MAINE MONTHLY OVERDOSE REPORT
For February, 2021
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Introduction

This report, funded jointly by the Maine Office of Attorney General and the Office of Behavioral Health, provides an overview of statistics regarding suspected and confirmed fatal and nonfatal drug overdoses in Maine during the month of February, 2021. Data for the report were collected at the Office of Chief Medical Examiner and as part of the Maine Naloxone Distribution Initiative. This report is the second in a series of monthly reports to be produced within about two weeks of the end of the month, designed to improve transparency and timeliness regarding the Maine's epidemic of substance use morbidity and mortality. Year-to-date numbers will be updated with each new monthly report, as cases are finalized, and their overdose status is confirmed or ruled out. The totals are expected to shift as this evolution occurs. In addition, due to the smaller sample size in each month, we expect totals to fluctuate due to the effects of random variation. These monthly reports will be posted on the Maine drug data hub: *https://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 that drug use during that moment. Although there are medical, psychosocial, or public policy interventions that can affect individual vulnerability and circumstances, the lethality of the drug or drug combination is rarely amenable to policy interventions.

A "suspected" drug fatality is identified by physiological signs of overdose as well as physical signs at the scene and witness information. In order for an overdose to be "confirmed," the medical examiner must have issued a final death certificate which includes the names of the specific drugs. Comprehensive forensic toxicology testing must also be 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.

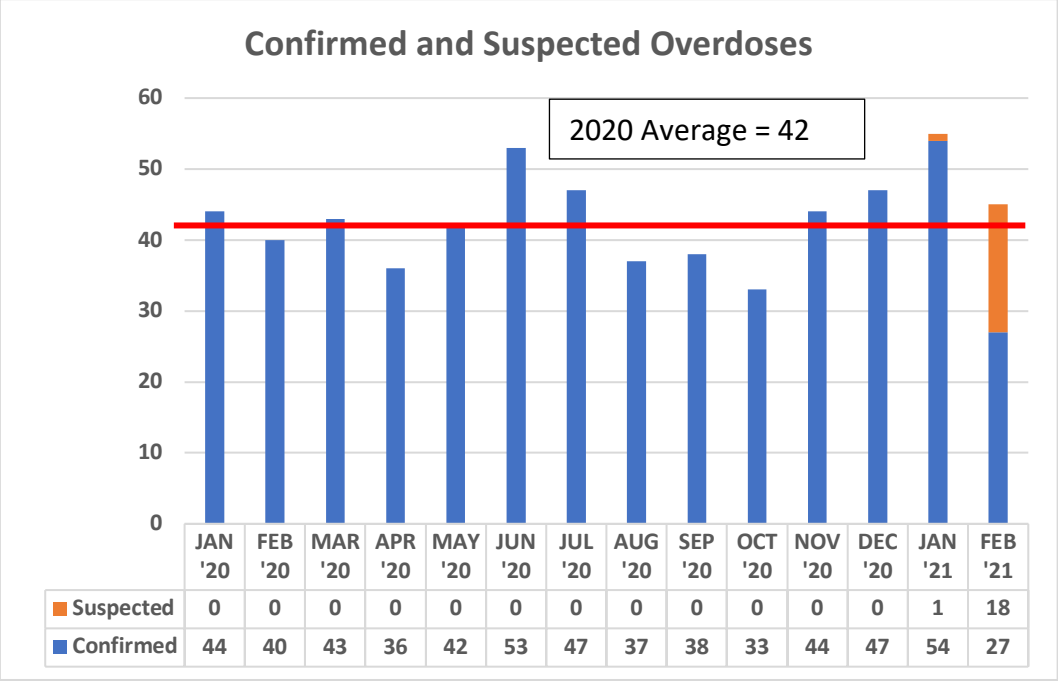
Monthly reporting of overdose totals will bring attention to the often dramatic shifts in totals that can occur from month to month. Yet, these fluctuations are common with small numbers, and will over time tend toward an average. Whereas the overall number of overdose deaths is a critical indicator 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 develop ways to monitor components that can be directly affected by specific public health education and harm reduction interventions. For example, we will report the number that had access to naloxone, and future reports will document the number who were alone while using.

Fatal Overdoses

Overview

The February 2021 total of 45 fatal drug overdoses consists of 27 confirmed drug deaths and 18 suspected drug deaths. Figure 1 shows the considerable monthly fluctuation over the past year. Although the 2020 average is 42, the range extends from 34 to 53. The January 2021 number of fatal drug overdoses is currently 54 confirmed and one suspected. Three additional overdoses were suspected in January (see January report), but were confirmed as due to different causes of death.

