

The University of Maine

DigitalCommons@UMaine

Health & Public Safety

Margaret Chase Smith Policy Center

3-2022

Maine Monthly Overdose Report for December

Marcella H. Sorg

Margaret Chase Smith Policy Center, University of Maine, mhsorg@maine.edu

Abby Leidenfrost

Follow this and additional works at: https://digitalcommons.library.umaine.edu/mcspc_healthsafety

Repository Citation

Sorg, Marcella H. and Leidenfrost, Abby, "Maine Monthly Overdose Report for December" (2022). *Health & Public Safety*. 30.

https://digitalcommons.library.umaine.edu/mcspc_healthsafety/30

This Report is brought to you for free and open access by DigitalCommons@UMaine. It has been accepted for inclusion in Health & Public Safety by an authorized administrator of DigitalCommons@UMaine. For more information, please contact um.library.technical.services@maine.edu.

MAINE MONTHLY OVERDOSE REPORT

For December 2021

Marcella H. Sorg and Abby Leidenfrost
Margaret Chase Smith Policy Center
University of Maine

Note: The timing of this report has been substantially delayed during the last several months due to pandemic-related issues. The turnaround times for the toxicology reports are currently returning to the Office of Chief Medical Examiner (OCME) in as much as 10 weeks following death; this is three to four times longer than the prepandemic turnaround time. Toxicology testing is done at a national reference laboratory out of state, and they have informed the OCME that these issues are being addressed but will likely continue for the near future. The toxicology report is needed to confirm that a case is an overdose, what substances are involved, and to determine cause and manner of death. Rather than wait for the completion of the majority of cases, as we have been doing, we have decided to release this report more quickly using “suspected” overdose totals, even though only a minority of prior month’s cases will be complete. This means that, beginning with the October report, information on the cause and manner of death for October cases will be delayed.

Overview

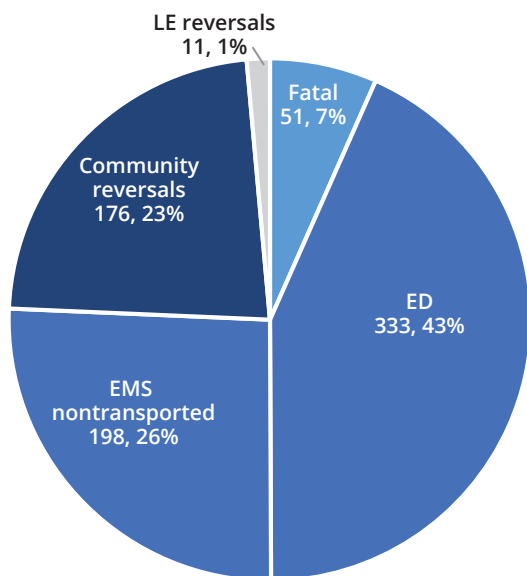
During December 2021, there were 769 nonfatal and fatal overdoses in Maine, including 718 (93%) nonfatal and 51 (7%) confirmed or suspected fatal overdoses. The proportion of fatal to nonfatal overdoses decreased from 9% to 7% of total overdoses between January and December. Deduplicated data derived from multiple statewide sources were compiled to reach these totals: nonfatal overdose incidents reported by hospital emergency rooms (ED), emergency medical service (EMS) responses without transport to the ED, overdose reversals reported by law enforcement, and overdose reversals reported by community members or agencies receiving state-distributed 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.

Composite Total of Fatal and Nonfatal Overdoses for December

During December 2021, there were an estimated 769 fatal and nonfatal drug overdoses statewide (Figure 1), of which 51 (7%) were confirmed or suspected fatal overdoses. The remaining 718 (93%) were reported nonfatal overdoses: 333 (43%) emergency department visits, 198 (25%) EMS patients who were not transported to the emergency room, 176 (23%) reversals reported by community members to the Maine Naloxone Distribution Initiative, and 11 (1%) reversals reported by law enforcement. There were also an additional unknown number of nonfatal overdoses for which 911 was not called and for which no reversal report was provided.

The cumulative number of reported fatal and nonfatal overdoses for the year, 9530, is displayed in Table 1 in the bottom row: 632 (7%) fatal overdoses, 4439 (47%) nonfatal emergency department visits, 2384 (25%) nonfatal EMS responses not transported to the emergency department, 2052 (22%) reported community reversals, and an estimated 23 (<1%) law enforcement reversals in cases that did not include EMS (Figure 1). As mentioned above, there were undoubtedly an unknown number of additional overdose incidents that were not reported. Additionally, an unknown number of the reported community reversals may overlap with nonfatal EMS or law enforcement responses.

