Arizona Child Fatality Review Team

31st Annual Report
November 15, 2024

Mission: To reduce preventable child fatalities in Arizona through a systematic, multi-disciplinary, multi-agency, and multi-modular review process. Prevention strategies, interdisciplinary training, community-based education, and data-driven recommendations and are derived from this report to aid legislation and public policy.

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Dedication:

We dedicate this report to the memory of the children and families represented within these pages. Their stories inspire us to continue working to improve the health of all children in Arizona.

Acknowledgements:

The Arizona Department of Health Services (ADHS) would like to acknowledge Dr. Mary Rimsza, MD, founding member and Chair of the Arizona Child Fatality Review Program (CFRP), and Susan Newberry, MEd, founding member and Arizona CFRP Contractor.

ADHS would also like to acknowledge the ten local CFRP teams and their coordinators in Arizona, whose persistent efforts conducted 100% of child fatality reviews to aid in prevention recommendations. Additionally, ADHS would like to acknowledge the Sudden Unexpected Infant Death (SUID) and Neglect/Abuse deaths second-level review teams, who review those cases the local CFRP teams classify as SUID or Neglect/Abuse deaths to ensure proper classification. Second-level reviews of SUID and Neglect/Abuse deaths are done at the state level by subcommittees of the State Team. A complete list of second-level and local CFRP review members can be found in Appendix C. Members who have served ten or more years in the program are noted with a star next to their name. Because of their dedicated time and volunteer commitment to the program, all child deaths in Arizona are reviewed to determine steps, if any, that could have prevented the child's death from occurring. It is because of their expertise and many years of experience with the program that this report is made possible.

Lastly, the CFRP acknowledges the 22 Tribal Nations who have stewarded this land since time immemorial, recognizing their people, culture, and history.

ADHS aspires to present data humbly, recognizing that numbers never tell the whole story. We strive to work with individuals and communities to learn and share their stories to improve collective understanding. Knowing that people across life circumstances have inequitable opportunities to achieve optimal health, we commit to pair numbers and stories to inform policy and systems change to improve health for all.

Photo Credit:

The following photographer took the images on the front cover and section covers of Gregory Ballos, which are available here: https://gregory-ballos.pixels.com/featured/arizonas-horseshoe-bend-river-landscape-in-black-and-white-gregory-ballos.html.

Submitted To:

The Honorable Katie Hobbs, Governor, State of Arizona
The Honorable Warren Petersen, President, Arizona State Senate
The Honorable Ben Toma, Speaker, Arizona State House of Representatives
This report is provided as required by A.R.S. §36-3501. C.3.

Prepared By:

Arizona Department of Health Services – Bureau of Assessment and Evaluation
Kiran Lalani, MPH, Infant and Child Health Epidemiologist
Morgan Anderson, MPH, Child Fatality Review Program Manager
Susan Newberry, MEd, Child Fatality Review Program Contractor
Mary Ellen Rimsza, MD, FAAP, Chair of Child Fatality Review Program
Teresa Garlington, Program Project Specialist II
Mary Glidden, MPH, Office Chief, Office of Fatality Review
Martín F. Celaya, DrPH MPH, Bureau Chief, Bureau of Assessment and Evaluation

Acknowledgements to Reviewers:

Ginger Dixon, DrPH MS, Epi. Program Manager, Prevention Epidemiology and Evaluation Team
Laura Luna Bellucci, MPA, Bureau Chief, Bureau of Women's and Children's Health
Celia Nabor, MPA, Assistant Director, Division of Public Health: Prevention Services
Shelia Sjolander, MSW, Deputy Director, Public Health Services

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Intended Audience:

This is a technical report on the analysis of the incidence and causes of infant and child deaths in Arizona. This report is aimed primarily at those actively improving child and infant health, including healthcare providers, policymakers, participating agencies, schools, community-based organizations, researchers, families, caregivers, and other stakeholders. The key findings presented in this report should assist in the identification of future targets for intervention and guide effective and evidence-based efforts toward the reduction of preventable deaths for our Arizona children.

Disclaimers to the Annual Report:

Public Health and Vital Statistics:

This report's data may differ from those published by the Business Intelligence Office (BIO). BIO only reports data on Arizona residents, whereas the CFRP investigates and reports on the deaths of all children who die in Arizona regardless of state residency.

Department of Child Safety (DCS) / Child Protective Services (CPS):

This report's data may differ from those published by the Department of Child Safety (DCS) / Child Protective Services (CPS) as the CFRP and DCS/CPS have different definitions of child neglect/abuse. The CFRP works closely with DCS/CPS to further improve our surveillance of child neglect/abuse. A more detailed explanation, including the DCS definition of neglect and abuse, can be found in Appendix A.

Race/Ethnicity Referencing:

The variables for race and ethnicity are based on specifications established by the Federal Office of Management and Budget (OMB) and the Arizona State Demographer with specifications developed by the ADHS Vital Statistics. Consistent with the OMB methodology, the web-based reporting system allows for multiple race categorizations consistent with the U.S. Census enumerations.[160] For instance, individuals were asked to provide their ethnicity (i.e., Hispanic or Latino and/or Non-Hispanic or non-Latino) and race according to standard race categories (i.e., White, Black/African American, American Indian/Alaska Native, Asian/Pacific Islander). Additionally, if one of the OMB categories does not apply, selecting "Other" allows providers to input specific race designations.[160]

This year's report continues by combining, or bridging, race/ethnicity for individuals identified as Hispanic and one other race, which was introduced in the 2012 Arizona Health Status and Vital Statistics Report.[161] In this method, individuals identified as Hispanic plus another race are included in the race/ethnicity category with the lowest population in the state. This approach to bridging is defined as the smallest group deterministic whole method.[161] In this method, individuals identified as both White and Hispanic are classified as Hispanic. In contrast, individuals identified as Hispanic and any other race (Black or African American, American Indian or Alaska Native, and Asian or Pacific Islander) are categorized by their racial identification. This method allows us to match the categories of race/ethnicity used by the Arizona Department of Administration to create the population projections used as denominators in this report, as well as to create more meaningful racial/ethnic categories by placing individuals identified with both race and ethnicity into the group representing a smaller proportion of Arizona's population.

Due to spacing issues, figures throughout the report will refer to the following race/ethnicity groups: American Indian, Asian, Black, Hispanic, and White. However, please note that American Indians include Alaska Natives, Asians include Pacific Islanders, Blacks include African Americans, and Hispanics include Latinos. All text accompanying the figures will be inclusive.

Race/Ethnicity Disparities:

Although portions of the report show progress in reducing child deaths in Arizona overall, racial disparities in mortality remain and have increased in recent years. American Indian and Black children are disproportionately affected by mortality at greater levels than White and Hispanic children despite both groups representing small proportions of the total Arizona population. Further investigation of these disparities can lead to evidence-based, tailored public health programs and interventions to improve mortality rates for Arizona's American Indian and Black communities.

Prevention Recommendations:

The CFRP State Team develops the prevention recommendations in this report, which do not necessarily reflect the official views of ADHS or the State of Arizona. The recommendations of the local review team and a literature review conducted by the CFRP make up the recommendations presented to the CFRP State Team for inclusion in this report. The top five recommendations in each section, except for Accidental Injury Deaths, reflect the recommendations the State CFRP Team prioritized at various State CFRP Team Meetings. The recommendations were prioritized based on whether the action would drive significant systematic improvements in child fatality prevention, if it would benefit a broad group of people, and if it would help reduce health inequalities and lead to better health results. Prioritizing the prevention recommendations helped identify areas to focus on and did not eliminate any lower-prioritized recommendations. Prevention recommendations for accidental injury deaths were added after the state team meetings.

Urban and Rural Area Designation:

For the purpose of this report, the following are Arizona's urban areas: Phoenix-Scottsdale-Mesa Metropolitan Statistical Area (Maricopa and Pinal Counties), Tucson Metropolitan Statistical Area (Pima County), and Yuma Metropolitan Statistical Area (Yuma County). The remaining counties (Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Mohave, Navajo, Santa Cruz, and Yavapai) comprise Arizona's rural areas. This designation was introduced in the 2012 Arizona Health Status and Vital Statistics Report.[161]

Infant Mortality Rate & Sudden Unexpected Infant Death Mortality Rate Reporting:

In previous reports, the population denominator used to calculate infant mortality rates and sudden unexpected infant death (SUID) mortality rates included the number of live births in Arizona among Arizona residents in the reported year. However, as determined by Arizona State statute (§ 36-3501), CFRP investigates and reports the deaths of all children who die in Arizona regardless of state residency. To ensure rates were calculated correctly, the population denominator has been re-calculated to include live births in Arizona regardless of state residency. This has resulted in changing both the infant mortality rates and SUID mortality rates for 2014 and onward. As such, the infant mortality rates and SUID mortality rates reported in this report will not match the previously reported numbers. Ensuring the population denominator is correctly identified gives a more accurate representation of the infant mortality rates and sudden unexpected infant death mortality rates.

Prematurity Mortality Rate Reporting:

In previous reports, the population denominator used to calculate the prematurity mortality rate included the number of premature births in Arizona among Arizona residents in the reported year. However, as determined by Arizona State statute (§ 36-3501), CFRP investigates and reports the deaths of all children who die in Arizona regardless of state residency. The population denominator has been re-calculated to include premature births in Arizona regardless of state residency to ensure rates were calculated correctly. This has resulted in changing the prematurity mortality rates from 2014 and onward. As such, the prematurity rates reported in this report will not match the previously reported numbers. Ensuring the population denominator is correctly identified gives a more accurate representation of the prematurity mortality rates.

Congenital Syphilis Rate Reporting:

This report's data may differ from those published by the Office of Disease Integration and Services (ODIS) at ADHS. ODIS uses the ADHS STDCP surveillance system PRISM (Patient Reporting Investigation Surveillance Manager) to conduct surveillance and monitor sexually transmitted disease trends in Arizona. The CFRP investigates all child deaths identified from vital records and records received by local teams. These approaches differ, and therefore, the information is not comparable.

Data Suppression:

To protect the identities of individuals and their families, non-zero counts of less than six are suppressed. For suppressed counts, percentages are not calculated.

Glossary:

Accidental Injury – An injury that occurred when there was no intent to cause harm or death, an unintentional injury.

ADES – Arizona Department of Economic Security

ADCS – Arizona Department of Child Safety

ADHS – Arizona Department of Health Services

Adverse Childhood Experiences (ACEs) – Potentially traumatic events (i.e., abuse, neglect, household dysfunction) that occurred before the age of 18 years. ACEs can include violence, abuse, and growing up in a family with mental health or substance use problems. Toxic stress from ACEs can cause brain development and affect how the body responds to stress.

Cause of Death – The illness, disease, or injury responsible for the death. Examples of natural causes include heart defects, asthma, and cancer. Examples of injury-related causes include blunt force impact, burns, and drowning.

CFRP Data Form – A standardized form approved by the State CFRP Team and is required to collect data on all child fatality reviews.

Child Fatality Review Program (CFRP) – Established in ADHS; provides administrative and clerical support to the State Team; provides training and technical assistance to Local Teams; and develops and maintains the data program.

Child Protective Service (CPS) History with Family – Review teams consider a family as having previous involvement with a CPS agency (including tribal DCS) if the agency investigated a report of abuse/neglect for any child in the family before the incident leading to the child's death.

Child Relationship Issues – Child relationship issues are identified as a factor when documentation reveals concern for isolation, arguments/discord with family, friends, significant others, and social discord.

Child's Chronic Condition – An impairment or illness that has a substantial long-term effect on the child's day-to-day function of health, including medical, orthopedic, cognitive, sensory, mental health, and substance use disorder.

Choking – The inability to breathe because the trachea (airway) is blocked, constricted, or swollen shut.

Confidentiality Statement – This form, which all review process participants must sign, includes statute information regarding the confidentiality of data reviewed by local child fatality teams.

Congenital Syphilis – A disease that occurs when a mother with syphilis, a sexually transmitted infection, passes the infection on to their baby during pregnancy or at childbirth.

COVID-19 – A disease caused by SARS-CoV-2. A COVID-19 death is when COVID-19 is the immediate or underlying cause of death.

Death of a Loved One – The death of a loved one is identified as a factor when documentation reveals concern about death among the child's peer, friend, or family member.

Drowning Death – Death from an accidental or intentional submersion in a body of water.

Firearm Injury Death – Death caused by an injury resulting from the penetrating force of a bullet or other projectile shot from a powder-charged gun.

Fire/Flame Death – Death caused by injury from severe exposure to flames or fire heat that leads to tissue damage or smoke inhalation to the upper airway, lower airway, or lungs.

Homicide – Death resulting from injuries inflicted by another person with the intent to cause fear, harm, or death.

IHS – Indian Health Services

Infant – A child who is less than one year of age.

Infectious Disease-Related Death – Death in which an infectious disease caused or contributed to the death. An infection is caused by organisms (such as bacteria, viruses, and fungi) that can be passed, directly or indirectly, from one person to another, making it contagious (communicable).

Intentional Injury – An injury resulting from the deliberate use of force or purposeful action against oneself or others. Intentional injuries include interpersonal acts of violence intended to cause harm, criminal negligence or neglect (i.e., homicide), and self-directed behavior with intent to kill oneself (i.e., suicide).

Local CFRP Team – A multi-disciplinary team authorized by the State CFRP Team to conduct reviews of child deaths within a specific area, i.e., county, reservation, or other geographic area.

Manner of Death – The circumstances of the death as determined by CFRP teams by postmortem examination, death scene investigation, police reports, medical records, or other reports. Manner of death categories includes natural, accident (i.e., unintentional injury), homicide (i.e., intentional injury), suicide (i.e., deliberate injury), and undetermined.

Medical Error – Unintentional act, either an omission or commission, that deviates from the standard of care or intended plan of action.

Motor Vehicle Crash-Related Death (MVC) – Death caused by injuries from a motor vehicle incident, including injuries to motor vehicle occupant(s), pedestrian(s), pedal cyclist(s), or another person.

Natural Death – Death is classified as natural death due to a medical condition.

Neglect – Failure to provide appropriate and safe supervision, food, clothing, shelter, and medical care when this causes or contributes to the death of the child.

Neglect/Abuse-Related Death – A death in which an act of neglect, physical abuse, sexual abuse, or emotional abuse against a child contributes to their death.

Parent Substance Use History – Parental substance use history is identified as a risk factor when there is available documentation of a current or past use of, or in addition to, alcohol or other drugs.

Perinatal Conditions – Health issues that can occur during the perinatal period, which the World Health Organization defines as the time between 22 weeks of gestation and seven days after birth.

Perpetrator – Individual identified as a possible perpetrator of physical, sexual, or emotional abuse or neglect. Caregivers may include individuals supervising the child, including parents, parents' boyfriend/girlfriend, friends, neighbors, childcare providers, or household members.

Physical Abuse – This means the infliction of bodily harm, whether the inflictor planned to carry out the act or inflicted harm. The abuse may have occurred on or around the time of death but also includes any abuse that occurred previously if that abuse contributed to the child's death. NOTE: Firearm injury deaths inflicted by a parent, guardian, or caregiver are included in this type of abuse and neglect.

Poverty – Poverty is identified as a risk factor if documentation identifies the child's family had limited financial resources and may have lived below the federal poverty level. This includes, but is not limited to, recipients of Temporary Assistance for Needy Families (TANF), Medicaid, Supplemental Nutrition Assistance Program (SNAP) (formally the Food Stamp program), and Section 8 Housing.

Premature Rupture of Membrane (PROM) – Rupture (breaking open) of the membranes (amniotic sac) before labor begins, among a patient who is beyond 37 weeks' gestation.

Prematurity Death – A death that was due to premature birth (less than 37 weeks gestation) of an infant that had no underlying medical conditions that would have resulted in the death. Perinatal conditions are included in this category if the birth was premature.

Preventable Death – A child's death is considered preventable if the community or an individual could have done something that would have changed the circumstances leading to the child's death. A death is preventable if reasonable medical, educational, social, legal, or psychological intervention could have prevented the death from occurring. The community, family, and individual's actions (or inactions) are considered when making this determination.

Record Request Forms – The form required to request records for conducting a team review.

Rural Counties in Arizona – According to the 2012 Arizona Health Status and Vital Statistics Report,[161] Arizona's rural areas comprise Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Mohave, Navajo, Santa Cruz, and Yavapai counties.

School Issues – School issues are identified as a factor when documentation reveals concern for school failure, pressure to succeed, issues with extracurricular activities, issues with being in a new school, and other school problems.

Sleep-Related Death – A unique grouping of infant injury deaths inclusive of select injury causes (accidental suffocation in bed, unspecified threat to breathing, and undetermined causes) in which the infant was last known to be asleep when last seen alive.

Substance Use – The CFRP defines substance use-related deaths as deaths in which substance use was found as a direct or contributing factor leading to child deaths. The substances used could include illegal drugs, prescription drugs, and alcohol. To identify substance use as a factor, each case was reviewed to determine if any individual involved in the death of a child used substances such as illegal drugs, prescription drugs, and alcohol. The individual could have been the child's parent or caretaker, an acquaintance, a stranger, or the child, and the substance use occurred proximate to the time of the incident leading to the death.

Suffocation – Oxygen deprivation by mechanical obstruction to air passage into the lungs, usually at the nose- or mouth level.

State CFRP Team—Established by A.R.S. 36-3501 et seq., the State CFRP Team oversees Local CFRP teams. They prepare an annual report of review findings and develop recommendations to reduce preventable child deaths.

Strangulation – Mechanical constriction of neck structures.

Substance Exposed Newborn (SEN) – A Newborn who was exposed to alcohol and/or a controlled substance (illicit or prescribed) while in the womb. This exposure can be determined by the childbearing parent's history; clinical presentation of the newborn; and laboratory testing of biological specimens (i.e., urine, blood, oral fluid, sweat, hair, and breast milk), neonatal matrices (i.e., urine, meconium, hair, and umbilical cord blood and tissue), and matrices from both the childbearing parent and neonate (i.e., placenta and amniotic fluid).

Sudden Unexpected Infant Death (SUID) – Death of a healthy infant who is not initially found to have any underlying medical condition that could have caused their death. It includes the deaths that might have previously been categorized as "crib deaths" if the death occurred during sleep. However, not all these deaths are sleep-related. Most of the SUIDs are due to suffocation and unsafe sleep environments.

Suicide – A death that is due to a self-directed intentional behavior where the intent is to die because of that behavior.

Undetermined – A death in which the CFRP Team is unable to determine if the manner of death was natural, accident, homicide, or suicide. Death may be listed as undetermined because there is insufficient information available for review.

Urban Counties in Arizona – According to the 2012 Arizona Health Status and Vital Statistics Report,[161] Arizona's urban areas comprise the Phoenix-Scottsdale-Mesa Metropolitan Statistical Area (Maricopa and Pinal Counties), Tucson Metropolitan Statistical Area (Pima County), and Yuma Metropolitan Statistical Area (Yuma County).

Letter from the Chair of the CFRP Team:

In 2023, 853 children died in Arizona, and local CFRP review teams determined that 49% of these deaths were preventable. The leading causes/manners of the preventable deaths were motor vehicle crashes (MVCs), firearm injuries, suffocation, fentanyl poisoning, and drowning. In 2023, MVCs were the most common cause of preventable deaths. In 32% of these deaths, the responsible driver of the vehicle was less than 19 years old. Ten drivers were 13-15 years old, and 22 were 16-18. There were ten deaths while riding/driving an ATV. Some of the leading risk factors for MVC deaths were lack of seat restraints, reckless driving, substance use, and driver inexperience.

Sixty-eight children died due to a firearm injury in 2023, and we have seen a staggering 171% increase in child deaths to firearms in the past decade. All of the 68 firearm deaths in 2023 were determined to be preventable. Sadly, suicide deaths increased last year, and 44% of these deaths were due to firearm injury. Homicide deaths also increased, and 40 of these 61 deaths were due to firearms. Since the CFRP determined that access to guns was the biggest risk factor for firearm deaths, CFRP believes that the most effective way to prevent firearm-related deaths in children is to remove all firearms in households with children because the presence of firearms in a household increases the risk of suicide among adolescents. Parents of all adolescents should remove all guns from their homes, especially if there is a history of mental health issues or substance use issues. In addition, CFRP recommends that all gun owners should practice safe storage of their firearms by keeping guns unloaded and locked in a safe separate from the ammunition.

Sudden Unexpected Infant Death (SUID) is the death of a healthy infant who is not initially found to have any underlying medical condition that could have caused their death. Most of these deaths are due to suffocation in unsafe sleep environments. There were 65 SUID deaths in 2023, which is a 14% decrease from 74 deaths in 2022. The CFRP determined that 74% of these tragic deaths were due to suffocation. In 95% of SUID deaths, the infant was sleeping in an unsafe environment, and in 65% of these deaths, the infant was not in a crib but sharing a bed. These tragic deaths can be prevented by always putting infants to sleep Alone on their Backs in a Crib. The CFRP recommends increasing parents' awareness of the dangers of using products such as rocking sleepers, nursing pillows, and infant loungers for sleep because of the risk of suffocation.

In 2023, 31 Arizona children drowned. The majority of drowning deaths occurred in pools and hot tubs. The leading risk factors for drowning were lack of supervision, inability to swim, lack of pool barriers, and poverty. Because of these findings, CFRP recommends close, constant supervision of children when around water, increased availability and affordability of swim lessons for children, and proper pool enclosures. Black children made up 23% of drowning deaths but only comprised 6% of the total child population. Additionally, White children made up 45% of drowning fatalities but only comprised 40% of the total population.

Substance use caused or contributed to 163 child deaths in 2023, and 100% of these deaths were determined to be preventable. The most common causes of these deaths were firearm injuries, MVCs, and poisoning. Sixty-three neglect/abuse-related deaths involved substance use. Marijuana was the most identified substance, contributing to 44% of child neglect/abuse-related deaths, followed by alcohol. In 2023, 27 Arizona children and adolescents died from fentanyl poisoning, a decrease from the 34 fentanyl deaths in 2022. Sadly, eight children less than five years old who had access to fentanyl died from fentanyl poisoning. CFRP recommendations to prevent these deaths include increasing the availability of substance use treatment health care, universal screening of adolescents

for substance use and mental health issues during health care visits, and increasing adolescents' awareness of the dangers of opioid use and how to recognize an overdose. In addition, to reduce overdose deaths, CFRP recommends that clinicians should make naloxone readily available to their patients. Families who have loved ones with opioid addiction should have naloxone nearby, ask other family members to carry it, and let friends know where it is stored. Users should always store their drugs in a location that is inaccessible to children.

In 2023, infectious disease-related deaths increased to 93 deaths despite a drop in deaths due to COVID-19 and congenital syphilis. After reviewing these deaths, the CFRP determined that 28% of these deaths could have been prevented and recommends increasing the availability and affordability of pediatric health care, increasing vaccination rates by promoting vaccine confidence, and providing vaccines at every healthcare visit, including emergency room visits.

I want to thank the Arizona Department of Health Services, Arizona Chapter, American Academy of Pediatrics, and all our local and state fatality team volunteers for supporting the CFR program and its mission to prevent child deaths in Arizona.

Sincerely,

Mary Ellen Rimsza, MD FAAP

Executive Summary

The Arizona CFRP provides an annual comprehensive review of every child less than 18 years of age who died in Arizona, including all deaths due to injuries and medical conditions. While most deaths due to medical conditions are not preventable, deaths due to intentional (suicides, homicides) and unintentional injuries (drowning, suffocation, motor vehicle crashes) are preventable and vary by age. Historical data shows that infants are most often injured by suffocation resulting from an unsafe sleep environment, toddlers are more likely to drown, and older children are more vulnerable to motor vehicle or firearm injury. Analyzing risk factors allows injuries to be anticipated and thus prevented when the appropriate protective measures are in place.

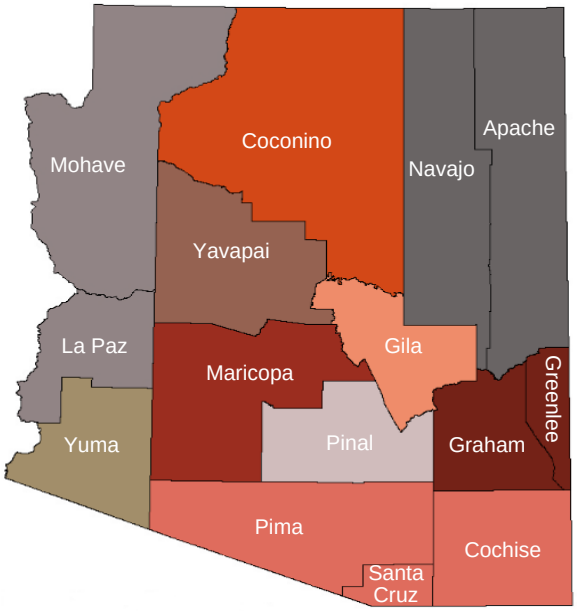
The CFRP was established to review all possible factors surrounding a child's death. The program intends to identify ways of reducing preventable fatalities. Legislation was passed in 1993 (A.R.S. § 36-342, 36- 3501) authorizing the creation of the CFRP. In 1994, the review process and data collection began. Today, ten local teams conduct initial reviews with oversight from the State Team and its two subcommittees (Neglect/Abuse and SUID/Undetermined Subcommittees).

This report utilizes descriptive statistics and trend analyses to present summary information about child fatalities as well as the leading causes under each manner of death by factors such as age, sex, and race/ethnicity. This report's demographic and prevention information is used to help broadly inform public health initiatives and the community. Recommendations for prevention are decided by both state and local review teams based on the information collected and reviewed on each child's death. The top five recommendations in each section, except for Accidental Injury Deaths, reflect the recommendations the State CFRP Team prioritized on at various State CFRP Team Meetings. Prevention recommendations for accidental injury deaths were added after the state team meetings.

The CFRP follows the National Center for Fatality Review and Prevention steps to conduct practical review meetings[1]:

Review Process

Arizona has ten local CFRP Teams that complete reviews at the community level. Second-level reviews of SUID and Neglect/Abuse deaths are done at the state level by subcommittees of the State Team. The review process begins when the death of a child less than 18 years old is identified through a vital records report. The CFRP sends a copy of the death certificate to a local CFRP team based in the county where the deceased child lived. If the child was not a resident of Arizona, the local team in the county where the death occurred will conduct the review. Information collected during the review is then entered into the National Child Death Review Database, which is managed by the National Child Fatality Review and Prevention (National Center) in the Michigan Public Health Institute. The resulting dataset is used to produce the statistics found in this annual report.



