

Drug Overdose Deaths among Minnesota Residents

2000-2017

Drug Overdose Deaths among Minnesota Residents, 2000 – 2017

Minnesota Department of Health
Injury and Violence Prevention Section
PO Box 64882
St. Paul, MN 55164-0882
651-201-4237
nate.wright@state.mn.us
www.health.state.mn.us

As requested by Minnesota Statute 3.197: This report cost approximately \$269.90, including staff time, printing and mailing expenses.

Upon request, this material will be made available in an alternative format such as large print, Braille or audio recording. Printed on recycled paper.

Contents

- Rising drug overdose deaths..... 1
 - Seven-county Metro compared to Greater Minnesota..... 1
- Shifts in drug overdose death trends 3
 - Opioid-involved drug overdose deaths 4
 - Beyond opioid-involved overdose deaths 5
 - Seven-county Metro compared to Greater Minnesota..... 6
- Intent of drug overdose deaths 8
- Age of drug overdose deaths..... 10
- Gender of drug overdose deaths..... 13
- Age & gender of drug overdose deaths..... 15
- Race disparities in drug overdose deaths..... 17
- Appendix 1 – Drug Category Tables..... 18
 - Table 1: Number of opioid-involved overdose deaths (non-exclusive), by county of residence or metro area and year, 2000-2017 18
 - Table 2: Number of heroin-involved overdose deaths (non-exclusive), by county of residence/metro area and year, 2000 – 2017 23
 - Table 3: Number of cocaine-involved overdose deaths (non-exclusive), by county of residence/metro area and year, 2000 – 2017 28
 - Table 4: Number of benzodiazepine-involved overdose deaths (non-exclusive), by county of residence/metro area and year, 2000 – 2017 33
 - Table 5: Number of psychostimulants with abuse potential-involved overdose deaths (non-exclusive), by county of residence/metro area and year, 2000-2017 38
 - Table 6: Number of other and unspecified narcotic drug deaths (non-exclusive), by county of residence/metro area and year, 2000 – 2017 43
- Appendix 2 – 7-county metro vs. Greater Minnesota 48
 - Number of drug overdose deaths, 7-county metro vs. Greater MN, MN Residents, 2000-2017 48
- Appendix 3: Definitions and methodology 53

Rising drug overdose deaths

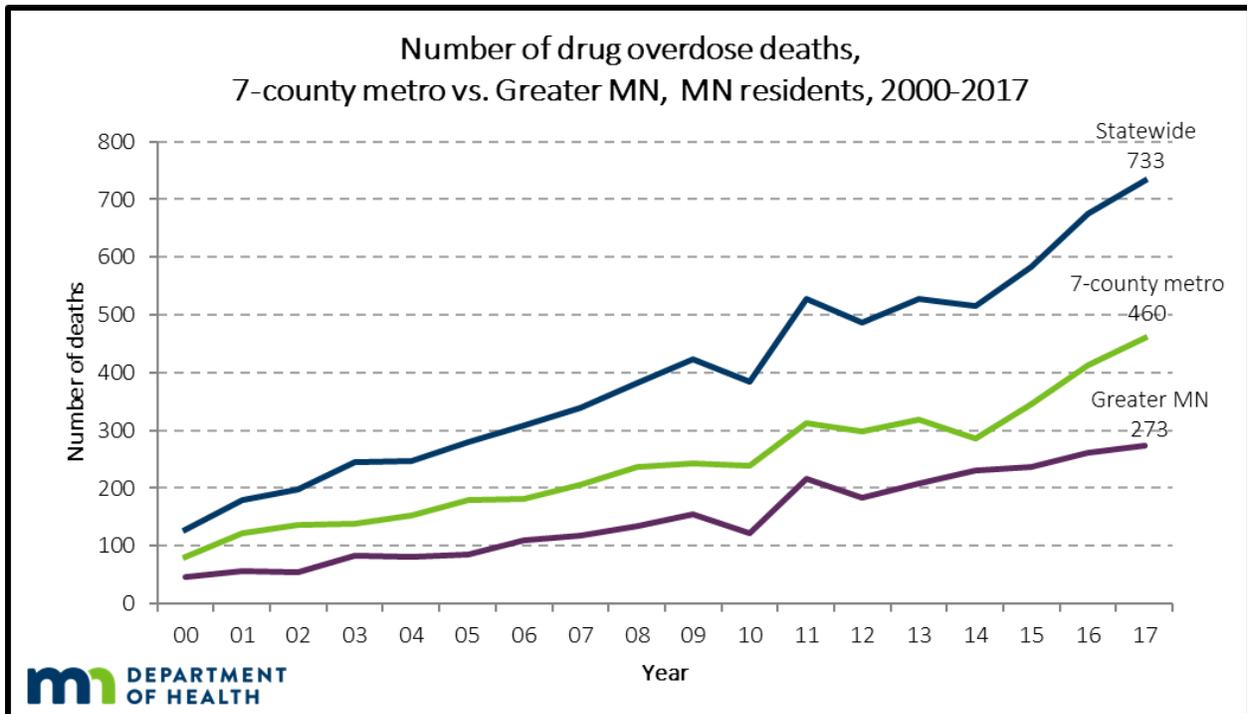
Seven-county Metro compared to Greater Minnesota

Drug overdose deaths among Minnesota residents continued an alarming trend, increasing 9% from 2016 to 2017. Final data collected from Minnesota death certificates show 733 people died from a drug overdose in 2017 compared to 675 deaths in 2016 (chart 1).

Drug overdose deaths are not just a Metro-area problem. Mortality rates in both Greater Minnesota and the Metro have steadily increased since 2000, when they were both less than 3.0 per 100,000 residents (chart 2). However, beginning in 2014 varying trends in the number and rate of drug overdose deaths has been observed for the Metro compared to Greater Minnesota. While the number of drug overdose deaths in the Metro has increased sharply, the number of drug overdose deaths in Greater Minnesota has increased modestly. The 2017 drug overdose mortality rate for the Metro of 14.9 per 100,000 residents is higher than the Greater Minnesota rate of 10.9 per 100,000 residents, and the rate difference has increased over the past three years.

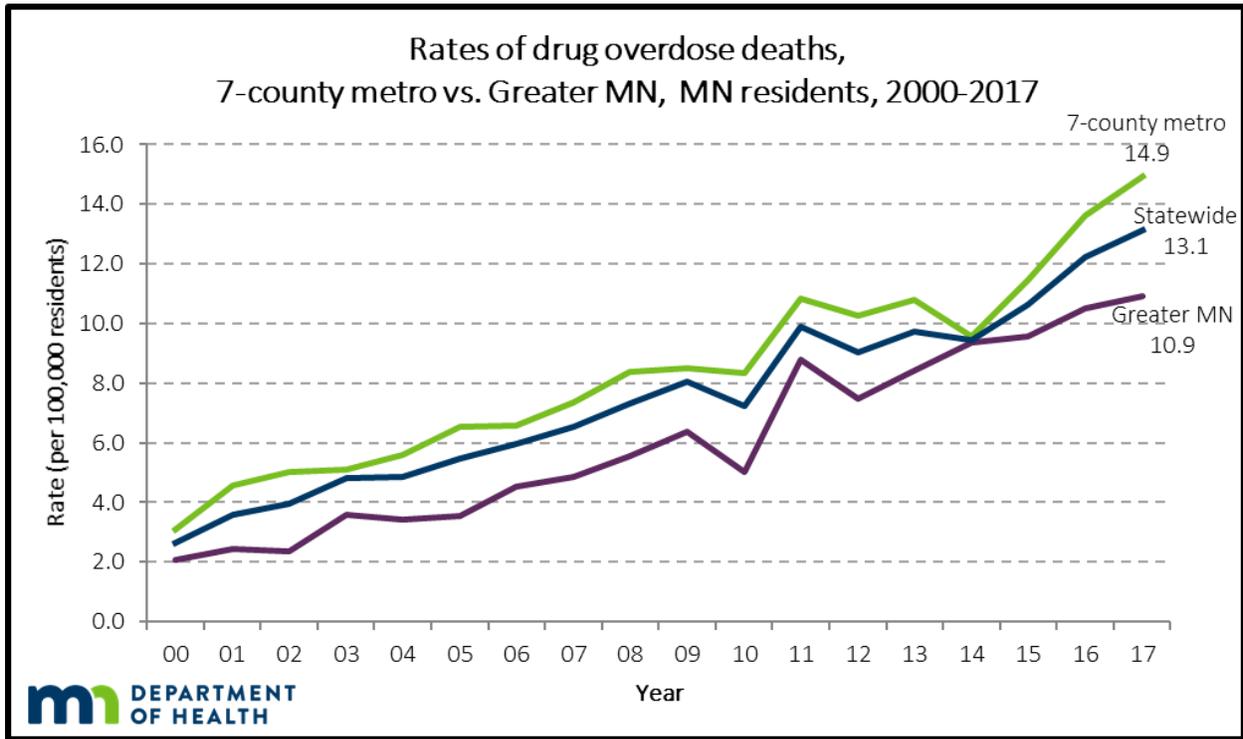
For county-specific data, refer to Appendix 1. For a listing of counties included in the Seven-county Metro, see Appendix 3.

CHART 1: The number of drug overdose deaths among Minnesota residents continued the alarming rise in 2017



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

CHART 2: The drug overdose mortality rate among Minnesota residents continued the alarming rise in 2017



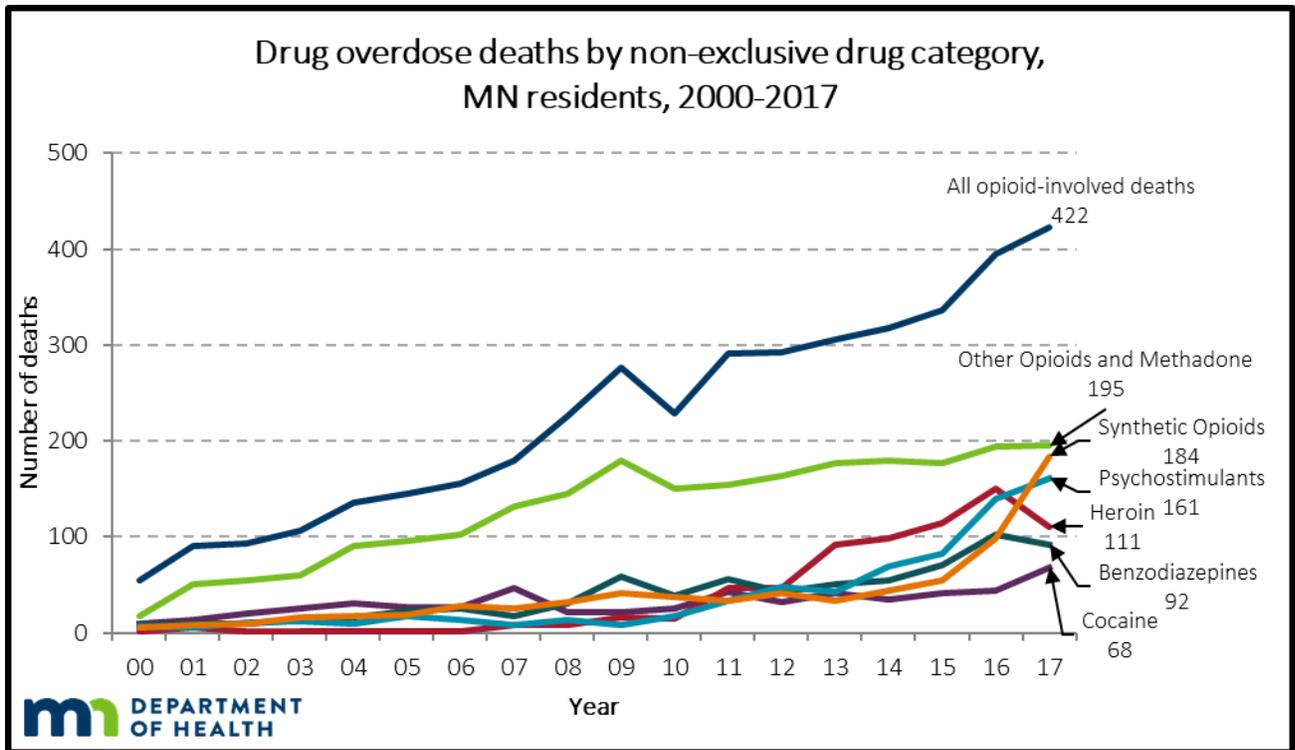
SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

Shifts in drug overdose death trends

The increasing drug overdose trends hold true for five of the seven highlighted drug categories, excluding heroin and benzodiazepines. In 2017, there were 422 opioid-involved deaths (including prescription opioids, heroin, fentanyl, and fentanyl analogues). This includes 195 other opioids and methadone-involved deaths (i.e. commonly prescribed opioids), 184 synthetic opioid-involved deaths, and 111 heroin-involved deaths. Additionally, there were 161 psychostimulant-involved deaths (e.g., methamphetamine), 92 benzodiazepine-involved deaths (e.g., Valium), and 68 cocaine-involved deaths among Minnesota residents (chart 3).