Figure 1: Fatal and nonfatal overdoses in December 2021



The deaths, nonfatal emergency department visits, and nonfatal and nontransported EMS responses have been deduplicated. Law enforcement reversals are assumed to be done in cases without EMS presence. Reported community reversals are assumed to be for private overdoses, with no 911 call.

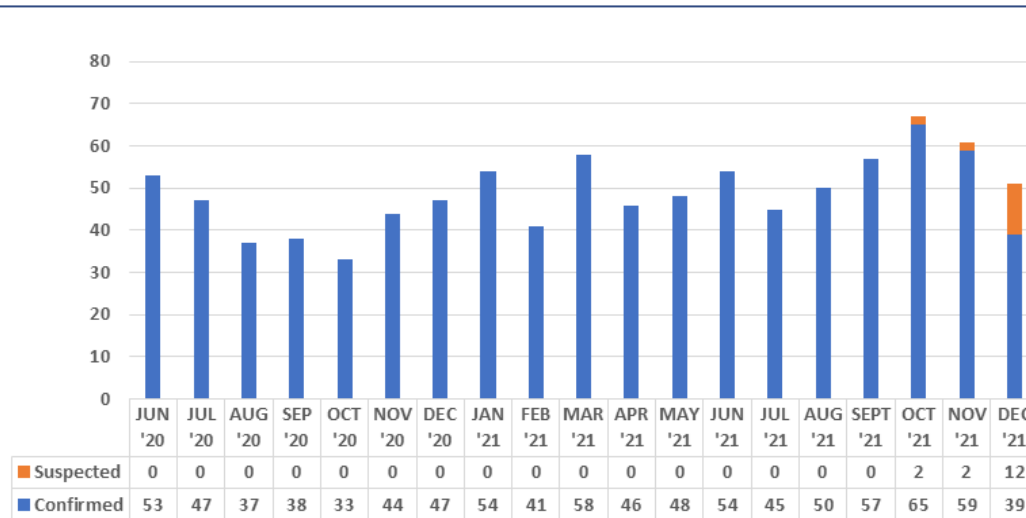
The month of December 2021 saw an average number of fatal overdoses. Nonfatal overdoses for December are down from last month, but are still greater than they were at the beginning of the year. Total fatal overdoses have fluctuated, ranging from lows of 41 in February and 45 in July to a high of 67 in October. As can be seen in Table 1, the total emergency

department visits also fluctuated from a low of 270 in January to highs of 483 in July and 477 in September. The total EMS responses in which the patient declined transport to the emergency

Table 1: Composite overdose totals by month, January—December 2021

Month	Fatal	Nonfatal				Total overdoses
		Emergency department	EMS not transported to emergency dept.	Community reversals with naloxone	Law enforcement reversals with naloxone and without EMS	
January	54	270	164	127	0	615
February	41	277	118	100	0	536
March	58	329	172	156	2	717
April	46	409	190	136	0	781
May	48	330	163	100	1	642
June	54	411	223	189	0	877
July	45	483	225	167	0	920
August	50	429	232	222	3	936
September	57	477	234	276	2	1046
October	67	384	246	208	2	907
November	61	307	219	195	2	784
December	51	333	198	176	11	769
Total	632	4439	2384	2052	23	9530
Percentage of total	7%	47%	25%	22%	<1%	100%

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



department has fluctuated fairly widely from lows of 118 in February and 163 in May to highs of 234 in September and 246 in October. The number of community-reported reversals has ranged from lows of 100 in both February and May to highs of 222 in August and 276 in September. The combined total of nonfatal overdoses has ranged from lows of 561 in January and 495 in February to highs of 886 in August and 989 in September.

Fatal Overdoses

The 51 fatal drug overdoses in December 2021 consists of 39 confirmed drug deaths and 12 suspected drug deaths. Figure 2 shows the considerable fluctuation of monthly death totals since June 2020 in the early months of the pandemic. Although the monthly average for 2020 is 42, the range extends from 34 to 53. The monthly average for 2021 is 53, and the range is 41 to 67.

Table 2 shows the frequency distribution of deaths at the county level. The December 2021 totals can be compared either to the percentage of the census population on the far left or the percentage of all Maine drug deaths for 2019, 2020, and 2021. Caution must be exercised viewing single counties with the small numbers for a single month. They may fluctuate randomly, without reflecting any significant statistical trend.

The cumulative percentages of deaths for many counties for 2021 (January–December) fall within 0%–1% of the 2019 census distribution, including those of Aroostook, Franklin, Hancock, Kennebec, Knox, Lincoln, Oxford, Piscataquis, Somerset, and Waldo. Counties that are 2% or more higher than the census proportions include Androscoggin (+3%), Penobscot (+6%), and Washington (+2%). Counties that are 2% or more lower than the census proportion include Cumberland (-4%), Sagadahoc (-2%), and York (-4%).

