

MAINE MONTHLY OVERDOSE REPORT

For May 2023

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Overview

This report documents suspected and confirmed fatal and nonfatal drug overdoses in Maine during May 2023 as well as for the period January 2022–May 2023 (Table 1). During May 2023, the proportion of fatal overdoses averaged 6.4% of total overdoses. Monthly proportions of 2023 fatalities have fluctuated from a low of 4.1% in March to a high of 8.2% in April. During the period January–May 2023, fatal overdoses comprised 6.1% of all overdoses, slightly lower than the 6.9% for 2022.

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 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 March, April, and May (see Figure 1).

The total number of fatal and reported nonfatal overdoses for May 2023, 739, is displayed in Table 1 in the row second from the bottom: 47 (6.4%) confirmed and suspected fatal overdoses, 276 (37.3%) nonfatal emergency department visits, 221 (29.9%) nonfatal EMS responses not transported to the emergency department, 165 (22.3%) reported community overdose reversals, and 30 (4.1%) law enforcement reversals in incidents that did not include EMS.

Figure 1. Suspected and confirmed fatal overdoses, all drugs, January 2022–May 2023

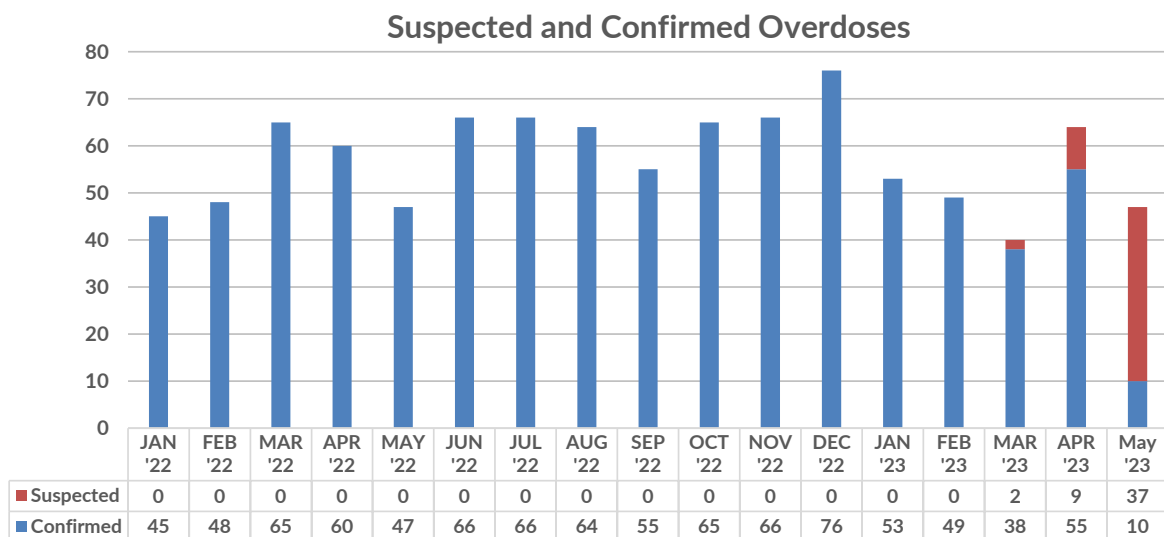


Table 1: Composite reported overdose totals, all drugs, January 2022–May 2023

	Nonfatal					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	Total nonfatal overdoses		
January 2022	295	206	178	39	718	45	763
February 2022	333	185	153	37	708	48	756
March 2022	458	201	202	30	891	65	956
April 2022	290	178	189	26	683	60	743
May 2022	402	248	186	41	877	47	924
June 2022	482	250	177	44	953	66	1019
July 2022	347	287	183	40	857	66	923
August 2022	385	272	255	37	949	64	1013
September 2022	458	256	153	33	900	55	955
October 2022	283	238	177	27	725	65	790
November 2022	287	206	200	20	713	66	779
December 2022	362	212	198	14	786	76	862
2022 total	4382	2739	2251	388	9760	723	10483
% of 2022 total	(41.8%)	(26.1%)	(21.5%)	(3.7%)	(93.1%)	(6.9%)	(100%)
January 2023	296	219	184	44	743	53	796
February 2023	347	226	192	27	792	49	841
March 2023	382	256	237	54	929	40	969
April 2023	269	217	202	27	715	64	779
May 2023	276	221	165	30	692	47	739
2023 YTD total	1570	1139	980	182	3871	253	4124
% of 2023 YTD total	(38.1%)	(27.6%)	(23.8%)	(4.4%)	(93.9%)	(6.1%)	(100%)

