

THE 2022 CUYAHOGA COUNTY DRUG OVERDOSE INTEGRATED EPIDEMIOLOGIC PROFILE

AUGUST 2023

OVERDOSE DATA TO ACTION (OD2A)

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DISCLAIMER

This report was supported by cooperative agreement #NU17CE925005 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.



EXECUTIVE SUMMARY

In 2021, according to the Centers for Disease Control and Prevention (CDC), nearly 106,700 people died of drug overdoses in the United States (U.S.); 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 (like fentanyl) have increased over 10 fold since 1999.³ Drug overdoses continue to impact communities across the U. S., including Cuyahoga County (CC), Ohio. Between 2015 and 2021, a total of 3,398 unintentional drug overdose deaths (UDODs) of residents of CC were reported (Figure 8). In 2021, fentanyl and fentanyl analogues were involved in 79.4% of UDODs (Figure 17). For that same year, data shows that drug poisoning accounted for half (50%) of unintentional deaths among CC residents (Figure 7). From 2017-2021, there were also 24,663 emergency department (ED) visits for suspected drug overdoses in CC (Table 12).

According to the 2021 U. S. Census estimates, 1,263,667 people reside in CC. More than half of residents (52.5%) were between the ages of 25-64 years; 29.9% were younger than 25 years, and 17.8% were 65 or older (median age=40.4) (Table 1). Based on analyses of Ohio vital statistics, the highest rate of UDODs in CC occurred among adults aged 35-44 in 2021; with a rate of 91.3 UDODs per 100,000 people (Table 9). The next highest rate of UDODs in 2021 occurred among adults aged 55-64; with a rate of 75.6 UDODs per 100,000 people.

In 2021, less than half (48%) of the population of CC consisted of males, yet males accounted for more than half of the UDODs. Although the Hispanic population (6.3% of the CC) had the lowest number of UDODs compared to Non-Hispanic Whites and Blacks in 2021, this race/ethnic group experienced the highest rate of UDODs. When considering race/ethnicity and sex, Non-Hispanic Black males had the highest rate of UDODs in CC in 2021, with a rate of 83.5 UDODs per 100,000 people (Table 9).

Additional demographic information such as marital status and education represent other potential risk/protective factors for UDODs. The U.S. Census Bureau reported that in 2021, 40.3% of residents in CC were never married (Table 5) and 27.3% of the population attained a high school diploma or GED, the most common level of education (Table 6). Vital statistics data show that in 2021, the majority of UDODs occurred among never married individuals (57.7%) and over 50% of UDODs were among individuals with a high school diploma or GED (Table 10).

UDODs 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 UDODs through 2021 in CC. Heroin related UDODs have steadily decreased after peaking in 2016; 2021 data show that heroin related UDODs have decreased by more than half since 2016 (Figure 11). Cocaine related UDODs peaked in 2017, then dropped and remained steady until 2021 where data shows that UDODs involving cocaine peaked again by 43% compared to 2020. Though psychostimulant-related UDODs (such as methamphetamine) have contributed to the fewer deaths historically in comparison, this drug category has steadily increased since 2016 and surpassed natural and semi-synthetic opioids UDODs in 2019 and continued to increase in 2021. Compared to 2021, preliminary 2022 data shows similar trends in the prevalent drug groups contributing to the number of UDODs. Fentanyl and fentanyl analogues were leading as contributors to UDODs in 2022, followed by cocaine. Conversely, carfentanil-related UDODs remain low, resulting in 1 death from 2021 to 2022.

From 2017 to 2021, there were over 24,500 emergency department (ED) visits for suspected drug overdoses in CC (Table 12). The greatest percentage of drug-related ED visits from 2017-2021 occurred in the 35-49 year olds category which accounted for 27.8% of visits, followed closely by 25-34 year olds, accounting for 25.7% of visits. The average age of a person visiting an ED for a suspected overdose was 38 years. Males were more likely to visit the ED for a suspected drug overdose compared to females (58.5% vs 41.5%, respectively). Whites were more likely to visit the ED for suspected drug overdose compared to Blacks (54.1% vs 30.6%, respectively). Visits to the ED by White persons decreased from 2020 to 2021 while visits by Black persons slightly increased from 2020 to 2021 (Figure 17). Collectively, the greatest number of drug overdoses presenting in the ED occurred in White males, ages 35-49.

Naloxone distribution is one of many major 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.⁵ 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®. Between 2018 and 2022, there were 24,993 doses of naloxone administered by emergency medical services (EMS) providers in CC (Figure 23). In the last five year the highest total count of naloxone doses administered occurred in 2019 with 6,049 doses. The number of naloxone administrations in 2020, 2021, and 2022 have slightly decreased since 2019.

The top five ZIP Codes, based on decedent residence, with the highest rate of UDODs from 2017-2021 were: 44127, 44109, 44102, 44135, and 44113 (Table 11). The highest number of ED visits for suspected drug overdose and naloxone doses administered both occurred in ZIP Codes 44109 and 44102 (Figures 22 and 25).

In summary, this DOIEP provides information on drug overdose mortality and morbidity (ED visits and EMS naloxone administration) in CC, including descriptive statistics, rates, and geographic analyses. Combining multiple data sources creates a more comprehensive picture of the drug overdose burden locally. Assessment of the epidemiology of the overdose crisis in CC as outlined in this profile is an important component of overdose prevention, as it provides information to effectively guide prevention and care activities for diverse organizations. The profile may also provide education and insight to healthcare providers, first responders, policymakers, and other stakeholders, including the public. Data included are based on currently available information and will continue to be updated annually.

OVERVIEW: DRUG OVERDOSE INTEGRATED EPIDEMIOLOGIC PROFILE (DOIEP)

The Drug Overdose Integrated Epidemiologic Profile (DOIEP) was made possible through the Overdose Data to Action (OD2A) grant from the Centers for Disease Control and Prevention (CDC). OD2A focuses on understanding the complex nature of the drug overdose epidemic using an interdisciplinary, comprehensive and cohesive public health approach. There are several strategies in the OD2A grant including both surveillance and prevention. The DOIEP was conducted as part of surveillance strategy 3, which focuses on implementing innovative surveillance. The DOIEP was adopted from a CDC and Health Resources and Services Administration (HRSA) document called the Integrated Epidemiologic Profile (IEP).⁶ 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 CC 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 level partners and community members to understand current drug overdose trends, patterns and risk factors in Cuyahoga County 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
- Provide insights for overdose prevention

DATA SOURCES

Data from various sources were analyzed for this DOIEP including United States Census Bureau data, Vital Statistics death certificate data, EpiCenter emergency department visit data, the State of Ohio Integrated Behavioral Health Dashboard, and Ohio EMS naloxone administration data. 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, 2021 ACS 5-year data are reported, the latest complete data available for use.

State of Ohio Integrated Behavioral Health Dashboard

The State of Ohio Integrated Behavioral Health Dashboard was created and maintained by Recovery Ohio, to help make behavioral health data from multiple agencies 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 on.

Ohio Department of Health (ODH) 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 deaths into six "External Injury Intent" types: Homicide, Legal Intervention of War, Natural, Suicide, Undetermined, and Unintentional. Accidental drug poisoning deaths, or unintentional drug overdose deaths (UDODs) as described in this report, fall into the "Unintentional" category. Among decedents with UDOD as the underlying cause, 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 UDODs, of those who resided in Cuyahoga County between 2015 and June 2022 (note 2022 data are preliminary and incomplete). In-depth analyses of 2021 data (the most recent complete year of data available) are provided.

EpiCenter

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; also known as an Epi-Alert. EpiCenter data are used in this DOIEP to provide insights on drug overdose morbidity in Cuyahoga County between January 2017 through December 2021. Preliminary 2022 totals are also provided.

Ohio Department of Public Safety's Emergency Medical Services (EMS) Incidence Reporting System (EMSIRS)

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.¹² The Ohio State Board of Emergency Medical, Fire and Transportation Services has statutory authority over EMSIRS and supervises its operations. For this report, 2018 -2022 quarterly data are examined.

STRENGTHS AND LIMITATIONS

The 2022 DOIEP provides important information that local partners can use as a resource for prevention strategies. 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 community 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 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.

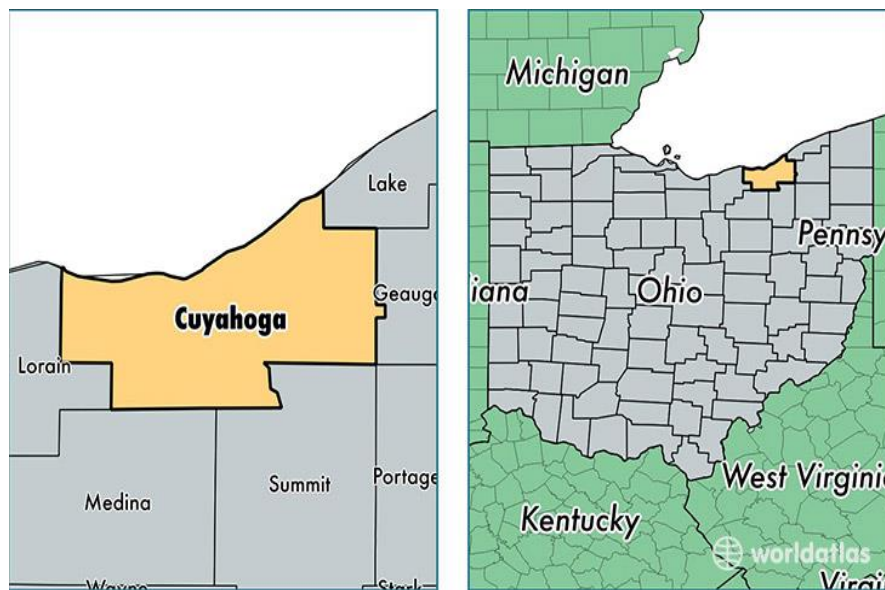
While there are many strengths in the data sources that are included in this profile, some limitations must be acknowledged. Due to the timing of data releases from the United States Census Bureau, the most recent Census data available and used in this profile are 2021 data. A time lag also exists in 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 2022 deaths are incomplete. In this report, only the first 6 months of 2022 data are included. Also, 2021 data has not yet been finalized and therefore is still considered preliminary. 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. EpiCenter temporarily stopped administering alerts in the first three quarters of 2021 due to transitioning to a new syndromic surveillance system ESSENCE, then transitioned back to EpiCenter. 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.

GEOGRAPHY 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 about 1.24 million people, and the 39th largest county in the state by land area at 44,826 square miles. Between 2019 and 2020, the population of Cuyahoga County experienced a .0479% decline.⁸ Cuyahoga County, OH, 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, 2021. [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 2021 was 40.4 years. More than one-half (52.5%) of CC residents are between the ages of 25 and 64 years. Nearly one third of residents (29.9%) are younger than 25 years old, with 15 to 24 years old representing 12.6%, 5 to 14 years old representing 11.6%, and children less than 5 years old representing 5.6% of the county's population. The remainder of CC's residents (17.8%) are age 65 or older. The female to male ratio in Cuyahoga County, OH is 100:91.

