

Alberta Health

Opioids and Substances of Misuse

Alberta Report, 2017 Q3

November 27, 2017

Alberta  Government

Highlights

- So far, in 2017, there have been 482 accidental drug overdose deaths related to an opioid.
- At this point last year, there were 346 accidental drug overdose deaths related to an opioid.
- This represents a 40 per cent increase in deaths this year compared to last.
- This means on average, 1.8 individuals die every day in Alberta as a result of an accidental drug overdose related to an opioid.
- In the most recent quarter, there were 143 accidental drug overdoses related to fentanyl.
- In the previous quarter, there were 131 accidental drug overdoses related to fentanyl.
- This represents a 9 per cent increase in these deaths this quarter compared to last.

Key points

Apparent accidental toxicity deaths related to fentanyl

- In the third quarter of 2017, there were **143** apparent accidental toxicity deaths related to fentanyl in Alberta. By comparison, there were **131** of these deaths in the second quarter of 2017. In 2016, **87** apparent accidental toxicity deaths related to fentanyl occurred in the third quarter.
- From Jan. 1, 2017 to Sept. 30, 2017, **81 per cent** of deaths occurred in larger urban cities (Edmonton, Calgary, Red Deer, Grande Prairie, Fort McMurray, Lethbridge, Medicine Hat).
- In the third quarter of 2017, the Calgary Zone (**68**) and Edmonton Zone (**39**) had the highest number of fentanyl deaths. In the most recent quarter, the Calgary Zone continued to have the highest rate per 100,000 person years at **15.3**, compared to a provincial average of **12.4** per 100,000 person years.

Apparent accidental toxicity deaths related to non-fentanyl opioids

- In the second quarter of 2017, there were **50** apparent accidental toxicity deaths related to an opioid other than fentanyl in Alberta. By comparison, there were **32** of these deaths in the first quarter of 2017. In 2016, **56** apparent accidental toxicity deaths related to an opioid other than fentanyl occurred in the second quarter.
- From Jan. 1, 2017 to Jun. 30, 2017, **74 per cent** of non-fentanyl opioid-related deaths occurred in larger urban cities (Edmonton, Calgary, Red Deer, Grande Prairie, Fort McMurray, Lethbridge, Medicine Hat).
- In the second quarter of 2017, the Calgary Zone (**17**) and Edmonton Zone (**18**) had the highest number of these deaths. The North Zone had the highest rate at **4.9** per 100,000 person years, compared to a provincial average of **3.8** per 100,000 person years.

Apparent accidental toxicity deaths related to all opioids (including fentanyl)

- Within the cities of Edmonton and Calgary, from Jan. 1, 2017 to Sept. 30, 2017, the rate of apparent accidental toxicity deaths related to all opioids was highest among Eastwood in Edmonton, and Calgary Central and East in Calgary.
- While the rates were highest in these local geographic areas, **72 per cent** of deaths in Calgary and **77 per cent** of deaths in Edmonton occurred outside these areas.
- Within Edmonton and Calgary, the majority of individuals who died of apparent accidental opioid toxicity lived outside of the central urban core.

Confirmed drug overdose deaths

- From 2016 to 2017, among confirmed accidental drug & alcohol toxicity deaths, opioids and fentanyl were directly involved in **80 per cent** of deaths. In comparison, among confirmed suicide drug & alcohol toxicity deaths, opioids and fentanyl were directly involved in **39 per cent** of deaths.

Emergency Department visits

- In the second quarter of 2017, there were **2,793** emergency and urgent care visits related to opioids and other substances of misuse. In the second quarter of 2016, there were **2,310** emergency and urgent care visits related to opioids and other substances of misuse.
- In the first quarter of 2017, emergency and urgent care visits related to opioids and other substances of misuse occurred among **2,320** unique individuals, of whom **14 per cent** had more than one visit.

Disclaimer

This surveillance report presents emergency department visits, drug dispensing from community pharmacies, emergency medical services, naloxone kit dispensing, and mortality data associated with opioids and other substances of misuse in Alberta.

Data sources are updated 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, 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 is 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). Confirmed deaths in this report are for *all* drug overdose deaths, not just drug overdoses related to fentanyl and opioids.

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 based on census boundaries

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

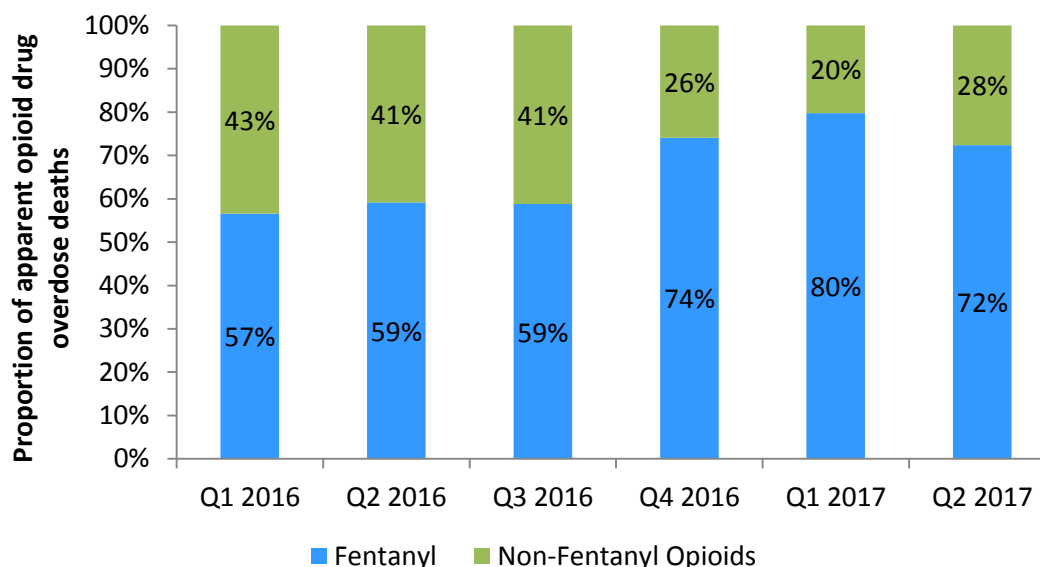
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Mortality data: Apparent accidental opioid toxicity deaths (fentanyl and non-fentanyl related)

Figure 1: Proportion of fentanyl vs. non-fentanyl related apparent accidental opioid toxicity deaths, by quarter. Jan. 1, 2016 to Jun. 30, 2017.

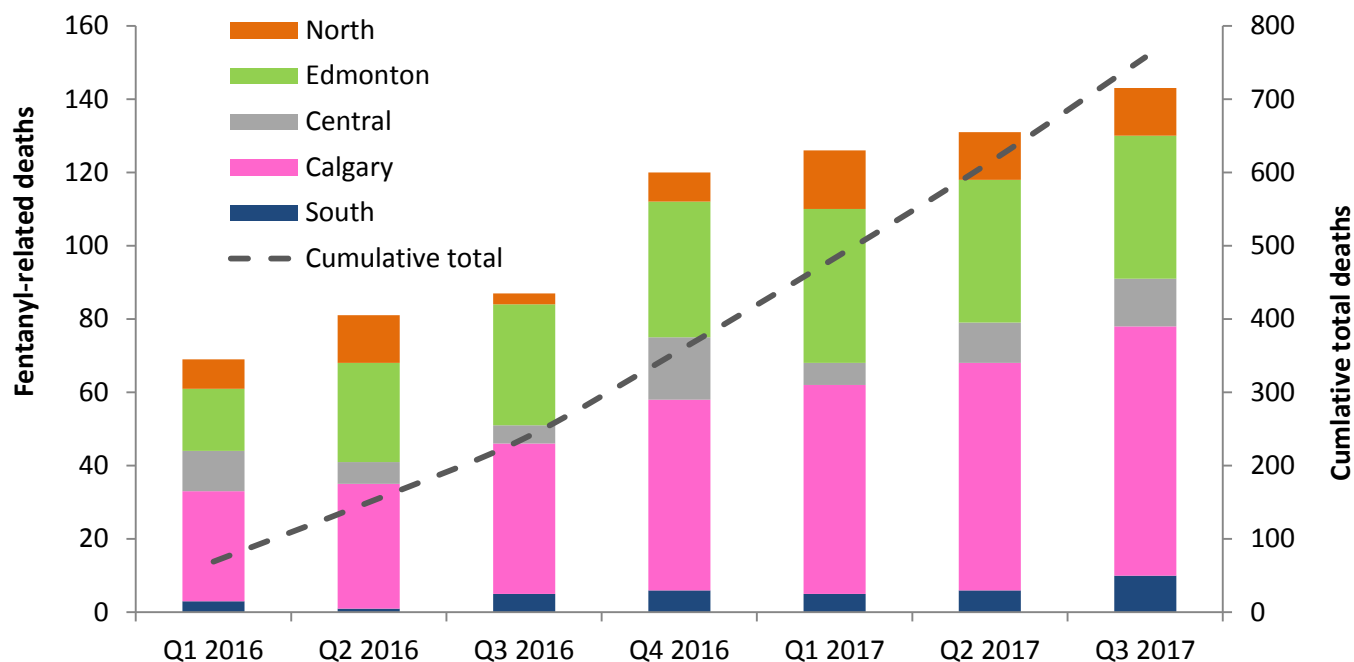


- The majority of apparent accidental opioid toxicity deaths continue to be related to fentanyl. However, in this most recent quarter, this proportion seems to have decreased, from 80 per cent of all apparent accidental opioid toxicity deaths in the first quarter of 2017, to 72 per cent in the second quarter of 2017.

Table 1: Number of apparent accidental opioid toxicity deaths related to any opioid by quarter.

							Total
South Zone	6	4	10	12	5	8	45
Calgary Zone	46	53	57	66	71	79	372
Central Zone	18	17	13	24	12	16	100
Edmonton Zone	40	48	61	50	50	57	306
North Zone	12	15	7	10	20	21	85
Alberta	122	137	148	162	158	181	908
	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017	

Figure 2: Number of apparent accidental fentanyl toxicity deaths, by Zone (based on place of death) and quarter. Jan. 1, 2016 to Sept. 30, 2017.



- Since Jan. 1, 2016, a total of 757 individuals in Alberta died from an apparent accidental drug toxicity death related to fentanyl, with an average of 108 per quarter. This includes 126 deaths where carfentanil was detected (29 in all of 2016, 30 in the first quarter of 2017, 23 in the second quarter of 2017, and 44 in the third quarter of 2017).
- From Jan 1, 2016 to Sept 30, 2017, the number of apparent accidental drug toxicity deaths related to fentanyl continues to be significant, with the trend still increasing, though not as dramatically from quarter to quarter in 2016.

Table 2: Number of apparent accidental fentanyl toxicity deaths by quarter.

								Total
South Zone	3	1	5	6	5	6	10	36
Calgary Zone	30	34	41	52	57	62	68	344
Central Zone	11	6	5	17	6	11	13	69
Edmonton Zone	17	27	33	37	42	39	39	234
North Zone	8	13	3	8	16	13	13	74
Alberta	69	81	87	120	126	131	143	757
	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017	

Table 3: Rate (per 100,000 person years) and number of apparent accidental drug toxicity deaths related to fentanyl, by Zone (based on place of death). Jan. 1, 2016 to Sept. 30, 2017.

