

MAINE MONTHLY OVERDOSE REPORT

For February 2023

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Overview

This report documents suspected and confirmed fatal and nonfatal drug overdoses in Maine during February 2023 as well as for the period January 2022–February 2023 (Table 1). During February 2023, the proportion of fatal overdoses averaged 5.8% of total overdoses. Monthly proportions of 2022 fatalities have fluctuated from a low of 5.0% in May to a high of 8.7% in December. During the period January–December 2022, fatal overdoses comprised 6.8% of all overdoses, slightly higher than the 6.5% for 2021. Data derived from multiple statewide sources were compiled and deduplicated to compute fatal and nonfatal overdose totals (Table 1). These include nonfatal overdose incidents reported by hospital emergency departments (ED), nonfatal emergency medical service (EMS) responses without transport to the ED, overdose reversals reported by law enforcement in the absence of EMS, and overdose reversals reported by community members or agencies receiving State-supplied naloxone. There are also an unknown number of private overdose reversals that were not reported, and an unknown number of the community-reported reversals that may have overlapped with emergency response by EMS or law enforcement. The total number of fatal overdoses in this report includes those that have been confirmed, as well as those that are suspected but not yet confirmed for October, December, January, and February (see Figure 1).

Figure 1. Suspected and confirmed fatal overdoses, all drugs, January 2022 through February 2023

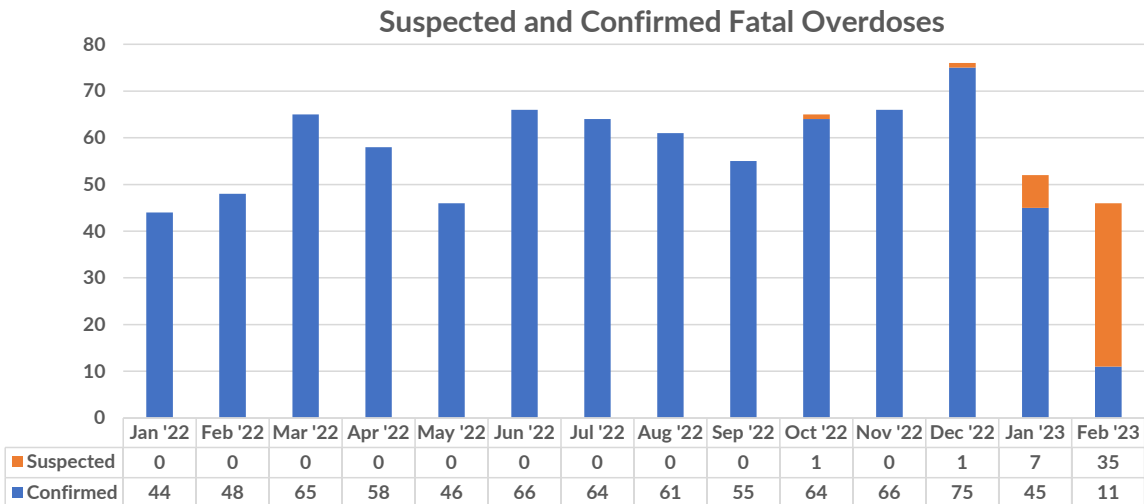


Table 1: Composite reported overdose totals, all drugs, January 2022–February 2023

	Nonfatal				Total nonfatal overdoses	Total confirmed and suspected fatal overdoses	Total overdoses
	Emergency Dept.	EMS not transported to emergency	Community reversals with naloxone	Law enforcement reversals with naloxone and without EMS			
January 2022	304	206	178	39	727	44	771
February 2022	341	185	153	34	713	48	761
March 2022	465	201	202	31	899	65	964
April 2022	297	178	189	26	690	58	748
May 2022	405	248	186	41	880	46	926
June 2022	492	250	177	43	962	66	1028
July 2022	357	287	183	40	867	64	931
August 2022	393	272	255	37	957	61	1018
September 2022	467	256	153	33	909	55	964
October 2022	289	238	177	27	731	65	796
November 2022	295	206	200	20	721	66	787
December 2022	376	212	198	15	801	76	877
2022 total	4481 (42.4%)	2739 (25.9%)	2251 (21.3%)	386 (3.7%)	9857 (93.2%)	714 (6.8%)	10571 (100%)
January 2023	297	221	184	30	732	52	784
February 2023	347	186	192	22	747	46	793
2023 YTD total	644 (40.8%)	407 (25.8%)	376 (23.8%)	52 (3.3%)	1479 (93.8%)	98 (6.2%)	1577 (100%)

*Law enforcement reversals are updated as cases are reported by departments and agencies. Thus, there may be significant changes in the data reported for January compared to previous months as lagged reporting catches up. Law enforcement cases have EMS involvement most of the time. Due to the need to deduplicate overdoses, law enforcement numbers only include those where EMS is not present.

