

# Alberta

# Opioid Response

# Surveillance Report:

# First Nations People

# in Alberta

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June 2021



The Alberta First Nations  
Information Governance Centre

Alberta 

Health, Government of Alberta

June 2021

Alberta Opioid Response Surveillance Report: First Nations People in Alberta

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## Highlights

- Across all measured indicators related to opioid use, First Nations people in Alberta have disproportionately higher rates compared to their Non-First Nation counterparts. First Nations people represent approximately 6 per cent of the Alberta population, yet they represent 22 per cent of all opioid poisoning deaths from in the first six months of 2020. This is an increase from 14 per cent in 2016.
- While the rate of opioid poisoning deaths per 100,000 continued to increase among both First Nations people and Non-First Nations people from 2016 to 2018, the rate decreased among Non-First Nations people in 2019 while it continued to increase among First Nations people.
- In the first six months of 2020, the rate of opioid poisoning deaths per 100,000 increased among both First Nations people and Non-First Nations people, however, the increase was significantly higher among First Nations people.
- The role of pharmaceutical opioids and drugs such as codeine and benzodiazepines in causing a fatal drug poisoning among First Nations people has decreased since 2016, while non-pharmaceutical drugs, such as fentanyl, carfentanil, and methamphetamines now play a larger role in fatal drug poisonings.
- The South Zone, the City of Lethbridge, the Calgary Zone, and the City of Calgary represent the areas of the province where rates of all measured indicators related to opioid use are highest among First Nations people.

## Key points

### Apparent unintentional poisoning deaths related to opioids

- Rates of apparent accidental opioid drug poisoning deaths per 100,000 were on average approximately seven times higher among First Nations people compared to Non-First Nations people from January 1, 2020 to June 30, 2020.
- First Nations people represented 22 per cent of all apparent accidental opioid poisoning deaths in Alberta from January 1, 2012 to June 30, 2020.
- From January 1, 2016 to June 30, 2020, the proportion of opioid drug poisonings involving fentanyl increased to over 80 per cent among First compared to 44 per cent in 2016.
- From January to June 2020, among First Nations people, the rate of opioid poisoning deaths per 100,000 was highest in the South Zone, followed by the Calgary Zone, which both saw significant increases from 2019 to the first six months of 2020.
- Among First Nations people, historically (2016 to 2018), males and females were nearly equally represented among apparent accidental opioid poisoning deaths. However, more recently (2019 to first six months of 2020), the trend among First Nations people is more similar to Non-First Nations people, where males represented a higher proportion of apparent accidental opioid poisoning deaths.

### Confirmed drug poisoning deaths

- In the first six months of 2020, among First Nations and Non-First Nations people, accidental fentanyl poisoning deaths represented the highest proportion of all drug & alcohol poisoning deaths.
- Among First Nations people, carfentanil, methamphetamine, and fentanyl saw the largest increase as a substance causing drug poisoning death from 2016 to the first six months of 2020. This coincided with a decrease in pharmaceutical substances (i.e. codeine, benzodiazepines) causing poisoning death.
- Similarly, among Non-First Nations people, carfentanil, fentanyl and methamphetamine saw the largest increase as substances causing drug poisoning death from 2016 to the first six months of 2020.

## Health care utilization related to opioid use

- From January 1, 2016 to June 30, 2020, rates of emergency department (ED) visits and hospitalizations related to opioids and other drugs per 100,000 were all higher among First Nations people compared to Non-First Nations people.
- From January 1, 2016 to June 30, 2020, proportionally, First Nations females had higher representation among emergency department visits and hospitalizations related to opioids and other drugs compared to their Non-First Nations female counterparts.
- In the first six months of 2020, the rate of ED visits and hospitalizations related to opioids and other drugs per 100,000 was highest among First Nations people residing in the South Zone, followed by the Calgary Zone.

## Opioid and opioid agonist therapy (OAT) dispensing from community pharmacies

- From January to June 2016 to Jan to Jun 2020, the rate of opioid dispensing (excluding OAT) from community pharmacies has decreased among both First Nations and Non-First Nations people by 27 per cent.
- Among First Nations and Non-First Nations people, the number of individuals dispensed OAT continues to increase. The rate of unique individuals dispensed buprenorphine/naloxone per 1,000 increased by over 100 per cent from 2016 to the first six months of 2020 among both First Nations and Non-First Nations people.
- From January to June 2020, the rate of unique individuals dispensed buprenorphine/naloxone for OAT was almost six times higher than Non-First Nations people, for methadone, it was just over three times higher.
- From January to June 2020, among First Nations people, the rate of dispensing of methadone and buprenorphine/naloxone was highest in the South Zone. In particular, the rate of unique individuals dispensed buprenorphine/naloxone in the South Zone was significantly higher than any other Zone (five times higher than the second highest rate in the Edmonton Zone).

## Disclaimer

This surveillance report presents emergency department visits, hospitalizations, prescription drug dispensing from community pharmacies, emergency medical services, naloxone kit dispensing, supervised consumption services visits, and mortality data associated with opioids and other drugs in Alberta.

Data sources are updated and verified at differing time periods. Results are subject to change based on differences in data submission schedules and updates from the various data systems. Data may change in later reporting as it is submitted by the medical examiner, health facilities, supervised consumption services, and pharmacies. **Recent data may be less complete due to delays in data submission.**

The number of drug overdose deaths related to fentanyl/opioids may change (including increases/decreases in previous numbers) as certification of deaths can take six months or longer, and certification of cause of death may lead to a change in classification.

**Apparent deaths** = Preliminary evidence suggests that the death was most likely a drug overdose.

**Confirmed deaths** = A Medical Examiner has determined the cause of death based on all available evidence, and listed the cause of death on a death certificate (including the substances directly involved in the overdose).

**Fentanyl related poisoning deaths:** Deaths in which fentanyl or a fentanyl analogue was identified as a cause of death (these may also have involved non-fentanyl opioids).

**Non-fentanyl opioid related poisoning deaths:** Deaths in which an opioid (not fentanyl or a fentanyl analogue) was identified as a cause of death. *Due to the added complexity of non-fentanyl opioid related poisoning deaths, there is a three-month delay in identifying these preliminary (apparent) cases for surveillance purposes compared to fentanyl related deaths.*

**Manner of death** is determined by Alberta's Office of the Chief Medical Examiner. Manner of death may be either accidental (i.e., unintentional), suicide (i.e., intentional), homicide, or undetermined. This report presents unintentional and undetermined deaths grouped together as "unintentional deaths". Suicide/intentional deaths are only reported for confirmed deaths. Homicide deaths are not included in this report.

Throughout this report: Q1 = January to March Q2 = April to June Q3 = July to September Q4 = October to December

**Local Geographic Areas (LGAs)** refers to 132 geographic areas created by Alberta Health and Alberta Health Services to support local health service planning, monitoring, public health surveillance, and deep dive analytics.

For more details on data sources and methods, please see the **Data notes** section at the end of this report.

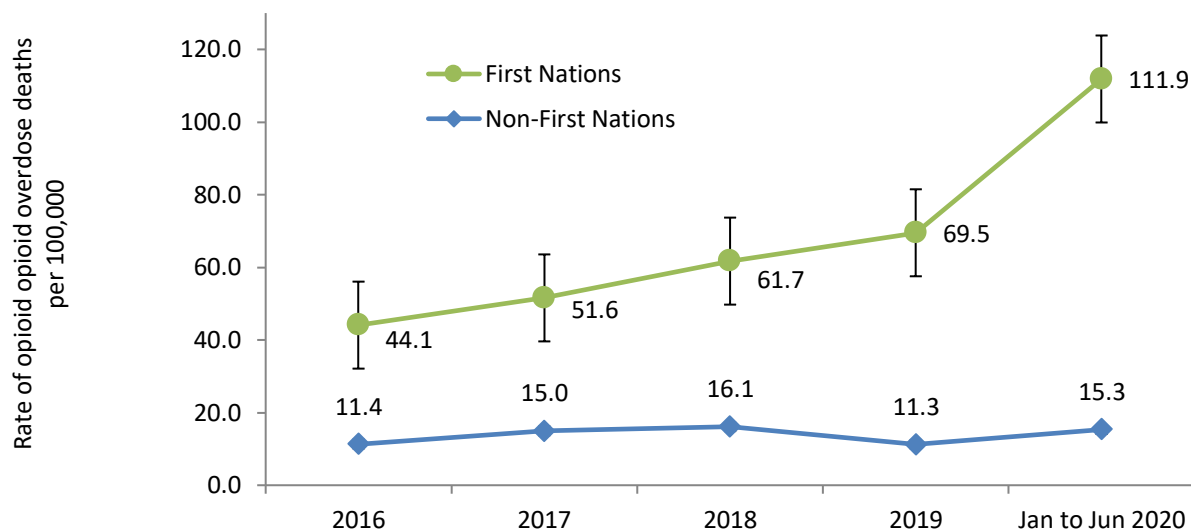
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## Mortality data

### Apparent accidental opioid poisoning deaths (fentanyl & non-fentanyl opioids)

Figure 1: Rate of apparent accidental opioid poisoning deaths per 100,000 by First Nations status and year. January 1, 2016 to June 30, 2020.



