DEPARTMENT OF HEALTH

# Nonfatal Hospital Visits for Intentional Drug Overdose Among Minnesota Residents

**2016 – 2022**

# Nonfatal Hospital Visits for Intentional Drug Overdose Among Minnesota Residents, 2016 – 2022

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# Key findings

- In 2022, there were 16,934 nonfatal drug overdoses treated in the hospital – around one-third of these were diagnosed as intentional (i.e., self-harm) drug overdoses.
- Similar to findings from a nationwide study, drugs that were commonly involved in nonfatal intentional drug overdoses included antidepressants, antipsychotics, acetaminophen (e.g., Tylenol), and ibuprofen (e.g., Advil).[1] Unlike nonfatal unintentional (i.e., accidental) or undetermined overdoses, opioids were not usually involved.
- Minnesotans aged 15-19 accounted for 26% of all nonfatal intentional overdoses treated in the hospital, despite making up 7% of the Minnesota population.
- Among female Minnesotans aged 13 and 14, the number of nonfatal intentional overdoses treated in the hospital rose sharply from 2019 to 2021 and has remained high since.

# Overview

Nonfatal drug overdoses continue to affect the lives of many Minnesotans. In 2022, there were 16,934 nonfatal drug overdoses treated in the hospital (including emergency department visits and inpatient hospitalizations) among Minnesota residents. This means for every one drug overdose death, there were nearly 13 nonfatal hospital-treated overdoses. Around one-third (5,991 overdoses) of these were diagnosed as intentional (i.e., self-harm). This report focuses on nonfatal intentional drug overdoses that were treated in the hospital among Minnesota residents and summarizes seven-year trends (2016-2022). **It is important to note that determining intent can be challenging and caution should be used when interpreting results.**

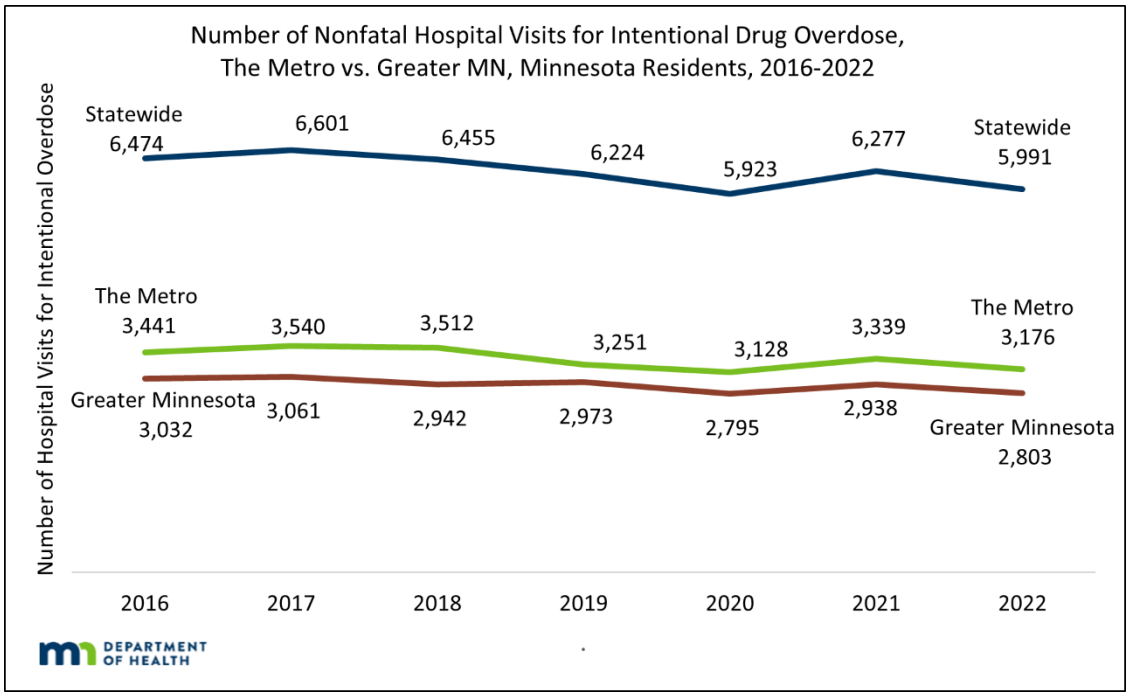
**For information on nonfatal drug overdoses of unintentional (i.e., accidental) or undetermined intent visit the** Nonfatal Drug Overdose Dashboard (https://www.health.state.mn.us/communities/opioids/data/nonfataldata.html) and the Nonfatal Hospital Visits for Intentional Drug Overdose Among Minnesota Residents Report (https://www.health.state.mn.us/communities/opioids/documents/final2021odmortalityreport.pdf).

# Seven-county Metro compared to Greater Minnesota

Statewide, nonfatal hospital visits for intentional drug overdose have varied since 2016 and have seen a slight decrease overall during this time period. In 2022, the number of nonfatal hospital visits for intentional drug overdose (5,991 overdoses) was 9% lower than in 2017 when the number of visits (6,601 overdoses) peaked.

Similarly, trends in hospital-treated nonfatal intentional overdoses have varied for both the 7-county Metro (the Metro) and Greater Minnesota since 2016. Like statewide trends, the Metro and Greater Minnesota have both experienced a slight decrease overall in nonfatal hospital visits for intentional drug overdose during this time period.

## Chart 1. Mirroring statewide trends, the number of nonfatal hospital visits for intentional drug overdose have varied in both the Metro and Greater Minnesota since 2016.




Data source: Minnesota hospital discharge data, Injury and Violence Prevention Section, Minnesota Department of Health, 2016-2022

