Poisoning Death Review Report
Montgomery County, 2021

Public Health – Dayton & Montgomery County
Prepared by Epidemiology Section
Published August 5, 2022

Contents

Executive Summary **4**
Number of Drug Overdose Deaths 4
Demographics 4
Health 5
Criminal History 5
Circumstances 5
Drugs Present in Toxicology Screen 5

Introduction **6**
Poisoning Death Review 6
Methodology 6
Overdose Fatality Review 6

Overdose Trends **7**
Overdose Deaths by Year 7
Overdose Deaths by Month 7

Demographics **8**
Sex 8
Race 9
Race and Sex 10
Age 11
Education 11
Marital Status 12
Occupation 12
Insurance 12

Health **13**
Physical Illness 13
Mental Illness 13
Substance Abuse and Prior Overdoses 13

Criminal History **14**
Lifetime Criminal History 14
Criminal Justice System Contact 14

Incident Information **15**
Location of Overdose Death 15
Alone at the Time of Overdose 15
Route of Administration 15
Recent Time Reported in a Facility and/or Sober 15
Naloxone Administration 15

Drugs Involved in Overdose Deaths **16**
Most Common Drugs in Toxicology Screens 16
Opioids 17
Prescription Opioids 18
Heroin 19
Illicit Fentanyl 19
Fentanyl Analogues 20
Cocaine 21
Methamphetamine 21
Marijuana 22
Antidepressants 22
Benzodiazepines 23
Gabapentin 24
Alcohol 24

Drug Mentions by Demographics and Health Status **25**
Demographic Attributes 25
Health Status 28
Physical Health 28
Mental Health 29
Prior Overdose Hospital Visits 30

Location **31**
Incident of Overdose 31
County of Residence 33
Zip Code of Residence 35

Appendix I: Data Tables **37**
Demographic Attributes 37
Health 38
Substance Abuse and Drug Overdose 39
Criminal History 40
Incident 41
Drug Mentions 42
Opioids 42
Prescription Opioids 43
Fentanyl Analogs 43
Cocaine 44
Marijuana 45
Antidepressants 46
Methamphetamine 47
Benzodiazepines 48
Alcohol 50
Gabapentin 51
Antihistamines/Sleep Aids 52
Drug Mentions by Demographic Attributes 53
Drug Mentions by Health Condition 55

Appendix II: Figures and Tables **56**
Table of Figures 56
Table of Tables 57

Executive Summary

337

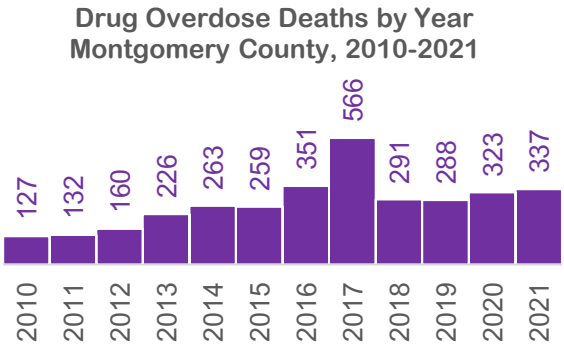
Number of Drug Overdose Deaths that Occurred in Montgomery County in 2021

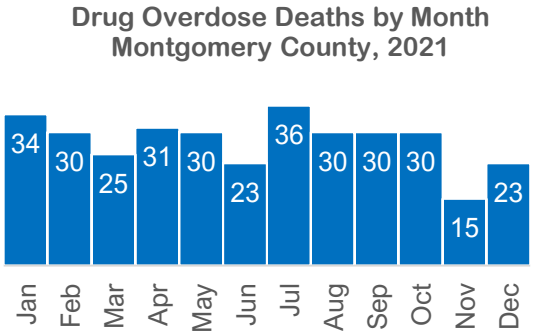
The Poisoning Death Review report provides an overview of accidental drug overdose deaths occurring in Montgomery County. The tables and charts that follow provide information on the number of deaths, the drugs involved, and information about individuals who died from a drug overdose.

This report is accompanied by an Overdose Fatality Review (OFR) addendum that summarizes information from interviews with friends and family members of individuals who died of an overdose. The OFR addendum also provides information on the Key Findings and Recommendations developed by the OFR Committee.

Number of Drug Overdose Deaths

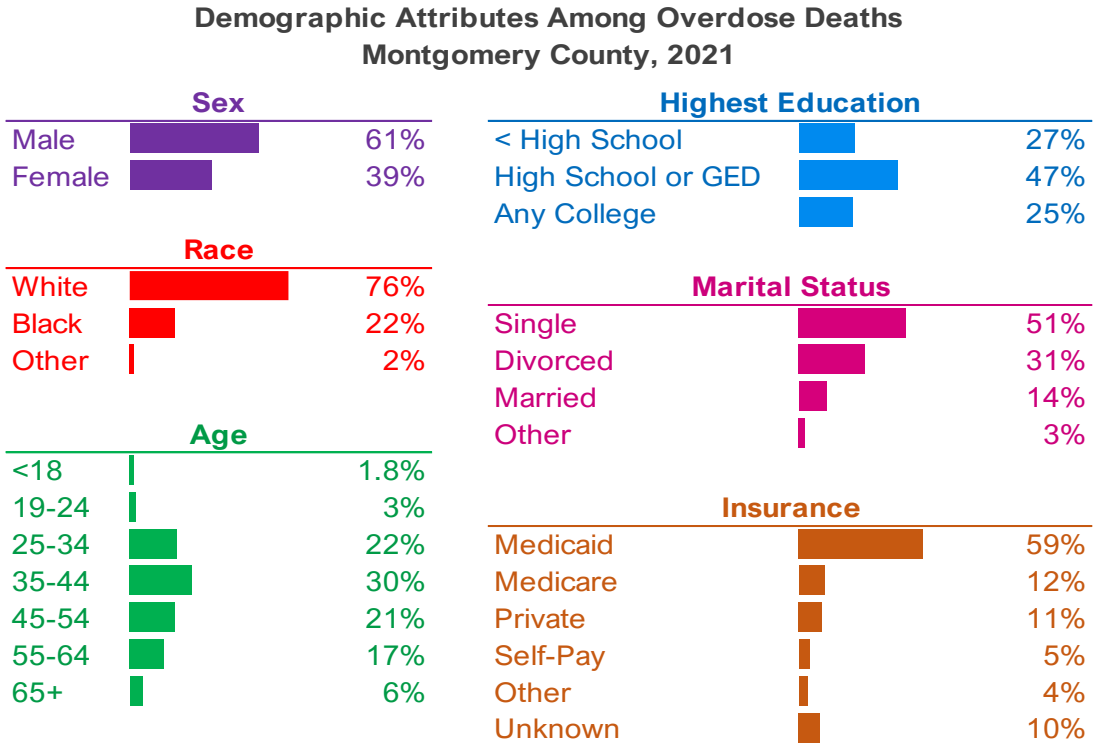
- In 2021, there were 337 drug overdose deaths in Montgomery County, a 4.3% increase from 323 in 2020. July had the highest number of overdose deaths with a total of 36.





Demographics

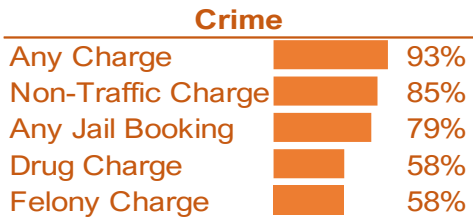
Demographic attributes of the 337 individuals who died of an overdose are below. The most common demographic characteristics were male, White, between the ages of 35 and 44, a high school diploma or GED but no college, single, and receiving Medicaid.



Health

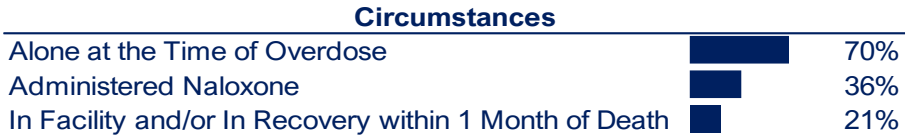
- 93% of individuals who died of a drug overdose in 2021 had a reported substance abuse history.
- 45% had a prior hospital visit for an overdose. This is an increase from prior years.
- 88% of individuals had a reported physical illness. The three most common health problems were hypertension (46%), heart disease (38%), and obesity (35%).
- 58% had a reported history of mental health problems. The most common illnesses were anxiety (47%) and depression (35%).

Criminal History



- 93% of individuals had a prior criminal charge in Montgomery County or a county nearby.
- 47% had an interaction with the criminal justice system within one year of death. This is a decrease from prior years.

Circumstances

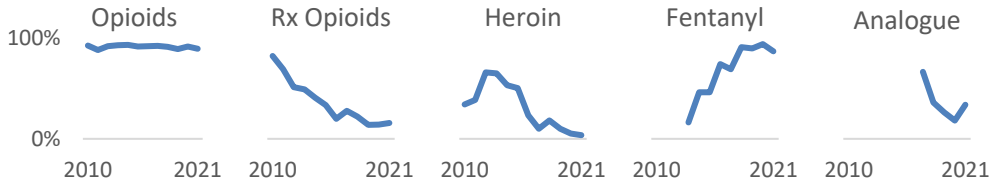


- 70% of individuals were alone when they overdosed.
- 36% of individuals received naloxone.
- 15% were reported to be either in jail or a treatment facility within one month of death. Seven percent were reported to be in recovery and abstaining from use within one month of death.

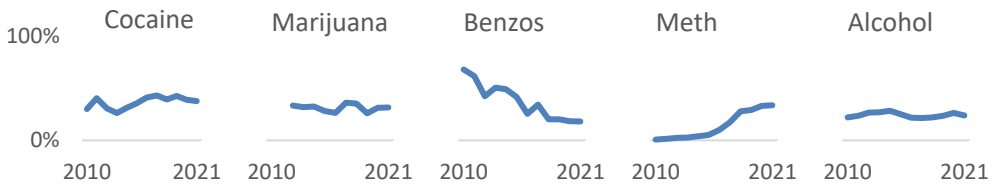
Drugs Present in Toxicology Screen

- 89% of overdose deaths had opioids present in the toxicology screen. Illicit fentanyl was the most common opioid.
- Cocaine, marijuana, and methamphetamine were the most common non-opioids in 2021.

- Between 2010 and 2021, the percent of deaths involving any opioid remained stable.
  - The percent involving a prescription opioid declined.
  - The percent involving heroin increased between 2010 and 2012 before declining.
  - The percent involving illicit fentanyl increased through 2020.
  - The percent involving illicit analogues declined between 2017 and 2020 before increasing in 2021.



- Between 2010 and 2021, the percent of deaths involving cocaine, marijuana, and alcohol remained relatively stable.
  - The percent involving benzodiazepines decreased.
  - The percent involving methamphetamine increased.



Introduction

Poisoning Death Review

The Poisoning Death Review report uses information from the Montgomery County Coroner's Office, the Ohio Department of Health, the local hospital system, and the criminal justice system to provide the community with an overview of data regarding the life and death of individuals who died of a drug overdose. This report provides demographic and health characteristics, as well as information on the circumstances of death and substances used for all individuals who died of a drug overdose that occurred in Montgomery County in 2021.

Methodology

The Montgomery County Coroner's Office collects data on suspected and confirmed accidental drug overdoses that occurred within Montgomery County and shares this data with Public Health on a weekly basis. When cases have been finalized, the Coroner's Office provides Public Health with a complete list of cases as well as autopsy findings, results from toxicology screens, and investigator's notes.

The drug overdose data from the Coroner's Office are linked with the most recent mortality data provided by the Ohio Department of Health (ODH), including a range of demographic information. Public Health staff then review the Coroner's report and investigator's notes to record physical and mental illness, circumstances of death, and substances found in the toxicology screen.

Data relating to hospital visits are provided by Ascend Innovations Inc., a partner of the Greater Dayton Area Hospital Association. Through a grant from the Bureau of Justice Assistance, Ascend provides de-identified hospital data to Public Health regarding insurance, mental and physical health, diagnoses of a substance use disorder, and prior overdose hospital visits.

Criminal history is collected from JusticeWeb, a portal that aggregates information from criminal justice agencies. Police incident reports are reviewed when available. Population data are obtained from the American Community Survey (2016-2020 5-year estimates), administered by the United States Census Bureau. Death rates are calculated per 100,000 residents; counts of Montgomery County residents dying from an overdose are derived from ICD-10 codes in death data from ODH. Because all death investigations in Ohio for 2021 have not yet been finalized, ODH classifies data for 2021 as partial and incomplete as of the writing of this report.

Overdose Fatality Review

Public Health formed an Overdose Fatality Review Committee, modeled after Child Fatality Review Committees already in existence, to better inform prevention efforts. Such teams are in practice in many counties in Ohio and across the country. They can identify and champion efforts to help decrease the number of overdose deaths in Montgomery County. Using aggregate data and deidentified case narratives, the committee develops recommendations to reduce the incidence of overdose deaths that are shared with the Community Overdose Action Team for implementation. More information is available in the 2021 Overdose Fatality Review addendum that accompanies this report.

Overdose Trends

Overdose Deaths by Year

Three hundred thirty-seven (337) accidental drug overdose deaths occurred in Montgomery County in 2021; this a 4.3% increase from 2020 when there were 323 deaths.

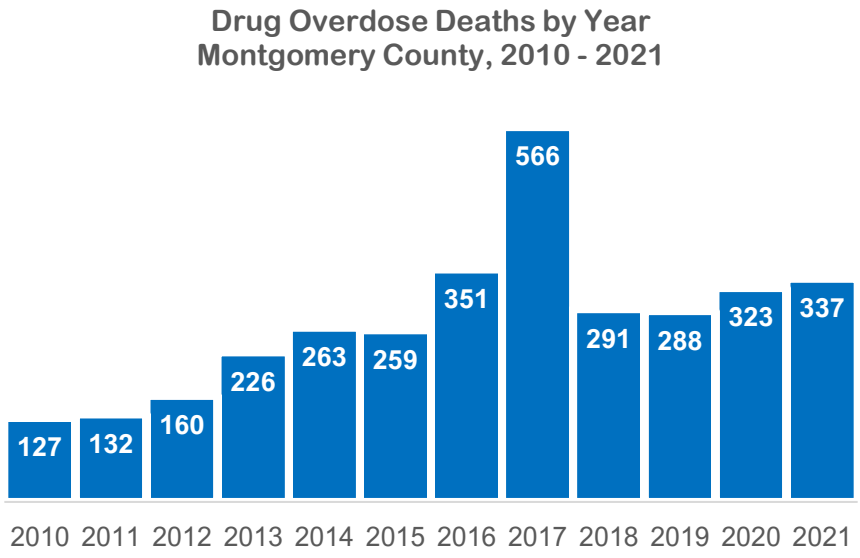


Figure 1: Overdose Deaths in Montgomery County by Year, 2010-2021

Overdose Deaths by Month

The number of overdose deaths in Montgomery County decreased beginning in June of 2017, reaching a low of 14 in March 2018. In 2021, the number of deaths per month ranged from 15 in November to 36 in July.

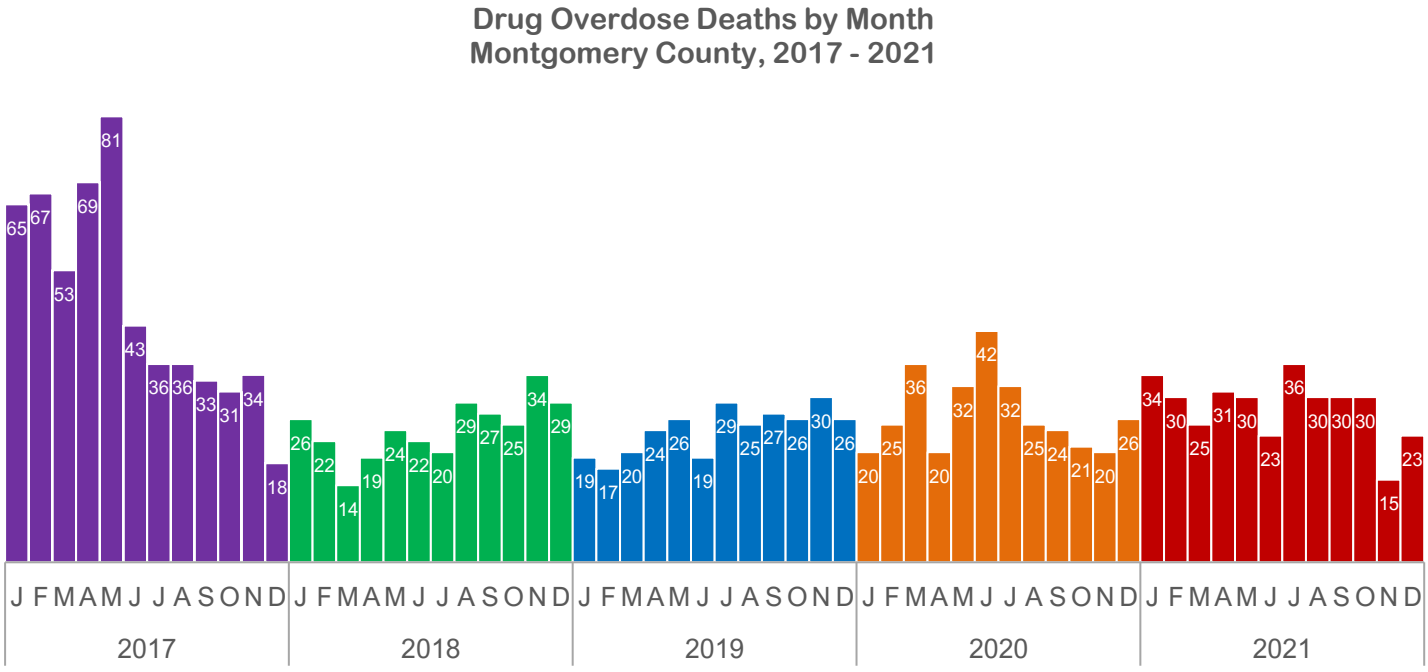


Figure 2: Overdose Deaths in Montgomery County by Month, 2017-2021

Demographics

Sex

In 2021, 61% (207 of 337) of individuals who died of an overdose in Montgomery County were male; 39% (130) were female.

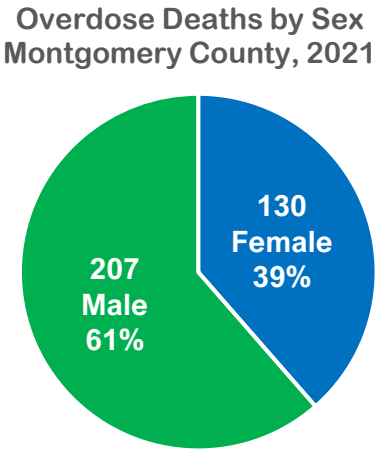


Figure 3: Overdose Deaths in Montgomery County by Sex, 2021

The proportion of individuals who died from an overdose who were women increased 14% between 2020 and 2021 (from 34% to 39%).

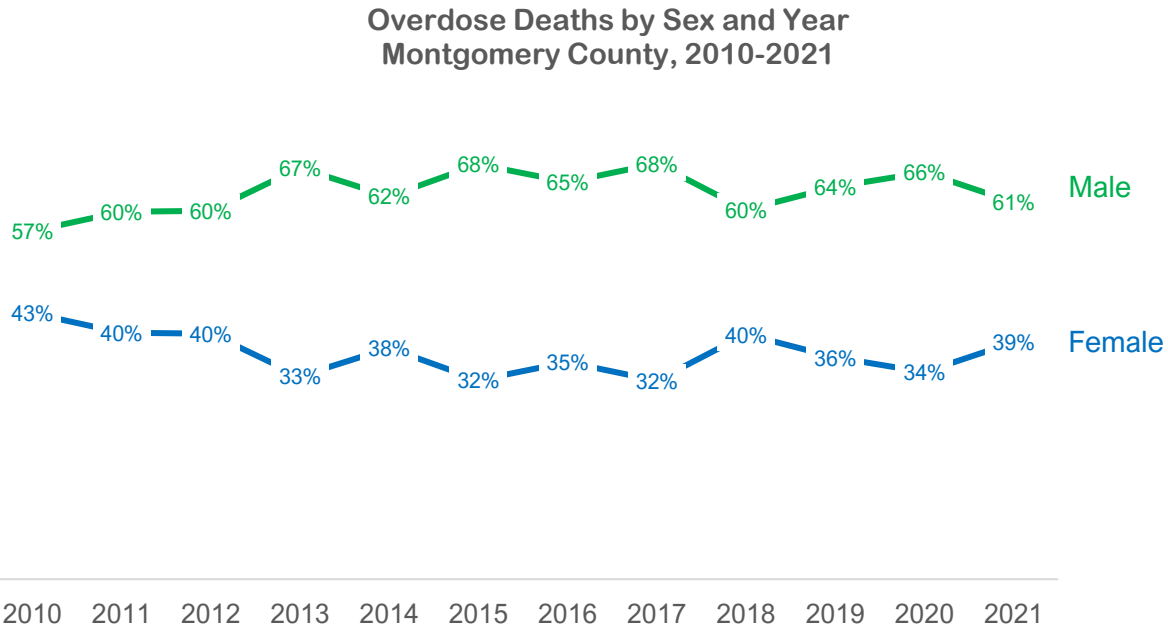


Figure 4: Overdose Deaths in Montgomery County by Sex and Year, 2010-2021

Race

Whites accounted for 76% (256 of 337) of overdose deaths that occurred in Montgomery County in 2021; 22% of individuals were Black.