Figure 1. Number of suspected and confirmed fatal overdoses by month



	JAN '20	FEB '20	MAR '20	APR '20	MAY '20	JUN '20	JUL '20	AUG '20	SEP '20	OCT '20	NOV '20	DEC '20	JAN '21	FEB '21
Suspected	0	0	0	0	0	0	0	0	0	0	0	0	1	18
Confirmed	44	40	43	36	42	53	47	37	38	33	44	47	54	27

Table 1 shows the frequency distribution of deaths at the county level. The February 2021 totals can be compared either to the percent of the census population on the left or the percent of all Maine drug deaths for 2020, also on the left. Caution must be exercised with these small county totals. They are likely to fluctuate randomly, without any significant statistical meaning. In general, the cumulative percentages for January - February in most counties accord with both the 2020 patterns and the census distribution. Cumberland and York are lower than their share of the population, and Kennebec and Penobscot are higher.

Table 1. County of death among suspected and confirmed overdoses

	Percent of 2019 Census Population	Jan-Dec 2020 Est. N=503	January 2021 Est. N=55	February 2021 Est. N=45	Cumulative Jan-Feb 2021 Est. N=100
Androscoggin	8%	51 (10%)	8 (14%)	5 (11%)	13 (13%)
Aroostook	5%	17 (3%)	1 (2%)	2 (4%)	3 (3%)
Cumberland	22%	98 (19%)	10 (18%)	9 (20%)	19 (19%)
Franklin	2%	8 (2%)	0 (0%)	2 (4%)	2 (2%)
Hancock	4%	13 (3%)	2 (4%)	3 (7%)	5 (5%)
Kennebec	9%	48 (10%)	6 (11%)	6 (13%)	12 (12%)
Knox	3%	17 (3%)	0 (0%)	0 (0%)	0 (0%)
Lincoln	3%	9 (2%)	3 (5%)	1 (2%)	4 (4%)
Oxford	4%	14 (3%)	3 (5%)	4 (9%)	7 (7%)
Penobscot	11%	94 (19%)	7 (13%)	5 (11%)	12 (12%)
Piscataquis	1%	10 (2%)	1 (2%)	0 (0%)	1 (1%)
Sagadahoc	3%	7 (1%)	1 (2%)	1 (2%)	2 (2%)
Somerset	4%	13 (3%)	1 (2%)	2 (4%)	3 (3%)
Waldo	3%	9 (2%)	2 (4%)	1 (2%)	3 (3%)
Washington	2%	20 (4%)	2 (4%)	1 (2%)	3 (3%)
York	15%	75 (15%)	8 (15%)	3 (7%)	11 (11%)

Table 2 displays the age and gender composition of the monthly fatal overdose population. The larger number of males in 2021 at 66% is slightly lower than most of Maine's drug death periods in the past, but can be expected to trend toward the 2020 average of 71%. The cumulative age distribution in 2021 is nearly identical to 2020, and is clustered in the two middle categories, from 18-39 and 40-59. There are no decedents that were under 18, and only 10% over 60.

Table 2. Decedent characteristics among suspected and confirmed overdoses

	Jan-Dec 2020 Est. N=503	January 2021 Est. N=55	February 2021 Est. N=45	Cumulative Jan-Feb 2021 Est. N=100
Percent males	356 (71%)	34 (62%)	32 (71%)	66 (66%)
Percent under 18	1 (<1%)	0 (0%)	0 (0%)	0 (0%)
Percent 18-39	213 (42%)	20 (36%)	22 (49%)	42 (42%)
Percent 40-59	235 (47%)	30 (55%)	18 (40%)	48 (48%)
Percent 60+	52 (10%)	5 (9%)	5 (11%)	10 (10%)

Table 3 reports some of the basic incident patterns. Similar to 2020, in January and February 2021, both EMS and police responded to most fatal overdoses, 79%. Law enforcement is more likely to respond to a scene alone than EMS. The overwhelming majority of January and February drug overdoses, 93%, were ruled as accidental manner of death. Unfortunately, many victims (39%) had already died before first responders arrived, so resuscitation was attempted in 61%. Naloxone was administered to 28% of the victims in 2021, which is nearly half (46%) of those who were still alive when first responders arrived. Most naloxone doses were administered by EMS personnel, 79%, with some doses being given by law enforcement or bystanders or a combination. Naloxone is not given in all cases; for example, non-opioid drugs would not respond to naloxone. Although most overdose cases have bystanders present at the scene, the details about who was present at the time of the overdose are usually unclear.

