

Maine Monthly Overdose Report

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Fatal Overdoses

The April 2021 total of 48 fatal drug overdoses consists of 10 confirmed drug deaths and 38 suspected drug deaths. Figure 1 shows the considerable monthly fluctuation of deaths since January 2020 months. Although the 2020 average is 42, the range extends from 34 to 53. The average so far for 2021 is 50, and the range is 42 to 57.

Figure 1. Number of Suspected and Confirmed Fatal Overdoses

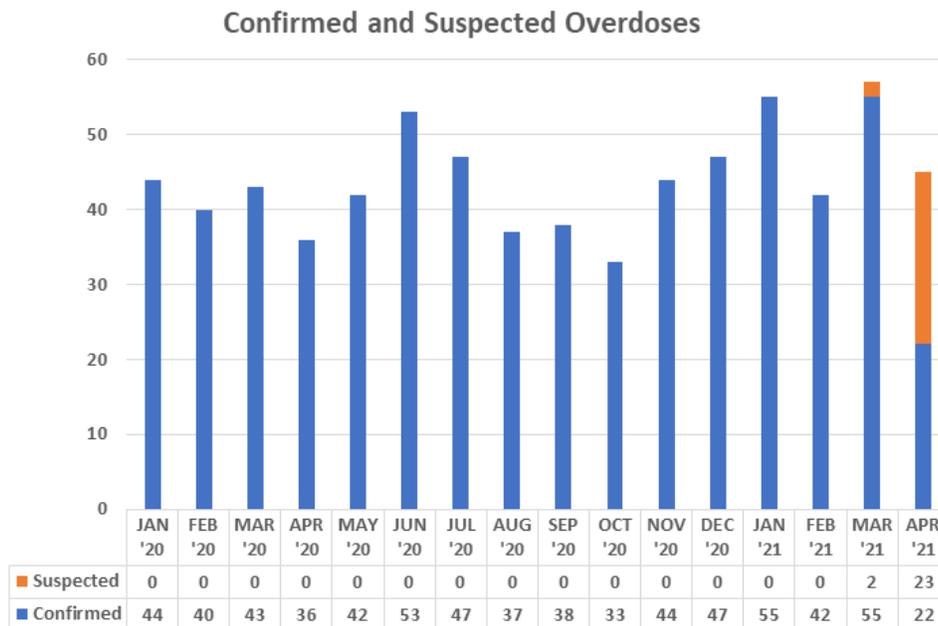


Table 1 shows the frequency distribution of deaths at the county level. The April 2021 totals can be compared either to the percent of the census population on the far left or the percent of all

Maine drug deaths for 2019, 2020, and January–April 2021. Caution must be exercised with the small numbers for a single month. They may fluctuate randomly, without any significant statistical meaning.

The cumulative percentages of deaths for many counties for 2021 (January–April) fall within 0%–1% of the 2019 census distribution, including those of Franklin, Hancock, Kennebec, Lincoln, Piscataquis, Sagadahoc, and Waldo. Counties that are 2% or higher than the census include Androscoggin (5%), Oxford (2%), Penobscot (6%), and Washington (3%). Counties that are 2% or lower than the census include Aroostook (-2%), Cumberland (-5%), Knox (-3%), Somerset (-3%) and York (-4%).

Compared to the county death frequencies in 2019, there has been a northward shift of the higher percentages. For example, the cumulative January–April 2021 percentages for York and Cumberland Counties have dropped by 4%, and 5% respectively, while Androscoggin and Penobscot Counties have increased by 5% and 6% respectively.

Table 1. County of death among suspected and confirmed overdoses

County	Percentage of 2019 Census Population	Jan–Dec 2019 N=380	Jan–Dec 2020 N=504	Cumulative Jan–Apr 2021 Est. N=199	April 2021 Est. N=46
Androscoggin	8%	33 (9%)	52 (10%)	25 (13%)	5 (10%)
Aroostook	5%	14 (4%)	17 (3%)	7 (3%)	1 (2%)
Cumberland	22%	100 (26%)	97 (19%)	34 (17%)	5 (10%)
Franklin	2%	5 (1%)	8 (2%)	4 (2%)	1 (2%)
Hancock	4%	9 (2%)	13 (3%)	10 (5%)	4 (8%)
Kennebec	9%	42 (11%)	49 (10%)	21 (10%)	7 (15%)
Knox	3%	7 (2%)	16 (3%)	1 (<1%)	0 (0%)
Lincoln	3%	11 (3%)	9 (2%)	7 (3%)	1 (2%)
Oxford	4%	9 (2%)	15 (3%)	12 (6%)	4 (8%)
Penobscot	11%	53 (14%)	94 (19%)	34 (17%)	7 (15%)
Piscataquis	1%	3 (1%)	10 (2%)	2 (1%)	1 (2%)
Sagadahoc	3%	8 (2%)	8 (2%)	3 (1%)	1 (2%)
Somerset	4%	16 (4%)	13 (3%)	3 (1%)	1 (2%)
Waldo	3%	3 (1%)	9 (2%)	4 (2%)	1 (2%)
Washington	2%	10 (3%)	20 (4%)	10 (5%)	2 (4%)
York	15%	57 (15%)	74 (15%)	23 (11%)	5 (10%)

