

2024 CUYAHOGA COUNTY DRUG OVERDOSE INTEGRATED EPIDEMIOLOGIC PROFILE

CUYAHOGA COUNTY BOARD OF HEALTH
AUGUST 2025



Local Data, Local Partners, Local Solutions

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EXECUTIVE SUMMARY

CONTEXT

This Drug Overdose Integrated Epidemiologic Profile (DOIEP) provides information about drug overdose mortality and morbidity (specifically, emergency department (ED) visits and emergency medical services (EMS) naloxone administration) in Cuyahoga County (CC), including descriptive statistics, rates, and geographic analyses. Combining multiple data sources creates a more comprehensive picture of the local drug overdose burden.

Assessment of the epidemiology of the overdose crisis in CC as outlined in this profile is an important component of overdose prevention. It provides information to effectively guide prevention and care activities for diverse organizations serving populations at risk for overdose.

The profile may also provide education and insight to healthcare providers, first responders, policymakers, and other stakeholders, including the general public. Data included are based on currently available information and will continue to be annually updated.

FACTS ABOUT OVERDOSES – NATIONAL AND LOCAL

In 2023, the Centers for Disease Control and Prevention (CDC) and the National Center for Health Statistics reported that 105,007 people died of drug overdoses in the United States (US). Drug overdose deaths continue to remain a leading cause of injury-related death.^{1,2}

Overdose deaths involving opioids, including prescription opioids, heroin, and synthetic opioids such as fentanyl, have increased more than 1000% since 1999.³

Drug overdoses continue to impact communities nationwide, including CC, Ohio. Between 2015 and 2023, a total of 4,502 CC residents were reported to have died from unintentional drug overdose deaths (UDOD) (Figure 10).

During 2023, drug poisoning accounted for 54% of unintentional deaths among CC residents (Figure 9).

In 2023, fentanyl and fentanyl analogues were involved in 78% of UDOD (Figure 15).

From 2022-2023, 7,569 ED visits for suspected drug overdoses occurred in CC (Table 12).

DRUG OVERDOSE DEMOGRAPHICS – CUYAHOGA COUNTY

According to 2023 US Census estimates, 1,249,418 people reside in CC. 52.1% of residents were between the ages of 25-64 years; 28.9% were younger than 25 years, and 19.0% were 65 or older (median age = 40.5) (Table 1).

Based on analyses of Ohio Department of Health Vital Statistics, the highest rate of UDOD in CC in 2023 occurred among adults aged 35-44: 88.5 UDOD per 100,000 people (Table 10). Among adults aged 55-64, the rate was 81.6 UDOD per 100,000 people.

48% of the population of CC in 2023 consisted of males, yet males accounted for more than half of the UDOD.

While the Hispanic population (6.8% of CC) had the lowest number of UDOD in 2023 (n= 37) compared to Non-Hispanic Whites (n = 292) and Non-Hispanic Blacks (n = 218), this group experienced the second highest rate of UDOD at 44.4 per 100,000 people.

When considering race/ethnicity and sex, Non-Hispanic Black males had the highest rate of UDOD in CC in 2023: 86.8 per 100,000 people (Table 10).

Additional demographic information such as marital status and education represent other potential risk/protective factors for UDOD. The US Census Bureau reports that 40.3% of residents in CC were never married (Table 6) and 27.2% of the population had a high school diploma or GED as their highest educational attainment, the most common level of education (Table 5). 2023 vital statistics data show that 62.6% of UDOD occurred among individuals who had never been married and 52.6% of UDOD were among individuals with a high school diploma or GED (Table 11).

UDOD routinely include a combination of drugs that contributed to one's death with many deaths involving fentanyl and fentanyl analogues. Fentanyl and fentanyl analogues remained the highest contributor to UDOD through 2023 in CC.

Cocaine has been the second highest contributor to UDOD in CC since 2020. Cocaine-related UDOD experienced a new peak in 2023, contributing to 316 UDOD.

Heroin-related UDOD have decreased (Figure 13).

Though psychostimulant-related UDOD, such as methamphetamine, have contributed to fewer deaths historically in comparison to opioid related deaths, this drug category increased from 2020 to 2021, surpassing natural and semi-synthetic opioids UDOD. There was a slight increase in psychostimulant-related UDOD in 2023.

Compared to 2023, preliminary 2024 data show similar trends in the prevalent drug groups contributing to the number of UDOD. Fentanyl and fentanyl analogues were leading

contributors to UDOD in 2024, followed by cocaine. Notably, carfentanil-related UDOD resulted in three deaths in 2023 and an estimated six deaths occurring in 2024 based on vital statistics.

From 2022-2023, 7,569 ED visits for suspected drug overdoses were reported in CC (Table 12):

35-49 year olds: 27.6%

25-34 year olds: 23.2%

Average age: 40 years old

Male compared to females: 56.8% vs 43.0%

Whites compared to Blacks: 53.1% vs 36.6%

Visits to the ED by White persons decreased from 2022 to 2023 while visits by Black persons slightly increased from 2022 to 2023 (Figure 19). Collectively, the greatest number of drug overdoses presenting in the ED occurred in White males, between ages 35-49 (Figure 23).

Black males ages 35-49 years had the highest rate of suspected drug overdose ED visits based on age-specific rate calculations, followed by white males of the same age group (Table 13).

Naloxone distribution is one of many major overdose prevention resources that is used to combat opioid overdose-related deaths in CC. Naloxone is a medication that has the ability to reverse an overdose caused by an opioid drug such as heroin, fentanyl, or other prescription pain medications.⁴ When Naloxone is administered during an overdose, it blocks the effects of opioids on the brain and quickly restores breathing. It is also known by the brand name Narcan®.

From 2018-2024, EMS providers in CC administered 31,724 doses of naloxone (Figure 25). In the last seven years, the highest total count of naloxone doses administered was 6,049 doses in 2019. The number of naloxone administrations during subsequent years has steadily decreased.

The top five ZIP Codes, based on decedent residence, with the highest rate of UDOD in 2023 were: 44109, 44103, 44115, 44110, and 44104 (Figure 12). The highest number of ED visits for suspected drug overdose and naloxone doses administered occurred in ZIP Codes 44109 and 44114 (Figures 24 and 27).

OVERVIEW: DRUG OVERDOSE INTEGRATED EPIDEMIOLOGIC PROFILE (DOIEP)

The 2024 Cuyahoga County (CC) Drug Overdose Integrated Epidemiologic Profile (DOIEP) was made possible through the Overdose Data to Action: Limiting Overdose through Collaborative Actions in Localities (OD2A) grant from the Centers for Disease Control and Prevention (CDC). OD2A focuses on understanding the complex and changing nature of the drug overdose epidemic using an interdisciplinary, comprehensive and cohesive public health approach, integrating data and prevention. There are several settings and strategies outlined in the OD2A grant. The DOIEP was conducted as part of surveillance strategy 6A, which focuses on improving overdose surveillance infrastructure. The DOIEP was adopted from a CDC and Health Resources and Services Administration (HRSA) document called the Integrated Epidemiologic Profile (IEP).⁵ This document described the burden of HIV/AIDS using multiple data sources to inform prevention and program planning, implementation and evaluation. The OD2A grant uses the IEP model as a foundation for the DOIEP.

The DOIEP describes the burden the drug crisis has on the population of CC in terms of sociodemographic and geographic characteristics of persons experiencing substance use disorder. The profile represents a data-driven resource for local partners and community members to understand current drug overdose trends, patterns and risk factors in CC and make recommendations for allocating drug overdose prevention and care resources, planning programs and evaluating programs and policies.

Goals of this DOIEP report:

- Describe the socio-demographic characteristics of the general population in Cuyahoga County for comparison to overdose statistics;
- Provide a thorough description of drug overdose morbidity and mortality among various populations (age, race, sex, ZIP Code, etc.) in Cuyahoga County using data;
- Identify trends and characteristics representing risk and protective factors for drug overdoses in Cuyahoga County; and
- Provide insights for overdose prevention.

DATA SOURCES

Data from various sources were analyzed for this DOIEP and are described below. Future editions may include additional data.

United States Census Bureau

The Census Bureau collects and provides information about the people and economy of the United States. The Census Bureau’s website (<http://www.census.gov/>) includes data on demographic characteristics of the population, family structure, educational attainment, income level, housing status, and the proportion of persons who live at or below the federal poverty level. State and county-specific data are easily accessible, and valuable to understand a population. In this DOIEP, the 2023 American Community Survey (ACS) 5-year data are reported, the most recent data yearly-available.

State of Ohio Integrated Behavioral Health Dashboard

The State of Ohio Integrated Behavioral Health Dashboard was created and is maintained by Recovery Ohio; it provides behavioral health data from multiple agencies that is accessible in a single location. This dashboard provides a county- and state-level picture of long-term trends in opioid use disorder, overdoses, and treatment. In this DOIEP, data related to buprenorphine use for treatment of opioid use disorder (OUD) are reported.

Ohio Hospital Association Data Dashboard

The Ohio Hospital Association (OHA) Data dashboard was created and is maintained by OHA, to provide state, regional and county-level data on opioid overdose encounters at Ohio hospitals to assist local community health and human services organizations as they address the crisis at the local level. The data are updated quarterly and sorted by gender, race, and age of the patient, in addition to marketplace totals and county level per-capita rates. The data are reported at the encounter-level (i.e., visits to a hospital) and do not reflect individual patients. In this DOIEP, data on hospital encounters due to opioid overdose are reported.

Ohio Department of Health Vital Statistics System

This DOIEP uses death certificate data from the Ohio Department of Health (ODH) Vital Statistics System. ODH uses the *International Classification of Disease, Tenth Revision* (ICD-10) to code deaths. ODH categorizes causes of death into six “External Injury Intent” types: Homicide, Legal Intervention and Operations of War, Natural, Suicide, Undetermined, and Unintentional. Accidental drug poisoning deaths, or unintentional drug overdose deaths (UDOD) as described in this report, fall into the “Unintentional” category. Among decedents with UDOD as the underlying cause of death, the type of drug is indicated by the following ICD10 multiple cause-of-death codes: illicit and prescription opioids (T40.0, T40.1, T40.2, T40.3, T40.4, or T40.6); benzodiazepines (T42.4); cocaine (T40.5); and methamphetamines (T43.6). Vitals Statistics data are used in this DOIEP to provide insights

on fatal overdoses, specifically UOD, for decedents who resided in CC between 2015 and June 2024 (note: 2024 data are preliminary and incomplete). In-depth analyses of 2023 data (the most recent complete year of data available) are provided.

Ohio Department of Health EpiCenter System

EpiCenter is a syndromic surveillance system managed by ODH that monitors suspected drug overdoses and many other health events presenting in emergency departments (ED). In 2016, ODH developed three opioid-related classifiers based on chief complaint data: suspected drug overdose, suspected drug overdose due to opioid, and suspected drug overdose due to heroin. In 2020, ODH developed a fourth classifier: suspected drug overdose due to stimulants. ODH retroactively updated all EpiCenter data from 2016 to 2020 to correctly reflect all four classifiers. Mid-year in 2024, ODH added five additional classifiers: suspected drug overdoses involving benzodiazepines, suspected drug overdoses involving cocaine, suspected drug overdoses involving fentanyl, suspected drug overdoses involving methamphetamine, and suspected drug overdoses involving xylazine. The classifiers build upon one another and one individual can be reported as a part of multiple classifiers; therefore, this report includes a general “all drug overdose category.” These classifiers support non-fatal overdose surveillance and anomaly (spike alert) detection, known as an Epi-Alert. EpiCenter data are used in this DOIEP to provide insights on drug overdose morbidity in CC between January 2017 through December 2023. Preliminary 2024 totals are also provided.

Ohio Department of Public Safety’s Emergency Medical Services Incidence Reporting System

The Ohio Department of Public Safety’s Emergency Medical Services (EMS) Incidence Reporting System (EMSIRS) records naloxone dose administrations provided by local EMS agencies participating in EMSIRS and the number of EMS 9-1-1 response events that mention “Narcan” or “naloxone” in the report under Medication Given Description, Situation Complaint Statement, or Patient Care Report Narrative. Naloxone is a medication used as treatment to reverse an opioid overdose.⁴ The Ohio State Board of Emergency Medical, Fire, and Transportation Services has statutory authority over EMSIRS and supervises its operations. For this report, 2018-2024 quarterly data are examined.