	2016		2017 YTD*	
	Count	Rate	Count	Rate
South Zone	15	4.9	21	9.2
Calgary Zone	157	9.7	187	15.3
Central Zone	39	8.1	30	8.3
Edmonton Zone	114	8.4	120	11.7
North Zone	32	6.5	42	11.4
Alberta	357	8.4	400	12.4

- The Calgary and Edmonton Zones continue to have the highest number of apparent accidental toxicity deaths related to fentanyl. In the most recent quarter, the Calgary Zone continued to have the highest rate per 100,000 person years at 15.3, compared to a provincial average of 12.4 per 100,000 person years.

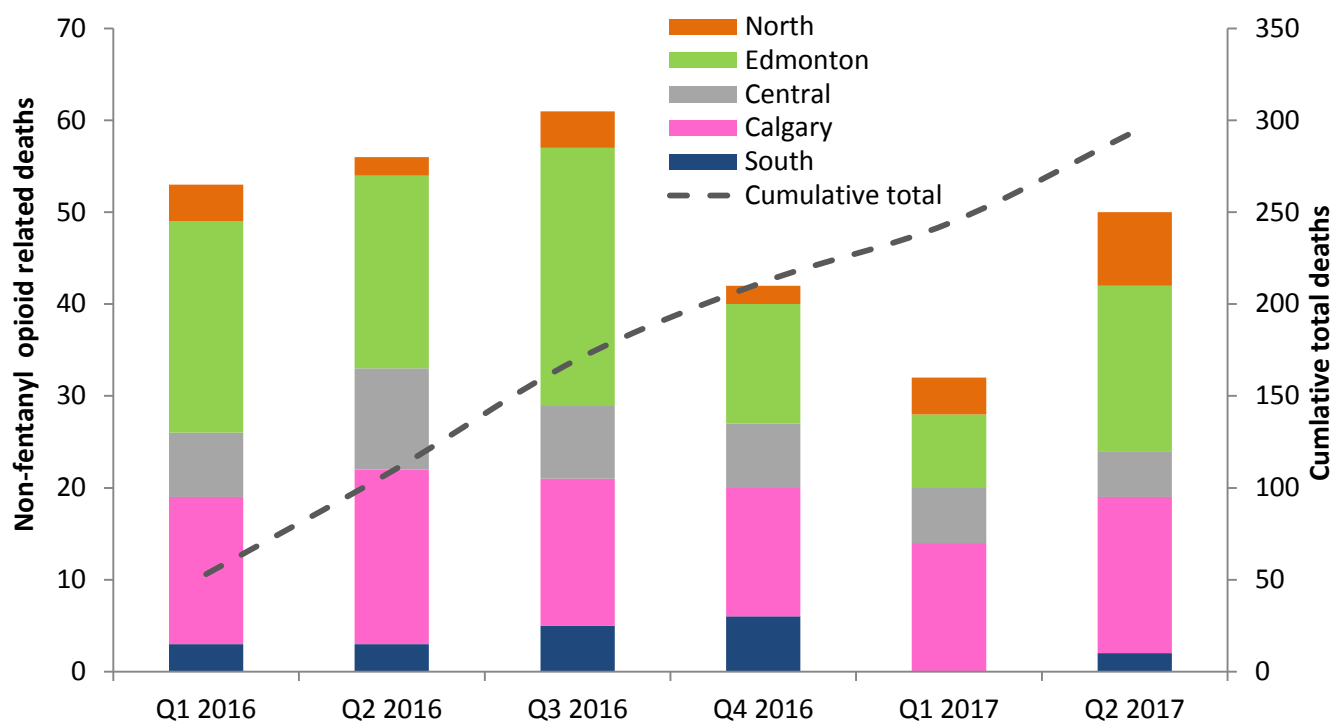
Table 4: Rate (per 100,000 person years) and number of apparent accidental drug toxicity deaths related to fentanyl, by city (based on place of death). Jan. 1, 2016 to Sept. 30, 2017.

	2016		2017 YTD*	
	Count	Rate	Count	Rate
Lethbridge	10	10.3	13	18.3
Medicine Hat	2	2.9	4	7.8
Calgary	150	11.3	170	17.2
Red Deer	23	21.0	16	19.3
Edmonton	100	10.2	94	12.8
Fort McMurray	9	11.0	9	15.0
Grande Prairie	10	13.4	18	31.2
Total	304	11.1	324	15.9

- The cities of Calgary and Edmonton continue to have the highest number of apparent accidental deaths related to fentanyl. However, for 2017 to date, the City of Grande Prairie had the highest rate of apparent drug toxicity deaths related to fentanyl per 100,000 person years.

*YTD = Jan. 1, 2017 to Sept. 30, 2017

Figure 3: Number of apparent accidental drug toxicity deaths related to an opioid other than fentanyl, by Zone (based on place of death) and quarter. Jan. 1, 2016 to Jun. 30, 2017.



- Since Jan. 1, 2016, a total of 294 individuals in Alberta died from apparent accidental drug toxicity related to an opioid other than fentanyl, with an average of 49 per quarter.
- The most recent quarter shows the number of these deaths have increased from the last quarter. However, compared to the first three quarters of 2016, there has been an overall decrease in these deaths.

Table 5: Number of apparent accidental drug toxicity deaths related to an opioid other than fentanyl by quarter.

							Total
South Zone	3	3	5	6	0	2	19
Calgary Zone	16	19	16	14	14	17	96
Central Zone	7	11	8	7	6	5	44
Edmonton Zone	23	21	28	13	8	18	111
North Zone	4	2	4	2	4	8	24
Alberta	53	56	61	42	32	50	294
	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017	

Table 6: Rate (per 100,000 person years) and number of apparent accidental drug toxicity deaths related to an opioid other than fentanyl, by Zone (based on place of death). Jan. 1, 2016 to Jun. 30, 2017.

	2016		2017 YTD*	
	Count	Rate	Count	Rate
South Zone	17	5.6	2	1.3
Calgary Zone	79	4.9	31	3.8
Central Zone	39	8.1	11	4.5
Edmonton Zone	93	6.9	26	3.8
North Zone	16	3.3	12	4.9
Alberta	244	5.7	82	3.8

- The Calgary and Edmonton Zones continue to have the highest number of these deaths. To date, in 2017, the North Zone has had the highest rate per 100,000 person years at 4.9, compared to a provincial average of 3.8 per 100,000 person years.

Table 7: Rate (per 100,000 person years) and number of apparent accidental drug toxicity deaths related to an opioid other than fentanyl, by city (based on place of death). Jan. 1, 2016 to Jun. 30, 2017.

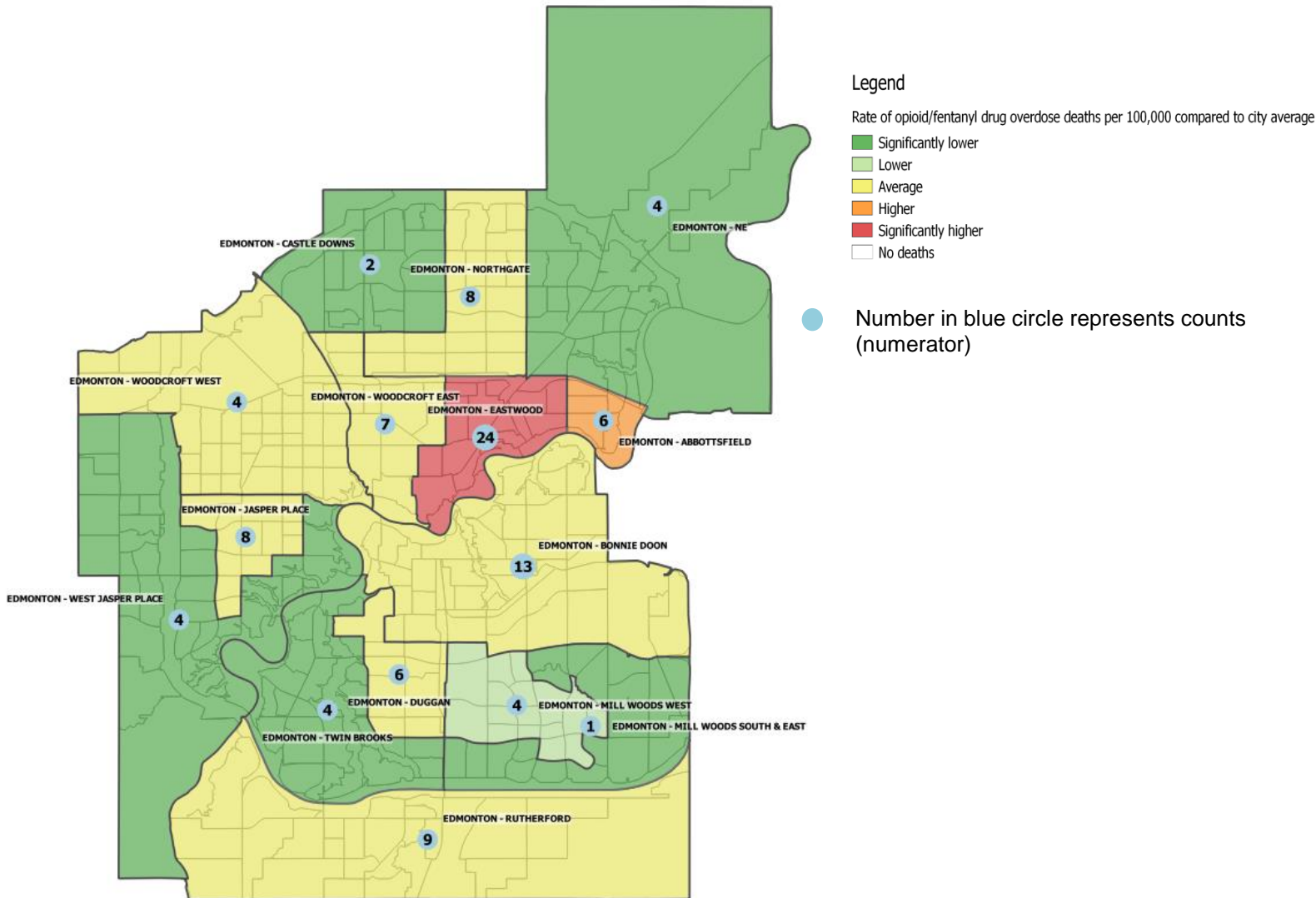
	2016		2017 YTD*	
	Count	Rate	Count	Rate
Lethbridge	4	4.1	0	0.0
Medicine Hat	5	7.3	1	2.9
Calgary	49	3.7	28	4.2
Red Deer	12	11.0	3	5.4
Edmonton	69	7.1	24	4.9
Fort McMurray	1	1.2	2	5.0
Grande Prairie	1	1.3	3	7.8
Total	141	5.2	61	4.5

- The cities of Calgary and Edmonton continue to have the highest number of these deaths. In 2017 YTD, the City of Grande Prairie had the highest rate of apparent accidental drug toxicity deaths related to an opioid other than fentanyl per 100,000 person years.

*YTD = Jan. 1, 2017 to Jun. 30, 2017

Figure 4: Rate (per 100,000 person years) and counts of apparent accidental drug toxicity deaths related to an opioid (including fentanyl), in the City of Edmonton, based on place of overdose, by LGA. Jan. 1, 2017 to Sept. 30, 2017.