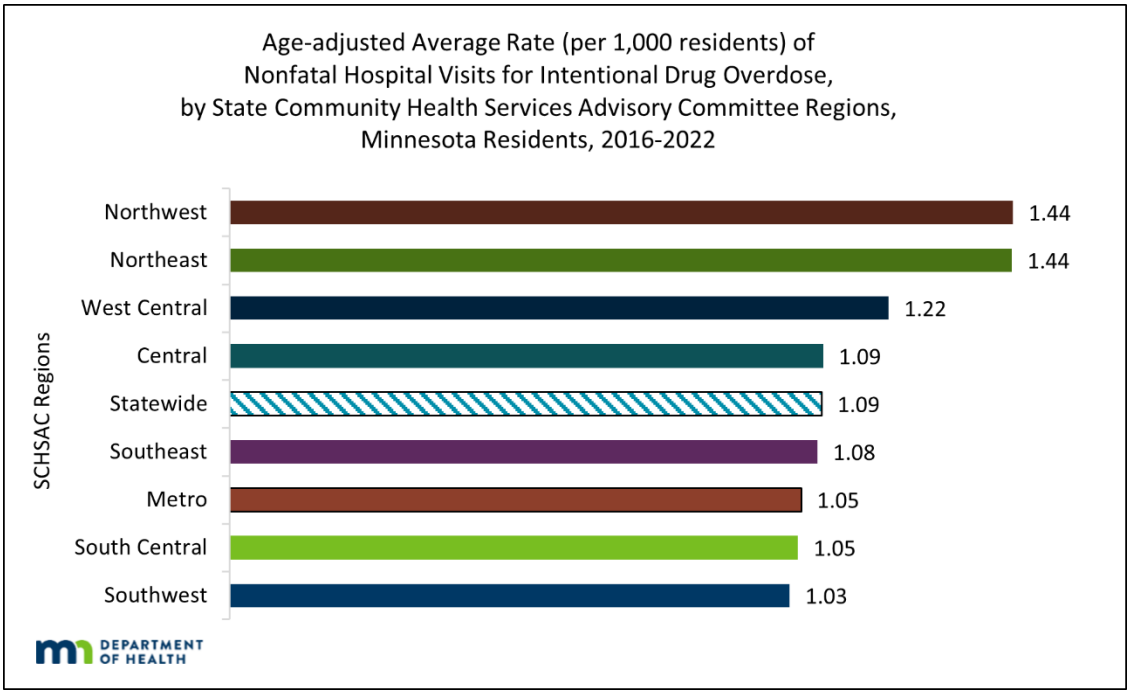
## Table 1. Number of nonfatal hospital visits for intentional drug overdose, the Metro vs. Greater Minnesota, Minnesota residents, 2016-2022

| Year | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| Statewide | 6,474 | 6,601 | 6,455 | 6,224 | 5,923 | 6,277 | 5,991 |
| The Metro | 3,441 | 3,540 | 3,512 | 3,251 | 3,128 | 3,339 | 3,176 |
| Greater Minnesota | 3,032 | 3,061 | 2,942 | 2,973 | 2,795 | 2,938 | 2,803 |

# Regional trends

To better understand geographic trends in nonfatal hospital visits for intentional drug overdose, the data were examined by the State Community Health Services Advisory Committee (SCHSAC) regions (See Appendix II for list of counties within each region). From 2016 to 2022, the average age-adjusted rates of nonfatal hospital-visits for intentional drug overdose varied by region, ranging from 1.03 (per 1,000 residents) in the Southwest to 1.44 (per 1,000 residents) in the Northwest and Northeast regions (Chart 2). For comparison, the statewide age-adjusted rate over the same period was 1.09 (per 1,000 residents).

## Chart 2. Rates of nonfatal hospital visits for intentional drug overdose vary by SCHSAC region.




Data source: Minnesota hospital discharge data, Injury and Violence Prevention Section, Minnesota Department of Health, 2016-2022

### Table 2. Average age-adjusted rate (per 1,000 residents) of nonfatal hospital visits for intentional drug overdose, by State Community Health Services Advisory Committee Regions, Minnesota residents, 2016-2022

| SCHSAC Regions | Age-adjusted rate (per 1,000 residents) of nonfatal hospital visits (2016-2022) |
|---|---|
| Northwest | 1.44 |
| Northeast | 1.44 |
| West Central | 1.22 |
| Central | 1.09 |
| Statewide | 1.09 |
| Southeast | 1.08 |
| Metro | 1.05 |
| South Central | 1.05 |
| Southwest | 1.03 |

## Suspected drug type

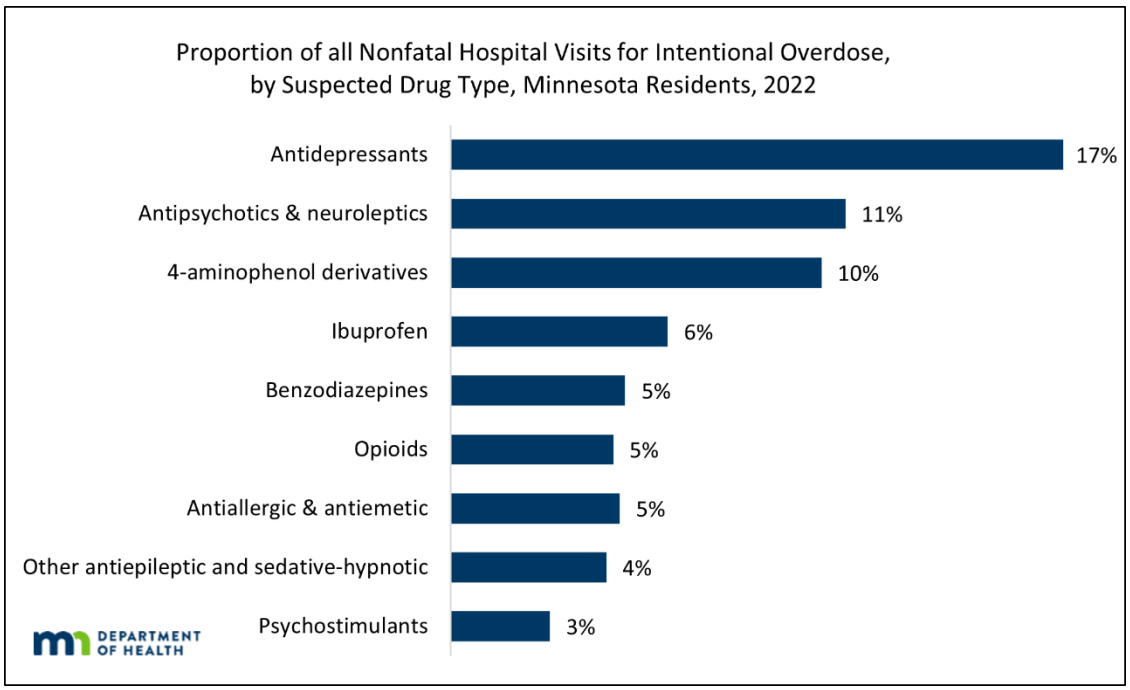
Nonfatal intentional drug overdoses typically involve different types of drugs than overdoses of unintentional (i.e., accidental) and undetermined intent, which most commonly involve opioids.[2]

Among nonfatal hospital visits for intentional drug overdose, antidepressants (e.g., Prozac, Lexapro, Zoloft, etc.) are the most common drug type suspected to be involved in the overdose, accounting for 17% of visits in 2022 (Chart 3). Antipsychotics/neuroleptics, which are primarily used to treat schizophrenia and bipolar disorder, were also commonly involved in the overdose, accounting for 11% of visits in 2022.

