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Maine Cumulative Monthly Overdose Report for January through May 2022

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This cumulative report is provided in lieu of monthly reports for January through May of 2022, which were unable to be compiled and released due to pandemic-related delays in toxicology and substance testing. Following a death, a toxicology report is needed to confirm that a case is an overdose, what substances are involved, and to determine cause and manner of death. Toxicology testing for Maine is done at a national reference laboratory located out-of-state. Prior to the pandemic, toxicology tests were customarily available to the Office of the Chief Medical Examiner within two to three weeks; in the pandemic period, turnaround times have extended to between eight and ten weeks. Emergent substances requiring out-of-scope toxicology testing have also caused additional delays. However, the national laboratory has informed the OCME that these issues are being addressed and turnaround is improving. Going forward, we expect to resume monthly reporting with the June report, which will be released at the end of July. Any anticipated delays will be announced on mainedrugdata.org.

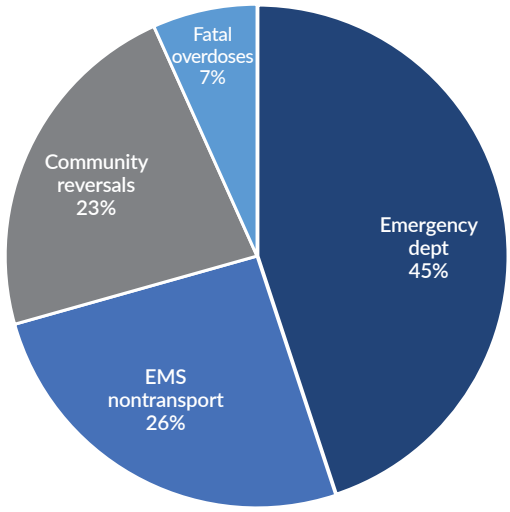
Overview

The proportion of fatal overdoses averaged 7% of total overdoses over the course of 2021 (Table 1), and has stayed at that level during the first five months of 2022 as a whole, although the monthly proportion of fatalities fluctuated from a low of 6% in January and May to 8% in April. During the first five months of 2021, the average number of overdoses per month was 658 (49 fatal and 609 nonfatal cases). During the first five months of 2022, the average number of overdoses per month was 792 (53 fatal and 739 nonfatal cases). The proportion of fatalities in January–May 2022 (266) is 9.0% higher than the first five months of 2021 (244).

Data derived from multiple statewide sources were compiled and deduplicated to reach these nonfatal overdose totals. 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 includes those that have been confirmed, as well as those that are suspected but not yet confirmed for part of April and part of May (see Figure 2).

The cumulative number of reported fatal and nonfatal overdoses January through May 2022, 3962, is displayed in Table 1 in the bottom row: 266 (7%) confirmed and suspected fatal overdoses, 1778 (45%) nonfatal emergency department visits, 1017 (26%) nonfatal EMS responses not transported to the emergency department, 896 (23%) reported community reversals, and 5 (<1%) law enforcement reversals in cases that did not include EMS. Figure 1 displays the relative proportions for these components.