Edmonton average: 14.5 per 100,000 person years (n = 104)

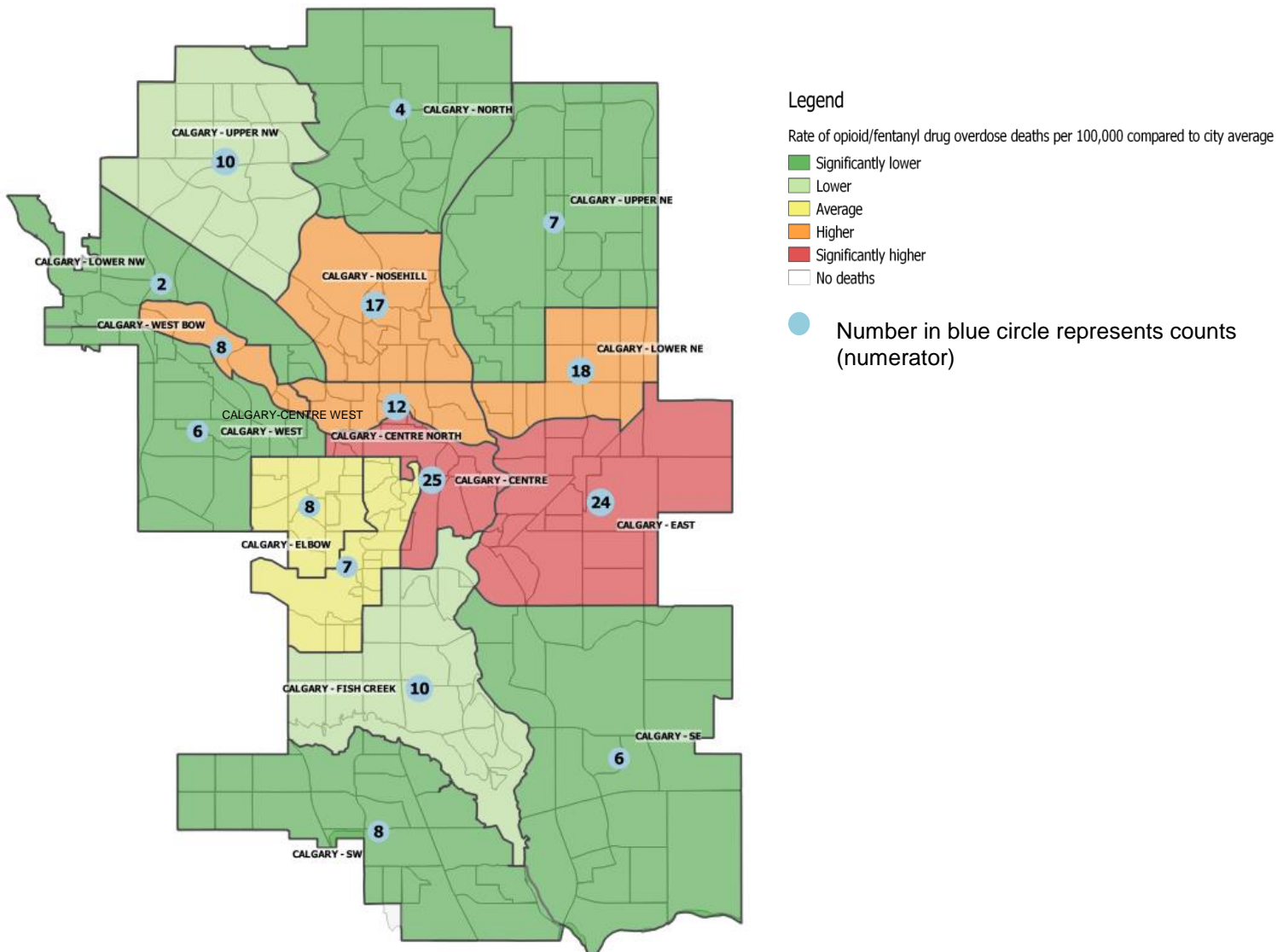


- Within the City of Edmonton, the LGAs with **higher** or **significantly higher** rates of apparent accidental drug toxicity deaths related to an opioid (including fentanyl) **compared to the city average** were Eastwood and Abbotsfield. However, 71 per cent of the total deaths occurred in LGAs outside of these areas.
- The place where the accidental drug toxicity death occurred was the same as the individual's home address for 57 per cent of these deaths in Edmonton.

Note: Place of death was used as the place of the overdose, except in instances where the place of death occurred in a hospital. In instances where the death occurred in a hospital, if EMS had responded to the individual for an opioid related event within 24 hours of the death, the location of the EMS response was used as place of the overdose. If no EMS visit occurred within 24 hours, the hospital death was excluded. In Edmonton, a hospital was the place of death in 17 per cent of deaths.

Figure 5: Rate (per 100,000 person years) and counts of apparent accidental drug toxicity deaths related to an opioid (including fentanyl), in the City of Calgary, based on place of overdose, by LGA. Jan. 1, 2017 to Sept. 30, 2017

Calgary average: 17.8 per 100,000 person years (n = 172)

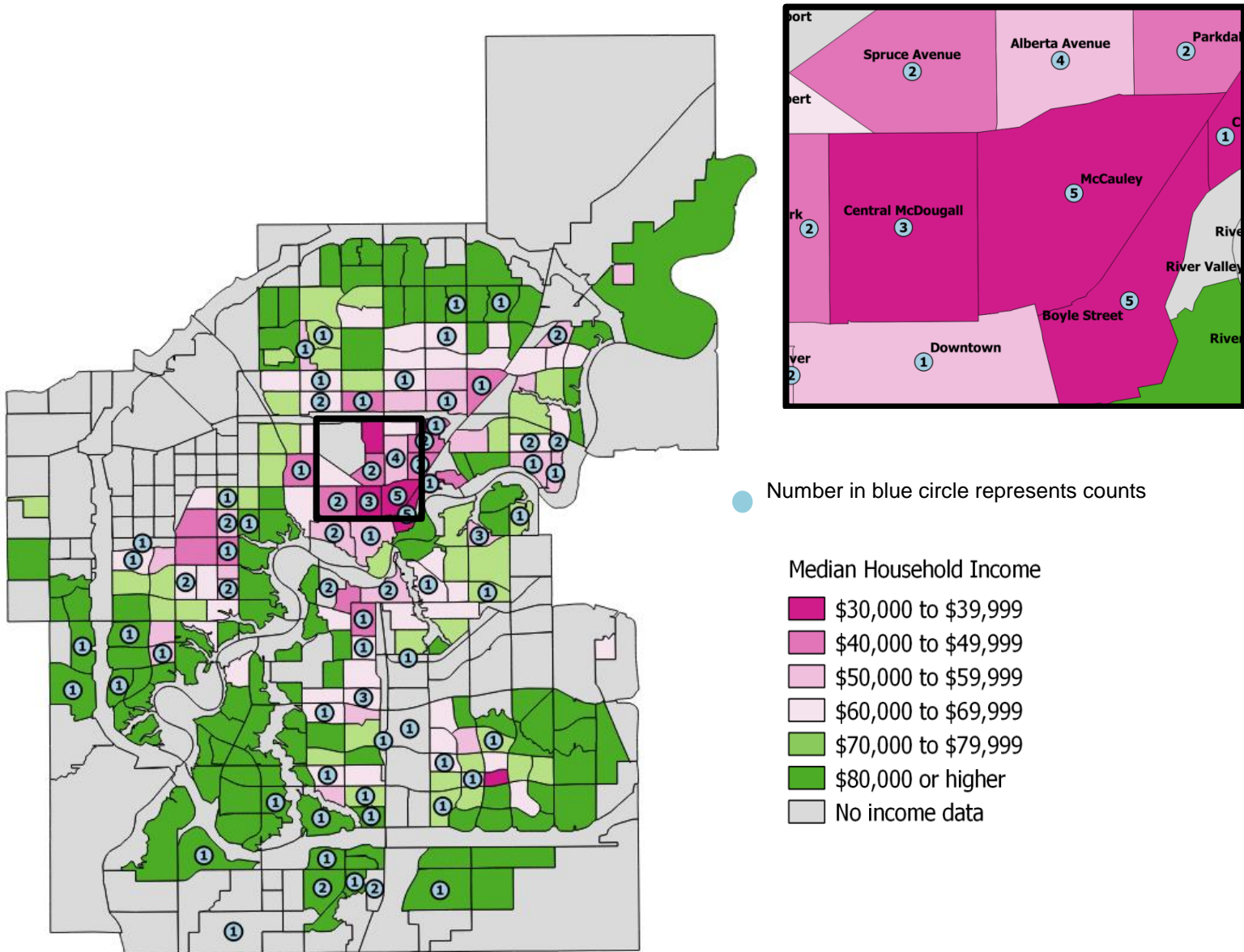


- Within the City of Calgary, the LGAs with **higher** or **significantly higher** rates of apparent accidental drug toxicity deaths related to an opioid (including fentanyl) **compared to the city average** were Centre, Centre-North, East, Lower NE, West Bow, and Nosehill. However, 40 per cent of the total deaths occurred in LGAs outside of these areas.
- The place where the overdose occurred was the same as the individual’s home address for 67 per cent of these deaths in Calgary.

Note: Place of death was used as the place of the overdose, except in instances where the place of death occurred in a hospital. In instances where the death occurred in a hospital, if EMS had responded to the individual for an opioid related event within 24 hours of the death, the location of the EMS response was used as place of the overdose. If no EMS visit occurred within 24 hours, the hospital death was excluded. In Calgary, a hospital was the place of death in 20 per cent of deaths.

Figure 6: Median household income of neighbourhood where individuals who died of apparent accidental opioid toxicity resided, and number of deaths occurring in neighbourhood, in the City of Edmonton. Jan. 1, 2016 to Sept. 30, 2017.

