



Parma Police Department (Ohio) Drug-Related Overdose Incidents 2017 - 2022

An analysis of City of Parma, Ohio, drug-related overdose incidents as collected and reported
by the Parma Police Department for incidents from
January 1, 2017 — December 31, 2022

Begun Center for Violence Prevention Research and Education
Jack, Joseph and Morton Mandel School of Applied Social Sciences
Case Western Reserve University
Cleveland, Ohio

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The Begun Center for Violence Prevention Research and Education, Jack, Joseph and Morton Mandel School of Applied Social Sciences, Case Western Reserve University promotes social justice and community development by conducting applied, community-based, and interdisciplinary research on the causes and prevention of violence, and by educating and training social workers, teachers, law enforcement and other professionals in the principles of effective violence prevention. The Center also develops and evaluates the impact of evidence based best practices in violence prevention and intervention, and seeks to understand the influence of mental health, substance use, youth development and related issues on violent behavior and public health.

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About the Data

Through our ongoing work in the drug-overdose space, we understand that utilizing only one source of information to determine how the drug epidemic is impacting a community is not sufficient. Agencies that collect information related to drug overdose are often limited in the scope of the information collected. For this reason, we provide herein a comprehensive overview of the data provided to us by Parma Police Department (PPD). We also have included herein a supplemental report entitled, "*Supplemental Drug-Related Mortality Data*" (see pp. 12-15) that utilizes only drug-related death information provided by the Cuyahoga County Medical Examiner's Office (CCMEO). These sources combined help us understand both fatal and non-fatal overdose incidents using publicly available information. PPD reports tell one part of a complex and challenging story, while CCMEO information includes the toxicology results that inform what drugs/drug combinations are impacting the community most. This combined overview and supplemental report is available on the data reports section of the [Cuyahoga County Board of Health's website](#).

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Executive Summary

The analysis of suspected drug overdose incidents handled by the Parma Police Department (PPD) between January 2017 and December 2022 reveals important insights into the scope and characteristics of the overdose epidemic in Cuyahoga County. The key findings are as follows:

1. **Incidents & Victims:** A total of 898 incidents were responded to by PPD, an average of 3.5 overdoses per week. These incidents involved 777 unique individuals. Of these, 700 experienced a single overdose, while 77 individuals suffered more than one overdose.
2. **Fatalities:** Of the incidents in which PPD responded, 9.9% (89 of 898) were reported as fatal overdoses.
3. **Naloxone Administration:** Naloxone was administered in 77.4% (626 of 809) of non-fatal overdose incidents. The average number of naloxone doses administered per incident was 3.1 doses ranging from 1 to 12 doses.¹
4. **Substances Involved:** Heroin was the most reported drug type causing overdose, accounting for 53.1% of all incidents (477 of 898). However, "heroin" is often used to describe what is likely fentanyl; the heroin supply has steadily decreased both locally and nationally since 2015 (Begun, 2023; OMAS, 2023). Over time, the reporting of heroin as the suspected cause of overdose declined, while the reporting of fentanyl and prescription pills as the cause for overdose increased. Reports of cocaine causing overdose steadily increased year over year, indicating potential adulteration of the cocaine supply, likely involving fentanyl.
5. **Location of Overdoses:** The majority of fatal overdoses (86.5%, 77 out of 89) occurred at residential locations. In non-fatal overdose incidents, 75% of cases (607 out of 809) occurred at residential locations, while the second-highest location type for non-fatal overdoses was "streets or parking lots," accounting for 10% of cases (79 incidents).
6. **Hospital Transport:** PPD reported that hospital transport occurred in 96.3% of the non-fatal incidents.

These findings demonstrate the complexity of drug overdose in Parma, with significant implications for public health, law enforcement, and community interventions. Key focus areas include prevention and education, particularly targeting high-risk demographics and alerting the community to specific dangers, such as cocaine potentially adulterated with fentanyl and the presence of counterfeit prescription pills in the drug supply. The information collected by PPD can better equip the community, local authorities, and other stakeholders to develop targeted and effective strategies to combat drug use in Parma and help prevent deaths caused by drug overdose.