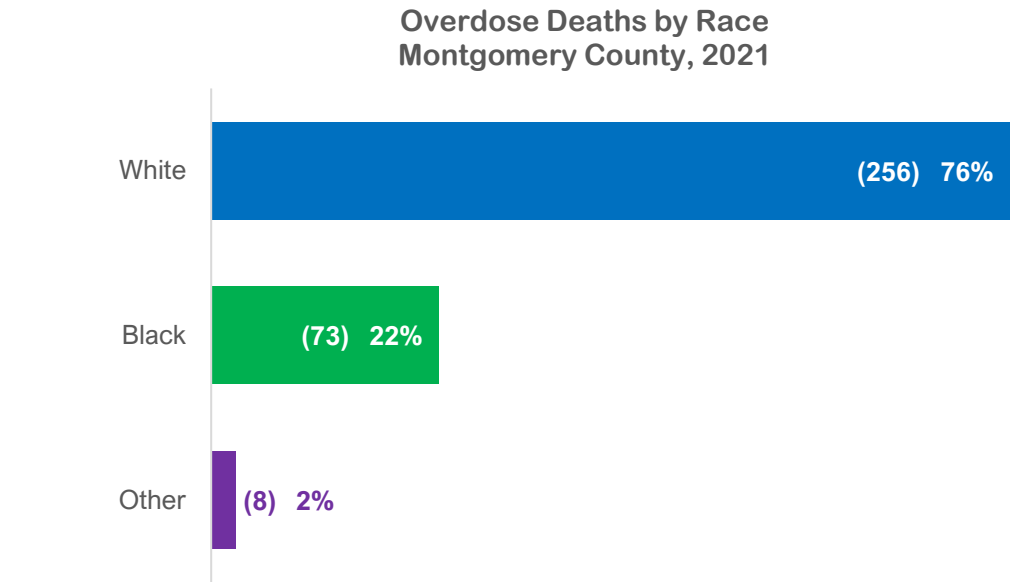


Figure 5: Overdose Deaths in Montgomery County by Race, 2021

The proportion of individuals who died from an overdose who were Black decreased 21% (from 28% to 22%) between 2020 and 2021, returning to the proportion they represented in 2019.

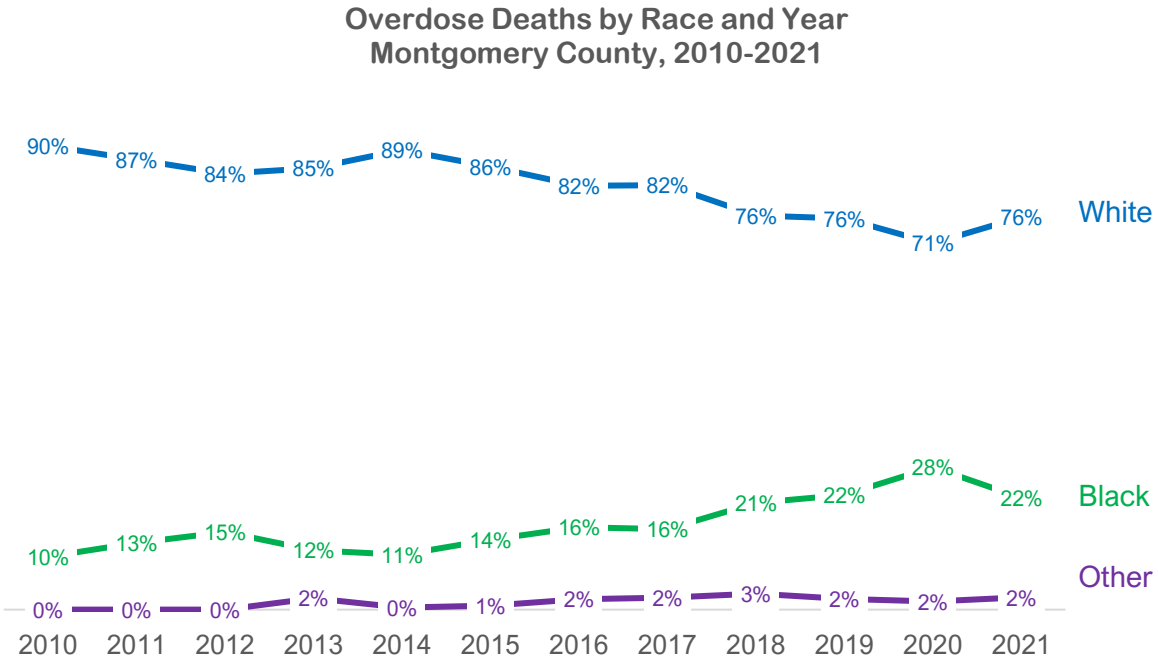
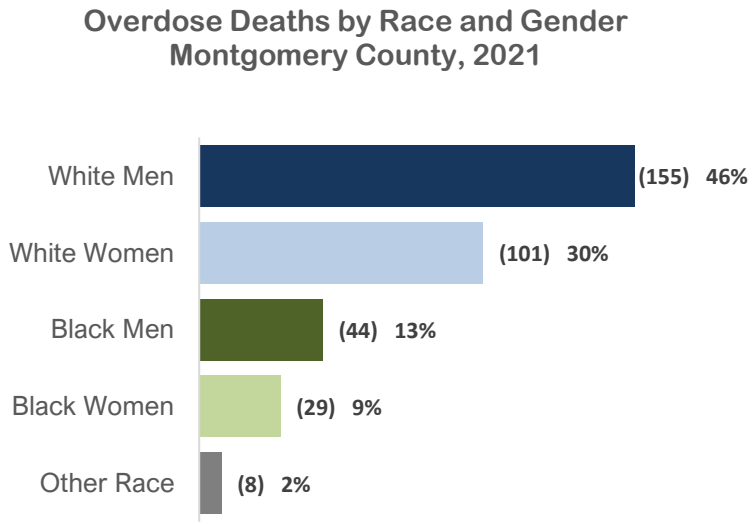


Figure 6: Overdose Deaths in Montgomery County by Race and Year, 2010-2021

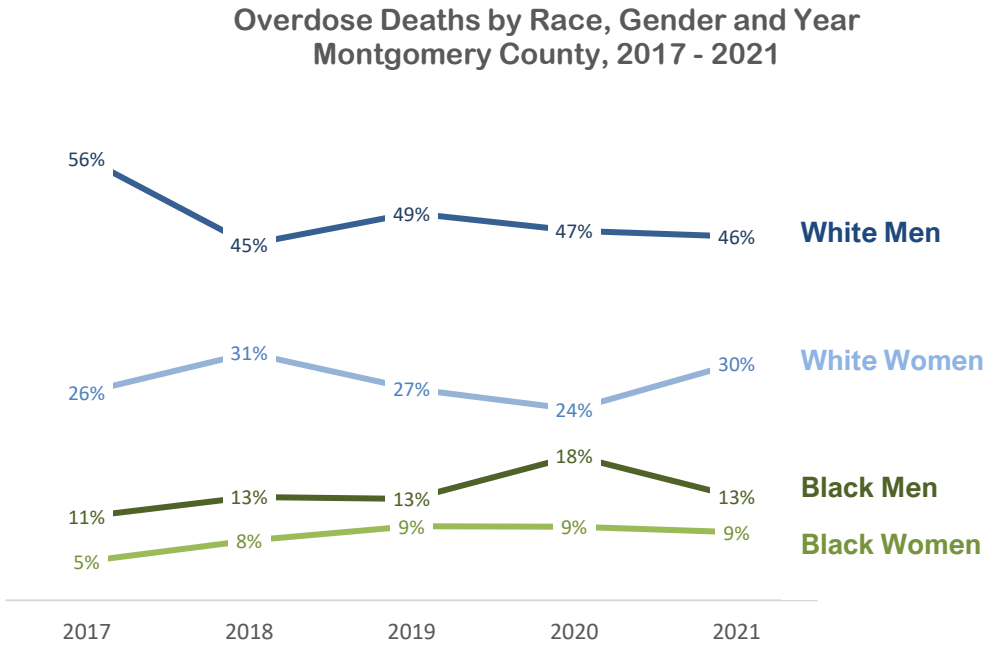
Race and Sex

White men accounted for 46% of overdose deaths in 2021, followed by White women who comprised 30% of overdose deaths.



Black Men

Black men accounted for 13% (44 of 337) of overdose deaths in 2021. This is a decrease from 2020, when 18% of overdose deaths were among Black men. The rate in 2020 represented an increase from prior years.



Age

The most common age group among individuals who died of a drug overdose in 2021 was 35-44 years, accounting for 30% (101 of 337) of all overdose deaths. The next most common age group was 25-34 years, at 22% (75) of deaths. This is consistent with prior years. The median age was 42, a slight increase from 40 in 2017 and 41 between 2018 and 2020.

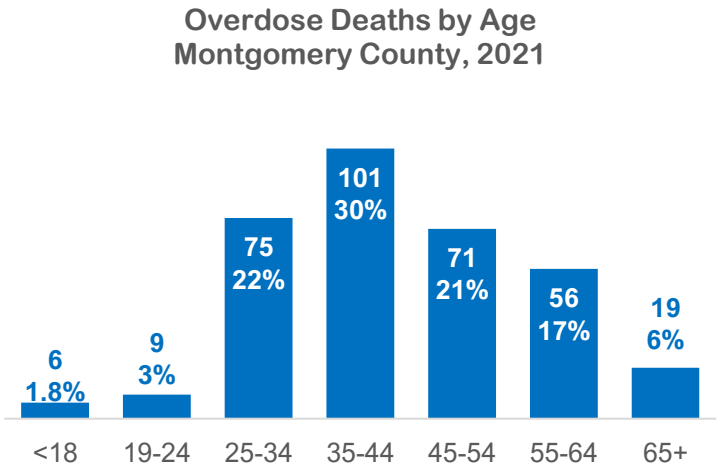


Figure 7: Overdose Deaths in Montgomery County by Age, 2021

Education

Forty-seven percent (47%) of individuals who died of an overdose had a high school diploma or GED but no college education (158 of 337). Twenty-seven percent (27%) had less than a high school education and 25% had any college education. This is consistent with prior years.

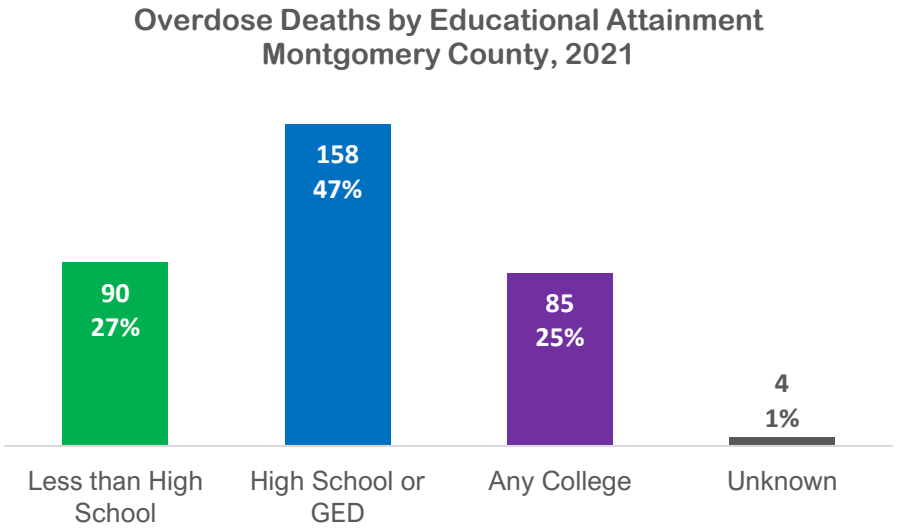


Figure 8: Overdose Deaths in Montgomery County by Educational Attainment, 2021

Marital Status

Fifty-one percent (51%) of individuals who died of an overdose were single, 31% were divorced, and 14% were married. The percent of individuals who were divorced increased from 24% in 2020 to 31% in 2021.

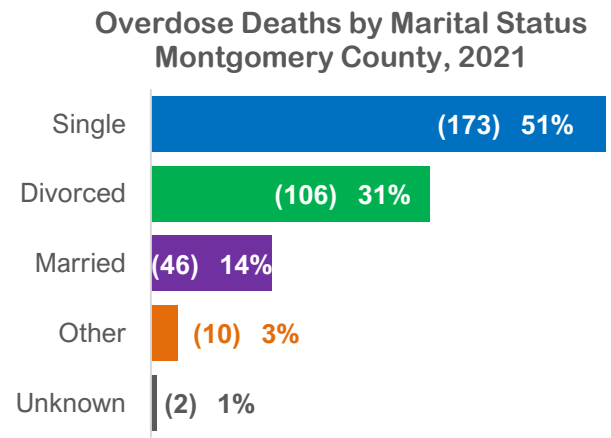


Figure 9: Overdose Deaths in Montgomery County by Marital Status, 2021

Occupation

The most common occupation listed on a death certificate was labor (35%), followed by service (20%) and healthcare (7%). Nine percent (9%) were listed as unemployed; an additional 12% had no occupation listed on their death certificate and may also have been unemployed. Between 2020 and 2021, the percent with a labor occupation declined from 41% to 35%.

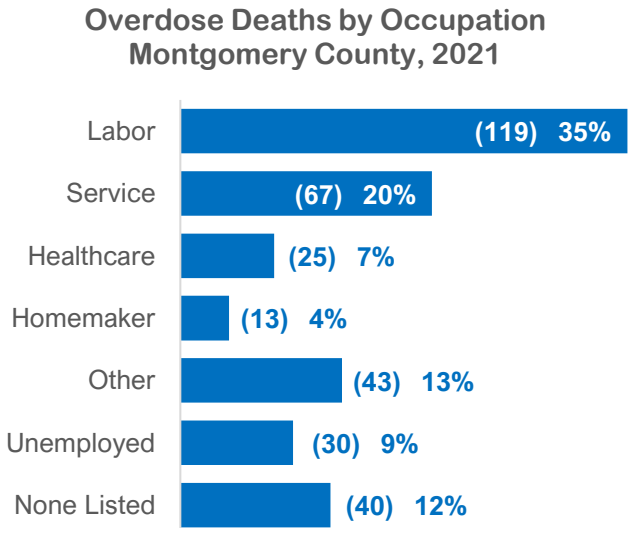


Figure 10: Overdose Deaths in Montgomery County by Occupation, 2021

Insurance

Of the 337 individuals who died of an overdose, 59% paid for their most recent visit with Medicaid, 12% with Medicare, 11% with commercial insurance, and 5% were self-pay/uninsured. Ten percent (10%) did not have a visit at an area hospital between 2016 and the date of death.

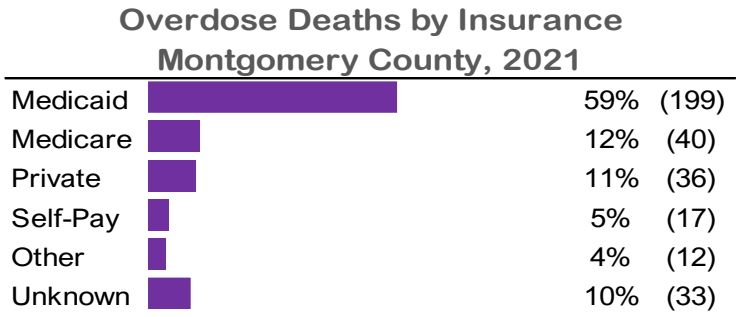


Figure 11: Overdose Deaths in Montgomery County by Insurance, 2021

Between 2020 and 2021, the percent of individuals who paid for their last visit with Medicaid increased from 53% to 59%, the percent with commercial insurance increased from 7% to 11%, and the percent who were self-pay/uninsured decreased from 15% to 5%.

Health

Individuals with physical health problems may have an increased risk of opioid use and may also have an increased risk of overdose. Conditions associated with a higher risk of overdose among opioid users include HIV, Hepatitis C, liver disease, lung disease, and depression[1]. Information on physical illness, mental illness, and prior substance abuse are collected from autopsy findings and investigator notes from the Coroner's Office or provided by Ascend Innovations, Inc.

Physical Illness

In 2021, 88% of individuals who died of a drug overdose had a reported physical illness. The most common illnesses were hypertension, heart disease, and obesity. Seventy-one percent (71%) had a hospital visit of any kind during the year prior to their death. This is similar to prior years. Data regarding prior COVID-19 diagnoses is incomplete and is not reported here.

Physical Illnesses Among Overdose Deaths
Montgomery County, 2021

Physical Illness	#	%
Hypertension	154	46%
Heart Disease	129	38%
Obesity	119	35%
Chronic Pain	106	31%
Kidney Disease	69	20%
COPD*	63	19%
Hepatitis C	59	18%
Asthma	56	17%
Diabetes	43	13%

*Chronic Obstructive Pulmonary Disease

Table 1: Physical Illnesses Among Overdose Deaths in Montgomery County, 2021

Mental Illness

Fifty-eight percent (58%, or 195 of 337) of individuals who died of a drug overdose had a reported mental health condition. The most common diagnoses were anxiety (47%) and depression (35%).

Substance Abuse and Prior Overdoses

- 93% (314) of individuals who died of an overdose had a reported history of substance abuse. This is similar to prior years.
    - 82% (278) had substance abuse reported to the coroner
    - 64% (214) had a hospital diagnosis of substance use disorder
    - 58% (197) had a drug charge indicating illegal substance use
- 45% (150) had known prior hospital visit for an overdose. This is an increase from prior years.
    - 6% (21) had an overdose visit within one year of death

[1] World Health Organization. "Information sheet on opioid overdose." November 2014. http://www.who.int/substance_abuse/information-sheet/en/. Accessed April 10, 2018.

Criminal History

Criminal charges, court cases, and jail time reflect both an individual's behavior and contact they have with the criminal justice system. Officers and other personnel can use these interactions to provide resources and referrals to individuals at risk of overdose, especially those who have had an overdose before. This information was retrieved from JusticeWeb.

Lifetime Criminal History

Of the 337 individuals who died of an overdose:

- 93% (314) had any type of criminal charge
- 85% (287) had a non-traffic charge
- 79% (266) had any jail booking in their lifetime
- 58% (197) had a drug charge
- 58% (195) had a felony charge
  - The percent with a felony conviction increased from 41% in 2020 to 46% in 2021.

The most common charges were drug/paraphernalia possession, robbery/theft, disorderly conduct, and Operating a Vehicle while Intoxicated (OVI).

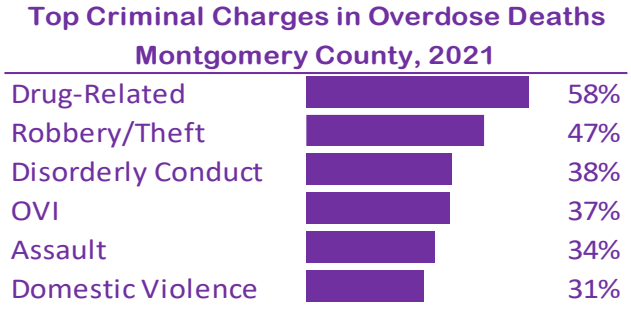


Figure 13: Criminal Charges Among Overdose Deaths in Montgomery County, 2021

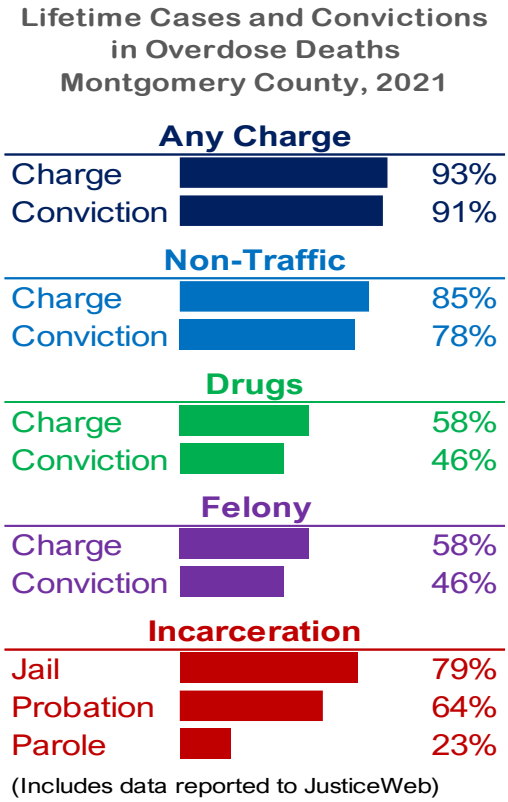


Figure 12: Criminal History Among Overdose Deaths in Montgomery County, 2021

Criminal Justice System Contact

Of the 337 individuals who died of a drug overdose, 47% had contact with the criminal justice system within 1 year of death, 34% had contact within 1 month of death, and 14% had contact within 1 week of death. Between 2017 and 2021, the percent who had contact with the criminal justice system within one year prior to their death decreased from 66% to 47% and the percent with a jail booking during this time decreased from 32% to 18%.

Time of Last Criminal Justice Contact by Type of Interaction
Montgomery County, 2021

	Any Contact	Release from Jail	Drug-Related
Ever	93%	79%	58%
Within 1 Year	47%	26%	18%
Within 1 Month	34%	18%	12%
Within 1 Week	14%	7%	3%

Table 2: Time Since Criminal Justice Contact Among Overdose Deaths in Montgomery County, 2021

Note: Additional criminal history information for overdose deaths in 2021 can be found in Appendix I.

Incident Information

Location of Overdose Death

In 2021, 73% percent of incidents occurred at the individual's home or that of a friend or family member. This is similar to prior years.

