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# EXPANDED MAINE DRUG DEATH REPORT FOR 2018

*Updated 4/19/19*

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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 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.*

## **Executive Summary**

There has been a reduction in 2018 drug deaths compared to 2017, 15% fewer drug deaths overall, with a reduction in both non-pharmaceutical and pharmaceutical opioid deaths. There were 354 total drug deaths statewide, down from 417 in 2017, and similar to 2016 levels. Of these 354 deaths, 80% were caused by opioids, frequently in combination with other drugs or alcohol.

Maine is not the only state seeing a reduction in overdoses. The across-the-board reduction in both pharmaceutical and non-pharmaceutical drug deaths suggests broad influences are impacting overdose rates, for example, economic changes, the composition and combination of drugs being trafficked, and regional law enforcement efforts, as well as specific policy changes around opioids.

Figure 1 shows the changes in major categories over time. Non-pharmaceutical opioid deaths, including fentanyl, fentanyl analogs, and heroin, have declined by 18%. Pharmaceutical opioid deaths, predominantly oxycodone, hydrocodone and methadone, declined by 37%.

It is important to point out that the reduction in deaths may represent a decline in the lethality of specific drugs and how they are being used. It does not necessarily indicate a reduction in the numbers of individuals with opioid use disorder. Patterns of use may be changing. For example, Maine has seen an increase in the number of deaths involving cocaine over the past several years, and a small, but dramatic increase in 2018 in the number of deaths caused by methamphetamine. Heroin deaths have decreased, but the statistics on arrests by the Maine Drug Enforcement Agency suggest that heroin availability has not decreased.

This year we are presenting data for all counties, regardless of the number of their total drug deaths. These totals are much smaller than the statewide total and because of those small numbers, we can expect to see changes up and down from year to year that reflect random fluctuations.

## Number of Deaths due to Pharmaceutical vs Nonpharmaceutical Opioids

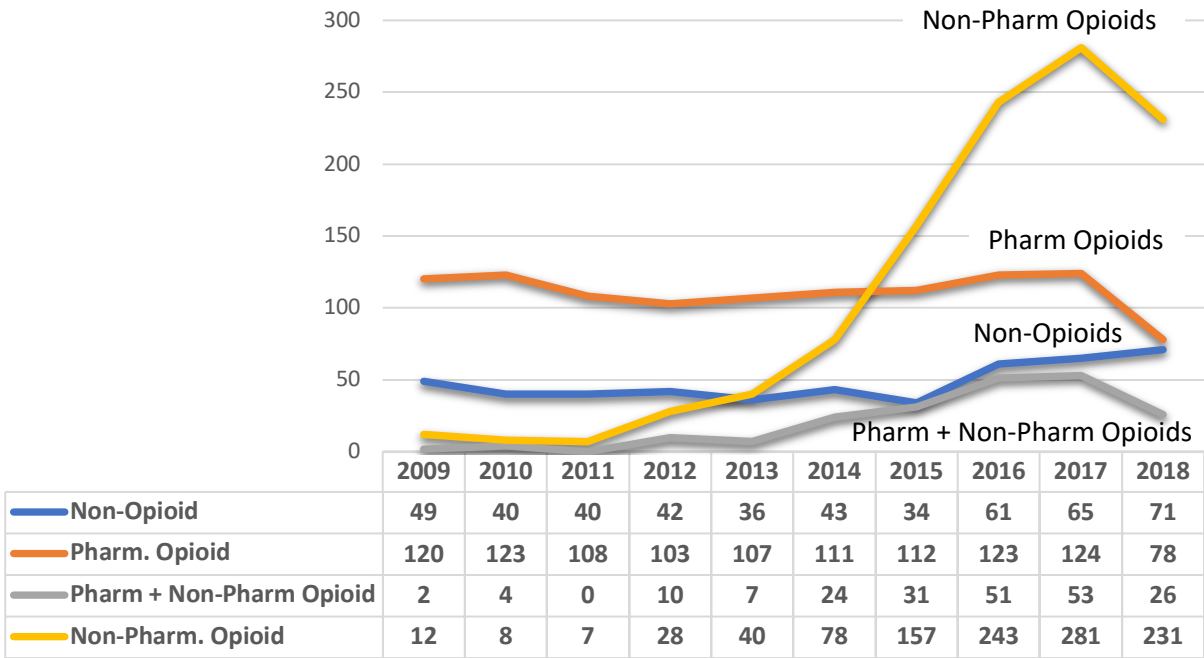


Figure 1. Overall trends in Maine drug death categories. Note that categories are not mutually exclusive.