Table 3 displays the age and gender composition of the monthly fatal overdose population. The cumulative proportion of males has stayed roughly the same since 2019. The total number of male fatal overdoses for 2021 was 459 (71%), which is the same percentage seen in 2020 and slightly higher than the 68% in 2019. In December, the proportion increased to 86%. The cumulative age distribution for 2021 compared to 2020 and 2019 shows increasingly more decedents in older

Table 2: County of death among suspected and confirmed overdoses

County	Percentage 2019 Census population	Jan-Dec 2019 N=380	Jan-Dec 2020 N=504	Cumulative Jan-Dec 2021 Est. N=632	December 2021 Est. N=51
Androscoggin	8%	33 (9%)	52 (10%)	72 (11%)	5 (10%)
Aroostook	5%	14 (4%)	17 (3%)	38 (6%)	4 (8%)
Cumberland	22%	100 (26%)	97 (19%)	115 (18%)	11 (22%)
Franklin	2%	5 (1%)	8 (2%)	8 (1%)	1 (2%)
Hancock	4%	9 (2%)	13 (3%)	22 (3%)	1 (2%)
Kennebec	9%	42 (10%)	49 (10%)	62 (10%)	4 (8%)
Knox	3%	7 (2%)	16 (3%)	11 (2%)	1 (2%)
Lincoln	3%	11 (3%)	9 (2%)	16 (3%)	1 (2%)
Oxford	4%	9 (2%)	15 (3%)	28 (5%)	1 (2%)
Penobscot	11%	53 (14%)	94 (19%)	105 (17%)	4 (8%)
Piscataquis	1%	3 (1%)	10 (2%)	11 (2%)	0 (0%)
Sagadahoc	3%	8 (2%)	8 (2%)	6 (1%)	0 (0%)
Somerset	4%	16 (4%)	13 (3%)	26 (4%)	4 (8%)
Waldo	3%	3 (1%)	9 (2%)	15 (2%)	1 (2%)
Washington	2%	10 (3%)	20 (4%)	25 (4%)	3 (6%)
York	15%	57 (15%)	74 (15%)	72 (11%)	10 (20%)

Table 3: Decedent characteristics among suspected and confirmed overdoses

Characteristics	Jan-Dec 2019 N=380	Jan-Dec 2020 N=504	Cumulative Jan-Nov 2021 Est. N=632	December 2021 Est. N=51
Males	258 (68%)	357 (71%)	451 (71%)	44 (86%)
Under 18	0 (0%)	2 (<1%)	2 (<1%)	0 (0%)
18-39	171 (45%)	213 (42%)	250 (40%)	21 (41%)
40-59	175 (46%)	235 (47%)	315 (50%)	29 (57%)
60+	33 (9%)	54 (11%)	65 (10%)	1 (2%)

categories. The percentage of those aged 18–39 decreased overall by 6%. The percentage of those aged 40–59 and those over 60 rose by 4% and 1%, respectively.

Out of 628 confirmed and suspected fatal overdoses for which race was reported in 2021, 587 (94%) of the victims were identified as White, 22 (4%) as Black or African American, and 15 (2%) as American Indian/Alaska Native. Out of 622 for whom Hispanic ethnicity status was reported, 612 (99%) were reported as not Hispanic, and 10 (1%) were identified as Hispanic. Out of the 632 cases for which military background was reported, 43 (7%) were identified as having a military background. Prior overdose history was reported for 211 (33%) of the victims. Transient housing status was reported for 62 (10%) of the victims.

Table 4 reports some of the basic incident patterns for fatal overdoses. Roughly similar to 2020, in 2021, both EMS and police responded to most fatal overdoses, 76%. Law enforcement was more likely to respond to a scene alone (17%) than EMS (6%) was. The overwhelming majority (96%) of drug overdoses were ruled as, or suspected of, being accidental manner of death.

During 2021, 31% 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 29% of fatal overdose cases in which naloxone was reported as administered by EMS, bystanders, or law enforcement at the scene in 2020, and considerably higher than the 28% found in the toxicology reports for 2020 fatal overdose victims. This increase may be due to the greater availability of police trained to administer it through programs like the Attorney General’s Naloxone Distribution Initiative. It may also be due to the greater availability in the community due to the Maine Naloxone Distribution Initiative. 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 9% of the fatal overdoses, often in addition to EMS or law enforcement. The 2020 drug death report documents only 4% of victims had received bystander-administered naloxone.