For further information about definitions and methodology, refer to Appendix 3

CHART 3: The number of drug overdose deaths by drug category among Minnesota residents



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

NOTE: Drug categories are non-exclusive

NOTE: Synthetic opioids include fentanyl; psychostimulants includes methamphetamine

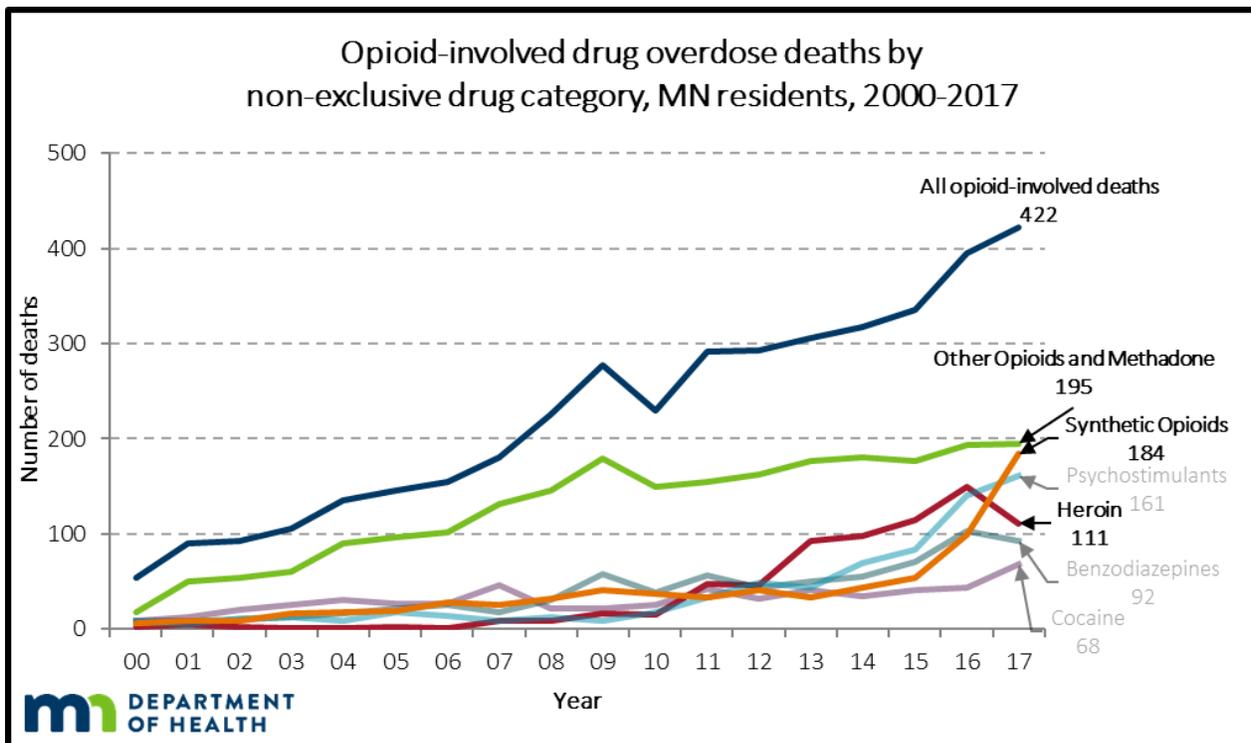
Opioid-involved drug overdose deaths

In recent years, the increase in opioid-involved overdose deaths has shifted to heroin and synthetic opioids (e.g., fentanyl, fentanyl analogues) from other opioids and methadone (i.e. commonly prescribed opioids) (chart 4).

Opioid-involved deaths continued to rise and reached 422 deaths in 2017; a 7% increase from 2016. The number of drug overdose deaths that involved other opioids and methadone (i.e. commonly prescribed opioids, such as codeine, oxycodone, or hydrocodone) has remained stable over the past four years. Heroin-involved overdose deaths decreased 26% from 2016, and reversed the steady increase since 2010. A continued dramatic increase was seen in synthetic opioid-involved overdose deaths (e.g., fentanyl, carfentanyl, fentanyl analogues), with an 86% increase from 2016. Drug overdose deaths that involved fentanyl or fentanyl analogues are captured within this broader category of synthetic opioids.

Unfortunately, due to limitations of death certificates, it is not possible to determine where the opioids involved in the drug overdose death originated from (i.e. legally prescribed versus illegally obtained), apart from heroin. Furthermore, counterfeit pills are being produced with increased precision and without laboratory testing can be difficult to discern from legally produced and distributed medications. There also continues to be a proliferation of novel synthetic opioids that require sophisticated toxicology testing to detect, which is resource intensive in time and funding. Therefore, there is potential for significant overlap between these drug categories and a need for comprehensive toxicology testing for every drug overdose death.

CHART 4: Opioid-involved overdose deaths continue to rise, driven by synthetic opioids



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

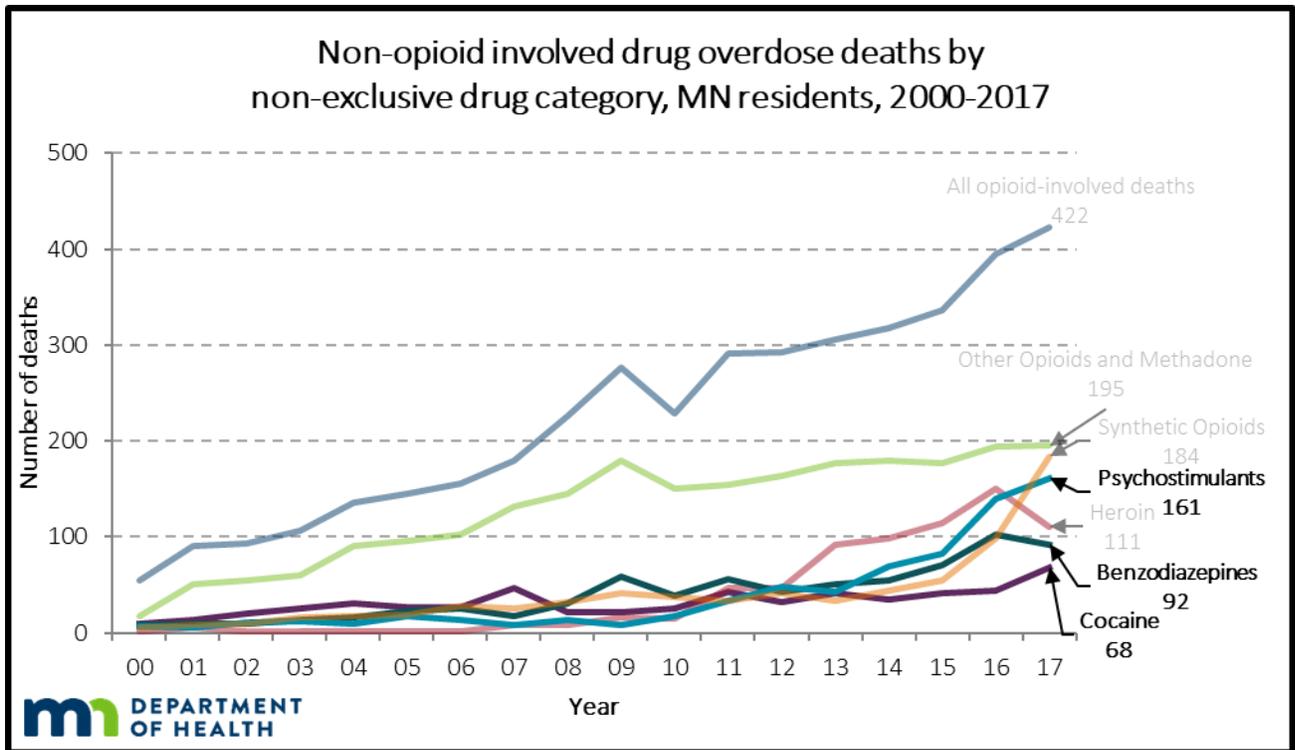
NOTE: Drug categories are non-exclusive

NOTE: Synthetic opioids include fentanyl

Beyond opioid-involved overdose deaths

As previously mentioned, other categories of drug overdose deaths have also been increasing. Trends in psychostimulant-involved overdose deaths, primarily driven by methamphetamine, have nearly paralleled heroin and synthetic opioid-involved overdose deaths, and increased 15% from 2016 to 2017. Reversing a long trend of increasing number of deaths, benzodiazepine-involved overdose deaths decreased 11% from 2016 to 2017. Cocaine-involved deaths increased 55% from 2016 to 2017, which represents the first time cocaine-involved deaths have increased over the past ten years.

As efforts continue and expand that address opioid overdose prevention, trends in drug overdose deaths beyond opioids need examination in close detail. Most drug overdose deaths involve multiple substances, and the continued increase in stimulant-involved (e.g., methamphetamine and cocaine) overdose deaths calls for overdose prevention strategies with a broader focus.



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

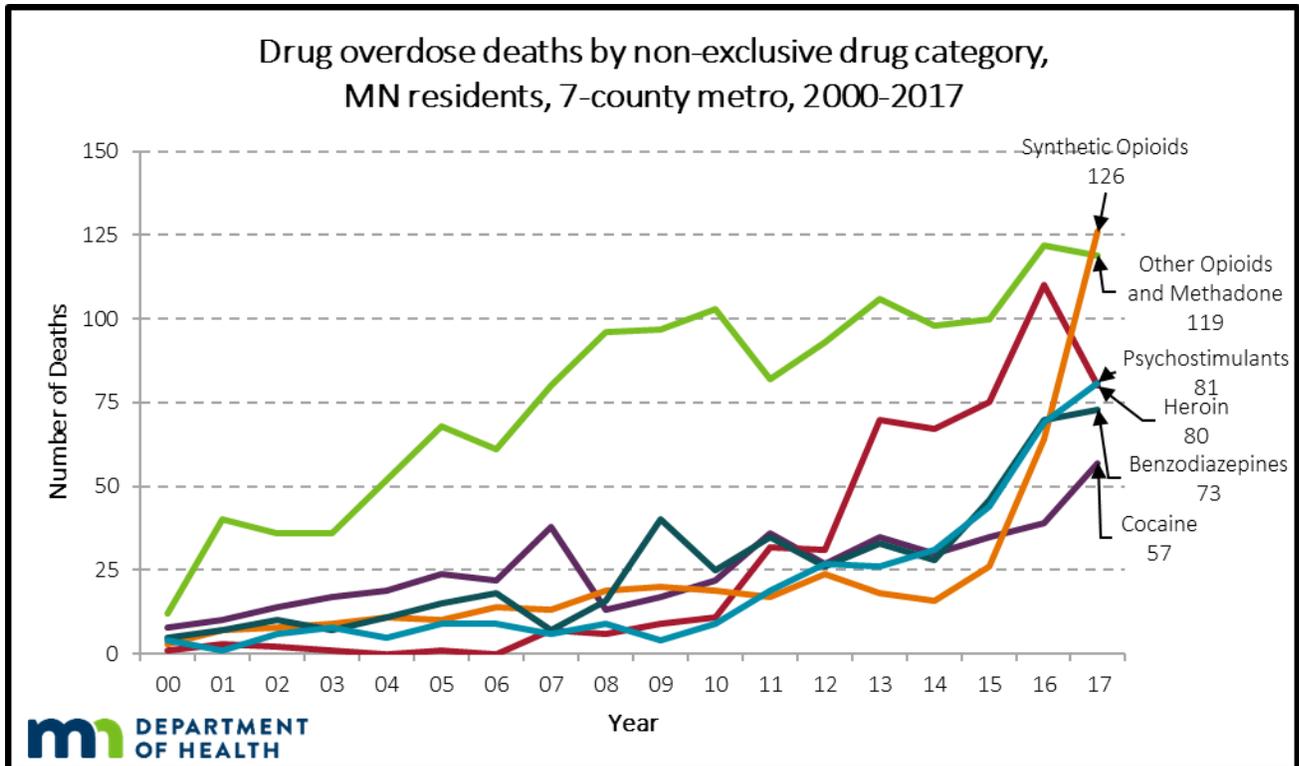
NOTE: Drug categories are non-exclusive

NOTE: Psychostimulants include methamphetamine

Seven-county Metro compared to Greater Minnesota

In the Seven-county Metro, synthetic opioid-involved deaths continued the dramatic rise, increasing 97% from 2016 to 2017. Psychostimulant- and cocaine-involved deaths also increased 17% and 46%, respectively. However, other opioids and methadone- and benzodiazepine-involved deaths remained stable, and heroin-involved deaths decreased 38% from 2016 to 2017 (chart 5).

