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MAINE DRUG DEATH REPORT FOR 2019

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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 2019. 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

Drug deaths totaled 380 in 2019, a 7% increase over 354 in 2018, but still lower than the 417 peak in 2017. Of these 380, 84% were caused by opioids, nearly always in combination with other drugs or alcohol. This increase over 2018 was largely driven by a 16% rise in deaths due to non-pharmaceutical drugs, primarily fentanyl, fentanyl analogs, as well as cocaine and methamphetamine. The number of deaths due to non-pharmaceutical opioids with or without co-intoxicant pharmaceutical opioids increased from 200 to 253 (26%), whereas the number due to pharmaceutical opioids without non-pharmaceutical opioids declined from 52 to 48 (8%). The largest impacts are due to drug trafficking from outside the state. Figure 1 highlights changes in the major categories of pharmaceutical opioid versus non-pharmaceutical opioid deaths. Maine has seen a dramatic increase in the involvement of non-opioid illicit drugs in general. This includes the more recent rise in deaths due to illicit stimulants. Cocaine deaths increased from 90 to 110 (22%) this past year, and methamphetamine deaths from 26 to 47 (81%). These drugs are usually combined with non-pharmaceutical opioids. Cocaine was included as a cause of death in 29% of all drug deaths, 34% of fentanyl deaths and 36% of heroin deaths. Methamphetamine was combined with 13% of fentanyl deaths and 18% of heroin deaths.

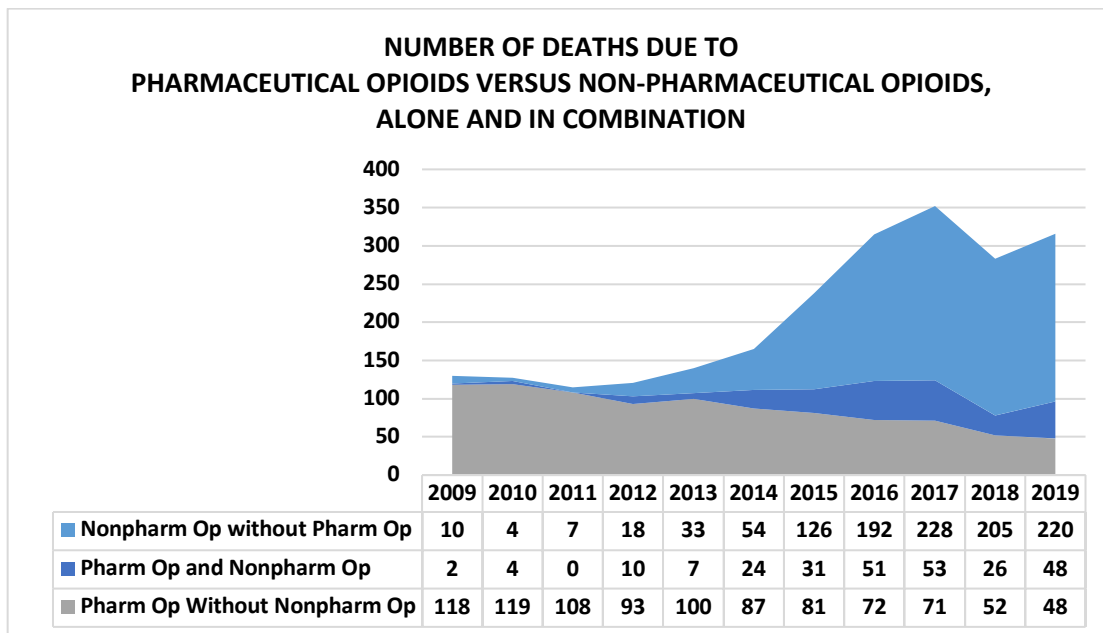


Figure 1. Comparison of pharmaceutical opioid and non-pharmaceutical opioid trends, alone and in combination

