

Trends in Drug Overdose Deaths: Northeast 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>) 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.

Northeast Region Overview

The Northeast region is home to 325,193 Minnesotans (Minnesota State Demographics Center, 2019) and includes seven counties – Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, and St. Louis counties (Figure 1). Among the eight SCHSAC regions, Northeast ranked first for drug overdose mortality in 2017-2019 (15.9 per 100,000 residents) (Chart 1). Since 2011, drug overdose deaths remained relatively stable but saw an increase from 2018 to 2019 (41 to 61 deaths) (Chart 2). The average annual number of overdose deaths was 47, ranging from 37 in 2012 to 61 in 2019. From 2017-2019, the Northeast 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, male, and Black and American Indian residents.

Figure 1. The Northeast region includes seven Minnesota counties.

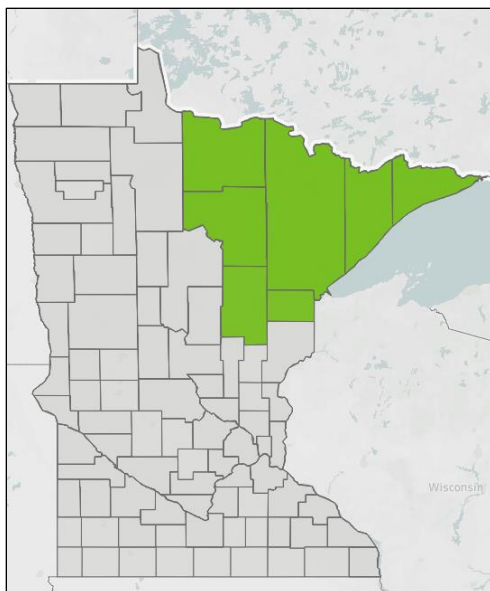
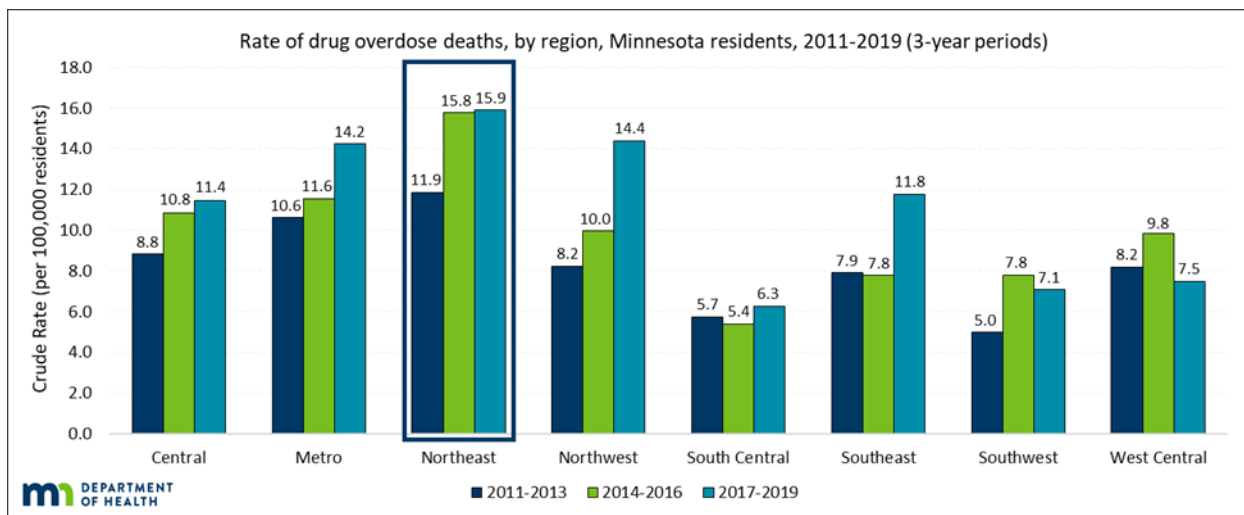
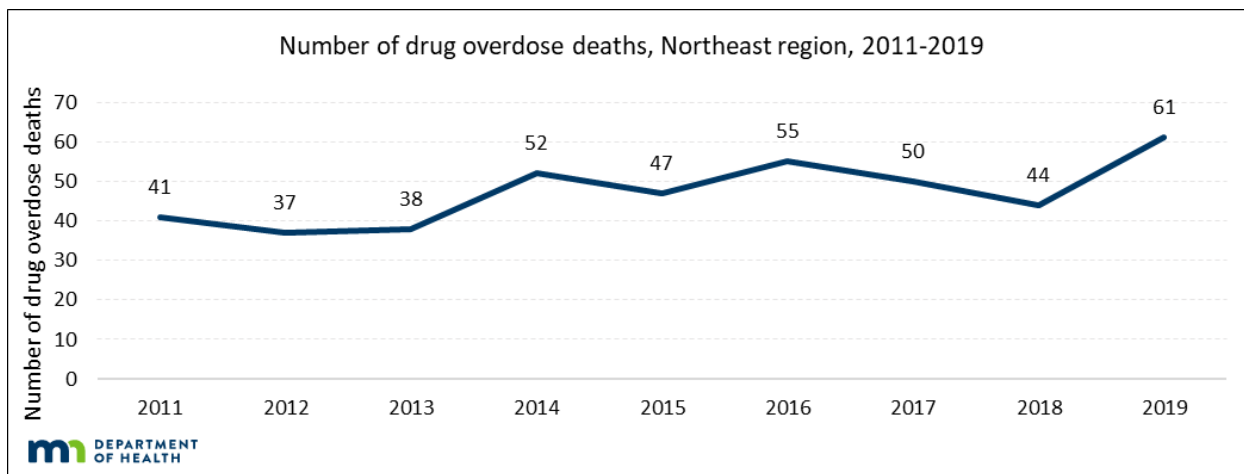