CHART 5: In the seven-county metro, drug overdose death continued to rise, driven primarily by synthetic opioids



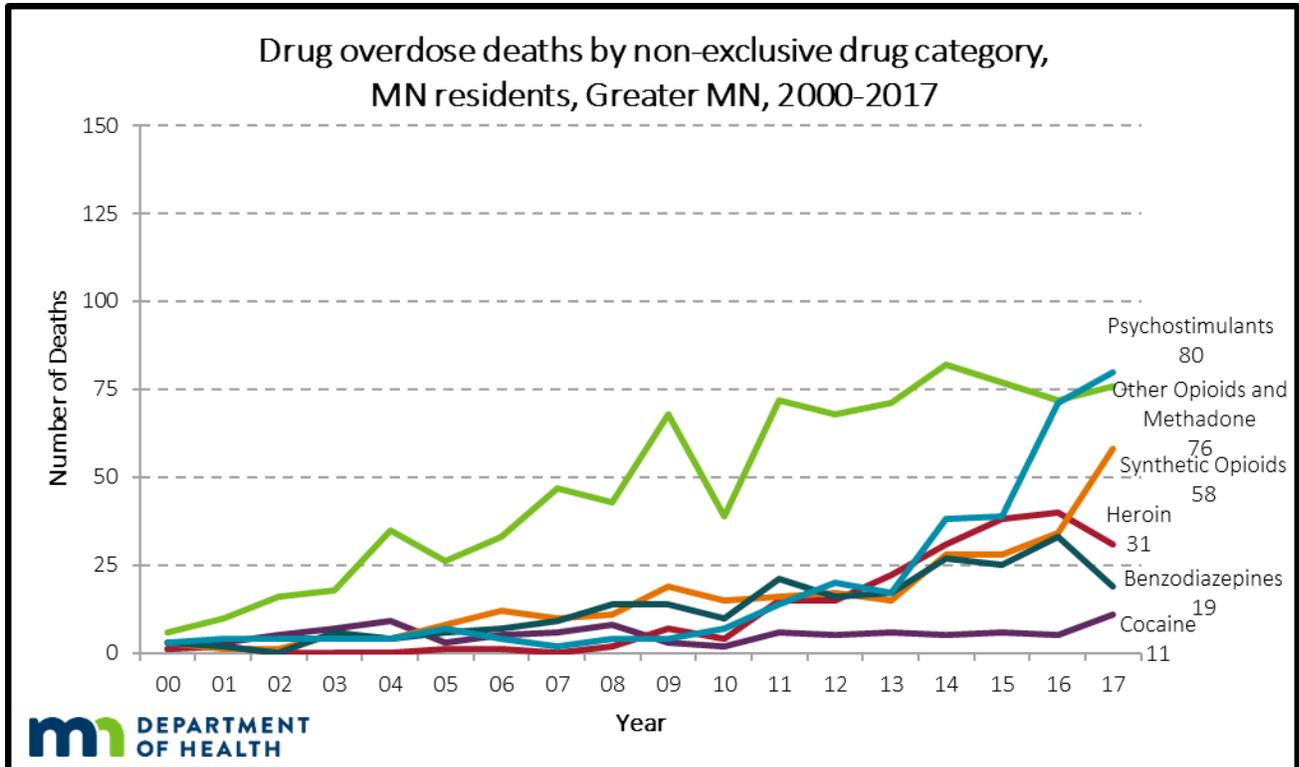
SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

NOTE: Synthetic opioids include fentanyl; psychostimulants includes methamphetamine

NOTE: Drug categories are non-exclusive

In Greater Minnesota, different trends emerge when examining drug overdose deaths. Other opioid and methadone-involved deaths remained stable, while heroin-, and benzodiazepine-involved deaths decreased 23% and 42%, respectively, from 2016 to 2017. However, psychostimulant-involved (e.g., methamphetamine) deaths continued the increase (13%), accompanied by synthetic opioid- (71%) and cocaine-involved deaths (120%) from 2016 to 2017 (chart 6).

CHART 6: In Greater Minnesota, drug overdose deaths continued to increase, driven primarily by psychostimulants and synthetic opioids

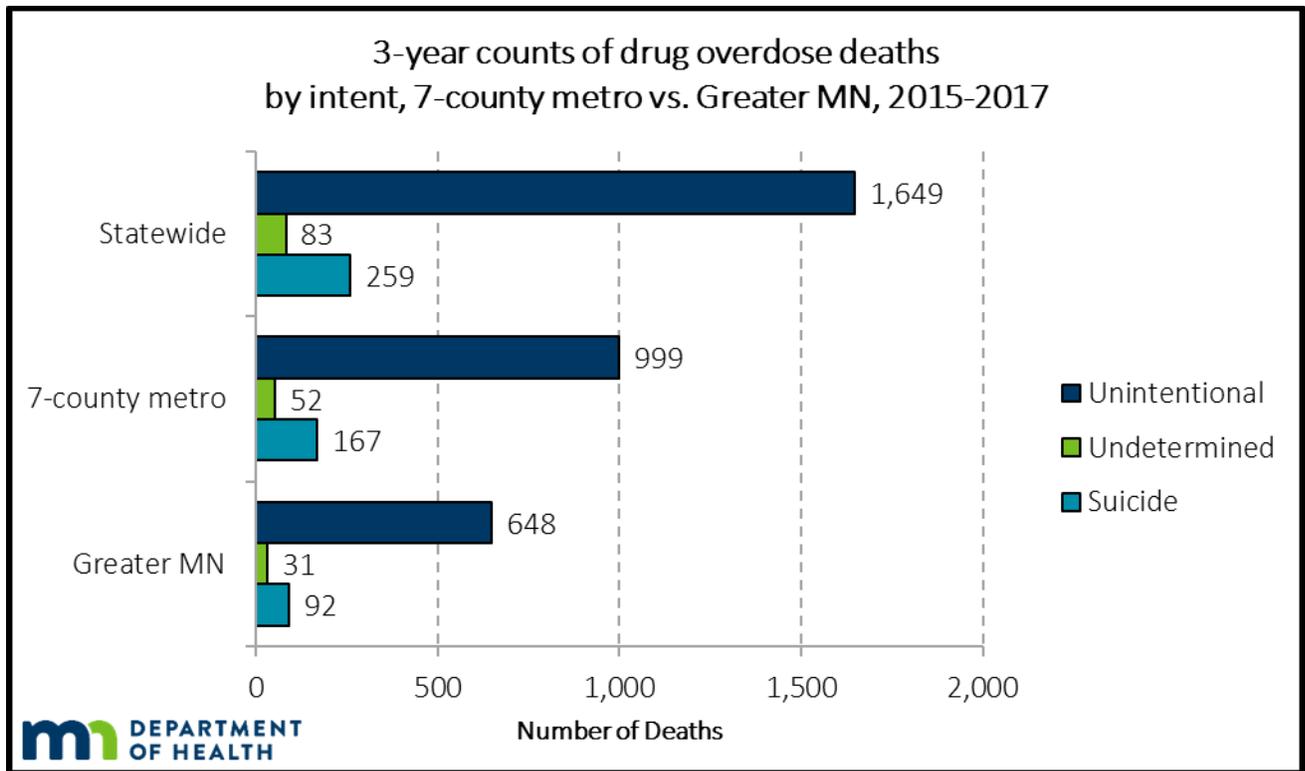


SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017
 NOTE: Synthetic opioids include fentanyl; psychostimulants includes methamphetamine
 NOTE: Drug categories are non-exclusive

Intent of drug overdose deaths

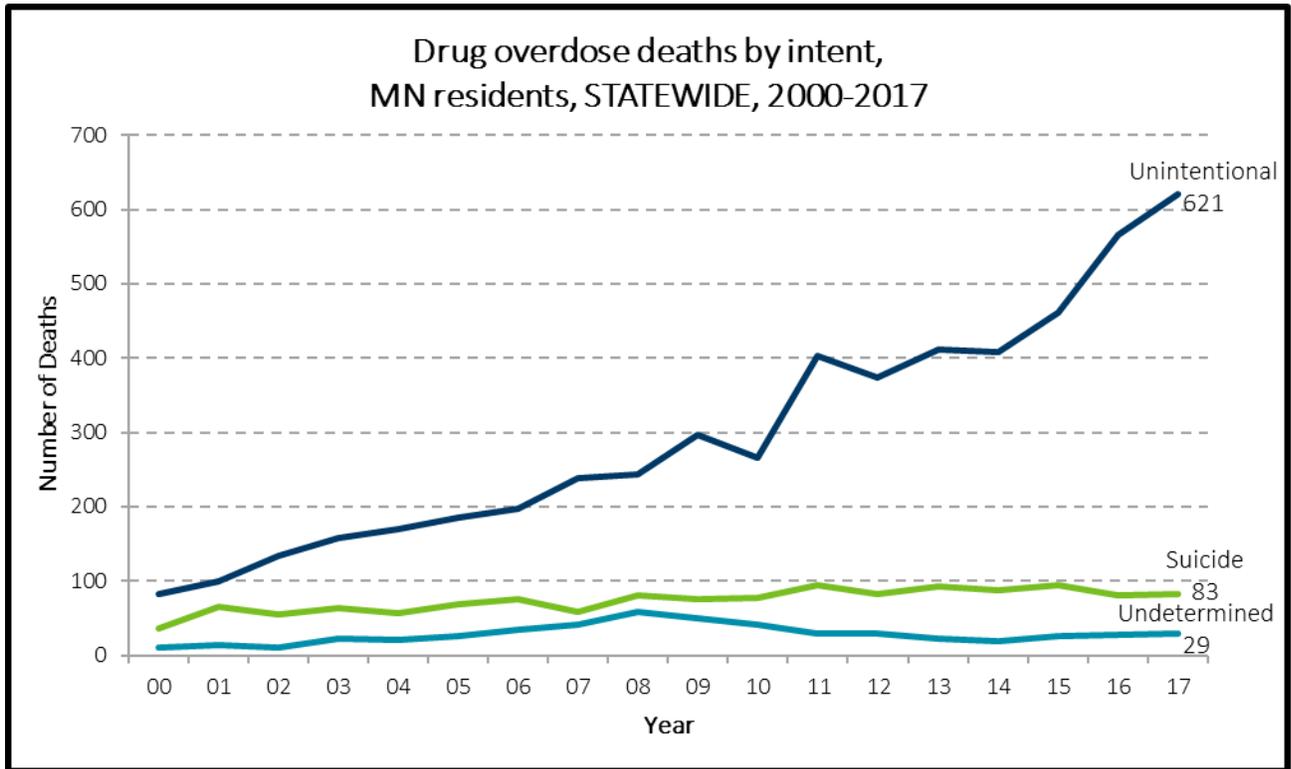
Over the last three years, unintentional drug overdose deaths accounted for a large majority of the Minnesota resident drug overdose deaths (chart 7). This continues a longer trend of a majority of drug overdose deaths being classified as unintentional. Drug overdose deaths classified as a suicide increased from 2000 to 2012, but remained stable over the past five years. The number of drug overdose deaths classified as undetermined peaked in 2008, decreased from 2009 to 2014, and remained level since 2014 (chart 8). While multiple factors influence suicidal behavior, substance use, including drugs and alcohol, is a significant risk factor for suicide and suicidal attempts. Therefore, it is likely that there is overlap between unintentional, undetermined, and suicide drug overdose deaths.

CHART 7: A large majority of drug overdose deaths are classified as unintentional



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2015-2017

CHART 8: Unintentional drug overdose deaths have risen dramatically, while suicide and undetermined deaths have remained stable over the last five years

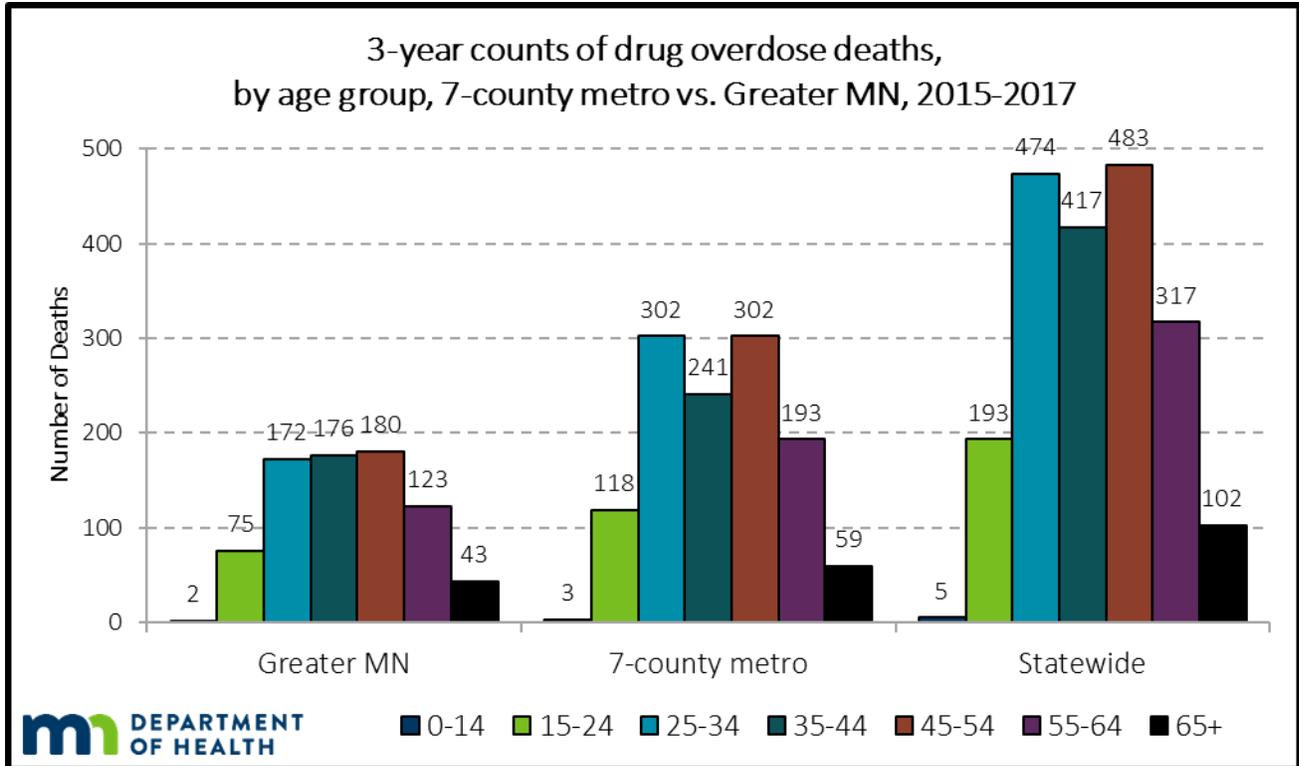


SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

Age of drug overdose deaths

From 2015 to 2017, adults aged 45 to 54 years experienced the greatest number of drug overdose deaths (483). The leading age groups in the Seven-county Metro were the 45 to 54 and 25 to 34 year age groups, with 302 deaths in each. However, in Greater Minnesota, the 25 to 54 year age groups had the greatest number of drug overdose deaths, with similar numbers in each category (chart 9).