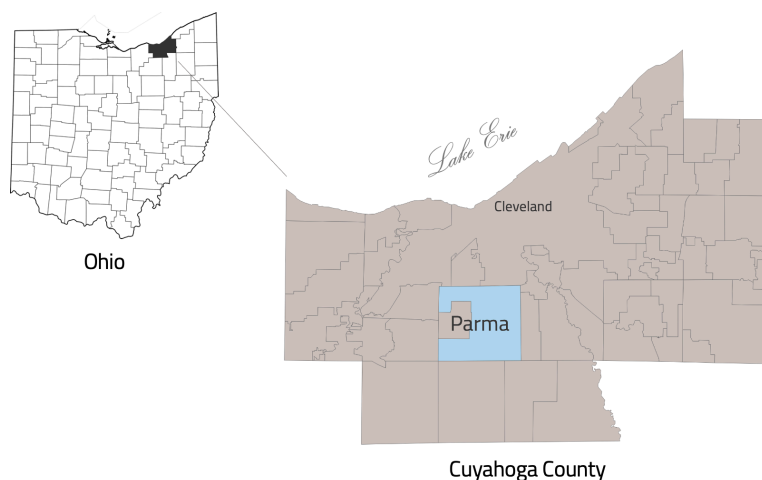
¹ Parma officers recorded instances where naloxone doses were administered by various individuals, including family members, friends, bystanders, and EMS personnel. It's important to note that naloxone dosages, measured in milligrams (mg), vary based on the delivery method, such as intravenous or nasal sprays, and have evolved over time. As a result, we are unable to specify the exact milligram dosage for each administration; our reporting can only provide the total number of doses administered.

Parma Overview

The City of Parma is in central Cuyahoga County on the southern edge of the city of Cleveland. Parma is the second largest city in Cuyahoga County and the seventh largest city in the State of Ohio with an estimated population of 79,358 (U.S. Census, 2022). The Parma Justice Center, located at 5555 Powers Boulevard, houses the PPD, the Parma Detention Center, and the Parma Municipal Court. Parma PD employs 88 officers whose jurisdiction covers approximately 20 square miles split into four “beats.” The Parma Detention Center is an in-house jail run solely under the guidance of the PPD. The Parma Municipal Court has jurisdiction over seven additional local communities, including Parma Heights, Brooklyn, Brooklyn Heights, Linndale, Seven Hills, North Royalton, and Broadview Heights.

PPD engages in several drug and opioid-related initiatives to support their community. First, PPD works closely with MetroHealth Medical Center’s Office of Opioid Safety (OOS) Quick Response Team (QRT). The QRT includes a member of the PPD, the Parma Fire Department, and a MetroHealth social worker who conducts outreach to individuals who have experienced an overdose in Parma to try to engage them in treatment. Secondly, in addition to QRT, officers also conduct welfare checks on an ongoing basis on individuals who have experienced an overdose. Third, PPD receives funding to authorize additional officer overtime to support community drug prevention-related events and activities. These activities include training to select PPD officers on motivational interviewing that supports their interactions with individuals experiencing the consequences of substance misuse. Activities also include drug counseling in the jail, sponsoring and/or participating in drug take-back events that include distributing charcoal packets for at-home drug deactivation, and reporting naloxone distribution to OOS for the “Project DAWN” (Death Avoided with Naloxone) effort to supply naloxone in the community. These efforts, however, are not comprehensive of all the PPD drug-related initiatives as the PPD is involved in many other activities.

Parma, Ohio. One of 59 Municipalities in Cuyahoga County, OH.