*Same color in map = Same review team

Local Team Membership

The CFRP partners with local county health departments, academia, and non-profit organizations to establish review teams. These teams are located throughout the state, and membership includes (A.R.S. § 36-3502):

- County attorney's office
- County health department
- County medical examiner's office
- Department of Child Safety (DCS)
- Domestic violence specialist
- Mental health specialist
- Local law enforcement
- Parent
- Pediatrician or family physician

Report Statistics

The descriptive statistics in this report summarize the information about child deaths by manner, cause, age, sex, race/ethnicity, and risk factors. Frequency percentages, rates, and cross-tabulation tables are shown throughout the report. Rate is a measure of the frequency of an event (i.e., death) about a population unit during a specified period such as a year; events in the numerator of the year occur to individuals in the denominator. Rates express the event's likelihood (or risk) in the specified population during a particular time. They are generally described as population units in the denominators (per 1,000, 10,000, 100,000, and so forth). The rates were calculated using the following denominators: the number of live births (specific to infant mortality and SUID), the number of premature live births (specific to prematurity mortality), and children (birth to 17 years) population estimates from the Arizona Office of Economic Opportunity for all other groups. This report's demographic and prevention information is primarily used to help broadly inform public health initiatives and the community.

Manner of Death vs. Cause of Death

In this report, the manner of death includes natural (i.e., cancer), accident (i.e., unintentional car crash), homicide (i.e., assault), suicide (i.e., self-inflicted intentional firearm injury), and undetermined. The cause of death refers to the injury or medical condition that resulted in death (i.e., firearm injury, pneumonia, cancer). The manner of death is not the same as the cause of death but specifically refers to the intentionality of the reason. For example, if the cause of death was a firearm injury, then the manner of death may have been deliberate or accidental. If it was deliberate, then the manner of death was suicide or homicide. If the injury was unintentional, then the manner of death was an accident. In some cases, there was insufficient information to determine the manner of death, even though the cause was known. For example, it may not have been clear that a firearm injury was due to an accident, suicide, or homicide, and in these cases, the manner of death was listed as undetermined.

Limitations

It is important to note that the report has certain limitations. While every child's death is important, the small numbers in some areas of preventable deaths reduce the ability to examine some trends in detail. The numbers are used to inform public health efforts in a broader sense. Still, the sample size reduces the ability to make accurate statements about statistical significance in any differences or causal relationships. It is also of note that much of the collected data is done through qualitative methods such as the collection of witness reports on child injury deaths. This means there is always the potential for bias when the information is taken. Other variables that may not be captured on the death certificate or other typical records may include family dynamics, mental health challenges, or other hazards.

Additionally, data is based upon vital records information and information from local jurisdictions. Arizona has a medical examiner system, with each county having its own authority. Law enforcement also varies around the state. Arizona has 22 American Indian tribes, each with sovereign laws and protocols. Jurisdiction and records sharing for each tribal government vary. These intricate relationships and individual jurisdictions mean that sources and information may differ when reviewing each case.

Thirty-First Annual Report Highlights

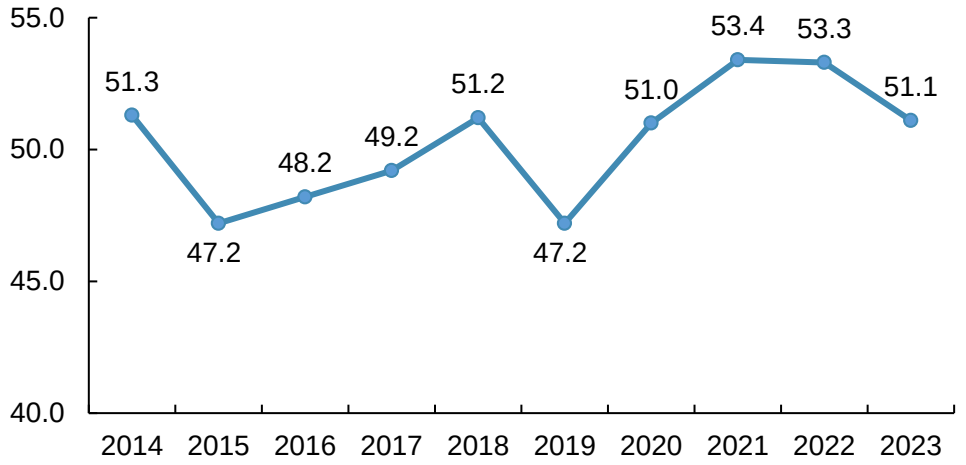
Total Deaths
853
(Out of State Residents: 32)

Preventable Deaths
415
(49% of all deaths)

Deaths Under 1 Year
425
(50% of all deaths)

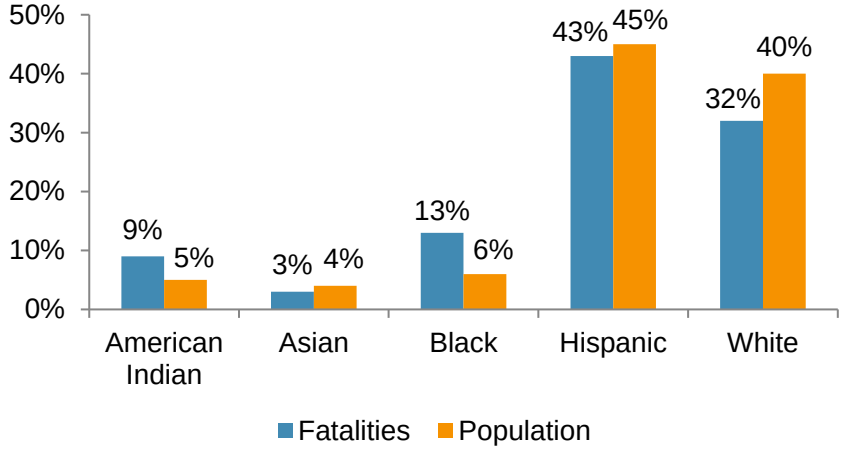
Neglect/Abuse Deaths
116
(14% of all deaths)

Mortality Rate per 100,000 Children, Ages Birth to 17 Years, Arizona, 2014-2023[2-11]



Natural Causes	Accidental Injuries	Homicides	Suicides	Undetermined
58%	**25%**	**7%**	**6%**	**3%**
495 child deaths	214 child deaths	61 child deaths	54 child deaths	29 child deaths

Percentage of Deaths among Children by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years (n=853)[2]



Top 5 Leading Causes of Death:

1. Prematurity (n=191)
2. Congenital Anomaly (n=101)
3. MVC (n=82)
4. Firearm Injury (n=68)
5. Suffocation (n=52)

Substance Use was involved in
1 out of every 5
child fatalities

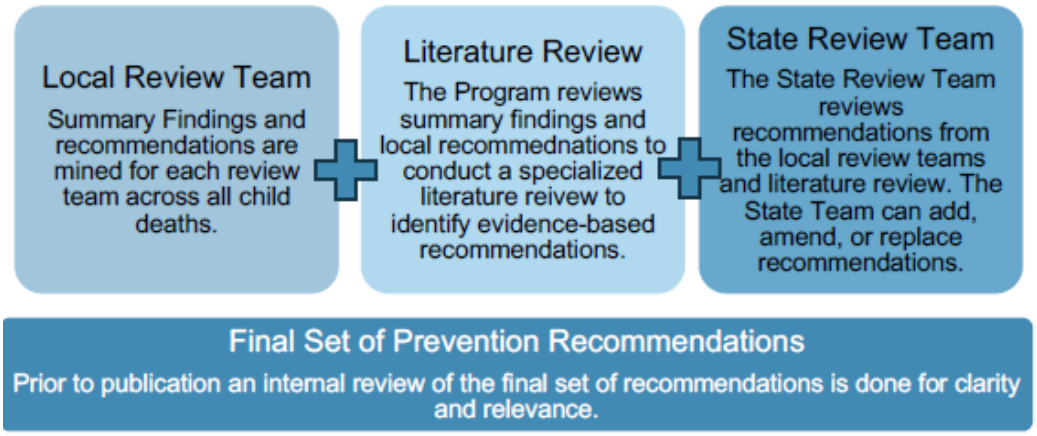
Males were victim to
84%
of firearm injury deaths

71% of children who died of neglect/abuse were **less than five years of age**

95% of the Sudden Unexpected Infant Deaths (SUIDs) occurred in an **unsafe sleep environment**

Recommendation Highlights:

In response to the summary data in the report, the State CFRP makes evidence-based recommendations to prevent child fatalities within the state. Highlighted recommendations are from manners/causes of deaths that report an increase between 2022-2023, including the following:



- **Drowning death** prevention recommendations include ensuring the availability and accessibility of CPR training, ensuring public pools and businesses (including rental properties) with pools have a proper pool enclosure, increasing drowning education and rescue signage in multiple languages, and creating a state fund to assist families with pool safety devices and providing swim lessons for children.
- **Firearm injury death** prevention recommendations include removing firearms from households with children, proper storage of all firearms, implementing initiatives aimed at limiting access to firearms, increasing funding and access to quality and affordable youth mental health programs and intervention in the community, and promoting positive parenting strategies in the home.
- **Infectious disease-related death** prevention recommendations include increasing the availability of telehealth care, promoting vaccine confidence, increasing home visiting programs and information on the importance of keeping medical appointments and vaccinations, providing resources for parents to find childcare, and providing education on the importance of following prescription instructions.
- **Suicide** prevention recommendations include increasing the availability and accessibility of mental health services that are culturally, linguistically, geographically, and age-appropriate, having and educating individuals on the use of a suicide management protocol in schools, increasing awareness of the 988 hotline, educating families that the presence of a firearm can increase the risk of suicide for adolescents, and increasing awareness of risk factors and warning signs for suicide.

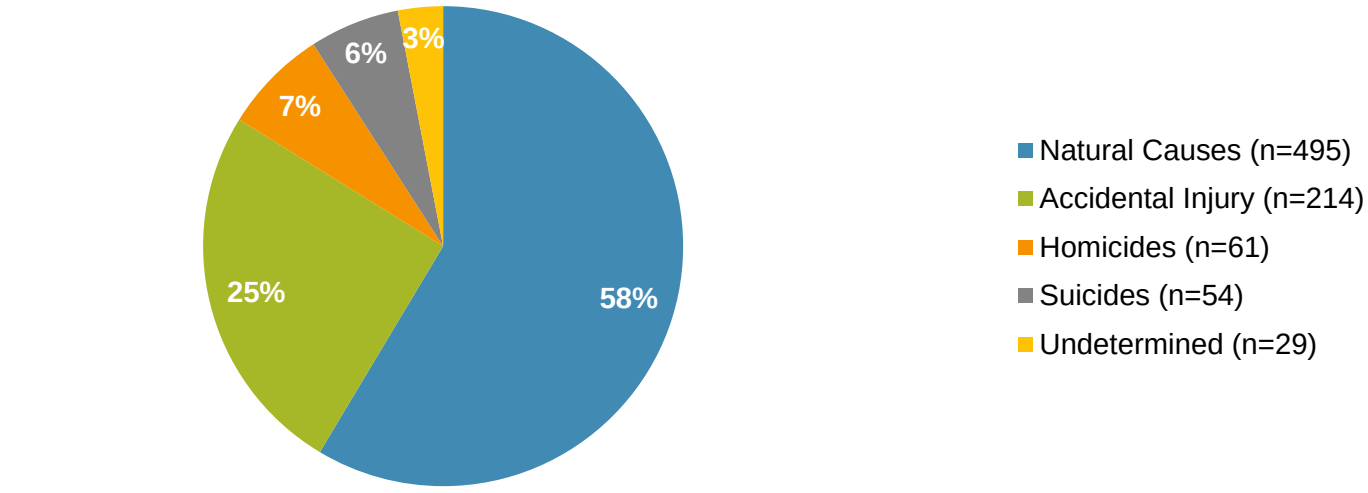
A more detailed list of these prevention recommendations begins in **Section 5**.

Section 1: Overall Demographics

Overall Child Mortality (Birth to 17 Years of Age)

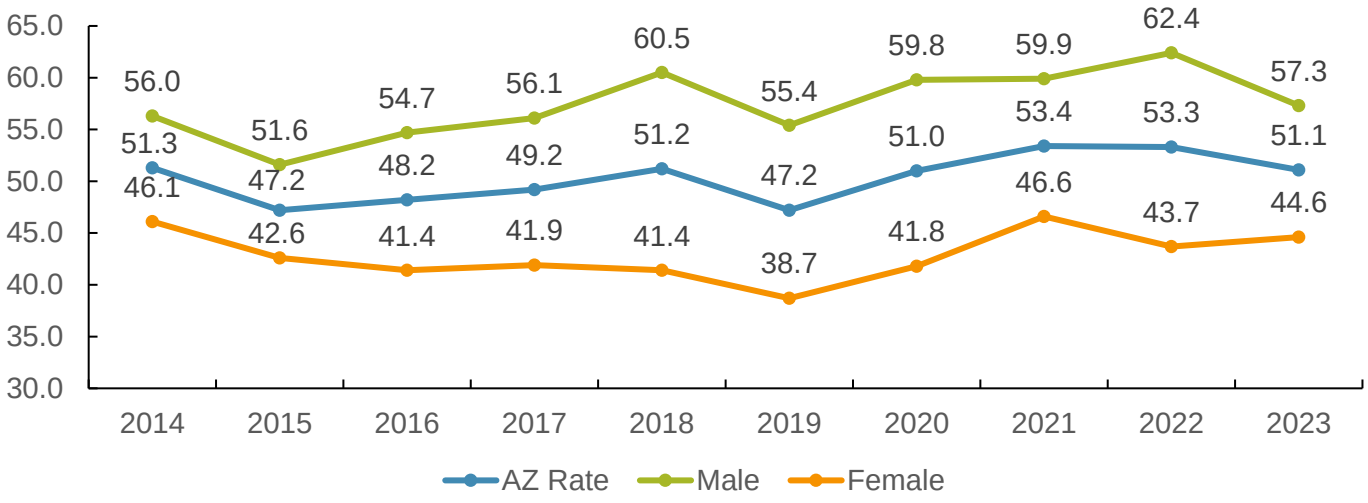
The majority of child deaths were from natural causes (58%), followed by accidental injury deaths (25%) (Figure 1).

Figure 1. Number and Percentage of Deaths by Manner of Death, Ages Birth to 17 Years, Arizona, 2023 (n=853)



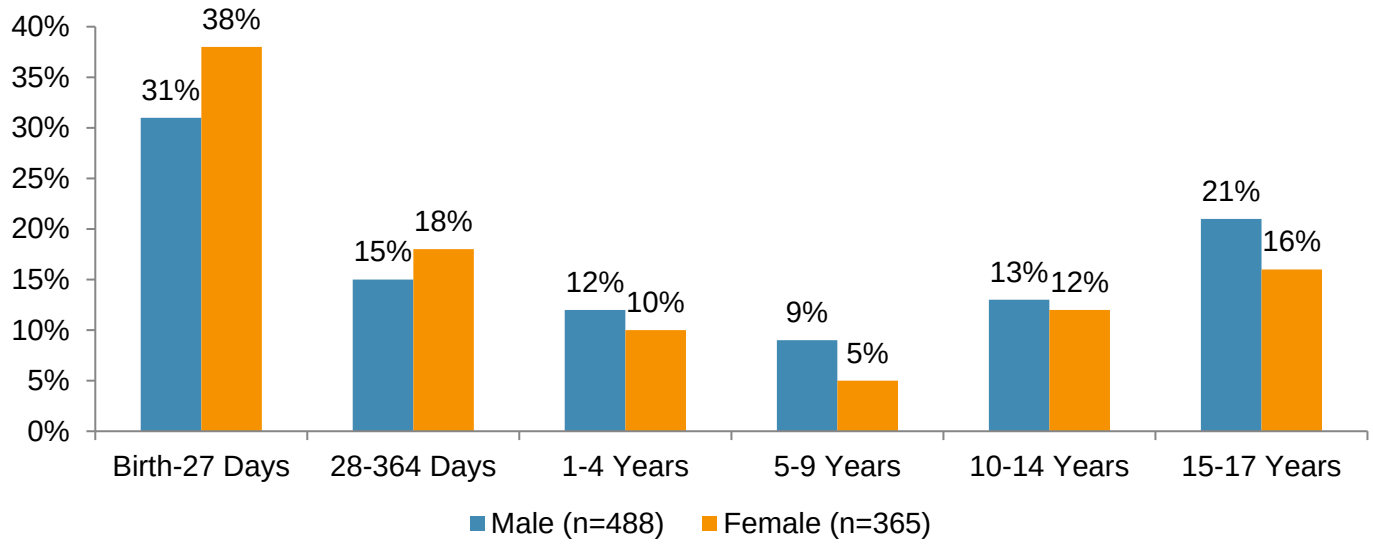
Arizona's child mortality rate has remained relatively stable since 2014. It decreased by 4.1% from 53.3 deaths per 100,000 children in 2022 to 51.1 deaths per 100,000 children in 2023. The male child mortality rate is consistently higher than the female child mortality rate; however, this year, the male mortality rate decreased, and the female mortality rate slightly increased (Figure 2).

Figure 2. Mortality Rate per 100,000 Children, Ages Birth to 17 Years, Arizona, 2014-2023 (n=853)[2-11]



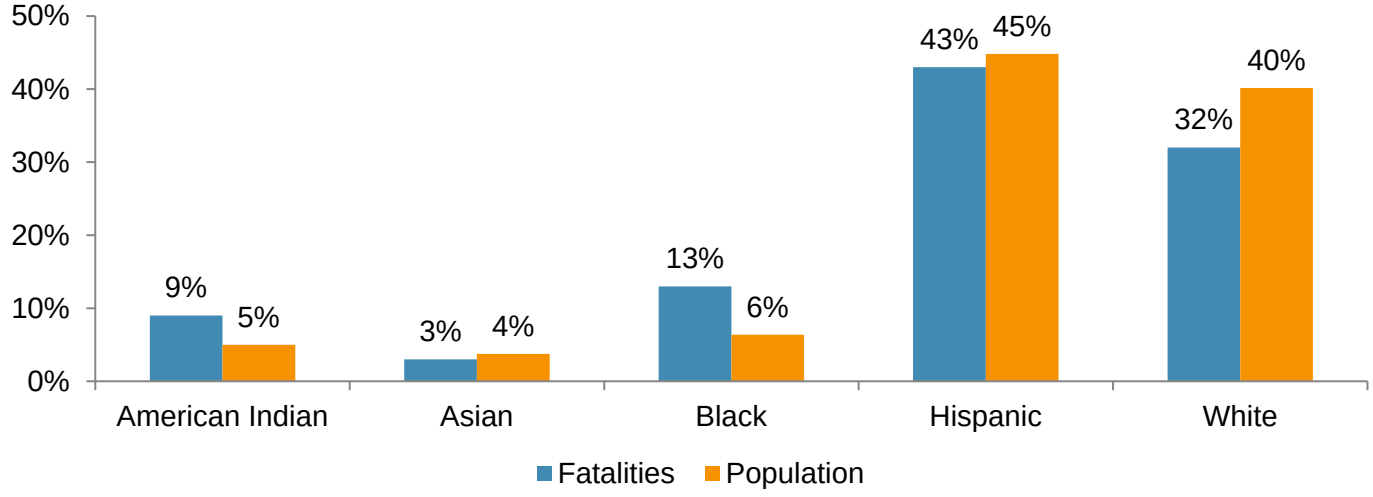
Among child deaths by sex, 57% of deaths were males, while 43% were females. The highest percentage of male deaths were among children younger than 27 days old and 15 to 17 years old (31% and 21%, respectively). The highest percentage of female deaths were among children younger than 27 days old and 28 to 364 days old (38% and 18%, respectively) (Figure 3).

Figure 3. Percentage of Deaths by Age Group and Sex, Ages Birth to 17 Years, Arizona, 2023 (n=853)



American Indian and Black children made up 9% and 13% of child deaths, respectively, but only made up 5% and 6% of the total child population. The largest percentage of child deaths was among Hispanic children (43%), followed by White children (32%) (Figure 4).

Figure 4. Percentage of Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years, Arizona, 2023 (n=853) [2]



According to the Arizona Health Status and Vital Statistics Definition,[161] urban child deaths are classified as deaths of residents that occurred in Maricopa, Pinal, Pima, and Yuma Counties. Rural child deaths are classified as deaths of residents in the remaining Arizona counties. See the Glossary for further explanation. The majority of child deaths in Arizona occurred in children residing in Arizona urban counties (84%), with a mortality rate of 49.3 deaths per 100,000 children in 2023 (Table 1). Thirty-two reported deaths occurred in children who lived outside the state of Arizona (4%).

Table 1. Number, Percentage, and Rate (per 100,000 children) of Deaths among Children by Residency, Ages Birth to 17 Years, Arizona and Out of State, 2023 (n=853)

Residency	Number	Percent	Rate
Urban Counties	716	84%	49.3 deaths per 100,000 children
Rural Counties	105	12%	48.3 deaths per 100,00 children
Out of State	32	4%	N/A

Prematurity was the leading cause of death for infants from birth to 27 days, while suffocation was the leading cause of death among infants from 28 days to less than one year of age (Table 2). Among children aged 1-4 years, drowning was the leading cause of death. Among children aged 5-9 years and 10-14 years, motor vehicle crash was the leading cause of death. Among children 15-17 years, firearm injury was the leading cause of death. Across all deaths, prematurity was the leading cause of death, followed by congenital anomaly, motor vehicle crash, firearm injury, and suffocation (Table 2).

Table 2. Top 5 Leading Causes of Child Death by Age Group, Arizona, 2023

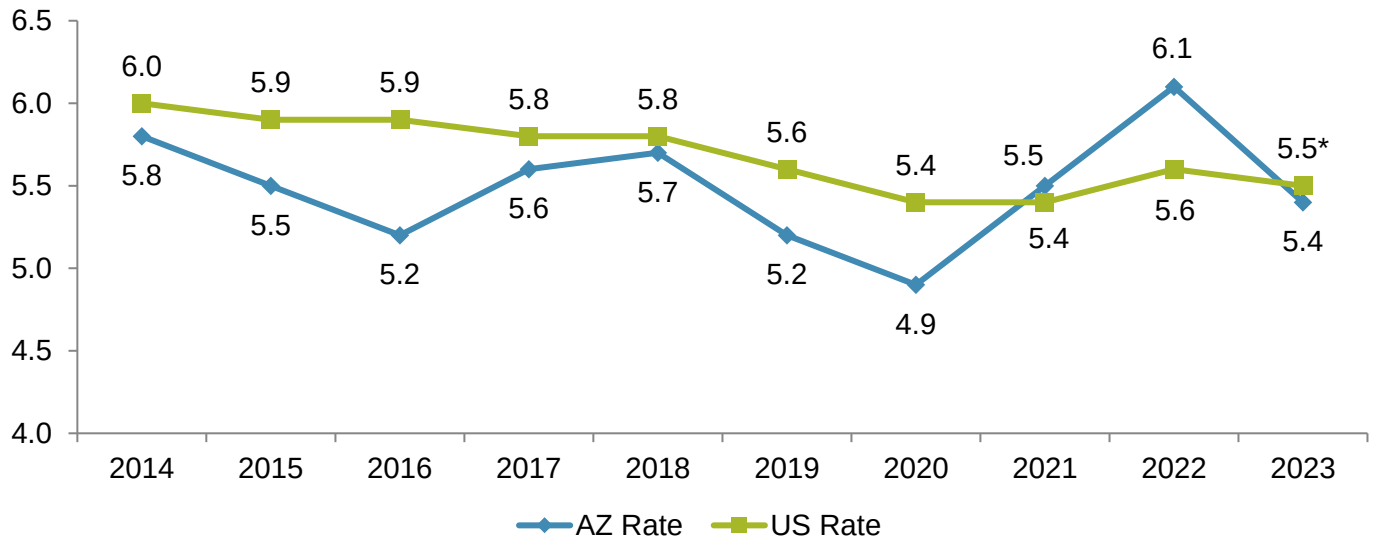
Age Group	Leading Causes of Child Death				
	1	2	3	4	5
Birth to 27 Days (n = 274)	Prematurity (n = 179)	Congenital Anomaly (n = 63)	Perinatal Condition (n = 15)	Cardiovascular (n = 10)	Neurological/ Seizure Disorder (n = 7)
28 Days - <1 Year (n = 106)	Suffocation (n = 43)	Congenital Anomaly (n = 23)	Undetermined (n = 16)	Prematurity (n = 12)	Cardiovascular (n = 12)
1-4 Years (n = 50)	Drowning (n = 20)	Blunt Force Trauma (n = 8)	Poisoning (n = 8)	Congenital Anomaly (n = 7)	Cancer (n = 7)
5-9 Years (n = 30)	MVC (n = 10)	Cancer (n = 7)	Neurological/ Seizure Disorder (n < 6)	Burn/Fire* (n < 6)	Other Medical Conditions (n < 6)
10-14 Years (n = 71)	MVC (n = 27)	Cancer (n = 19)	Firearm Injury (n = 12)	Poisoning (n = 7)	Neurological/ Seizure Disorder (n = 6)
15-17 Years (n = 123)	Firearm Injury (n = 51)	MVC (n = 34)	Poisoning (n = 15)	Strangulation (n = 13)	Cancer (n = 10)
All Deaths (N = 853)	**Prematurity (n = 191)**	**Congenital Anomaly (n = 101)**	**MVC (n = 82)**	**Firearm Injury (n = 68)**	**Suffocation (n = 52)**

*The number of burns/fire incidents did not increase this year; one incident caused the death of multiple children.

Infant Mortality (Less than 1 Year of Age)

Arizona's infant mortality rate has fluctuated since 2014. Since 2022, it has decreased by 11.5% from 6.1 deaths per 1,000 live births to 5.4 deaths per 1,000 live births. The Arizona infant mortality rate dipped below the US infant mortality rate for the first time since 2020 (Figure 5).