- Among First Nations people, from 2016 to 2019, the annual rate of apparent accidental opioid poisoning deaths per 100,000 person years increased year over year on average by 16 per cent. However, the rate increased by 60 per cent from 2019 to the first six months of 2020.
- In comparison, among Non-First Nations people, from 2016 to 2018, the year over year rate of apparent accidental opioid poisoning deaths per 100,000 person years increased on average by 20 per cent, but from 2018 to 2019, the rate decreased by 30 per cent. From 2019 to the first six months of 2020, this rate among Non-First Nations people increased by 36 per cent.
- In 2016, 2017, and 2018, the rates of apparent accidental opioid poisoning deaths per 100,000 person years among individuals identifying as First Nations were approximately three to four times higher than Non-First Nations people. In 2019, the rate among First Nations people was six times higher than Non-First Nations people, and in the first six months of 2020, seven times higher.

**Table 1:** Count and percentage of opioid poisoning deaths by First Nations status and year. January 1, 2016 to June 30, 2020.

	FN		Non-FN		Total
	Count	Percent of annual deaths	Count	Percent of annual deaths	
<b>2016</b>	72	14%	458	86%	<b>530</b>
<b>2017</b>	85	12%	611	88%	<b>696</b>
<b>2018</b>	102	13%	668	87%	<b>770</b>
<b>2019</b>	116	20%	476	80%	<b>592</b>
<b>Jan to Jun 2020</b>	94	22%	329	78%	<b>423</b>
<b>Total</b>	<b>469</b>	<b>16%</b>	<b>2,542</b>	<b>84%</b>	<b>3,011</b>



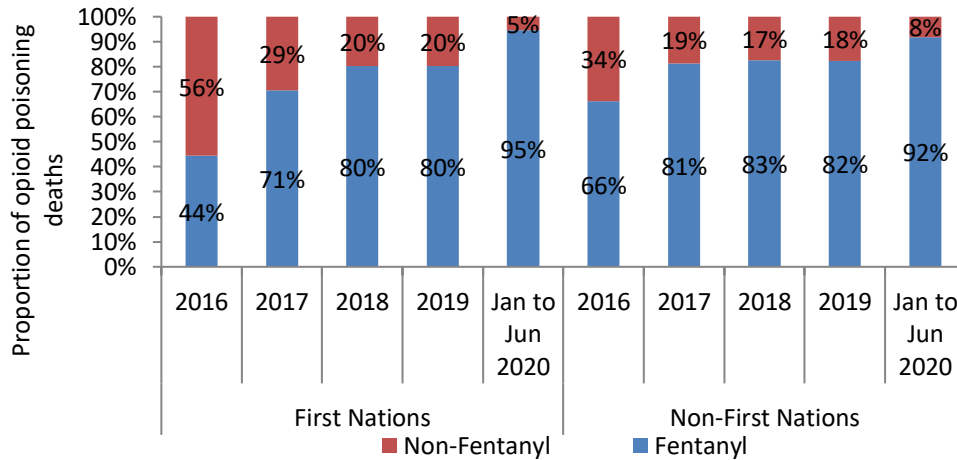
**Table 2:** Count and percentage of opioid poisoning deaths by First Nations status and municipality. January 1, 2020 to June 30, 2020.

	FN		Non-FN	
	Count	Proportion of FN deaths	Count	Proportion of Non-FN deaths
<b>Calgary</b>	31	33%	120	36%
<b>Edmonton</b>	29	31%	104	32%
<b>Red Deer</b>	2	2%	16	5%
<b>Fort McMurray</b>	0	0%	4	1%
<b>Grande Prairie</b>	1	1%	7	2%
<b>Lethbridge</b>	13	14%	10	3%
<b>Medicine Hat</b>	0	0%	4	1%
<b>Other AB locations, by Zone</b>				
<b>North Zone</b>	2	2%	11	3%
<b>Edmonton Zone</b>	2	2%	8	2%
<b>Central Zone</b>	4	4%	26	8%
<b>Calgary Zone</b>	5	5%	10	3%
<b>South Zone</b>	5	5%	9	3%
<b>Total</b>	<b>94</b>	<b>100%</b>	<b>329</b>	<b>100%</b>

- During the first six months of 2020, among First Nations and Non-First Nations people, the majority of opioid poisoning deaths occurred in the seven largest cities in Alberta (81 per cent among First Nations people and 80 per cent among Non-First Nations). The largest populated centers (Calgary and Edmonton) accounted for 64 per cent of all deaths among First Nations people, and 68% among Non-First Nations people.
- Compared to non-First Nations people, a higher proportion of opioid poisoning deaths among First Nations people occurred in Lethbridge, and other Alberta locations (i.e. not in the seven largest AB cities) within the Calgary and South Zone.

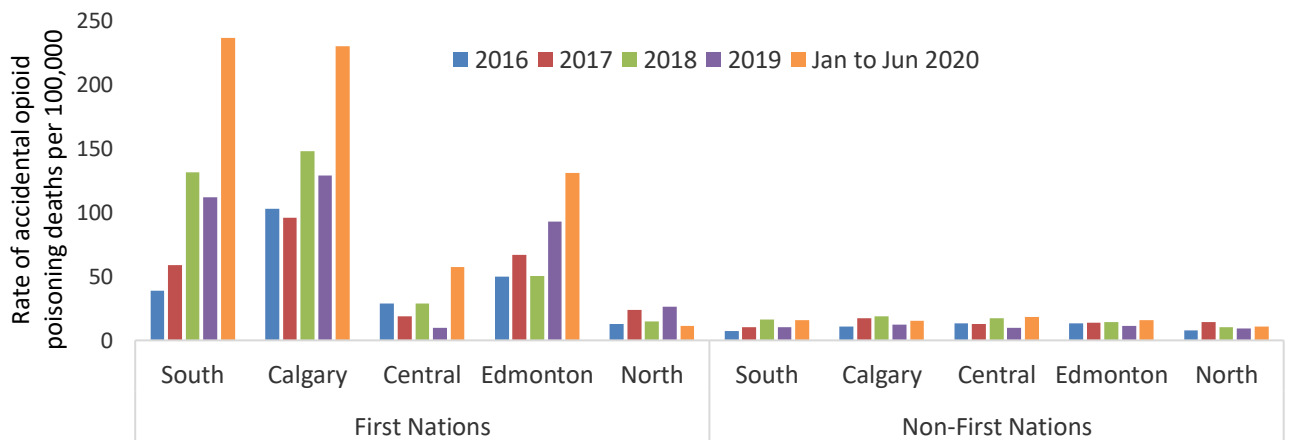
**Note:** Individuals that could not be matched to a Unique Life Time Identifier (ULI) were excluded, as their First Nation status could not be verified.

**Figure 2:** Proportion of fentanyl vs. non-fentanyl opioid apparent accidental poisoning deaths, by First Nations status and year. January 1, 2016 to June 30, 2020.



- The proportion of apparent opioid poisoning deaths related to fentanyl has been increasing relative to non-fentanyl opioid poisoning deaths among both First Nations and Non-First Nations people.
- While the proportion of fentanyl related poisoning deaths was 22 per cent lower among First Nations people in 2016 when compared to Non-First Nations people, by 2020 the proportion of opioid deaths related to fentanyl among First Nations people was higher than Non-First Nations people (95 vs 92 per cent).