Overdose Totals, by Year

Table 1. PPD Suspected Drug Overdose Incidents by Year: 01 January 2017 to 31 December 2022

	2017	2018	2019	2020	2021	2022	Total
Non-Fatal	203	109	149	107	126	115	809
Fatal	18	19	10	11	16	15	89
Total	221	128	159	118	142	130	898

PPD Officers responded to 898 suspected overdose incidents from 2017 to 2022: 809 non-fatal and 89 fatal incidents. 2017 was the peak year for drug overdose in Cuyahoga County including record overdose deaths (N = 727) and emergency department visits for suspected overdose (N = 6,533) (CCMEO, 2023; ODH, 2023). PPD also reported the highest total of overdose incident responses by the department in 2017.²

Demographics



PPD reported a total of 604 (67.3%) males and 294 (32.7%) females who experienced an overdose (see Figure 1). Males between the ages of 25-39 accounted for 37.1% of both fatal and non-fatal overdose incidents to which PPD responded (333 of 898). The five-year age bracket of 25-29 (combined males and females) had the highest number of overdoses, accounting for 18.9% of the total overdose incidents (18 fatal and 152 non-fatal) (see Figure 2).

Figure 1. Overdoses by Gender and Non-fatal/Fatal (N=898)

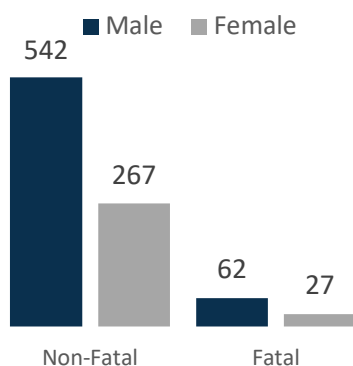
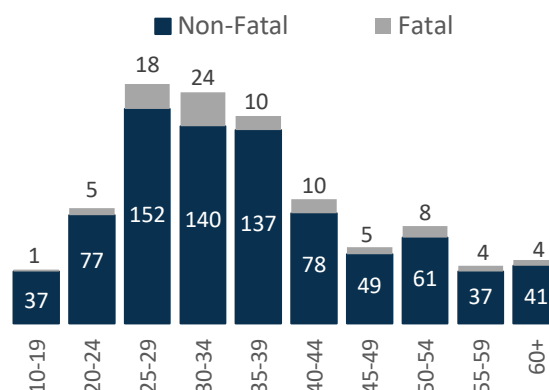
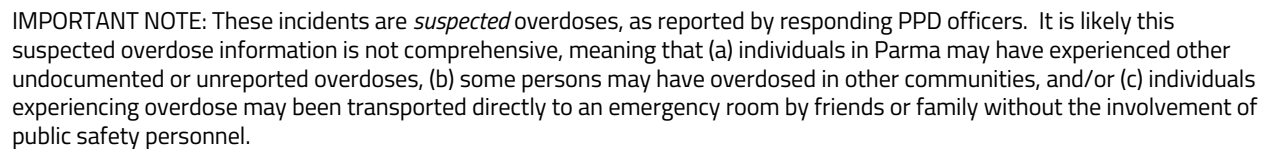


Figure 2. Overdoses by Age and Non-fatal/Fatal (N=898)



² A spike in deaths in Cuyahoga County in 2017 and 2019 can be attributed to the presence of carfentanil, an extremely potent fentanyl analogue that has not reemerged significantly in the drug supply since those years. Parma also experienced a similar trend reflecting relatively high counts of carfentanil-related deaths in 2017 and 2019 (see Table 10, page 14).