Figure 1: Fatal and nonfatal overdoses in January through May 2022*

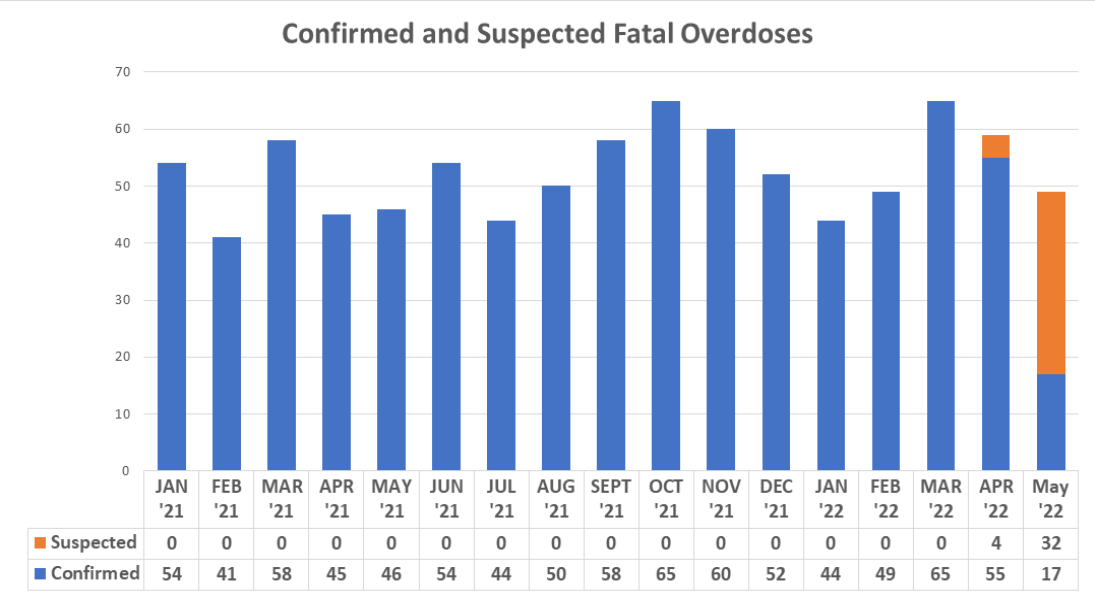


* Percentages may not total 100 due to rounding.

Table 1: Composite overdose totals by month, calendar months January 2021–May 2022

	Nonfatal					Total confirmed and suspected fatal overdoses	Total overdoses
	Emergency department	EMS not transported to emergency dept.	Community reversals with naloxone	Law enforcement reversals with naloxone and without EMS	Total nonfatal overdoses		
January 2021	270	164	127	0	561	54	615
February 2021	277	118	100	0	495	41	536
March 2021	329	172	156	2	659	58	717
April 2021	334	190	136	0	660	45	705
May 2021	409	163	100	1	673	46	719
June 2021	411	223	189	0	823	54	877
July 2021	482	225	167	0	874	44	918
August 2021	428	232	222	3	885	50	935
September 2021	473	234	276	2	985	58	1043
October 2021	383	246	208	2	839	65	904
November 2021	308	219	195	2	724	60	784
December 2021	344	198	176	11	729	52	781
2021 Total	4448 (46.7%)	2384 (25.1%)	2052 (21.5%)	23 (<1)	8907 (93.4%)	627 (6.6%)	9534 (100.0%)
January 2022	296	206	177	1	680	44	724
February 2022	333	185	152	1	671	49	720
March 2022	458	201	202	0	861	65	926
April 2022	290	177	186	3	656	59	715
May 2022	401	248	179	0	828	49	877
2022 YTD total	1778 (44.8%)	1017 (25.6%)	896 (22.6%)	5 (<1%)	3696 (93.2%)	266 (6.5%)	3962 (100.0%)

Figure 2: Number of suspected and confirmed fatal overdoses by month



	JAN '21	FEB '21	MAR '21	APR '21	MAY '21	JUN '21	JUL '21	AUG '21	SEPT '21	OCT '21	NOV '21	DEC '21	JAN '22	FEB '22	MAR '22	APR '22	May '22
Suspected	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	32
Confirmed	54	41	58	45	46	54	44	50	58	65	60	52	44	49	65	55	17

County Distribution of Fatal Overdoses

Table 2 shows the frequency distribution of fatal overdoses at the county level. The monthly totals can be compared either to the percentage of the census population on the far left column or the percentage of all Maine drug fatal overdoses for 2021 and 2022. Caution must be exercised viewing single counties with small numbers for a single month. They may fluctuate randomly, without reflecting any significant statistical trend.

The cumulative percentages of deaths for many counties in 2021 fall within 0–1% of the 2020 census distribution, including those of Aroostook, Cumberland, Franklin, Hancock, Kennebec, Lincoln, Oxford, Piscataquis, Somerset, and Waldo. In 2022 (January–May) many counties likewise fall within 0–1% of the 2020 census distribution, including those of Androscoggin, Aroostook, Franklin, Knox, Lincoln, Oxford, Piscataquis, Sagadahoc, Somerset, Waldo, Washington, and York.

