ARIZONA
DEPARTMENT OF
HEALTH SERVICES

Opioid Overdoses Surveillance Report, Arizona, 2023

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Intended Audience

This is a technical report on the analysis of the prevalence and causes of opioid overdoses in Arizona. This report is aimed primarily at those actively involved in the prevention, intervention, and interdiction of substance use disorders, including healthcare providers, community service providers, researchers, policymakers, law enforcement, and other stakeholders. While publicly available, the intended audience of this report is not the general public, and extra care in the use or interpretation of this report should be taken by those with limited background or subject-matter expertise in the areas of substance use disorders.

How to Use This Report

This report describes the prevalence of opioid overdoses in Arizona, as well as a variety of risk- and associated-factors contributing to these events among individuals in Arizona. The key findings presented in this report should assist in the identification of future targets for intervention and guide effective and evidence-based efforts towards the reduction of substance use disorder outcomes.

Disclaimer

Use of Term: Opioid Overdose

The use and definition of the term "opioid overdose" in this report may differ from other organizations, and is largely dependent on the data source from which it is derived. All definitions are described in the Definitions Section.

Previous ADHS Reports on Opioid Overdoses

The findings in this report related to opioid overdoses were derived from methods established in 2022 by the Business Intelligence Office during the revision of the ADHS Opioid Dashboard, including institution of increased data quality standards for all data sources.

Arizona Health Status and Vital Statistics Annual Report

The ADHS publishes the Arizona Health Status and Vital Statistics Annual Report, which includes drug overdose outcomes. Data in this report differs from the annual reports as data is limited to opioid-related overdoses. Population level data for deaths of all Arizona residents can be found in the Arizona Health Status and Vital Statistics Annual Report. In order to produce the timeliest availability of reported data, provisional population denominators were used.

Data Suppression

It is important to note that ADHS suppresses numbers less than ten to protect confidentiality of rare cases and to eliminate bias or potential for error in reporting numbers or rates. However, for SUDORS section in the report, any counts of less than six are suppressed. Rates are not calculated for low counts due to instability.

Race/Ethnicity Categorization

Race/ethnicity groupings are mutually exclusive. Individuals identifying as 'Hispanic or Latino' are not included in the remaining race categories. Population rates for 'Other' and 'Unknown' categories are not available due to the lack of an appropriate denominator. SUDORS includes an additional race/ethnicity category, "Two or More Races," which encompasses individuals who were endorsed as some 2+ combination of American Indian, Asian, Black, Unspecified, White, or Other.

While we acknowledge that there is a significant amount of surveillance data from the Centers for Disease Control and Prevention (CDC) and other partners, this report is solely based on data from state data repositories. Please note our findings may slightly differ from other national data sources such as CDC's State Unintentional and undetermined Drug Overdose Reporting System (SUDORS), Drug Overdose Surveillance and Epidemiology (DOSE) system, and National Vital Statistics System (NVSS). However, as part of our ongoing surveillance efforts, we actively contribute to these data sources.

Presentation of the Data

Arizona Department of Health Services aspires to present data humbly, recognizing numbers never tell the whole story. We aim to collaborate with individuals and communities to gain valuable insight and foster a collective understanding of the drug overdose crisis. By combining this insight with data to inform policy and drive systemic change, we hope to leverage this collaboration for the improvement of health for all.

Executive Summary

In 2023…

53,967 Opioid-related hospitalizations

4,081 Non-Fatal Opioid Overdose Events

1,928 Opioid Overdose Deaths

7,959 Suspected Opioid Overdose Responses

3,077,971 Opioid Prescriptions

Synthetic opioids (except methadone), primarily illicit fentanyl, combined with stimulants like methamphetamine are responsible for an increasing number of overdose deaths in Arizona.[1,2] This rise reflects a growing problem across the nation, and overdose deaths remain a leading cause of injury-related death in the United States.[3] In 2023, there were 1,928 opioid overdose deaths among Arizona residents. The Arizona annual opioid-related fatality rate in 2023 was 25.6 per 100,000. The leading manner of opioid overdose deaths was accidental (93.7%), followed by suicide (3.5%), and undetermined (2.2%). The leading cause was prescription and synthetic opioids (97.6%), which includes illicit fentanyl. The mortality rate for opioid overdose deaths was highest among males (38.4 per 100,000), Black or African Americans (41.9 per 100,000), individuals 35-44 years old (55.7 per 100,000), and individuals 25-34 years old (49.5 per 100,000). The rate of opioid overdose deaths per 100,000 people increased from 2017-2021, but the numbers have leveled off since then. The rate of opioid overdose deaths was highest (and higher than the state combined annual rate of 25.6) in Apache, Navajo, Gila, Pima, and Maricopa Counties.

Other opioid overdose-related events are reported via multiple data sources in the report, each providing different levels of detail. From most to least specific, there were 4,081 reportable non-fatal opioid overdose events (Medical Electronic Disease Surveillance Intelligence System) and 53,967 hospitalization or Emergency Department (ED) visits with any mention of opioids (hospital discharge records) in 2023. Hospitalizations with any mention of opioids resulted in approximately $2.5 billion in total charges annually in 2023. Opioid-related hospitalizations and emergency department visit rates were highest among males (841.2 per 100,000), Black or African American (1041.5 per 100,000) and White individuals (824.3 per 100,000), and individuals aged 25-34 years (1351.1 per 100,000). Non-fatal

[1] SUDORS Dashboard: Fatal Overdose Data | Drug Overdose | CDC Injury Center. www.cdc.gov. Accessed December 2, 2024. https://www.cdc.gov/overdose-prevention/data-research/facts-stats/sudors-dashboard-fatal-overdose-data.html?CDC_AAref_Val=https://www.cdc.gov/drugoverdose/fatal/dashboard/index.html

[2] Centers for Disease Control & Prevention. Products - Vital Statistics Rapid Release - Provisional Drug Overdose Data. CDC. Accessed December 2, 2024. https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm

[3] Centers for Disease Control & Prevention. Understanding the epidemic. CDC. Accessed December 2, 2024. https://www.cdc.gov/nchs/hus/topics/drug-overdose-deaths.htm

opioid-related overdoses most commonly occurred among males (67.4%), White (46.0%) and Hispanic (22.1%) individuals, and individuals aged 25-34 (32.7%). Despite this, the rate of non-fatal opioid-related overdoses was highest among males (72.6 per 100,000), African American or Black individuals (81.0 per 100,000) and American Indian or Alaska Native individuals (55.1 per 100,000), and individuals 25-34 years old (127.5 per 100,000). Throughout the year the overall trend of non-fatal opioid overdoses was fairly stable, with peaks in summer months (June-August). In 2023, fentanyl was the most common drug (74.7%) involved in non-fatal opioid overdose events, with polydrug use reported in approximately half (49.7%) of these events. Fentanyl and methamphetamine/amphetamine was the most common drug combination in a majority (20.0%) of non-fatal opioid overdose events in Arizona.

There were 7,959 Emergency Medical Services (EMS)/Law Enforcement responses reported for suspected opioid overdoses in 2023.[4] EMS/Law Enforcement response for suspected opioid overdoses occurred most commonly among males (69.4%), White (28.6%) or Hispanic (12.6%) individuals, and individuals 18-44 years old (66.1%). Naloxone was administered in 5,984 EMS/Law Enforcement responses for suspected opioid overdoses (~75.0% of all responses). Naloxone was administered most commonly by EMS (69.0%), Law Enforcement (22.0%), or a bystander (7.0%). In 2023, a total of 72,235 naloxone doses were dispensed by pharmacies, a 15.3% increase compared to the previous year.

From 2019 to 2023, Arizona saw a reduction in opioid prescribing practices, with the total number of opioid prescriptions decreasing by 20.3% and the average morphine milligram equivalents (MME) dispensed declining by 13.6%, demonstrating that interventions targeting provider prescription rates continue to produce results. This decrease mirrors national trends showing that the biggest contributor to overdose deaths is no longer prescription drugs but synthetic opioids, primarily illicit fentanyl.

In recent years, Arizona has also seen an increase in the presence of novel illicit drugs in combination with opioids. In 2023, Xylazine was identified in 5 unintentional or undetermined drug overdose deaths, while Kratom/Mitragynine was detected in 19 such fatalities. [5,6]

Altogether, the 2023 opioid overdose data underscores the alarming contribution of synthetic opioids, particularly illicit fentanyl, to the number of overdose deaths in Arizona. The combination of synthetic opioids with stimulants like methamphetamine/amphetamine, along with the emergence of novel drugs, is creating new challenges in addressing the crisis. The findings also highlight demographic disparities in both fatal and non-fatal cases, emphasizing the importance of tailored prevention and response strategies. Notably, the ongoing efforts to mitigate the impact of opioid-related incidents are underscored by the widespread administration of naloxone by EMS/Law Enforcement responses and

[4] Please note the AZ-PIERS team is currently working on resolving data quality issues for records from June 2023 onward. As a result, the 2023 count is provisional and subject to change.

[5] Arizona SUDORS Data

[6] SUDORS captures all drugs detected by postmortem toxicology, even those not ruled by a medical examiner or coroner as causing death. Analyses of drugs detected are restricted to jurisdictions with toxicology reports available for at least 75% of deaths in the specified year. Analyses are further restricted to deaths with an available toxicology report.

naloxone dispensation by pharmacies. Although opioid deaths are starting to level off, the data demonstrates the continued urgency to address the drug overdose crisis in Arizona through comprehensive and collaborative approaches.

The most current statistics for opioid-related overdoses, including for the current year to date, can be viewed on the ADHS Opioid Dashboard.

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Introduction

In 2022, in the United States there were an estimated 107,941 drug overdose deaths. The age-adjusted rate of overdose deaths did not significantly change from 2021 (32.4 per 100,000) to 2022 (32.6 per 100,000).[7] Age-adjusting the rates ensures that differences in deaths from one year to the next are not due to differences in the age distribution of the populations being compared. Opioids were involved in 81,806 overdose deaths in 2022 (75.8% of all drug overdose deaths).[8] Opioids, mainly synthetic opioids (other than methadone), are currently the largest driver of drug overdose deaths. In 2022, deaths involving synthetic opioids other than methadone—primarily illicitly manufactured fentanyl—continued to rise, reaching a total of 73,838 overdose deaths. Similarly, overdose deaths involving stimulants also increased, with 27,569 deaths involving cocaine and 34,022 deaths attributed to psychostimulants with abuse potential, primarily methamphetamine.[8]

On June 5, 2017, Governor Doug Ducey declared a public health emergency, initiating a statewide effort to combat opioid-related deaths in Arizona. Although the emergency declaration was officially lifted on May 29, 2018, the commitment to saving lives and addressing the opioid crisis continued. In response to the crisis, the opioid surveillance report was established to provide updated information on the prevalence of opioid overdoses in Arizona, as well as a variety of risk- and associated-factors contributing to these events among individuals in Arizona. The annual opioid surveillance report is now in its third iteration.

Arizona continues to face significant challenges related to drug overdoses, with synthetic opioids such as fentanyl being a primary contributor to fatalities. In recent years, the combination of synthetic opioids with stimulants like methamphetamine and amphetamine, along with the emergence of novel synthetic substances such as xylazine and Kratom/Mitragynine, has introduced additional complexities to addressing the crisis. In Arizona, the number and age-adjusted rate of drug overdose deaths slightly decreased from 2021 [2,730 (38.77 per 100,000)] to 2022 [2,664 (37.2 per 100,000)].[9] According to CDC, relative to other states, Arizona ranked 19th highest in 2022 for the rate of drug overdose deaths.[9] Despite significant efforts and resources dedicated to tackling the drug overdose epidemic, the data highlights the need to continue the ongoing work, especially given the post-pandemic challenges facing Arizona communities.

[7] https://www.cdc.gov/nchs/data/databriefs/db491.pdf
[8] CDC Wonder
[9] https://www.cdc.gov/nchs/pressroom/sosmap/drug_poisoning_mortality/drug_poisoning.htm

The current report provides an update on current trends of opioid-related overdoses in 2023 in Arizona. The most updated statistics for opioid-related overdoses can be viewed on the ADHS Opioid Dashboard. The data presented in this report may differ slightly, even for comparable years, as this is a snapshot of the data, and the dashboard will continue to be updated.

Definitions

Opioids

Opioids are a class of drugs that derive from, or mimic, natural substances found in the opium poppy plant. Generally, the term opiates describe naturally-occurring opioids and the term opioids describes manufactured opioids. Opioids work in the brain to produce a variety of effects, including pain relief.[10] Opioid drugs include prescription pain medicine and illegal drugs. Prescription opioids can be prescribed by doctors to treat moderate to severe pain but can also have serious risks and side effects. Common types are oxycodone (OxyContin), hydrocodone (Vicodin), morphine, and methadone. Methadone is a medication approved by the Food and Drug Administration (FDA) to treat Opioid Use Disorder (OUD) as well as for pain management. Buprenorphine is another (semi-synthetic) medication approved by the FDA to treat OUD.[11]

Pharmaceutical fentanyl is a synthetic opioid approved by the FDA for treating severe pain, typically advanced cancer pain. It is many times more powerful than other opioids. The production and distribution of illicit fentanyl, as well as deaths involving synthetic opioids, such as fentanyl and fentanyl analogs, have increased in recent years.

Opioid Deaths (from Death Certificate)

Opioid deaths in Arizona are based on final determination of cause of death as reported on the official death certificate. The underlying cause International Classification of Diseases (ICD-10) code used in opioid overdose deaths may not always specify opioids, in which case the contributing cause(s) are also referenced. For example, drug overdose deaths caused by acute poisonings as the underlying cause of death that involve any opioid as a contributing cause of death, regardless of intent (e.g., unintentional and undetermined, suicide, assault, or undetermined) or type of drug are considered opioid deaths. The list of ICD-10 codes used to identify opioid deaths can be found here.

Unintentional and Undetermined Drug Overdose Deaths (from SUDORS)

Unintentional and undetermined drug overdose deaths data come from SUDORS which collects data on unintentional and undetermined intent drug overdose deaths from death certificates, medical examiner or coroner reports, and postmortem toxicology results. Data are abstracted from death certificates, coroner/medical examiner reports, and postmortem toxicology reports. We use relevant ICD-10 cause-of-death codes (X40–X44 and Y10–Y14 for

[10] https://nida.nih.gov/publications/drugfacts/prescription-opioids
[11] https://www.fda.gov/drugs/information-drug-class/information-about-medications-opioid-use-disorder-moud

unintentional and undetermined intent overdose deaths, respectively), scans of the text-based cause-of-death information, and reviews of coroner/medical examiner reports to identify unintentional and undetermined intent drug overdose deaths. SUDORS staff code this information in the Secure Access Management Services (SAMS) portal and write a non-identifying narrative for each overdose death detailing all components (such as cause of death, circumstances, and toxicology) in one place. These narratives provide additional context for understanding the overdose and supporting information on circumstances captured within the system.

Opioid-Related Hospitalization and Emergency Department (ED) Visits

Opioid-related hospitalization and ED visits are defined as hospitalization or ED visits with any mention of opioids in the diagnosis codes of hospital discharge records. Hospitalization or ED visit events are grouped by year according to discharge date.

Non-Fatal Opioid Overdose Events (from MEDSIS)

The Medical Electronic Disease Surveillance Intelligence System (MEDSIS) is a state-based medical surveillance system used by healthcare professionals, healthcare institutions, correctional facilities, and medical examiners in Arizona to report suspected opioid overdose events. Only suspected non-fatal opioid overdose events with confirmed or probable case classification are considered non-fatal opioid overdoses. To meet the case classification, various criteria are taken into consideration in addition to the toxicology report.

Primary Care Areas (PCAs)

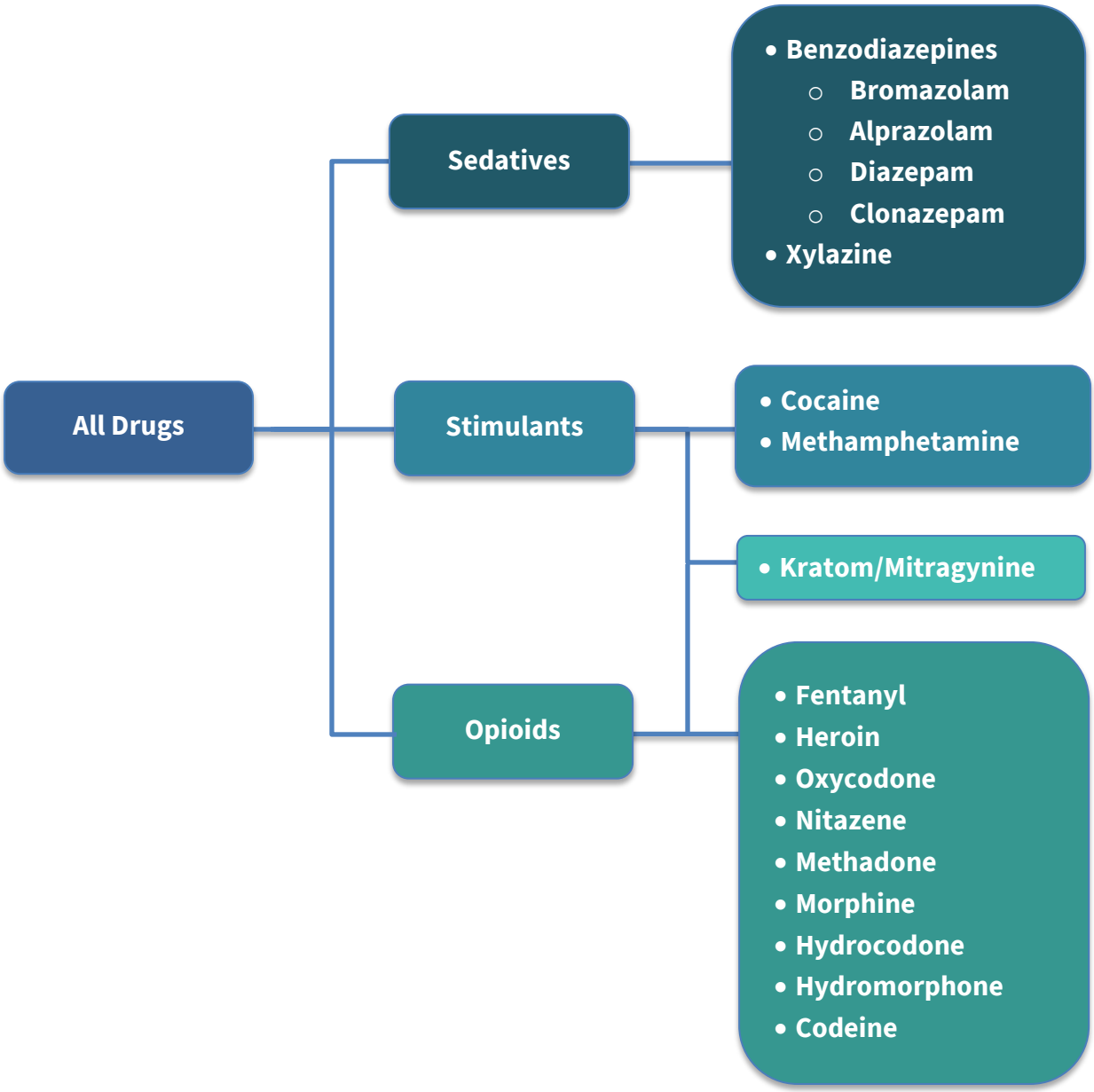
PCAs are geographic regions created by the Arizona Department of Health Services (ADHS). They are designed to represent the communities of the state while maintaining populations conducive to statistical/spatial analysis. PCAs are built from U.S. Census Tracts and are updated every Census using a repeatable rule-based methodology intended to preserve community boundaries, provide population numbers conducive to statistical analysis, account for demographic variation, and represent common utilization of primary care services. The creation and maintenance of PCAs is required by Arizona Administrative Code R9-24-204 for use in designating Medically Underserved Areas. Please note PCAs will be converted to Community Statistical Areas (CSAs) in next year's reporting. For more information on CSAs, please visit ADHS Community Statistical Areas.

Suspected Opioid Overdose (from Arizona Pre-Hospital Information & EMS Registry System)

A suspected opioid overdose is defined as a reporting entity specified the incident is opioid-related, or an entity reports one or more reasons why an opioid overdose is suspected.

Categorization of Drugs: Major Examples by Type*

The chart below provides a breakdown of selected drugs mentioned throughout this report, categorized by their respective types.



*Please note that this is not a comprehensive list of all available drugs; it includes only a selection of major drugs included in this report.

Methods

The methodology for reporting of opioid overdoses varies based on reporting requirements for each data source.

Data Sources

Hospital Discharge Data

ADHS collects hospital discharge records for emergency department (ED) visits and hospitalizations from all Arizona licensed hospitals. This collection is required by Arizona Revised Statute (A.R.S.) § 36-125-05, and Arizona Administrative Code Title 9, Chapter 11, Articles 4 and 5. Hospital discharge data includes both fatal and non-fatal encounters. Data were submitted by 154 facilities in Arizona (as of December, 2023). However, the number of facilities changes each reporting period due to the closure of some facilities and the opening of new ones. Federal and tribal hospitals, as well as Arizona State Hospital, are exempt from participating in HDD.

MEDSIS

In 2017, a public health emergency was declared to address the rise in opioid deaths, and later reporting of suspected opioid overdose events was mandated under Arizona Administrative Code R9-4, Article 6. These suspected opioid overdose events are reported by healthcare professionals, healthcare institutions, correctional facilities, and medical examiners via MEDSIS. Only non-fatal opioid overdose-related events with “confirmed” or “probable” case classification are included in this report. In 2023, a total of 57 facilities reported suspected opioid overdose events into MEDSIS. To see the number of MEDSIS reporters by year, please see Appendix, Table 2.

Death Certificates

Information on opioid deaths (see Definitions above) is compiled from the original documents filed with the Arizona Department of Health Services' Bureau of Vital Records and from transcripts of original death certificates filed in other states but affecting Arizona residents.

Arizona Pre-Hospital Information & EMS Registry System (AZ-PIERS)

AZ-PIERS is a web-based prehospital patient care data repository supported by the ADHS Bureau of EMS & Trauma System (BEMSTS). Emergency Medical Services and Law Enforcement use AZ-PIERS to report any out-of-hospital suspected opioid overdoses, suspected opioid overdose deaths, and out-of-hospital use of naloxone to treat opioid overdoses.

Prescription Drug Monitoring Program (PDMP)

Arizona State Board of Pharmacy's Prescription Drug Monitoring Program (PDMP) requires pharmacies and medical practitioners who dispense Schedule II, III, and IV controlled substances to a patient to report prescription information to the PDMP on a daily basis. As pertaining to prescriptions dispensed, only schedule II, III, and IV controlled substances and opioid prescriptions (excluding buprenorphine) dispensed among Arizona residents are shown in the report.

CDC's State Unintentional and undetermined Drug Overdose Reporting System (SUDORS)

SUDORS collects data on unintentional and undetermined intent drug overdose deaths from death certificates, medical examiner or coroner reports, and postmortem toxicology results. For more information on SUDORS, please visit here.

Analytic Methods

Prevalence Estimates

The prevalence for the number of fatal and non-fatal opioid-related events were calculated as the proportion of individuals who had an opioid overdose at a specified point in time.

Computing Crude Rates

Crude rates were calculated by dividing the total number of events (or deaths) among Arizonans in a given year by the total population for that year. The result was then multiplied by 100,000 to express the rate as the number of events or deaths per 100,000 population.

For SUDORS data, crude rates were created using Census Bureau ACS 1-year estimates for 2023.

Denominators

The denominators for rates of fatal and non-fatal opioid-related events and hospital encounters were calculated based on 2023 population data from ADHS. Denominators for EMS, Naloxone administration, and prescriptions filled were data source specific, and based on the number of events.

Trend Analyses

Prevalence estimates were examined over multiple years (and across groups) to compare current and past trends to provide insight into population differences over time.

Urbanization Categories

For SUDORS data, each county was coded for their level of urbanicity using the 2013 National Center for Health Statistics' classification scheme for counties. The scheme includes six levels of urbanicity ranging from most to least urban. To give an example, Maricopa County is classified as the most urbanized county (large central metro), since the bulk of the Phoenix-Mesa-Scottsdale metropolitan area is within it; Pinal County is given the second highest category (large fringe metro) due to its proximity to the Phoenix-Mesa-Scottsdale area; Pima County is given medium metro due to its containing the bulk of the Tucson metropolitan area, which is smaller in size than the Phoenix-Mesa-Scottsdale area; counties lacking either metropolitan or micropolitan urban areas, such as Apache and La Paz counties, are given the noncore category.

Findings

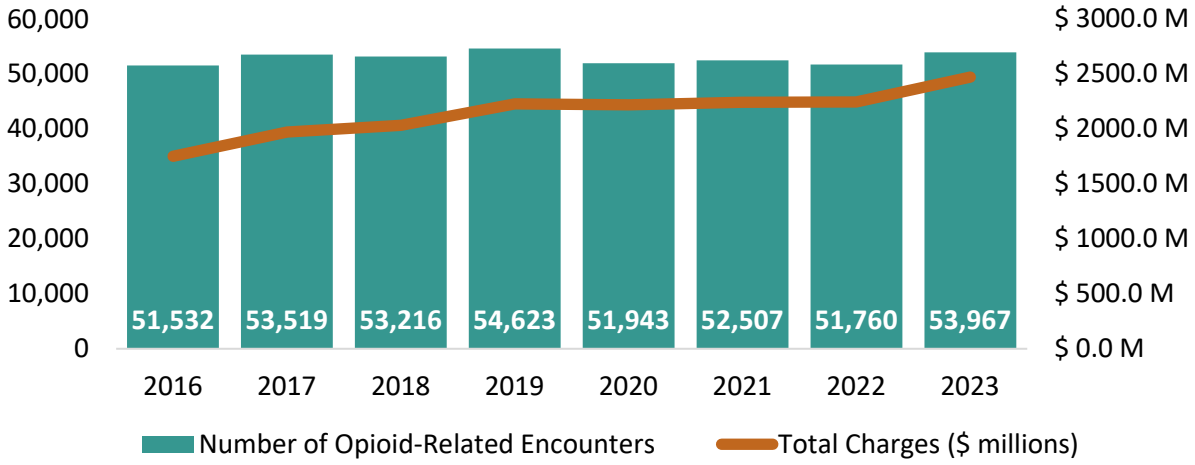
The findings described in this section are derived from several data sources, including hospital discharges, death certificates, various surveillance systems, and stakeholder inputs.

Hospital Discharges and Costs (Data Source: Hospital Discharge Data)

Trends 2016-2023

From 2016-2023, the number of opioid-related hospitalizations and emergency department visits have fluctuated. While opioid-related encounters peaked in 2019, they remained relatively stable from 2020 to 2022 and increased again in 2023. In 2023, there were 53,967 opioid-related hospitalizations, reflecting a 4.1% increase compared to 2022. The cost of opioid-related hospitalizations and emergency department visits has increased steadily from $1.8 billion in 2016 to $2.5 billion in 2023, representing a 41.0% increase over eight years. The average cost of opioid-related hospitalizations and emergency department visits in 2023 was $45,764.