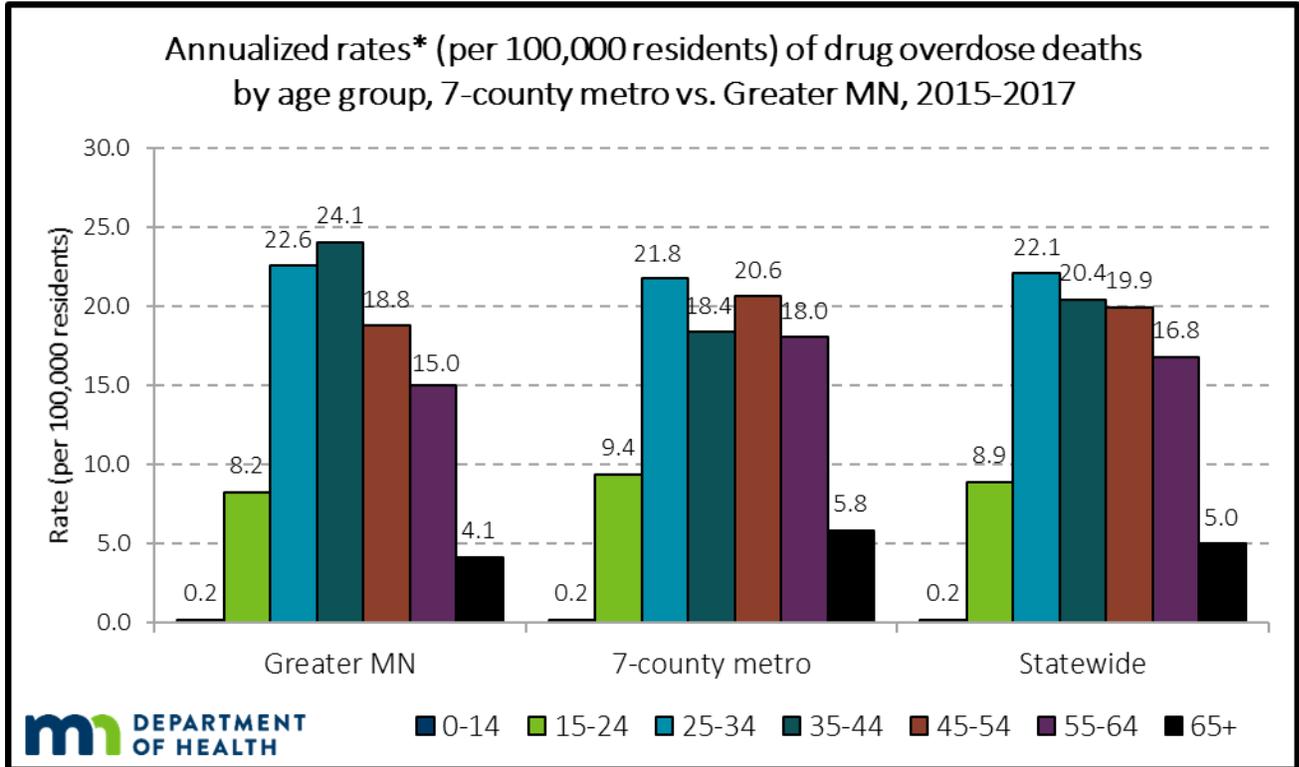
CHART 9: Statewide, adults aged 25 to 54 had the highest number of drug overdose deaths



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2015-2017

The rates per 100,000 residents portray a mixed picture. The highest mortality rate in Greater Minnesota is 24.1 per 100,000 residents in the 35 to 44 year age group. The highest mortality rate in the Seven-county Metro is 21.8 per 100,000 residents in the 25-34 year age group (chart 10). This suggests that slightly different phenomena are influencing drug use and overdose deaths in the two regions, which aligns with what was highlighted previously in drug categories of overdose deaths.

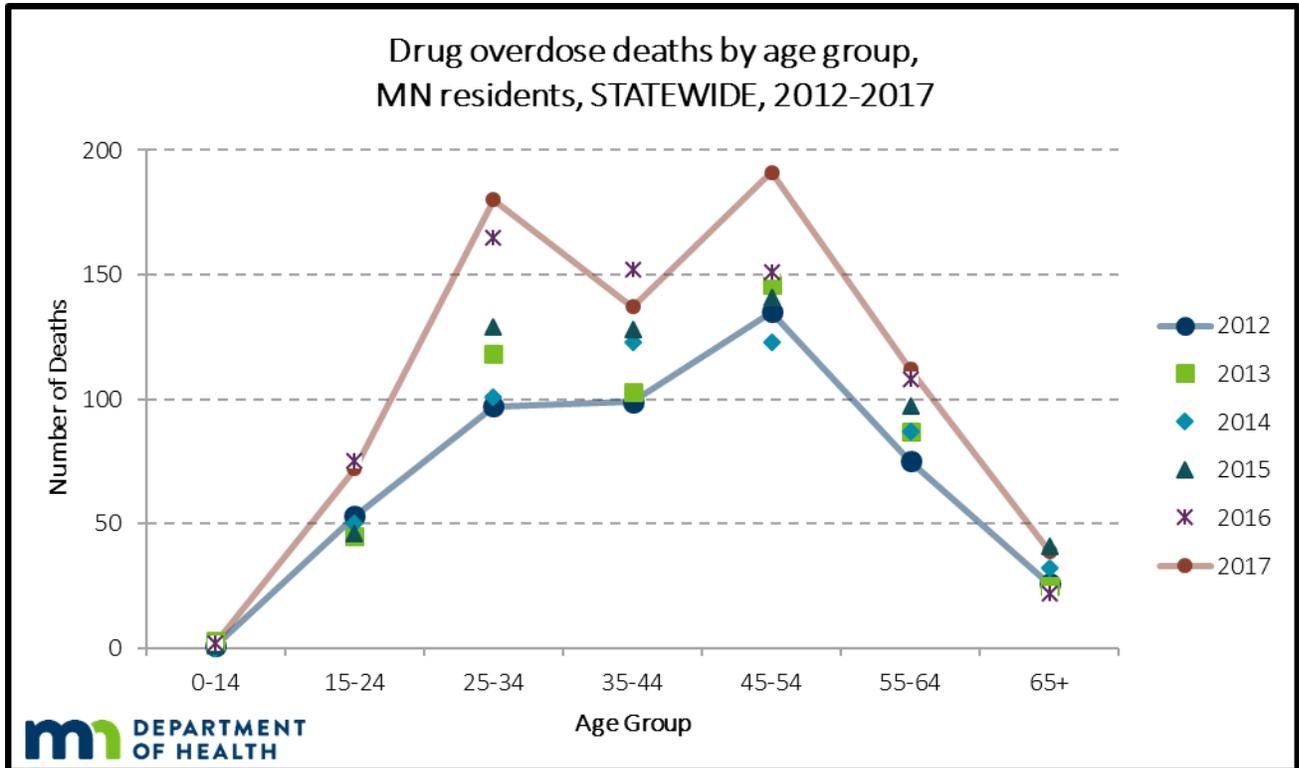
CHART 10: Drug overdose mortality rates by age group portray a mixed picture in Minnesota



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2015-2017
 *Crude (unadjusted) rates. 3-year rates were calculated using the Census 2010 population.

The age distribution of drug overdose deaths had been shifting younger over the past five years. Adults aged 45 to 54 years used to account for the largest number of drug overdose deaths, but by 2016, 25 to 34 year olds had the greatest number of drug overdose deaths a (chart 11). In 2017, however, a distinct bimodal (i.e. two-peaked) distribution emerged as the result of a large increase in the number of drug overdose deaths among adults aged 45 to 54 years. Now, the 45 to 54 year age group is, again, the leading age group for drug overdose deaths. This trend holds true for both Greater Minnesota and the Seven-county Metro.

CHART 11: Drug overdose deaths had been shifting younger; distinct bimodal distribution now evident

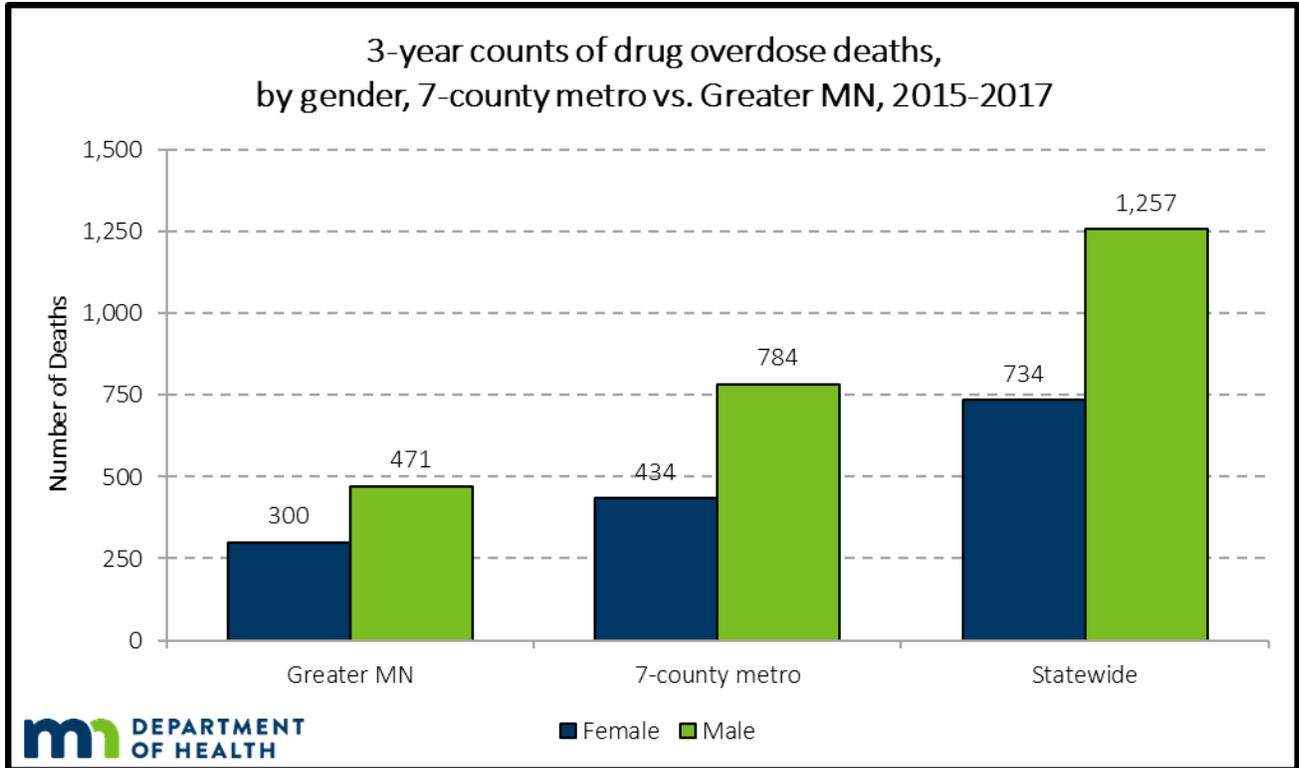


SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2012-2017

Gender of drug overdose deaths

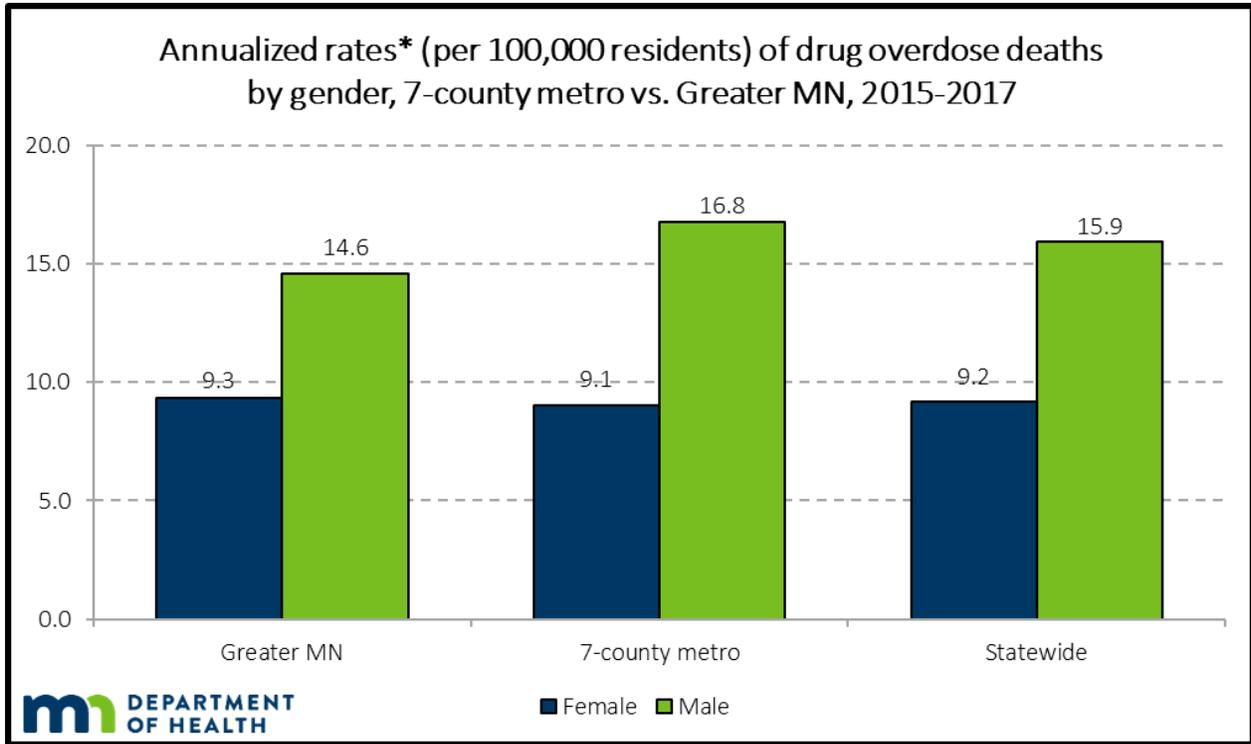
Across Minnesota, men have a higher number and mortality rate of drug overdose death compared with women (chart 12 and chart 13). In 2017, the number of drug overdose deaths for men remained stable, while the number of drug overdose deaths for women increased 24% from 2016. Furthermore, men accounted for about 60% of the drug overdose deaths from 2012 to 2017 (chart 14).