Counties that are 2% or more higher than the 2020 census proportions in 2021 include Androscoggin (+3%), Penobscot (+7%), and Washington (+2%). Counties that are 2% or more lower than the 2020 census proportion in 2021 include Knox (-2%), Sagadahoc (-2%), and York (-5%). The only county that is 2% or more higher than the 2020 census proportions in 2022 is Penobscot (+7%). In 2022, the counties that are 2% or more lower than the 2020 census proportion are Cumberland (-3%), Hancock (-2%), and Kennebec (-3%).

Table 2: County of death among suspected and confirmed fatal overdoses

	% 2020 estimated census population	Jan–Dec 2021 Est. N=627		Jan–May 2022 Est. N=266		Jan 2022 Est. N=44		Feb 2022 Est. N=49		Mar 2022 Est. N=65		Apr 2022 Est. N=59		May 2022 Est. N=49	
Androscoggin	8%	71	(11%)	23	(9%)	3	(7%)	4	(8%)	6	(9%)	7	(12%)	3	(6%)
Aroostook	5%	38	(6%)	16	(6%)	3	(7%)	1	(2%)	5	(8%)	3	(5%)	4	(8%)
Cumberland	22%	130	(21%)	51	(19%)	10	(23%)	12	(24%)	8	(12%)	12	(20%)	9	(18%
Franklin	2%	7	(1%)	8	(3%)	1	(2%)	2	(4%)	3	(5%)	0	(0%)	2	(4%)
Hancock	4%	17	(3%)	5	(2%)	1	(2%)	1	(2%)	2	(4%)	1	(2%)	0	(0%)
Kennebec	9%	54	(9%)	16	(6%)	3	(7%)	5	(10%)	2	(4%)	3	(5%)	3	(6%)
Knox	3%	9	(1%)	6	(2%)	0	(0%)	1	(2%)	2	(4%)	3	(5%)	0	(0%)
Lincoln	3%	15	(2%)	5	(2%)	1	(2%)	0	(0%)	1	(2%)	1	(2%)	2	(4%)
Oxford	4%	26	(4%)	12	(5%)	3	(7%)	0	(0%)	2	(4%)	4	(7%)	3	(6%)
Penobscot	11%	115	(18%)	48	(18%)	8	(18%)	8	(16%)	11	(17%)	10	(17%)	11	(22%)
Piscataquis	1%	11	(2%)	4	(2%)	0	(0%)	1	(2%)	2	(4%)	1	(2%)	0	(0%)
Sagadahoc	3%	5	(1%)	5	(2%)	0	(0%)	2	(4%)	0	(0%)	2	(3%)	1	(2%)
Somerset	4%	24	(4%)	12	(5%)	3	(7%)	3	(6%)	2	(4%)	2	(3%)	2	(4%)
Waldo	3%	14	(2%)	10	(4%)	1	(2%)	1	(2%)	4	(6%)	3	(5%)	1	(2%)
Washington	2%	24	(4%)	6	(2%)	2	(5%)	1	(2%)	0	(0%)	0	(0%)	3	(6%)
York	16%	67	(11%)	39	(15%)	5	(11%)	7	(14%)	15	(23%)	7	(12%)	5	(10%)

Table 3 displays the age and gender composition of the monthly fatal overdose population. The cumulative proportion of males has risen from 68% in 2019 to 71% in 2020 and 2021, and to 73% in the first five months of 2022. The cumulative age distribution for 2022 compared to 2021 shows 1 death under 18 in 2021 and none in 2022, no change in the proportion of those aged 18–39, a 2% decrease in those aged 40–59, and a 2% increase in the proportion of those 60 and above.

Out of 265 confirmed and suspected fatal overdoses for which race was reported in 2022, 253 (95%) of the victims were identified as White, 5 (2%) as Black or African American, 1 (<1%) as Black or African American-White, 2 (1%) as American Indian/Alaska Native, 2 (1%) as American Indian/Alaska Native-White, and 1 (<1%) as Hawaiian/Pacific Islander. Out of 257 for whom Hispanic ethnicity status was reported, 3 (1%) were identified as Hispanic.