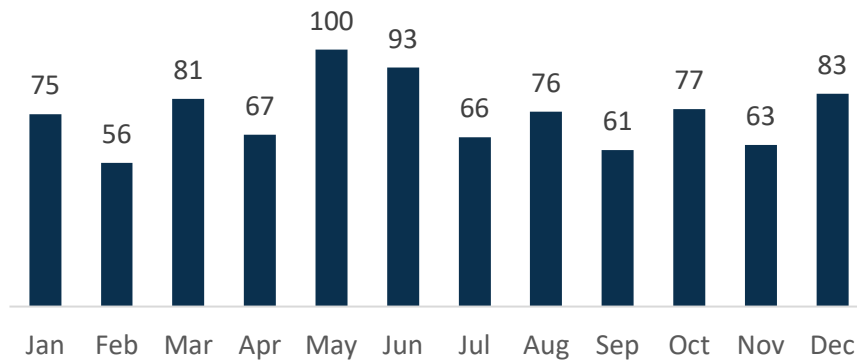
Among the 898 suspected overdose incidents to which PPD responded, 700 incidents involved individuals who experienced a single overdose. The remaining 198 incidents involved individuals known by the agency to have experienced at least one prior suspected overdose. The 77 individuals who were known to have experienced two or more overdoses accounted for 22% of the total responses (198 of 898).



The peak period for overdose in Parma:
5PM - 10PM

	Hour of Day																								Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
Day of Week	Sun	8	8	3	4	6	3	1	3	2	3	2	3	2	6	4	3	9	5	12	10	10	8	6	2	123
	Mon	8	1	5	4	2	1	0	0	2	5	1	5	2	5	7	9	3	9	9	4	6	8	7	8	111
	Tue	1	6	4	5	1	1	1	4	3	6	2	1	5	1	3	4	7	10	13	13	10	9	7	11	128
	Wed	5	6	2	4	8	2	5	0	4	1	3	4	2	2	3	7	7	13	7	8	6	9	12	5	125
	Thu	5	2	6	1	1	2	2	4	2	3	5	2	9	5	6	3	8	13	14	4	7	8	5	7	124
	Fri	7	6	5	2	4	1	2	4	7	4	2	4	6	6	5	9	9	14	9	9	8	7	13	10	153
	Sat	7	6	5	6	2	6	3	3	3	1	3	4	2	7	4	6	5	9	1	17	6	11	9	8	134
Total		41	35	30	26	24	16	14	18	23	23	18	23	28	32	32	41	48	73	65	65	53	60	59	51	898

Figure 3. Overdose Incidents by Month: 2017-2022 (N=898)



Drugs Causing Overdose

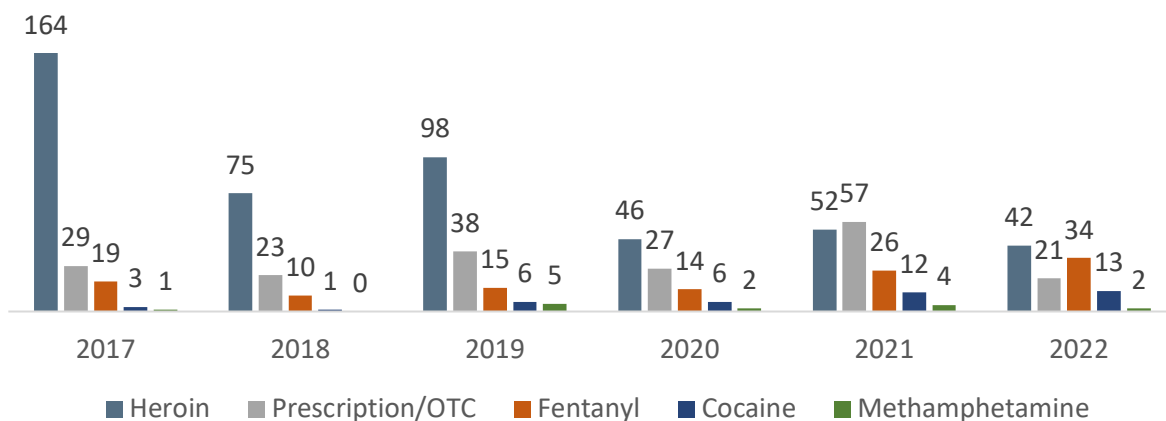
Reports of **cocaine** causing overdose are increasing.