Cuyahoga County Pilot Drug Checking Program

The Cuyahoga County Medical Examiner’s Office (CCMEO) and Cuyahoga County Board of Health, in partnership with the MetroHealth System, the Centers, and Case Western Reserve University, launched the pilot drug checking program in August 2024, funded as part of OD2A. Under this program, used syringes from 7 different syringe service program (SSP) locations are tested at the CCMEO and the results are shared with the service clients, partner agencies and local stakeholders. This program strengthens drug overdose surveillance efforts in Cuyahoga

County by providing insight into the drug supply in active use and clients' perceptions about the drugs they use.

Cuyahoga County Regional Forensic Science Laboratory

The Cuyahoga County Regional Forensic Science Laboratory (CCRFSL) is an accredited laboratory at CCMEO, which provides a wide range of forensics science services to the community. The lab handles various types of evidence, including DNA, controlled substances and much more. This report utilizes the results of submissions to the drug chemistry laboratory. Submissions may be positive for more than one drug or substances. This data captures the presence of drug/substances, not concentrations or purity of drug/substances. Information provided from CCRFSL drug testing informs on the current drug supply that is impacting our community, including emerging drugs. For this report, top drug submissions from 2021-2024 are examined.

STRENGTHS AND LIMITATIONS

The 2024 DOIEP provides important information that local partners can use as a resource for prevention efforts. Strengths of this profile include robust datasets and detailed analyses. Comprehensive population demographics data from the Census Bureau offer community context. The Vital Statistics System captures data on all deaths of CC residents and has hundreds of variables for analysis. Data from this system can be compared across communities or with other counties across the state. EpiCenter data are submitted by local hospital systems and urgent care centers in near real-time and have become an important resource for tracking trends in ED visits for drug overdoses. EpiCenter also administers Epi-Alerts when hospitals report a spike in overdose ED visits. Lastly, most EMS naloxone dose administrations in CC are recorded into EMSIRS, which are helpful for understanding the overdose burden on EMS providers and communities.

Despite the many strengths of the data sources included in this profile, some limitations must be acknowledged. Due to the timing of data releases from the United States Census Bureau, the most recent Census data available and used are 2023 data. A time lag also exists in reporting for Vital Statistics and finalization of these data by ODH; it can take months to over a year to complete. Therefore, validated county vital statistics data indicating cause of death for 2024 deaths are incomplete. In this report, only the first 6 months of 2024 data are included. Also 2023 death data have not yet been finalized and therefore are considered preliminary. Non-CC-resident deaths are also not accounted for in the vital statistics analyses reported. EpiCenter data are de-identified to some degree, classifiers do not capture all overdoses, and non-standard reporting across hospital systems can make these data hard to interpret. Underreporting may exist due to facilities temporarily being out of surveillance, although some facilities have rejoined surveillance in 2024. EMS data are listed as total dose administrations and not per person administrations; therefore, it is not known how many doses of naloxone an individual received. Administrations of naloxone may be part of standard EMS protocols. As such, an incident in which EMS responded and administered naloxone may not necessarily have been an opioid-related overdose but protocols led to administration of the medication and the incident was reported as such. Lastly, not all EMS agencies report to EMSIRS.

CUYAHOGA COUNTY GEOGRAPHIC & SOCIODEMOGRAPHIC COMPOSITION, BEHAVIORAL HEALTHCARE, AND DRUG SUPPLY

Geographic Description of Cuyahoga County

- Cuyahoga County is located in northeastern Ohio, in the Midwest region of the United States. Housing the City of Cleveland, it is the second most-populated county in Ohio with a population of 1.25 million people, and the 39th largest county in the state by land area at 44,826 square miles.
- Between 2022 and 2023, the population of Cuyahoga County experienced a 0.6% decline.⁶ Cuyahoga County shares its borders with Lake Erie, Geauga County, Lake County, Lorain County, Medina County, Portage County, and Summit County (Figure 1).

Figure 1: Geographic Location of Cuyahoga County, OH



⁷Data Source: Worldatlas.com. Accessed January 23, 2025. [Cuyahoga County, Ohio / Map of Cuyahoga County, OH / Where is Cuyahoga County? \(worldatlas.com\)](https://www.worldatlas.com/cuyahoga-county-ohio/)

Demographic Composition of the Population

- The types and level of services needed by a community relate to its demographic make-up, including age, gender, race, income levels, health insurance status, etc.
- In 2023, the median age in CC was 40.5 years, with more than half (52.1%) of residents between the ages of 25 and 64 years.
- The female to male ratio in CC is 100:92.

Table 1. Population Distribution by Age Group and Sex, Cuyahoga County, OH 2023

Age Group (years)	Males		Females		Total Population	
	N = 599,391	%	N = 650,027	%	N = 1,249, 418	%
<15	108,369	18.1%	103,788	15.9%	212,157	17.0%
15-24	74,863	12.4%	74,387	11.5%	149,250	11.9%
25-34	87,357	14.6%	91,410	14.1%	178,767	14.3%
35-44	73,883	12.3%	78,305	12.0%	152,188	12.2%
45-54	70,328	11.8%	76,114	11.8%	146,442	11.8%
55-64	82,223	13.7%	90,723	14.0%	172,946	13.8%
65+	102,368	17.0%	135,300	20.8%	237,668	19.0%

⁸Source: 2023 American Community Survey estimates, United States Census Bureau.

Note: Percentages may not sum to 100% due to rounding.

- The Census Bureau estimates that 57.0% (n = 712,578) of CC residents are Non-Hispanic White.
- Non-Hispanic Black or African American residents make up 28.6% (n = 357,473) of the CC population.

Table 2. Population Distribution by Race/Ethnicity, Cuyahoga County, OH 2023

Race/Ethnicity	Total Population	
	*N = 1,249,418	%
Non-Hispanic White	712,578	57.0%
Non-Hispanic Black	357,473	28.6%
Hispanic or Latino	84,864	6.8%
Asian	40,272	3.2%
Native American	944	0.1%
Two or more races	46,880	3.8%

⁹Source: 2023 American Community Survey estimates, United States Census Bureau.

Note: Percentages may not sum to 100% due to rounding.

*This is the total including residents who identified as “other” race, which is not shown in the race/ethnicity category.

Poverty, Income, and Education

- According to rankings based on poverty rate, CC is the 13th most impoverished county in Ohio.¹⁰
- In 2023 it was reported that 16.2% of individuals residing in Cuyahoga County live below the federal poverty level, compared to 13.2% for the state.
- The average personal income in Cuyahoga County is \$41,559 and the median household income is \$62,823.

Table 3. Socioeconomic Characteristics of Population, Cuyahoga County, OH and Ohio, 2023

Characteristic	Cuyahoga County	Ohio
Income		
Average per Capita Income*	\$41,559	\$39,455
Median Household Income*	\$62,823	\$66,990
Federal Poverty Level		
Individuals	16.2%	13.2%
Female	17.2%	14.6%
Male	15.1%	11.9%
Federal Poverty Level by Age Group (years)		
<18	23.2%	18.0%
18-64	15.0%	12.6%
≥65	12.3%	9.5%
Federal Poverty Level by Race and Ethnicity		
Non-Hispanic White	9.4%	10.4%
Non-Hispanic Black	28.1%	26.9%
Hispanic or Latino	23.9%	21.7%
Native American	43.9%	26.8%
Asian	13.2%	11.5%

¹¹⁻¹³Source: 2023 American Community Survey estimates, United States Census Bureau.

Note: Percentages may not sum to 100% due to rounding.

*Inflation-Adjusted Dollars

- The State of Homelessness data (Table 4) draw from the nationwide Point-in-Time Count, and show how homelessness has fluctuated during the last 5 years.¹⁴ Data collection was interrupted in 2021 due to the COVID-19 pandemic and is unavailable.

- Between 2022 and 2023, overall homelessness slightly increased in CC.
- In 2023, an estimated 1,629 individuals were homeless, of which 1,449 (89.0%) were reported to be sheltered.
- Homelessness has been associated with reduced access to care, engagement in harmful behaviors such as substance use, lower survival rate, and reduced adherence to treatment.¹⁴

Table 4. Homelessness in Cuyahoga County, Ohio 2019-2023*

	2019		2020		2022		2023	
Overall Homelessness	N= 1,618	%	N= 1,675	%	N= 1,574	%	N= 1,629	%
Unsheltered	106	6.6%	109	6.5%	84	5.3%	180	11.0%
Sheltered	1,512	93.4%	1,566	93.5%	1,490	94.7%	1,449	89.0%
Individual	1,228	75.9%	1,315	78.5%	1,228	78.0%	1,221	75.0%
Family	390	24.1%	360	21.5%	346	22.0%	408	25.0%
Chronic	212	13.1%	171	10.2%	198	12.6%	278	17.1%
Veteran	135	8.3%	168	10.0%	105	6.7%	90	5.5%
Youth	118	7.3%	110	6.6%	112	7.1%	97	6.0%

¹⁴Source: US Department of Housing and Urban Development.

*The COVID-19 pandemic interrupted data collection in 2021, so data for that year are unavailable.

- The most common level of education attained in CC among people aged 25 years and older is a high school diploma or its equivalent (27.2%).
- 44.0% of residents 25 years and older reported having any college degree.

Table 5. Educational Attainment (Population Age ≥25 Years) in Cuyahoga County, OH 2023

Education	Males		Females		Total Population	
	N = 416,159	%	N = 471,852	%	N = 888,011	%
Less than High School	39,523	9.5%	38,229	8.1%	77,752	8.8%
High School Diploma/GED	119,913	28.8%	121,778	25.8%	241,691	27.2%
Some College, no degree	80,635	19.4%	97,127	20.6%	177,762	20.0%
Associate’s Degree	29,615	7.1%	42,240	9.0%	71,855	8.1%
Bachelor’s Degree	85,633	20.6%	96,161	20.4%	181,794	20.5%
Graduate or Professional Degree	60,840	14.6%	76,317	16.2%	137,157	15.4%

¹⁵Source: 2023 American Community Survey estimates, United States Census Bureau. Note: Percentages may not sum to 100% due to rounding.

Marital Status, Employment, and Healthcare Coverage

- Among persons 15 years of age and over, 40.9% (n= 423,764) reported being married and 40.3% (n= 418,035) have never been married.

Table 6. Marital Status (Population Age ≥15 Years) in Cuyahoga County, OH 2023

Marital Status	Males		Females		Total Population	
	N = 491,022	%	N = 546,239	%	N = 1,037,261	%
Married	212,327	43.2%	211,437	38.7%	423,764	40.9%
Divorced	52,158	10.6%	76,732	14.0%	128,890	12.4%
Never Married	211,360	43.0%	206,675	37.8%	418,035	40.3%
Widowed	15,177	3.1%	51,395	9.4%	66,572	6.4%

^{16,17}Source: 2023 American Community Survey estimates, United States Census Bureau. Note: Percentages may not sum to 100% due to rounding.

- The civilian labor force, or currently active workforce, is defined as all civilian noninstitutionalized residents 16 years or older who fulfill the requirements for inclusion among the employed or the unemployed.
- 59.3% of CC residents are employed, defined as those who work for pay or profit for at least one hour a week, or have a job, but are temporarily on leave due to illness, industrial action, etc.
- 4.4% of CC residents are unemployed, defined as people without work, but are actively seeking a job and currently available to start work.

Table 7. Employment Status (Population Age ≥16 Years) in Cuyahoga County, OH and Ohio, 2023

Characteristic	Cuyahoga County		Ohio	
	Total	%	Total	%
Civilian Labor Force 16 Years and Over	651,035	63.7%	5,984,743	63.1%
Employed	605,884	59.3%	5,694,732	60.1%
Unemployed	45,151	4.4%	290,011	3.1%

¹⁸Source: 2023 American Community Survey estimates, United States Census Bureau. Note: Percentages may not sum to 100% due to rounding.

- In 2023, 46.9% of CC residents were covered under their employers’ health insurance plan, compared to 50.5% in Ohio overall.
- 22.6% of CC residents had their health insurance coverage through Medicaid in 2023 (higher than the state level) and 5.5% were uninsured (lower than the state level).

