

2023 CUYAHOGA COUNTY DRUG OVERDOSE INTEGRATED EPIDEMIOLOGIC PROFILE



Local Data, Local Partners, Local Solutions

Cuyahoga County Board of Health

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EXECUTIVE SUMMARY

CONTEXT

This Drug Overdose Integrated Epidemiologic Profile (DOIEP) provides information about drug overdose mortality and morbidity – 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.

The profile also provides 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 2022, the Centers for Disease Control and Prevention (CDC) and the National Center for Health Statistics reported that 107,941 people died of drug overdoses in the United States (US). This is the highest annual total on record, contributing to drug overdose deaths being 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 2022, a total of 3,952 CC residents were reported to have died from unintentional drug overdose deaths (UDOD) (Figure 10).

In 2022, fentanyl and fentanyl analogues were involved in 84.3% of UDOD (Figure 15).

During 2022, drug poisoning accounted for 54% of unintentional deaths among CC residents (Figure 9).

From 2017-2022, 28,629 ED visits for suspected drug overdoses occurred in CC (Table 12).

DRUG OVERDOSE DEMOGRAPHICS – CUYAHOGA COUNTY

According to 2022 US Census estimates, 1,256,620 people reside in CC. 52.2% of residents were between the ages of 25-64 years; 29.2% were younger than 25 years, and 18.7% were 65 or older (median age = 40.4) (Table 1).

Based on analyses of Ohio Department of Health Vital Statistics, the highest rate of UDOD in CC in 2022 occurred among adults aged 35-44: 81.8 UDOD per 100,000 people (Table 9). Among adults aged 25-34, the rate was 72.2 UDOD per 100,000 people.

48% of the population of CC in 2022 consisted of males, yet males accounted for more than half of the UDOD.

While the Hispanic population (6.3% of CC) had the lowest number of UDOD in 2022 (n= 32) compared to Non-Hispanic Whites (n = 299) and Non-Hispanic Blacks (n = 213), this group experienced the second highest rate of UDOD at 52.2 per 100,000 people.

When considering race/ethnicity and sex, Non-Hispanic Black males had the highest rate of UDOD in CC in 2022: 93.3 per 100,000 people (Table 9).

Additional demographic information such as marital status and education represent other potential risk/protective factors for UDOD. The US Census Bureau reports that 40.6% of residents in CC were never married (Table 6) and 27.1% of the population had a high school diploma or GED as their highest educational attainment, the most common level of education (Table 5). 2022 vital statistics data show that 59.6% of UDOD occurred among individuals who had never been married and 56.5% of UDOD were among individuals with a high school diploma or GED (Table 10).

UDOD regularly 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 2022 in CC.

Cocaine has been the second highest contributor to UDOD in CC since 2017. Cocaine-related UDOD experienced a new peak in 2022, contributing to 252 UDOD.

Heroin-related UDOD have steadily decreased after peaking in 2016. 2022 data show that they have decreased by over 90% since then (Figure 13).

Though psychostimulant-related UDOD, such as methamphetamine, have contributed to fewer deaths historically in comparison, this drug category increased from 2016 to 2021, surpassing natural and semi-synthetic opioids UDOD in 2019. There was a slight decrease in psychostimulant-related UDOD in 2022.

Compared to 2022, preliminary 2023 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 2023, followed by cocaine. Notably, carfentanil-related UDOD resulted in only one death in 2022 and an estimated five deaths occurring in 2023 based on vital statistics.

From 2017-2022, more than 28,000 ED visits for suspected drug overdoses were reported in CC (Table 12):

35-49 year olds: 27.7%

25-34 year olds: 25.5%

Average age: 39 years old

Male compared to females: 58.2% vs 41.8%

Whites compared to Blacks: 54.1% vs 31.3%

Visits to the ED by White persons increased slightly from 2021 to 2022 while visits by Black persons slightly decreased from 2021 to 2022 (Figure 19). Collectively, the greatest number of drug overdoses presenting in the ED occurred in White males, between ages 25-49 (Figure 23).

Naloxone distribution is one of many major harm reduction 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 2018-2023, EMS providers in CC administered 28,980 doses of naloxone (Figure 25). In the last six 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 from 2017-2022 were: 44109, 44106, 44115, 44119, and 44127 (Table 11). The highest number of ED visits for suspected drug overdose and naloxone doses administered occurred in ZIP Codes 44109 and 44102 (Figures 24 and 27).

OVERVIEW: DRUG OVERDOSE INTEGRATED EPIDEMIOLOGIC PROFILE (DOIEP)

The 2023 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 of the drug crisis on the population of CC in terms of socio-demographic 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, 2022 American Community Survey (ACS) 5-year data are reported, the latest complete data available for use at the time of report development.

State of Ohio Integrated Behavioral Health Dashboard

The State of Ohio Integrated Behavioral Health Dashboard was created and is maintained by Recovery Ohio, to allow behavioral health data from multiple agencies to be 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 Medicaid enrollees with opioid use disorder (OUD) is 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 is 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 ICD-10 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 UDOD, for those who resided in CC between 2015 and June 2023 (note: 2023 data are

preliminary and incomplete). In-depth analyses of 2022 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. The classifiers build upon one another and one individual can be a part of multiple classifiers; therefore, this report includes a general all drug overdose category and specific drug overdose category which includes the opioid, heroin, and stimulant classifiers grouped together for analysis. 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 2022. Preliminary 2023 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 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, 2018-2023 quarterly data are examined.

STRENGTHS AND LIMITATIONS

The 2023 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. These data 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 are seeing a spike in overdose ED visits. Lastly, most EMS naloxone dose administrations in CC are recorded into EMSIRS which can be used to better understand the burden of overdoses on EMS providers and communities.

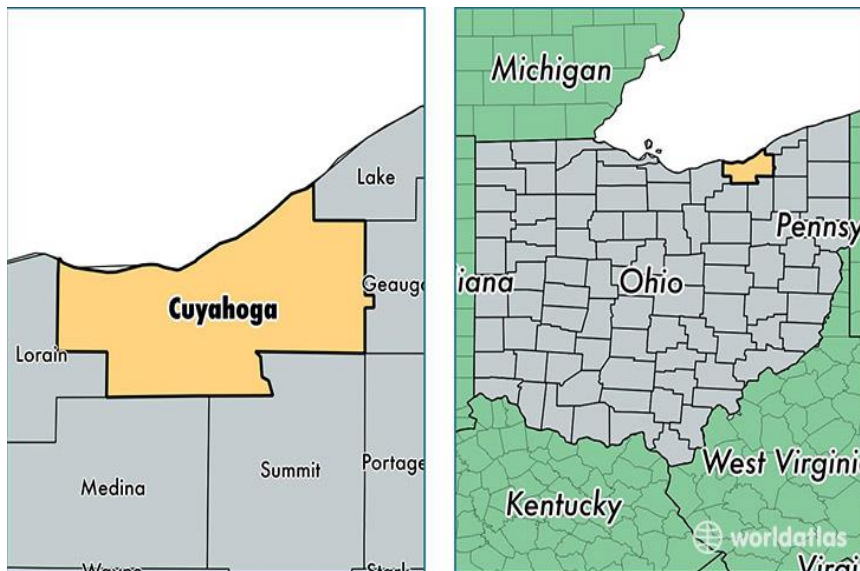
While there are many strengths in the data sources that are included in this profile, some limitations must be acknowledged. Due to the timing of data releases from the United States Census Bureau, the most recent Census data available and used in this profile are 2022 data. A time lag also exists in 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 2023 deaths are incomplete. In this report, only the first 6 months of 2023 data are included. Also, 2022 death data have not yet been finalized and therefore are still 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. 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 receives. Administrations of naloxone may be part of standard EMS protocols. 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. Also, not all EMS agencies report to EMSIRS.

GEOGRAPHICAL AND SOCIODEMOGRAPHIC COMPOSITION OF THE POPULATION OF CUYAHOGA COUNTY, OH

Geographical 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 over 1.25 million people, and the 39th largest county in the state by land area at 44,826 square miles. Between 2021 and 2022, 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: Geographical Location of Cuyahoga County, OH



⁷Data Source: Worldatlas.com. Accessed December 10, 2023. [Cuyahoga County, Ohio / Map of Cuyahoga County, OH / Where is Cuyahoga County? \(worldatlas.com\)](https://www.worldatlas.com/cuyahoga-county-ohio/)

Demographic Composition

The types and level of services needed by community members are highly related to the demographic make-up of the community, in particular age, gender, race, income levels, access to health insurance, etc. Table 1 shows the age of people living in CC, the median for 2022 was 40.4 years. More than one-half (52.2%) of CC residents are between the ages of 25 and 64 years. Nearly one third of the residents (29.2%) are below the age of 25 years old, with 15 to 24 years old representing 12.3%, 5 to 14 years old representing 11.4%, and children less than 5 years old representing 5.5% of the county's population. The remainder of CC's residents (18.7%) are age 65 or older. The female to male ratio in Cuyahoga County, OH is 100:93.

Table 1. Population Distribution by Age Group and Sex, Cuyahoga County, OH, 2022

Age Group (years)	Males		Females		Total Population	
	N=604,080	%	N=652,540	%	N=1,256,620	%
<15	108,711	17.9%	103,881	15.9%	212,592	16.9%
15-24	77,694	12.8%	76,823	11.8%	154,517	12.3%
25-34	87,796	14.5%	90,797	13.9%	178,593	14.3%
35-44	73,274	12.2%	76,917	11.8%	150,191	12.0%
45-54	72,445	12.0%	77,518	11.9%	149,963	11.9%
55-64	84,101	13.9%	91,954	14.1%	176,055	14.0%
65+	100,059	16.4%	134,650	20.6%	234,709	18.7%

⁸Source: 2022 American Community Survey estimates, United States Census Bureau.

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

The Census Bureau estimates that more than half (57.6%) of CC residents are Non-Hispanic White. Non-Hispanic Black or African American residents make up 28.7% of the population. The remainder of the population identify as Hispanic (6.3%), Asian (3.2%), Native American (0.1%), or two or more races (3.5%) (Table 2).

Table 2. Population Distribution by Race/Ethnicity, Cuyahoga County, OH, 2022

Race/Ethnicity	Total Population	
	*N=1,256,620	%
Non-Hispanic White	723,764	57.6%
Non-Hispanic Black	360,339	28.7%
Hispanic or Latino	81,987	6.3%
Two or more races	44,470	3.5%
Asian	39,710	3.2%
Native American	1,007	0.1%

⁹Source: 2022 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 poverty stricken county in Ohio.¹⁰ In 2022 it was reported that 16.5% of individuals residing in Cuyahoga County live below the federal poverty level, compared to 13.3% for the state (Table 3). Of those residing in CC, 17.6% of females and 15.3% of males live below the federal poverty level. A little less than a quarter (23.9%) of children less than 18 years old and 11.9% of residents aged 65 years and older live below the federal poverty level. When broken down by race and ethnicity, 28.5% of individuals who identified as Non-Hispanic Black, 9.3% of Non-Hispanic White individuals, 25.2% of Hispanic or Latino individuals, 11.8% of Asian individuals, and 43.4% of Native American individuals live below the federal poverty level. The average personal income in Cuyahoga County is \$39,807 and the median household income is \$60,074.

Table 3. Socioeconomic Characteristics of Population, Cuyahoga County, OH and Ohio, 2022

Characteristic	Cuyahoga County	Ohio
Income		
Average per Capita Income*	\$39,807	\$37,729
Median Household Income*	\$60,074	\$66,990
Federal Poverty Level		
Individuals	16.5%	13.3%
Female	17.6%	14.6%
Male	15.3%	12.0%
Federal Poverty Level by Age Group (years)		
<18	23.9%	18.3%
18-64	15.4%	12.7%
≥65	11.9%	9.1%
Federal Poverty Level by Race and Ethnicity		
Native American	43.4%	26.1%
Non-Hispanic Black	28.5%	27.3%
Hispanic or Latino	25.2%	22.5%
Asian	11.8%	11.3%
Non-Hispanic White	9.3%	10.3%

¹¹⁻¹³Source: 2022 American Community Survey estimates, United States Census Bureau.