Edmonton average: 14.5 per 100,000 person years (n = 104)

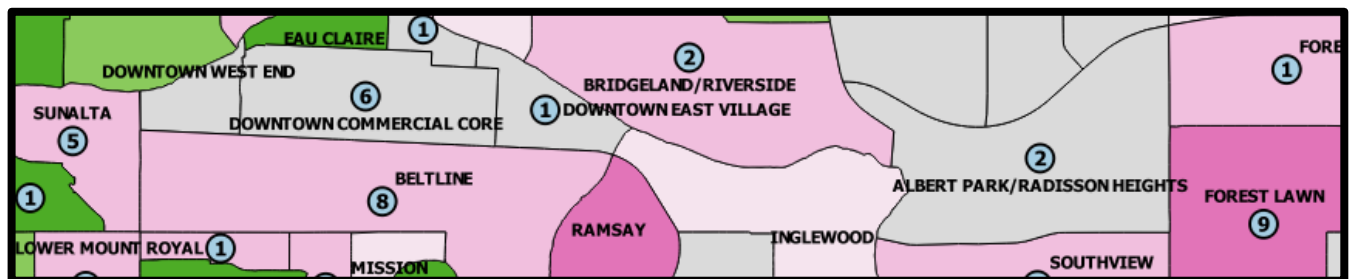
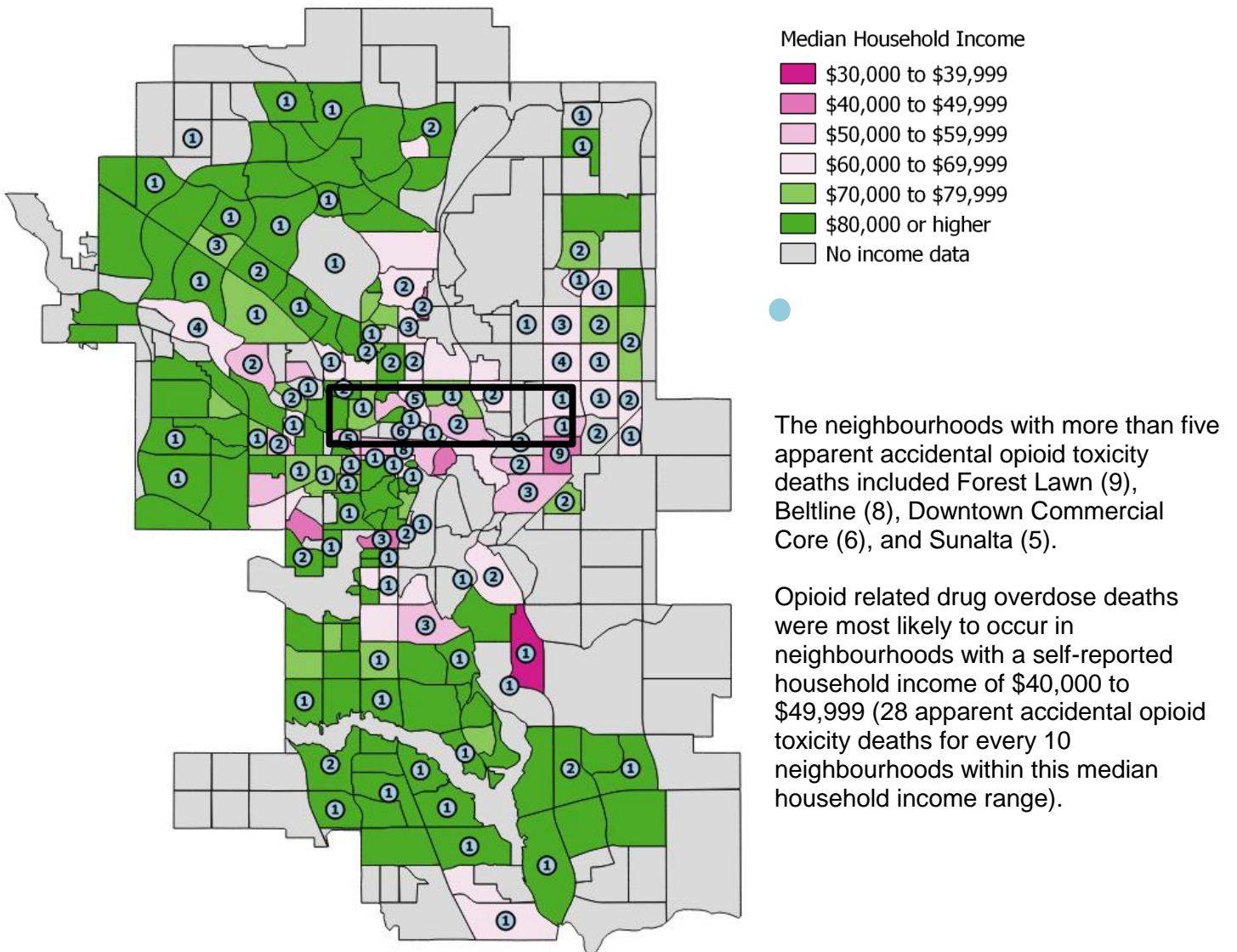


- The neighbourhoods with three or more apparent accidental opioid toxicity deaths included McCauley (5), Boyle Street (5), Alberta Avenue (4), and Central McDougall (3).
- Opioid related drug overdose deaths were most likely to occur in neighbourhoods with a self-reported household median income of \$30,000 to \$39,999 (23 apparent accidental opioid toxicity deaths for every 10 neighbourhoods within this median household income range).

Note: Household income was based on results from the 2011 NHS survey, and adjusted to 2017 dollars.

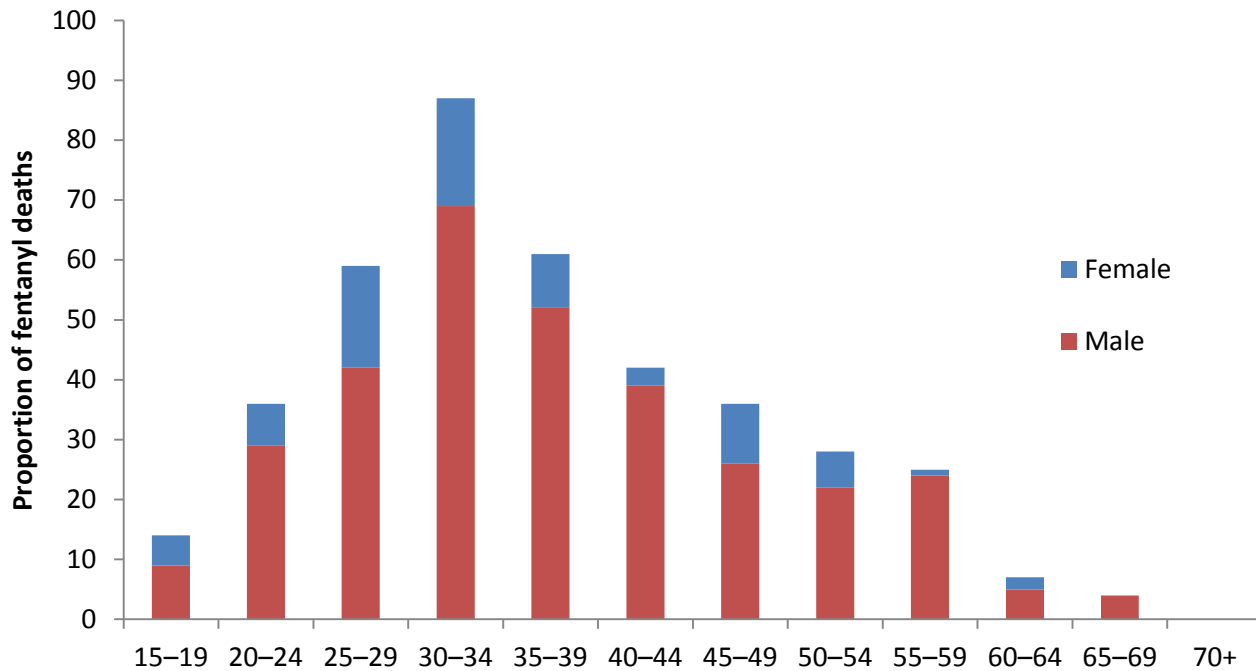
Figure 7: Median household income of neighbourhood where individuals who died of apparent accidental opioid toxicity resided, and number of deaths occurring in neighbourhood, in the City of Calgary. Jan. 1, 2016 to Sept. 30, 2017.

Calgary average: 17.8 per 100,000 person years (n = 172)



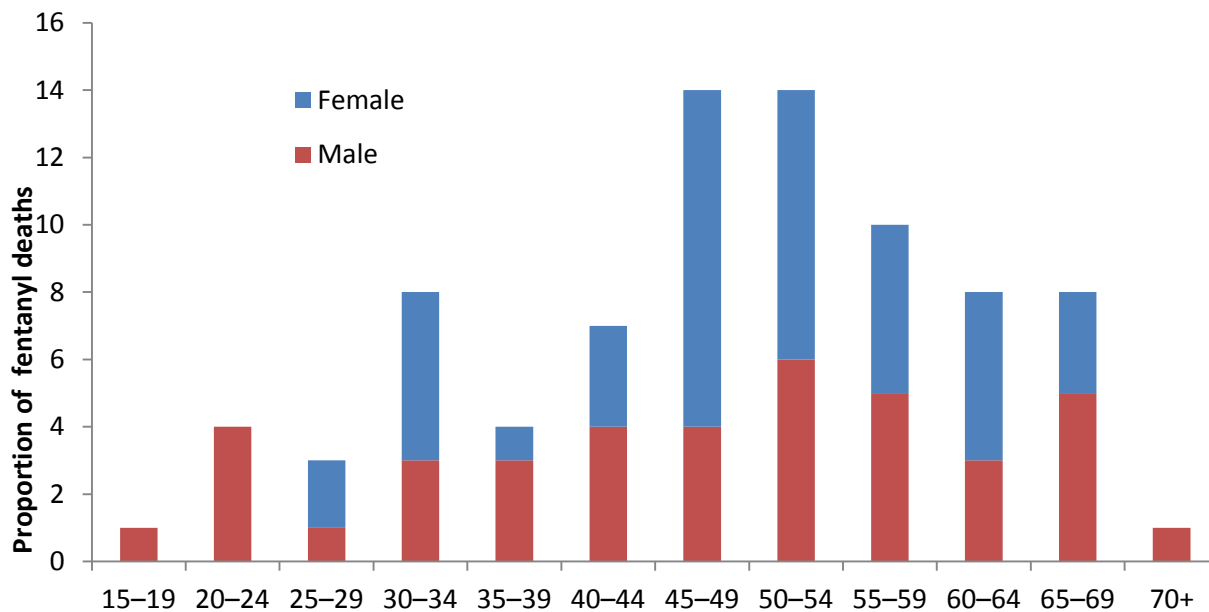
Note: Household income was based on results from the 2011 NHS survey, and adjusted to 2017 dollars.

Figure 8: Apparent accidental toxicity deaths related to fentanyl, by sex and age. Jan. 1, 2017 to Sept. 30, 2017.



- 81 per cent of apparent accidental drug toxicity deaths related to fentanyl were among males. Across both sexes, the highest number of deaths occurred among individuals spanning the ages of 30-34.

Figure 9: Apparent accidental toxicity deaths related to an opioid other than fentanyl, by sex and age, Jan. 1, 2017 to Jun. 30, 2017.



- 49 per cent of apparent accidental toxicity deaths related to an opioid other than fentanyl were among males. Among males, the age group with the highest number of deaths was 50-54 years, and among females, was 45-49 years.

Figure 10: Proportion of apparent accidental toxicity deaths related to fentanyl, by medical history within the 30 days before the date of death. Jan. 1, 2017 to Sept. 30, 2017.