Overview

- **Total:** In 2019 there were 380 drug-induced deaths statewide, which is 26 (7%) more than in 2018. Of the 380 total, 318 (84%) deaths were caused by opioids alone or in combination with other drugs and/or alcohol, compared to 283 (80%) in 2018. This is an increase of 12%, mostly due to illicit drugs: particularly non-pharmaceutical opioids, cocaine and methamphetamine (Figures 2 and 3). The number of deaths due to non-pharmaceutical opioids rose 16% over last year, and deaths due to pharmaceutical opioids rose 23% (Figure 4). But some deaths in these two categories overlap; there are 48 deaths that were due to pharmaceutical opioids combined with non-pharmaceutical opioids, and 48 that were not. It is important to note that, within those deaths due to pharmaceutical opioids, the subset of deaths due to pharmaceutical opioids that had not been combined with non-pharmaceutical opioids, declined by 8%. This decline can be seen in Figure 1. Two-thirds (68%) of drug deaths overall are male, and all were 18 or older.
- **Manners of death:** Of the 380 drug deaths, 341 (90%) were accidental overdoses, 34 (9%) were suicides, and 5 (1%) were certified as undetermined manner of death.
- **Overall patterns of note in 2019:**
 - Most (323, 85%) drug deaths were caused by two or more drugs. This is greater in number and percent than in 2018 (283, 80%). The average cause of death involved three drugs.
 - Deaths due to opioids totaled 318 (84%), a 12% increase in number compared to 2018 (283, 80%).
 - Deaths due to non-pharmaceutical opioids such as illicit fentanyl and heroin totaled 268 (70% of all deaths and 84% of opioid deaths), a 16% increase compared to 2018 levels (231, 65% of all deaths and 82% of opioid deaths).
 - Deaths due to pharmaceutical opioids totaled 96 (30% of opioid deaths), a 23% increase in number compared to 2018 (78, 28% of opioid deaths).
 - Fentanyl and its analogs caused 259 deaths (81% of opioid deaths), a 19% increase in number compared to 2018 (217, 77% of opioid deaths).
 - Heroin caused 73 deaths (19% of opioid deaths), about the same number as in 2018 (74, 26% of opioid deaths).
 - Cocaine-involved deaths totaled 110 (29% of drug deaths), a 22% increase in number compared to 2018 (90, 25% of drug deaths). Cocaine is a co-intoxicant in 34% of fentanyl deaths and 36% of heroin deaths.
 - Deaths involving methamphetamine totaled 47, an 81% increase from 26 in 2018.
- **Demographic patterns:**

Table 1. Demographic patterns by manner of death, 2019

	Total	Average Age	Age Range	Percent Male
All drug deaths	380	43	18-88	257 (68%)
Accidents	341	41	18-88	242 (71%)
Suicides	34	54	25-86	13 (38%)

- **County/City frequencies:**

Table 2. Frequency of drug deaths by county and major city, 2019

COUNTY CITY	TOTAL NUMBER (PERCENT) OF OVERDOSE DEATHS 2019 N=380	TOTAL NUMBER (PERCENT) OF OPIOID DEATHS 2019 N=318	PERCENT OF MAINE CENSUS POPULATION 2019 (1,332,813)
Androscoggin	33 (9%)	29 (9%)	8%
<i>Lewiston</i>	18 (5%)	17 (5%)	3%
Aroostook	14 (4%)	11 (3%)	5%
Cumberland	100 (26%)	80 (25%)	22%
<i>Portland</i>	55 (14%)	41 (12%)	5%
<i>South Portland</i>	14 (4%)	14 (4%)	2%
Franklin	5 (1%)	5 (2%)	2%
Hancock	9 (2%)	6 (2%)	4%
Kennebec	42 (11%)	33 (10%)	9%
<i>Augusta</i>	14 (4%)	9 (2%)	1%
<i>Waterville</i>	11 (3%)	9 (2%)	1%
Knox	7 (2%)	6 (2%)	3%
Lincoln	11 (3%)	8 (3%)	3%
Oxford	9 (2%)	7 (2%)	4%
Penobscot	53 (14%)	48 (15%)	11%
<i>Bangor</i>	28 (7%)	27 (8%)	2%
Piscataquis	3 (1%)	3 (1%)	1%
Sagadahoc	8 (2%)	8 (3%)	3%
Somerset	16 (4%)	11 (3%)	4%
Waldo	3 (1%)	3 (1%)	3%
Washington	10 (3%)	9 (3%)	2%
York	57 (15%)	51 (16%)	15%
<i>Biddeford</i>	16 (4%)	15 (5%)	2%
<i>Sanford</i>	8 (2%)	8 (3%)	2%