The total number of fatal and reported nonfatal overdoses for February 2023, 793, is displayed in Table 1 in the bottom row: 46 (5.8%) confirmed and suspected fatal overdoses, 347 (43.8%) nonfatal emergency department visits, 186 (23.5%) nonfatal EMS responses not transported to the emergency department, 192 (24.2%) reported community overdose reversals, and 22 (2.8%) law enforcement reversals in incidents that did not include EMS.

Law Enforcement Response to Fatal and Nonfatal Overdose Incidents

Due to the method we used to deduplicate nonfatal overdose incidents to derive a composite number of overdoses for the month, the activity of law enforcement officials is underrepresented in the above chart. The process used to deduplicate overdoses begins by removing fatal overdoses from the emergency department and EMS overdose incidents. Then the number of patients transported to emergency departments by Maine EMS are removed from the EMS overdose incidents. Finally, EMS involvement and fatal overdose incidents are removed from law enforcement responses.

Table 2 shows the public safety response to fatal and nonfatal overdose events in January–February 2023 as well as 2022. During January–February 2023, law enforcement officers responded to a reported 278 overdose incidents (93 fatal; 185 nonfatal) and Maine EMS responded to a reported 1,528 incidents (78 fatal; 1,450 nonfatal). During 2022, law enforcement officers responded to a reported 2,136 incidents (665 fatal; 1,471 nonfatal) and Maine EMS responded to a reported 9,950 incidents (577 fatal; 9,373 nonfatal).

Table 2: Fatal and nonfatal overdose emergency response counts from law enforcement and EMS, including overlapping cases

	Fatal Overdose Response Jan-Dec 2022	Nonfatal Overdose Response Jan-Dec 2022	Total Overdose Response Jan-Dec 2022	Fatal Overdose Response Jan-Feb 2023	Nonfatal Overdose Response Jan-Feb 2023	Total Overdose Response Jan-Feb 2023
Maine EMS	577	9373	9950	78	1450	1528
Law Enforcement	665	1471	2136	93	185	278

*Please note numbers will fluctuate from month to month as public safety agencies catch up their reporting . Due to methodological convention, alcohol-only cases are excluded from this table. However, we recognize that alcohol is a large part of substance misuse epidemic. Cases with both drugs and alcohol are included.

County Distribution of Suspected Nonfatal Overdoses

Table 3 shows the frequency distribution of nonfatal overdoses at the county level. Due to how overdose reversals are reported by community partners and emergency departments, only EMS overdoses are included. In future reports, deduplicated law enforcement events will also be included. The February 2023 monthly totals can be compared to the percentage of the census population on the far left or the percentage of deduplicated law enforcement and EMS nonfatal overdoses in the center. Caution must be exercised viewing single counties with small numbers for a single month. These may fluctuate randomly, without reflecting any significant statistical trend.

Table 3: County of incident among suspected and confirmed nonfatal overdoses

	% 2020 estimated Census population	Jan-Dec 2022 Est. N = 9373	Jan-Feb 2023 Est. N = 1450	Feb 2023 Est. N = 687
Androscoggin	8%	1055 (11%)	139 (10%)	57 (8%)
Aroostook	5%	490 (5%)	68 (5%)	27 (4%)
Cumberland	22%	2193 (23%)	350 (24%)	176 (26%)
Franklin	2%	139 (1%)	19 (1%)	9 (1%)
Hancock	4%	287 (3%)	44 (3%)	13 (2%)
Kennebec	9%	922 (10%)	148 (10%)	63 (9%)
Knox	3%	245 (3%)	48 (3%)	15 (2%)
Lincoln	3%	161 (2%)	21 (1%)	13 (2%)
Oxford	4%	410 (4%)	59 (4%)	24 (3%)
Penobscot	11%	1292 (14%)	209 (14%)	110 (16%)
Piscataquis	1%	90 (1%)	20 (1%)	9 (1%)
Sagadahoc	3%	130 (1%)	18 (1%)	9 (1%)
Somerset	4%	392 (4%)	72 (5%)	39 (6%)
Waldo	3%	199 (2%)	38 (3%)	19 (3%)
Washington	2%	221 (2%)	24 (2%)	10 (1%)
York	16%	1147 (12%)	173 (12%)	94 (14%)