Over-the-counter pain relievers are another drug type that were frequently suspected to be involved in nonfatal hospital-treated intentional drug overdose. 4-aminophenol derivatives, like acetaminophen (e.g., Tylenol), and ibuprofen (e.g., Advil), were involved in 10% and 6% of nonfatal hospital visits for intentional drug overdose, respectively.

Benzodiazepines (e.g., Xanax, Ativan) are a common drug of misuse and often involved in drug overdose deaths.[2,3] In 2022, benzodiazepines were suspected to be involved in 5% of hospital-treated intentional drug overdoses. Opioids, which are commonly involved in nonfatal unintentional overdoses and overdose deaths, were involved in a much smaller proportion of intentional drug overdose visits. In 2022, opioids were suspected to be involved in 5% of hospital-treated intentional drug overdoses. Psychostimulants with abuse potential (e.g., methamphetamine and amphetamines), another drug type frequently involved in drug overdose deaths, were suspected to be involved in 3% of hospital-treated intentional drug overdoses.

## Chart 3. Antidepressants were the most common drug type suspected to be involved in hospital-treated intentional drug overdoses.




Data source: Minnesota hospital discharge data, Injury and Violence Prevention Section, Minnesota Department of Health, 2022

## Table 3. Proportion of nonfatal hospital visits for intentional drug overdose, by suspected drug type, Minnesota residents, 2022

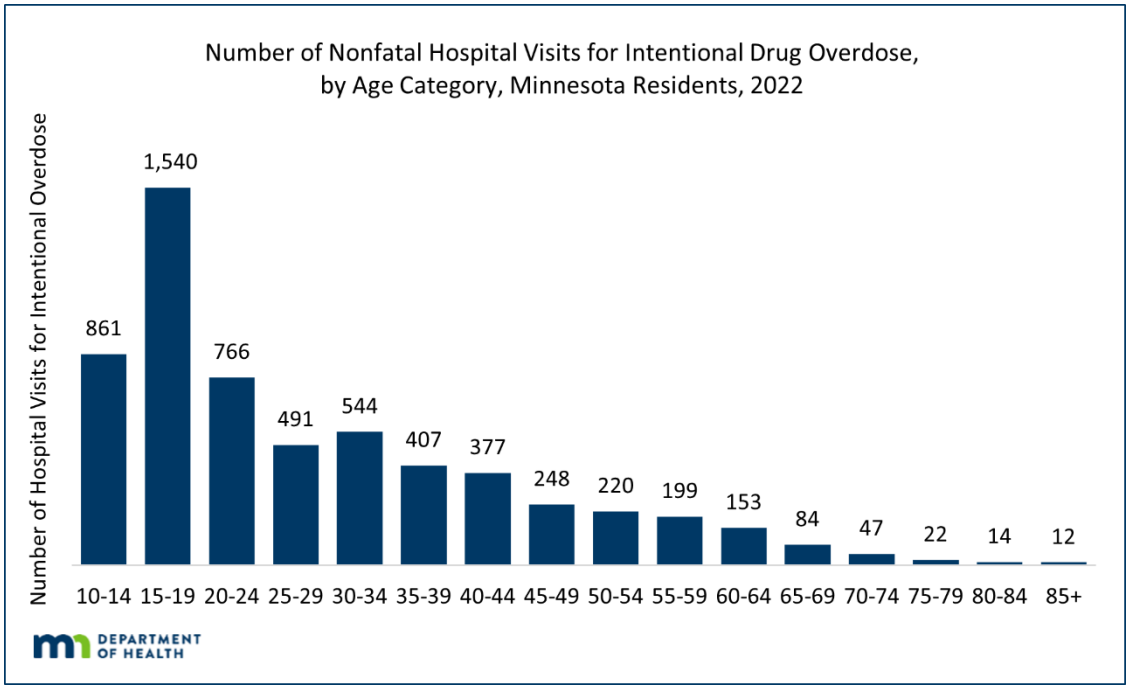
| Drug Type | Proportion of hospital visits |
|---|---|
| Antidepressants | 17% |
| Antipsychotics & neuroleptics | 11% |
| 4-aminophenol derivatives | 10% |
| Ibuprofen | 6% |
| Benzodiazepines | 5% |
| Opioids | 5% |
| Antiallergic & antiemetic | 5% |
| Other antiepileptic and sedative-hypnotic | 4% |
| Psychostimulants | 3% |

It is important to emphasize that drugs suspected to be involved in nonfatal hospital-treated overdoses are typically self-reported by the patient or determined by presenting symptoms at the hospital; often, toxicology testing is not completed (See Appendix I for more details). Because it is difficult to determine which specific drugs were present without toxicological results, and due to the lack of detail from ICD-10-CM diagnosis codes, the interpretation of drug-specific trends requires caution. In addition, it is not possible to determine whether the substances listed were prescribed, diverted, or illicit.

## Patient age

In 2022, Minnesotans aged 15-19 experienced the largest number of nonfatal intentional drug overdoses, accounting for 26% (1,540) of all nonfatal hospital visits for intentional drug overdose (Chart 4). These numbers have remained stable since 2016 (Chart 5). Additionally, 2021 and 2022 saw an increase in the number of nonfatal hospital visits for intentional drug overdose in the 10-14 age category, with hospital visits peaking in 2021 at 976 before going down to 861 in 2022 (Chart 5).