Table 8. Healthcare Coverage in Cuyahoga County, OH and Ohio, 2023

Health Insurance Coverage	Cuyahoga County %	Ohio %
Employer	46.9%	50.5%
Non-Group	9.8%	10.4%
Medicaid	22.6%	17.8%
Medicare	14.1%	13.7%
Military or VA	1.1%	1.3%
Uninsured	5.5%	6.4%

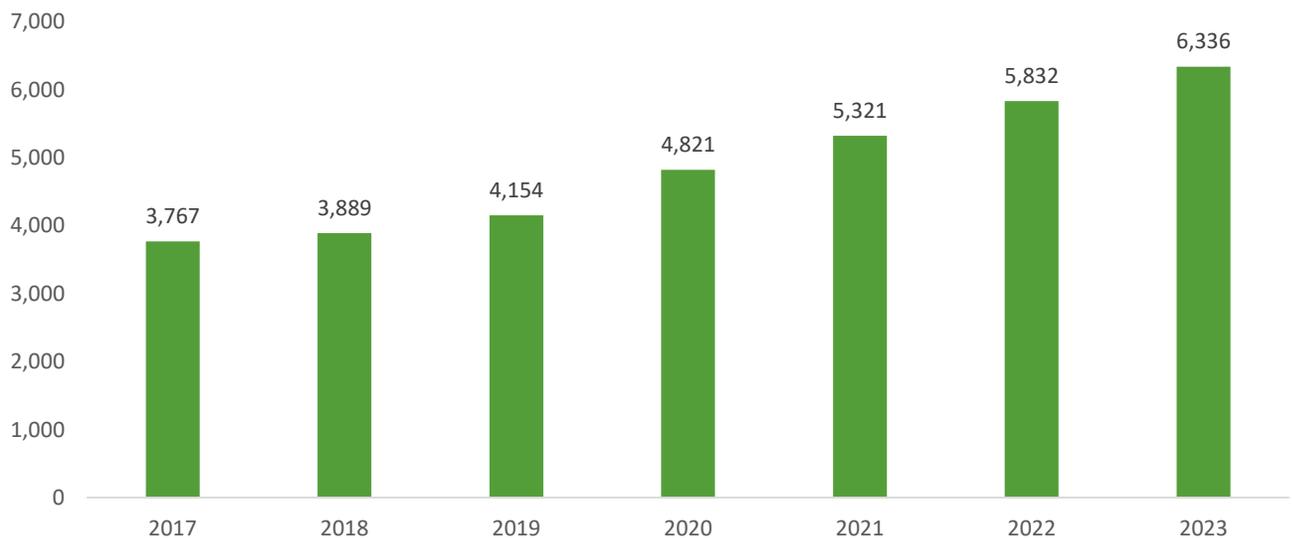
^{19, 20}Source: Data USA: Cuyahoga County, OH & Ohio.

Note: Percentages may not sum to 100% due to rounding.

Behavioral Health

- OARRS Drug Monitoring Program data published on the State of Ohio Integrated Behavioral Health Dashboard shows that 6,336 individuals received Buprenorphine as either medication for opioid use disorder (MOUD) or Medication-Assisted Treatment (MAT) in 2023, the highest annual total to date.

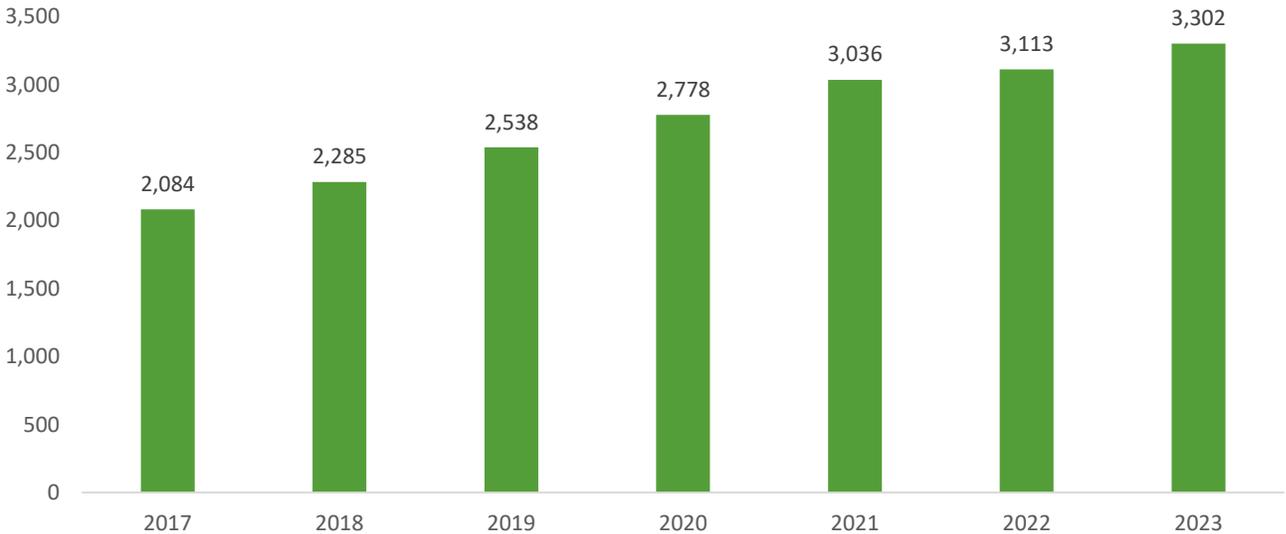
Figure 2. Individuals Receiving Buprenorphine as MOUD/MAT in Cuyahoga County, 2017-2023



²¹Source: DataOhio: State of Ohio Integrated Behavioral Health Dashboard (February 2025 update)

- Receiving buprenorphine for more than six months is a measure of retention in treatment for OUD. Among CC residents there has been a steady increase in retention by year, with the highest total reported being 3,302 in 2023.

Figure 3. Individuals Receiving Buprenorphine Products for 6+ Months in Cuyahoga County, 2017-2023



²¹Source: DataOhio: State of Ohio Integrated Behavioral Health Dashboard (February 2025 update)

Hospital Encounters

- Figures in this section derive from the Ohio Hospital Association (OHA) Dashboard. From 2023 to 2024, hospital encounters related to opioid overdose decreased 34%.

Figure 4. Hospital Encounters Related to Opioid Overdose in Cuyahoga County, 2018-2024

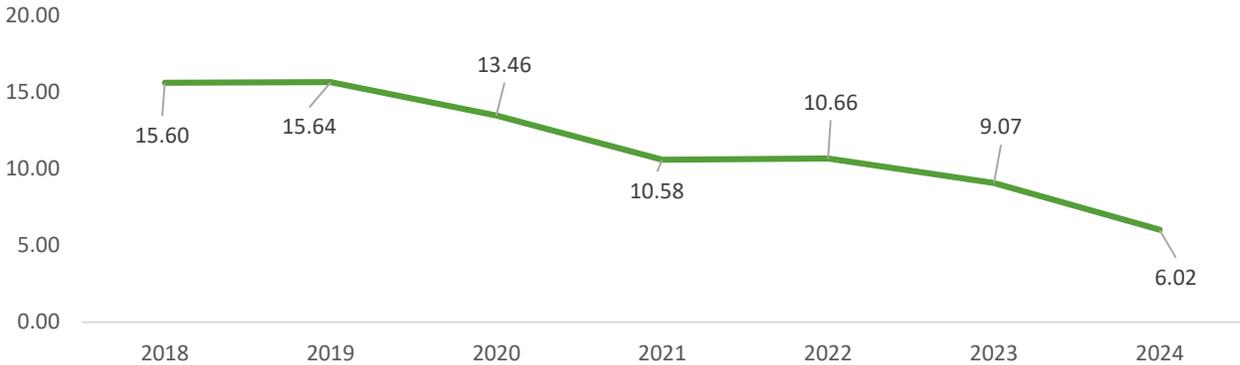


²²Source: Ohio Hospital Association Dashboard

County data includes hospital encounters seen in an Ohio hospital for patients who live in Ohio.

- In 2024, the rate for hospital encounters related to opioid overdose was 6.02 per 10,000 population, the lowest rate across the time frame provided. This represents a 34% decrease from 2023.

Figure 5. Rate per 10,000 population for Hospital Encounters Related to Opioid Overdose in Cuyahoga County, 2018-2024



²²Source: Ohio Hospital Association Dashboard

County data includes hospital encounters seen in an Ohio hospital for patients who live in Ohio.

Drug Supply in Cuyahoga County

- From August 2024 to December 2024, the Cuyahoga County Pilot Drug Checking Program tested 290 syringes, which were collected from seven different syringe service programs (SSP).
- Among the SSP clients sampled, 86.9 were Non-Hispanic (n = 252), 88.6% were White (n = 257), and 57.9% were males (n = 168), with an average age (SD) of 41.24 (9.97) years.
- The most commonly detected drugs were illicit fentanyls (n = 168, 57.9%), xylazine (n = 136, 46.9%), and cocaine (n = 120, 41.4%).
- Perceived drugs were misaligned with drugs detected via testing, over half of participating SSP clients (n = 156, 53.8%) reported that heroin was in their syringes while testing showed it was present much less often (n = 72, 24.8%).
- The most detected adulterants were Diphenhydramine (n = 193, 66.6%), caffeine (n = 135, 46.6%), and quinine (n = 148, 51.0%). BTMPS was detected in 21 (7.2%) syringes. Protonitazene was found in 5 (1.7%) syringes. (Data not shown.)

Figure 6. Major Drugs Tested vs. Perceived by Clients in Cuyahoga County, August-December 2024

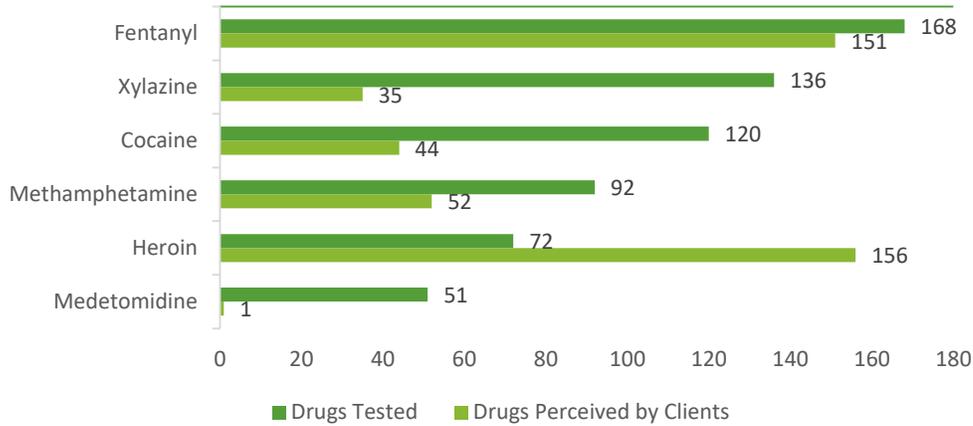


Table 9. Major Drugs Tested and Perceived by Clients in Cuyahoga County, August-December 2024

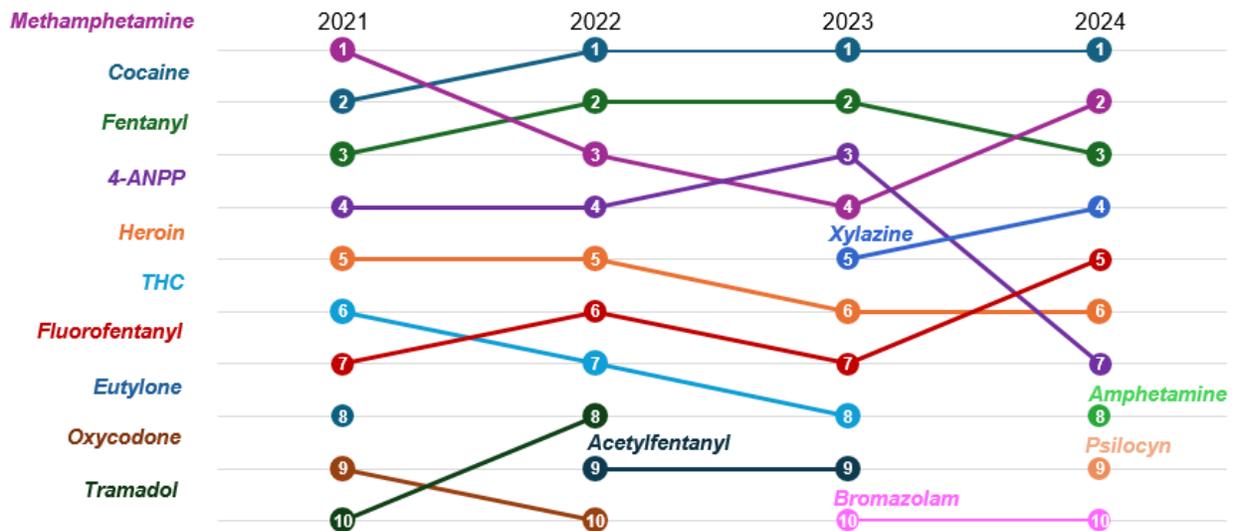
Drug	Drugs Tested		Drugs Perceived by Clients	
	N	%	N	%
Fentanyls	168	57.9	151	52.1
Xylazine	136	46.9	35	12.2
Cocaine	120	41.4	44	15.2
Methamphetamine	92	31.7	52	17.9
Heroin	72	24.8	156	53.8
Medetomidine	51	17.6	1	0.3

Source: Cuyahoga County Pilot Drug Checking Program

- Regarding seized drug submissions tested by the CCRFSL, cocaine was the most common drug identified from 2022 to 2024.
- Methamphetamine and fentanyl ranked second and third respectively in drug submissions in 2024.
- Fluorofentanyl sustained as a dominant fentanyl analog from 2021 to 2024.
- 4-ANPP, which is a precursor and by-product in fentanyl production, decreased from ranking fourth in 2021 to the seventh most common drug identified in 2024.

