

# Maine Drug Death Report January–June 2021

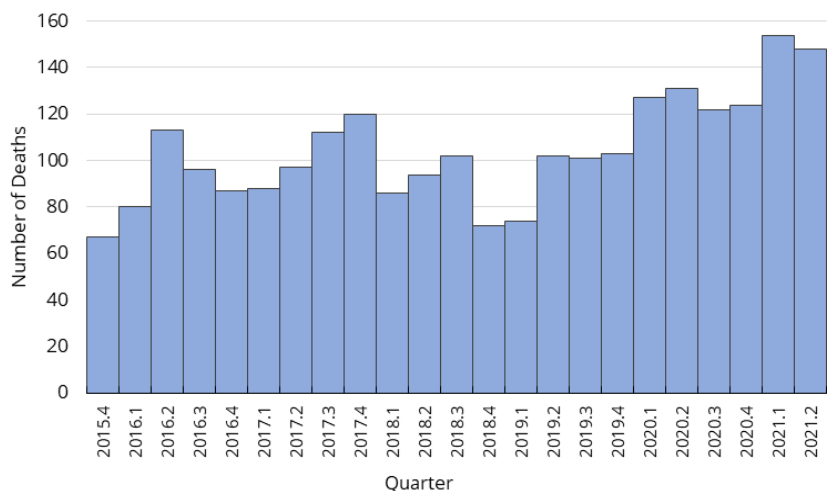
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*This report, funded by the Maine Office of Attorney General, provides a summary of statistics regarding confirmed drug fatalities in Maine during January–June 2021. Data for the report were collected at the Office of Chief Medical Examiner. A “drug death” is identified when one or more drugs are mentioned on the death certificate as a cause or significant contributing factor for the death.*