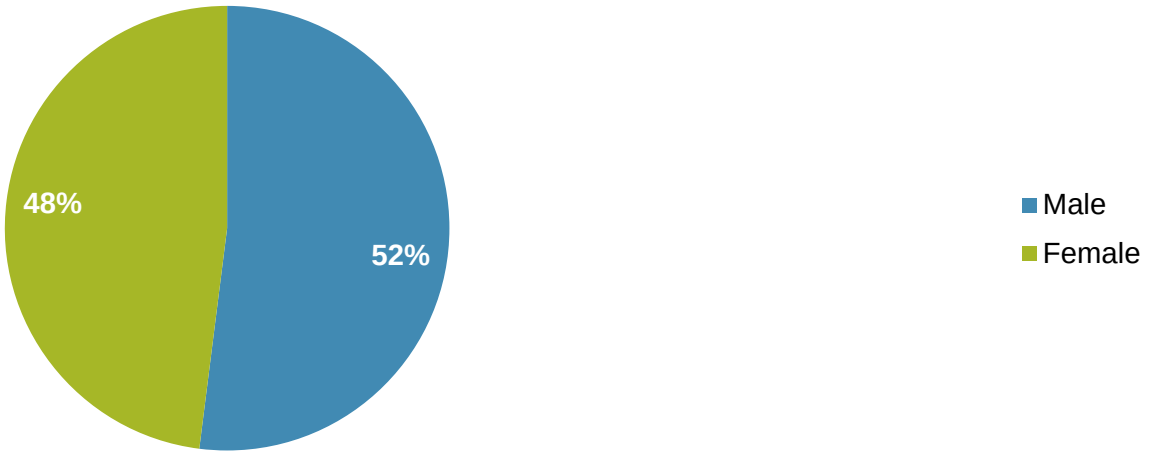
Figure 5. Infant Mortality Rate per 1,000 Live Births, Less than 1 Year of Age, Arizona & U.S., 2014-2023 [12-31]



*Preliminary infant mortality rate as reported by the National Center for Health Statistics, National Vital Statistical System[21].

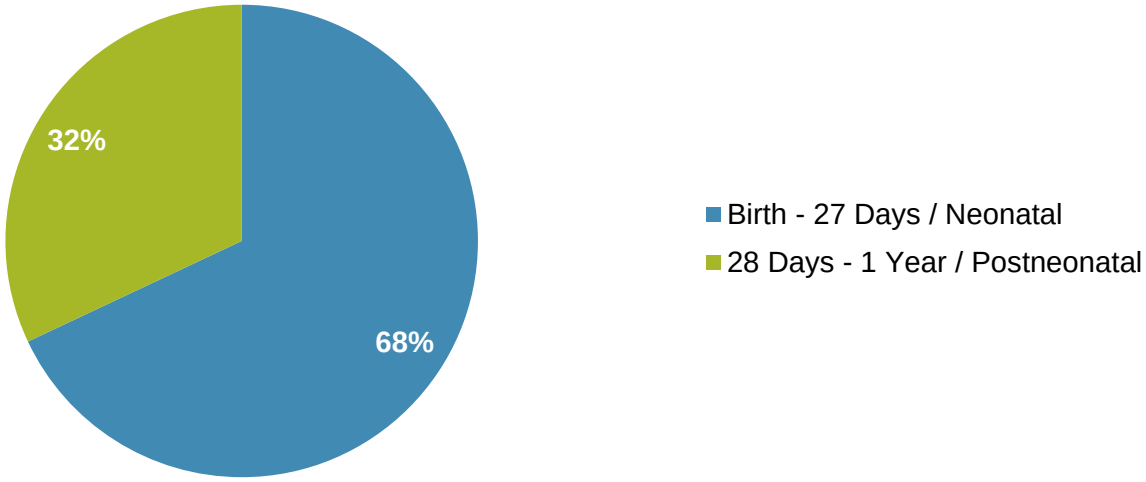
The majority of infant deaths were male (52%) (Figure 6).

Figure 6. Percentage of Deaths by Sex, Less than 1 Year of Age, Arizona, 2023 (n=425)



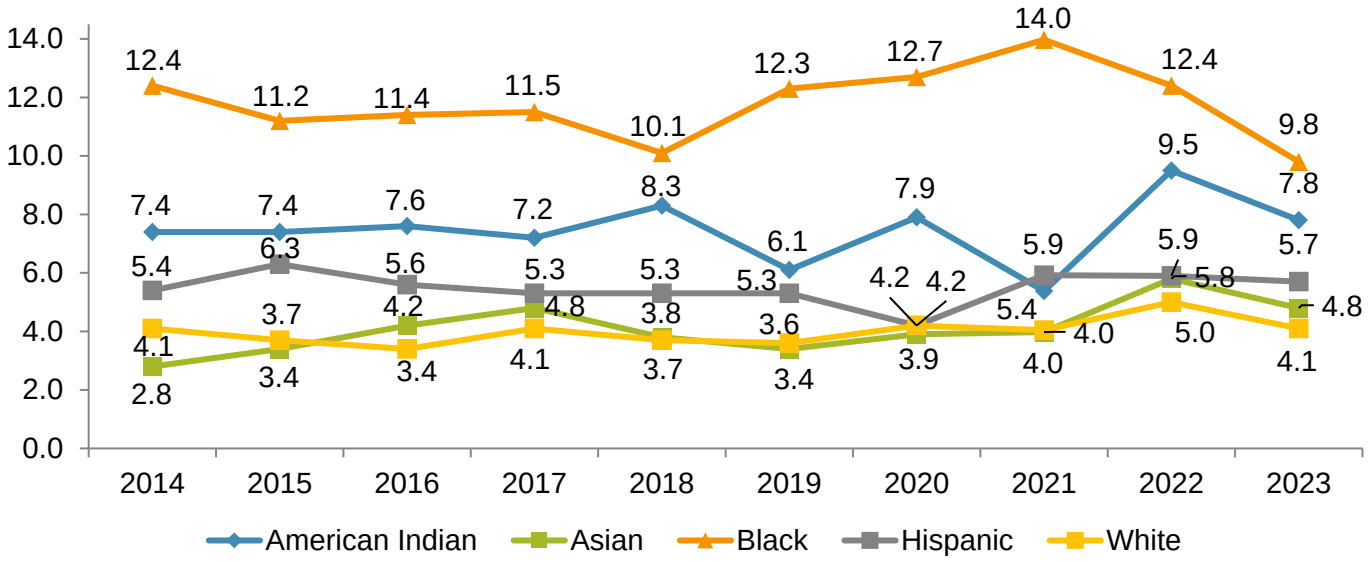
The majority of infant deaths occurred in neonatal infants (birth to 27 days) (68%) (Figure 7).

Figure 7. Percentage of Deaths by Age Group, Less than 1 Year of Age, Arizona, 2023 (n=425)



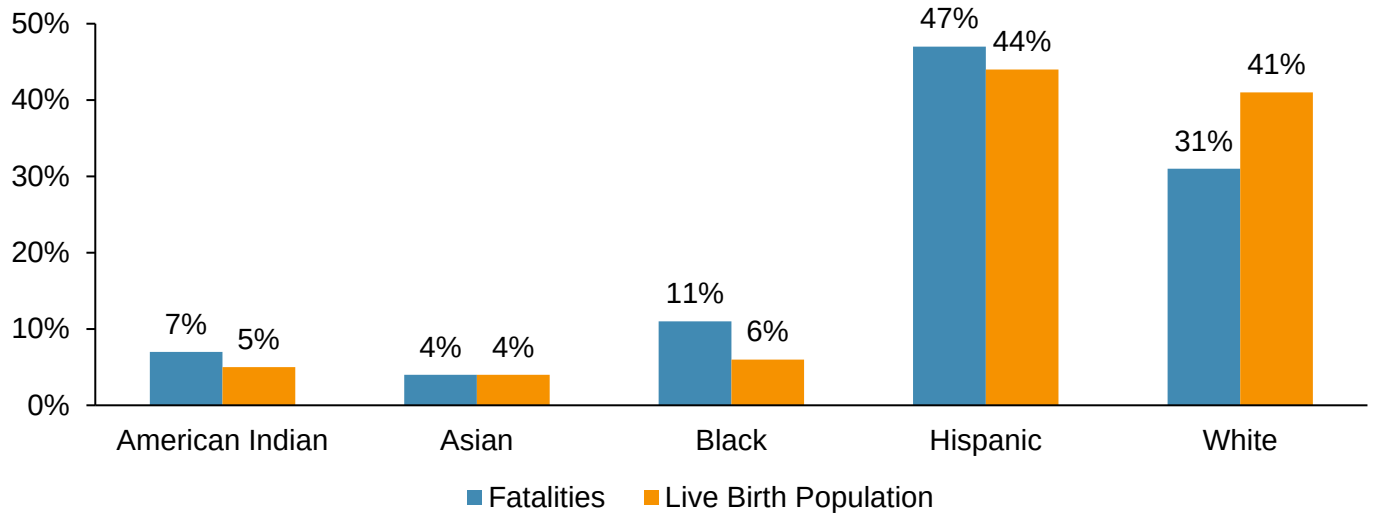
American Indian and Black infants have consistently higher rates of infant mortality since 2014. In 2023, the infant mortality rates for American Indian and Black infants were 7.8 and 9.8 deaths per 1,000 live births, respectively. In comparison, the infant mortality rates for Hispanic and White infants were 5.7 and 4.1 deaths per 1,000 live births. All infant mortality rates decreased from 2022 to 2023, with the highest rate decrease seen for Black infants at 20.2% (Figure 8). This is the lowest infant mortality rate for Black infants since before 2014.

Figure 8. Infant Mortality Rates per 1,000 Live Births by Race/Ethnicity, Less than 1 Year of Age, Arizona, 2014-2023 [32-41]



American Indian and Black children made up 7% and 11% of infant deaths, respectively, but only made up 5% and 6% of the live births in Arizona. Additionally, Hispanic children made up 47% of infant deaths but only made up 44% of live births in Arizona. The largest percentage of infant deaths were among Hispanic children (47%), followed by White children (31%) (Figure 9).

Figure 9. Percentage of Infant Deaths per 1,000 Live Births by Race/Ethnicity, compared to the Live Birth Population, Less than 1 Year of Age, Arizona, 2023 (n=425) [41]



Low birth weight (64%; n = 234) followed by poverty (54%; n = 195) were the leading risk factors of infant deaths among infants living in Arizona's urban counties. Among infants living in Arizona's rural counties, low birthweight (53%; n = 27) was the number one risk factor for death, followed by poverty (51%; n = 26). Amongst all infant deaths, low birthweight was the leading risk factor in 62% (n = 265) of cases (Table 3).

Table 3. Leading Risk Factors of Infant Death by Urban/Rural, Less than 1 Year of Age, Arizona, 2023*^

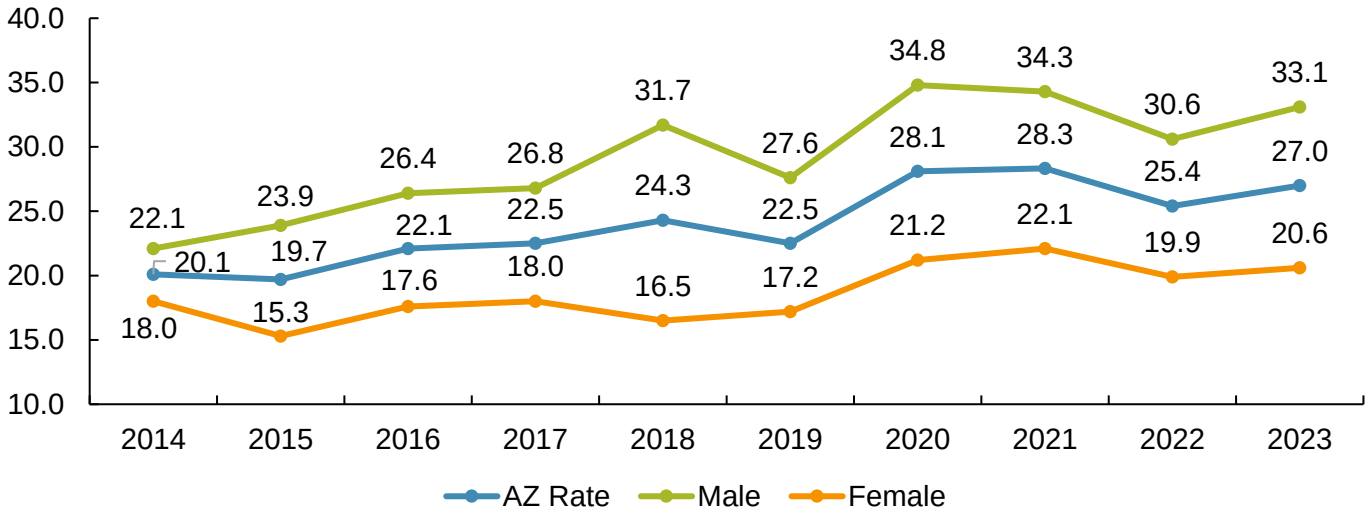
Location	Leading Risk Factors of Infant Death, Less than 1 Year of Age				
	1	2	3	4	5
Urban (n = 364)	Low Birthweight (n = 234)	Poverty (n = 195)	Child's Chronic Condition (n = 124)	Parent Substance Use History (n = 55)	Unsafe Sleep Environment (n = 49)
Rural (n = 51)	Low Birthweight (n = 27)	Poverty (n = 26)	Parent Substance Use History (n = 20)	Child's Chronic Condition (n = 17)	Substance Use (n = 11)
Infant Deaths (n = 425)	**Low Birthweight (n = 265)**	**Poverty (n = 225)**	**Child's Chronic Condition (n = 141)**	**Parent Substance Use History (n = 76)**	**Unsafe Sleep Environment (n = 62)**

*More than one risk factor may have been identified for each death.
^Please note that the column totals may not add up to the overall column total due to the inclusion of non-resident infant deaths

Child Mortality (1-17 Years of Age)

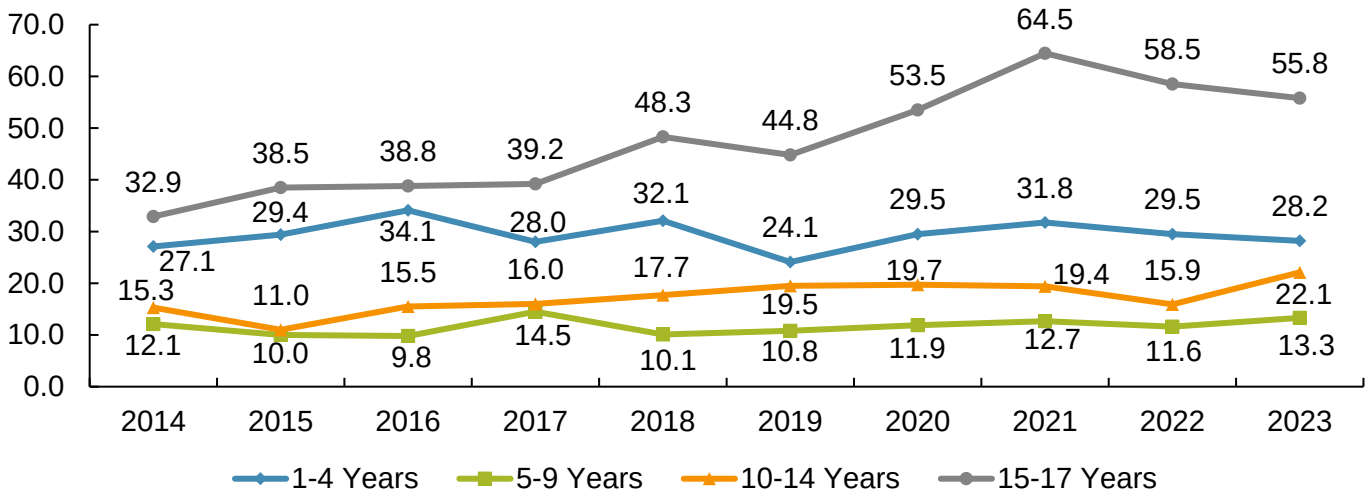
Arizona's child mortality rate increased 6.4% from 25.4 deaths per 100,000 children in 2022 to 27.0 deaths per 100,000 children in 2023. Both the male and female child mortality rates have increased by 8% and 4%, respectively, from 2022 to 2023. Males have consistently had a higher child mortality rate compared to females since 2014 (Figure 10). Suicides and firearm injury deaths are large contributors to the increase (See the suicide and firearm injury sections for more information).

Figure 10. Mortality Rates per 100,000 Children, Ages 1-17 Years, Arizona, 2014-2023 [42-51]



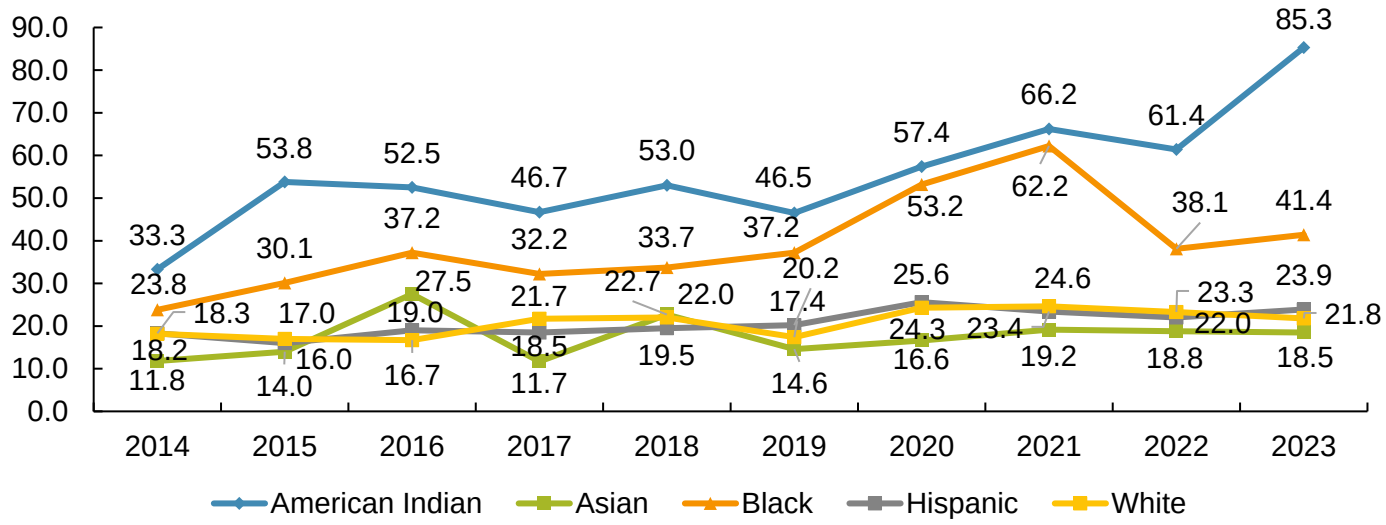
Mortality rates among 1-4-year-olds and 15-17-year-olds experienced a decrease, with the most significant decrease among 15-17-year-olds at 5% from 58.5 deaths per 100,00 children in 2022 to 55.8 deaths per 100,000 children in 2023. Children aged 10-14 years and 5-9-years-old experienced an increase in mortality rate, with the most significant increase being among 10-14-year-olds at a 39% increase from 15.9 deaths per 100,000 children in 2022 to 22.1 deaths per 100,000 children in 2023 (Figure 11).

Figure 11. Mortality Rates per 100,000 Children by Age Group, Ages 1-17 Years, Arizona, 2014-2023 [42-51]



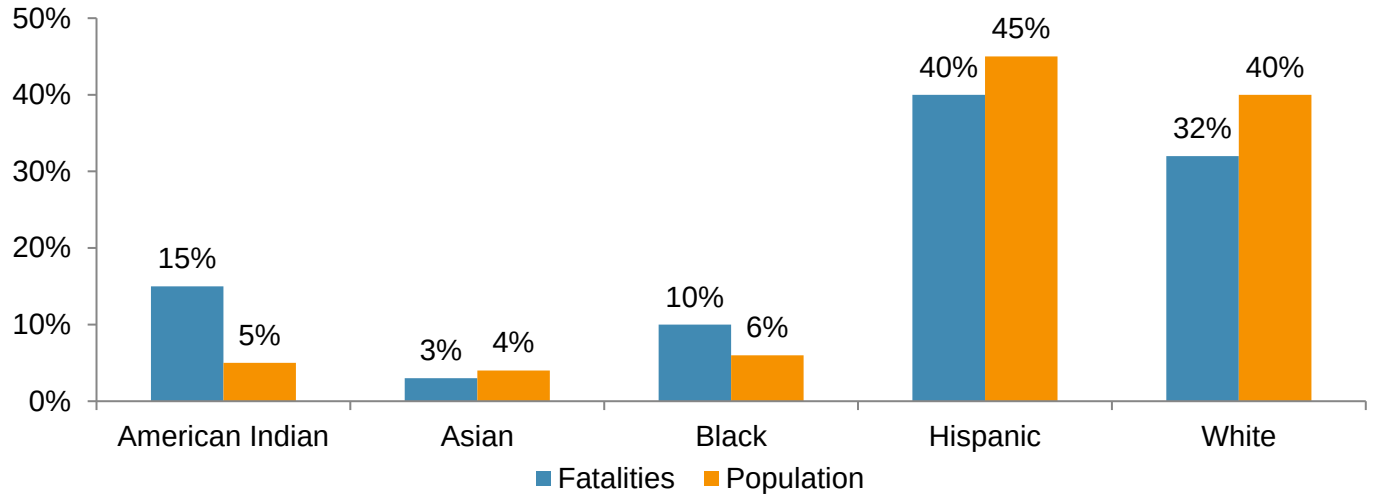
The mortality rate for American Indian, Black, and Hispanic children increased from 2022 to 2023. American Indian and Black children consistently had higher rates of child mortality from 2014-2023. In 2023, the child mortality rate for American Indian and Black children was 85.3 and 41.4 deaths per 100,000 children and experienced a 39% and 9% increase, respectively. The mortality rate for Asian and White children decreased from 2022 to 2023 (Figure 12).

Figure 12. Mortality Rates per 100,000 Children by Race/Ethnicity, Ages 1-17 Years, Arizona, 2014-2023 [42-51]



American Indian and Black children made up 15% and 10% of child deaths aged 1-17 years, respectively, but only comprised 5% and 6% of the total child population aged 1-17 years. The majority of deaths were among Hispanic (40%) and White (32%) children aged 1-17 years (Figure 13).

Figure 13. Percentage of Deaths by Race/Ethnicity, compared to the Population, Ages 1-17 Years, Arizona, 2023 [51]

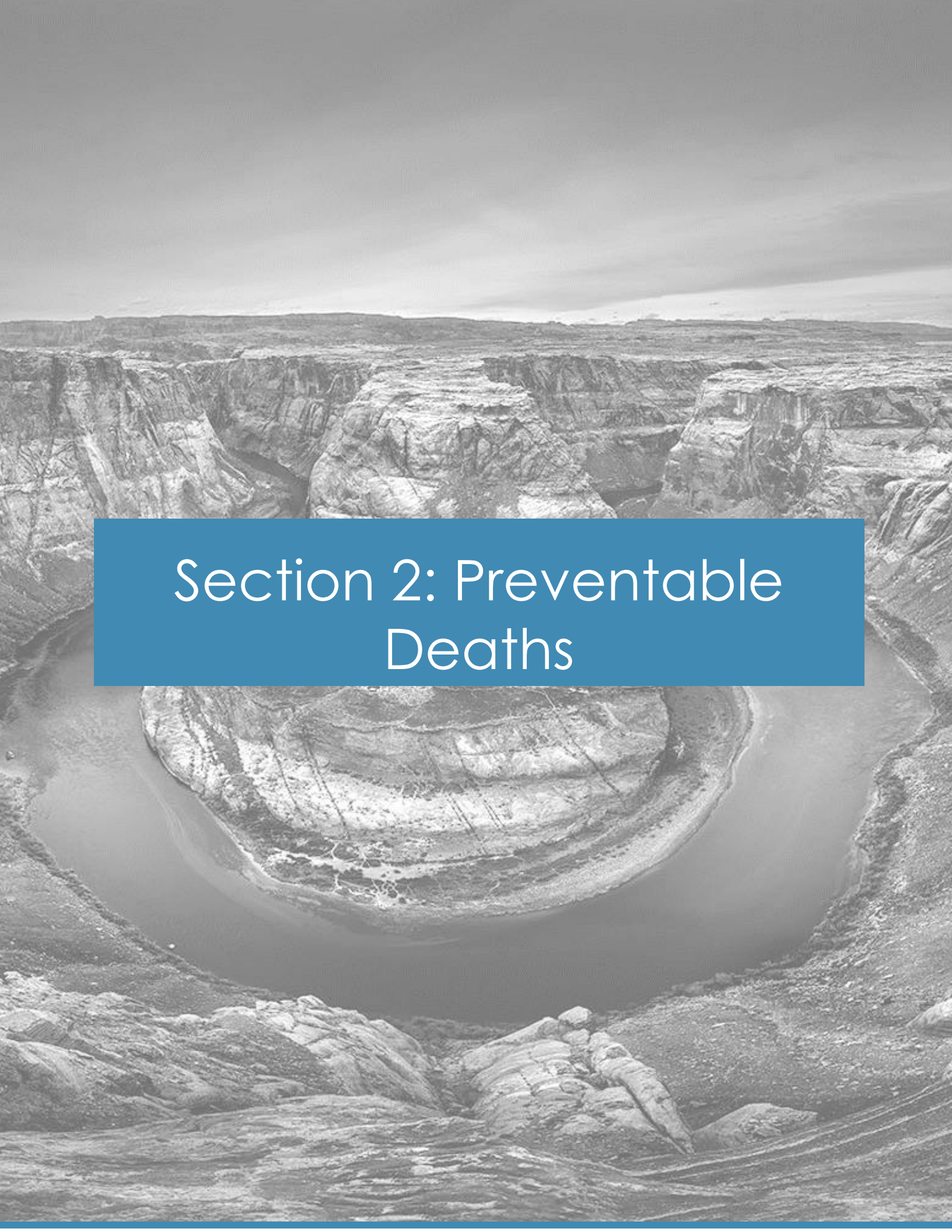


A child's chronic condition (42%; n = 178) was the number one risk factor of child death among children aged 1-17 years, no matter the county the child resided in. Child relationship issues (50%; n = 27) are a leading risk factor for child death among children aged 1-17 years in rural counties in Arizona (Table 4).