Chart 1. From 2017 to 2019, Northeast region ranked first in the state for the drug overdose death rate.



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

Chart 2. Drug overdose deaths have increased since 2011 and 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 have increased 13% since 2011-2013 (78 to 88 deaths) (Chart 3). However, trends in 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 substantially increased and surpassed the number of commonly prescribed opioid-involved

overdose deaths. Heroin-involved deaths have increased since 2011-2013 but have decreased since 2014-2016. From 2014-2016 to 2017-2019:

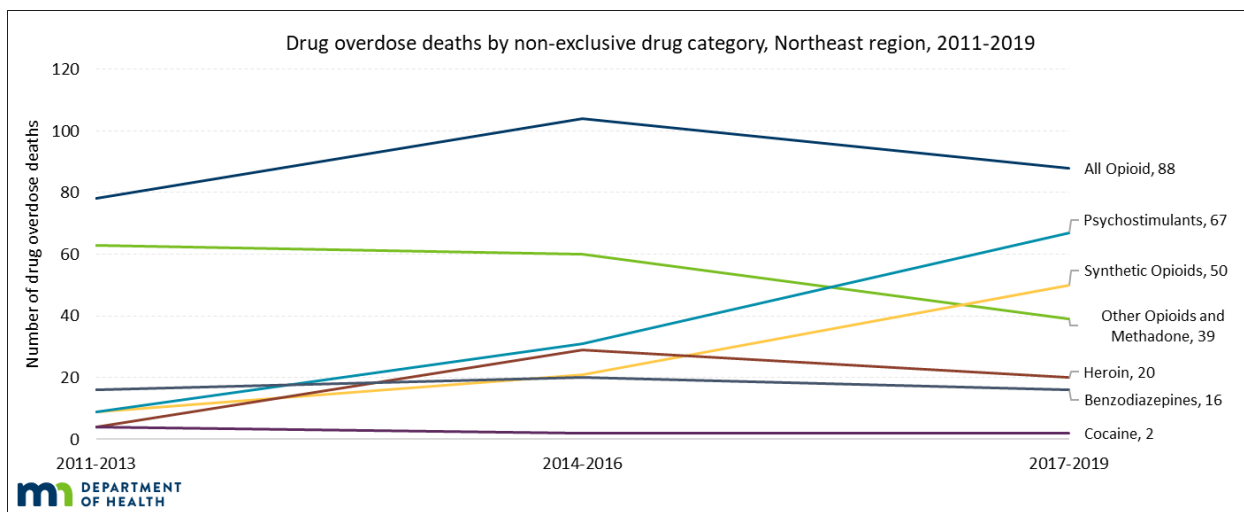
- All opioid-involved overdose deaths decreased 15% (104 to 88 deaths)
- Synthetic opioid-involved overdose deaths sharply increased, increasing 138% (21 to 50 deaths)
- Commonly prescribed opioid-involved overdose deaths decreased 35% (60 to 39 deaths)
- Heroin-involved overdose deaths decreased 31% (29 to 20 deaths)

