MAINE DRUG DEATH REPORT
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This report, funded by the Maine Office of Attorney General, provides a summary of statistics regarding drug fatalities in Maine during January-September, 2018. 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.

Summary

Total fatalities due to drugs during the first three quarters of 2018 number 282, 5% fewer than the total of 297 last year in the same period, with important changing patterns. There has been an overall decrease in opioid-caused deaths overall, and pharmaceutical opioid and heroin deaths in particular. In addition, the multiyear increase in non-pharmaceutical fentanyl deaths seems to have decreased slightly. But there is a contrasting increase in cocaine and methamphetamine deaths, and the cocaine is increasingly mixed with fentanyl and heroin.

The projected number of opioid deaths overall (pharmaceutical and/or non-pharmaceutical) is down 13% for 2018: 307 compared to the peak of 354 in 2017. The high number of fatal overdoses in Maine continues to be driven by non-pharmaceutical fentanyl and fentanyl analogs, which caused 173 (61%) of deaths during the first three quarters of 2018. The projected total of 2018 fentanyl deaths is 231, which is down by 6% compared to 2017 (see **Table 1**). More substantially, the number of pharmaceutical opioid deaths is projected to decrease by 29% compared to 2017 and 2016. Heroin deaths are projected to decrease by 17% compared to 2017, and by 39% compared to 2016. Both the fentanyl and heroin deaths are increasingly mixed with cocaine.

There are projected increases in the number of cocaine and methamphetamine deaths, although the numbers are comparatively small. The projected number of 2018 cocaine deaths is 95, which is 4% higher than 2017 and 58% higher than in 2016. Cocaine is mixed with fentanyl in 32% of fentanyl deaths, and 35% of the heroin deaths. The projected number of methamphetamine deaths is 21, which is higher than in 2017 and 2016, although these increases may be due to random effects because of the small numbers.

These projections are subject to change with the addition of the fourth quarter totals.

Overview

Manners of death: Of the 282 deaths during the first three quarters, 252 (89%) were accidental overdoses, 23 (8%) were suicides, and 7 (2%) undetermined manner.

Overall patterns of note during the first three quarters:

- Most (228, 81%) drug deaths were caused by two or more drugs in combination. The average cause of death involved three drugs. The proportion of deaths caused by only one drug was 18%, down slightly compared to 20% in 2017 as a whole.
- The vast majority of overdoses (230, 82%) were caused by at least one opioid, including both pharmaceutical and illicit (non-pharmaceutical) opioid drugs. The projected 2018 total is 307, which is down 13% from the 2017 peak total of 354.
- Pharmaceutical opioid deaths constituted 66 (23%) of drug deaths, alone or in combination with other drugs. The projected 2018 total is 88, a 29% reduction from 124 (30%) in 2017.
- Non-pharmaceutical fentanyl (and/or its analogs) caused 173 (61%) deaths, alone or in combination with other drugs. The projected 2018 total number of deaths is 231, a reduction from 247 (59%) in 2017[1].
- Compared to 2017 as a whole, during the first three quarters of 2018, deaths due to non-pharmaceutical fentanyl (and/or its analogs) are slightly more likely to involve other drugs, 84% compared to 79% in 2017, but are less likely to include pharmaceutical opioids (9% compared to 18% in 2017).
- Heroin caused 55 (20%) deaths, alone or in combination with other drugs, continuing to trend downward from 119 (32%) in 2016, and 88 (21%) in 2017.
- Cocaine or crack caused 71 (25%) deaths, alone or in combination with other drugs. The projected 2018 total is 95, an upward trend from 60 (16%) in 2016 and 91 (22%) in 2017.
- Naloxone was present in 68 (30%) of 230 opioid deaths, and is projected to be 91 of 307 for 2018 as a whole year. The projected number for 2018 is lower than it was in 2017, 108 (34%) of 317 opioid deaths.

Table 1. Projected 2018 statistics compared to 2016 and 2017, showing the overall decline in the number of opioid deaths, and the rise in the number of stimulant deaths

	2016 N=376	2017 N=417	2018 Projected N=376 Based on 1st through 3rd quarters
OPIOIDS			
Any opioid	317 (84%)	354 (85%)	307 (82%)
Pharmaceutical opioids	123 (33%)	124 (30%)	88 (23%)
Fentanyl and analogs	194 (51%)	247 (59%)	231 (61%)
Heroin	119 (32%)	88 (21%)	73 (19%)
STIMULANTS			
Cocaine	60 (16%)	91 (22%)	95 (25%)
Methamphetamine	7 (2%)	16 (4%)	21 (6%)

[1] *The 2017 annual report cited 58% due to opioid drugs, but this figure was later updated to 59%.*

Table 2. Demographic patterns:

	Total	Average Age	Age Range	Percent Male
All drug deaths	282	42	0-90	197 (70%)
Accidents	252	41	0-73	180 (71%)
Suicides	23	50	30-90	13 (57%)
Undetermined	7	47	21-77	4 (57%)