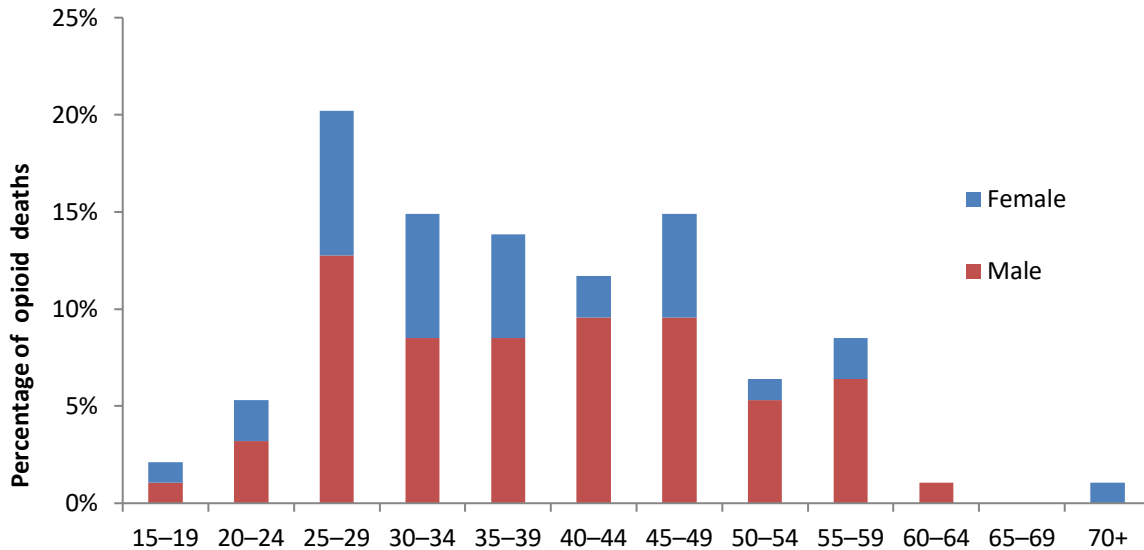
**Figure 3:** Rate of apparent accidental opioid poisoning deaths per 100,000 person years, by First Nations status and Zone. January 1, 2020 to June 30, 2020.



- In the first six months of 2020, the rate of apparent accidental opioid poisoning deaths per 100,000 person years among individuals identifying as First Nation was highest in the South Zone followed by the Calgary Zone. From 2016 to the first six months of 2020, the rate of apparent accidental opioid poisoning deaths per 100,000 person years among First Nations people in the South Zone saw the largest increase (506 per cent).
- While the rates of apparent accidental opioid poisoning deaths per 100,000 person years between zones was more consistent among Non-First Nations people, in the first six months of 2020 the rate was highest in the Central Zone. From 2016 to the first six months of 2020, the rate of apparent accidental opioid poisoning deaths per 100,000 person years among Non-First Nations people in the South Zone also saw the largest increase (111 per cent).

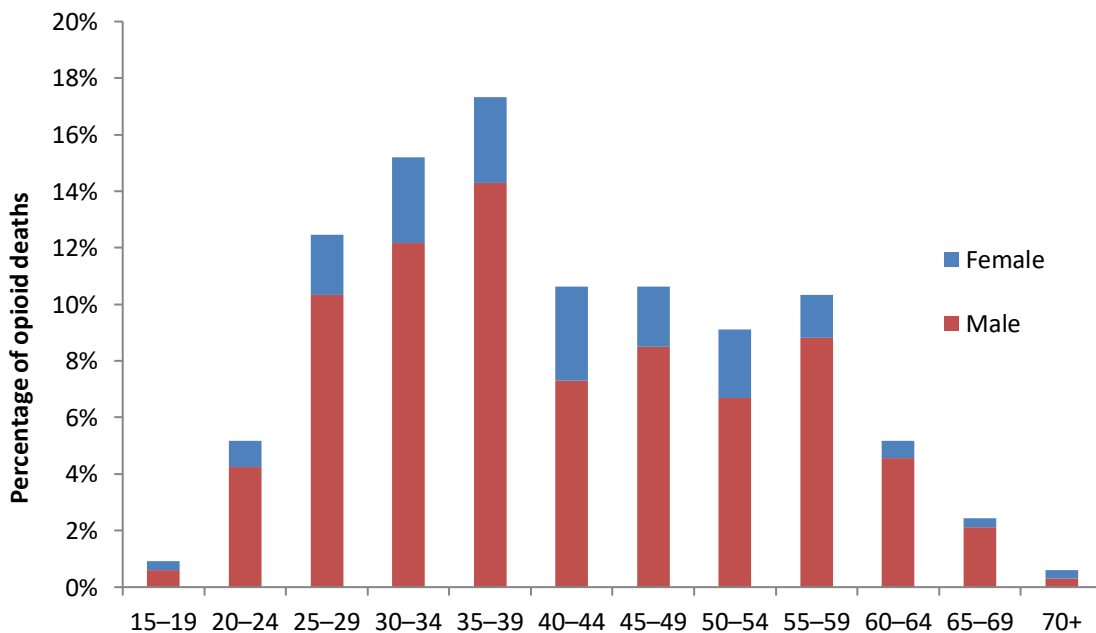
## Demographics and recent medical history of apparent accidental opioid poisoning decedents

**Figure 4:** Deaths due to apparent accidental opioid poisoning among First Nations people, by sex and age. January 1, 2020 to June 30, 2020.



- Among First Nations people, the proportion of deaths occurring among males increased in the first six months of 2020 (66 per cent) compared to previous years. Among females and males, there were more deaths among individuals aged 25 to 29 years.

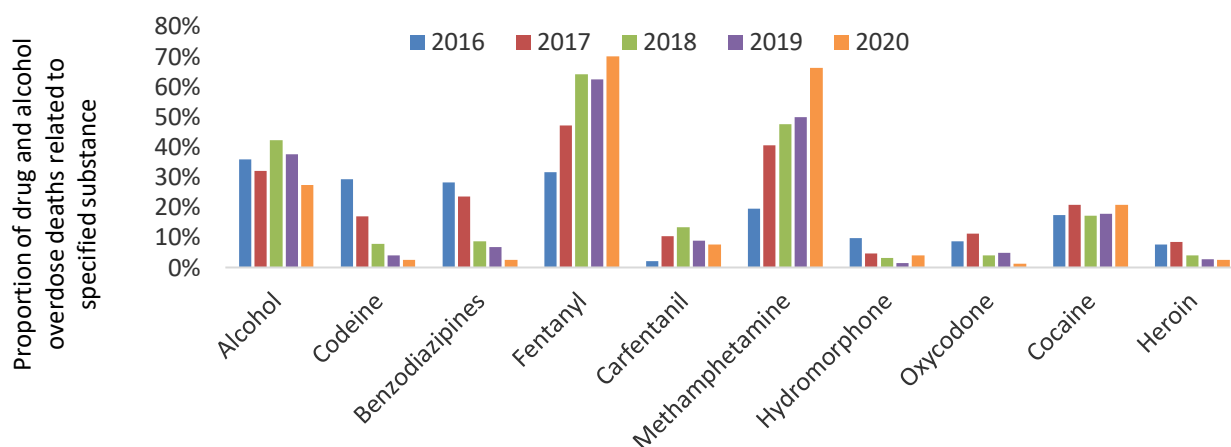
**Figure 5:** Deaths due to apparent accidental opioid poisoning among Non-First Nations people, by sex and age. January 1, 2020 to June 30, 2020.



- Among Non-First Nations people, the highest proportion of deaths occurred among males (80 per cent), particularly in those aged 35-39 years.