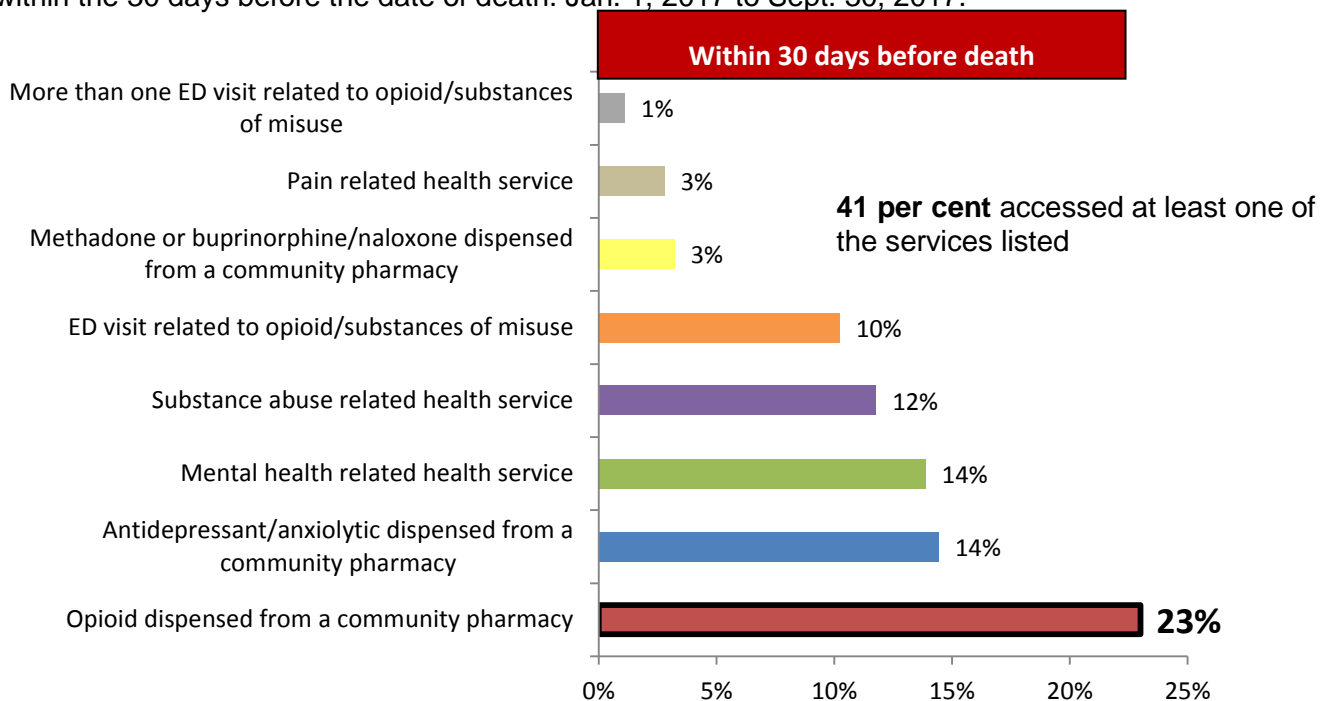
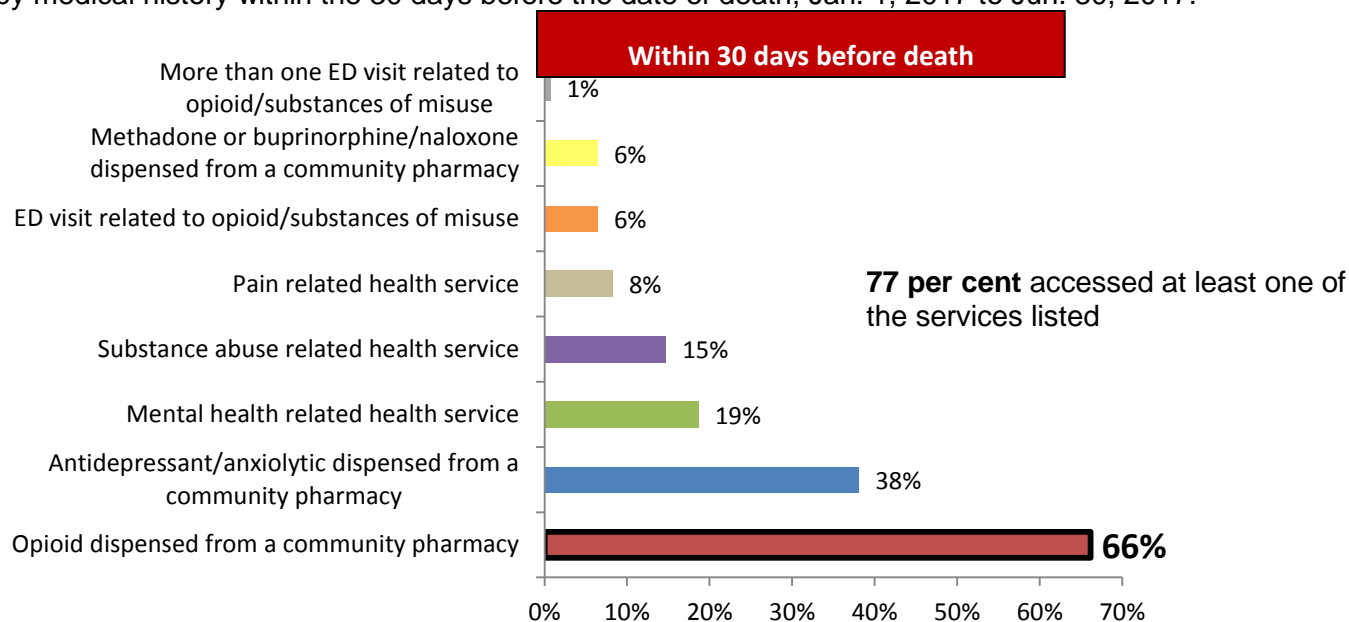


Figure 11: Proportion of apparent accidental toxicity deaths related to an opioid other than fentanyl, by medical history within the 30 days before the date of death, Jan. 1, 2017 to Jun. 30, 2017.



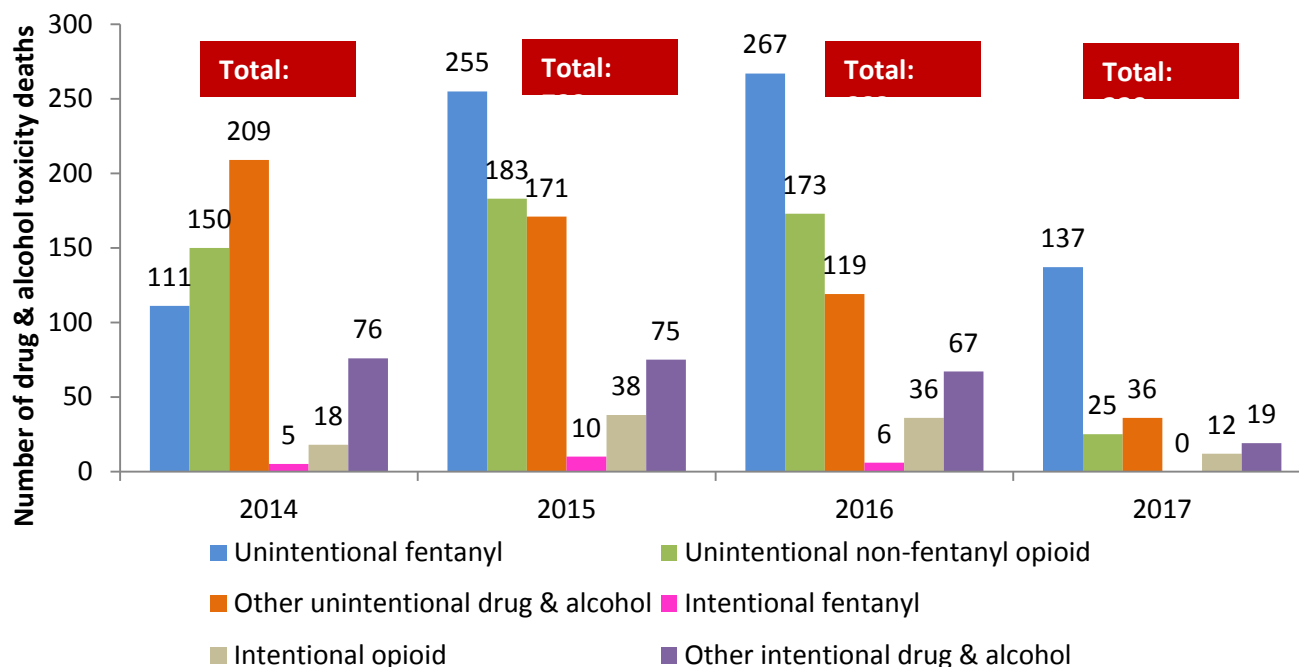
- Among apparent accidental toxicity deaths related to an opioid (including fentanyl) the most frequent health care utilization within 30 days before the individual's date of death was a dispensation for an opioid, antidepressant, or anxiolytic.
- Significantly more individuals who died from apparent accidental toxicity related to an opioid other than fentanyl had an opioid or an antidepressant/anxiolytic dispensed from a community pharmacy in the 30 days prior to death compared to those who died from apparent accidental toxicity related to fentanyl.

Note: 95% of individuals had their primary healthcare number (PHN) available and were included in this analysis. The above includes the number of individuals who sought one of the services at least once. Individuals can be counted in more than one category. Health service means a physician, inpatient, or emergency department visit.

Confirmed drug & alcohol toxicity deaths (accidental and suicide)

Figure 12: Number of confirmed drug & alcohol toxicity deaths in Alberta by drug causing death, manner, and year. 2014 to 2017.

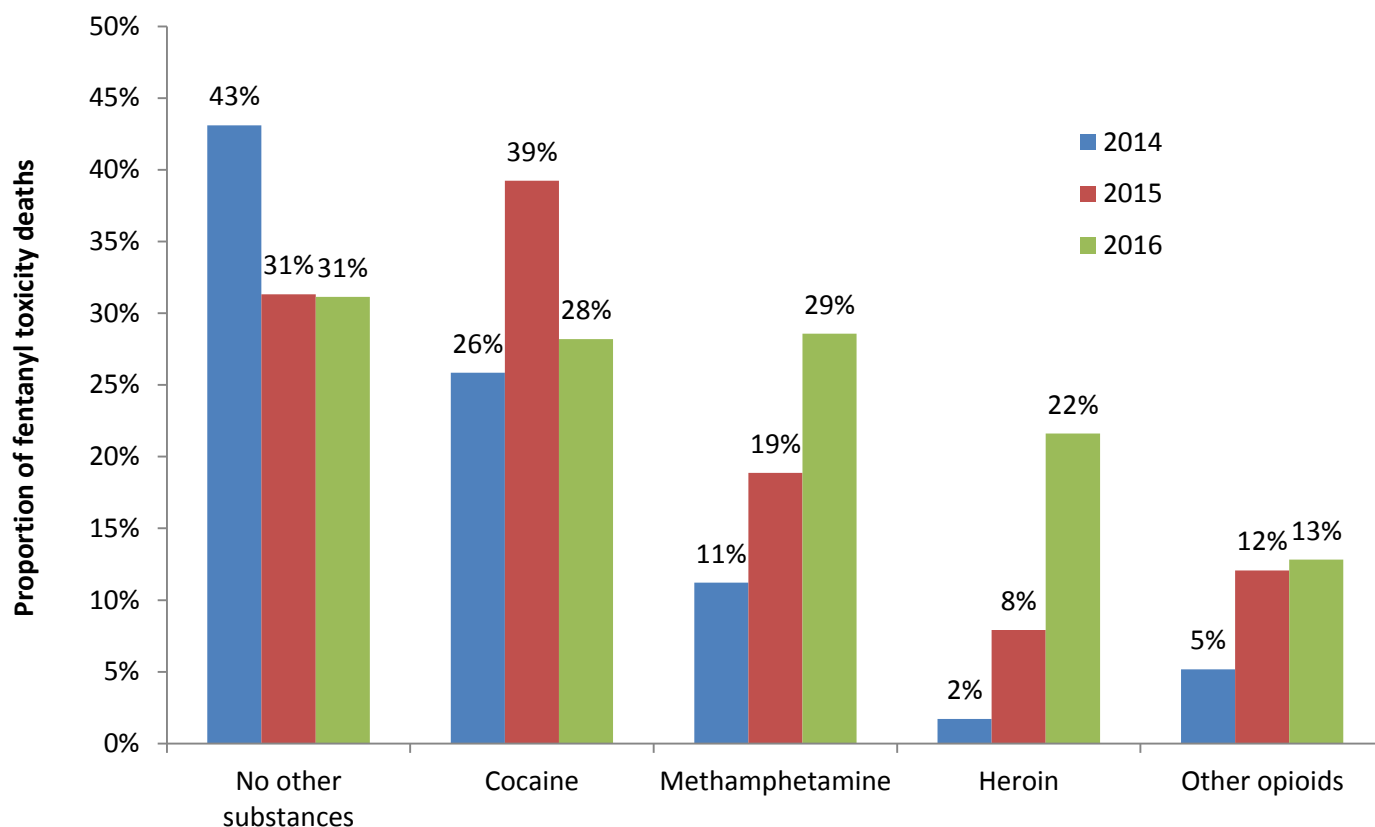
Many drug overdose deaths in 2016 and 2017 are currently under review by the Office of the Chief Medical Examiner and have not been confirmed. Therefore, upon completion of all cases, the final number of total drug overdose deaths in 2016 and 2017 will be higher than the current number. The numbers below are the confirmed cases as of Sept 30, 2017.



