



AT A GLANCE

The State Unintentional Drug Overdose Reporting System

allows for a detailed look into the details surrounding an overdose death

44% of fatal overdoses

had a bystander present; most were unaware that an overdose occurred

Opioids and stimulants such as methamphetamine

were the most common substances associated with a fatal overdose

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Overview

Across Montana, drug overdoses increased in 2019-2020, with unintentional drug overdoses rising 39%.¹ To better understand the circumstances surrounding unintentional, fatal drug overdoses, Montana receives support from the Centers for Disease Control and Prevention to maintain the State Unintentional Drug Overdose Reporting System (SUDORS). The SUDORS program collects data from death certificates and coroner/medical examiner reports, which include a variety of documents including autopsy reports, toxicology reports, and occasionally investigation summaries and scene descriptions.

The Montana Department of Public Health and Human Services (DPHHS) started collecting data for the SUDORS program in 2019. This report describes fatal drug overdoses of unintentional intent using information collected by SUDORS for the first two years of data collection (2019-2020).

Methods

Data in this report come from the State Unintentional Drug Overdose Reporting System (SUDORS) and are collected by the Montana DPHHS. Deaths are identified for inclusion in the SUDORS based on the underlying cause recorded on the death certificate of death codes using the International Classification of Disease, 10th Revision (ICD-10).² Unintentional drug overdose deaths (X40-X44) as well as overdose deaths with an undetermined intent (Y11-Y14) that occurred between January 2019 and December 2020 are included in this report.

Age-adjusted death rates were calculated with the direct method using the 2000 US standard population. We reviewed demographic information, decedent medical history, circumstances surrounding the overdose such as whether bystanders were present, as well as toxicology information. Due to small numbers, death rates for 2019 and 2020 are reported in aggregate. Medical examiners may list more than one drug on the death certificate, thus reported counts of specific drug-related deaths may exceed the total number of drug overdose deaths reported. Rates were not calculated for events with fewer than 20 observations.

Limitations

Data completeness is dependent on information documented at the time of death and therefore leads to potentially large amounts of missing data. DPHHS receives data from a variety of law enforcement agencies that do not always provide complete information; most agencies are concerned primarily with the cause and manner of death, and not the circumstances around it. This means that many reports do not contain past drug use or overdose history, bystander information, or if the decedent had received any treatment for prior substance use disorders. DPHHS is working with counties to ensure all deaths are reported in a manner that will allow analysis for future reports.



*Table 1. Demographic characteristics of Decedents
Counts and Age-adjusted Rates per 100,000 people Montana
SUDORS 2019-2020*

	Count (%) Rate (95% CI)
Total	237 10.3 (9.0-11.6)
Sex	
Male	161 (68%) 19.1 (16.2-22.1)
Female	76 (32%) 8.9 (6.9-11.0)
Age Group*	
18-24	15 (6%) †
25-34	42 (18%) 15.1 (10.9-20.4)
35-44	73 (31%) 27.7 (21.7-34.8)
45-54	50 (21%) 21.3 (15.8-28.1)
55-64	43 (18%) 14.4 (10.4-19.4)
65+	14 (6%) †
Race	
White	192 (81%) 12.4 (10.6-14.2)
American Indian/Alaska Native	36 (15%) 36.3 (24.4-48.1)
Urban-Rural Classification	
Small Metro (Population <250,000)	76 (32%) 12.6 (9.7-15.5)
Micropolitan (Population 10,000-49,999)	60 (25%) 10.9 (8.1-13.7)
Rural/Noncore (Population <10,000)	101 (43%) 17.8 (14.3-21.3)

*Age-specific rates per 100,000 people

† Rates were not calculated for less than 20 events

Race is not mutually exclusive and may not add up to total population

Percentages are rounded, may not add up to 100 in each category

Results

Demographics

There were 237 unintentional drug overdose deaths in Montana in 2019-2020; seven were non-residents of the state. 76% of decedents had either a partial or complete autopsy conducted (n=179) and 96% had toxicology results (n=228).

The death rate for males was over twice the rate for females (19.1 vs. 8.9 per 100,000 people) and 31% of decedents were between the ages of 35-44 years. The rate of unintentional overdose death among American Indian/Alaska Natives was nearly three times that of Whites (36.3 vs. 12.4 per 100,000). 44% of decedents who were residents of Montana lived in a rural/non-core county (Table 1).

Decedent history

SUDORS also collects data on factors that may have contributed to the overdose, such as a history of substance use disorder. 26% of decedents were receiving treatment for either acute or chronic pain at the time of death (n=61). 14% of decedents had a history of treatment for a substance use disorder or were currently in treatment at the time of the overdose (n=32), with five decedents reported as having recently been released from a residential facility related to alcohol or substance use (data not shown).

