported having **at least one known chronic health condition.**



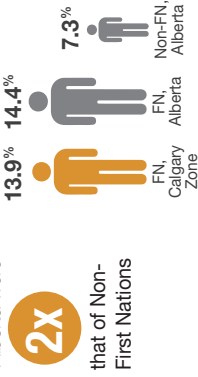
Among First Nations, females had a consistently **higher prevalence of diabetes** than males.



First Nation **female** adults are **more likely** than males to have **more than one chronic condition.**



Diabetes rates among First Nations in Calgary Zone and Alberta were



Calgary Zone INDIGENOUS HEALTH At a Glance

Addictions and Mental Health

Opioid dispensation rate for First Nations peoples
187 per 1,000
2x higher than the non-First Nations rate of 98 per 1,000

Differences in dispensation rates were **greatest** for those ages **25-49 yrs** (2011-2015)

Anti-depressant dispensation rates
First Nations: 161
Non-First Nations: 118

2x higher among First Nations women.
men 80 women 160
(January 2014-June 2017, per 1,000 population)

43 Non-FN
12 Non-FN

Opioid drug toxicity deaths were nearly **3x higher** among First Nations than non-First Nations.

First Nations people suffered **12%** of opioid toxicity deaths in Alberta.

The greatest number of these deaths occurred in the Calgary Zone.



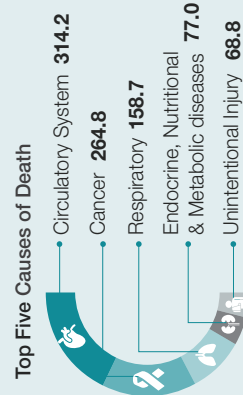
(January 1, 2016-March 31, 2017, per 100,000 persons)

Mortality

The age-standardized **mortality rate** for First Nations in Alberta was

1,269 per 100,000
2x higher than the non-First Nations rate of 689

Mortality rates were **higher** for First Nations males than females.
Males: 1,473.3
Females: 1,098.8



excludes external causes of morbidity & mortality (2014)

Mortality rate for Métis people in Alberta was lower than that of Non-Indigenous Albertans.

Métis: 400 deaths
Non-Indigenous: 538 deaths



The main causes of death for Métis people were **cancer, circulatory disease and injury**

575 deaths
Inuit in Alberta have a **higher all-cause mortality rate** than Métis and non-Indigenous populations.

Inuit have **lower mortality rates** due to **cancer and circulatory** disease than all other groups.



Emergency Department (ED) Utilization

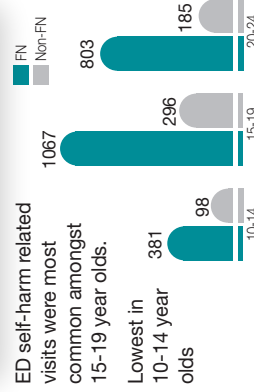
ED visits for Alberta's First Nations were almost **2x the rate for non-First Nations**
FN: 137,852 Non-FN: 70,702 (2010-2014, per 100,000 population)

Top three reasons for ED visits among Alberta's Indigenous peoples
Injury or poisoning
Acute upper respiratory infections
Laboratory results

ED visits related to opioids and narcotics were **5x** the rate for non-First Nations

FN: 380 Non-FN: 75

Among First Nations ages **10-24** in Alberta, **ED visits due to self-harm** were **4x** higher than non-First Nations



In 2013, the main cause of injury-related ED visits among Métis people was **unintentional falls**
Higher rates observed in adults **70+** years.

In 2009, ED visits by the **Métis people** were **1.6x higher** than among Alberta's **non-Indigenous** population.



40% higher **Injury-related ED visits** among Métis males than females.

51% higher overall ED visits in **rural areas** compared to urban ones.
(Unintentional poisoning, suicide and self-inflicted injury were significantly higher in urban areas).

AHS recognizes that the historical legacy of Canada's colonization has resulted in considerable differences between Alberta's non-Indigenous and Indigenous populations. Indigenous populations in the province experience a greater burden of disease, death and disability than the general population.

Some of the primary needs and challenges include:

- Life expectancy
- Lifestyle factors
- Addictions incidence (alcohol & illicit drug use)
- Injuries and death

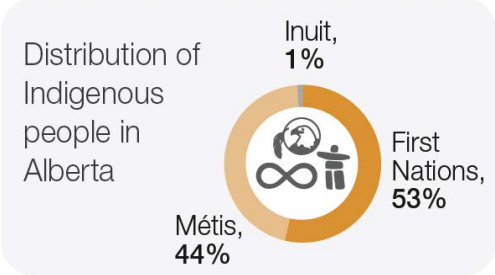
- Maternal & Child Health concerns
- Chronic Disease Prevention & Management