- In 2016, opioids were directly involved in 72 per cent of all drug and alcohol overdoses (both accidental and suicide). Fentanyl continues to be the most common opioid causing drug toxicity death.
- From 2014 to 2017, 84 per cent of all confirmed drug & alcohol toxicity deaths were consistently unintentional. Since 2014, the number of unintentional drug overdose deaths involving fentanyl increased from 24 per cent to 69 per cent in 2017. Unintentional non-fentanyl opioid drug overdoses have remained stable, at around 26 per cent of all unintentional drug overdoses.
- From 2014 to 2017, 16 per cent of all drug overdose deaths were consistently an intentional drug overdose. Since 2014, the number of intentional drug overdose deaths involving fentanyl has remained around 5 per cent. Intentional non-fentanyl opioid overdoses have increased from 18 per cent to 39 per cent of all intentional drug overdoses from 2014 to 2017.

Note: Certification of more complex drug overdose deaths involving less potent opioids and drugs may take longer than fentanyl related deaths to certify, and therefore, non-fentanyl drug related deaths are potentially underreported in 2016 and 2017. The above includes deaths where the cause was due to acute poisoning or toxicity by an exogenous substance where the manner was intentional (suicide) or unintentional (accidental). Deaths as a result of chronic substance use were excluded. Deaths as a result of poisoning or toxic effects due to carbon monoxide and household chemicals were excluded. "Other drugs" refers to prescription drugs (i.e. antidepressants, benzodiazepines), illicit drugs such as cocaine, methamphetamine and MDMA, and unspecified drugs.

Figure 13: Number of confirmed fentanyl toxicity deaths (suicides and accidental) in Alberta by additional substances causing death, and year. 2014 to 2016.

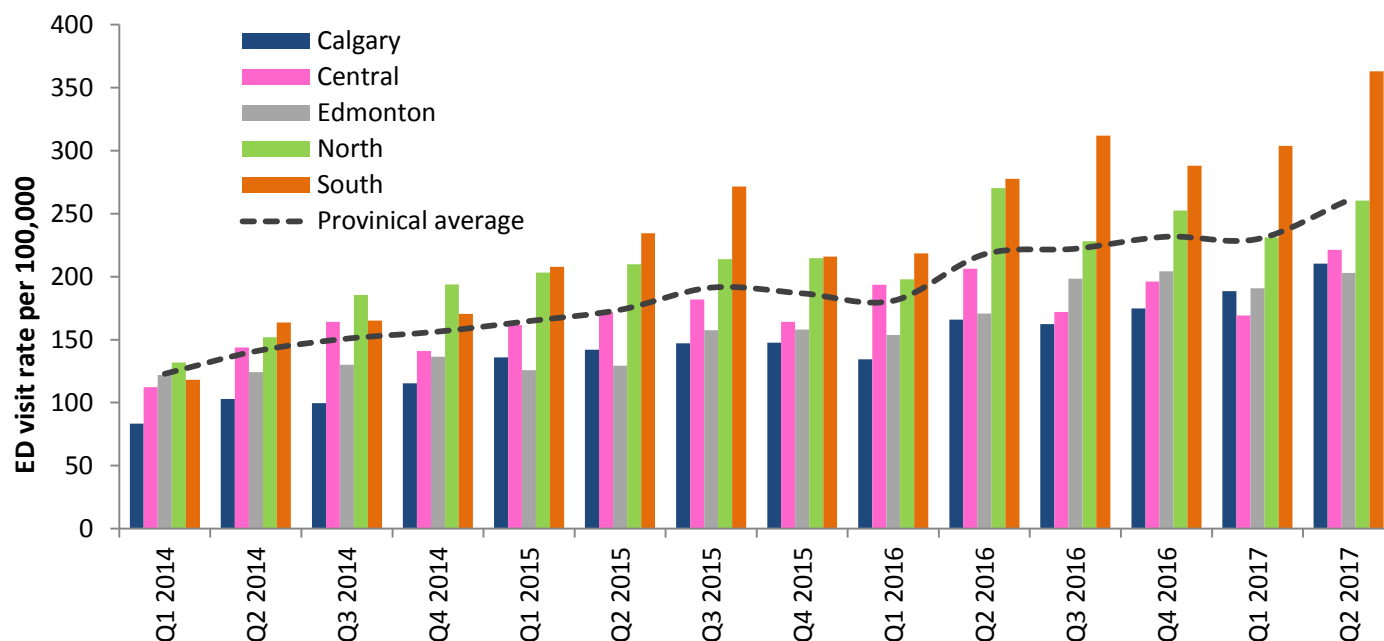


- In 2016, 31 per cent of all fentanyl toxicity deaths had no other substances listed on the death certificate as causing death, while just under 30 per cent had cocaine or methamphetamine listed, and 22 per cent had heroin listed.
- The number of fentanyl toxicity deaths where heroin was also listed as causing death increased by 2,859 per cent since 2014 (listed on death certificates in two instances in 2014 and 59 in 2016).
- Following heroin, methamphetamine saw the second largest increase of 500 per cent from 2014 to 2016 (listed on death certificates in 13 instances in 2014 and 48 in 2016).

Note: “Other opioids” includes: morphine, oxycodone, codeine, methadone, hydromorphone, tramadol, unspecified opiates, and U4470. Since multiple substances may be listed on one death certificate, deaths can be counted more than once in each category.

Emergency department visits

Figure 14: Rate of emergency department (ED) visits related to opioid use and other substances of misuse, by quarter and Zone, per 100,000 person years. Jan. 1, 2014 to Jun. 30, 2017.



- The *rate* of ED visits related to opioid use and substance misuse increased by 83.8 per cent from Jan. 1, 2014 to Jun. 30, 2017. From the first quarter in 2017 to the second quarter in 2017, the rate increased by 13.4 per cent.
- From 2014 to 2017, the average *rate* of ED visits related to opioid use and substance misuse was the highest in the South Zone (236 visits per 100,000 person years); approximately 26 per cent higher than the provincial average over this period (188 visits per 100,000 person years).
- From 2014 to 2017, the Edmonton and Calgary Zones had the highest *number* of ED visits related to opioid use and substance misuse, and on average per quarter made up 29 and 27 per cent of all provincial ED visits related to opioid use and other substances of misuse, respectively.

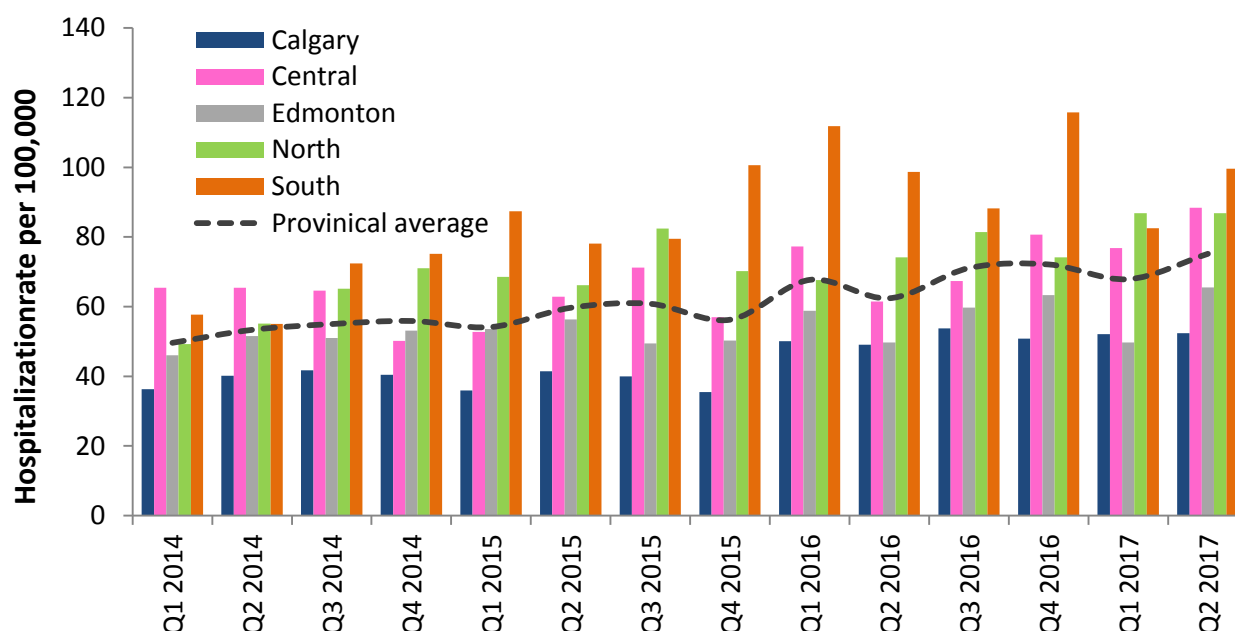
Table 8: Top 10 ED facilities utilized for emergency visits related to opioid use and other substances of misuse, Jan. 1, 2014 to Jun. 30, 2017

Rank	Facility	Percent of all visits	Rank	Facility	Percent of all visits
1	Royal Alexandra Hospital	13%	6	Red Deer Regional Hospital	4%
2	Peter Lougheed Centre	9%	7	Grey Nuns Community Hospital	4%
3	Foothills Medical Centre	7%	8	South Health Campus	4%
4	University Of Alberta Hospital	7%	9	Chinook Regional Hospital	3%
5	Rockyview General Hospital	7%	10	Queen Elizabeth II Hospital	3%

Note: 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 15: Rate of hospitalizations related to opioid use and other substances of misuse, by quarter and Zone, per 100,000 person years. Jan. 1, 2014 to Jun. 30, 2017.