CHART 12: Men have a higher number of drug overdose deaths compared with women



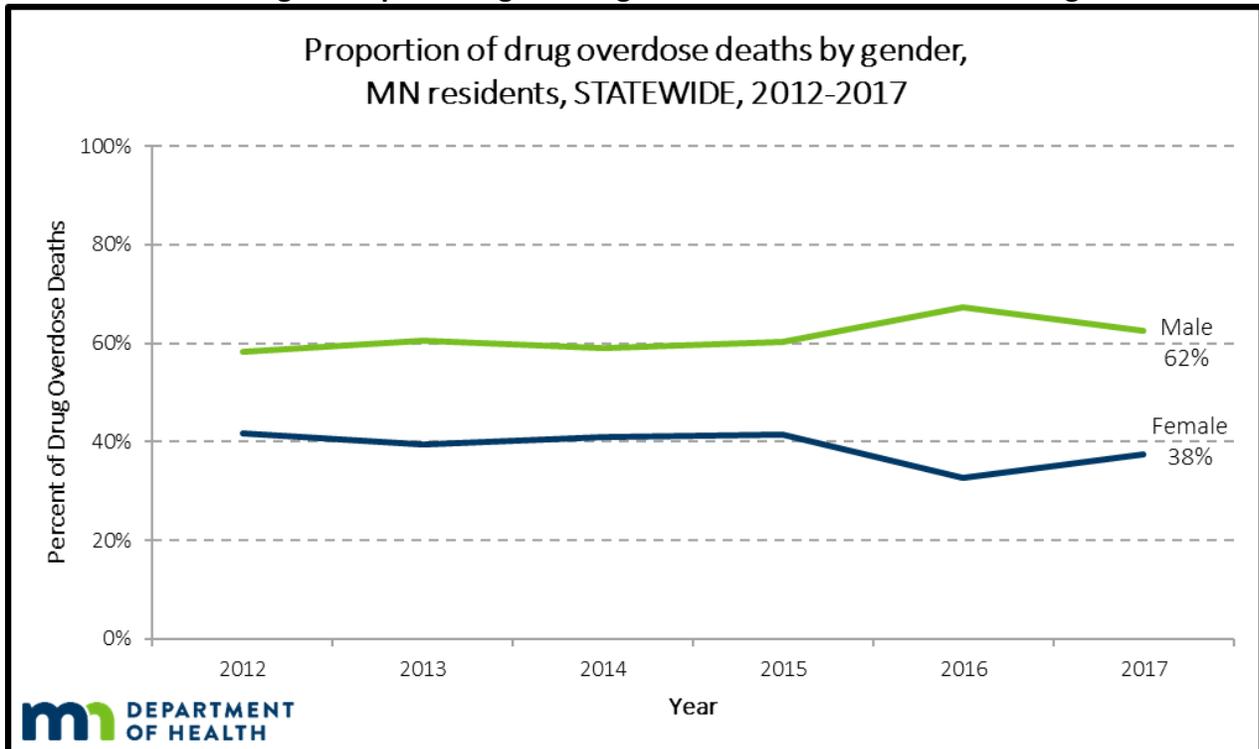
SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2015-2017

CHART 13: Men have a higher drug overdose mortality rate compared with women



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2015-2017
 *Crude (unadjusted) rates. 3-year rates were calculated using the Census 2010 population.

CHART 14: A greater percentage of drug overdose deaths occurred among men

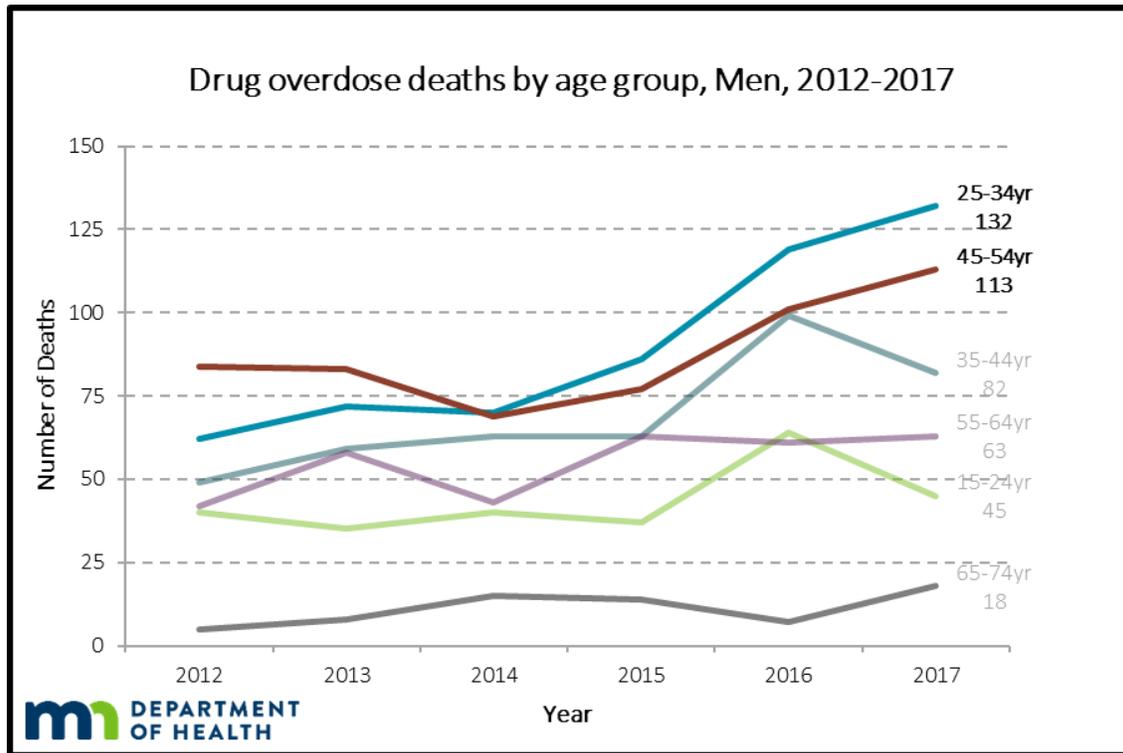


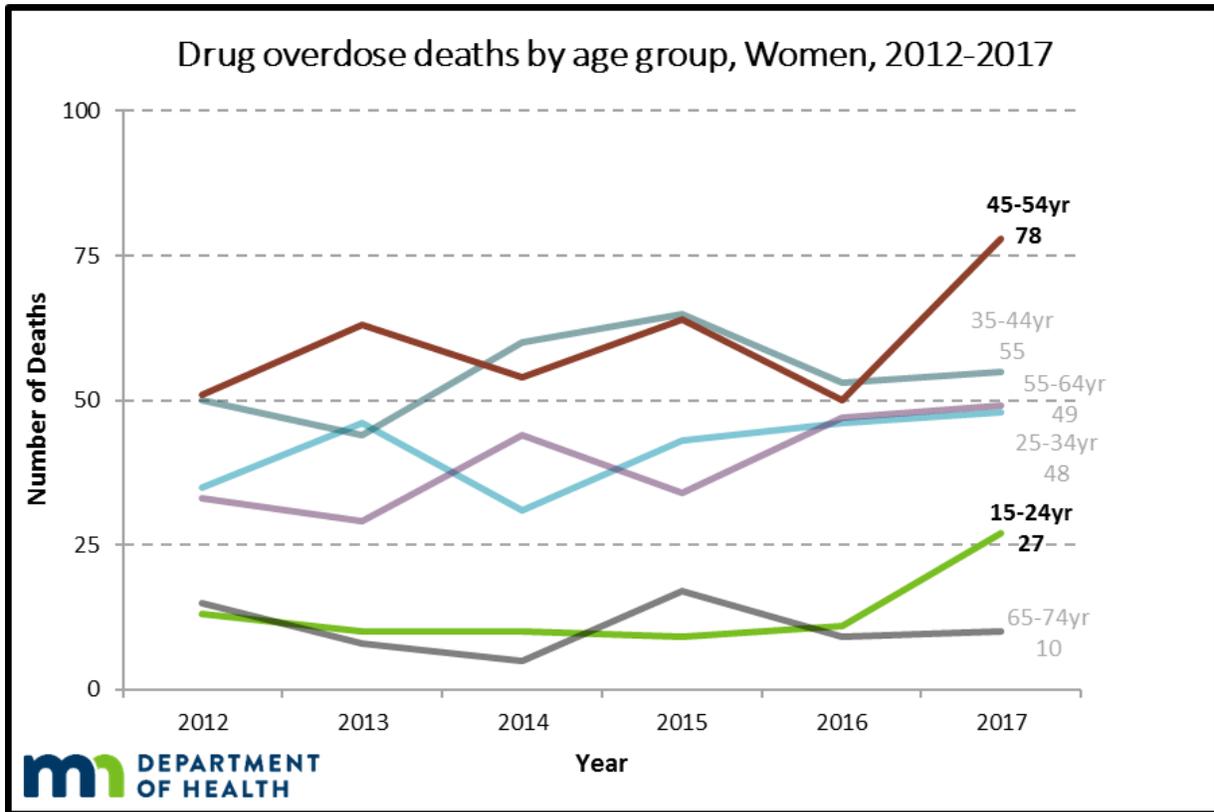
SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2012-2017

Age & gender of drug overdose deaths

As highlighted on the previous page, a majority of drug overdose deaths occur among men, and this trend has been consistent over the past five years. In 2017, the number of drug overdose deaths for men remained stable, while the number of drug overdose deaths among women increased. For men, the number of drug overdose deaths increased across the 25 to 34 and 45 to 54 year age groups. The increase in drug overdose deaths among women occurred in the 45 to 54 and 15 to 24 year age groups (chart 15).

CHART 15: Increases in drug overdose deaths occurred in different age groups for men and women





SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2012-2017

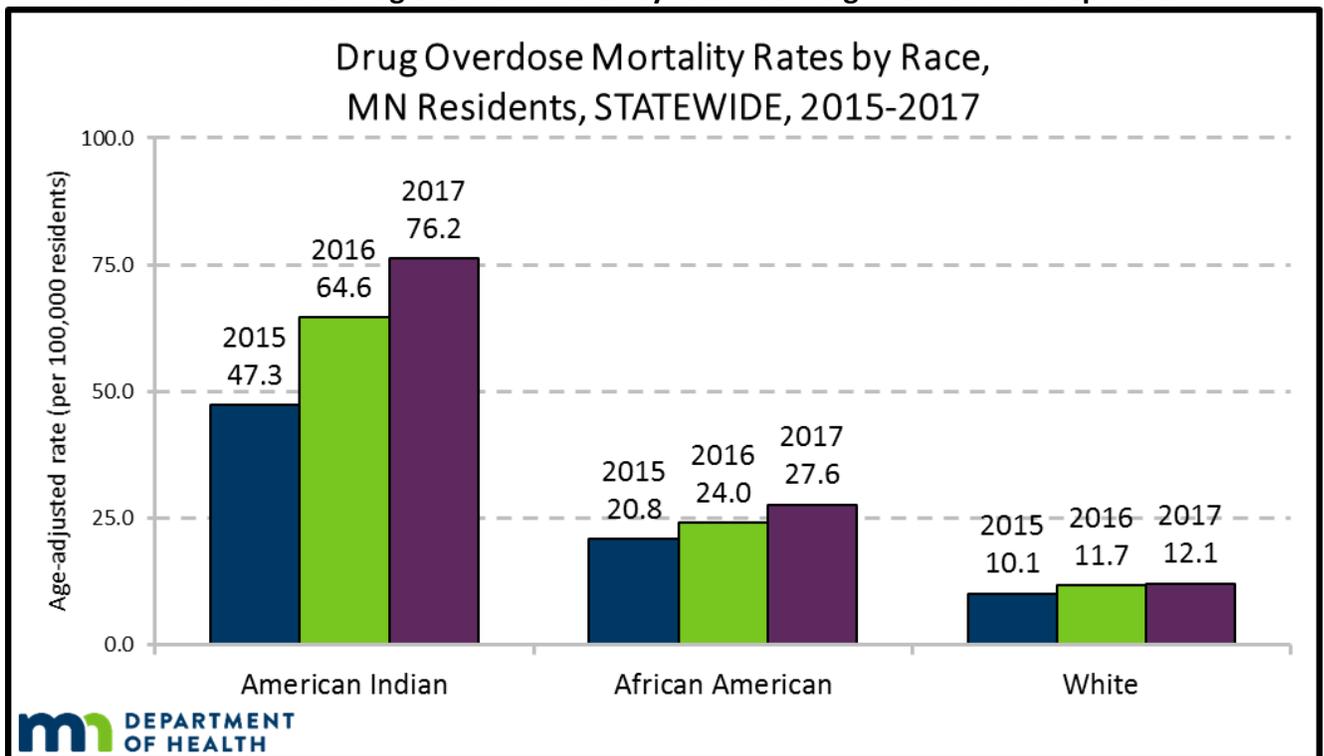
Race disparities in drug overdose deaths

Minnesota ranked sixth lowest among all states in overall drug overdose mortality rate in 2015 (10.6 per 100,000 residents). In 2015, however, Minnesota ranked first amongst all states when measuring the disparity rate ratio of drug overdose deaths among American Indians relative to whites. Native American Minnesotans were five times more likely to die from a drug overdose than white Minnesotans. Rate ratios were calculated for nine states with sufficient numbers of deaths to calculate reliable mortality rates.