Prior drug overdose or recent relapse are risk factors for overdose; 18 decedents had a history of a prior overdose, and 29 had a known history of relapse.³ Recent release from a correctional institution and homelessness following release are risk factors for overdose as well; eight decedents had recently been released from a jail, prison, or detention facility; eight had been released from a hospital, and nine were known to be homeless at the time of the overdose.^{4,5}



The Event

Less than half of decedents (44%) were known to have had at least one bystander present at the scene of their overdose (n=104). Table 2 describes the type of bystander at the scene; in some cases, multiple bystanders may have been present.

*Table 2. Type of bystander present
Montana SUDORS 2019-2020*

Type	Count
Intimate Partner	31
Family	25
Friend	22
Roommate	14
Person Using Drugs	11
Other	9
Stranger	6
Medical Provider	2

*Table 3. Reported reasons for not intervening
Montana SUDORS 2019-2020*

Reason	Count
In a different room	33
Didn't recognize the overdose	18
Didn't recognize any abnormalities	17
Unaware of use	17
Using substance and also impaired	14
Other	2

While bystanders were present in many cases, few reported intervening. Performing CPR and rescue breathing were the most common bystander intervention for each event when reported (n=44) but data show in many cases bystanders were unaware that an overdose was occurring at all (Table 3).

The other reasons why bystanders did not respond included that the bystander was too young, or that the overdose occurred in a public space and members of the public did not intervene.

Overdose type

By combining autopsy and forensic pathologist reports, SUDORS can identify specific substances in the toxicology report that were noted as causing death, in addition to those that were noted as 'present' but did not necessarily contribute to the death. Figure 1 summarizes the substances that were noted as cause of death; deaths may be attributed to multiple substances and these categories are not mutually exclusive. From 2019-2020, there were 702 substances identified as causing overdose deaths. Of these substances, 40% were an opioid. Specific opioids are also listed in the figure. Stimulants such as methamphetamine or amphetamines were the next most common substance that contributed to an overdose in 2019-2020.

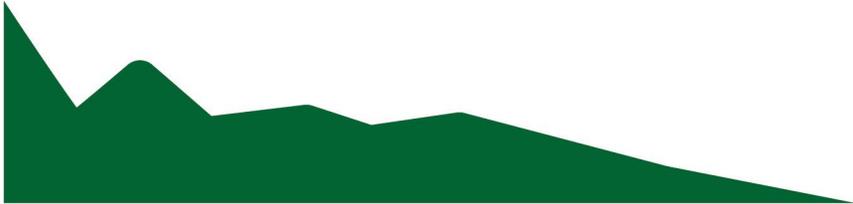
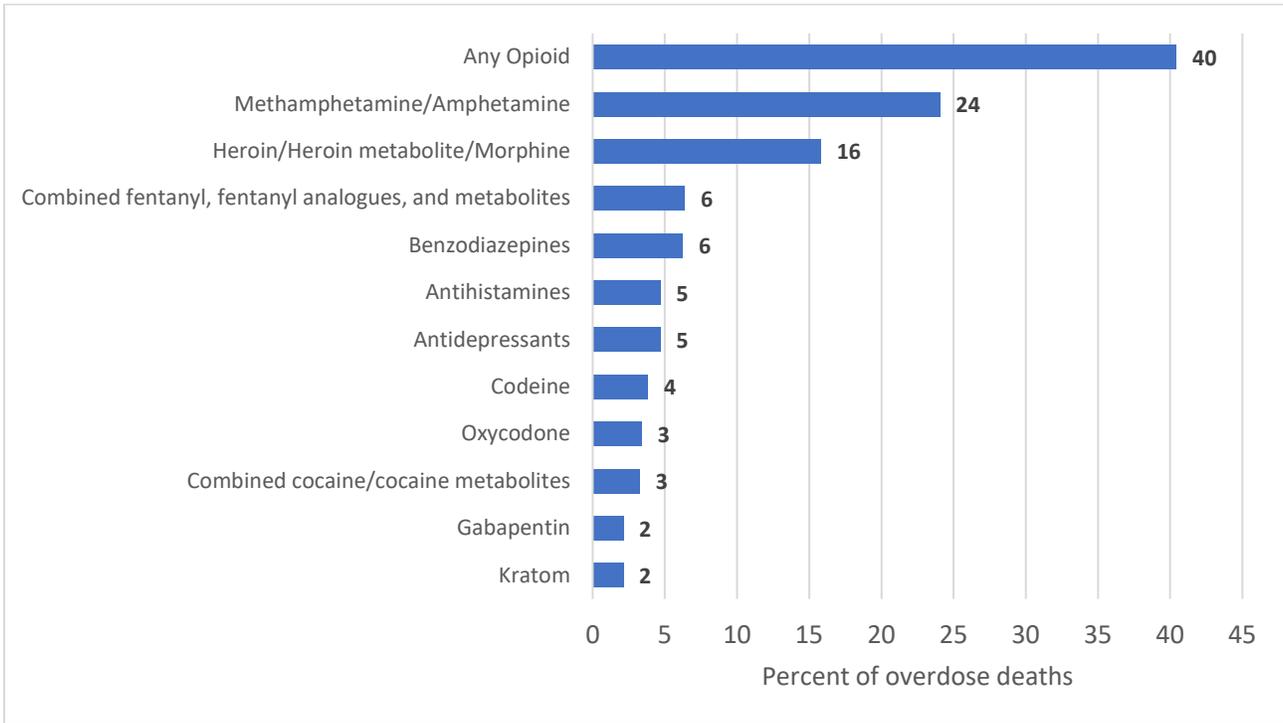