## Overview

- **Total:** In 2018 there were 354 drug-induced deaths statewide, which is 42 (15%) fewer than in 2017. Of the 354 total, 283 (80%) deaths were caused by opioids alone or in combination with other drugs and/or alcohol.
- **Manners of death:** Of the 354 drug deaths, 313 (89%) were accidental<sup>1</sup> overdoses, 30 (8%) were suicides, and 10 (3%) were certified as undetermined manner of death.
- **Overall patterns of note in 2018:**
  - Most (80%) drug deaths were caused by two or more drugs. The average cause of death involved 3 drugs. This is about the same proportion as in 2017.
  - Deaths due to opioids totaled 283, a 20% reduction in number compared to 2017.
  - Deaths due to non-pharmaceutical opioids such as illicit fentanyl and heroin totaled 231, (82% of opioid deaths), an 18% reduction in number compared to 2017.
  - Deaths due to pharmaceutical opioids totaled 78 (28% of opioid deaths), a 37% reduction in number compared to 2017.
  - Fentanyl and its analogs caused 217 deaths (77% of opioid deaths), a 12% reduction in number compared to 2017.
  - Heroin caused 74 deaths (26% of opioid deaths), a 16% reduction in number compared to 2017.
  - Cocaine-involved deaths totaled 90 (25% of drug deaths), a 1% reduction in number compared to 2017. Cocaine is a co-intoxicant in 32% of fentanyl deaths and 32% of heroin deaths.
  - Deaths due to methamphetamine totaled 26, a 62% increase from 16 in 2017.
- **Demographic patterns:**

*Table 1. Demographic patterns by manner of death, 2018*

	<b>Total</b>	<b>Average Age</b>	<b>Age Range</b>	<b>Percent Male</b>
<b>All drug deaths</b>	354	42	0-90	253 (71%)
<b>Accidents</b>	314	41	0-73	230 (73%)
<b>Suicides</b>	30	50	18-90	17 (57%)

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<sup>1</sup> Provisional accidental manner of death designations were assigned to two cases still awaiting further testing and final completion.

- **Involvement of specific drug categories:**

*Table 2. Frequency of specific drug categories, 2018*

<b>Specific drug or drug category causing the death (alone or in combination with other drugs and/or alcohol)</b>	<b>Number</b>	<b>Percent of 354 drug deaths</b>
Number of deaths caused by more than one drug	284	80%
Any pharmaceutical drug	198	56%
Any opioid (pharmaceutical or non-pharmaceutical)	283	80%
Naloxone present in the toxicology report*	97	27%
Any illicitly manufactured drug (includes heroin/morphine, non-pharmaceutical fentanyl, fentanyl analogs, other illicitly-manufactured opioids, cocaine, methamphetamine, and MDMA)	257	73%
Any non-pharmaceutical opioid drugs (heroin/morphine, fentanyl, fentanyl analogs, U-47700, mitragynine).	231	65%
Heroin/morphine and/or fentanyl or fentanyl analogs	230	65%
Fentanyl and/or fentanyl analogs (known pharmaceutical fentanyl removed)	217	61%
Heroin/morphine (known pharmaceutical morphine removed)	74	21%
Any pharmaceutical opioid (most were <u>not</u> prescribed to the decedent)	78	22%
Any benzodiazepine	78	22%
Cocaine	90	25%
Methamphetamine	26	7%

\*Excludes cases with buprenorphine in toxicology.

- **County/City frequencies:** The following table provides totals for the counties and the six cities that had 10 or more drug deaths in 2018.