Figure 1. Number and Cost of Opioid-Related Hospitalization and Emergency Department Visits, Arizona, 2016-2023



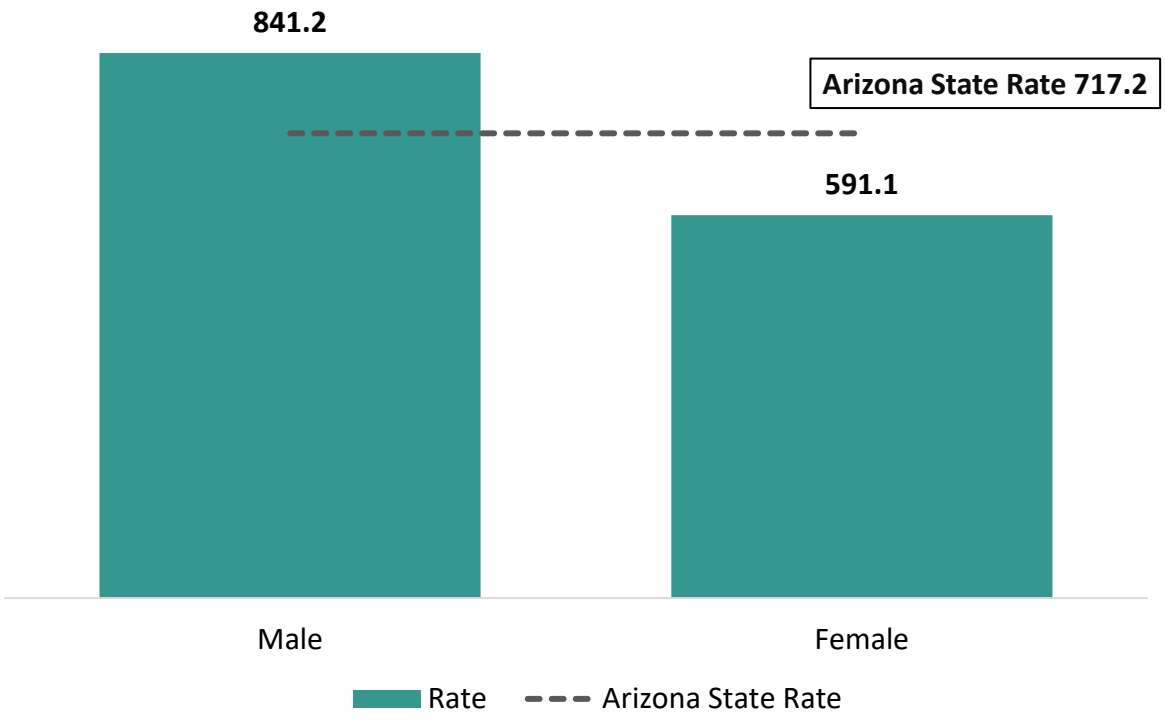
Data Source: Hospital Discharge Data. Notes: Total charges abbreviated as millions of dollars (e.g., "$500.0 M" is equal to $500,000,000); Includes Arizona residents and non-residents; includes relevant ICD-10 codes in any position (not just first (primary) diagnosis); total reported charges not adjusted for inflation or to estimate the actual amount paid to the provider for healthcare services received

Demographic Comparisons

Sex

The rate of opioid-related hospitalization and emergency department visits was higher among males (841.2 per 100,000) compared to females (591.1 per 100,000).

Figure 2. Opioid-Related Hospitalization and Emergency Department Visits Rate Per 100,000 by Sex, Arizona, 2023 (n=53,967)

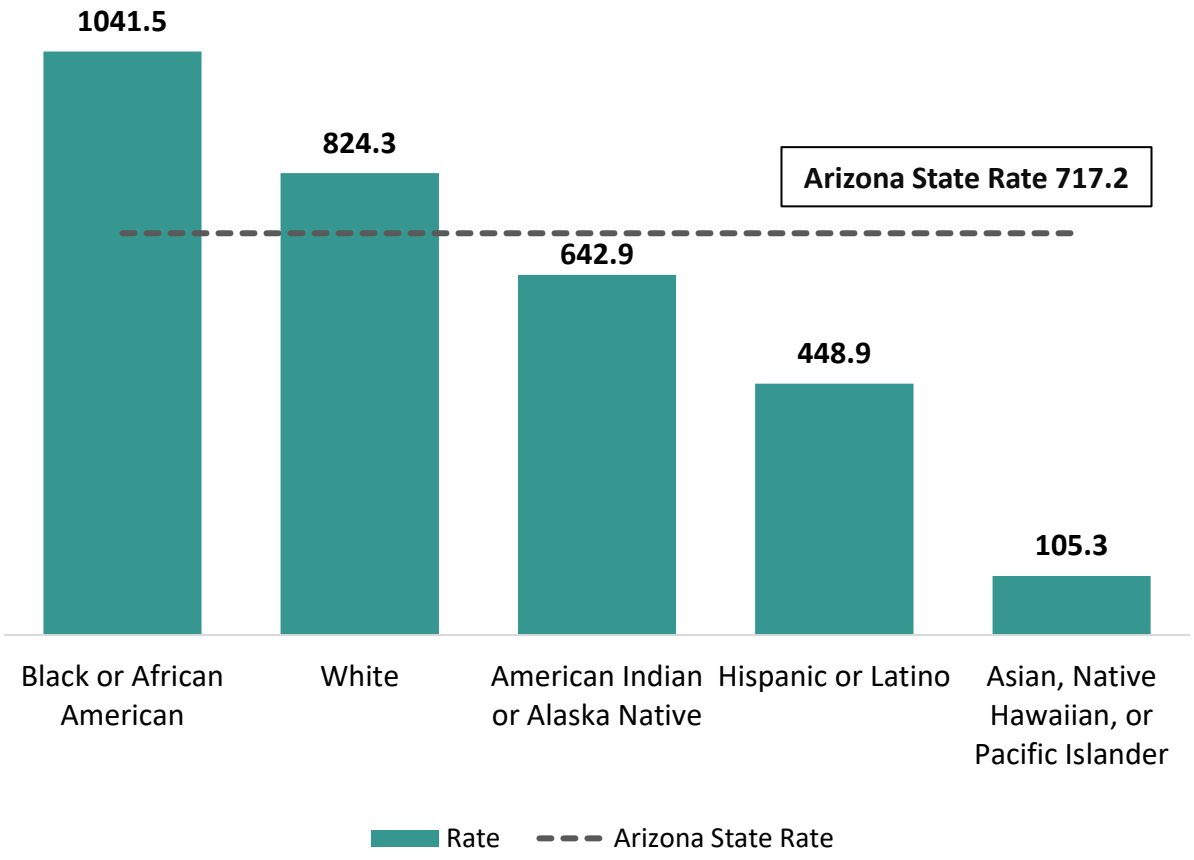


Data Source: Hospital Discharge Data

Race and Ethnicity

The rate of opioid-related hospitalization and emergency department visits was highest among Black or African American individuals (1041.5 per 100,000), followed by White (824.3 per 100,000), and American Indian or Alaska Native individuals (642.9 per 100,000).

Figure 3. Opioid-Related Hospitalization and Emergency Department Visits Rate Per 100,000 by Race and Ethnicity, Arizona, 2023 (n=53,967)

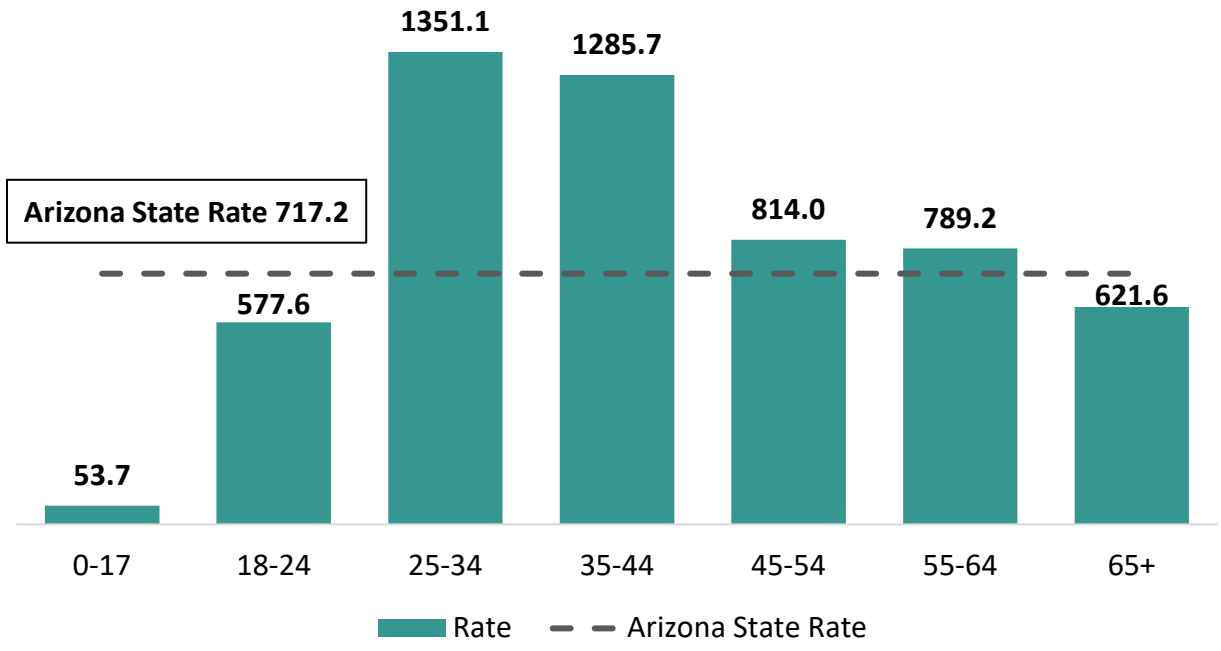


Data Source: Hospital Discharge Data

Age

The rate of opioid-related hospitalization and emergency department visits was highest among individuals aged 25-34 years (1351.1 per 100,000), followed by 35-44 years (1285.7 per 100,000), and 45-54 years (814.0 per 100,00).

Figure 4. Opioid-Related Hospitalization and Emergency Department Visits Rate Per 100,000 by Age Group, Arizona, 2023 (n=53,967)

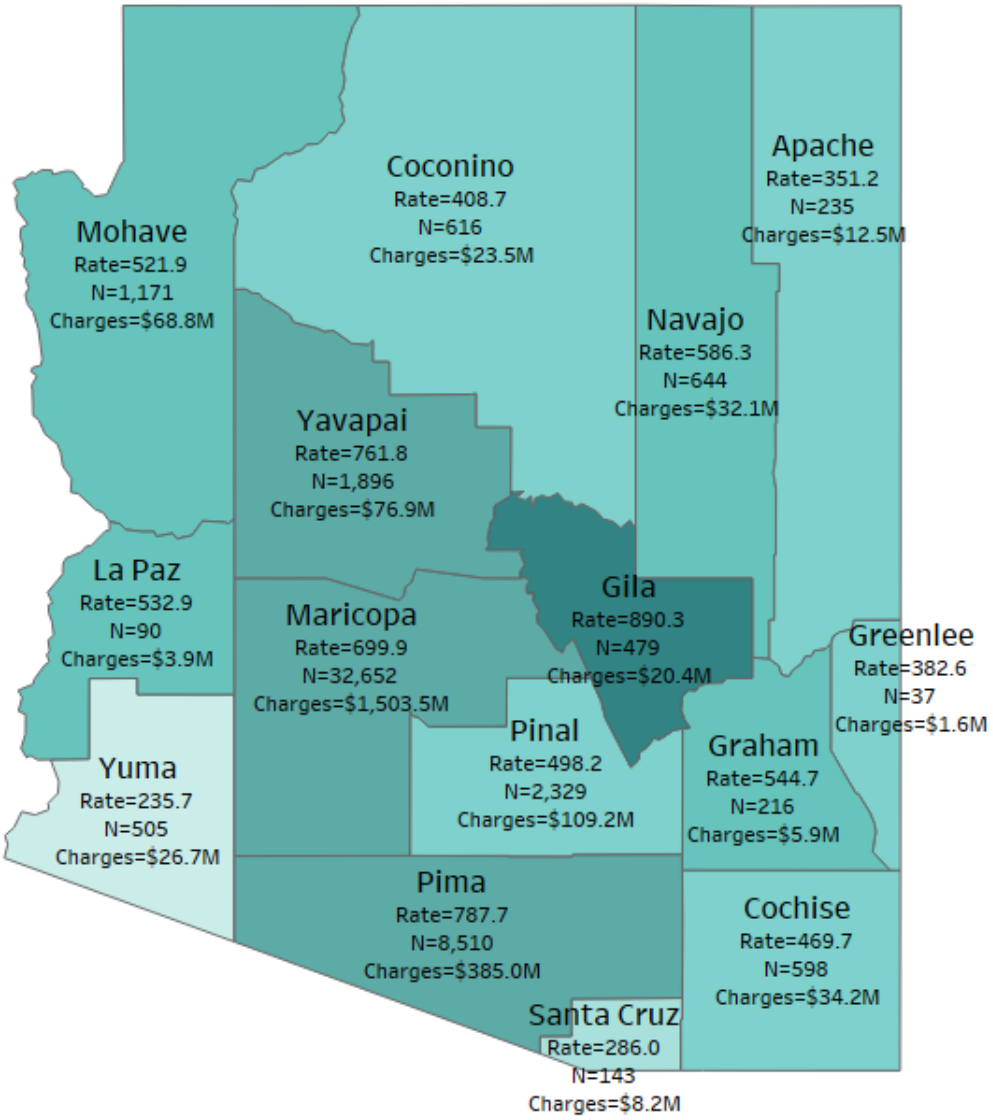


Data Source: Hospital Discharge Data

County Comparison

The overall state annual rate of opioid-related hospitalizations and ED visits (2023) was 717.2 per 100,000 population. The average annual rate of opioid-related hospitalizations and ED visits in 2023 was highest in Gila, Pima, Yavapai, and Maricopa Counties.

Figure 5. Rate per 100,000, Number of Opioid-Related Hospitalization and Emergency Department Visits, and Total Charges (in Millions), Arizona, 2023

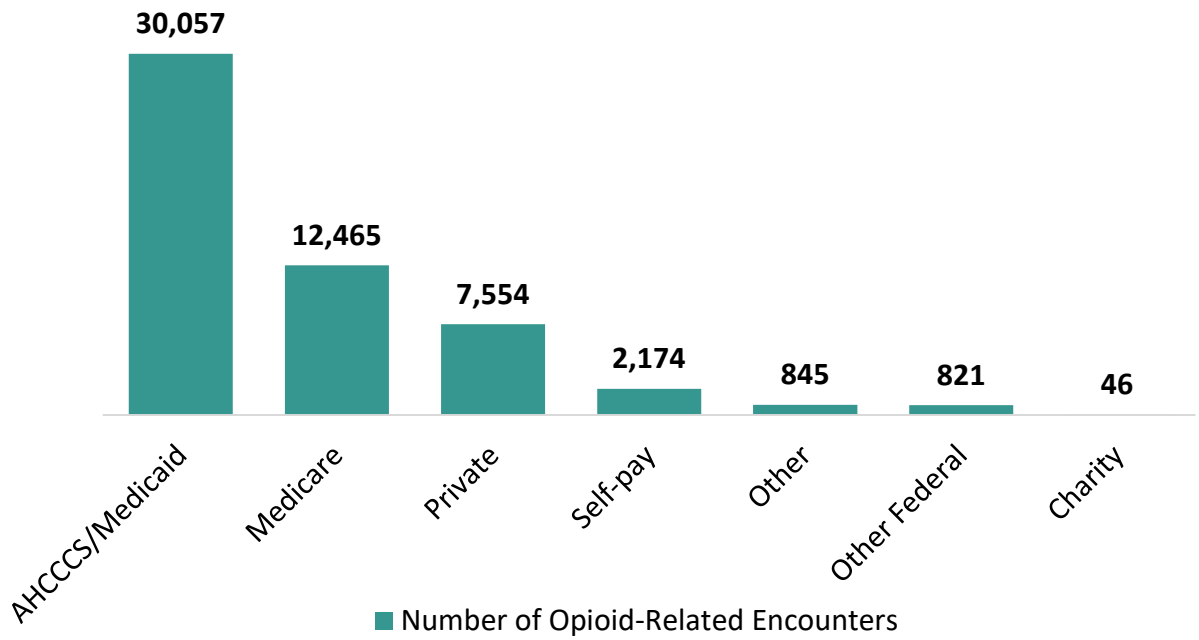


Data Source: Hospital Discharge Data. Notes: Total charges abbreviated as millions of dollars (e.g., "$500.0 M" is equal to $500,000,000); County reflects person place of residence.

Payer Type Comparisons

The most common payers for ED visits and hospitalizations were Arizona Health Care Cost Containment System (AHCCCS)/Medicaid (30,057), Medicare (12,465), and Private Insurance (7,554). The average length of stay was highest for visits paid for by Medicare (5.6 days), Private (5.6 days) and Other Federal* (5.0 days). The overall length of stay for all visits was 4.6 days.

Figure 6. Number of Opioid-Related Hospitalization and Emergency Department Visits, by Payer Type, Arizona, 2023



Data Source: Hospital Discharge Data. Notes: Other payer types include worker's compensation, foreign national, automobile policy due to injury sustained in motor vehicle accident, Border Patrol for care of illegal immigrants.
*Other Federal payer type includes Tricare and IHS payer type

Table 1. Average Length of Stay (LOS) for Opioid-Related Hospitalization and Emergency Department Visits by Payer Type, Arizona, 2023

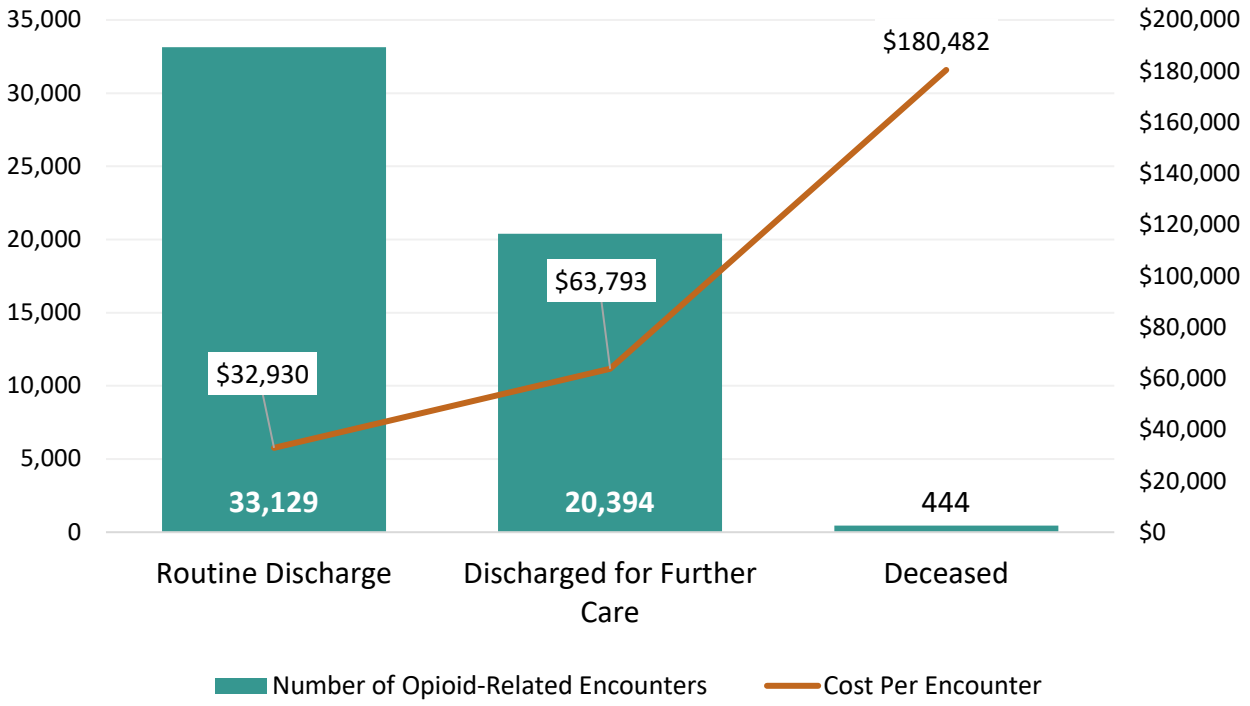
Insurance Category	Medicare	Private	Other Federal	AHCCCS/ Medicaid	Charity	Other	Self-pay
Average LOS (days)	5.6	5.6	5.0	4.1	3.9	2.7	2.5

Data Source: Hospital Discharge Data. Notes: Length of stay for individuals admitted and discharged on same date are calculated as 1 day.

Disposition Status Comparisons

The majority of opioid-related hospitalizations and ED visits had a disposition status of routine discharge (33,129, 61.4%) or discharged for further care (20,394, 37.8%). Visits with a disposition resulting in death (444, 0.8%) were associated with higher costs per encounter and a longer length of stay (7.3 days).

Figure 7. Number of Opioid-Related Hospitalization and Emergency Department Visits and Cost Per Encounter by Disposition, Arizona, 2023



Data Source: Hospital Discharge Data. Notes: Disposition is defined as the location or facility to where the patient left following a hospital encounter; Routine discharge includes home or self-care; discharged for further care includes inpatient, other care facility (short- or long-term), hospice, and left against medical advice

Table 2. Average Length of Stay (LOS) for Opioid-Related Hospitalization and Emergency Department Visits by Disposition Status, Arizona, 2023

Disposition Status	Routine Discharge	Discharged for Further Care	Deceased
Average LOS (days)	3.9	5.7	7.3

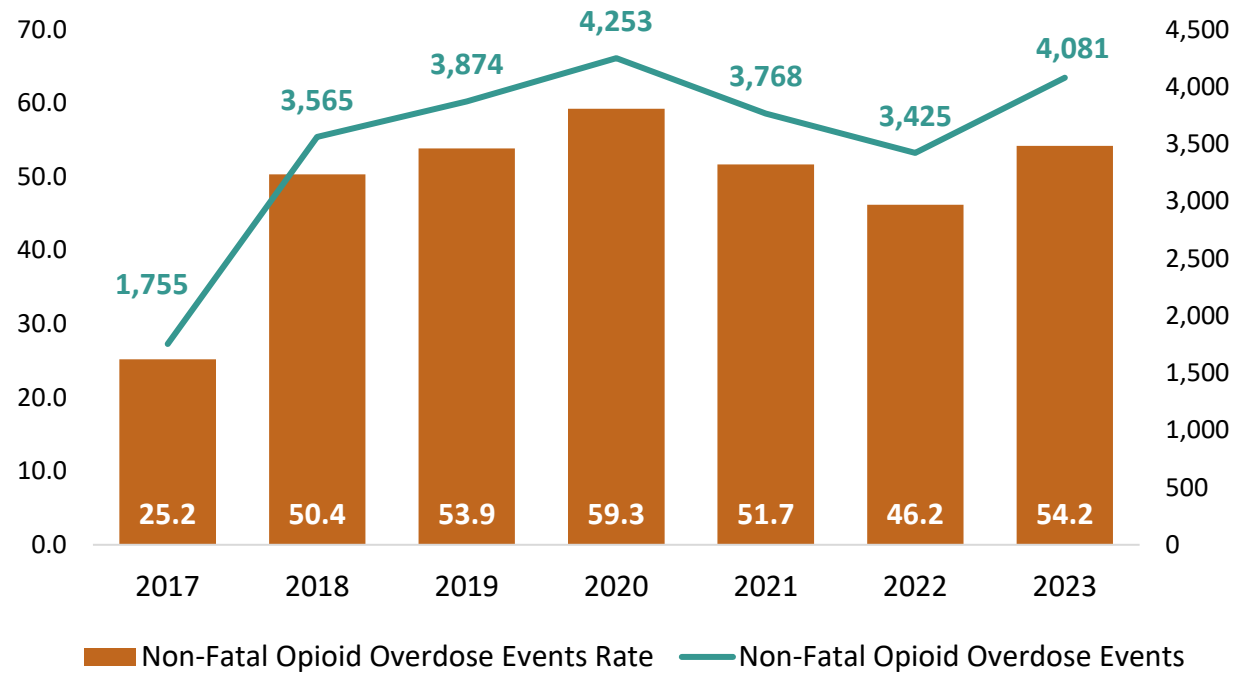
Data Source: Hospital Discharge Data

Reportable Non-Fatal Opioid Overdose Events (Data Source: MEDSIS)

Trends 2017-2023

June 2022 marked five years since Governor Ducey declared a State of Emergency due to the opioid overdose epidemic. In the period from June 2017 to December 2020, the total number of non-fatal opioid overdose events among Arizona residents increased since reporting was mandated in June 2017 (+142.0%), with a decrease from 2020 to 2022 (-19.7%), and an increase again from 2022-2023 (+19.2%). These fluctuations are also reflected in the rates which accounts for the population size.

Figure 8. Non-Fatal Opioid Overdose Events Count and Rate per 100,000 Population, Arizona, 2017-2023 (n=24,721)



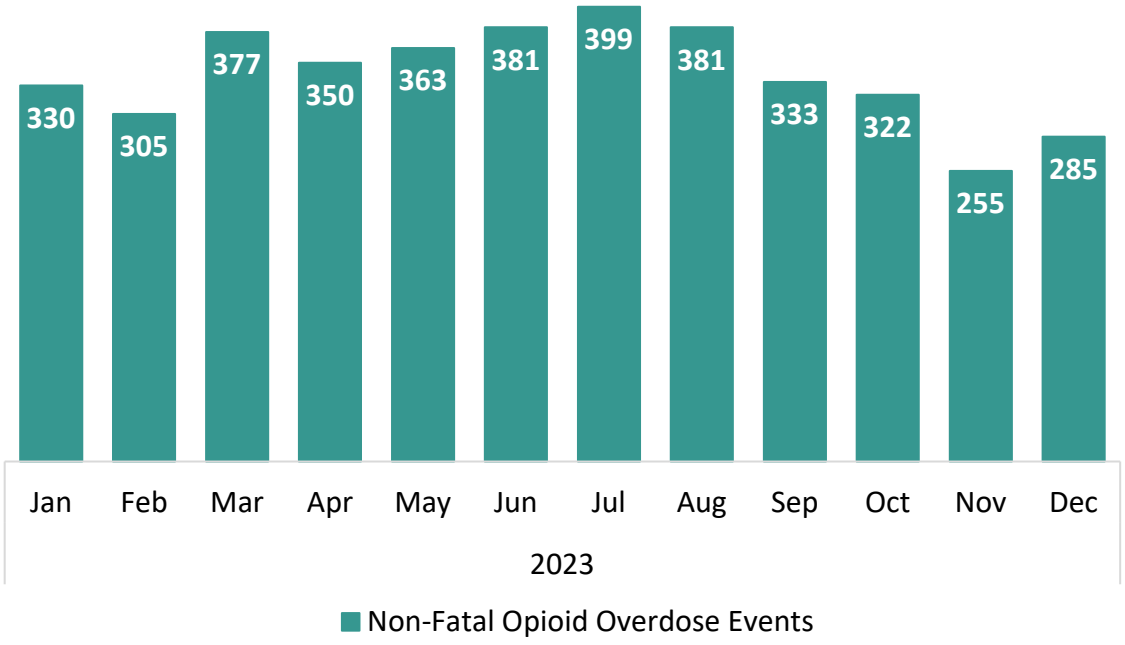
Data Source: MEDSIS

*Please note data collection for non-fatal opioid overdose events began in June 2017 with the issue of the public health emergency declaration to reduce opioid deaths. As a result, data for 2017 is incomplete, and only includes data reported in MEDSIS from June through December of 2017.

Trends 2023

The number of non-fatal opioid overdose events peaked in the summer months (June-August) of 2023, followed by a gradual decline, but increased again in December.

