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MAINE MONTHLY OVERDOSE REPORT

For September 2021
(Revised 11/22/21)

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Note: The timing of this report has been substantially delayed during the last several months due to pandemic-related issues. The toxicology reports are currently returning to the Office of Chief Medical Examiner (OCME) in as much as 6-8 weeks following death; this is 3 to 4 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 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, but the report will be released by the end of November.

Overview

During September there were a total of 1020 fatal and nonfatal overdoses, including 58 (6%) confirmed and suspected fatal overdoses and 962 (94%) nonfatal overdoses. The proportion of fatal to nonfatal overdoses has decreased from 9% to 6% between January and September. Deduplicated data derived from multiple statewide sources were compiled to reach these totals. They include 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 September

During September 2021, there were an estimated 1020 fatal and nonfatal drug overdoses statewide (Figure 1), of which 58 (6%) were confirmed or suspected fatal overdoses. The remaining 962 (94%) were reported non-fatal overdoses: 450 (44%) emergency department visits; 234 (23%) EMS patients who were not transported to the emergency room; and 276 (27%) reversals reported by community members to the Maine Naloxone Distribution Initiative. 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 January through September, 6891, is displayed in Table 1 in the bottom row: 454 (7%) fatal overdoses; 3261 (47%) nonfatal emergency department visits; 1658 (24%) nonfatal EMS responses not transported to the emergency department; 1479 (21%) reported community reversals; and an estimated 39 (<1%) law enforcement reversals in cases that did not include EMS. As mentioned above, there were undoubtedly additional overdose incidents that were not reported, for which the total number is

unknown. Additionally, an unknown number of the reported community reversals may overlap with nonfatal EMS or law enforcement responses. The deaths, nonfatal emergency department visits, and nonfatal and non-transported EMS responses have been deduplicated.

The month of September included the greatest number of both fatal and nonfatal overdoses in 2021, but the increase has not been steady or consistent. The total fatal overdoses have fluctuated up and down, ranging from lows of 41 in February and 46 in April to highs of 58 in March and September.

As can be seen in Table 1, the total emergency department visits fluctuated as well from lows of 263 in both January and February to highs of 399 in March and 450 in September. The total EMS responses in which the patient declined transport to the emergency department has fluctuated fairly widely from lows of 117 in February and 157 in May to highs of 214 in July and 234 in September. The number of community-reported reversals has ranged from lows of 100 in February and 101 in May to highs of 225 in August and 276 in September. The combined total of nonfatal overdoses has ranged from lows of 485 in February and 558 in January to highs of 834 in July and 962 in September.