Non-opioid involved drug overdose deaths

Of particular concern in the Northeast region are psychostimulant-involved drug overdose deaths (Chart 3). Cocaine and benzodiazepine-involved deaths have remained relatively stable since 2011. From 2014-2016 to 2017-2019:

- Psychostimulant-involved deaths sharply increased, increasing 116% (31 to 67 deaths)
- Benzodiazepine-involved deaths remained relatively stable (20 to 16 deaths)
- Cocaine-involved deaths remained stable (2 to 2 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.

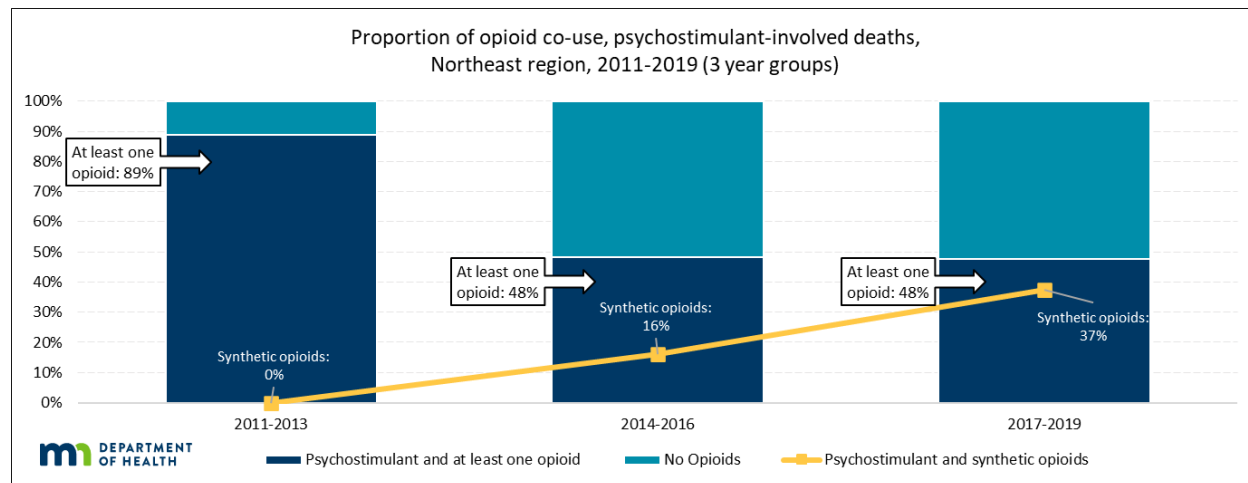
Due to relatively low numbers of cocaine-involved deaths (8 deaths) in the Northeast region from 2011 to 2019, there is not sufficient data to make meaningful conclusions on the co-involvement of cocaine and opioids.

Psychostimulant- and Opioid-involved Deaths

Psychostimulant-involved deaths have continued to increase statewide and in the Northeast region. The co-involvement of opioids in psychostimulant-involved deaths has fluctuated from 2011-2019 but remained stable from 2014-2019 (Chart 4). In 2017-2019, psychostimulant-involved deaths that involved at least one opioid accounted for 48% of all psychostimulant-involved deaths (32 out of 67 deaths).