Figure 9. Number of Non-Fatal Opioid Overdose Events (Monthly), Arizona, 2023 (n=4,081)



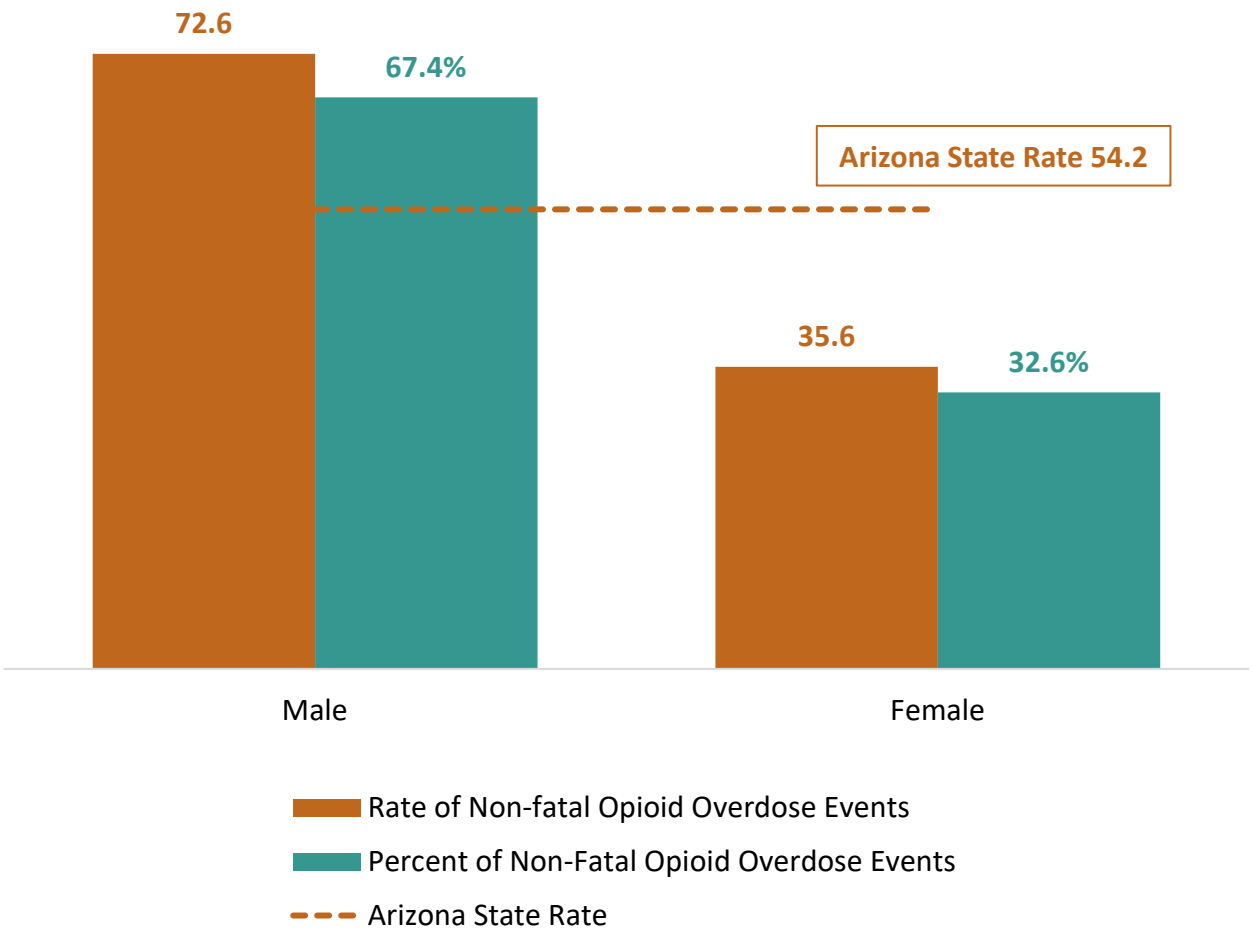
Data Source: MEDSIS

Demographic Comparisons

Sex

The percent and rate of non-fatal opioid overdose events was higher among males (67.4%, rate 72.6 per 100,000) compared with females (32.6%, rate 35.6 per 100,000).

Figure 10. Rate per 100,000 Population, and Percentage of Non-Fatal Opioid Overdose Events by Sex, Arizona, 2023 (n=4,081)

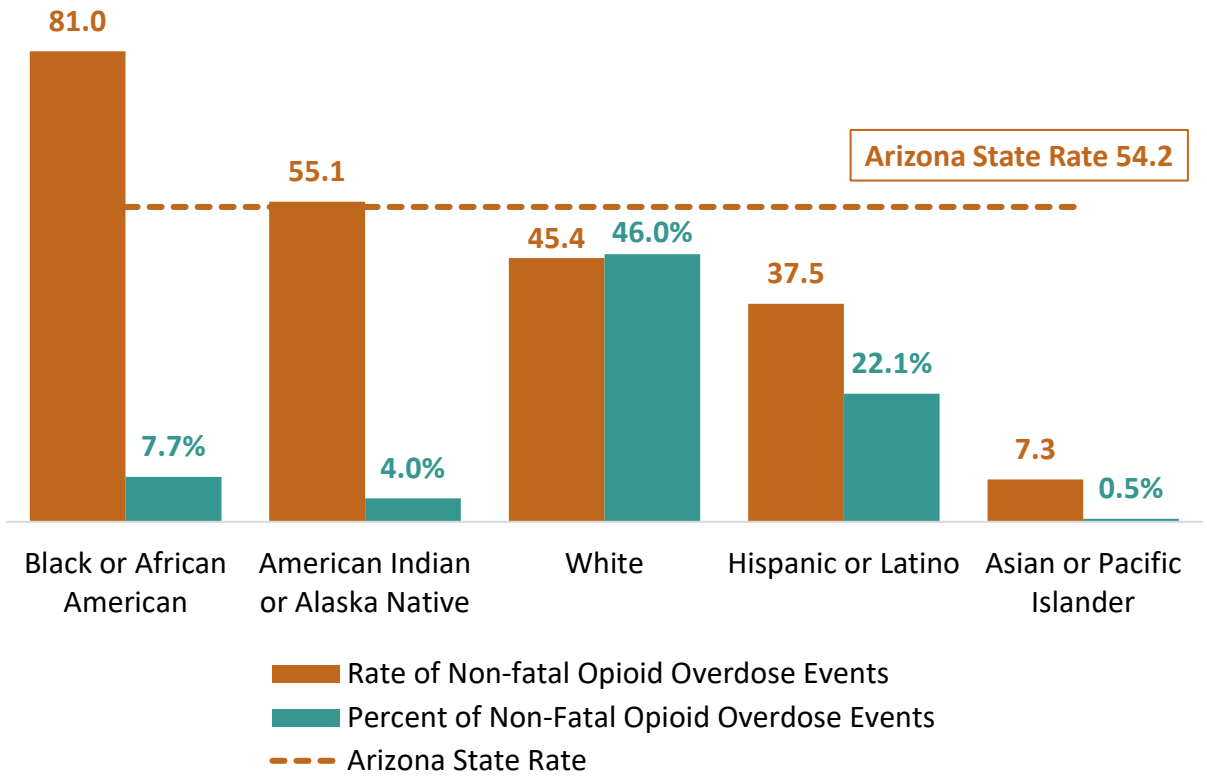


Arizona overall combined annual (2023) rate was 54.2 per 100,000 population.
Data Source: MEDSIS. Notes: Individuals with 'Unknown' sex (n=1; 0.03%) have been excluded from this graphic. 'Unknown' sex may include unidentified individuals.

Race and Ethnicity

Although the majority of non-fatal opioid overdose events occurred among White (46.0%) and Hispanic or Latino (22.1%) individuals, Black or African American (81.0 per 100,000) and American Indian or Alaska Native (55.1 per 100,000) populations experienced the highest rates, highlighting significant disparities in overdose risk.

Figure 11. Rate per 100,000 Population, and Percentage of Non-Fatal Opioid Overdose Events by Race and Ethnicity, Arizona, 2023 (n=4,081)

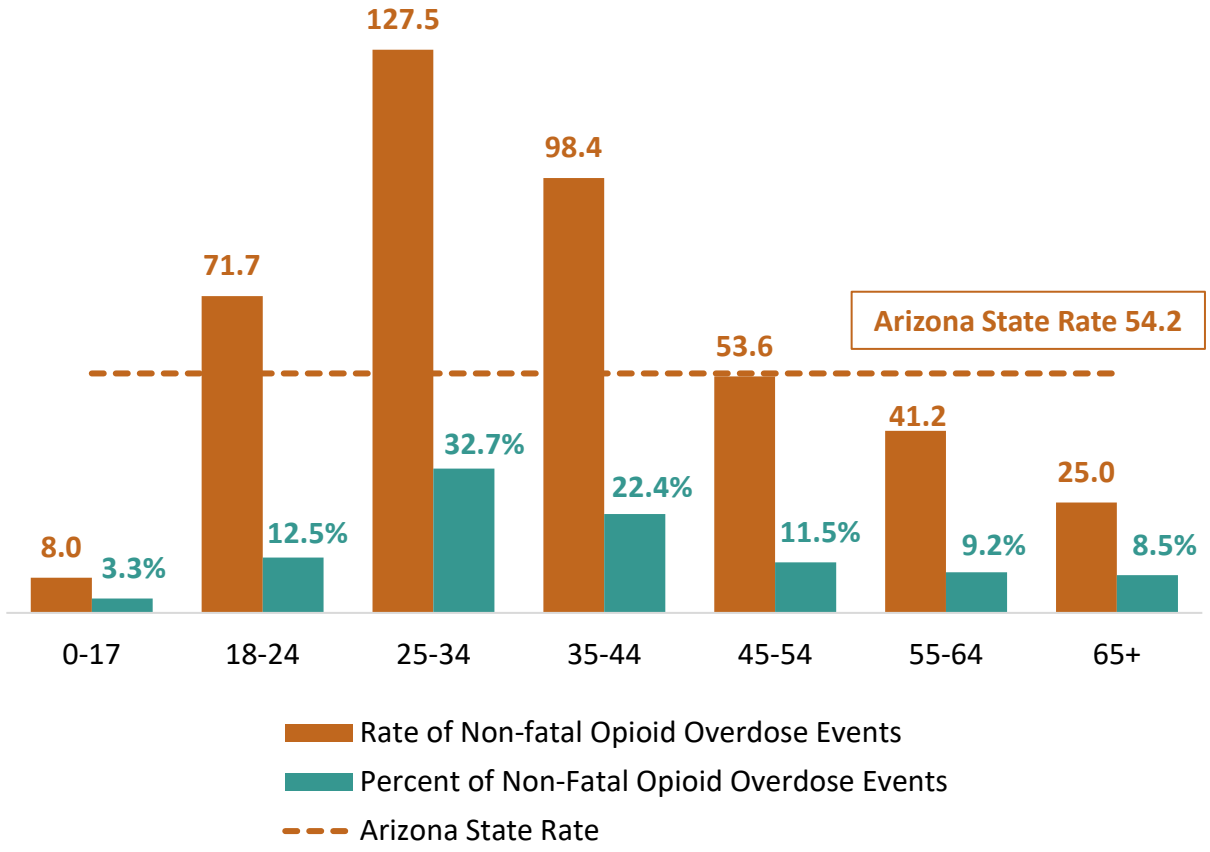


Arizona overall combined annual (2023) rate was 54.2 per 100,000 population.
Data Source: MEDSIS. Notes: Individuals with 'Unknown' race and ethnicity (n=742; 18.2%) and 'Other' race (n=58; 1.4%) have been excluded from this graphic.

Age

The percent of non-fatal opioid overdose events was highest among individuals aged 25-34 years (32.7%), 35-44 years (22.4%), and 18-24 years (12.5%). The rate of non-fatal overdose events was also highest among individuals aged 25-34 years (127.5 per 100,000), 35-44 years (98.4 per 100,000), and 18-24 years (71.7 per 100,000).

Figure 12. Rate per 100,000 Population, and Percentage of Non-Fatal Opioid Overdose Events by Age Group, Arizona, 2023 (n=4,081)

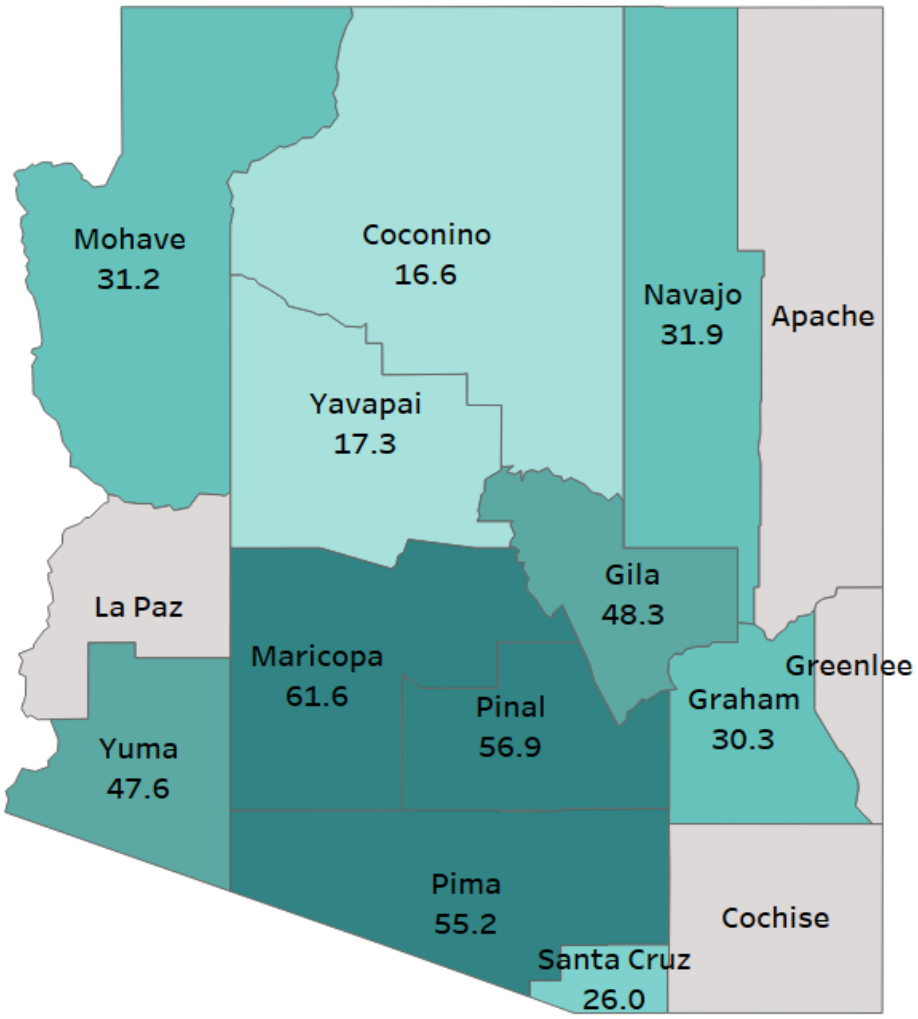


Arizona overall combined annual (2023) rate was 54.2 per 100,000 population.
Data Source: MEDSIS. Notes: Individuals with 'Unknown' age (n=3; 0.01%) have been excluded from this graphic.

County

The Arizona overall annual rate of non-fatal opioid overdoses in 2023 was 54.2 per 100,000. The rate of non-fatal opioid overdose events was highest (and higher than the overall rate) in Maricopa, Pinal, and Pima Counties.

Figure 13. Rate per 100,000 Population of Non-Fatal Opioid Overdose Events by County, Arizona, 2023 (n=4,081)



Arizona overall combined annual (2023) rate was 54.2 per 100,000 population.
Data Source: MEDSIS. Notes: To prevent the public disclosure of personally identifying information, data points based on fewer than 10 counts are not displayed (indicated in gray). County reflects patient's county of residence.

Primary Care Areas (PCAs)

Primary Care Areas (PCAs) are geographic regions defined by the Arizona Department of Health Services (ADHS) to represent communities while enabling effective statistical and spatial analysis. Built from U.S. Census Tracts and updated every Census, PCAs are created using a consistent, rule-based methodology to preserve community boundaries, ensure suitable population sizes, account for demographic differences, and reflect common use of primary care services.

In 2023, the count of non-fatal opioid overdose events was highest in Central City Village (n=195), followed by Mesa West (n=171), and Tucson South (n=150).

Table 3. Rate of Non-Fatal Opioid Overdose Events Per 100,000 by Top 15 Primary Care Areas, Arizona, 2023 (n=4,081)

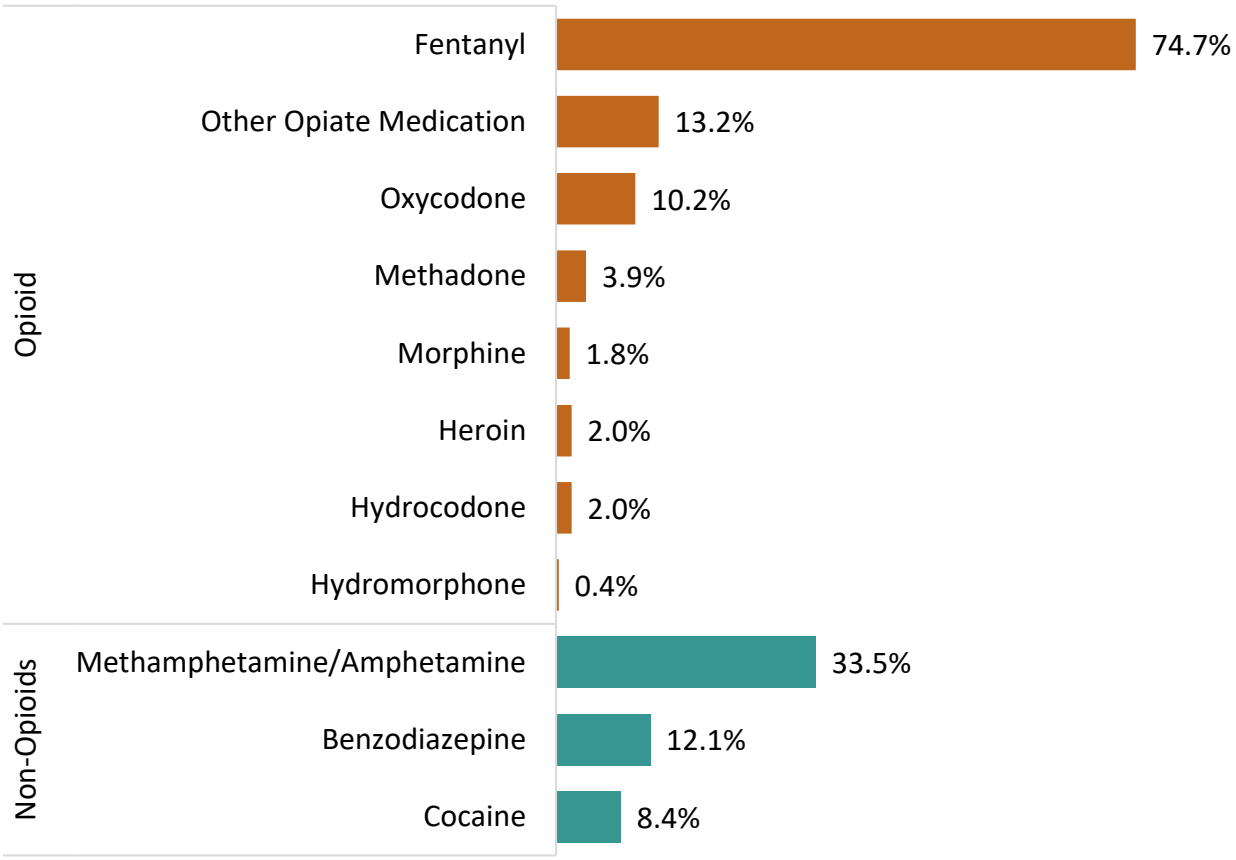
Primary Care Area	Non-Fatal Opioid Overdose Events
Central City Village	195
Mesa West	171
Tucson South	150
Tempe North	135
Buckeye	130
Alhambra Village	129
North Mountain Village	117
Maryvale Village	115
Tucson Central	108
Glendale North	101
Central City Village	195
Mesa West	171
Tucson South	150
Tempe North	135
Buckeye	130

Data Source: MEDSIS

Drugs Involved in Non-Fatal Opioid Overdose Events

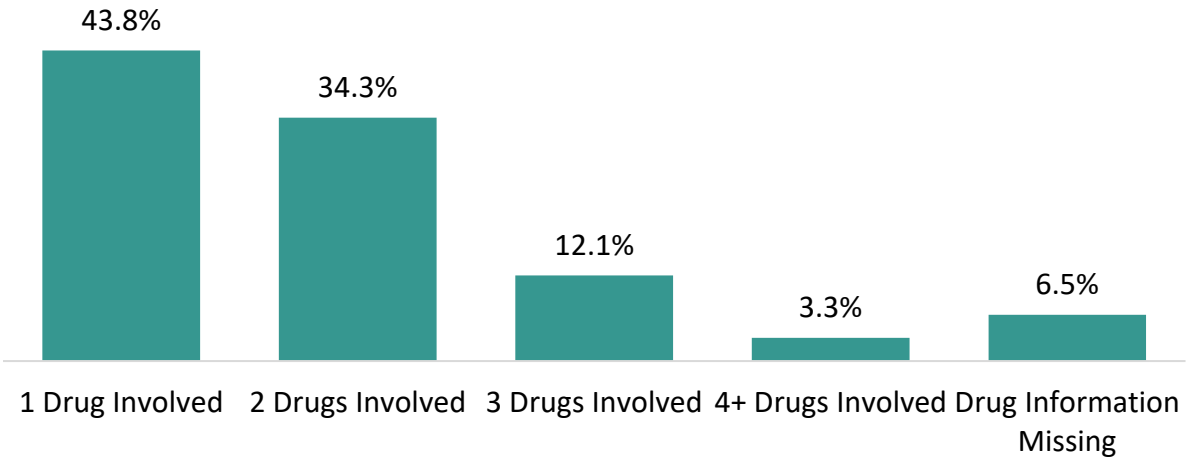
Fentanyl was the most common drug involved in non-fatal opioid overdose events during 2023. Polydrug use (typically defined as the consumption of more than one drug at once) was reported in about half (49.7%) of non-fatal opioid overdose events during 2023. Fentanyl and methamphetamine/amphetamine was the most common drug combination in majority (20.0%) of non-fatal opioid overdose events in Arizona.

Figure 14. Percent of Non-Fatal Opioid Overdose Events Involving Selected Drugs, Arizona, 2023 (n=4,081)



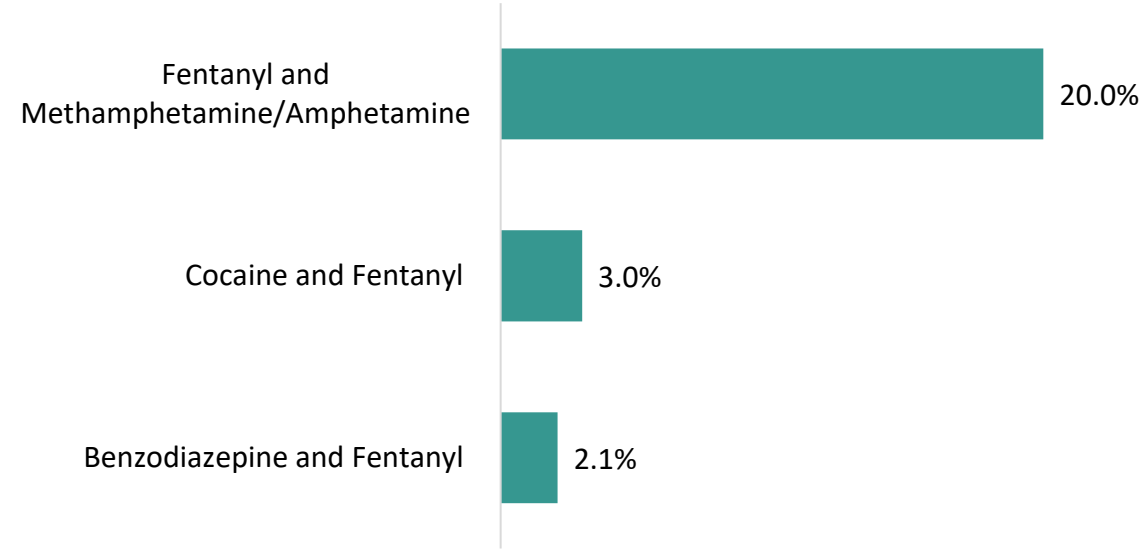
Data Source: MEDSIS. Notes: Non-opioid drugs are included because they were identified along with an opioid. ADHS does not have a requirement for reporting any drug overdoses other than opioids (e.g., all methamphetamine overdoses that are happening in Arizona are not identified nor represented). The percentages do not add up to 100% as one overdose event may involve multiple drugs. The percentage indicates the proportion of overdose events in which the drug was identified.

Figure 15. Percentage of Non-Fatal Opioid Overdose Events by Number of Drugs Involved, Arizona, 2023 (n=4,081)



Data Source: MEDSIS. Notes: Non-opioid drugs are included because they were identified along with an opioid. ADHS does not have a requirement for reporting any drug overdoses other than opioids (e.g., all methamphetamine overdoses that are happening in Arizona are not identified nor represented). List of drugs collected is shown in Figure 14.

Figure 16. Percentage of Non-Fatal Opioid Overdose Events Involving Top 3 Two Drug Combination, 2023 (n=4,081)



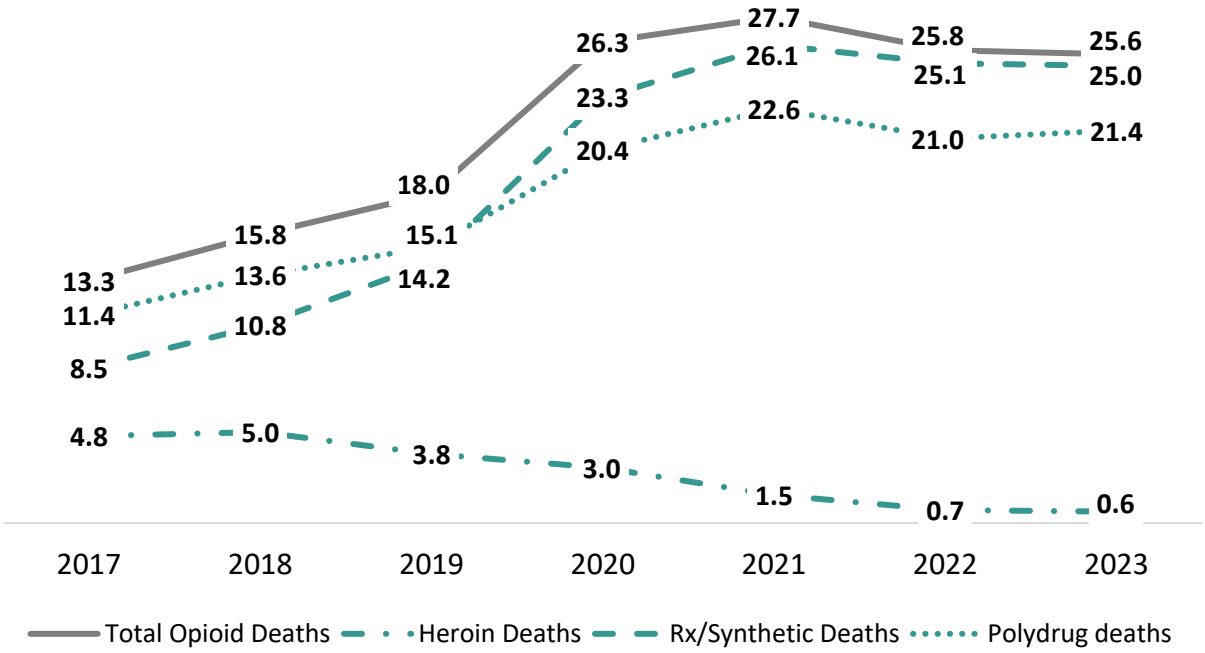
Data Source: MEDSIS. Notes: Non-opioid drugs are included because they were identified along with an opioid. Other Opioid category includes other opioid drugs (e.g., opiates, tramadol, codeine, etc.) that are not listed under fentanyl, oxycodone, heroin, methadone, morphine, hydrocodone, and hydromorphone.

Opioid Overdose Deaths Among Arizona Residents (Data Source: Death Certificates)

Trends 2017-2023

In the period from 2017-2021, the rate of opioid overdose deaths per 100,000 increased (+108.3%) among Arizona residents, with a slight decrease from 2021 to 2023 (-7.6%). The rate of deaths per 100,000 attributed to prescription/synthetic drugs increased from 2017-2021, and stayed relatively stable from 2021-2023, as did the rate attributed to polydrug use. The rate of heroin drug deaths per 100,000 decreased from 2017-2023 (-87.5%). For count of opioid overdose deaths by drug type, see Appendix, Table 3. It's worth noting that naloxone became available over-the-counter in September 2023.

