Trends in Drug Overdose Deaths: Northwest Region

2011-2019

This series of data briefs describe trends in drug overdose deaths by Minnesota's State Community Health Services Advisory Committee (SCHSAC) (https://www.health.state.mn.us/communities/practice/schsac/index.html)regions. By having access to data, communities can better understand trends in drug overdose in their region and make data-driven decisions that influence public health policy, guidelines, and practices.

Note on the data: The data briefs cover drug overdose deaths from 2011-2019 with years grouped in three-year time periods (e.g., 2011-2013) to account for relatively small annual numbers in some regions and the necessity to make meaningful comparisons across the eight SCHSAC regions.

Northwest Region Overview

The Northwest region is home to 171,972 Minnesotans (Minnesota State Demographic Center, 2019) and includes 12 counties – Beltrami, Clearwater, Hubbard, Kittson, Lake of the Woods, Mahnomen, Marshall, Norman, Pennington, Polk, Red Lake, and Roseau counties (Figure 1). Among the eight SCHSAC regions, Northwest ranked second in the state for rate of drug overdose deaths in 2017-2019 (14.4 per 100,000 residents) (Chart 1). Since 2011, drug overdose deaths in the Northwest region have increased (14 to 32 deaths) (Chart 2). The average annual number of overdose deaths was 19, ranging from 13 in 2012 and 2015 to 32 in 2019. From 2017-2019, the Northwest region saw an increase in overdose deaths involving psychostimulants and synthetic opioids. Over this time period, the greatest burden of drug overdose deaths was among 25-34-year-old, female, and American Indian residents.

Figure 1. The Northwest region includes 12 Minnesota counties.