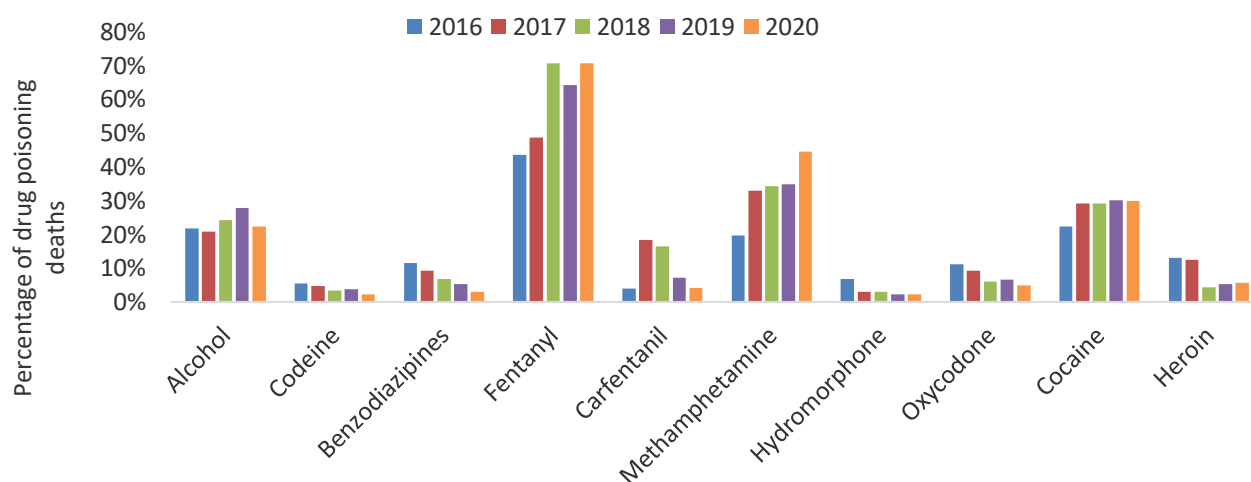
## Confirmed drug and alcohol poisoning deaths

**Figure 10:** Frequency of substances causing acute poisoning death (accidental and suicides) among First Nations people, January 1, 2016 to June 30, 2020.



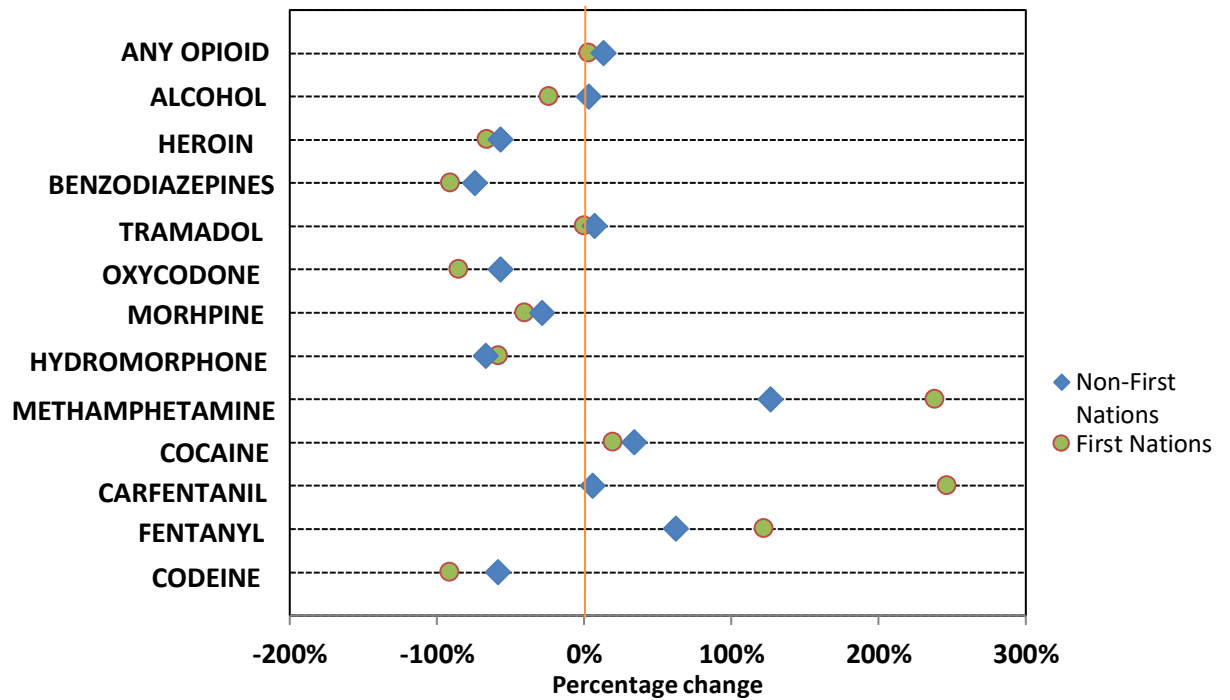
- In the first six months of 2020, among First Nations people, fentanyl and methamphetamine were listed as the most frequent substances causing a poisoning death, occurring in 70 and 66 per cent of all drug & alcohol poisoning deaths, respectively.
- Among First Nations people, comparing 2016 to the first six months of 2020, back in 2016, fentanyl (32 per cent), carfentanil (2 per cent) and methamphetamine (20 per cent) had a smaller presence in drug poisoning deaths, and pharmaceutical substances such as codeine and benzodiazepines had a greater presence (approximately 30 per cent of all deaths). This suggests that drug use patterns have shifted toward an increase in non-pharmaceutical substances, specifically, non-pharmaceutical fentanyl, carfentanil and methamphetamine.

**Figure 11:** Frequency of substances causing acute poisoning death (accidental and suicides) among Non-First Nations people, January 1, 2016 to June 30, 2020.



- In the first six months of 2020, among Non-First Nations people, similar to First Nations people, fentanyl (71 per cent) and methamphetamine (44 per cent) were the most frequent substances causing poisoning death. The occurrence of both of these substances has increased since 2016, whereas the presence of other non-pharmaceutical drugs like heroin has decreased (decrease from 13 per cent to 6 per cent).

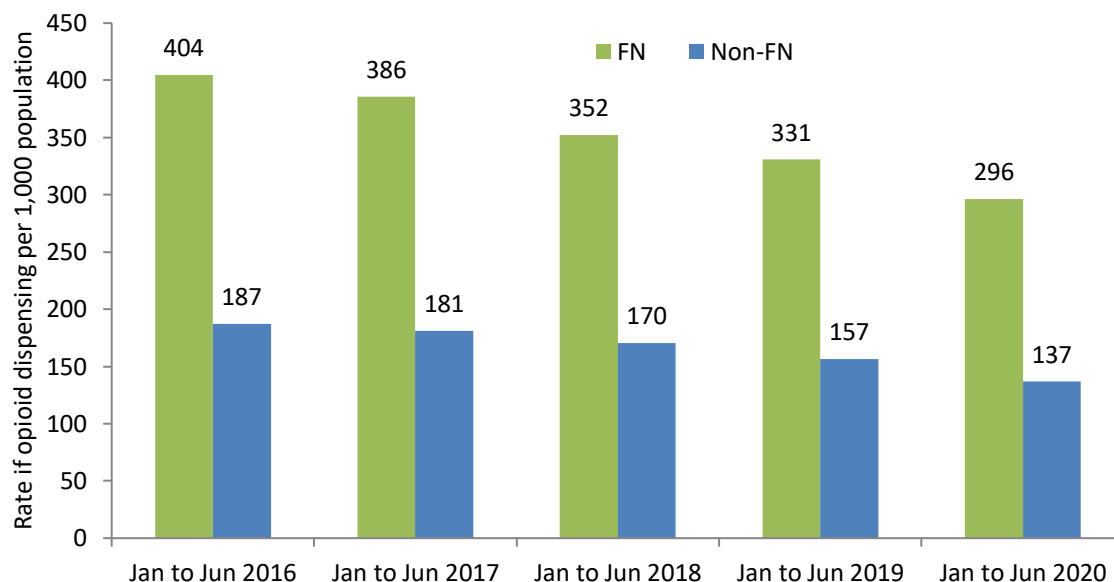
**Figure 12:** Percentage difference in substances causing acute poisoning death between January 2016 to June 2020, by First Nations status, Alberta.