Table 4. Leading Risk Factors of Child Death by Urban/Rural Residence, Ages 1-17 Years, Arizona, 2023*^

Residence	Leading Risk Factors of Child Death, Ages 1-17				
	1	2	3	4	5
Urban (n = 352)	Child's Chronic Condition (n = 158)	CPS History with the Family (n = 147)	Poverty (n = 108)	Substance Use (n = 101)	Parent Substance Use History (n = 90)
Rural (n = 54)	Child Relationship Issues (n = 27)	CPS History with the Family (n = 25)	Poverty (n = 24)	Parent Substance Use History (n = 24)	Family Discord (n = 22)
Ages 1-17 Deaths (n = 428)	**Child's Chronic Condition (n = 178)**	**CPS History with the Family (n = 176)**	**Poverty (n = 134)**	**Substance Use (n = 125)**	**Parent Substance Use History (n = 118)**

*More than one risk factor may have been identified for each death.
^Please note that the column totals may not add up to the overall column total due to the inclusion of non-resident child deaths



Section 2: Preventable Deaths

The primary purpose of the CFRP is to identify preventable factors in a child's death. Throughout the report, the term "preventable death" is used. Each multi-disciplinary team is composed of professionals who review the circumstances of a child's death by reviewing records ranging from autopsies to law enforcement reports. The team then determines if any preventable factors were present before the death. They used one of the following three labels to determine preventability: 1) Yes, probably, 2) No, probably not, and 3) Team could not determine. A determination is based on the program's operational definition of preventability in a child's death.

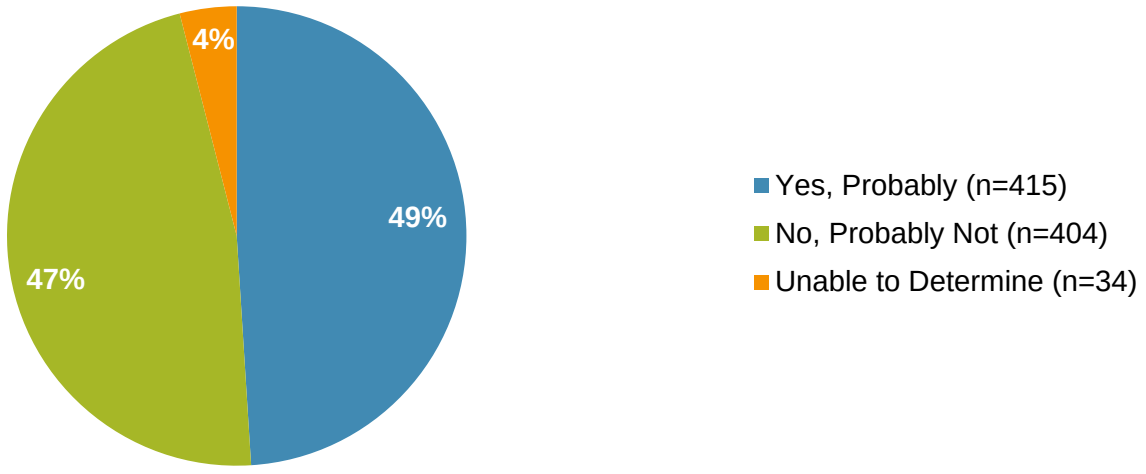
A child's death is considered preventable if the community (education, legislation, etc.) or an individual could reasonably have done something that would have changed the circumstances that led to the child's death.

"Yes, probably" means that some circumstance or factor related to the death could have been prevented. "No, probably not" indicates that everything reasonable was most likely done to prevent the death, but the child would still have died. A designation of "Team could not determine" means that there was insufficient information for the team to decide upon preventability.

The report discusses all 853 child deaths that occurred in 2023. Preventable deaths refer to the fatalities that the review teams deemed preventable. Much of the data discussed in this report is based on fatalities deemed as preventable by the teams. This is important so that efforts are targeted to the areas where prevention initiatives will be most effective.

In 2023, local review teams determined that 415 child deaths were preventable (49%), 404 child deaths were probably not preventable (47%), and the teams could not determine the preventability in 34 (4%) of the deaths (Figure 14).

Figure 14. Number and Percentage of Deaths by Preventability, Ages Birth to 17 Years, Arizona, 2023 (n=853)



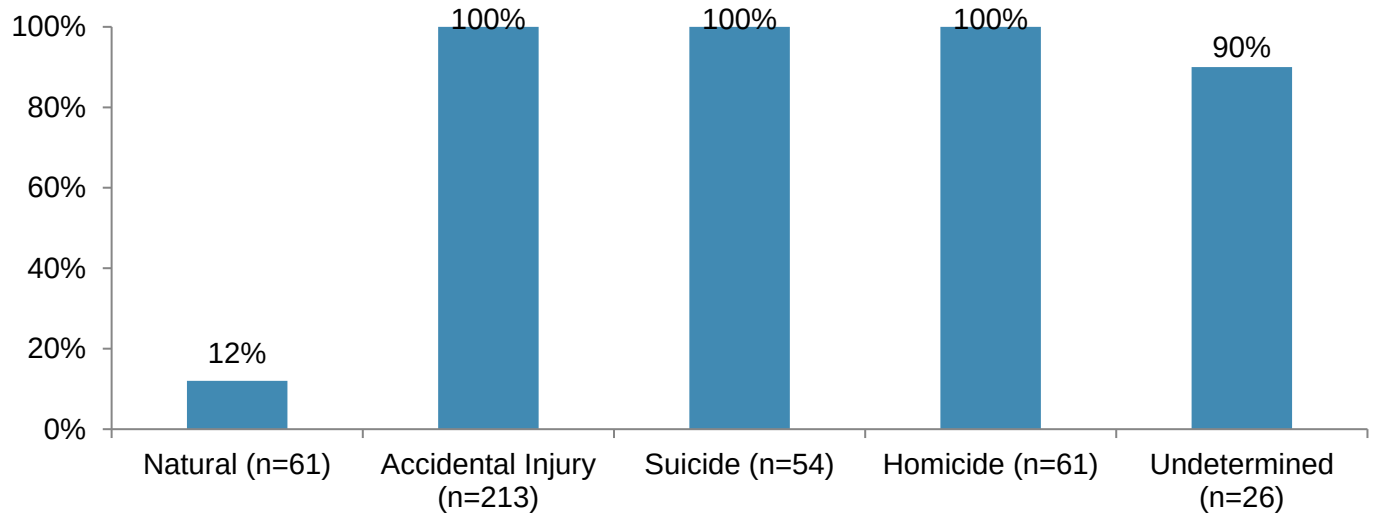
The leading cause of preventable deaths was motor vehicle crash deaths (20%), followed by firearm injury deaths (16%) and suffocation (13%) (Table 5).

Table 5. Leading Causes of Preventable Deaths, Ages Birth to 17 Years, Arizona, 2023

Leading Causes of Death	Number	Percent
Motor Vehicle Crash	81	20%
Firearm Injury	68	16%
Suffocation	52	13%
Poisoning	34	8%
Drowning	31	7%

Local review teams determined that 12% of natural deaths (n=61), 100% of accidental injury deaths (n=213), 100% of suicides (n=54), 100% of homicides (n=61), and 90% of the undetermined manner of deaths (n=26) were preventable (Figure 15).

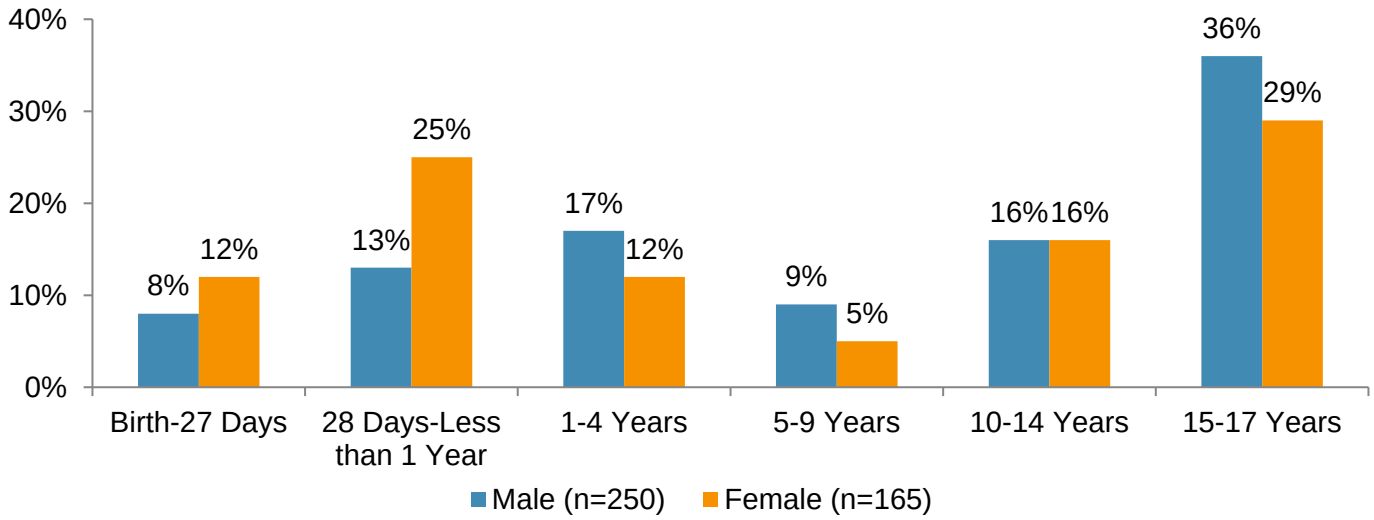
Figure 15. Number and Percentage of Preventable Deaths by Manner of Death, Ages Birth to 17 Years, Arizona, 2023 (n=415)



The most noticeable percentage of preventable deaths occurred in children aged 15-17 years (33%), followed by children aged 28 days to less than one year of age (18%) (not shown).

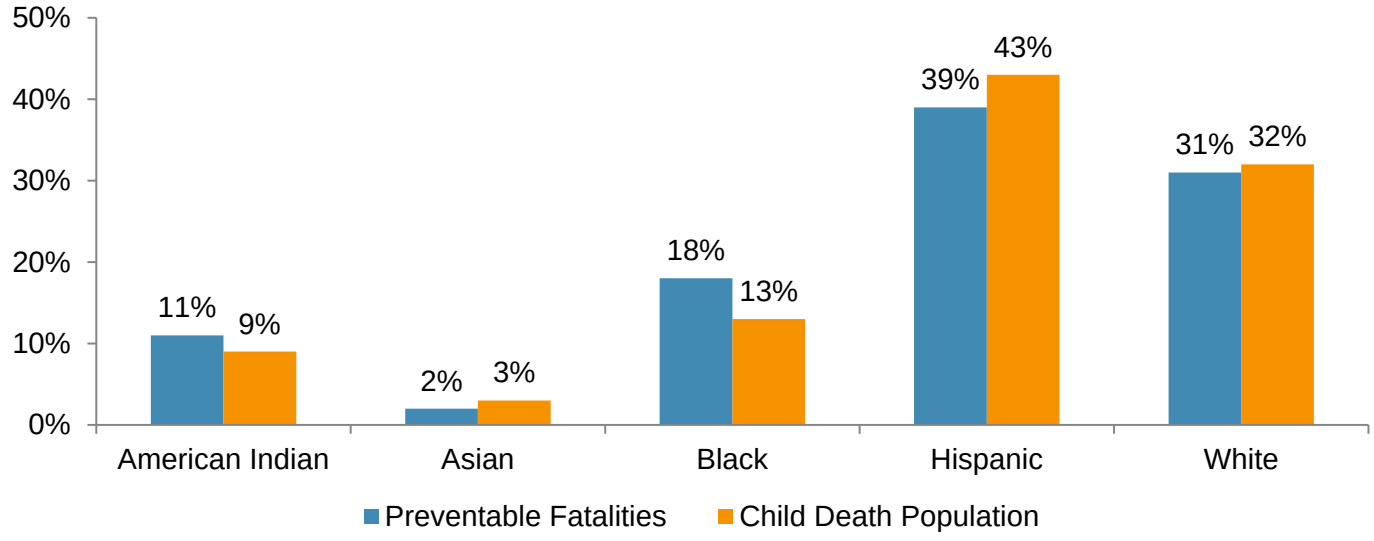
Male children aged 15-17 years made up a large proportion of male preventable deaths (36%). The most significant percentage of female preventable deaths occurred in female children aged 15-17 years (29%), followed by female children aged 28 days to less than one year of age (25%) (Figure 16).

Figure 16. Percentage of Preventable Deaths by Age Group and Sex, Ages Birth to 17 Years, Arizona, 2023 (n=415)



American Indian and Black children made up 11% and 18% of preventable child deaths, respectively, but only comprised 9% and 13% of the total child death population. The majority of preventable child deaths were among Hispanic (39%) and White (31%) children (Figure 17).

Figure 17. Percentage of Preventable Deaths by Race/Ethnicity, compared to the Total Child Death Population, Ages Birth to 17 Years, Arizona, 2023 (n=415) [2]



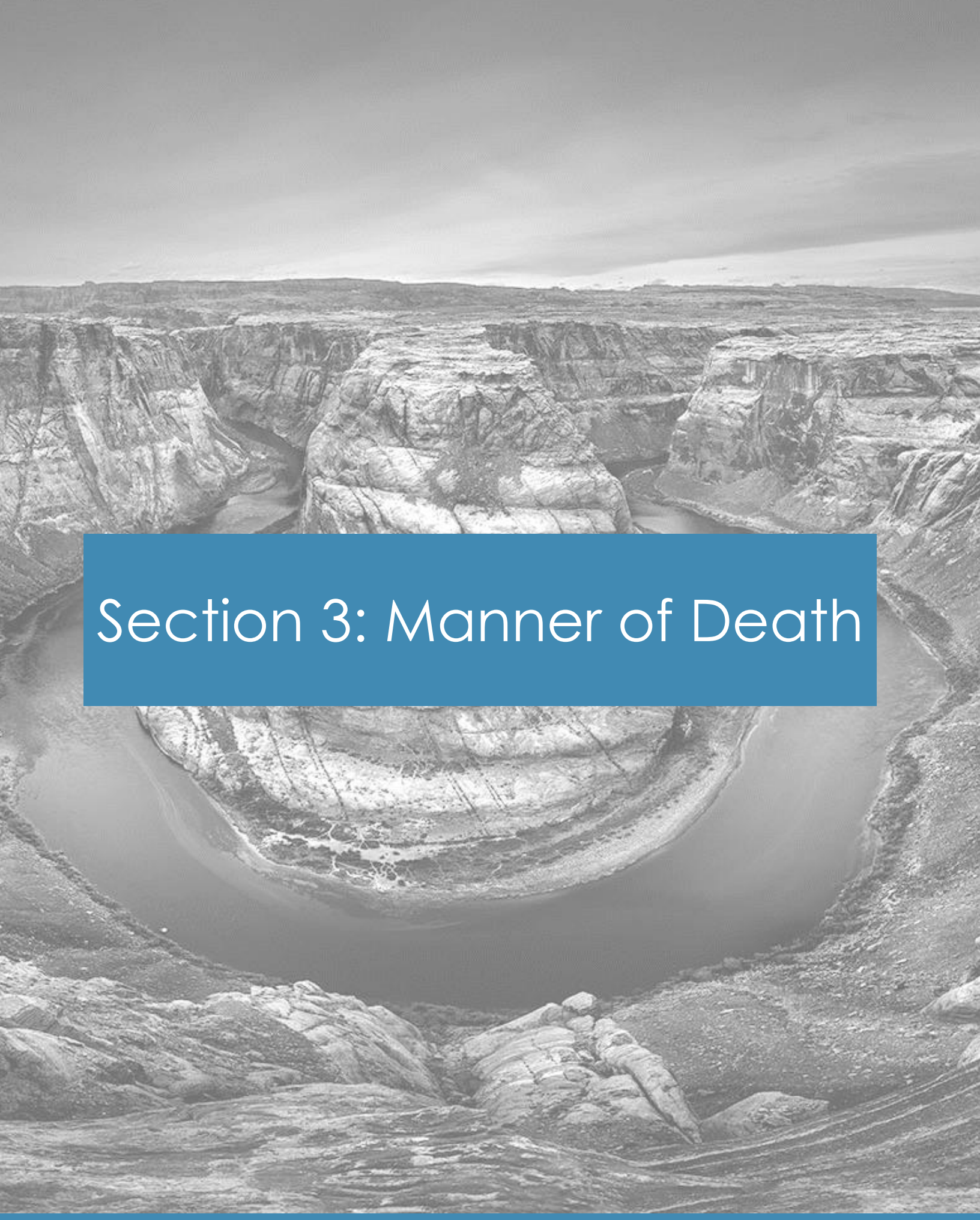
Poverty was the leading risk factor of preventable deaths for infants from birth to 27 days, while an unsafe sleep environment was the leading risk factor of preventable deaths among infants 28 days to less than one year of age (Table 6). Among children aged 1-4, lack of supervision was the leading risk factor of preventable deaths. CPS history with the family was the leading risk factor of preventable deaths among children aged 5-9 years and 10-14 years. Among children 15-17 years, substance use was the leading risk factor for preventable deaths.

The most identified risk factor of preventable deaths among all ages was CPS history with the family (47%) followed by parent substance use history (40%) (Table 6). As a note, multiple risk factors may have been identified for each death.

Table 6. Leading Risk Factors of Preventable Deaths among Children by Age Group, Arizona, 2023*

Age Group	Leading Risk Factors of Preventable Child Deaths*				
	1	2	3	4	5
Birth-27 Days (n = 41)	Poverty (n = 25)	Parent Substance Use History (n = 22)	Substance Use (n = 19)	No Prenatal Care (n = 15)	CPS History with the Family (n = 14)
28 Days - <1 Year (n = 75)	Unsafe Sleep Environment (n = 56)	Poverty (n = 49)	Parent Substance Use History (n = 36)	CPS History with the Family (n = 32)	Substance Use (n = 19)
1-4 Years (n = 62)	Lack of Supervision (n = 36)	CPS History with the Family (n = 32)	Parent Substance Use History (n = 31)	Poverty (n = 28)	Inability to Swim (n = 18)
5-9 Years (n = 32)	CPS History with the Family (n = 16)	History of Trauma/ Violence (n = 13)	Poverty (n = 11)	Child's Chronic Condition (n = 10)	Parent Substance Use History (n = 9)
10-14 Years (n = 67)	CPS History with the Family (n = 35)	Substance Use (n = 22)	Child Relationship Issues (n = 21)	History of Trauma/ Violence (n = 21)	Poverty (n = 18)
15-17 Years (n = 138)	Substance Use (n = 78)	CPS History with the Family (n = 66)	Child Relationship Issues (n = 48)	History of Trauma/ Violence (n = 48)	Lack of Supervision (n = 37)
Preventable Deaths (N = 415)	**CPS History with the Family (n = 195)**	**Parent Substance Use History (n = 166)**	**Substance Use (n = 163)**	**Poverty (n = 158)**	**Lack of Supervision (n = 113)**

*More than one risk factor may have been identified for each death.



Section 3: Manner of Death

Accidental Injury Deaths

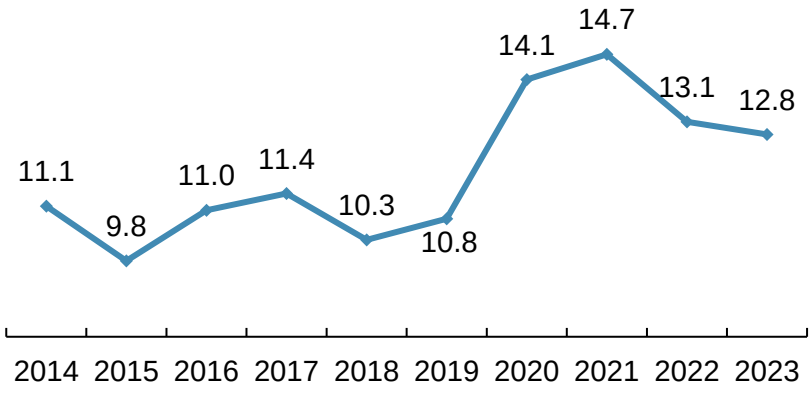
An injury that occurred when there was no intent to cause harm or death, an unintentional injury. See the Glossary for further explanation.

Total Accidental Injury Deaths
214
(25% of all child deaths)

2.1% decrease
in mortality rate from 2022
(12.8 deaths per 100,000 children in 2023)

100%
of Accidental Injury Deaths were Preventable

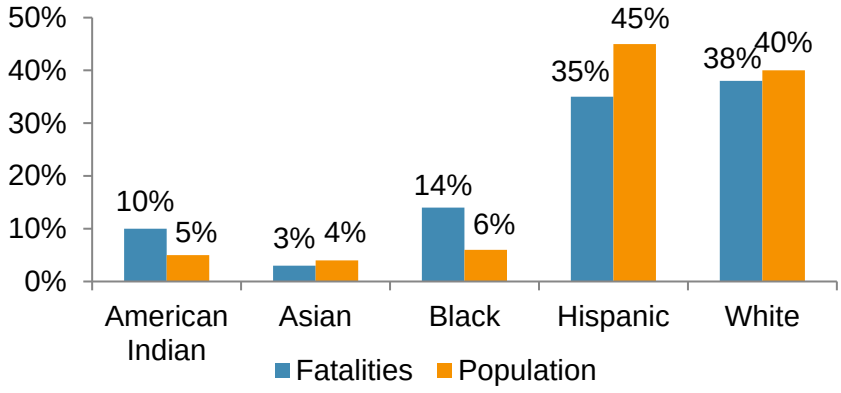
Mortality Rate per 100,000 Children Due to Accidental Injury, Ages Birth to 17 Years [2-11]



Top Causes of Accidental Injury Deaths:

MVC	Suffocation	Drowning	Poisoning	Fire
37%	24%	14%	13%	6%
(80 deaths)	(51 deaths)	(31 deaths)	(28 deaths)	(13 deaths)

Percentage of Accidental Injury Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years[2]



27% of accidental injury deaths occurred in **infants (less than one year of age)**

56% of accidental injury deaths were among **males**

Leading Risk Factors of Accidental Injury Deaths*:

CPS History with the Family	Substance Use	Poverty	Parent Substance Use History	Lack of Supervision
47%	40%	38%	37%	37%

*More than one risk factor may have been identified for each death.

Accidental Injury Death Prevention Recommendations*:

Sport Injuries

- Providers should educate parents and caregivers on when to obtain an immediate medical evaluation of a child after a head injury.[151]

Choking Injuries

- Pediatricians, dentists, and other infant and child health care providers should provide choking-prevention counseling to parents as an integral part of anticipatory guidance activities.[152]

Fire Injuries

- Parents/caregivers and rental property staff should ensure residences are equipped with working smoke alarms and that families follow essential fire safety tips, including[154]
  - Installing working smoke alarms on every level of homes, outside sleeping areas, and inside bedrooms
  - Replacing smoke alarm batteries and testing alarms once every year
  - Always stay in the kitchen when cooking
  - Know how to escape if there is a fire in your home. Have a plan and practice it with your family.
  - Replace smoke alarms that are more than ten years old.

Dog Bite Injuries

- Increase public awareness/education on risk of dog bites.[156]
  - Almost 1 in 5 people bitten by dogs require medical attention. For children, the injuries are more likely to be serious since the majority of injuries occur in the head, face, or neck. Parents should be aware of some simple steps that can prevent dog bites.[156]

Heat-Related Injuries

- Increase parent/caregiver understanding of protecting children from extreme heat, including recognizing the dangers of heat exposure and signs of adverse reactions.[158]

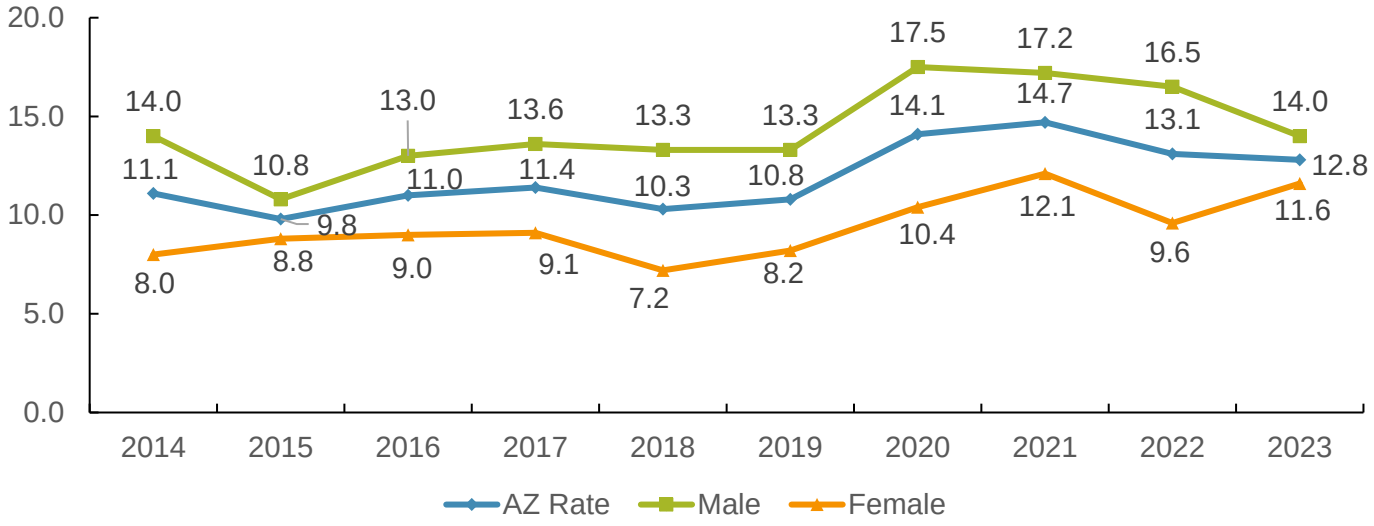
Fall/Crush-Related Injuries

- Educate parents on how to respond to acute injuries and when/where to seek help.

*See the Accidental Injury Death Prevention Recommendations for additional evidence-based recommendations.