*EMS nonfatal overdose counts include incidents where a patient may have died after admission to the ED. Please note numbers will fluctuate from month-to-month as public safety agencies catch up their reporting. Due to methodological convention, alcohol-only cases are excluded from this table. However, we recognize that alcohol is a large part of substance misuse epidemic. Cases with both drugs and alcohol are included.

The 2022 percentages for most counties fall within 0 to 1 percentage points of the 2020 census distribution. York County is 4 percentage points lower; Sagadahoc County is 2 percentage points lower than the 2020 census proportion. Androscoggin County and Penobscot County are 3 percentage points higher than the 2020 census proportion. The proportion of January–February 2023 nonfatal overdoses contain only two months of data and caution must be used as monthly data randomly fluctuates, both up and down, and changes may not be statistically significant.

County Distribution of Fatal Overdoses

Table 4 shows the frequency distribution of fatal overdoses at the county level. The February 2023 monthly totals can be compared either to the percentage of the census population in the far-left column or the percentage of all Maine fatal overdoses for 2022. Caution must be exercised viewing single counties with small numbers for a single month. These may fluctuate randomly, without reflecting any significant statistical trend. The 2022 percentages for most counties fall within 0 to 1 percentage points of the 2020 census distribution. Penobscot County is 4 percentage points higher and Androscoggin County as well as Aroostook County are 2 percentage points higher than the 2020 Census proportions. Cumberland County is 4 percentage points lower and Sagadahoc County as well as York County are 2 percentage points lower than the 2020 Census proportions.

Table 4: County of death among suspected and confirmed fatal overdoses

	% 2020 estimated Census population	Jan-Dec 2022 Est. N = 714	Jan-Feb 2023 Est. N = 98	Feb 2023 Est N = 46
Androscoggin	8%	69 (10%)	13 (13%)	4 (9%)
Aroostook	5%	47 (7%)	4 (4%)	3 (7%)
Cumberland	22%	130 (18%)	25 (26%)	9 (18%)
Franklin	2%	14 (2%)	0 (0%)	0 (0%)
Hancock	4%	24 (3%)	4 (4%)	2 (4%)
Kennebec	9%	54 (8%)	12 (12%)	8 (17%)
Knox	3%	20 (3%)	0 (0%)	0 (0%)
Lincoln	3%	14 (2%)	1 (1%)	0 (0%)
Oxford	4%	36 (5%)	3 (3%)	1 (2%)
Penobscot	11%	107 (15%)	15 (15%)	9 (18%)
Piscataquis	1%	9 (1%)	5 (5%)	4 (9%)
Sagadahoc	3%	10 (1%)	0 (0%)	0 (0%)
Somerset	4%	35 (5%)	5 (5%)	3 (7%)
Waldo	3%	21 (3%)	2 (2%)	1 (2%)
Washington	2%	24 (3%)	3 (3%)	0 (0%)
York	16%	100 (14%)	6 (6%)	2 (4%)

Age and Sex Distribution of Fatal Overdose Victims

Table 5 displays the age and sex composition of the February 2023 fatal overdose population, the 2022 fatal overdose population, and the 2020 estimated census population. When comparing the February 2023

data with 2022 and the census population proportion, caution must be exercised as the small number of cases in a given month creates random fluctuation that may not reflect a significant statistical trend. The 2023 overall age categories are within 2 to 4 percentage points of 2022. The cumulative proportion of males has risen from 73% in 2022 to 76% in the 2023. The cumulative age distribution for 2023 compared to 2022 shows 3 deaths under 18 in 2022 and 1 death in 2023, a decrease of 7 percentage points in the proportion of those aged 18–39, an increase of 2 percentage points in those aged 40–59, and a 5 percentage point increase in the proportion of those 60 and above. Note that death certificate data contain sex as a recorded category and does not contain gender categories.