- Among First Nations people, carfentanil (247 per cent), methamphetamine (239 per cent), and fentanyl (122 per cent) saw the largest increase as a substance causing drug poisoning death from 2016 to the first six months of 2020. Benzodiazepines, oxycodone, morphine, hydrocodone, and codeine all saw a decrease between 40 and 90 per cent as a substance causing drug poisoning death from 2016 to the first six months of 2020. Tramadol was the only pharmaceutical opioid to see an increase as a substance causing poisoning death in this time period. Heroin saw a decrease of 66 per cent.
- Similar trends were seen among Non-First Nations people, where methamphetamine (127 per cent), and fentanyl (62 per cent) saw the largest increase as a substance causing drug poisoning death from 2016 to the first six months of 2020, while pharmaceutical substances (i.e., oxycodone, benzodiazepines) saw the largest decreases. Tramadol was the only pharmaceutical opioid to see an increase as a substance causing poisoning death in this time period. Heroin saw a decrease of 57 per cent.

## Opioid dispensing data

**Figure 13:** Rate of opioid dispensing per 1,000, by First Nations status, January 1, 2016 to June 30, 2020.



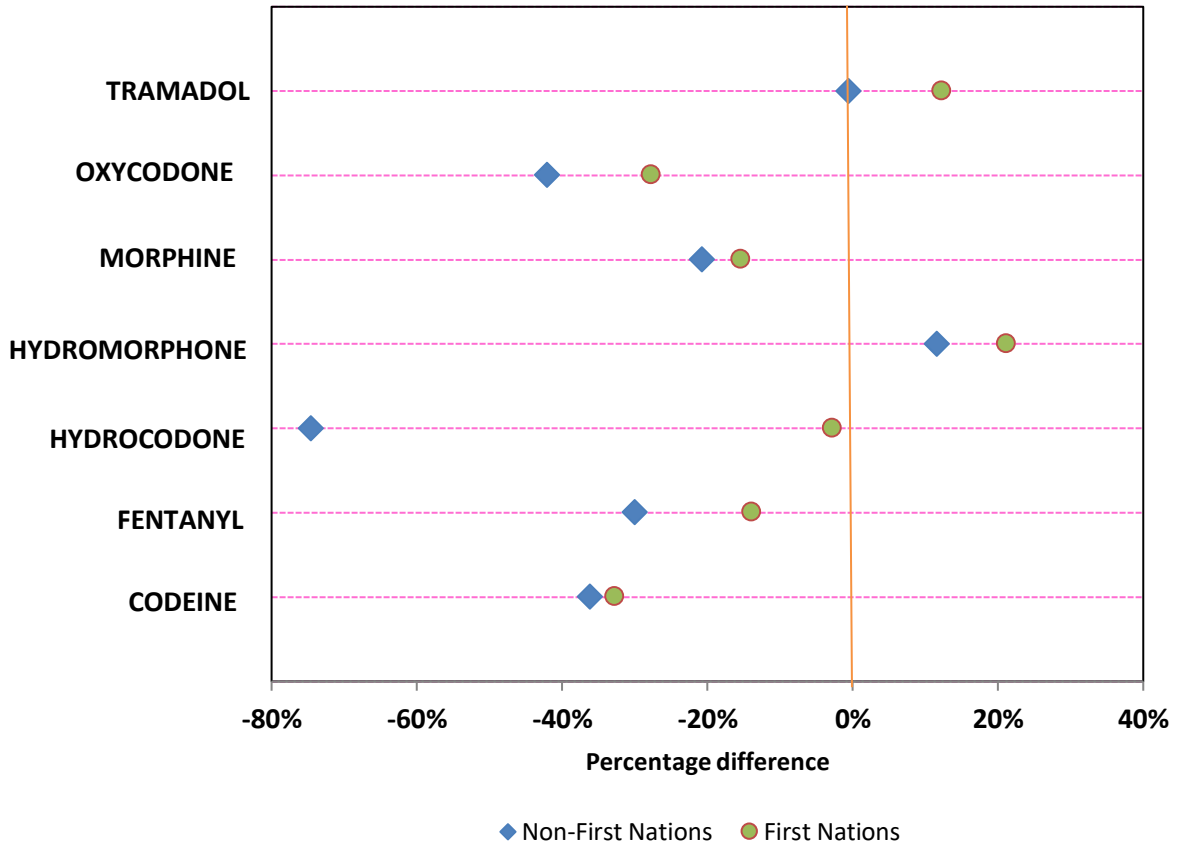
- From Jan to Jun 2016 to Jan to Jun 2020, the rate of opioid dispensing from community pharmacies has decreased among both First Nations and Non-First Nations people by 27 per cent.
- The rate of opioid dispensing from community pharmacies has consistently been approximately two times higher among First Nations people compared to Non-First Nations people from January 1, 2016 to June 30, 2020.

**Table 3:** Opioid dispensing, by First Nations status, sex, and median age. January 1, 2016 to June 30, 2020.

	FN		Non-FN	
	Proportion of individuals dispensed an opioid	Median age	Proportion of individuals dispensed an opioid	Median age
Females	54%	47	53%	55
Males	46%	48	47%	54

- Among First Nations people and Non-First Nations people, females were more likely to have an opioid dispensed from a community pharmacy.
- Among First Nations people, the median age of individuals (both males and females) receiving an opioid dispensed from a community pharmacy was between six and eight years younger than their Non-First Nations identifying counterparts.

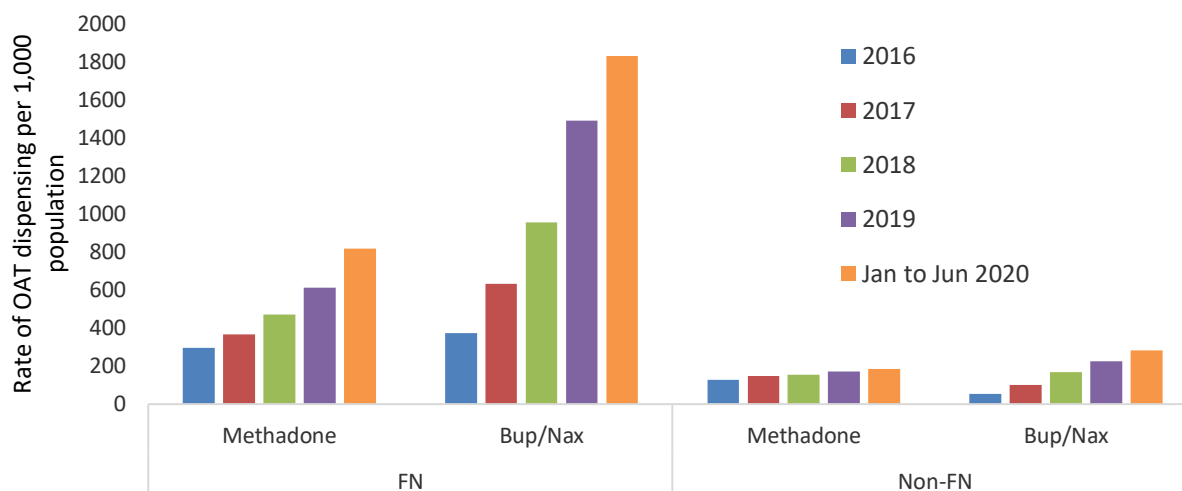
**Figure 14:** Percentage difference in opioid dispensing (unique individuals with at least one dispensation) by First Nations status, Alberta, between January to June, 2016 to January to June, 2020.



- Among First Nations people, hydromorphone and tramadol were the only opioids that saw a moderate increase in dispensing rates from January to June 2016 to January to June 2020 (21 per cent and 12 per cent respectively). All other opioids saw a decrease in their rate of dispensing.
- Among Non-First Nations people, hydromorphone was the only opioid that saw a moderate increase in dispensing rates from January to June 2016 to January to June 2020 (12 per cent). All other opioids saw a decrease in their rate of dispensing.

## Opioid agonist therapy

**Figure 15:** Opioid agonist therapy (OAT) drug dispensing rate (unique individuals with at least one dispensation) by First Nations status, Alberta, January to June, 2016 to January to June, 2020.