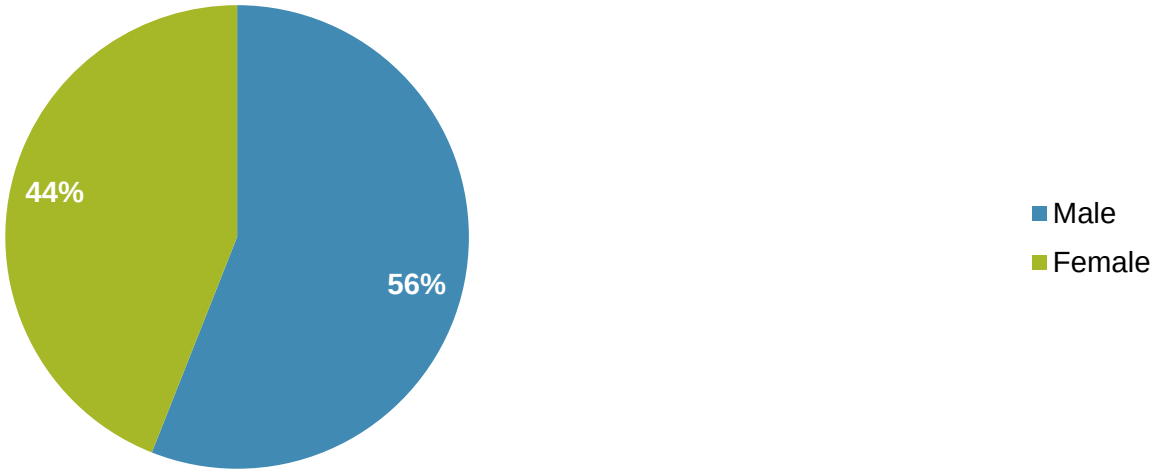
Overall, Arizona's accidental injury mortality rate decreased by 2.1%, from 13.1 deaths per 100,000 children in 2022 to 12.8 deaths per 100,000 children in 2023. Males have consistently had a higher accidental injury mortality rate than females. The male mortality rate decreased from 2022 to 2023, while the female mortality rate increased from 2022 to 2023 (Figure 18).

Figure 18. Mortality Rate per 100,000 Children due to Accidental Injury by Sex, Ages Birth to 17 Years, Arizona, 2014-2023 [2-11]



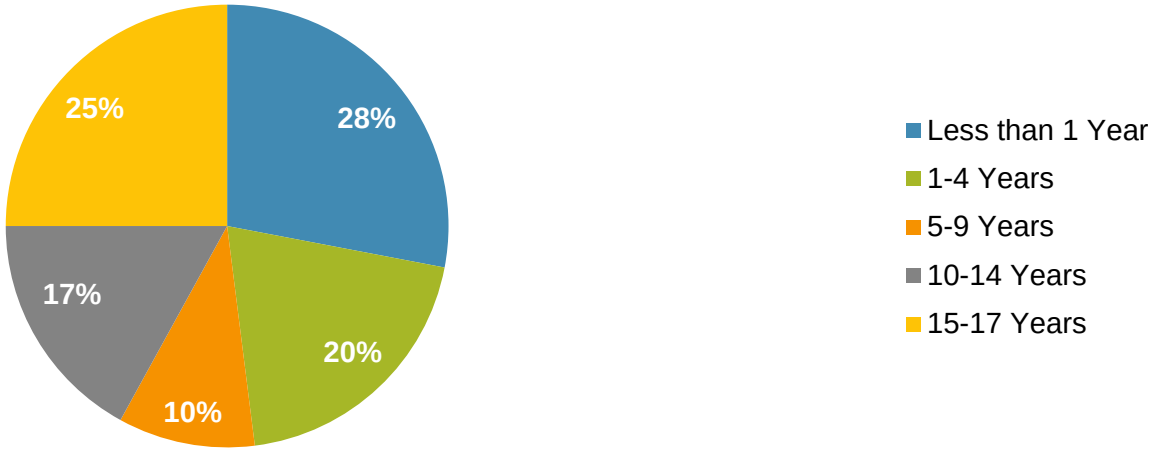
The majority of accidental injury deaths occurred among males (56%) (Figure 19).

Figure 19. Percentage of Accidental Injury Deaths by Sex, Ages Birth to 17 Years, Arizona, 2023 (n=214)



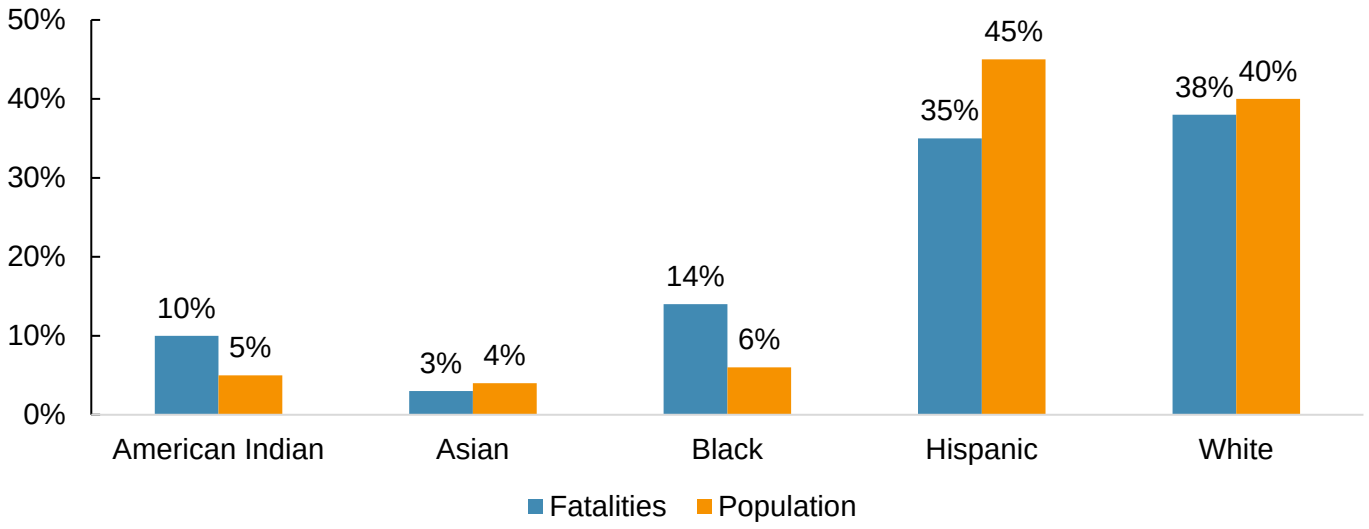
The highest percentage of accidental injury deaths occurred among children less than one year of age (28%), followed by children aged 15-17 years (25%) (Figure 20).

Figure 20. Percentage of Accidental Injury Deaths by Age Group, Ages Birth to 17 Years, Arizona, 2023 (n=214)



American Indian and Black children made up 10% and 14% of accidental injury deaths, respectively, but only comprised 5% and 6% of the total child population. The majority of unintentional injury deaths were among White (38%) and Hispanic (35%) children (Figure 21).

Figure 21. Percentage of Accidental Injury Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years, Arizona, 2023 (n=214) [2]



Among accidental injury deaths, motor vehicle crash (37%) was the leading cause of death for children age birth to 17 years (Table 7).

Table 7. Cause of Accidental Injury Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=214)

Causes of Death	Number	Percent
Motor Vehicle Crash	80	37%
Suffocation	51	24%
Drowning	31	14%
Poisoning	28	13%
Fire	13	6%
Other Injury (i.e., choking, firearm, fall, sports-related, etc.)	11	5%

While numerous preventable risk factors contribute to accidental injury deaths, CPS history with the family (47%) was the most identified risk factor, followed by substance use and poverty (40%, 38%) (Table 8).

Table 8. Risk Factors of Accidental Injury Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=214)

Risk Factors*	Number	Percent
CPS History with the Family	100	47%
Substance Use	85	40%
Poverty	82	38%
Parent Substance Use History	80	37%
Lack of Supervision	80	37%
History of Trauma/Violence	53	25%
Unsafe Sleep Environment	48	22%
Child Relationship Issues	40	19%
Lack of Seat Restraint	38	18%
Family Discord	36	17%
Reckless Driving	36	17%
Child's Chronic Condition	31	14%
Housing Insecurity	30	14%
*More than one risk factor may have been identified in each death.		

Homicides

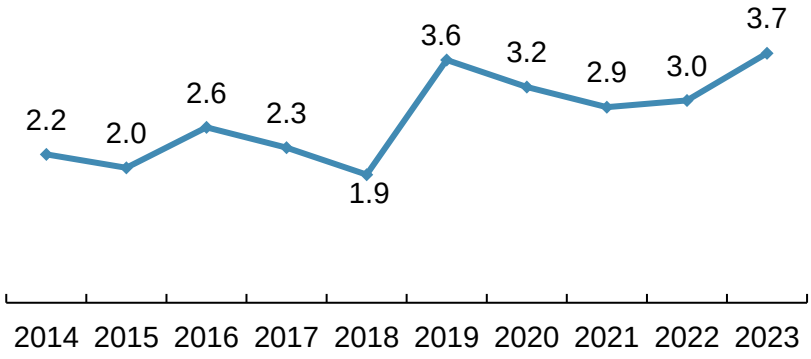
Death resulting from injuries inflicted by another person with the intent to cause fear, harm, or death. See the Glossary for further explanation.

Total Homicides
61
(7% of all child deaths)

22.8% increase
in mortality rate from 2022
(3.7 deaths per 100,000 children in 2023)

100%
of Homicides were Preventable

Mortality Rate per 100,000 Children Due to Homicides, Ages Birth to 17 Years[2-11]

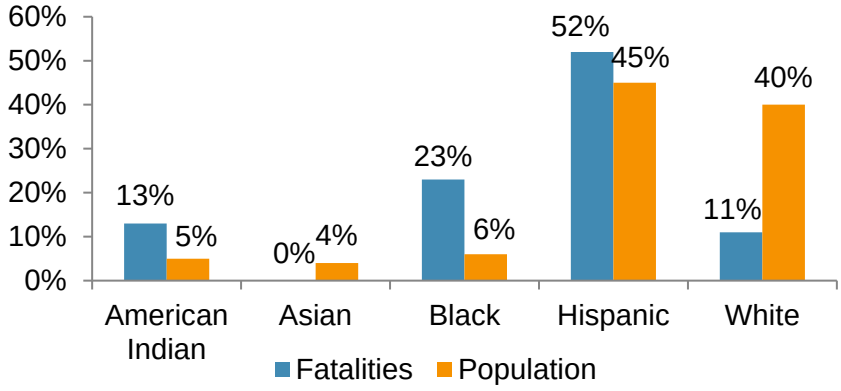


Top Causes of Homicides:

Firearm Injury	Blunt Force Injury	Other Injury
66%	28%	*
(40 deaths)	(17 deaths)	(<6 deaths)

*Number/Percentage suppressed due to count less than 6.

Percentage of Homicides by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years[2]



57% of homicides occurred in **children age 15-17 years**

77% of homicides were among **males**

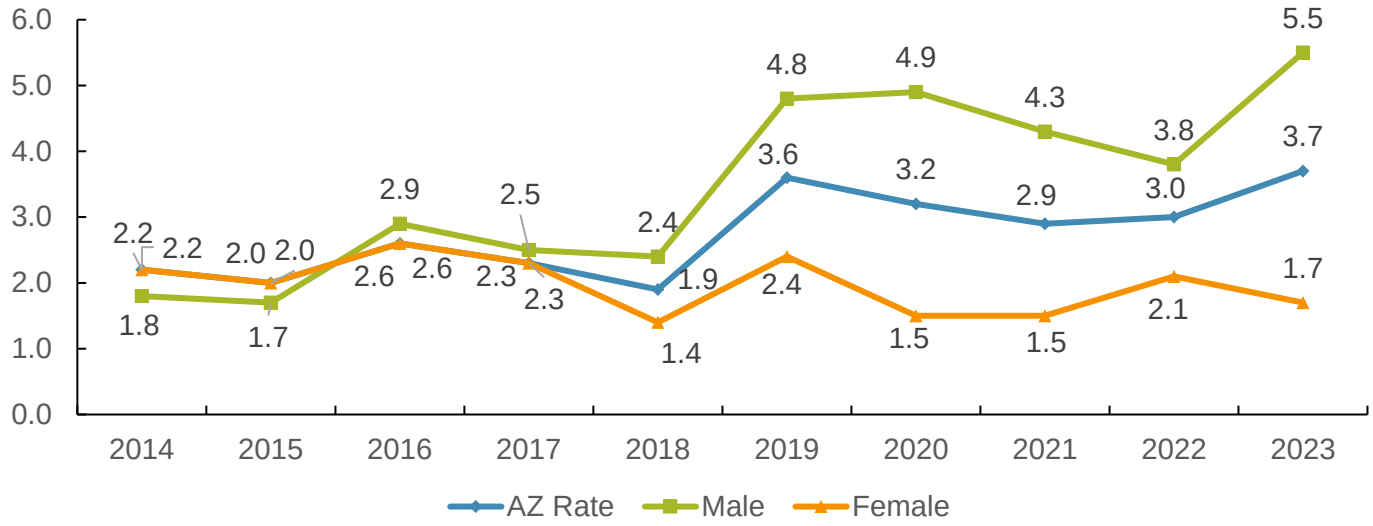
Leading Risk Factors of Homicides*:

CPS History with the Family	Substance Use	Parent Substance Use History	History of Trauma/Violence	Criminal Activity
67%	52%	51%	46%	44%

*More than one risk factor may have been identified for each death.

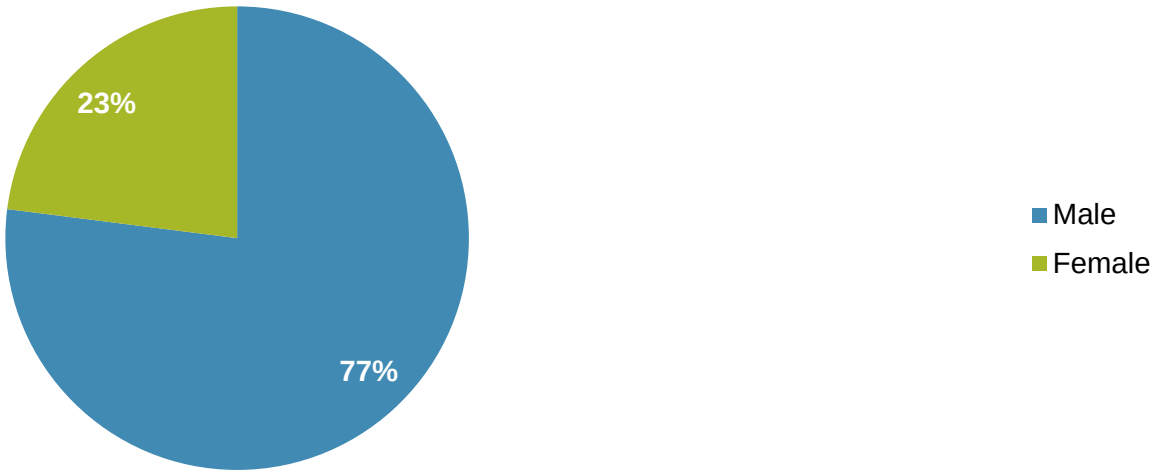
Arizona's child homicide rate increased by 22.8% from 3.0 deaths per 100,000 children in 2022 to 3.7 deaths per 100,000 children in 2023. Since 2016, males have had a higher homicide rate compared to females. The male mortality rate increased from 2022 to 2023, while the female mortality rate decreased from 2022 to 2023 (Figure 22).

Figure 22. Mortality Rate per 100,000 Children due to Homicide by Sex, Ages Birth to 17 Years, Arizona, 2014-2023 [2-11]



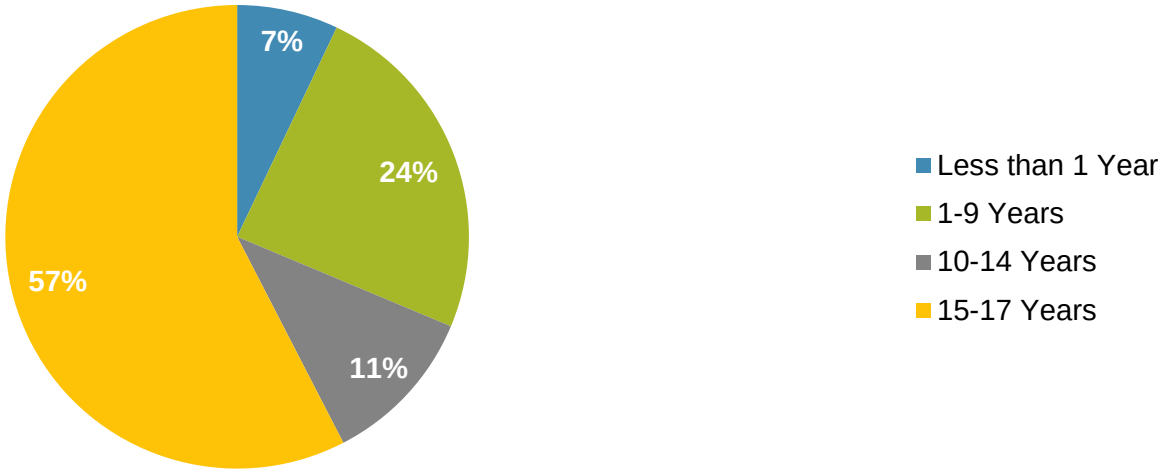
The majority of homicide deaths occurred among males (77%) (Figure 23).

Figure 23. Percentage of Homicides by Sex, Ages Birth to 17 Years, Arizona, 2023 (n=61)



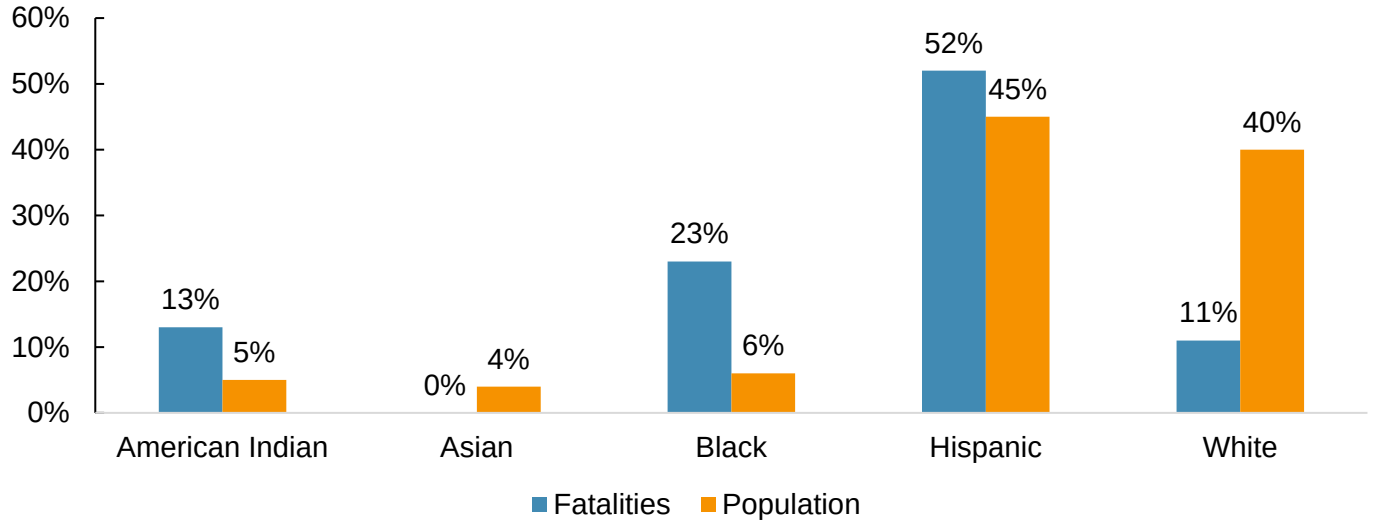
The majority of homicide deaths of children were among those aged 15-17 years (57%), followed by those 1-9 years of age (24%) (Figure 24).

Figure 24. Percentage of Homicides by Age Group, Ages Birth to 17 Years, Arizona, 2023 (n=61)



American Indian and Black children made up 13% and 23% of homicides, respectively, but only comprised 5% and 6% of the total child population. Similarly, Hispanic children made up 52% of homicides but only comprised 45% of the total child population. The greatest percentage of homicides were among Hispanic (52%) children. Asian children experienced no homicides in 2023 in Arizona (Figure 25).

Figure 25. Percentage of Homicides by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years, Arizona, 2023 (n=61)[2]



Among homicides, firearm injury (66%) was the leading cause of death for children aged birth to 17 years, followed by blunt force injury (28%) and other injuries (Table 9).

Table 9. Cause of Homicides, Ages Birth to 17 Years, Arizona, 2023 (n=61)

Cause of Death	Number	Percent
Firearm Injury	40	66%
Blunt Force Injury	17	28%
Other Injury	*	*
*Number/Percentage suppressed due to count less than 6.		

Strangers (26%) were the most commonly identified perpetrator of child homicides (Table 10).

Table 10. Number and Percentage of Homicides by Perpetrator, Ages Birth to 17 Years, Arizona, 2023 (n=61)

Perpetrator**	Number	Percent
Stranger	16	26%
Other (i.e., grandparents, siblings, parent's partner, foster parent, other relative)	14	23%
Acquaintance	12	20%
Father	10	16%
Mother	10	16%
Unknown	*	*
*Number/Percentage suppressed due to count less than 6.		
**There may be more than one perpetrator in each death.		

While numerous preventable risk factors contribute to homicides, CPS history with the family was the most commonly identified risk factor (67%) (Table 11).

Table 11. Risk Factors of Homicides, Ages Birth to 17 Years, Arizona, 2023 (n=61)

Risk Factors*	Number	Percent
CPS History with the Family	41	67%
Substance Use	32	52%
Parent Substance Use History	31	51%
History of Trauma/Violence	28	46%
Criminal Activity	27	44%
Poverty	22	36%
Child Relationship Issues	16	26%
Access to Firearm (User less than 18 years)	16	26%
*More than one risk factor may have been identified in each death.		

Natural Deaths

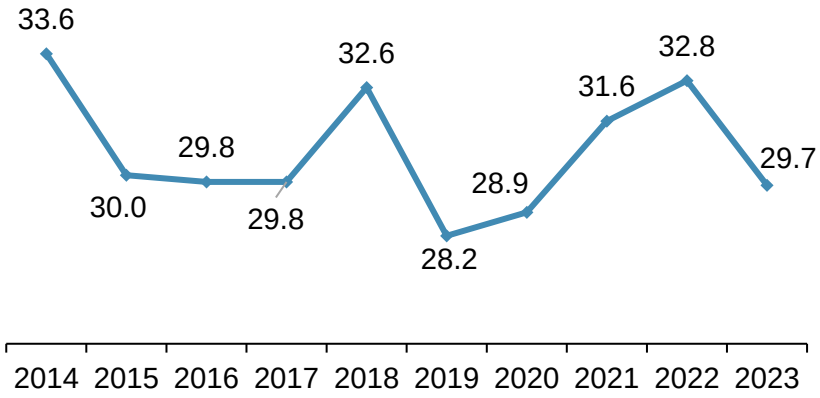
In Arizona and nationwide, deaths classified as natural deaths due to a medical condition account for the largest percentage of child deaths every year. See the Glossary for further explanation.

Total Natural Deaths
495
(58% of all child deaths)

9.6% decrease
in mortality rate from 2022
(29.7 deaths per 100,000 children in 2023)

12%
of Natural Deaths were Preventable

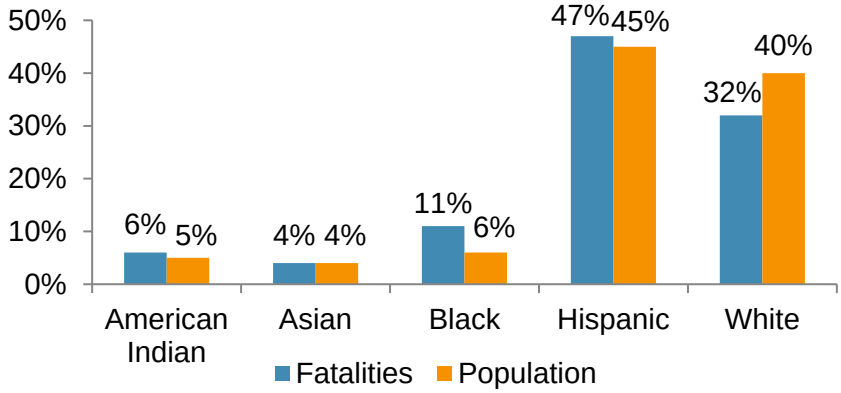
Mortality Rate per 100,000 Children Due to Natural Deaths, Ages Birth to 17 Years[2-11]



Top Causes of Natural Deaths:

Prematurity	Congenital Anomaly	Cancer	Cardiovascular	Neurological/Seizure Disorder
39% (191 deaths)	20% (101 deaths)	10% (48 deaths)	7% (37 deaths)	6% (30 deaths)

Percentage of Natural Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years[2]



69% of natural deaths occurred in **infants (less than one year of age)**

55% of natural deaths were among **males**

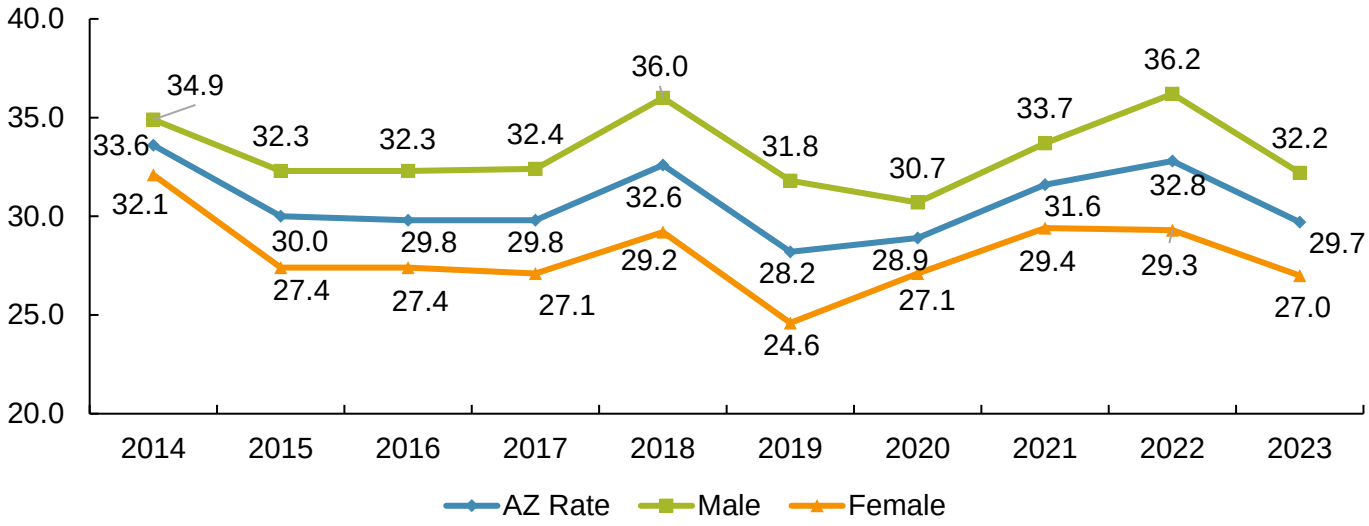
Leading Risk Factors of Natural Deaths*:

Child's Chronic Condition	Poverty	CPS History with the Family	Substance Exposed Newborn (SEN)	Inadequate Medical Treatment
52%	46%	12%	8%	7%

*More than one risk factor may have been identified for each death.