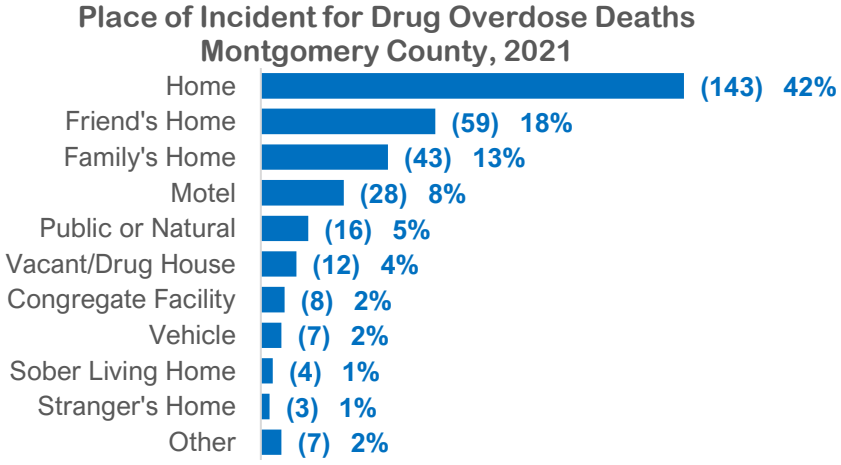


Figure 14: Place of Incident Among Drug Overdose Deaths in Montgomery County, 2021

Alone at the Time of Overdose

Seventy percent (70%) of individuals who died of a drug overdose in 2021 were reported to be alone at the time of overdose. This is similar to 2020 but an increase from 61% in 2019.

Drug Overdose Deaths by Presence of Others at the Time of Overdose
Montgomery County, 2021

Alone	70%
With Others	19%
Unknown but found alone	8%
Unknown	3%

Table 4: Drug Overdose Deaths by Presence of Others in Montgomery County, 2021

Route of Administration

The most common routes of administration were injecting and snorting; each was believed to have been the route in 1 in 5 deaths. The route is unknown for 48% of deaths.

Route of Administration
Montgomery County, 2021

Inject	20%
Snort	19%
Smoke	13%
Ingest	3%
Unknown	48%

Table 3: Route of Administration, Drug Overdose Deaths, Montgomery County, 2021

Recent Time Reported in a Facility and/or In Recovery and Sober

Twenty-one percent (21%) were reported to be either in a facility or otherwise abstinent from drug use within one month of their death, including 15% who were reported to have been jail or a treatment facility and seven percent (7%) who were reported to be in recovery from Substance Use Disorder within one month of death. This is similar to prior years.

Naloxone Administration

Thirty-six percent (36%) of individuals were given naloxone at the time of overdose according to the Coroner's notes and toxicology screens. This is an increase from 31% in 2020 and is similar to 2019. At least six percent (6%) of individuals are known to have received naloxone administered by bystanders.

Drugs Involved in Overdose Deaths

The increase in overdose deaths in 2017 was associated with the appearance of more lethal drugs in the local supply. Illicit fentanyl and fentanyl analogs are extremely potent opioids that contributed to this increase. Fentanyl was present in 80% of all overdose deaths, a decline from 2020 when this substance was present in 89% of deaths. Fentanyl analogues were present in 32% of overdose deaths, an decline from 17% in 2020.

Most Common Drugs in Toxicology Screens

Opioids were the most common substance found in toxicology screens, appearing in 89% of cases. This is 2.3 times as many overdose deaths as cocaine, the next most common drug mentioned.

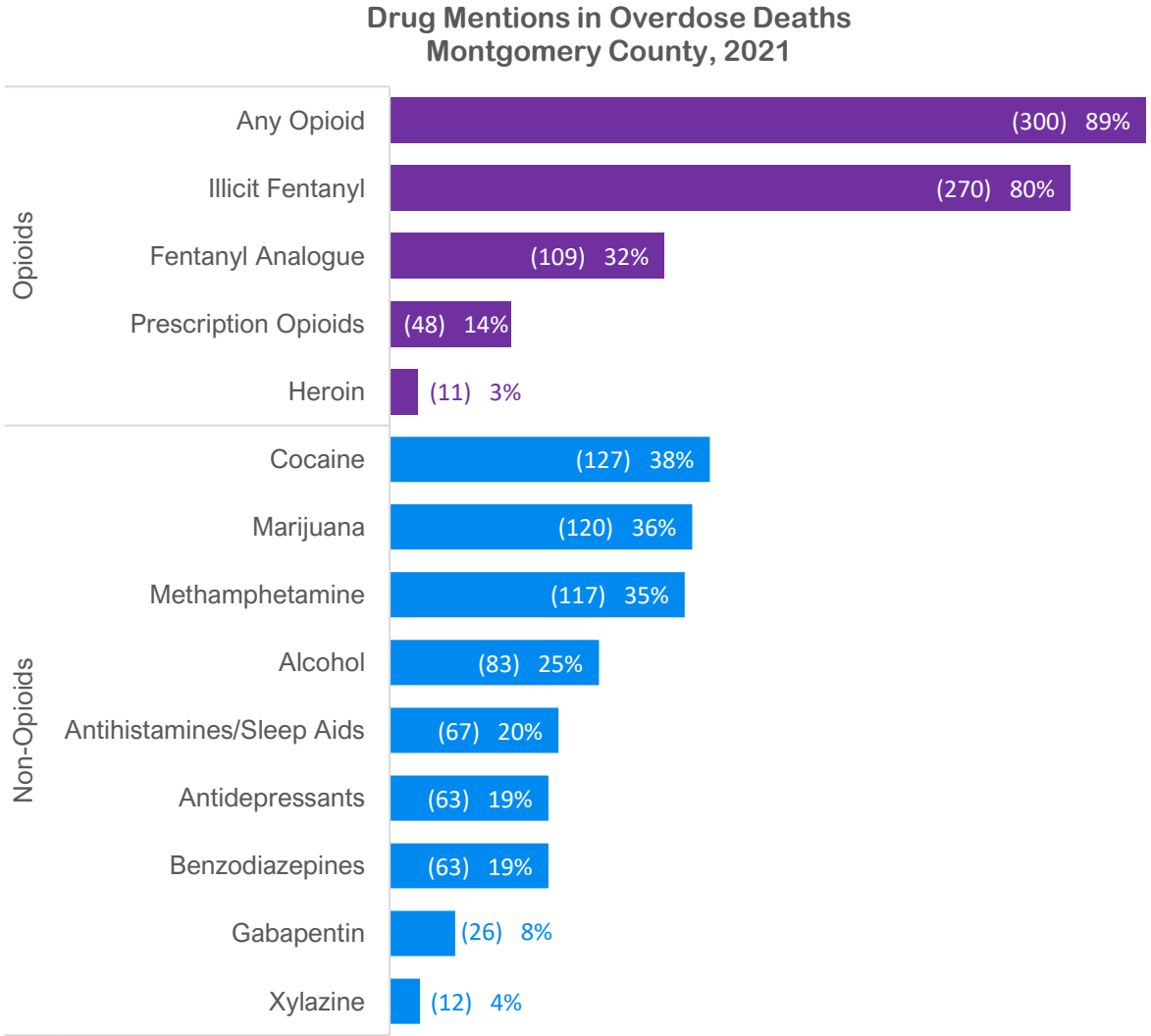


Figure 15: Drug Mentions Among Overdose Deaths in Montgomery County, 2021

Definition of a Drug Mention

A Drug Mention means that a substance was found in the individual's body at the time of hospital admission or after death, as reported in the Montgomery County Coroner's toxicology screen. The substance was not necessarily the cause of death and individuals may have multiple substances in their system at the time of death, so percentages may sum to more than 100%.

Opioids

Opioids appeared in 89% of overdose deaths in 2021, a proportion consistent with prior years.

89%

Percent of Drug Overdose Deaths Involving Opioids

The figure below shows overdose deaths with opioid mentions between 2010 and 2021. The bar chart represents the total number of overdose deaths involving opioids, while the line chart shows the percent of all overdose deaths that involved opioids.

While the percent of cases with opioids remained stable between 2010 and 2021, the number of overall and opioid-related overdose deaths increased dramatically between 2010 and 2017 before declining in 2018. This number increased by 18% between 2019 and 2021. Despite this increase, the number of overdose deaths involving opioids was 42% lower in 2021 than in 2017 (300 vs. 520).

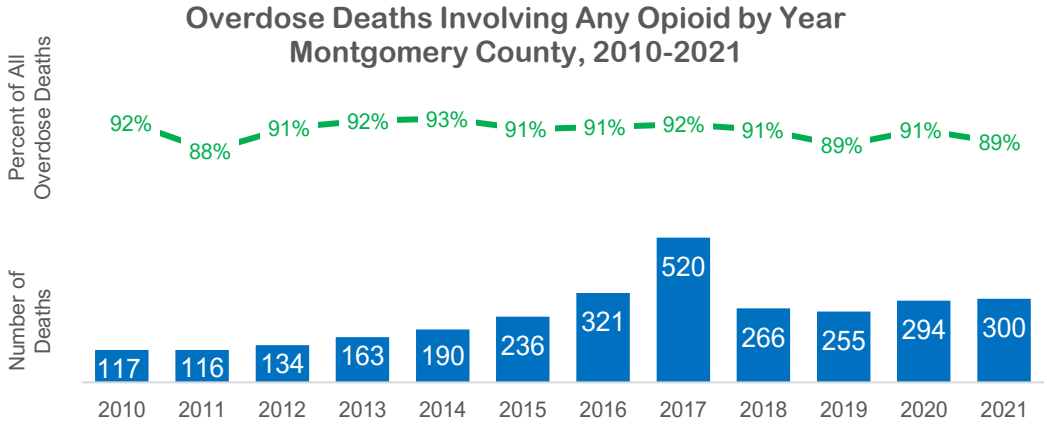
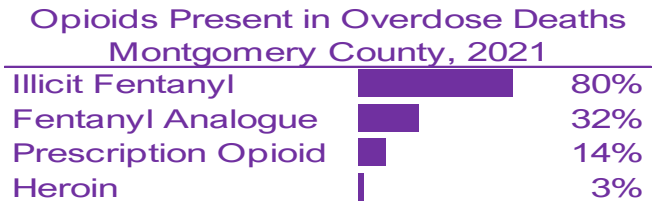


Figure 16: Opioid Overdose Deaths Among Overdose Deaths in Montgomery County, 2010-2021

Opioids Present in Overdose Deaths

Illicit fentanyl was the most common opioid in 2021, appearing in 80% of opioid overdose deaths. This drug and other opioids often appeared in combination with other substances.

The most common mentions of opioids are as follows:



Note: A full list of opioid combinations found in toxicology screens can be found in the Appendix.

Figure 17: Opioids Present Among Overdose Deaths in Montgomery County, 2021

Prescription Opioids

The percent of overdose deaths involving prescription opioids (excluding fentanyl) decreased by 81% between 2010 and 2021. These prescription drugs appeared in the individuals' toxicology screens. It is unknown if they received a prescription, obtained the drugs illicitly, or both.

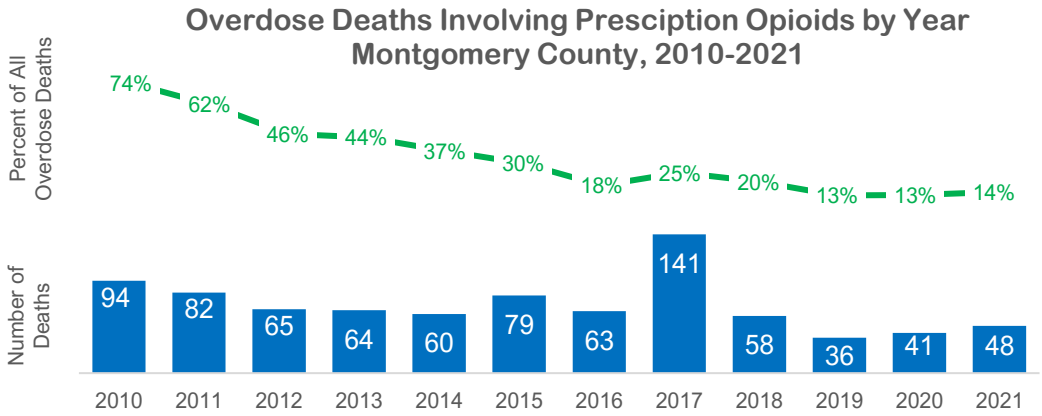


Figure 18: Prescription Opioids Among Overdose Deaths in Montgomery County, 2010-2021

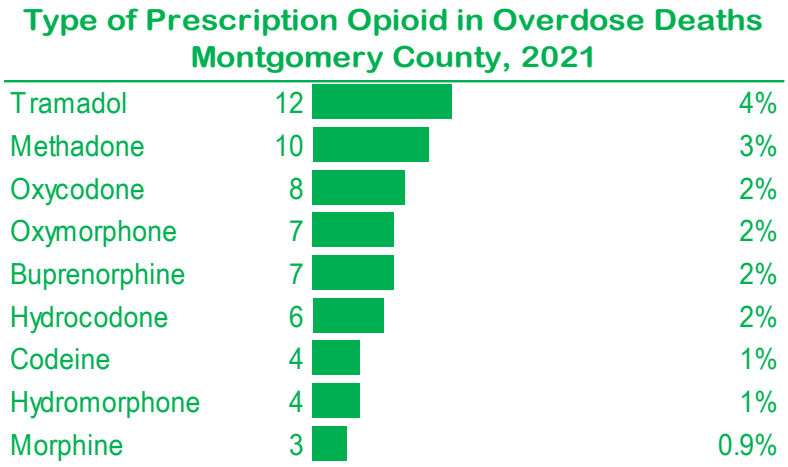


Figure 19: Prescription Opioids Present Among Overdose Deaths in Montgomery County, 2021

Buprenorphine, an opioid used to treat substance use disorder, was found in the toxicology screens for 7 overdose deaths in 2021. Naltrexone was found in the toxicology screen of 5 individuals who died of a drug overdose.

Note:
Information on prescription opioids present in overdose deaths can be found in the Appendix.

Heroin

Heroin appeared in 59% of overdose deaths in 2012 and 3% in 2021. Between 2013 and 2021, the percent of deaths involving heroin declined by 94%.

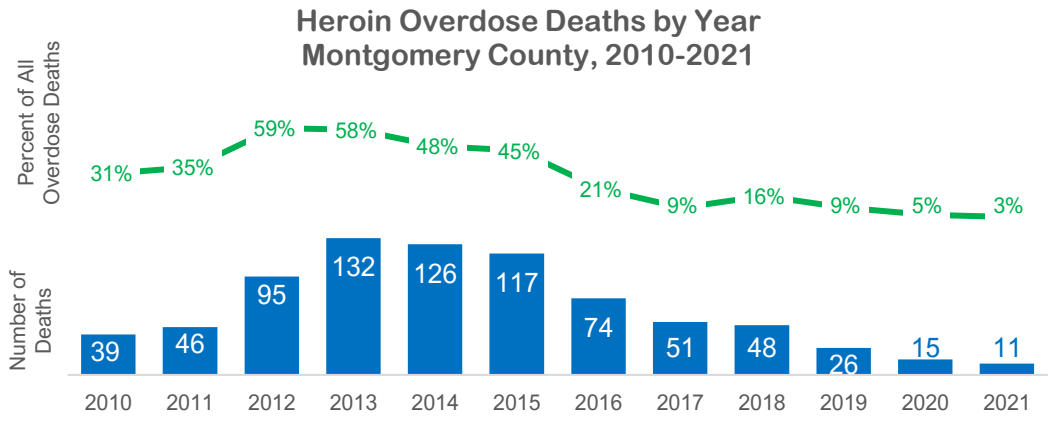


Figure 20: Heroin Among Overdose Deaths in Montgomery County, 2010-2021

Illicit Fentanyl

Overdose deaths with mentions of illicit fentanyl increased in number between 2013 and 2017; the percent of all deaths involving illicit fentanyl continued to increase through 2018. This percent remained stable through 2020 and declined slightly in 2021.

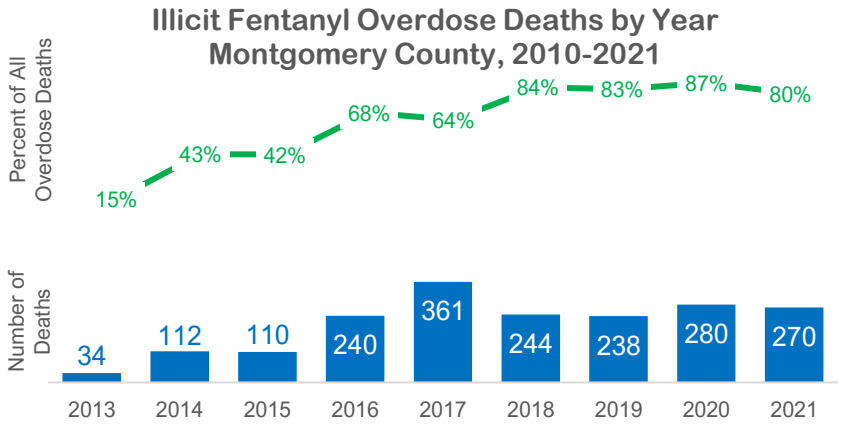


Figure 21: Illicit Fentanyl Among Overdose Deaths in Montgomery County, 2013-2021

In 2021, 80% of deaths involved illicit fentanyl. This is a decline from 2020 when 87% of overdose deaths involved fentanyl.

Fentanyl Analogues

Fentanyl analogues are drugs that are similar in structure to fentanyl but can be far more potent. The Miami Valley Crime Laboratory began routinely testing for fentanyl analogues in late 2016.

The percent of deaths involving fentanyl analogues decreased by 46% between 2017 and 2018 and continued to decrease through 2020 before increasing by 93% in 2021.

In 2021, 32% of deaths involved fentanyl analogues. This is a decrease from 62% in 2017.

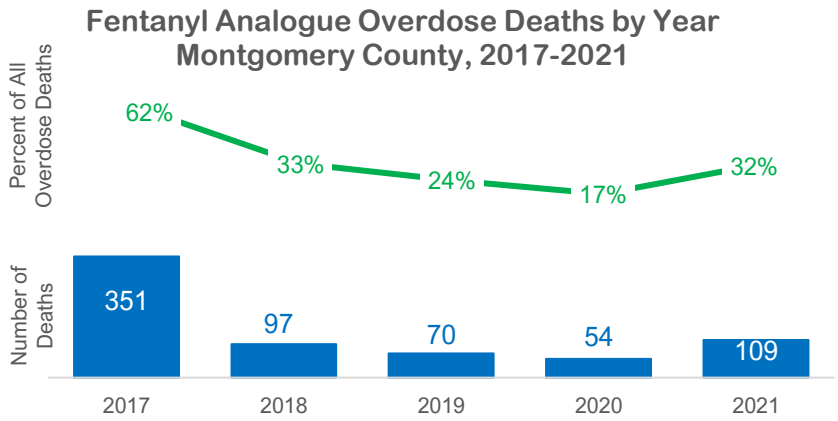


Figure 22: Fentanyl Analogs Among Overdose Deaths by Year, 2017 – 2021

Types of Fentanyl Analogs

Fluorofentanyl was the most common fentanyl analog present in overdose deaths in 2021. This substance was present in 27% of deaths in 2021; this is a drastic increase from 2020 when 1.2% of deaths involved this analogue.

Carfentanil, which was present in 41% of all overdose deaths in 2017, was not present in any deaths in 2021.

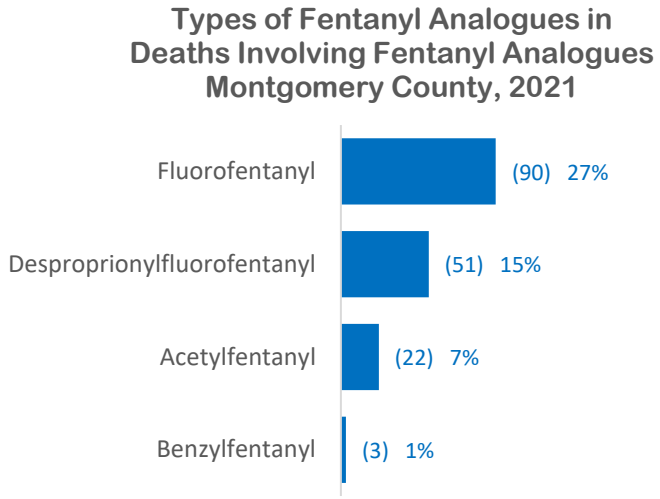


Figure 23: Fentanyl Analogs Present Among Overdose Deaths in Montgomery County, 2021

Special Note: In prior reports, desproprionyl fentanyl was included in totals for fentanyl analogues. Desproprionyl fentanyl can be more accurately described as a precursor to and metabolite of fentanyl. All data relating to fentanyl analogues in this report has been adjusted accordingly and will not match prior reports.

Note:
Additional information on fentanyl analogues can be found in the Appendix.

Individuals can have multiple fentanyl analogs in their system at the time of death, so percentages may sum to more than 100%.

Cocaine

In 2021, 38% of drug overdose deaths involved cocaine. This is consistent with recent years; between 2016 and 2020, cocaine was involved in 41% of all overdose deaths.