Note: Percentages may not sum to 100% due to rounding. N=1,256,620

*Inflation-Adjusted Dollars

The State of Homelessness data for CC (Table 4) draw from the nationwide Point-in-Time Count, and show how homelessness in CC has fluctuated through the years of 2016-2022.¹⁴ In CC, an estimated 1,574 individuals were homeless in 2022, of which 1,490 (94.7%) were reported to be sheltered and 84 (5.3%) were unsheltered. A total of 198 (12.6%) were chronically homeless, 105 (6.7%) were veterans, and 112 (7.1%) were unaccompanied youths. 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 Due to the COVID-19 pandemic, data collection was interrupted in 2021, so data for that year were unavailable. Comparing 2022 data to 2020 data suggests overall homelessness in CC slightly improved.

Table 4. Homelessness in Cuyahoga County, Ohio 2016-2022*

Overall Homelessness	2016		2017		2018		2019		2020		2022	
	N=1,697	%	N=1,727	%	N=1,808	%	N=1,618	%	N=1,675	%	N=1,574	%
Unsheltered	74	4.4%	97	5.6%	78	4.3%	106	6.6%	109	6.5%	84	5.3%
Sheltered	1,623	95.6%	1,630	94.4%	1,730	95.7%	1,512	93.4%	1,566	93.5%	1,490	94.7%
Chronic	175	10.3%	115	6.7%	172	9.5%	212	13.1%	171	10.2%	198	12.6%
Family	337	19.9%	367	21.3%	431	23.8%	390	24.1%	360	21.5%	346	22.0%
Individual	1,360	80.1%	1,360	78.7%	1,377	76.2%	1,228	75.9%	1,315	78.5%	1,228	78.0%
Veteran	202	11.9%	172	10.0%	159	8.8%	135	8.3%	168	10.0%	105	6.7%
Youth	110	6.5%	93	5.4%	116	6.4%	118	7.3%	110	6.6%	112	7.1%

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 recent data on educational attainment are available from the 2022 American Community Survey. The most common level of education attained in CC among people aged 25 years and older is a high school diploma or its equivalent (27.1%) (Table 5). Only 20.3% of residents 25 years and older reported having a bachelor’s degree and 20.4% reported having some college education, but no degree. Of the population 25 years and older in Cuyahoga County, 9.1% of residents reported having less than a high school education.

Table 5. Educational Attainment (Population Age ≥25 Years) in Cuyahoga County, OH, 2022

Education	Males		Females		Total Population	
	N=417,675	%	N=471,836	%	N= 889,511	%
Less than High School	40,279	9.7%	40,611	8.6%	80,890	9.1%
High School Diploma/GED	119,872	28.7%	121,622	25.8%	241,494	27.1%
Some College, no degree	82,228	19.7%	99,535	21.1%	181,763	20.4%
Associate’s Degree	29,818	7.1%	42,654	9.0%	72,472	8.1%
Bachelor’s Degree	85,875	20.6%	94,415	20.0%	180,290	20.3%
Graduate or Professional Degree	59,603	14.3%	72,999	15.5%	132,602	14.9%

¹⁵Source: 2022 American Community Survey estimates, United States Census Bureau.

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

Marital Status, Employment, and Healthcare Coverage

Table 6 provides marital status information stratified by gender for the population of CC that is 15 years of age and over. Of this population, 40.7% reported being married. Additionally, 10.5% of males and 13.6% of females reported being divorced, 40.6% of residents aged 15+ have never been married, and 6.5% of the population, largely females, reported being widowed.

Table 6. Marital Status (Population Age ≥15 Years) in Cuyahoga County, OH, 2022

Marital Status	Males		Females		Total Population	
	N=495,369	%	N=548,659	%	N=1,044,028	%
Married	213,083	43.0%	212,173	38.7%	425,256	40.7%
Divorced	51,972	10.5%	74,546	13.6%	126,518	12.1%
Never Married	214,822	43.4%	209,571	38.2%	424,393	40.6%
Widowed	15,492	3.1%	52,369	9.5%	67,861	6.5%

^{16, 17}Source: 2022 American Community Survey estimates, United States Census Bureau.

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

Table 7 provides information on the employment status of the civilian labor force that is 16 years of age or older for CC and the state of Ohio. The civilian labor force, or currently active workforce, is defined as all civilian noninstitutionalized residents who fulfill the requirements for inclusion among the employed or the unemployed. The employed of CC (58.8%) are 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. Those that are unemployed (4.5%) are 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, 2022

Characteristic	Cuyahoga County		Ohio	
	Total	%	Total	%
Civilian Labor Force 16 Years and Over	652,007	63.4%	5,987,111	63.1%
Employed	605,214	58.8%	5,686,919	59.9%
Unemployed	46,793	4.5%	300,192	3.2%

¹⁸Source: 2022 American Community Survey estimates, United States Bureau.

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

Table 8 displays the distribution of healthcare coverage in CC compared to the entire state of Ohio. A 2022 population survey found that 47.1% of CC residents were covered under their employers' health insurance plan. Another 22.7% were insured by Medicaid, 13.8% were insured by Medicare, and 5.6% of CC residents were uninsured.

Table 8. Healthcare Coverage in Cuyahoga County, OH and Ohio, 2022

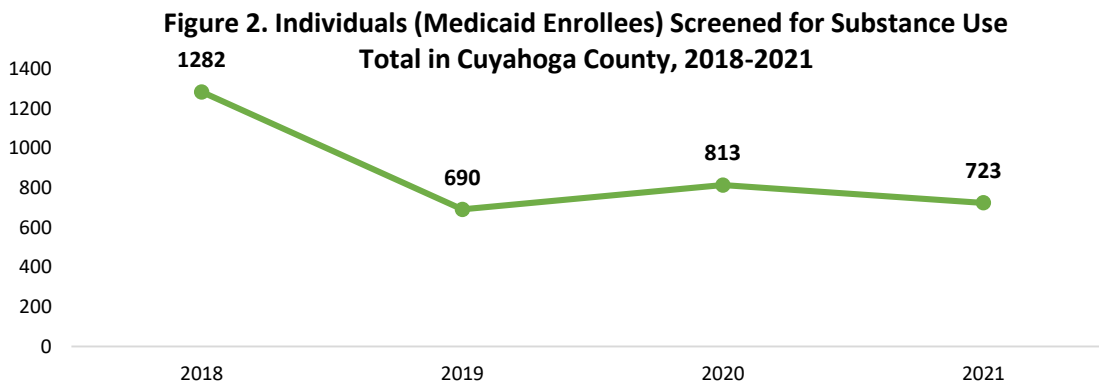
Health Insurance Coverage	Cuyahoga County		Ohio	
	Total	%	Total	%
Employer		47.1%		50.7%
Non-Group		9.7%		10.4%
Medicaid		22.7%		17.7%
Medicare		13.8%		13.6%
Military or VA		1.2%		1.3%
Uninsured		5.6%		6.4%

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

Note: Percentages may not sum to 100% due to rounding. NSD = No Statistical Data

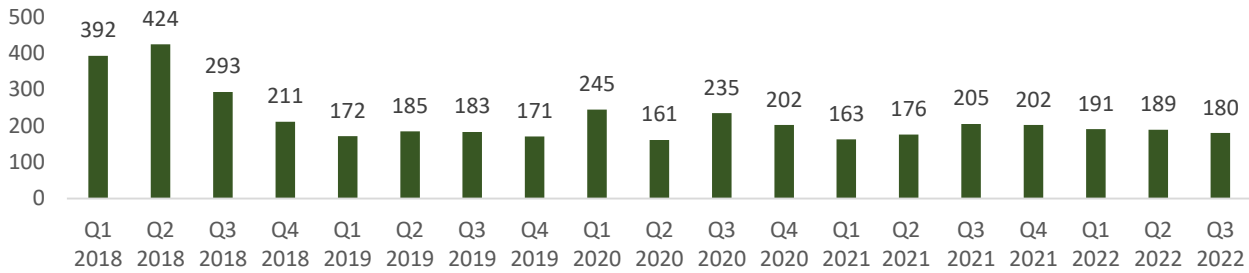
Behavioral Health

The next few charts show Ohio Department of Medicaid: Medicaid Claims and Enrollment data published on the State of Ohio Integrated Behavioral Health Dashboard. Figure 2 is based on data available by year. In 2018, 1,282 individuals who were Medicaid enrollees were screened for substance use (alcohol and/or drug). The number declined by nearly half (46%) in 2019, increased by 18% in 2020, then slightly decreased by 11% in 2021 to 723 individuals. Figure 3 shows the available data by quarter, which includes quarter one 2018 through quarter three of 2022.



²¹Source: DataOhio: State of Ohio Integrated Behavioral Health Dashboard (June 2023 update)

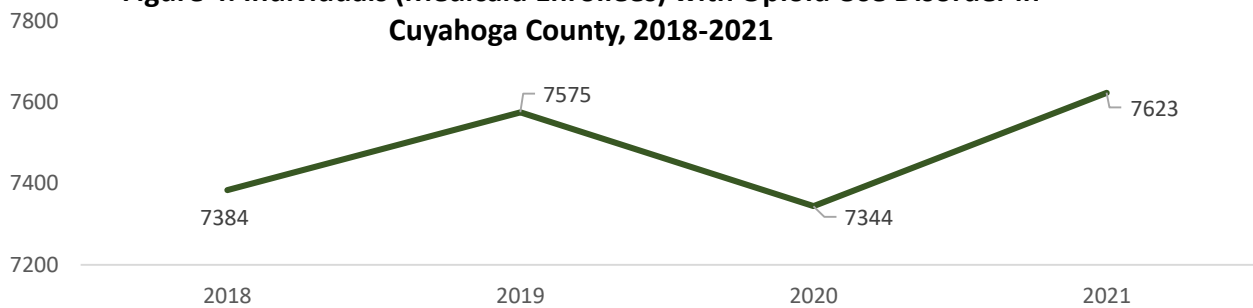
Figure 3. Individuals (Medicaid Enrollees) Screened for Substance Use in Cuyahoga County, by Quarter 2018-2022



²¹Source: DataOhio: State of Ohio Integrated Behavioral Health Dashboard (June 2023 update)

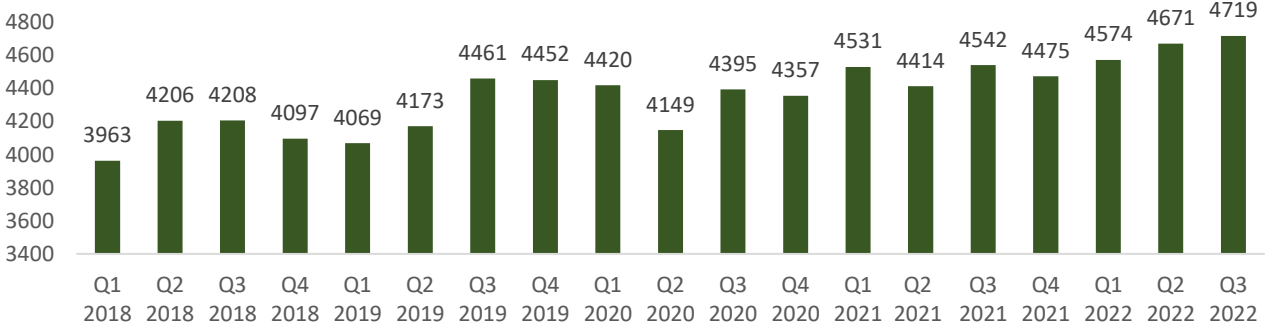
Figures 4 and 5 show CC individuals who are Medicaid enrollees that have been diagnosed with opioid use disorder (OUD). The measure “Medicaid Enrollees with Opioid Use Disorder” reports how many Medicaid enrollees had a medical encounter during the period (quarter or year) that indicated they had an OUD diagnosis. This might be, for example, an outpatient medication for opioid use disorder (MOUD) appointment or an inpatient diagnosis code. It is not limited to new OUD diagnoses that could be summed up across time intervals rather counts all Medicaid enrollees who had an OUD diagnosis according to their Medicaid claims data. Based on available data by year, in 2018 the number of Medicaid enrollees with a diagnosed opioid use disorder was 7,384. The annual totals have fluctuated by less than 300 people since then, to 7,623 in 2021. Figure 5 shows available data by quarter, also providing data on the first three quarters of 2022.