However, a concerning trend in the Northeast region is the co-involvement of synthetic opioids in psychostimulant-involved deaths. From 2011-2013, there were no psychostimulant-involved deaths that also involved a synthetic opioid. By 2017-2019, synthetic opioids were involved in 37% of psychostimulant-involved deaths in the Northeast region (25 out of 67 deaths) and accounted for 78% of overall opioid co-involvement in psychostimulant-involved deaths (25 out of 32 deaths; not shown in chart).

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

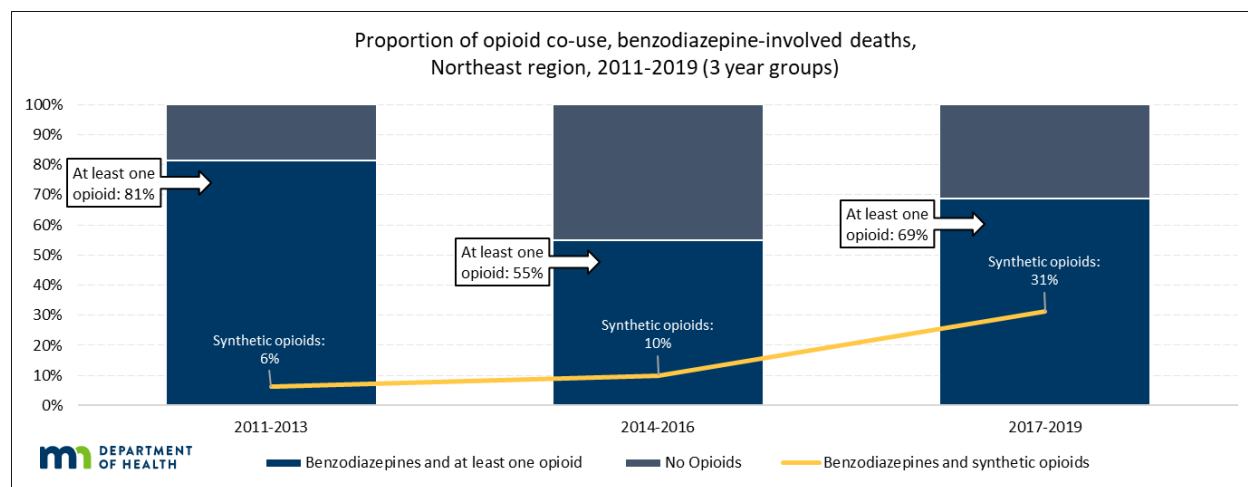


SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

Benzodiazepine- and Opioid-involved Deaths

The co-involvement of opioids in benzodiazepine-involved deaths has been high since 2011-2013, with proportion of benzodiazepine-involved deaths involving at least one opioid ranging from 55% in 2014-2016 (11 out of 20 deaths) to 81% in 2011-2013 (13 out of 16 deaths) (Chart 5). However, the trend in the type of opioid present has shifted. In 2011-2013, synthetic opioids were involved in 1 out of 16 psychostimulant-involved deaths. By 2017-2019, synthetic opioids were involved in 31% of all benzodiazepine deaths (5 out of 16 deaths) and accounted for 45% of overall opioid co-involvement (5 out of 16 deaths; not shown in chart).

Chart 5. The proportion of synthetic opioid co-involvement in benzodiazepine-involved deaths has increased in the Northeast region.