Table 1. Population Distribution by Age Group and Sex, Cuyahoga County, OH 2021

Age Group (years)	Males		Females		Total Population	
	N=606,297	%	N=657,370	%	N=1,263,667	%
<15	110,892	18.3%	106,172	16.2%	217,064	17.3%
15-24	77,894	12.8%	77,340	11.8%	155,234	12.6%
25-34	87,001	14.3%	91,261	13.9%	178,262	13.9%
35-44	72,428	11.9%	76,780	11.7%	149,208	11.5%
45-54	74,381	12.3%	80,376	12.2%	154,757	12.8%
55-64	85,973	14.2%	94,100	14.3%	180,073	14.3%
65+	97,728	16.1%	131,341	19.9%	229,069	17.8%

¹²Source: 2021 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 (57.9%) of CC residents are Non-Hispanic White. Non-Hispanic Black or African American residents make up 28.8% of the population. The remainder of the population identified themselves as Hispanic (6.3%), Asian (3.1%), Native American (0.1%), or two or more races (3.3%) (Table 2).

Table 2: Population Distribution by Race/Ethnicity, Cuyahoga County, OH 2021

Race/Ethnicity	Total Population	
	*N=1,263,667	%
Non-Hispanic White	732,660	57.9%
Non-Hispanic Black	363,677	28.8%
Hispanic or Latino	80,052	6.3%
Asian	41,776	3.3%
Two or more races	39,127	3.1%
Native American	1,230	0.1%

¹³Source: 2021 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 the rankings based on poverty rate, CC is the 13th most poverty stricken county in Ohio.¹⁰ In 2021 it was reported that 16.7% of individuals residing in Cuyahoga County live below the federal poverty level, compared to 13.4% for the state (Table 3). Of those residing in CC, 17.7% of females and 15.6% of males live below the federal poverty level. A little less than a quarter (24.2%) of children less than 18 years old and 11.5% of residents aged 65 years and older live below the federal poverty level. When broken down by race and ethnicity, 29.9% of individuals who identified as Non-Hispanic Black, 9.8% of Non-Hispanic White individuals, 25.3% of Hispanic or Latino individuals, 12.4% of Asian individuals, and 36.5% of Native American individuals live below the federal poverty level. The average personal income in Cuyahoga County is \$36,321 and the median household income is \$55,109.

Table 3: Socioeconomic Characteristics of Population, Cuyahoga County, OH and Ohio 2021

Characteristic	Cuyahoga County	Ohio
Income		
Average per Capita Income*	\$36,321	\$34,526
Median Household Income*	\$55,109	\$61,938
Federal Poverty Level		
Individuals	16.7%	13.4%
Female	17.7%	14.5%
Male	15.6%	12.1%
Federal Poverty Level by Age Group (years)		
<18	24.2%	18.6%
18-64	15.7%	12.7%
≥65	11.5%	8.5%
Federal Poverty Level by Race and Ethnicity		
Native American	36.5%	22.9%
Non-Hispanic Black	29.9%	27.7%
Hispanic or Latino	25.3%	23.1%
Asian	12.4%	12.1%
Non-Hispanic White	9.8%	10.6%

¹⁴Source: 2021 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 for CC, shown in table 4, draws from the nationwide Point-in-Time Count that occurred in January 2020, just a few weeks before COVID-19 was declared a national emergency. Therefore, these data do not reflect any changes brought about by the pandemic.¹¹ In CC, an estimated 1,675 individuals were homeless in 2020, of which 1,566 (93.5%) were reported to be sheltered and 109 (6.5%) were unsheltered. A total of 171 (10.2%) were chronically homeless, 168 (10%) were veterans, and 110 (6.6%) were unaccompanied youths. Table 4 shows how homelessness in CC has fluctuated through the years of 2015-2020. 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.

Table 4: Homelessness in Cuyahoga County, Ohio 2015-2020

	2015		2016		2017		2018		2019		2020	
Overall Homelessness	N=1,943	%	N=1,697	%	N=1,727	%	N=1,808	%	N=1,618	%	N=1,675	%
Unsheltered	68	3.5%	74	4.3%	97	5.6%	78	4.3%	106	6.6%	109	6.5%
Sheltered	1,875	96.5%	1,623	95.6%	1,630	94.3%	1,730	95.7%	1,512	93.4%	1,566	93.5%
Chronic	215	11%	175	10.3%	115	6.7%	172	9.5%	212	13.1%	171	10.2%
Family	393	20.2%	337	19.9%	367	21.3%	431	23.8%	390	24.1%	360	21.5%
Individual	1,550	79.8%	1,360	80.1%	1,360	78.8%	1,377	76.2%	1,228	75.9%	1,315	78.5%
Veteran	326	16.8%	202	11.9%	172	9.9%	159	8.8%	135	8.3%	168	10%
Youth	112	5.8%	110	6.5%	93	5.4%	116	6.4%	118	7.3%	110	6.6%

¹⁵Source: US Department of Housing and Urban Development.

The most recent available data on educational data are from the 2021 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 (27.3%) (Table 5). While 20.0% of residents 25 years and older reported having a bachelor's degree; 21.7% reported having some college education, but no degree. Of the population 25 years and older in Cuyahoga County, 9.2% of residents reporting less than a high school education.

Table 5: Educational Attainment (Population Age ≥25 Years) in Cuyahoga County, OH 2021

Education	Males		Females		Total Population	
	N=417,511	%	N=473,858	%	N= 891,369	%
Less than High School	40,995	9.8%	41,751	8.8%	82,746	9.2%
High School Diploma/GED	119,981	28.7%	123,690	26.1%	243,671	27.3%
Some College, no degree	85,211	20.4%	101,720	21.5%	186,931	21.7%
Associate's Degree	29,105	7.0%	42,509	9.0%	71,614	8.0%
Bachelor's Degree	84,455	20.2%	93,449	19.7%	177,904	20.0%
Graduate or Professional Degree	57,764	13.8%	70,739	14.9%	128,503	14.4%

¹⁶Source: 2021 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 by gender for the population of CC that is 15 years of age and over. Of this population, 41% reported being married. Additionally 10.7% of males and 13.6% of females reported being divorced, while 40.3% of residents aged 15+ have never been married, and 6.4% of the population (largely females) reported being widowed.

Table 6: Marital Status (Population Age ≥15 Years) in Cuyahoga County, OH 2021

Marital Status	Males		Females		Total Population	
	N=495,405	%	N=551,198	%	N=1,046,603	%
Married	214,602	43.3%	214,684	38.9%	429,286	41.0%
Divorced	52,961	10.7%	74,972	13.6%	127,933	12.2%
Never Married	212,374	42.9%	209,518	38.0%	421,892	40.3%
Widowed	15,468	3.1%	52,024	9.4%	67,492	6.4%

¹⁷Source: 2021 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 old and over 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 (58.7%) 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 (4.8%) are defined as people without work, but are actively seeking for a job and currently available to start work.

Table 7: Employment Status (Population Age ≥16 Years) in Cuyahoga County, OH and Ohio 2021

Characteristic	Cuyahoga County		Ohio	
	Total	%	Total	%
Civilian Labor Force 16 Years and Over	653,892	63.4%	5,970,869	63.2%
Employed	604,808	58.7%	5,656,463	59.9%
Unemployed	49,084	4.8%	314,406	3.3%

¹⁴Source: 2021 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 2021 population survey found that 47.7% of CC residents were covered under their employer health insurance plan. Another 22.6% were insured by Medicaid, 13.6% were insured by Medicare, and 5.4% of CC residents were uninsured.

Table 8: Healthcare Coverage in Cuyahoga County, OH and Ohio 2020

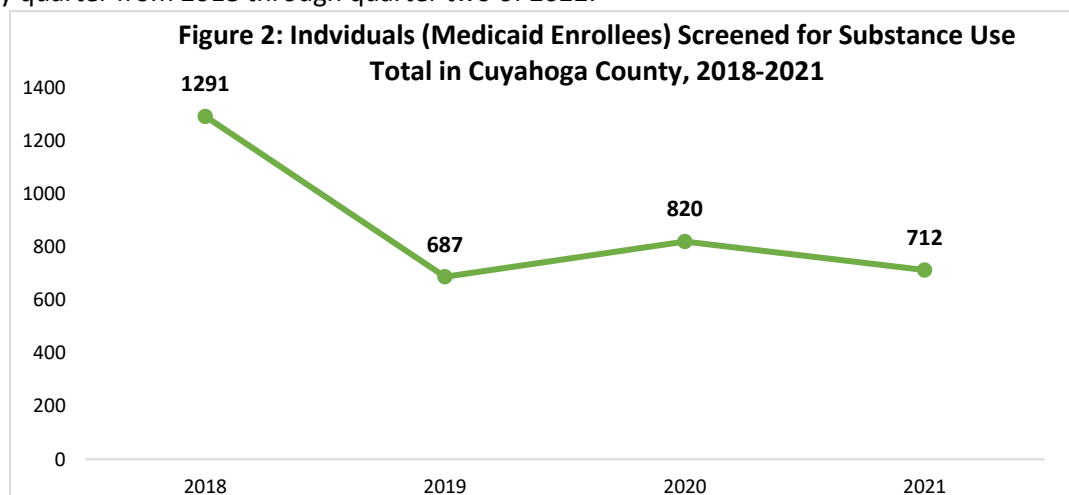
Health Insurance Coverage	Cuyahoga County		Ohio
		%	%
Employer	47.7%		51.2%
Non-Group	9.68%		10.4%
Medicaid	22.6%		17.6%
Medicare	13.6%		13.3%
Military or VA	1.1%		1.3%
Uninsured	5.4%		6.16%

¹⁸Source: Data USA: Cuyahoga County, OH & Ohio.

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

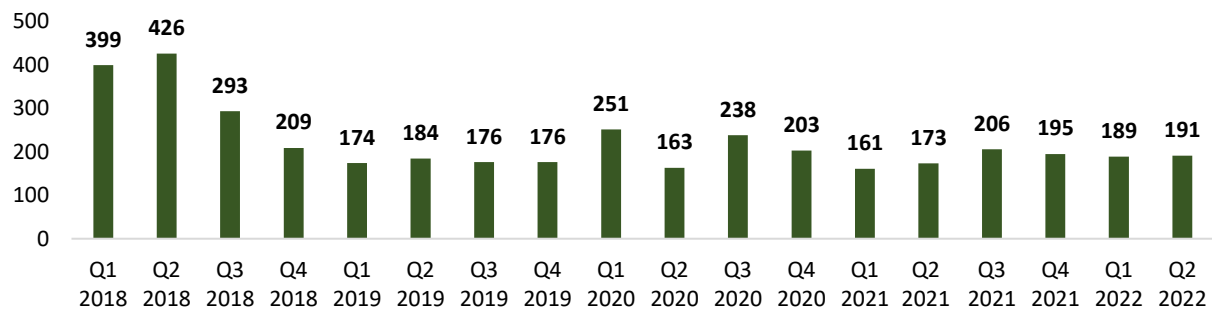
Behavioral Health

The next few charts in this section show data from the recently published State of Ohio Integrated Behavioral Health Dashboard. The dashboard data below were retrieved from the Ohio Department of Medicaid: Medicaid Claims and Enrollment. Figure 2 shows that in 2018, 1,291 individuals who are Medicaid enrollees, were screened for substance use (alcohol and/or drug); that number then declined by nearly half (46%) in 2019. In 2020, the amount of individuals screened for substance use who were insured through Medicaid increased by 19%, then slightly decreased by 13% in 2021. Figure 3 shows this data by quarter from 2018 through quarter two of 2022.