Figure 4. Individuals (Medicaid Enrollees) with Opioid Use Disorder in Cuyahoga County, 2018-2021



²¹Source: DataOhio: State of Ohio Integrated Behavioral Health Dashboard (June 2023 update)

Figure 5. Individuals (Medicaid Enrollees) with Opioid Use Disorder in Cuyahoga County, by Quarter 2018-2022

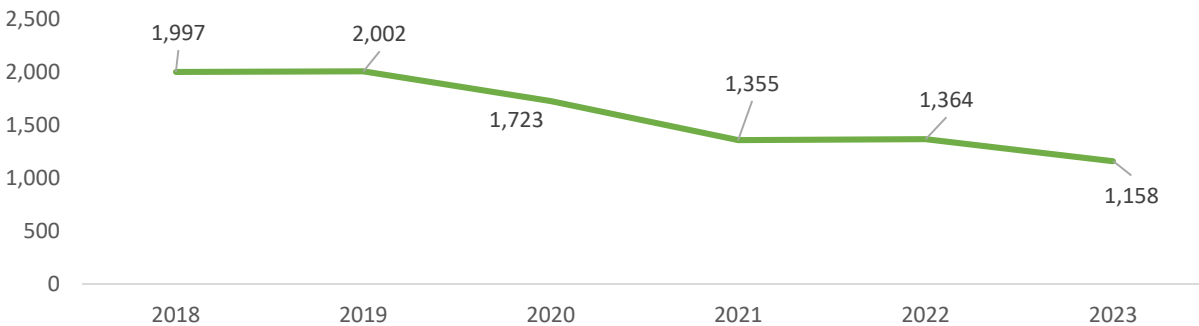


²¹Source: DataOhio: State of Ohio Integrated Behavioral Health Dashboard (June 2023 update)

Hospital Encounters

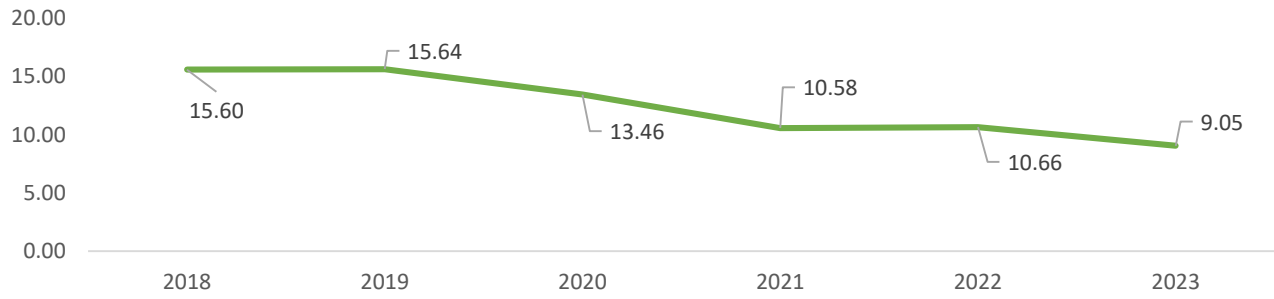
Figures in this section show data from the Ohio Hospital Association (OHA) Dashboard. The dashboard data were retrieved from all inpatient and outpatient hospital encounters submitted by participants of the OHA Data program on a quarterly basis. The data is encounter-level and does not reflect individual patients, thus an individual could be reported more than once. Encounter types include inpatient, emergency rooms, urgent care, and observation. The data represented is for opioid overdose related hospital encounters. Figure 6 shows that in 2018 there were 1,997 hospital encounters related to opioid overdose and the total decreased to 1,158 in 2023, the lowest number of encounters observed, despite slight increases occurring in 2019 and 2022. Figure 7 shows the data by rate per capita from 2018 to 2023. The 2023 rate of 9.05 per 10,000 also represents the lowest rate for the time frame provided.

Figure 6. Hospital Encounters Related to Opioid Overdose in Cuyahoga County, 2018-2023



²²Source: Ohio Hospital Association Dashboard

Figure 7. Rate per 10,000 population for Hospital Encounters Related to Opioid Overdose in Cuyahoga County, 2018-2023



²²Source: Ohio Hospital Association Dashboard

DRUG OVERDOSE MORTALITY – TOTAL DEATHS

Based on Vital Statistics data, Figure 8 shows CC resident deaths in 2022 (n=14,976) categorized by the six causes of death types. While 89% of residents experienced a natural cause of death, the second highest cause of death category was unintentional (7%), representing 998 deaths. Figure 9 details the eight injury types that fall within the unintentional death classification; drug poisoning accounted for more than half (54%) of all unintentional deaths.

Figure 8: Causes of Death of Those Residing in Cuyahoga County, 2022

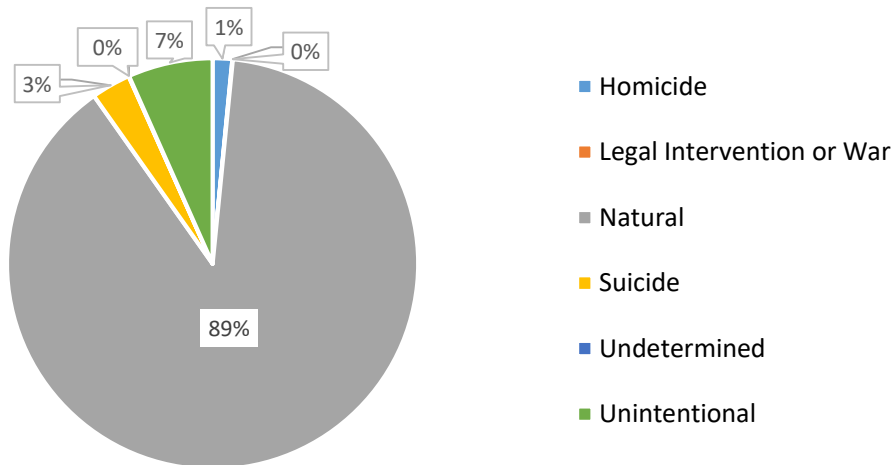
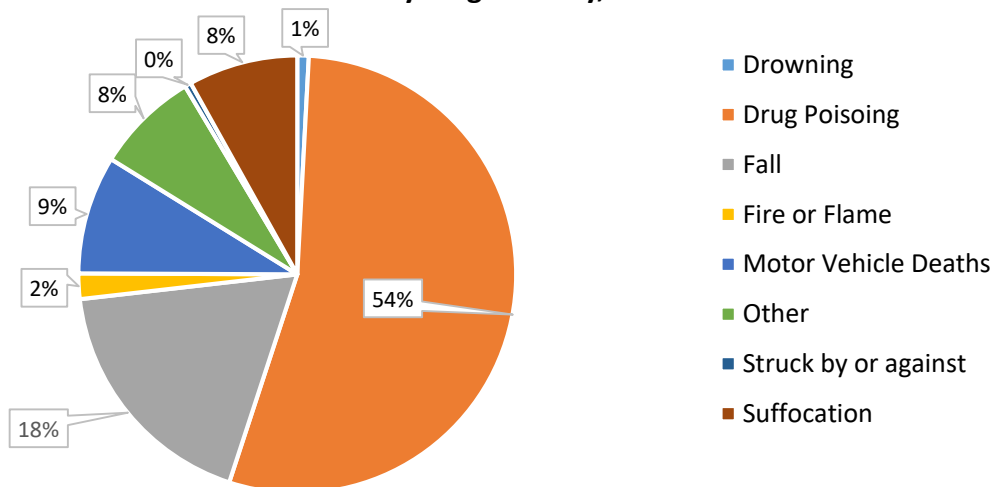
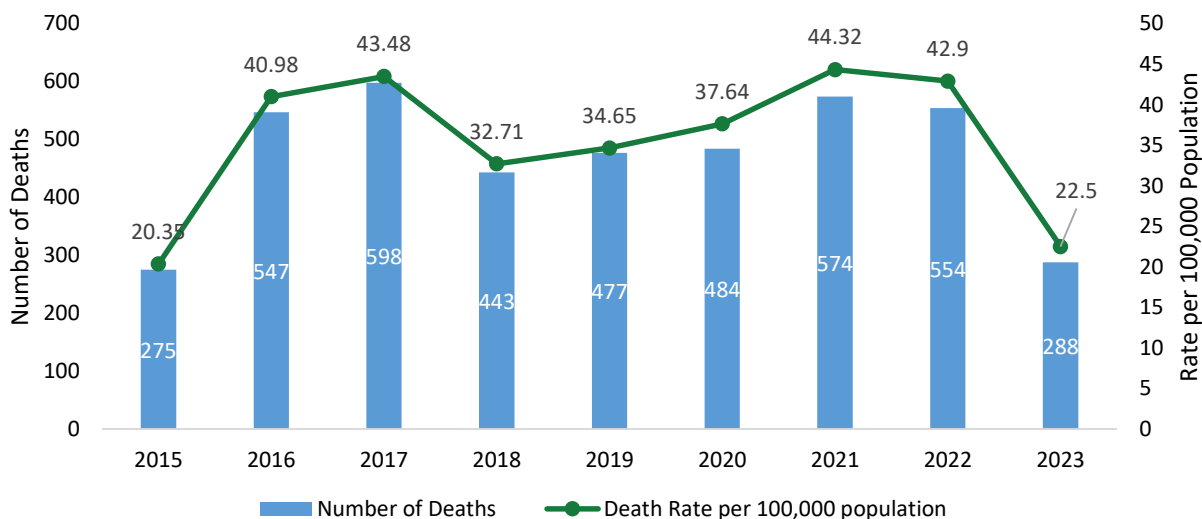


Figure 9. Causes of Unintentional Death of Those Residing in Cuyahoga County, 2022



Trends by year for unintentional deaths caused by drug poisoning, also known as unintentional drug overdose deaths (UDOD), are shown in Figure 10. There was a 98.9% increase in UDOD between 2015 and 2016. This was the largest increase over a one-year period in the history of CC. The number of UDOD peaked in 2017 with a 9.3% increase from 2016. Although there was a decrease in the number and rate of UDOD in 2018, slight increases followed in 2019 and 2020. CC had 574 UDOD in 2021, the second highest count and highest rate. UDOD slightly decreased in 2022 to 554, representing a rate of 42.9 deaths per 100,000 people. The preliminary count of UDOD for the first six months of 2023 is 288; this total is more than the total UDOD occurring in the first half of 2022. When looking at recent years by quarter (see Figure 11), spikes in UDOD appear in quarter 2 of 2021 and quarter 2 of 2023.

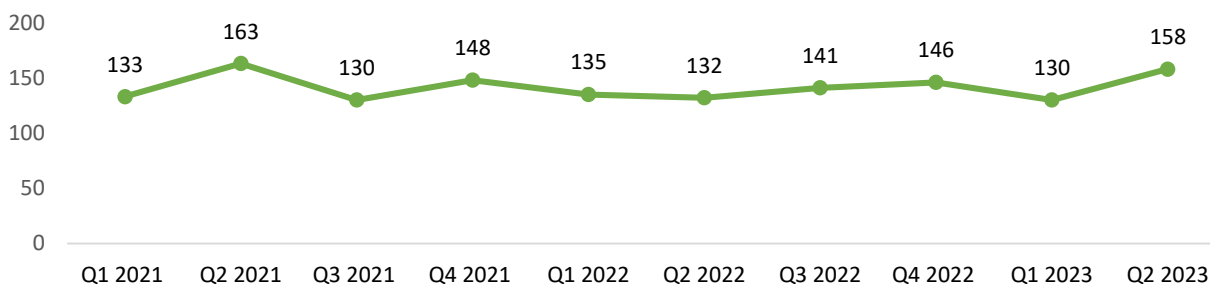
Figure 10. Number and Age-Adjusted Rate of Unintentional Drug Overdose Deaths in Cuyahoga County, 2015-2023*



***2023 DATA ONLY REFLECT THE FIRST 6 MONTHS (JANUARY 2023- JUNE 2023) OF THE YEAR THEREFORE ARE PRELIMINARY AND INCOMPLETE**

Note: The death rates presented are age-adjusted to the 2010 U.S. standard population to allow comparisons between different populations.