Out of the 266 cases for which military background was reported in 2022, 25 (9%) were identified as having a military background. Prior overdose history was reported for 102 (38%) of the victims. Undomiciled or transient housing status was reported for 41 (15%) of the victims:

Table 3: Decedent characteristics among suspected and confirmed fatal overdoses

	Jan–Dec 2021 Est. N=627		Jan–May 2022 Est. N=266		Jan 2022 Est. N=44		Feb 2022 Est. N=49		Mar 2022 Est. N=65		Apr 2022 Est. N=59		May 2022 Est. N=49	
Males	447	(71%)	195	(73%)	34	(77%)	38	(78%)	45	(69%)	45	(76%)	33	(67%)
Under 18	1	(<1%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)
18–39	247	(39%)	104	(39%)	21	(48%)	13	(27%)	21	(32%)	28	(47%)	21	(43%)
40–59	313	(50%)	128	(48%)	19	(43%)	27	(55%)	36	(55%)	24	(41%)	22	(45%)
60+	66	(11%)	34	(13%)	4	(9%)	9	(18%)	8	(12%)	7	(12%)	6	(12%)

19 in Cumberland County, 10 in Penobscot County, 4 in York County, 3 in Androscoggin County, 2 in Aroostook County, 2 in Kennebec County, and 1 in Somerset County.

Table 4 reports some of the basic incident patterns for fatal overdoses. Both EMS and police responded to most fatal overdoses, that is, 77% in both 2021 and the first five months of 2022. Law enforcement was more likely to respond to a scene alone (17%) than EMS (5%) in both 2021 and 2022. The overwhelming majority (95%) of drug overdoses were ruled as, or suspected of being, accidental manner of death.

During 2022, 35% of fatal overdose cases had naloxone administered at the scene or in the ambulance, by EMS, bystanders, or law enforcement. This rate is higher than the 33% of fatal overdoses cases in which naloxone was reported as administered by EMS, bystanders, or law enforcement at the scene or in the ambulance in 2020, but lower than the 45% recorded in 2021.

Although most cases had bystanders present at the scene by the time first responders arrived, the details about who was present at the time of the overdose were usually unclear. However, bystanders, including family and friends, administered naloxone for 15% of the fatal overdoses,

Table 4: Event characteristics among suspected and confirmed fatal overdoses

	Jan–Dec 2021 Est. N=627		Jan–May 2022 Est. N=266		Jan 2022 Est. N=44		Feb 2022 Est. N=49		Mar 2022 Est. N=65		Apr 2022 Est. N=59		May 2022 Est. N=49	
First Responder														
EMS response alone	34	(5%)	13	(5%)	2	(5%)	4	(8%)	3	(5%)	2	(3%)	2	(4%)
Law enforcement alone	108	(17%)	46	(17%)	9	(20%)	10	(20%)	12	(18%)	4	(7%)	11	(22%)
EMS and law enforcement	480	(77%)	205	(77%)	32	(73%)	35	(71%)	50	(77%)	52	(88%)	36	(73%)
Private transport to Emerg. Dept.	5	(1%)	2	(<1%)	1	(2%)	0	(0%)	0	(0%)	1	(2%)	0	(0%)
Naloxone Administration														
Naloxone administration at scene and/or (presumably) in ambulance during transport to emergency room	283	(45%)	93	(35%)	20	(45%)	19	(39%)	21	(32%)	20	(34%)	13	(27%)
Naloxone administration reported at the scene	189	(30%)	79	(30%)	17	(39%)	16	(33%)	18	(28%)	18	(31%)	10	(20%)
Bystander only administered	42	(7%)	17	(6%)	2	(5%)	6	(12%)	3	(5%)	2	(3%)	4	(8%)
Law enforcement only administered	19	(3%)	10	(4%)	5	(11%)	1	(2%)	2	(3%)	2	(3%)	0	(0%)
EMS only administered	83	(13%)	25	(9%)	4	(9%)	5	(10%)	7	(11%)	5	(8%)	4	(8%)
EMS and law enforcement administered	22	(4%)	5	(2%)	1	(2%)	1	(2%)	1	(2%)	2	(3%)	0	(0%)
EMS and bystander administered	21	(3%)	15	(6%)	3	(7%)	2	(4%)	4	(6%)	4	(7%)	2	(4%)
Law enforcement and bystander administered	8	(1%)	4	(2%)	2	(5%)	1	(2%)	0	(0%)	1	(2%)	0	(0%)
EMS, bystander, and law enforcement administered	3	(<1%)	3	(1%)	0	(0%)	0	(0%)	1	(2%)	2	(3%)	0	(0%)

often in addition to EMS or law enforcement. The 2020 drug death report documents only 4% of victims had received bystander-administered naloxone and only 11% of victims in 2021.