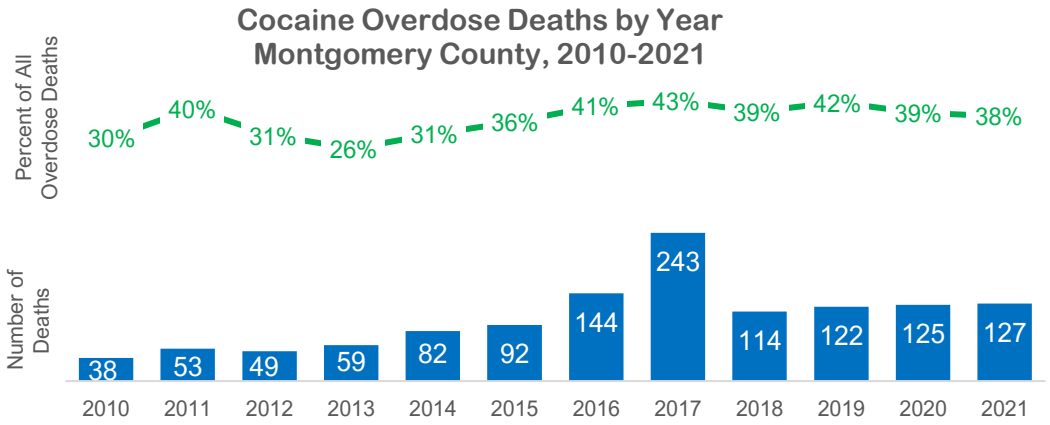


Figure 24: Cocaine Among Overdose Deaths in Montgomery County, 2010-2021

Of the 127 overdose deaths involving cocaine, 114 (9 in 10) also involved opioids.

Methamphetamine

The percent of deaths involving methamphetamine increased from 5% in 2015 to 34% in 2020 and remained stable at 35% in 2021.

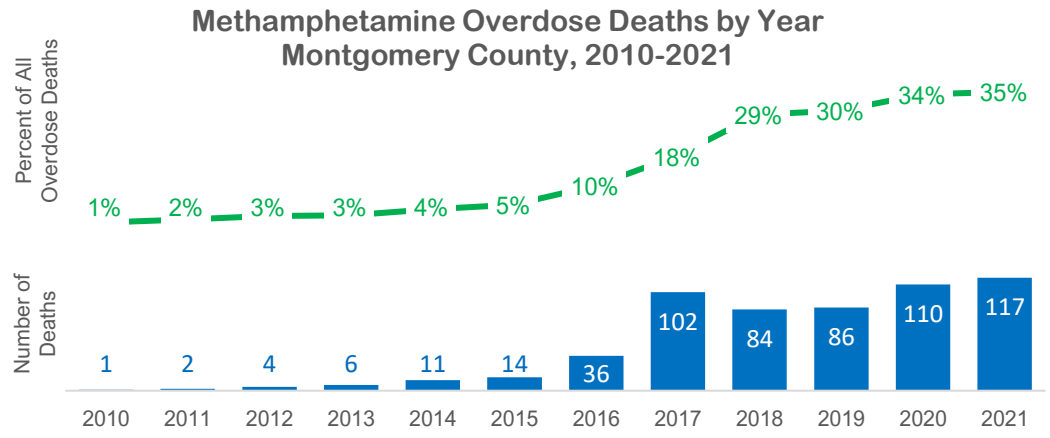


Figure 25: Methamphetamine Among Overdose Deaths in Montgomery County by Year, 2010-2021

Methamphetamine was involved in more than one third of overdose deaths in 2021. Four out of five deaths involving methamphetamine also had opioids present.

Marijuana

In 2021, 36% of drug overdose deaths involved marijuana. This is consistent with prior years; marijuana was present in 34% of deaths between 2017 and 2020.

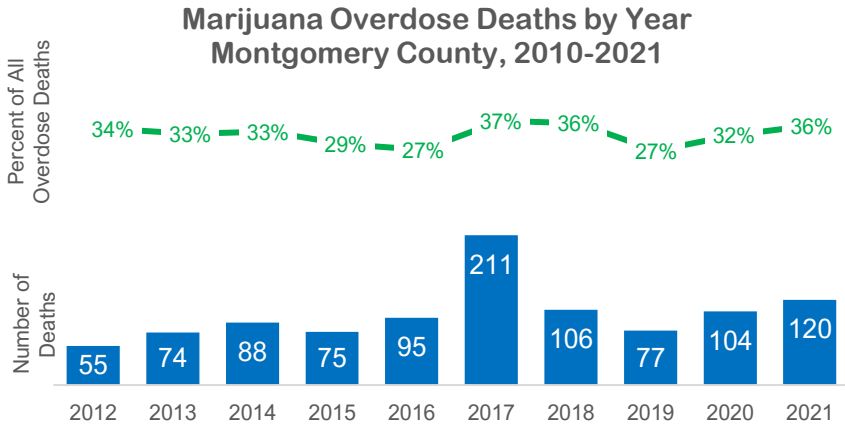


Figure 26: Marijuana Among Overdose Deaths in Montgomery County by Year, 2012-2021

Of the 120 overdose deaths involving marijuana, 93% (111) also involved opioids.

Antidepressants

In 2021, one or more antidepressants appeared in 19% of drug overdose deaths. The percent of deaths involving antidepressants decreased between 2010 and 2015, then increased from 2016 to 2018 and remained stable through 2021.

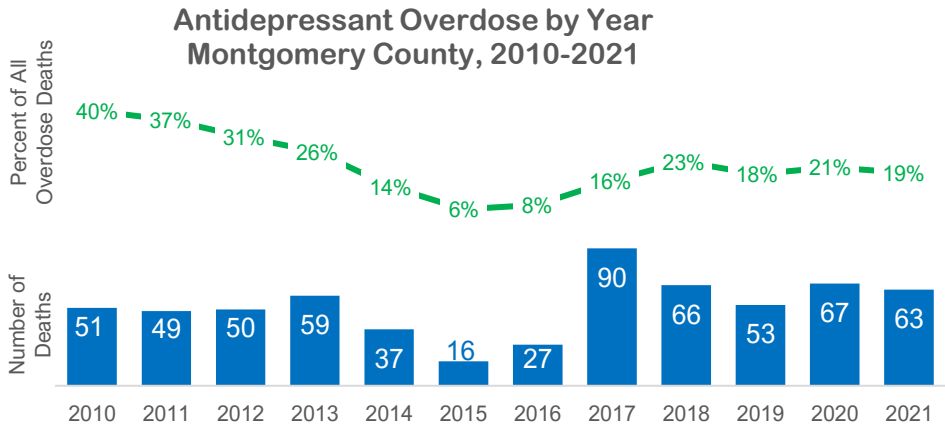


Figure 27: Antidepressant Among Overdose Deaths in Montgomery County by Year, 2010-2021

Of the 63 overdose deaths involving antidepressants, 94% (59) also involved opioids.

Benzodiazepines

In 2021, 19% of overdose deaths mentioned benzodiazepines in the toxicology report. The percent of deaths with benzodiazepines present decreased by 73% between 2010 and 2021.

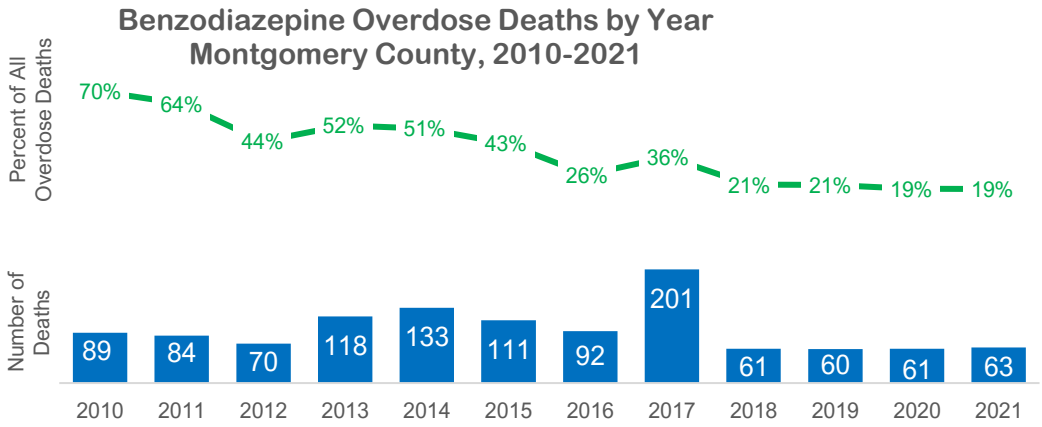


Figure 28: Benzodiazepine Among Overdose Deaths in Montgomery County, 2010-2021

Klonopin (clonazepam) was the most common benzodiazepine, appearing in 24 of the 63 deaths involving benzodiazepines.

Type of Benzodiazepine in Overdose Deaths
Montgomery County, 2021

Clonazepam	24	7%
Clonazolam	18	5%
Diazepam	16	5%
Alprazolam	7	2%
Oxazepam	5	1%
Temazepam	5	1%
Lorazepam	4	1.2%
Midazolam	1	0.3%

Table 5: Type of Benzodiazepine Among Overdose Deaths in Montgomery County, 2021

Eighty-five percent (54 of 63) of the deaths involving benzodiazepines also had a mention of an opioid.

Note:
Information on opioids present in overdose deaths involving benzodiazepines can be found in the Appendix

Gabapentin

Gabapentin is a non-opioid anti-convulsant used to treat nerve pain. Illicit use of gabapentin has increased over the past few years, including recreational use and self-treatment for symptoms of opioid withdrawal[2].

Studies have found gabapentin use to be associated with opioid deaths[3]. Ohio requires reporting of gabapentin prescriptions and sales to the Ohio Automated Rx Reporting System (OARRS),[4] and Kentucky classified gabapentin as a Schedule V controlled substance[5].

Eight percent (8%) of overdose deaths in 2021 involved gabapentin.

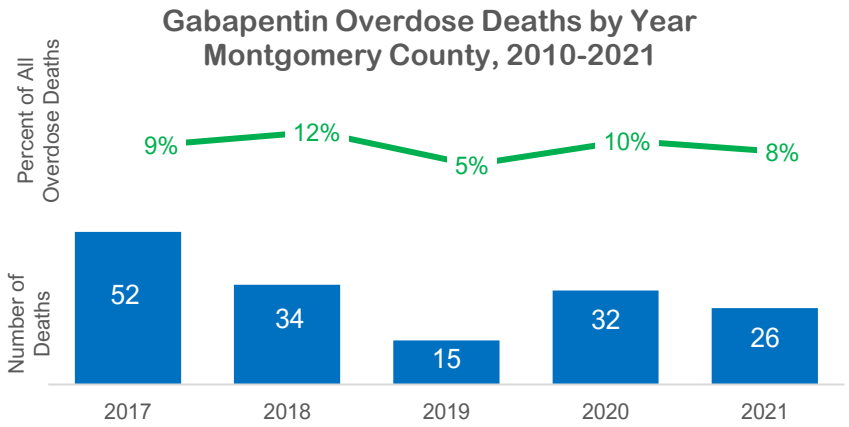


Figure 29: Gabapentin Among Overdose Deaths in Montgomery County, 2017-2021

Of the 26 overdose deaths that mentioned gabapentin, 96% also included opioids. Half (54%) involved prescription opioids.

Alcohol

In 2021, 25% of overdose deaths mentioned alcohol in the toxicology report. The percent of deaths involving alcohol was consistent from 2010 through 2021.

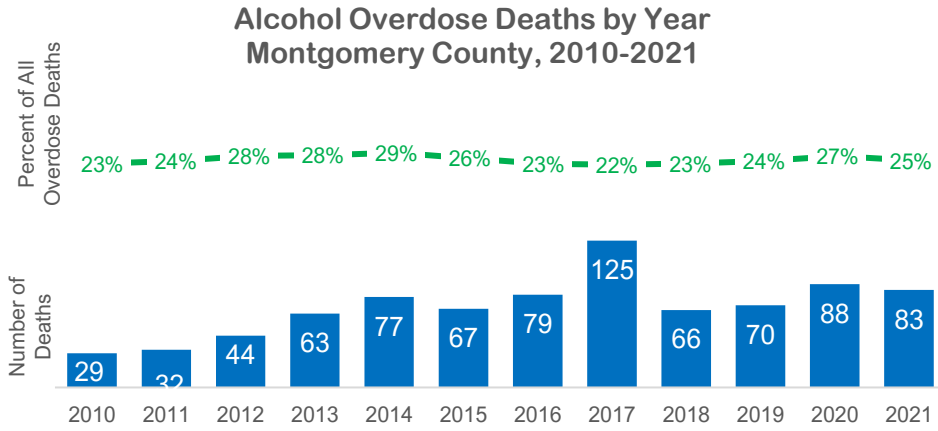


Figure 30: Alcohol Among Overdose Deaths in Montgomery County, 2010-2021

Eighty-eight percent (88%) of deaths involving alcohol also had a mention of opioids.

[2] Ohio Substance Abuse Monitoring Network. "Neurontin® Widely Sought for Illicit Use." February 2017.
[3] Gomes T, Juurlink DN, Antoniou T, Mamdani MM, Paterson JM, van den Brink W (2017) Gabapentin, opioids, and the risk of opioid-related death: A population-based nested case–control study. PLoS Med 14(10): e1002396. https://doi.org/10.1371/journal.pmed.1002396.
[4] Ohio Administrative Code, 4729-37-12.
[5] 902 Kentucky Administrative Regulations, 55:035.

Drug Mentions by Demographics and Health Status

Drugs involved in overdose deaths differed by demographic attributes, including race, age, sex, marital status, occupation, and insurance type. Some drugs were also more common among individuals with a physical or mental illness, or among individuals who experienced prior drug overdoses.

Demographic Attributes

Race

Whites were **7 times** more likely than Blacks to have a mention of **gabapentin** and **3 times** more likely to have a mention of **methamphetamine**. They were also more likely to have a mention of **antidepressants** and **benzodiazepines**.

Blacks were more likely than Whites to have a mention of **cocaine, alcohol,** and **marijuana**.

Opioids are labeled in blue.

Non-opioids are labeled in gray.

White

7 times ↑ Gabapentin *(9.8% vs 1.4%)*

3 times ↑ Methamphetamine *(41.0% vs 14.7%)*

96% ↑ Antidepressants *(21.5% vs 11.0%)*

68% ↑ Benzodiazepines *(20.7% vs 12.3%)*

Black

97% ↑ Cocaine *(61.6% vs 31.3%)*

48% ↑ Alcohol *(32.9% vs 22.3%)*

38% ↑ Marijuana *(45.2% vs 32.8%)*

Sex

Men were more likely than women to have a mention of **alcohol** and **fentanyl analogues**.

Women were **5.3 times** more likely to have a mention of **gabapentin** and more than **2 times** more likely to have a mention of **antihistamines**, **antidepressants**, **benzodiazepines,** or **prescription opioids**. They were also more likely to have a mention of **cocaine**.

Men

85% ↑ Alcohol *(30.0% vs 16.2%)*

34% ↑ Fentanyl Analogs *(33.8% vs 26.9%)*

Women

5.3 times ↑ Gabapentin *(15.4% vs 2.9%)*

2.5 times ↑ Antihistamines/Sleep Aids *(32% vs 13%)*

2.4 times ↑ Antidepressants *(29.2% vs 12.1%)*

2.1 times ↑ Benzodiazepines *(27.7% vs 13.0%)*

2 times ↑ Prescription Opioids *(20.8% vs 10.1%)*

26% ↑ Cocaine *(43.1% vs 34.3%)*

Age

Individuals **35 and over** were **2.8 times** more likely to have a mention of **gabapentin**. They were also more likely to have a mention of **alcohol** and **antihistamines**.

35 and Over

2.8 times ↑	41% ↑	38% ↑
Gabapentin	Alcohol	Antihistamines/Sleep Aids
(9.3% vs 3.3%)	*(26.7% vs 18.9%)*	*(21.5% vs 15.6%)*

Marital Status

Singles were **more likely** than others to have a mention of **marijuana**.

Divorced individuals were **2 times more likely** to have a mention of **gabapentin.** They were also **more likely** to have a mention of **prescription opioids.**

Married individuals were **2 times more likely** than others to have a mention of **antidepressants**. They were also **more likely** than others to have a mention of **benzodiazepines**.

Single	Divorced		Married	
55% ↑	2.6 times ↑	64% ↑	2 times ↑	85% ↑
Marijuana	Gabapentin	Prescription Opioids	Antidepressants	Benzodiazepines
(42.8% vs 27.6%)	*(13.2% vs 5.0%)*	*(17.9% vs 11.0%)*	*(32.6% vs 16.1%)*	*(30.4% vs 16.5%)*

Education

Individuals who **did not complete high school** were **more likely** than those who did to have a mention of **gabapentin,** and **less likely** to have a mention of **cocaine**.

Those who attended **any college** were **more likely** to have a mention of **antihistamines** and **antidepressants** and **less likely** to have a mention of **marijuana.**

The percent of individuals who had a mention of **methamphetamine decreased as education increased.**

No HS Diploma		Any College		
80% ↑	43% ↓	63% ↑	36% ↑	26% ↓
Gabapentin	Cocaine	Antihistamines/Sleep Aids	Antidepressants	Marijuana
(11.1% vs 6.2%)	*(24.4% vs 42.8%)*	*(28.2% vs 17.3%)*	*(23.5% vs 17.3%)*	*(28.2% vs 38.3%)*

Methamphetamine Mentions Decrease with Education

No HS Diploma	HS Diploma	Any College
40.0%	34.8%	29.4%

Occupation

Individuals in **service** occupations were **more likely** to have a mention of **methamphetamine.**

Individuals working in **manual or skilled labor** were **less likely** than others to have a mention of **benzodiazepines**.

Unemployed individuals were **more likely** than others to have a mention of **prescription opioids** and **illicit fentanyl.**

Service	Labor	Unemployed	
27% ↑	62% ↓	67% ↑	11% ↑
Methamphetamine	Benzodiazepines	Prescription Opioids	Illicit Fentanyl
(41.8% vs 32.8%)	*(9.2% vs 24.1%)*	*(20.6% vs 12.4%)*	*(6.87% vs 78.3%)*

Insurance

Individuals with **private insurance** were **less likely** than others to have a mention of **methamphetamine.**

Individuals covered by **Medicare** were **more likely** than others to have a mention of **gabapentin** and **cocaine.**

Individuals covered by **Medicaid** were **more likely** than others to have a mention of **benzodiazepines**.

Individuals **without insurance** were **more likely** than others to have a mention of **illicit fentanyl.**

Private Insurance	Medicare	Medicaid	Uninsured
43% ↓	58% ↑	43% ↑	18% ↑
Methamphetamine	Gabapentin	Benzodiazepines	Illicit Fentanyl
(22.2% vs 38.7%)	*(12.5% vs 7.9%)*	*(22.1% vs 16.1%)*	*(94.1% vs 80.0%)*
	42% ↑		
	Cocaine		
	(50.0% vs 35.3%)		

Note: Further information on substances present by demographic group in overdose deaths in 2020 can be found in Appendix I.

Health Status

Physical Health

Opioids

Individuals with a physical illness were:

- Thirty-two percent (32.3%) **less likely** to have a mention of **fentanyl analogues** than those without a physical illness (30% vs. 44%).
- Six times (6X) **more likely** to have mention of **prescription opioids** (16% vs. 3%).

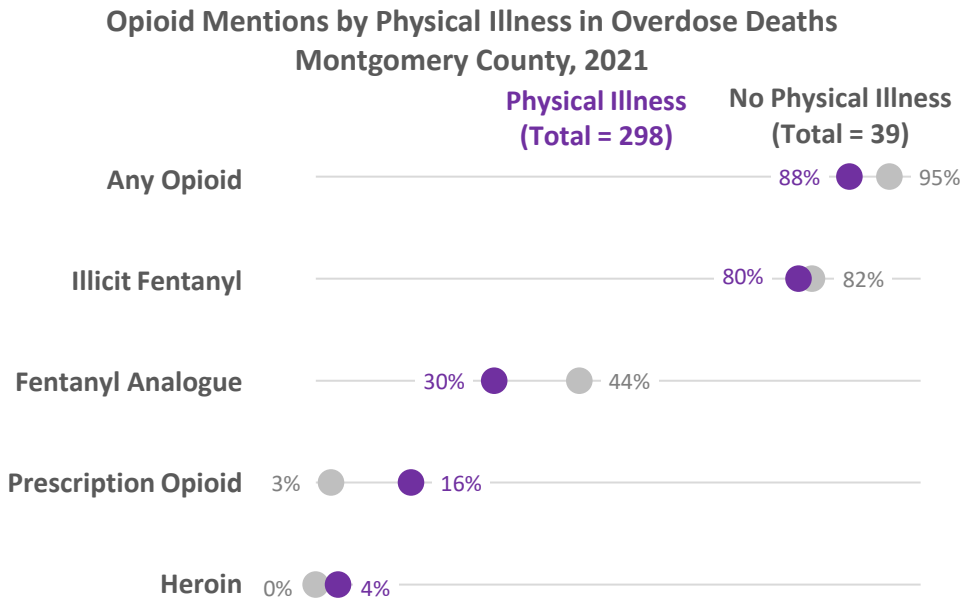


Figure 31: Opioid Mentions by Physical Illness Among Overdose Deaths in Montgomery County, 2021

Non-Opioids

Individuals with a physical illness were:

- **Twice as likely** (2.6X) to have a mention of **benzodiazepines** than those without a physical illness (20% vs. 8%).
- Ninety-three percent (93.0%) **more likely** to have a mention of **antidepressants** (19.8% vs. 10.3%).