Table 2. Involvement of specific drug categories

Specific drug or drug category causing the death (alone or in combination with other drugs and/or alcohol)	Number	Percent of 282 drug deaths
Number of deaths caused by more than one drug	228	81%
Any pharmaceutical drug	156	55%
Any pharmaceutical opioid drug	66	23%
Any opioid (pharmaceutical or non-pharmaceutical) 68 (30%) of 230 opioid deaths had received Naloxone*	230	82%
Any illicitly manufactured drug (includes heroin, non-pharmaceutical fentanyl, fentanyl analogs, other illicitly-manufactured opioids, cocaine, and methamphetamine)	202	72%
Any non-pharmaceutical opioid drugs (heroin, fentanyl, fentanyl analogs, U-47700, mitragynine).	183	65%
Heroin and/or fentanyl or fentanyl analogs	182	65%
Fentanyl and/or fentanyl analogs (known pharmaceutical fentanyl removed)	173	61%
Heroin (known pharmaceutical morphine removed)	55	20%
Any benzodiazepine	59	21%
Cocaine	71	25%
Methamphetamine	16	6%

**Excludes cases with buprenorphine in toxicology.*

Non-Pharmaceutical ("Illicit") Fentanyl and/or Fentanyl Analog Deaths

This category includes deaths caused by non-pharmaceutical (illicitly manufactured) fentanyl or fentanyl analogs. We removed all cases that involved known pharmaceutical fentanyl from these totals. There were 173 overdoses due to non-pharmaceutical fentanyl and/or fentanyl analogs in the first three quarters of 2018.

- 134 (77%) are male and 39 (23%) are female.
- The average age in non-pharmaceutical fentanyl/fentanyl analog deaths is 39 (age range 20-69).

Table 3. Involvement of co-intoxicant drugs in non-pharmaceutical fentanyl deaths January-September 2018

Specific co-intoxicants in addition to fentanyl and/or fentanyl analogs identified as a cause of death	Number	Percent of Fentanyl/Fentanyl Analog Deaths N=173
FENTANYL and FENTANYL ANALOG COMBINATIONS		
• Fentanyl (with or without fentanyl analogs)	164	95%
• Fentanyl analogs (with or without fentanyl)	48	28%
• Both non-pharmaceutical fentanyl and at least one fentanyl analog	39	23%
CO-INTOXICANTS IDENTIFIED IN FENTANYL and/or FENTANYL ANALOG DEATHS		
• One or more drugs (or alcohol) in addition to fentanyl and/or fentanyl analogs	145	84%
• One or more pharmaceutical opioids in addition to fentanyl and/or fentanyl analogs	15	9%
• Heroin in addition to fentanyl and/or fentanyl analogs	46	27%
• Alcohol in addition to fentanyl and/or fentanyl analogs	54	31%
• One or more benzodiazepines in addition to fentanyl and/or fentanyl analogs	25	14%
• Cocaine in addition to fentanyl and/or fentanyl analogs	56	32%

Table 4. Fentanyl analogs identified as a cause of death January-September 2018

Fentanyl Analog Identified	Total Number of Cases*	Percent of Fentanyl Analog-Caused Deaths N=48
Acetyl fentanyl	35	73%
Carfentanil	1	2%
Cyclopropyl Fentanyl	2	4%
Furanyl fentanyl	2	4%
Methoxyacetyl fentanyl	3	6%
Para-fluorobutyryl fentanyl	2	4%
Para-fluoroisobutyryl Fentanyl	6	13%

**Some cases had more than one analog.*

Heroin/Morphine Deaths

Heroin/morphine deaths include any death in which the cause of death identifies "heroin" or "morphine." We have removed all cases involving known pharmaceutical morphine, so the heroin/morphine deaths included here are all suspected heroin overdoses. In the first three quarters of 2018 there were 55 deaths due to heroin, 20% of all drug deaths, projected to total 73 for 2018 as a whole. Both the proportion and the number of deaths in 2018 are slightly lower than in 2017 as a whole, when there were 88 (21%) heroin deaths.

All of the heroin deaths during the first three quarters had other drug co-intoxicants mentioned on the death certificate; most had several co-intoxicants. The vast majority (84%) had fentanyl and/or fentanyl analogs, 35% had cocaine, 35% alcohol, 16% benzodiazepines, and 16% had pharmaceutical opioids.

County Totals

This table provides totals for those counties with 10 or more deaths during the first three quarters of 2018. The reader is cautioned that, because the numbers for individual counties are relatively small, fluctuations may be due to random effects, or seasonal changes, rather than actual changes in underlying epidemiological trends.

Table 5. Total drug deaths by county for 2017 and projected* for 2018, compared to percent of Maine census population

County	2017 County Totals (Statewide Total 417*)	2018 County Projections (Using Projected Statewide Total of 376)	County Percents of Maine Estimated Census Population 2016
Androscoggin	24 (6%)	33 (9%)	8%
Cumberland	109 (26%)	88 (23%)	22%
Kennebec	47 (11%)	45 (12%)	9%
Oxford	*(Fewer than 10)*	16 (4%)	4%
Penobscot	65 (16%)	56 (15%)	12%
York	82 (20%)	55 (15%)	15%

**Note that the 2017 total, originally reported at 418, was later updated to 417.*