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 total amount of activity of law enforcement officials is underrepresented in the above table. 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–May 2023 as well as 2022. During January–May 2023, law enforcement officers responded to a reported 834 overdose incidents (236 fatal; 598 nonfatal) and Maine EMS responded to a reported 3,863 incidents (197 fatal; 3,666 nonfatal). During 2022, law enforcement officers responded to a reported 2,143 incidents (672 fatal; 1,471 nonfatal) and Maine EMS responded to a reported 9,958 incidents (582 fatal; 9,376 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–May 2023	Nonfatal overdose response Jan–May 2023	Total overdose Response Jan–May 2023
Maine EMS	582	9376	9958	197	3666	3863
Law Enforcement	672	1471	2143	236	598	834

*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 with EMS Response

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 cases are included. Often, law enforcement officers are also present at these nonfatal overdose events. The May 2023 monthly totals can be compared to the percentage of the census population on the far left or the percentage of nonfatal overdoses for 2022 or 2023. Caution must be exercised viewing single counties with small numbers for a single month. These may fluctuate randomly, without reflecting any significant statistical trend.

January–May 2023 percentage totals for most counties fall within 0 to 1 percentage points of the 2020 census distribution. Penobscot County is 3 percentage points higher and Androscoggin County is 2 percentage points higher than the 2020 census proportion. York County is 4 percentage points lower, and Sagadahoc County is 2 percentage points lower than the 2020 census proportion.

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

	% 2020 estimated Census population	Jan–Dec 2022 Est. N = 9376	Jan-May 2023 Est. N = 3666	May 2023 Est. N = 760
Androscoggin	8%	1055 (11%)	384 (10%)	63 (8%)
Aroostook	5%	490 (5%)	155 (4%)	39 (5%)
Cumberland	22%	2194 (23%)	858 (23%)	164 (22%)
Franklin	2%	140 (1%)	58 (2%)	12 (2%)
Hancock	4%	287 (3%)	115 (3%)	30 (4%)
Kennebec	9%	922 (10%)	368 (10%)	68 (9%)
Knox	3%	245 (3%)	134 (4%)	35 (5%)
Lincoln	3%	162 (2%)	59 (2%)	13 (2%)
Oxford	4%	410 (4%)	137 (4%)	28 (4%)
Penobscot	11%	1292 (14%)	528 (14%)	99 (13%)
Piscataquis	1%	90 (1%)	45 (1%)	5 (1%)
Sagadahoc	3%	130 (1%)	52 (1%)	15 (2%)
Somerset	4%	392 (4%)	188 (5%)	40 (5%)
Waldo	3%	199 (2%)	84 (2%)	14 (2%)
Washington	2%	221 (2%)	65 (2%)	16 (2%)
York	16%	1147 (12%)	436 (12%)	119 (16%)

County Distribution of Suspected and Confirmed Fatal Overdoses

Table 4 shows the frequency distribution of fatal overdoses at the county level. The May 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 when viewing single counties with small numbers for a single month. These may fluctuate randomly, without reflecting any significant statistical trend. The 2023 percentages for most counties fall within 0 to 2 percentage points of the 2020 census distribution. Androscoggin County is 5 percentage points higher and Penobscot County is 4 percentage points higher. York County is 6 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 = 723	Jan-May 2023 Est. N = 253	May 2023 Est N. = 47
Androscoggin	8%	69 (10%)	34 (13%)	7 (15%)
Aroostook	5%	47 (7%)	13 (5%)	7 (15%)
Cumberland	22%	134 (19%)	54 (21%)	4 (9%)
Franklin	2%	13 (2%)	2 (1%)	2 (4%)
Hancock	4%	24 (3%)	6 (2%)	2 (4%)
Kennebec	9%	54 (7%)	27 (11%)	4 (9%)
Knox	3%	20 (3%)	4 (2%)	0 (0%)
Lincoln	3%	14 (2%)	4 (2%)	0 (0%)
Oxford	4%	36 (5%)	8 (3%)	2 (4%)
Penobscot	11%	109 (15%)	39 (15%)	6 (13%)
Piscataquis	1%	9 (1%)	8 (3%)	0 (0%)
Sagadahoc	3%	11 (2%)	2 (1%)	1 (2%)
Somerset	4%	35 (5%)	11 (4%)	4 (9%)
Waldo	3%	21 (3%)	4 (2%)	2 (4%)
Washington	2%	24 (3%)	11 (4%)	0 (0%)
York	16%	103 (14%)	26 (10%)	6 (13%)