⁹Source: DataOhio: State of Ohio Integrated Behavioral Health Dashboard

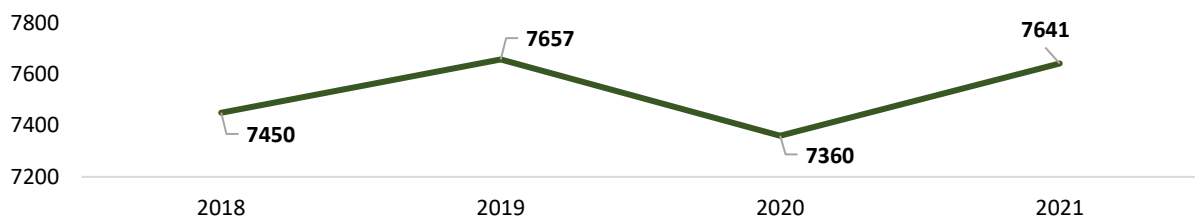
Figure 3: Individuals (Medicaid Enrollees) Screened for Substance Use in Cuyahoga County, by Quarter 2018-2022



¹⁹Source: DataOhio: State of Ohio Integrated Behavioral Health Dashboard

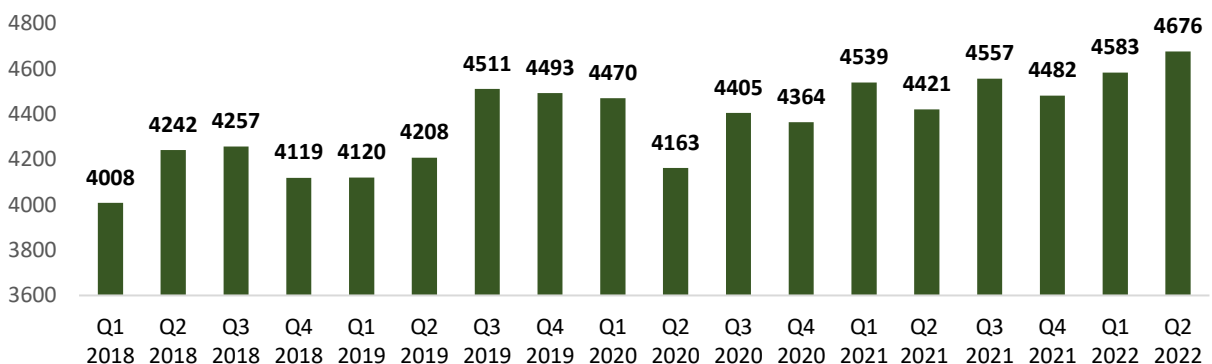
Figures 4 and 5 show individuals who are Medicaid enrollees that have been diagnosed with opioid use disorder in CC. The measure “Medicaid Enrollees with Opioid Use Disorder” reports how many Medicaid enrollees had a medical encounter during the period (quarter or year) that indicated they had an OUD 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. In 2018, the number of Medicaid enrollees with a diagnosed opioid use disorder was 7,450. The annual totals have been consistent since then, only fluctuating by approximately 200-300 people each year. Figure 5 breaks this data down into quarters, while also adding information about the first 2 quarters of 2022.

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



¹⁹Source: DataOhio: State of Ohio Integrated Behavioral Health Dashboard

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



¹⁹Source: DataOhio: State of Ohio Integrated Behavioral Health Dashboard

DRUG OVERDOSE MORTALITY – TOTAL DEATHS

Figure 6 shows CC resident deaths in 2021 (n=15,969) categorized by the six cause of death types. While 91% of residents experienced a natural cause of death, the second highest cause of death category was unintentional at 7%, representing 1,082 deaths. Figure 7 details the eight injury types that fall within the unintentional death classification; drug poisoning accounted for half (50%) of all unintentional deaths.

Figure 6. Causes of Death of Those Residing in Cuyahoga County, 2021

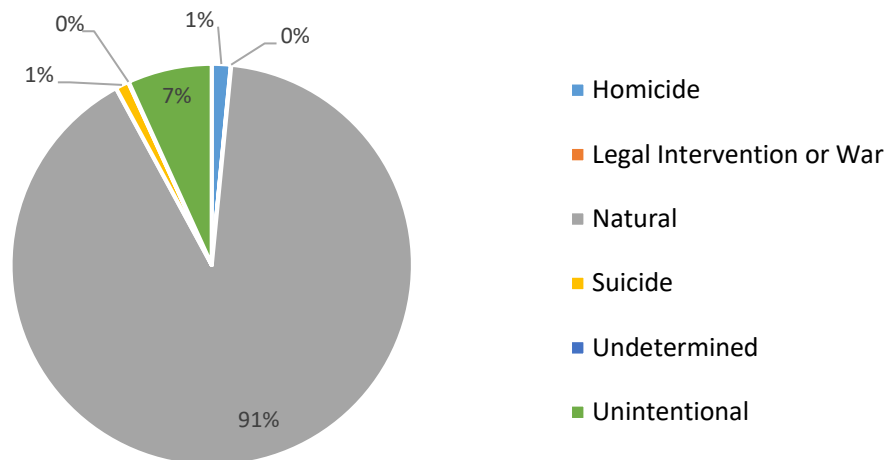
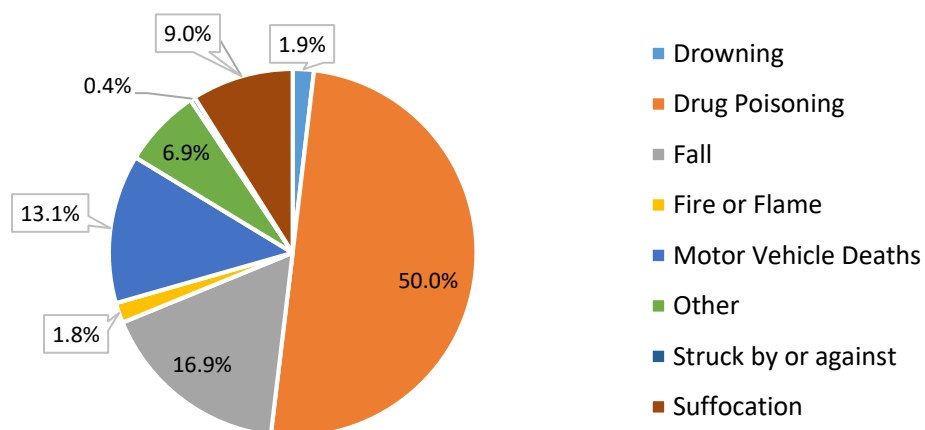
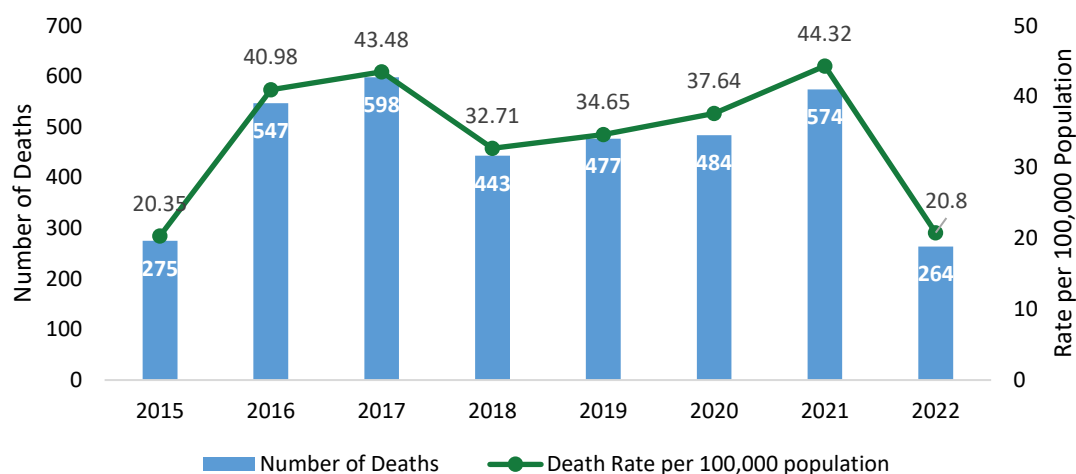


Figure 7. Causes of Unintentional Death of Those Residing in Cuyahoga County, 2021



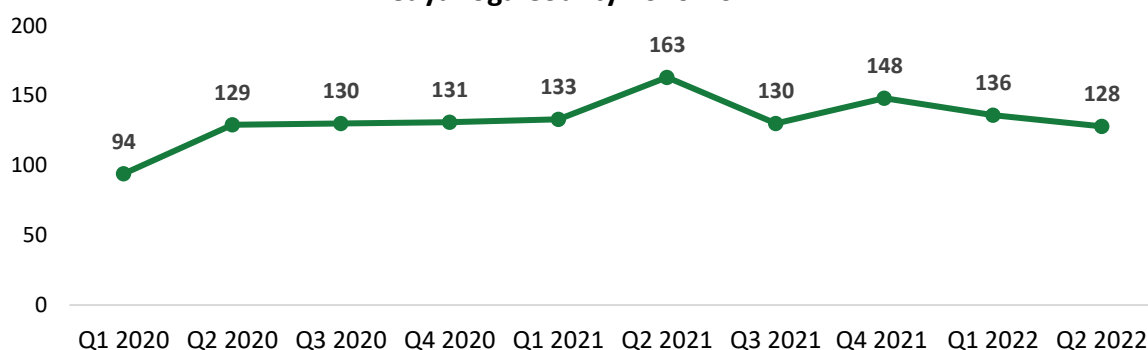
There was a 98.9% increase in unintentional drug overdose deaths (UDODs) between 2015 and 2016. This was the largest increase over a one-year period in the history of CC. The number of UDODs peaked in 2017 with a 9.3% increase from 2016. Although there was a decrease in the number and rate of UDODs in 2018, there was a slight increase in 2019 and another slight increase in 2020. 2021 data shows that there were 574 UDODs; this total exceeded the OD deaths seen in 2018, 2019, and 2020 (see Figure 8). There were 264 UDODs in the first six months of 2022; this total is less than the total UDODs in the first half of 2021, so it is expected that 2022 UDODs will slightly decline from the previous year once Vital Statistics data is finalized. When the years are analyzed by quarter, a spike in overdose deaths is apparent in quarter 2 of 2021 (see Figure 9).

Figure 8. Number and Age-Adjusted Rate of Unintentional Drug Overdose Deaths in Cuyahoga County, 2015-2022*



***2022 DATA ONLY REFLECTS THE FIRST 6 MONTHS (JANUARY 2022- JUNE 2022) OF THE YEAR THEREFORE IT IS PRELIMINARY AND INCOMPLETE**
Note: The death rates presented are age-adjusted to the 2000 U.S. standard population to allow comparisons between different populations.

Figure 9. Number of Unintentional Drug Overdose Deaths by Quarter, Cuyahoga County 2020-2022*



***2022 DATA ONLY REFLECTS THE FIRST 6 MONTHS (JANUARY 2021- JUNE 2021) OF THE YEAR THEREFORE IT IS PRELIMINARY AND INCOMPLETE**

DRUG OVERDOSE MORTALITY – DEMOGRAPHIC AND GEOGRAPHIC ANALYSES

The demographic breakdown of CC resident UDODs occurring in 2020 through mid-year 2022 are shown below in Table 9. In 2020, 2021, and the first half of 2022 35-44 year olds had the highest rate of UDODs. In 2021, more males died of UDODs than females (398 deaths vs 176 deaths respectively); this pattern also occurred in 2020 and in the first 6 months of 2022. In 2021, Non-Hispanic Blacks had a slightly higher overdose death rate than Non-Hispanic Whites. Although the overall counts of UDODs in the Hispanic population were lower than other race/ethnic groups in 2020 and 2021, this group experienced the highest rate of UDODs in both years.