*Table 3. Frequency of drug deaths by county and major city*

<b>COUNTY CITY</b>	<b>TOTAL NUMBER (PERCENT) OF OVERDOSE DEATHS 2018 N=354</b>	<b>TOTAL NUMBER (PERCENT) OF OPIOID DEATHS 2018 N=283</b>	<b>PERCENT OF MAINE CENSUS POPULATION 2017 (1,335,907)</b>
Androscoggin	33 (9%)	26 (9%)	8%
<i>Lewiston</i>	16 (5%)	13 (5%)	3%
Aroostook	8 (2%)	4 (1%)	5%
Cumberland	88 (25%)	70 (25%)	22%
<i>Portland</i>	44 (12%)	34 (12%)	5%
Franklin	5 (1%)	5 (2%)	2%
Hancock	10 (3%)	9 (3%)	4%
Kennebec	43 (12%)	38 (13%)	9%
<i>Augusta</i>	15 (4%)	14 (5%)	1%
Knox	6 (2%)	3 (1%)	3%
Lincoln	6 (2%)	4 (1%)	3%
Oxford	13 (4%)	9 (3%)	4%
Penobscot	53 (15%)	39 (14%)	11%
<i>Bangor</i>	24 (7%)	18 (6%)	2%
Piscataquis	5 (1%)	5 (2%)	1%
Sagadahoc	2 (1%)	0 (0%)	3%
Somerset	10 (3%)	9 (3%)	4%
Waldo	9 (3%)	6 (2%)	3%
Washington	9 (3%)	8 (3%)	2%
York	54 (15%)	48 (17%)	15%
<i>Sanford</i>	10 (3%)	9 (3%)	2%

## 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 are all suspected heroin overdoses. In 2018 there were 74 deaths due to (non-pharmaceutical) heroin/morphine alone or in combination with other drugs. This is a 16% decrease from the 88 heroin/morphine deaths identified in 2017.
  - 57 (77%) are male and 17 (23%) are female.
  - Average age of heroin/morphine deaths is 38 (age range 1-69).
- **Involvement of co-intoxicant drugs in heroin/morphine deaths:**

*Table 4. Frequency of co-intoxicant drugs involved in heroin/morphine deaths, 2018*

<b>Specific co-intoxicants in addition to heroin/morphine identified on the death certificate as a cause of death</b>	<b>Number</b>	<b>Percent of Heroin/Morphine Deaths N=74</b>
One or more drugs (or alcohol) in addition to heroin/morphine	74	100%
At least one pharmaceutical opioid in addition to heroin/morphine	13	18%
Non-pharmaceutical fentanyl and/or at least one fentanyl analog in addition to heroin/morphine	61	82%
Alcohol in addition to heroin/morphine	21	28%
At least one benzodiazepine in addition to heroin/morphine	14	19%
Cocaine in addition to heroin/morphine	24	32%

## **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 217 overdoses due to non-pharmaceutical fentanyl and/or fentanyl analogs in 2018. This is a 12% decrease from 247 deaths in 2017.
  - 169 (78%) are male and 48 (22%) are female.
  - The average age in illicit fentanyl/fentanyl analog deaths is 38 (age range 1-69).
- **Involvement of co-intoxicant drugs in non-pharmaceutical fentanyl deaths:**

*Table 5. Frequency of co-intoxicant drugs involved in fentanyl deaths, 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=217
<b>FENTANYL and FENTANYL ANALOG COMBINATIONS</b>		
• Fentanyl (with or without fentanyl analogs)	207	95%
• Fentanyl analogs (with or without fentanyl)	65	30%
• <u>Both</u> non-pharmaceutical fentanyl and at least one fentanyl analog	55	25%
<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	169	78%
• One or more pharmaceutical opioids in addition to fentanyl and/or fentanyl analogs	21	10%
• Heroin/morphine in addition to fentanyl and/or fentanyl analogs	61	28%
• Alcohol in addition to fentanyl and/or fentanyl analogs	59	27%
• One or more benzodiazepines in addition to fentanyl and/or fentanyl analogs	35	16%
• Cocaine in addition to fentanyl and/or fentanyl analogs	69	32%