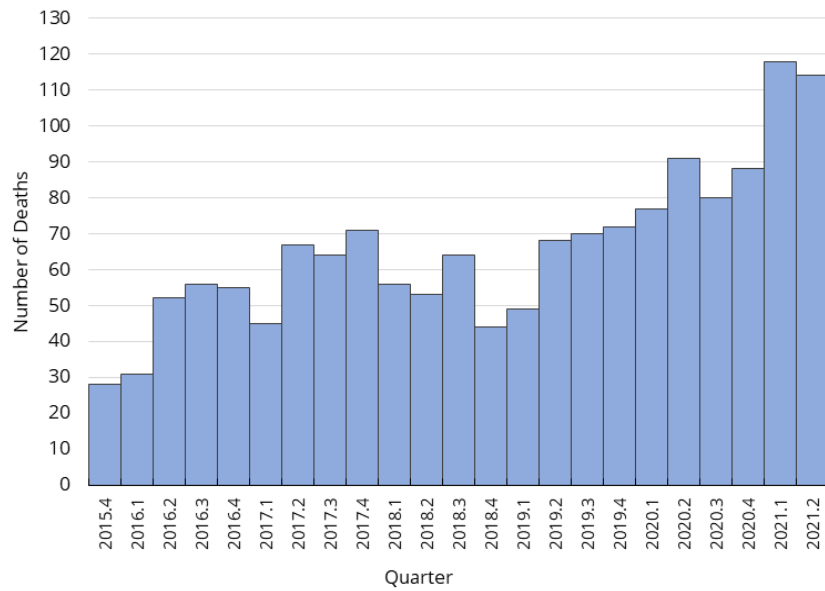
## Overview

Total fatalities due to drugs during the first half of 2021 were 302 (Figure 1). The first quarter of 2021 had 154 deaths, a 24% increase over fourth quarter 2020; the second quarter total was 148, a 4% decrease from the first quarter 2021. The 2021 total is 23% higher than the previous half year, July–December 2020, which had a total of 246. This pattern, similar to that seen in many other states, is likely due at least in part to the effects of the COVID-19 pandemic: isolation, avoidance of medical services, and alterations in the illicit drug supply. The high number of fatal overdoses continues to be driven by illicit, nonpharmaceutical fentanyl and fentanyl analogs, total 232, 77% of deaths (Figure 2), whereas pharmaceutical opioids were mentioned as a cause of death in 69 cases, 23% of the deaths (Figure 3). In 36 cases (12% of deaths), these two categories overlap. The overall totals for illicit, nonpharmaceutical drug mortality, mainly involving fentanyl and heroin, have been quite volatile over the last three years, with a dip in 2018 (257, 73%), an increase in 2019 (301, 80%), and a peak in 2020 (399, 79% of all drug deaths). One-third of opioid deaths (80, 30%) received naloxone at some point near the time of their death. Finally, about half (107, 46%) of nonpharmaceutical opioid deaths in 2021 also involved the illicit stimulants cocaine and/or methamphetamine (Figure 4).

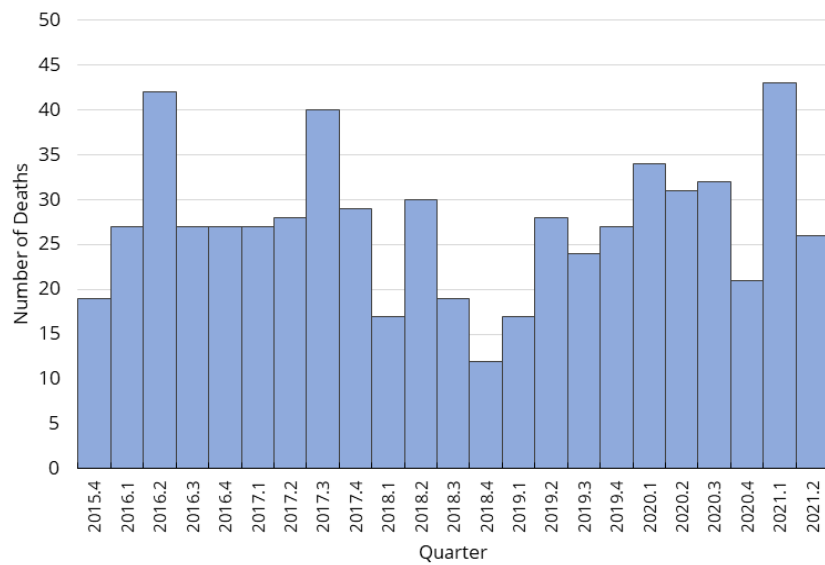
Figure 1. Total number of drug deaths by quarter



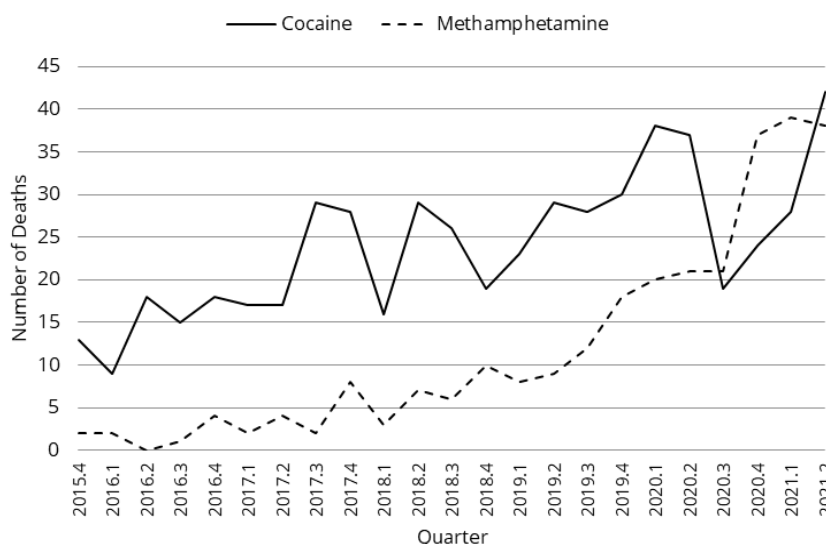
**Figure 2.** Quarterly number of deaths caused by nonpharmaceutical fentanyl and/or fentanyl analogs, alone or in combination with other drugs or alcohol



**Figure 3.** Quarterly number of deaths caused by pharmaceutical opioid drugs alone or in combination with other drugs or alcohol



**Figure 4.** Quarterly number of deaths caused by cocaine and/or methamphetamine alone or in combination with other drugs or alcohol



### Manners of death

Of the 302 total overdoses, 289 (96%) were accidental, 8 (3%) were suicides, and 5 (2%) were undetermined manner.