Table 5: Decedent reported age group and sex among suspected and confirmed fatal overdoses*

	% 2020 estimated Census population	Jan–Dec 2022 Est. N = 714	Jan–Feb 2023 Est. N = 98	Feb 2023 Est. N = 46
Males	49%	521 (73%)	74 (76%)	35 (76%)
Under 18	19%	3 (<1%)	1 (1%)	1 (2%)
18–39	26%	291 (41%)	33 (34%)	16 (35%)
40–59	27%	331 (46%)	47 (48%)	22 (48%)
60+	29%	89 (12%)	17 (17%)	7 (15%)

*Percentages may not total 100 due to rounding.

Table 6 displays the reported race and ethnicity of confirmed and suspected fatal overdoses in 2022 and 2023 compared to the 2020 census population. Note that race and ethnicity are not finalized until the full death certificate is entered into Vital Records, and a small number of decedents’ records lack information about these variables. Race and ethnicity proportions in 2023 have yet to accumulate enough data to stabilize. Out of 95 decedents for whom race was reported January through February 2023, 92% of the victims were identified as White, 4% as Black/African American, and 0% as American Indian/Alaska Native. Out of 95 decedents for whom Hispanic ethnicity status was reported, 0% were identified as Hispanic. Please note, January through February 2023 only contains two months of data, and thus contains random variation of data due to small numbers. Changes in proportion compared to 2022 are not statistically significant.

Table 6: Decedent race and ethnicity among suspected and confirmed fatal overdoses*

	% 2020 estimated Census population: Race & Hispanic/Latinx ethnicity	Jan–Dec 2022 Race N = 712 Ethnicity N = 698	Jan–Feb 2023 Race Est. N = 95 Ethnicity Est. N = 95	Feb 2023 Race Est. N = 43 Ethnicity Est. N = 43
White alone, non-Hispanic	91%	662 (93%)	87 (92%)	40 (93%)
Black/African American alone, non-Hispanic	2%	16 (2%)	4 (4%)	2 (5%)
American Indian/Alaska Native, non-Hispanic	1%	14 (2%)	0 (0%)	0 (0%)
Other race and 2+ races combined, non-Hispanic	7%	15 (2%)	4 (4%)	1 (2%)
Hispanic/Latinx alone or in combination	2%	7 (1%)	0 (0%)	0 (0%)

*Race and ethnicity data for some cases are unavailable until drug deaths are confirmed. †Percentages may not total 100 due to rounding.

Military Status and Housing Stability of Fatal Overdose Victims

Out of the 94 cases for which military background was reported January–February 2023, 5 (5%) were identified as having a military background. Out of the 43 cases in February 2023 where military background was reported, 3 (7%) were identified as having a military background.

Of the 98 total suspected and confirmed overdoses cases in 2023, undomiciled or transient housing status was reported for 9 (9%) of victims. Among those 9, the largest proportions of undomiciled persons were found in Cumberland County (4, 44%), Penobscot County (2, 22%) and Androscoggin County, Kennebec County, and Piscataquis County (1, 11%). In February 2023, 4 decedents were identified as undomiciled.

Basic Incident Patterns of Fatal Overdoses

Table 7 reports some of the basic incident patterns for fatal overdoses. February 2023 can be compared to 2022. Caution must be exercised interpreting a single month of data as numbers fluctuate randomly and may not reflect a statistically significant trend. In addition, data totals may change slightly as suspected cases are confirmed. Both EMS and police responded to most fatal overdoses (74%) in 2023. Law enforcement was more likely to respond to a scene alone (20%) than EMS (5%). The overwhelming majority (89%) of confirmed fatal drug overdoses were ruled as, or suspected of being, accidental manner of death. Of the 98 confirmed or suspected fatal overdoses in 2023, 38 (39%) had a history of prior overdose. Although most cases had bystanders or witnesses present at the scene by the time first responders arrived, the details about who was present at the time of the overdose were frequently unclear. However, responding family and friends or bystanders administered naloxone for 10 (10%) of the 2023 fatal overdoses, slightly less than 2022 (11%) but greater than 2021 (9%) and 2020 (4%). Often, bystanders or witnesses administered naloxone in addition to EMS and/or law enforcement. During 2023, 24% of suspected and confirmed fatal overdose cases had naloxone administered at the scene by EMS, bystanders, and/or law enforcement. This rate is lower than in 2021 (30%) and 2022 (25%).

