



Office of the Medical Examiner

Monroe County, New York

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Heroin/fentanyl deaths in Monroe County in 2020

In 2020, there were 238 deaths in Monroe County that were attributed, in whole or in part, to the use of heroin/morphine, fentanyl, and/or its analogs. This represents fully a quarter (25%) of the Monroe County deaths investigated, a slight increase over the previous 2 years (22% in 2018, 20% in 2019). The actual number of Monroe County deaths attributable to heroin/morphine and/or fentanyl/analogues increased 31% from 2019, and exceeded the previous maximum 220, observed in 2017 (Table 1), by 8%.

NOTE: The data presented in this report refer only to those individuals who died in Monroe County, for whom the cause(s) of death was specifically attributed to the substances involved. It does not include deaths wherein these substances were present, but the cause of death was attributed to some traumatic injury (e.g., driving under the influence of drugs leading to a fatal crash). It also does not include cases from other counties that were investigated by the Monroe County Office of the Medical Examiner, or cases attributed to overdose on prescription opioids in the absence of heroin/morphine or fentanyl/analogues.

Almost half of the decedents (47.9%) were white males, consistent with previous years; but the racial/ethnic heritage (Table 2) and sex distribution (Table 3) reflects considerable diversity among the individuals affected. In particular, the proportion of African Americans dying of heroin/fentanyl overdose in Monroe County is on a notably increasing trajectory, from 13.3% in 2018 to 21.0% in 2019 and 26.5% in 2020.

Table 1. Number of deaths in Monroe County attributed to overdose from heroin/morphine and/or fentanyl, fentanyl analogs, or other designer opioids.

Year	Number of Deaths
2011-2013 (<i>aggregate</i>)	78
2014	81
2015	69
2016	169
2017	220
2018	195
2019	181
2020	238

The opioid crisis continues to affect people of all ages. In 2020, the ages of the victims of heroin/morphine/fentanyl/analogues overdose ranged from <20 to 73 years with a median age of 41 years (Figure 1).



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Table 2. Race/ethnicity distribution among heroin/morphine and fentanyl/analogs deaths in 2020.

Race	Percent
<i>Caucasian</i>	63.4%
<i>African American</i>	26.5%
<i>Asian</i>	0.8%
<i>Other^a</i>	8.8%
<i>Hispanic^b</i>	14.3%

^aOther includes but is not limited to Native American.
^bHispanic/Non-Hispanic identification is independent of race identification.

Table 3. Sex distribution among heroin/morphine and fentanyl/analogs deaths in 2020.