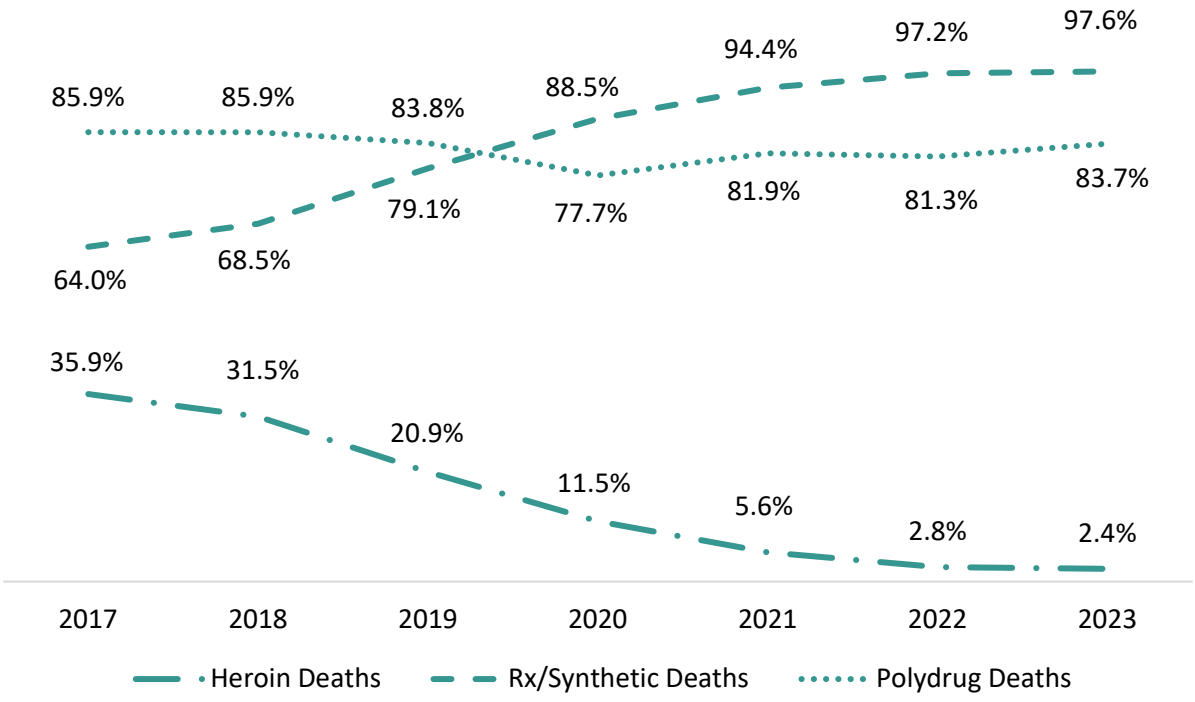
Figure 17. Opioid Overdose Fatality Rate per 100,000 Population, Arizona, 2017-2023 (n=11,077)



Data Source: Arizona Vital Statistics, Death Certificates. Notes - Heroin: Opioid deaths involving heroin (T40.1); Rx/Synthetic: Opioid deaths involving all "other opioids" except heroin (T40.2, T40.3, T40.4, and T40.6); Polydrug: Opioid deaths involving opioids in combination with other non-opioid substances. All polydrug deaths are also counted in either the Heroin or Rx/Synthetic Drug Category.

The percent of opioid overdose deaths involving prescription/synthetic drugs increased steadily each year from 2017-2023. The percent of opioid overdose deaths involving polydrug use saw a steady decrease from 2017-2020, followed by an increase from 2021 to 2023. The percent of opioid overdose deaths involving heroin decreased from 2017-2023.

Figure 18. Percent of Opioid Deaths Involving Selected Drugs, Arizona, 2017-2023 (n=11,077)

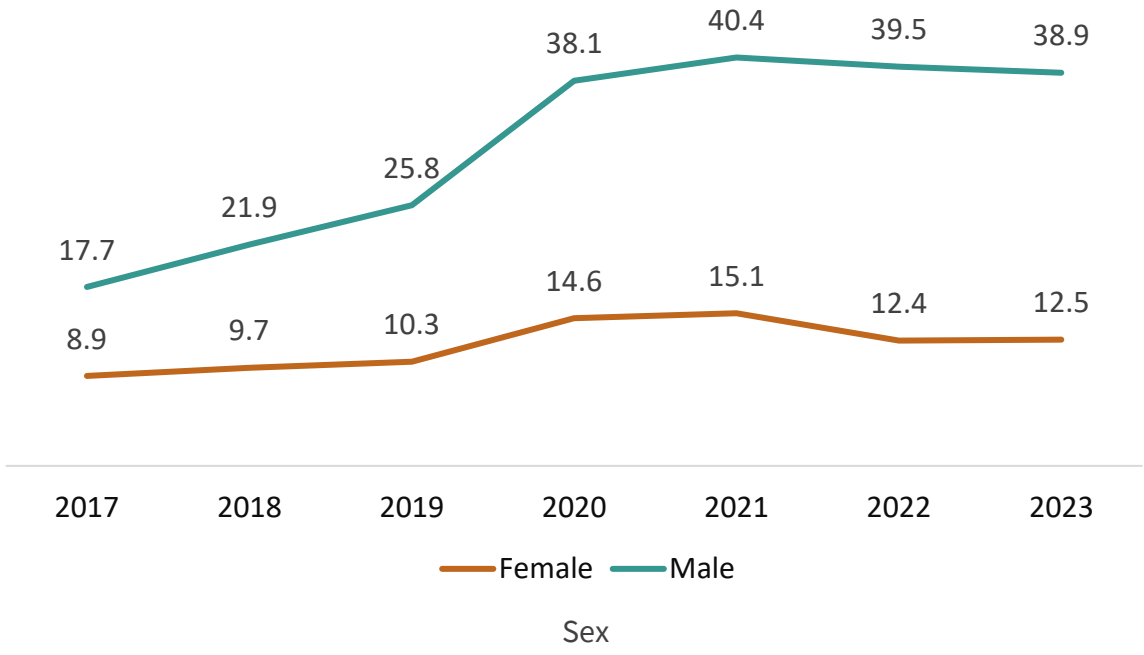


Data Source: Arizona Vital Statistics, Death Certificates. Notes - Heroin: Opioid deaths involving heroin (T40.1); Rx/Synthetic: Opioid deaths involving all "other opioids" except heroin (T40.2, T40.3, T40.4, and T40.6); Polydrug: Opioid deaths involving opioids in combination with other non-opioid substances. All polydrug deaths are also counted in either the Heroin or Rx/Synthetic Drug Category

Sex

From 2017 to 2021, the rate of opioid overdose deaths per 100,000 population increased significantly among both males and females in Arizona. Between 2017 and 2019, male opioid fatality rates were twice those of females, then almost tripled from 2020 onward. The opioid fatality rate for males increased from 17.7 in 2017 to 40.4 in 2021 (+128.2% increase), and then slightly decreased from 2021 to 2023 to 38.9 (-3.7% decrease). The opioid fatality rate for females increased from 8.9 in 2017 to 15.1 in 2021 (+69.7% increase), and then decreased to 12.4 in 2022 (-17.9% decrease), staying relatively stable through 2023.

Figure 19. Opioid Fatality Rate Per 100,000 Population by Sex, Arizona, 2017-2023 (n=11,077)

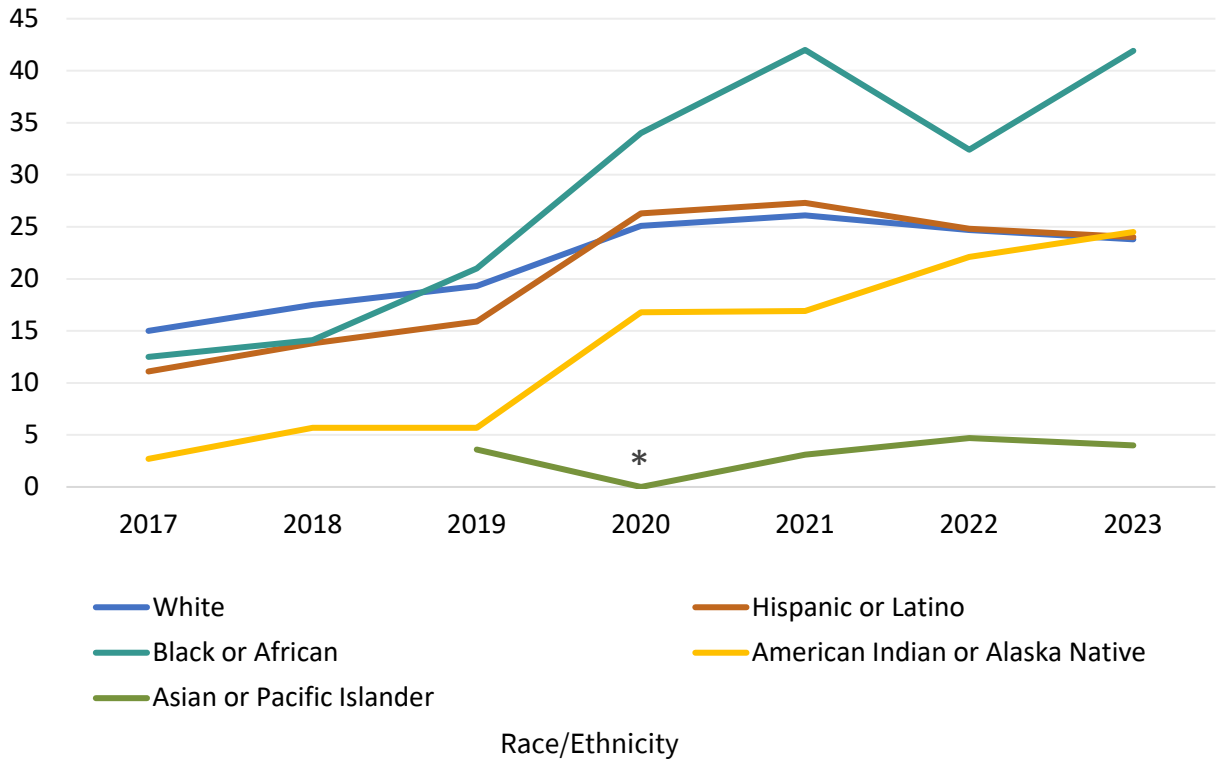


Data Source: Arizona Vital Statistics, Death Certificates

Race and Ethnicity

Between 2017 and 2023, American Indian or Alaska Native individuals experienced the highest percentage increase in opioid fatality rates, with an 807.4% increase (from 2.7 to 24.5 deaths per 100,000). Opioid fatalities among Black or African American individuals more than tripled during this time, rising from 12.5 to 41.9 deaths per 100,000 (+235.2% increase). Both White and Hispanic/Latino individuals had an increase in opioid fatality rate between 2017 and 2021, with rates stabilizing after that period. White individuals experienced a 74.0% increase (from 15.0 to 26.1), while Hispanic/Latino individuals saw a 145.9% increase (from 11.1 to 27.3) from 2017 to 2021. The opioid fatality rate among Asian or Pacific Islander individuals was consistently low, remaining below 5.0 per 100,000 throughout the period. Please note that 2017-2019 and 2020 opioid fatality rates for Asian or Pacific Islander individuals are not available due to low counts.

Figure 20. Opioid Fatality Rate Per 100,000 Population by Race/Ethnicity, Arizona, 2017-2023 (n=11,077)



Data Source: Arizona Vital Statistics, Death Certificates. 'Unknown' and 'Other Race' categories are not shown here due to lack of appropriate denominator.

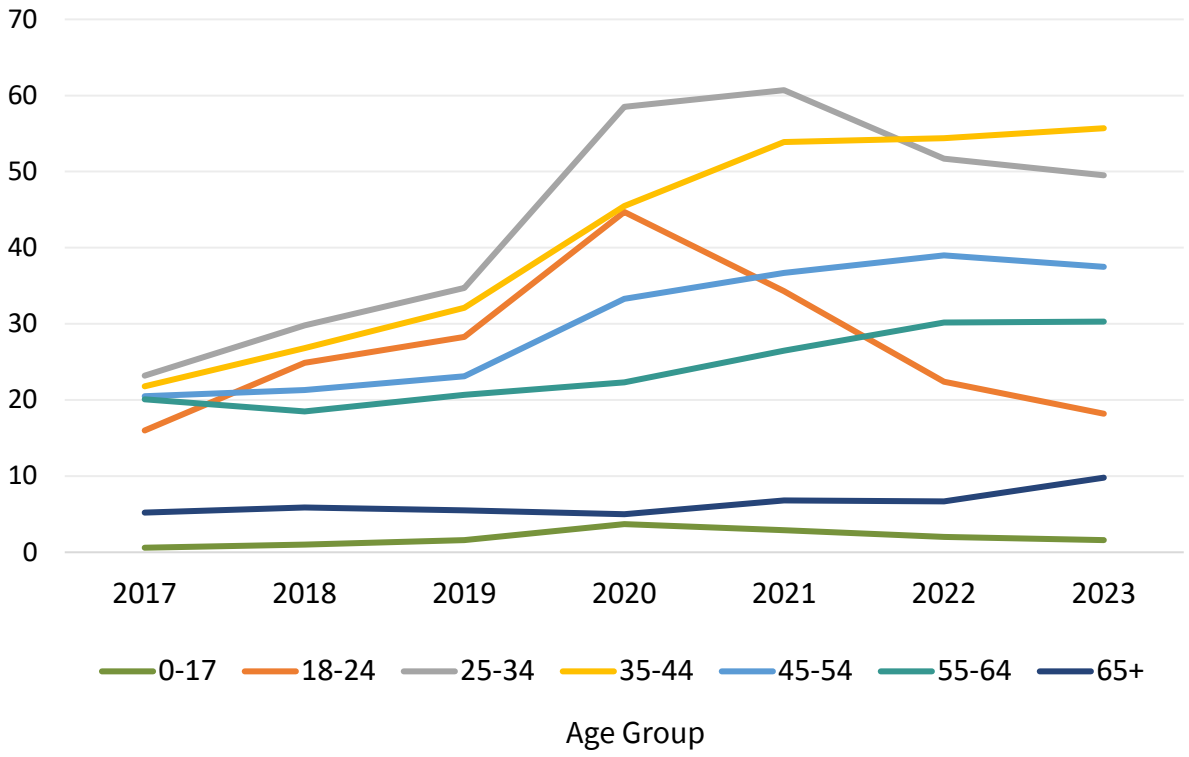
*Rate not available due to low counts.

Age

Between 2017 and 2023, the opioid fatality rate was highest among individuals aged 25-44. Individuals aged 25-34 years had an increase in opioid fatality rate until 2021, peaking at 60.7, before declining to 49.5 in 2023. Individuals aged 35-44 years experienced a steady increase in opioid fatality rate, from 21.8 in 2017 to 55.7 in 2023 (+155.5% increase). Individuals aged 45-54 and 55-64 years also had a steady increase in rates through 2022, with rates stabilizing in 2023.

Opioid fatality rate has continued to decline among individuals aged 0-24 in recent years. Individuals aged 0-17 also saw an increase in fatality rate from 2017 to 2020 (+733.3% increase), returning to pre-COVID level rates by 2023. Among individuals aged 18-24, the rate surged to 26.3 in 2020 (+184.4% increase from 2017), before dropping to 18.2 in 2023 (-60.0% decrease).

Figure 21. Opioid Fatality Rate Per 100,000 Population by Age Group, Arizona, 2017-2023 (n=11,077)

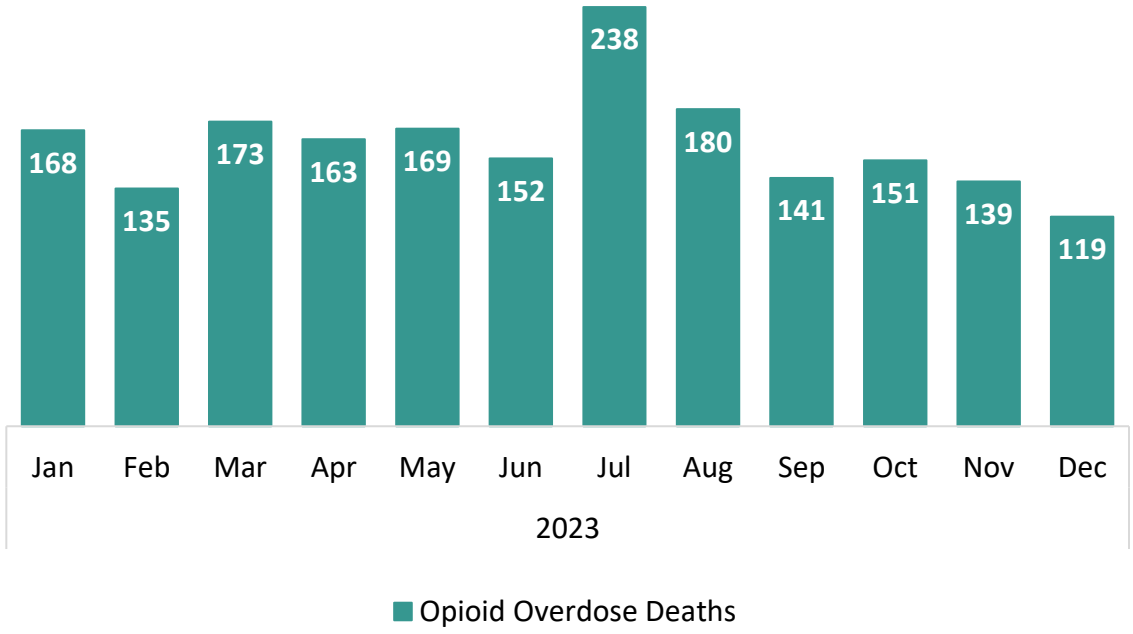


Data Source: Arizona Vital Statistics, Death Certificates

Trends 2023

The number of opioid overdose deaths remained relatively stable in 2023 except for a peak recorded in July (238 deaths).

Figure 22. Number of Opioid Overdose Deaths (Monthly), Arizona, 2023 (n=1,928)

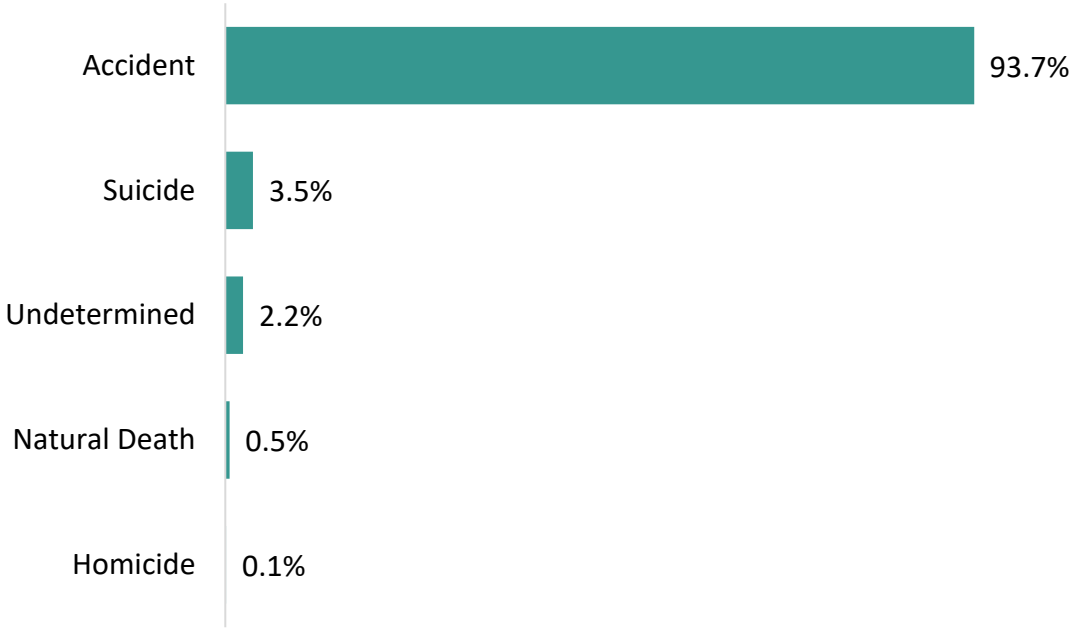


Data Source: Arizona Vital Statistics, Death Certificates

Manner of Death

The majority of opioid overdose deaths (93.7%) were classified as an Accident.

Figure 23. Percent of Opioid Overdose Deaths by Manner of Death, Arizona, 2023 (n=1,928)



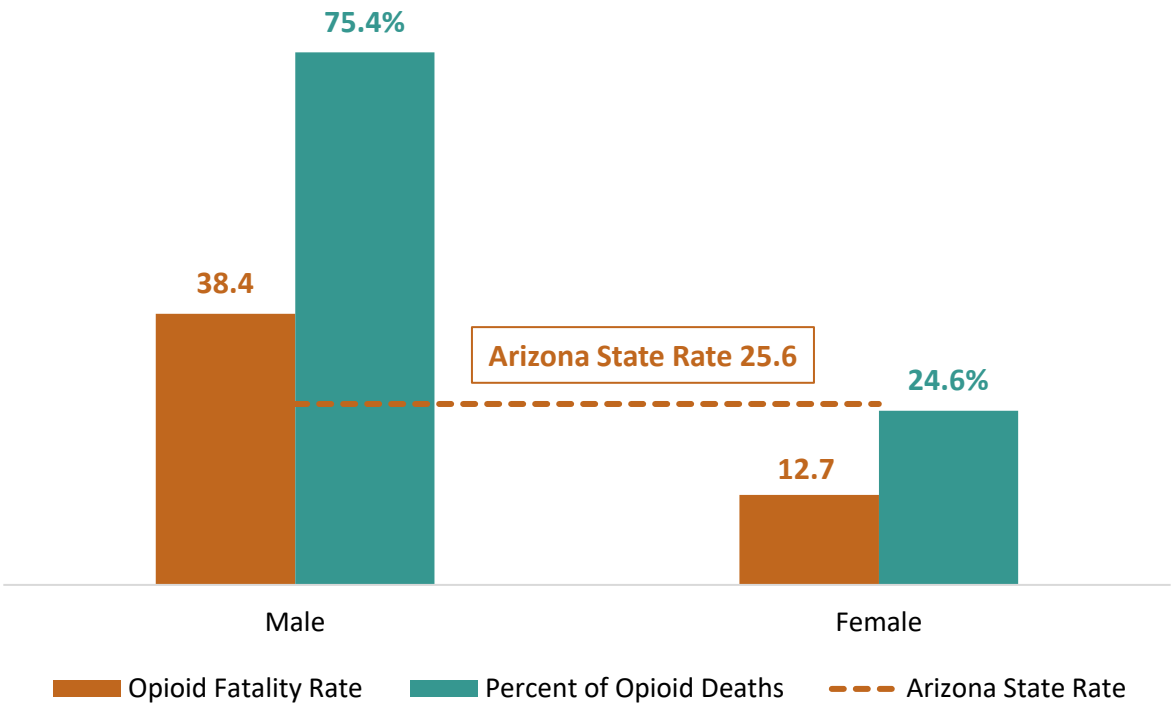
Data Source: Arizona Vital Statistics, Death Certificates

Demographic Comparisons

Sex

The percent and rate of opioid overdose deaths was higher among males (75.4%, rate 38.4 per 100,000) compared with females (24.6%, rate 12.7 per 100,000).

Figure 24. Opioid Overdose Fatality Rate per 100,000 Population, and Percent of Opioid Deaths by Sex, Arizona, 2023 (n=1,928)

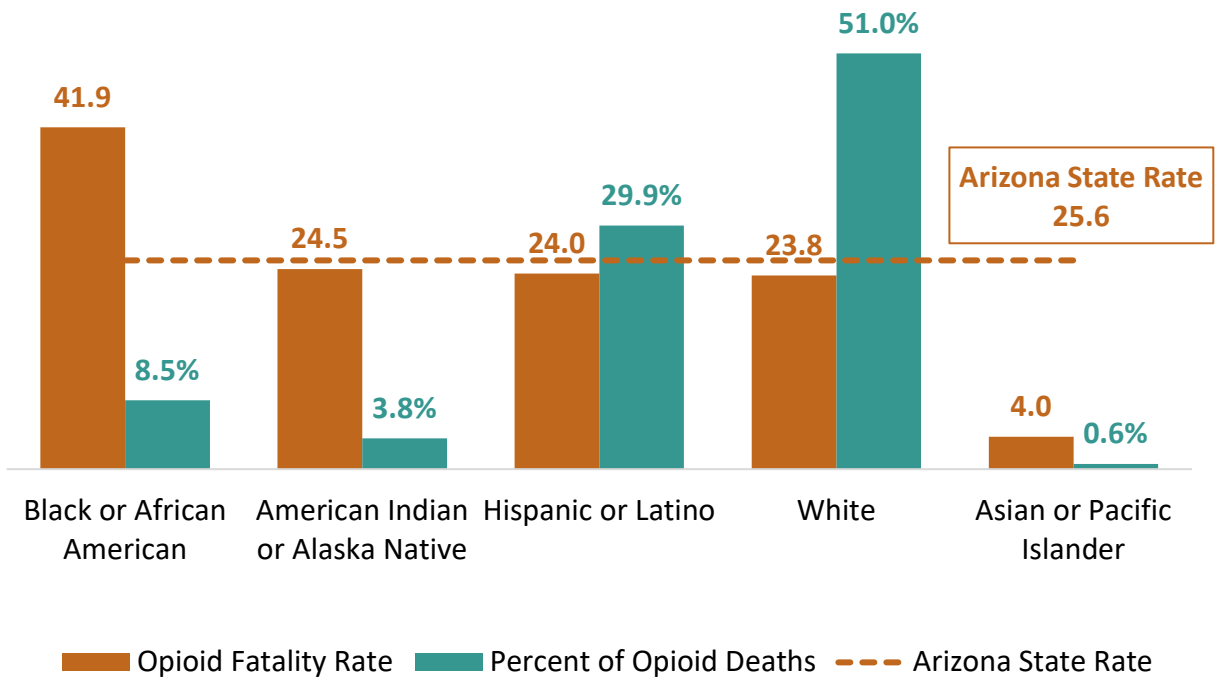


Arizona overall combined annual 2023 was 25.6 per 100,000.
Data Source: Arizona Vital Statistics, Death Certificates. Notes: There were no missing data for Sex.

Race and Ethnicity

While the percent of opioid overdose deaths was highest among Whites (51.0%) and Hispanic or Latino (29.9%) individuals, the highest rate of opioid overdose deaths was among Black or African American (41.9 per 100,000), American Indian or Alaska Native (24.5 per 100,000), and Hispanic or Latino (24.0 per 100,000) individuals.