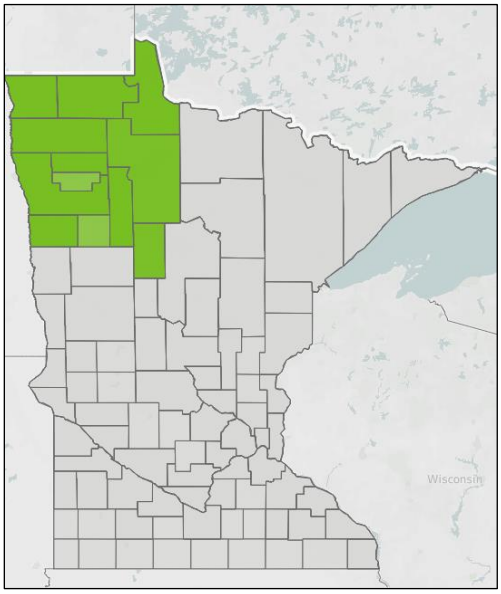
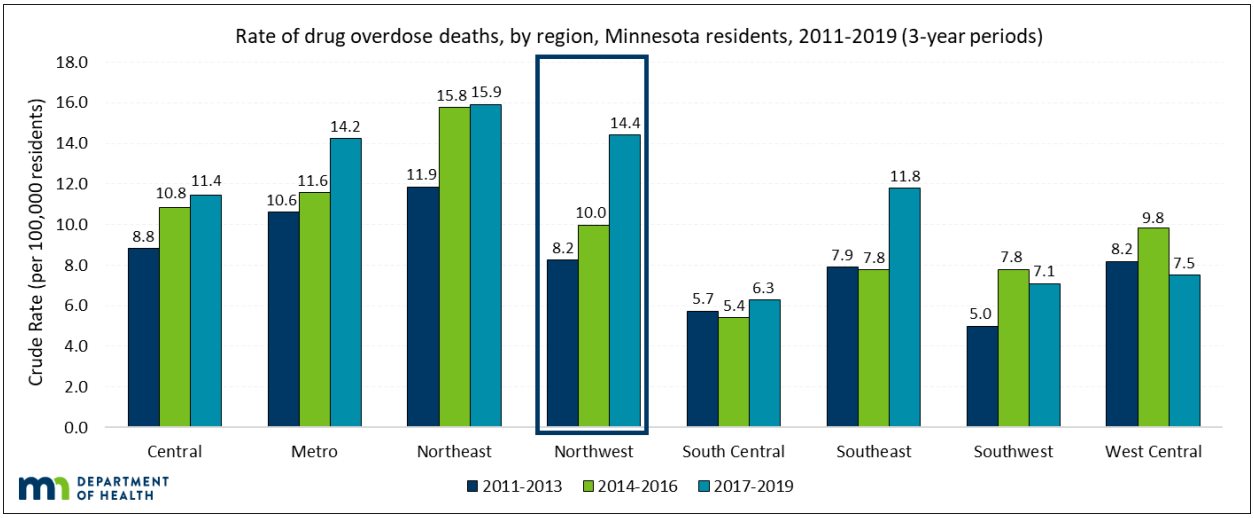
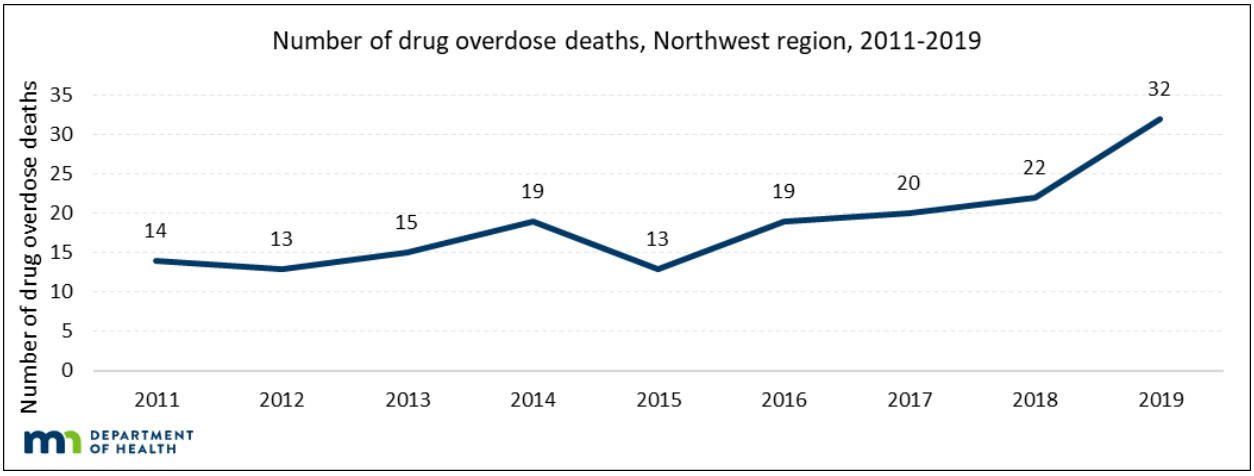


Chart 1. From 2017 to 2019, the Northwest region ranked second in the state for the drug overdose death rate.



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

Chart 2. After a period of relative stability, drug overdose deaths in the Northwest region reached their highest number in 2019.



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

Drug overdose deaths by drug category

Opioid-involved drug overdose deaths

All opioid-involved deaths increased 67% since 2011-2013 (21 to 35 deaths) (Chart 3). However, trends in the types of opioids involved have changed. From 2011-2016, other opioids and methadone (i.e., commonly prescribed opioids) accounted for the largest number of opioid-involved overdose deaths. Beginning in 2017-2019, synthetic opioid-involved deaths experienced a large increase, surpassing the number of commonly prescribed opioid-involved overdose deaths. Heroin-involved deaths remained relatively low but did see an increase since 2011-2013. From 2014-2016 to 2017-2019:

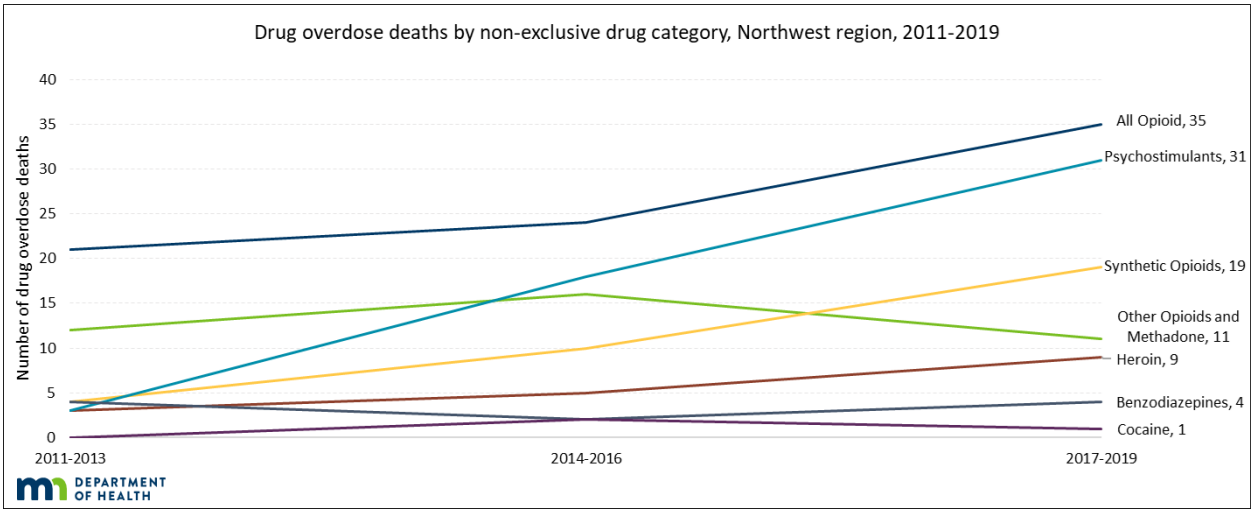
- All opioid-involved overdose deaths increased 46% (24 to 35 deaths)
- Synthetic opioid-involved overdose deaths increased 90% (10 to 19 deaths)
- Commonly prescribed opioid-involved overdose deaths decreased 31% (16 to 11 deaths)
- Heroin-involved overdose deaths increased 80% (5 to 9 deaths)

Non-opioid involved drug overdose deaths

Of particular concern in the Northwest region are psychostimulant-involved drug overdose deaths, which have increased almost 10-fold since 2011-2013 (Chart 3). Benzodiazepine and cocaine-involved deaths have remained relatively stable. From 2014-2016 to 2017-2019:

- Psychostimulant-involved deaths increased 72% (18 to 31 deaths)
- Benzodiazepine-involved deaths remained relatively stable (2 to 4 deaths)
- Cocaine-involved deaths remained relatively stable (2 to 1 deaths)

Chart 3. From 2014-2016 to 2017-2019, there were large increases in psychostimulant and synthetic opioid involved deaths.



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

Co-involvement of multiple substances

The presence of multiple drugs involved in a death has several implications. One of the major concerns is the challenge of responding to an overdose when multiple substances are present, especially when there are opioids and non-opioids together. There are no medications to reverse a non-opioid (e.g., psychostimulant, benzodiazepine, cocaine) overdose, whereas opioid overdoses can be reversed with the life-saving medication naloxone. Understanding trends in the co-use of non-opioids and opioids can help us to better interpret trends in drug overdose deaths and inform prevention and response efforts.