In 2015, Minnesota ranked first amongst all states when measuring the disparity-rate ratio of deaths due to drug overdose among African Americans relative to whites. African American Minnesotans were twice as likely to die from drug overdose as white Minnesotans. Rate ratios were calculated for 35 states with sufficient numbers of deaths to calculate reliable mortality rates.

Both of these disparities – between Native American/whites and African Americans/whites – are the greatest rate disparity based on race in the United States. Final 2017 data show the disparity has continued and worsened. While the white drug overdose mortality rate increased from 10.1 to 12.1 per 100,000 white residents, the American Indian mortality rate increased from 47.3 per 100,000 residents to 76.2 per 100,000 residents, and the African American rate increased from 20.8 per 100,000 residents to 27.6 per 100,000 residents (chart 16). National 2017 mortality data show the disparity rate ratio for Native American/whites is the highest, while the African American/white disparity rate ratio remains high as number three in the United States.

CHART 16: The state drug overdose mortality rate masks significant racial disparities



SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2015-2017

Appendix 1 – Drug Category Tables

Table 1: Number of opioid-involved overdose deaths (non-exclusive), by county of residence or metro area and year, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Aitkin	0	0	1	1	2	0	0	1	0	1	2	1	1	4	1	2	2	*	19
Anoka	5	11	5	11	12	12	14	15	15	18	28	29	29	32	19	24	26	31	336
Becker	0	0	0	0	1	0	0	1	3	0	0	1	1	2	1	3	2	*	15
Beltrami	0	0	1	0	2	2	0	2	3	0	2	3	4	1	2	1	2	*	25
Benton	0	1	0	1	0	0	1	1	3	5	4	2	1	1	1	5	5	*	31
Big Stone	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	*	3
Blue Earth	0	0	0	0	0	2	0	1	0	1	2	0	0	0	2	0	5	*	13
Brown	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	*	3
Carlton	0	0	0	0	2	1	2	2	4	3	1	3	5	1	6	5	4	*	39
Carver	0	1	0	3	1	1	1	3	2	1	4	3	2	5	3	5	4	*	39
Cass	0	0	0	0	2	4	2	0	2	2	2	4	4	5	2	6	0	*	35
Chippewa	0	0	0	0	0	0	1	0	0	1	1	0	1	0	1	0	0	*	5
Chisago	0	0	0	1	1	0	1	2	5	1	2	5	6	2	5	5	2	*	38
Clay	0	0	0	1	0	3	0	6	1	4	2	4	1	3	3	8	4	*	40
Clearwater	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	*	3
Cook	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	*	3
Cottonwood	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	*	3
Crow Wing	1	2	0	1	2	2	4	3	0	7	0	2	2	5	3	1	3	*	38
Dakota	2	9	6	7	8	7	6	13	23	28	23	25	25	24	16	24	26	28	300

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Dodge	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1	*	5
Douglas	0	0	0	0	1	0	1	2	0	0	0	6	0	0	2	0	0	*	12
Faribault	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	1	0	*	4
Fillmore	0	0	1	0	1	2	1	0	0	0	0	0	0	0	0	0	1	*	6
Freeborn	0	0	0	1	1	0	0	0	0	4	1	1	1	2	0	1	0	*	12
Goodhue	0	0	0	1	1	2	0	2	3	2	1	0	2	2	3	2	3	*	24
Grant	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	*	1
Hennepin	32	39	39	38	43	53	53	61	79	73	69	75	93	99	92	101	146	150	1335
Houston	0	0	0	1	1	0	1	2	1	1	1	1	1	1	0	2	1	*	14
Hubbard	0	0	1	1	0	0	0	2	1	0	0	1	0	0	0	0	1	*	7
Isanti	0	0	2	1	0	0	0	2	2	2	1	1	1	0	1	4	7	*	24
Itasca	0	1	1	0	1	1	2	1	3	4	1	6	0	2	3	3	3	*	32
Jackson	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	*	3
Kanabec	0	0	0	0	0	0	0	0	1	2	0	0	1	0	2	1	0	*	7
Kandiyohi	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	1	1	*	6
Kittson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	*	2
Koochiching	0	0	0	0	1	1	0	0	0	0	0	2	0	0	1	0	1	*	6
Lac Qui Parle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Lake	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	*	3
Lake of the Woods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Le Sueur	0	0	0	0	1	0	1	0	0	1	0	0	0	2	0	0	0	*	5
Lincoln	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	*	2

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Lyon	0	1	0	0	0	0	0	1	0	0	0	0	1	0	1	1	1	*	6
Mahnomen	0	0	0	0	0	0	0	0	1	1	0	1	0	0	2	0	1	*	6
Marshall	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	*	2
Martin	0	0	0	0	1	2	1	0	0	0	1	0	0	0	1	0	0	*	6
McLeod	0	1	0	0	0	2	2	2	1	3	0	2	3	0	0	0	0	*	16
Meeker	0	0	0	0	2	0	0	0	2	0	3	0	2	2	2	0	0	*	13
Mille Lacs	0	0	0	1	0	2	1	1	2	5	1	3	2	3	3	2	4	*	30
Morrison	0	0	0	0	0	0	3	2	0	1	2	1	3	1	1	2	2	*	18
Mower	0	0	0	0	0	0	0	2	1	2	0	0	1	2	3	4	2	*	17
Murray	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	*	3
Nicollet	0	0	0	0	0	0	1	0	0	0	1	1	0	1	1	0	0	*	5
Nobles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	*	1
Olmsted	3	1	0	2	4	0	2	1	1	3	2	5	8	9	11	7	8	*	67
Otter Tail	0	0	1	1	0	0	1	0	2	1	0	1	1	1	2	3	3	*	17
Pennington	0	0	1	1	1	1	0	0	0	2	0	1	0	0	1	0	0	*	8
Pine	0	0	0	1	1	0	1	0	0	1	2	4	3	1	2	3	1	*	20
Pipestone	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1
Polk	0	0	1	2	0	0	2	3	1	1	3	1	3	4	3	3	3	*	30
Pope	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	*	2
Ramsey	3	9	21	10	14	27	14	16	24	25	25	28	31	27	28	35	34	45	416
Red Lake	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	*	1
Redwood	0	0	0	0	0	0	0	1	0	1	0	1	0	3	0	2	0	*	8

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Renville	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	2	0	*	6
Rice	1	1	0	0	0	0	0	2	4	2	1	3	1	1	3	0	4	*	23
Rock	0	0	0	0	0	1	1	0	1	0	0	0	0	2	0	0	3	*	8
Roseau	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	*	3
Scott	0	2	1	4	3	2	4	5	2	6	3	9	5	2	6	3	9	*	66
Sherburne	1	1	2	1	3	0	1	4	2	3	5	3	5	4	10	4	8	*	57
Sibley	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3	1	*	7
St. Louis	2	3	0	0	0	0	0	0	0	0	0	15	19	17	26	23	23	23	151
Stearns	1	2	2	1	3	0	4	5	4	9	1	6	4	8	4	11	8	*	73
Steele	0	1	0	0	2	0	0	0	1	0	0	0	1	3	1	0	2	*	11
Stevens	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	1	*	4
Swift	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	*	2
Todd	0	0	0	0	0	0	1	0	0	3	1	1	0	1	1	1	0	*	9
Traverse	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	*	2
Wabasha	0	0	0	0	0	1	0	1	1	1	2	1	1	0	0	0	0	*	8
Wadena	0	0	0	0	1	0	0	0	0	2	0	0	0	0	1	0	1	*	5
Waseca	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	*	3
Washington	1	2	2	0	6	3	4	2	8	10	4	9	6	7	14	10	11	15	114
Watonwan	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	*	1
Wilkin	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	1
Winona	1	1	0	1	1	0	2	1	4	4	1	4	2	4	7	2	1	*	36
Wright	0	1	1	1	4	5	6	0	0	7	4	4	4	7	5	1	4	*	54

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Yellow Medicine	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	1	*	5
7-county metro	43	73	74	73	87	105	96	115	153	161	156	178	191	196	178	202	256	280	2337
Greater MN	11	17	17	25	44	36	49	58	63	99	60	113	100	110	139	133	138	142	1212
Unknown County	0	0	2	8	4	4	10	7	10	17	13	0	2	0	0	1	1	0	79
Total	54	90	93	106	135	145	155	180	226	277	229	291	293	306	317	336	395	422	3628

SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

Underlying cause of death includes ICD-10 code indicating drug overdose (X40-X44, X60-X64, X85, or Y10-Y14); contributing cause of death includes ICD-10 code indicating opioid use (T40.0, T40.1, T40.2, T40.3, T40.4, T40.6). Opioid overdose deaths are not exclusive of other drug categories.

7-county metro: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties; Greater Minnesota: Not part of the 7-county;

Unknown county: County FIPS code is invalid or missing

*See Appendix 3: Definitions and Methodology

**Table 2: Number of heroin-involved overdose deaths (non-exclusive),
by county of residence/metro area and year, 2000 – 2017**

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Aitkin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Anoka	0	2	0	1	0	1	0	3	1	5	4	11	7	15	6	7	6	17	86
Becker	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	1	*	4
Beltrami	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	*	3
Benton	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	*	3
Big Stone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Blue Earth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Carlton	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	*	3
Carver	0	0	0	0	0	0	0	1	0	0	1	1	0	3	0	1	2	*	9
Cass	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	*	4
Chippewa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Chisago	0	0	0	0	0	0	0	0	0	0	1	1	1	0	2	1	1	*	7
Clay	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	3	*	6
Clearwater	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Cook	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Cottonwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Crow Wing	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	*	4
Dakota	0	0	0	0	0	0	0	2	2	2	4	6	8	5	5	6	8	*	48
Dodge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Douglas	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Faribault	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Fillmore	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	*	1
Freeborn	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	*	1
Goodhue	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	*	2
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Hennepin	1	1	0	2	1	1	3	40	41	46	72	41	249						
Houston	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	*	1
Hubbard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Isanti	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	1	3	*	7
Itasca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	*	1
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Kanabec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Kandiyohi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Kittson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Koochiching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lac Qui Parle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lake Of The Woods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Le Sueur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lyon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	*	1
Mahnomen	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	*	2

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Marshall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Martin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
McLeod	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	*	2
Meeker	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	*	2
Mille Lacs	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3	0	0	*	6
Morrison	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	*	3
Mower	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	*	5
Murray	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Nicollet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Nobles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	*	1
Olmsted	1	0	0	0	0	0	0	0	0	2	0	2	1	3	5	4	3	*	21
Otter Tail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Pennington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Pipestone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Polk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Pope	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	*	1
Ramsey	0	0	2	0	0	0	0	0	2	0	1	9	8	6	9	9	13	12	71
Red Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Redwood	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	*	2
Renville	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Rice	0	0	0	0	0	0	0	0	1	1	0	3	0	0	1	0	4	*	10

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Rock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Roseau	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Scott	0	0	0	0	0	0	0	1	1	0	0	2	3	0	1	2	6	*	16
Sherburne	0	0	0	0	0	0	1	0	0	1	0	1	2	0	3	1	3	*	12
Sibley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
St. Louis	0	0	0	0	0	0	0	0	0	0	0	0	2	1	6	12	8	*	29
Stearns	0	0	0	0	0	0	0	0	0	1	0	1	0	3	1	1	1	*	8
Steele	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	*	1
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Swift	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Todd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Traverse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wabasha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wadena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Waseca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Washington	0	0	0	0	0	0	0	0	0	0	0	2	2	1	5	4	3	*	17
Watonwan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wilkin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Winona	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	*	1
Wright	0	0	0	0	0	0	0	0	0	0	1	1	1	4	3	0	2	*	12
Yellow Medicine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
7-county metro	1	3	2	1	0	1	0	7	6	9	11	32	31	70	67	75	110	80	506
Greater MN	1	2	0	0	0	1	1	0	2	7	4	15	15	22	31	38	40	31	210
Unknown county	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	3
Total	2	5	2	1	1	2	1	8	8	16	15	47	46	92	98	114	150	111	719

SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

Underlying cause of death includes ICD-10 code indicating drug overdose (X40-X44, X60-X64, X85, or Y10-Y14); contributing cause of death includes ICD-10 code indicating heroin use (T40.1).

Heroin overdose deaths are not exclusive of other drug categories.