Figure 25. Opioid Overdose Fatality Rate per 100,000 Population, and Percent of Opioid Deaths by Race/Ethnicity, Arizona, 2023 (n=1,928)



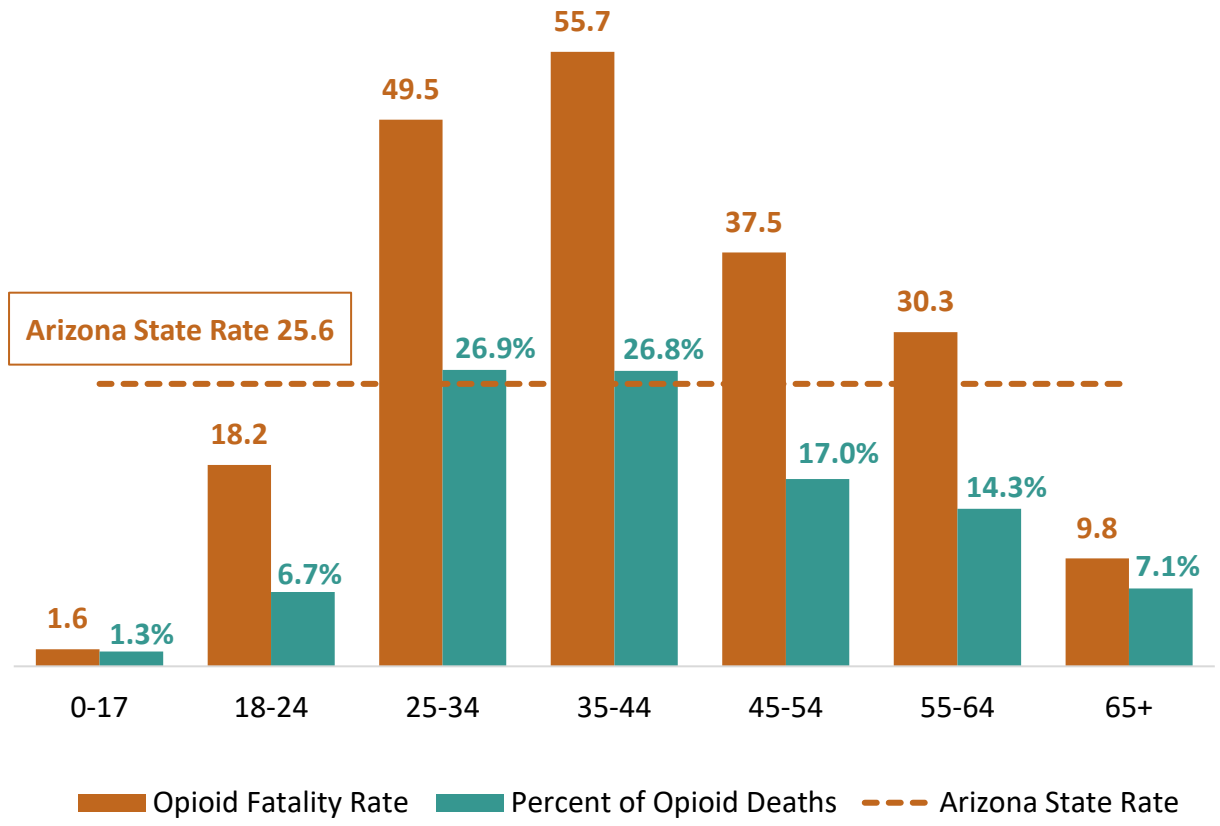
Arizona overall combined annual 2023 was 25.6 per 100,000.

Data Source: Arizona Vital Statistics, Death Certificates. Notes: There were no missing data for Race/Ethnicity. 'Unknown' and 'Other Race' categories are not shown here.

Age

The percent of opioid overdose deaths was highest among individuals 25-34 years (26.9%), 35-44 years (26.8%), 45-54 years (17.0%), and 55-64 years (14.3%). The rate of opioid overdose deaths was highest among individuals 35-44 years (55.7 per 100,000), 25-34 years (49.5 per 100,000), 45-54 years (37.5 per 100,000), and 55-64 years (30.3 per 100,000).

Figure 26. Opioid Overdose Fatality Rate per 100,000 Population, and Percent of Opioid Deaths by Age Group, Arizona, 2023 (n=1,928)

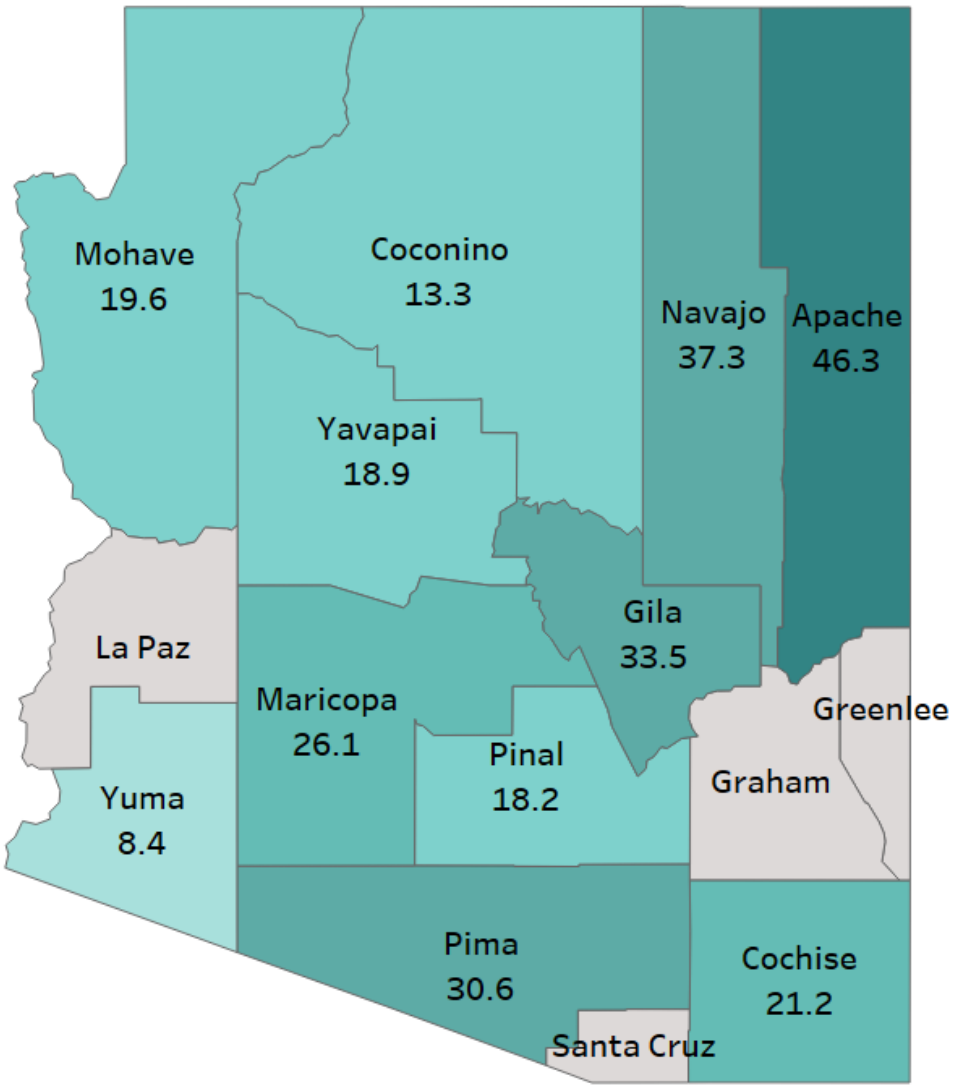


Arizona overall combined annual 2023 was 25.6 per 100,000.
Data Source: Arizona Vital Statistics, Death Certificates. Notes: There were no missing data for Age Group.

County

The Arizona annual opioid-related fatality rate in 2023 was 25.6 per 100,000. The rate of opioid overdose deaths was highest (and higher than the state combined annual rate) in Apache, Navajo, Gila, Pima, and Maricopa Counties.

Figure 27. Opioid Fatality Rate per 100,000 Population by County, Arizona, 2023 (n=1,928)



Data Source: Arizona Vital Statistics, Death Certificates. Notes: To prevent the public disclosure of personally identifying information, data points based on fewer than 10 counts are not displayed (indicated in gray). County reflects person place of residence.

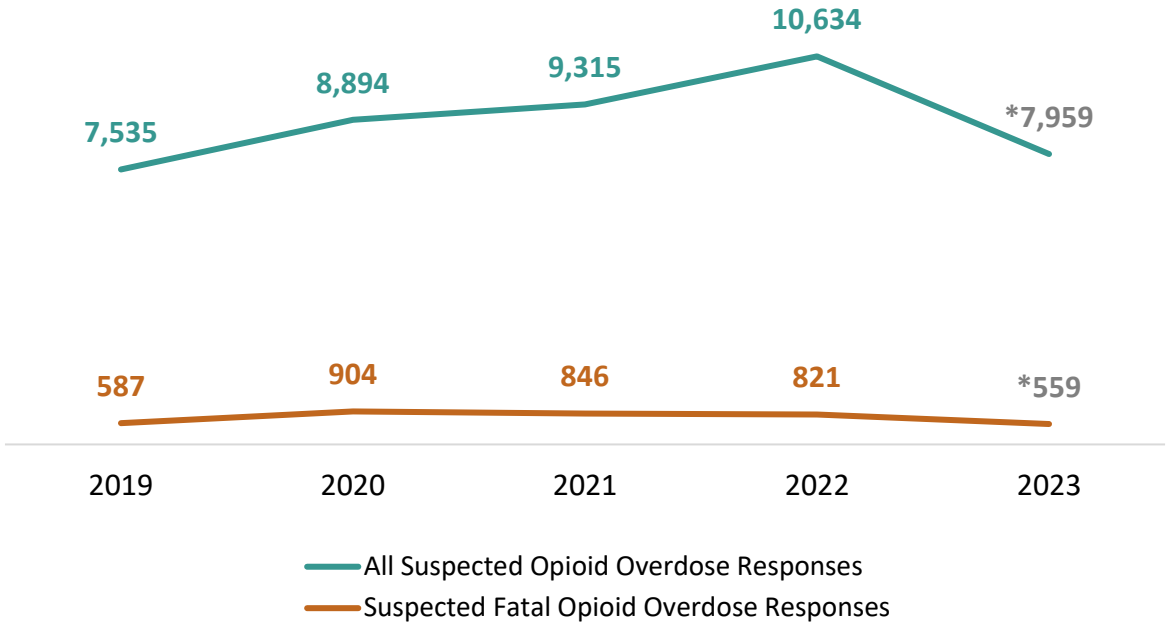
EMS/Law Enforcement Responses for Suspected Opioid Overdose (Data Source: AZ-PIERS)

Out-of-hospital suspected opioid overdoses, suspected opioid overdose deaths, and out-of-hospital use of naloxone to treat opioid overdoses is reported through the web-based prehospital patient care data repository (AZ-PIERS).

Trends 2019-2023

From 2019-2022, the number of EMS/law enforcement responses for all suspected opioid overdoses increased significantly by 41.1% and then decreased by 25.2% from 2022 to 2023. The number of fatal suspected opioid overdose responses increased from 2019-2020 (54.0% increase) and then decreased from 2020-2023 (38.2% decrease).

Figure 28. EMS/Law Enforcement Responses for Suspected Opioid Overdoses, Arizona, 2019-2023 (n=44,337)

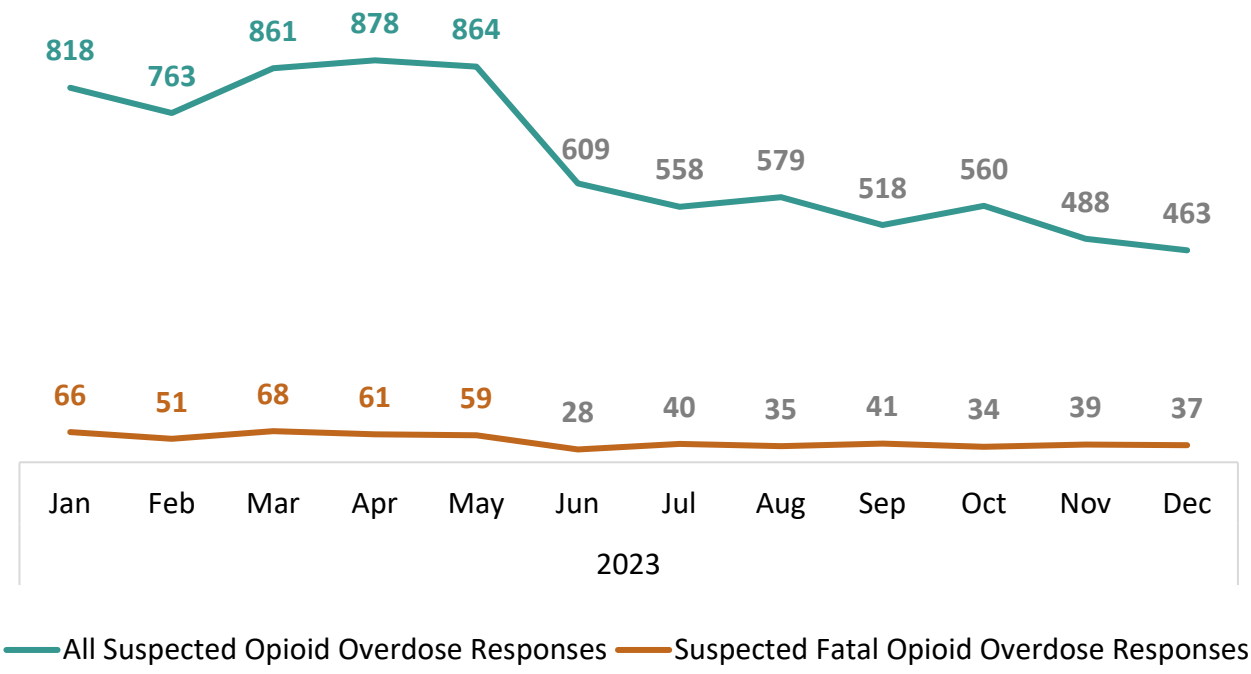


Data Source: Arizona Pre-Hospital Information & EMS Registry System (AZ-PIERS)
*Please note the AZ-PIERS team is currently working on resolving data quality issues for records from June 2023 onward (indicated in gray text). As a result, the 2023 count is provisional and subject to change.

Trends 2023

The number of EMS and law enforcement responses to suspected opioid overdoses remained relatively consistent throughout the first half of 2023. Starting in June, there was a notable decline with a continued downward trend in the following months*.

Figure 29. EMS/Law Enforcement Responses for Suspected Opioid Overdoses (Monthly), Arizona, 2023* (n=7,959)



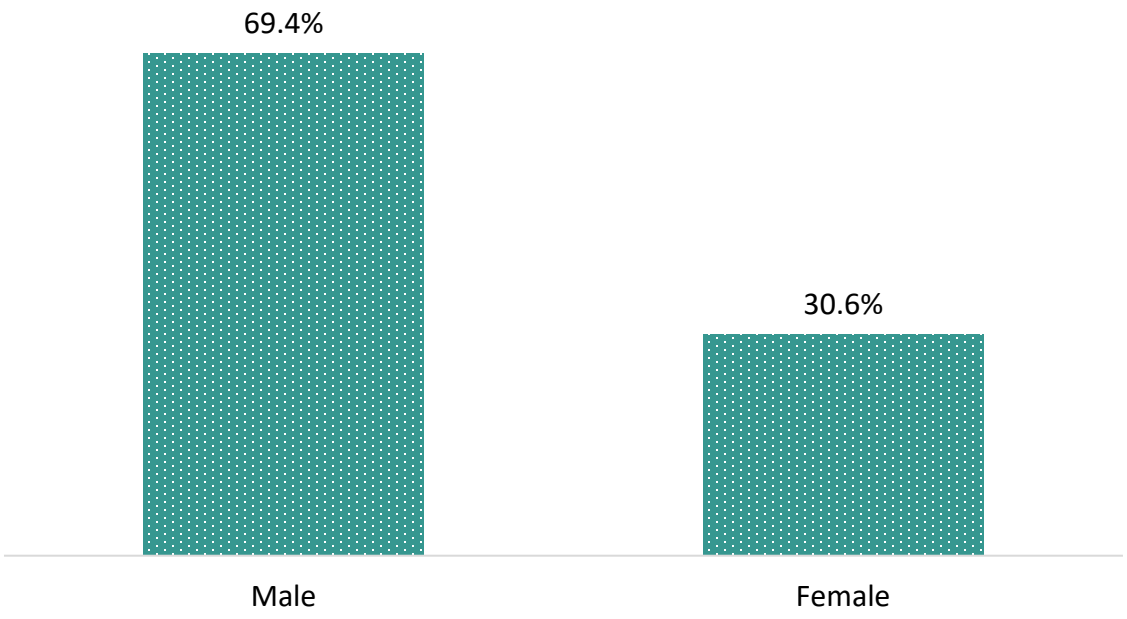
Data Source: Arizona Pre-Hospital Information & EMS Registry System (AZ-PIERS)
*Please note the AZ-PIERS team is currently working on resolving data quality issues for records from June 2023 onward (indicated in gray text). As a result, the 2023 count is provisional and subject to change.

Demographic Comparisons

Sex

The percent of EMS/law enforcement responses for total suspected opioid overdoses was higher among males (69.4%) compared with females (30.6%).

Figure 30. Percentage of EMS/Law Enforcement Responses for Suspected Opioid Overdoses by Sex, Arizona, 2023* (n=7,959)

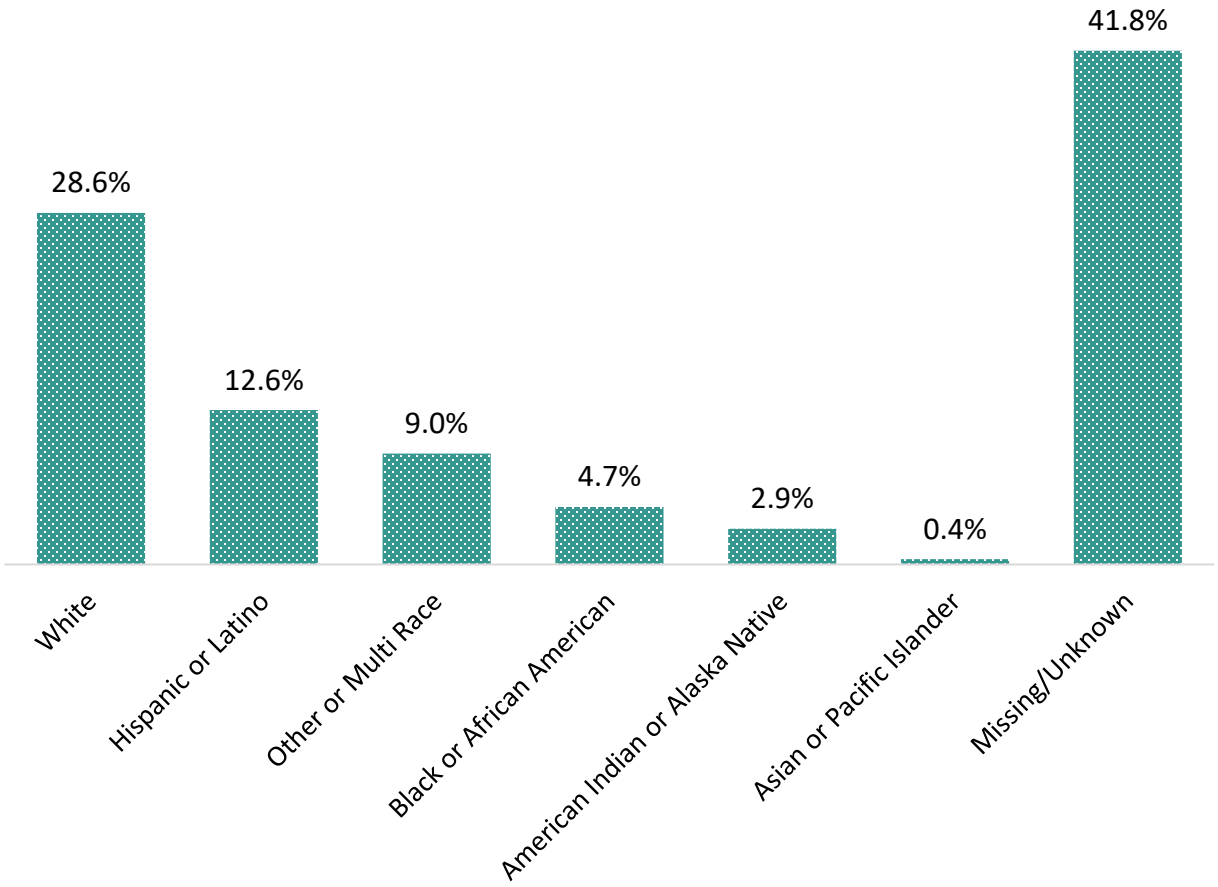


Data Source: Arizona Pre-Hospital Information & EMS Registry System (AZ-PIERS). Notes: Missing values for sex (n=35; 0.4%) are excluded from this graph. Unknown sex may include unidentified individuals.
*Please note the AZ-PIERS team is currently working on resolving data quality issues for records from June 2023 onward (indicated in dotted bars). As a result, the 2023 count is provisional and subject to change.

Race and Ethnicity

The percent of EMS/law enforcement responses for suspected opioid overdoses was highest among White (28.6%) and Hispanic or Latino (12.6%) individuals. However, a significant portion of the responses (41.8%) lacked information on race or ethnicity.

Figure 31. Percentage of EMS/Law Enforcement Responses for Suspected Opioid Overdoses by Race/Ethnicity, Arizona, 2023* (n=7,959)

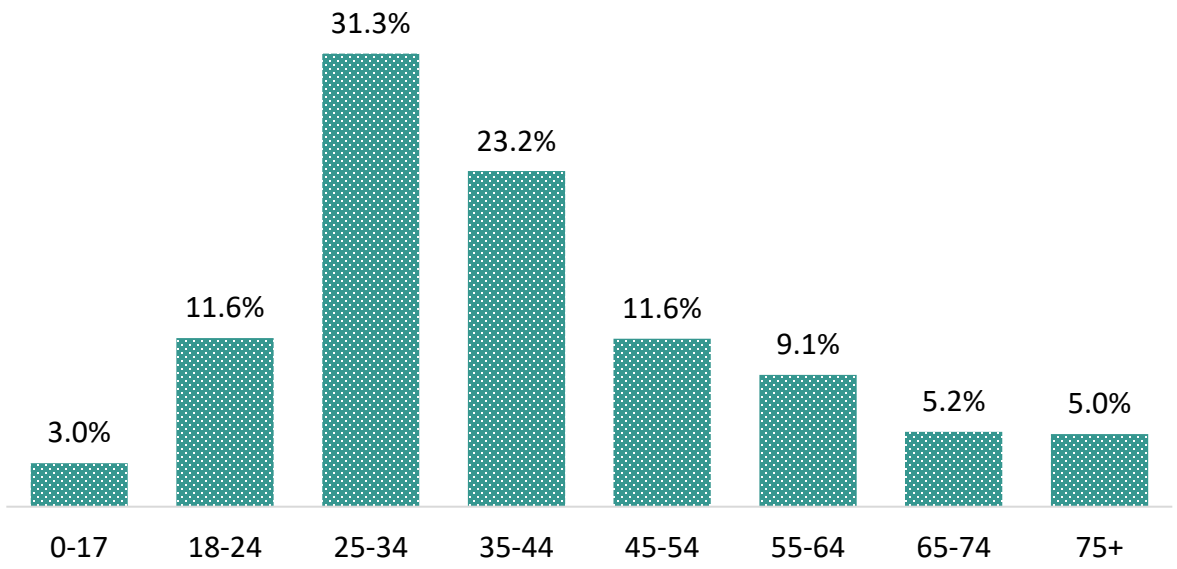


Data Source: Arizona Pre-Hospital Information & EMS Registry System (AZ-PIERS). Other or Multi Race' includes all other race and ethnicity groups, including individuals who reported more than one race.
*Please note the AZ-PIERS team is currently working on resolving data quality issues for records from June 2023 onward (indicated in dotted bars). As a result, the 2023 count is provisional and subject to change.

Age

Individuals 18-54 years account for 77.7% of EMS/law enforcement responses for suspected opioid overdoses, with individuals aged 25-34 years (31.3%), 35-44 years (23.2%), 18-24 years (11.6%), and 45-54 years (11.6%) making up the highest percentages by age groups.

Figure 32. Percentage of EMS/Law Enforcement Responses for Suspected Opioid Overdoses by Age Group, Arizona, 2023* (n=7,959)



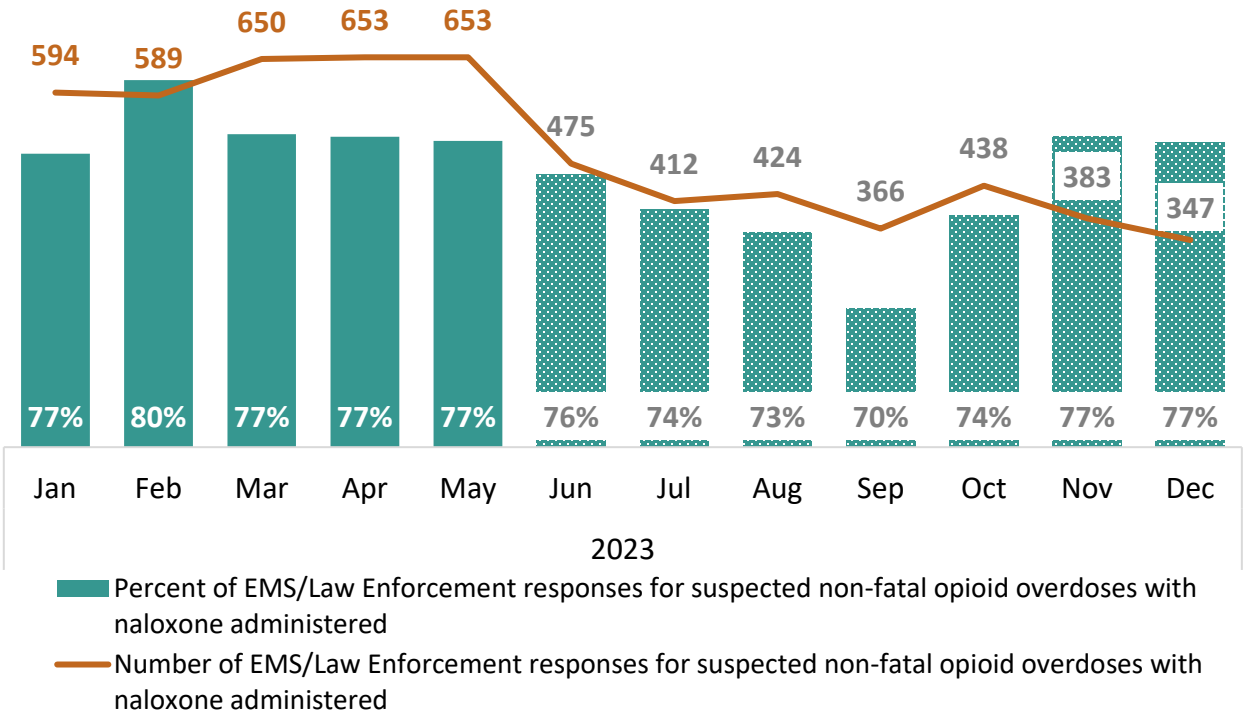
Data Source: Arizona Pre-Hospital Information & EMS Registry System (AZ-PIERS). Notes: Missing values for age (n=30; 0.4%) are excluded from this graph.
*Please note the AZ-PIERS team is currently working on resolving data quality issues for records from June 2023 onward (indicated in dotted bars). As a result, the 2023 count is provisional and subject to change.

EMS/Law Enforcement Administered Naloxone

ADHS provides naloxone free of charge to EMS and law enforcement agencies to equip their personnel with a limited supply for use in the field.

The number of EMS/law enforcement responses for suspected opioid overdoses with naloxone administered varied monthly in 2023 (total doses = 5,984), coinciding with the months when the number of suspected opioid overdoses are highest and lowest, except in November and December. The percent of EMS/law enforcement responses for suspected opioid overdoses with naloxone administered was fairly consistently above 70% (range 70-80%, overall %) during 2023. There are situations where naloxone does not need to be administered, and thus the goal for naloxone administration is not 100%.