### Chart 4. Minnesotans aged 15-19 made up the largest number of nonfatal intentional overdoses.

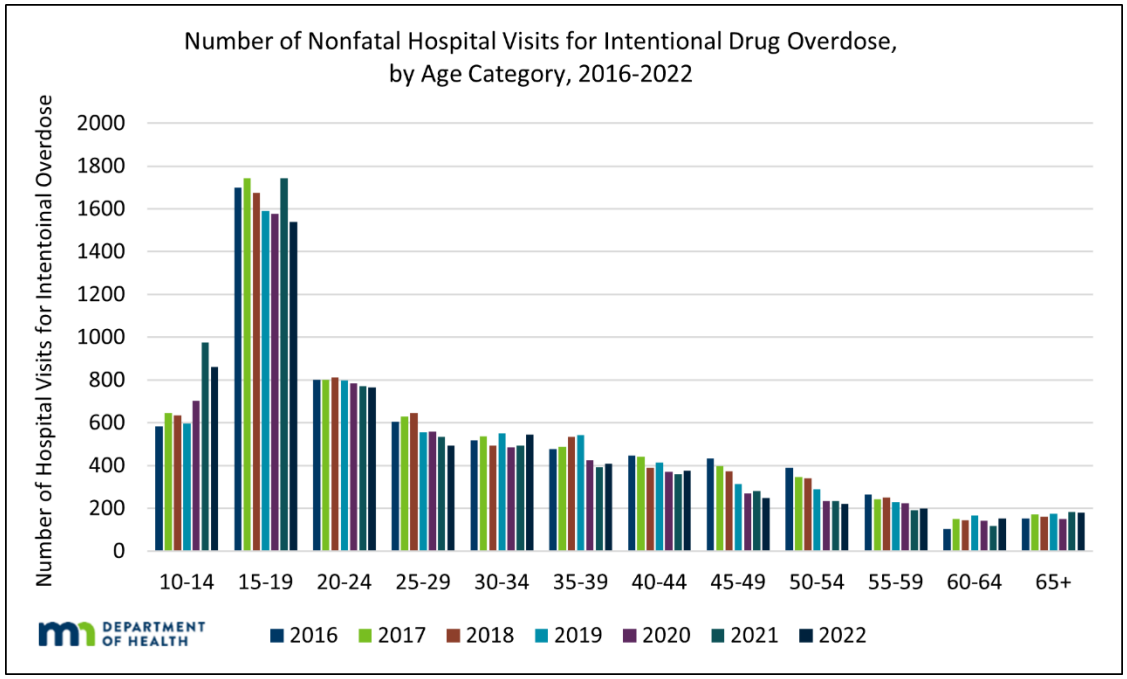



Data source: Minnesota hospital discharge data, Injury and Violence Prevention Section, Minnesota Department of Health, 2022

## Table 4. Number of nonfatal hospital visits for intentional drug overdose, by age category, Minnesota residents, 2022

| Age category | Number of hospital visits |
|---|---|
| 10-14 | 861 |
| 15-19 | 1,540 |
| 20-24 | 766 |
| 25-29 | 491 |
| 30-34 | 544 |
| 35-39 | 407 |
| 40-44 | 377 |
| 45-49 | 248 |
| 50-54 | 220 |
| 55-59 | 199 |
| 60-64 | 153 |
| 65-69 | 84 |
| 70-74 | 47 |
| 75-79 | 22 |
| 80-84 | 14 |
| 85+ | 12 |

## Chart 5. Since 2016, 15–19-year-old Minnesota residents have accounted for the highest number of nonfatal hospital visits for intentional drug overdose.




Data source: Minnesota hospital discharge data, Injury and Violence Prevention Section, Minnesota Department of Health, 2016-2022

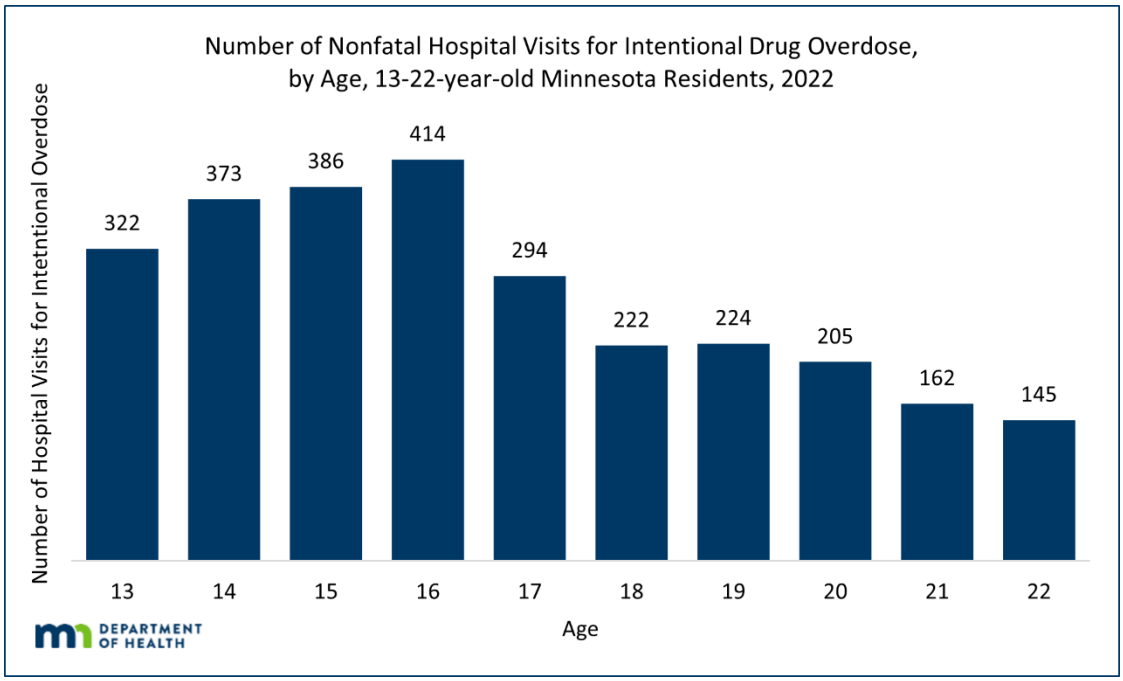
## Table 5. Number of nonfatal hospital visits for intentional drug overdose, by age category, 2016-2022

| Age Category | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| 10-14 | 584 | 645 | 636 | 597 | 704 | 976 | 861 |
| 15-19 | 1699 | 1743 | 1674 | 1591 | 1576 | 1742 | 1540 |
| 20-24 | 800 | 800 | 812 | 799 | 784 | 772 | 766 |
| 25-29 | 604 | 630 | 645 | 556 | 558 | 534 | 492 |
| 30-34 | 517 | 536 | 492 | 551 | 484 | 492 | 544 |
| 35-39 | 477 | 488 | 533 | 541 | 425 | 392 | 408 |
| 40-44 | 446 | 442 | 389 | 415 | 370 | 360 | 377 |
| 45-49 | 434 | 399 | 374 | 313 | 270 | 282 | 248 |
| 50-54 | 390 | 346 | 341 | 288 | 235 | 234 | 220 |
| 55-59 | 264 | 243 | 250 | 230 | 224 | 192 | 199 |
| 60-64 | 103 | 150 | 144 | 166 | 143 | 116 | 153 |
| 65+ | 154 | 172 | 160 | 174 | 149 | 182 | 179 |

Young people go through many changes, particularly during their teens and early 20's, and with those changes, different suicide and self-harm prevention strategies are often required. Among

Minnesotans aged 13-22, 14-, 15-, and 16-year-olds experienced the largest number of nonfatal hospital-treated intentional overdoses in 2022 (373, 386, 414, respectively) (Chart 6).