- Although the top few ranked drugs are relatively stable, the change in rankings after that reflects the changing nature of the crisis including emerging substances.
- For example, Xylazine entered the top 10 in 2023, ranking fifth, and moved up to fourth in 2024.

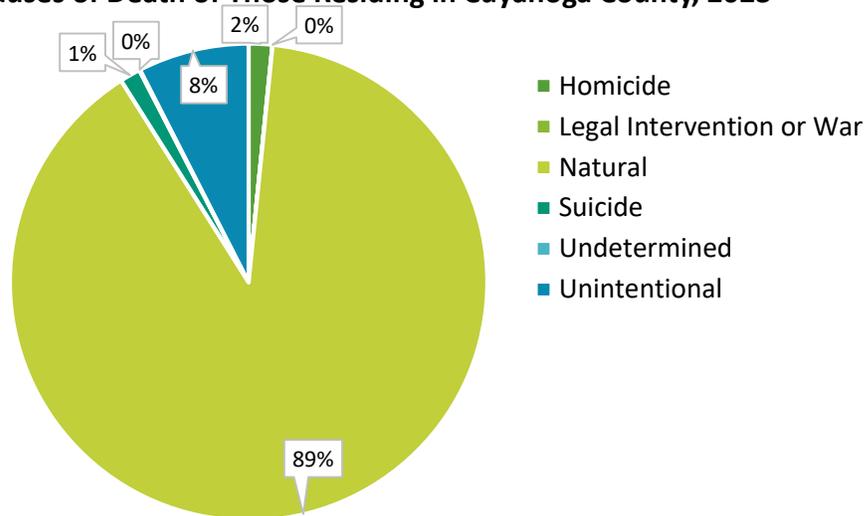
Figure 7. Ranking of Top Drug Submissions in Cuyahoga County, 2021-2024



DRUG OVERDOSE MORTALITY – TOTAL DEATHS

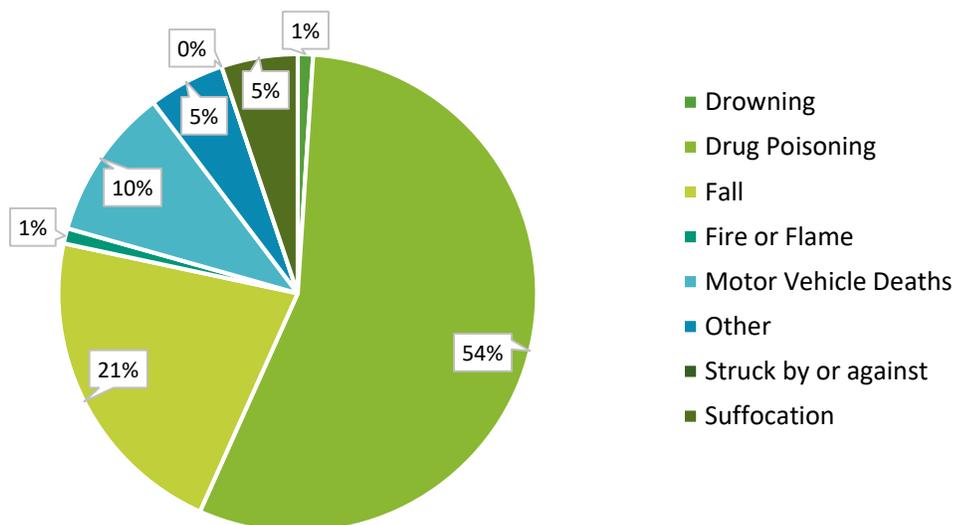
- Based on Vital Statistics data, 13,679 CC residents died in 2023.
- 89% of deaths were due to a natural cause and 8% (n=1,028) were unintentional deaths (e.g., an unnatural death caused by accident or injury).

Figure 8. Causes of Death of Those Residing in Cuyahoga County, 2023



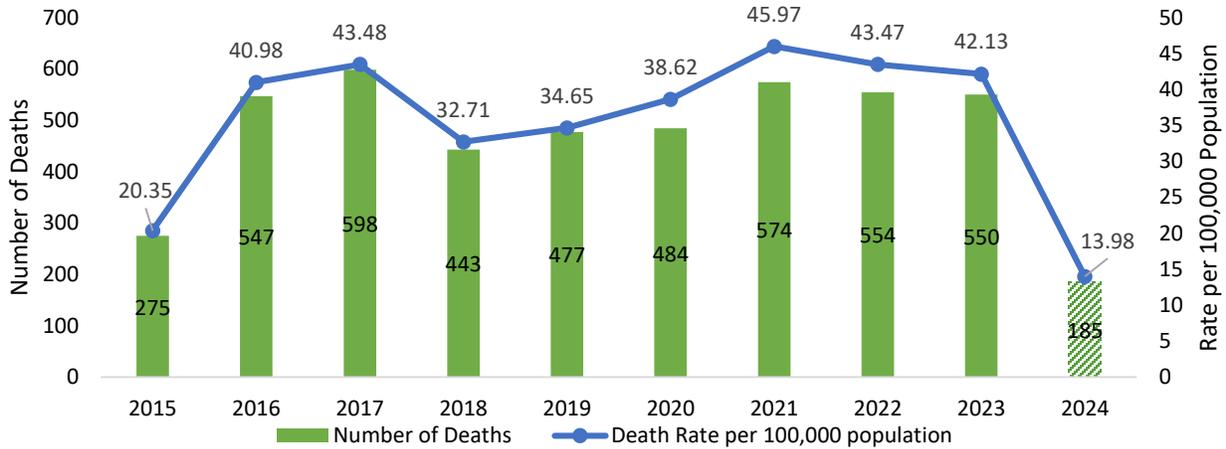
- In 2023, drug poisoning was the leading cause of unintentional death in CC, accounting for more than half (54%) of all unintentional deaths.

Figure 9. Causes of Unintentional Death of Those Residing in Cuyahoga County, 2023



- In 2023, there were 550 unintentional drug overdose deaths (UDOD), which was a 0.7% decrease in the number of UDOD from 2022.
- CC’s age-adjusted rate of UDOD in 2023 was 42.1 deaths per 100,000 population, a decrease from 43.5 deaths per 100,000 population seen in 2022.

Figure 10. Number and Age-Adjusted Rate of Unintentional Drug Overdose Deaths in Cuyahoga County, 2015-2024*

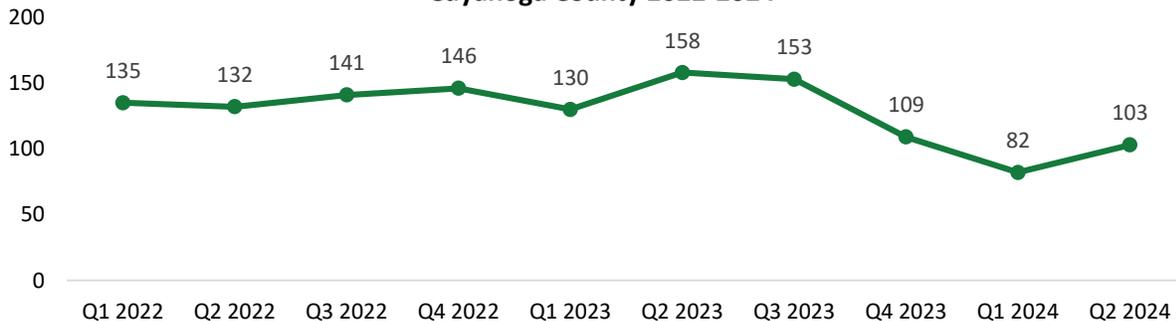


***2024 DATA ONLY REFLECT THE FIRST 6 MONTHS (JANUARY 2024- JUNE 2024) OF THE YEAR THEREFORE ARE PRELIMINARY AND INCOMPLETE**

Note: The death rates presented are age-adjusted to the 2000 U.S. standard population to allow comparisons between different populations.

- In 2023, there was a 22% increase in the number of UDODs from the first quarter (130 deaths) to the second quarter (158 deaths). The number of UDODs decreased 31% from the second quarter to the fourth quarter (109 deaths).

Figure 11. Number of Unintentional Drug Overdose Deaths by Quarter, Cuyahoga County 2022-2024*



***2024 DATA ONLY REFLECT THE FIRST 6 MONTHS (JANUARY 2024- JUNE 2024) OF THE YEAR THEREFORE ARE PRELIMINARY AND INCOMPLETE**

DRUG OVERDOSE MORTALITY – DEMOGRAPHIC AND GEOGRAPHIC ANALYSES

- In 2023, the 35-44 age group had the highest rate of UDOD (88.5 deaths per 100,000 population).
- More males died of UDOD than females in 2023 (381 deaths vs 169 deaths, respectively); this pattern also occurred in 2022 and in the first 6 months of 2024.
- In 2023, Non-Hispanic Blacks had a higher rate of UDOD (59.7 deaths per 100,000 population) than Non-Hispanic Whites (40.6 deaths per 100,000 population).
- Although the overall number of UDOD in the Hispanic population (n = 37) were lower than other race/ethnic groups in 2023, this group experienced a higher rate of UDOD (44.4 deaths per 100,000 population) compared to Non-Hispanic Whites.

Age	2022			2023			2024*		
	N	%	Rate ¹	N	%	Rate ¹	N	%	Rate ¹
<15	-	-	-	-	-	-	-	-	-
15-24	28	5.1	17.9	9	1.6	5.8	7	3.8	-
25-34	114	20.6	63.6	80	14.6	44.6	29	15.7	-
35-44	130	23.5	87.8	131	23.8	88.5	42	22.7	-
45-54	108	19.5	72	118	21.5	78.6	34	18.4	-
55-64	114	20.6	62.9	148	26.9	81.6	50	27	-
65+	60	10.8	45.5	64	11.6	58.6	23	12.4	-
Sex									
Female	168	30.3	25.5	169	30.7	25.6	57	30.8	-
Male	386	69.7	63.8	381	69.3	63.0	128	69.2	-
Race/Ethnicity²									
Non-Hispanic Black	212	38.3	58.1	218	39.6	59.7	76	41.1	-
Non-Hispanic White	299	54	41.6	292	53.1	40.6	104	56.2	-
Hispanic	32	5.8	38.4	37	6.7	44.4	4	0.7	-
Race/Ethnicity and Sex²									
Non-Hispanic Black Females	52	9.4	26.3	73	13.3	36.9	21	11.4	-
Non-Hispanic Black Males	160	28.9	95.8	145	26.4	86.8	55	29.7	-
Non-Hispanic White Females	105	19	28.5	87	15.8	23.6	36	19.5	-
Non-Hispanic White Males	194	35	55.4	205	37.3	58.5	68	36.8	-
Hispanic Females	9	1.6	21.1	8	1.5	18.8	-	-	-
Hispanic Males	23	4.2	56.5	29	5.3	71.2	4	2.2	-
Total³	554		43.5	550		42.1	185		-
Mean Age		45.9			48.9			48.4	

*2024 DATA ONLY REFLECT THE FIRST 6 MONTHS OF THE YEAR (JAN 2024-JUN 2024), DUE TO THIS THE OVERDOSE RATE IS NOT REPORTED.