H Health Care Utilization

A. Demographic Data

Population size

- In Alberta, the reported population of Indigenous people in the 2016 census was 258,640, making up 6.5% of the total provincial population. Among the three Indigenous groups, First Nations have the highest population, at 52.8% (136,585), followed by the Métis people at 44.2% (114,375), while the Inuit made up a very small proportion of the population at 1.0% (2,500; Statistics Canada, 2017).
- Within AHS Calgary Zone, the population of First Nations in 2018 was 30,369 (15,446 females and 14,922 males), compared with the First Nations population in Central Zone (20,902), Edmonton Zone (45,479), North Zone (53,174), South Zone (15,223) and Alberta (165,156; Government of Alberta, 2019).
 - In 2016, the percentage of both First Nations with Treaty Status and Inuit in the Calgary Zone Primary Care Network (PCN) was 1.2%, and 2.6% in the Alberta PCN (Government of Alberta, 2018).
- As of December 31, 2014, 25% of First Nations registered to Alberta bands were registered to Treaty 7 (Health Canada, 2016). Within Treaty 7, the registered First Nations population was 26,751 and total on-reserve population was 19,497, making up the highest proportion (73%) of the population of all three treaty areas in Alberta (Voyageur et al, 2015).



Calgary Zone is **home** to the following Indigenous groups:

- Treaty 7 First Nations (FN)
 - Stoney Nakoda Nations (Chiniki, Bearspaw, Wesley)

On reserve	4,715	Registered	5,352
------------	-------	------------	-------
 - Tsuut'ina Nation

On reserve	1,522	Registered	2,132
------------	-------	------------	-------
 - Siksika Nation

On reserve	3,826	Registered	6,988
------------	-------	------------	-------
- Métis people and Métis Region 3
- Inuit people
- Urban and non-status Indigenous peoples

Nearly **half of First Nations adults** living in First Nations communities **live in rural** settings.

Setting	Percentage
Rural	45%
Urban	39%
Remote/Special Access	16%

Calgary Zone Indigenous Health Action Planning

Table 1: A breakdown of the population size for Treaty 7 First Nations within Calgary Zone (Voyageur et al, 2015)

Community	On-Reserve Population	Off-Reserve Population	Other ¹	Total Registered
Stoney (Bears paw, Chiniki, Wesley Nakoda Nations)	4,715	463	174	5,352
Tsuu T'ina Nation	1,522	498	112	2,132
Siksika Nation	3,826	n/a*	n/a*	6,988
TOTAL	10,063	961	286	14,472

*Note: data is not available

Age

- Nationally, First Nations adults living in First Nations communities are relatively young, compared to the general population (First Nations Information Governance Centre, 2018). Approximately half (49%) of the Indigenous people are under the age of 25, compared to 32% for non-Indigenous Albertans (Statistics Canada, 2016).
- In 2016, the average overall age in Canada was 41.0 years, with 35.4% of the population being under the age of 30 years. In comparison, the average age of First Nations children, youth, and adults living on reserve and in northern communities combined was 30.8 years, with 51.6% being under the age of 30 (First Nations Information Governance Centre, 2018).
- In 2016, the average age of Indigenous population in private households in Alberta (both on-reserve and off-reserve) was 29.8 years, compared with 37.8 years for the non-Indigenous population; the average age for First Nations, Métis and Inuit were 28.1 years, 31.8 years and 28.5 years, respectively (Statistics Canada, 2018a).
- In 2016, the median age of the Indigenous population in private households in Alberta (both on-reserve and off-reserve) was 26.9 years, compared with 37.0 years for the non-Indigenous population; the median age for First Nations, Métis and Inuit were 24.9 years, 29.5 years and 27.1 years, respectively (Statistics Canada, 2018a).
 - Among the First Nations, the off-reserve population was slightly older (28.3 years) than those living on a reserve (23.2 years).
- Among Alberta's Métis population, a 2012 publication reported an underrepresentation of children relative to adults registered with the Métis Nation of Alberta (Randall et al, 2012).

¹ Not defined in the report

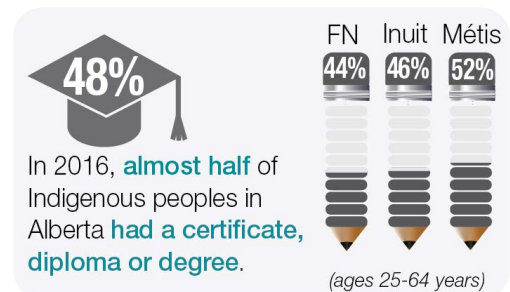
Calgary Zone Indigenous Health Action Planning

Aging Population

- Although the Indigenous population is young, it is also aging. The proportion of the Indigenous population 65 years of age or older rose from 4.8% in 2006 to 7.3% in 2016; with seniors expected to make up a larger share of the Indigenous populations over the coming years (Statistics Canada, 2018b).

Education

- In 2016, 48% of Indigenous people, aged 25 to 64 in Alberta, had a certificate, diploma or degree from a trade school, college or university: 44% of First Nations, 52% of Métis and 46% of Inuit; compared to 65% for their non-Indigenous counterparts (Statistics Canada, 2018a).