Figure 1: Fatal and nonfatal overdoses in September 2021

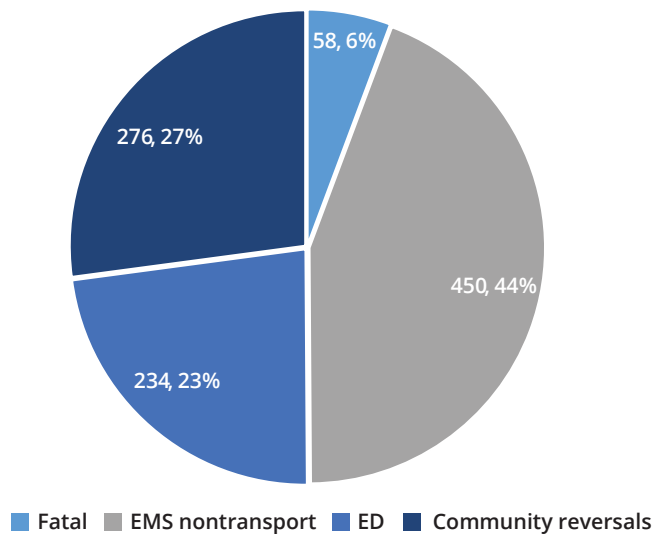
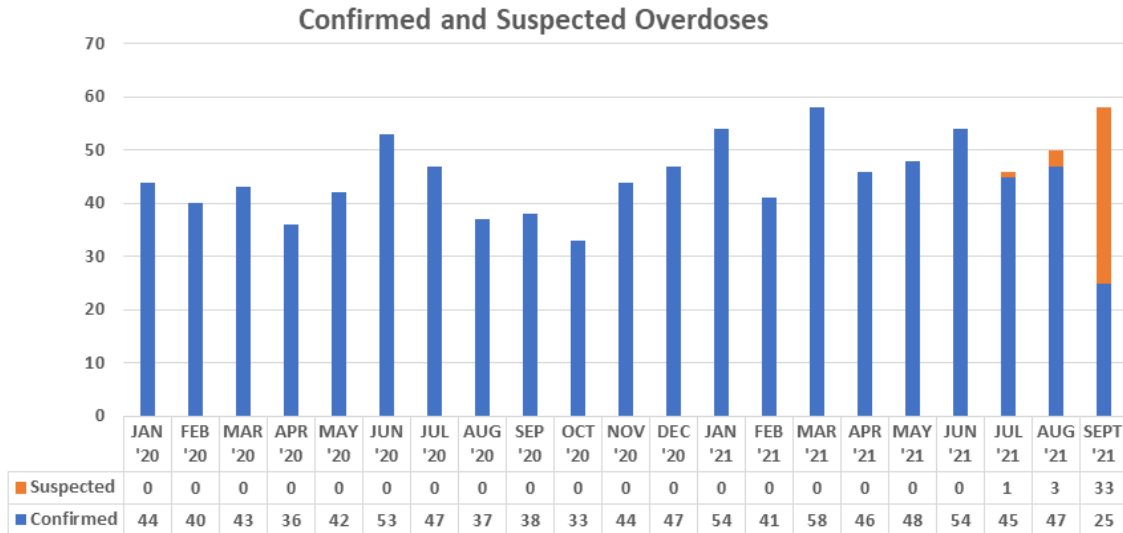


Table 1: Composite overdose totals by month, January–September 2021

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—Estimated	
January	54	263	163	127	5	612
February	41	263	117	100	5	526
March	58	399	169	158	5	789
April	46	326	187	136	5	700
May	48	323	157	101	5	634
June	54	396	213	189	5	857
July	46	449	214	167	4	880
August	50	392	204	225	3	874
September	58	450	234	276	2	1020
TOTAL (%)	455 (7%)	3261 (47%)	1658 (24%)	1479 (21%)	39 (1%)	6892 (100%)

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



Fatal Overdoses

The September 2021 total of 58 fatal drug overdoses consists of 25 confirmed drug deaths and 33 suspected drug deaths. Figure 2 shows the considerable monthly fluctuation of monthly death totals since January 2020 at the start of the pandemic. Although the 2020 monthly average is 42, the range extends from 34 to 53. The average so far for 2021 is 51, and the range is 41 to 58.

Table 2 shows the frequency distribution of deaths at the county level. The September 2021 totals can be compared either to the percent of the census population on the far left or the percent of all Maine drug deaths for 2019, 2020, and January–September 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–September) fall within 0%–1% of the 2019 census distribution, including those of Aroostook, Franklin, Hancock, Knox, Lincoln, Oxford, Piscataquis, Somerset, and Waldo. Counties that are 2% or more higher than the census proportions include Androscoggin (+3%), Kennebec (+3%), Penobscot (+4%), 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. For January–September for 2021, it was 314 (69%), which is slightly lower than 71% in 2020 and slightly higher than the 68% in 2019. In September, it increased to 72%. The cumulative age distribution January–September 2021 compared to 2020 and 2019 shows increasingly more decedents in older categories. The percentage of those 18–39 decreased overall by 5%. The percentage of those 40–59 and those over 60 rose by 3% and 2% respectively.