- **Involvement of specific drug categories:**

Table 3. Frequency of specific drug categories, 2019

Specific drug or drug category causing the death (alone or in combination with other drugs and/or alcohol)	Number of Deaths	Percent of 380 drug deaths
Number of deaths caused by more than one drug	322	85%
Any pharmaceutical drug	246	68%
Any opioid (pharmaceutical or non-pharmaceutical)	318	84%
Naloxone present in the toxicology report*	110	29%
Any illicitly manufactured drug (includes heroin/morphine, non-pharmaceutical fentanyl, fentanyl analogs, other illicitly-manufactured opioids, cocaine, methamphetamine, and MDMA)	301	79%
Any non-pharmaceutical opioid drugs (heroin/morphine, fentanyl, fentanyl analogs, U-47700, mitragynine).	268	71%
Heroin/morphine and/or fentanyl or fentanyl analogs	268	71%
Fentanyl and/or fentanyl analogs (known pharmaceutical fentanyl removed)	259	68%
Heroin/morphine (known pharmaceutical morphine removed)	61	16%
Any pharmaceutical opioid (highest frequency opioids itemized below)	96	25%
Buprenorphine (8 decedents had current prescription)	32	8%
Methadone (1 decedent had current prescription-tablets)	25	7%
Oxycodone (9 decedents had current prescription)	21	6%
Any benzodiazepine	84	22%
Cocaine	110	29%
Methamphetamine	47	12%

*Excludes cases with buprenorphine in toxicology.

Pharmaceutical Opioid Deaths

- This category includes deaths caused by opioids that are manufactured by legitimate pharmaceutical companies and available by prescription (Figure 5). Most deaths (78%) in this category involve drugs that were not currently prescribed to the decedent. There were 96 overdoses due to pharmaceutical opioids, alone or in combination with other drugs and alcohol. Of that total, 21 (22%) had a current prescription for the opioid that caused death, dispensed to them within 30 days of death. There were an additional 7 individuals who had a current prescription for a pharmaceutical opioid, but who died due to a non-pharmaceutical opioid, and their prescription drug was not actually involved in the death.
- Of the 96 deaths due to pharmaceutical opioids, half (48, 50%) also had a non-pharmaceutical opioid listed as a cause. Of the 21 that died due to a drug for which they had a current prescription 8 (38%) also had a non-pharmaceutical listed as a cause of their death.
- The most common pharmaceutical opioids listed as a cause of death are buprenorphine (32, 33% of the pharmaceutical opioid deaths), methadone (25, 26%), and oxycodone (21, 22%). See Figure 6. Of the 32 decedents with buprenorphine listed, 8 had a current prescription. Of those 25 who died due to methadone, 1 had a current prescription. Of those 21 who died due to oxycodone, 9 had a current prescription.

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 259 overdoses due to non-pharmaceutical fentanyl and/or fentanyl analogs in 2019. This is a 19% increase from 217 deaths in 2018. There were 52 (20%) of the fentanyl and/or analog deaths combined with heroin (see Figure 7), 74 (29%) combined with alcohol, and 88 (34%) combined with cocaine.
- **Involvement of co-intoxicant drugs in non-pharmaceutical fentanyl deaths:**

Table 4. Frequency of co-intoxicant drugs involved in fentanyl deaths, 2019

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=259
FENTANYL and FENTANYL ANALOG COMBINATIONS		
• Fentanyl (with or without fentanyl analogs)	255	99%
• Fentanyl analogs (with or without fentanyl)	69	27%
• <u>Both</u> non-pharmaceutical fentanyl and at least one fentanyl analog	65	25%
CO-INTOXICANTS IDENTIFIED IN FENTANYL and/or FENTANYL ANALOG DEATHS		
• One or more drugs (or alcohol) in addition to fentanyl and/or fentanyl analogs	219	85%
• One or more pharmaceutical opioids in addition to fentanyl and/or fentanyl analogs	41	16%
• Heroin/morphine in addition to fentanyl and/or fentanyl analogs	52	20%
• Alcohol in addition to fentanyl and/or fentanyl analogs	74	29%
• One or more benzodiazepines in addition to fentanyl and/or fentanyl analogs	45	17%
• Cocaine in addition to fentanyl and/or fentanyl analogs	88	34%
• Methamphetamine in addition to fentanyl and/or fentanyl analogs	34	13%

