



# Office of the Medical Examiner

Monroe County, New York

Nadia A. Granger, MD  
Medical Examiner

Rebecca L. Hartman, PhD  
Chief Toxicologist

## ***Heroin/fentanyl deaths in Monroe County in 2019.***

In 2019, there were 181 deaths in Monroe County that were attributed to the use of heroin/morphine, fentanyl, and/or its analogs. This represents 20% of the Monroe County deaths investigated. Although this proportion of cases is consistent with the previous few years (e.g., 22% in 2018), the actual number of deaths in Monroe County attributable to heroin/morphine and/or fentanyl/analogues decreased 7% from 2018, and was down 18% from the maximum 220 observed in 2017 (Table 1).

*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 (47.5%) were white males, but the racial/ethnic heritage (Table 2) and sex distribution (Table 3) reflected a broad range of individuals affected. In particular, the proportion of African American individuals who were affected increased considerably (to 21.0%) in 2019 from 2018 (13.3%).

Table 1. Number of deaths in Monroe County attributed to overdose from heroin/morphine and/or fentanyl, fentanyl analogs, or U-47700.

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

The opioid crisis affects people of all ages. In 2019, the ages of the victims of heroin/morphine/fentanyl/analogues overdose ranged from <20 to 81 years with a median age of 40 years (Figure 1).



# Office of the Medical Examiner

## Monroe County, New York

**Nadia A. Granger, MD**  
*Medical Examiner*

**Rebecca L. Hartman, PhD**  
*Chief Toxicologist*

Table 2. Race/ethnicity distribution among heroin/morphine and fentanyl/analogs deaths in 2018.

<b>Race</b>	<b>Percent</b>
<i>Caucasian</i>	68.0%
<i>African American</i>	21.0%
<i>Asian</i>	--
<i>Other<sup>a</sup></i>	10.5%
<i>Hispanic<sup>b</sup></i>	15.5%

<sup>a</sup>Other includes but is not limited to Native American.  
<sup>b</sup>Hispanic/Non-Hispanic identification is independent of race identification.

Table 3. Sex distribution among heroin/morphine and fentanyl/analogs deaths in 2018.

<b>Male</b>	<b>Female</b>
72.9%	27.1%

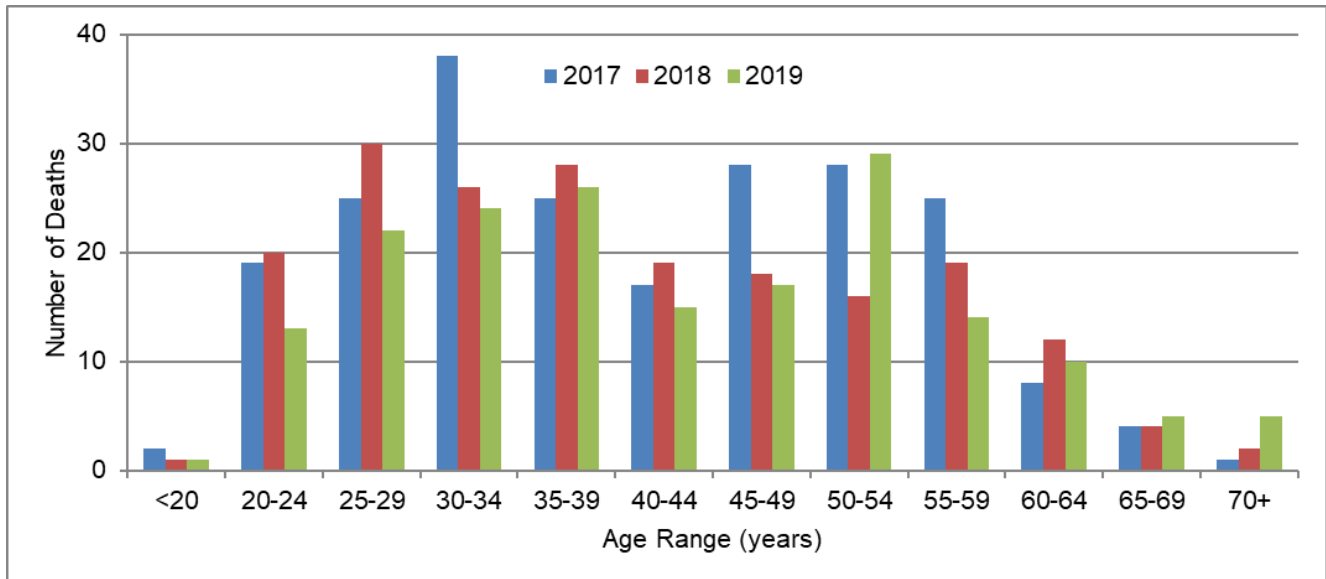


Figure 1. Age distribution of heroin/morphine and fentanyl/analogs deaths by year.

Although the number of Monroe County deaths decreased somewhat from the peak in 2017, the opioid crisis has continued to have a devastating impact in the past few years. In 2019, an average of 15 deaths/month were recorded in Monroe County.

Upon 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. Twelve (6.6%) of the 181 deaths



# Office of the Medical Examiner

*Monroe County, New York*

**Nadia A. Granger, MD**  
*Medical Examiner*

**Rebecca L. Hartman, PhD**  
*Chief Toxicologist*

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.

Fentanyl remains by far the most common opioid associated with overdose deaths. Fentanyl/analogues were present in 94.5% of these heroin/morphine/fentanyl deaths in 2019, virtually identical to 2018's 94.4% (Table 4). Heroin/morphine, in contrast, were only detected in 17.7% of these cases—continuing a downward prevalence trend from 42.3% of the opioid deaths in 2017 and 30.8% in 2018. Variable monthly rates of heroin/fentanyl fatalities are likely due (in part) to changing availability, potency and/or composition of drugs on the street (as well as seasonal behaviors). The availability of heroin/fentanyl and other heroin substitutes varies by region. Additionally, the fentanyl analogs included in street heroin preparations vary both regionally and over time. In both 2018 and 2019, the broader range of fentanyl analog compounds detected in prior years was reduced to primarily acetyl fentanyl and para-fluoro(iso)butyryl fentanyl. Although acetyl fentanyl is less potent than fentanyl itself, neither fentanyl compound was detected in the absence of fentanyl in 2019. The dynamic and frequently changing NPS drug market presents unique and growing 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.

Combinations of fentanyl/analogues, ethanol (alcohol) and cocaine are frequently encountered together in postmortem cases. Among the 181 cases described herein, again in 2019 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 half of the opioid deaths in 2019. Although preparations vary, it is generally not possible to establish whether cocaine and fentanyl/analogues 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 4.



# Office of the Medical Examiner

Monroe County, New York

Nadia A. Granger, MD  
Medical Examiner

Rebecca L. Hartman, PhD  
Chief Toxicologist

Table 4. Number of 2019 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/Analog	184	94.5%
Cocaine	92	50.8%
Heroin	20	11.0%
Morphine	12	6.6%
Alcohol	42	23.2%
Benzodiazepines	18	9.9%
Prescription Opioids <sup>a</sup>	20	11.0%
Amphetamines <sup>b</sup>	5	2.8%
Mitragynine	7	3.9%
Gabapentin	4	2.2%
Cyclobenzaprine	7	3.9%

<sup>a</sup>Note: these data do not include deaths attributed to prescription opioids in the absence of heroin/morphine or fentanyl/analog. Prescription opioids include buprenorphine, hydrocodone, methadone, oxycodone, and tramadol.  
<sup>b</sup>Includes amphetamine, methamphetamine, and 3,4-methylenedioxymethamphetamine (MDMA, ecstasy)