Figure 33. EMS/Law Enforcement Responses for Suspected Non-Fatal Opioid Overdoses with Naloxone Administered (Monthly), Arizona, 2023*

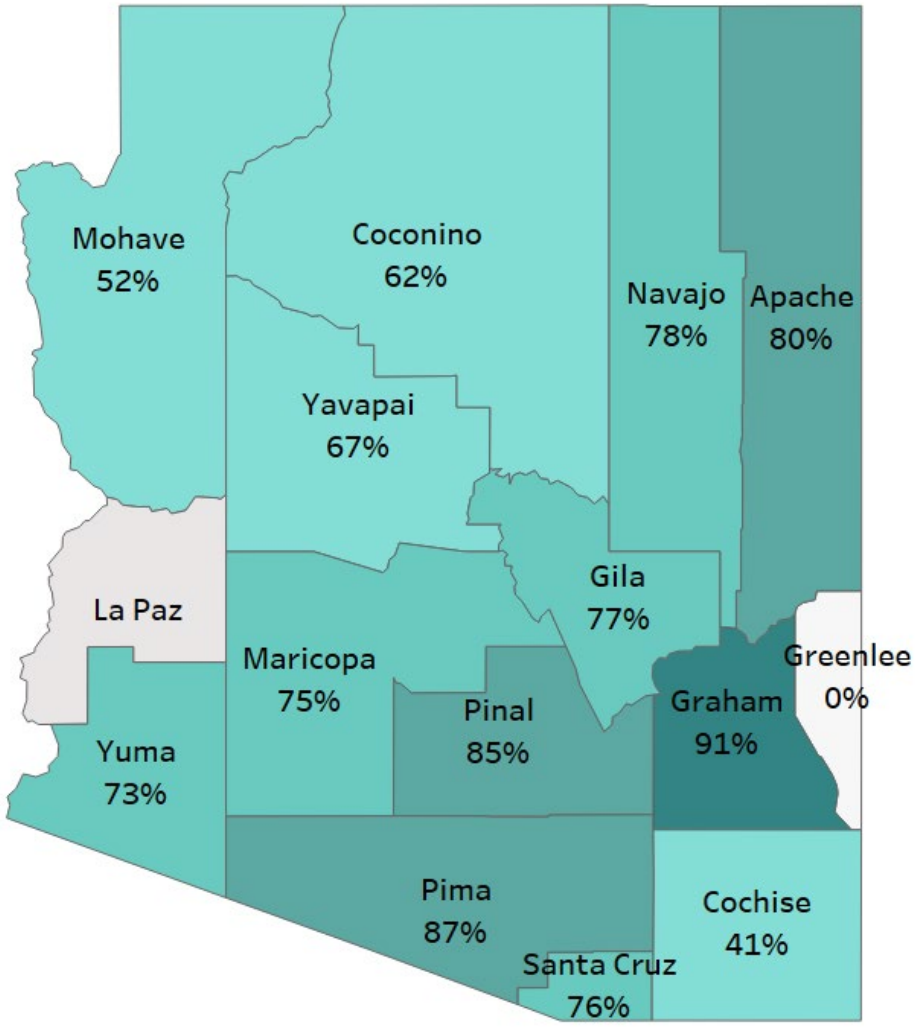


Data Source: Arizona Pre-Hospital Information & EMS Registry System (AZ-PIERS). Majority of the naloxone were administered by Emergency Medical Services (69%), followed by Law Enforcement (22%), or a bystander (7%).
*Please note the AZ-PIERS team is currently working on resolving data quality issues for records from June 2023 onward (indicated in gray text and dotted bars). As a result, the 2023 count is provisional and subject to change.

County

The percent of EMS/law enforcement responses for suspected opioid overdoses with naloxone administered was highest in Graham, Pinal, Pima, and Apache Counties.

Figure 34. Percent of EMS/Law Enforcement Responses for Suspected Non-Fatal Opioid Overdoses with Naloxone Administered by County, Arizona, 2023*



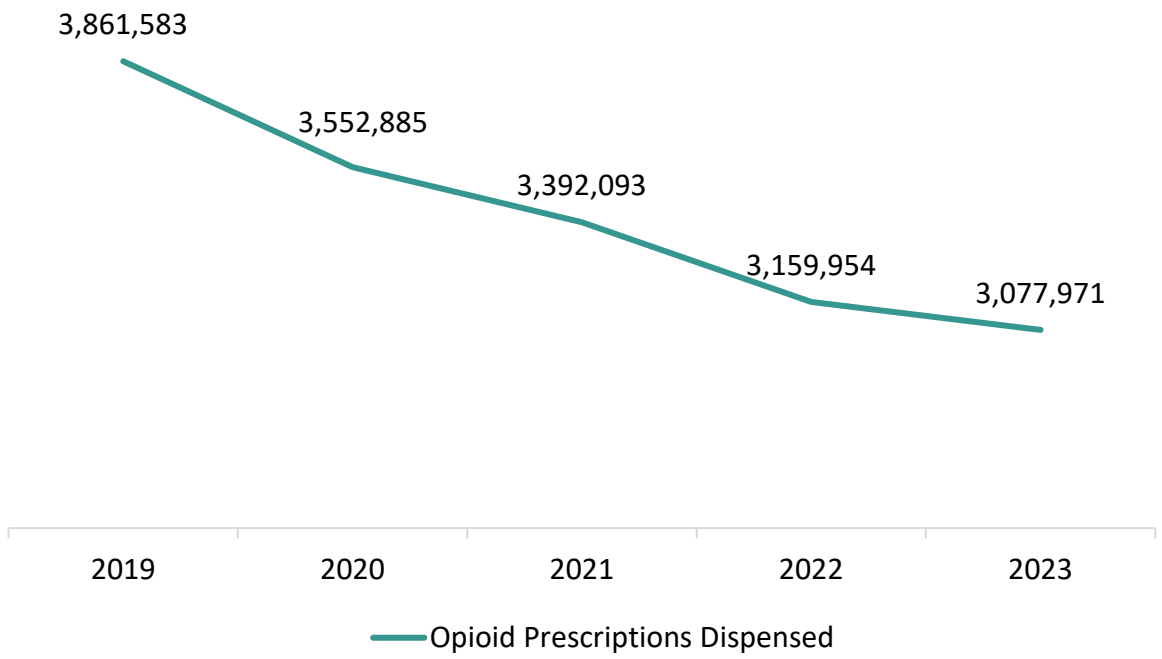
Data Source: Arizona Pre-Hospital Information & EMS Registry System (AZ-PIERS). Notes: To prevent the public disclosure of personally identifying information, data points based on fewer than 10 counts are not displayed (indicated in gray). County reflects patient's place of overdose. No EMS/Law Enforcement responses were reported for Greenlee county in 2023.
*Please note the AZ-PIERS team is currently working on resolving data quality issues for records from June 2023 onward. As a result, the 2023 count is provisional and subject to change.

Prescription Opioid Data (Data Source: PDMP)

Trends 2019-2023

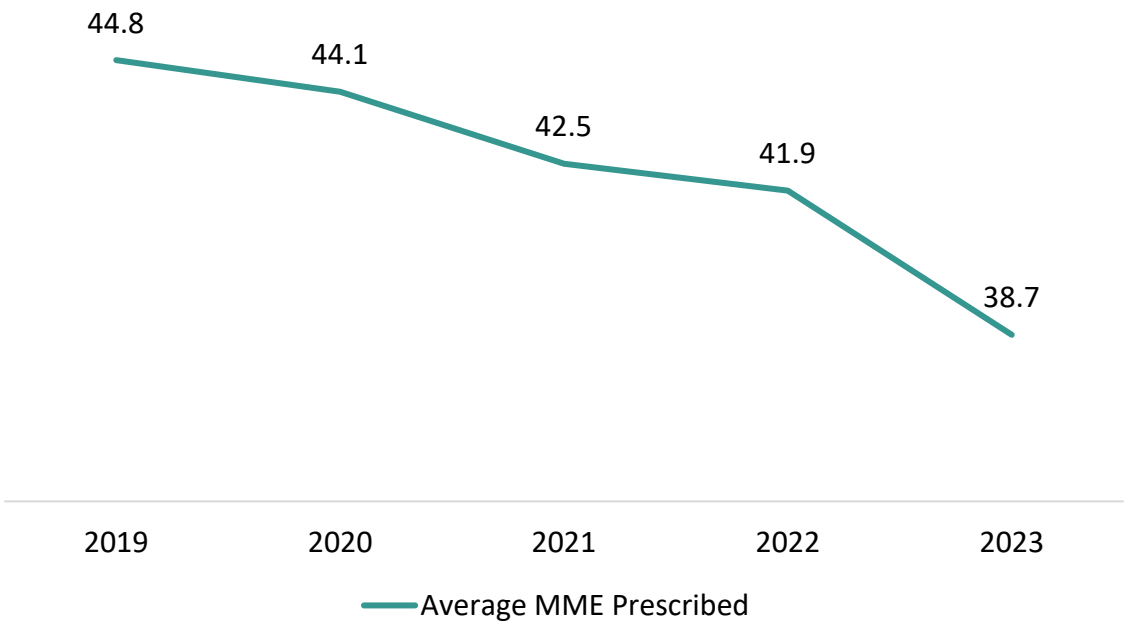
From 2019 to 2023, Arizona saw a reduction in opioid prescribing practices, with the total number of opioid prescriptions decreasing by 20.3% and the average morphine milligram equivalents (MME) dispensed declining by 13.6%. This suggests progress in efforts to curb unnecessary exposure to opioids and potentially reduce misuse.

Figure 35. Opioid Prescriptions Dispensed by Year, Arizona, 2019-2023 (n= 17,044,486)



Data Source: Arizona Prescription Drug Monitoring Program. Note: Only opioid prescriptions dispensed among Arizona residents are included in the graph.

Figure 36. Average Morphine Milligram Equivalent (MME) Prescribed, Arizona, 2019-2023 (n= 17,044,486)

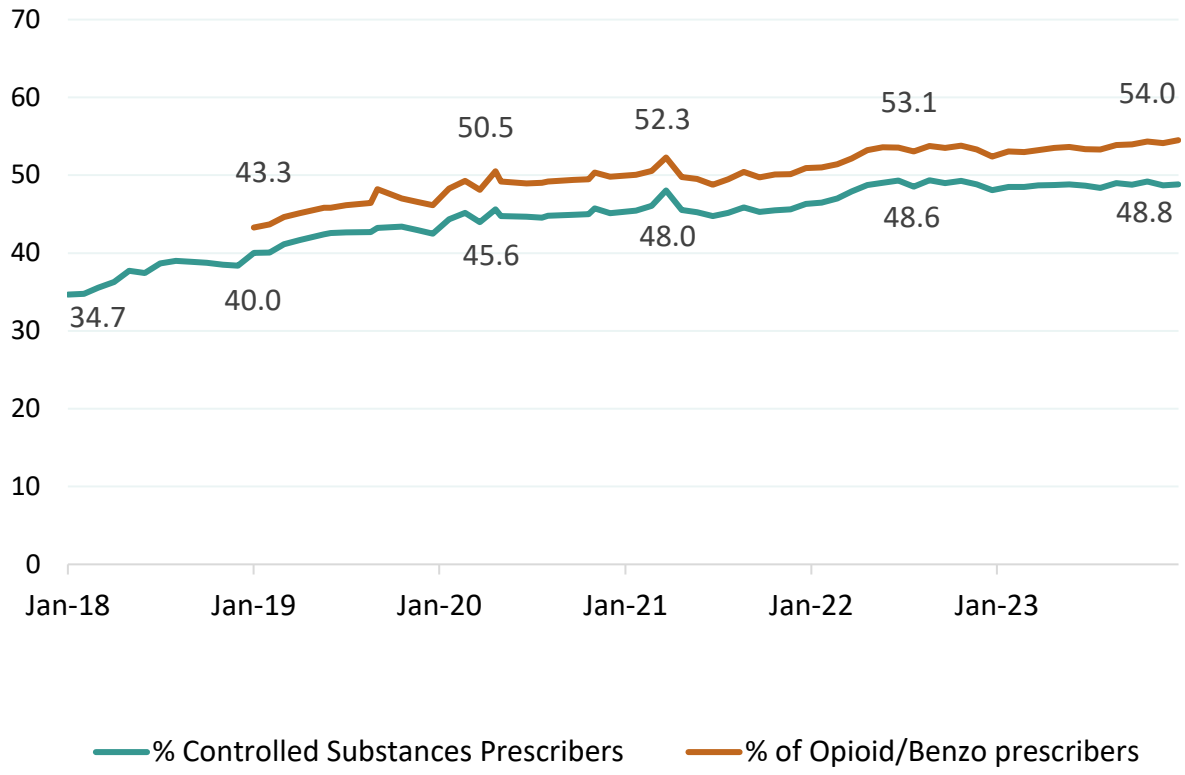


Data Source: Arizona Prescription Drug Monitoring Program. Notes: Only opioid prescriptions dispensed among Arizona residents are included in the graph. MME are values that represent the potency of an opioid dose relative to morphine.

PDMP Prescriber Lookups

The percent of prescribers who checked the Prescription Drug Monitoring Program (PDMP)[12] has increased from 2018-2023 for prescribers of all controlled substances (34.7% to 48.8%) and from 2019-2023 for prescribers of opioids and benzodiazepines (43.3% to 54.0%).

Figure 37. Percentage of Controlled Substances and Opioid/Benzodiazepine Prescribers who Checked PDMP, 2018-2023



Data Source: Controlled Substance Prescription Monitoring Program (CSPMP)

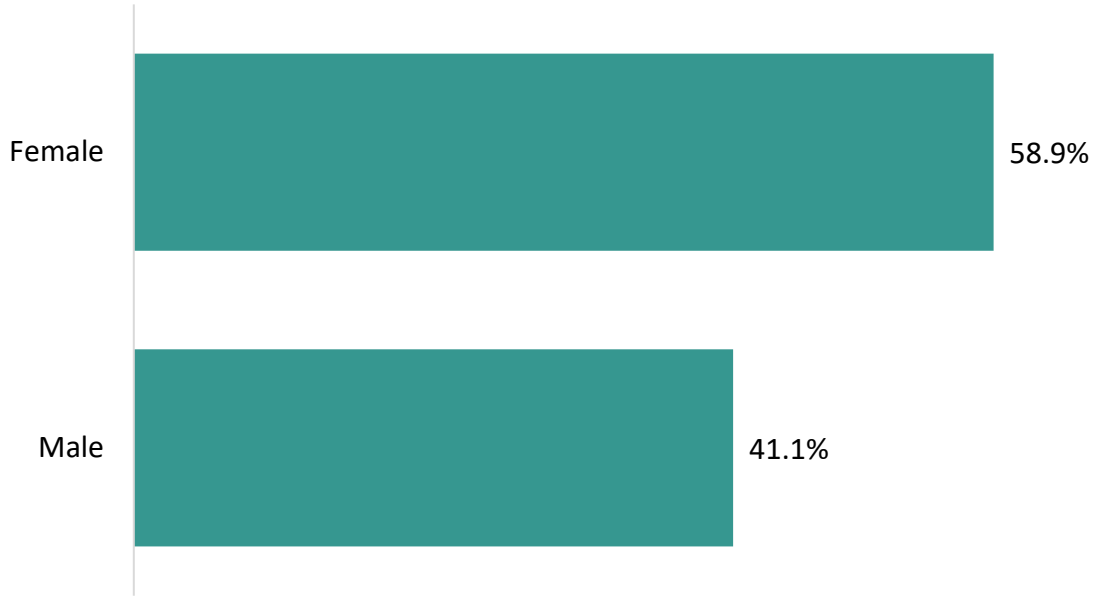
[12] As of October 16, 2017, prescribers are required to check the Prescription Drug Monitoring Program (PDMP) before prescribing an opioid analgesic or benzodiazepine-controlled substance listed in schedule II, III or IV for a patient, shall obtain a patient utilization report regarding the patient for the preceding 12 months from the controlled substances prescription monitoring program's central database tracking system at the beginning of each new course of treatment and at least quarterly while that prescription remains a part of the treatment. For information on exemptions, review Arizona Revised Statutes (A.R.S.) § 36-2606.

Demographic Comparisons

Sex

The percent of opioid prescriptions dispensed for females (58.9%) was higher than compared with males (41.1%).

Figure 38. Percentage of Opioid Prescriptions Dispensed by Sex, Arizona, 2023 (n= 3,077,971)

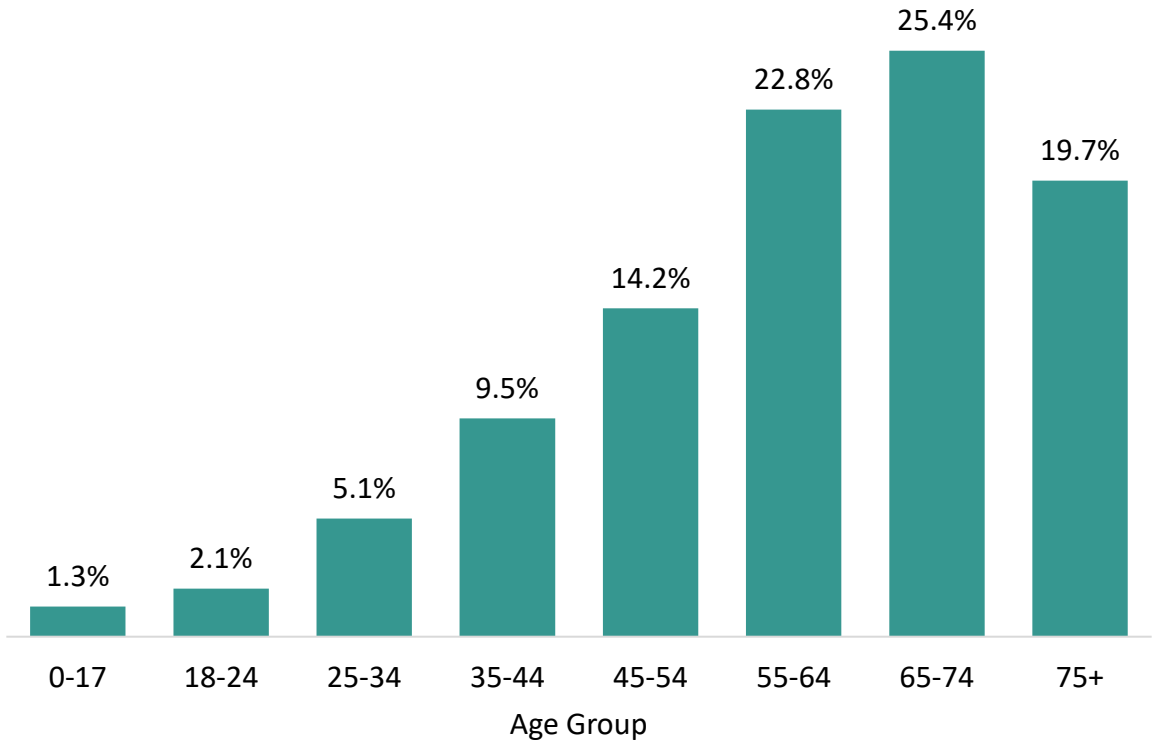


Data Source: Arizona Prescription Drug Monitoring Program. Notes: Missing values for sex (n=505; 0.02%) are excluded from this graph. Unknown sex may include unidentified individuals. Only opioid prescriptions dispensed among Arizona residents are included in the graph.

Age

The percent of opioid prescriptions dispensed for individuals aged 65-74 years (25.4%), 55-64 years (22.8%), and 75+ years (19.7%) was higher than compared with individuals of other age groups.

Figure 39. Percentage of Opioid Prescriptions Dispensed by Age Group, Arizona, 2023 (n= 3,077,971)



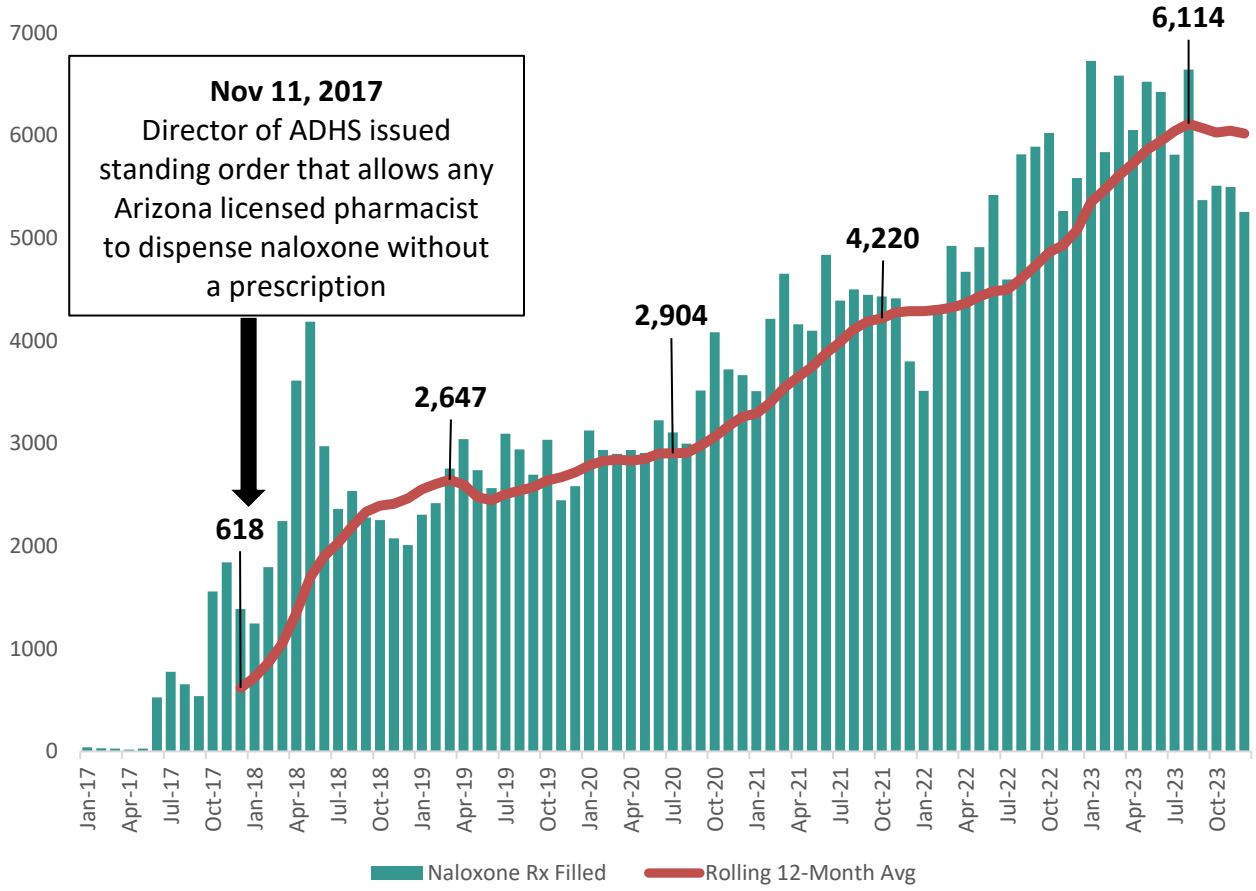
Data Source: Arizona Prescription Drug Monitoring Program. Only opioid prescriptions dispensed among Arizona residents are included in the graph.

Naloxone Dispensed by Pharmacies

The ADHS began issuing a standing order on November 11, 2017 that allowed any Arizona licensed pharmacist to dispense naloxone without a prescription. The number of naloxone dispensed by pharmacies in Arizona has increased significantly from 2017-2023 by 873.6%.

Naloxone was approved by the FDA for purchase without a prescription (over the counter) in September 2023. Subsequently, on June 21, 2024, Governor Katie Hobbs signed SB1211 into law, eliminating the requirement for pharmacies to report naloxone dispensation information to the CSPMP. As a result, data on naloxone dispensed by pharmacies in 2024 will be limited. Future surveillance reports may still include data on naloxone dispensed by pharmacies, however, because naloxone is and will continue to be covered by AHCCCS/Medicaid and pharmacies will continue to be the sole source of access to subsidized naloxone for AHCCCS members. Availability of over-the-counter sales data is yet to be determined.

Figure 40. Naloxone Dispensed by Pharmacies, Arizona, 2017-2023 (n=293,417)



Data Source: Controlled Substance Prescription Monitoring Program (CSPMP). Notes: Rolling average calculated as average number of events in previous 12 months.

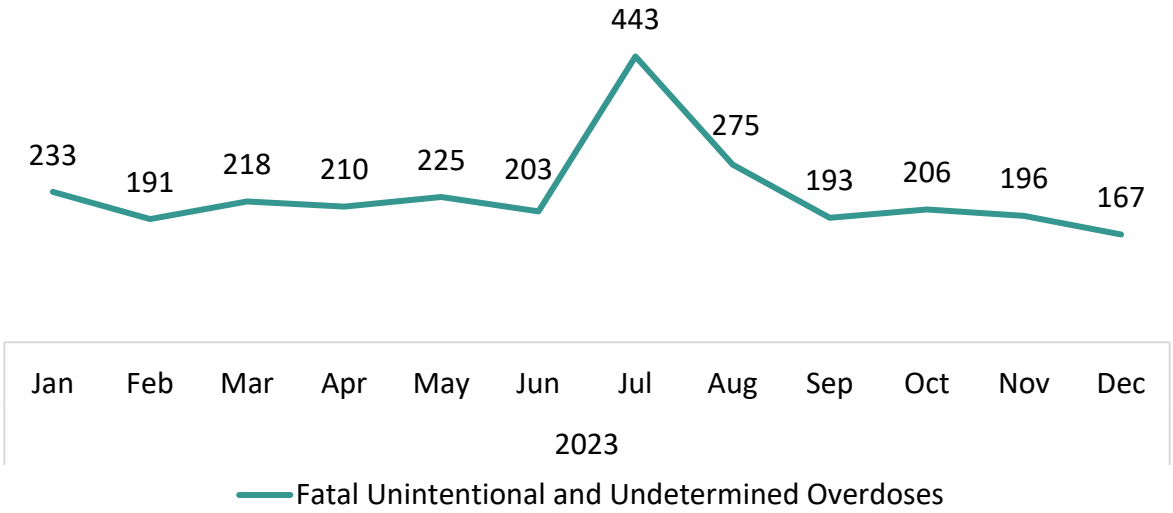
Unintentional and Undetermined Drug Overdose Deaths in Arizona (Data source: SUDORS)

SUDORS collects data on unintentional and undetermined drug overdose deaths from death certificates, medical examiner reports, and toxicology reports, using ICD-10 codes (X40–X44 and Y10–Y14), cause of death text fields, and detailed narratives to provide additional context for understanding circumstances surrounding death. In contrast, death certificate data presented in the Opioid Overdose Deaths section focuses exclusively on opioid overdose deaths, regardless of intent (link to opioid deaths definition). Since SUDORS includes a broader scope of overdose deaths based on unintentional and undetermined intent, the data from these two sources will differ and are not directly comparable.

Monthly Trends

The number of fatal unintentional and undetermined overdose events[13] peaked in July (n=443) and August (n=275) of 2023. The number of events was fairly stable during the rest of the year, ranging from 167 events in December to 233 events in January. The month of death was not known for 171 events. In short, fatal unintentional and undetermined overdose events were most frequent in the summer months, while a temporal effect was not observed for the other seasons.