- From January to June 2020, the rate of unique individuals dispensed buprenorphine/naloxone for OAT was almost six times higher than Non-First Nations people, for methadone, it was just over three times higher.
- From Jan to Jun 2016 to Jan to Jun 2020, the rate (per 1,000) of methadone for OAT dispensed among First Nations people increased by 177 per cent. For buprenorphine/naloxone, the rate (per 1,000) increased by 392 per cent.
- From Jan to Jun 2016 to Jan to Jun 2020, the rate (per 1,000) of methadone for OAT dispensed among Non-First Nations people increased by 46 per cent. For buprenorphine/naloxone, the rate (per 1,000) increased by 416 per cent.

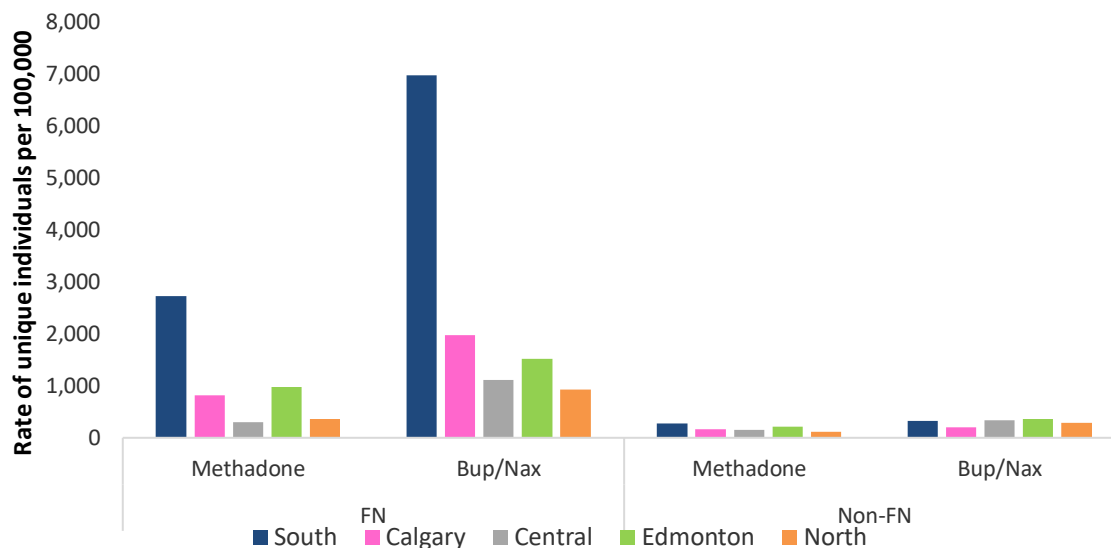
**Table 4:** OAT drug product dispensing, by First Nations status, sex, and median age. January 1, 2016 to June 30, 2020.

	FN		Non-FN	
	Proportion of individuals dispensed OAT product	Median age	Proportion of individuals dispensed OAT product	Median age
Females	55%	35	40%	35
Males	45%	37	60%	38

- Females represented a higher proportion of individuals dispensed a drug product for opioid agonist therapy (OAT) dispensing from community pharmacies among First Nations people. Among Non-First Nations people, males represented a much higher proportion.



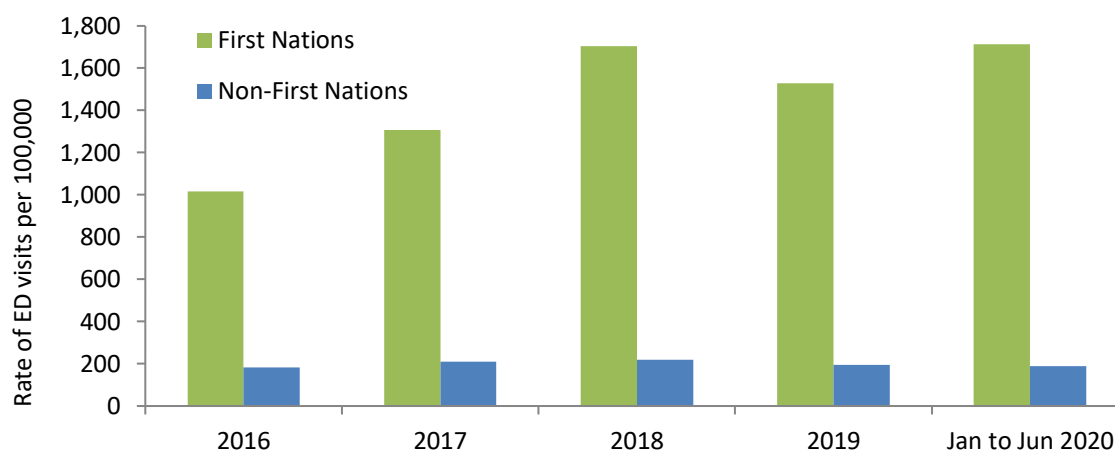
**Figure 16:** Opioid agonist therapy (OAT) drug dispensing rate (unique individuals with at least one dispensation) by First Nations status, and Zone, Alberta, January 1, 2020 to June 30, 2020.



- From January to June 2020, among First Nations people, the rate of dispensing of methadone and buprenorphine/naloxone was highest in the South Zone. In particular, the rate of unique individuals dispensed buprenorphine/naloxone in the South Zone was significantly higher than any other Zone (over three times higher than the second highest rate in the Calgary Zone).
- From January to June 2020, among Non-First Nations people, the rate of dispensing of methadone was highest in the South Zone, while for buprenorphine/naloxone the rate was highest in the Edmonton Zone.

## Emergency Department visits

**Figure 17:** Rate of emergency department (ED) visits related to opioids and other drugs, by First Nations status, per 100,000 person years. January 1, 2016 to June 30, 2020.



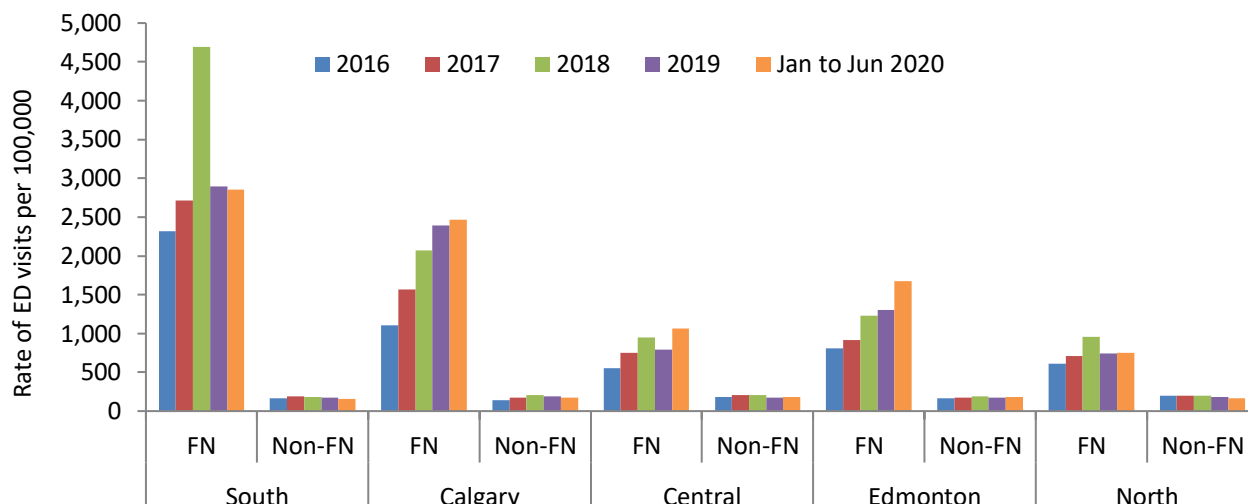
- In 2016 and 2017, the rate of emergency department (ED) visits related to opioids and other drugs among First Nations people was about six times higher than the rate among Non-First Nations people. In 2018 and 2019 this rate was closer to eight times higher among First Nations people, and by the first six months of 2020, it was nine times higher.
- The rate of emergency department (ED) visits related to opioids and other drugs among First Nations people increased on average per year by 29 per cent from 2016 to 2018, and decreased in 2019 by 10 per cent. However, by the first six months of 2020, the rate had seen an increase of 12 per cent from 2019.
- In comparison, the rate of emergency department (ED) visits related to opioids and other drugs among Non-First Nations people increased on average per year by 10 per cent from 2016 to 2018, decreased in 2019 by 10 per cent, and continued to decrease by 3 per cent in the first six months of 2020.