Table 7: Event characteristics among suspected and confirmed fatal overdoses

	Jan–Dec 2022 Est. N = 714	Jan–Feb 2023 Est. N = 98	Feb 2023 Est N = 46
EMS response alone	39 (5%)	5 (5%)	4 (9%)
Law enforcement alone	127 (18%)	20 (20%)	7 (15%)
EMS and law enforcement	538 (75%)	73 (74%)	35 (76%)
Private transport to Emergency Dept.	13 (2%)	0 (0%)	0 (0%)
Naloxone administration reported at the scene	181 (25%)	24 (24%)	14 (30%)
Bystander only administered	45 (6%)	5 (5%)	3 (7%)
Law enforcement only administered	32 (4%)	1 (1%)	1 (2%)
EMS only administered	55 (8%)	12 (12%)	7 (15%)
EMS and law enforcement administered	11 (2%)	1 (1%)	0 (0%)
EMS and bystander administered	26 (4%)	4 (4%)	3 (7%)
Law enforcement and bystander administered	5 (1%)	1 (1%)	0 (0%)
EMS, bystander, and law enforcement administered	6 (1%)	0 (0%)	0 (0%)
Naloxone administered by unspecified person	10 (1%)	0 (0%)	0 (0%)
History of prior overdose	266 (37%)	38 (39%)	18 (39%)

Of the 78 suspected or confirmed drug death cases with EMS involvement during 2023, 43 (55%) victims were already deceased when EMS arrived. In the remaining 35 (45%) cases, resuscitation was attempted either at the scene or presumably in the ambulance during transport to the emergency room. Of those 35 who were still alive when EMS arrived, 10 (29%) were transported, and 25 (71%) did not survive to be transported. Thus, out of 78 ultimately fatal cases with EMS response, only 10 (13%) remained alive long enough to be transported but died during transport or at the emergency room. This outcome is likely due to a combination of the high number of cases with fentanyl as a cause of death and individuals using alone. Fentanyl acts more quickly than other opioids, and there is less time for bystanders to find an overdose victim alive, administer naloxone, and call 911.

Table 8 displays the frequencies of the most prominent drug categories causing death among confirmed drug deaths. As expected, within the 56 confirmed drug death cases so far in 2023, nonpharmaceutical fentanyl was the most frequent cause of death, mentioned on the death certificate of 43 (77%) victims.

Fentanyl is nearly always found in combination with multiple other drugs. Heroin involvement, declining rapidly in recent years, was reported as a cause of death in 4% (2) of 2023 deaths, compared to 2022 (3%, 19). Xylazine and nonpharmaceutical tramadol were identified as co-intoxicants with fentanyl for the first time in 2021. Among 56 confirmed deaths in 2023, there were 6 cases (11%) with xylazine listed in addition to fentanyl as a cause of death, and 1 case (2%) with tramadol listed along with fentanyl.

Stimulants continue to increase as a cause of death, usually in combination with other drugs, particularly fentanyl. Methamphetamine was cited as a cause of death in 20 (36%) of the confirmed fatal overdoses in 2023, an increase from 33% in 2022; 16 (80%) of the methamphetamine deaths also involved fentanyl as a co-intoxicant cause of death. Cocaine-involved fatalities constituted 19 (34%) of confirmed cases in 2023, an increase from 30% in 2022. Fentanyl is mentioned as a cause in combination with cocaine in 15 (79%) of 2023 cocaine cases. Cocaine and methamphetamine are named together on 6 (11%) death certificates in 2023, in most cases (5, 83%) as combined co-intoxicants also combined with fentanyl.