- Among those with postsecondary credentials, First Nations, Métis and Inuit were more likely than non-Indigenous graduates to have completed programs below the bachelor's level (trades or college programs; Statistics Canada, 2018a).
- In 2016, among Alberta's Indigenous people aged 25 to 64, 34% of First Nations, 21% of Métis and 24% of Inuit did not have a certificate, diploma or degree; compared to 10% for their non-Indigenous counterparts (Statistics Canada, 2018a).
- Among First Nations, in general, educational attainment appeared to be higher for those off-reserve, compared to those on-reserve (see Appendix 1 for more detailed breakdown). Approximately 56% of on-reserve First Nations adults registered to bands in Canada reported attaining at least a high school education, which is slightly lower than for First Nations living off-reserve (Health Canada MOH, 2013).
- First Nations females are more likely than First Nations males to further their education and complete a post-secondary education (28.7% vs. 18.8%; Health Canada MOH, 2013).
- The high school completion rate within five 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 (Health Canada, 2016).
- Between 2006 and 2016, the percentage of First Nations with a college diploma increased from 17% to 21%. Among the Métis, one in four had completed a college diploma in 2016, compared with one in five in 2006. The percentage of Inuit with a college diploma also increased, from approximately 17% to nearly 19% (Statistics Canada, 2018b).
- 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 (Health Canada, 2016).

Calgary Zone Indigenous Health Action Planning

Employment and Income

- In 2011, the employment rates of Alberta's First Nations, Métis and Inuit aged 25 to 64 who did not have a certificate, diploma or degree were 40.5%, 56.9% and 68.2%, respectively. Employment rates were higher for those with further education. For example, among those with post-secondary credentials, the employment rate of First Nations was 71.4%, while that of Métis was 80.5% and that of Inuit, 84.4% (Statistics Canada, 2016).
- In 2016, among Canada's Indigenous peoples, employment rates were above 80% for degree holders and among Métis with college diplomas or apprenticeship certificates. Among First Nations living off-reserve who had college diplomas or apprenticeship certificates, the employment rates were about 75% (Statistics Canada, 2018b).

Table 2: Employment rate and selected highest certificate, diploma or degree, for Indigenous people, aged 25-54, Canada, 2016 (Statistics Canada, 2018b).

	First Nations (%)		Métis (%)	Inuit (%)
	On-reserve	Off-reserve		
No certificate, diploma or degree	31.3	40.3	51.1	44.3
High school diploma or equivalency certificate	47.7	62.5	71.9	63.5
Trades certificate (non-apprenticeship)	55.3	66.8	73.8	65.7
Apprenticeship certificate	59.1	75.0	81.3	68.4
College diploma	66.0	74.6	81.5	70.8
Bachelor's degree or higher	81.3	85.3	88.0	83.6

- Median total income was also higher for those with higher education levels. Among First Nations aged 25 to 64, median total income (rounded to the nearest \$1,000) ranged from \$15,000 for those with no certificate, diploma or degree to \$34,000 for those with postsecondary credentials. The range for Métis was from \$22,000 to \$47,000, and for Inuit, from \$20,000 to \$47,000 (Statistics Canada, 2016).
- 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, and 74% to 80% for people with a bachelor's or higher degree in 2011 (Health Canada, 2016).
- First Nations living on-reserve are less likely to be employed than are First Nations living off-reserve (51.9% vs. 66.3%; Health Canada MOH, 2013).

Language

- In Alberta, 45% of First Nations living on a reserve reported the ability to conduct a conversation in an Indigenous language, a rate higher than among off-reserve First Nations (13%), Métis (4%) and Inuit (8%) (Statistics Canada, 2016).

Calgary Zone Indigenous Health Action Planning

- The Indigenous languages most commonly spoken by First Nations were Cree languages, Blackfoot, and Stoney. Métis spoke mostly Cree languages, Michif and Dene. Inuktitut was the Indigenous language most commonly spoken by Inuit (Statistics Canada, 2016).
- Nearly two-thirds (65%) of off-reserve First Nations, 37% of Métis and 61% of Inuit aged six and older reported that speaking and understanding an Indigenous language was important to them (Statistics Canada, 2016).

B. Health Outcomes Data

Maternal and Child Health

- Overall, the First Nations population in Alberta is experiencing declining birth rates and slowing population growth; from 2007 to 2011 the crude birth rates declined from 34.9 to 28.7 live births per 1,000 total population (Health Canada MOH, 2013).
- According to the Alberta First Nations Information Governance Centre (2015), the life expectancy at birth for First Nations in Alberta is lower than the life expectancy for Albertans in general (see Table 3). In addition, the gap in life expectancy between the two groups widened from 7.3 years in 1999 to 11.9 years in 2015: For First Nations, life expectancy between 1999 and 2015 remained around the same at an average of 71.4 years, while for non-First Nations it rose from 79.6 to 82.3 years within same time period.
- Infant mortality rate is higher among Alberta's First Nations compared with non-First Nations (see Table 3). The most commonly reported cause of death among First Nations infants in Alberta is immaturity (40%). The second leading cause of infant death is Ill-defined/Sudden Infant Death Syndrome (SIDS;16%). SIDS deaths alone accounted for 11% of all First Nations infant deaths from 2001 to 2011 (Health Canada MOH, 2013).