### Overall patterns of note

- Fatal overdoses made up 8% of total reported overdoses during the first two quarters.
- Most (78%) drug deaths were caused by two or more drugs. The average cause of death involved three drugs.
- The vast majority of overdoses (88%) were caused by at least one opioid, including both pharmaceutical and illicit (nonpharmaceutical) opioid drugs.
- Fentanyl (and/or its analogs) caused 77% of deaths, usually in combination with other drugs, up in proportion from 67% in 2020.
- Heroin/morphine caused 6% of deaths, usually in combination with other drugs, down in proportion from 11% in 2020.
- Cocaine or crack caused 23% of deaths, usually in combination with other drugs, the same proportion as in 2020.
- Methamphetamine caused 26% of deaths, usually in combination with other drugs, up in proportion from 20% in 2020.
- Pharmaceutical opioid deaths caused 23% of deaths, almost all in combination with other drugs, the same proportion as in 2020.
- Mitragynine (Kratom) appeared as a cause of death in 4 cases, 1% of deaths. This represents a decrease over the last quarter of 2020 when there were 6 (5%).
- Xylazine has been identified as co-intoxicant of fentanyl in an increasing number of deaths in 2021, total 30 (10%) out of 302.

- Tramadol was listed as a cause of death in 15 (5%) of deaths.
- In the first half of 2021, 80 (30%) of 267 opioid deaths had evidence of naloxone in their toxicology reports. Bystander administration of naloxone was mentioned in 28 (35%) out of those 80 case reports: 2 by strangers, 9 by spouse, 3 by relative, and 8 by a friend. For 6 cases, it was unclear who administered naloxone.

**Table 1.** Demographic patterns

	Total	Average age	Age range	Male (%)
All drug deaths	302	43	17–73	213 (71%)
Accidents	289	43	17–73	207 (72%)
Suicides	8	44	22–68	3 (38%)

**Table 2.** Race and ethnicity

	Total	Ethnicity (Hispanic)
White	282	1 (3 Unknown)
Black or African America	12	0
American Indian/Alaska Native	6	1
Unknown	1	1 Unknown
Total with race/ethnicity reported	301	2

**Table 3.** Involvement of specific drug or drug categories that caused death

Specific drug or drug category causing the death (alone or in combination with other drugs and/or alcohol)	Number	Percentage of 302 drug deaths
Number of deaths caused by more than one drug	237	78%
Any pharmaceutical drug	185	61%
Any pharmaceutical opioid drug	69	23%
Any opioid (pharmaceutical or nonpharmaceutical) 73 (34%) of 212 opioid deaths had received naloxone*	267	88%
Any nonpharmaceutical, illicitly manufactured drug (includes heroin/morphine, nonpharmaceutical fentanyl, fentanyl analogs, other illicitly manufactured opioids, cocaine, and methamphetamine)	264	87%
Any nonpharmaceutical opioid drugs (heroin/morphine, fentanyl, fentanyl analogs, U-47700)	236	78%
Fentanyl and/or fentanyl analogs (known pharmaceutical fentanyl cases removed)	232	77%
Heroin/morphine (known pharmaceutical morphine cases removed)	18	6%
Any benzodiazepine	43	14%
Cocaine	70	23%
Methamphetamine	77	26%
Mitragynine (Kratom)	4	1%
Xylazine	30	10%

\*Excludes cases with buprenorphine in toxicology.