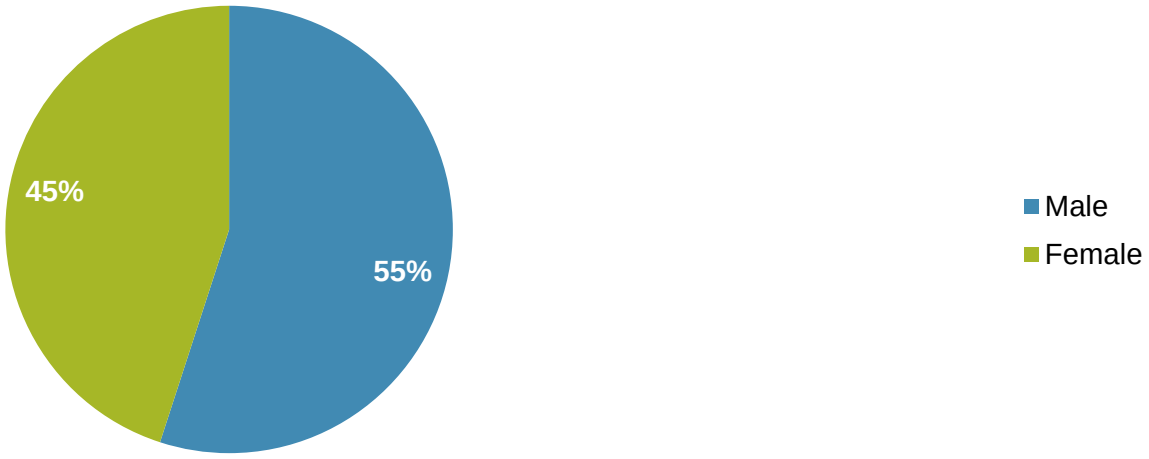
Arizona's natural child mortality rate decreased by 9.6% from 32.8 deaths per 100,000 children in 2022 to 29.7 deaths per 100,000 children in 2023. Males have consistently had a higher natural mortality rate compared to females (Figure 26).

Figure 26. Mortality Rate per 100,000 Children due to Natural Causes by Sex, Ages Birth to 17 Years, Arizona, 2014-2023[2-11]



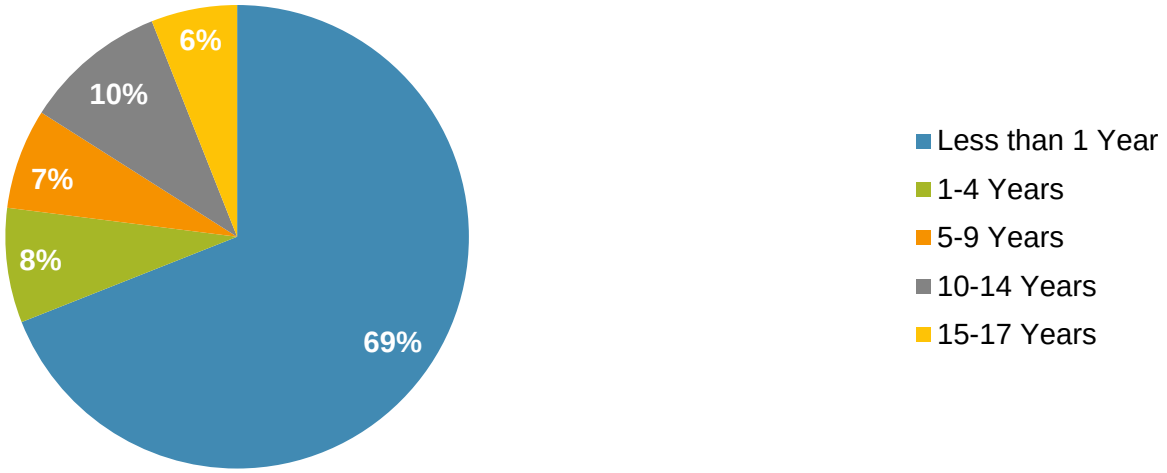
The majority of natural deaths occurred among male children (55%) (Figure 27).

Figure 27. Percentage of Natural Deaths by Sex, Ages Birth to 17 Years, Arizona, 2023 (n=495)



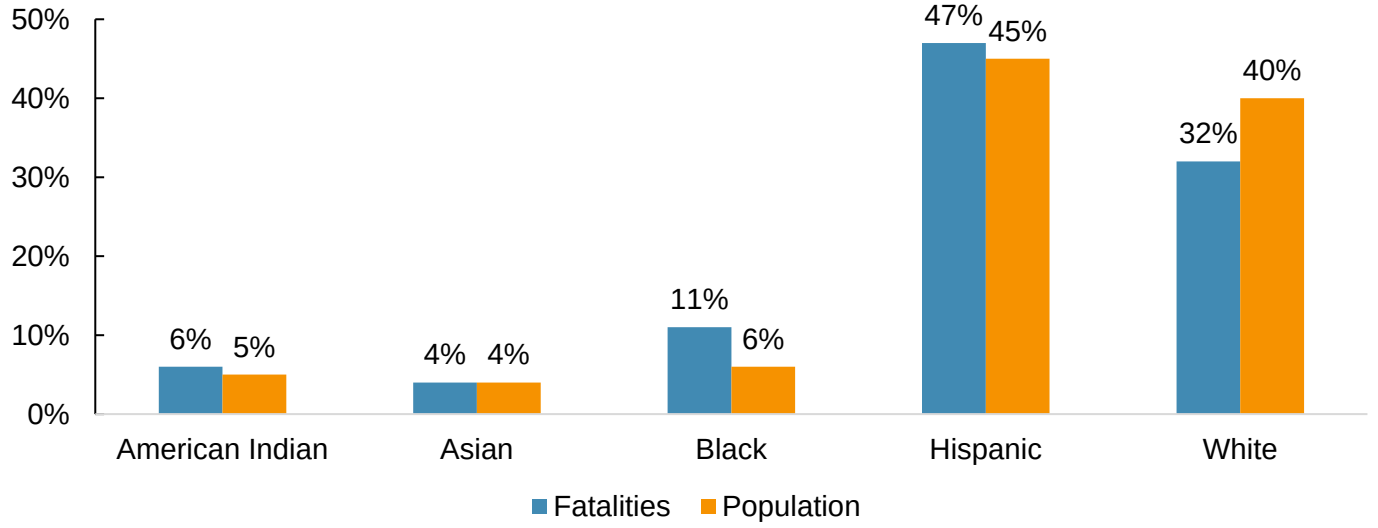
The majority of natural deaths occurred among infants less than one year of age (69%), followed by children 10-14 years of age (10%) (Figure 28).

Figure 28. Percentage of Natural Deaths among Children by Age Group, Ages Birth to 17 Years, Arizona, 2023 (n=495)



Black children made up 11% of natural deaths but only comprised 6% of the total child population. Similarly, American Indian and Hispanic children made up 6% and 47% of natural deaths, respectively, but only comprised 5% and 45% of the total child population. The majority of natural deaths were among Hispanic (47%) and White (32%) children (Figure 29).

Figure 29. Percentage of Natural Deaths among Children by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years, Arizona, 2023 (n=495)[2]



Among natural deaths, prematurity (39%) was the leading cause of death for children aged birth to 17 years followed by congenital anomaly (20%) and cancer (10%) (Table 12).

Table 12. Cause of Natural Deaths among Children, Ages Birth to 17 Years, Arizona, 2023 (n=495)

Causes of Death	Number	Percent
Prematurity	191	39%
Congenital Anomaly	101	20%
Cancer	48	10%
Cardiovascular	37	7%
Neurological/Seizure Disorder	30	6%
Other Infection	27	5%
Other Medical Condition	24	5%
Other Perinatal Condition	16	3%
Pneumonia	15	3%
COVID-19	6	1%

The most commonly identified risk factor for natural deaths among children aged birth to 17 years was the child's chronic conditions (52%), followed by the presence of poverty (46%) (Table 13).

Table 13. Leading Risk Factors of Natural Deaths among Children, Ages Birth to 17 Years, Arizona, 2023 (n=495)

Risk Factors*	Number	Percent
Child's Chronic Conditions	258	52%
Poverty	230	46%
CPS History with the Family	58	12%
Substance Exposed Newborn (SEN)	40	8%
Inadequate Medical Treatment	37	7%
No Health Insurance	28	6%
History of Trauma/Violence	20	4%
Substance Use	16	3%
Medical Error	13	3%
*More than one risk factor may have been identified in each death.		

Suicides

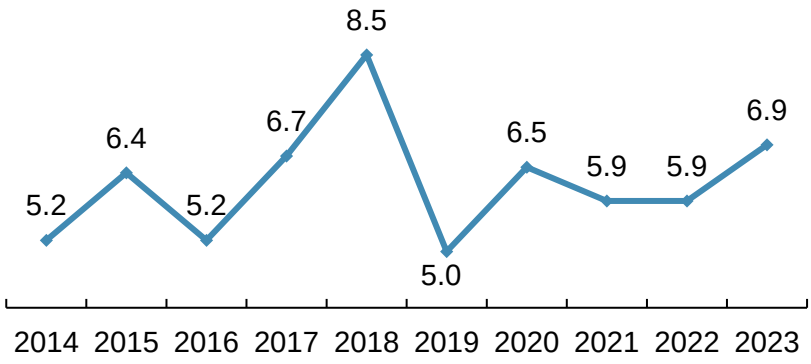
A death is due to a self-directed intentional behavior where the intent is to die because of that behavior. See the Glossary for further explanation.

Total Suicides
54
(6% of all child deaths)

15.9% increase
in mortality rate from 2022
(6.9 deaths per 100,000 children in 2023)

100%
of Suicides were Preventable

Mortality Rate per 100,000 Children Due to Suicides, Ages 10-17 Years^[42-51]

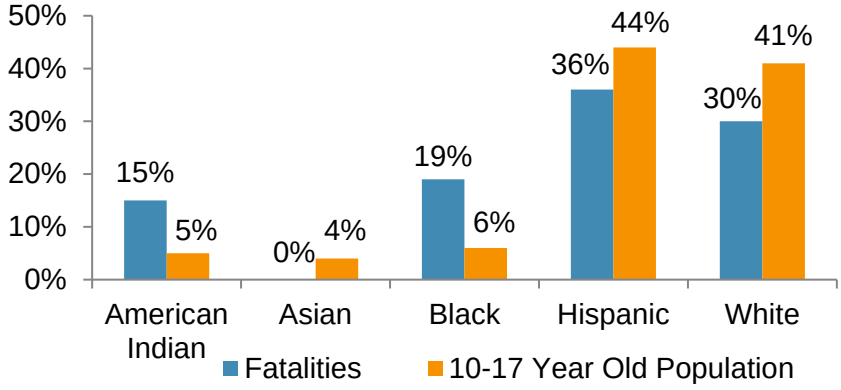


Top Causes of Suicides:

Firearm Injuries	Strangulation	Fall/ Crush	Poisoning	Motor Vehicle Crash
44%	35%	*	*	*
(24 deaths)	(19 deaths)	(<6 deaths)	(<6 deaths)	(<6 deaths)

*Number/Percentage suppressed due to count less than 6.

Percentage of Suicides by Race/Ethnicity, compared to the 10–17-Year-Old Population, Ages 10-17 Years^[51]



77% of suicides occurred in **ages 15-17 years^.**

^Data for children under the age of 10 suppressed due to counts less than 6.

64% of suicides were among **males^**

Leading Risk Factors of Suicides*:

Child Relationship Issues	Recent Suicide Warning	School Issues	Firearm Access	Prior Suicide Attempt
67%	59%	48%	44%	43%

*More than one risk factor may have been identified for each death.

Top 5 Suicide Prevention Recommendations*:

(1) Ensure the availability and accessibility of counseling, therapy, grief, crisis, behavioral, and mental health services that are culturally competent and linguistically appropriate, outreach to rural populations, age-appropriate, and availability of telehealth.[122, 126, 132]
   a. Increase access to effective mental health care for Arizonans by adopting the Zero Suicide Model statewide. Implement communication strategies using traditional and new media for school personnel that promote suicide prevention, emotional well-being, and mental health.

(2) Public and Private Schools should have the resources to:[122-125, 132]
   a. Have a suicide management protocol and be aware of resources like the suicide prevention toolkits developed by the Substance Abuse and Mental Health Services Administration and the American Foundation for Suicide Prevention.
   b. Provide appropriate mental health services for students at risk for suicide. If the school cannot provide the services, they should identify mental health providers to whom students can be referred.
   c. Educate staff members on the effects that suicide contagion can have on a student population. Adolescents are vulnerable to suicide contagion, and it is essential for schools not to glamorize, simplify, or romanticize the death of a student.
   d. Use simultaneous complementary strategies. Simultaneous interventions involving parents, changing the school environment, and improving students' skills have been effective.

(3) Increase awareness of the 988 hotline, which anyone can call, text, or chat with online at 988lifeline.org if they are worried about a loved one who may need crisis support.[137]

(4) Educate parents/families/caregivers that the presence of a firearm in the house significantly increases the risk of suicide for adolescents.[124, 129]

(5) Increase public awareness of risk factors and warning signs for suicide and connect people in crisis to care.[122, 123, 127, 128]

*See the Suicide Prevention Recommendations for additional evidence-based recommendations.

Resources:**

Arizona Department of Child Safety
- https://dcs.az.gov/services/prevention/suicideprevention

Suicide Hotline: 988
- https://www.azdhs.gov/988

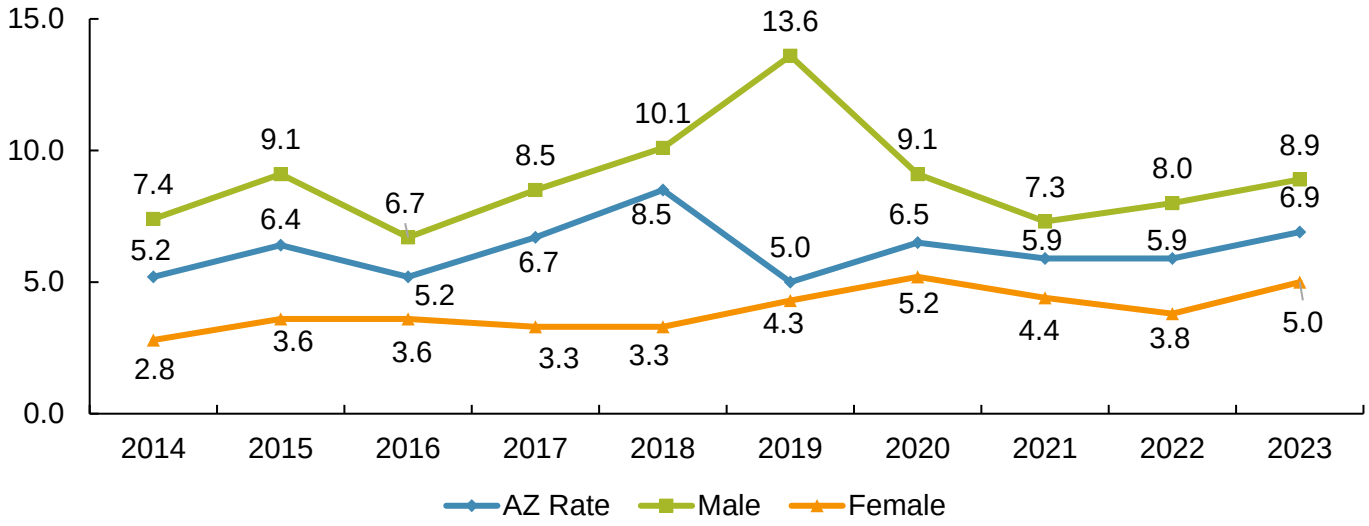
Suicide Prevention Resource Center
- https://sprc.org/populations/adolescents/

Teen Lifeline
- https://teenlifeline.org/

**See the Suicide Prevention Resources for additional resources.

Arizona's child suicide rate increased by 15.9% from 5.9 deaths per 100,000 children aged 10-17 years in 2022 to 6.9 deaths per 100,000 children aged 10-17 years in 2023. Males have consistently had a higher suicide rate compared to females (Figure 30).

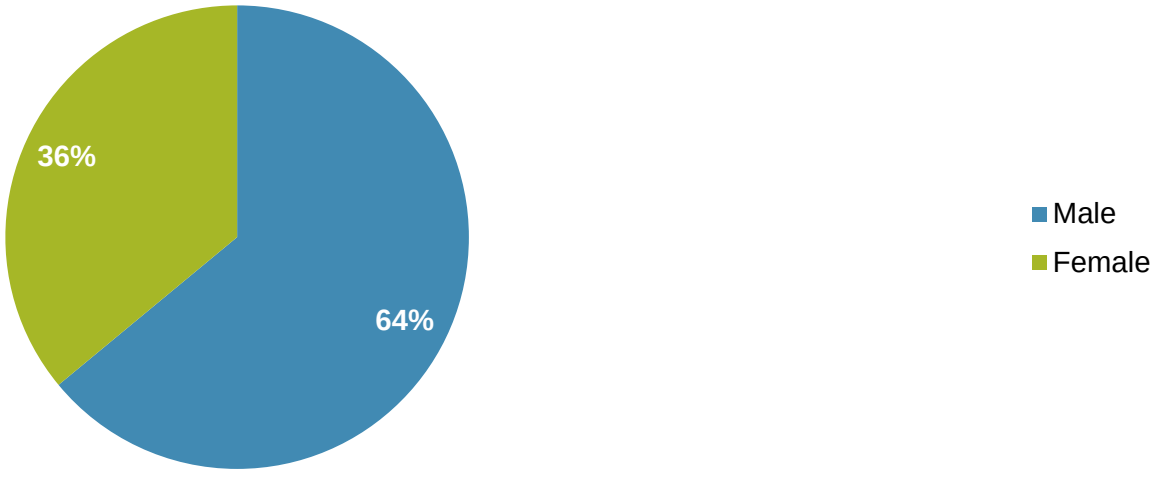
Figure 30. Mortality Rate per 100,000 Children due to Suicide by Sex, Ages 10-17 Years, Arizona, 2014-2023* [42-51]



*Data for children under the age of 10 was suppressed due to counts less than 6.

The majority of suicide deaths in children aged 10-17 years occurred among males (64%) (Figure 31).

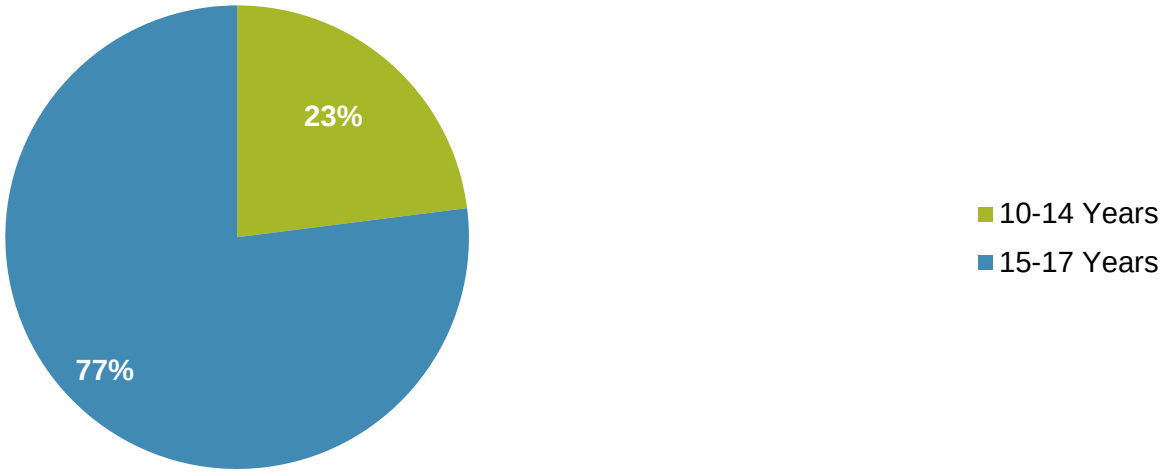
Figure 31. Percentage of Suicides by Sex, Ages 10-17 Years, Arizona, 2023 (n=53)*



*Data for children under the age of 10 was suppressed due to counts less than 6.

The majority of suicides occurred among children aged 15-17 years (77%) (Figure 32).

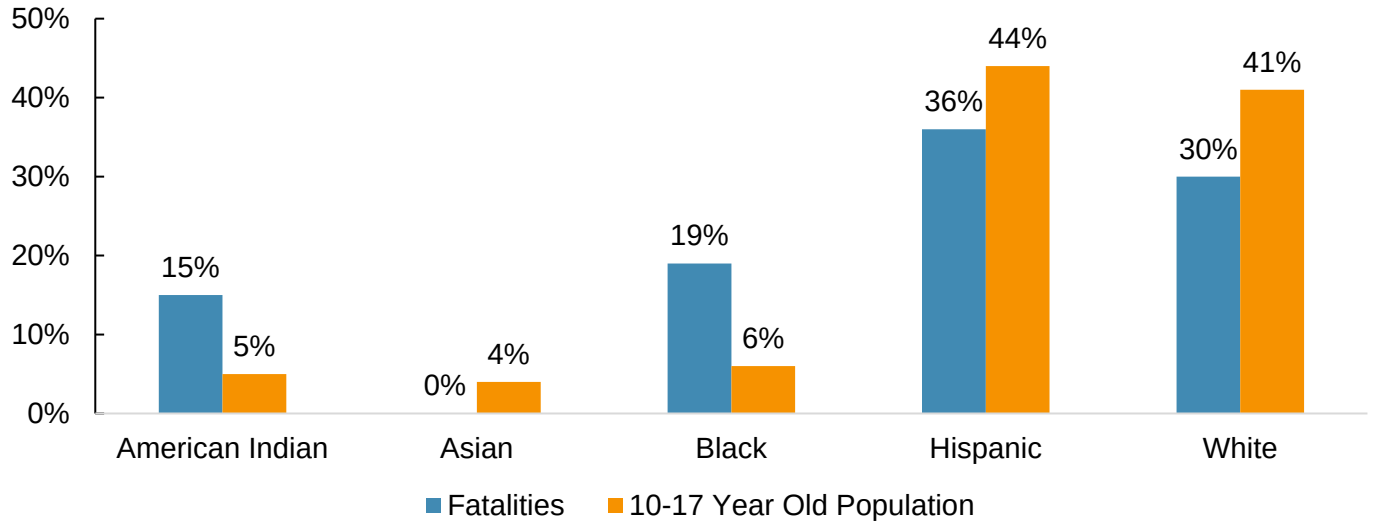
Figure 32. Percentage of Suicides by Age Group, Ages 10-17 Years, Arizona, 2023 (n=53)*



*Data for children under the age of 10 was suppressed due to counts less than 6.

American Indian and Black children, aged 10-17 years, made up 15% and 19% of suicides, respectively, but only 5% and 6% of the 10-17-year-old population. The largest percentage of suicides was among Hispanic (36%) children. Asian children experienced no suicides in 2023 in Arizona (Figure 33).

Figure 33. Percentage of Suicides by Race/Ethnicity, compared to the 10–17-Year-Old Population, Ages 10-17 Years, Arizona, 2023 (n=53)*[51]



*Data for children under the age of 10 was suppressed due to counts less than 6.

Among suicides, firearm injury (44%) was the leading cause of death for children aged 5-17 years, followed by strangulation (35%) (Table 14).

Table 14. Cause of Suicides, Ages 5-17 Years, Arizona, 2023 (n=54)

Cause of Death	Number	Percent
Firearm Injury	24	44%
Strangulation	19	35%
Fall/Crush	*	*
Poisoning	*	*

*Number/Percentage suppressed due to count less than 6.

While numerous risk factors can contribute to suicide, the most commonly identified risk factors were child relationship issues (67%), recent (within 30 days of the child's death) suicide warnings (59%), and school issues for the child (48%) (Table 15).

Table 15. Risk Factors of Suicides, Ages 5-17 Years, Arizona, 2023 (n=54)

Risk Factors*	Number	Percent
Child Relationship Issues	36	67%
Recent Suicide Warning	32	59%
School Issues	26	48%
Firearm Access	24	44%
Prior Suicide Attempt	23	43%
Mental Health/Substance Use Disorder	22	41%
Substance Use	21	39%
CPS History with the Family	21	39%
History of Trauma/Violence	21	39%
Recent Crisis	18	33%
Parent Substance Use	16	30%
Poverty	9	17%
Death of a Loved One (i.e., peer, friend, or family member)	8	15%
Isolation	7	13%

*More than one risk factor may have been identified in each death.

Undetermined Manner Deaths

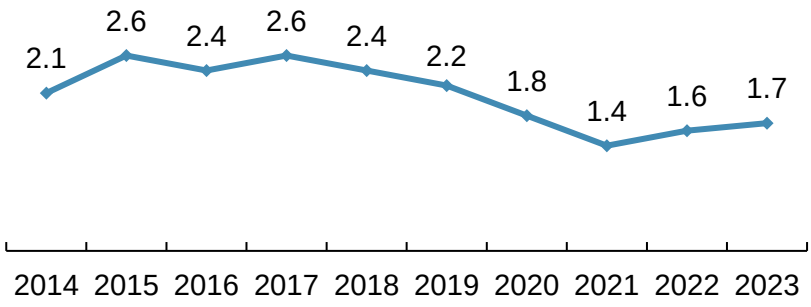
A death that the CFR State Team, after review of all available documents, is unable to decide whether the manner of death was natural, accident, homicide, or suicide. See the Glossary for further explanation.