¹Death rates for age are age-specific. Death rates for sex and race/ethnicity are age-adjusted to the 2000 U.S. standard population to allow comparisons between different populations. ²Other race groups are not shown due to small numbers. ³Total includes all unintentional drug overdose deaths in Cuyahoga County.

- When examining race/ethnicity and sex together additional UDOD disparities and trends are observed:
 - Despite non-Hispanic White males representing the highest number and percentage of UDOD each year, Non-Hispanic Black males had a higher rate of UDOD in 2022 and 2023.
 - Non-Hispanic White females had a higher rate of UDOD in 2022 when compared to non-Hispanic Black females, but in 2023 non-Hispanic Black females had a higher rate of UDOD.
 - The UDOD rate for Hispanic females remained the lowest among the female race/ethnicity subgroups from 2022 to 2023.
 - The UDOD rate for Hispanic males increased from 56.5 per 100,000 in 2022 to 71.2 per 100,000 in 2023.

Table 11. Unintentional Drug Overdose Deaths by Marital Status and Education in Cuyahoga County, 2022-2024**

Marital Status	2022		2023		2024**	
	N	%	N	%	N	%
Married	57	10.3	50	9.1	19	10.3
Divorced	132	23.8	111	20.2	47	25.4
Never Married	330	59.6	344	62.6	110	59.5
Other/Unknown	35	6.3	45	8.2	9	4.9
Education						
Less than High School Grad	104	18.8	121	22.0	33	17.8
High School Diploma/GED	313	56.5	289	52.6	113	61.1
Some College	62	11.2	62	11.3	18	9.7
College Degree	64	11.6	56	10.2	14	7.6
Unknown	11	2.0	22	4.0	7	3.8
Total¹	554		550		185	

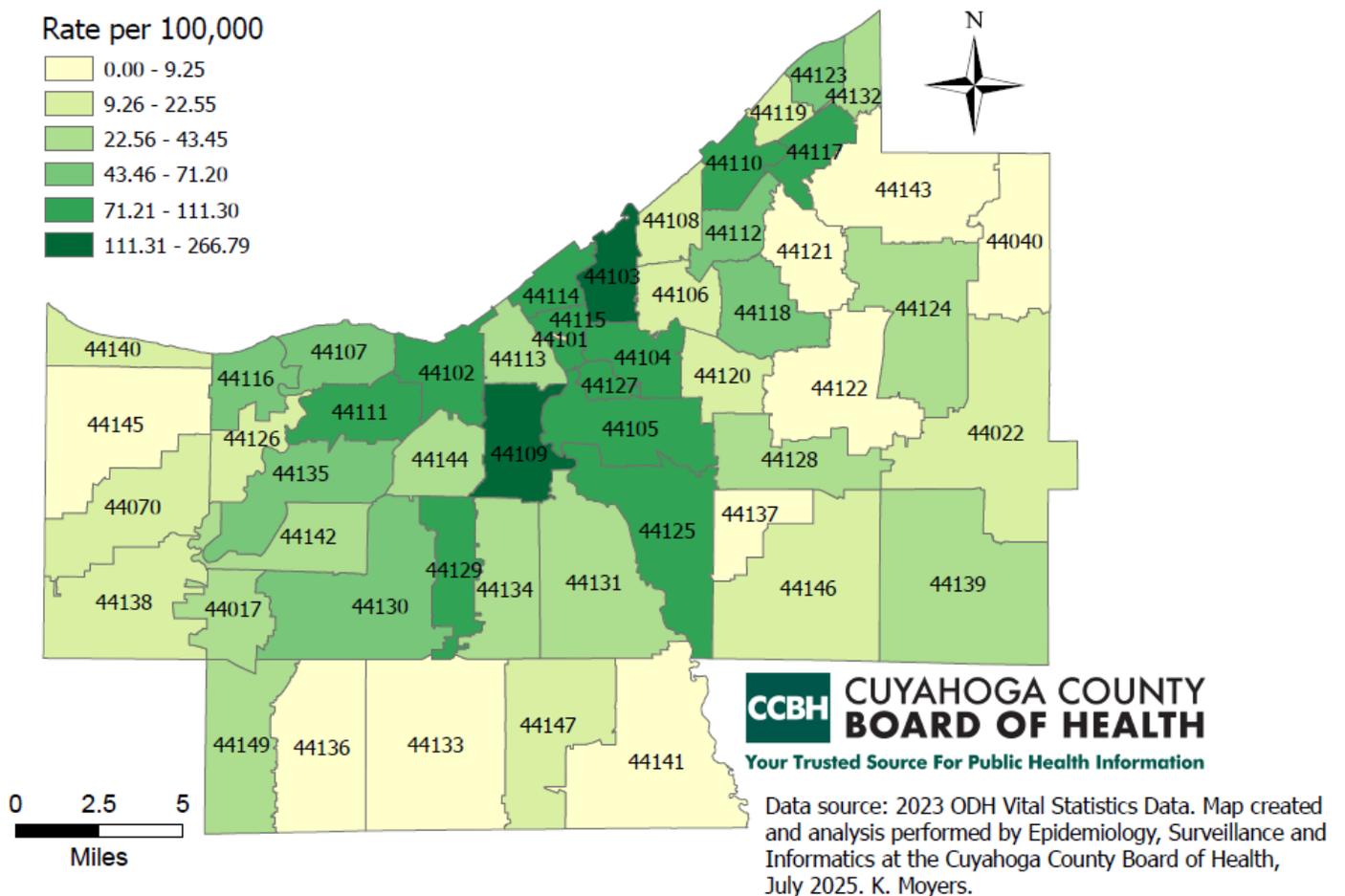
**2024 DATA ONLY REFLECT THE FIRST 6 MONTHS OF THE YEAR (JAN 2024-JUN 2024)

¹Total includes all unintentional drug overdose deaths in Cuyahoga County

- Individuals who were never married (62.6%) represent the highest percentage of UDOD among marital status groups in 2023, similar to 2022 and mid-year 2024 data.
- The most common level of education attained for individuals that died of UDOD was a high school diploma or GED (52.6%); these trends were seen in 2022, 2023, and preliminary 2024.

- Figure 12 shows a map of rates of UDOD for CC in 2023 by residential ZIP Code based on Vital Statistics data.
- The CC ZIP Codes with the highest rates of UDOD in 2023 were 44109 (266.8 deaths per 100,000 population) and 44103 (179.7 deaths per 100,000 population).

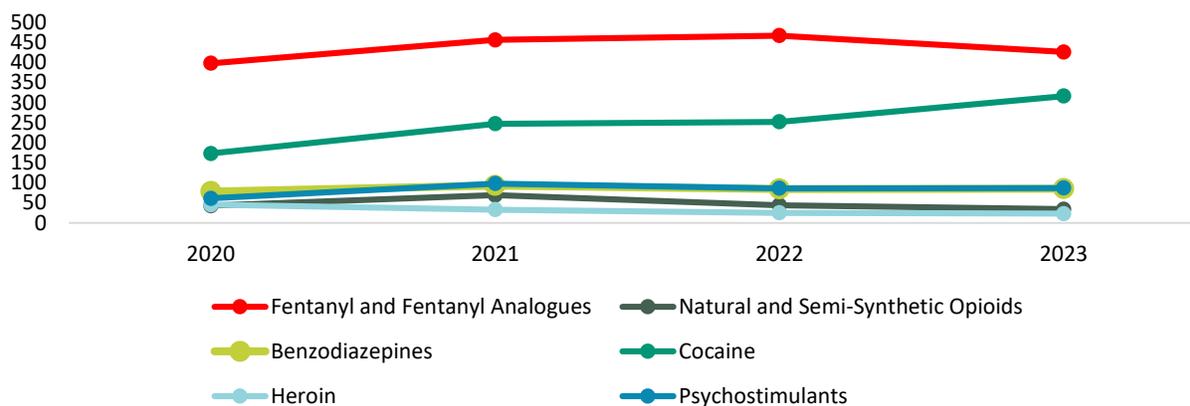
Figure 12. Rate of Unintentional Overdose Deaths in Cuyahoga County by Residence Zip Code, 2023



DRUG OVERDOSE MORTALITY – DRUG TYPES

- From 2022 to 2023, there was an 25% increase in the number of UDOD involving cocaine. UDOD involving benzodiazepines and psychostimulants increased by only 1%.
- Overall opioid-related UDOD decreased 10% from 2022 to 2023. Fentanyl-related UDOD decreased 9%, while deaths involving natural and semisynthetic opioids and heroin decreased 23% and 8%, respectively.

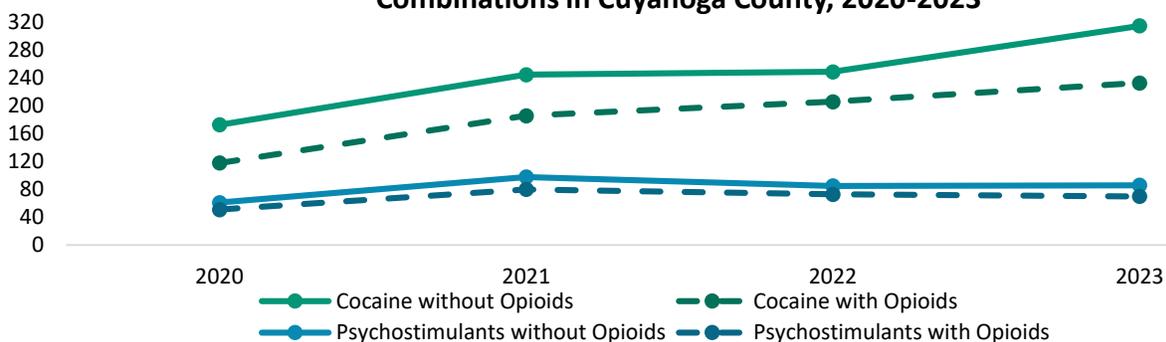
Figure 13. Number of Unintentional Drug Overdose Deaths Involving Select Drugs in Cuyahoga County, 2020-2023



Note: Overdose deaths usually involve a combination of drugs. Individual deaths may be reported in more than one category.

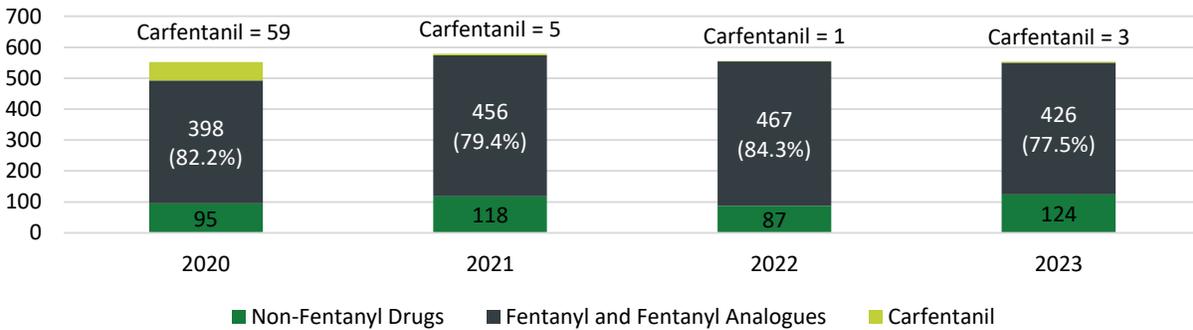
- Between 2022 to 2023, the number of cocaine-related UDOD that did not involve an opioid increased 27% and those that involved an opioid increased 13%.
- From 2022 to 2023, the number of psychostimulant-related deaths that involved an opioid decreased 4%, while those without an opioid involved increased slightly by 1%

Figure 14. Number of Unintentional Drug Overdose Deaths Involving Select Drug Combinations in Cuyahoga County, 2020-2023



- Fentanyl and fentanyl analogs continued to drive UDOD in CC. In 2023, there were 426 fentanyl-related UDOD, which represents nearly 78% of all UDOD.
- In 2023 there were three carfentanil-involved UDOD. Carfentanil is a potent fentanyl analog. This is a notable decrease from 59 in 2020 but an increase from one in 2022.

Figure 15. Number and Percentage of Fentanyl-Related Unintentional Drug Overdose Deaths in Cuyahoga County, 2020-2023*



Note: Overdose deaths usually involve a combination of drugs. Individual deaths may be reported in more than one category.