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-Sept 2021 Est. N=455	September 2021 Est. N=58
Androscoggin	8%	33 (9%)	52 (10%)	52 (11%)	3 (5%)
Aroostook	5%	14 (4%)	17 (3%)	21 (5%)	2 (4%)
Cumberland	22%	100 (26%)	97 (19%)	82 (18%)	14 (24%)
Franklin	2%	5 (1%)	8 (2%)	6 (1%)	0 (0%)
Hancock	4%	9 (2%)	13 (3%)	17 (4%)	2 (4%)
Kennebec	9%	42 (10%)	49 (10%)	53 (12%)	7 (12%)
Knox	3%	7 (2%)	16 (3%)	10 (2%)	3 (5%)
Lincoln	3%	11 (3%)	9 (2%)	14 (3%)	1 (2%)
Oxford	4%	9 (2%)	15 (3%)	17 (4%)	2 (4%)
Penobscot	11%	53 (14%)	94 (19%)	69 (15%)	7 (12%)
Piscataquis	1%	3 (1%)	10 (2%)	10 (2%)	3 (5%)
Sagadahoc	3%	8 (2%)	8 (2%)	5 (1%)	1 (2%)
Somerset	4%	16 (4%)	13 (3%)	14 (3%)	3 (5%)
Waldo	3%	3 (1%)	9 (2%)	13 (3%)	3 (5%)
Washington	2%	10 (3%)	20 (4%)	20 (4%)	2 (4%)
York	15%	57 (15%)	74 (15%)	52 (11%)	5 (9%)

Table 3: Decedent characteristics among suspected and confirmed overdoses

Characteristics	Jan-Dec 2019 N=380	Jan-Dec 2020 N=504	Cumulative Jan-Sept 2021 Est. N=455	September 2021 Est. N=58
Males	258 (68%)	357 (71%)	314 (69%)	42 (72%)
Under 18	0 (0%)	2 (<1%)	1 (<1%)	0 (0%)
18-39	171 (45%)	213 (42%)	182 (40%)	22 (38%)
40-59	175 (46%)	235 (47%)	222 (49%)	30 (52%)
60+	33 (9%)	54 (11%)	50 (11%)	6 (10%)

During January through September 2021, out of 451 confirmed and suspected fatal overdoses for which race was reported, 422 (94%) of the victims were identified as White, 18 (4%) as Black or African American, and 11 (2%) as American Indian/Alaska Native. Out of 448 for whom Hispanic ethnicity status was reported, 444 (99%) were reported as not Hispanic, and 4 (1%) were identified as Hispanic. Out of the 455 cases for which military background was reported, 30 (7%) were identified as having a military background. Prior overdose history was reported for 150 (33%) of the victims. Transient housing status was reported for 40 (9%) of the victims.

Table 4 reports some of the basic incident patterns for fatal overdoses. Roughly similar to 2020, during January through September of 2021, both EMS and police responded to most fatal overdoses, 78%. Law enforcement was more likely to respond to a scene alone (17%) than EMS (4%). The overwhelming majority (95%) of drug overdoses were ruled as accidental manner of death.

During January through September of this year, 39% of fatal overdose cases had naloxone administered at the scene or in the ambulance, whether by EMS, bystanders, or law enforcement. This is higher than the 33% 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.¹ 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 may have been present at the time of the overdose were usually unclear. However, bystanders, including family and friends, administered naloxone for 11% of the fatal overdoses, often in addition to EMS and/or law enforcement. The 2020 drug death report documents only 4% of victims who had received bystander-administered naloxone.

Based on 374 suspected or confirmed drug death cases with EMS involvement during January to September, 179 (48%) victims were already deceased when EMS arrived. In the remaining 195 (52%) cases, resuscitation was attempted either at the scene or in the ambulance during transport to the emergency room. Of the 195 cases who were still alive when EMS arrived, 56 were transported, and 139 did not survive to be transported. Thus, out of 374 fatal cases with EMS response, only 56 (15%) remained alive long enough to be transported but died during transport or at the emergency room.