	2020			2021			2022*		
Age	N	%	Rate ¹	N	%	Rate ¹	N	%	Rate ¹
<15	2	0.4	<10	-	-	-	-	-	-
15-24	24	5.0	14.3	29	5.1	17.2	13	4.9	-
25-34	109	22.5	69	92	16.0	58.2	57	21.6	-
35-44	113	23.4	71.1	145	25.3	91.3	68	25.8	-
45-54	102	21.1	51.7	136	23.7	68.9	49	18.6	-
55-64	103	21.3	62.8	124	21.6	75.6	48	18.2	-
65+	31	6.4	15.6	48	8.4	50.3	29	10.9	-
Sex									
Female	123	25.4	18.3	176	30.7	26.2	81	30.7	-
Male	361	74.6	59.4	398	69.3	65.5	183	69.3	-
Race/Ethnicity²									
Non-Hispanic Black	146	30.2	38.4	192	33.4	50.5	95	35.9	-
Non-Hispanic White	291	60.1	35.7	374	65.2	45.9	162	61.4	-
Hispanic	41	8.5	66.9	39	6.8	63.7	18	6.8	-
Race/Ethnicity and Sex²									
Non-Hispanic Black Females	42	7.8	20.2	47	5.6	22.6	22	8.3	-
Non-Hispanic Black Males	104	24.5	67.8	144	17.2	83.5	72	27.3	-
Non-Hispanic White Females	73	20.1	17.3	118	14.1	28.0	53	20.1	-
Non-Hispanic White Males	218	47.2	55.0	221	26.4	56.2	92	34.9	-
Hispanic Females	8	1.5	25.7	9	1.1	28.9	4	1.5	-
Hispanic Males	33	5.0	53.9	30	3.6	49.0	14	5.3	-
Total³	484		37.6	574		44.3	293		-
Mean Age		44.4			46.2			45.1	

*2022 DATA ONLY REFLECTS THE FIRST 6 MONTHS OF THE YEAR (JAN 2022-JUN 2022) 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.

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

Some key points include:

- Despite non-Hispanic White males representing the highest percentage of UDODs each year, non-Hispanic Black males had a higher rate of UDODs than any other group in 2020, 2021, and preliminary 2022.
- Non-Hispanic Black females had a higher rate of UDODs in 2020 when compared to non-Hispanic White females in 2020, but in 2021 this reversed with White Females experiencing a higher rate of UDODs than Black Females.
- The Hispanic female UDOD rate remained highest among the female race/ethnicity subgroups.

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 UDODs among marital status groups. The most common level of education attained for individuals that died of UDODs was a high school diploma or GED; these trends occurred in 2020, 2021, and preliminary 2022.

Table 10: Unintentional Drug Overdose Deaths by Marital Status and Education in Cuyahoga County, 2020-2022**						
	2020		2021		2022**	
Marital Status	N	%	N	%	N	%
Married	55	11.4	66	11.5	22	8.3
Divorced	114	23.6	133	23.2	65	24.6
Never Married	294	60.7	331	57.7	161	61.0
Other/Unknown	21	4.3	44	7.7	16	6.1
Education						
Less than High School	98	17.4	125	21.8	45	17.0
High School Diploma/ GED	261	53.9	288	50.2	151	57.2
Some College	66	13.6	87	15.2	34	12.9
College Degree	38	6.9	65	11.3	26	9.8
Unknown	21	4.3	9	1.6	8	3.0
Total¹	484		574		264	

****2022 DATA ONLY REFLECTS THE FIRST 6 MONTHS OF THE YEAR (JAN 2022-JUN 2022)**

¹Total includes all unintentional drug overdose deaths in Cuyahoga County

Figure 10 shows a geographical analysis of Vital Statistics death data presenting the rate of UDODs by ZIP Code. The CC ZIP Codes with the highest rates of UDODs from 2017-2021 were: 44127 and 44109. Table 11 displays the top 10 ZIP Codes with the highest rates of UDODs during this time period. The list is determined by the residential address of the decedent at the time of death."

Figure 10: Rate of Unintentional Overdose Deaths in Cuyahoga County by Residence Zip Code, 2017-2021

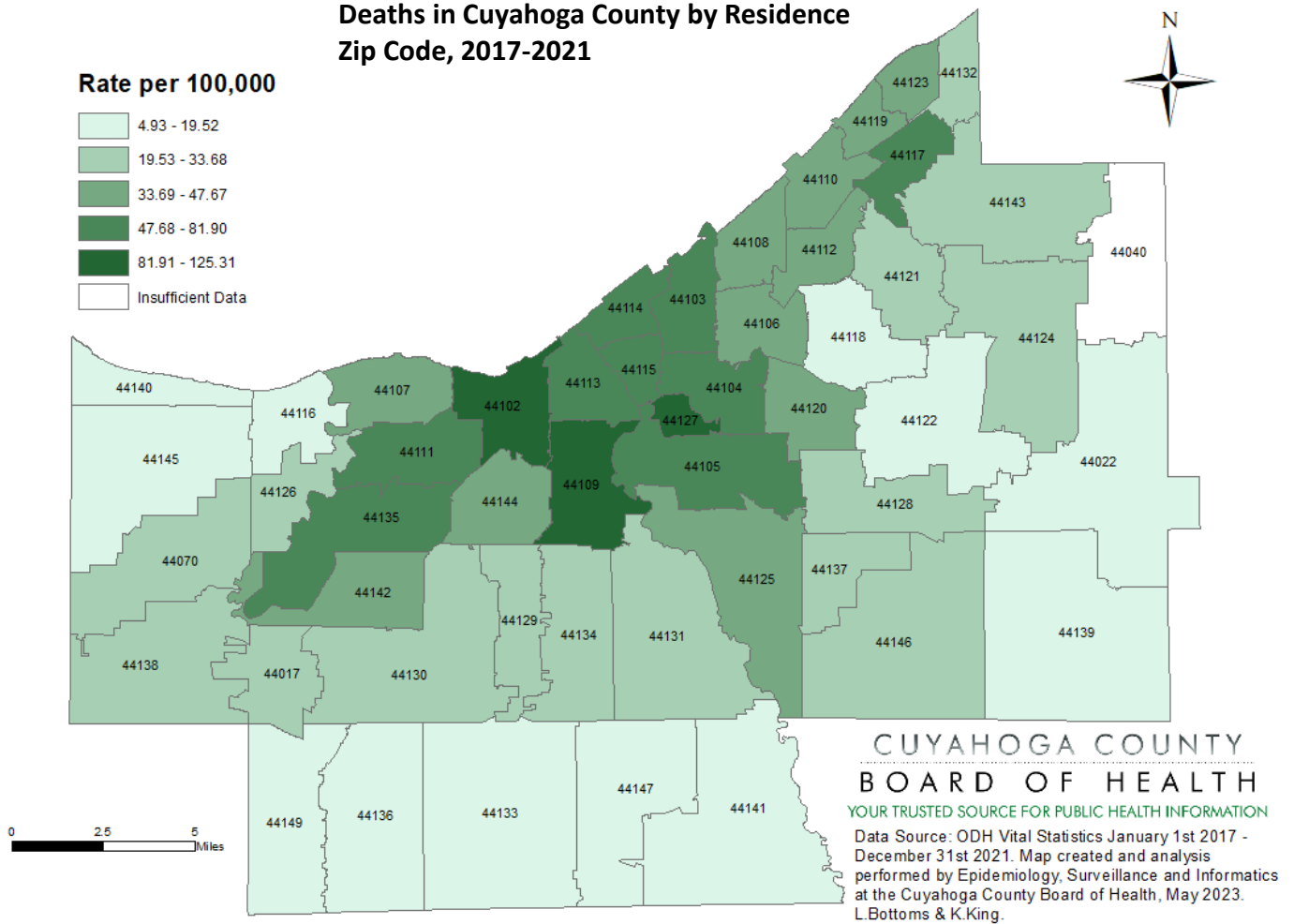


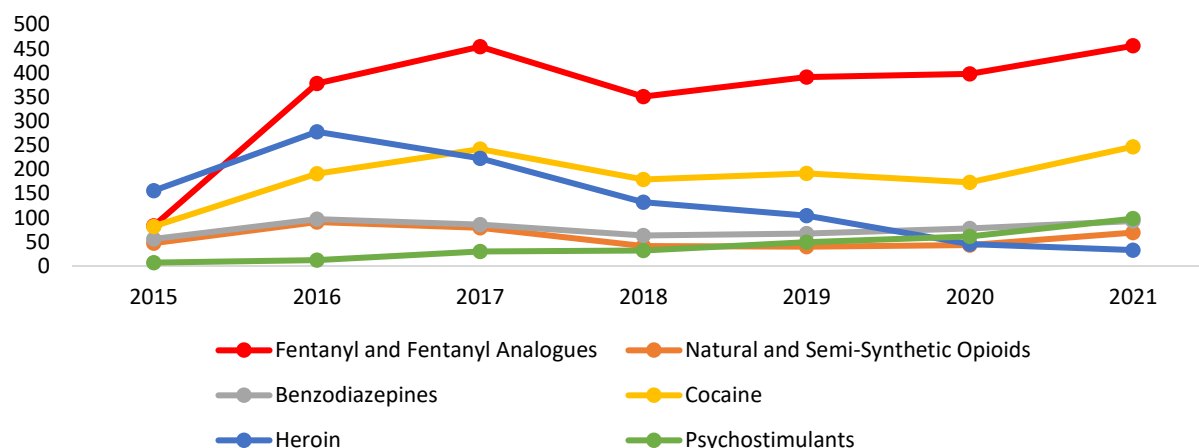
Table 11: Top 10 Zip Codes with Highest Rates of Unintentional Overdose Deaths, 2017-2021

1. 44127	6. 44101
2. 44109	7. 44111
3. 44102	8. 44114
4. 44135	9. 44103
5. 44113	10. 44105

DRUG OVERDOSE MORTALITY – DRUG TYPES

Analyses of UDODs by drug type were conducted for 2015-2021. The number of fentanyl related UDODs in CC increased 355% from 2015 to 2016; fentanyl and fentanyl analogues remained the highest contributor to UDODs through 2021. Heroin related UDODs have steadily decreased after peaking in 2016; in 2021 heroin related UDODs decreased by more than half compared to 2019. Cocaine related UDODs steadily increased from 2015 to 2017 and surpassed heroin related deaths in 2017. Although psychostimulant-related UDODs (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 2021 (see Figure 11).

Figure 11. 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.

UDODs regularly included a combination of contributing drugs. From 2020 to 2021, there was a substantial increase in deaths related to psychostimulants (primarily methamphetamine) with opioids such as fentanyl present (see Figure 12). As well as a large increase in cocaine with fentanyl present from 2020-2021.