Table 3: Maternal and child health data for Alberta's First Nations and non-First Nations Populations (Government of Alberta, 2019)

Indicator	First Nations in Alberta	Non-First Nations in Alberta
Life expectancy at birth (2018)	70.42 <ul style="list-style-type: none"> • 67.95 males • 73.28 females 	82.38 <ul style="list-style-type: none"> • 80.03 males • 84.78 females
Infant mortality rates (2018) ²	13.82 per 1,000 live births	4.36 per 1,000 live births
Preterm Birth Percent – maternal age-standardized (2018)	13.66	8.59

² Combined infant mortality rate for neonatal (i.e., infants aged 0 to 27 days) and post-neonatal (i.e., aged infants 28 to 364 days)

Calgary Zone Indigenous Health Action Planning

- From 2001 to 2011, the maternal mortality rate for First Nations in Alberta during some phase of childbearing was 5.7 per 100,000 deliveries. The First Nations maternal mortality rate is attributed to factors such as access to health care, prenatal care, health professionals during delivery and safe therapeutic abortion services (Health Canada MOH, 2013).
- The rate of diabetes complications among pregnant First Nations women in Alberta increased drastically by 149% between 2001 and 2011. The age-specific rate was consistently highest in women aged 40–44 years (averaging 174 cases per 1,000 live births; Health Canada MOH, 2013).

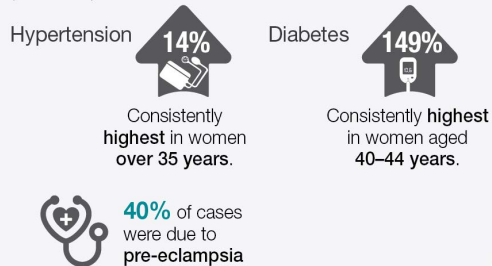
5.7 per 100,000
deliveries

Maternal mortality rate
for First Nations in Alberta
(2001-2011)

Some factors associated with First Nations maternal mortality rate

- ✓ access to health care
- ✓ prenatal care
- ✓ health professionals during delivery
- ✓ safe therapeutic abortion services

Pregnancy complications among First Nations women in Alberta **increased**.
(2001-2011)



- The rate of pregnant First Nations women in Alberta with hypertension complicating their pregnancy significantly increased by 14% between 2001 and 2011. Overall, 40% of these cases were due to pre-eclampsia. The age-specific case rate was consistently highest in women over the age of 35 (averaging 116.5 cases per 1,000 live births; Health Canada MOH, 2013).

- Fifty-three percent of all pregnant First Nations women registered to bands in Canada living on-reserve reported never smoking during their pregnancy. Of the women who did report smoking during pregnancy (47%), nearly half reported smoking daily, while the other half reported occasional smoking. Forty per cent of women reported environmental exposure to smoke within their household during pregnancy (Health Canada MOH, 2013).
- Smoking and alcohol consumption were reported by 36% and 20% of the pregnant Métis women, respectively (Randall et al, 2012).

Mortality Rates

- In Alberta, the 2012 age-standardized mortality rate for First Nations was double the rate for non-First Nations (see Table 4), with the mortality rates higher for males than females among both groups (Alberta First Nations Information Governance Centre, 2015).

Calgary Zone Indigenous Health Action Planning

- The top 5 leading causes of death for First Nations males and females in Western Canada from 2003 to 2007 were:
 - external causes of morbidity and mortality,
 - diseases of the circulatory system,
 - neoplasms,
 - diseases of the respiratory system, and
 - endocrine, nutritional and metabolic diseases (Health Canada, 2014).

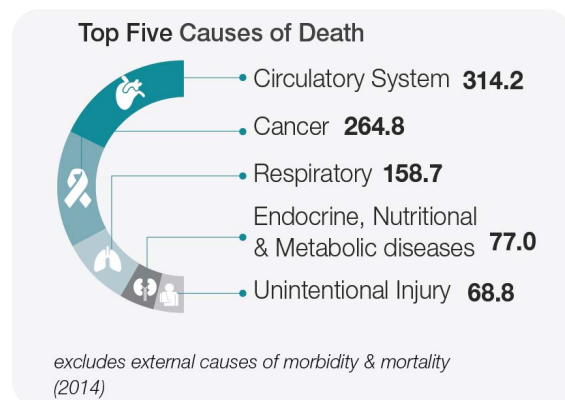


Table 4: Mortality Rates (Leading Causes of Death) for Alberta’s First Nations and Non-First Nations (with the exception of external causes of morbidity and mortality for which no data were found) (Alberta First Nations Information Governance Centre, 2015; Government of Alberta, 2019)