Age and Sex Distribution of Fatal Overdose Victims

Table 5 displays the age and sex composition¹ of the May 2023 fatal overdose population, the 2023 and 2022 fatal overdose population, and the 2020 estimated census population. When comparing the May 2023 data with 2023 year-to-date and 2022 data as well as the census population proportion, caution must be exercised as the small number of cases in each month is vulnerable to random fluctuation that may not reflect a significant statistical trend. The 2023 overall age categories are within 3 percentage points of 2022. The cumulative proportion of males has increased slightly from 73% in 2022 to 74% in the 2023 year to date. The 2023 totals were 187 males and 66 females. The cumulative age distribution for 2023 compared to 2022 shows 3 deaths under 18 in 2022 and 1 in 2023, a decrease of 3 percentage points in the proportion of those aged 18–39, an increase of 2 percentage points in those aged 40–59, and a 1 percentage point increase in the proportion of those 60 and above.

¹ Note that death certificate data contain sex as a recorded category and do 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 = 723	Jan–May 2023 Est. N = 253	May 2023 Est. N = 47
Males	49%	527 (73%)	187 (74%)	34 (72%)
Under 18	19%	3 (<1%)	1 (<1%)	0 (0%)
18–39	26%	295 (41%)	95 (38%)	21 (45%)
40–59	27%	333 (46%)	121 (48%)	21 (45%)
60+	29%	92 (13%)	36 (14%)	5 (11%)

*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. Out of 251 decedents for whom race was reported January through May 2023, 90% of the victims were identified as White, 4% as Black/African American, and 1% as American Indian/Alaska Native. Out of 247 decedents for whom Hispanic ethnicity status was reported, <1% was identified as Hispanic.

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 = 720 Ethnicity N = 706	Jan–May 2023 Race Est. N = 251 Ethnicity Est. N = 247	May 2023 Race Est. N = 47 Ethnicity Est. N = 47
White alone, non-Hispanic	91%	670 (93%)	226 (90%)	43 (91%)
Black/African American alone, non-Hispanic	2%	17 (2%)	11 (4%)	2 (4%)
American Indian/Alaska Native, non-Hispanic	1%	14 (2%)	3 (1%)	1 (2%)
Other race and 2+ races combined, non-Hispanic	7%	12 (2%)	6 (2%)	0 (0%)
Hispanic/Latinx alone or in combination	2%	7 (1%)	1 (<1%)	1 (2%)

*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 251 cases for which military background was reported January–May 2023, 14 (5%) were identified as having a military background. Out of the 47 cases in May 2023 where military background was reported, 2 (4%) was identified as having a military background.

Of the 253 total suspected and confirmed overdoses cases in 2023, undomiciled or transient housing status was reported for 27 (11%) of victims. Among those 27, the largest proportions of undomiciled persons were found in Cumberland County (9, 33%), Penobscot County and Androscoggin County (5, 19%), and Kennebec County (2, 7%). In May 2023, 6 decedents (13%) were identified as undomiciled.

Basic Incident Patterns of Fatal Overdoses

Table 7 reports some of the basic incident patterns for fatal overdoses. May 2023 can be compared to either 2023 year to date or 2022. Caution must be exercised interpreting a single month of data as numbers may fluctuate randomly and not reflect a statistically significant trend. In addition, data totals may change slightly as suspected cases are confirmed or eliminated. Both EMS and police responded together to most fatal overdoses (72%) in 2023. Law enforcement was more likely to respond to a scene alone (21%) than EMS (6%). The overwhelming majority (91%) of confirmed fatal drug overdoses were ruled as, or suspected of being, accidental manner of death. Of the 253 confirmed or suspected fatal overdoses in 2023, 95 (38%) 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 38 (15%) of the 2023 fatal overdoses, higher than 2022 (12%), 2021 (9%), and 2020 (4%). Often, bystanders or witnesses administered naloxone in addition to EMS and/or law enforcement. During 2023, 26% 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%) but slightly higher than in 2022 (25%).