- Compared to 2023, preliminary 2024 data show similar trends in the prevalent drug type groups contributing to UDOD in CC. At mid-year fentanyl and fentanyl analogues (N = 137) remain the leading contributor in UDOD in 2024 followed by cocaine (N = 109). While carfentanil was a major contributor to drug deaths in the county in the past, it has diminished since, but may be resurging.²³ An estimated six carfentanil-related deaths occurred in 2024 involving carfentanil. (Data not shown.)

DRUG OVERDOSE MORTALITY – SUMMARY

Based on the mortality data presented above, there are specific sub-populations to prioritize for prevention efforts:

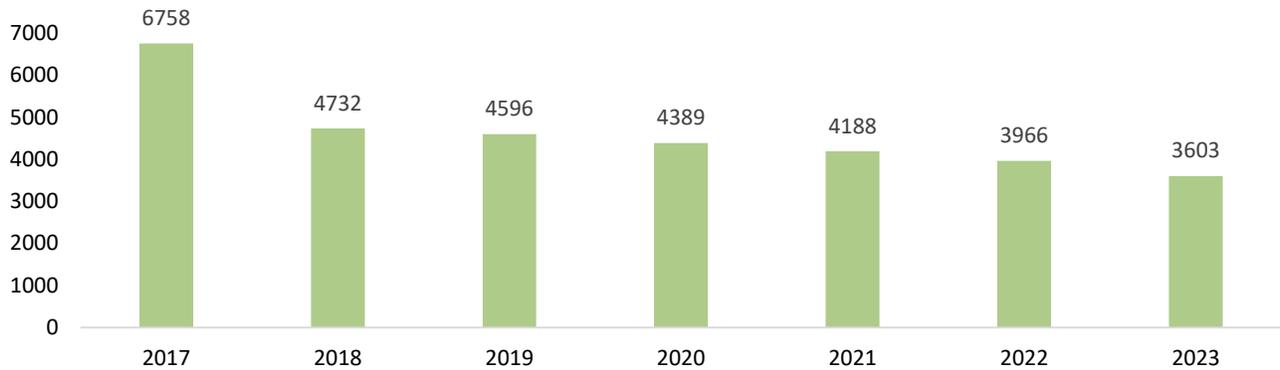
From 2022 to 2023:



DRUG OVERDOSE MORBIDITY—TOTAL EMERGENCY DEPARTMENT VISITS

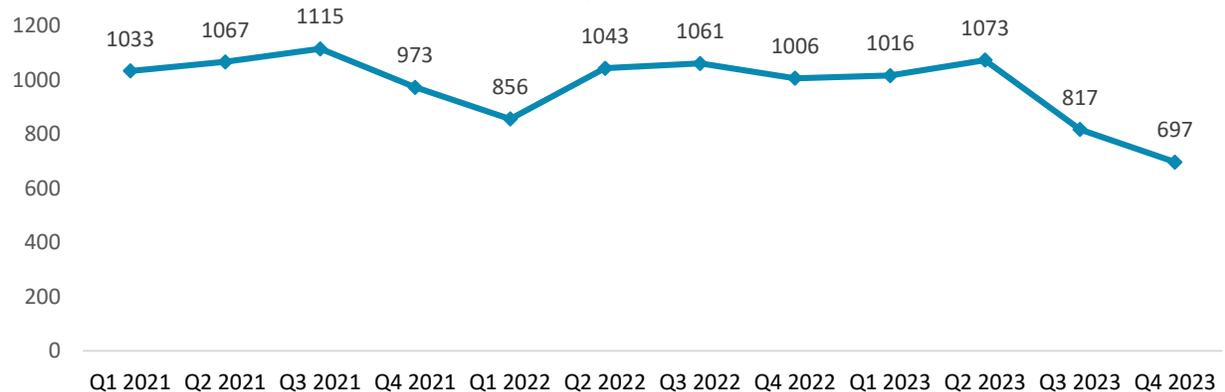
- In 2023, there were 3,603 emergency department (ED) visits for suspected drug overdoses in CC, a 9% decrease from 2022.

Figure 16: Number of Emergency Department Visits for All Suspected Drug Overdoses, Cuyahoga County 2017-2023



- In 2023, the highest volume of ED visits for suspected drug overdose occurred in the first half of the year, then a steep decline followed.
- The highest number of ED visits for suspected drug overdose (n = 1,073) occurred in quarter two (April through June).

Figure 17: ED Visits for All Suspected Drug Overdoses by Quarter, Cuyahoga County 2021-2023



DRUG OVERDOSE MORBIDITY—ED VISIT DEMOGRAPHIC AND GEOGRAPHIC ANALYSES

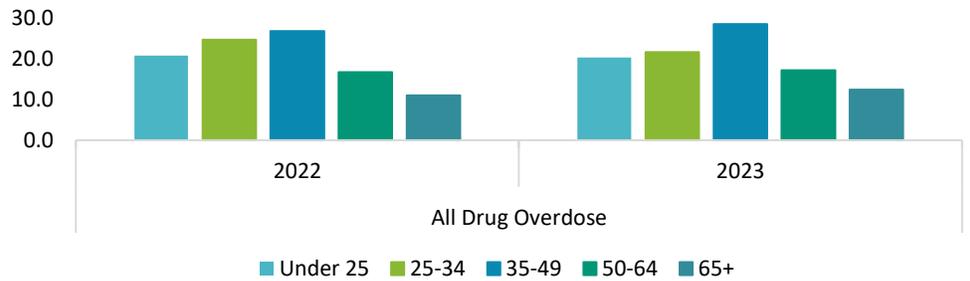
- Table 12 shows the demographic characteristics of individuals visiting an ED for suspected drug overdose from 2022-2023 (n = 7,569).
- From 2022-2023, the 35-49 years old age group accounted for 28% (n = 2,088) of ED visits for suspected drug overdose, followed by 25-34 year olds accounting for 23% (n = 1,759) of visits.
- The average age of a person visiting an ED for a suspected overdose was 40.4 years.
- Males were more likely to visit the ED for a suspected drug overdose compared to females (56.8% vs 43.0% of visits, respectively).
- More White individuals (n = 4,018) than Black individuals (n = 2,768) visited the ED for suspected drug overdose (53.1% vs 36.6% of visits, respectively).

Table 12. Demographics for ED Visits Due to All Drug Overdose, Cuyahoga County, 2022-2023		
Age Group	2022-2023 ED Visits	
	N	%
<12	360	4.8
12-17	386	5.1
18-24	809	10.7
25-34	1,759	23.2
35-49	2,088	27.6
50-64	1,284	17.0
65+	883	11.7
Total	7,569	100
Sex		
Male	4,300	56.8
Female	3,252	43.0
Total	7,569	100
Race		
White	4,018	53.1
Black	2,768	36.6
Other	719	9.5
Unknown	64	0.9
Total	7,569	100
Mean and Median Age of ED Visits		
	Mean	Median
	40.4	37.0

2022 & 2023 Demographic Breakdown: The demographic breakdown of ED visits related to suspected drug overdose for 2022 and 2023 show a similar pattern as the aggregate 2022-2023 data. Collectively, the greatest number of drug overdoses occurred among White males ages 35-49 years (Figures 18-20).

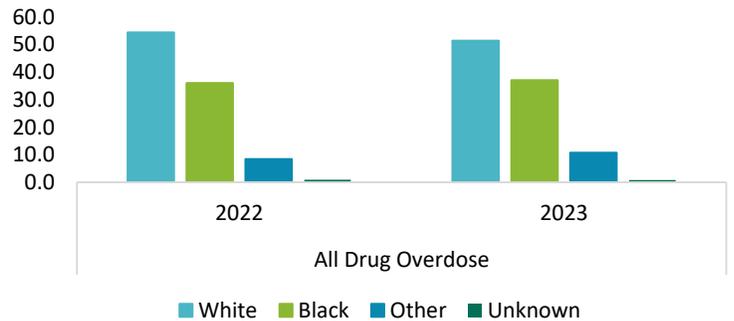
- In both 2022 and 2023 the greatest number of ED visits for suspected drug overdose occurred among individuals aged 35-49 years.

Figure 18: Percentage of ED Visits for Overdose by Age, Cuyahoga County 2022 & 2023



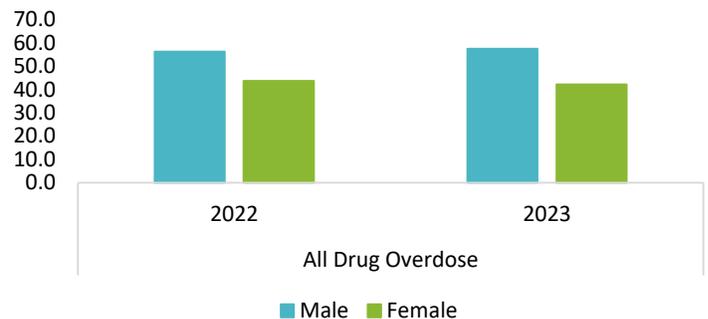
- Among Whites, the percentage of ED visits for suspected drug overdose decreased from 2022 to 2023 (54.5% vs 51.5%), while the percentage among Blacks slightly increased (36.1% vs 37.1%).

Figure 19: Percentage of ED Visits for Overdose by Race, Cuyahoga County 2022 & 2023



- Among males, the percentage of ED visits for suspected drug overdose increased (56.2% vs 57.5%) while decreasing for females (43.7% vs 42.2%) from 2022 to 2023.

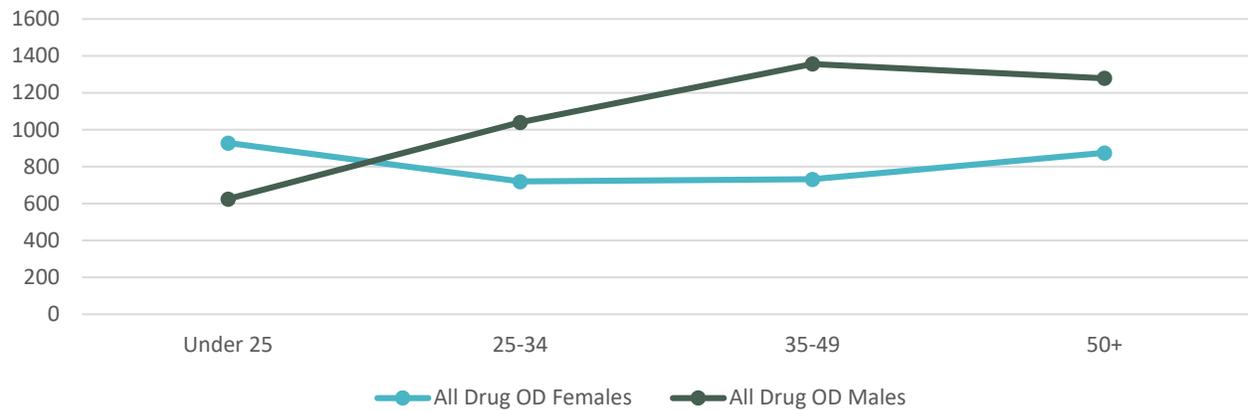
Figure 20: Percentage of ED Visits for Overdose by Sex, Cuyahoga County 2022 & 2023



Sex and Age Breakdown:

- From 2022-2023, males had a higher number of suspected drug overdose ED visits compared to females in all age categories except for the under 25 age group.
- Males age 35-49 had the highest number of ED visits for suspected drug overdose (n = 1,357) followed by the 50 and over male age group (n = 1,279).

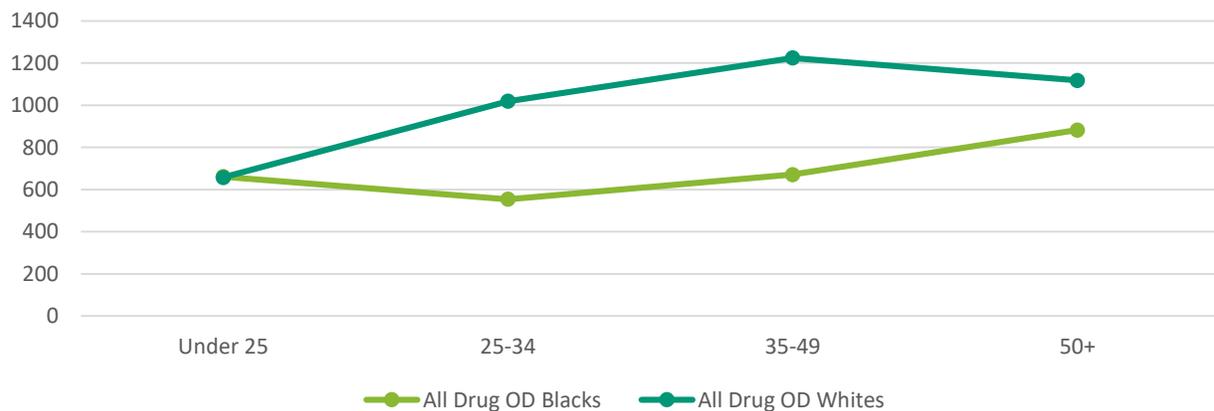
Figure 21: Number of All Drug Overdose ED Visits by Age and Sex, Cuyahoga County 2022-2023



Race and Age Breakdown:

- From 2022-2023, Whites had the highest number of ED visits due to suspected drug overdose in the 35-49 age group with 1,224 and the 50 and over age group with 1,118 visits.
- Among Blacks, the highest number of ED visits due to suspected drug overdose occurred in the 50 and over age group with 882 visits.