- **Fentanyl analogs identified:**

Table 5. Frequency of fentanyl analogs identified as a cause of death in 2019

Fentanyl Analog Identified (Some cases had more than one analog.)	Total Number of Cases*	Percent of Fentanyl Analog-Involved Deaths N=69
4-ANPP fentanyl	2	3%
Acetyl fentanyl	58	84%
Carfentanil	3	4%
Furanyl fentanyl	1	1%
Parafluoroisobutyryl fentanyl	6	9%
Valeryl fentanyl	6	9%

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 probable heroin overdoses. In 2019 there were 61 deaths due to (non-pharmaceutical) heroin/morphine alone or in combination with other drugs. This is a 16% decrease from the 73 heroin/morphine deaths identified in 2018.
 - 42 (69%) are male and 19 (31%) are female.
 - Average age of heroin/morphine deaths is 41 (age range 19-71).
- **Involvement of co-intoxicant drugs in heroin/morphine deaths:**

Table 6. Frequency of co-intoxicant drugs involved in heroin/morphine deaths, 2019

Specific co-intoxicants in addition to heroin/morphine identified on the death certificate as a cause of death	Number	Percent of Heroin/Morphine Deaths N=61
One or more drugs (or alcohol) in addition to heroin/morphine	61	100%
At least one pharmaceutical opioid in addition to heroin/morphine	17	28%
Non-pharmaceutical fentanyl and/or at least one fentanyl analog in addition to heroin/morphine	52	85%
Alcohol in addition to heroin/morphine	18	30%
At least one benzodiazepine in addition to heroin/morphine	14	23%
Cocaine in addition to heroin/morphine	22	36%
Methamphetamine in addition to heroin/morphine	11	18%

Deaths Involving the Stimulants Cocaine and Methamphetamine

- Deaths involving cocaine have been rising since 2014 (see Figure 7). In 2013 there were 10 cocaine deaths. By 2014 the number had more than doubled to 24. The total has been rising steadily, and reached 110 in 2019, which is 29% of all drug deaths, compared to 90 (25%) of drug deaths in 2018. Most (88, 80%) of cocaine deaths list at least one non-pharmaceutical opioid as a co-intoxicant; 19 (17%) of cocaine deaths list at least one pharmaceutical opioid as a co-intoxicant. Cocaine is a co-intoxicant in 34% of fentanyl deaths and 36% of heroin deaths.
- Deaths due to methamphetamine totaled 47, an 81% increase from 26 in 2018. As shown in Figure 7, these totals began rising in 2016. Most (36, 77%) of methamphetamine deaths list at least one non-pharmaceutical opioid as a co-intoxicant; 10 (21%) of methamphetamine deaths list at least one pharmaceutical opioid as a co-intoxicant. Methamphetamine is a co-intoxicant in 13% of fentanyl deaths and 18% of heroin deaths.