## Chart 6. 14-, 15-, and 16-year-old Minnesotans experienced the greatest number of nonfatal hospital visits for intentional drug overdoses.




Data source: Minnesota hospital discharge data, Injury and Violence Prevention Section, Minnesota Department of Health, 2022

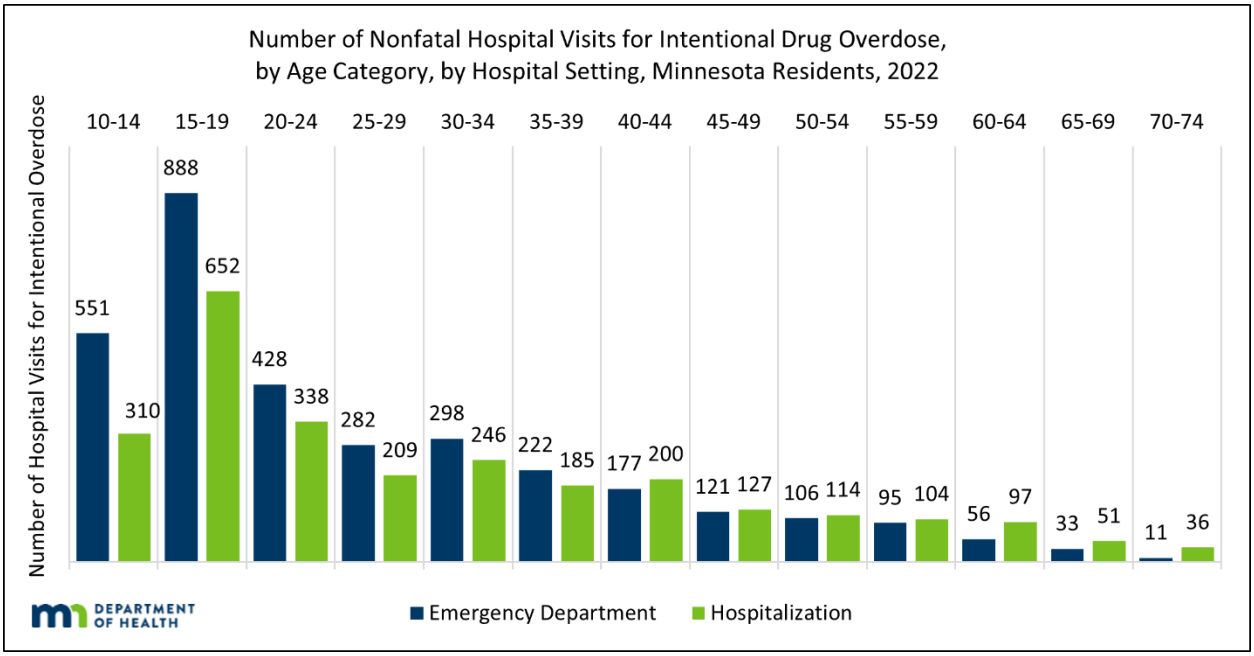
## Table 6. Number of nonfatal hospital visits for intentional drug overdose, by age, 13-22-year-old Minnesota residents, 2022

| Age | Number of hospital visits |
|---|---|
| 13 | 322 |
| 14 | 373 |
| 15 | 386 |
| 16 | 414 |
| 17 | 294 |
| 18 | 222 |
| 19 | 224 |
| 20 | 205 |
| 21 | 162 |
| 22 | 145 |

While following an overall similar distribution, the trends by age group in nonfatal hospital-visits for intentional overdose vary by hospital setting. For Minnesotans under 40, nonfatal

intentional overdoses are more frequently treated in the emergency department (Chart 7). As age increases, so does the proportion of nonfatal intentional overdoses resulting in hospitalization.

## Chart 7. For older Minnesotans, nonfatal intentional drug overdose more often resulted in hospitalization.




Data source: Minnesota hospital discharge data, Injury and Violence Prevention Section, Minnesota Department of Health, 2022

## Table 7. Number of nonfatal hospital visits for intentional drug overdose, by age category and hospital setting, Minnesota residents, 2022

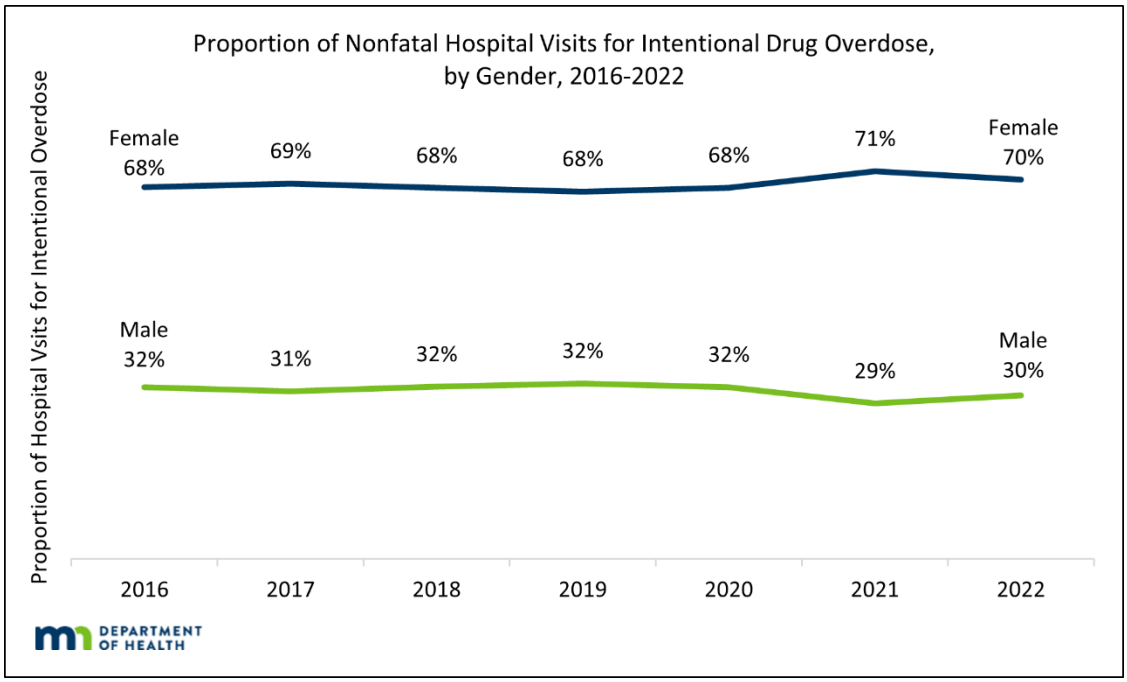
| Age category | Number of emergency department visits | Number of hospitalizations |
|---|---|---|
| 10-14 | 551 | 310 |
| 15-19 | 888 | 652 |
| 20-24 | 428 | 338 |
| 25-29 | 282 | 209 |
| 30-34 | 298 | 246 |
| 35-39 | 222 | 185 |
| 40-44 | 177 | 200 |
| 45-49 | 121 | 127 |
| 50-54 | 106 | 114 |
| 55-59 | 95 | 104 |

| Age category | Number of emergency department visits | Number of hospitalizations |
|---|---|---|
| 60-64 | 56 | 97 |
| 65-69 | 33 | 51 |
| 70-74 | 11 | 36 |