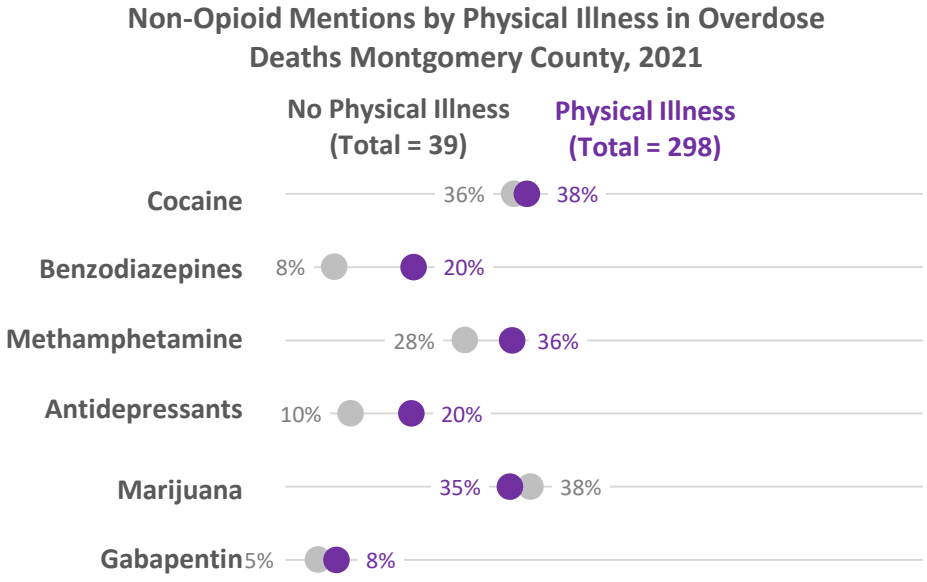


Figure 32: Non-Opioid Mentions by Physical Illness Among Overdose Deaths in Montgomery County, 2021

Mental Health

Opioids

Individuals with a recorded mental illness were:

- Two times (2.4X) **more likely** to have a mention of **prescription opioids** than those without a mental illness (19% vs. 8%).

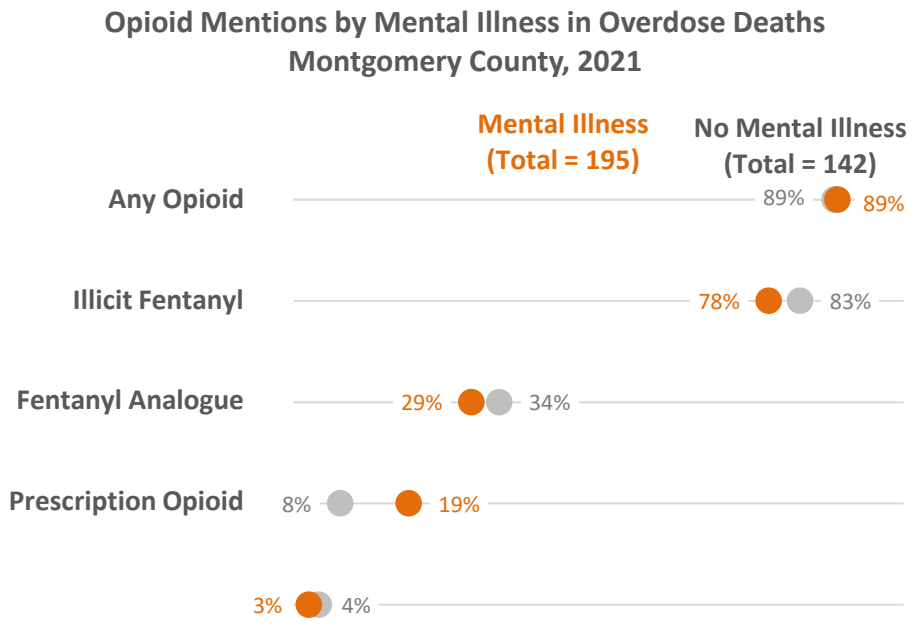


Figure 33: Opioid Mentions by Mental Illness Among Overdose Deaths in Montgomery County, 2021

Non-Opioids

Individuals with a recorded mental illness were:

- Two times (2.1X) **more likely** to have a mention of **benzodiazepines** (24% vs. 11%).
- Nearly three times (2.8X) **more likely** to have a mention of **antidepressants** (26% vs. 9%).
- Nearly nine times (8.7X) **more likely** to have a mention of **gabapentin** (12% vs. 1%)

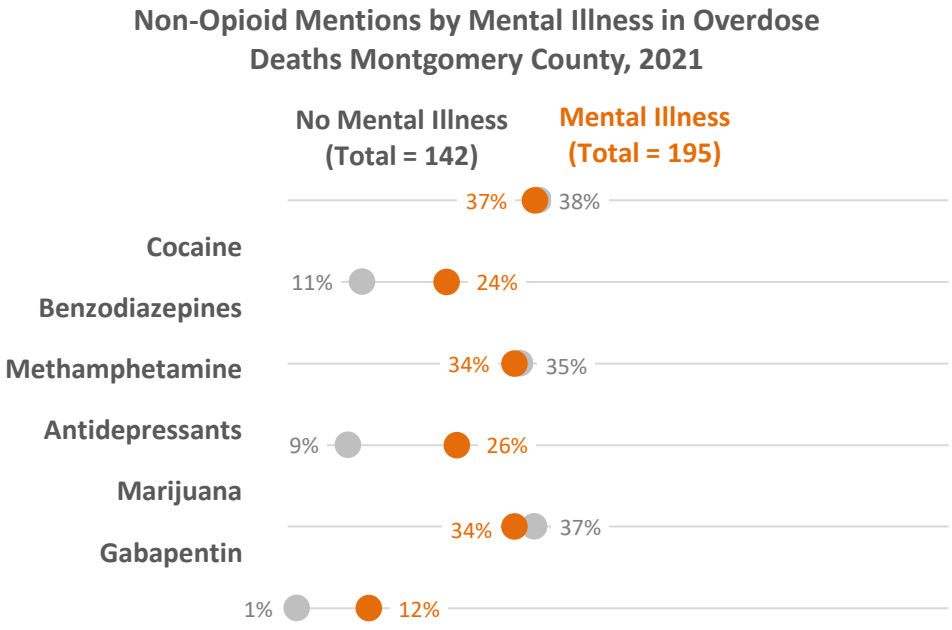


Figure 34: Non-Opioid Mentions by Mental Illness Among Overdose Deaths in Montgomery County, 2021

Prior Overdose Hospital Visits

Opioids

Individuals with a prior overdose visit to an area emergency department were:

- Sixty percent (60.3%) **more likely** to have a mention of **prescription opioids** than were those without such a visit (18% vs. 11%).

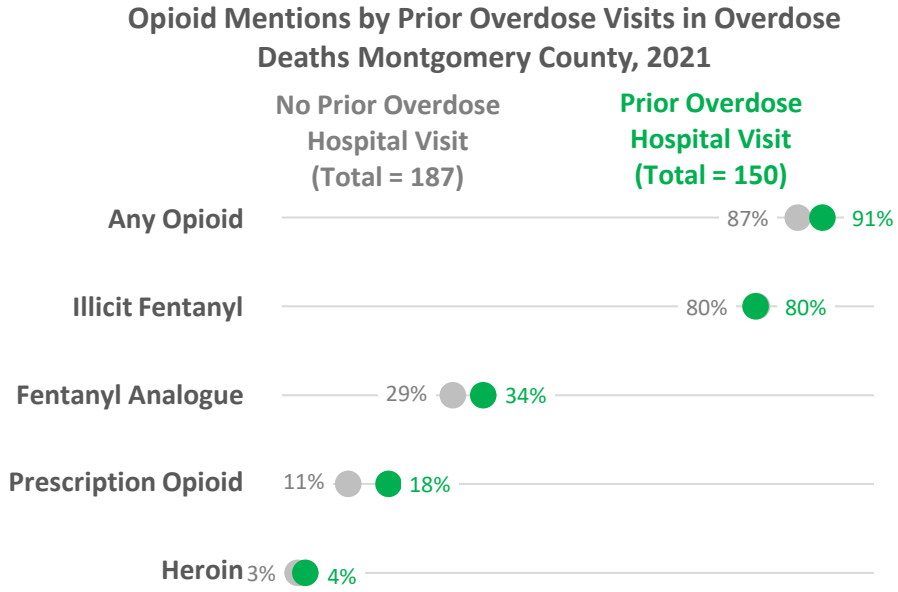


Figure 35: Opioid Mentions by Prior Overdose Hospital Visits Among Overdose Deaths in Montgomery County, 2021

Non-Opioids

Individuals with a prior overdose visit to an area emergency department were:

- Thirty percent (29.2%) **less likely** to have a mention of **cocaine** than were those without (31% vs. 43%).
- Twenty-seven percent (26.8%) **more likely** to have a mention of **methamphetamine** (39% vs. 31%).
- Twenty percent (19.7%) **less likely** to have a mention of **marijuana** (31% vs. 39%).

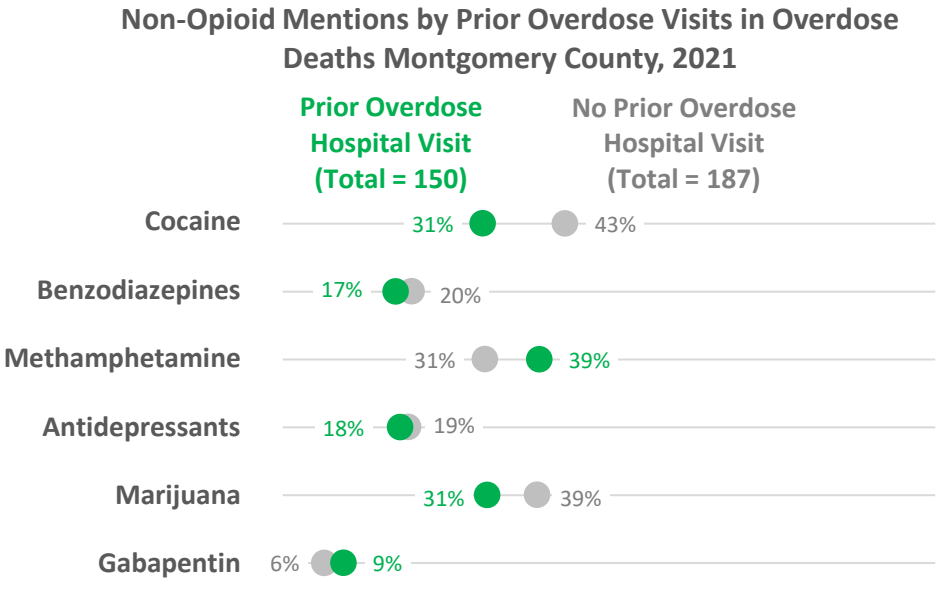


Figure 36: Non-Opioid Mentions by Prior Overdose Hospital Visits Among Overdose Deaths, 2021

Location
Incident of Overdose

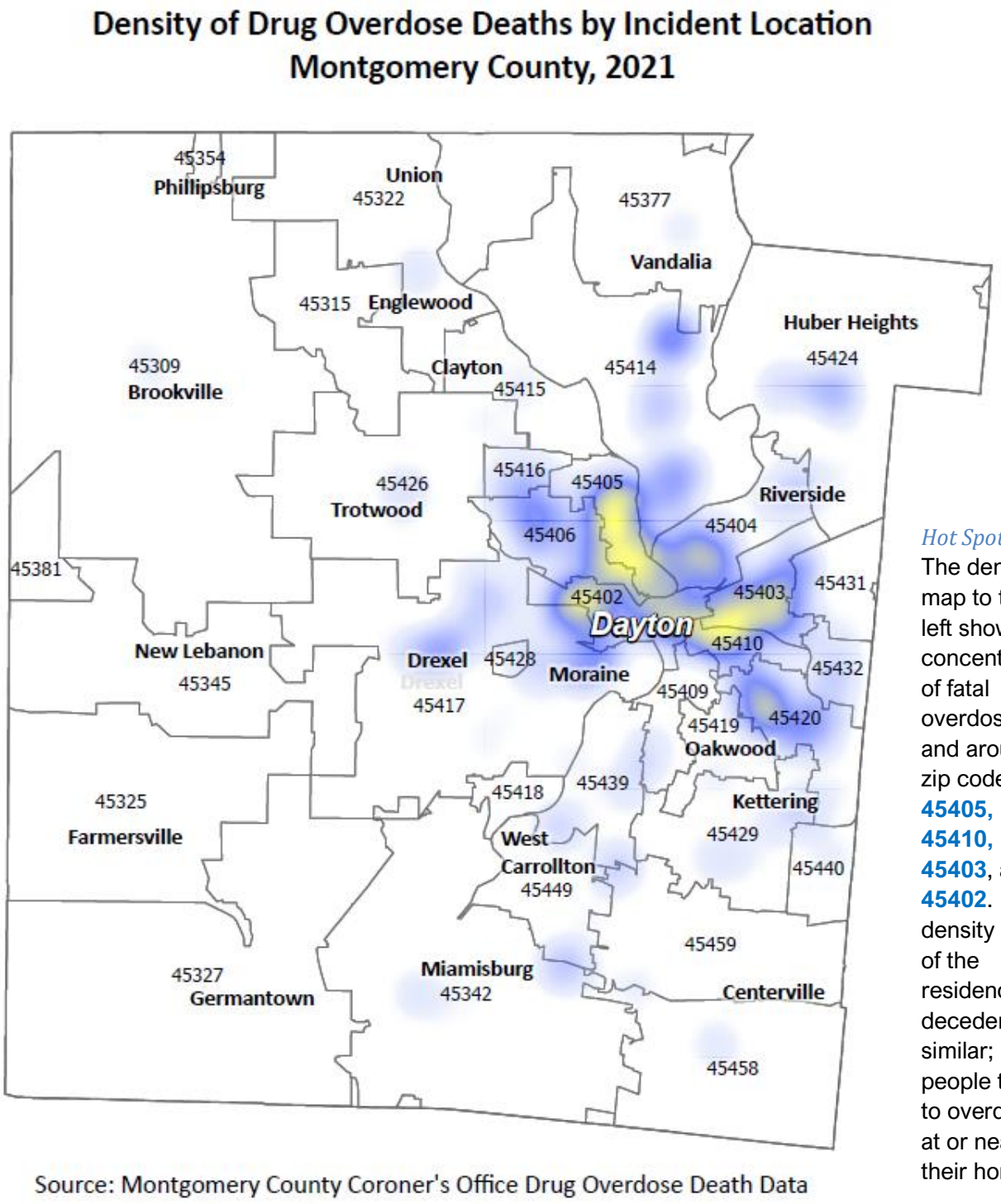


Figure 37: Density Map of Incident Location Among Overdose Deaths in Montgomery County, 2021

Hot Spots

The density map to the left shows the concentration of fatal overdoses in and around in zip codes **45405, 45410, 45403**, and **45402**. A density map of the residence of decedents is similar; people tend to overdose at or near their home.

Density of Drug Overdose Deaths by Incident Location and Year
Montgomery County, 2017 - 2021

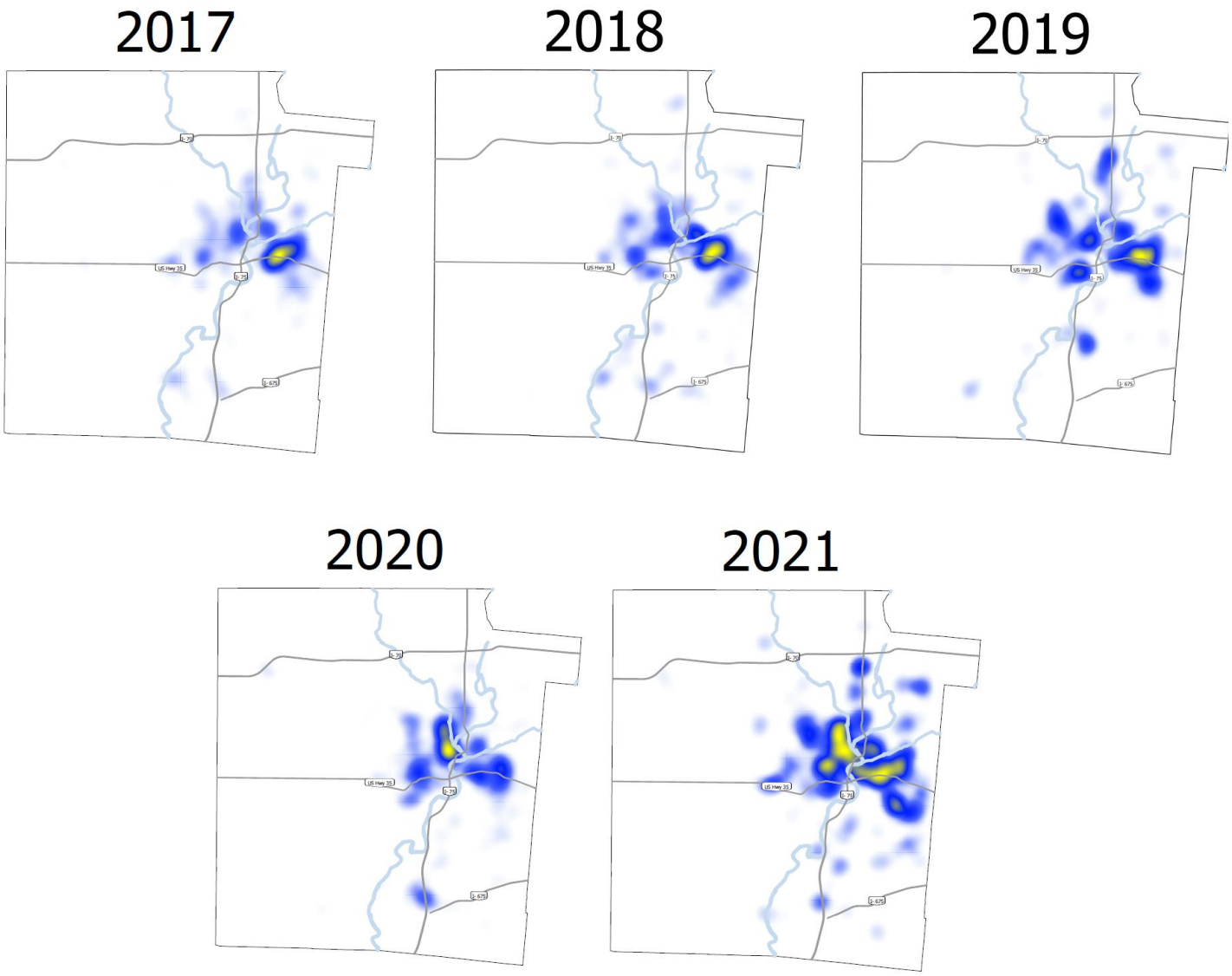
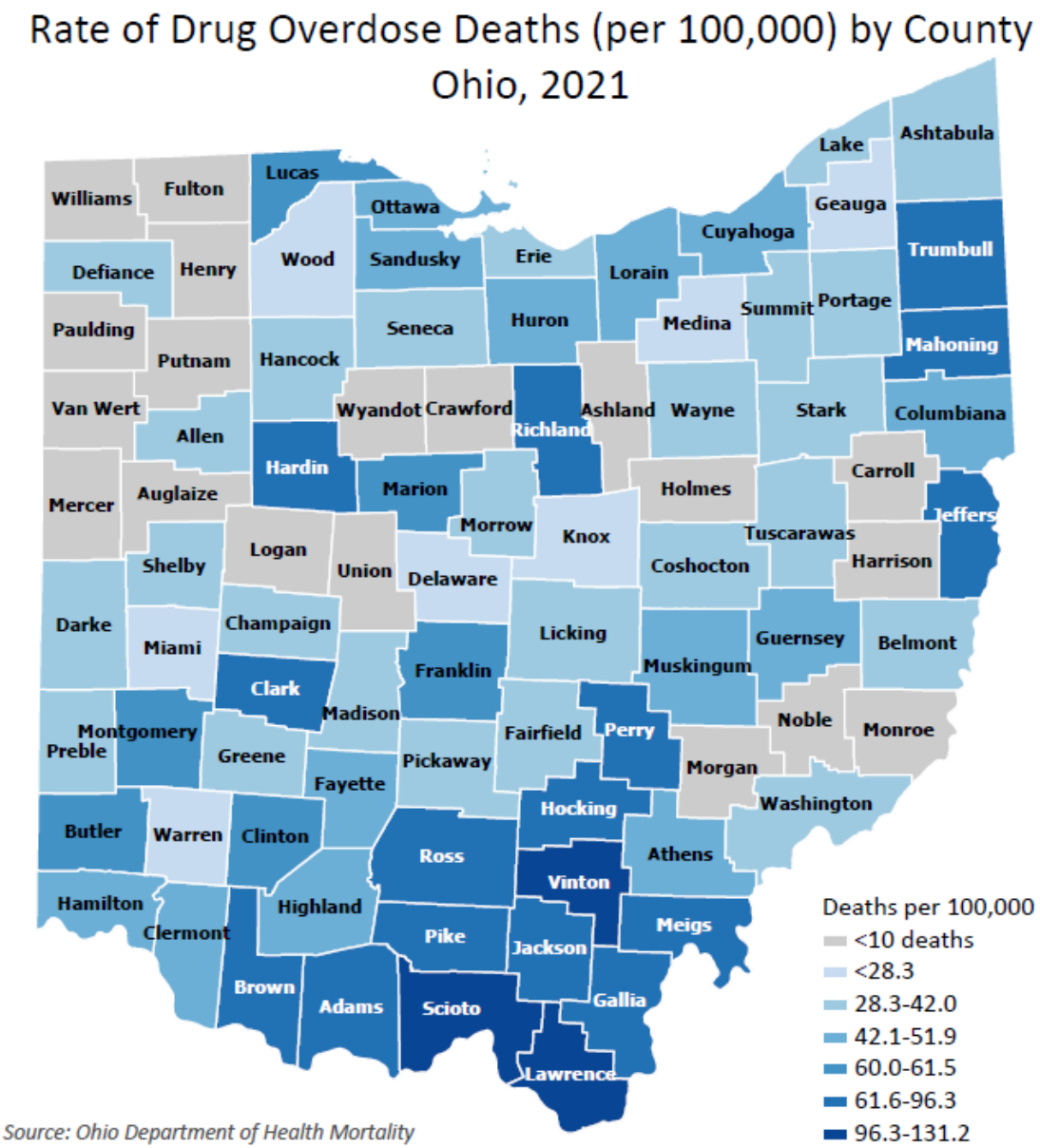


Figure 38: Density Map of Incident Location Among Overdose Deaths in Montgomery County by Year, 2017-2021

Between 2017 and 2019, there was a consistent hot spot in East Dayton, with areas of concentration throughout the Dayton area. In 2020, a new hot spot appeared along **North Main Street in zip code 45405**. In 2021, the hot spots were less concentrated that in prior years and appear in zip codes **45405, 45410, 45403**, and **45402**.