Indicator	First Nations in Alberta	Non-First Nations in Alberta
Age-standardized mortality rates ³ (2014)	1,268.8 per 100,000 population <ul style="list-style-type: none"> 1,473.3 per 100,000 for males 1,098.8 per 100,000 for females 	689.1 per 100,000 population <ul style="list-style-type: none"> 829.4 per 100,000 for males 577.6 per 100,000 for females
Age-standardized mortality rates due to diseases of the circulatory system (2014)	314.2 per 100,000 population <ul style="list-style-type: none"> 413.6 per 100,000 for males 241.3 per 100,000 for females 	209.4 per 100,000 population <ul style="list-style-type: none"> 259.8 per 100,000 for males 167.3 per 100,000 for females
Age-standardized mortality rates due to neoplasms (2014)	264.8 per 100,000 population <ul style="list-style-type: none"> 307.4 per 100,000 for males 232.3 per 100,000 for females 	194.7 per 100,000 population <ul style="list-style-type: none"> 227.6 per 100,000 for males 172.0 per 100,000 for females
Age-standardized mortality rates due to diseases of the respiratory system (2014)	158.7 per 100,000 population <ul style="list-style-type: none"> 166.2 per 100,000 for males 148.1 per 100,000 for females 	61.8 per 100,000 population <ul style="list-style-type: none"> 78.6 per 100,000 for males 51.2 per 100,000 for females
Age-standardized mortality rates due to endocrine, nutritional and metabolic diseases (2014)	77.0 per 100,000 population <ul style="list-style-type: none"> 105.0 per 100,000 for males 55.5 per 100,000 for females 	20.1 per 100,000 population <ul style="list-style-type: none"> 23.6 per 100,000 for males 17.1 per 100,000 for females

³ For selected causes of death

Calgary Zone Indigenous Health Action Planning

Indicator	First Nations in Alberta	Non-First Nations in Alberta
Age-standardized mortality rates due to unintentional injury (2014)	68.8 per 100,000 population <ul style="list-style-type: none"> • 102.1 per 100,000 for males • 39.6 per 100,000 for females 	25.2 per 100,000 <ul style="list-style-type: none"> • 35.8 per 100,000 for males • 15.6 per 100,000 for females
Age-standardized mortality rates due to suicide (2014)	45.6 per 100,000 population <ul style="list-style-type: none"> • 45.7 per 100,000 for males • 46.5 per 100,000 for females 	11.8 per 100,000 population <ul style="list-style-type: none"> • 18.2 per 100,000 for males • 5.4 per 100,000 for females

- The mortality rate for the Métis was lower than the mortality rate of the non-Indigenous population (400 deaths per 100,000 versus 538 deaths per 100,000), based on 2007-2009 data (Randall et al, 2012). Furthermore, the mortality rate of the Métis is considerably lower than the mortality rate of the First Nations. The age-standardized mortality rates for Métis males and females were found to be significantly higher when compared to rates for the general population (Randall et al, 2012).
- The main causes of death among Alberta's Métis population were cancer, circulatory disease and injury (Randall et al, 2012). Among Métis males, the most common causes of death were circulatory system disorders (32%), cancer (all types 23%) and injury (external causes 18%). While among Métis females, the most common causes of death were cancer (all types; 33%), circulatory system disorders (29%), respiratory diseases (7%), injuries (6%), and digestive system disorders, which account for 6% of all mortality rates (Randall et al, 2012).
- The Inuit in Alberta have a slightly elevated mortality rate compared to the non-Indigenous population, and also experience a higher rate of mortality than the Métis (Randall et al, 2012).

Cancer

- Indigenous populations are disproportionately impacted by cancers related to infectious disease agents – cervical, stomach and liver cancers (Alberta First Nations Information Governance Centre, 2015).
 - Cervical cancer incidence rates are 2.6 times higher among First Nations compared to non-First Nations women.
 - Among First Nations, incidence rates of stomach cancer and liver cancer are 1.8 times and 2.1 times higher, respectively, compared to non-First Nations.
- Specific incidence rates for these cancers for Alberta's First Nations and non-First Nations populations are presented in Table 5.

Calgary Zone Indigenous Health Action Planning

Table 5: Incidence rates for cancers associated with infectious disease agents among Alberta’s First Nations and Non-First Nations (Alberta First Nations Information Governance Centre, 2015).

Indicator	First Nations in Alberta	Non-First Nations in Alberta
Cervical cancer incidence rates (2006-2015)	21.5 per 100,000 population	8.3 per 100,000 population
Stomach cancer incidence rate (2006-2015)	16.9 per 100,000 population	9.4 per 100,000 population
Liver cancer incidence rate (2006-2015)	12.6 per 100,000 population	6.1 per 100,000 population