Figure 41. Number of fatal unintentional and undetermined overdose events (monthly), Arizona, 2023 (n=2,760)



Data Source: Arizona SUDORS

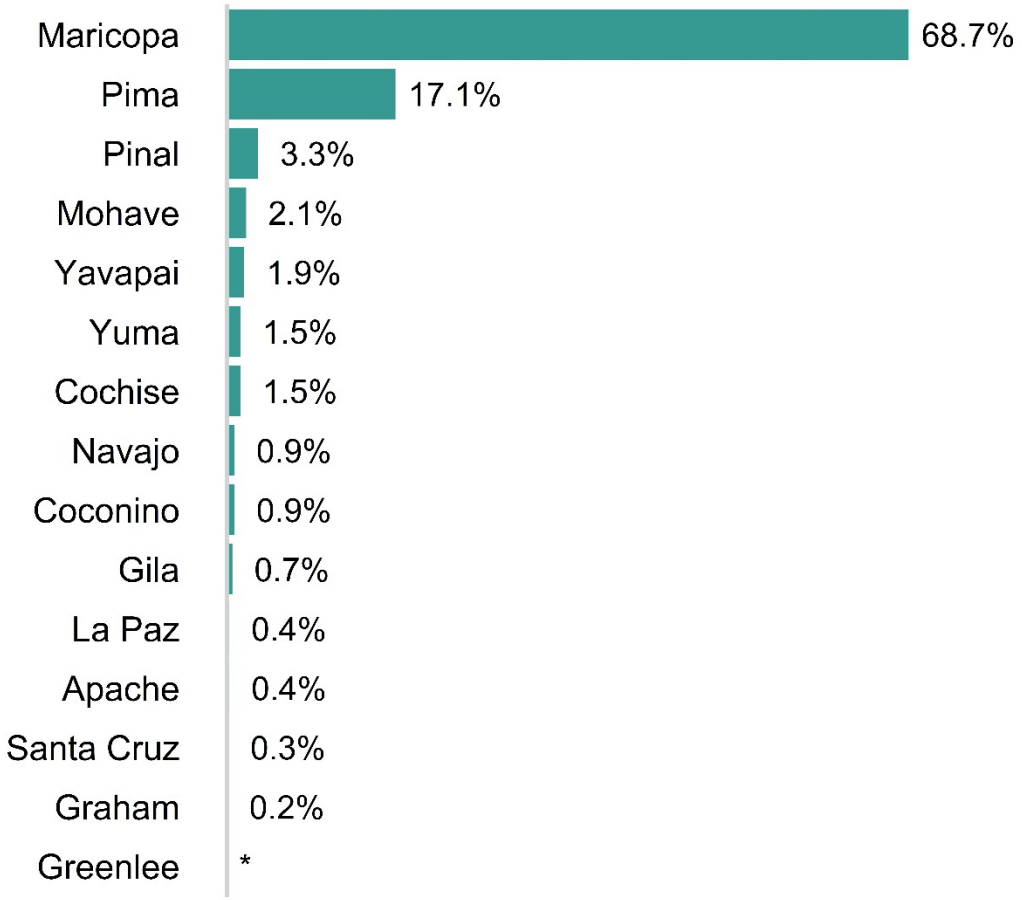
[13] Of the 2,931 total unintentional and undetermined overdose events in Arizona in 2023, 97.4% (n=2,856) of events were unintentional overdoses and 2.6% (n=75) of events were deaths of undetermined intent.

Geography

Percent by County

The majority of fatal unintentional and undetermined overdose events occurred in Maricopa County (n=1,936, 68.7%) and Pima County (n=481, 17.1%). The remaining thirteen counties collectively accounted for the remaining 14.2% (n=401) of events. The percentage for Greenlee County is not shown for having fewer than 6 events.

Figure 42. Percent of fatal unintentional and undetermined overdose events by county, Arizona, 2023 (n=2,818)



Data Source: Arizona SUDORS

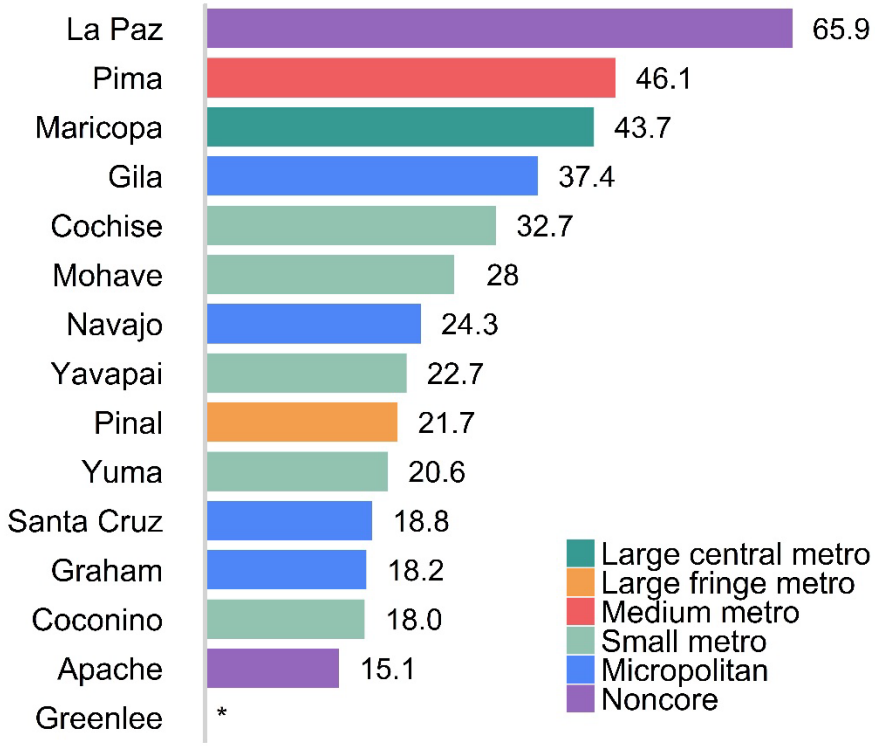
Please note county refers to county in which the overdose took place.

Crude Rates by County and Urbanization Level

The crude rate of fatal unintentional and undetermined overdose events was highest for La Paz (65.9 events per 100,000 people), Pima (46.1), and Maricopa (43.7) counties, followed by Gila (37.4), Cochise (32.7), Mohave (28.0), Navajo (24.3), Yavapai (22.7), Pinal (21.7), and Yuma (20.6) counties. Santa Cruz, Graham, Coconino, and Apache counties showed relatively lower rates (i.e., fewer than 20 events per 100,000 people). Greenlee County had fewer than 6 events within the time period and thus is not reported.

There is a weak relationship between the level of urbanization[†] and crude rate of fatal unintentional and undetermined overdoses. For example, the three counties with the highest crude rates (La Paz, Pima, and Maricopa counties) showed low, moderate, and high levels of urbanization, respectively, while counties with the lowest crude rates (Graham, Coconino, and Apache counties) displayed low levels of urbanization.

Figure 43. Crude rate of fatal unintentional and undetermined overdose events per 100,000 people by county*, Arizona, 2023 (n=2,818)



Data Source: Arizona SUDORS

Please note county refers to county in which the overdose took place.

[†]For more information on urbanization categories, please visit the Methods section

Substances Contributing to Fatal Unintentional and Undetermined Overdose Events

Number of Substances

Fatal unintentional and undetermined overdose events can be caused by one or more substances. For clarity, we consider below a number of substance classes (e.g., anti-depressants) and specific substances (e.g., fentanyl) to examine how often multiple different substances contributed to an overdose event.

A majority of the events (41.4%) involved a single substance (n=1,210); 39.1% of events involved two substances (n=1,142); 12.9% of events involved three substances (n=378); 3.9% of events involved 4 substances (n=115); and 2.7% of events involved five-to-nine substances (n=78). The most common cause of overdose events was a combination of fentanyl and methamphetamine (23.3%, n=682), followed by methamphetamine alone (20.3%, n=593) and fentanyl alone (15.6%, n=456). These three substance groups accounted for over half of events in 2023.

Table 4. Number and percent of substances causing fatal unintentional and undetermined overdose events, Arizona, 2023 (n=2,923)

(Poly-)substances	Number of overdoses	Percent of overdoses
Fentanyl, methamphetamine	682	23.3
Methamphetamine	593	20.3
Fentanyl	456	15.6
Fentanyl, alcohol	148	5.1
Cocaine	73	2.5
Fentanyl, methamphetamine, illicit synthetic opioid	61	2.1
Fentanyl, methamphetamine, alcohol	50	1.7
Fentanyl, cocaine	48	1.6
Prescription opioid (other)	47	1.6
Fentanyl, methamphetamine, prescription opioid (other)	37	1.3
	2,195	75.1

Data Source: Arizona SUDORS

Substances and Substance Classes

Around 71% (n=2,075) of fatal unintentional and undetermined overdose events involved an opioid, while 66.3% (n=1,939) involved a stimulant. Illicit fentanyls contributed to 1,764 overdose events (60.4%), while illicit fentanyl metabolites (that is, the substance that is formed when the body breaks down the fentanyl) contributed to 162 overdose events (5.6%). Among other opioids, prescription opioids contributed to 8.2% of events (n=239) and heroin 1.5% of events (n=43). Among stimulants, methamphetamine contributed to 58.1% of overdose events (n=1,697), cocaine contributed to 18.0% of overdose events (n=528), cocaethylene contributed to 2.3% of events (n=67), and amphetamine contributed to 1.9% of events (n=54). Finally, benzodiazepines contributed to 6.4% of overdose events (n=188), while kratom/mitragynine contributed to 0.7% of events (n=19). For a breakdown of methamphetamine events by demographic characteristics, see Appendix, Table 4.

Table 5. Number and percent of fatal unintentional and undetermined overdose events with select substances contributing to the overdose, Arizona, 2023 (n=2,923)

Substance class or name	Number of overdoses	Percent of overdoses
Any opioid	2,075	71.0%
Any stimulant*	1,939	66.3%
Illicit fentanyls	1,764	60.4%
Methamphetamine	1,697	58.1%
Cocaine	528	18.0%
Prescription opioids	239	8.2%
Benzodiazepines	188	6.4%
Illicict fentanyl metabolites**	162	5.6%
Cocaethylene	67	2.3%
Amphetamine	54	1.9%
Heroin	43	1.5%
Kratom/Mitragynine	19	0.7%

* Includes amphetamines and cocaine
** Includes acetyl fentanyl, para-fluofentanyl, and despropionyl fentanyl

Data Source: Arizona SUDORS

Context of Substance Use

Location

The ten most frequent locations of fatal unintentional and undetermined overdose events accounted for 91.5% of all events. Over half of all events occurred in a house or apartment (n=1,567, 53.5%), followed by street, sidewalk, or alley (n=306; 10.4%), non-public motor vehicles (n=151, 5.2%), natural areas (n=122, 4.2%), hotels or motels (n=119, 4.1%), supervised residential facilities (n=105, 3.6%), other commercial establishments (n=96, 3.3%), parking lots or garages (n=95, 3.2%), parks, playgrounds, or public use areas (n=72, 2.5%), and public transport (n=50, 1.7%).

Table 6. Number and percent of fatal unintentional and undetermined overdose events by the top ten locations of event, Arizona, 2023 (n=2,931)

Location	Number of overdoses	Percent of overdoses
House or apartment	1,567	53.5%
Street, sidewalk, or alley	306	10.4%
Non-public motor vehicle	151	5.2%
Natural area	122	4.2%
Hotel or motel	119	4.1%
Supervised residential facility	105	3.6%
Other commerical establishment	96	3.3%
Parking lot or garage	95	3.2%
Park, playground, or public use area	72	2.5%
Public transportation	50	1.7%
Total	*2,683*	*91.5%*

Data Source: Arizona SUDORS

Bystanders

The presence of one or more bystanders was known for 91.4% (n=2,680) of all fatal unintentional and undetermined overdose events. Among the known events, one or more bystanders were present in 45.5% (n=1,221) of events. In most events, a single bystander was present (n=680, 25.4%), followed by multiple bystanders (n=300, 11.9%) and an unknown number of bystanders (n=241, 9.0%). Regarding the type of bystander, a family member (n=368, 30.1%) or intimate partner (n=268, 22.0%) were present in the majority of events, followed by a friend (n=187, 15.3%), roommate (n=167, 13.7%), stranger (n=124, 10.2%), medical professional (n=25, 2.1%), or other (n=125, 10.2%). In 2.2% (n=39) of events, the bystander(s) was also using substance(s).

Table 7. Number and percent of fatal unintentional and undetermined overdose events by bystander information, Arizona, 2023 (n=2,680)

Bystander information		Number of overdoses	Percent of overdoses
Number	None	1,459	54.4%
	One	680	25.4%
	Multiple	300	11.9%
	Present but number unknown	241	9.0%
Type	Family member	368	30.1%
	Intimate partner	268	22.0%
	Friend	187	15.3%
	Roommate	167	13.7%
	Other	125	10.2%
	Stranger	124	10.2%
	Bystander using substance(s)	39	2.2%
	Medical professional	25	2.1%

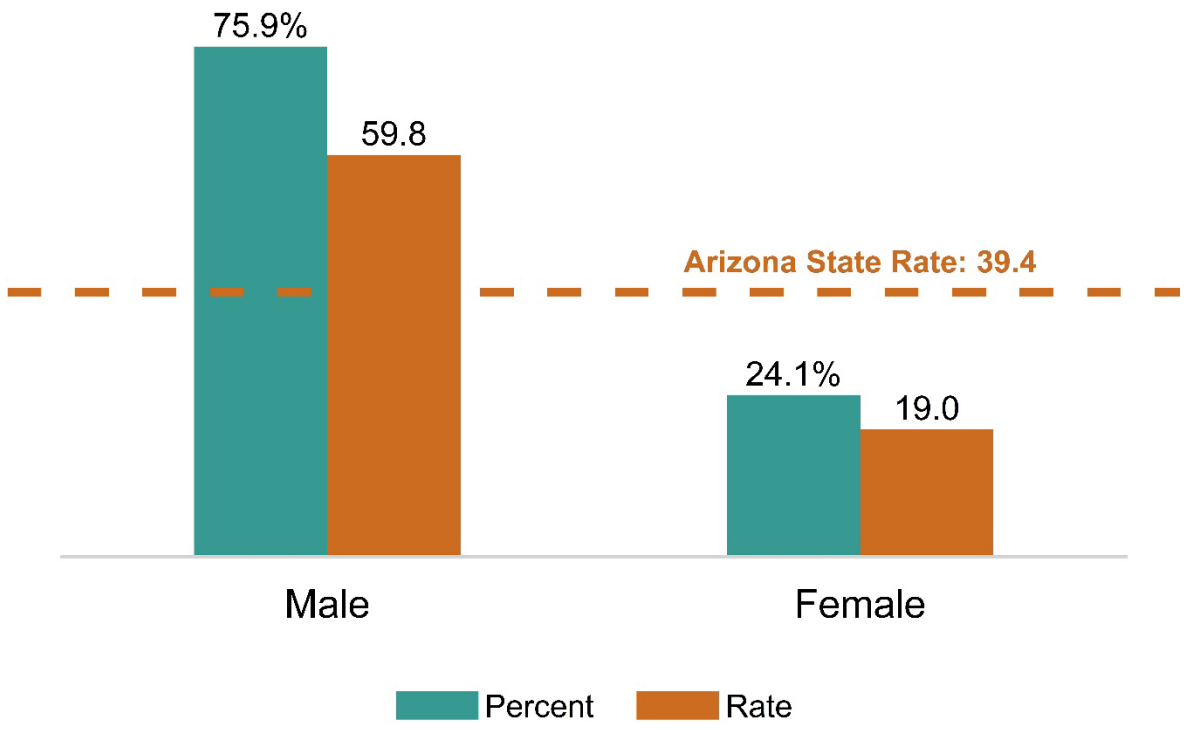
Data Source: Arizona SUDORS

Demographic Comparisons

Sex

The rate of unintentional and undetermined overdose events was higher among males (59.8 per 100,000 people) compared to females (19.0 per 100,000). Similarly, males made up a greater proportion (75.9%) of overdose events compared to females (24.1%).

Figure 44. Crude rates of fatal unintentional and undetermined overdose events per 100,000 persons by sex, Arizona, 2023 (n=2,931)

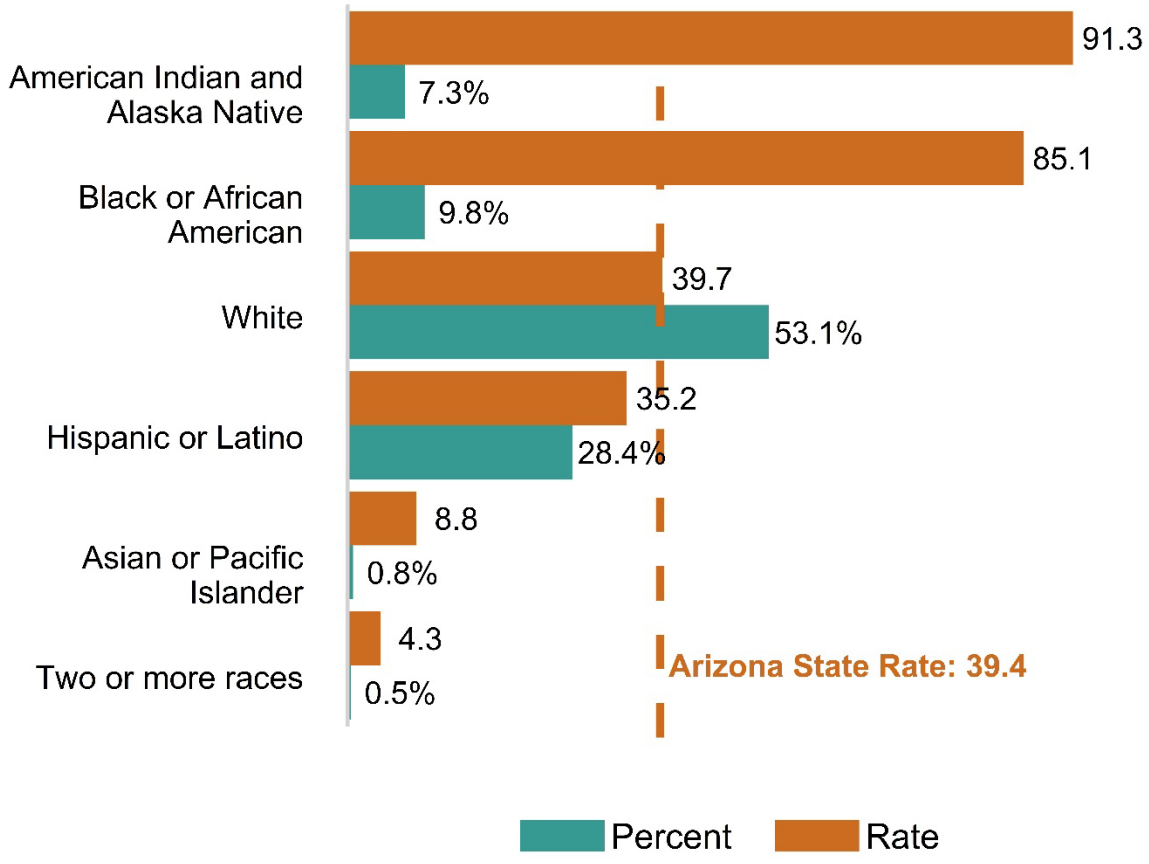


Data Source: Arizona SUDORS

Race and Ethnicity

The rate of unintentional and undetermined overdose events was highest among American Indian or Alaska Natives (91.3 per 100,000 people) and Black or African Americans (85.1 per 100,000), followed by White (39.7 per 100,000), Hispanic or Latino (35.2 per 100,000), Asian or Pacific Islander (8.8 per 100,000), and two or more races (4.3 per 100,000). Whites made up the greatest proportion of overdose events (53.1%), followed by Hispanic or Latino (28.4%), Black or African American (9.8%), American Indian or Alaska Native (7.3%), Asian or Pacific Islander, (0.8%), and two or more races (0.5%).

Figure 45. Crude rates of fatal unintentional and undetermined overdose events per 100,000 persons by race/ethnicity, Arizona, 2023 (n=2,903)

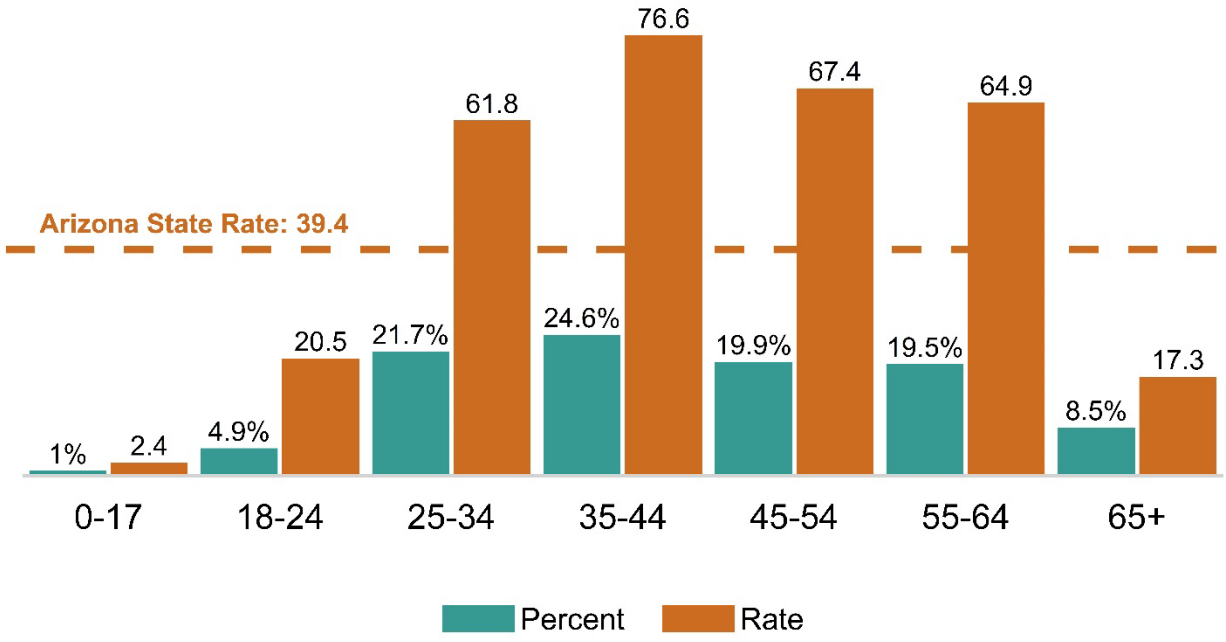


Data Source: Arizona SUDORS

Age

The rate of unintentional and undetermined overdose events was highest among individuals aged 35-44 (76.6 per 100,000 people), followed by those aged 45-54 (67.4 per 100,000), 55-64 (64.9 per 100,000), 25-34 (61.8 per 100,000), 18-24 (20.5 per 100,000), 65 and up (17.3 per 100,000), and 0-17 (2.4 per 100,000). Thus, rates were especially elevated for individuals aged 25 to 64, while rates were lowest among those aged 0-24 and 65+. Individuals aged 25 to 64 made up the bulk of overdose events (85.7%), followed by individuals aged 65 years and over (8.5%), 18 to 24 (4.9%), and 0 to 17 (1%).

Figure 46. Crude rates of fatal unintentional and undetermined overdose events per 100,000 persons by age group, Arizona, 2023 (n=2,931)



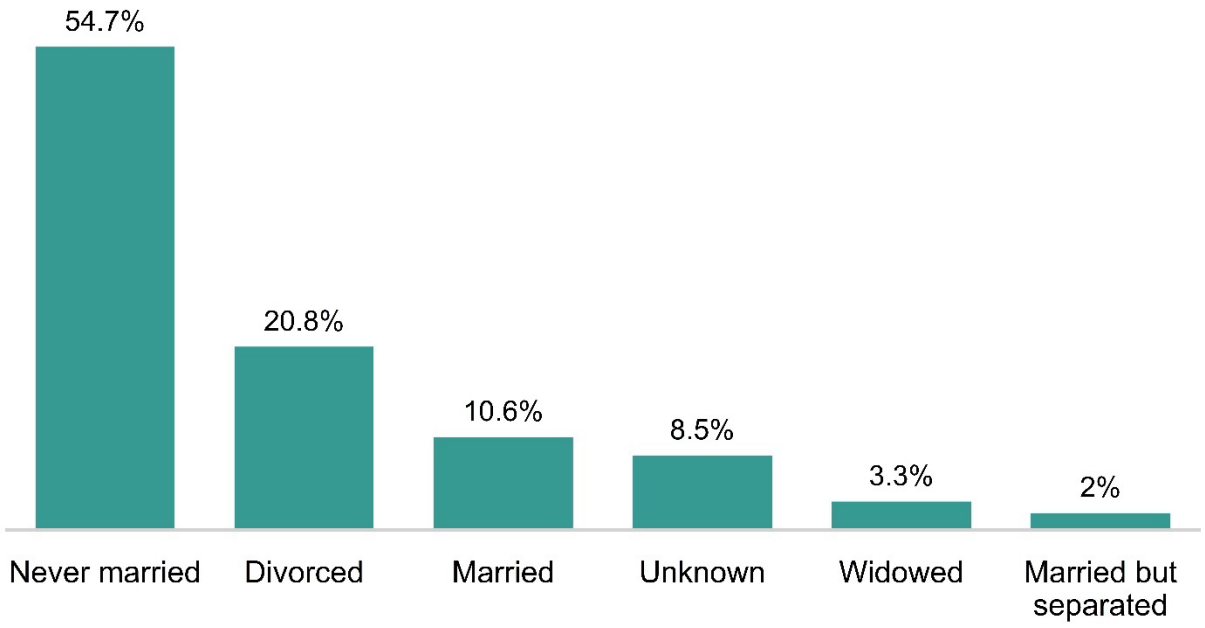
Data Source: Arizona SUDORS

Extended Demographics

Marital Status

Over half of fatal unintentional and undetermined overdose decedents were never married (54.7% of events). About one-fifth of decedents were divorced (20.8%), followed by currently married (10.6%), unknown marital status (8.5%), widowed (3.3%), and married but separated (2%).

Figure 47. Percent of fatal unintentional and undetermined overdose events by marital status, Arizona, 2023 (n=2,931)

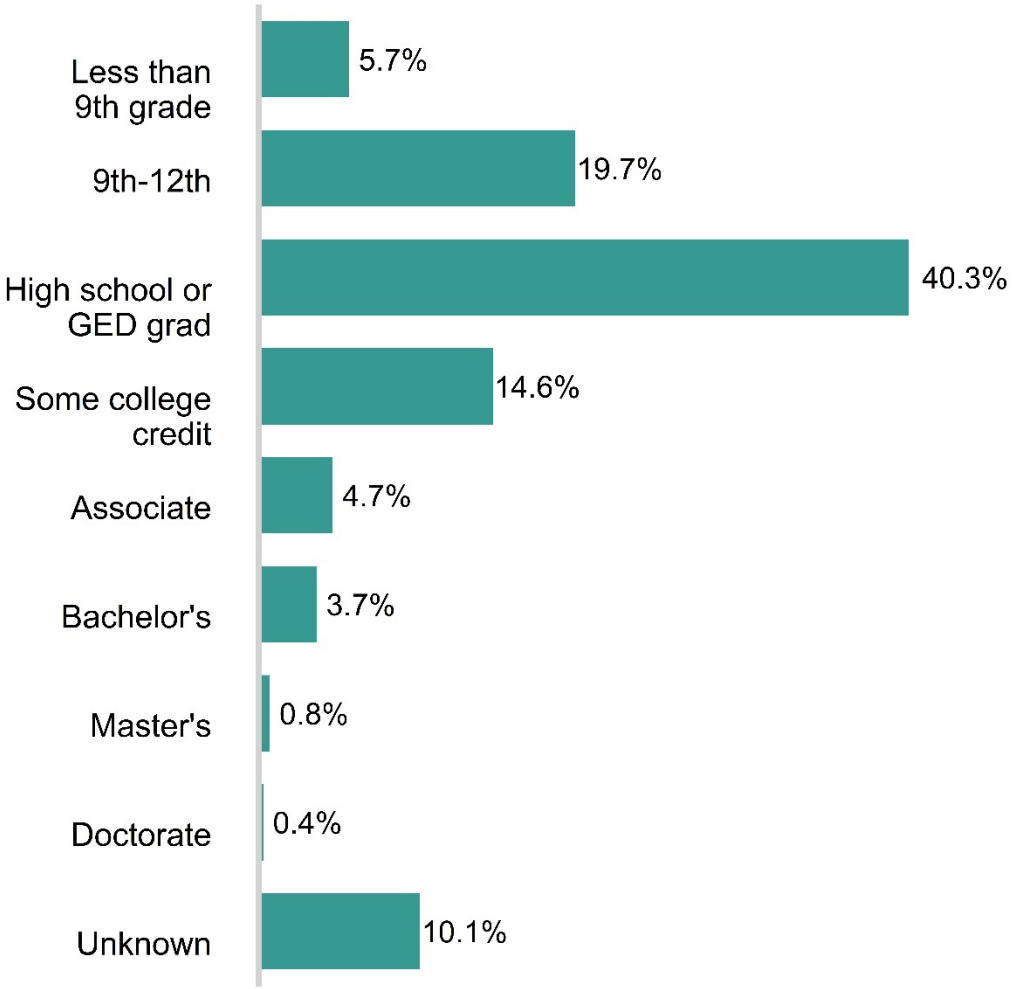


Data Source: Arizona SUDORS

Education

Most fatal unintentional and undetermined overdose decedents had completed high school or their General Education Development (GED; 40.3% of events), followed by completing anywhere from 9th through 12th grade (19.7%), some college credit (14.6%), an unknown education level (10.1%), less than 9th grade (5.7%), an associate degree (4.7%), a bachelor's degree (3.7%), a master's degree (0.8%), or a doctorate or professional degree (0.4%).