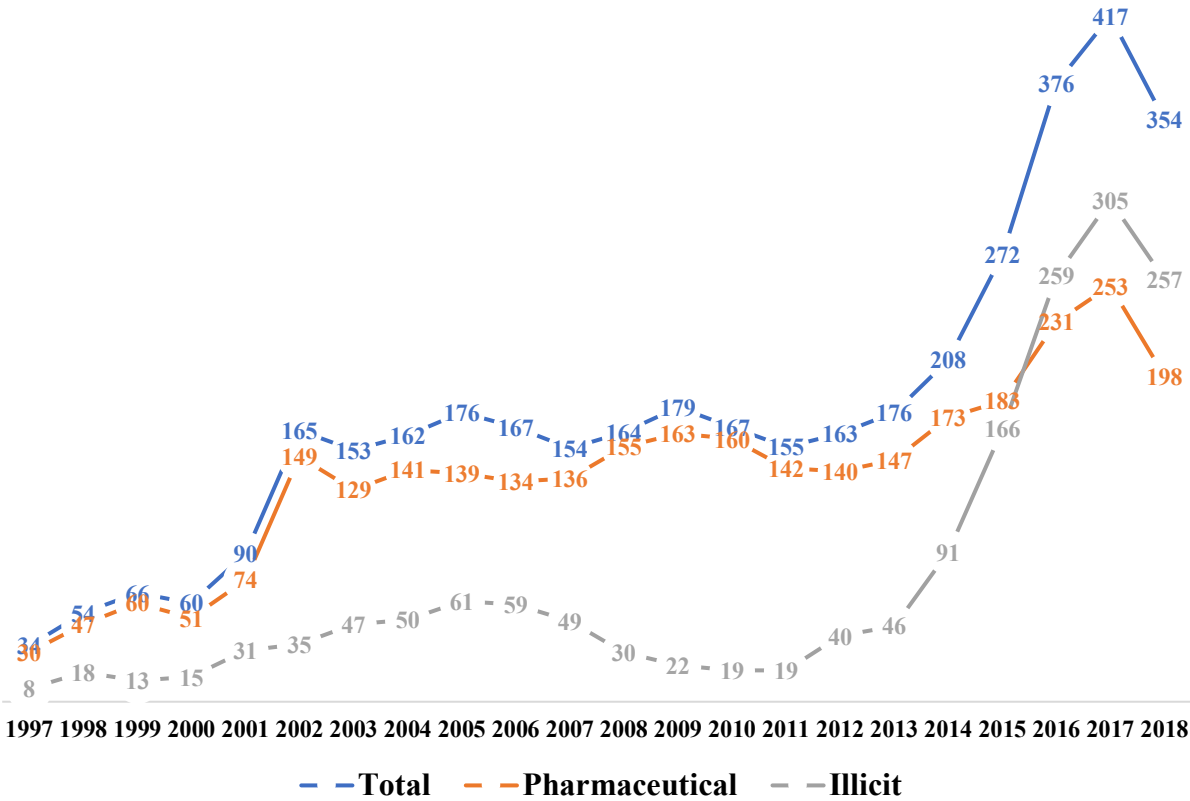
- **Fentanyl analogs identified:**

*Table 6. Frequency of fentanyl analogs identified as a cause of death in 2018*

Fentanyl Analog Identified (Some cases had more than one analog.)	Total Number of Cases*	Percent of Fentanyl Analog-Involved Deaths N=65
Acetyl Fentanyl	48	74%
Carfentanil	1	2%
Cyclopropyl Fentanyl	2	3%
Furanyl Fentanyl	2	3%
Methoxyacetyl Fentanyl	4	6%
Parafluorobutyryl Fentanyl	3	5%
Parafluoroisobutyryl Fentanyl	10	15%



## Total Drug Deaths, Comparing the Totals for Deaths Casued by Pharmaceutical and Non-Pharmaceutical (Illicit) Drugs



*Figure 2. Number of drug-induced deaths in Maine, with subtotals for deaths caused by any pharmaceutical drugs and for deaths caused by any illicit (non-pharmaceutical) drugs. Most deaths are caused by more than one drug. Pharmaceutical and illicit drugs may be combined to cause death. Note: 2017 total was revised from 418 to 417 subsequent to the release of the 2017 report.*