Of the 197 suspected or confirmed drug death cases with EMS involvement during 2023, 108 (55%) victims were already deceased when EMS arrived. In the remaining 89 (45%) cases, resuscitation was attempted either at the scene or presumably in the ambulance during transport to the emergency room. Of those 89 who were still alive when EMS arrived, 24 (27%) were transported, and 65 (73%) did not survive to be transported and 1 had an unknown status. Thus, out of 197 ultimately fatal cases with EMS response, only 24 (12%) 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 7: Incident characteristics among suspected and confirmed fatal overdoses

	Jan–Dec 2022 Est. N = 723	Jan–May 2023 Est. N = 253	May 2023 Est. N = 47
EMS response alone	38 (5%)	15 (6%)	4 (9%)
Law enforcement alone	131 (18%)	54 (21%)	9 (19%)
EMS and law enforcement	541 (75%)	182 (72%)	33 (70%)
Private transport to Emergency Dept.	13 (2%)	1 (<1%)	0 (0%)
Naloxone administration reported at the scene	182 (25%)	65 (26%)	17 (36%)
Bystander only administered	44 (6%)	17 (7%)	5 (11%)
Law enforcement only administered	31 (4%)	4 (2%)	2 (4%)
EMS only administered	49 (7%)	20 (8%)	4 (9%)
EMS and law enforcement administered	11 (2%)	3 (1%)	1 (2%)
EMS and bystander administered	26 (4%)	15 (6%)	4 (9%)
Law enforcement and bystander administered	5 (1%)	5 (2%)	0 (0%)
EMS, bystander, and law enforcement administered	6 (1%)	1 (<1%)	0 (0%)
Naloxone administered by unspecified person	0 (0%)	1 (<1%)	0 (0%)
History of prior overdose	269 (37%)	95 (38%)	11 (23%)

Table 8 displays the frequencies of the most prominent drug categories causing death among confirmed drug deaths. As expected, within the 205 confirmed drug death cases so far in 2023, nonpharmaceutical fentanyl was the most frequent cause of death, mentioned on the death certificate of 165 (80%) 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% (9) 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 205 confirmed deaths in 2023, there were 22 cases (11%) with xylazine listed in addition to fentanyl as a cause of death, and 1 case (<1%) with tramadol listed along with fentanyl.

Stimulants continue to increase as a cause of death, usually in combination with other drugs, particularly fentanyl. Cocaine-involved fatalities constituted 70 (34%) of confirmed cases in 2023, an increase from 29% in 2022. Fentanyl is mentioned as a cause in combination with cocaine in 62 (89%) of 2023 cocaine cases. Methamphetamine was cited as a cause of death in 62 (30%) of the confirmed fatal overdoses in 2023, slightly lower than 2022 (32%, 234); 51 (83%) of the methamphetamine deaths also involved fentanyl as a co-intoxicant cause of death. Cocaine and methamphetamine are named together on 15 (7%) death certificates in 2023, in most cases (14, 93%) as 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 = 723	Jan-May 2023 Est. N = 205	May 2023 Est. N = 10
Fentanyl or fentanyl analogs	560 (77%)	165 (80%)	8 (80%)
Heroin	19 (3%)	9 (4%)	0 (0%)
Cocaine	213 (29%)	70 (34%)	2 (20%)
Methamphetamine	234 (32%)	62 (30%)	1 (10%)
Pharmaceutical opioids**	156 (22%)	65 (17%)	1 (10%)
Fentanyl and heroin	18 (2%)	9 (4%)	0 (0%)
Fentanyl and cocaine	171 (24%)	62 (30%)	2 (20%)
Fentanyl and methamphetamine	189 (26%)	51 (25%)	0 (0%)
Fentanyl and xylazine	46 (6%)	22 (11%)	2 (20%)
Fentanyl and tramadol	10 (1%)	1 (<1%)	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 because 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 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. 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. C