## Nonpharmaceutical (Illicit) Fentanyl and/or Fentanyl Analog Deaths

This category includes deaths caused by nonpharmaceutical (illicitly manufactured) fentanyl and/or fentanyl analogs, usually combined with other co-intoxicant drugs. We removed all cases that involved known pharmaceutical fentanyl from these totals. There were 232 overdoses due to nonpharmaceutical fentanyl and/or fentanyl analogs in the first two quarters of 2021, 77% of drug deaths. Out of the 232 fentanyl/fentanyl analog deaths, only 2 (1%) were suicides, the remaining 99% being accidental.

- 172 (74%) are male and 60 (26%) are female.
- The average age in nonpharmaceutical fentanyl and/or fentanyl analog deaths is 42 (age range 17–71).

**Table 4.** Involvement of co-intoxicant drugs in nonpharmaceutical fentanyl deaths

Specific co-intoxicants in addition to fentanyl and/or fentanyl analogs identified as a cause of death	Fentanyl-fentanyl analog deaths N=232	
	Number	Percentage
<b>Fentanyl and Fentanyl Analog Combinations</b>		
Fentanyl (alone or combined with fentanyl analogs)	232	100%
Fentanyl analogs (alone or combined with fentanyl)	16	7%
<i>Both</i> nonpharmaceutical fentanyl and at least one fentanyl analog	16	7%
<b>Co-Intoxicants Identified in Fentanyl and/or Fentanyl Analog Deaths</b>		
One or more drugs (or alcohol) in addition to fentanyl and/or fentanyl analogs	192	83%
One or more pharmaceutical opioids in addition to fentanyl and/or fentanyl analogs	36	16%
Heroin/morphine in addition to fentanyl and/or fentanyl analogs	14	6%
Alcohol in addition to fentanyl and/or fentanyl analogs	59	25%
One or more benzodiazepines in addition to fentanyl and/or fentanyl analogs	33	14%
Cocaine in addition to fentanyl and/or fentanyl analogs	59	25%
Methamphetamine in addition to fentanyl and/or fentanyl analogs	60	26%
Cocaine and/or methamphetamine in addition to fentanyl and/or fentanyl analogs	107	46%
Xylazine in addition to fentanyl and/or fentanyl analogs	30	13%

**Table 5.** Fentanyl analogs identified as a cause of death, January–June 2021

Fentanyl analog identified	Total number of cases*	Percentage fentanyl analog-involved deaths N=16
Acetyl fentanyl	16	100%

\*Excludes cases with buprenorphine in toxicology.

## Heroin/Morphine Deaths

Heroin/morphine deaths include any death in which the cause of death identified “heroin” or “morphine.” We have removed all cases involving known pharmaceutical morphine, so the heroin/morphine deaths are all suspected heroin overdoses. In the first two quarters of 2021, there were 18 deaths due to (nonpharmaceutical) heroin/morphine, all in combination with other drugs or alcohol, constituting 6% of all drug deaths. In 2020, there had been 57 heroin deaths, 11% of all drug deaths.

**Table 6.** Involvement of co-intoxicant drugs in heroin/morphine deaths

Specific co-intoxicants in addition to heroin/morphine identified on the death certificate as a cause of death	Heroin/morphine deaths N=18	
	Number	Percentage
One or more drugs (or alcohol) in addition to heroin/morphine	17	94%
At least one pharmaceutical opioid in addition to heroin/morphine	4	22%
Nonpharmaceutical fentanyl and/or fentanyl analogs in addition to heroin/morphine	14	78%
Alcohol in addition to heroin/morphine	4	22%
At least one benzodiazepine in addition to heroin/morphine	4	22%
Cocaine in addition to heroin/morphine	5	28%

## Pharmaceutical Opioid Deaths

There was a total of 69 (23%) deaths due to pharmaceutical opioids during the first half of 2021. Of these, 66 (96%) had co-intoxicant drugs or alcohol also mentioned as a cause of death. Key pharmaceutical opioids included buprenorphine (22, 32%), oxycodone (23, 33%), and methadone (17, 25%). Out of the 22 deaths from buprenorphine, 7 (32%) deaths had a prescription for that drug and 8 (35%) out of 23 deaths from oxycodone had an active prescription. There were 1 out of 2 pharmaceutical morphine deaths, 2 out of 4 hydrocodone deaths, and 1 out of 6 hydromorphone deaths that had a prescription for that drug.