Figure 11. Number of Unintentional Drug Overdose Deaths by Quarter, Cuyahoga County, 2021-2023*



***2023 DATA ONLY REFLECT THE FIRST 6 MONTHS (JANUARY 2023- JUNE 2023) OF THE YEAR THEREFORE ARE PRELIMINARY AND INCOMPLETE**

DRUG OVERDOSE MORTALITY – DEMOGRAPHIC AND GEOGRAPHIC ANALYSES

The demographic breakdown of CC resident UDOD occurring in 2021 through mid-year 2023 are shown below in Table 9. In 2022, 35-44 year olds had the highest rate of UDOD, similar to 2021. More males died of UDOD than females in 2022 (386 deaths vs 168 deaths, respectively); this pattern also occurred in 2021 and in the first 6 months of 2023. In 2021 and 2022, Non-Hispanic Blacks had a higher rate of UDOD than Non-Hispanic Whites. Although the overall counts of UDOD in the Hispanic population were lower than other race/ethnic groups, this group experienced the highest rate of UDOD in 2021 and the second highest rate in 2022.

Age	2021			2022			2023*		
	N	%	Rate ¹	N	%	Rate ¹	N	%	Rate ¹
<15	-	-	-	-	-	-	-	-	-
15-24	29	5.1	17.2	28	5.1	16.6	2	0.7	-
25-34	92	16.0	58.2	114	20.6	72.2	37	12.8	-
35-44	145	25.3	91.3	130	23.5	81.8	70	24.3	-
45-54	136	23.7	68.9	108	19.5	54.8	69	24.0	-
55-64	124	21.6	75.6	114	20.6	69.5	79	27.4	-
65+	48	8.4	50.3	60	10.8	63.9	31	10.8	-
Sex									
Female	176	30.7	26.2	168	30.3	25.0	86	30.0	-
Male	398	69.3	65.5	386	69.7	63.6	202	70.1	-
Race/Ethnicity²									
Non-Hispanic Black	191	33.3	50.2	213	38.5	56.0	110	38.2	-
Non-Hispanic White	339	59.1	41.6	299	54.0	36.7	153	53.1	-
Hispanic	39	6.8	63.7	32	5.8	52.2	23	8.0	-
Race/Ethnicity and Sex²									
Non-Hispanic Black Females	47	8.2	22.6	52	9.4	25.0	34	11.8	-
Non-Hispanic Black Males	144	25.1	83.5	161	29.1	93.3	76	26.4	-
Non-Hispanic White Females	118	20.6	28.0	105	19.0	24.9	47	16.3	-
Non-Hispanic White Males	221	38.5	56.2	194	35.0	49.4	106	36.8	-
Hispanic Females	9	1.6	28.9	9	1.6	28.9	5	1.7	-
Hispanic Males	30	5.2	99.6	23	4.2	76.4	18	6.3	-
Total³	574		44.3	554		43.0	288		-
Mean Age		46.2			45.8			49.2	

*2023 DATA ONLY REFLECT THE FIRST 6 MONTHS OF THE YEAR (JAN 2023-JUN 2023), 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 2010 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.

Table 9 also breaks down these data into demographic subgroups (race/ethnicity and sex). This breakdown shows a stark difference in the rate of UDOD among groups.

Some key points include:

- Despite non-Hispanic White males representing the highest percentage of UDOD each year, Hispanic males had the highest rate of UDOD in 2021 and non-Hispanic Black males had a highest rate of UDOD in 2022.
- Non-Hispanic White females had a higher rate of UDOD in 2021 when compared to non-Hispanic Black females in 2021, but in 2022 these groups experienced similar rates of UDOD.
- The Hispanic female UDOD rate remained highest among the female race/ethnicity subgroups, despite experiencing the lowest number of UDOD.

Table 10 provides marital status and education information for persons who died from an UDOD. Individuals who were never married represent the highest percentage of UDOD among marital status groups. The most common level of education attained for individuals that died of UDOD was a high school diploma or GED; these trends were seen in 2021, 2022, and preliminary 2023.

Table 10. Unintentional Drug Overdose Deaths by Marital Status and Education in Cuyahoga County, 2021-2023**						
	2021		2022		2023**	
	N	%	N	%	N	%
Marital Status						
Married	66	11.5	57	10.3	25	8.7
Divorced	133	23.2	132	23.8	53	18.4
Never Married	331	57.7	330	59.6	183	63.5
Other/Unknown	44	7.7	35	6.3	27	9.4
Education						
Less than High School Grad	125	21.8	104	18.8	62	21.5
High School Diploma/GED	288	50.2	313	56.5	155	53.8
Some College	87	15.2	62	11.2	31	10.8
College Degree	65	11.3	64	11.6	32	11.1
Unknown	9	1.6	11	2.0	8	2.8
Total¹	574		554		288	

**2023 DATA ONLY REFLECT THE FIRST 6 MONTHS OF THE YEAR (JAN 2023-JUN 2023)

¹Total includes all unintentional drug overdose deaths in Cuyahoga County

Figure 12 provides a geographical analysis of Vital Statistics death data presenting the rate of UDOD by ZIP Code. The list is determined by the residential address of the decedent at the time of death. The CC ZIP Codes with the highest rates of UDOD from 2017-2022 were: 44109 and 44106. Table 11 displays the top 10 ZIP Codes with the highest rates of UDOD during this time period.

Figure 12. Rate of Unintentional Overdose Deaths in Cuyahoga County by Residence Zip Code, 2017-2022

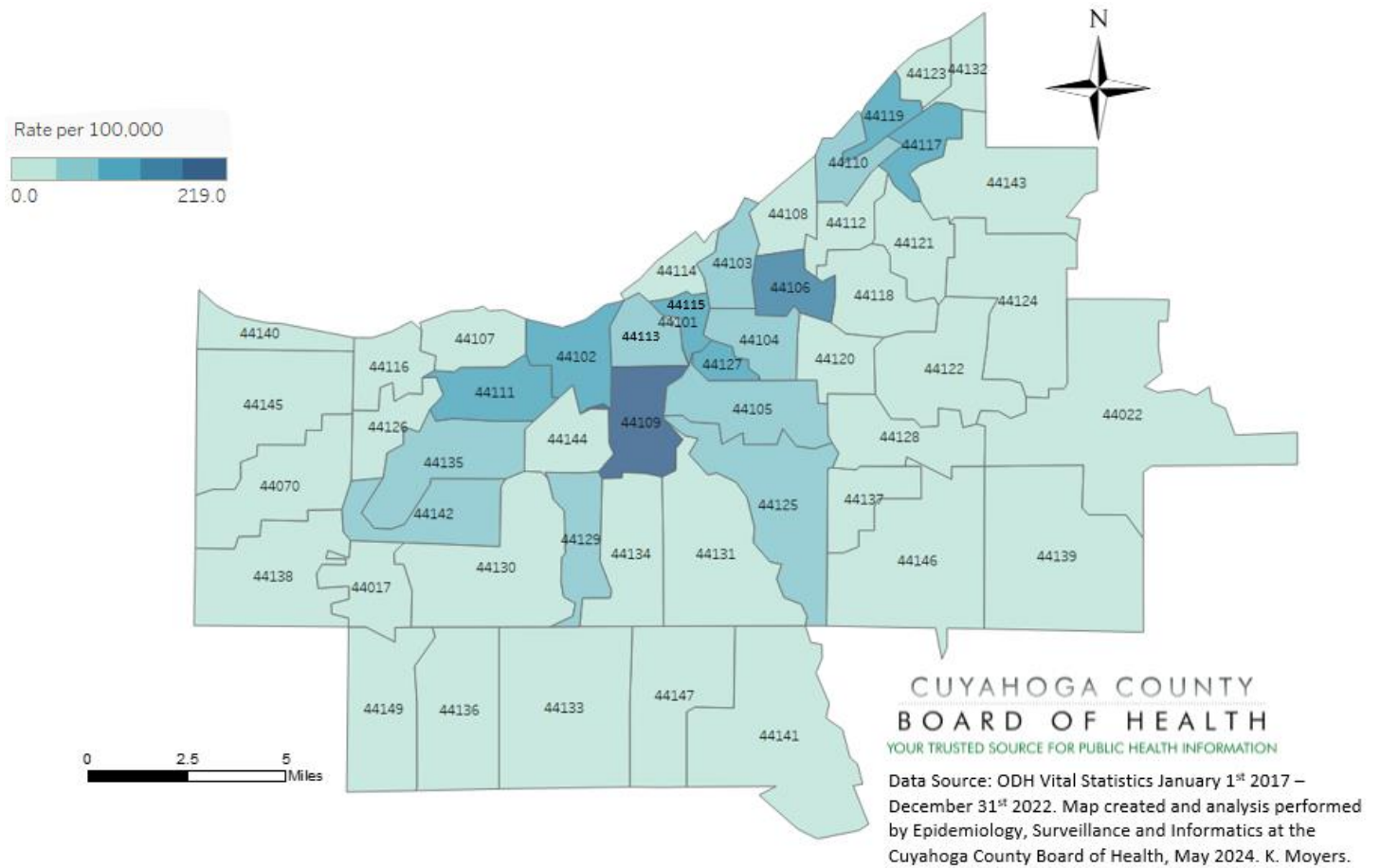


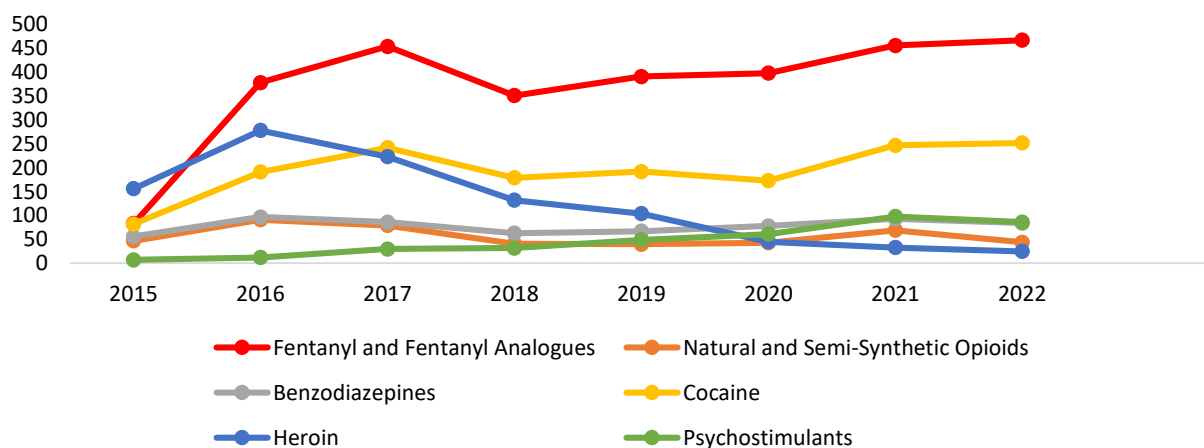
Table 11. Top 10 Zip Codes with Highest Rates of Unintentional Overdose Deaths, 2017-2022

Zip Code	Rate per 100,000 population
1. 44109	219.0
2. 44106	137.9
3. 44115	114.4
4. 44119	109.3
5. 44127	105.7
6. 44111	105.1
7. 44102	97.3
8. 44117	88.2
9. 44135	76.1
10. 44113	74.9

DRUG OVERDOSE MORTALITY – DRUG TYPES

Analyses of UDOD by drug type were conducted for data spanning 2015-2022. Figure 13 is reporting the number of times a drug was reported as a cause of death, however, not all of the cases will be independent. The number of fentanyl related UDOD in CC increased 355% from 2015 to 2016; fentanyl and fentanyl analogues remained the highest contributor to UDOD through 2022. Heroin related UDOD have steadily decreased after peaking in 2016; the 2022 count was less than half that of 2019. Cocaine related UDOD increased from 2015 to 2017, surpassing heroin related deaths in 2017, and have remained the second highest contributor to UDOD since then. Although psychostimulant-related UDOD (other than cocaine) contributed to the least number of deaths among the drug types examined through 2018, this drug category has increased each year and surpassed natural and semi-synthetic opioids in 2019 and heroin in 2020; this trend continued in 2022 (see Figure 13).

Figure 13. Number of Unintentional Drug Overdose Deaths Involving Select Drugs in Cuyahoga County, 2015-2022



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

UDOD regularly included a combination of contributing drugs. From 2020 to 2021, there was a substantial increase in the number of deaths related to psychostimulants (primarily methamphetamine) with opioids such as fentanyl present (see Figure 14). However, in 2022 there was a slight decrease. There was also a large increase in cocaine related deaths with fentanyl present from 2020-2021.