Figure 48. Percent of fatal unintentional and undetermined overdose events by level of education, Arizona, 2023 (n=2,931)

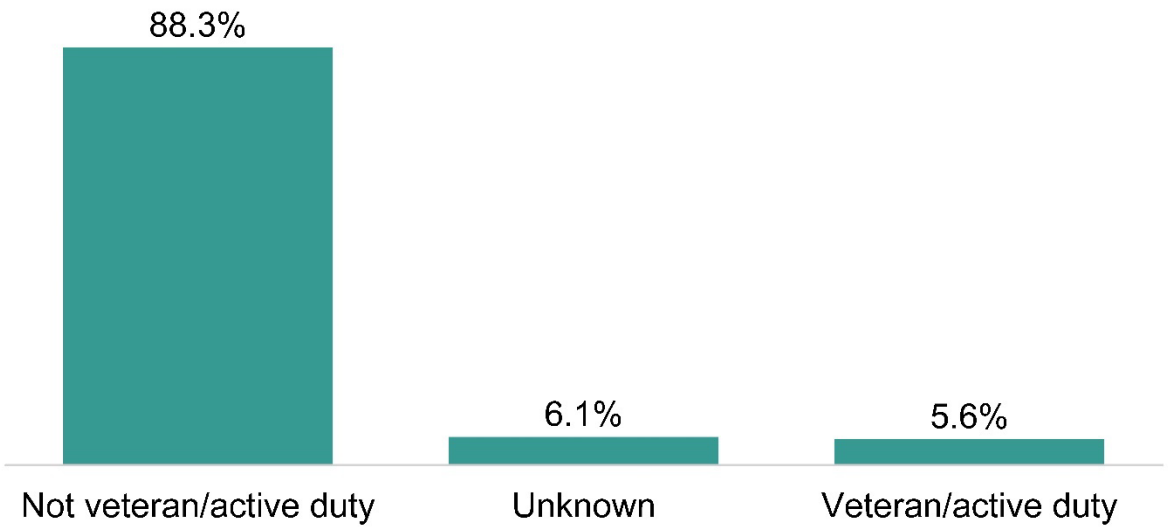


Data Source: Arizona SUDORS

Military Status

Among fatal unintentional and undetermined overdose events, 88.3% of decedents were not military veterans or active-duty personnel, 5.6% of decedents were veterans or active-duty personnel, and the military status for 6.1% of decedents was unknown.

Figure 49. Percent of fatal unintentional and undetermined overdose events by military status, Arizona, 2023 (n=2,931)



Data Source: Arizona SUDORS

Usual Occupation

Approximately 87.7% of fatal unintentional and undetermined overdose events involved a decedent whose usual occupation, which may be different from the current occupation, was known. Usual occupations were recategorized to align with the classification system used by the Standard Occupational Classification (SOC) system, which includes up to 25 broad occupational categories. Among those with known occupations, the top ten usual occupation categories accounted for 79.4% (n=1,209) of all cases. Construction and extraction occupations accounted for the largest portion of overdose events (12.8%), followed by sales and related occupations (10.4%) and transportation and material moving (10.1%). The remaining seven occupational categories accounted for fewer than 10% of overdose events each.

Table 6. Number and percent of fatal unintentional and undetermined overdose events by top ten occupations of decedents, Arizona, 2023 (n=2,537)

Usual occupation category	Number of overdoses	Percent of overdoses
Construction and extraction	195	12.8%
Sales and related occupations	159	10.4%
Transportation and material moving	153	10.1%
Other (e.g., student, home-maker, disabled)	128	8.4%
Management	104	6.8%
Installation, maintanence, and repair	102	6.7%
Office and administrative support	101	6.6%
Food preparation and serving	93	6.1%
Building and grounds cleaning/maintenance	91	6.0%
Production	83	5.5%
Total	*1,209*	*79.4%*

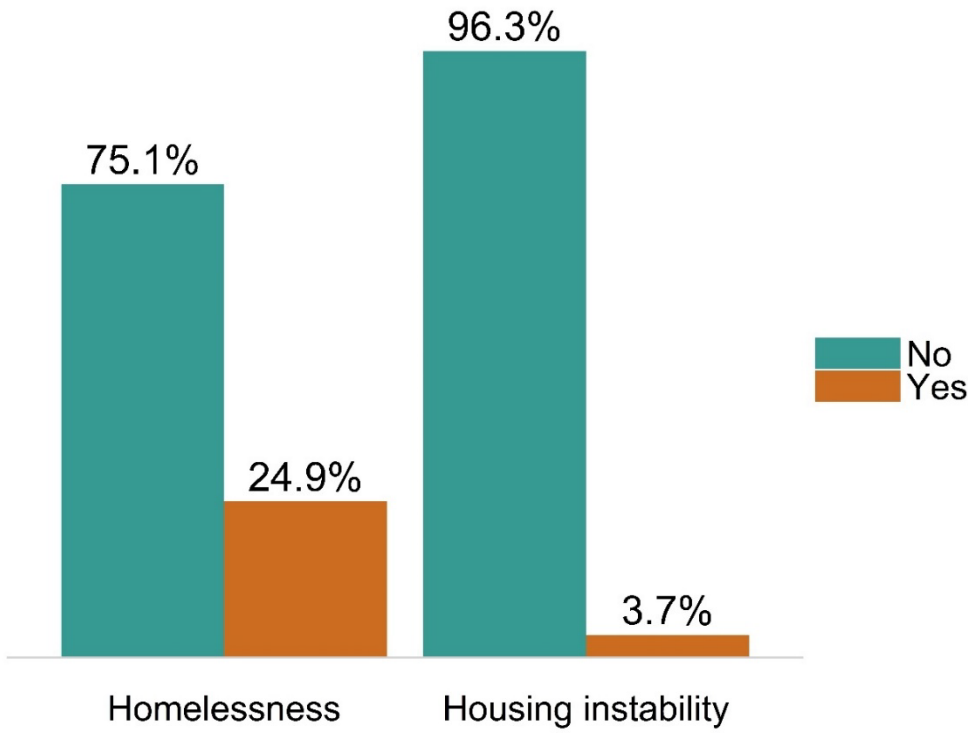
Data Source: Arizona SUDORS

Housing Status

Approximately 93.2% (n=2,731) of fatal unintentional and undetermined overdose events involved a decedent whose homelessness status was known, while 91.2% (n=2,674) of events involved a decedent whose housing instability status was known. Homelessness refers to decedents who lacked a typical sleeping accommodation or who lived in a shelter or drop-in center, while housing instability refers to decedents who were not homeless but who lacked the resources or support networks to obtain or retain permanent housing.

There were significantly more overdose decedents who were experiencing homelessness (n=679, 24.9%) than those experiencing housing instability (n=99, 3.7%).

Figure 50. Number of fatal unintentional and undetermined overdose events by homelessness (n=2,731) and housing instability (n=2,674) status, Arizona, 2023



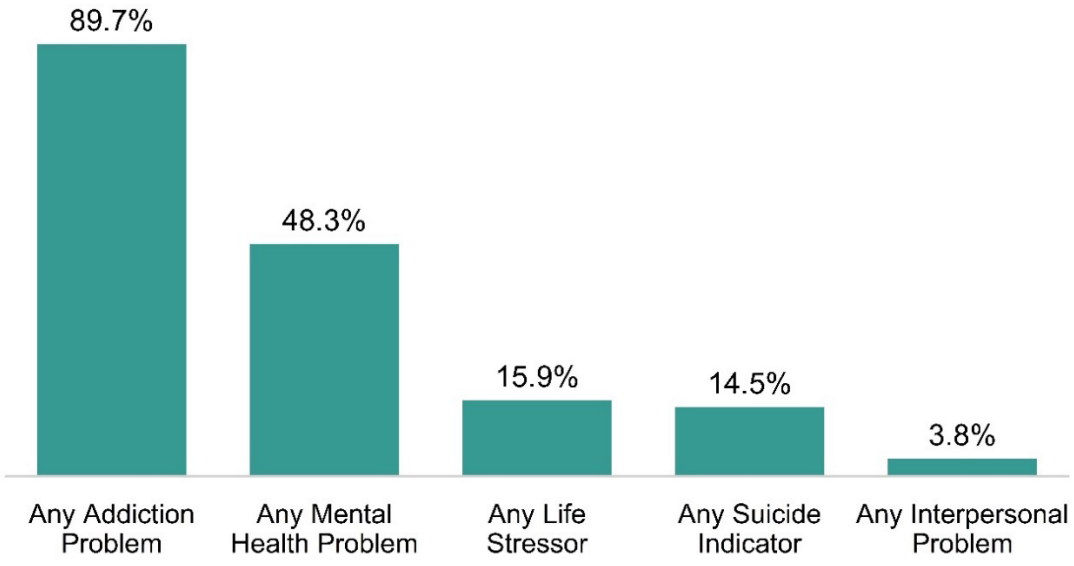
Data Source: Arizona SUDORS

Circumstances

Overall Circumstances

In SUDORS, fatal unintentional and undetermined overdose events can be precipitated by any of five circumstance categories. The most common category was having any addiction problem (89.7% of events), which includes alcohol misuse, non-alcohol substance misuse, and other addiction problems. Second most common was any mental health problem (48.3%), which includes past or current treatment for mental health or substance misuse problems, having a depressed mood, or having a diagnosed mental health problem. Third was any life stressor (15.9%), which includes a recent eviction or loss of one's home, having a school, financial, or job problem, having a crime- and non-crime-related legal problem, or having a physical health problem. Fourth was any suicide indicator (14.5%), which includes history of self-harm, leaving a suicide note, disclosing one's intent to die by suicide, having a history of suicide attempts, and having a history of suicidal thoughts. The final category was any interpersonal problem (3.8%), which includes experiencing a recent death or suicide of a friend or family member, having an intimate partner, family relationship, or non-family relationship problem, stress due to caring for a chronically ill, disabled, or elderly person, or recently experiencing physical violence.

Figure 51. Percent of fatal unintentional and undetermined overdose events with an overall circumstance category precipitating the event, Arizona, 2023 (n=2,634)

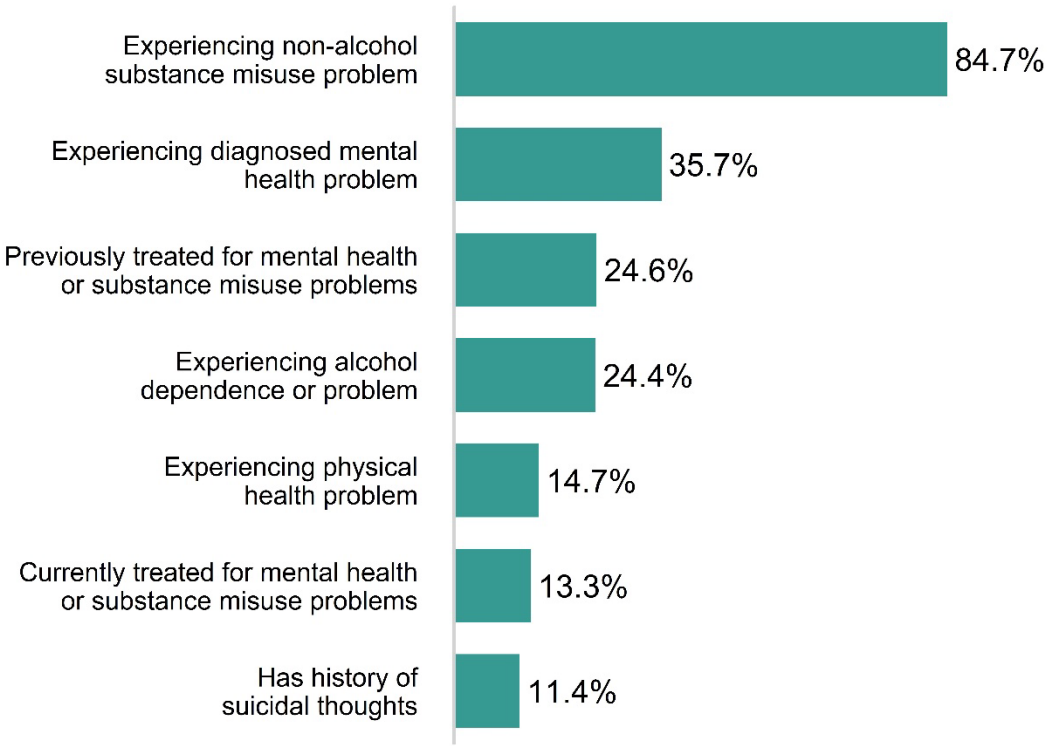


Data Source: Arizona SUDORS

Specific Circumstances

Within each of the five circumstance categories are several specific circumstances[14]. The seven most common specific circumstances precipitating fatal unintentional and undetermined overdose events were having a non-alcohol substance misuse problem (84.7%) of events, followed by currently having a diagnosed mental health disorder (35.7%), having previously been treated for a mental health or substance abuse problem (24.6%), having an alcohol misuse problem (24.4%), having a physical health problem (14.7%), currently being treated for a mental health or substance misuse problem (13.3%), and having a history of suicidal thoughts (11.4%).

Figure 52. Percent of fatal unintentional and undetermined overdose events with a specific circumstance precipitating the event, Arizona, 2023 (n=2,634)



Data Source: Arizona SUDORS

[14] The reference to substance or alcohol use in this context is intended to highlight behavioral indicators and should not be interpreted as a clinical diagnosis of substance use disorder or alcohol use disorder. In contrast, mental health disorders are diagnosed based on criteria outlined in the DSM-V.

Limitations

Several limitations should be kept in mind when reviewing data included in this report.

Rate Calculations

Rates throughout are calculated using different denominators depending on the particular source of data (e.g., hospital discharge uses total number of visits, AZ-PIERS uses total number of responses). This report is a cross-sectional analysis of events and rates for 2023, with no additional statistical testing to quantify the significance of relationships between various factors and outcomes. As such, data should be interpreted with caution in identifying potential associations, and without conclusions about cause and effect.

Reporting Completeness

It is important to acknowledge that while reporting of suspected opioid overdose events is mandatory under Arizona Administrative Code R9-4, Article 6, there is a notable prevalence of underreporting in MEDSIS. Consequently, the counts of non-fatal opioid overdose events are likely underestimated in this report.

Timeliness of Data

Data for this report were pulled from October-December, 2024. Data from several data sources for 2023 may update slightly from what was reported as they become more complete. For this reason, data reported may differ slightly from what is reported elsewhere, and specifically on the ADHS Opioid Dashboard.

Data Quality

The AZ-PIERS team is currently working on resolving data quality issues for 2023 EMS/law enforcement responses for suspected opioid overdoses from June 2023 onward. As a result, the 2023 data is provisional and likely an underestimation of the true count.

Classification of Opioid Overdoses

Case classification of opioid overdoses is complex and differs significantly between data sources. Most data and data systems (with the exception of MEDSIS for non-fatal overdoses) used for the surveillance of opioid overdoses were not created for the express purpose of capturing opioid overdoses. Estimates are likely a slight underrepresentation of the true prevalence of events in Arizona.

Toxicology Data

This report does not include any data from Arizona State Public Health Laboratory (ASPHL). As part of the strategic plan for Overdose Data to Action in States, the statewide overdose surveillance and prevention project funded by the CDC, ADHS is collaborating with ASPHL to collect and analyze biological specimens from suspected overdoses. The goal of this biological surveillance is to identify opioids, stimulants, and other drugs of abuse. These data will be incorporated into future reports once this initiative is implemented.

Other Contributing Factors for Opioid Overdoses

Most of this analysis could not consider social determinants of health that may have played a role in any particular opioid overdose, such as economic stability, access to health providers or behavioral health care, or other environmental impacts. These can be important contributors of opioid overdoses that are often overlooked. The Annual State Drug Overdose Fatality Review Report contains more information on contributing factors related to drug overdose deaths.

Limitations in Detection of Clusters or Novel Substances

Traditional toxicology screens may not be equipped to detect novel substances, especially if they are not yet widely recognized or included in testing protocols. This means that some overdose deaths involving novel substances might go undetected or missed entirely. Additionally, ADHS does not currently employ any drug-checking programs that would allow the identification and monitoring of novel substances in the drug supply.

Furthermore, surveillance systems often rely on retrospective data, which can delay the identification of emerging cluster. Novel substances may not be immediately detected if they are not included in the routine testing panels used by laboratories and labs may require additional time to validate new testing methods for these substances.

Conclusions

The Arizona Department of Health Services (ADHS) is one of many organizations throughout Arizona committed to ending the opioid epidemic. ADHS enacts that commitment through multiple cross-agency programs and initiatives. The continuing Overdose Data to Action in States (OD2A-S) cooperative agreement with CDC and State Opioid Response (SOR) contract with AHCCCS allow ADHS to build upon the Arizona Health Improvement Plan: Mental Well Being Action Plan, Annual Overdose Fatality Review Report recommendations, and Annual Overdose Surveillance Report recommendations. The Data to Action Framework in particular, paired with CDC funding recently renewed to continue through 2028, will enable ADHS to strengthen its understanding and therefore prevention of the opioid epidemic in Arizona. Data-related activities anticipated for 2024-2028 are described further in the Future Directions for Data Collection and Analysis section.

Within ADHS the work of addressing the opioid crisis is integrated throughout the agency. The Office of Injury and Violence Prevention leads the implementation of OD2A-S and SOR programming supporting local interventions through funding to 13 county health departments (and collaboration with the two counties funded directly by CDC, Pima and Maricopa), funding and training to county overdose fatality review teams, funding to the Opioid Assistance and Referral (OAR) Line in partnership with the Arizona Poison Control Center, enhancement of the Prescription Drug Monitoring Program in partnership with the Arizona Board of Pharmacy, funding of targeted local treatment engagement activities, development and distribution of prescribing and pain and addiction resources for providers, and distribution of naloxone to more than 600 state and local agencies and community organizations across the state, including the Arizona Department of Education. The Bureau of EMS and Trauma works with first responders to establish naloxone-leave behind programs and with law enforcement. The Office of HIV and Hep C Services manages the Overdose and Disease Prevention Program serving community-based organizations. The Arizona State Public Health laboratory (ASPHL) provides toxicology expertise. The Bureau of Assessment and Evaluation and the Business Intelligence Office work together to produce, analyze, and disseminate opioid-related data such as this report. Staff from multiple Bureaus and other state and local agencies participate in monthly state Overdose Fatality Review team meetings in order to review fatal overdose cases from counties without their own review teams, identify ways in which fatal overdoses may be prevented in the future, and compile recommendations from the state and local teams into an annual report of data and prevention recommendations for policy-makers and advocates.

ADHS remains committed to using data to inform prevention interventions and drive effective action. The data in this report highlights several opportunities for activities with the potential to address the biggest drivers of fatal overdoses in Arizona.

What we know: Most fatal overdoses (53%) occur in the home.
What we do: Encourage people who use either prescribed or illicit opioids or their family members to keep naloxone (Narcan) nasal spray in their homes in case of an overdose. While ADHS does not distribute individual kits to residential addresses, we can direct individuals to where they can free naloxone from their local community coalition or health department. Additionally, ADHS works with AHCCCS, the Department of Children's Services, and the Arizona Department of Education to distribute free naloxone to foster care providers and schools. Individuals with AHCCCS coverage can also receive naloxone from their pharmacy without a co-pay cost.

What we know: A bystander was present at 45% of fatal overdose events.
What we do: On our website and in marketing materials ADHS promotes the use of naloxone to the general public, purchases naloxone for statewide distribution to individuals at risk of an opioid overdose and their communities and families, and provides print materials and videos on how to recognize an overdose and administer naloxone. ADHS also works with public safety agencies to normalize the distribution of naloxone by police and other first responders and provides free naloxone for EMS agencies to "leave behind" after responding to a non-fatal opioid overdose event.

What we know: Workers in some industries experience fatal overdoses at higher rates than those in other industries.
What we do: The overdose prevention program partners with ADHS' Healthy Arizona Worksite Program to share information and resources with employers. In 2025 ADHS will build on its existing relationships with industry leaders to explore targeted interventions in specific industries such as construction and restaurants.

What we know: In one-quarter of all fatal overdoses, the decedent was experiencing homelessness.
What we do: ADHS supplies naloxone to shelters and organizations that conduct outreach to people experiencing homelessness and in 2025 ADHS will partner with housing agencies and coalitions on prevention interventions.

What we know: Every person with an addiction problem or mental health diagnosis is at an increased risk of a fatal overdose.
What we do: ADHS prioritizes these populations by prioritizing naloxone distribution to agencies and organizations serving people with addiction, addiction and behavioral health treatment facilities. ADHS also promotes media and messages normalizing naloxone use and addressing stigma against people with addiction problems.

What we know: Most fatal overdose events involved the ingestion of more than one substance, and the majority involved an opioid (71%) and/or a stimulant (66%).
What we do: ADHS distributes free fentanyl test strips through county health departments and community coalitions, which allow people who use drugs to identify if their drug(s) contain fentanyl and thereby avoid ingesting fentanyl. In the future ADHS can direct messages and resources to people who are using multiple drugs together (fentanyl and methamphetamine in particular).

Future Directions for Data Collection and Analysis

ADHS is currently working on collecting and analyzing biological specimens from suspected overdoses in select emergency departments statewide for Arizona. Specimens are being analyzed to identify opioids, stimulants, and other drugs of abuse and the resulting data will allow ADHS to identify trends in drugs of abuse and types of analytes (opioids/stimulants) involved. Reporting on these results will begin in 2025.

In 2025, ADHS also seeks to increase understanding of the drug overdose crisis and Arizona trends, improve identification of the factors contributing to overdoses, and improve the identification of populations disproportionately affected by overdoses involving opioids and/or stimulants by using linked datasets. ADHS is actively working on linking fatal drug overdose data from vital records with non-fatal opioid overdose events in MEDSIS, as well as non-fatal drug-related ED visits and hospitalizations through HDD. Additionally, fatal drug overdose data from Vital records will also be linked with social determinants of health data using the Social Vulnerability Index (SVI) at the census tract level. The key findings from these linkages will help identify risk factors associated with drug overdoses, spotlight individuals disproportionately affected by the opioid crisis, and inform the development of targeted interventions, such as linkage to care and naloxone distribution, to reduce overdose-related morbidity and mortality in Arizona.

In 2025, ADHS also plans to enhance the reporting of MEDSIS opioid overdose events by actively engaging with reporting facilities to ensure timely case submission. This will include providing training and support to reporters, offering guidance on data entry best practices, and addressing any challenges or barriers they may face in reporting. Additionally, ADHS will implement regular follow-ups to monitor progress, ensure data quality, and identify opportunities for further improvements in the reporting process.

Appendix

Table 1. Data Source Strengths and Limitations

Data Source	Strength[15]	Limitation[16]
AZPIERS	Contains **EMS** encounters	**Does NOT collect insurance info**
	Data from multiple reporting agencies (e.g., Law Enforcement/Fire Department/Public and Private EMS)	Only captures info on suspected opioid overdoses, not all suspected drug overdoses
	Contains some non-hospital destinations and encounters (e.g. "Airport,")	**Requires extensive data review** due to inconsistencies or inaccuracies in open text field responses during data entry (e.g., patient destination facility name, etc.)
	Provides weekly "snapshot" of Opioid incidents	
	Provides destination facility address (if patient was transported to a facility)	
	May lend itself well to GIS, data mapping, heat maps given the availability of incident address	**High rates of MISSINGNESS**
	Contains data on naloxone administration	Multiple types of reporters (Private EMS, Fire EMS, Police)
	Can provide initial incident site data (e.g. jail cell, cross streets, residence)	Data is not updated in real time
		Does not capture responses (i.e., positive, negative, or no response) to naloxone administration
MEDSIS	Data extracts are updated daily on the ADHS network drive	Date completeness is poor due to prevalence of underreporting in MEDSIS
	MEDSIS fatal data is supplemented with opioid death certificates data	Data is not updated in real time
	Healthcare providers are required to report suspected opioid overdose events under the Arizona Administrative Code	Data may change retrospectively, as more investigation is done or more data is available
	Contains **toxicology** data	Toxicology data is often incomplete as it takes 30-45 days for lab data to be finalized
HDD	Easy to link with Vital Stats	Does not include tribal hospital data (not required to report)
	Monitor past records	Released in 6-month increments (will need to wait to use full year of data, not for current records)

[15] **Bolded** text denotes unique factors for consideration
[16] **Bolded** text denotes unique reasons for caution

	Detailed insurance payer information	Only includes records of hospital admissions (no outpatient)
	Highest quality data source (robust QA, high data completeness)	Complex SAS code to pull records
	Supports internal Dashboards (via Snowflake)	Huge data files (millions of records)
	Largest data sample	Long run time to pull records
	Supports custom queries based on ICD-10 codes (from Oct-2015)	
	Supports patient and facility location data; address, ZIP, ZIP+4, Census Block, LAT, LONG	
	Large variety of tracked variables (e.g. marital status, homelessness, etc.)	

Table 2. Number of MEDSIS Reporters by Year

Year	Count of MEDSIS Reporters
2017	84
2018	99
2019	70
2020	59
2021	64
2022	66
2023	57

Data Source: MEDSIS

Table 3. Number of Opioid Deaths Involving Selected Drugs by Year

Year	Opioid Deaths	Heroin Deaths	Rx/Synthetic Deaths	Polydrug deaths
2017	923	331	591	793
2018	1,116	352	764	959
2019	1,294	271	1,023	1,085
2020	1,886	217	1,669	1,465
2021	2,015	112	1,903	1,650
2022	1,915	53	1,862	1,557
2023	1,928	47	1,881	1,614

Data Source: Arizona Vital Statistics, Death Certificates. Notes - Heroin: Opioid deaths involving heroin (T40.1); Rx/Synthetic: Opioid deaths involving all "other opioids" except heroin (T40.2, T40.3, T40.4, and T40.6); Polydrug: Opioid deaths involving opioids in combination with other non-opioid substances. All polydrug deaths are also counted in either the Heroin or Rx/Synthetic Drug Category.

Table 4. Number and percent of fatal unintentional and undetermined overdose events caused by methamphetamine by select demographic characteristics (n=1,697)

Demographic characteristic		Number of overdoses	Percent of overdoses
Sex			
	Male	1,307	77.0
	Female	390	23.0
Age			
	0-17	5	0.3
	18-24	48	2.8
	25-34	298	17.6
	35-44	417	24.6
	45-54	382	22.5
	55-64	398	23.5
	65+	149	8.8
Race			
	American Indian and Alaska Native, NH*	129	7.6
	Asian or Pacific Islander, NH	15	0.9
	Black or African American, NH	182	10.7

Hispanic	444	26.2
White, NH	896	52.8
Two or more races, NH	8	0.5
Other	23	1.4
Education level		
No high school diploma or GED	440	25.9
High school diploma or GED	683	40.2
Associate degree or some college credit	299	17.6
Bachelor degree or more	55	3.2
Unknown	220	13
Homelessness status		
Homeless	544	32.1
Not homeless	1,006	59.3
Unknown	147	8.6
Housing stability status		
Unstable housing	56	3.3
Stable housing	1,465	86.3
Unknown	176	10.4

* NH = Non-Hispanic

Data Source: Arizona SUDORS