Figure 12. Number of Unintentional Drug Overdose Deaths Involving Select Drug Combinations in Cuyahoga County, 2015-2021

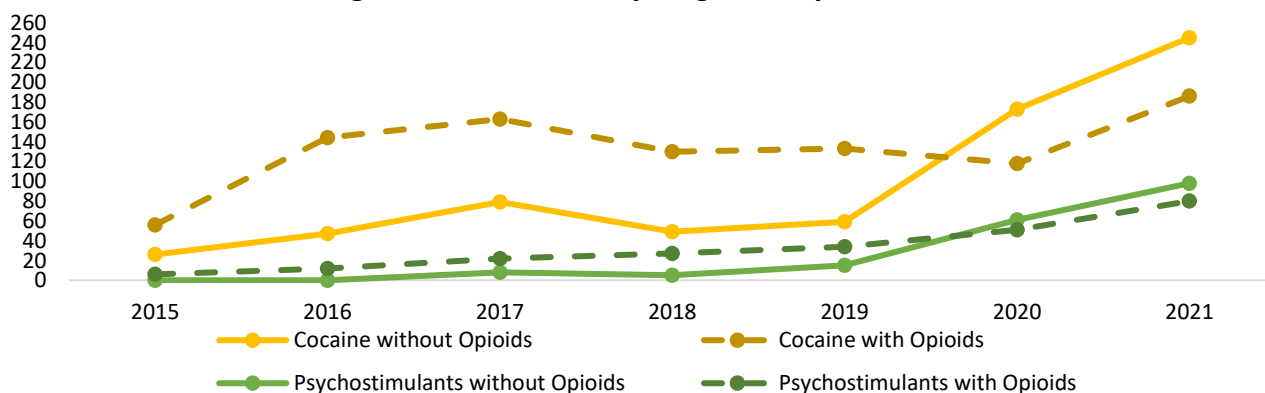
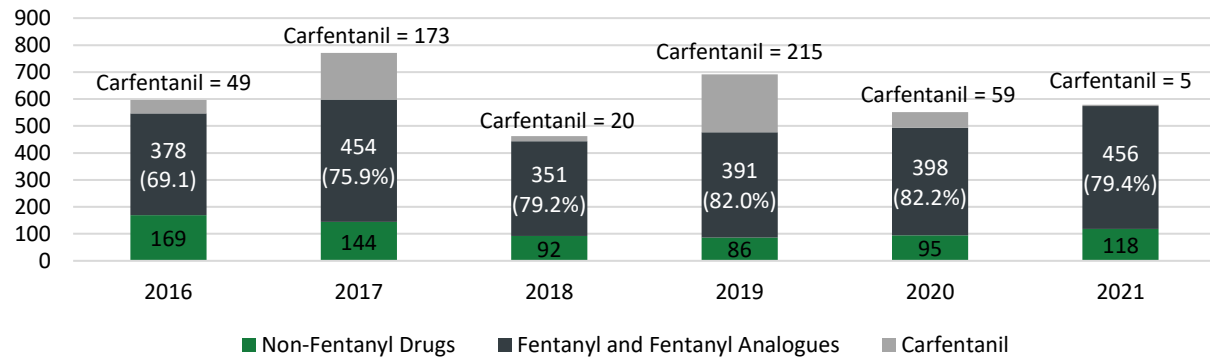


Figure 13 shows that fentanyl and fentanyl analogues continue to drive UDODs in CC, contributing to nearly 80% of UDODs in 2021, similar to the last three years. The number of UDODs related to carfentanil peaked in 2019 at 215 deaths. There was over a 70% decrease in carfentanil UDODs in 2020; this trend continued in 2021 with over a 90% decrease in carfentanil UDODs.

Figure 13. Number and Percentage of Fentanyl-Related Unintentional Drug Overdose Deaths in Cuyahoga County, 2016-2021*



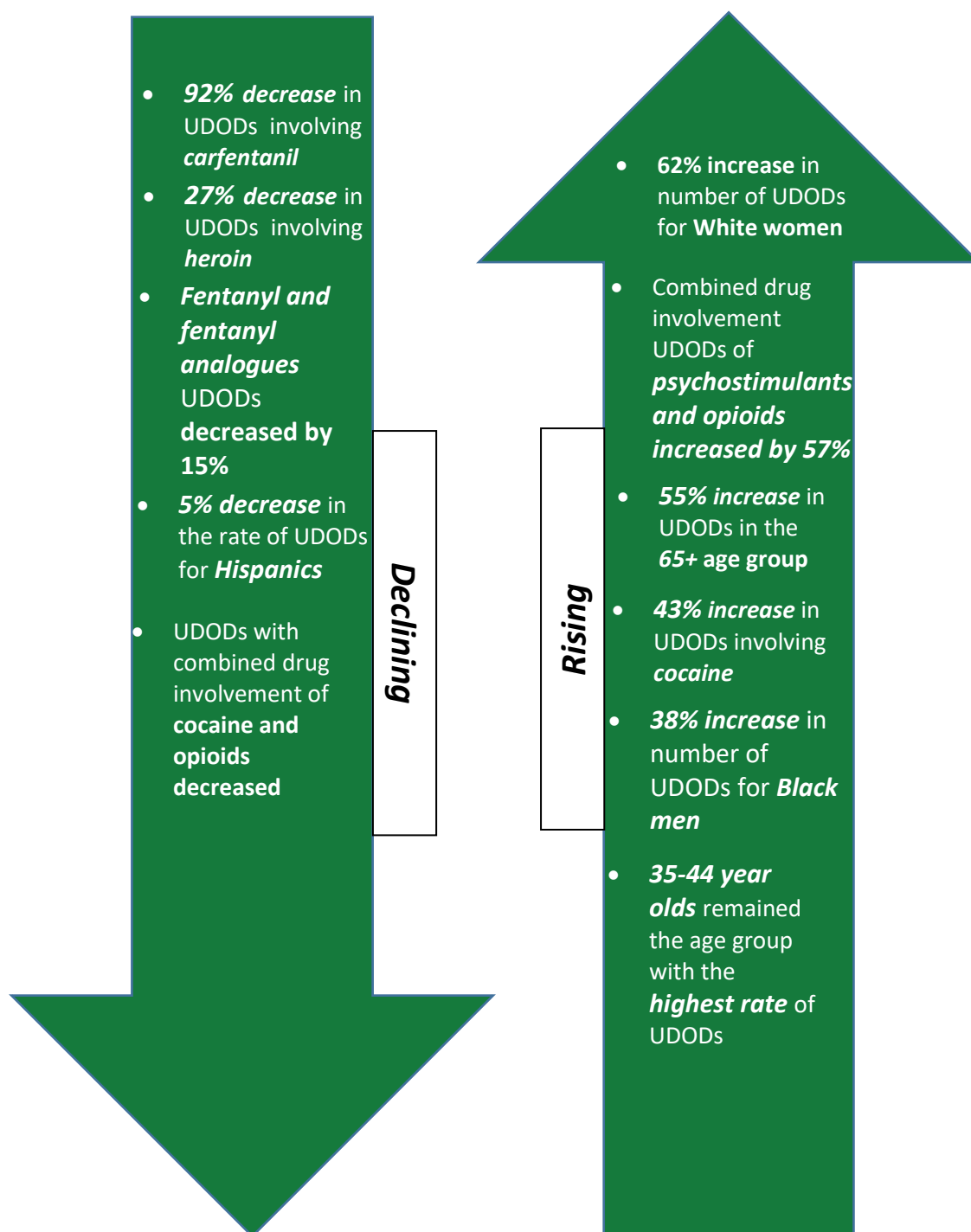
Note: Overdose death usually involve a combination of drugs. Individual deaths may be reported in more than one category.

Compared to 2021, preliminary 2022 data show similar trends in the prevalent drug type groups contributing to UDODs. Fentanyl and fentanyl analogues were the leading contributor in UDODs in 2022 followed by cocaine. Carfentanil related UDODs remained low, with only 5 deaths reported in 2021 and it is estimated that one death occurred in 2022.

DRUG OVERDOSE MORTALITY – SUMMARY

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

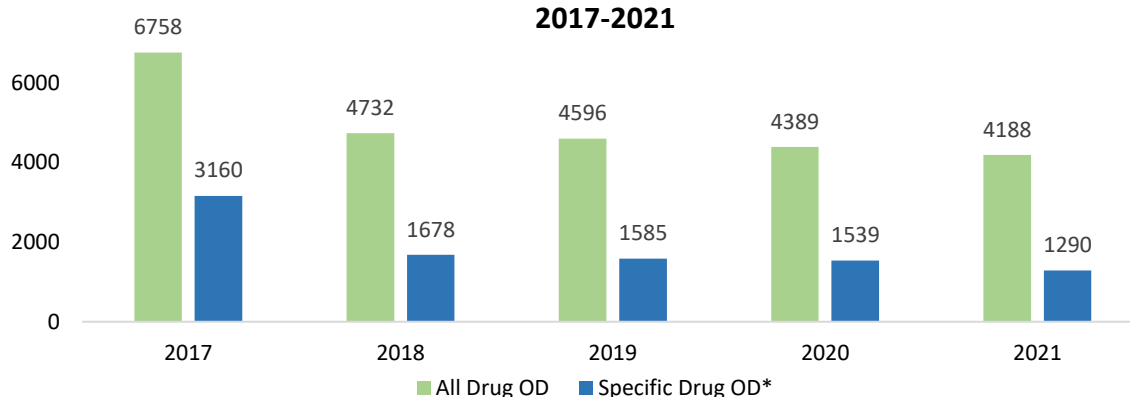
From 2020 to 2021:



DRUG OVERDOSE MORBIDITY – TOTAL EMERGENCY DEPARTMENT VISITS

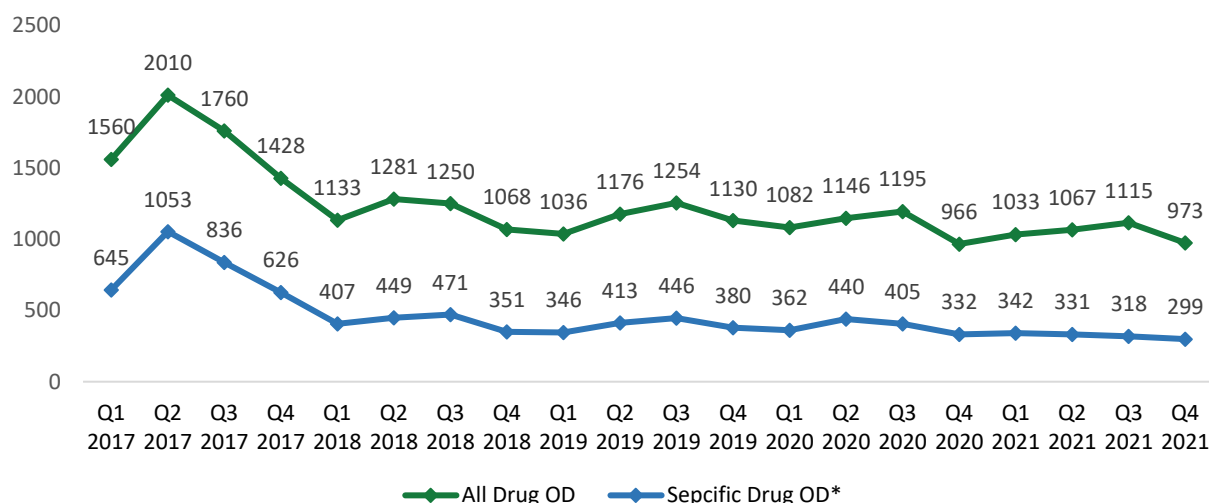
From 2017 to 2021, there were 24,663 emergency department (ED) visits for suspected drug overdoses in CC. Opioids/heroin, or stimulants, were specifically mentioned as the drug type causing overdose in 9,252 (38%) of the visits. The highest total number of ED visits occurred in 2017 with 6,758 suspected 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 slightly declined in 2019, 2020, and 2021 (Figure 14). Quarters two and three of each year (April through September) had the highest volume of ED visits every year studied, including 2021 (Figure 15).

Figure 14: Number of Emergency Department Visits for All Suspected Drug and *Specific Drug Overdoses, Cuyahoga County 2017-2021



*Specific Drug overdose (OD) 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 15: ED Visits for All Suspected Drug and *Specific Drug Overdoses by Quarter, Cuyahoga County 2017-2021



*Specific Drug overdose (OD) 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 2017-2021 occurred in the 35-49 year 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 (58.5% vs 41.5%, respectively). The same trend applied to ED visits for a suspected drug overdose involving specific drugs for males and females (68.9% vs 31.1%, respectively). Whites were more likely to visit the ED for suspected drug overdose compared to Blacks (54.1% vs 30.6%, respectively). The same trend applied to ED visits for a suspected drug overdose involving specific drugs for Whites and Blacks (61.9% vs 19.8%, respectively). The average age of a person visiting an ED for a suspected overdose was 38.4 years while the average age of a person visiting the ED for a suspected overdose involving specific drugs was 40.2 years.