Figure 14. Number of Unintentional Drug Overdose Deaths Involving Select Drug Combinations in Cuyahoga County, 2015-2022

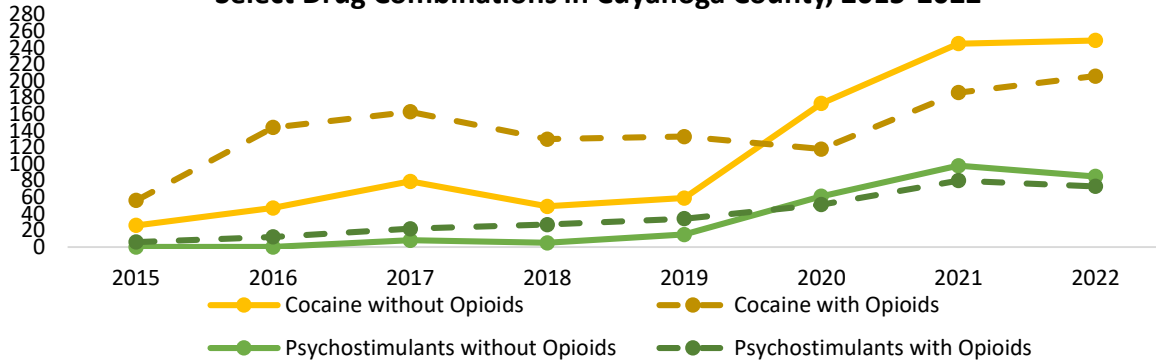
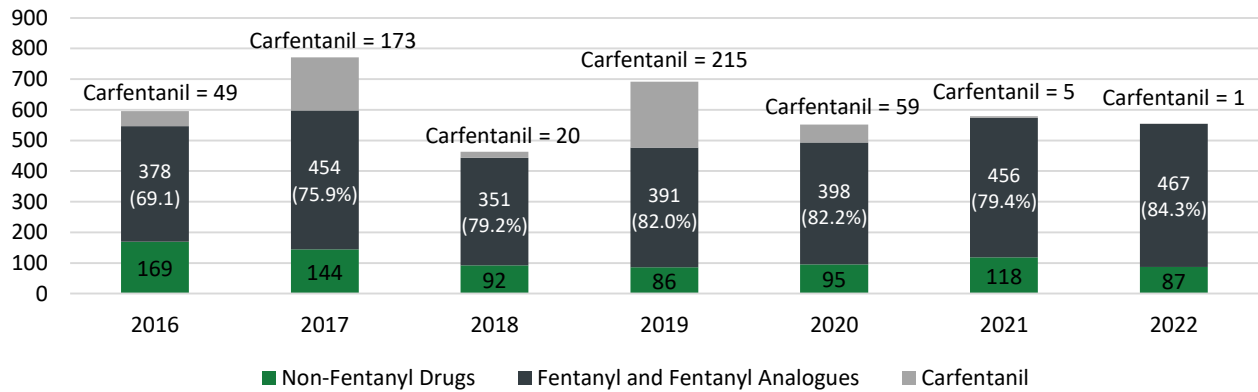


Figure 15 shows that fentanyl and fentanyl analogues continue to drive UDOD in CC, contributing to nearly 85% of UDOD in 2022, similar to the recent years. The number of UDOD related to carfentanil peaked in 2019 at 215 deaths. In 2020 the number dropped to 59. Then there was over a 90% decrease in carfentanil UDOD from 2020 to 2021; this trend continued in 2022 with an 80% decrease in carfentanil UDOD.

Figure 15. Number and Percentage of Fentanyl-Related Unintentional Drug Overdose Deaths in Cuyahoga County, 2016-2022*



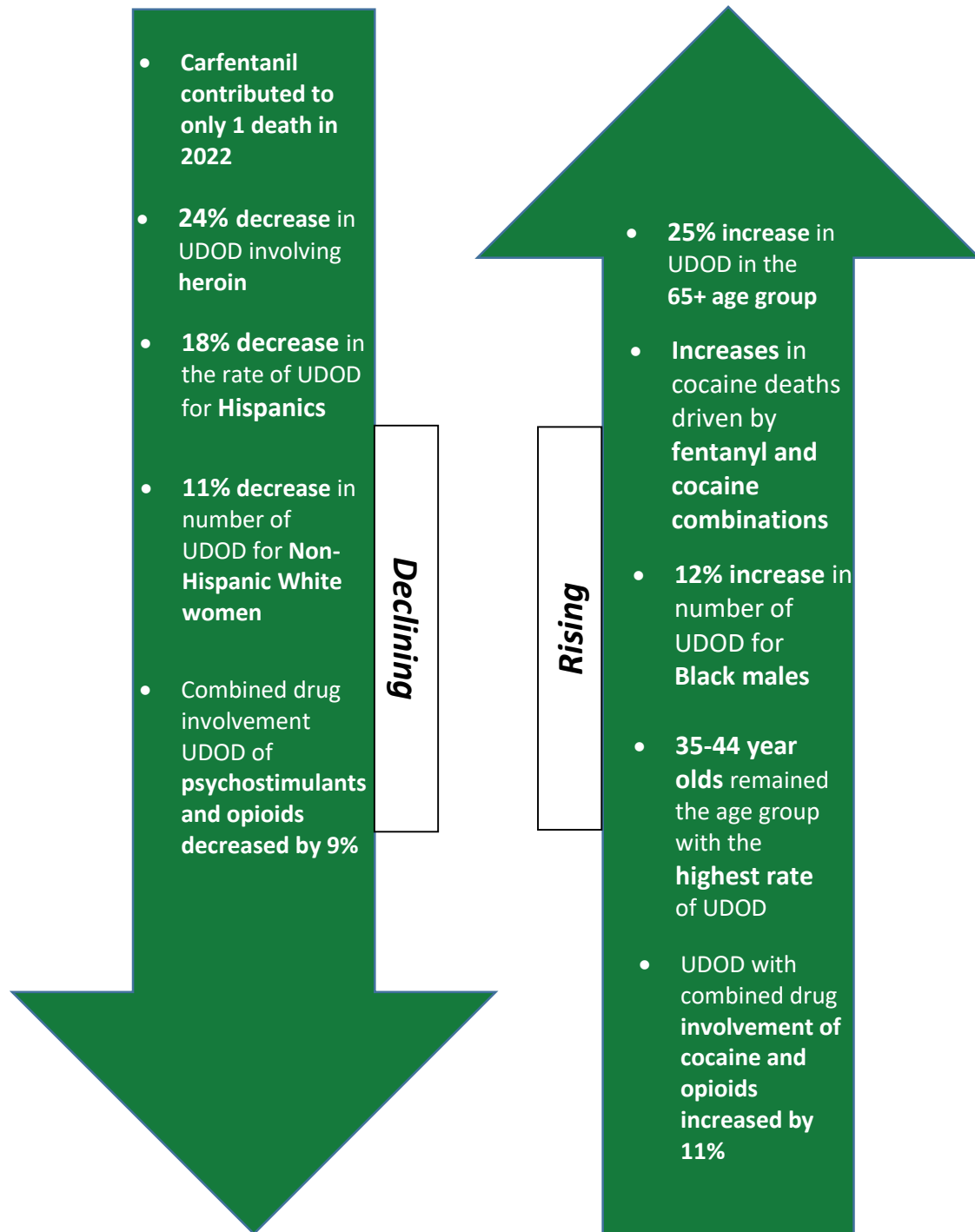
Note: Overdose deaths usually involve a combination of drugs. Individual deaths may be reported in more than one category.

Compared to 2022, preliminary 2023 data show similar trends in the prevalent drug type groups contributing to UDOD in CC. Fentanyl and fentanyl analogues remain the leading contributor in UDOD in 2023 followed by cocaine. While carfentanil was a major contributor to drug deaths in the county in 2017 and 2019, it has diminished since, although recent concerns exist about resurgence.²³ Only one carfentanil related UDOD was reported in 2022, however, it is estimated that five deaths occurred in 2023 involving carfentanil.

DRUG OVERDOSE MORTALITY – SUMMARY

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

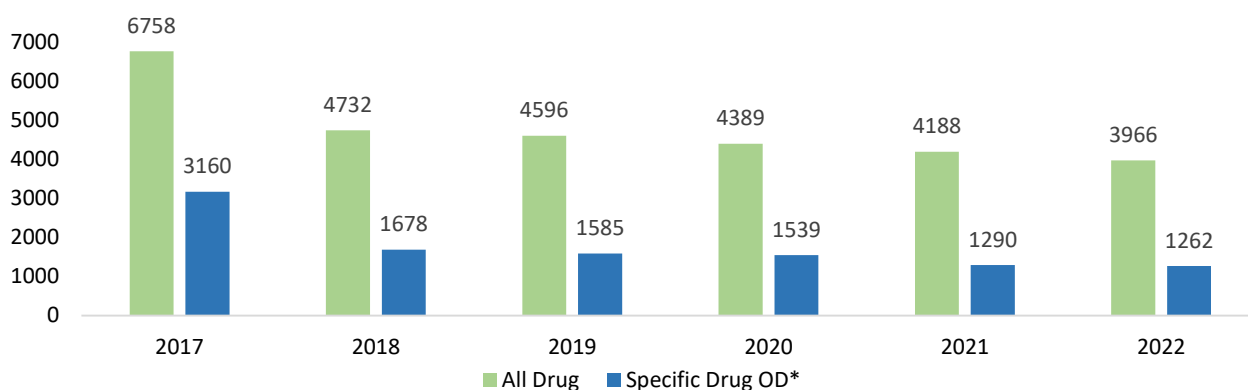
From 2021 to 2022:



DRUG OVERDOSE MORBIDITY – TOTAL EMERGENCY DEPARTMENT VISITS

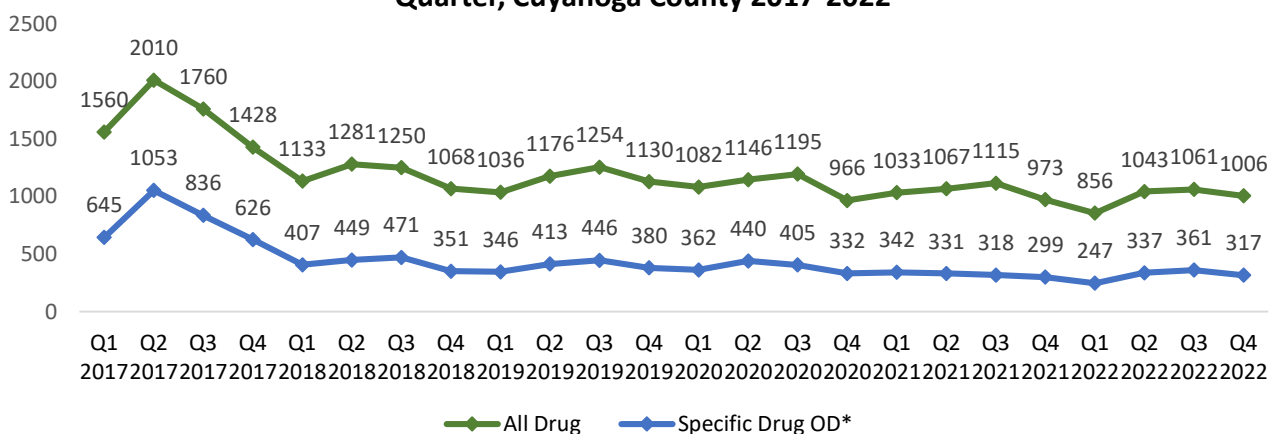
From 2017 to 2022, there were 28,629 emergency department (ED) visits for suspected drug overdoses in CC. Opioids/heroin or stimulants, were specifically mentioned as the drug type causing overdose in 37% (10,514) of the visits and are referred to as “specific drug overdoses” throughout the analysis. The highest total number of ED visits occurred in 2017 with 6,758 suspected drug overdose ED visits; 3,160 of the 6,758 visits were reported as suspected opioid, heroin or stimulant overdoses. From 2017 to 2018 there was a 30% decrease in the number of ED visits for all suspected drug overdoses. ED visits have been steadily declining each year. Quarters two and three of each year (April through September) had the highest volume of ED visits reported, including in 2022 (Figure 17).