Of the 517 suspected or confirmed drug death cases with EMS involvement in 2021, 252 (49%) victims were already deceased when EMS arrived. In the remaining 265 (51%) cases, resuscitation

Table 4: Event characteristics among suspected and confirmed fatal overdoses

	Jan-Dec 2020 N=504	Cumulative Jan-Dec 2021 Est. N=632	December 2021 Est. N=51
Manner of death (suspected or confirmed)			
Accident	457 (91%)	604 (96%)	49 (96%)
Suicide	33 (7%)	21 (3%)	2 (4%)
Undetermined	14 (3%)	7 (1%)	0 (0%)
First Responder			
EMS response alone	28 (6%)	37 (6%)	5 (10%)
Law enforcement alone	107 (21%)	108 (17%)	10 (20%)
EMS and law enforcement	365 (72%)	480 (76%)	36 (71%)
Naloxone Administration			
Naloxone administration at scene and/or (presumably) in ambulance during transport to emergency room	127 (33%)	194 (31%)	16 (31%)
Naloxone administration reported at the scene	83 (22%)	188 (30%)	12 (24%)
Bystander only administered	11 (2%)	37 (6%)	5 (10%)
Law enforcement only administered	8 (2%)	21 (3%)	0 (0%)
EMS only administered	55 (11%)	87 (14%)	6 (12%)
EMS and law enforcement administered	4 (1%)	20 (3%)	0 (0%)
EMS and bystander administered	8 (2%)	14 (2%)	0 (0%)
Law enforcement and bystander administered	0 (0%)	5 (1%)	0 (0%)
EMS, bystander, and law enforcement administered	-	2 (<1%)	1 (2%)

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, 80 were transported, and 185 did not survive to be transported. Thus, out of 265 ultimately fatal cases with EMS response, only 80 (16%) remained alive long enough to be transported but died during transport or at the hospital.

Table 5 displays the frequencies of the most prominent drug categories causing death among confirmed drug deaths. As expected, for 2021 nonpharmaceutical fentanyl was the most frequent cause of death mentioned on the death certificate at 475 (77%), which is 9% 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 of fentanyl during the past several years. Heroin involvement, declining each year, was reported as a cause in 4% of 2021 deaths, compared to 11% in 2020. Methamphetamine was cited as a cause in 27% of the overdoses, compared to 20% in 2020. Cocaine-involved fatalities constituted 25% of cases in 2021, slightly more than the 23% of cases in 2020. Fentanyl is mentioned as a cause in combination with cocaine in 20% of 2021 cases, and in combination with methamphetamine in 21%. Xylazine and nonpharmaceutical tramadol were identified as co-intoxicants with fentanyl for the first time in 2021. Among 616 confirmed deaths in 2021, there were 51 cases (8%) with xylazine listed in addition to fentanyl and 24 cases (4%) 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) <i>Sample size for completed cases only</i>	Jan–Dec 2020 N=504	Cumulative Jan–Dec 2021 N=616	December 2021 N=39
Nonpharmaceutical opioids			
Fentanyl or fentanyl analogs	336 (67%)	475 (77%)	30 (77%)
Heroin	57 (11%)	22 (4%)	1 (3%)
Nonpharmaceutical stimulants			
Cocaine	118 (23%)	152 (25%)	10 (26%)
Methamphetamine	99 (20%)	166 (27%)	13 (33%)
Pharmaceutical opioids**	118 (23%)	110 (18%)	4 (10%)
Key combinations			
Fentanyl and heroin	47 (9%)	20 (3%)	1 (3%)
Fentanyl and cocaine	97 (19%)	123 (20%)	9 (23%)
Fentanyl and methamphetamine	70 (14%)	128 (21%)	10 (26%)
Fentanyl and xylazine	0 (0%)	51 (8%)	0 (0%)
Fentanyl and tramadol	0 (0%)	24 (4%)	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 no longer counted as a pharmaceutical opioid.

Highlight of the Month Regarding Substance Use Disorder Public Policy Response

Maine Recovery Coach Certification Board

The state's effort to define and maintain the highest standards of recovery coach professional practices and ethics reached a significant milestone in January 2022 with the first individual reaching the threshold for experience and supervision and other criteria to be eligible for state certification. This state designation will allow individuals trained through the basic recovery coach academy course to continue their training and education and receive state certification. Certification requires 500 hours of coaching with at least 25 of those hours being actively supervised. It is anticipated that receiving state designation will accelerate the ability of recovery coaches to be employed in a number of settings including hospital emergency departments, MaineCare Opioid Health Homes, and correctional facilities. All the application materials for certification are available for download on the Maine Recovery Coach Certification Board website at <https://www.peerrecoverycoachme.org>.

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 non-fatal 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. Monthly reports are designed to improve transparency and timeliness regarding Maine's epidemic of substance use morbidity and mortality. Year-to-date numbers are updated with each monthly report, 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 is being extended to two or more months.

By highlighting drug death 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 is 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 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 also provides funding to the State of Maine's Office of Behavioral Health and Center for Disease Control, which support university programs involving fatal and non-fatal overdoses, and enable collection of data included in this report. The conclusions represented here do not necessarily represent those of the U.S. CDC.