County of Residence



Source: Ohio Department of Health Mortality
**Note: 2021 data are preliminary and subject to change*
Rates for counties with fewer than ten overdose deaths have been suppressed.

Figure 39: Map of Drug Overdose Rates by County, 2021

DRUG OVERODSE RATE BY COUNTY

The maps on the next four pages show rates of drug overdose deaths by residence.

- This page shows rates of drug overdose deaths by county in 2020, Page 33 shows these rates for 2011-2020.
- Montgomery County had the highest overdose death rate in 2017, the sixth highest in 2018, the fifth highest in 2019, the 14th highest in 2020, and the 20th highest in 2021.
- Nineteen counties had fewer than ten deaths in 2021; their data were suppressed.
- Pages 35 and 36 show rates of overdose death by zip code and year.

Age-Adjusted Drug Overdose Death Rates (Deaths per 100,000 Residents) by County and Year
Ohio, 2012-2021

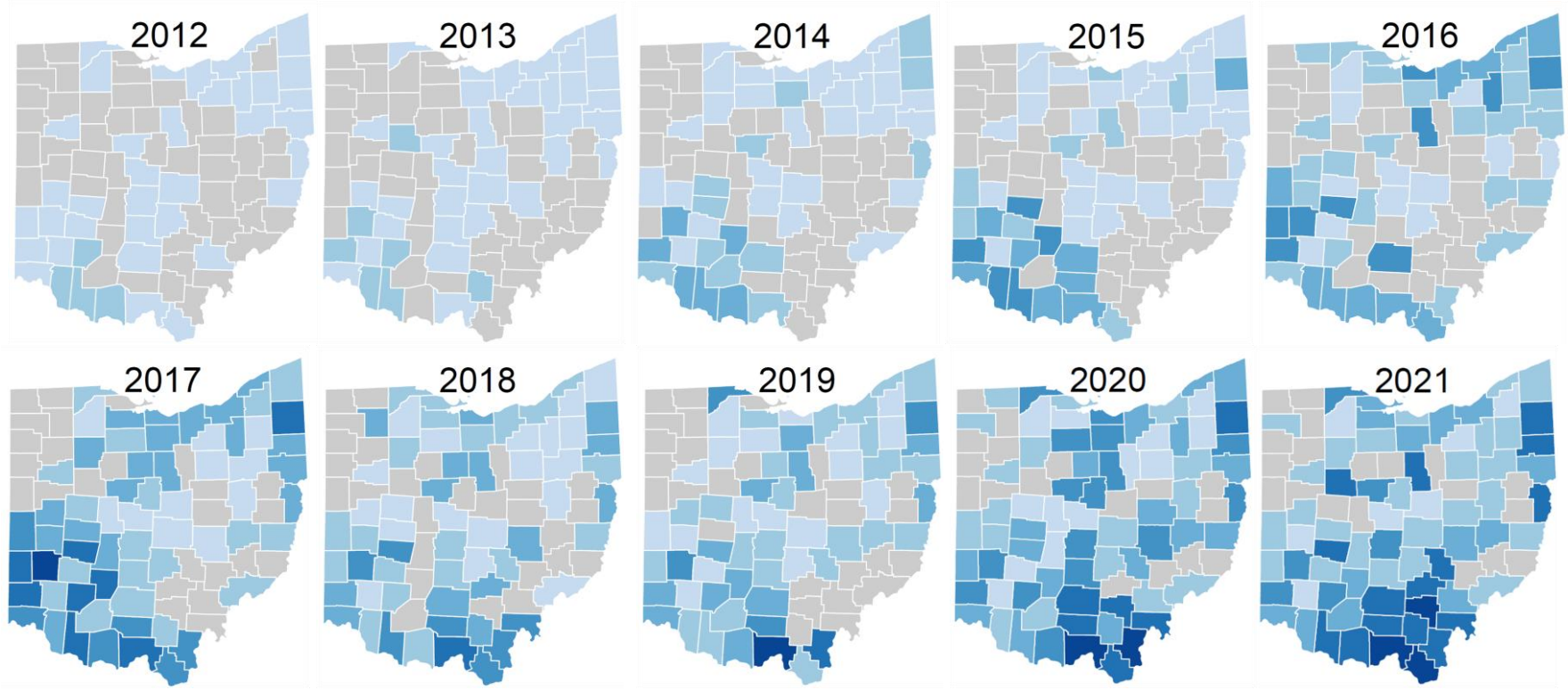


Figure 40: Map of Drug Overdose Death Rate by County, 2012-2021
Note: 2020 ODH Mortality Data are preliminary and subject to change

The rate of overdose deaths increased in counties across Ohio between 2010 and 2017 before declining in 2018. This rate again increased in 2020 and 2021. While the **rate of overdose deaths increased 13% in Montgomery County** between 2019 and 2021, the **rate for Ohio increased 28%**. In 2017, Montgomery County had the highest rate of overdose deaths in Ohio; in 2021, Montgomery County ranked 20th.

Zip Code of Residence

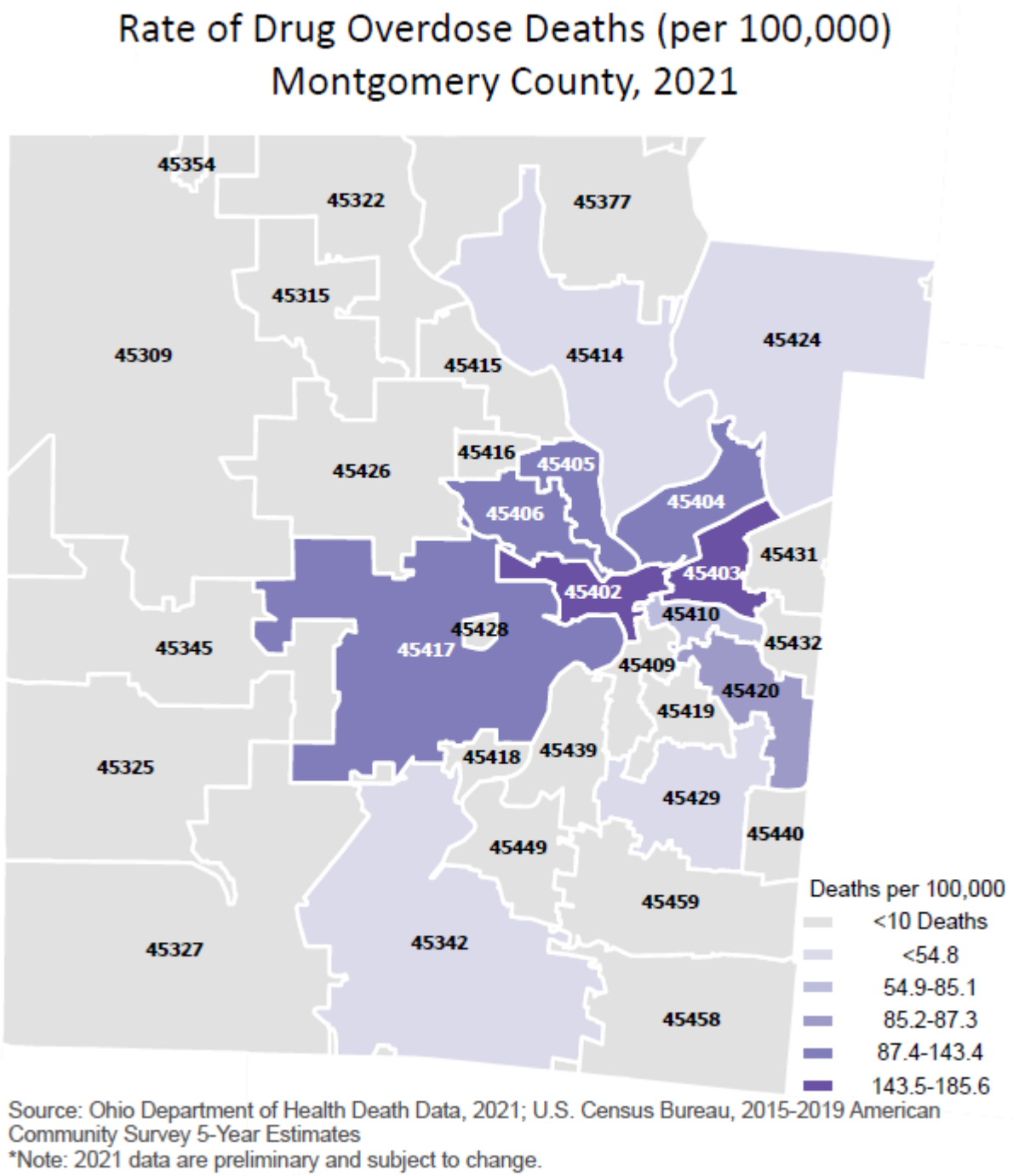


Figure 41: Map of Drug Overdose Death Rates by Zip Code, 2021

Zip codes 45402 and 45403 in Dayton, Ohio had the highest rates of overdose deaths in Montgomery County in 2021; 45404 also had a high rate. In 2020, 45405 had the highest rates of overdose deaths. Zip codes that include hot spots of overdose incidents may not be included in this map because they have fewer than ten total deaths, because individuals overdosed at a place other than home, or because several zip codes converge in an area with a high number of deaths.

Drug Overdose Death Rates (Deaths per 100,000 Residents) by Zip Code and Year
Montgomery County, 2012 – 2021

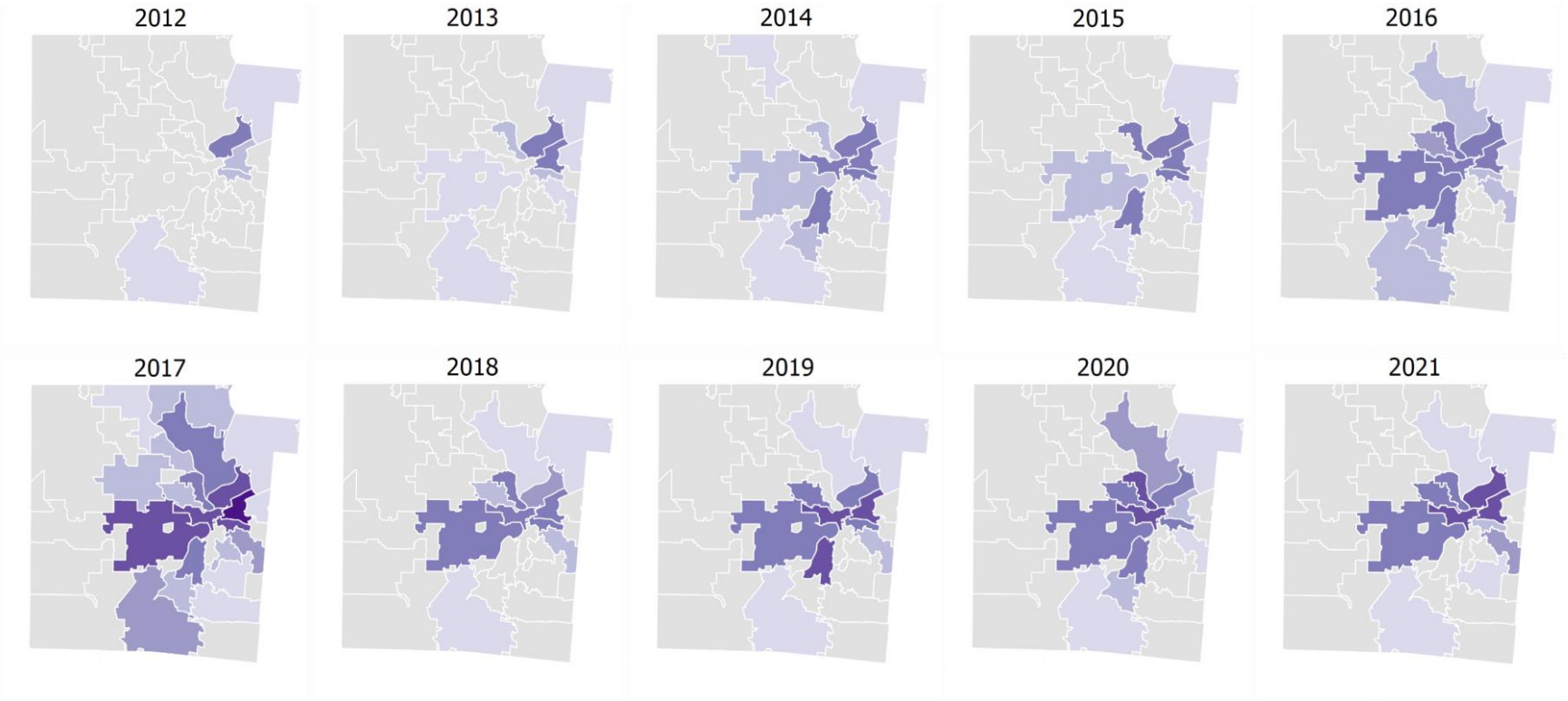


Figure 42: Map of Drug Overdose Death Rate by Zip Code, 2012-2021
Note: 2021 ODH Mortality Data are preliminary and subject to change

Between 2011 and 2017, zip codes throughout Montgomery County saw an increase in the rate of overdose deaths. While the **rate declined in most zip codes** between 2017 and 2021, it **increased in 45406**.

Appendix I: Data Tables

Demographic Attributes

Demographic Information in Overdose Deaths, Montgomery County, 2010-2021

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		2010-2021	
													#	%	#	%
Race	White	90%	87%	84%	85%	89%	86%	82%	82%	76%	76%	71%	256	76%	2,691	81%
	Black	10%	13%	15%	12%	11%	14%	16%	16%	21%	22%	28%	73	22%	573	17%
	Other	0%	0%	0%	2%	0%	1%	2%	2%	3%	2%	2%	8	2%	56	2%
	Unknown	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0	0%	3	0%
Gender	Male	57%	60%	60%	66%	62%	68%	65%	68%	60%	64%	66%	207	61%	2,126	64%
	Female	43%	40%	40%	33%	38%	32%	35%	32%	40%	36%	34%	130	39%	1,195	36%
	Unknown	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0	0%	2	0%
Age	<18	1%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0.3%	6	1.8%	16	0%
	18-24	13%	5%	4%	4%	6%	7%	6%	5%	5%	5%	7%	9	3%	180	5%
	25-34	22%	22%	29%	26%	29%	26%	29%	27%	25%	24%	25%	75	22%	860	26%
	35-44	28%	26%	19%	28%	26%	29%	28%	30%	29%	32%	27%	101	30%	939	28%
	45-54	18%	32%	33%	27%	24%	22%	19%	21%	22%	20%	19%	71	21%	736	22%
	55-64	16%	14%	13%	13%	14%	14%	16%	14%	16%	16%	18%	56	17%	505	15%
	65+	2%	1%	3%	3%	2%	2%	2%	2%	2%	2%	5%	19	6%	87	3%
Education	<HS	26%	33%	29%	32%	26%	29%	30%	26%	24%	30%	23%	90	27%	909	27%
	HS	52%	42%	53%	45%	50%	49%	51%	49%	51%	48%	51%	158	47%	1,637	49%
	College	21%	25%	18%	20%	24%	21%	18%	22%	24%	22%	24%	85	25%	732	22%
	Unknown	1%	1%	1%	3%	0%	1%	1%	3%	1%	1%	2%	4	1%	45	1%
Marital Status	Single	41%	38%	48%	43%	44%	51%	52%	52%	53%	55%	55%	173	51%	1,663	50%
	Divorced	26%	25%	29%	32%	31%	25%	27%	26%	27%	24%	24%	106	31%	907	27%
	Married	29%	33%	18%	19%	22%	19%	16%	16%	16%	16%	15%	46	14%	592	18%
	Widowed	2%	2%	6%	3%	2%	2%	4%	5%	3%	5%	4%	10	3%	138	4%
	Unknown	0%	1%	0%	0%	1%	1%	0%	1%	1%	1%	1%	2	1%	23	1%
Insurance	Private	-	-	-	-	-	-	-	7%	8%	8%	7%	36	11%	142	10%
	Medicaid	-	-	-	-	-	-	-	55%	57%	50%	53%	199	59%	987	67%
	Medicare	-	-	-	-	-	-	-	10%	11%	11%	13%	40	12%	200	14%
	Self Pay	-	-	-	-	-	-	-	10%	8%	11%	15%	17	5%	176	12%
	Other	-	-	-	-	-	-	-	2%	2%	6%	3%	12	4%	57	4%
	Unknown	-	-	-	-	-	-	-	16%	14%	15%	10%	33	10%	243	17%
Occupation	Labor	-	-	-	-	-	-	-	-	40%	41%	43%	119	35%	492	55%
	Service	-	-	-	-	-	-	-	-	20%	20%	18%	67	20%	240	27%
	Healthcare	-	-	-	-	-	-	-	-	5%	5%	5%	25	7%	72	8%
	Office	-	-	-	-	-	-	-	-	3%	5%	4%	43	13%	80	9%
	Homemaker	-	-	-	-	-	-	-	-	6%	7%	7%	13	4%	73	8%
	Other	-	-	-	-	-	-	-	-	9%	6%	5%	43	13%	103	11%
	Unemployed	-	-	-	-	-	-	-	-	10%	9%	11%	30	9%	118	13%
	None Listed	-	-	-	-	-	-	-	-	6%	7%	7%	40	12%	102	11%
Total Deaths		**127**	**132**	**160**	**226**	**263**	**259**	**351**	**566**	**291**	**288**	**323**	**337**		**3,323**	

Table 6: Full Demographic Information in Overdose Deaths in Montgomery County, 2010-2021

Health

Physical and Mental Illness in Overdose Deaths
Montgomery County, 2018-2021

	Physical Illness					Mental Illness				
	2018	2019	2020	2021		2018	2019	2020	2021	
	%	%	%	#	%	%	%	%	#	%
Any Reported Illness	**90%**	**88%**	**84%**	**298**	**88%**	**53%**	**47%**	**56%**	**195**	**58%**
Reported to Coroner	74%	76%	67%	231	69%	16%	18%	16%	57	17%
Hospital Diagnosis	66%	67%	63%	249	74%	47%	43%	52%	183	54%
Last Hospital Visit	**Any Hospital Visit**					**Mental Health Hospital Visit**				
Last Month	28%	25%	23%	89	26%	9%	8%	8%	32	9%
Last 6 Months	57%	53%	55%	192	57%	25%	20%	19%	83	25%
Last Year	69%	67%	68%	238	71%	33%	28%	28%	110	33%
One or more years	16%	18%	22%	66	20%	14%	15%	24%	73	22%
Total Deaths	**291**	**288**	**323**	**337**	**100%**	**291**	**288**	**323**	**337**	**100%**

Table 9: Physical and Mental Illness Among Overdose Deaths in Montgomery County, 2018-2021

Types of Physical Illness in Overdose Deaths
Montgomery County, 2021

	2021	
	#	%
Hypertension	154	46%
Heart Disease	129	38%
Obesity	119	35%
Chronic Pain	106	31%
Kidney Disease	69	20%
COPD*	63	19%
Hepatitis C	59	18%
Asthma	56	17%
Diabetes	43	13%
Headaches	28	8%
Seizure Disorder	23	7%
Injury and/or Surgery	20	6%
Cancer	11	3%
Fibromyalgia	8	2%
Hepatitis A	3	1%

*Chronic Obstructive Pulmonary Disease

Table 8: Types of Physical Illness Among Overdose Deaths in Montgomery County, 2021

Types of Mental Illness in Overdose Deaths
Montgomery County, 2021

	2021	
	#	%
Anxiety	157	47%
Depression	119	35%
Bipolar Disorder	58	17%
Stress Reaction/PTSD*	56	17%
Delusions/Psychosis	36	11%
ADHD+	18	5%
Personality Disorder	17	5%
Other	33	10%
Unknown	23	7%

* Post-Traumatic Stress Disorder

+Attention-Deficit/Hyperactivity Disorder

Table 7: Types of Mental Illness Among Overdose Deaths in Montgomery County, 2021

Substance Abuse and Drug Overdose

Substance Abuse and Overdose History Among Overdose Deaths
Montgomery County, 2017-2021