## Patient gender

Since 2016, female Minnesotans have experienced a greater burden of nonfatal intentional drug overdose than male Minnesotans and the difference has remained relatively stable over this time period. In 2022, female Minnesotans accounted for 70% and male Minnesotans accounted for 30% of all hospital-treated nonfatal intentional drug overdoses (Chart 8). Each year since 2016, the proportion of nonfatal hospital visits for intentional drug overdose has been higher among female Minnesotans (Chart 9).

### Chart 8. Since 2016, female Minnesotans have experienced a greater burden of hospital-treated nonfatal intentional drug overdose.




Data source: Minnesota hospital discharge data, Injury and Violence Prevention Section, Minnesota Department of Health, 2016-2022

### Table 8. Proportion of nonfatal hospital visits for intentional drug overdose, by gender, Minnesota residents, 2016-2022

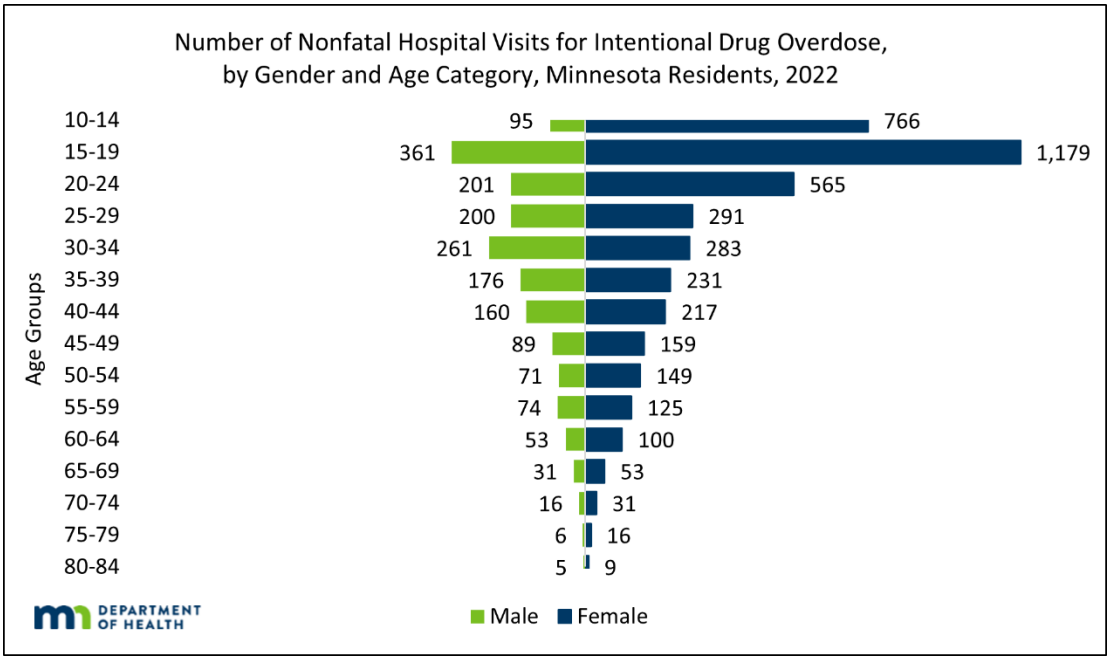
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| Female | 68% | 69% | 68% | 68% | 68% | 71% | 70% |

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| Male | 32% | 31% | 32% | 32% | 32% | 29% | 30% |

## Patient age and gender

Among female and male Minnesotans, the 15-19-year age group experienced the largest number (1,179 and 361 overdoses, respectively) of nonfatal hospital visits for intentional drug overdose in 2022 (Chart 9). Moreover, female Minnesotans in this age group experienced substantially more nonfatal hospital visits for intentional drug overdose than any other age group across genders. Notably, female Minnesotans accounted for nearly nine out of ten nonfatal hospital visits for intentional drug overdose among Minnesotans aged 10-14.

### Chart 9. 15-19-year-old female Minnesotans experienced substantially more nonfatal hospital visits for intentional drug overdose than any other age group for either gender.




Data source: Minnesota hospital discharge data, Injury and Violence Prevention Section, Minnesota Department of Health, 2022

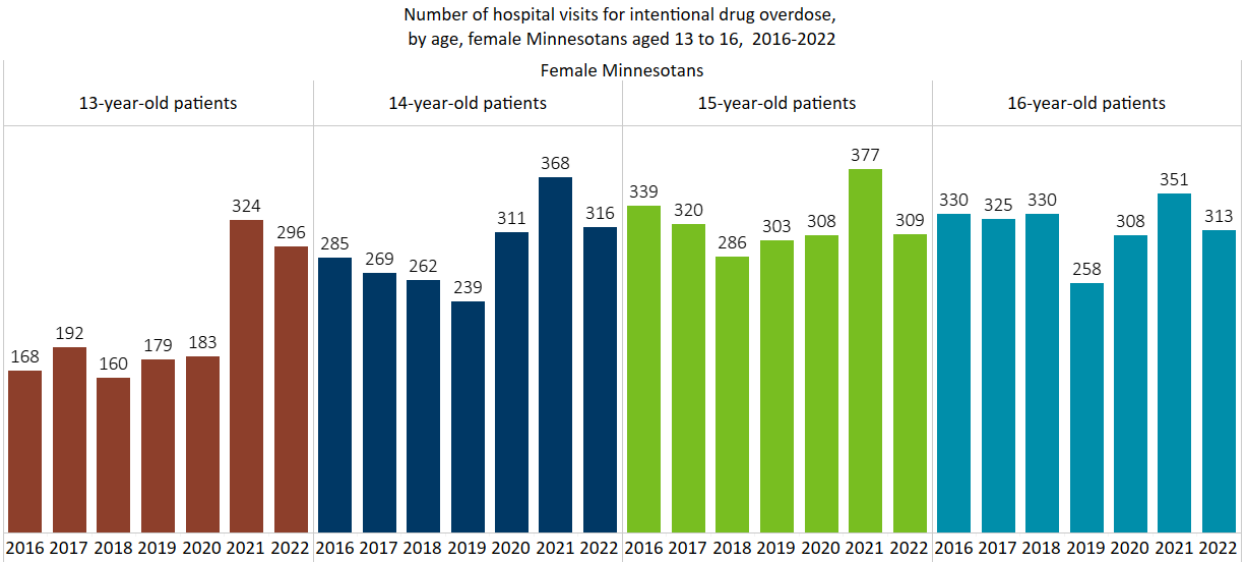
### Table 9. Number of nonfatal hospital visits for intentional drug overdose, by gender and age category, Minnesota residents, 2022