Of the 218 suspected or confirmed drug death cases with EMS involvement during 2022, 92 (42%) victims were already deceased when EMS arrived. In the remaining 127 (58%) cases, resuscitation was attempted either at the scene or in the ambulance during transport to the emergency room. Of those who were still alive when EMS arrived, 28 were transported, and 99 did not survive to be transported. Thus, out of 218 fatal cases with EMS response, only 28 (13%) remained alive long enough to be transported but died during transport or at the emergency room. This is likely due to the high number of cases with fentanyl as a cause of death. Fentanyl acts more quickly than other opioids and there is less time for bystanders to find an overdose victim alive and respond by administering naloxone and calling 911.

Table 5 displays the frequencies of the most prominent drug categories causing death among confirmed drug deaths. As expected, for those 230 cases in 2022, nonpharmaceutical fentanyl was the most frequent cause of death mentioned on the death certificate at 173 (75%), which is 2% lower than the rate in 2021 (77%) but 10% higher than the rate in 2020 (67%).

Fentanyl is nearly always found in combination with multiple other drugs. Illicit stimulants have been increasingly mentioned as co-intoxicants with fentanyl during the past several years. Heroin involvement, declining each year, was reported as a cause in only 2% of 2022 deaths, compared to 4% in 2021 and 11% in 2020.

Stimulants continue to increase as a cause of death. Methamphetamine was cited as a cause of death in 35% of the fatal overdoses in 2022, an increase from 27% in 2021. Cocaine-involved fatalities constituted 30% of cases in 2022, an increase from 25% in 2021. Fentanyl is mentioned as a cause in combination with cocaine in 24% of 2022 cases, and in combination with methamphetamine in 28%. Xylazine and nonpharmaceutical tramadol were identified as co-intoxicants with fentanyl for the first time in 2021. Among 230 confirmed deaths in 2022, there were 15 cases (7%) with xylazine listed in addition to fentanyl as a cause of death, and 5 cases (2%) with tramadol listed along with fentanyl.

Table 5: 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 2021 N=627		Jan–May 2022 N=230		Jan 2022 N=44		Feb 2022 N=49		Mar 2022 N=65		Apr 2022 N=55		May 2022 N=17	
Nonpharmaceutical opioids														
Fentanyl or fentanyl analogs	485	(77%)	173	(75%)	31	(70%)	37	(76%)	50	(77%)	41	(75%)	14	(82%)
Heroin	28	(4%)	4	(2%)	1	(2%)	2	(4%)	1	(2%)	0	(0%)	0	(0%)
Nonpharmaceutical stimulants														
Cocaine	156	(25%)	69	(30%)	10	(23%)	17	(35%)	18	(28%)	16	(29%)	8	(47%)
Methamphetamine	171	(27%)	81	(35%)	11	(25%)	15	(31%)	26	(40%)	21	(38%)	8	(47%)
Pharmaceutical opioids**	136	(22%)	50	(22%)	10	(23%)	10	(20%)	12	(18%)	17	(31%)	1	(6%)
Key combinations														
Fentanyl and heroin	21	(3%)	4	(2%)	1	(2%)	2	(4%)	1	(2%)	0	(0%)	0	(0%)
Fentanyl and cocaine	126	(20%)	55	(24%)	7	(16%)	12	(24%)	15	(23%)	13	(24%)	8	(47%)
Fentanyl and methamphetamine	132	(21%)	65	(28%)	8	(18%)	12	(24%)	22	(34%)	16	(29%)	7	(41%)
Fentanyl and xylazine	53	(8%)	15	(7%)	1	(2%)	4	(8%)	3	(5%)	5	(9%)	2	(12%)
Fentanyl and tramadol	20	(3%)	5	(2%)	0	(0%)	0	(0%)	2	(3%)	3	(5%)	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 Management 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. 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 will be 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. 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 was delayed.

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.

1 The Office of Attorney General supports ongoing regarding 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 support University programs involving fatal and nonfatal overdoses surveillance and enable the collection of metrics included in this report. The conclusions in this report do not necessarily represent those of the U.S. CDC.