Male	Female
73.1%	26.9%

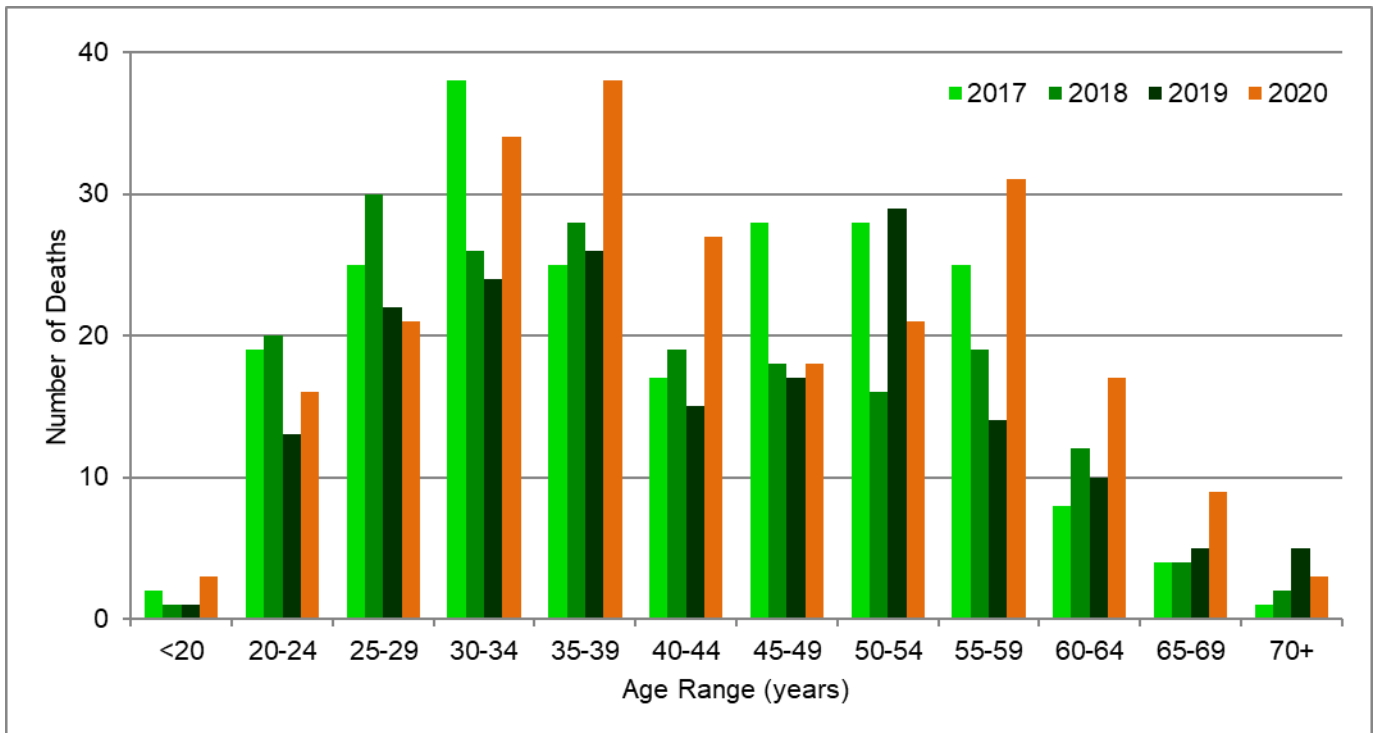


Figure 1. Age distribution of heroin/morphine and fentanyl/analogs deaths by year.



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Based on the raw number of Monroe County deaths listed above, it follows that the average number of heroin/fentanyl deaths per month in Monroe County also reached its highest point in 2020 (Table 4). That said, March and December 2020 had the most with 29 each. It cannot be stated with certainty, but the pandemic likely had an impact here, as there was less to occupy people and depression may have set in as people were isolated or cut off from family.

Table 4. Average number of Monroe County heroin/morphine and fentanyl/analogs deaths per month.

	Average Deaths/Month
2016	14
2017	18
2018	16
2019	15
2020	20

Fentanyl remains by far the most common opioid associated with overdose deaths. Fentanyl/analogs were present in 98.3% of these fentanyl/heroin/morphine deaths in 2020 (Table 5). Heroin/morphine¹, in contrast, were only detected in 11.3% of these cases, continuing a steeply downward prevalence trend in this current wave of the opioid crisis: 42.3%, 30.8%, and 17.7% of cases contained heroin/morphine in 2017, 2018, and 2019, respectively. Heroin/morphine prevalence peaked in an earlier wave of the opioid crisis, and has since been superseded and largely replaced by the more-potent fentanyl. Only 3 (1.3%) of the overdose deaths contained heroin/morphine in the absence of fentanyl.

Availability, potency and/or composition of drugs on the street varies over time and by region. In autumn of 2020, a new fentanyl analog (fluoro fentanyl) appeared in Monroe County, and was present in 2.9% of the year's overdose deaths. Meanwhile, most other fentanyl analogs detected in previous years had also largely dropped away in 2020, with the exception of acetyl fentanyl (2.5% of the overdose deaths). These analog compounds are typically detected alongside fentanyl itself, and they vary in potency. The dynamic and frequently changing Novel Psychoactive Substance (NPS) drug market presents unique and ongoing challenges for toxicological testing. The Office of the Medical Examiner continues to watch developments carefully and adapt testing methodology to detect these threats to public health.

¹Upon entry into the body, heroin is rapidly metabolized to morphine through an intermediate (6-monoacetylmorphine, 6-MAM). Detecting 6-MAM helps differentiate heroin from pharmaceutical morphine, but its absence does not preclude it. Six (2.5%) of the 238 deaths involved morphine that could not necessarily be attributed to heroin. Fentanyl and analogs are often sold on the street as heroin or cocaine, frequently in preparations or mixtures with those compounds.



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Combinations of fentanyl/analogs, heroin/morphine, ethanol (alcohol) and cocaine are frequently encountered together in postmortem cases. Among the 238 cases described herein, again in 2020 there was both a mean and median of 2 of these four substances that were listed as direct contributors to the cause of death. Cocaine is the single most common concurrent contributing substance in opioid overdoses, appearing in over half of the opioid deaths in 2020 (Table 5). It also remains a growing concern for overdose deaths in its own right. Although preparations vary, it is generally not possible to establish whether cocaine and fentanyl/analogs were contained in the same mixture or merely utilized concurrently. However, the public should be cautioned about the risks of taking multiple drugs and/or combining drugs with alcohol—as well as the fact that illicit drugs may contain unknown mixtures of compounds and produce unexpected or exaggerated effects. Benzodiazepines are another class of compounds that are frequently detected in opioid overdose deaths. Other findings of drugs contributing to these overdose deaths are presented in Table 5.

Table 5. Number of 2020 cases for which common substances were listed in the cause of death.

Compound / Drug Class	Number of Cases	Percent of Heroin/Morphine/Fentanyl Overdose Deaths
Fentanyl/Analogs	234	98.3%
Cocaine	136	57.1%
Heroin	21	8.8%
Morphine	6	2.5%
Alcohol	59	24.8%
Benzodiazepines	14	5.9%
Prescription Opioids ^a	26	10.9%
Amphetamines ^b	12	5.0%
Mitragynine (Kratom)	8	3.4%
Gabapentin	7	2.9%
Cyclobenzaprine	3	1.3%

^aNote: these data do *not* include deaths attributed to prescription opioids in the *absence* of fentanyl/analogs or heroin/morphine. Prescription opioids include buprenorphine, hydrocodone, methadone, oxycodone, and tramadol.
^bIncludes amphetamine, methamphetamine, and 3,4-methylenedioxyamphetamine (MDMA, ecstasy)