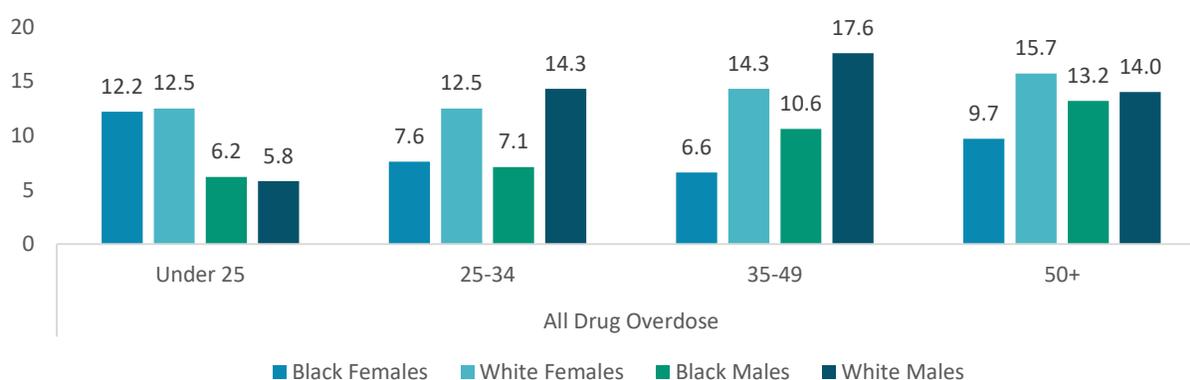
Figure 22: Number of All Drug Overdose ED Visits by Age and Race, Cuyahoga County 2022-2023



Sex, Age, and Race Breakdown:

- Among Black females the highest prevalence of ED visits for suspected drug overdose was the under 25 age group (12.2%), while for white females it was the 50 and over age group (15.7%).
- Among Black males the highest prevalence of ED visits for suspected drug overdose was the 50 and over age group (13.2%), while for white males it was the 35 to 49 age group (17.6%, the highest overall percentage).

Figure 23: Percent of ED Visits in Cuyahoga County by Age, Sex, and Race, 2022-2023



Age-Specific Rates with Sex and Race Breakdown:

- Age-specific rates (Table 13) tell a different story than the prevalence data above.
- Black males had the highest age-specific rates of ED visits for suspected drug overdose across all age groups.
- Black females had a higher age-specific rate compared to White females in the under 25 age group and the 50 and over age group.
- Among Whites, males had higher age-specific rates than females in all age groups.

Table 13. Age-Specific Rates for ED Visits for All Drug Overdose, Cuyahoga County, 2022-2023

	Black Females	White Females	Black Males	White Males
Age Group				
Under 25	24.0	19.6	30.3	20.5
25-34	13.2	13.4	37.0	33.2
35-49	16.3	19.4	77.3	57.6
50 and Over	6.7	4.3	30.8	11.9

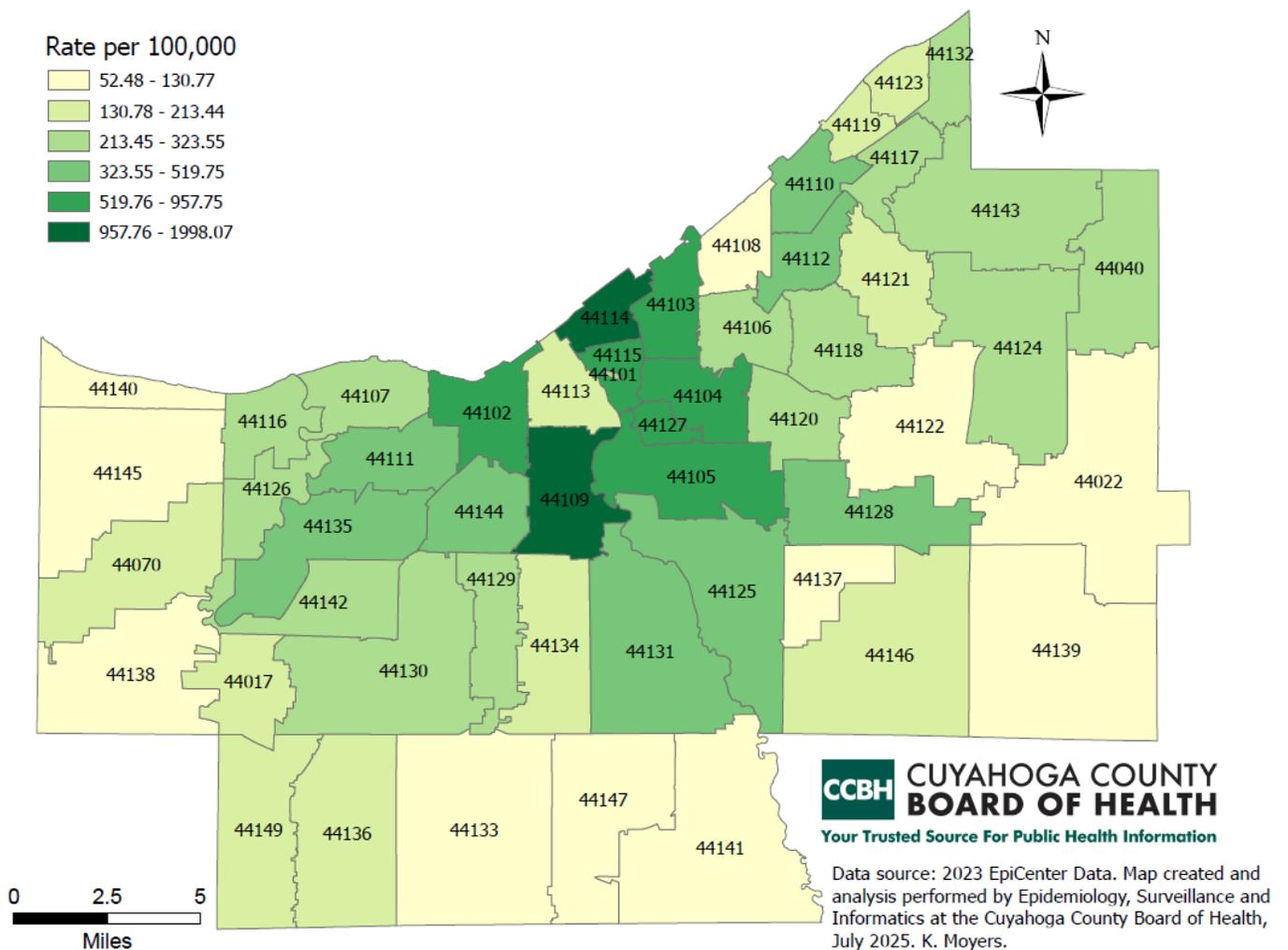
Rates per 100,000 population

Note: The rates presented are age-adjusted to the 2000 U.S. standard population to allow comparisons between different populations.

Geographic Analyses:

- Figure 24 shows a map of rates of ED visits for suspected drug overdose for CC in 2023 by residential ZIP Code based on EpiCenter data.
- The CC ZIP Codes with the highest rate of ED visits due to suspected drug overdose in 2023 were 44109 (1998.1 visits per 100,000 population) and 44114 (957.8 visits per 100,000 population).

Figure 24. Rate of ED Visits for All Drug Overdose by Zip Code in Cuyahoga County, 2023



2024 At-A-Glance and Epi-Alerts:

- In 2024, based on preliminary data, there were 2,678 ED visits for suspected drug overdose, which is a 26% decrease from 2023.
- July represented the month with the highest number of ED visits for suspected drug overdose in 2024, whereas in 2023 June had the highest number.
- Trends by age, sex, and race in 2024 based on preliminary data are similar to those observed in 2023 data. Collectively, White males ages 35-49 show the highest number of ED visits for suspected drug overdose. (Data not shown.)

Table 14. Number of ED Visits: 2023 and 2024*		
	2023	2024*
January	354	184
February	323	216
March	339	235
April	346	230
May	337	231
June	390	237
July	292	246
August	269	238
September	256	215
October	246	230
November	211	200
December	240	216
Total	3,603	2,678

*2024 data are preliminary and subject to change

- Epi-Alerts (Table 15) are administered by CCBH when there is a spike in the number of ED visits for suspected drug overdose. A spike occurs when the verified number of ED visits is greater than expected by four standard deviations in a 24-hour period.
- A total of three Epi-Alerts occurred in 2024, which is a decrease from four in 2023.
- All of the Epi-Alerts in 2024 occurred in the first quarter of the year compared to previous years where typically 1-2 occurred each quarter.

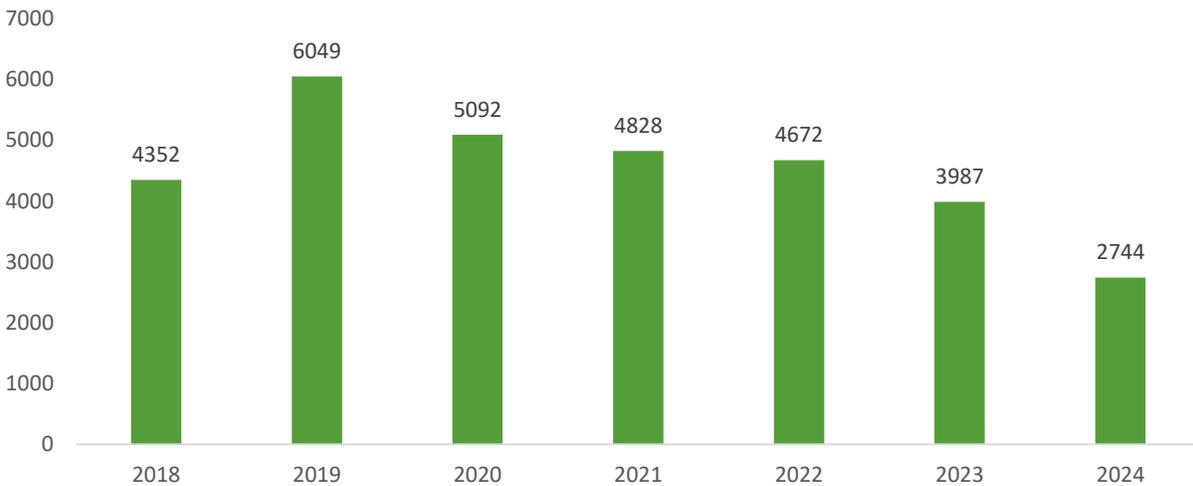
Table 15. Epi-Alerts Administered Due to Suspected Drug Overdose, 2020-2024							
Q1		Q2		Q3		Q4	
2020							
1/15/2020	2/1/2020	4/1/2020	6/8/2020	7/25/2020	7/29/2020	12/19/2020	
2021							
Epi-Alerts inactive Q1-Q3 due to system change						11/8/2021	
2022							
1/22/2022		4/1/2022		7/12/2022		11/28/2022	
2023							
1/1/2023	3/2/2023			7/5/2023		11/12/2023	
2024							
2/12/2024	2/28/2024	3/19/2024					

Note: Epi-Alerts were not administered in the first three quarters of 2021 due to data system transitions by ODH, so a comparison is not available.

DRUG OVERDOSE MORBIDITY—EMERGENCY MEDICAL SERVICES NALOXONE ADMINISTRATION

- Between 2018 and 2024, there were 31,724 doses of naloxone administered by EMS providers in CC as reported by EMSIRS.
- From 2023 to 2024, there was a 31% decrease in the number of naloxone administrations.