Table 8: Key drug categories and combinations causing death among confirmed overdoses

Cause of death (alone or in combination with other drugs) Sample size for confirmed cases only	Jan–Dec 2022 Est. N = 712	Jan–Feb 2023 Est. N = 56	Feb 2023 Est. N = 11
Fentanyl or fentanyl analogs	560 (79%)	43 (77%)	9 (82%)
Heroin	19 (3%)	2 (4%)	1 (9%)
Cocaine	211 (30%)	19 (34%)	3 (27%)
Methamphetamine	233 (33%)	20 (36%)	3 (27%)
Pharmaceutical opioids**	155 (22%)	14 (25%)	2 (18%)
Fentanyl and heroin	18 (3%)	2 (4%)	1 (9%)
Fentanyl and cocaine	171 (24%)	15 (27%)	2 (18%)
Fentanyl and methamphetamine	189 (27%)	16 (29%)	3 (27%)
Fentanyl and xylazine	46 (6%)	6 (11%)	1 (9%)
Fentanyl and tramadol	10 (1%)	1 (2%)	0 (0%)

**Nonpharmaceutical tramadol is now being combined with fentanyl in pills and powders for illicit drug use. When found in combination with fentanyl, and in the absence of a known prescription, tramadol is categorized as a nonpharmaceutical opioid.

Background Information about this Report

This report, funded jointly by the Maine Office of Attorney General and the Office of Behavioral Health,¹ provides an overview of statistics regarding suspected and confirmed fatal and nonfatal drug overdoses each month. Data for the fatal overdoses were collected at the Office of Chief Medical Examiner and data regarding nonfatal overdoses were contributed by the Maine CDC, Maine Emergency Medical Services, Maine ODMAP initiative, Maine Naloxone Distribution Initiative, and Office of Attorney General Naloxone Distribution. Year-to-date numbers are updated as medical examiner cases are finalized, and their overdose status is confirmed or ruled out, and as occasional lagged EMS, ED, and ODMAP data totals are finalized. The totals are expected to shift as case completion occurs. In addition, due to the small sample size in each month, we expect totals to fluctuate from month to month due to the effects of random variation. The monthly reports are posted on mainedrugdata.org.

A “drug death” is confirmed when one or more drugs are mentioned on the death certificate as a cause or significant contributing factor for the death. Most drug-induced fatalities are accidents related primarily to drug lethality, the unique vulnerability of the drug user, such as underlying medical conditions, and the particular circumstances surrounding drug use during that moment.

A “suspected” drug fatality is identified by physiological signs of overdose as well as physical signs at the scene and witness information. In order to be confirmed as a drug death, the medical examiner must have issued a final death certificate which includes the names of the specific drugs. A forensic toxicology exam must also have been done, which includes a minimum of two toxicology tests, one to screen for drugs present, and another that will quantify the levels of drugs in the decedent’s system. All cases receive a thorough external examination and comprehensive toxicology tests. In some cases a complete autopsy is also done. Additional data, such as medical records and police incident reports are also collected. Normally cases are completed within one month; however, due to recent problems being experienced by our national toxicology testing service, completion of cases is occurring at about 6–8 weeks after death, and occasionally longer.

By highlighting drug deaths at the monthly level, this report brings attention to the often dramatic shifts in totals that can occur from month to month. These fluctuations are common with small numbers and will tend toward an average over time. Whereas the overall number of overdose deaths are a critical indicator of individual and societal stress, this metric itself can be quite resistant to public policy interventions due to its complexity. Overdose fatalities occur because of multiple unique and interacting factors, as mentioned above. For that reason, these reports will seek to monitor components that can be directly affected by specific public health education and harm reduction interventions.

The statistics in this report reflect both suspected and confirmed “occurrent” deaths, that is, deaths that occur in the State of Maine, even though they may not be Maine residents. These totals also do not include Maine residents who die in other states. For these reasons, totals will differ slightly from the statistics reported by the National Center for Health Statistics, which reports only confirmed “resident” deaths. In addition, due to recently reported updates of toxicology results and newly confirmed or eliminated drug death cases, both the 2021 and 2022 statistics have changed slightly from those reported in the previous monthly report.

¹ The Office of Attorney General supports ongoing research on fatal overdoses by the University of Maine. Additionally, the Overdose Data to Action cooperative agreement from the U.S. Centers for Disease Control & Prevention also provides funding to the State of Maine’s Office of Behavioral Health and Maine Center for Disease Control, which also supports University programs involving fatal and nonfatal overdoses surveillance and enables the collection of nonfatal metrics included in this report. The conclusions in this report do not necessarily represent those of the U.S. CDC.