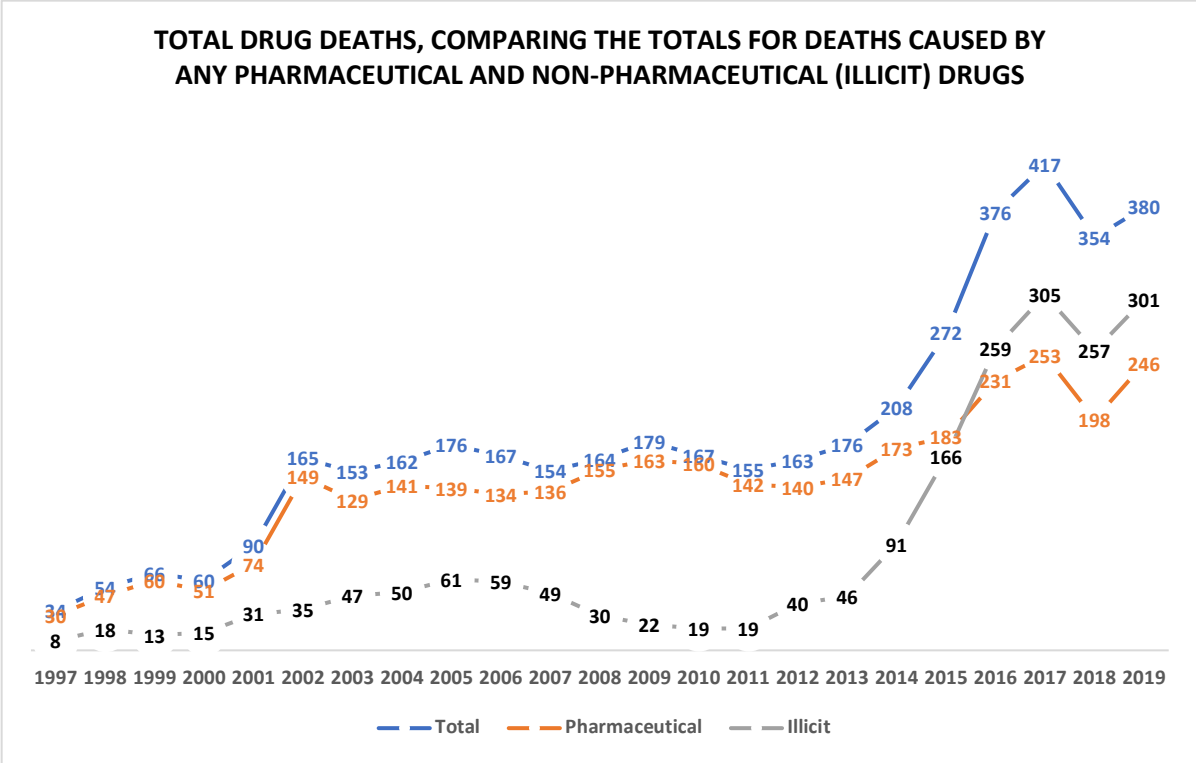


Figure 2. Number of drug-induced deaths in Maine, with subtotals for deaths caused by any pharmaceutical drugs and for deaths caused by any illicit (non-pharmaceutical) drugs. Most deaths are caused by more than one drug. Pharmaceutical and illicit drugs may be combined to cause death. Note: 2017 total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

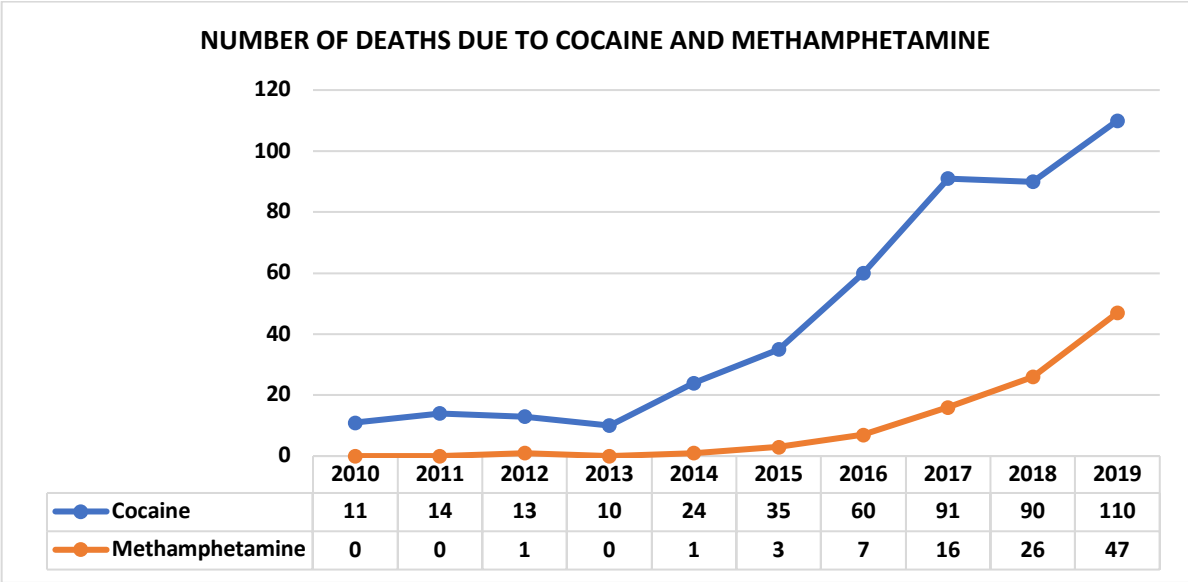


Figure 3. Number of deaths caused by cocaine and by methamphetamine, alone or in combination with other drugs