Figure 1. Percent of overdose deaths by select substances identified as cause of death, alone or in combination with other substances, Montana SUDORS 2019-2020

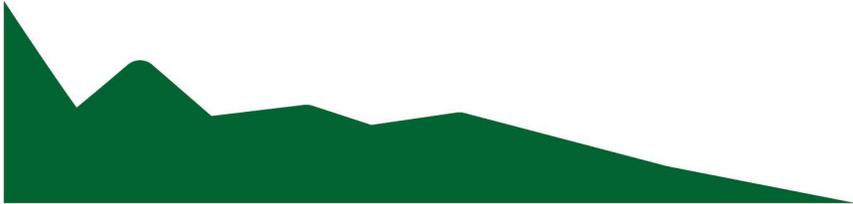


Conclusions

The SUDORS system provides a wealth of information beyond what is available in death certificates alone. As we continue to collect data, our understanding of the factors that contribute to unintentional drug overdoses grows. These data can inform drug overdose prevention programs and policies.

Findings from this report show that bystanders do not always know how to recognize an overdose. DPHHS has created an [Opioids Overdose Recognition and Response Guide](#) which aims to educate Montanans on how to determine if an overdose is occurring. The signs of an overdose include:

- Slow breathing or no breathing (less than 1 breath every 5 seconds)
- Vomiting
- Face is pale and clammy
- Blue lips, fingernails, or toenails
- Slow, erratic, or no pulse
- Snoring or gurgling noises while asleep or nodding out
- No response when you yell the person’s name or rub the middle of their chest with your knuckles



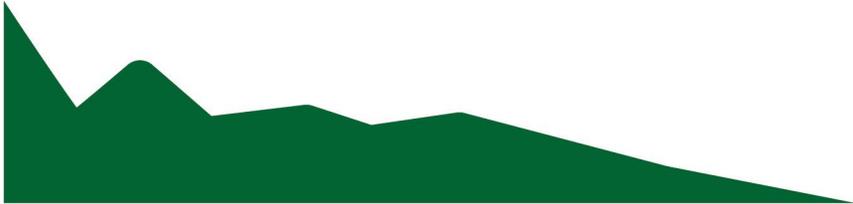


Naloxone administration is a highly effective method of reversing an opioid overdose, yet it was rarely reported by bystanders. To address this, DPHHS has issued a [Standing Order for Naloxone Opioid Antagonists](#) that allows for the acquisition of naloxone by anyone without the need for a prescription and launched a [website](#) providing resources for the public on identifying the signs of an overdose and how to treat an overdose using easily accessible naloxone.

If you know someone who uses opioids, encourage them to follow the evidence-based practices below outlined by the National Harm Reduction Coalition:

- Always carry naloxone and know when and how to use it.
- Try to use with other people, or have a friend check on you who can respond to an overdose.
- Injecting drugs has the highest risk for overdose, so shifting to other methods may reduce the risk of overdose.

DPHHS continues to partner with county coroners, law enforcement, and the CDC to identify and address data gaps and to improve our prevention efforts. Training EMS and coroners to ensure that information is collected and reported in a uniform manner across the state, as well as increasing the number of autopsies conducted, are important steps towards more complete data collection of the circumstances surrounding a drug overdose death.





Citations

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2. World Health Organization. International Statistical Classification of Diseases and Related Health Problems-10th Revision 5th ed. Geneva, (CH): WHO Press; 2016.
3. Dowell D, Haegerich TM, Chou R. CDC Guidelines for Prescribing Opioids for Chronic Pain—United States, 2016. *MMWR Recomm Rep* 2016; 65(No. RR-1):1-49. DOI: <http://dx.doi.org/10.15585/mmwr.rr6501e1>
4. Bukten A, Stavseth MR, Skurtveit S, Tverdal A, Strang J, Clausen T. High risk of overdose death following release from prison: variations in mortality during a 15-year observation period. *Addiction*. 2017;112(8):1432-1439. doi:10.1111/add.13803
5. Fine DR, Dickins KA, Adams LD, et al. Drug Overdose Mortality Among People Experiencing Homelessness, 2003 to 2018. *JAMA Netw Open*. 2022;5(1):e2142676. doi:10.1001/jamanetworkopen.2021.42676