The frequency of deaths in which at least one pharmaceutical opioid is mentioned on the death certificate as a cause of death declined slightly over the past decade, although there was a slight increase in 2019 and 2020, which continues on during the first half of 2021, going from 53 in the previous half (July–December 2020), to 69 (January–June 2021). This downward trend continues in the second quarter of 2021 from 43 in the first quarter to 26.

Of the 69 pharmaceutical opioid deaths, a majority (38, 55%) had at least one illicit drug also listed as a co-intoxicant cause of death. Approximately half (36, 52%) included nonpharmaceutical fentanyl, usually also in combination with cocaine and/or methamphetamine (24, 35%)

**Table 7.** Involvement of key pharmaceutical opioids and co-intoxicants in pharmaceutical opioid deaths

	Pharmaceutical opioid deaths N=69	
	Number	Percentage
<b>Key pharmaceutical opioids</b>		
Buprenorphine	22	32%
Oxycodone	23	33%
Methadone	17	25%
<b>Co-intoxicant combinations</b>		
One or more drugs (or alcohol) in addition to pharmaceutical opioids	66	96%
Nonpharmaceutical opioid(s) in addition to pharmaceutical opioids	38	55%
Multiple pharmaceutical opioids	13	19%
Fentanyl and/or fentanyl analogs in addition to pharmaceutical opioids	36	52%
Heroin/morphine in addition to pharmaceutical opioids	4	6%
One or more benzodiazepines in addition to pharmaceutical opioids	19	28%
Cocaine in addition to pharmaceutical opioids	10	15%
Methamphetamine in addition to pharmaceutical opioids	14	20%
Alcohol in addition to pharmaceutical opioids	13	19%

## County Totals

Table 8 provides totals for Maine counties, comparing 2020 as a whole with the first half of 2021 and projecting totals to the end of 2021. The reader is cautioned that, because the numbers for individual counties are relatively small, fluctuations between quarters or years may be due more to random chance than to actual changes in underlying epidemiological trends. Noting from the first to the second quarter, the totals for Penobscot and Cumberland counties dropped by 3 and 2 percentage points respectively, and Kennebec went up by 4 percentage points. Although these changes are noticeable, within our model they are not statistically significant, and so far, there are no trends emerging.

**Table 8.** Total drug deaths by county for 2020, in the first half of 2021, and projected for 2021, compared to percentage of Maine census population

County	2020 Jan–Dec (total=504)	2021 Jan–Jun (total=302)	2021 projection (Jan–Jun totals x 2) (302 x 2=604)	Percentage Maine estimated 2019 Census population
Androscoggin	52 (10%)	41 (14%)	82	8%
Aroostook	17 (3%)	13 (4%)	26	5%
Cumberland	97 (19%)	61 (20%)	122	22%
Franklin	8 (2%)	5 (2%)	10	2%
Hancock	13 (3%)	12 (4%)	24	4%
Kennebec	49 (10%)	28 (9%)	56	9%
Knox	16 (3%)	4 (1%)	8	3%
Lincoln	9 (2%)	10 (3%)	20	3%
Oxford	15 (3%)	14 (5%)	28	4%
Penobscot	94 (19%)	49 (16%)	98	11%
Piscataquis	10 (2%)	3 (1%)	6	1%
Sagadahoc	8 (2%)	2 (1%)	4	3%
Somerset	13 (3%)	4 (1%)	8	4%
Waldo	9 (2%)	9 (3%)	18	3%
Washington	20 (4%)	12 (4%)	24	2%
York	74 (15%)	35 (12%)	70	15%