Figure 16. Number of Emergency Department Visits for All Suspected Drug and *Specific Drug Overdoses, Cuyahoga County 2017-2022*



*Specific Drug Overdoses describes Suspected Drug Overdoses due to opioid/heroin and/or stimulants. It is listed as Specific Drug OD throughout the report and in all figures and graphs.

Figure 17. ED Visits for All Suspected Drug and *Specific Drug Overdoses by Quarter, Cuyahoga County 2017-2022



*Specific Drug Overdoses describes Suspected Drug Overdoses due to opioid/heroin and/or stimulants. It is listed as Specific Drug OD throughout the report and in all figures and graphs.

DRUG OVERDOSE MORBIDITY – ED VISIT DEMOGRAPHIC AND GEOGRAPHIC ANALYSES

The demographic characteristics of individuals visiting an ED for suspected drug overdoses are shown in Table 12. The highest percentage of drug-related ED visits from 2017-2022 occurred in the 35-49 years old age group accounting for 28% of visits, followed closely by 25-34 year olds, accounting for 26% of visits. Males were more likely to visit the ED for a suspected drug overdose compared to females (58.2% vs 41.8%, respectively). The same trend applied to ED visits for a suspected drug overdose involving specific drugs for males and females (68.4% vs 31.5%, respectively). Whites were more likely to visit the ED for suspected drug overdose compared to Blacks (54.1% vs 31.3%, respectively). The same trend applied to ED visits for a suspected drug overdose involving specific drugs for Whites and Blacks (62.2% vs 20.6%, respectively). The average age of a person visiting an ED for a suspected overdose was 38.6 years, while the average age of a person visiting the ED for a suspected overdose involving specific drugs was 40.5 years.

Table 12. Demographics for ED Visits Due to All Drug Overdose and Specific Drug Overdose, Cuyahoga County, 2017-2022				
	2017-2022 ED Visits – All Drug Overdose		2017-2022 ED Visits – Specific Drug Overdose*	
	N	(%)	N	(%)
Age Group				
<12	1,176	4.1	73	0.7
12-17	1,357	4.7	71	0.7
18-24	3,489	12.2	891	8.5
25-34	7,306	25.5	3,315	31.5
35-49	7,918	27.7	3,477	33.1
50-64	5,027	17.6	2,021	19.2
65+	2,356	8.2	666	6.3
Total	28,629	100	10,514	100
Sex	N	(%)	N	(%)
Male	16,647	58.2	7,196	68.4
Female	11,968	41.8	3,313	31.5
Total	28,629	100	10,514	100
Race	N	(%)	N	(%)
White	15,494	54.1	6,535	62.2
Black	8,971	31.3	2,166	20.6
Other	2,123	7.4	834	7.9
Unknown	2,041	7.1	979	9.3
Total	28,629	100	10,514	100
Mean and Median Age of ED Visits – All Drug Overdose				
	Mean	38.6	Median	36.0
Mean and Median Age of ED Visits – Specific Drug Overdose				
	Mean	40.5	Median	37.0

2021-2022 Demographic Breakdown: The demographic breakdown of ED visits related to drug overdose and specific drug overdose for 2021 and 2022 show a similar pattern as the aggregate 2017-2022 data (see Figures 18-20). Collectively, the greatest number of drug overdoses occurred among White males, ages 35-49 years.

2021-2022 Demographic Breakdown – All Drug Overdose: Noted trends for ED visits related to all drug overdose from 2021 to 2022 include: the distribution by age group was relatively stable from 2021 to 2022 with most age groups experiencing a very slight decrease in ED visits, except for the 35-49 and 65+ age groups which experienced a slight increase in ED visits; the percentage of ED visits by White persons increased (52.9% vs 54.5%) while the percentage of ED visits by Black persons slightly decreased (36.7% vs 36.1%); and the percentage of ED visits for males decreased (58.4 % vs 56.2%), increasing for females (41.6% vs 43.7%) from 2021 to 2022.

2021-2022 Demographic Breakdown – Specific Drug Overdose: Noted trends for ED visits related to specific drug overdose from 2021 to 2022 include: the under 25 and 25-34 age groups experienced a decrease from 2021 to 2022, while the 35-49, 50-64, and 65+ age groups increased during that time frame; the percentage of ED visits among Whites (64.3% vs 63.6%) and Other races (10.9% vs 9.0%) decreased while ED visits among Blacks (24.3% vs 26.8%) increased; and the percentage of ED visits for males decreased (69.5% vs. 65.3%), while ED visits for females increased (30.5% vs. 34.5%) from 2021 to 2022.

Figure 18. Percentage of ED Visits for Overdose by Age, Cuyahoga County 2021-2022

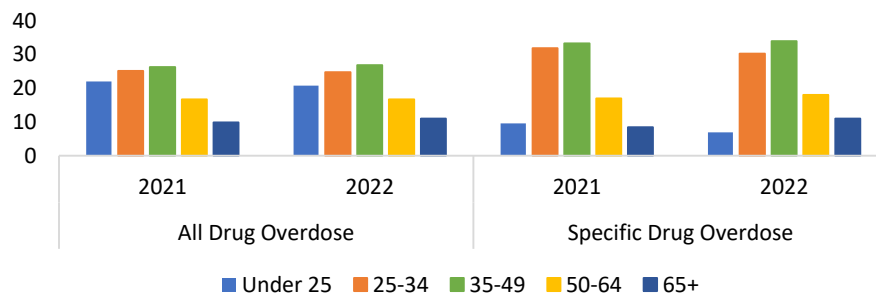


Figure 19. Percentage of ED Visits for Overdose by Race, Cuyahoga County 2021-2022

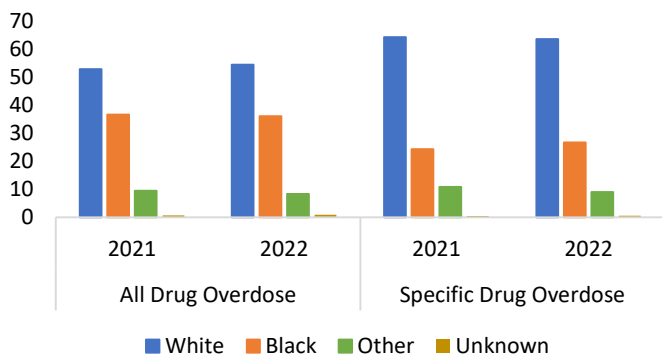
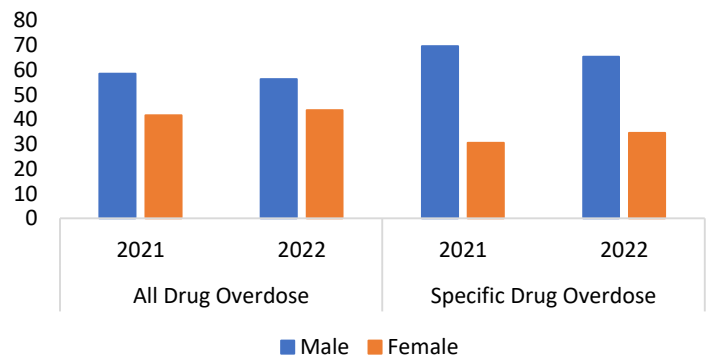


Figure 20. Percentage of ED Visits for Overdose by Sex, Cuyahoga County 2021-2022

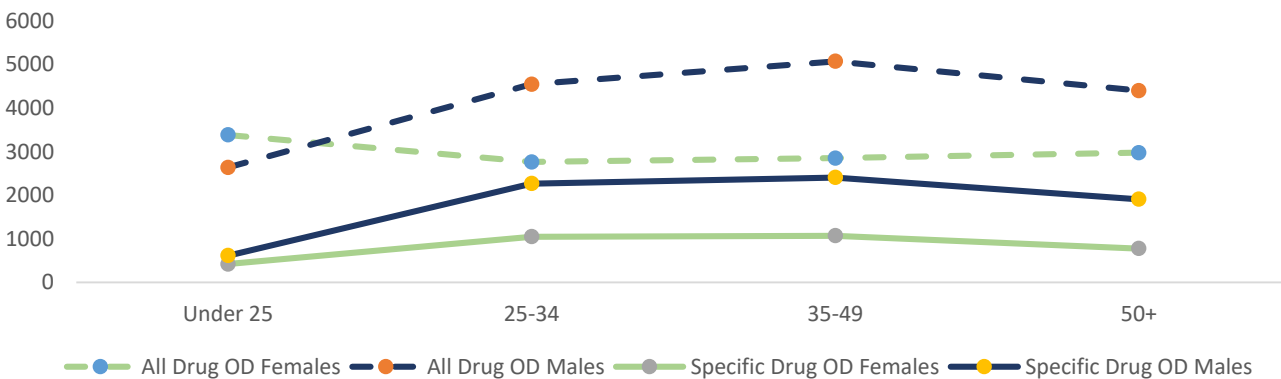


Additional analyses by age, sex and race for 2017-2022 ED visits for all suspected drug overdoses and specific drug overdoses are shown in Figures 21-22.

Sex and Age Breakdown – All Drug Overdose: Males had a higher number of all drug overdose ED visits than females in all age categories except for the under 25 age group. The 35-49 male age group had the highest number of ED visits followed by the 25-34 male age group (see Figure 21).

Sex and Age Breakdown – Specific Drug Overdose: For ED visits due to specific drug overdose, males were higher in all age groups including the under 25 age group. The 35-49 male age group had the highest number of ED visits due to specific drug overdose with 2,407 ED visits. The 25-34 and 35-49 female age groups followed a similar trend in ED visits (1047 and 1070 respectively), accounting for the highest numbers of ED visits for specific drug overdose for females (see Figure 21).

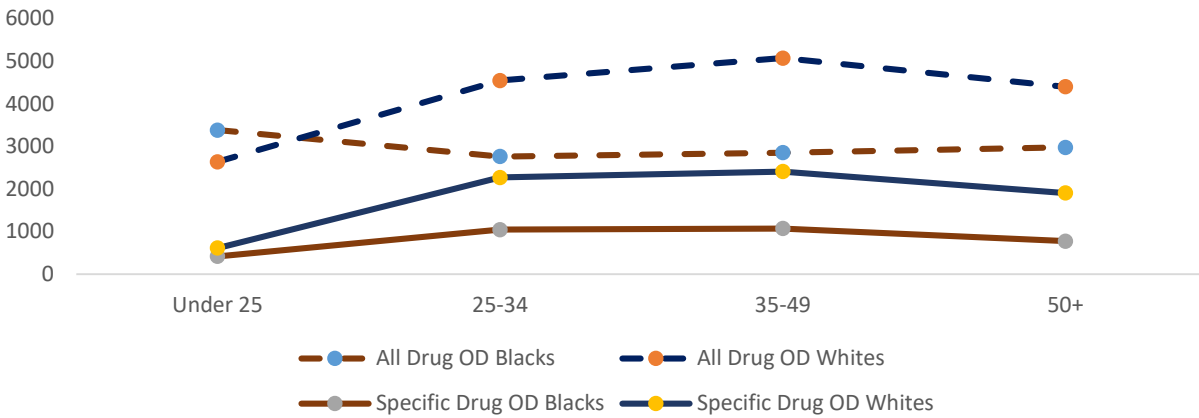
Figure 21. Number of All Drug and Specific Drug Overdose ED Visits by Age and Sex, Cuyahoga County 2017-2022



Race and Age Breakdown – All Drug Overdose: Whites had a higher number of all drug overdose ED visits than Blacks in all age groups except the under 25 age group. Whites had the highest number of ED visits due to all drug overdose in the 35-49 age group with 5,068 and the 25-34 age group with 4,544 visits. Blacks had the highest number of ED visits in the under 25 age group with 3,382 visits followed by the 50 and over age group with 2,975 visits (see Figure 22).

Race and Age Breakdown – Specific Drug Overdose: Whites had a higher number of specific drug overdose ED visits than Blacks in all age groups. Whites had the highest number of ED visits due to specific drug overdose in the 25-34 age group (2,268 visits) and 35-49 age group (2,407 visits). For Blacks, ED visits for specific drug overdose were highest among the 35-49 age group (1,070 visits) and 25-34 age group (1,047 visits) (see Figure 22).