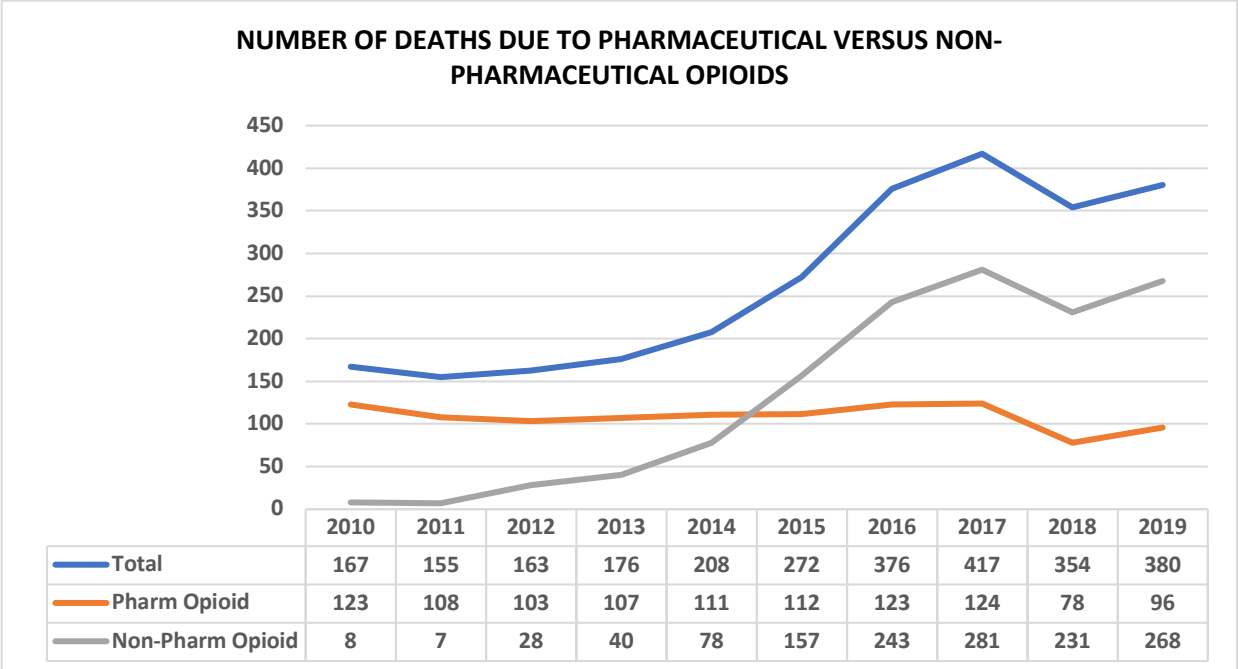


Figure 1. Comparison of the number deaths due to pharmaceutical versus non-pharmaceutical opioids, alone or in combination with other drugs and/or alcohol.