- The *rate* of hospitalizations related to opioid use and substance misuse increased by 51.5 per cent from Jan. 1, 2014 to Mar. 31, 2017. From the last quarter in 2016 to the second in 2017, the rate increased by 10.7 per cent.
- From 2014 to 2017, the average *rate* of hospitalizations related to opioid use and substance misuse was the highest in the South Zone (86 hospitalizations per 100,000 person years); approximately 40 per cent higher than the provincial average (62 hospitalizations per 100,000 person years).
- From 2014 to 2017, the Edmonton and Calgary Zones had the highest *number* of hospitalizations related to opioid use and substance misuse, and on average per quarter made up 28 and 27 per cent of all hospitalizations related to opioid use and other substances of misuse, respectively.

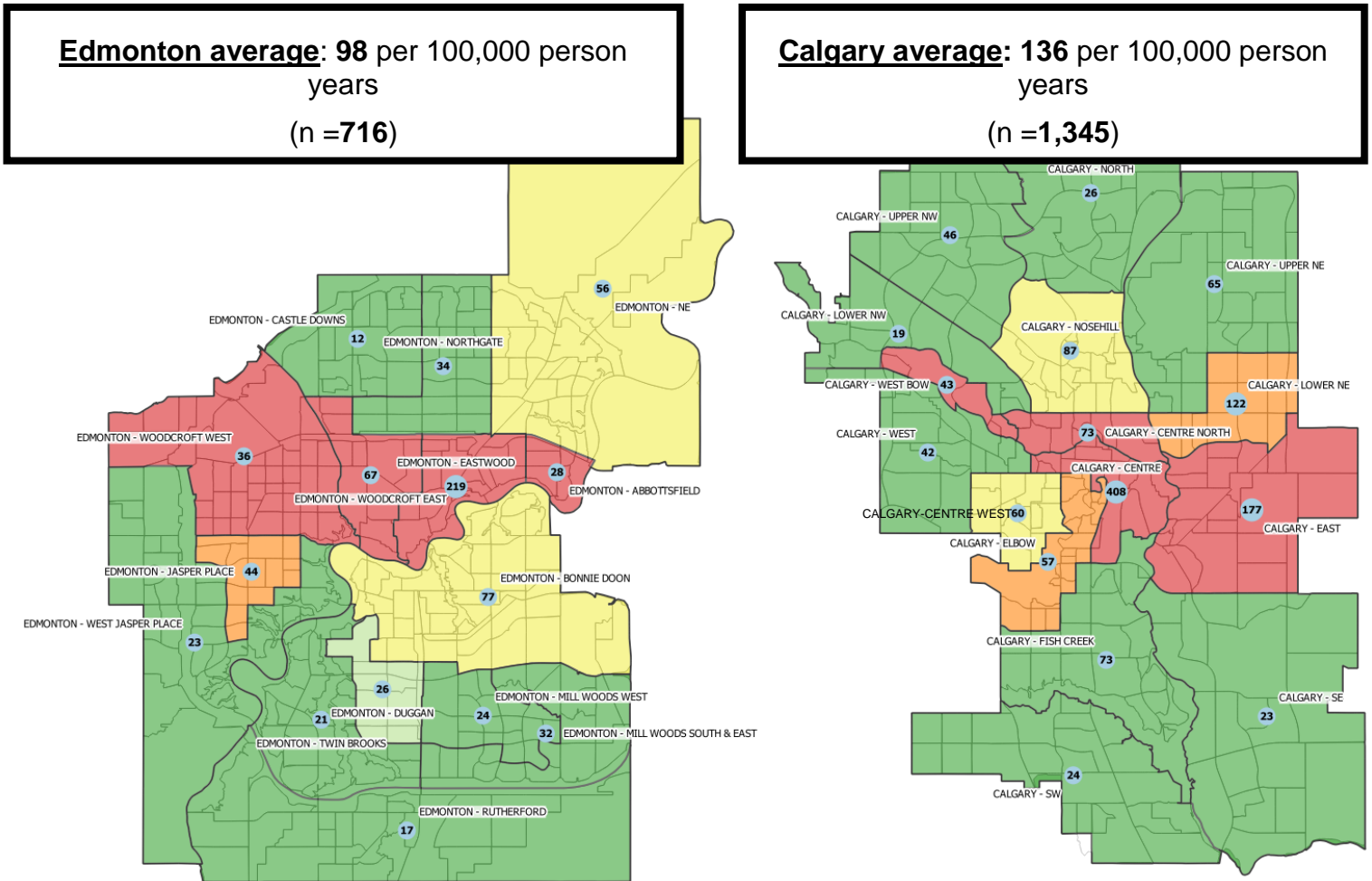
Table 9: Top 10 facilities utilized for hospitalizations related to opioid use and other substances of misuse, Jan. 1, 2014 to Jun. 30, 2017.

Rank	Facility	Percent of all stays	Rank	Facility	Percent of all stays
1	Royal Alexandra Hospital	17%	6	Red Deer Regional Hospital	4%
2	Peter Lougheed Centre	11%	7	Grey Nuns Community Hospital	4%
3	Foothills Medical Centre	10%	8	Medicine Hat Regional Hospital	4%
4	University Of Alberta Hospital	7%	9	Queen Elizabeth II Hospital	4%
5	Rockyview General Hospital	6%	10	South Health Campus	3%

Note: 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)

Emergency Medical Services data

Figure 16: Rate (per 100,000 person years) and count of Emergency Medical Services (EMS) responses to opioid related events, by LGA. Jan. 1, 2017 to Sept. 30, 2017.



Legend

Rate of EMS opioid related responses per 100,000 compared to city average

- Significantly lower
- Lower
- Average
- Higher
- Significantly higher

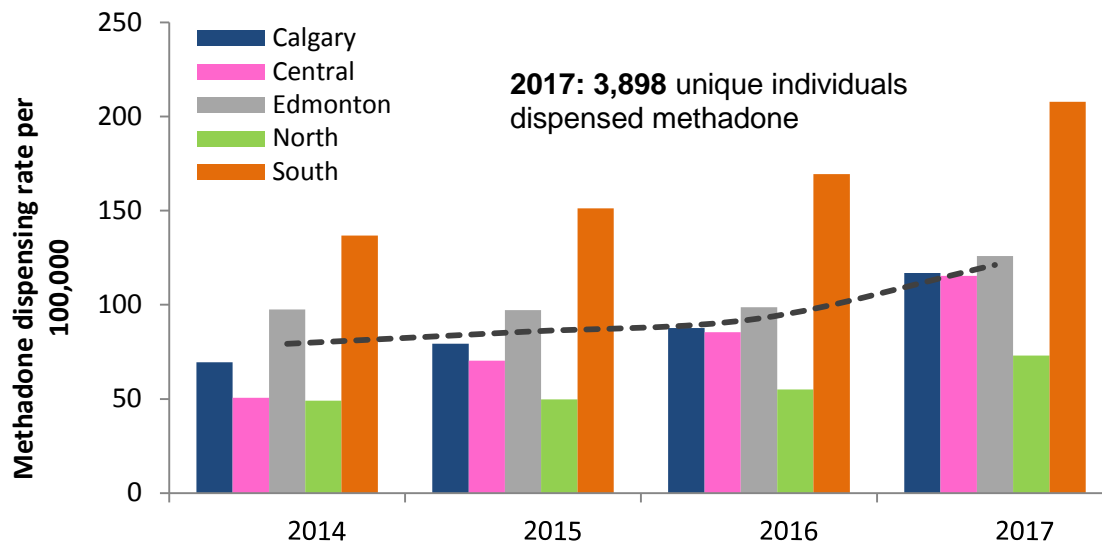
● Number in blue circle represents counts (numerator)

- Of the opioid related EMS events that occurred in Edmonton (743), the highest rate (407 per 100,000 person years) and count (230) was in the Eastwood area. The LGAs with **significantly higher** rates of opioid related EMS events **compared to the city average** were Eastwood, Abbotsfield, and Woodcroft East & West.
- Of the opioid related EMS events that occurred in Calgary (1,400), the highest rate (908 per 100,000 person years) and count (423) was in Calgary Centre. The LGAs with **significantly higher** rates of opioid related EMS events **compared to the city average** were West Bow, Centre, Centre North, Elbow, and East.

Note: This data is from AHS EMS Direct delivery – ground ambulance. Air ambulance and Contractors are not included. EMS opioid related events refer to any EMS response where the Medical Control Protocol of Opiate Overdose was documented and/or naloxone was administered.

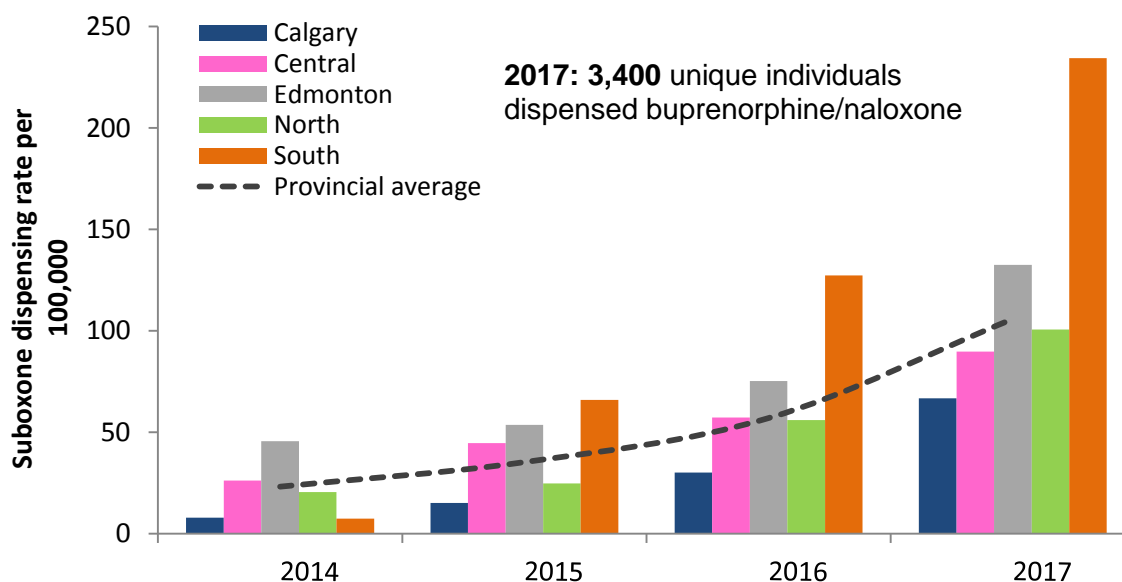
Methadone & buprenorphine/naloxone dispensing from community pharmacies

Figure 17: Rate of unique individuals dispensed methadone indicated for opioid dependence from community pharmacies per 100,000, by Zone and year. Jan. 1, 2017 to Sept. 30, 2017.



- In Alberta, the rate of unique individuals dispensed methadone indicated for opioid dependence from community pharmacies per 100,000 increased by 53 per cent from Jan. 1, 2017 to Sept. 30, 2017. The South Zone had the highest rate in 2017, 172 per cent higher than the provincial average (208 per 100,000 vs. 121 per 100,000).