7-county metro: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties; Greater Minnesota: Not part of the 7-county;

Unknown county: County FIPS code is invalid or missing

*See Appendix 3: Definitions and Methodology

Table 3: Number of cocaine-involved overdose deaths (non-exclusive), by county of residence/metro area and year, 2000 – 2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Aitkin	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	*	2
Anoka	0	1	1	1	3	3	1	1	2	1	0	4	6	7	0	4	1	*	36
Becker	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	*	1
Beltrami	0	0	0	0	1	1	0	1	0	0	0	0	0	0	1	0	0	*	4
Benton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Big Stone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Blue Earth	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	*	1
Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Carlton	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	*	2
Carver	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	*	1
Cass	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	*	2
Chippewa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Chisago	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	*	1
Clay	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	*	3
Clearwater	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Cook	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Cottonwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Crow Wing	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	*	3
Dakota	0	2	1	2	0	0	1	1	0	2	1	1	4	1	0	1	2	*	19
Dodge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Douglas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Faribault	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Fillmore	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	*	2
Freeborn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Goodhue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Hennepin	7	3	3	10	13	15	11	24	8	9	13	23	11	19	15	21	23	37	265
Houston	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	*	1
Hubbard	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	*	2
Isanti	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	*	2
Itasca	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	*	1
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Kanabec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Kandiyohi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Kittson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Koochiching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lac Qui Parle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lake Of The Woods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Le Sueur	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	*	2
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lyon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Mahnomen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Marshall	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	1
Martin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
McLeod	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	*	1
Meeker	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	*	1
Mille Lacs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Morrison	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	*	2
Mower	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	1	0	*	4
Murray	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Nicollet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Nobles	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	1
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Olmsted	0	0	0	2	1	0	0	0	2	1	0	1	2	1	1	2	1	*	14
Otter Tail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Pennington	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	*	1
Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	*	1
Pipestone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Polk	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	*	1
Pope	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Ramsey	1	1	8	2	2	4	7	9	3	3	6	7	5	6	11	8	10	10	103
Red Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Redwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Renville	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Rice	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	*	3

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Rock	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	*	1
Roseau	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Scott	0	1	0	2	0	0	2	1	0	1	1	1	0	0	1	0	2	*	12
Sherburne	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1
Sibley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
St. Louis	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	*	4
Stearns	0	0	1	1	0	0	1	1	0	0	0	0	0	2	1	0	0	*	7
Steele	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	*	3
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Swift	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Todd	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	*	1
Traverse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wabasha	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	*	2
Wadena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Waseca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Washington	0	2	1	0	1	2	0	2	0	1	1	0	1	1	3	1	1	*	17
Watonwan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wilkin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Winona	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	*	2
Wright	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	*	1
Yellow Medicine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
7-county metro	8	10	14	17	19	24	22	38	13	17	22	36	27	35	30	35	39	57	463
Greater MN	1	3	5	7	9	3	5	6	8	3	2	6	5	6	5	6	5	11	96
Unknown county	0	0	1	1	2	0	0	2	0	1	1	0	0	0	0	0	0	0	8
Total	9	13	20	25	30	27	27	46	21	21	25	42	32	41	35	41	44	68	567

SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

Underlying cause of death includes ICD-10 code indicating drug overdose (X40-X44, X60-X64, X85, or Y10-Y14); contributing cause of death includes ICD-10 code indicating cocaine use (T40.5). Cocaine overdose deaths are not exclusive of other drug categories.

7-county metro: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties; Greater Minnesota: Not part of the 7-county;

Unknown county: County FIPS code is invalid or missing

*See Appendix 3: Definitions and Methodology

Table 4: Number of benzodiazepine-involved overdose deaths (non-exclusive), by county of residence/metro area and year, 2000 – 2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Aitkin	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	*	1
Anoka	1	0	0	0	0	0	1	0	2	3	5	5	5	6	5	2	6	*	41
Becker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Beltrami	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	*	3
Benton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	*	3
Big Stone	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	*	1
Blue Earth	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	1	*	4
Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Carlton	0	1	0	0	0	1	1	0	2	0	2	0	1	0	0	2	1	*	11
Carver	0	0	0	1	0	1	0	1	0	3	2	0	0	1	2	0	1	*	12
Cass	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	2
Chippewa	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	*	1
Chisago	0	0	0	0	0	0	0	2	1	0	2	1	2	0	2	0	1	*	11
Clay	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	*	2
Clearwater	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Cook	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Cottonwood	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1
Crow Wing	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	1	*	4
Dakota	0	1	0	2	1	2	3	1	7	15	5	13	11	7	2	10	3	*	83
Dodge	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	*	2
Douglas	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Faribault	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Fillmore	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	*	2
Freeborn	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	*	4
Goodhue	0	0	0	0	0	2	0	0	2	1	0	1	1	1	0	1	3	*	12
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Hennepin	4	5	8	4	10	9	12	4	4	12	9	13	8	18	16	27	49	46	258
Houston	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	*	2
Hubbard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Isanti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	*	2
Itasca	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	*	2
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Kanabec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	*	1
Kandiyohi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Kittson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Koochiching	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1
Lac Qui Parle	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	*	1
Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lake Of The Woods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Le Sueur	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	*	2
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lyon	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	*	2
Mahnomen	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	*	2

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Marshall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Martin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
McLeod	0	0	0	0	0	0	1	0	0	1	0	2	1	0	0	0	0	*	5
Meeker	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	*	3
Mille Lacs	0	0	0	0	0	0	0	0	0	2	1	0	1	0	1	0	1	*	6
Morrison	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	*	2
Mower	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Murray	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Nicollet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Nobles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	*	1
Olmsted	1	1	0	1	0	0	0	0	1	1	0	0	2	3	7	3	6	*	26
Otter Tail	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	*	3
Pennington	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	*	1
Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	*	2
Pipestone	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1
Polk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Pope	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Ramsey	0	0	2	0	0	3	0	0	2	3	3	0	0	1	2	6	7	*	29
Red Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Redwood	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	*	3
Renville	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	*	3
Rice	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	*	2

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Rock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Roseau	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	*	1
Scott	0	1	0	0	0	0	1	1	1	4	1	3	2	0	1	0	3	*	18
Sherburne	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	1	*	5
Sibley	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	*	3
St. Louis	1	0	0	0	0	0	0	0	0	0	0	5	4	5	6	3	6	*	30
Stearns	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	2	0	*	5
Steele	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	*	3
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Swift	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	*	3
Todd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Traverse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wabasha	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	*	2
Wadena	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	*	1
Waseca	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	*	1
Washington	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	*	4
Watonwan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wilkin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Winona	0	0	0	1	1	0	0	1	0	1	0	3	0	0	3	1	0	*	11
Wright	0	0	0	1	1	1	1	0	0	0	1	1	0	1	0	0	1	*	8
Yellow Medicine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
7-county metro	5	7	10	7	11	15	18	7	16	40	25	35	26	33	28	46	70	73	472
Greater MN	3	2	0	6	4	6	7	9	14	14	10	21	16	17	27	25	33	19	233
Unknown county	0	0	0	0	1	1	0	1	1	4	3	0	1	0	0	0	0	0	12
Total	8	9	10	13	16	22	25	17	31	58	38	56	43	50	55	71	103	92	717

SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

Underlying cause of death includes ICD-10 code indicating drug overdose (X40-X44, X60-X64, X85, or Y10-Y14); contributing cause of death includes ICD-10 code indicating benzodiazepine use (T42.4). Benzodiazepine overdose deaths are not exclusive of other drug categories.

7-county metro: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties; Greater Minnesota: Not part of the 7-county;

Unknown county: County FIPS code is invalid or missing

*See Appendix 3: Definitions and Methodology

Table 5: Number of psychostimulants with abuse potential-involved overdose deaths (non-exclusive), by county of residence/metro area and year, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Aitkin	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	*	2
Anoka	1	0	0	3	1	4	1	2	0	1	0	3	4	4	5	6	5	13	53
Becker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Beltrami	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	3	*	6
Benton	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	1	*	5
Big Stone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Blue Earth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Carlton	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2	*	7
Carver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Cass	0	0	0	0	0	1	0	0	0	0	1	0	1	1	1	3	2	*	10
Chippewa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Chisago	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	*	2
Clay	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2	*	6
Clearwater	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Cook	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Cottonwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Crow Wing	0	1	1	1	0	0	0	0	0	0	0	0	3	0	0	1	7	*	14
Dakota	1	0	1	1	0	0	1	0	0	0	1	2	0	2	5	4	12	*	30
Dodge	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	*	3
Douglas	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	*	3

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Faribault	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	*	1
Fillmore	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	*	1
Freeborn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	*	2
Goodhue	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	*	2
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Hennepin	1	1	3	3	1	2	3	3	8	1	7	8	14	13	13	20	31	43	175
Houston	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	*	3
Hubbard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	*	1
Isanti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	*	3
Itasca	0	0	0	0	0	1	2	0	0	0	0	0	1	1	3	1	0	*	9
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	*	1
Kanabec	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	*	1
Kandiyohi	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	*	2
Kittson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Koochiching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Lac Qui Parle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lake Of The Woods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Le Sueur	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	*	1
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lyon	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	*	2
Mahnomen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	*	6

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Marshall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Martin	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	*	2
McLeod	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	*	2
Meeker	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	*	2
Mille Lacs	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	0	1	*	5
Morrison	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Mower	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	*	3
Murray	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Nicollet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Nobles	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	*	2
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	*	2
Olmsted	0	0	0	0	0	0	1	0	0	1	0	1	3	4	6	3	11	*	30
Otter Tail	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	*	3
Pennington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	2	*	5
Pipestone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Polk	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	*	5
Pope	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	*	1
Ramsey	0	0	0	1	3	1	2	1	0	2	1	5	7	4	7	12	13	13	72
Red Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Redwood	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	*	1
Renville	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	*	1
Rice	0	0	1	0	0	0	0	0	1	0	1	0	0	0	1	1	2	*	7

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Rock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Roseau	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Scott	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	*	7
Sherburne	0	0	0	0	1	0	0	0	2	0	0	1	1	0	4	1	2	*	12
Sibley	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	1
St. Louis	1	0	0	0	0	0	0	0	0	0	0	0	3	2	5	10	7	12	40
Stearns	0	0	0	1	0	1	0	0	0	0	0	0	1	1	1	2	3	*	10
Steele	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	2
Stevens	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	*	2
Swift	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Todd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Traverse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wabasha	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	*	2
Wadena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Waseca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Washington	1	0	1	0	0	2	2	0	1	0	0	1	2	3	1	2	2	*	18
Watonwan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wilkin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Winona	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	1	*	6
Wright	0	1	1	0	0	1	0	0	0	0	0	0	0	1	3	2	0	*	9
Yellow Medicine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	*	2

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
7-county metro	4	1	6	8	5	9	9	6	9	4	9	19	27	26	31	44	69	81	367
Greater MN	3	4	4	4	4	7	4	2	4	4	7	14	20	17	38	39	71	80	326
Unknown county	0	0	1	0	0	2	1	0	0	0	2	0	1	0	0	0	0	0	7
Total	7	5	11	12	9	18	14	8	13	8	18	33	48	43	69	83	140	161	700

SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

Underlying cause of death includes ICD-10 code indicating drug overdose (X40-X44, X60-X64, X85, or Y10-Y14); contributing cause of death includes ICD-10 code indicating psychostimulants with abuse potential use (T43.6). Psychostimulants with abuse potential drug overdose deaths are not exclusive of other drug categories.

7-county metro: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties; Greater Minnesota: Not part of the 7-county;

Unknown county: County FIPS code is invalid or missing

*See Appendix 3: Definitions and Methodology

Table 6: Number of other and unspecified narcotic drug deaths (non-exclusive), by county of residence/metro area and year, 2000 – 2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Aitkin	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	*	1
Anoka	2	2	2	0	0	2	0	2	6	1	3	3	3	0	0	3	0	*	29
Becker	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	1	*	5
Beltrami	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	*	2
Benton	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	0	*	4
Big Stone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Blue Earth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Carlton	0	0	0	0	0	0	0	0	0	2	0	0	1	0	2	0	0	*	5
Carver	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	*	1
Cass	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	*	4
Chippewa	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	*	1
Chisago	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	*	3
Clay	0	0	0	0	0	0	0	0	0	3	1	0	0	0	1	1	1	*	7
Clearwater	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Cook	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Cottonwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Crow Wing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Dakota	1	1	2	0	0	0	1	1	2	3	2	0	0	1	1	2	1	*	18
Dodge	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	*	1
Douglas	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	*	3

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Faribault	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Fillmore	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	*	1
Freeborn	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	*	1
Goodhue	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	*	2
Grant	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	*	1
Hennepin	23	23	24	25	21	22	22	16	34	36	26	45	53	11	3	9	4	*	397
Houston	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1
Hubbard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Isanti	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	*	3
Itasca	0	0	0	0	1	0	1	0	2	1	0	0	0	1	1	0	0	*	7
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Kanabec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Kandiyohi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	*	1
Kittson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Koochiching	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lac Qui Parle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lake Of The Woods	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Le Sueur	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	*	1
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Lyon	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	*	1
Mahnomen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Marshall	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1
Martin	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	*	1
McLeod	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	*	3
Meeker	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	*	1
Mille Lacs	0	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	*	4
Morrison	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	*	2
Mower	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Murray	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	*	1
Nicollet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Nobles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Olmsted	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	*	2
Otter Tail	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	*	2
Pennington	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	*	3
Pine	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	*	1
Pipestone	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Polk	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	*	4
Pope	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Ramsey	2	0	3	4	7	8	1	5	1	4	2	6	3	1	3	4	1	*	55
Red Lake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Redwood	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	*	2
Renville	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Rice	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	*	2

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Rock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Roseau	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Scott	0	1	0	2	0	1	1	2	0	2	1	0	0	0	2	0	1	*	13
Sherburne	1	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	*	4
Sibley	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1
St. Louis	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	*	5
Stearns	0	0	0	0	0	0	0	0	2	1	0	1	1	0	0	2	0	*	7
Steele	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	*	4
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	*	1
Swift	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Todd	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	*	1
Traverse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wabasha	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	*	1
Wadena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Waseca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Washington	0	1	2	0	2	0	1	0	0	2	0	1	1	1	1	0	0	*	12
Watonwan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Wilkin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	0
Winona	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	*	5
Wright	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	*	1
Yellow Medicine	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
7-county metro	28	28	33	31	30	33	26	27	43	48	34	55	60	14	10	18	7	14	539
Greater MN	3	3	1	2	7	4	5	3	12	13	7	13	9	9	12	6	9	6	124
Unknown county	0	0	0	0	0	1	0	1	2	2	2	0	0	0	0	0	1	0	9
Total	31	31	34	33	37	38	31	31	57	63	43	68	69	23	22	24	17	20	672

SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

Underlying cause of death includes ICD-10 code indicating drug overdose (X40-X44, X60-X64, X85, or Y10-Y14); contributing cause of death includes ICD-10 code indicating other and unspecified narcotics (T40.6). Other and unspecified narcotics drug overdose deaths are not exclusive of other drug categories.