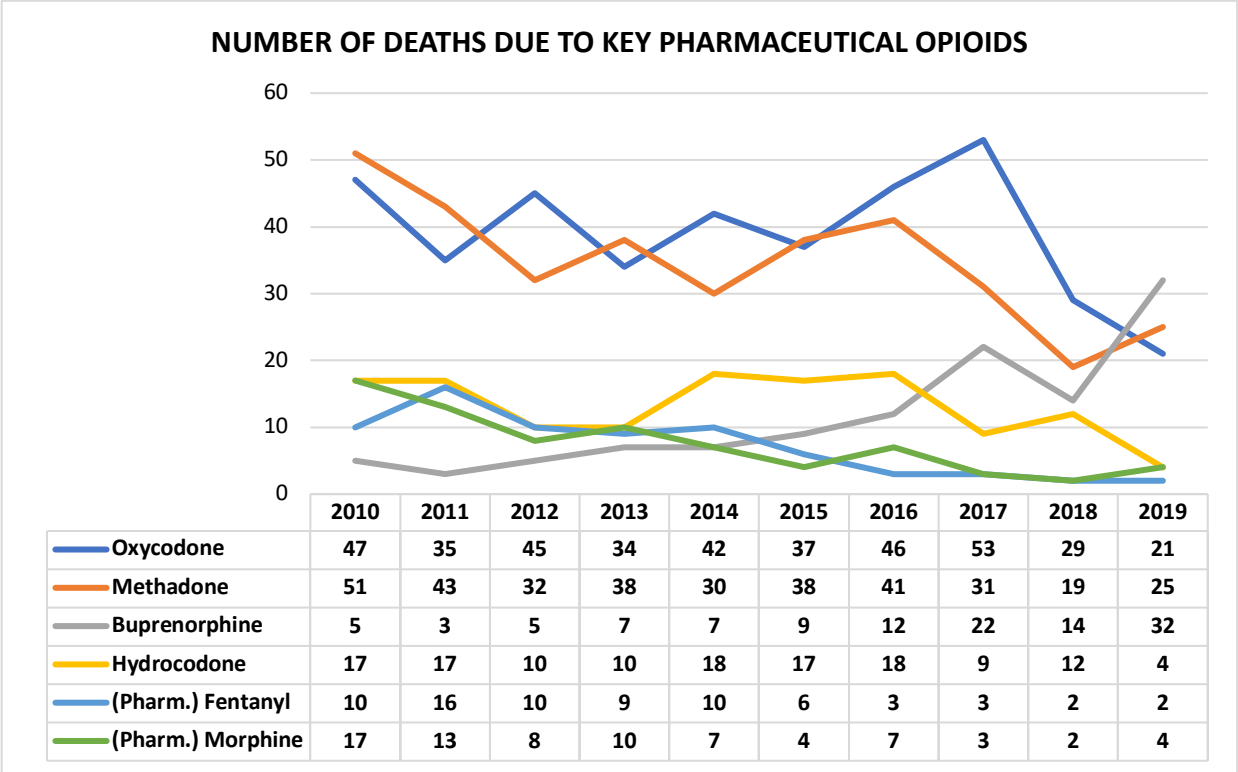


Figure 5. Number of deaths caused by key pharmaceutical opioids, alone or in combination with other drugs. Note that these fentanyl cases are pharmaceutical fentanyl.