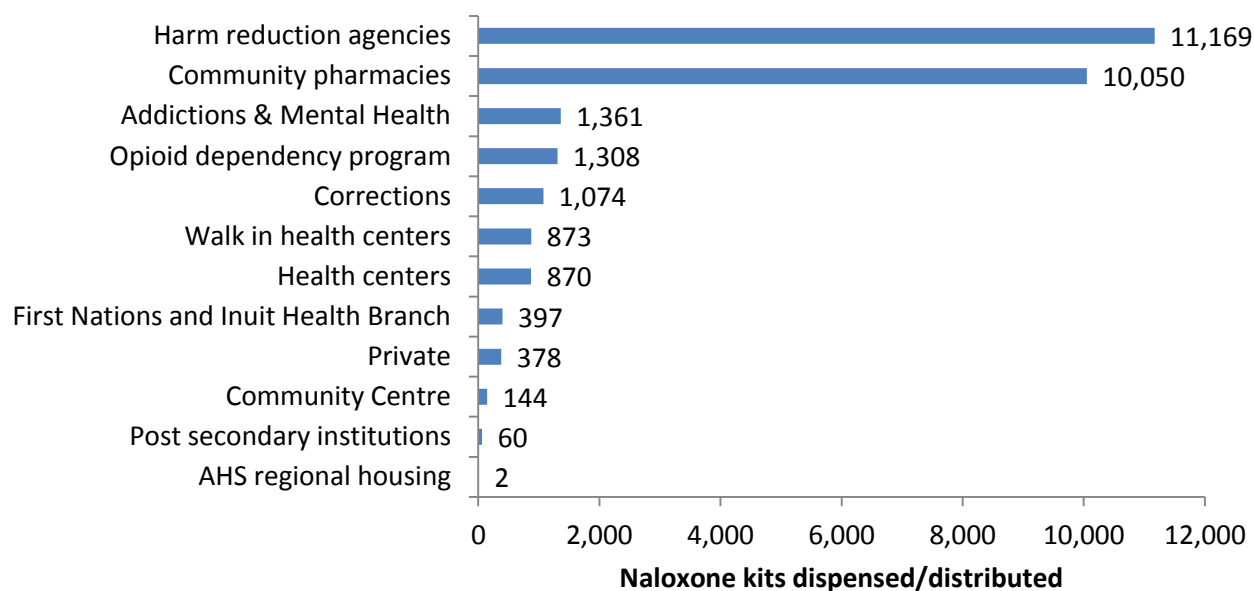
Figure 18: Rate of unique individuals dispensed buprenorphine/naloxone (Suboxone) indicated for opioid dependence from community pharmacies per 100,000, by Zone and year. Jan. 1, 2017 to Sept. 30, 2017.



- In Alberta, the rate of unique individuals dispensed buprenorphine/naloxone indicated for opioid dependence from community pharmacies per 100,000 increased by 358 per cent from Jan. 1, 2017 to Sept. 30, 2017. The South Zone had the highest rate in 2017, 222 per cent higher than the provincial average (235 per 100,000 vs. 106 per 100,000).

Naloxone kit dispensing and distribution

Figure 19: Naloxone kits dispensed/distributed by registered site type, Jan. 1, 2016 to Sept. 30, 2017.



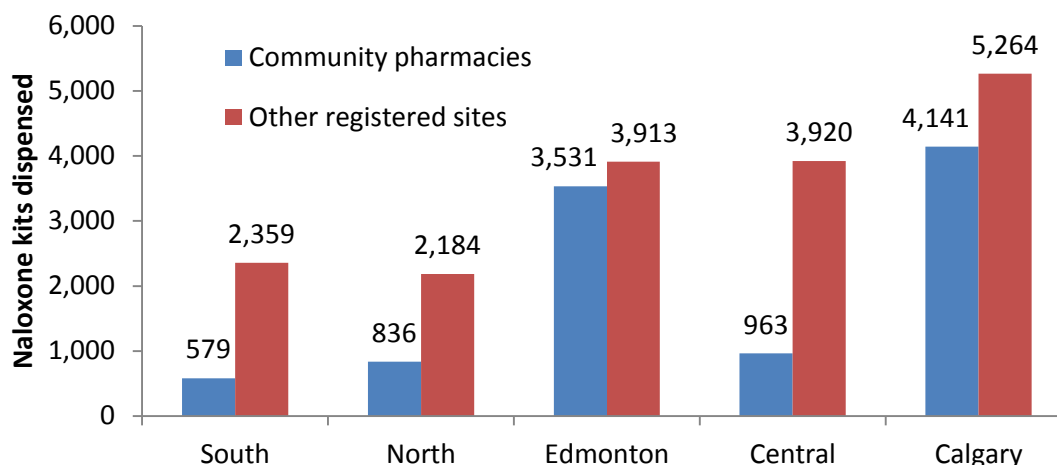
- As of Sept 30, 2017, 27,690 naloxone kits have been dispensed in Alberta since Jan. 1, 2016, and 2,330 reversals have been self-reported.
- The highest volume of naloxone kits have been dispensed from harm reduction agencies (40 per cent), followed by community pharmacies (36 per cent).

Table 10: Number of sites registered to distribute naloxone kits, Jan. 1, 2016 to Sept. 30, 2017.

	South	Calgary	Central	Edmonton	North	Total
Community pharmacies	82	332	109	296	100	919
Addictions & Mental Health	1	14	6	9	8	38
AHS regional housing		3		1		4
Community Centre		2	2	1	9	14
Corrections	2	3	1	3	1	10
First Nations sites	1	2	4	1	6	14
Harm reduction agencies	2	1	1	3	2	9
Health centers	11	19	16	15	23	84
Walk in health centers	9	20	26	16	30	101
Opioid dependency program	4	2		4	3	13
Post-secondary institutions		2		3	1	6
Private	11	14	13	16	5	59
Medical First Response	7	9	11	8	20	55
Total	130	423	189	376	208	1,326

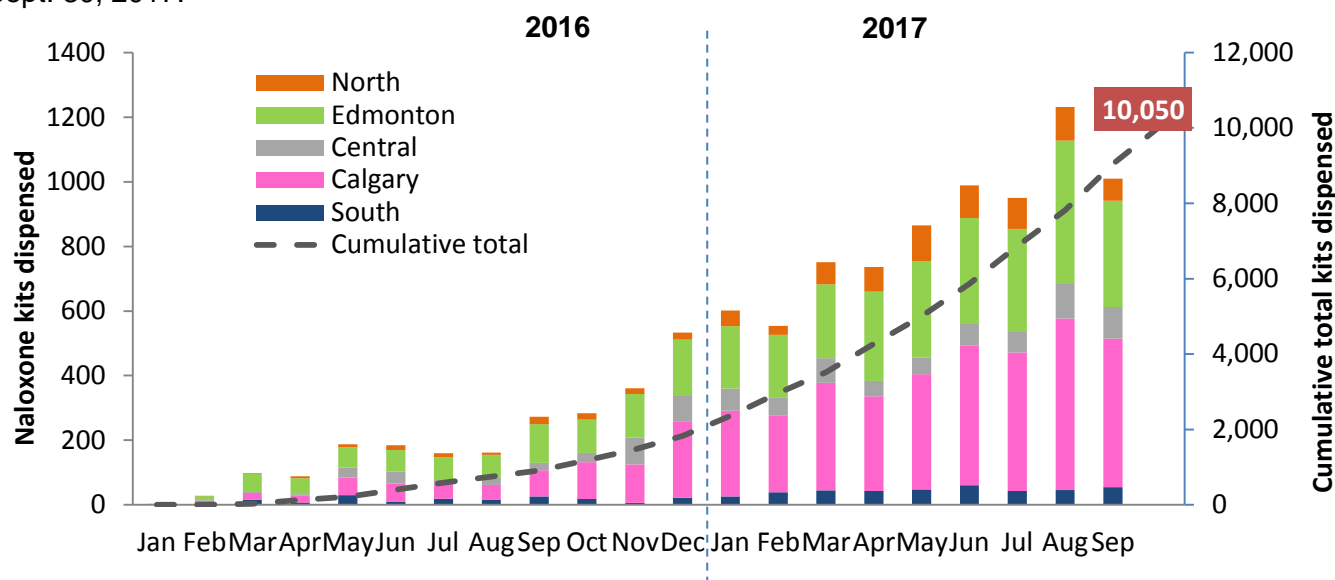
Note: Naloxone kits dispensing data from community pharmacies comes from the Pharmaceutical Information Network. All other kit distribution data comes from the AHS Take Home Naloxone Kit Program.

Figure 20: Naloxone kits dispensed/distributed by community pharmacies and other registered sites, by Zone. Jan. 1, 2016 to Sept. 30, 2017.



- Throughout the province, other registered sites are dispensing more naloxone kits than community pharmacies.
- The Calgary Zone dispensed the highest total volume of kits in the province (34 per cent).

Figure 21: Naloxone kits dispensed by community pharmacies, by Zone and month. Jan. 1, 2016 to Sept. 30, 2017.



- Across Alberta, community pharmacies dispensed an average of 479 kits per month. The Calgary Zone has had the largest volume of naloxone kits dispensed from community pharmacies, with an average of 197 kits per month. The Edmonton Zone dispensed the next highest volume with an average of 168 kits per month.
- The median age of an individual receiving a naloxone kit dispensed from a community pharmacy was 31 years, and 58 per cent were male.
- Since Jan. 1, 2016, 10,050 naloxone kits have been dispensed from community pharmacies in Alberta.

Note: Naloxone kits dispensing data from community pharmacies comes from the Pharmaceutical Information Network. All other kit distribution data comes from the AHS Take Home Naloxone Kit Program.

Data notes

Data source(s) for report

1. National Ambulatory Care Reporting System (NACRS)
2. Alberta Health Care Insurance Plan (AHCIP) Quarterly Population Registry Files
3. Alberta Health and Wellness Postal Code Translation File (PCTF)
4. Pharmaceutical Information Network (PIN)
5. OCME MEDIC data
6. AHS EMS Direct delivery-ground ambulance services data
7. AHS Take Home Naloxone Program data

Mortality data

The following substances are included in the drug overdose categories.

- **Fentanyl:** fentanyl, 3-methylfentanyl, acetylfentanyl, furanylfentanyl, or carfentanil
- **Opioids:** non-specified opiate, heroin, oxycodone, hydromorphone, morphine, codeine, tramadol, U-47700, tapentadol, or methadone
- **Other drugs:** includes, but not limited to ethanol (alcohol) in combination with other substances, benzodiazepines, antidepressants, antipsychotics, acetaminophen, cocaine or methamphetamine.

Emergency Medical Services data

Emergency Medical Services (EMS) data comes from AHS EMS Direct delivery – ground ambulance services. Air ambulance and Contractors are not included. AHS direct delivery does 97.7 per cent of the operational responses in the City of Edmonton, 99.9 per cent in the City of Calgary, and approximately 82 per cent in the entire province of Alberta.

EMS opioid related events refer to any EMS response where the Medical Control Protocol of Opiate Overdose was documented and/or naloxone was administered.

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:

1. 71310 – Ambulatory care services described as emergency
2. 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
3. 71514 – Community Advanced Ambulatory Care Centre (AACC). As of 2014, the only AACC in Alberta is La Crete Health Centre

Community pharmacy drug dispensing

1. The Pharmaceutical Information Network (PIN) Database is used to estimate dispensation events for the province between 2014 and 2016 **only from community pharmacies**. Variability can be dependent on the way the drug is prescribed.
2. The PIN database is up-to-date; to date, the PIN database has records up to Jun. 30, 2017. 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