- Between 2007 and 2012, age-standardized incidence rates (ASIRs) among the Métis population appeared to increase slightly over time for all cancers combined, compared to the non-Métis with fairly stable rates (Sanchez-Ramirez et al, 2016).
 - The ASIR for both males and females was 401.5 per 100,000 population.
 - The ASIR for Métis males was 401.8 per 100,000 population, compared with 393.0 per 100,000 population for females.
 - The majority of new cases of cancer diagnosed in Alberta’s Métis population were diagnosed among people aged 55 years or older (71% of total cases in Métis; 76% in non-Métis).
- The top four cancer types observed between 2006 and 2015 were breast, colorectal, bronchus/lung and prostate (for both First Nations and non-First Nations, both sexes combined). Prostate cancer was the most common diagnosis for males; while breast cancer was the most common for females (Voyageur et al, 2015).
- Similarly, among Alberta’s Métis population, the most common types of cancer diagnosed were bronchus/lung cancer, followed by colorectal cancer. Among women, breast cancer was the most common type of cancer, representing 34% of all cancers diagnosed in Métis women (Sanchez-Ramirez et al, 2016). Prostate cancer was the most common cancer diagnosed in men, representing 25% of all cancers in Métis (Sanchez-Ramirez et al, 2016).
- Lung cancer was the leading cause of the reported 1,082 cancer deaths among Alberta First Nations (Voyageur et al, 2015). Among the Métis, the majority of cancer deaths between 2007 and 2012 were due to bronchus/lung cancer, representing 33% of the total deaths (Sanchez-Ramirez et al, 2016).
- Kidney, cervical and stomach cancers each comprise a higher percentage of the total number of cancer cases diagnosed compared to those cancer sites in non-First Nations (Voyageur et al, 2015).

Calgary Zone Indigenous Health Action Planning

- The ASIRs for colorectal cancer, for female breast cancer and for all cancers combined were not significantly different between Métis and non-Métis populations from 2007 to 2012 (Sanchez-Ramirez et al, 2016).
- The standardized mortality rate for all cancers among First Nations males was nearly 56% higher than that of First Nation females (Voyageur et al, 2015).
- Age-standardized mortality rates (ASMRs) associated with cancer were not statistically different between Métis and non-Métis people. However, the ASMR for breast cancer in Métis women was half of the rate estimated for their non-Métis counterparts (Sanchez-Ramirez et al, 2016).

Other Chronic Conditions

- Diabetes rates are higher among First Nations in Calgary Zone and Alberta compared to the non-Indigenous population in the province (Alberta First Nations Information Governance Centre, 2015; Government of Alberta, 2019). See Table 6
- The 2015 incidence rate of diabetes among 30 to 34 year old First Nations females in Alberta was 3.8 times higher than the rate among their non-First Nations counterparts (Alberta First Nations Information Governance Centre, 2015).

Table 6: Diabetes rates among Alberta’s First Nations and Non-First Nations (Government of Alberta, 2019)

Indicator	First Nations in Calgary Zone	First Nations in Alberta	Non-First Nations in Alberta
Age-standardized diabetes incidence rate (2015)	1,140.7 per 100,000 population ⁴	1257.6 per 100,000 population	714.7 per 100,000 population
Age-standardized diabetes prevalence (2015)	13.9% ⁵	14.4%	7.3%

⁴ http://www.ahw.gov.ab.ca/IHDA_Retrieval/selectSubCategoryParameters.do#

⁵ http://www.ahw.gov.ab.ca/IHDA_Retrieval/selectSubCategoryParameters.do#

Calgary Zone Indigenous Health Action Planning

Addictions and Mental Health

- Misuse of substance, e.g., opioids, have been reported among First Nations in Alberta (Alberta Health: Analytics and Performance Reporting Branch, 2017). For example:
 - Rates of apparent accidental opioid drug toxicity deaths per 100,000 were three times higher among First Nations compared to non-First Nations from January 1, 2016 to March 31, 2017.
 - First Nations people represented 12% of all apparent accidental opioid toxicity deaths in Alberta from January 1, 2016 to March 31, 2017.
- Antidepressant dispensation rates have increased over time for all populations; these rates are highest among First Nations women (Alberta First Nations Information Governance Centre, 2015).



Table 7: Dispensation rates of substances that may be prescribed in treating mental health conditions and have the potential to be misused (Alberta First Nations Information Governance Centre, 2015)

Indicator	First Nations in Alberta	Non-First Nations in Alberta
Opioid dispensation rate (2011-2015)	• 187 per 1000 population	• 98 per 1000 population
Pharmacy dispensations of opioids (2011-2015)	• 1,788 per 100,000 population	• 1,020 per 100,000 population
Antidepressant dispensations rates (2016)	• 161 per 1,000 population	• 118 per 1,000 population
Anti-Anxiety dispensation rates (2016)	<ul style="list-style-type: none"> • 85 per 1,000 population for males • 142 per 1,000 population for females 	<ul style="list-style-type: none"> • 35 per 1,000 population for males • 65 per 1,000 population for females

Emergency Department Utilization

- In general, Emergency Department (ED) visit rates are higher among First Nations compared with non-First Nations in Alberta (Table 8).
 - Overall ED visit rate for Alberta's First Nations is double the rate for non-First Nations in the province. For ED visits related to opioids and narcotics, the rate is

Calgary Zone Indigenous Health Action Planning

five times higher for First Nations compared to non-First Nations (Alberta First Nations Information Governance Centre, 2015).