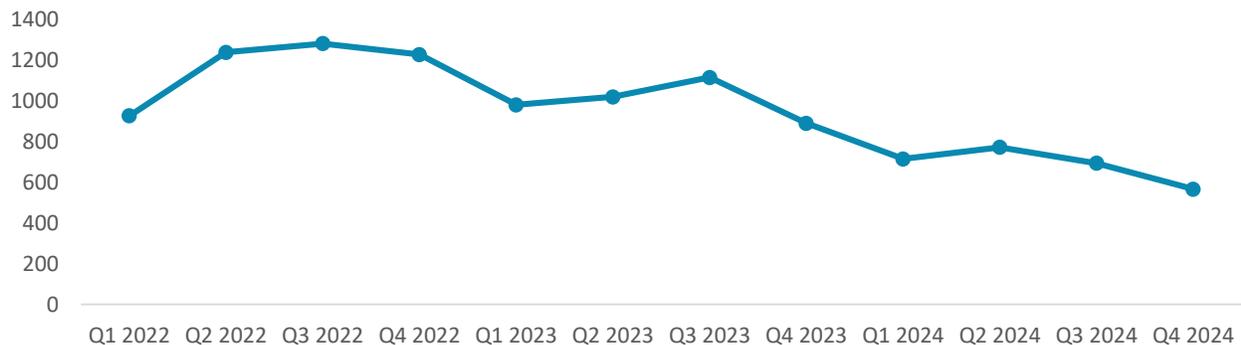
Figure 25. EMS Naloxone Administrations in Cuyahoga County, 2018-2024*



*2024 data are preliminary and subject to change

- EMS naloxone administrations were higher in the first half (n = 1,485) than the second half (n = 1,259) of 2024, with the highest number of administrations (n = 771) occurring in quarter two (n = 771).

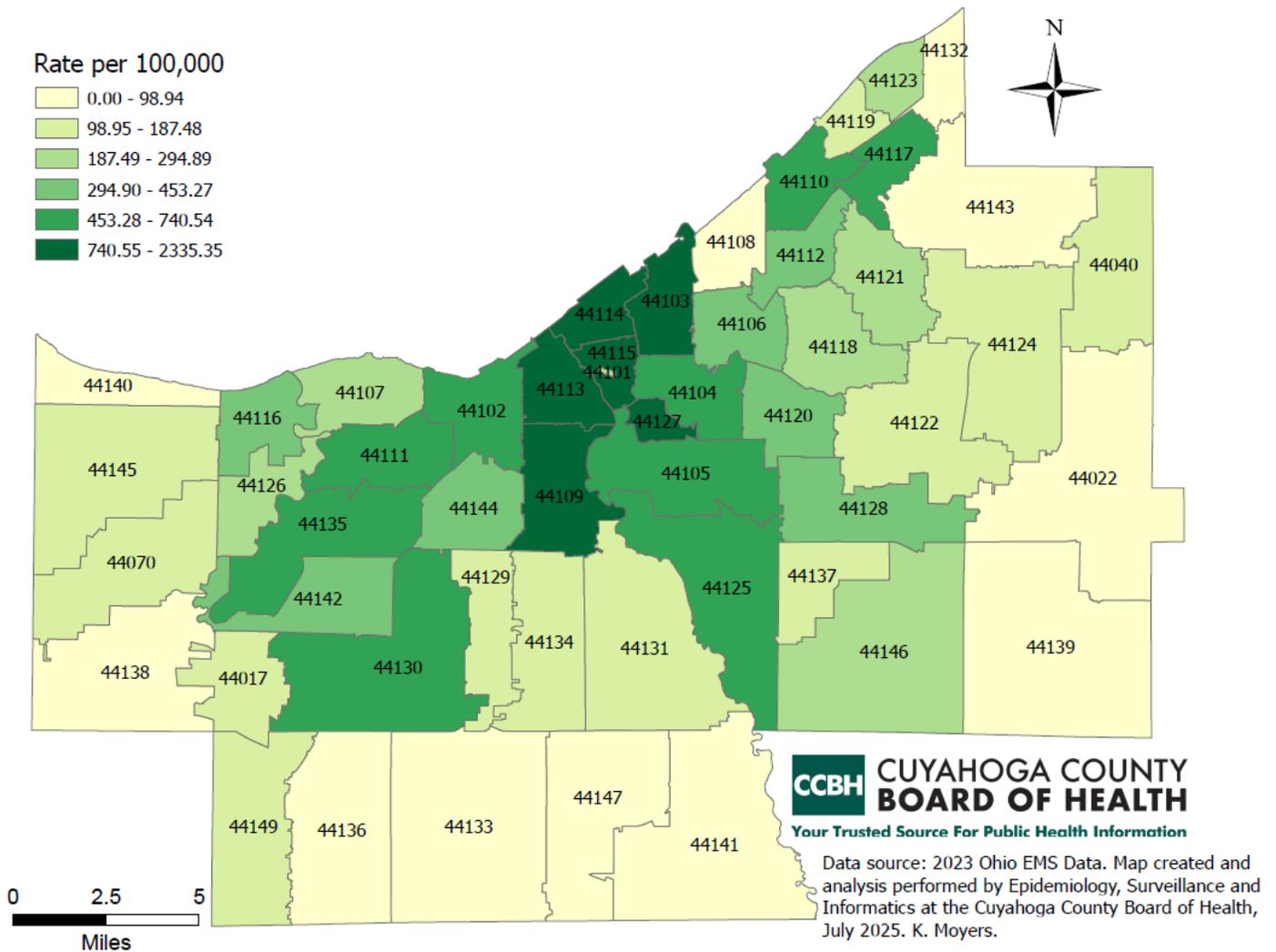
Figure 26. EMS Naloxone Administrations by Quarter in Cuyahoga County, 2022-2024*



*2024 data are preliminary and subject to change

- Figure 27 shows a map of rates of EMS naloxone administrations for CC in 2023 by ZIP Code based on Ohio EMSIRS data.
- The CC ZIP Codes with the highest rate of EMS naloxone administrations were: 44114, 44109, 44113, 44115, and 44127. These ZIP Codes all had a rate at or above 1,100 administrations per 100,000 population.
- ZIP Code 44114 has the highest rate of 2,335 administrations per 100,000 population.

Figure 27. Rate of EMS Naloxone Administrations by Zip Code in Cuyahoga County, 2023

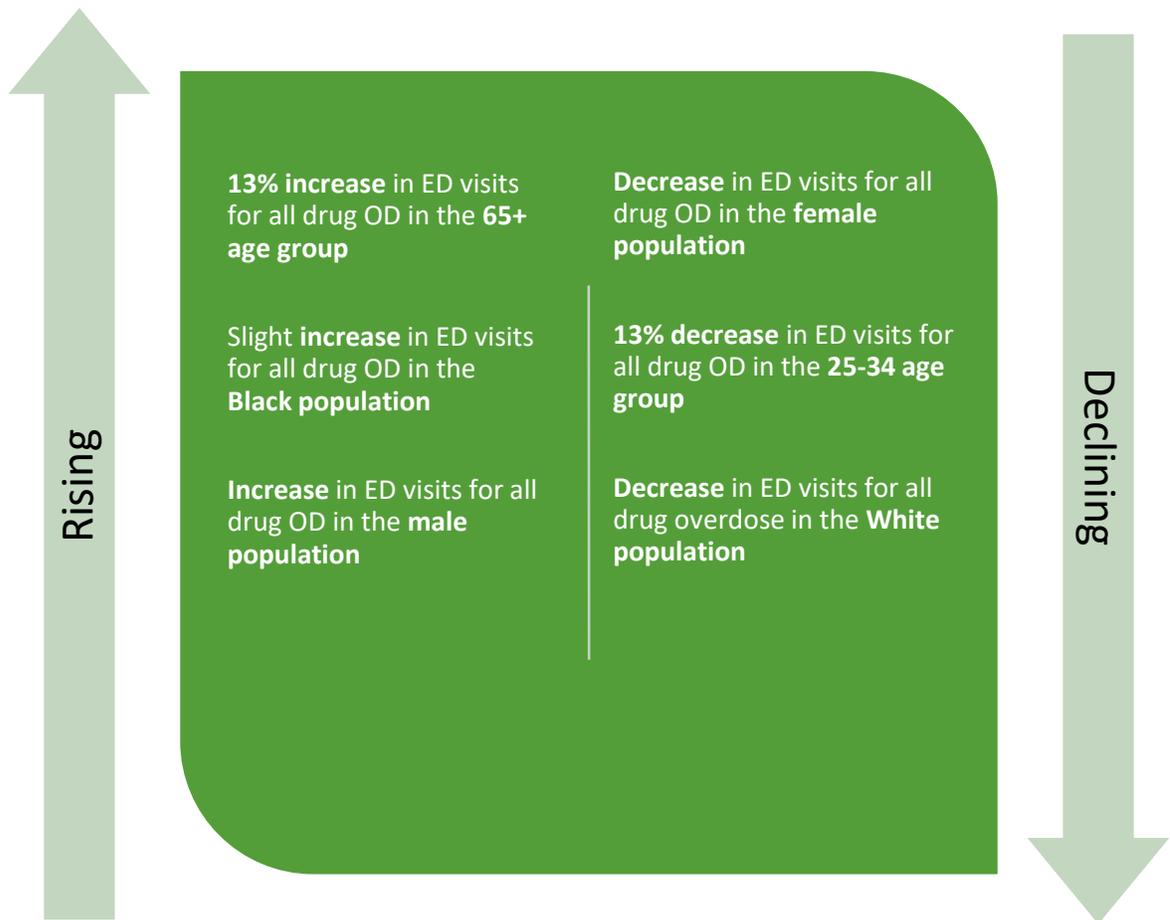


*Not all EMS agencies report to EMSIRS. The accuracy of data reported to EMSIRS is limited by the number of individual EMS agencies submitting data and the accuracy of these submissions.

DRUG OVERDOSE MORBIDITY—SUMMARY

Based on the morbidity data presented above, there are specific sub-populations to prioritize for prevention efforts:

From 2022 to 2023:



DRUG OVERDOSE MORBIDITY—SUMMARY CONTINUED

- Rate-specific data showed a unanimous difference across racial groups for visits to the ED due to suspected drug overdose:
 - Black males had the highest age-specific rates across all age groups. In the 2023 DOIEP, this trend was only true for the 35-49 and 50 and over age groups.
- EMS naloxone administration data showed parallels to suspected drug overdose ED visit data in terms of annual and quarterly trends. The number of naloxone doses administered by EMS has decreased since 2019 and the number of ED visits for suspected drug overdose has decreased since 2017.
- Analyses showed specific geographic areas of concern.
 - The city of Cleveland has the highest rates of ED visits due to suspected drug overdose. Top ZIP Codes included: 44109, 44114, 44127, 44102, and 44103.
 - The ZIP Codes with the highest rates of naloxone doses administered by EMS matched those with the most ED visits for suspected drug overdose in 2023: 44109 and 44114.

FINAL THOUGHTS

This Drug Overdose Integrated Epidemiologic Profile provides guidance for drug overdose prevention and control efforts by combining multiple data sources and identifying populations most affected in Cuyahoga County.

In 2023, 54% of unintentional deaths in Cuyahoga County were due to drug overdose. Recent trends show that males were consistently more likely to die from an UDOD and visit the ED for a suspected drug overdose than females.

Non-Hispanic Black males had the highest rate of UDOD in 2023. The Hispanic population experienced an increase in UDOD from 2022-2023.

Vital statistics data showed that 78% of all 2023 UDOD involved fentanyl and/or fentanyl analogues, which is a decrease from 2022 but still the top contributing drug type.

ED data suggest that targeted interventions should prioritize Black and White males age 35 to 49 years old.

In Cuyahoga County naloxone administrations by EMS continue to decrease. Naloxone distribution and administration remain an important opioid overdose prevention strategy, however.

Geographic analyses of EpiCenter and EMS data were conducted and showed that the top ZIP Codes for rate of ED visits for suspected drug overdose and EMS naloxone administrations were similar and in the Northeastern region of the county in the City of Cleveland: 44109, 44114, 44127. Based on Vital Statistics the top ZIP Codes for rate of UDOD in Cuyahoga County included 44109, 44103, and 44115.

Based on these findings, increasing resources in these areas and prioritizing outreach to these subpopulations could improve UDOD prevention. We hope that this comprehensive report drives further discussion and direction to identify and assist individuals in Cuyahoga County that are at highest risk for drug overdose.

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