Table 2 displays the age and gender composition of the monthly fatal overdose population. The cumulative proportion of males has increased since 2019. In the first four months of 2021, it was 75%, which is higher than the 71% level in 2020 and the 68% in 2019. The cumulative age distribution in January–April 2021 compared to 2019, shows the percentage of those 18–39 decreased overall by 4%. The percentage of those 40–59 rose by 2%, and the percentage of those over 60 remained the same. There are no decedents under 18 in 2021, and 9% over 60, the same as 2019.

During the first four months of 2021, out of 199 confirmed and suspected fatal overdoses, 187 (94%) of the victims were identified as White, 8 (4%) as Black or African American, and 4 (1%) as American Indian/Alaska Native. Out of 194 for which Hispanic ethnicity was reported, 192 (99%) were reported as not Hispanic, and 2 (1%) were identified as Hispanic. Out of the 199 cases, 17 (9%) were identified as having a military background. Prior overdose history was reported for 66 (33%) of the victims. Transient housing status was reported for 17 (9%) of the victims.

Table 2. Decedent characteristics among suspected and confirmed overdoses

Characteristic	Jan-Dec 2019 N=380	Jan-Dec 2020 N=504	Cumulative Jan-Apr 2021 Est. N=199	April 2021 Est. N=45
Males	258 (68%)	357 (71%)	138 (69%)	36 (75%)
Under 18	0 (0%)	2 (<1%)	0 (0%)	0 (0%)
18-39	171 (45%)	213 (42%)	83 (41%)	17 (35%)
40-59	175 (46%)	235 (47%)	97 (48%)	22 (46%)
60+	33 (9%)	54 (11%)	19 (9%)	6 (13%)

Table 3 reports some of the basic incident patterns. Roughly similar to 2020, during the first four months of 2021, both EMS and police responded to most fatal overdoses, 77%. Law enforcement was more likely to respond to a scene alone (20%) than EMS (4%). The overwhelming majority (95%) of drug overdoses were ruled as accidental manner of death.

During April, 44% of cases had naloxone administered at the scene or in the ambulance, whether by EMS, bystanders, or law enforcement, greater than in the first four months of 2021 (35%) or 2020 (33%) (see Table 3). This may be due to the greater availability of police trained to administer it through programs like the Attorney General’s Naloxone Distribution Initiative and ODMAP. 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 when first responders arrived, the details about who may have been present at the time of the overdose were usually unclear. Several victims reportedly had naloxone prescriptions, but none of those were evidently used: 7 in 2020; 4 in first four months of 2021.

Based on 161 suspected or confirmed drug death cases with EMS records during the first four months of 2021, 71 (44%) victims were already deceased when EMS arrived. Of the remaining 90 (56%), resuscitation was attempted either at the scene or in the ambulance during transport to the emergency room. Of the 90 cases who were still alive when EMS arrived, 26 were transported, and 64 did not survive to be transported. Thus, out of 161 cases with EMS records, only 26 (16%) remained alive long enough to be transported, but died during transport or at the emergency room.

Table 3. Event characteristics among suspected and confirmed overdoses

	Jan-Dec 2020 N=504	Cumulative Jan-Mar 2021 Est. N=199	Apr 2021 Est. N=45
Manner of death (suspected or confirmed)			
Accident	457 (91%)	190 (95%)	45 (100%)
Suicide	33 (7%)	6 (3%)	0 (0%)
Undetermined	14 (3%)	3 (2%)	0 (0%)
First Responder			
EMS response alone	28 (6%)	8 (4%)	1 (2%)
Law enforcement alone	107 (21%)	37 (20%)	9 (20%)
EMS and law enforcement	365 (72%)	153 (77%)	35 (80%)
Naloxone Administration			
Naloxone administration at scene and/or (presumably) in ambulance during transport to emergency room	127 (33%)	77 (38%)	20 (44%)
Naloxone administration reported at the scene	83 (22%)	69 (35%)	19 (42%)
Bystander only administered	11 (2%)	11 (6%)	3 (7%)
Law enforcement only administered	8 (2%)	10 (5%)	4 (8%)
EMS only administered	55 (11%)	32 (16%)	9 (20%)
EMS and law enforcement administered	4 (1%)	10 (5%)	2 (4%)
EMS and bystander administered	8 (2%)	4 (2%)	1 (2%)
Law enforcement & bystander administered	0 (0%)	1 (1%)	0 (0%)