Table 12: Demographics for ED Visits Due to All Drug Overdose and Specific Drug Overdose, Cuyahoga County 2017-2021				
	2017-2021 ED Visits – All Drug Overdose		2017-2021 ED Visits – Specific Drug Overdose*	
Age Group	N	(%)	N	(%)
<12	986	4.0	61	0.7
12-17	1,164	4.7	63	0.7
18-24	3,048	12.4	824	8.9
25-34	6,325	25.7	2,934	31.7
35-49	6,856	27.8	3,049	32.9
50-64	4,363	17.7	1,794	19.4
65+	1,921	7.8	527	5.7
Total	24,663	100	9,252	100
Sex	N	(%)	N	(%)
Male	14,420	58.5	6,372	68.9
Female	10,237	41.5	2,878	31.1
Total	24,663	100	9,252	100
Race	N	(%)	N	(%)
White	13,331	54.1	5,732	61.9
Black	7,539	30.6	1,828	19.8
Other	1,789	7.2	721	7.8
Unknown	2,004	8.1	971	10.5
Total	24,663	100.0	9,252	100.0
Mean and Median Age of ED Visits – All Drug Overdose				
Mean	38.4	Median	36.0	
Mean and Median Age of ED Visits – Specific Drug Overdose				
Mean	40.2	Median	37.0	

2020-2021 Demographic Breakdown: The demographic breakdown of ED visits related to drug overdose and specific drug overdose for 2020 and 2021 show a similar pattern as the aggregate 2017-2021 data (see Figures 16-18). Collectively, the greatest number of drug overdoses occurred among White males, ages 35-49 years.

2020-2021 Demographic Breakdown – All Drug Overdose: Noted trends for ED visits related to all drug overdose from 2020 to 2021 include: the distribution by age group was relatively stable from 2020 to 2021, all age groups experienced a very slight decrease in ED visits, except for the 65+ age group which experienced a minor increase in visits in 2021 compared to 2020; the proportion of ED visits by White persons decreased while the proportion of ED visits by Black persons increased; the percentages of visits for males and females remained stable from 2020 to 2021.

2020-2021 Demographic Breakdown – Specific Drug Overdose: Noted trends for ED visits related to specific drug overdose from 2020 to 2021 include: the under 25, 25-34, and 35-49 age groups remained steady from 2020 to 2021 while the 50-64 age groups decreased during that time frame and the 65+ age group experienced an increase; visits among Whites decreased (67.4% vs 64.3%) while Blacks (24.0% vs 24.3%) and Other races (10.1% vs 10.9%) increased slightly; the percentage of visits for males and females remained stable from 2020 to 2021.

Figure 16: Percentage of ED Visits for Overdose by Age, Cuyahoga County 2020-2021

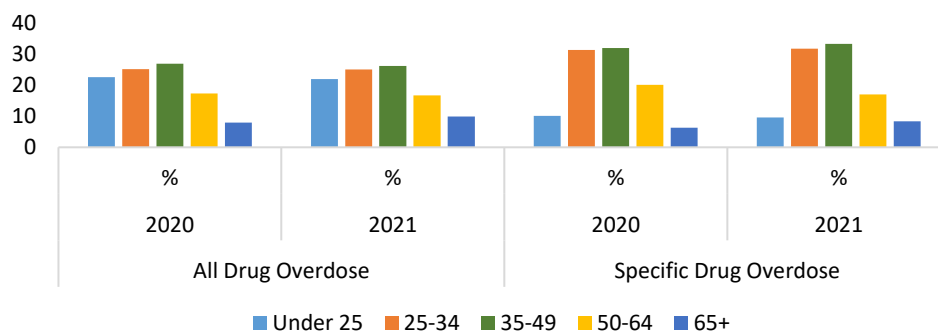


Figure 17: Percentage of ED Visits for Overdose by Race, Cuyahoga County 2020-2021

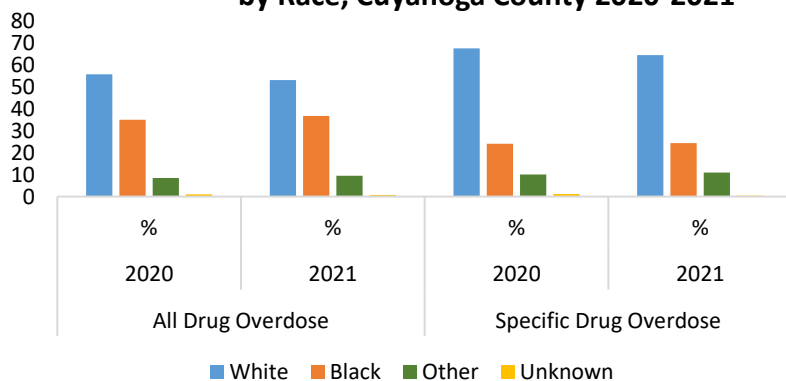
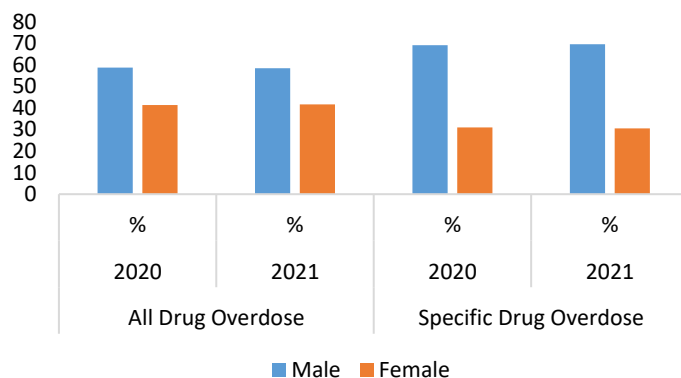


Figure 18: Percentage of ED Visits for Overdose by Sex, Cuyahoga County 2020-2021

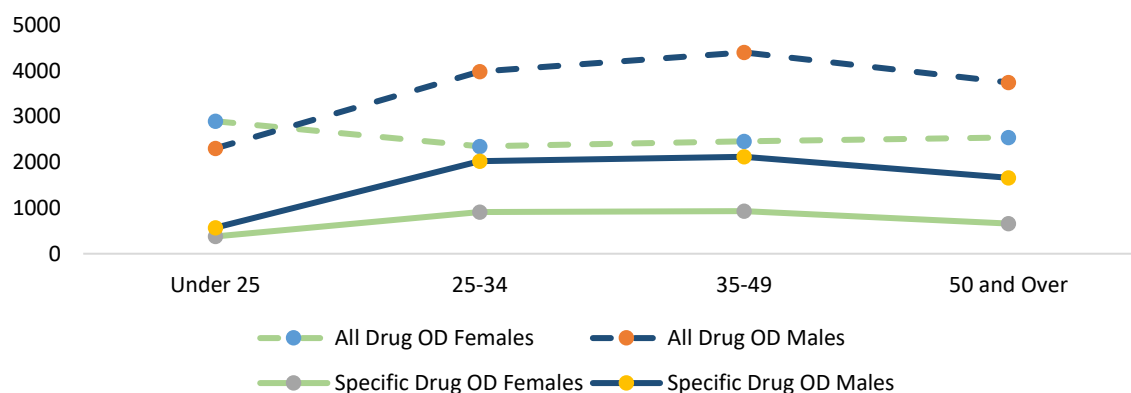


Additional analyses by age, sex and race for 2017-2021 visits to the ED for all suspected drug overdoses and specific drug overdoses are shown in Figures 19-20.

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 19).

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 25-34 male age group had the highest number of ED visits due to specific drug overdose with 2,025 ED visits. The 25-34 and 35-49 female age groups reported a similar number of ED visits (909 and 931 respectively), accounting for the highest numbers of ED visits for specific drug overdose for females (see Figure 19).

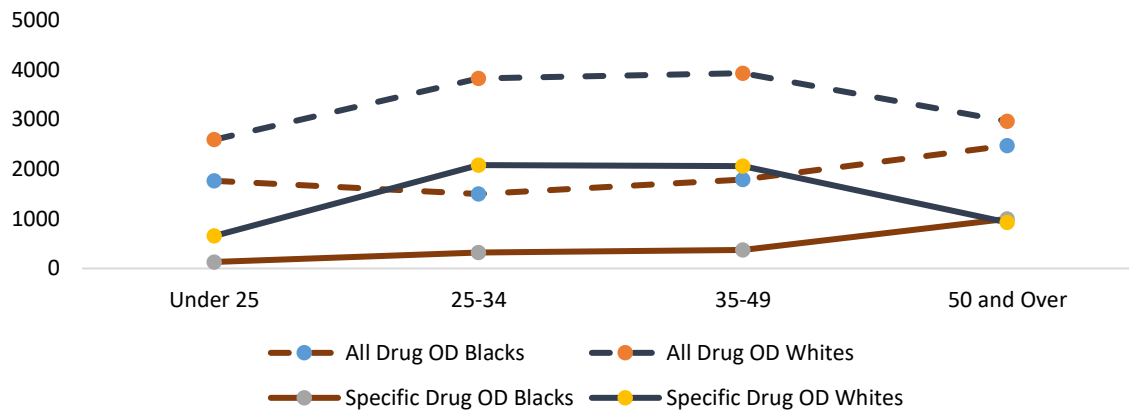
Figure 19: Number of All Drug and Specific Drug Overdose ED Visits by Age and Sex, Cuyahoga County 2017-2021



Race and Age Breakdown – All Drug Overdose: Whites had a higher number of all drug overdose ED visits than Blacks in all age groups. Whites had the highest number of ED visits due to all drug overdose in the 35-49 age group with 3,937 and the 25-34 age group with 3,831 visits. Blacks had the highest number of ED visits in the 50 and over age group with 2,479 visits followed by the under 25 age group with 1,769 visits (see Figure 20).

Race and Age Breakdown – Specific Drug Overdose: Whites had a higher number of specific drug overdose ED visits than Blacks in all age groups except the 50 and over group. Whites had the highest number of ED visits due to specific drug overdose in the 25-34 age group (2,084 visits) and 35-49 age group (2,062 visits). For Blacks, ED visits for specific drug overdose were highest among the 50 and over age group (1,001 visits) and 35-49 age group (374 visits) (see Figure 20).