PPD officers routinely record suspected drugs that contribute to an overdose (fatal and non-fatal). More than one suspected drug could be recorded for a single incident, e.g., cocaine and heroin recorded as drugs contributing to an overdose. After categorizing drug

types based on PPD's report, opioids (e.g., heroin, fentanyl, methadone) were found to be the most frequently reported suspected drug type in all incidents; opioids were reported in 78.2% of all cases (702 of 898). Heroin was ranked the highest specifically named drug causing overdose, accounting for 53.1% of all incidents (477 of 898). The second highest reported drug causing overdose was prescription and over-the-counter medications, reported in 21.7% of incidents (195 of 898). PPD reported increases in cocaine-related overdoses (see Figure 4). This mirrors the trend of rising cocaine-involved deaths in Parma and across the county. Statewide, 51% of drug-related deaths involved and opioid and either cocaine or a non-cocaine psychostimulant (i.e., methamphetamine) (ONIC, 2023).

Figure 4. Suspected Drug Types Causing Overdose



Naloxone & Disposition

Naloxone

In total naloxone was administered in 74.2% of all suspected overdose cases (666 of 898). In incidents ultimately reported as fatal overdoses, 44.9% of persons did receive naloxone (40 of 89). In non-fatal incidents, 77.4% reportedly received naloxone (626 of 809).

Naloxone
was administered in
74% of incidents

Naloxone administration varied slightly when comparing incidents that occurred at residential vs. non-residential overdose locations:

- Residential locations: Naloxone was administered in 73.2% of overdoses (501 of 684).
- Non-residential locations: Naloxone was administered in 77.1% of overdoses (165 of 214).

Of the 666 incidents in which naloxone was administered, various (often multiple) parties were reported to have administered the drug:

- EMS/Fire personnel administered naloxone in 68% of the incidents (453 of 666).
- Police administered naloxone in 51.5% of the incidents (343 of 666).
- Others including family, friends, and healthcare workers administered naloxone in 10.7% of the incidents (71 of 666).

Of the 666 overdose incidents where naloxone was administered, PPD reported the amount of naloxone (the number of doses) in 652 of the incidents. The total number of known doses of naloxone administered was 2,004 with an average of 3.1 doses administered per incident.

Outcomes After Overdoses

Of the 898 suspected overdose incidents to which PPD responded, 79 individuals were found to be deceased on scene. 819 individuals were reported as non-fatal (initially). Of the reported non-fatal incidents, 96.3% (789 of 819) were transported to a hospital.

Table 3. Disposition

Disposition	Incident Count
Transported to Hospital	789
Deceased on scene	79
Refused Transport or Transport Not Required	12
Jailed in Parma	9
Other	9
Total	898

Location



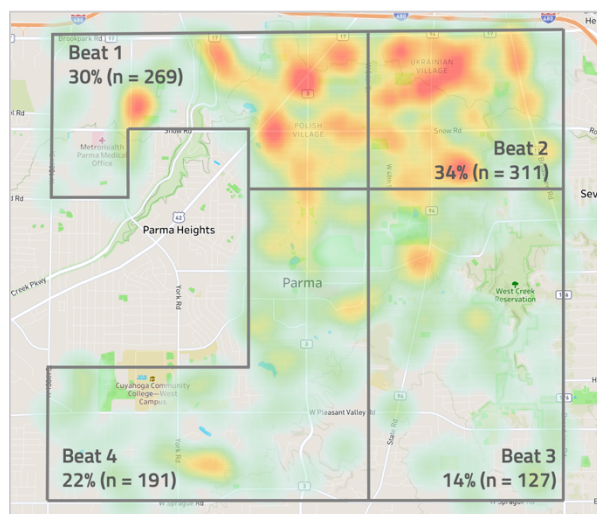
Overdose Incident Locations

Of the 898 suspected overdose incidents, the majority occurred at residential locations (houses, apartments, etc.) (684 of 898 or 76.2%). Nine percent of incidents occurred on the street or in a parking lot (81 of 898 (see Table 4).