Table 4 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 during the first four months of 2021 at 73%, 9% higher than in 2020. Fentanyl is nearly always found in combination with multiple other drugs. Heroin involvement has been declining during the last several years, causing 7% of 2021 deaths, compared to 11% last year. Illicit stimulants have been increasingly mentioned as a cause of death in recent years, and in the first four months of 2021, methamphetamine caused 28% of the overdoses, compared to 20% in 2020. Cocaine-involved fatalities January–April constituted 20% of cases, slightly lower than 23% in 2020. Fentanyl is found in combination with cocaine in 17% of cases, and in combination with methamphetamine in 21%. Pharmaceutical opioids were named as a cause of death in 25% of cases during the first four months of 2021, all in combination with other drugs, just 2% higher than in 2020.

Table 4. Key drug categories and combinations causing death among confirmed overdoses

Cause of death (alone or in combination with other drugs) Sample size for completed cases only	Jan–Dec 2020 N=504	Cumulative Jan–Apr 2021 N=174	April 2021 N=22
Nonpharmaceutical opioids			
Fentanyl or fentanyl analogs	336 (67%)	132 (76%)	16 (73%)
Heroin	57 (11%)	12 (7%)	0 (0%)
Nonpharmaceutical stimulants			
Cocaine	118 (23%)	35 (20%)	7 (32%)
Methamphetamine	99 (20%)	48 (28%)	6 (27%)
Pharmaceutical opioids**	118 (23%)	43 (25%)	7 (32%)
Key combinations			
Fentanyl and cocaine	97 (19%)	29 (17%)	7 (32%)
Fentanyl and methamphetamine	70 (14%)	36 (21%)	3 (14%)

**Nonpharmaceutical tramadol is now being combined with fentanyl in pills and powders for illicit drug use. When found in combination with fentanyl, tramadol is no longer counted as a pharmaceutical opioid.

Nonfatal Overdoses

We currently do not have a precise way to enumerate nonfatal overdoses. Several metrics can be used to estimate minimum numbers of nonfatal overdoses from different perspectives (see Table 5). This includes, for example, counting the number of responses by EMS in which the EMT or paramedic suspects an opioid overdose and administers naloxone. However, many persons involved with an overdose event do not call 911. And some deaths for which naloxone is administered are not caused by opioids. One syringe access program in Maine estimates that as many as 74% of overdose events do not include a 911 call. Put another way, the 911 calls may occur in only 26% of the overdoses, whereas 74% constitute “private overdoses.” Some of these persons will unfortunately die. In about 15% of EMS overdose cases, the patient is revived, but refuses to be transported to the emergency room. Some may receive naloxone, but are found later not have had an overdose, but were unconscious or had stopped breathing for another reason.

The average monthly number of 2020 EMS runs in which naloxone was administered and patient survived was 105, and is 80 for the first four months of 2021. The average monthly number of emergency room visits for a drug overdose identified through syndromic surveillance increased slightly from 277 in 2020 to 278 in the first four months of 2021. The average monthly number of overdose reversals voluntarily reported to the Tier 1 distributors in the Maine Naloxone Distribution Initiative was 161 in 2020, and fell to 121 in the first quarter of 2021. Finally the average monthly number of non-fatal overdose incidents attended by law enforcement including naloxone administration fell from 52 in 2020 to 42 in the first four months of 2021.

Table 5. Five partially overlapping metrics estimating the number of nonfatal overdoses per month

Metrics Frequently Used to Estimate Nonfatal Overdose Numbers	Unduplicated Monthly Estimate Based on 4th Quarter 2020	Unduplicated Monthly Estimate Based on Jan-Apr 2021
Average monthly number of EMS runs in which naloxone was administered and patient survived (EMS runs minus deaths) SOURCE: Maine EMS; Maine Office of Chief Medical Examiner	105	80
Average monthly number of emergency department visits likely involving a drug overdose, minus those who were transported by EMS and then died SOURCES: Maine CDC- Syndromic Surveillance, Office of Chief Medical Examiner	277	278
Average monthly number of overdose reversals reported by community naloxone distributors, minus the number of fatal overdoses in which bystanders administered naloxone SOURCE: Maine Naloxone Distribution Initiative (based on January and February totals)	161	121 (Jan-Mar)**
Average monthly number of incidents in which law enforcement administered naloxone and victim survived* SOURCES: Maine Office of Attorney General and ODMAP Initiatives, unduplicated	52	42

*Error was corrected from February Report for 4th quarter 2020

**The April report of reversals was delayed.

Background Information about this Report

This report, funded jointly by the Maine Office of Attorney General and the Office of Behavioral Health¹, provides an overview of statistics regarding suspected and confirmed fatal and nonfatal drug overdoses in Maine during the month of March, 2021. 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. Most cases are completed within one month.

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.

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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.