### Total Deaths due to Pharmaceutical Opioids Compared to Non-Pharmaceutical (Illicit) Opioids, Alone or in Combination

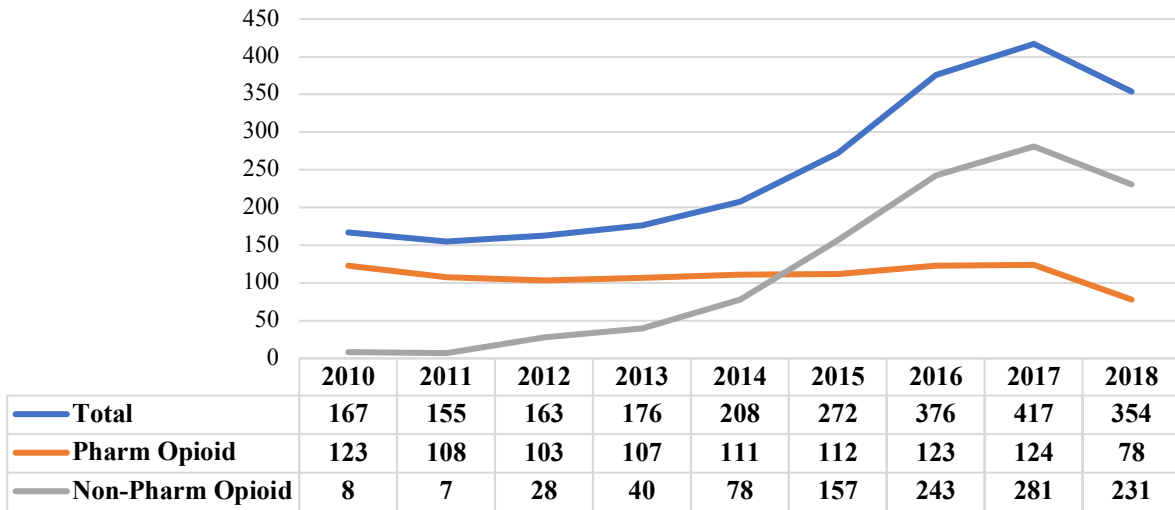


Figure 3. Comparison of the number deaths due to pharmaceutical versus non-pharmaceutical opioids, alone or in combination with other drugs and/or alcohol.

### Deaths due to Heroin/Morphine and Non-Pharmaceutical Fentanyl and/or its Analogs

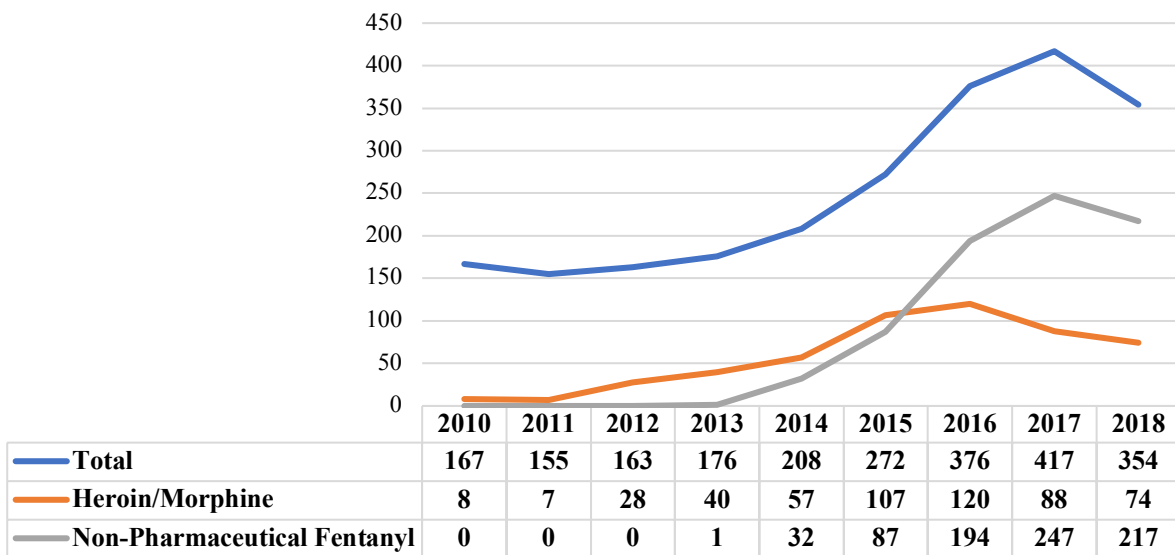
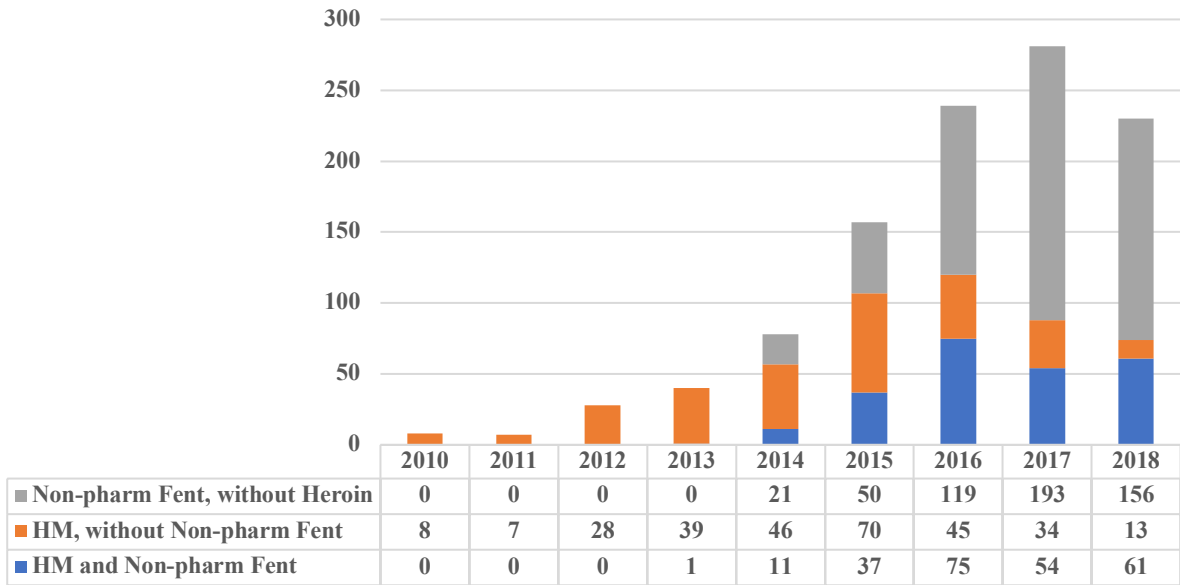