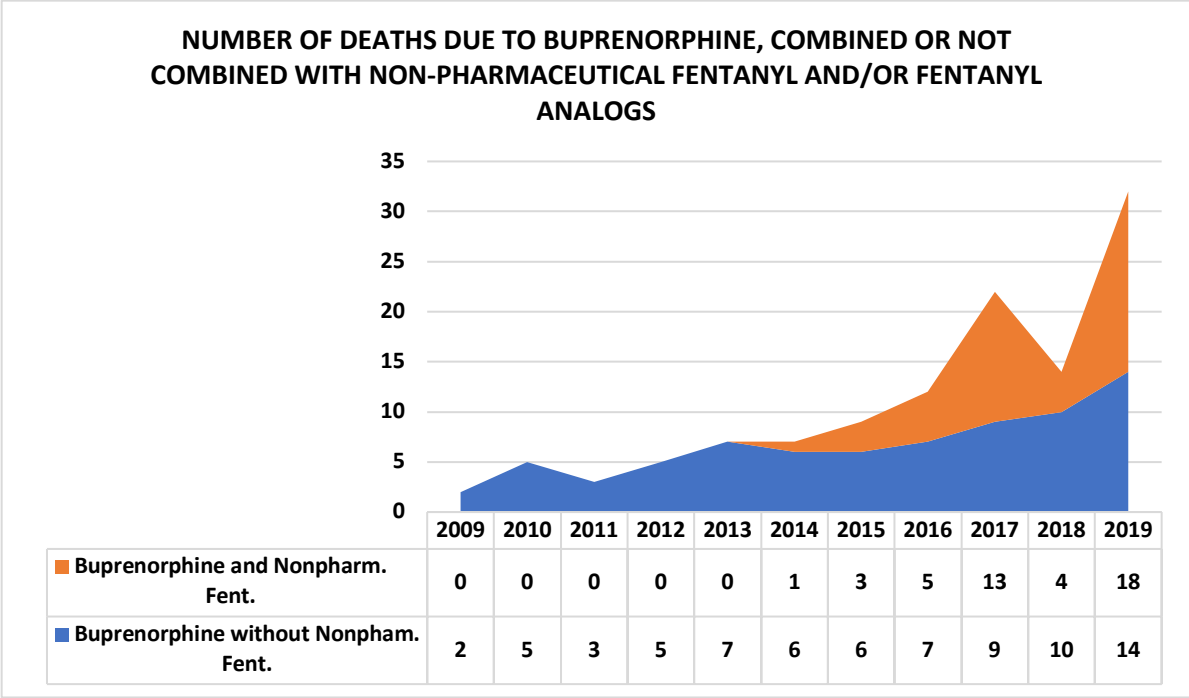


Figure 6. Total drug deaths with subtotals for the number of deaths due to heroin/morphine and non-pharmaceutical fentanyl and/or its analogs. Although separate totals are provided for heroin/morphine and fentanyl/fentanyl analog fatalities, many deaths include both drug categories.

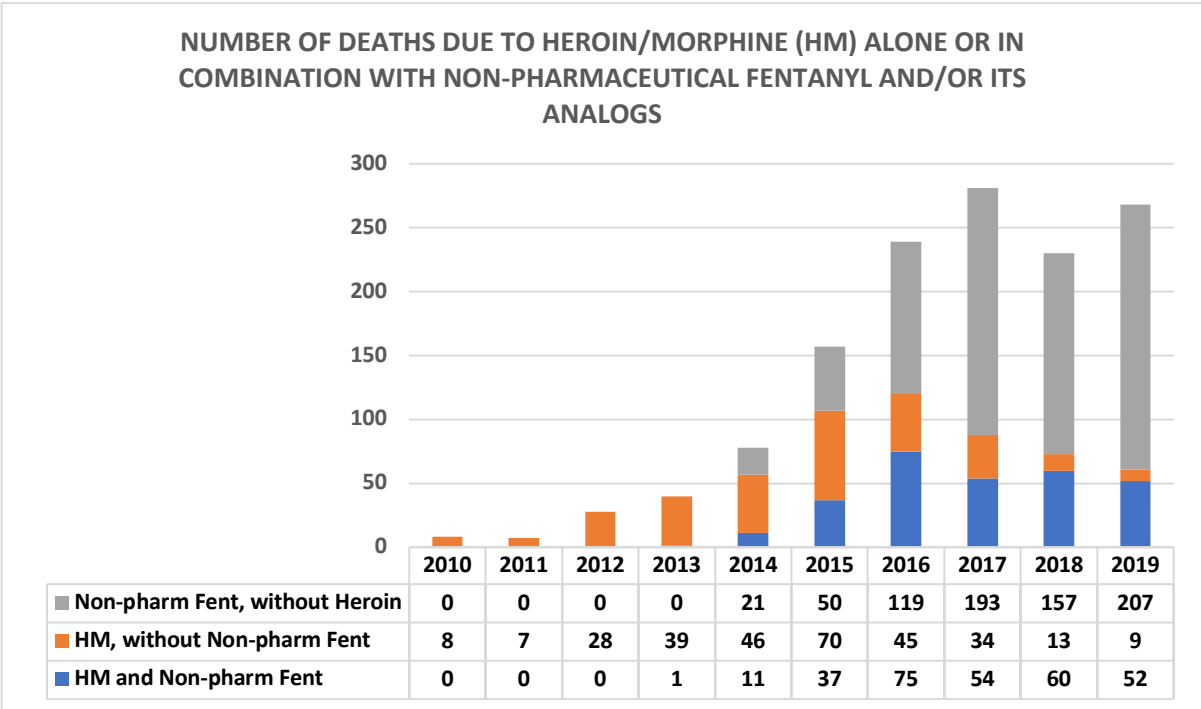


Figure 7. Total deaths due to heroin/morphine (“HM”) with non-pharmaceutical fentanyl (non-pharm Fent”) and/or its analogs, alone or in combination with each other.