Fatal overdoses occurred at residential locations in 86.5% of cases (77 of 89), whereas non-fatal incidents occurred at residential locations in 75% of cases (607 of 809).

PPD officers who cover Beat 2 responded to the most overdose incidents compared to officers patrolling the other three Beats (see Figure 5).

Figure 5. Density Map of Drug Overdose Incident responses by PPD Beat



76.2% of all overdoses occurred at **residences**.

86.5% of fatal overdoses occurred at **residences**.

Table 4. Overdose Incidents by Location Type

Location of Incident	Incident Count
Residence	684
Street or Parking Lot	81
Business	33
Gas Station or Convenience Store	25
Restaurant or Bar	24
Hospital or Other Health Care	14
Grocery Store	7
In Vehicle	7
School	5
Church	4
Other	14
Total	898

Parma Residents vs. Non-Residents

Among 898 suspected overdose incidents that PPD responded to, 70.6% (634 of 898) involved Parma residents. The remaining 29.4% (264 of 898) were for individuals from 68 other cities. Residents of Cleveland (11.2% or 101) were involved in the greatest number of incidents aside from Parma. Non-residents of Parma experienced fatal overdose in 10.6% of the incidents (28 of 264) while Parma residents experienced fatal overdose in 9.6% (61 of 634) (see Table 5).

Table 5. Reported City of Residence for Persons Experiencing a Suspected Overdose*

Reported Residence (City)	Incident Count
Parma	634
Cleveland	101
Parma Heights	21
Brooklyn	8
Elyria	8
Lakewood	8
Brook Park	7
North Royalton	7
Seven Hills	6
Broadview Heights	4
Brunswick	4
Middleburg Heights	4
North Olmsted	4
Northfield	4

*Only the top 14 (four or more incident reports) of 69 reported cities of residence are listed.

Supplemental Drug-Related Mortality Data - CCMEQ

This supplemental information pertaining to fatal overdoses among Parma residents was provided by CCMEQ, which maintains records of overdose-related deaths, including comprehensive toxicology reports for all deceased individuals. This information enhances our understanding of fatal overdoses experienced by Parma residents.

It is important to note that this information does not align directly with incident response data from the PPD for several reasons. First, not all Parma residents who died from drug-related causes did so within the PPD jurisdiction and consequently these incidents would not have been reported by the PPD. Second, there may be instances where the PPD responded to an incident without any initial indications of a drug-related fatality, but subsequent toxicology tests conducted by the CCMEQ revealed otherwise. Finally, the dataset provided by the CCMEQ spans a longer timeframe compared to the overdose incident data available

from the PPD. Specifically, the CCMEQ has provided overdose death information from January 1, 2014, to December 31, 2022. To compare the two sources of information (CCMEQ and PPD) over the same period: CCMEQ reported 165 drug-related deaths for Parma residents from 2017 to 2022, while PPD reported that they responded to 61 Parma residents who died from suspected drug-related causes.

From 2014 – 2022, CCMEQ reported 239 fatal overdoses in which the decedent’s residential address was in Parma (see Table 6). Like the rest of Cuyahoga County, Parma experienced drastic increases in drug-related deaths in 2016 and 2017 due to the introduction of fentanyl into the drug supply. Fentanyl continues to drive the sustained high numbers of drug-related deaths not only in Parma and Cuyahoga County, but across Ohio and the nation. Over the nine-year period, the month of May had the highest number of fatal overdose incidents in Parma at 30 of 239 cases (12.6%), while the month of April had the lowest number in total at 12 of 239 cases (5%).

Table 6. Drug-Related Deaths for Parma Residents, 2014 to 2022

	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Total	16	21	37	34	30	20	25	27	29	239

Demographics

A total of 164 (68.6%) male and 75 (31.4%) female Parma residents died due to a fatal overdose incident from 2014 to 2022. Although males aged 30-34 experienced the highest number of drug-related deaths, the age distribution of these fatalities was relatively even. 93.3% of the decedents were White (223 of 239, and 5 White Hispanic), 6.3% were Black/African American (15 of 239, and 1 Black Hispanic), and 0.4% were Asian Indian (1 of 239).