Total Undetermined Deaths
29
(3% of all child deaths)

10.1% increase
in mortality rate from 2022
(1.7 deaths per 100,000 children in 2023)

90%
of Undetermined Manner Deaths were Preventable

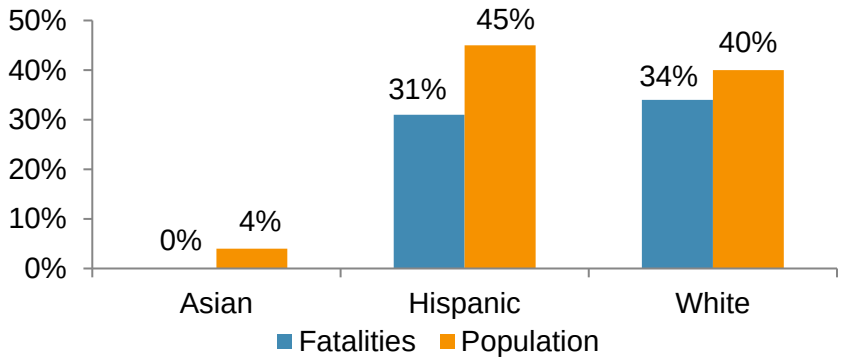
Mortality Rate per 100,000 Children Due to Undetermined Manner Deaths, Ages Birth to 17 Years[2-11]



Top Causes of Undetermined Manner Deaths:

Undetermined	Other (i.e., Firearm, Poisoning, Fire, Fall)
76% (22 deaths)	24% (7 deaths)

Percentage of Undetermined Manner Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years[**2]**



66% of undetermined manner deaths occurred in **infants (less than one year of age)**

55% of undetermined manner deaths were among **females**

**Data for American Indian and Black children suppressed due to counts less than 6.

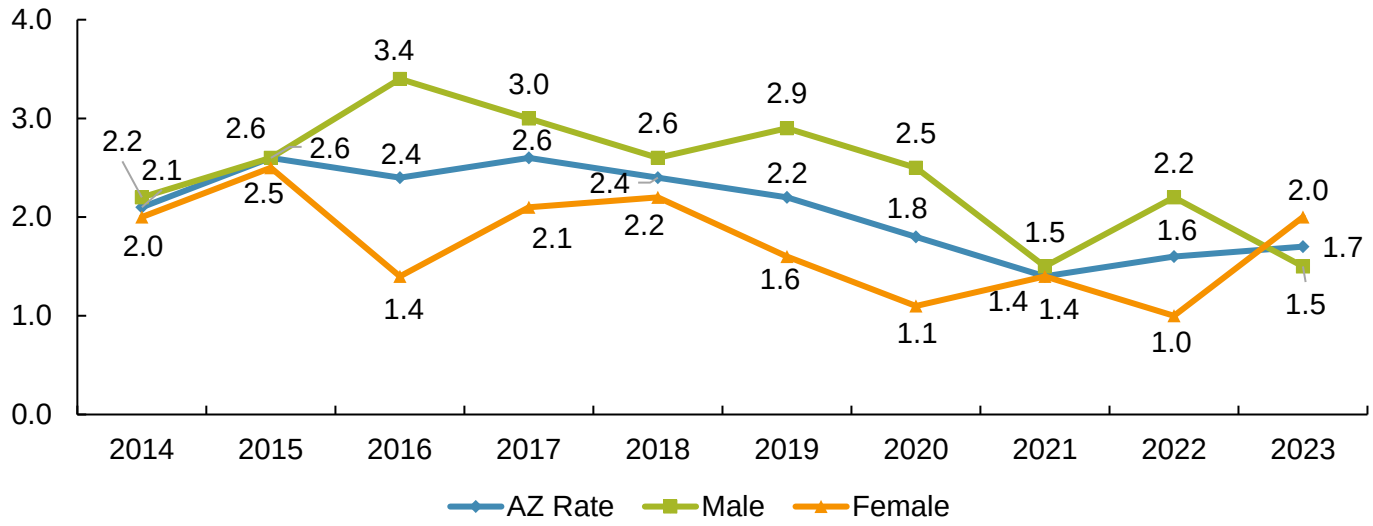
Leading Risk Factors of Undetermined Manner Deaths*:

Parent Substance Use History	Poverty	CPS History with the Family	Unsafe Sleep Environment	No Crib Present
55%	55%	48%	45%	34%

*More than one risk factor may have been identified for each death.

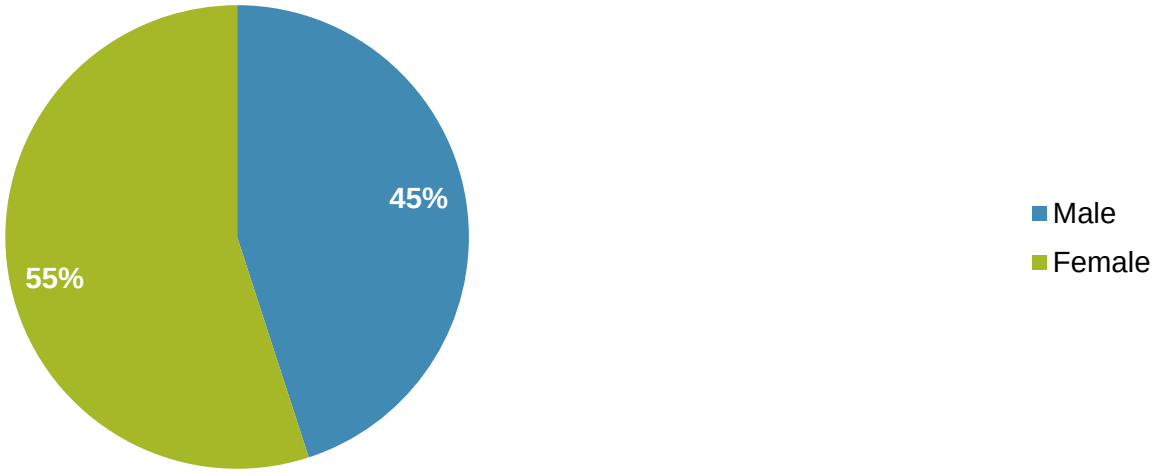
Arizona's undetermined manner of death rate has increased by 10.1% from 1.6 deaths per 100,000 children in 2022 to 1.7 deaths per 100,000 children in 2023. Males have consistently had a higher undetermined manner of death rate compared to females until 2023, when females surpassed the male mortality rate (Figure 34).

Figure 34. Mortality Rate per 100,000 Children due to Undetermined Death by Sex, Ages Birth to 17 Years, Arizona, 2014-2023 [2-11]



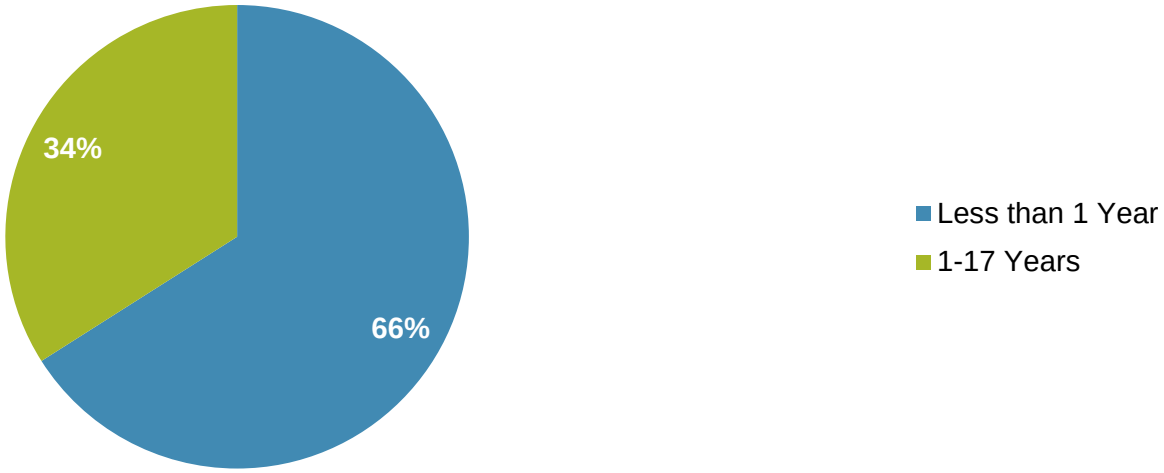
The majority of undetermined manner of deaths occurred among females (55%) (Figure 35).

Figure 35. Percentage of Undetermined Deaths by Sex, Ages Birth to 17 Years, Arizona, 2023 (n=29)



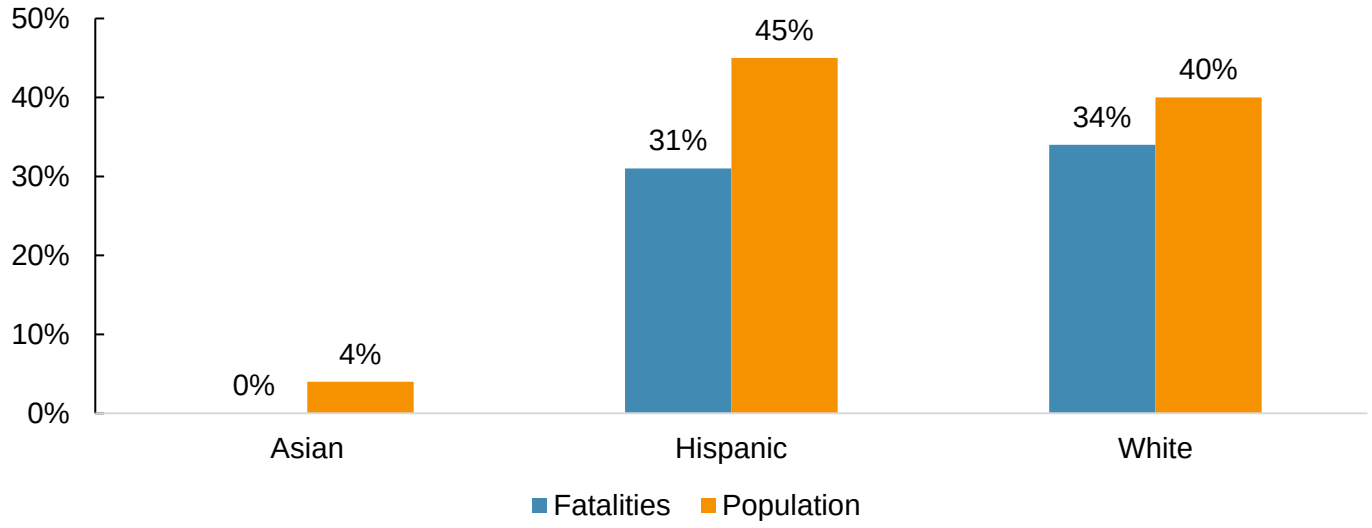
The majority of undetermined manner of deaths occurred among infants less than one year of age (66%) (Figure 36).

Figure 36. Percentage of Undetermined Deaths by Age Group, Ages Birth to 17 Years, Arizona, 2023 (n=29)



The largest percentage of unknown manner of deaths was among White (34%) children, followed by Hispanic (31%) children. Asian children experienced no undetermined manner of death in 2023 in Arizona (Figure 37).

Figure 37. Percentage of Undetermined Deaths by Race/Ethnicity, compared to the population, Ages Birth to 17 Years, Arizona, 2023 (n=29)*[2]



*Data for American Indian and Black children suppressed due to counts less than 6.

Among undetermined manner deaths, undetermined (76%) was the leading cause of death for children aged birth to 17 years (Table 16).

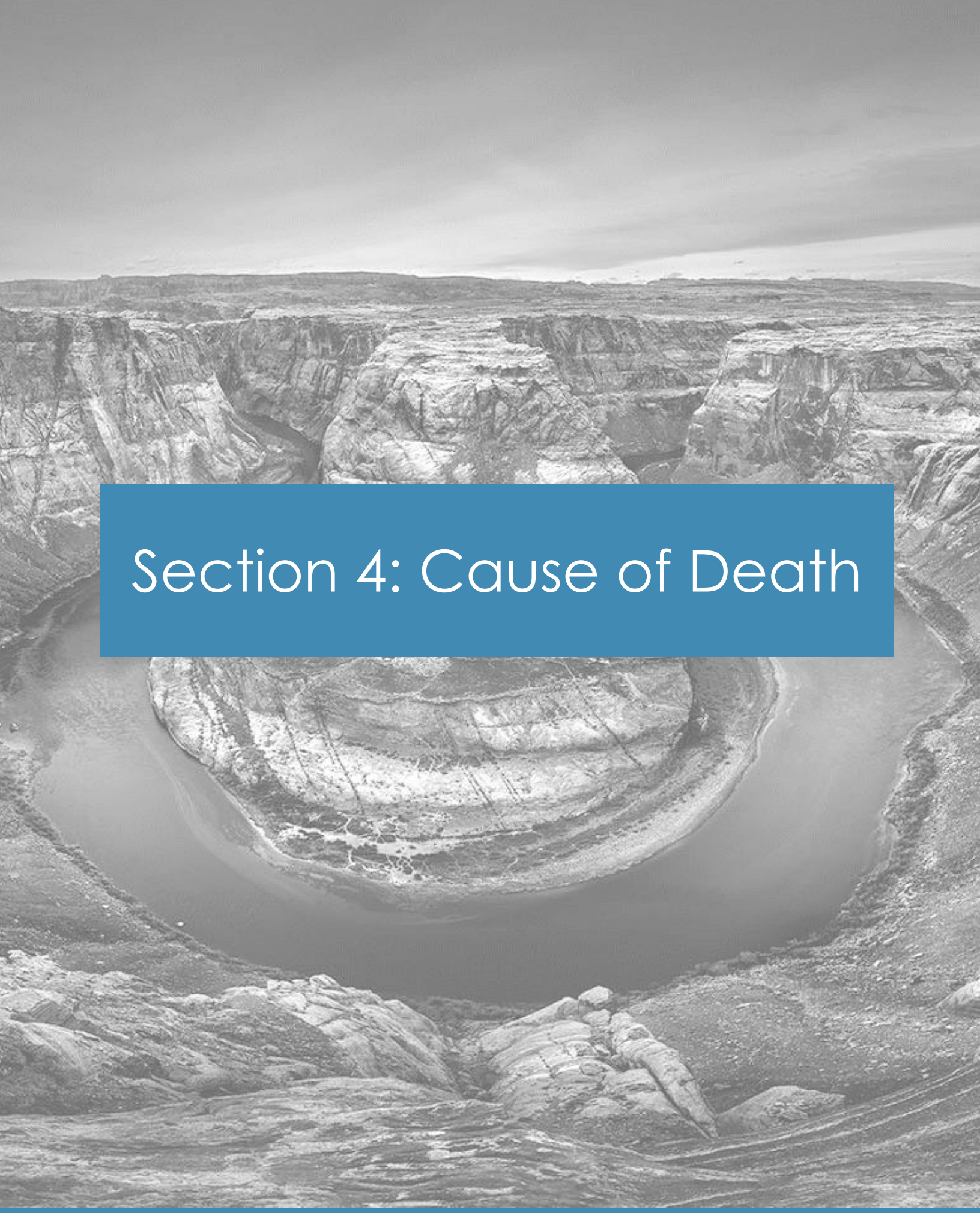
Table 16. Cause of Undetermined Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=29)

Cause of Death	Number	Percent
Undetermined	22	76%
Other (i.e., Firearm, Poisoning, Fire, Fall)	7	24%

The most commonly identified risk factors for an undetermined manner of death were parent substance use history and poverty (55%; 55%) (Table 17).

Table 17. Risk Factors of Undetermined Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=29)

Risk Factors**	Number	Percent
Parent Substance Use History	16	55%
Poverty	16	55%
CPS History with the Family	14	48%
Unsafe Sleep Environment	13	45%
No Crib Present	10	34%
Substance Use	9	31%
Housing Insecurity	8	28%
Child's Chronic Condition	8	28%
Lack of Supervision	7	24%
**More than one risk factor may have been identified in each death.		



Section 4: Cause of Death

Drowning Deaths

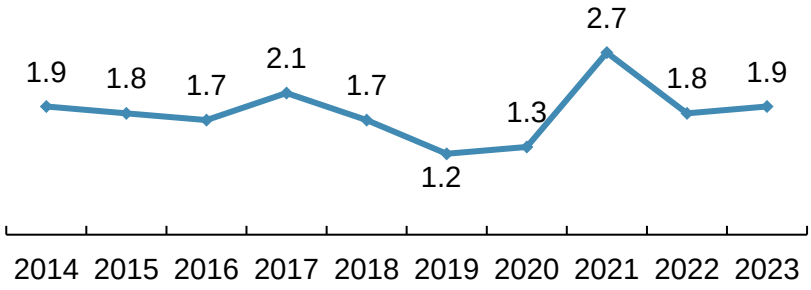
Death from an accidental or intentional submersion in a body of water. See the Glossary for further explanation.

Total Drowning Deaths
31
(3% of all child deaths)

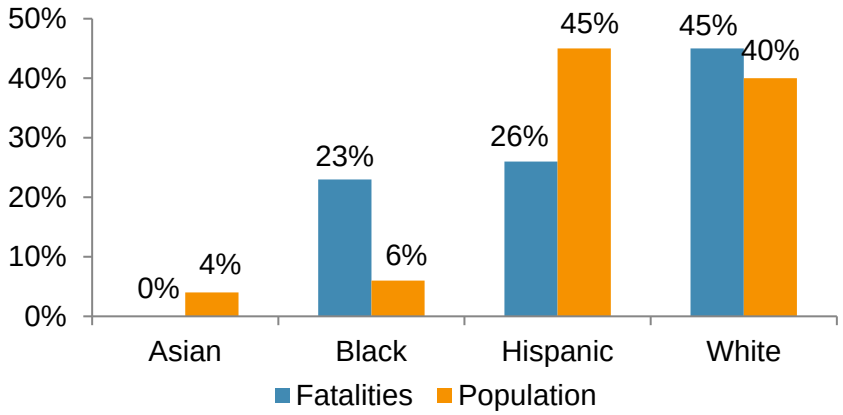
1.6% increase
in mortality rate from 2022
(1.9 deaths per 100,000 children in 2023)

100%
of Drowning Deaths were Preventable

Mortality Rate per 100,000 Children Due to Drowning, Ages Birth to 17 Years[2-11]



Percentage of Drowning Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years[2]



71% of drowning deaths occurred in **children less than five years of age**

58% of drowning deaths were among **males**

**Data for American Indian children was suppressed due to counts less than 6.

Leading Risk Factors of Drowning Deaths*:

Lack of Supervision	Inability to Swim	Lack of Pool Barrier	Poverty	CPS History with the Family
87%	68%	58%	39%	39%

*More than one risk factor may have been identified for each death.

Top 5 Drowning Death Prevention Recommendations*:

(1) Ensure availability and accessibility of CPR training for parents/caregivers.[69]

(2) Increase drowning education and family outreach to promote water safety in multiple languages.[63-68]

a. Parents and caregivers should ensure children are not left unattended near pools or pool areas. A focused adult supervisor should watch children in or around open water, pools, and spas. This is especially true for high-risk groups such as refugee families, families with young children, and children with special needs (e.g., autism, seizure disorders, etc.).

b. Parents and caregivers should constantly supervise children under four years of age during bath time and how rapidly a drowning can occur in any water source, including bathtubs. Adult supervision is the key to preventing children from drowning. These points should continue to be reiterated, and drowning prevention education should be expanded.

(3) Ensure public pools and businesses (including rental properties) with pools have a proper pool enclosure and are up to code.[64-67]

a. Pools must be enclosed on all four sides by a wall, fence, or barrier to ensure restricted access to young children. Pool enclosures must be at least 5 feet tall and 20 inches from the water's edge and have a gate at least 54 inches above the floor that swings away from the pool. The gate should have a self-closing/latching mechanism. There should be no openings in pool enclosures wide enough for a child to get through or under. There should be no protrusions, like handholds, which can be used to climb the enclosure.

(4) Ensure the availability and accessibility of affordable swim lessons that are developmentally, culturally, and linguistically appropriate, especially for children after age one.[64, 66]

(5) Create a state fund to assist families with pool safety devices if they cannot afford them. Instruct parents that inflatable swimming aids and personal floatation devices are not a substitute for a life jacket. Families should have their children wear appropriately fitted, Coast Guard-approved life jackets when on a boat, dock, or near bodies of water.[66]

*See the Drowning Prevention Recommendations for additional evidence-based recommendations.

Resources:**

ADHS Water Safety and Drowning Prevention

- https://www.azdhs.gov/prevention/womens-childrens-health/injury-prevention/drowning-prevention/index.php

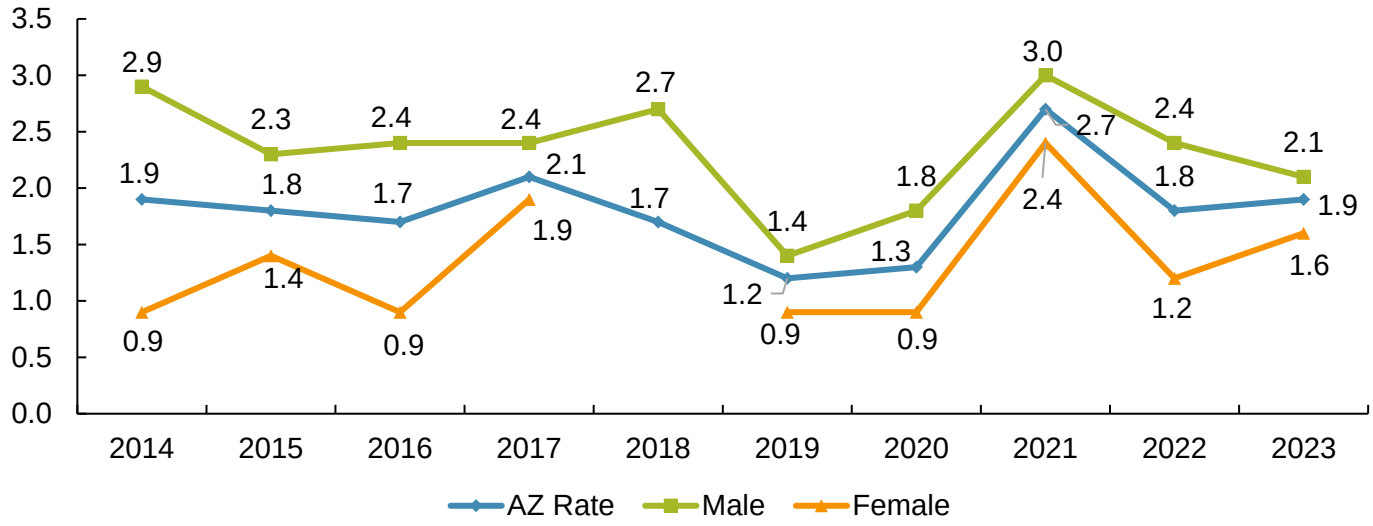
Drowning Prevention Coalition of Arizona

- https://www.preventdrownings.org/

**See the Drowning Prevention Resources for additional resources.

Overall, Arizona's drowning rate has fluctuated since 2014. Arizona's drowning rate increased by 1.7%, from 1.8 deaths per 100,000 children in 2022 to 1.9 deaths per 100,000 children in 2023. Males have consistently had a higher drowning rate compared to females (Figure 38).

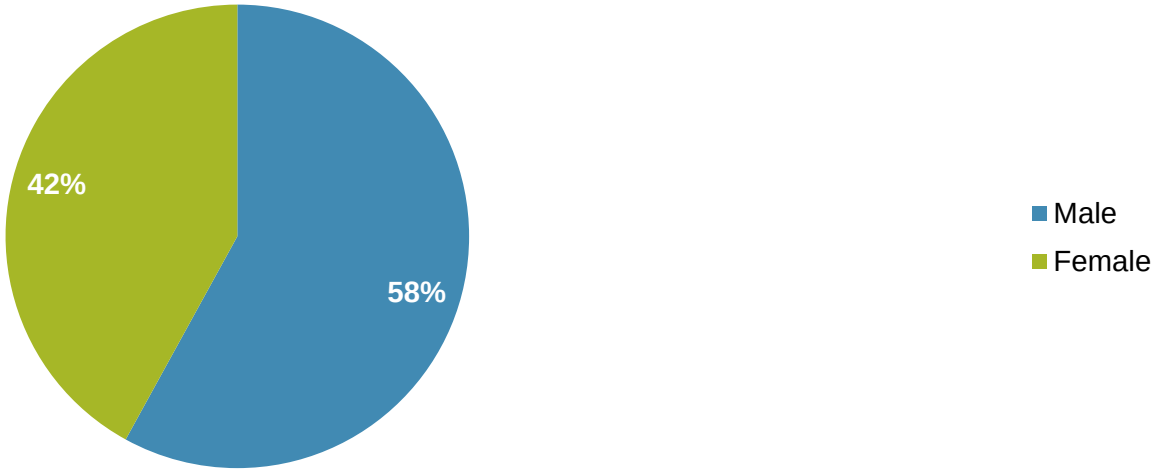
Figure 38. Mortality Rate per 100,000 Children due to Drowning by Sex, Ages Birth to 17 Years, Arizona, 2014-2023*[2-11]



*2018 data on female children was not included due to a small sample size.

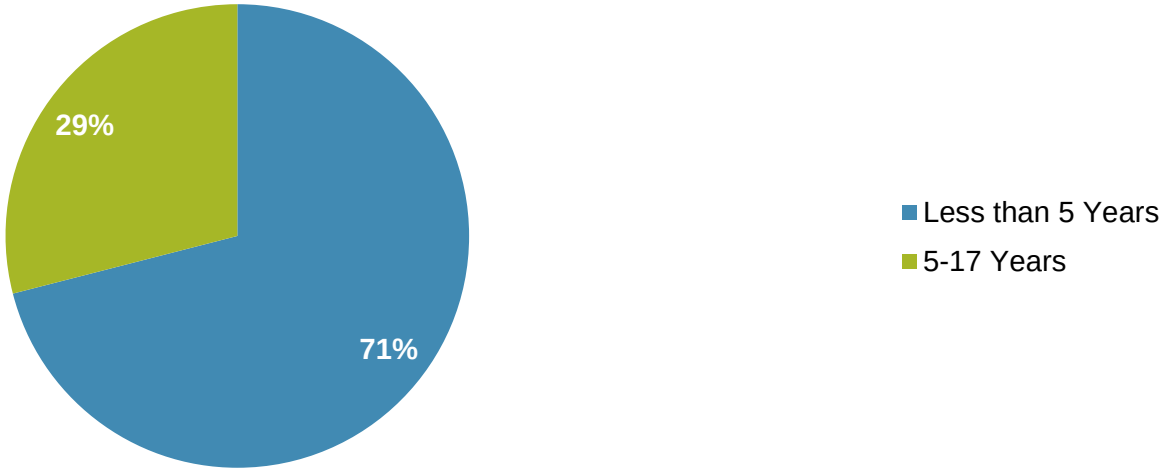
The majority of drowning deaths occurred among males (58%) (Figure 39).