Table 3. Event characteristics among suspected and confirmed overdoses

	Jan-Dec 2020 Est. N=503	January 2021 Est. N=55	February 2021 Est. N=45	Cumulative Jan-Feb 2021 Est. N=100
EMS or law enforcement response				
EMS response alone	29 (6%)	2 (4%)	2 (4%)	6 (6%)
Law enforcement response alone	108 (21%)	11 (20%)	8 (18%)	19 (19%)
Both EMS and law enforcement	361 (72%)	44 (80%)	35 (78%)	79 (79%)
Found deceased by first responders	----	24 (44%)	15 (33%)	39 (39%)
Manner of death (suspected or confirmed)				
Accident	456 (91%)	51 (93%)	42 (93%)	93 (93%)
Suicide	33 (7%)	1 (2%)	3 (7%)	4 (4%)
Undetermined	12 (2%)	1 (2%)	0 (0%)	1 (1%)
Naloxone administration	74 (15%)	14 (25%)	14 (31%)	28 (28%)
Bystander only administered	11 (2%)	1 (2%)	1 (2%)	2 (2%)
Law enforcement only administered	8 (2%)	3 (5%)	1 (2%)	4 (4%)
EMS only administered	42 (8%)	7 (13%)	11 (24%)	18 (18%)
EMS and law enforcement administered	4 (1%)	2 (4%)	0 (0%)	2 (2%)
EMS and bystander administered	9 (2%)	1 (2%)	1 (2%)	2 (2%)

Table 4 displays the overall pattern of the most prominent drug categories identified in confirmed overdoses. As expected, nonpharmaceutical fentanyl is the most frequent cause of death to date in 2021, at 74%, 7% higher than in 2020. Heroin involvement has been declining during the last several years; it represents only 10% of 2021 deaths. Illicit stimulants have been increasing in recent years, and in January and February cocaine-involved fatalities constituted 27% of cases and methamphetamine 23%. Amphetamine is a metabolite of methamphetamine, and is frequently found with it. Fentanyl is found in combination with cocaine in 16% of cases, and fentanyl and methamphetamine as a combination in 20%. Pharmaceutical opioids were identified as a cause of death in 23% of cases, all in combination with other drugs.

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

Cause of death (alone or in combination with other drugs)	Jan-Dec 2020 Est. N=503	January 2021 N=54	February 2021 N=27	Cumulative Jan-Feb 2021 N=81
Nonpharmaceutical opioids				
Fentanyl or fentanyl analogs	337 (67%)	39 (72%)	21 (78%)	60 (74%)
Heroin	53 (11%)	5 (9%)	3 (11%)	8 (10%)
Nonpharmaceutical stimulants				
Cocaine	119 (24%)	17 (31%)	5 (19%)	22 (27%)
Methamphetamine/amphetamine	102 (20%)	11 (20%)	4 (15%)	19 (23%)
Pharmaceutical opioids	119 (24%)	15 (28%)	4 (15%)	19 (23%)
Key combinations				
Fentanyl and cocaine	97 (19%)	9 17%)	4 (15%)	13 (16%)
Fentanyl and methamphetamine/amphetamine	72 (14%)	12 22%)	4 (15%)	16 (20%)

Nonfatal Overdoses

We do not have a precise way to calculate 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 overdose and administers naloxone. However, many persons involved with an overdose event do not call 911. 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 represent 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.

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-Feb 2021
Number of EMS runs in which naloxone was administered and patient survived Source: Maine EMS; Maine Office of Chief Medical Examiner	105	74
Number of Emergency Department visits likely involving a drug overdose, less those who were transported by EMS and then died Source: Maine CDC, Syndromic Surveillance	277	256
Number of overdose reversals reported by community naloxone distributors and users of the OD-ME mobile app, minus the number of fatal overdoses in which bystanders administered naloxone (163-2=161) Sources: Maine Naloxone Distribution Initiative (based on January total); OD-ME mobile app	161	151
Number of incidents in which law enforcement administered naloxone and victim survived Sources: Maine Office of Chief Medical Examiner; ODMAP initiative	21	13

Highlight of the Month Regarding
Substance Use Disorder Public Policy Response

Comprehensive Drug-Related Data Website

Our highlighted project this month is the Opioid Data Sharing Committee and the newly created *https://mainedrugdata.org* website. The Committee will be holding its 8th monthly meeting this month. Co-chaired by Rebecca Taylor, Deputy Director of Research and Evaluation at the Office of Behavioral Health and Gordon Smith, Director of Opioid Response, and staffed by the University of Maine research team, the committee's purpose is to identify all the potential statewide sources of data on opioids (and other drugs as well), analyze the data, and where valuable, work with the source of the data to establish regular and timely reporting to the website's data hub, also managed by the University of Maine. The new website will be utilized to publicly report the data, including this new *Maine Monthly Overdose Report*. Since its establishment in mid-January, the website has already attracted approximately 73,000 "hits," or website interactions, and about 3,000 unique visitors. The website now includes data from over 25 sources.

The Opioid Data Sharing Committee will be featuring one category of the data each month, and exploring its relevance and promise for understanding the drug-related issues Maine is facing, e.g. law enforcement; judicial systems; corrections; prescription monitoring; treatment; syringe exchange program data; naloxone distribution data; and overdose data. The goal is to improve transparency and public engagement, as well as to provide a readily accessible source for information needed both by the public and by policy makers, supporting Maine's efforts to make its policy decisions data-driven and evidence-based.