**Table 5:** Emergency department (ED) visits related to opioids and other drugs, by First Nations status, sex, and median age. January 1, 2016 to June 30, 2020.

	FN		Non-FN	
	Proportion of ED visits	Median age	Proportion of ED visits	Median age
Females	51%	32	37%	33
Males	49%	34	63%	35

- Among First Nations people, a nearly equal distribution of emergency department (ED) visits related to opioids and other drugs occurred among males and females.
- Among Non-First Nations people, a higher proportion of emergency department (ED) visits related to opioids and other drugs occurred among males.

**Figure 18:** Rate of emergency department (ED) visits related to opioids and other drugs, by First Nations status and Zone, per 100,000 person years. January 1, 2016 to June 30, 2020.



- From 2016 to the first six months of 2020, the rate of emergency department (ED) visits related to opioids and other drugs was significantly higher among First Nations people residing in the South and Calgary Zone compared to all other Zones. The Calgary Zone also saw the largest increase in rate of emergency department (ED) visits related to opioids and other drugs among First Nations people from 2016 to the first six months of 2020.
- From 2016 to the first six months of 2020, the Calgary Zone saw the largest increase in rate of emergency department (ED) visits related to opioids and other drugs among Non-First Nations people. In the first six months of 2020, the Edmonton Zone had the highest rate among Non-First Nations people.

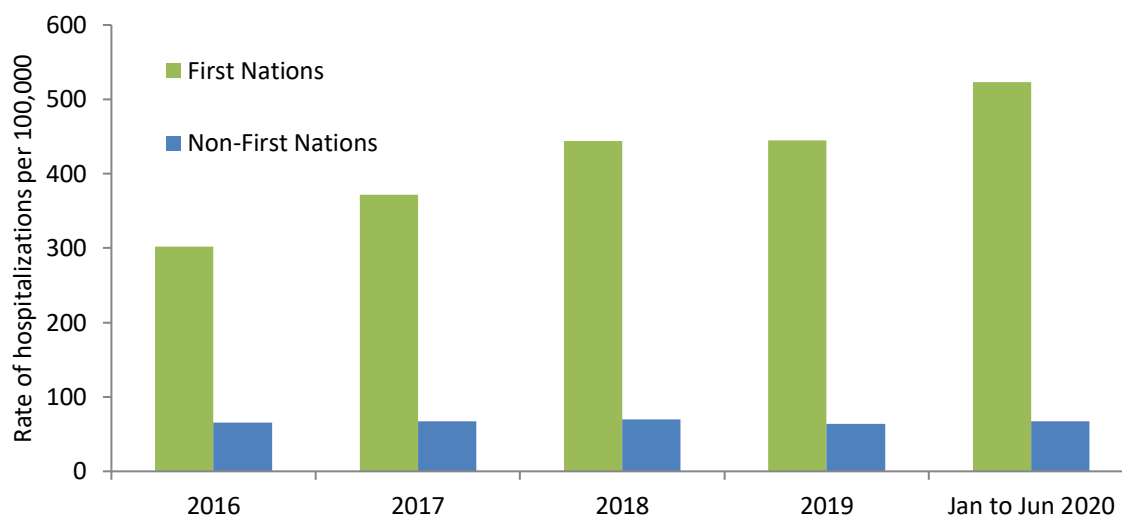
**Table 6:** Top 10 ED facilities utilized for emergency visits related to opioids and other drugs, by First Nations status. January 1, 2020 to June 30, 2020.

FN				Non-FN			
Rank	Facility	Count	Percent of all visits*	Rank	Facility	Count	Percent of all visits*
1	Royal Alexandra Hospital	331	23%	1	Royal Alexandra Hospital	702	17%
2	Peter Lougheed Centre	102	7%	2	Peter Lougheed Centre	415	10%
3	Rockyview General Hospital	96	7%	3	Rockyview General Hospital	302	7%
4	Foothills Medical Centre	83	6%	4	Foothills Medical Centre	284	7%
5	University Of Alberta Hospital	78	5%	5	Sheldon M Chumir Center	221	5%
6	Sheldon M Chumir Center	77	5%	6	Red Deer Regional Hospital Ctr	201	5%
7	Chinook Regional Hospital	74	5%	7	University Of Alberta Hospital	194	5%
8	Pincher Creek Health Centre	54	4%	8	South Health Campus	173	4%
9	Misericordia Community Hosp	50	3%	9	Misericordia Community Hosp	141	3%
10	Cardston Health Centre	44	3%	10	Grey Nuns Community Hospital	133	3%

\*Percentage of the total respective 1,439 (First Nations) and 4,061 (Non-First Nations) ED visits related to harm associated with opioids and other drug use that occurred at the specified facility. Includes ED visits for all behavioural and mood disorders due to opioid use, and poisoning by all substances-all causes. (All F11 and T40 ICD-10 codes, any diagnosis field)

## Hospitalizations

**Figure 19:** Rate of hospitalizations related to opioids and other drugs, by First Nations status, per 100,000 person years. January 1, 2016 to June 30, 2020.



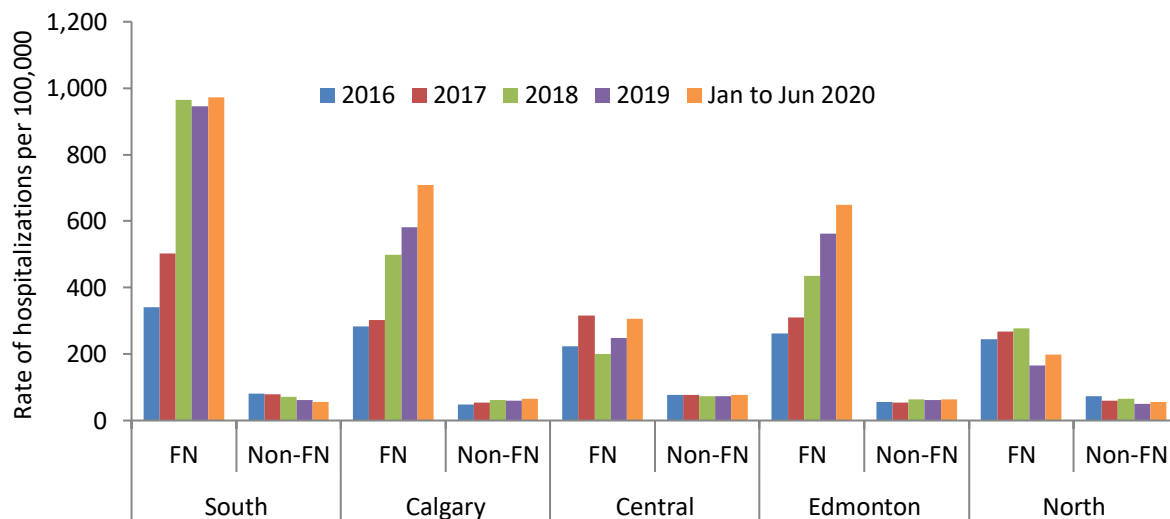
- The rate of hospitalizations related to opioids and other drugs among First Nations people increased by 47 per cent from 2016 to 2018, and by 6 per cent among Non-First Nations people. However, after no rate increase or a decrease in 2019 among both First Nations and Non-First Nations people, this rate increased by 18 per cent among First Nations people, and by 6 per cent among Non-First Nations people in the first six months of 2020.
- On average, from 2016 to 2017, the rate of hospitalizations related to opioids and other drugs among First Nations people was over five times higher than the rate among Non-First Nations people. The difference in rate increased to six, then seven times higher by the first six months of 2020.

**Table 7:** Hospitalizations related to opioids and other drugs, by First Nations status and sex. January 1, 2016 to June 30, 2020.

	FN		Non-FN	
	Proportion of hospitalizations	Median age	Proportion of hospitalizations	Median age
Females	58%	37	45%	38
Males	42%	35	55%	39

- Among First Nations people, a higher proportion of hospitalizations related to opioid use and other substance of use occurred among females.
- Among Non-First Nations people, a higher proportion of hospitalizations related to opioid use and other substance of use occurred among males.