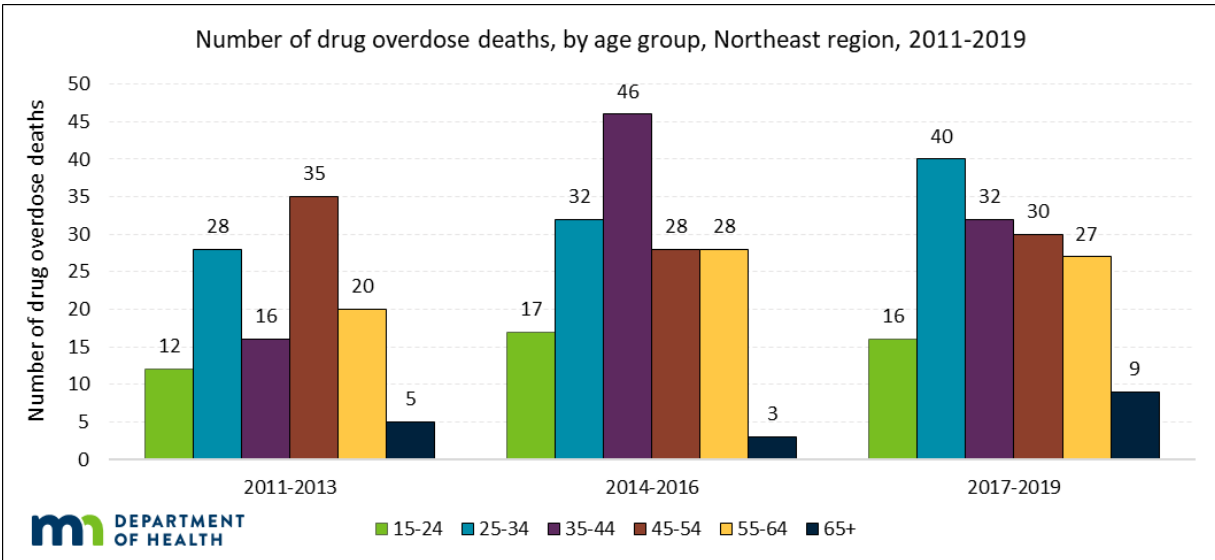
SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

Age of drug overdose deaths

In the Northeast region, the age distribution of drug overdose deaths has continued to change and trended younger over time. From 2011-2013, 45–54-year-old Minnesotans from the Northeast region experienced the largest number of drug overdose deaths (Chart 6). Beginning in 2014-2016, 35-44-year-old Minnesotans from the Northeast region experienced the largest number of drug overdose deaths. From 2017-2019, 25–34-year-old Minnesotans from the Northeast region experienced the largest number of drug overdose deaths. Among age groups who experienced a change in drug overdose deaths, from 2014-2016 to 2017-2019:

- the 25-to-34-year age group experienced a 25% increase in drug overdose deaths (32 to 40 deaths)
- the 35-to-44-year age group experienced a 30% decrease in drug overdose deaths (46 to 32 deaths)
- the 45-to-54-year age group experienced a 16% decrease in drug overdose deaths (65 to 57 deaths)

Chart 6. In 2017-2019, 25–34-year-old Minnesotans from the Northeast region experienced the largest number of drug overdose deaths.