Table 4: Event characteristics among suspected and confirmed fatal overdoses

	Jan-Dec 2020 N=504	Cumulative Jan-Sept 2021 Est. N=455	September 2021 Est. N=58
Manner of death (suspected or confirmed)			
Accident	457 (91%)	434 (95%)	53 (91%)
Suicide	33 (7%)	16 (3%)	5 (9%)
Undetermined	14 (3%)	5 (1%)	0 (0%)
First Responder			
EMS response alone	28 (6%)	19 (4%)	2 (4%)
Law enforcement alone	107 (21%)	77 (17%)	6 (10%)
EMS and law enforcement	365 (72%)	355 (78%)	46 (79%)
Naloxone Administration			
Naloxone administration at scene and/or (presumably) in ambulance during transport to emergency room	127 (33%)	178 (39%)	23 (40%)
Naloxone administration reported at the scene	83 (22%)	145 (32%)	18 (31%)
Bystander only administered	11 (2%)	26 (6%)	4 (7%)
Law enforcement only administered	8 (2%)	16 (4%)	2 (4%)
EMS only administered	55 (11%)	65 (14%)	5 (9%)
EMS and law enforcement administered	4 (1%)	17 (4%)	2 (4%)
EMS and bystander administered	8 (2%)	12 (3%)	1 (2%)
Law enforcement and bystander administered	0 (0%)	5 (1%)	3 (5%)
EMS, bystander, and law enforcement administered	-	1 (<1%)	0 (0%)

¹ Note that toxicology samples are taken at a slightly later time than the scene visit, and values for naloxone may be lower.

Table 5 displays the frequencies of the most prominent drug categories causing death among confirmed drug deaths. As expected, nonpharmaceutical fentanyl was the most frequent cause of death mentioned on the death certificate so far for 2021 at 319 (76%), which is 9% higher than 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% last year. Methamphetamine was cited as a cause in 25% of the overdoses, which is 5% more than in 2020. Cocaine-involved fatalities January–September constituted 26% of cases, slightly more than the 23% in 2020. Fentanyl is mentioned as a cause in combination with cocaine in 20% of 2021 cases, and in combination with methamphetamine in 19%. Xylazine and nonpharmaceutical tramadol were identified as co-intoxicants with fentanyl for the first time in 2021. Among 399 confirmed deaths January–September, the number and percent of cases with xylazine listed as an additional cause in fentanyl deaths is 34 (8%) of confirmed overdose deaths, and 18 (4%) with tramadol.

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–Sept 2021 N=420	September 2021 N=25
Nonpharmaceutical opioids			
Fentanyl or fentanyl analogs	336 (67%)	319 (76%)	20 (80%)
Heroin	57 (11%)	18 (4%)	1 (4%)
Nonpharmaceutical stimulants			
Cocaine	118 (23%)	107 (26%)	8 (32%)
Methamphetamine	99 (20%)	105 (25%)	4 (16%)
Pharmaceutical opioids**	118 (23%)	88 (21%)	2 (8%)
Key combinations			
Fentanyl and heroin	47 (9%)	17 (4%)	1 (4%)
Fentanyl and cocaine	97 (19%)	85 (20%)	6 (24%)
Fentanyl and methamphetamine	70 (14%)	78 (19%)	2 (8%)
Fentanyl and xylazine	0 (0%)	34 (8%)	4 (16%)
Fentanyl and tramadol	0 (0%)	18 (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 Health Access Foundation funded Maternal Overdose Death Prevention Quality Improvement Project

MeHAF supports this project based at Franklin Memorial Hospital, which distributes first aid kits to all postpartum patients, with Narcan offered as part of the kit. The kit is offered to all such patients, not just to those individuals who have a diagnosed SUD. Why? Because postpartum patients are considered at high risk, as up to 50% of overdoses that occur postpartum have been found to occur in those without previous identification of an SUD.

This project began on May 1, 2021, and the early data are encouraging. During the first five months, a significant majority of the patients offered the first aid kit have chosen to include Narcan. In August, of 17 deliveries, 16 accepted the kit and 13 included Narcan. Cumulatively since the initiation of the project, there have been 70 deliveries, 64 kits distributed and in 46 kits Narcan was included. The program is operated under the guidance of retired OB-GYN Jay Naliboff, M.D., and Nell Tharp, RN, CNM.

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 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.