	2018	2019	2020	2021	
	%	%	%	#	%
Reported Substance Use	**92%**	**93%**	**94%**	**314**	**93%**
Reported to Coroner	80%	85%	85%	278	82%
Hospital Diagnosis	51%	55%	56%	214	64%
Drug Charge	62%	60%	61%	197	58%
Time Since Substance Use Disorder Visit					
Last Month	9%	9%	11%	31	9%
Last 6 Months	24%	23%	25%	84	25%
Last Year	34%	32%	32%	115	34%
One or more years	17%	23%	24%	99	29%
Prior Overdose Hospital Visit	**38%**	**40%**	**36%**	**150**	**45%**
Time Since Overdose Visit					
Last Month	2%	6%	3%	13	4%
Last 6 Months	4%	11%	9%	19	6%
Last Year	6%	14%	12%	21	6%
One or more years	33%	26%	24%	129	38%
Total Overdose Deaths	**38%**	**40%**	**36%**	**150**	**45%**

Source: Montgomery County Coroner's Office, GDAHA Healthcare Database, JusticeWeb

Table 10: Substance Abuse Among Overdose Deaths in Montgomery County, 2017-2021

Decedents with Criminal History, 2017-2021

	2017	2018	2019	2020	2021	
	%	%	%	%	#	%
Any Charge	96%	94%	92%	96%	314	93%
Any Conviction	41%	89%	89%	92%	305	91%
Non-Traffic Charge	-	85%	86%	86%	287	85%
Non- Traffic Conviction	-	78%	77%	79%	264	78%
Any Jail Booking	83%	77%	83%	77%	266	79%
Drug Charge	60%	62%	60%	61%	197	58%
Drug Conviction	45%	44%	41%	48%	156	46%
Felony Charge	59%	53%	53%	54%	195	58%
Felony Conviction	42%	38%	39%	41%	154	46%
Total Deaths	**566**	**291**	**288**	**323**	**337**	**100%**

Table 11: Criminal History Among Overdose Deaths in Montgomery County, 2017-2021

Prior Criminal Charges, 2018-2021

Charge	2018	2019	2020	2021	
	%	%	%	#	%
Drug Related	62%	60%	61%	197	58%
Robbery/Theft	42%	46%	50%	157	47%
Disorderly Conduct	34%	34%	37%	129	38%
OVI	30%	37%	30%	126	37%
Assault	27%	30%	30%	113	34%
Domestic Violence	25%	28%	27%	104	31%
Obstruction of Official Business	17%	19%	21%	84	25%
Public Intoxication	25%	27%	28%	82	24%
Fraud	10%	15%	21%	78	23%
Trespassing	17%	17%	21%	69	20%
Weapons Charges	11%	9%	12%	63	19%
Receiving Stolen Property	11%	12%	12%	58	17%
Unauthorized Use of Property	7%	8%	11%	52	15%
Menacing	11%	13%	12%	50	15%
Breaking and Entering	8%	11%	13%	49	15%
Criminal Damage	13%	15%	14%	46	14%
Resisting Arrest	10%	11%	14%	46	14%
Criminal Damage	15%	15%	17%	44	13%

Table 12: Prior Criminal Charges Among Overdose Deaths, 2018-2021

Time Since Contact with Criminal Justice System, 2017-2021

	All Contacts						Jail Booking						Drug-Related Contact					
	2017	2018	2019	2020	2021		2017	2018	2019	2020	2021		2017	2018	2019	2020	2021	
	%	%	%	%	#	%	%	%	%	%	#	%	%	%	%	%	#	%
Ever	96%	94%	92%	96%	313	93%	83%	77%	83%	77%	196	58%	60%	62%	60%	61%	266	79%
Within 1 Year	66%	57%	54%	50%	158	47%	42%	37%	38%	32%	62	18%	19%	24%	21%	22%	86	26%
Within 6 Months	52%	45%	40%	36%	115	34%	29%	30%	28%	22%	41	12%	13%	20%	15%	16%	58	17%
Within 1 Month	22%	18%	17%	11%	46	14%	8%	12%	10%	7%	9	3%	3%	8%	6%	5%	22	7%

Table 13: Time Since Contact with the Criminal Justice System Among Overdose Deaths, 2017-2021

Incident

Circumstances of Fatal Overdose
Montgomery County, 2018-2021

	2018	2019	2020	2021	
	%	%	%	#	%
Location					
Home	42%	42%	44%	143	42%
Friend's Home	16%	19%	17%	59	18%
Family's Home	18%	15%	15%	43	13%
Motel	5%	7%	7%	28	8%
Public Area (incl Street)	5%	3%	5%	16	5%
Drug House	3%	3%	2%	12	4%
Public Business	3%	3%	3%	8	2%
Car or Driving	2%	3%	4%	7	2%
Work	2%	2%	0%	7	2%
Sober Living Home	2%	1%	1%	4	1%
Stranger's Home	1%	2%	1%	3	1%
Unknown	1%	1%	1%	11	3%
Route of Administration					
Inject	30%	26%	25%	69	20%
Snort	18%	19%	25%	64	19%
Smoke	9%	13%	14%	45	13%
Ingest	10%	8%	6%	11	3%
Unknown	40%	43%	37%	162	48%
Alone at the Time of Overdose					
Yes	64%	61%	71%	235	70%
Unknown but found alone	9%	9%	7%	28	8%
No	22%	25%	19%	64	19%
Unknown	5%	5%	3%	10	3%
Abstinence Within 1 Month of Death					
Yes	**17%**	**22%**	**19%**	**71**	**21%**
In Facility	*14%*	*19%*	*15%*	*51*	*15%*
Sober	*3%*	*3%*	*5%*	*23*	*7%*
No	**83%**	**78%**	**81%**	**266**	**79%**
Naloxone Administered					
Yes	**36%**	**38%**	**31%**	**122**	**36%**
By Bystander	*1%*	*4%*	*2%*	*19*	*6%*
No	**64%**	**63%**	**69%**	**215**	**64%**
Total	**291**	**288**	**323**	**337**	**100%**

Table 14: Circumstances of Overdose Deaths, 2018-2021

Drug Mentions
Opioids

Presence of Opioids in Overdose Deaths in Montgomery County, 2010-2021

Year	Total Deaths	Any Opioid		Illicit Fentanyl		Prescription Opioids		Fentanyl Analogue		Heroin	
		# of Deaths	% of All Deaths	#	%	#	%	#	%	#	%
2010	127	117	92%	9	7%	94	74%	-	-	39	31%
2011	132	116	88%	8	6%	82	62%	-	-	46	35%
2012	160	134	91%	9	6%	65	46%	-	-	95	59%
2013	226	163	92%	34	15%	64	44%	-	-	132	58%
2014	263	190	93%	112	43%	60	37%	-	-	126	48%
2015	259	236	91%	110	42%	79	30%	-	-	117	45%
2016	351	321	91%	240	68%	63	18%	32	9%	74	21%
2017	566	520	92%	361	64%	141	25%	351	62%	51	9%
2018	291	266	91%	244	84%	58	20%	97	33%	48	16%
2019	288	255	89%	238	83%	36	13%	70	24%	26	9%
2020	323	294	91%	280	87%	41	13%	54	17%	15	5%
2021	337	300	89%	270	80%	48	14%	109	32%	11	3%
2010-2021	3,323	2,912	88%	1,915	58%	831	25%	713	21%	780	23%

Table 16: Opioid Mentions by Year Among Overdose Deaths in Montgomery County, 2010-2021

Opioid Combinations in Opioid Overdose Deaths in Montgomery County, 2017-2021

Opioid Combinations	2017	2018	2019	2020	2021		Opioids Mentioned			
	% of Opioid Deaths	% of Opioid Deaths	% of Opioid Deaths	% of Opioid Deaths	# of Deaths	% of Opioid Deaths	Fentanyl Analogs	Illicit Fentanyl	Prescription Opioids	Heroin
Illicit Fentanyl	15%	38%	55%	65%	138	46.0%		X		
Fentanyl Analogues & Illicit Fentanyl	33%	24%	21%	15%	91	30.3%	X	X		
Illicit Fentanyl & Rx Opioids	5%	6%	5%	7%	23	7.7%		X	X	
Prescription (Rx) Opioids	6%	5%	5%	3%	15	5.0%			X	
Unspecified Opioid	0%	0%	0%	1%	8	2.7%				
Fentanyl Analogues Illicit Fentanyl & Rx Opioids	7%	3%	2%	2%	7	2.3%	X	X	X	
Fentanyl Analogues	19%	1%	0%	0%	4	1.3%	X			
Fentanyl Analogues, Illicit Fentanyl & Heroin	1%	3%	2%	1%	4	1.3%	X	X		X
Illicit Fentanyl & Heroin	1%	7%	6%	3%	3	1.0%		X		X
Fentanyl Analogues, Illicit Fentanyl, Rx Opioids & Heroin	3%	2%	1%	0%	2	0.7%	X	X	X	X
Fentanyl Analogues & Heroin	0%	0%	0%	0%	1	0.3%	X			X
Prescription Opioids & Heroin	1%	0%	0%	0%	1	0.3%			X	X
Fentanyl Analogues & Rx Opioids	2%	0%	0%	0%	0	0.0%	X		X	
Fentanyl Analogues, Rx Opioids & Heroin	1%	0%	0%	0%	0	0.0%	X		X	X
Heroin	1%	1%	0%	0%	0	0.0%				X
Illicit Fentanyl, Rx Opioids & Heroin	2%	4%	1%	1%	0	0.0%		X	X	X

Table 15: Opioid Combinations in Toxicology Screens Among Overdose Deaths, 2017-2021

Prescription Opioids

Prescription Opioid Overdose Deaths by Type and Year in Montgomery County, 2010-2021

Prescription (Rx) Opioid Deaths	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	2018 %	2019 %	2020 %	2021 #	2021 %
Oxycodone	31%	31%	33%	24%	29%	28%	35%	35%	22%	17%	15%	8	17%
Methadone	44%	53%	27%	31%	13%	14%	13%	16%	19%	31%	22%	10	21%
Hydrocodone	33%	23%	20%	22%	43%	26%	24%	13%	22%	6%	17%	6	13%
Morphine	12%	12%	15%	16%	29%	37%	27%	24%	29%	11%	7%	3	6%
Tramadol	9%	6%	12%	15%	5%	6%	6%	11%	21%	22%	34%	12	25%
Codeine	4%	4%	1%	4%	3%	4%	2%	4%	12%	8%	12%	4	8%
Oxymorphone	2%	0%	8%	0%	4%	5%	2%	1%	9%	14%	12%	7	15%
Hydromorphone	1%	0%	0%	1%	4%	6%	2%	1%	17%	3%	7%	4	8%
U-47700	0%	0%	0%	0%	0%	0%	6%	6%	0%	0%	0%	0	0%
Buprenorphine	0%	0%	0%	0%	0%	0%	0%	0%	7%	14%	5%	7	15%
Dextropropoxyphene	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0	0%
Total Deaths	**94**	**81**	**75**	**100**	**97**	**78**	**63**	**141**	**58**	**36**	**41**	**48**	**100%**

Table 17: Prescription Opioid Mentions by Year Among Overdose Deaths in Montgomery County, 2010-2021

Fentanyl Analogs

Fentanyl Analogue Overdose Deaths by Substance and Year in Montgomery County, 2017-2021

	2017 % of Fentanyl Analogue Deaths	2018 %	2019 %	2020 %	2021 #	2021 %
Acetylfentanyl	4%	66%	69%	63%	22	20%
Acrylfentanyl	21%	0%	0%	0%	0	0%
Benzylfentanyl	1%	5%	3%	2%	3	3%
Butyryl/Isobutyrylfentanyl	1%	1%	0%	2%	0	0%
Carfentanil	67%	19%	6%	0%	0	0%
Cyclopropylfentanyl	0%	0%	0%	0%	0	0%
Cyclopropylfentanyl/Crotonylfentanyl	2%	0%	1%	0%	0	0%
Desproprionyl Fluoro Fentanyl	0%	0%	0%	2%	51	47%
Fluorobutyrylfentanyl/Fluoroisobutyrylfentanyl	4%	11%	1%	0%	0	0%
Fluorofentanyl	0%	0%	0%	7%	90	83%
Furanylfentanyl	19%	3%	1%	0%	0	0%
Methoxy Acetylfentanyl	0%	3%	0%	2%	0	0%
Tetrahydrofuran Fentanyl	0%	3%	3%	2%	0	0%
Valeryl/Isovaleryl Fentanyl	0%	13%	26%	20%	0	0%
Total Fentanyl Analogue Overdose Deaths	**351**	**97**	**70**	**54**	**109**	

Table 18: Fentanyl Overdose Deaths by Year and Type of Fentanyl Analog in Montgomery County, 2017-2021

Cocaine

Cocaine Overdoses
Montgomery County by Year, 2010-2021

Year	Total Overdose Deaths	Cocaine Overdoses	
		# of Deaths	% of Total
2010	127	38	30%
2011	132	53	40%
2012	160	49	31%
2013	226	59	26%
2014	263	82	31%
2015	259	92	36%
2016	351	144	41%
2017	566	243	43%
2018	291	114	39%
2019	288	122	42%
2020	323	125	39%
2021	337	127	38%
2010-2021	**3,323**	**1,248**	**38%**

Table 19: Cocaine Overdose Deaths by in Montgomery County, 2010-2021

Cocaine Overdoses by Opioid Presence and Year, 2010-2021

Year	Cocaine	Any Opioid		Illicit Fentanyl		Fentanyl Analogs		Prescription Opioids		Heroin	
		# of Deaths	% of all Cocaine Deaths	#	%	#	%	#	%	#	%
2010	38	33	87%	3	8%	-	-	26	68%	15	39%
2011	53	45	85%	0	0%	-	-	23	43%	29	55%
2012	49	36	73%	1	2%	-	-	15	31%	26	53%
2013	59	41	69%	4	7%	-	-	10	17%	32	54%
2014	82	60	73%	39	48%	-	-	15	18%	29	35%
2015	92	79	86%	38	41%	-	-	15	16%	47	51%
2016	144	133	92%	107	74%	-	-	10	7%	33	23%
2017	243	225	93%	156	64%	152	63%	47	19%	18	7%
2018	114	105	92%	99	87%	34	30%	22	19%	14	12%
2019	122	107	88%	102	84%	23	19%	15	12%	9	7%
2020	125	110	88%	103	82%	20	16%	14	11%	8	6%
2021	127	114	90%	104	82%	44	35%	13	10%	7	6%
2010-2021	**1,248**	**1,088**	**87%**	**756**	**61%**	**273**	**22%**	**225**	**18%**	**267**	**21%**

Table 20: Opioid Mentions in Cocaine Overdoses by Year in Montgomery County, 2010-2021

Marijuana

Marijuana Overdoses in Montgomery County by Year, 2012-2021

Year	Total Overdose Deaths	Marijuana Overdoses	
		# of Deaths	% of Total
2012	160	55	34%
2013	226	74	33%
2014	263	88	33%
2015	259	75	29%
2016	351	95	27%
2017	566	211	37%
2018	291	106	36%
2019	288	77	27%
2020	323	104	32%
2021	337	120	36%
2010-2021	**3,064**	**1,005**	**33%**

Table 21: Marijuana Overdose Deaths by Year in Montgomery County, 2012-2021

Marijuana Overdoses by Opioid Presence and Year, 2012-2021

Year	Marijuana Overdose Deaths	Any Opioid		Illicit Fentanyl		Fentanyl Analogs		Prescription Opioids		Heroin	
		# of Deaths	% of all Marijuana Deaths	#	%	#	%	#	%	#	%
2012	55	43	78%	1	2%	-	-	16	29%	22	40%
2013	74	55	74%	10	14%	-	-	20	27%	22	30%
2014	88	66	75%	43	49%	-	-	17	19%	25	28%
2015	75	71	95%	28	37%	-	-	22	29%	41	55%
2016	95	93	98%	69	73%	-	-	16	17%	22	23%
2017	211	200	95%	136	64%	142	67%	43	20%	23	11%
2018	106	103	97%	92	87%	35	33%	27	25%	19	18%
2019	77	73	95%	67	87%	22	29%	7	9%	7	9%
2020	104	99	95%	94	90%	19	18%	13	13%	3	3%
2021	120	111	93%	101	84%	46	38%	12	10%	8	7%
2010-2021	**1,005**	**914**	**91%**	**641**	**64%**	**218**	**22%**	**193**	**19%**	**192**	**19%**

Table 22: Opioid Mentions in Marijuana Overdose Deaths by Year in Montgomery County, 2012-2021

Antidepressants

Antidepressant Overdoses in Montgomery County by Year, 2010-2021

Year	Total Overdose Deaths	Antidepressant Overdoses	
		# of Deaths	% of Total
2010	127	51	40%
2011	132	49	37%
2012	160	50	31%
2013	226	59	26%
2014	263	37	14%
2015	259	16	6%
2016	351	27	8%
2017	566	90	16%
2018	291	66	23%
2019	288	53	18%
2020	323	67	21%
2021	337	63	19%
2010-2021	**3,323**	**628**	**19%**

Table 23: Antidepressant Overdose Deaths by Year in Montgomery County, 2010-2021

Antidepressant Overdoses by Opioid Presence and Year, 2010-2021

Year	Antidepressant Overdose Deaths	Any Opioid		Illicit Fentanyl		Fentanyl Analogs		Prescription Opioids		Heroin	
		# of Deaths	% of all Antidepressant Deaths	#	%	#	%	#	%	#	%
2010	51	48	94%	3	6%	-	-	40	78%	13	25%
2011	49	44	90%	6	12%	-	-	35	71%	15	31%
2012	50	43	86%	3	6%	-	-	28	56%	20	40%
2013	59	49	83%	3	5%	-	-	32	54%	24	41%
2014	37	32	86%	15	41%	-	-	22	59%	14	38%
2015	16	14	88%	2	13%	-	-	13	81%	1	6%
2016	27	24	89%	6	22%	-	-	17	63%	4	15%
2017	90	83	92%	55	61%	47	52%	35	39%	9	10%
2018	66	60	91%	54	82%	24	36%	23	35%	16	24%
2019	53	49	92%	45	85%	14	26%	9	17%	5	9%
2020	67	62	93%	58	87%	13	19%	11	16%	3	4%
2021	63	59	94%	49	78%	19	30%	17	27%	0	0%
2010-2021	**628**	**567**	**90%**	**299**	**48%**	**98**	**16%**	**282**	**45%**	**124**	**20%**

Table 24: Opioid Mentions in Antidepressant Overdose Deaths by Year in, 2010-2021

Methamphetamine

Methamphetamine Overdoses in Montgomery County by Year, 2010-2021

Year	Total Overdose Deaths	Methamphetamine Overdoses	
		# of Deaths	% of Total
2010	127	1	1%
2011	132	2	2%
2012	160	4	3%
2013	226	6	3%
2014	263	11	4%
2015	259	14	5%
2016	351	36	10%
2017	566	102	18%
2018	291	84	29%
2019	288	86	30%
2020	323	110	34%
2021	337	117	35%
2010-2020	**3,323**	**573**	**17%**

Table 25: Methamphetamine Overdose Deaths by Year in Montgomery County, 2010-2021

Methamphetamine Overdoses by Opiate Presence and Year, 2010-2021

Year	Methamphetamine Overdose Deaths	Any Opioid		Illicit Fentanyl		Fentanyl Analogs		Prescription Opioids		Heroin	
		# of Deaths	% of all Meth Deaths	#	%	#	%	#	%	#	%
2010	1	1	100%	0	0%	-	-	1	100%	0	0%
2011	2	1	50%	0	0%	-	-	0	0%	1	50%
2012	4	3	75%	1	25%	-	-	1	25%	2	50%
2013	6	3	50%	2	33%	-	-	1	17%	1	17%
2014	11	8	73%	3	27%	-	-	1	9%	6	55%
2015	14	12	86%	6	43%	-	-	3	21%	5	36%
2016	36	33	92%	22	61%	-	-	6	17%	12	33%
2017	102	94	92%	65	64%	75	74%	12	12%	3	3%
2018	84	76	90%	72	86%	27	32%	12	14%	12	14%
2019	86	76	88%	74	86%	25	29%	5	6%	11	13%
2020	110	97	88%	93	85%	20	18%	10	9%	5	5%
2021	117	95	81%	91	78%	38	32%	10	9%	2	2%
2010-2021	**573**	**499**	**87%**	**429**	**75%**	**147**	**26%**	**62**	**11%**	**60**	**10%**

Table 26: Opioid Mentions in Methamphetamine Overdose Deaths by Year, 2010-2021

Benzodiazepines

Benzodiazepine Overdoses in Montgomery County by Year, 2010-2021

Year	Total Overdose Deaths	Benzodiazepine Overdoses	
		# of Deaths	% of Total
2010	127	89	70%
2011	132	84	64%
2012	160	70	44%
2013	226	118	52%
2014	263	133	51%
2015	259	111	43%
2016	351	92	26%
2017	566	201	36%
2018	291	61	21%
2019	288	60	21%
2020	323	61	19%
2021	337	63	19%
2010-2021	**3,323**	**1,143**	**34%**

Table 27: Benzodiazepine Overdose Deaths by Year in Montgomery County, 2010-2021

Benzodiazepine Overdoses by Opioid Presence and Year, 2010-2021

Year	Benzodiazepine	Any Opioid		Illicit Fentanyl		Fentanyl Analogs		Prescription Opioids		Heroin	
		# of Deaths	% of all Benzo Deaths	#	%	#	%	#	%	#	%
2010	89	84	94%	5	6%	-	-	73	82%	24	27%
2011	84	80	95%	5	6%	-	-	64	76%	28	33%
2012	70	57	81%	5	7%	-	-	38	54%	30	43%
2013	118	89	75%	16	14%	-	-	44	37%	44	37%
2014	133	107	80%	58	44%	-	-	41	31%	42	32%
2015	111	109	98%	40	36%	-	-	48	43%	53	48%
2016	92	89	97%	59	64%	-	-	32	35%	18	20%
2017	201	190	95%	125	62%	120	60%	74	37%	18	9%
2018	61	54	89%	45	74%	15	25%	21	34%	16	26%
2019	60	55	92%	45	75%	19	32%	17	28%	10	17%
2020	61	61	100%	56	92%	10	16%	19	31%	5	8%
2021	63	54	86%	44	70%	13	21%	18	29%	2	3%
2010-2021	**1,143**	**1,029**	**90%**	**503**	**44%**	**177**	**15%**	**489**	**43%**	**290**	**25%**