| Age category | Male | Female |
|---|---|---|
| 10-14 | 95 | 766 |
| 15-19 | 361 | 1,179 |
| 20-24 | 201 | 565 |
| 25-29 | 200 | 291 |
| 30-34 | 261 | 283 |

| Age category | Male | Female |
|---|---|---|
| 35-39 | 176 | 231 |
| 40-44 | 160 | 217 |
| 45-49 | 89 | 159 |
| 50-54 | 71 | 149 |
| 55-59 | 74 | 125 |
| 60-64 | 53 | 100 |
| 65-69 | 31 | 53 |
| 70-74 | 16 | 31 |
| 75-79 | 6 | 16 |
| 80-84 | 5 | 9 |

Trends were examined more closely for 13-16-year-old female Minnesotans due to the high number of nonfatal hospital-treated intentional drug overdose in this population (Chart 10). From 2020 to 2021, nonfatal hospital visits for intentional drug overdose increased 77% (183 to 324 overdoses) for 13-year-old female Minnesotans and 18% (311 to 368 overdoses) for 14-year-old female Minnesotans. In 2022, the number of nonfatal slightly decreased among these age groups. Since 2016, nonfatal hospital visits for intentional drug overdose have varied among 15- and 16-year-old female Minnesotans – visits peaked in 2021 but have remained relatively stable overall.

## Chart 10. Among 13- and 14-year-old female Minnesotans, the number of nonfatal hospital visits for intentional drug overdose slightly decreased in 2022 after reaching their highest number in 2021.




Data source: Minnesota hospital discharge data, Injury and Violence Prevention Section, Minnesota Department of Health, 2016-2022

### Table 10. Number of nonfatal hospital visits for intentional drug overdose, by age, 13-16-year-old female Minnesota residents, 2016-2022

| Year | 13-year-old female | 14-year-old female | 15-year-old female | 16-year-old female |
|---|---|---|---|---|
| 2016 | 168 | 285 | 339 | 330 |
| 2017 | 192 | 269 | 320 | 325 |
| 2018 | 160 | 262 | 286 | 330 |
| 2019 | 179 | 239 | 303 | 258 |
| 2020 | 183 | 311 | 308 | 308 |
| 2021 | 324 | 368 | 377 | 351 |
| 2022 | 296 | 316 | 309 | 313 |

## Suicide prevention efforts

Suicide affects people from every race, age, nationality, sexual orientation, gender identity, and ability in Minnesota. Minnesota has seen a consistent, decade-long increasing trend in the number of deaths by suicide each year, similar to trends across the United States. While death by suicide occurs at the individual level, each person lives in context of relationships with family, friends, colleagues, and within neighborhoods, community, and society. Minnesota recently updated their State Suicide Prevention Plan (https://www.health.state.mn.us/communities/suicide/mnresponse/stateplan.html) which outlines two main goals:

Improve, expand, and coordinate the suicide prevention infrastructure in Minnesota.

Prevent Minnesotans from having suicidal experiences and improve the lives of all those who are struggling, so they know they are not alone, help is available, and healing is possible.

The 2023-2027 Minnesota State Suicide Prevention Plan calls for a comprehensive approach to suicide prevention. A comprehensive approach includes:

- Improving infrastructure
- Increasing collaboration
- Building capacity for local communities to work in upstream prevention, early intervention, crisis intervention, and postvention (support after a death by suicide).

It is important to take a comprehensive public health approach to suicide prevention that includes strategies for individuals, families, and communities. Implementation of complementary prevention strategies tailored for populations who are most at risk within a community can lessen harm and prevent future risk. Research has shown that people are less likely to attempt suicide or to die by suicide in communities that support, care for, and affirm all their members.

Learn more about how the Minnesota Department of Health is working with various communities, organizations, and systems across the state: Suicide Prevention (https://www.health.state.mn.us/communities/suicide/index.html)

If you need suicide or mental health crisis support, or are worried about someone else, please call or text 988 or visit the 988 Lifeline Chat and Text (Lifeline https://988lifeline.org/chat/) to connect with a trained crisis specialist.

## Conclusions

Over the past several years, Minnesota has continued to see a high number of nonfatal hospital visits for intentional drug overdose. In 2022, around one-third of all nonfatal hospital visits for drug overdose were diagnosed as intentional (i.e., self-harm). Some groups were affected by nonfatal intentional drug overdose more than others. Notably, the number of nonfatal hospital visits for intentional drug overdose increased 81% for 13-year-old female Minnesotans and 54% for 14-year-old female Minnesotans from 2019 to 2021.

The 2022 data shows that the types of drugs involved in nonfatal hospital-treated intentional drug overdoses were most commonly prescription medications, like antidepressants and antipsychotics, and over-the-counter medications, like acetaminophen and ibuprofen. Reducing lethal access to these substances for people demonstrating suicidal ideation may help prevent these incidents.

These findings continue to provide an understanding of where and how to focus prevention efforts in communities across the state. Learn more about how the Minnesota Department of Health is working with various communities, organizations, and systems across the state: Suicide Prevention (https://www.health.state.mn.us/communities/suicide/index.html).

# References

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4. Centers for Disease Control and Prevention. (2021). *Suspected Nonfatal Drug Overdoses during COVID-19.* Retrieved from Centers for Disease Control and Prevention: https://www.cdc.gov/drugoverdose/nonfatal/states/covid-19.html
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# Appendix

## Appendix I: Data Source and Case Definitions for Nonfatal Overdose

Within this report, the data consist of Minnesota residents treated for nonfatal drug overdoses in Minnesota and North Dakota hospitals. The Minnesota Department of Health receives approximately 95% of hospital discharge data from the Minnesota Hospital Association, including emergency department visits and inpatient hospitalizations. These data cover all 87 Minnesota counties and can include reports from all 132 acute care hospitals in the state.