- Among 10 to 24 year olds, ED visit rates due to self-harm (when a person purposefully harms their body with a non-fatal outcome) are four times higher for First Nations compared to non-First Nations (Alberta First Nations Information Governance Centre, 2015). The ED visit rates were highest in 15 to 19 year olds and lowest in 10 to 14 year olds. In addition, the rates were higher in females compared to males in all age categories.
- Among 15 to 19 year old First Nations females, ED visit rates due to self-harm increased from 2011 to 2017 (this trend was observed for non-First Nations as well). For First Nations females, the rates increased each year during 2011 to 2017 by 10.7 percent. The rates for 15 to 19 year old First Nations males remained relatively stable between 2006 and 2017 (Alberta First Nations Information Governance Centre, 2015).

Table 8: Emergency department utilization among Alberta’s First Nations and Non-First Nations (Alberta First Nations Information Governance Centre, 2015)

Indicator	First Nations in Alberta	Non-First Nations in Alberta
Emergency department visits rate (2010-2014)	137,852 per 100,000 population	70,702 per 100,000 population
Emergency department visits related to opioids & narcotics (2011-2015)	380 per 100,000 population	75 per 100,000 population
Emergency department visits due to self-harm among youth (2006-2017)	2250.9 per 100,000 population	579.2 per 100,000 population

- Similarly, ED utilization rates appeared to be higher among Alberta’s Métis and Inuit when compared with the general population:
 - In 2009, ED visits by the Métis population (37.2% of population after age/sex standardization) was 1.59 times the proportion for Alberta’s non-f population (23.4%). This is less than the rate (46.7%) for First Nations, though more than the rate (32.7%) for Alberta’s Inuit population (Randall et al, 2012).
- In 2013, the incidence rate of visits to the ED among Alberta’s Métis people was 51% higher in rural areas compared to urban areas ($p < 0.001$). With the exception of incidence rates of unintentional poisoning, suicide and self-inflicted injury, which were significantly higher in the urban areas (Sanchez-Ramirez et al, 2013).

Calgary Zone Indigenous Health Action Planning

- The most common reasons for ED visits among Alberta's First Nations (and non-First Nations also) were those categorized as 'injury or poisoning', followed by 'diseases of the respiratory system'. The remaining top reasons for visits to the ED by First Nations included those categorized as diseases of the digestive system, mental and behavioral disorders, and disease of the musculoskeletal system.

Top three reasons for ED visits among Alberta's Indigenous peoples



Injury or poisoning
Acute upper respiratory infections
Laboratory results

- Similarly, the most common reasons for presentation to the ED (identified in an earlier publication) for all three Indigenous groups were injuries, factors influencing health status, respiratory diseases and laboratory findings (Randall et al, 2012).

C Risk Factors

Smoking

- Off-reserve First Nations and Métis in the province are more likely to smoke daily in comparison to the general population. In 2012, 31% of off-reserve First Nations individuals aged 12 and older in Alberta reported that they smoked daily, as did 27% of Métis, compared to 16% for the non-Indigenous population (Statistics Canada, 2016).

Alcohol Consumption

- First Nations and Métis in the province are more likely to engage in heavy drinking, compared to the general population. The rate of heavy drinking (five or more drinks on one occasion at least once a month in the 12 months preceding the survey) among those 12 and older, was 36% for off-reserve First Nations and 31% for Métis, compared with 24% for non-Indigenous people (Statistics Canada, 2016).
- Almost half of First Nations (47%), 40% of Métis and 38% of non-Indigenous people aged 12 to 24 reported heavy drinking (Statistics Canada, 2016).
- Nearly one-third (30%) of off-reserve First Nations were non-drinkers (consumed no alcohol in the 12 months preceding the survey), compared with 24% of the non-Indigenous population and 25% for Métis (Statistics Canada, 2016).
- At ages 12 to 24, 41% of First Nations were non-drinkers. In comparison, 36% of non-Indigenous population and 34% of Métis had not consumed alcohol in the same time period for which data were collected (Statistics Canada, 2016).

CONCLUSION

Data Utilization Approach Adopted by the Calgary Zone Indigenous Health Action Planning Committee

As an accountable organization, AHS reports on, and uses, data to identify health and wellness status to guide future planning. Current approaches to health monitoring and reporting typically focus on deficits or the negative aspects of health; however, AHS does not focus on only negative indicators as a leading argument for action. As part of the organization's commitment to adopting a strength-based approach to guide the Indigenous health action planning process, the Indigenous Health Action Planning Committee acknowledges that reporting on the negative aspects of Indigenous health can continue to stigmatize at-risk individuals or communities. Therefore, while the identification of health trends and opportunities to create evidence-based change is essential for success, it is equally important to value qualitative approaches, such as oral storytelling, that utilize more of a wellness lens and are informed by community perspective and wisdom.

Borrowing from the Medicine Wheel philosophy, to paint a complete and holistic picture of Indigenous health and wellness, the Indigenous Health Action Planning Committee proposes to use qualitative data as an equalizing measure to more traditional quantitative indicators. This approach demonstrates the committee's respect for oral culture and supports a more holistic approach to data utilization in health planning. The committee also acknowledges that this is a shared responsibility, and Indigenous strength-based data need to be developed, informed, tailored and monitored with, by and for Indigenous people and communities as co-owners in health.