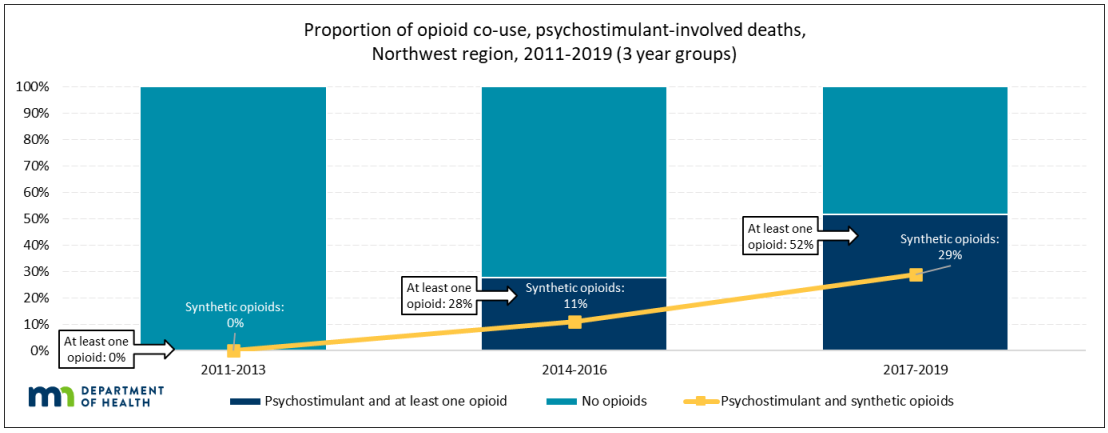
Due to relatively low numbers of drug overdose deaths involving cocaine (3 deaths) and benzodiazepines (10 deaths) in the Northwest region from 2011 to 2019, there is not sufficient data to make meaningful conclusions on the co-use of opioids with these drugs.

Psychostimulant- and Opioid-involved Deaths

Psychostimulant-involved deaths have continued to increase statewide and in the Northwest region. The co-involvement of opioids in psychostimulant-involved deaths has also increased from 2011-2013 to 2017-2019. In 2011-2013, there was no co-involvement of opioids in psychostimulant-involved deaths (0 out of 3 deaths) (Chart 4). In 2014-2016, the proportion of psychostimulant-involved deaths with at least one opioid present increased to 28% (5 out of 18 deaths). In 2017-2019, the proportion of psychostimulant-involved deaths involving at least one opioid increased to 52% (16 out of 31 deaths).

Although the numbers remain relatively small, a concerning trend in the Northwest region is the co-involvement of synthetic opioids in psychostimulant-involved deaths. From 2011-2013 there were zero psychostimulant-involved deaths that also involved a synthetic opioid; this number increased to 2 deaths from 2014-2016. From 2017-2019, synthetic opioids were involved in 29% of psychostimulant-involved deaths in the Northwest region (9 out of 31 deaths) and accounted for 56% of the overall opioid co-involvement in psychostimulant-involved deaths (9 out of 16 deaths; not shown in chart).

Chart 4. The proportion of synthetic opioid co-involvement in psychostimulant-involved deaths has increased.



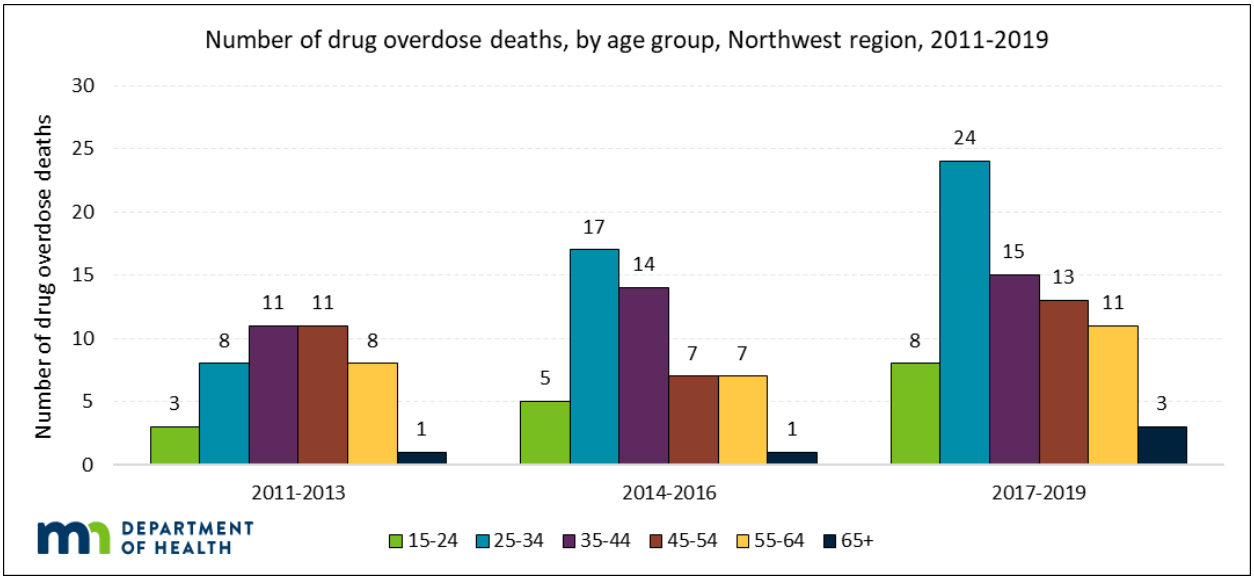
SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