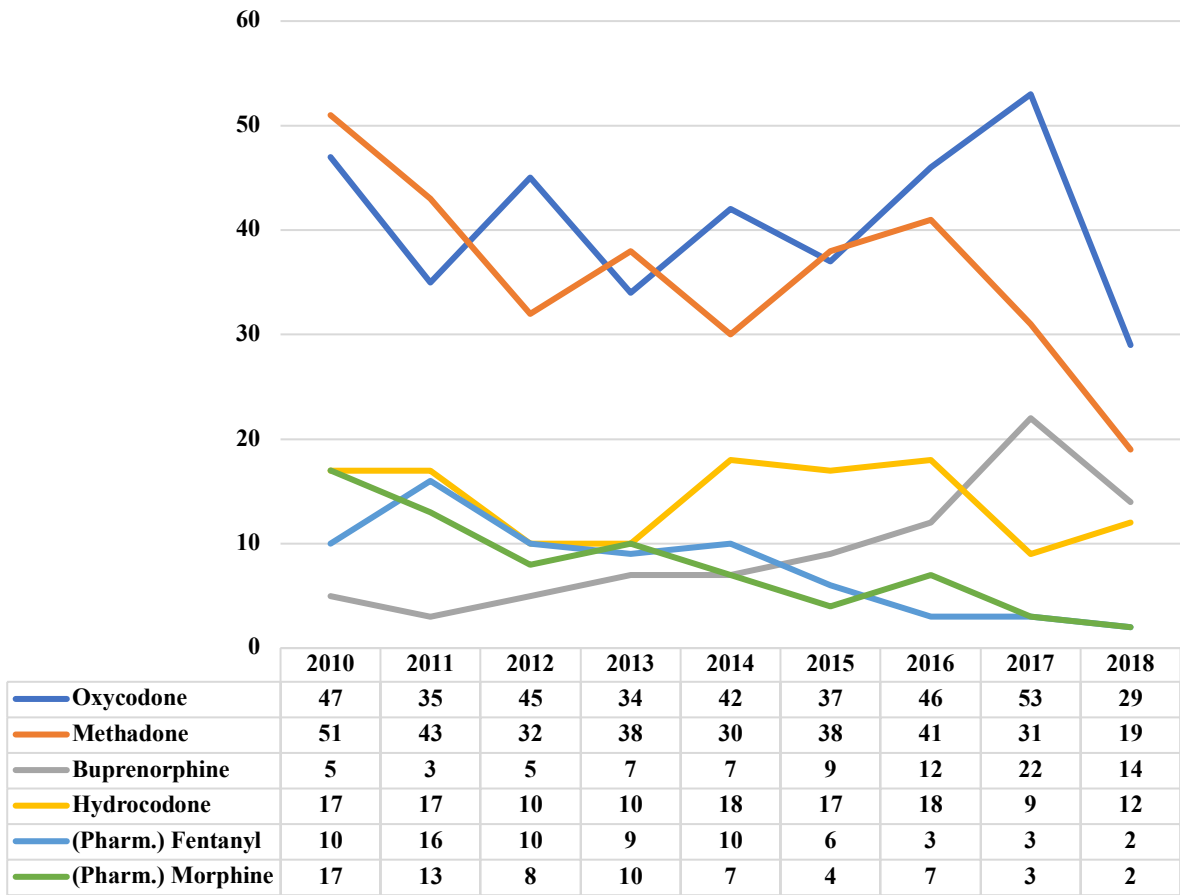
Figure 4. Total drug deaths with subtotals for the number of deaths due to heroin/morphine and non-pharmaceutical fentanyl and/or its analogs. Although separate totals are provided for heroin/morphine and fentanyl/fentanyl analog fatalities, many deaths include both drug categories.