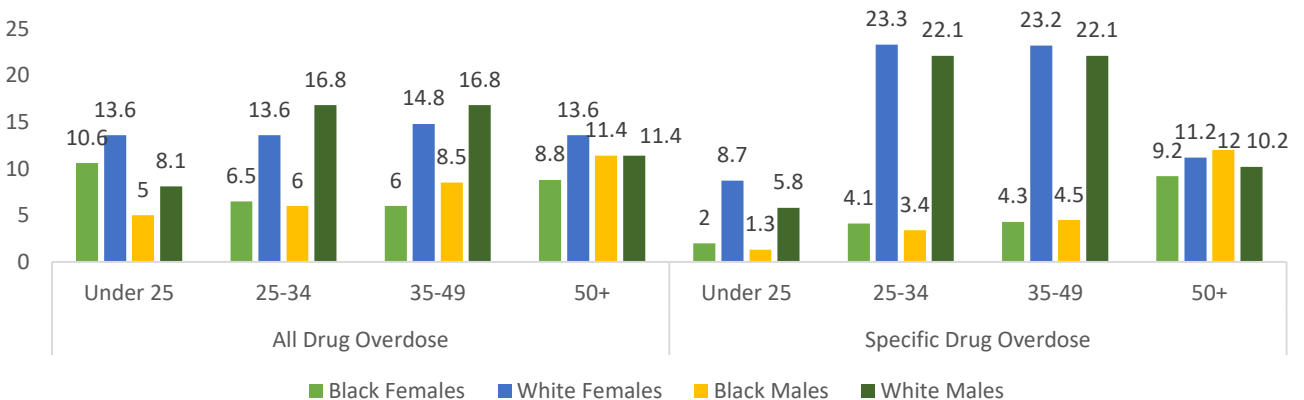
Figure 22. Number of All Drug and Specific Drug Overdose ED Visits by Age and Race, Cuyahoga County, 2017-2022



Sex, Age and Race Breakdown – All Drug Overdose: Figure 23 shows the prevalence of ED visits due to all drug overdose and specific drug overdose in different groups broken out by age, sex and race. White males led age categories 25-34 and 35-49 for highest prevalence of ED visits due to all drug overdose. For persons under 25, White females had the highest prevalence of ED visits (13.6%) and for persons 50 and over (13.6%). Black females had a lower prevalence of ED visits for all drug overdose in all age categories compared to White females. The highest prevalence of ED visits among Black females was seen in the under 25 age group for all drug overdose. Black males experienced the lowest prevalence in both the under 25 and 25-34 age groups.

Sex, Age and Race Breakdown – Specific Drug Overdose: For ED visits due to specific drug overdose, White females had the highest prevalence of ED visits in all age groups except for persons 50 and over, which was led by Black males (see Figure 23).

Figure 23. Percent of ED Visits in Cuyahoga County by Age, Sex, and Race, 2017-2022



Age-Specific Rates with Sex and Race Breakdown – All Drug Overdose: Age-specific rates were calculated for ED visits due to all drug overdose in 2017-2022 by age, sex and race (see Table 13). These age-specific rates tell a different story than the prevalence data above. Black females had the highest age-specific rate in the under 25 age group. White males had higher age-specific rates than White females in all age groups except for the under 25 age group. For the 25-34 age group, White males had the highest rate. Black males had the highest rate of ED visits for age groups 35-49 and 50 and over, differing from the prevalence data where black males were highest for the 50 and over age group only.

Age-Specific Rates with Sex and Race Breakdown – Specific Drug Overdose: Age-specific rates for ED visits due to specific drug overdose in 2017-2022 tell a similar story compared to the prevalence data. White females had higher rates than Black females in all age categories, except for the 50 and over age group. Mirroring the prevalence data, White males had higher rates compared to Black males in all age groups except for the 50 and over age group (see Table 13).

	All Drug Overdose				Specific Drug Overdose			
	Black Females	White Females	Black Males	White Males	Black Females	White Females	Black Males	White Males
Under 25	123.0	107.0	81.1	85.3	6.5	18.9	8.5	26.6
25-34	82.9	90.3	138.7	153.4	14.3	43.1	33.7	87.2
35-49	81.9	100.2	207.9	161.0	16.3	43.6	47.2	91.4
50 and Over	46.6	26.7	116.3	38.1	13.5	6.1	52.9	14.6

Rates per 100,000 population

Note: The rates presented are age-adjusted to the 2010 U.S. standard population to allow comparisons between different populations.

Geographic Analysis: Figure 24 shows a geographical analysis of EpiCenter data presenting the number of ED visits due to all drug overdose by ZIP Code for 2017-2022. The CC ZIP Codes with the highest number of ED visits due to all drug overdose were 44109 and 44102.

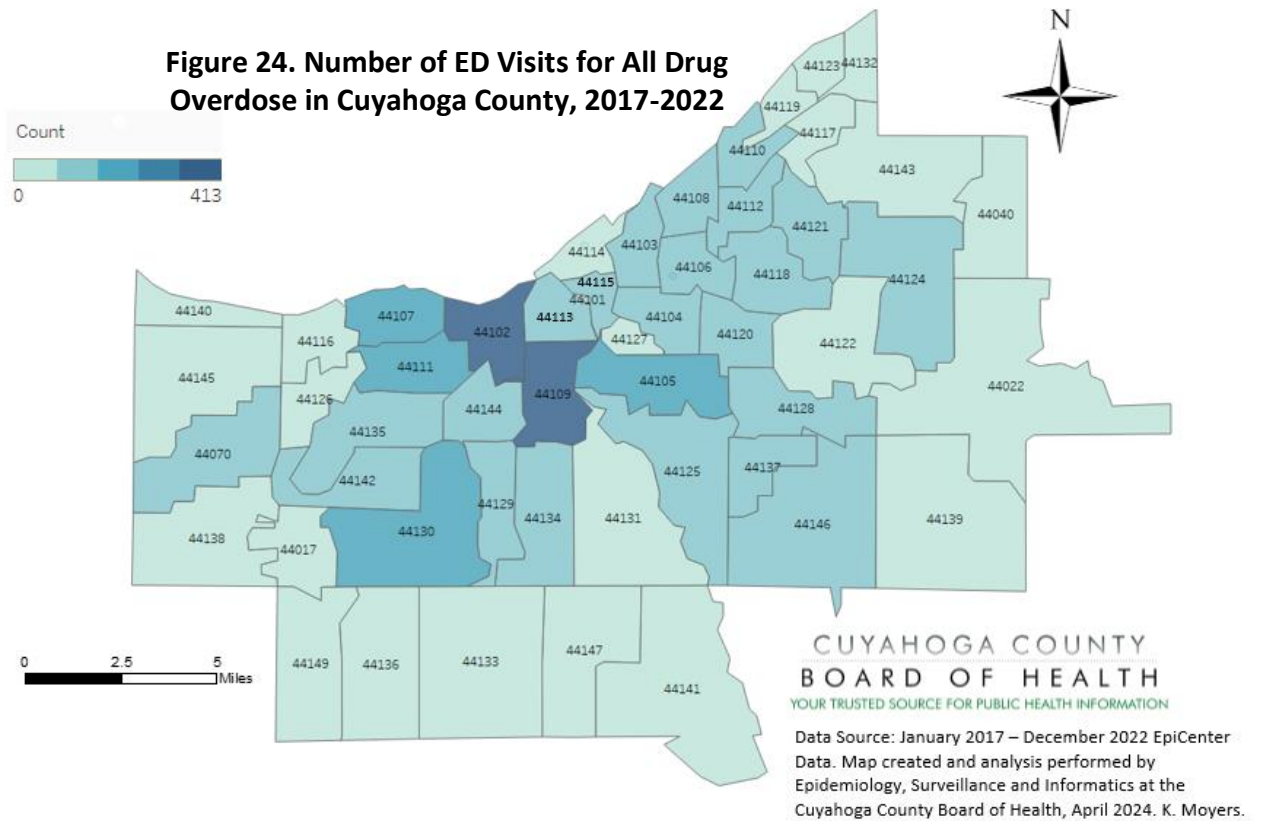


Table 14.
Top 10 Zip Codes for ED Visits, 2017-2022

All Drug	Specific Drug
1. 44109	1. 44109
2. 44102	2. 44102
3. 44105	3. 44111
4. 44111	4. 44105
5. 44107	5. 44107
6. 44130	6. 44135
7. 44135	7. 44130
8. 44134	8. 44134
9. 44129	9. 44113
10. 44125	10. 44125

Table 14 shows the top 10 ZIP Codes for ED visits related to all drug and specific drug overdoses.

2023 At-A-Glance and Epi-Alerts: Fewer ED visits related to suspected drug overdose occurred in 2023 compared to 2022 in CC based on preliminary data (see Table 15). In 2023, there were 3,603 ED visits for all drug overdose and of those visits, 1,071 (29.7%) were categorized as specific drug overdose. June represented the month with the highest number of ED visits for all drug overdoses in 2023, whereas in 2022, May had the highest number of ED visits. Trends by age, sex and race in 2023 preliminary data are similar to those observed in 2022 data. Collectively, White males, ages 35-49 reported the highest number of ED visits for all suspected drug overdose and drug overdose due to specific drug.

Table 15. Number of ED Visits: 2022 and 2023				
	All Drug		Specific Drug	
	2022	2023*	2022	2023*
January	291	354	93	107
February	262	323	62	86
March	303	339	92	97
April	309	346	87	117
May	371	337	122	93
June	363	390	128	111
July	358	292	107	103
August	362	269	135	77
September	341	256	119	78
October	358	246	118	65
November	327	211	97	69
December	321	240	102	68
Total	3,966	3,603	1,262	1,071

*2023 data are preliminary and subject to change

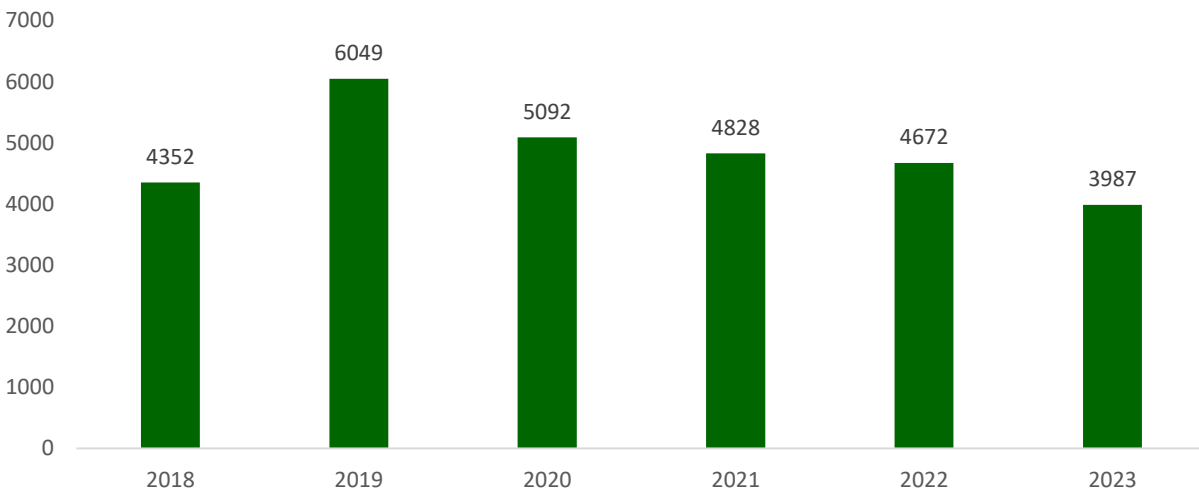
Lastly, a total of four Epi-Alerts occurred in 2023 (see Table 16). Epi-Alerts are administered when there is a spike in the number of ED visits for suspected drug overdoses. A spike occurs when the number of ED visits is greater than expected by four standard deviations in a 24-hour period. This number of alerts matches 2022 and is nearly half as many as 2020. 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. Although the exact dates of alerts have varied year to year some seasonality may exist.