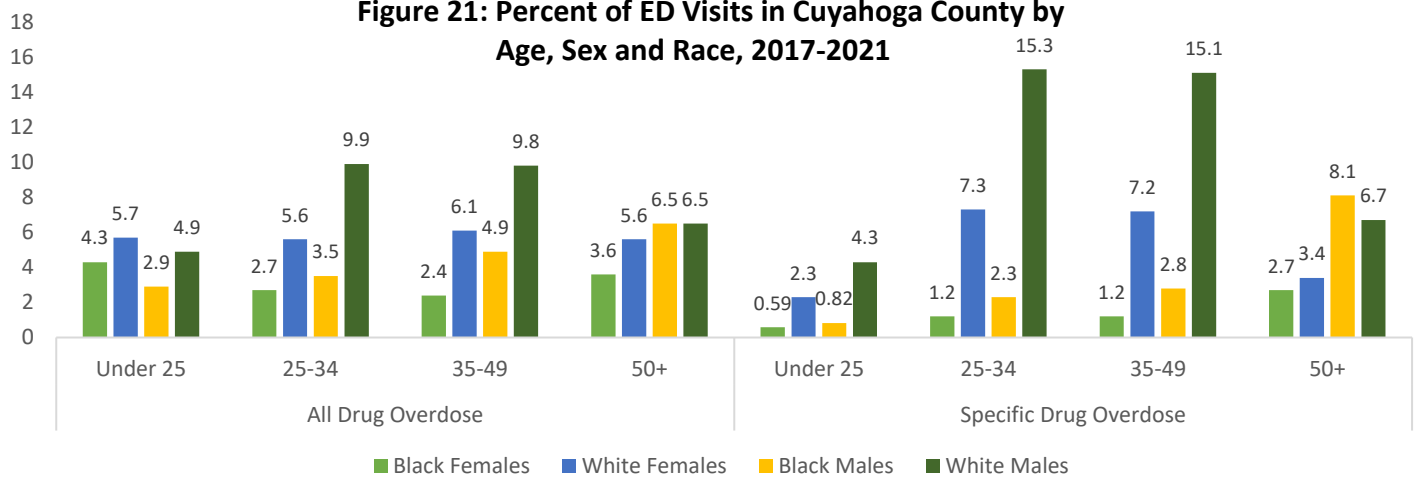
Figure 20: Number of All Drug and Specific Drug Overdose ED Visits by Age and Race, Cuyahoga County 2017-2021



Sex, Age and Race Breakdown – All Drug Overdose: Figure 21 demonstrates 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 drug overdose. For persons under 25, White females had the highest prevalence of ED visits (5.7%) and for persons 50 and over, both Black males and White Males had the highest prevalence of ED visits (6.5%). Black females had the lowest prevalence of ED visits for all drug overdose in all age categories except Black males experienced the lowest prevalence in the under 25 age group.

Sex, Age and Race Breakdown – Specific Drug Overdose: For ED visits due to specific drug overdose, White males had the highest prevalence of ED visits in all age groups except persons 50 and over, which was led by Black males (see Figure 21).

Figure 21: Percent of ED Visits in Cuyahoga County by Age, Sex and Race, 2017-2021



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 2017-2021 by age, sex and race. 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. White males had the highest rates in the 25-34 age category. 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 category only (see Table 13).

Age-Specific Rates with Sex and Race Breakdown – Specific Drug Overdose: Age-specific rates for ED visits due to specific drug overdose in 2017-2021 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).

Table 13: Age-Specific Rates for ED Visits for All Drug and Specific Drug Overdose, Cuyahoga County 2017-2021								
	All Drug Overdose				Specific Drug Overdose			
	Black Females	White Females	Black Males	White Males	Black Females	White Females	Black Males	White Males
Under 25	102.9	92.0	68.6	76.0	5.3	17.2	7.5	25.0
25-34	68.4	76.9	117.8	134.3	11.8	37.4	29.1	77.4
35-49	68.2	85.8	175.3	139.2	13.1	37.7	38.1	80.2
50 and Over	39.3	22.6	97.8	31.8	11.2	5.2	45.9	12.3

Rates per 100,000 population

Geographic Analysis: Figure 22 shows a geographical analysis of EpiCenter data presenting the number of ED visits due to all drug overdose by ZIP Code for 2017-2021. The CC ZIP Codes with the highest number of ED visits due to all drug overdose were 44109 and 44102.

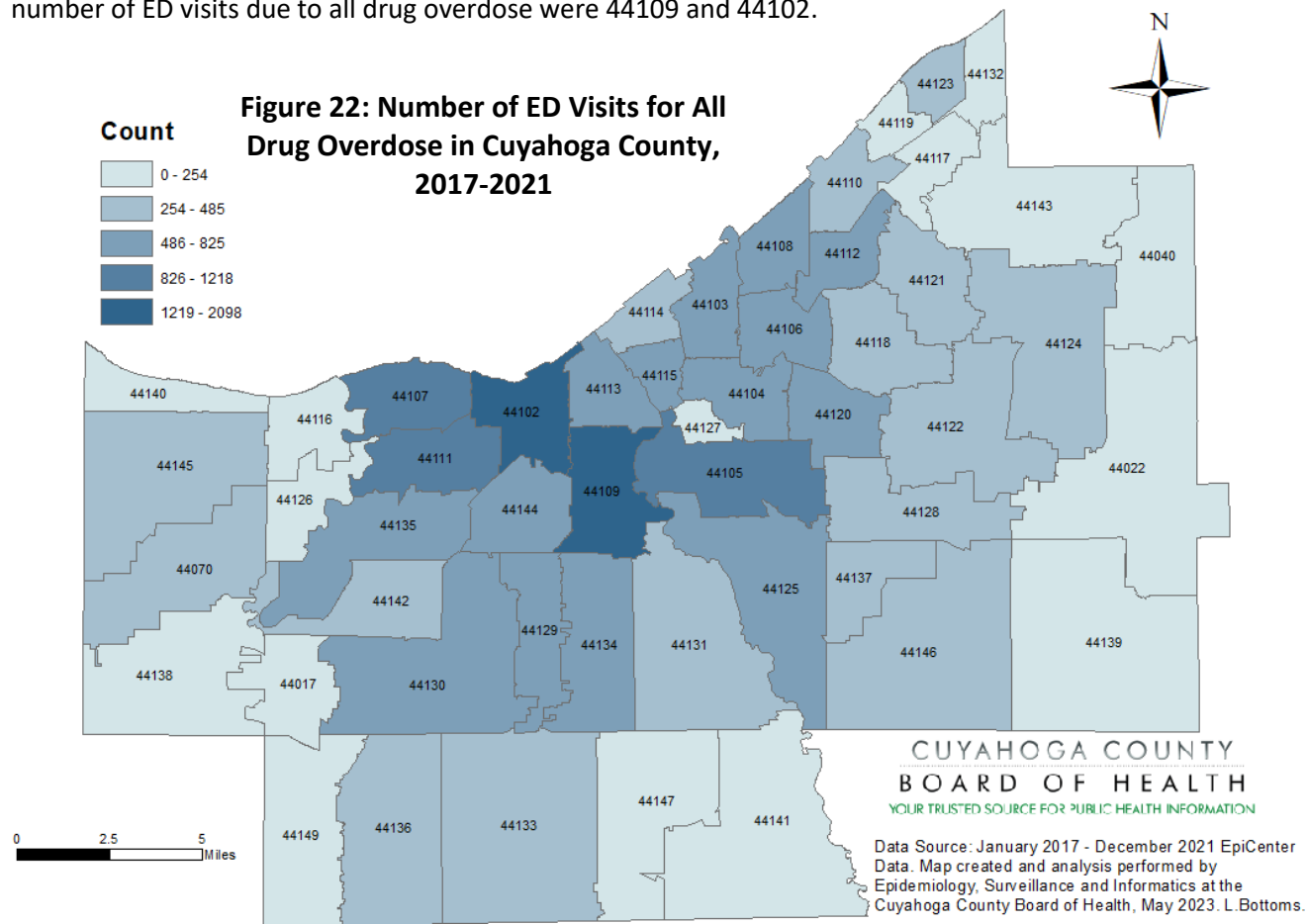


Table 14: Top 10 Zip Codes for ED Visits, 2017-2021	
All Drug	Specific Drug
1. 44109	1. 44109
2. 44102	2. 44102
3. 44111	3. 44111
4. 44105	4. 44105
5. 44107	5. 44107
6. 44130	6. 44130
7. 44135	7. 44125
8. 44134	8. 44115
9. 44129	9. 44103
10. 44104	10. 44104

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

2022 At-A-Glance and Epi-Alerts: Fewer ED visits related to suspected drug overdose occurred in 2022 compared to 2021 in CC based on preliminary data (see Table 15). In 2022, there were 3,939 ED visits for all drug overdose and of those visits, 1,288 (32.7%) were categorized as specific drug overdose. May represented the month with the highest number of ED visits for all drug overdoses in 2022, similar to 2021. Trends by age, sex and race in 2022 preliminary data are similar to those observed in 2021 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: 2021 and 2022				
	All Drug		Specific Drug	
	2021	2022*	2021	2022*
January	316	291	109	100
February	334	262	102	69
March	383	303	131	104
April	336	309	112	87
May	409	371	123	122
June	322	336	96	128
July	376	358	120	107
August	383	362	105	135
September	356	341	93	119
October	356	358	111	118
November	309	327	96	97
December	308	321	92	102
Total	4,188	3,939	1,290	1,288

*2022 data are preliminary and subject to change

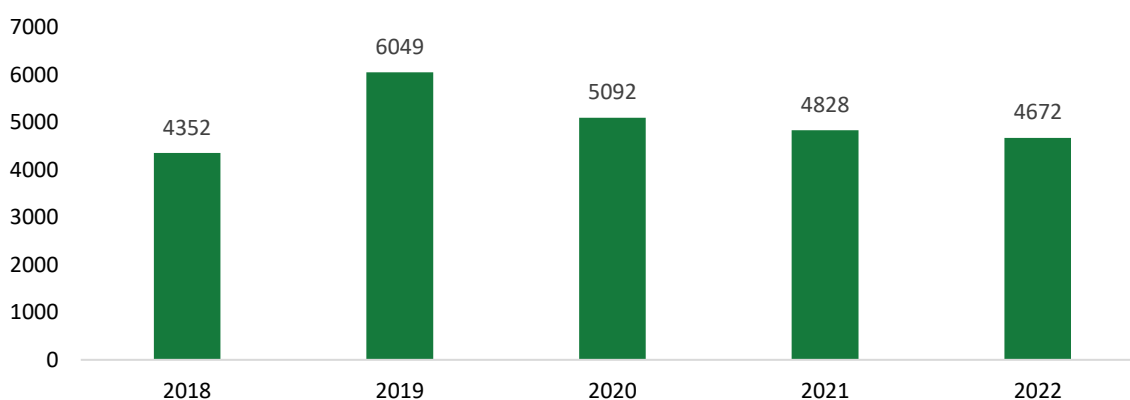
Lastly, a total of four Epi-Alerts occurred in 2022 (see Table 16), one per quarter. Epi-Alerts are administered when there is a spike in the number of ED visits for suspected drug overdoses. A spike occurs when the number of ED visits is greater than expected by four standard deviations in a 24-hour period. This number of alerts matches 2019 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, 2019-2022				
Q1	Q2	Q3	Q4	
2019				
2/13/2019	4/8/2019	7/11/2019	8/31/2019	
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

DATA OVERDOSE MORBIDITY – EMERGENCY MEDICAL SERVICES NALOXONE ADMINISTRATION

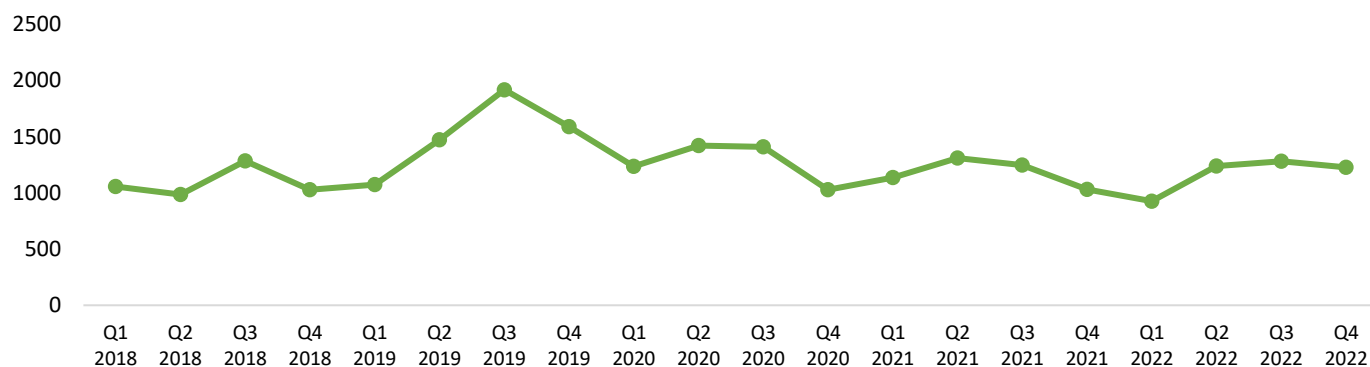
Between 2018 and 2022, there were 24,993 doses of naloxone administered by EMS providers in CC as reported by EMSIRS. The highest total naloxone doses administered occurred in 2019 with 6,049 doses (see Figure 23). From 2018 to 2019, there was a 40% increase in the number of naloxone administrations, followed by a 16% decrease in 2020 and continued slight decreases annually through 2022. Naloxone administrations by quarter from 2018-2022 are shown in Figure 24.