Table 28: Opioid Mentions in Benzodiazepine Overdose Deaths by Year, 2010-2021

Benzodiazepine Deaths by Type and Year, 2010-2021

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
	%	%	%	%	%	%	%	%	%	%	%	#	%
Clonazepam	34%	26%	33%	39%	29%	38%	35%	21%	15%	35%	41%	24	38%
Clonazolam	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	18	29%
Diazepam	25%	20%	31%	25%	32%	26%	25%	28%	20%	30%	34%	16	25%
Alprazolam	73%	70%	57%	64%	52%	48%	52%	40%	59%	42%	34%	7	11%
Oxazepam	0%	0%	0%	0%	0%	0%	0%	0%	3%	3%	2%	5	8%
Temazepam	0%	0%	0%	0%	0%	0%	0%	0%	3%	2%	3%	5	8%
Lorazepam	4%	2%	6%	5%	11%	5%	4%	3%	0%	3%	5%	4	6%
Chlordiazepoxide	0%	0%	0%	0%	1%	1%	0%	1%	3%	2%	0%	0	0%
Etizolam	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	3%	0	0%
Flualprazolam	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	0	0%
Midazolam	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1	2%
Total Benzodiazepines	**89**	**84**	**70**	**118**	**133**	**111**	**92**	**201**	**61**	**60**	**61**	**63**	

Table 29: Type of Opioid in Benzodiazepine Overdose Deaths by Year, 2010-2021

Alcohol

Alcohol Overdoses in Montgomery County by Year, 2010-2021

Year	Total Overdose Deaths	Alcohol Overdoses	
		# of Deaths	% of Total
2010	127	29	23%
2011	132	32	24%
2012	160	44	28%
2013	226	63	28%
2014	263	77	29%
2015	259	67	26%
2016	351	79	23%
2017	566	125	22%
2018	291	66	23%
2019	288	70	24%
2020	323	88	27%
2021	337	83	25%
2010-2020	3,323	823	25%

Table 30: Alcohol Overdose Deaths by Year in Montgomery County, 2010-2021

Alcohol Overdoses by Opioid Presence and Year, 2010-2021

Year	Alcohol Overdose Deaths	Any Opioid		Illicit Fentanyl		Fentanyl Analogues		Prescription Opioids		Heroin	
		# of Deaths	% of all Meth Deaths	#	%	#	%	#	%	#	%
2010	29	25	86%	1	3%	-	-	15	52%	11	38%
2011	32	23	72%	1	3%	-	-	10	31%	14	44%
2012	44	37	84%	2	5%	-	-	15	34%	27	61%
2013	63	47	75%	7	11%	-	-	10	16%	36	57%
2014	77	54	70%	30	39%	-	-	18	23%	26	34%
2015	67	61	91%	24	36%	-	-	19	28%	39	58%
2016	79	75	95%	56	71%	-	-	7	9%	17	22%
2017	125	116	93%	77	62%	76	61%	34	27%	9	7%
2018	66	62	94%	60	91%	21	32%	9	14%	8	12%
2019	70	61	87%	59	84%	13	19%	9	13%	7	10%
2020	88	78	89%	75	85%	12	14%	8	9%	7	8%
2021	83	73	88%	71	86%	22	27%	5	6%	2	2%
2010-2021	**823**	**712**	**87%**	**463**	**56%**	**122**	**15%**	**159**	**19%**	**203**	**25%**

Table 31: Opioid Mentions in Alcohol Overdose Deaths by Year, 2010-2021

Gabapentin

Gabapentin Overdoses in Montgomery County by Year, 2017-2021

Year	Total Overdose Deaths	Gabapentin Overdoses	
		# of Deaths	% of Total
2017	566	52	9%
2018	291	34	12%
2019	288	15	5%
2020	323	32	10%
2021	337	26	8%
2010-2021	1,805	159	9%

Table 32: Gabapentin Overdose Deaths by Year in Montgomery County, 2017-2021

Gabapentin Overdoses by Opioid Presence and Year, 2017-2021

Year	Gabapentin Overdose Deaths	Any Opioid		Illicit Fentanyl		Fentanyl Analogs		Prescription Opioids		Heroin	
		# of Deaths	% of all Gabapentin Deaths	#	%	#	%	#	%	#	%
2017	52	50	96%	27	52%	20	38%	30	58%	8	15%
2018	34	34	100%	27	79%	9	26%	13	38%	7	21%
2019	15	14	93%	11	73%	6	40%	7	47%	3	20%
2020	32	31	97%	27	84%	6	19%	13	41%	2	6%
2021	26	25	96%	20	77%	9	35%	14	54%	0	0%
2010-2021	133	154	116%	112	84%	41	31%	77	58%	20	15%

Table 33: Opioid Mentions in Gabapentin Overdose Deaths by Year, 2017-2021

Antihistamines/Sleep Aids

Antihistamines/Sleep Aids Overdoses in Montgomery County by Year, 2018-2021

Year	Total Overdose Deaths	Antihistamines/ Sleep Aids Overdoses	
		# of Deaths	% of Total
2018	291	65	22%
2019	288	44	15%
2020	323	55	17%
2021	337	67	20%
2010-2020	1,239	231	19%

Table 34: Antihistamine/Sleep Aid Overdose Deaths by Year in Montgomery County, 2018-2021

Antihistamines/Sleep Aids Overdoses by Opioid Presence and Year, 2018-2021

Year	Antihistamines/ Sleep Aids Overdose Deaths	Any Opioid		Illicit Fentanyl		Fentanyl Analogs		Prescription Opiates		Heroin	
		# of Deaths	% of Antihistamine Deaths	#	%	#	%	#	%	#	%
2018	65	60	92%	54	83%	25	38%	20	31%	16	25%
2019	44	42	95%	38	86%	17	39%	7	16%	5	11%
2020	55	53	96%	49	89%	14	25%	10	18%	2	4%
2021	67	62	93%	59	88%	21	31%	10	15%	2	3%
2018-2021	164	155	95%	141	86%	56	34%	37	23%	23	14%

Table 35: Opioid Mentions in Antihistamine/Sleep Aid Overdose Deaths by Year, 2018-2021

Drug Mentions by Demographic Attributes

Opioids

Opioid Mentions by Demographic Group, Montgomery County, 2021

		All Deaths		Any Opioid		Illicit Fentanyl		Fentanyl Analogue		Prescription Opioid		Heroin	
		#	%	#	%	#	%	#	%	#	%	#	%
Race	White	256	76%	225	75%	202	75%	80	76%	38	79%	6	55%
	Black	73	22%	67	22%	62	23%	20	19%	9	19%	5	45%
Gende	Male	207	61%	186	62%	170	63%	70	67%	21	44%	5	45%
	Female	130	39%	114	38%	100	37%	35	33%	27	56%	6	55%
Age	Under 35	90	27%	83	28%	74	27%	29	28%	10	21%	3	27%
	35 and Over	247	73%	217	72%	196	73%	76	72%	38	79%	8	73%
Education	<HS	90	27%	83	28%	73	27%	28	27%	14	29%	4	36%
	HS	158	47%	141	47%	127	47%	53	50%	19	40%	4	36%
	College	85	25%	72	24%	66	24%	24	23%	13	27%	3	27%
Marital	Single	173	51%	157	52%	146	54%	58	55%	18	38%	5	45%
	Divorced	106	31%	93	31%	81	30%	34	32%	19	40%	4	36%
	Married	46	14%	39	13%	34	13%	12	11%	6	13%	2	18%
Insurance	Private	36	11%	29	10%	23	9%	10	10%	2	4%	0	0%
	Medicaid	199	59%	185	62%	168	62%	61	58%	36	75%	8	73%
	Self-Pay	17	5%	16	5%	16	6%	4	4%	1	2%	0	0%
	Medicare	40	12%	34	11%	29	11%	15	14%	6	13%	1	9%
Occupation	Labor	119	35%	106	35%	95	35%	41	39%	9	19%	3	27%
	Service	67	20%	56	19%	49	18%	19	18%	8	17%	3	27%
	Other	81	24%	73	24%	65	24%	23	22%	16	33%	3	27%
	Unemployed/None Listed	68	20%	63	21%	59	22%	22	21%	14	29%	2	18%
	Total Deaths	**337**		**300**		**270**		**105**		**48**		**11**	

Table 36: Opioid Mentions by Demographic Categories Among Overdose Deaths, 2021

Non-Opioid Mentions by Demographic Group, Montgomery County, 2021

		All Deaths		Cocaine		Marijuana		Metham-phetamine		Alcohol		Benzo-diazepines		Anti-depressants		Antihistamines/ Sleep Aids		Gabapentin	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Race	White	256	76%	80	63%	84	70%	105	90%	57	69%	53	84%	55	87%	53	79%	25	96%
	Black	73	22%	45	35%	33	28%	10	9%	24	29%	9	14%	8	13%	14	21%	1	4%
Gende	Male	207	61%	71	56%	77	64%	69	59%	62	75%	27	43%	25	40%	26	39%	6	23%
	Female	130	39%	56	44%	43	36%	48	41%	21	25%	36	57%	38	60%	41	61%	20	77%
Age	Under 35	90	27%	32	25%	33	28%	29	25%	17	20%	15	24%	15	24%	14	21%	3	12%
	35 and Over	247	73%	95	75%	87	73%	88	75%	66	80%	48	76%	48	76%	53	79%	23	88%
Education	<HS	90	27%	22	17%	33	28%	36	31%	20	24%	17	27%	17	27%	18	27%	10	38%
	HS	158	47%	66	52%	62	52%	55	47%	40	48%	29	46%	26	41%	25	37%	8	31%
	College	85	25%	38	30%	24	20%	25	21%	23	28%	16	25%	20	32%	24	36%	7	27%
Marital	Single	173	51%	68	54%	74	62%	60	51%	44	53%	27	43%	26	41%	33	49%	10	38%
	Divorced	106	31%	40	31%	26	22%	34	29%	26	31%	19	30%	19	30%	23	34%	14	54%
	Married	46	14%	16	13%	16	13%	17	15%	12	14%	14	22%	15	24%	10	15%	1	4%
Insurance	Private	36	11%	16	13%	12	10%	8	7%	11	13%	5	8%	7	11%	7	10%	1	4%
	Medicaid	199	59%	68	54%	70	58%	79	68%	48	58%	44	70%	36	57%	42	63%	18	69%
	Self-Pay	17	5%	5	4%	6	5%	6	5%	6	7%	3	5%	3	5%	3	4%	1	4%
	Medicare	40	12%	20	16%	15	13%	14	12%	10	12%	7	11%	8	13%	9	13%	5	19%
Occupation	Labor	119	35%	44	35%	39	33%	39	33%	30	36%	11	17%	15	24%	14	21%	8	31%
	Service	67	20%	27	21%	26	22%	28	24%	16	19%	17	27%	9	14%	15	22%	3	12%
	Other	81	24%	32	25%	29	24%	23	20%	18	22%	19	30%	27	43%	21	31%	10	38%
	Unemployed/ None Listed	68	20%	24	19%	25	21%	26	22%	19	23%	16	25%	12	19%	17	25%	5	19%
Total Deaths		**337**		**127**		**120**		**117**		**83**		**63**		**63**		**67**		**26**	

Table 37: Non-Opioid Drug Mentions by Demographic Categories Among Overdose Deaths, 2021

Drug Mentions by Health Status, 2021

	Physical Illness		No Physical Illness		Mental Illness		No Mental Illness		Prior Overdose Hospital Visit		No Prior Overdose Hospital Visit	
	Total = 298		**Total = 39**		**Total = 195**		**Total = 142**		**Total = 150**		**Total = 187**	
	#	%	#	%	#	%	#	%	#	%	#	%
Any Opioid	263	88%	37	95%	174	89%	126	89%	137	91%	163	87%
Illicit Fentanyl	238	80%	32	82%	152	78%	118	83%	120	80%	150	80%
Fentanyl Analog	88	30%	17	44%	57	29%	48	34%	51	34%	54	29%
Prescription Opioids	47	16%	1	3%	37	19%	11	8%	27	18%	21	11%
Heroin	11	4%	0	0%	5	3%	6	4%	6	4%	5	3%
Cocaine	113	38%	14	36%	73	37%	54	38%	46	31%	81	43%
Benzos	60	20%	3	8%	47	24%	16	11%	26	17%	37	20%
Methamphetamine	106	36%	11	28%	67	34%	50	35%	59	39%	58	31%
Antidepressants	59	20%	4	10%	50	26%	13	9%	27	18%	36	19%
Marijuana	105	35%	15	38%	67	34%	53	37%	47	31%	73	39%
Gabapentin	24	8%	2	5%	24	12%	2	1%	14	9%	12	6%

Table 38: Drug Mentions by Health Status Among Overdose Deaths in Montgomery County, 2021

Appendix II: Figures and Tables

Table of Figures

Figure 1: Overdose Deaths in Montgomery County by Year, 2010-2021 7
Figure 2: Overdose Deaths in Montgomery County by Month, 2017-2021 7
Figure 3: Overdose Deaths in Montgomery County by Sex, 2021 8
Figure 4: Overdose Deaths in Montgomery County by Sex and Year, 2010-2021 8
Figure 5: Overdose Deaths in Montgomery County by Race, 2021 9
Figure 6: Overdose Deaths in Montgomery County by Race and Year, 2010-2021 9
Figure 7: Overdose Deaths in Montgomery County by Age, 2021 11
Figure 8: Overdose Deaths in Montgomery County by Educational Attainment, 2021 11
Figure 9: Overdose Deaths in Montgomery County by Marital Status, 2021 12
Figure 10: Overdose Deaths in Montgomery County by Occupation, 2021 12
Figure 11: Overdose Deaths in Montgomery County by Insurance, 2021 12
Figure 12: Criminal History Among Overdose Deaths in Montgomery County, 2021 14
Figure 13: Criminal Charges Among Overdose Deaths in Montgomery County, 2021 14
Figure 14: Place of Incident Among Drug Overdose Deaths in Montgomery County, 2021 15
Figure 15: Drug Mentions Among Overdose Deaths in Montgomery County, 2021 16
Figure 16: Opioid Overdose Deaths Among Overdose Deaths in Montgomery County, 2010-2021 17
Figure 17: Opioids Present Among Overdose Deaths in Montgomery County, 2021 17
Figure 18: Prescription Opioids Among Overdose Deaths in Montgomery County, 2010-2021 18
Figure 19: Prescription Opioids Present Among Overdose Deaths in Montgomery County, 2021 18
Figure 20: Heroin Among Overdose Deaths in Montgomery County, 2010-2021 19
Figure 21: Illicit Fentanyl Among Overdose Deaths in Montgomery County, 2013-2021 19
Figure 22: Fentanyl Analogs Among Overdose Deaths by Year, 2017 – 2021 20
Figure 23: Fentanyl Analogs Present Among Overdose Deaths in Montgomery County, 2021 20
Figure 24: Cocaine Among Overdose Deaths in Montgomery County, 2010-2021 21
Figure 25: Methamphetamine Among Overdose Deaths in Montgomery County by Year, 2010-2021 21
Figure 26: Marijuana Among Overdose Deaths in Montgomery County by Year, 2012-2021 22
Figure 27: Antidepressant Among Overdose Deaths in Montgomery County by Year, 2010-2021 22
Figure 28: Benzodiazepine Among Overdose Deaths in Montgomery County, 2010-2021 23
Figure 29: Gabapentin Among Overdose Deaths in Montgomery County, 2017-2021 24
Figure 30: Alcohol Among Overdose Deaths in Montgomery County, 2010-2021 24
Figure 31: Opioid Mentions by Physical Illness Among Overdose Deaths in Montgomery County, 2021 28
Figure 32: Non-Opioid Mentions by Physical Illness Among Overdose Deaths in Montgomery County, 2021 28
Figure 33: Opioid Mentions by Mental Illness Among Overdose Deaths in Montgomery County, 2021 29
Figure 34: Non-Opioid Mentions by Mental Illness Among Overdose Deaths in Montgomery County, 2021 29
Figure 35: Opioid Mentions by Prior Overdose Hospital Visits Among Overdose Deaths in Montgomery County, 2021 30
Figure 36: Non-Opioid Mentions by Prior Overdose Hospital Visits Among Overdose Deaths, 2021 30
Figure 37: Density Map of Incident Location Among Overdose Deaths in Montgomery County, 2021 31
Figure 38: Density Map of Incident Location Among Overdose Deaths in Montgomery County by Year, 2017-2021 32
Figure 39: Map of Drug Overdose Rates by County, 2021 33
Figure 40: Map of Drug Overdose Death Rate by County, 2012-2021 34
Figure 41: Map of Drug Overdose Death Rates by Zip Code, 2021 35
Figure 42: Map of Drug Overdose Death Rate by Zip Code, 2012-2021 36

Table of Tables

Table 1: Physical Illnesses Among Overdose Deaths in Montgomery County, 2021 13
Table 2: Time Since Criminal Justice Contact Among Overdose Deaths in Montgomery County, 2021 14
Table 3: Route of Administration, Drug Overdose Deaths, Montgomery County, 2021 15
Table 4: Drug Overdose Deaths by Presence of Others in Montgomery County, 2021 15
Table 5: Type of Benzodiazepine Among Overdose Deaths in Montgomery County, 2021 23
Table 6: Full Demographic Information in Overdose Deaths in Montgomery County, 2010-2021 37
Table 7: Types of Mental Illness Among Overdose Deaths in Montgomery County, 2021 38
Table 8: Types of Physical Illness Among Overdose Deaths in Montgomery County, 2021 38
Table 9: Physical and Mental Illness Among Overdose Deaths in Montgomery County, 2018-2021 38
Table 10: Substance Abuse Among Overdose Deaths in Montgomery County, 2017-2021 39
Table 11: Criminal History Among Overdose Deaths in Montgomery County, 2017-2021 40
Table 12: Prior Criminal Charges Among Overdose Deaths, 2018-2021 40
Table 13: Time Since Contact with the Criminal Justice System Among Overdose Deaths, 2017-2021 40
Table 14: Circumstances of Overdose Deaths, 2018-2021 41
Table 15: Opioid Combinations in Toxicology Screens Among Overdose Deaths, 2017-2021 42
Table 16: Opioid Mentions by Year Among Overdose Deaths in Montgomery County, 2010-2021 42
Table 17: Prescription Opioid Mentions by Year Among Overdose Deaths in Montgomery County, 2010-2021 43
Table 18: Fentanyl Overdose Deaths by Year and Type of Fentanyl Analog in Montgomery County, 2017-2021 43
Table 19: Cocaine Overdose Deaths by in Montgomery County, 2010-2021 44
Table 20: Opioid Mentions in Cocaine Overdoses by Year in Montgomery County, 2010-2021 44
Table 21: Marijuana Overdose Deaths by Year in Montgomery County, 2012-2021 45
Table 22: Opioid Mentions in Marijuana Overdose Deaths by Year in Montgomery County, 2012-2021 45
Table 23: Antidepressant Overdose Deaths by Year in Montgomery County, 2010-2021 46
Table 24: Opioid Mentions in Antidepressant Overdose Deaths by Year in, 2010-2021 46
Table 25: Methamphetamine Overdose Deaths by Year in Montgomery County, 2010-2021 47
Table 26: Opioid Mentions in Methamphetamine Overdose Deaths by Year, 2010-2021 47
Table 27: Benzodiazepine Overdose Deaths by Year in Montgomery County, 2010-2021 48
Table 28: Opioid Mentions in Benzodiazepine Overdose Deaths by Year, 2010-2021 48
Table 29: Type of Opioid in Benzodiazepine Overdose Deaths by Year, 2010-2021 49
Table 30: Alcohol Overdose Deaths by Year in Montgomery County, 2010-2021 50
Table 31: Opioid Mentions in Alcohol Overdose Deaths by Year, 2010-2021 50
Table 32: Gabapentin Overdose Deaths by Year in Montgomery County, 2017-2021 51
Table 33: Opioid Mentions in Gabapentin Overdose Deaths by Year, 2017-2021 51
Table 34: Antihistamine/Sleep Aid Overdose Deaths by Year in Montgomery County, 2018-2021 52
Table 35: Opioid Mentions in Antihistamine/Sleep Aid Overdose Deaths by Year, 2018-2021 52
Table 36: Opioid Mentions by Demographic Categories Among Overdose Deaths, 2021 53
Table 37: Non-Opioid Drug Mentions by Demographic Categories Among Overdose Deaths, 2021 54
Table 38: Drug Mentions by Health Status Among Overdose Deaths in Montgomery County, 2021 55

THIS REPORT WAS PRODUCED BY

PUBLIC HEALTH – DAYTON & MONTGOMERY COUNTY EPIDEMIOLOGY

REIBOLD BUILDING NG • 117 SOUTH MAIN STREET

DAYTON, OH 45422-1280

FOR MORE INFORMATION, CALL (937) 225-5700. TO DOWNLOAD OR VIEW THIS REPORT ONLINE,

VISIT WWW.PHDMC.ORG

SEARCH FOR: POISONING DEATH REVIEW