Age of drug overdose deaths

Over the examined period, the age distribution of drug overdose deaths in the Northwest region has shifted younger. From 2011-2013, 35-44 and 45–54-year-old Minnesotans from the Northwest region experienced the largest number of drug overdose deaths (Chart 5). From 2014-2016, 25–34 and 35-44-year-old Minnesotans from the Northwest region experienced the largest number of drug overdose deaths. From 2017-2019, 24-34-year-old Minnesotans from the Northwest region experienced the largest number of drug overdose deaths. Among age groups that experienced a change in the number of drug overdose deaths, from 2014-2016 to 2017-2019:

- the 25-to-34-year age group experienced a 41% increase in drug overdose deaths (17 to 24 deaths)
- the 45-to-54-year age group experienced an 86% increase in drug overdose deaths (7 to 13 deaths)
- the 55-to-64-year age group experienced a 57% increase in drug overdose deaths (7 to 11 deaths)

Chart 5. In 2017-2019, 25–34-year-old Minnesotans from the Northwest region experienced the largest number of drug overdose deaths.

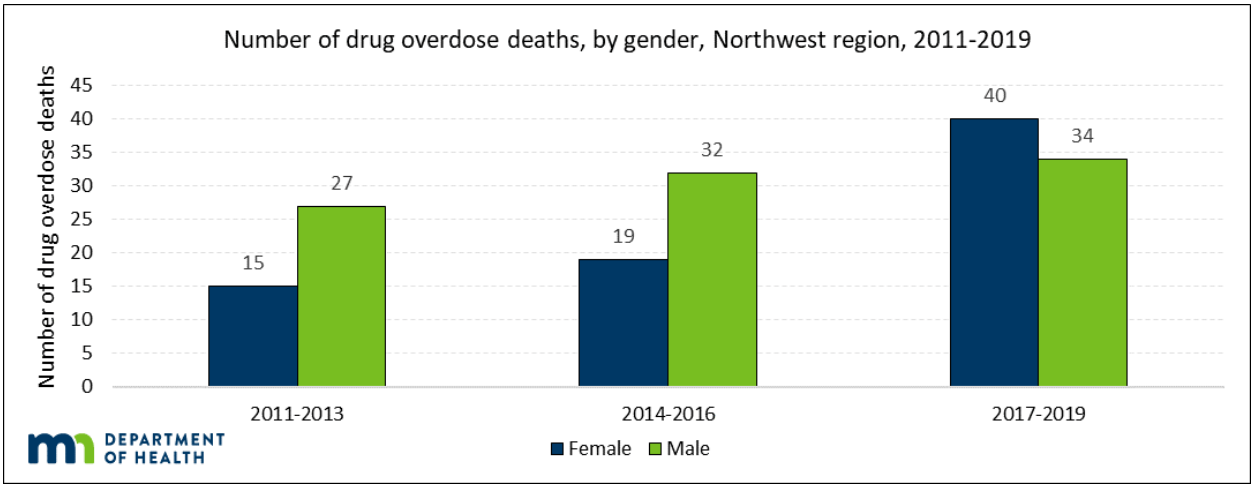


SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

Drug overdose deaths by gender

From 2011-2016, males experienced a larger number of drug overdose deaths than females in the Northwest region (Chart 6). Marking a change from previous time periods, females experienced more drug overdose deaths than men from 2017-2019. From 2017-2019, males accounted for 46% of drug overdose deaths (34 deaths) and females accounted for 54% of drug overdose deaths (40 deaths).