Table 16. Epi-Alerts Administered Due to Suspected Drug Overdose, 2020-2023						
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	

DATA OVERDOSE MORBIDITY – EMERGENCY MEDICAL SERVICES NALOXONE ADMINISTRATION

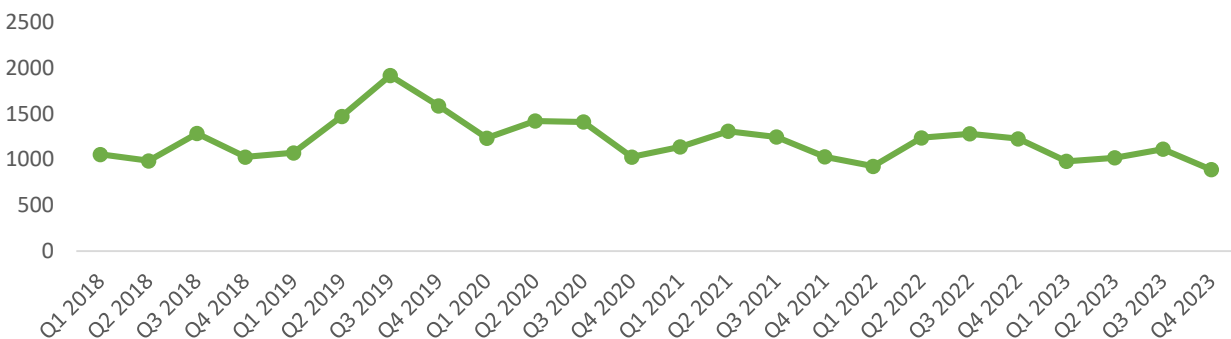
Between 2018 and 2023, there were 28,980 doses of naloxone administered by EMS providers in CC as reported by EMSIRS. The highest total naloxone doses administered occurred in 2019 with 6,049 doses (see Figure 25). From 2018 to 2019, there was a 39% increase in the number of naloxone administrations, followed by a 16% decrease in 2020 and continued slight decreases annually through 2023. Naloxone administrations by quarter from 2018-2023 are shown in Figure 26.

Figure 25. EMS Naloxone Administrations in Cuyahoga County, 2018-2023*



*2023 data are preliminary and subject to change

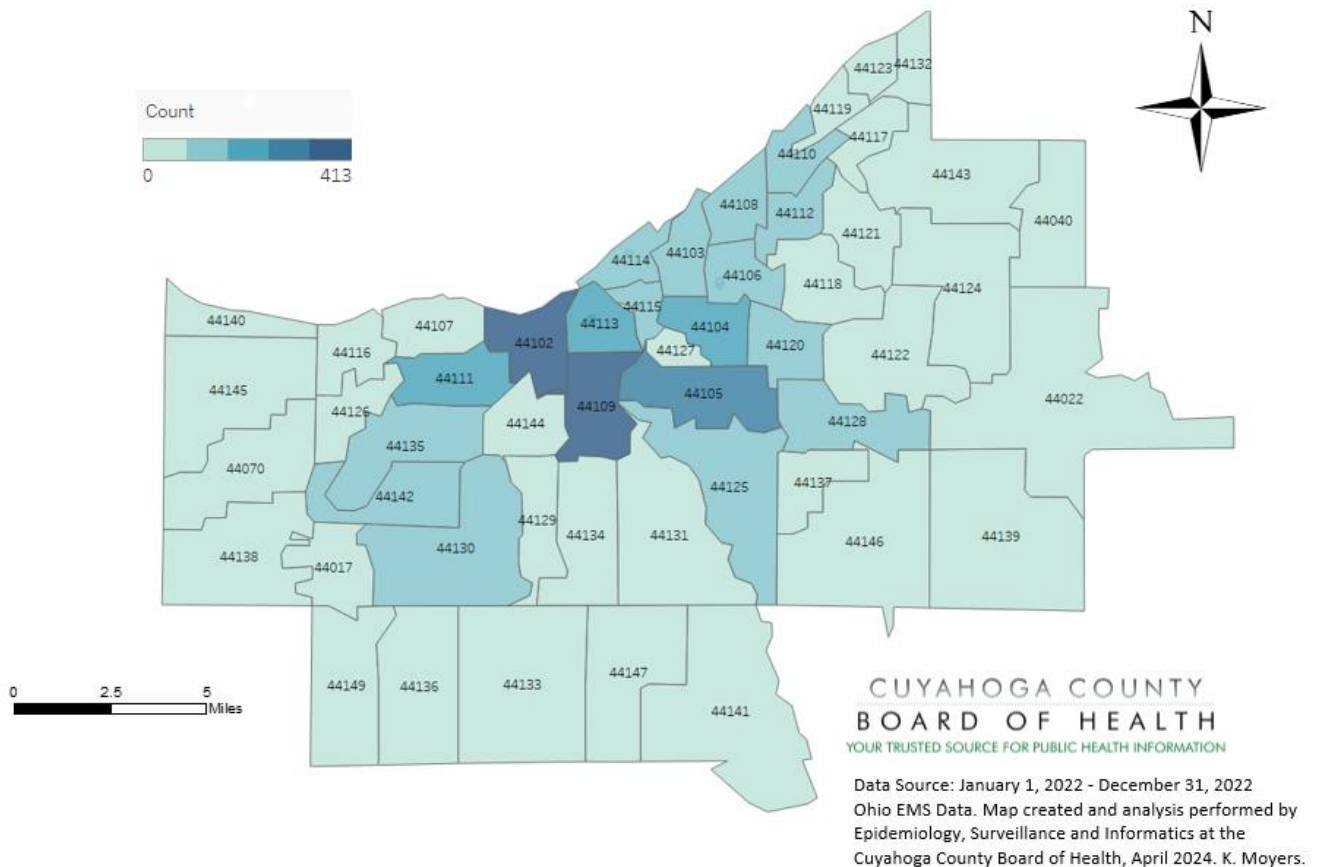
Figure 26. EMS Naloxone Administrations by Quarter in Cuyahoga County, 2018-2023*



*2023 data are preliminary and subject to change

Figure 27 represents a geographical analysis of EMS data showing the number of naloxone administrations by resident ZIP Code in CC. In 2022, the five areas with the highest number of naloxone administrations were in the following ZIP Codes: 44102, 44105, 44109, 44111 and 44113. These ZIP Codes had 200 or more naloxone administrations, with the highest being 413 administrations in 44109. Compared to 2021, ZIP Code 44113 moved into the top five and 44130 dropped out of the top five.

Figure 27. EMS Naloxone Administrations by Zip Code in Cuyahoga County, 2022*

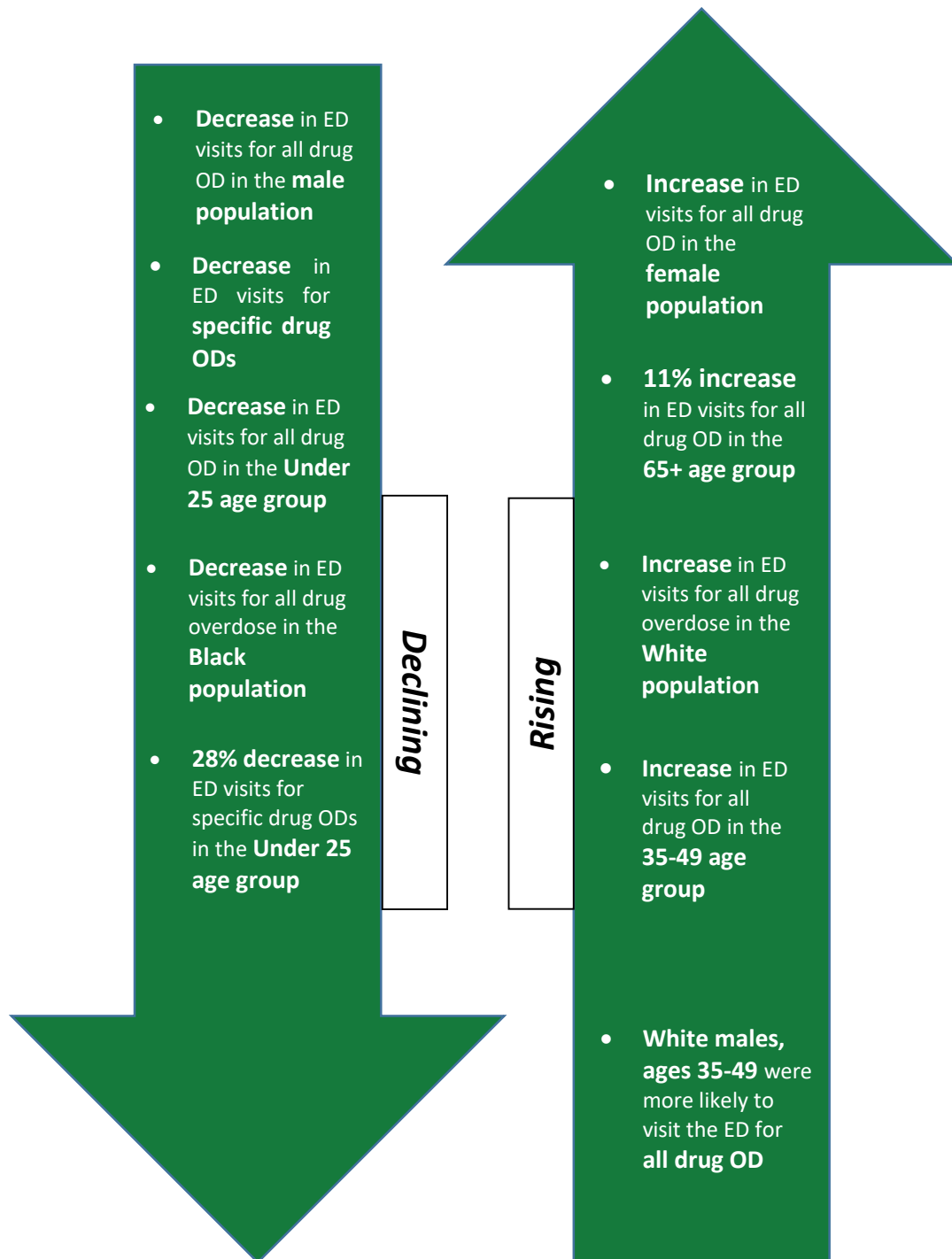


*Not all EMS agencies report to EMSIRS. The accuracy of data reported to EMSIRS is limited by the number of individual EMS agencies submitting data and the accuracy of these submissions.

DRUG OVERDOSE MORBIDITY – SUMMARY

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

From 2021 to 2022:



DRUG OVERDOSE MORBIDITY – SUMMARY CONTINUED

- ❖ Rate-specific data showed a difference between older and younger age groups for visits to the ED due to all drug overdose:
 - Black females had the highest age-specific rates in the under 25 age group. This trend is consistent with the 2022 DOIEP.
 - White males had the highest age-specific rates in the 25-34 age group and Black males had the highest age-specific rates in the 35-49 and 50 and over age groups. This trend is consistent with the 2022 DOIEP.

- ❖ For ED visits due to specific drug overdose:
 - White males had the highest age-specific rates in all age groups under 50 while Black males had higher age-specific rates in the 50 and over age group.

- ❖ Analyses showed specific geographic areas of concern. The city of Cleveland has the highest numbers of ED visits due to drug overdose.
 - Specific ZIP Codes of concern are: 44109, 44102, 44105, 44111 and 44107. These are the same zip codes of concern reported in the 2022 DOIEP.

- ❖ EMS naloxone administration data somewhat parallels ED visit data in terms of annual and quarterly trends. The number of naloxone doses administered by EMS has decreased since 2019 and suspected ED visits for drug overdoses have decreased since 2017. The ZIP Codes with the highest number of naloxone doses administered by EMS match those with the most ED visits for suspected drug overdose (44109 and 44102).

FINAL THOUGHTS

This 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 2022, 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 2022. Although the Hispanic population experienced a decrease in UDOD from 2021-2022, this race/ethnic population still had a higher rate of UDOD compared to the non-Hispanic White population.

Vital statistics data showed that 84% of all UDOD involved fentanyl and/or fentanyl analogues.

ED data suggest that targeted interventions should prioritize Black males 35 and older, Black females under 25, and young to middle-age White males.

Naloxone distribution is an important harm reduction strategy used to combat opioid overdose-related deaths in Cuyahoga County. Naloxone administrations by EMS continue to decrease.

Geographic analyses of Vital Statistics, EpiCenter, and EMS data were conducted and showed that the top ZIP Codes for ED visits for suspected drug overdose and EMS naloxone administrations were similar: 44109, 44102, 44105, 44111. The top ZIP Codes for UDOD in Cuyahoga County included 44109, 44106, and 44115.

Based on these findings, increasing harm reduction 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 overdoses.

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