Two thirds of Parma’s drug-related deaths were **men**.

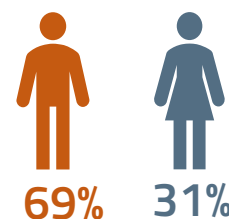
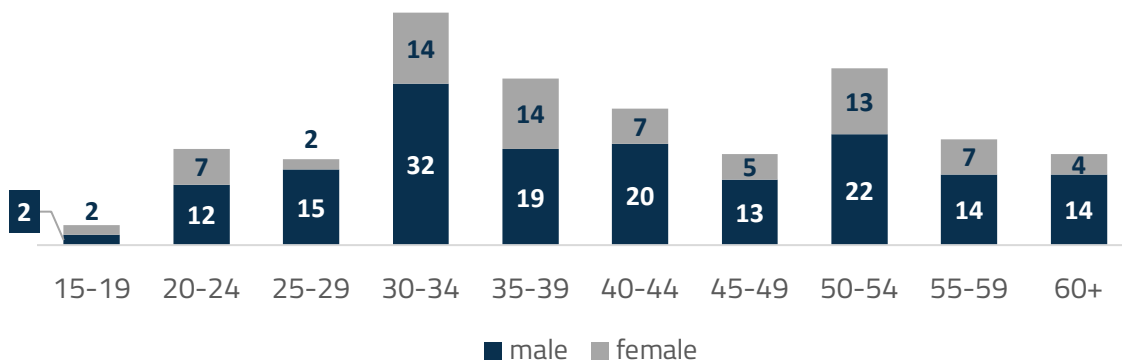


Figure 6. All Drug-Related Deaths from 2014-2022 by Age Group and Gender (N=239)



Toxicology Results: The Drugs Causing Death

Fentanyl has been the leading cause-of-death drug in Cuyahoga County since 2016. Fentanyl and its analogues were reported as cause-of-death drugs in 69.5% of Parma's cases (166 of 239); carfentanil was responsible for 10.5% or 25 deaths. Carfentanil's varying presence in Parma and the county was confined to 2017 through 2020 and since then has essentially disappeared from the drug supply. While heroin dominated drug-related deaths before fentanyl's rise in 2016, by 2022 it was reported in only three deaths. Conversely, cocaine's role in drug-related deaths has grown, likely due to adulteration or contamination with opioids like fentanyl. Forty-three out of 61 cocaine-related deaths also involved fentanyl.

Tables 7, 8, 9, and 10 all show the frequency of specific drug types or combinations of drugs reported in toxicology results for Parma residents who died from drug-related causes. Individuals often have multiple drugs present at the time of death. For example, an individual toxicology result may include fentanyl and benzodiazepine as cause of death drugs, therefore the individual would be counted twice (or more) in these tables based on toxicology results. These tables are not all inclusive of all drug types or combinations (e.g., methamphetamine with fentanyl), but reflect drugs that are the most commonly occurring or have emerged in recent years.

Table 7. Common Drug Types Present in Parma Drug-Related Overdoses

	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Fentanyl	2	7	25	29	24	16	20	21	22	166
Other Opioids	3	9	6	9	7	3	7	4	4	52
Benzodiazepine	8	7	7	3	2	4	9	6	6	52
Cocaine	3	2	7	6	8	5	10	8	12	61
Methamphetamine	0	0	0	1	1	2	4	5	4	17

Table 8. Emerging Trends – Substances of Concern Nationally and Locally

	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Gabapentinoids	0	0	1	1	4	4	5	6	1	22
Xylazine	0	0	0	0	0	0	1	2	0	3
Nitazenes	0	0	0	0	0	0	0	2	3	5