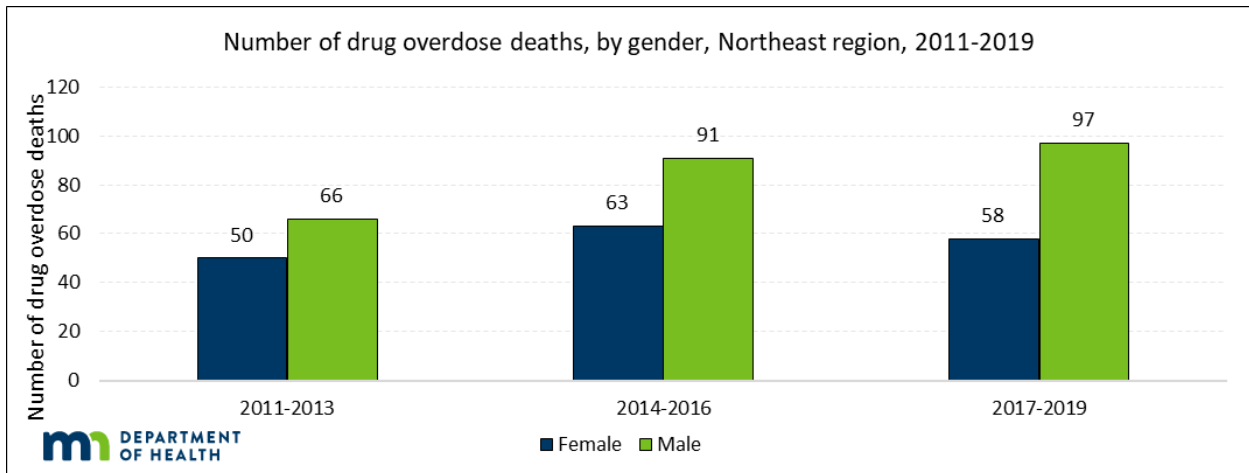


SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2011-2019

Drug overdose deaths by gender

Since 2011-2013, males have experienced a larger number of drug overdose deaths than females in the Northeast region (Chart 7). The gap between male and females has continued to increase. From 2017-2019, males accounted for 63% of drug overdose deaths (97 deaths) and females accounted for 37% of drug overdose deaths (58 deaths).

Chart 7. Males experienced more drug overdose deaths than females since 2011.



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

Drug overdose deaths by race

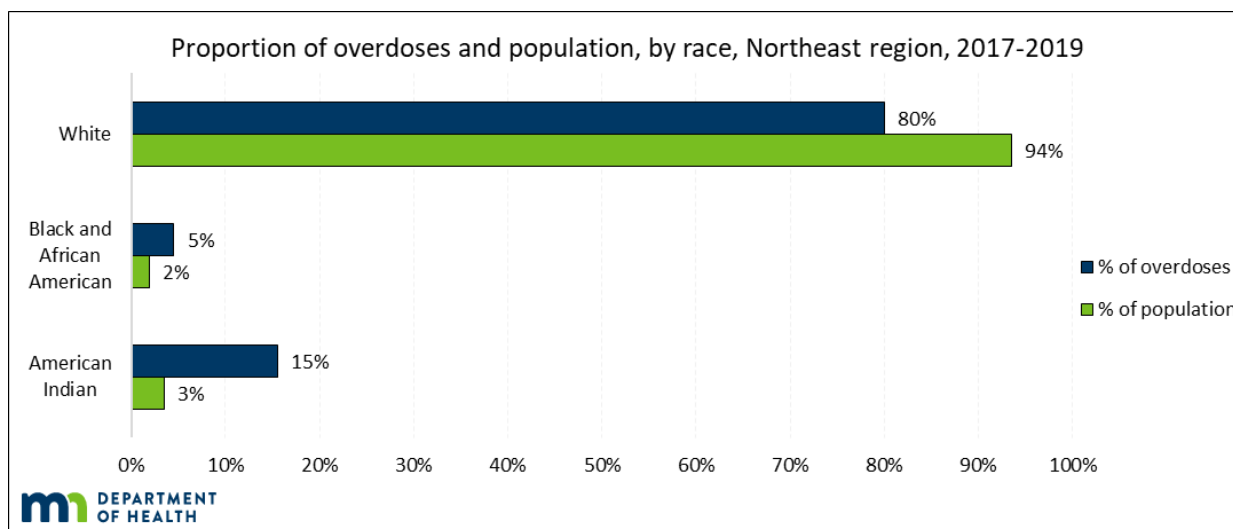
Since 2011, white residents experienced the largest number of drug overdose deaths in the Northeast region (Table 1). However, Black and American Indian residents experienced a disproportionate number of overdose deaths when compared to the proportion of the population in the Northeast region – in 2017-2019, Black residents represented 2% of the Northeast region population but accounted for 5% of all overdose deaths during that time period (Chart 8). American Indian residents represented 4% of the Northeast region population; However, they accounted for 16% of all overdose deaths over that time period. Conversely, white residents represented 94% of the Northeast region population, but accounted for only 80% of drug overdose deaths from 2017-2019.

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

Race of Decedent	2011-2013	2014-2016	2017-2019
American Indian	15	14	24
Black	2	2	7
White	99	138	124

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

Chart 8. American Indian and Black residents experience a disproportionate number of overdose deaths in the Northeast 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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