Figure 23: EMS Naloxone Administrations in Cuyahoga County, 2018-2022*



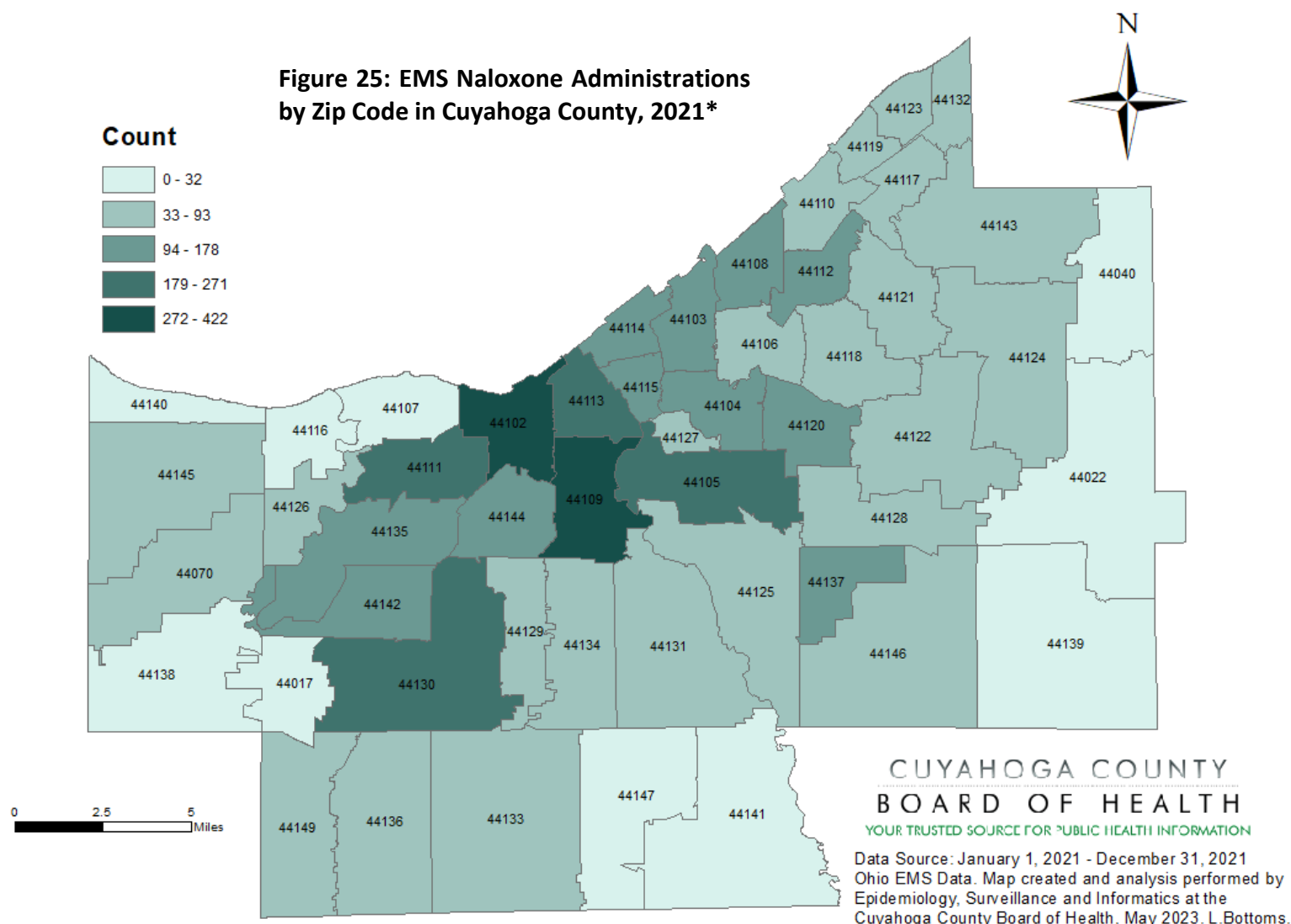
*2022 data are preliminary and subject to change

Figure 24: EMS Naloxone Administrations by Quarter in Cuyahoga County, 2018-2022*



*2022 data are preliminary and subject to change

Figure 25 represents a geographical analysis of EMS data showing the number of naloxone administrations by resident ZIP Code in CC. In 2021, the areas with the highest number of naloxone administrations were in the following ZIP Codes: 44109, 44102, 44105, 44111 and 44130. These ZIP Codes had 200 or more naloxone administrations, with the highest being over 422 administrations in 44109. Compared to 2020, ZIP Code 44130 moved into the top five and 44135 dropped out of the top five.

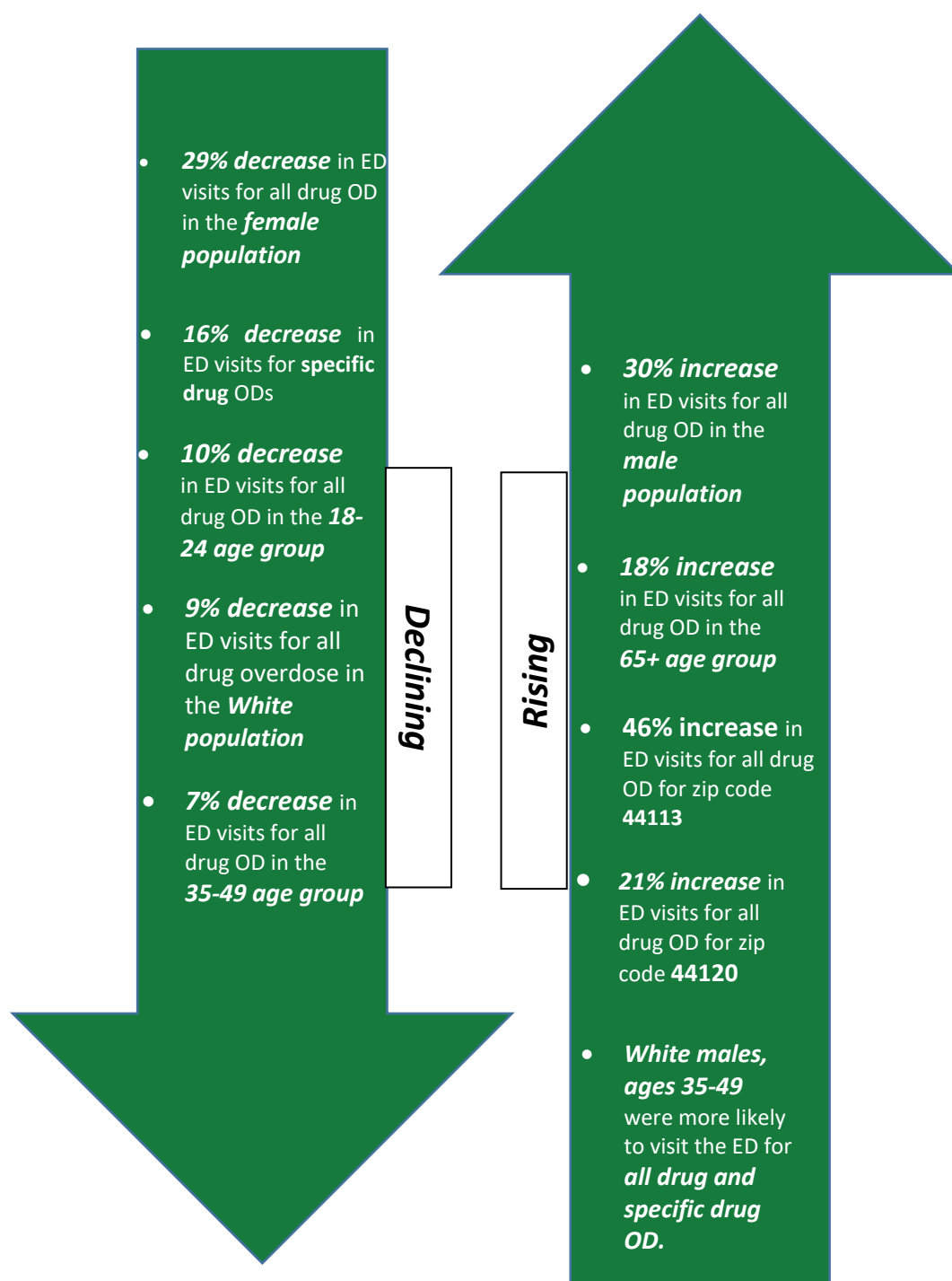


*Not all EMS agencies report to EMSIRS. The accuracy of data reported to EMSIRS is limited by the number of individual EMS agencies submitting data and the accuracy of these submissions.

DRUG OVERDOSE MORBIDITY – SUMMARY

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

From 2020 to 2021:



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 2021 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 2021 DOIEP.
- ❖ A similar pattern was seen in ED visits due to specific drug overdose:
 - White females and males had higher age-specific rates in the under 50 age groups while Black females and males had higher age-specific rates in the 50 and over age group for ED visits.
- ❖ 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, 44111, 44105 and 44107. These are the same zip codes of concern reported in the 2021 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 (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 by the drug overdose in Cuyahoga County. In 2021, 50% of unintentional deaths in Cuyahoga County were due to drug overdose. Recent trends show that males were consistently more likely to die from an UDO and visit the ED for a suspected drug overdose than females. In 2020, non-Hispanic Black males had the highest rate of UDOs; this trend also followed in 2021. Although the Hispanic population experienced a slight decrease in UDOs from 2020 to 2021, this race/ethnic population still had the highest rate of UDOs compared to the White or Black population. Vital statistics data also showed that 80% of all UDOs involved fentanyl and/or fentanyl analogues. ED data suggest that targeted interventions should prioritize Black males 35 and older, young to middle age white males, and Black females under 25.

Naloxone distribution is one of many major resources that is used to combat opioid overdose-related deaths in Cuyahoga County. Geographic analyses of Vital Statistics, EpiCenter, and EMS naloxone administration data were able to be conducted. Top ZIP Codes in EpiCenter ED visit data and EMS naloxone administration data were similar (e.g., 44109, 44102, 44111, 44105). The top ZIP Codes for unintentional overdose deaths in Cuyahoga County include 44127, 44109, and 44102. Based on these findings, harm reduction resources could be increased in these areas for improved prevention. We hope that this comprehensive report drives further discussion and direction to identify and assist populations at risk for drug overdoses.

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