7-county metro: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties; Greater Minnesota: Not part of the 7-county;

Unknown county: County FIPS code is invalid or missing

*See Appendix 3: Definitions and Methodology

Appendix 2 – 7-county metro vs. Greater Minnesota

Number of drug overdose deaths, 7-county metro vs. Greater MN, MN Residents, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Aitkin	1	0	3	1	3	2	1	2	0	1	2	2	4	5	2	3	4	*	36
Anoka	10	14	10	15	15	20	17	19	20	31	35	41	44	45	27	36	36	46	481
Becker	1	0	1	0	3	0	0	2	4	3	1	3	1	3	1	5	3	*	31
Beltrami	0	1	2	0	3	5	2	5	5	2	4	6	7	4	3	3	4	*	56
Benton	0	1	1	3	0	2	2	3	4	5	4	5	1	2	3	7	7	*	50
Big Stone	0	0	0	1	0	0	1	0	0	0	1	0	1	0	0	1	1	*	6
Blue Earth	0	0	0	1	0	4	0	3	0	2	3	5	5	1	3	3	7	*	37
Brown	0	0	0	2	1	0	0	1	1	0	2	2	0	0	2	1	2	*	14
Carlton	1	1	0	2	2	4	2	3	5	5	2	6	6	3	7	7	6	*	62
Carver	1	1	1	3	1	1	1	4	3	4	4	5	3	5	5	8	6	*	56
Cass	2	0	2	0	3	5	5	1	4	3	4	9	6	5	6	7	7	10	79
Chippewa	0	0	0	1	0	0	1	0	0	1	1	0	1	1	1	0	0	*	7
Chisago	1	0	1	3	1	0	2	2	7	1	2	8	8	5	8	6	4	*	59
Clay	0	4	2	4	1	3	3	10	6	6	4	10	3	9	9	14	9	*	97
Clearwater	2	1	0	0	0	1	0	0	1	0	0	0	1	1	1	1	3	*	12
Cook	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	*	4
Cottonwood	0	0	1	0	0	1	0	0	0	1	0	3	0	0	0	0	0	*	6
Crow Wing	1	3	1	4	4	2	6	4	2	9	3	5	6	9	7	8	12	*	86

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Dakota	3	17	10	16	10	13	11	19	30	37	32	38	32	34	30	42	42	39	455
Dodge	0	1	0	0	0	0	2	0	0	2	0	0	2	1	0	2	1	*	11
Douglas	0	0	0	1	1	1	1	2	0	0	2	7	2	0	2	1	1	*	21
Faribault	0	0	0	1	1	1	0	0	0	0	0	1	0	2	0	3	0	*	9
Fillmore	0	0	1	0	1	2	1	0	1	0	0	1	1	0	1	0	2	*	11
Freeborn	1	1	0	3	1	0	0	1	2	4	1	3	1	3	0	1	3	*	25
Goodhue	0	1	1	2	2	3	1	2	3	3	2	2	2	4	3	3	3	*	37
Grant	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	*	2
Hennepin	52	61	66	63	72	80	89	97	103	96	103	128	128	149	131	156	202	220	1996
Houston	0	0	0	1	1	0	1	3	1	1	2	2	1	1	0	2	1	*	17
Hubbard	0	1	2	1	1	0	1	2	3	1	2	3	1	0	2	1	2	*	23
Isanti	0	0	4	2	1	0	1	2	2	4	2	1	1	0	3	4	8	*	35
Itasca	0	1	3	1	2	2	3	5	5	5	4	7	4	5	7	5	5	*	64
Jackson	1	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	2	*	7
Kanabec	2	0	0	0	0	0	0	0	1	2	1	1	2	0	2	1	0	*	12
Kandiyohi	0	0	0	2	1	1	2	1	1	0	1	4	1	0	2	8	1	*	25
Kittson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	*	2
Koochiching	0	0	2	2	1	2	0	0	0	0	0	2	0	0	2	0	2	*	13
Lac Qui Parle	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	*	4
Lake	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	*	4
Lake Of The Woods	0	0	0	1	0	0	0	0	0	0	2	0	1	0	1	0	0	*	5
Le Sueur	0	1	0	1	2	1	3	0	1	1	0	1	0	2	2	1	2	*	18

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Lincoln	0	0	0	0	1	0	0	1	0	1	1	0	1	0	1	0	0	*	6
Lyon	1	1	0	1	0	1	0	2	0	0	0	1	1	1	2	4	1	*	16
Mahnomen	0	0	0	0	1	0	0	0	1	2	0	1	0	1	5	0	3	*	14
Marshall	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	1	*	6
Martin	1	0	0	1	1	2	1	0	0	0	1	0	0	2	1	1	0	*	11
McLeod	1	2	2	0	0	2	2	2	1	4	0	2	3	1	1	0	0	*	23
Meeker	0	0	0	1	3	0	0	0	3	0	4	1	2	4	2	0	2	*	22
Mille Lacs	0	0	0	2	1	2	1	2	4	7	1	3	3	6	4	3	6	10	55
Morrison	0	0	1	0	4	0	4	3	1	1	4	1	4	1	2	6	6	*	38
Mower	0	2	3	1	0	1	1	4	5	4	1	1	4	6	3	8	2	*	46
Murray	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	2	0	*	5
Nicollet	0	0	0	0	0	0	3	1	0	3	1	4	2	2	3	2	0	*	21
Nobles	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	2	*	5
Norman	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	*	4
Olmsted	3	3	0	6	5	4	11	5	5	10	9	12	15	17	17	11	18	15	166
Otter Tail	2	0	2	2	0	0	2	2	2	2	0	4	7	3	3	5	5	*	41
Pennington	1	0	1	2	1	1	2	0	1	2	1	1	0	2	2	0	0	*	17
Pine	0	1	0	1	1	0	2	0	0	1	3	5	3	4	4	3	3	*	31
Pipestone	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	*	1
Polk	0	1	1	4	1	2	4	3	2	3	4	3	4	6	5	5	3	*	51
Pope	0	0	0	1	0	0	1	0	1	0	0	1	0	1	1	1	1	*	8
Ramsey	14	22	38	29	39	50	45	51	61	50	47	68	68	64	59	82	89	108	984
Red Lake	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	*	2

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Redwood	0	0	0	0	0	1	1	1	3	1	0	1	0	4	0	3	2	*	17
Renville	0	0	0	1	0	1	1	0	2	0	2	3	0	0	1	3	0	*	14
Rice	1	2	2	1	0	1	1	3	9	3	3	4	4	2	5	2	5	*	48
Rock	0	0	0	0	0	1	1	0	1	0	0	0	0	3	1	0	3	*	10
Roseau	0	0	0	0	2	2	0	1	1	1	0	0	0	0	0	1	0	*	8
Scott	0	3	2	6	5	4	6	5	4	8	3	9	9	3	9	3	13	15	107
Sherburne	1	4	3	4	4	5	2	4	12	3	9	6	12	8	13	7	11	*	108
Sibley	0	2	0	0	0	0	0	2	0	0	2	1	3	0	0	3	1	*	14
St. Louis	14	12	0	0	0	0	0	0	0	0	0	22	22	24	33	31	38	37	233
Stearns	3	3	6	7	5	4	8	9	7	16	5	14	9	17	13	17	20	19	182
Steele	0	1	1	1	2	0	0	1	2	0	0	4	1	5	2	2	2	*	24
Stevens	0	0	0	1	0	0	0	2	0	2	0	0	0	0	0	0	2	*	7
Swift	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	*	4
Todd	1	0	0	0	0	1	3	0	0	3	1	1	0	1	1	1	0	*	13
Traverse	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	*	3
Wabasha	0	0	0	0	0	3	2	3	2	2	4	1	1	1	0	0	1	*	20
Wadena	1	0	0	1	1	0	0	1	0	2	2	0	0	0	2	0	2	*	12
Waseca	1	0	0	2	0	1	1	1	1	0	1	0	1	1	0	1	3	*	14
Washington	2	5	9	6	11	12	13	11	15	16	14	23	15	19	24	18	25	28	266
Watonwan	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	1	0	*	5
Wilkin	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	*	3
Winona	2	1	0	2	3	0	4	3	4	6	3	6	4	7	10	4	3	*	62
Wright	0	2	3	2	6	7	8	4	2	9	7	8	5	9	8	4	6	*	90

DRUG OVERDOSE DEATHS AMONG MINNESOTA RESIDENTS, 2000-2017

County of residence	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	Total
Yellow Medicine	0	0	0	0	1	0	0	1	0	0	0	1	1	0	2	1	1	*	8
7-county metro	82	123	136	138	153	180	182	206	236	242	238	216	299	319	285	345	413	460	4253
Greater MN	47	56	55	84	81	85	109	117	134	154	123	312	184	208	231	237	261	273	2751
Unknown county	0	0	7	22	13	15	17	17	12	27	23	0	3	0	0	1	1	0	158
Total	129	179	198	244	247	280	308	340	382	423	384	528	486	527	516	583	675	733	7162

SOURCE: Minnesota death certificates, Injury and Violence Prevention Section, Minnesota Department of Health, 2000-2017

Underlying cause of death includes ICD-10 code indicating drug overdose (X40-X44, X60-X64, X85, or Y10-Y14)

7-county metro: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties; Greater Minnesota: Not part of the 7-county;

Unknown county: County FIPS code is invalid or missing

**See Appendix 3: Definitions and Methodology*

Appendix 3:

Definitions and methodology

Data for this report come from Minnesota death certificates, with cause and manner of death information provided by a medical examiner or coroner. A drug overdose death is defined as having an underlying cause of death within the following range of ICD-codes:

- Accidental poisoning by drugs: X40-X44
- Intentional self-poisoning by drugs: X60-X64
- Assault by drug poisoning: X85
- Drug poisoning of undetermined intent: Y10-Y14

This report provides the number of drug overdose deaths within ten non-exclusive categories of drugs that contributed to the cause of death, by county, metro area, and year. Note, for example, that an opioid-involved death may also be counted as a cocaine-involved death, if both drugs were listed on the death certificate as contributory causes. The ten non-exclusive categories of drug overdose deaths are defined as having a contributory cause of death within the following ranges of ICD-10 codes:

- All opioid-involved deaths: T40.0-T40.4, T40.6
- Prescription opioids: T40.2-T40.4
- Other opioids and methadone: T40.2-T40.3
- Synthetic opioids (includes fentanyl): T40.4
- Heroin: T40.1
- Cocaine: T40.5
- Benzodiazepines: T42.4
- Psychostimulants with abuse potential (includes methamphetamine): T43.6
- Other and unspecified narcotic(s): T40.6
- Other and unspecified drug(s): T50.9 and deaths without a T-code in the T36-T50.8 range

The methodology for defining drug overdose deaths and non-exclusive drug categories is based on the following sources:

Gabella BA, Proescholdbell SK, Johnson RL, Thomas KE. State Special Emphasis Report: Instructions Drug Overdose Death Data. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2014.

Injury Surveillance Workgroup 7. Consensus recommendations for national and state poisoning surveillance. Atlanta, GA: The Safe States Alliance; 2012. Available online at: http://c.ymcdn.com/sites/www.safestates.org/resource/resmgr/imported/ISW7%20Full%20Report_3.pdf.

Centers for Disease Control and Prevention. Opioid data analysis. Atlanta, GA; 2017. Available online at: <https://www.cdc.gov/drugoverdose/data/analysis.html>

Seven-county Metro: The Seven-county Metropolitan Area includes Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington counties.

Note (*): Data for 2017 are final and obtained from [CDC WONDER \(https://wonder.cdc.gov/\)](https://wonder.cdc.gov/) multiple cause of death (detailed mortality). Due to interjurisdictional death certificate data sharing issues, final 2017 data could not be obtained and analyzed within the Injury and Violence Prevention Section of the Minnesota Department of Health. Updated analyses are presented from functionalities of CDC WONDER. Due to data privacy and suppression rules of CDC WONDER, complete 2017 county-level data

could not be shared as was done from 2000-2016. County-level data are only presented where the number of deaths in 2017 exceeded 20.

Note: Alcohol overdose deaths are excluded from these analyses.

Suggested Citation:

Wright, N., Roesler, J. Drug Overdose Deaths among Minnesota Residents, 2000-2017. Saint Paul: Minnesota Department of Health. Report – February 2019.