Chart 6. Marking a change from previous year trends, females experienced more drug overdose deaths in 2017-2019.



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

Drug overdose deaths by race

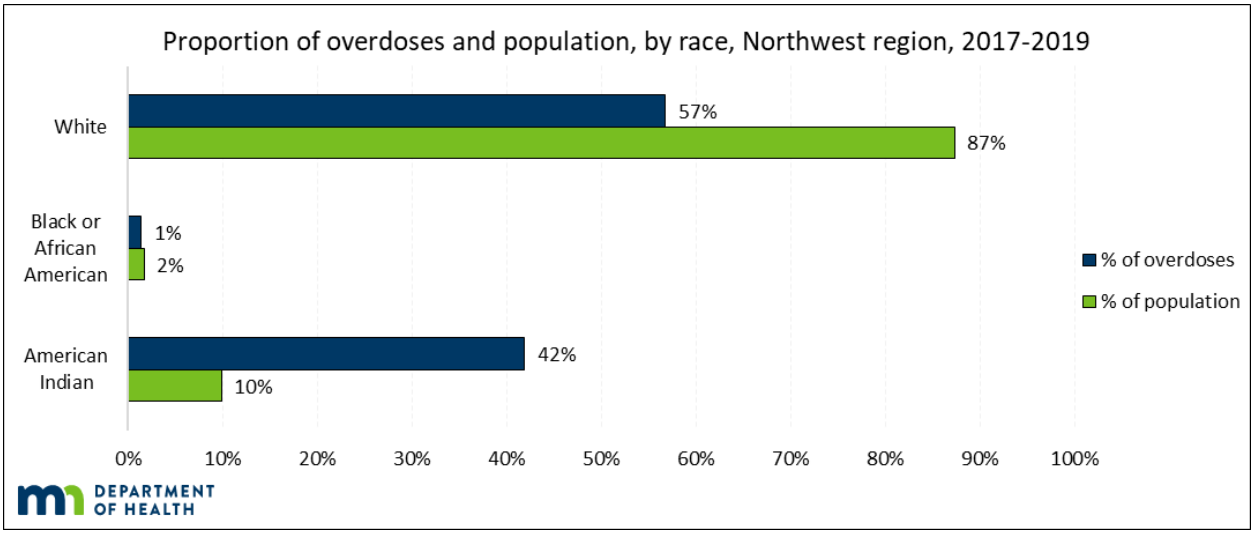
Since 2011, white residents experienced the largest number of drug overdose deaths in the Northwest region (Table 1). However, American Indian residents experienced a disproportionate number of overdose deaths when compared to the proportion of the population in the Northwest region. In 2017-2019, American Indian residents represented 10% of the Northwest region population; however, they accounted for 42% of all overdose deaths over that time period (Chart 7). Conversely, white residents represented 87% of the Northwest region population, but accounted for only 57% of drug overdose deaths from 2017-2019. Black residents, who represented 2% of the population, accounted for 1% of drug overdose deaths.

Table 1. Number drug overdose deaths by race, Northwest region, 2011-2019

Race of Decedent	2011-2013	2014-2016	2017-2019
American Indian	10	19	31
Black	0	0	1
White	32	32	42

SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

Chart 7. American Indian residents experience a disproportionate number of drug overdose deaths in the Northwest region.



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

References

Minnesota State Demographic Center. (2021, April). PopFinder For Minnesota, Counties, & Regions. PopFinder For Minnesota, Counties, & Regions. Retrieved February 14, 2022, from https://mn.gov/admin/demography/data-by-topic/population-data/our-estimates/pop-finder1.jsp

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