Table 9. Fentanyl Driving Stimulant-Related Deaths

	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Cocaine with Fentanyl	1	0	7	6	3	4	6	7	9	43
Methamphetamine with Fentanyl	0	0	0	1	0	1	4	3	4	13

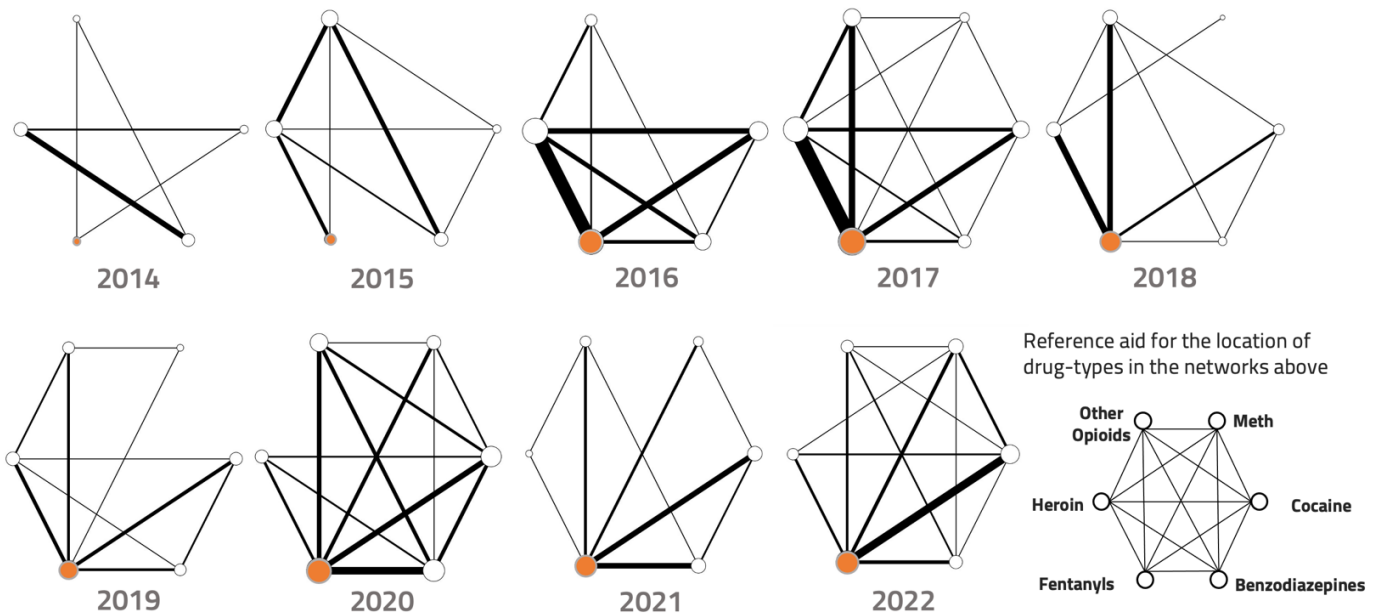
Table 10. Heroin and Carfentanil-Related Deaths have Declined

	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Carfentanil	0	0	2	9	2	8	4	0	0	25
Heroin	10	12	21	16	8	4	4	1	3	79

Figure 7 shows evolving drug patterns in Parma decedents from 2014 to 2022, and focuses on common drug combinations in drug-related death cases. The drug supply has changed, with heroin as the primary factor in 2014, often combined with benzodiazepines. Fentanyl emerged in 2016, leading to record deaths in 2017. By 2022, diverse drug mixtures, particularly fentanyl and cocaine, are prevalent. The network's drug connections represent combinations found in toxicology tests, and line thickness indicates their proportion. The circle size reflects individual drug frequency in toxicology results.

Figure 7. Toxicology “Network” Graph: Visualizing Mixtures of Drugs Reported by CCMEQ.

Fentanyl highlighted in orange.



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