A limitation of the data source is the drug(s) suspected to be involved in hospital visits are often self-reported by the patient or determined by presenting symptoms at the hospital. Often, toxicology tests are not run for these patients to determine the specific substances involved. As a result, caution is needed when interpreting drug category-specific findings. All drug overdoses referenced in this summary are suspected drug overdoses. Drug categories are non-exclusive. The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes, used to classify these categories, are shown below.

### ICD-10-CM Codes for Drug Overdose Case Definition

**All Drug**

**T36** Poisoning by, adverse effect of and underdosing of systemic antibiotics

**T37** Poisoning by, adverse effect of and underdosing of other systemic anti-infectives and antiparasitics

**T38** Poisoning by, adverse effect of and underdosing of hormones and their synthetic substitutes and antagonists, not elsewhere classified

**T39** Poisoning by, adverse effect of and underdosing of nonopioid analgesics, antipyretics and antirheumatics

**T40** Poisoning by, adverse effect of and underdosing of narcotics and psychodysleptics [hallucinogens]

**T41** Poisoning by, adverse effect of and underdosing of anesthetics and therapeutic gases

**T42** Poisoning by, adverse effect of and underdosing of antiepileptic, sedative- hypnotic and antiparkinsonism drugs

**T43** Poisoning by, adverse effect of and underdosing of psychotropic drugs, not elsewhere classified

**T44** Poisoning by, adverse effect of and underdosing of drugs primarily affecting the autonomic nervous system

**T45** Poisoning by, adverse effect of and underdosing of primarily systemic and hematological agents, not elsewhere classified

**T46** Poisoning by, adverse effect of and underdosing of agents primarily affecting the cardiovascular system

**T47** Poisoning by, adverse effect of and underdosing of agents primarily affecting the gastrointestinal system

**T48** Poisoning by, adverse effect of and underdosing of agents primarily acting on smooth and skeletal muscles and the respiratory system

**T49** Poisoning by, adverse effect of and underdosing of topical agents primarily affecting skin and mucous membrane and by ophthalmological, otorhinorlaryngological and dental drugs

**T50** Poisoning by, adverse effect of and underdosing of diuretics and other and unspecified drugs, medicaments and biological substances

**Antidepressants**

**T43.012A** Poisoning by tricyclic antidepressants, intentional self-harm, initial encounter

**T43.022A** Poisoning by tetracyclic antidepressants, intentional self-harm, initial encounter

**T43.1X2A** Poisoning by monoamine-oxidase-inhibitor antidepressants, intentional self-harm, initial encounter

**T43.202A** Poisoning by unspecified antidepressants, intentional self-harm, initial encounter

**T43.212A** Poisoning by selective serotonin and norepinephrine reuptake inhibitors, intentional self-harm, initial encounter

**T43.292A** Poisoning by other antidepressants, intentional self-harm, initial encounter

**Antipsychotics and neuroleptics**

**T43.3X2A** Poisoning by phenothiazine antipsychotics and neuroleptics, intentional self-harm, initial encounter

**T43.4X2A** Poisoning by butyrophenone and thiothixene neuroleptics, intentional self-harm, initial encounter

**T43.502A** Poisoning by unspecified antipsychotics and neuroleptics, intentional self-harm, initial encounter

**T43.592A** Poisoning by other antipsychotics and neuroleptics, intentional self-harm, initial encounter

**4-aminophenol derivatives**

**T39.1X2A** Poisoning by 4-Aminophenol derivatives, intentional self-harm, initial encounter

**Ibuprofen**

**T39.392A** Poisoning by other nonsteroidal anti-inflammatory drugs [NSAID], intentional self-harm, initial encounter

**Benzodiazepines**

**T42.4X2A** Poisoning by benzodiazepines, intentional self-harm, initial encounter

**Opioids**

**T40.0X2A** Poisoning by opium, intentional self-harm, initial encounter

**T40.1X2A** Poisoning by heroin, intentional self-harm, initial encounter

**T40.2X2A** Poisoning by other opioids, intentional self-harm, initial encounter

**T40.3X2A** Poisoning by methadone, intentional self-harm, initial encounter

**T40.412A** Poisoning by fentanyl or fentanyl analogs, intentional self-harm, initial encounter

**T40.422A** Poisoning by tramadol, intentional self-harm, initial encounter

**T40.492A** Poisoning by other synthetic narcotics, intentional self-harm, initial encounter

**T40.5X2A** Poisoning by cocaine, intentional self-harm, initial encounter

**T40.602A** Poisoning by unspecified narcotics, intentional self-harm, initial encounter

**T40.692A** Poisoning by other narcotics, intentional self-harm, initial encounter

**Antiallergic & Antiemetic**

**T45.0X2A** Poisoning by antiallergic and antiemetic drugs, intentional self-harm, initial encounter

**Other Antiepileptic and Sedative-Hypnotic**

**T42.6X2A** Poisoning by other antiepileptic and sedative-hypnotic drugs, intentional self-harm, initial encounter

**Psychostimulants**

**T43.602A** Poisoning by unspecified psychostimulants, intentional self-harm, initial encounter

**T43.692A** Poisoning by other psychostimulants, intentional self-harm, initial encounter

# Appendix II: State Community Health Services Advisory Committee Regions

Regions were determined using the 'State Community Health Services Advisory Committee' regions (https://www.health.state.mn.us/communities/practice/connect/docs/schsac.pdf). Below is a table that lists which counties belong to a given region.

## State Community Health Services Advisory Committee Regions

| State Community Health Services Advisory Committee (SCHSAC) Region | Counties |
|---|---|
| Northeast | Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, St. Louis |
| Northwest | Beltrami, Clearwater, Hubbard, Kittson, Lake of the Woods, Mahnomen, Marshall, Norman, Pennington, Polk, Red Lake, Roseau |
| Central | Benton, Cass, Chisago, Crow Wing, Isanti, Kanabec, Mille Lacs, Morrison, Pine, Sherburne, Stearns, Todd, Wadena, Wright |
| Metro | Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, Washington |
| Southeast | Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha, Winona |
| Southwest | Big Stone, Chippewa, Cottonwood, Jackson, Kandiyohi, Lac Qui Parle, Lincoln, Lyon, Murray, Nobles, Pipestone, Redwood, Renville, Rock, Swift, Yellow Medicine |
| South Central | Blue Earth, Brown, Faribault, Le Sueur, Martin, Mcleod, Meeker, Nicollet, Sibley, Waseca, Watonwan |
| West Central | Becker, Clay, Douglas, Grant, Otter Tail, Pope, Stevens, Traverse, Wilkin |