REFERENCES

1. Alberta First Nations Information Governance Centre. (2015). Resources: First Nations Health Trends-Alberta "One-Pagers". Retrieved from <http://www.afnigc.ca/main/index.php?id=resources&content=FNHTA>
2. Alberta Health: Analytics and Performance Reporting Branch. (2017). Opioids and Substances of Misuse among First Nations People in Alberta. Retrieved from <https://open.alberta.ca/dataset/cb00bdd1-5d55-485a-9953-724832f373c3/resource/31c4f309-26d4-46cf-b8b2-3a990510077c/download/Opioids-Substances-Misuse-Report-FirstNations-2017.pdf>.
3. First Nations Information Governance Centre (2018). National Report of the First Nations Regional Health Survey Phase 3: Volume One. Ottawa, Ontario.
4. Government of Alberta. (2019). Alberta Health Interactive Health Data Application. Retrieved from http://www.ahw.gov.ab.ca/IHDA_Retrieval/selectCategory.do?dataBean.id=121&command=doSelectSubCategory&cid=121
5. Government of Alberta. (2018). Alberta Health Primary Care Network (PCN) Profiles: Calgary Zone PCN, 1st edition.
6. Health Canada. (2016). Health determinants for First Nations in Alberta, 2016. Ottawa, Ontario.
7. Health Canada. (2014). A Statistical Profile on The Health of First Nations In Canada: Vital Statistics for Atlantic And Western Canada, 2003–2007. Retrieved from http://publications.gc.ca/collections/collection_2014/sc-hc/H34-193-3-2014-eng.pdf.
8. Health Canada, Medical Officer of Health. (2013). First Nations Health Status Report: Alberta Region 2011-2012. Retrieved from http://publications.gc.ca/collections/collection_2013/sc-hc/H26-4-2012-eng.pdf
9. Randall, J.R., Harris, A., Svenson, L.W., Voaklander, D.C., & Hassen Parker, S. (2012). Health Status of the Métis Population of Alberta. Edmonton, Alberta.
10. Sanchez-Ramirez, D.C., Colquhoun, A., Parker S., Randall J., Svenson, L.W., & Voaklander, D. (2016). Cancer incidence and mortality among the Métis population of Alberta, Canada, *International Journal of Circumpolar Health*, 75:1, DOI: 10.3402/ijch.v75.30059

Calgary Zone Indigenous Health Action Planning

11. Sanchez-Ramirez, D.C., Parker S.H., Randall J., Svenson, L.W., & Voaklander, D. (2013). Injuries Among Members of the Métis Nation of Alberta, 2013. Retrieved from http://albertametis.com/wp-content/uploads/2017/05/Health-Report_Injuries-Report-final-NO-CROP-MARKS.pdf.
12. Statistics Canada. (2018a). Alberta [Province] (table). Aboriginal Population Profile. 2016 Census. Statistics Canada Catalogue no. 98-510-X2016001. Ottawa. Released July 18, 2018. <http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/abpopprof/index.cfm?Lang=E>.
13. Statistics Canada. (2018b). First Nations People, Métis and Inuit in Canada: Diverse and Growing Populations. Released March 20, 2018. Corrected March 26, 2018. <https://www150.statcan.gc.ca/n1/pub/89-659-x/89-659-x2018001-eng.htm>.
14. Statistics Canada. (2017). Focus on Geography Series, 2016 Census. Statistics Canada Catalogue no. 98-404-X2016001. Ottawa, Ontario. Data products, 2016 Census.
15. Statistics Canada. (2016). Aboriginal Peoples: Fact Sheet for Alberta. Retrieved from <https://www150.statcan.gc.ca/n1/pub/89-656-x/89-656-x2016010-eng.htm>.
16. Voyageur, C., Letendre, A. Healy, B. (2015). Alberta Baseline Assessment Report. Retrieved from <http://www.afnigc.ca/main/includes/media/pdf/digital%20reports/Alberta%20Baseline%20Assessment%20Report.pdf>.

APPENDIX 1: Highest level of educational attainment of population aged 25 to 64, by selected Aboriginal identity group and area of residence, Alberta, 2011 (Statistics Canada, 2016).

	Total Aboriginal identity population	First Nations Single Identity			Métis single identity	Inuit single identity	Non- Aboriginal identity population
		Total	On- Reserve	Off- Reserve			
	Percent (%)						
No certificate, diploma or degree	30.4	38.5	54.3	28.9	22.6	23.9	11.3
High school diploma or equivalent	23.0	21.3	15.7	24.7	24.5	24.5	23.9
Postsecondary certificate, diploma or degree	46.6	40.2	30.0	46.5	52.9	52.2	64.8
Apprenticeship or trades certificate or diploma	14.4	12.2	10.1	13.5	16.7	18.5	12.1
College, CEGEP or other non-university certificate or diploma	20.6	18.0	13.9	20.4	23.3	20.7	21.4
University certificate or diploma below bachelor level	3.1	3.3	2.6	3.8	3.1	2.2	4.8
University certificate, diploma or degree at bachelor level or above	8.5	6.8	3.5	8.8	9.9	10.3	26.5