### Deaths Due to Heroin/Morphine (HM) and Non-Pharmaceutical Fentanyl and/or its Analogs, Alone or in Combination with Each Other



*Figure 5. Total deaths due to heroin/morphine (“HM”) with non-pharmaceutical fentanyl (Non-pharm Fent”) and/or its analogs, alone or in combination with each other.*

### Deaths due to Key Pharmaceutical Opioids, Alone or in Combination



*Figure 6. Number of deaths caused by key pharmaceutical opioids, alone or in combination with other drugs. Note that these fentanyl cases are pharmaceutical fentanyl.*

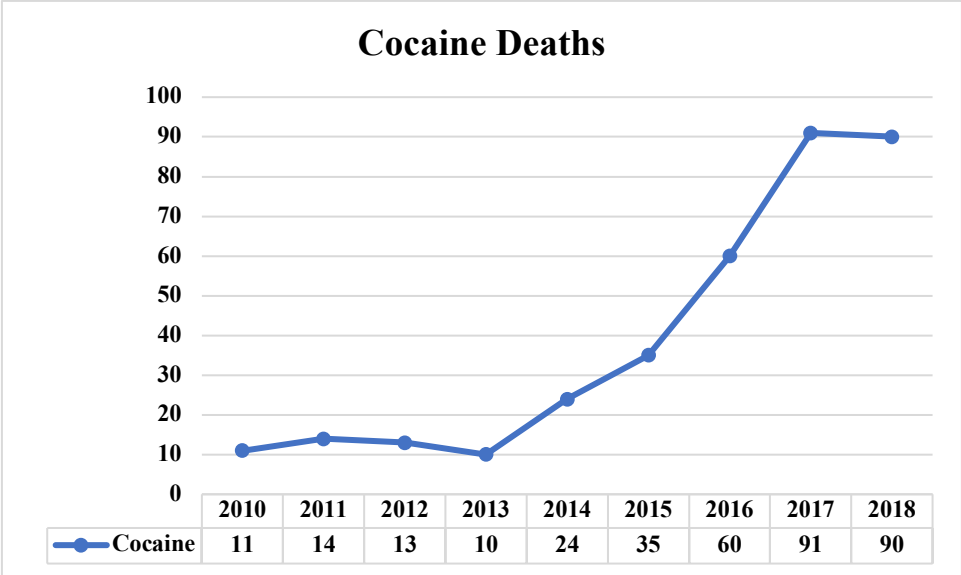


Figure 7. Number of deaths caused by cocaine, alone or in combination with other drugs