**Figure 20:** Rate of hospitalizations related to opioids and other drugs, by First Nations status and Zone, per 100,000 person years. January 1, 2016 to June 30, 2020.



- From 2016 to the first six months of 2020, the rate of hospitalizations related to opioids and other drugs saw the largest increase among First Nations people residing in the South Zone. In the first six months of 2020, the South Zone also had the highest rate of hospitalizations related to opioids and other drugs among First Nations people.
- From 2016 to the first six months of 2020, the rate of hospitalizations related to opioid use and other drugs saw the largest increase among Non-First Nations people residing in the Calgary Zone. In the first six months of 2020, the Central Zone had the highest rate of hospitalizations related to opioids and other drugs among Non-First Nations people.

**Table 8:** Top 10 facilities utilized for hospitalizations related to opioids and other drugs, by First Nations status. January 1, 2020 to June 30, 2020.

FN				Non-FN			
Rank	Facility	Count	Percent of all stays*	Rank	Facility	Count	Percent of all stays*
1	Royal Alexandra Hospital	126	29%	1	Royal Alexandra Hospital	293	20%
2	Chinook Regional Hospital	53	12%	2	Peter Lougheed Centre	235	16%
3	Peter Lougheed Centre	49	11%	3	Foothills Medical Centre	156	11%
4	University Of Alberta Hospital	28	6%	4	Rockyview General Hospital	88	6%
5	Foothills Medical Centre	25	6%	5	Red Deer Regional Hospital Ctr	82	6%
6	Rockyview General Hospital	23	5%	6	University Of Alberta Hospital	76	5%
7	Pincher Creek Health Centre	16	4%	7	Chinook Regional Hospital	50	3%
8	Red Deer Regional Hospital Ctr	13	3%	8	South Health Campus	46	3%
9	Centennial Ctr MH & Brain Inj	12	3%	9	Misericordia Community Hosp	39	3%
10	Queen Elizabeth II Hospital	11	3%	10	Centennial Ctr MH & Brain Inj	35	2%

\*Percentage of the total respective 440 (First Nations) and 1,437 (Non-First Nations inpatient stays related to harm associated with opioids and other drug use that occurred at the specified facility. Includes hospitalizations for all behavioural and mood disorders due to opioid use, and poisoning by all substances—all causes. (All F11 and T40 ICD-10 codes, any diagnosis field)

## Data notes

### Data source(s) for report

- Emergency department data-National Ambulatory Care Reporting System (NACRS)
- Hospitalization data -Discharge Abstract Database (DAD)
- Alberta Health Care Insurance Plan (AHCIP) Quarterly Population Registry Files
- Alberta Health Postal Code Translation File (PCTF)
- Pharmaceutical Information Network (PIN)
- Office of the Chief Medical Examiner (OCME) MEDIC data

### First Nations Status Assignment

Each record from the various data sources listed above has a PHN assigned either from primary data collection or through a deterministic linkage process (Note: not all records have a PHN depending on the data source). The linked records are then linked to the First Nations Registry to assign the First Nations status to each individual.

The FN registry would include anyone ever having registered with the Alberta Health Care Insurance Plan as either status First Nation or Inuit and would also include some Alberta residents belonging to out of province bands. Non-Status First Nations and Metis can't be identified in the AHCIP population registry so would not be included. The registry also includes individuals on accounts where the main account holder is first nations (even though the individual is not).

### Mortality data

The following substances are used to identify opioid poisoning deaths.

Fentanyl: fentanyl, 3-methylfentanyl, acetylfentanyl, furanylfentanyl, norfentanyl, butyrylfentanyl, despropionylfentanyl, acrylfentanyl, methoxyacetylfentanyl, cyclopropylfentanyl, fluoroisobutyrylfentanyl (FIBF), or carfentanil

Non-fentanyl opioids: non-specified opiate, heroin, oxycodone, hydromorphone, morphine, codeine, tramadol, illicit synthetic opioids (e.g., U-47700), buprenorphine, or methadone

Fentanyl-related deaths are any deaths in which fentanyl or a fentanyl analogue was identified as a cause of death (these may also have involved non-fentanyl opioids). Non-fentanyl related deaths are deaths in which an opioid other than fentanyl or a fentanyl analogue was identified as a cause of death.

### Emergency visits

Emergency Department (ED) visits are defined by the Alberta MIS chart of accounts. Specifically, the three Functional Centre Accounts used to define any ACCS (Alberta Care Classification System) visits into an emergency visit could be:

71310 – Ambulatory care services described as emergency

71513 – Community Urgent Care Centre (UCC). As of 2014, the UCCs in Alberta are listed below:

Airdrie Regional Health Centre, Cochrane Community Health Centre, North East Edmonton Health Centre, Health First Strathcona, Okotoks Health and Wellness Centre, Sheldon M Chumir Centre, South Calgary Health Centre

71514 – Community Advanced Ambulatory Care Centre (AACC). As of 2014, the only AACC in Alberta is La Crete Health Centre

### Community pharmacy drug dispensing

The Pharmaceutical Information Network (PIN) Database is used to estimate dispensation events for the province only from community pharmacies. Variability can be dependent on the way the drug is prescribed.

PIN records can change due to data reconciliations, which may affect results. Results are more stable with older data.

Opioid dependency drugs are defined by the ATC code (Anatomical Therapeutic Chemical), as given in the table below.

ATC Code	Drug Name	ATC Grouping
N07BC51	Buprenorphine, combinations	Drugs used in opioid dependence
N07BC02	Methadone	Drugs used in opioid dependence

The following DINs were excluded since they are indicated for pain relief by Health Canada. 02247701, 02247700, 02241377, 02247699, 02247698, 02247694

Opioid dispensing data is obtained from the Pharmaceutical Information Network (PIN). PIN does not have information on the specific condition the opioid was prescribed for. Opioid types are defined by ATC Code, as given in the table below.

ATC CODE	DRUG NAME	ATC NAME
N02AA59, N02AA79, R05DA04, R05DA20 <sup>1</sup> , R05FA02 <sup>2</sup> , M03BA53, M03BB53, N02BE51, and N02BA51	CODEINE	CODEINE
R05DA03, R05DA20 <sup>3</sup> , R05FA02 <sup>4</sup>	HYDROCODONE	HYDROCODONE
N02AB03, N01AH01	FENTANYL	FENTANYL
N02AA03	HYDROMORPHONE	HYDROMORPHONE
N02AA01	MORPHINE	MORPHINE
N02AA05, N02AA55, N02BE51, and N02BA51	OXYCODONE	OXYCODONE
N02AX02, N02AX52	TRAMADOL	TRAMADOL
N07BC02	METHADONE	METHADONE
N02AA	NATURAL OPIUM ALKALOIDS	OTHER
N02AA02	OPIUM	OTHER
N02AB02	PETHIDINE	OTHER
N02AC04, N02AC54	DEXTROPROPOXY PHENE	OTHER
N01AH03	SUFENTANIL	OTHER
N01AH06	REMIFENTANIL	OTHER
N01AX03	KETAMINE	OTHER
R05DA20	NORMETHADONE	OTHER
N02AD01	PENTAZOCINE	OTHER
N02AE01, N04BC51	BUPRENORPHINE	OTHER
N02AF01	BUTORPHANOL	OTHER
N02AF02	NALBUFINE	OTHER
N02AX06	TAPENTADOL	OTHER

The following DINs are excluded from the opioid dispensing data because they have been identified as drugs used to treat opioid dependence: 02244290, 02247374, 02394596, 02394618, 02295695, 02295709, 02408090, 02408104, 02424851, 02424878, 02453908, 02453916, 02468085, 02468093. The following DINs were excluded because they do not contain opioids: 02239141, 02254468

<sup>1</sup> The ATC name for R05DA20 is "combinations" which include drugs that contain codeine, hydrocodone, and normethadone hydrochloride. Classifications of codeine and hydrocodone were based on both drug identification number and ATC code.

<sup>2</sup> The ATC name for R05FA02 is "opium derivatives and expectorants" which include drugs that contain codeine and hydrocodone. Classifications of these drugs were based on both drug identification number and ATC code.

<sup>3</sup> See footnote #1 <sup>4</sup>See footnote #2