Figure 39. Percentage of Drowning Deaths by Sex, Ages Birth to 17 Years, Arizona, 2023 (n=31)



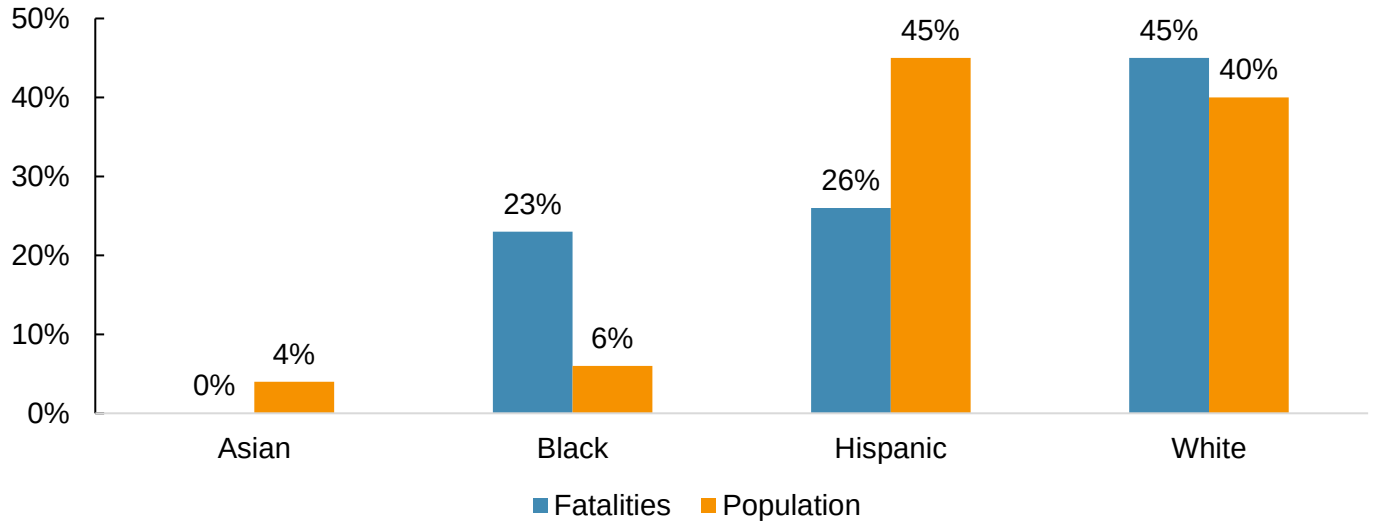
The majority of drowning deaths occurred among children less than five years old (71%) (Figure 40).

Figure 40. Percentage of Drowning Deaths by Age Group, Ages Birth to 17 Years, Arizona, 2023 (n=31)



Black children made up 23% of drowning deaths but only comprised 6% of the total child population. Additionally, White children made up 45% of drowning fatalities but only comprised 40% of the total population. White children made up the largest percentage of drowning deaths (45%). Asian children experienced no drowning deaths in 2023 in Arizona (Figure 41).

Figure 41. Percentage of Drowning Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years, Arizona, 2023 (n=31)*[2]



*Data for American Indian children suppressed due to counts less than 6.

The majority of drowning deaths occurred in pools, hot tubs, or spas (65%) (Table 18).

Table 18. Number and Percentage of Drowning Deaths by Location, Ages Birth to 17 Years, Arizona, 2023 (n=31)

Location	Number	Percent
Pool, Hot Tub, Spa	20	65%
Open Water/Pond	6	19%
Bathtub	*	*
*Number/Percentage suppressed due to count less than 6.		

Among the cases where a pool barrier was in place to prevent drowning, the most frequently breached barrier was the door (48%) or the fence (48%) (Table 19). 47% of the door breaches were because the door was left open, and 80% of the fence breaches were because there was no fence present.

Table 19. Number and Percentage of Drowning Deaths by Location, Ages Birth to 17 Years, Arizona, 2023 (n=31)

Breach Location*	Number	Percent
Door Breached (i.e., left open, lock broken, pet door)	15	48%
Fence (i.e., no fence, climbed, broken, too short)	15	48%
Gate Breached (i.e., broken or left open)	6	19%
*More than one breach location may have been identified in each death.		

While numerous preventable risk factors contribute to drowning, lack of supervision (87%) was the most commonly identified risk factor, followed by the child's inability to swim (68%) and the lack of a pool barrier (58%) (Table 20).

Table 20. Risk Factors of Drowning Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=31)

Risk Factors*	Number	Percent
Lack of Supervision	27	87%
Inability to Swim	21	68%
Lack of Pool Barrier	18	58%
Poverty	12	39%
CPS History with the Family	12	39%
Parent Substance Use History	8	26%
Child's Chronic Condition	8	26%
Substance Use	7	23%
*More than one risk factor may have been identified in each death.		

Of the 30 drowning incidents that needed supervision, the child's parent was the individual who was responsible for supervision in 67% of the cases (Table 21).

Table 21. Responsible Supervisor during Drowning Incidents Requiring Supervision, Ages Birth to 17 Years, Arizona, 2023 (n=30)

Responsible Supervisor	Number	Percent
Parent	20	67%
Other (i.e., Other Relative, Babysitter)	10	33%

Firearm Injury Deaths

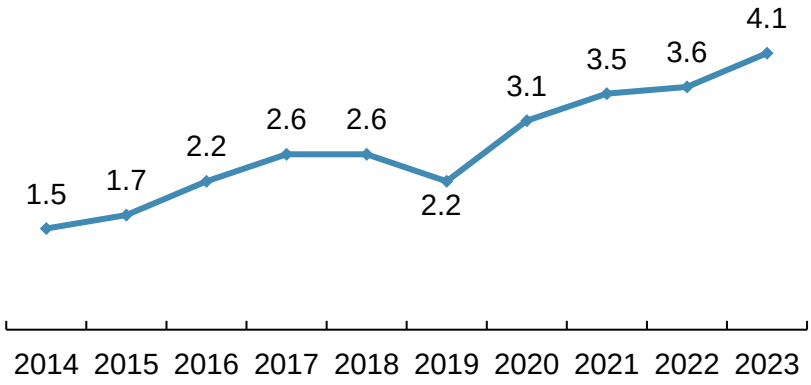
Death caused by an injury resulting from the penetrating force of a bullet or other projectile shot from a powder-charged gun. See the Glossary for further explanation.

Total Firearm Injury Deaths
68
(8% of all child deaths)

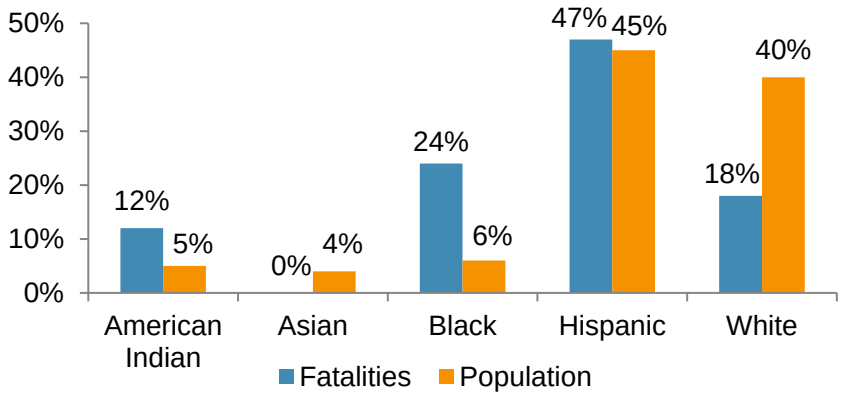
13.4% increase
in mortality rate from 2022
(4.1 deaths per 100,000 children in 2023)

100%
of Firearm Injury Deaths were Preventable

Mortality Rate per 100,000 Children Due to Firearm Injury, Ages Birth to 17 Years[2-11]



Percentage of Firearm Injury Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years[2]



75% of firearm injury deaths occurred in **children ages 15-17 years**

84% of firearm injury deaths were among **males**

Leading Risk Factors of Firearm Injury Deaths*:

Access to Firearm (User Less Than 18 years)	CPS History with the Family	Substance Use	History of Trauma/ Violence	Unlocked Firearm
60%	59%	56%	46%	40%

*More than one risk factor may have been identified for each death.

Top 5 Firearm Injury Death Prevention Recommendations*:

(1) Increase public awareness that the most effective way to prevent firearm-related deaths in children and adolescents is to remove all firearms in households.[70-72]
   a. The presence of firearms in a household increases the risk of suicide among adolescents. Parents of all adolescents should remove all guns, especially if there is a history of mental health issues or substance use issues.
   b. Gun owners should practice safe storage of their firearms, which requires keeping the gun unloaded and locked in a safe separate from the ammunition.

(2) Provide parents with education on positive parenting strategies.[75, 76]
   a. Proper supervision of teens
   b. Internet/social media safety
   c. Increased supervision for children, especially those in distress, risks of isolation for children in distress, alternatives to restricting technology
   d. How to handle challenging behaviors and discipline
   e. Conflict resolution

(3) The state should implement policies, programs, and initiatives focused on responsible firearm access and ownership. This could include:[104,105]
   a. Requiring mental health screening and gun safety training as part of the firearm purchasing process
   b. Licensing and tracking firearm ownership
   c. Increase public awareness of reporting stolen firearms and establish penalties for failing to report.

(4) Increase funding, access, and use of quality and affordable community mental health and intervention programs.[73, 74]

(5) Have mental health materials present and available in the pediatrician's office and other healthcare facilities and screen patients for substance abuse and mental health concerns.[70, 71, 73]

*See the Firearm Injury Death Prevention Recommendations for additional evidence-based recommendations.

Resources:**

CCHHS Firearm Safety and Education
- https://www.coconino.az.gov/249/Injury-Prevention#FirearmSafetyandEducation

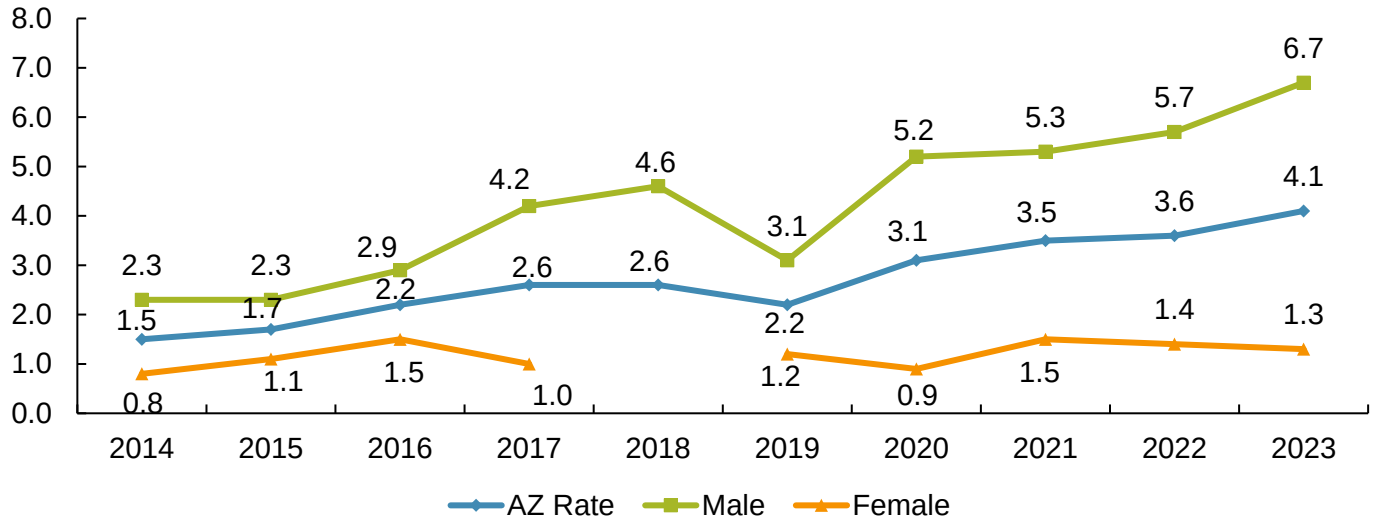
Safe Gun Storage
- https://www.coconino.az.gov/DocumentCenter/View/64285/Safe-Gun-Storagae-ask-tip-sheet

How to Talk to Your Kids About Guns
- https://www.coconino.az.gov/DocumentCenter/View/64286/Talking-to-your-kids-about-guns

**See the Firearm Injury Death Prevention Resources for additional resources.

Overall, Arizona's firearm injury mortality rate has increased 171% since 2014. Males have consistently had a higher firearm injury mortality rate compared to females. Arizona's firearm injury mortality rate increased by 13.4%, from 3.6 deaths per 100,000 children in 2022 to 4.1 deaths per 100,000 children in 2023 (Figure 42).

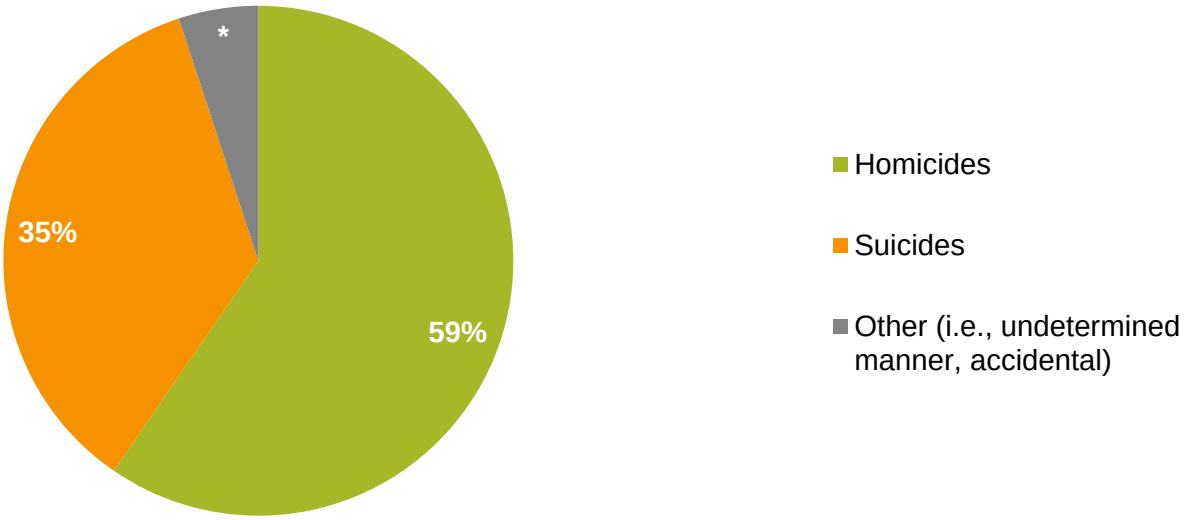
Figure 42. Mortality Rate per 100,000 Children due to Firearm Injury by Sex, Ages Birth to 17 Years, Arizona, 2014-2023*[2-11]



*2018 data on female children were not included due to the small sample size.

The majority of firearm injury deaths were due to homicides (59%) followed by suicides (35%) and undetermined manner (4%) (Figure 43).

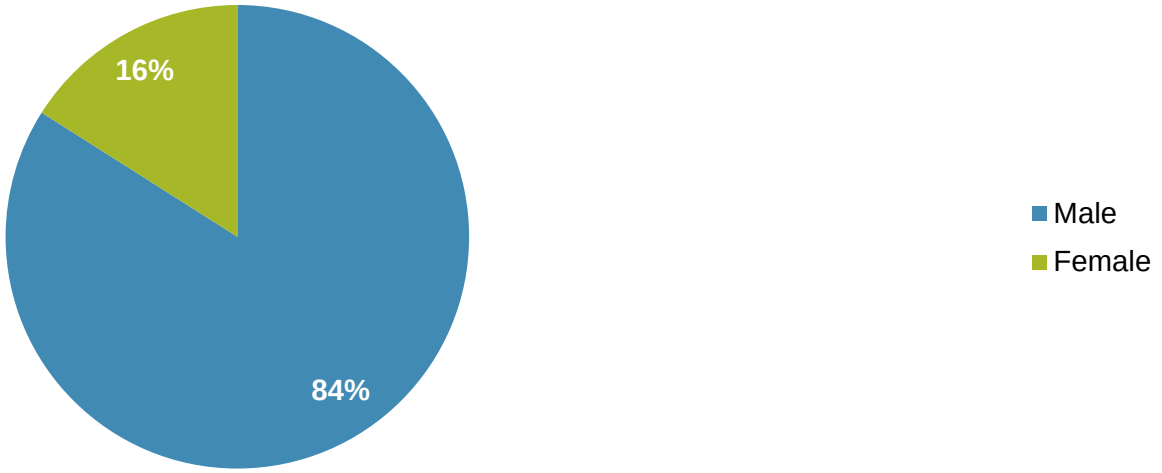
Figure 43. Percentage of Firearm Injury Deaths by Manner of Death, Ages Birth to 17 Years, Arizona, 2023 (n=68)



*Percentage suppressed due to count less than 6.

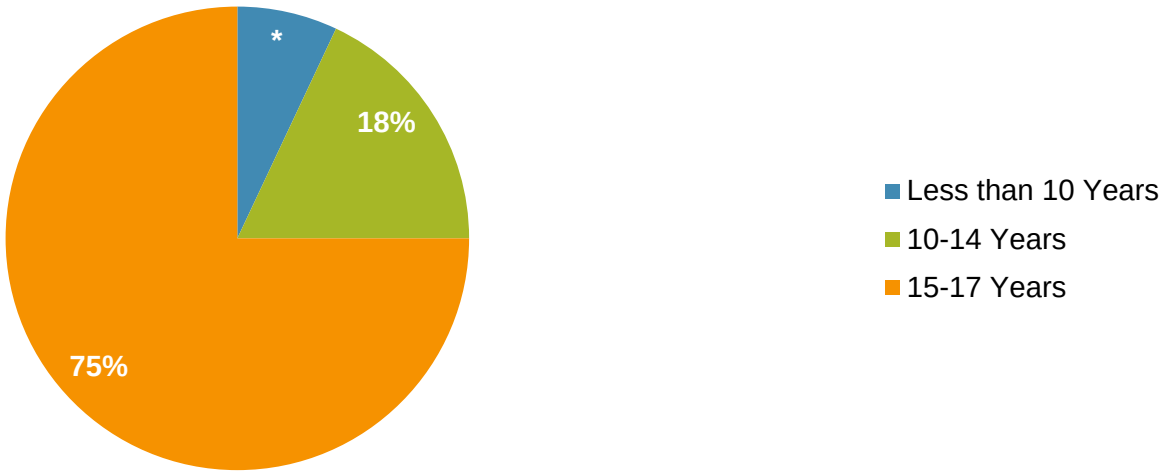
The majority of firearm injury deaths occurred among males (84%) (Figure 44).

Figure 44. Percentage of Firearm Injury Deaths by Sex, Ages Birth to 17 Years, Arizona, 2023 (n=68)



The majority of firearm injury deaths occurred among children aged 15 to 17 years (75%), followed by children aged 10 to 14 years (18%) (Figure 45).

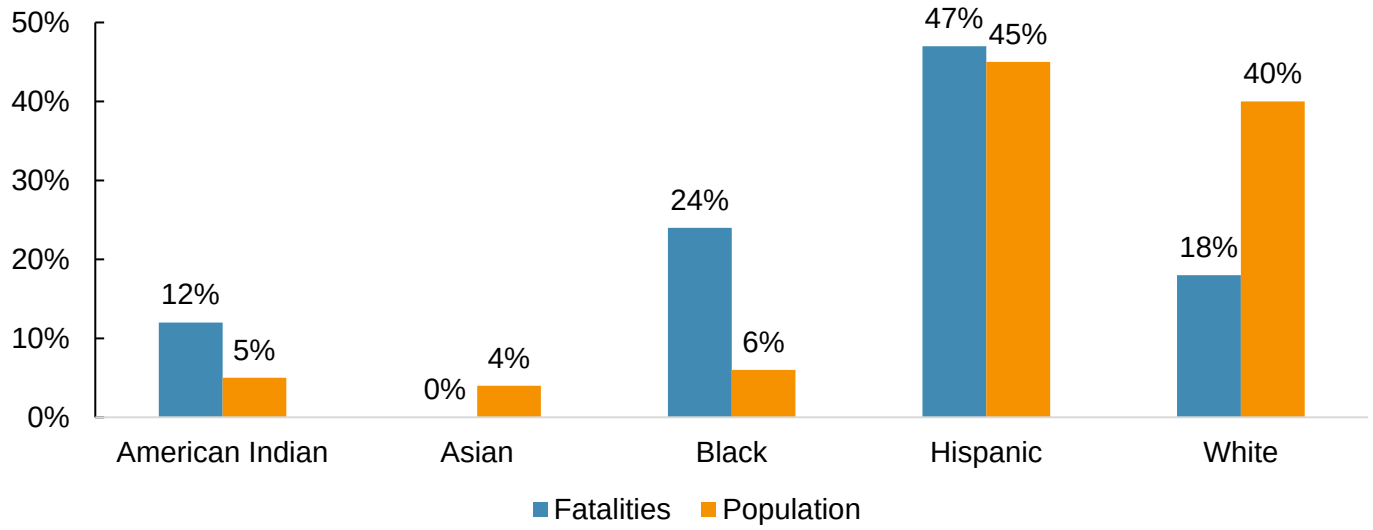
Figure 45. Percentage of Firearm Injury Deaths by Age Group, Ages Birth to 17 Years, Arizona, 2023 (n=68)



*Percentage suppressed due to count less than 6.

American Indian and Black children made up 12% and 24% of firearm injury deaths, respectively, but only comprised 5% and 6% of the total child population. Additionally, Hispanic children made up 47% of firearm injury deaths but only comprised 45% of the total child population. Hispanic children made up the largest percentage of firearm injury deaths (47%). Asian children experienced no firearm injury deaths in 2023 in Arizona (Figure 46).

Figure 46. Percentage of Firearm Injury Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years, Arizona, 2023 (n=68)[2]



While numerous preventable risk factors contribute to firearm injury deaths, access to firearms among users less than 18 years of age (60%) was the most identified risk factor. This is followed by CPS history with the family (59%) and substance use (56%) (Table 22).

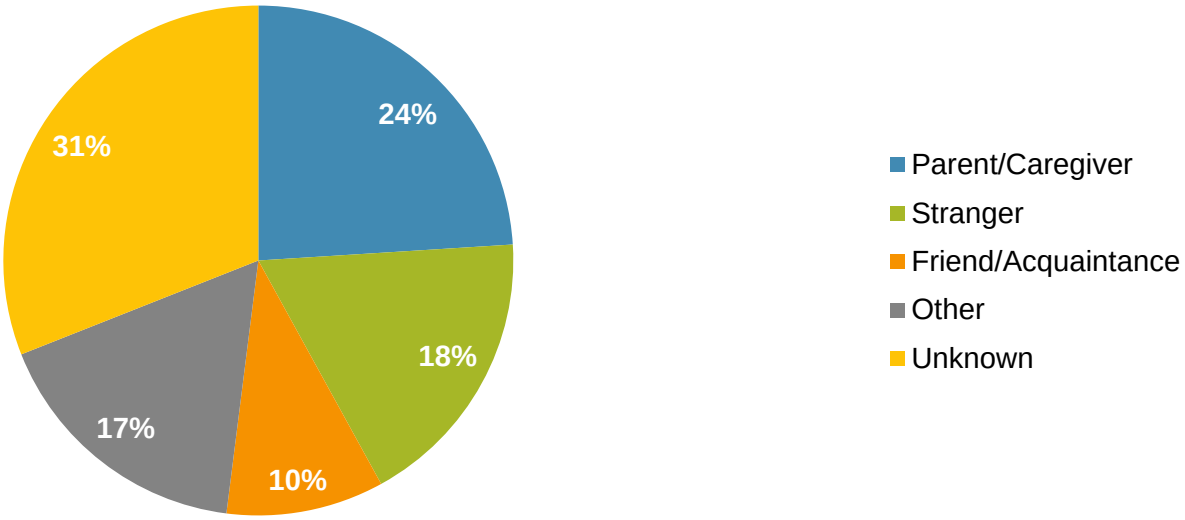
Table 22. Risk Factors of Firearm Injury Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=68)

Risk Factors*	Number	Percent
Access to Firearm (User less than 18 years)	41	60%
CPS History with the Family	40	59%
Substance Use	38	56%
History of Trauma/Violence	31	46%
Unlocked Firearm	27	40%
Parent Substance Use History	26	38%
Child Relationship Issues	25	37%
Criminal Activity	22	32%
Lack of Supervision	15	22%
Poverty	11	16%

*More than one risk factor may have been identified in each death.

In 31% of firearm injury deaths, the owner of the firearm was unknown. The child's parent/caregiver as the owner accounted for 24% of the firearm injury deaths (Figure 47).

Figure 47. Percentage of Owners Involved in Firearm Injury Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=68)



In 44% of firearm injury deaths, the firearm user was the child themselves (Table 23).

Table 23. Firearm User Involved in Firearm Injury Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=68)

Person Using Firearm**	Number	Percent
Self	30	44%
Stranger	14	21%
Friend/Acquaintance	12	18%
Relative (i.e., Parent, Step-Parent, Grandparent, Sibling)	7	10%
Other (i.e., Gang Rival, Law Enforcement)	6	9%
Unknown	*	*
*Number/Percentage suppressed due to count less than 6.		
**More than one person may be using a firearm.		

Of the firearm injury deaths, 78% involved a handgun (Table 24).

Table 24. Types of Firearms Used in Firearm Injury Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=68)

Type of Firearm	Number	Percent
Handgun	53	78%
Rifle	6	9%
Unknown	6	9%
Other (i.e., Shotgun)	*	*
*Number/Percentage suppressed due to count less than 6.		

When looking at the location where the firearm injury occurred, most of the deaths occurred in the child's home (35%), followed by a friend/relative's home (19%). Nineteen percent of firearm injury deaths occurred in other locations, such as parking lots, driveways, stores, and other dwellings, including abandoned houses, short-term rentals, and strangers' homes (Table 25).

Table 25. Number and Percentage of Firearm Injury Deaths by Location, Ages Birth to 17 Years, Arizona, 2023 (n=68)

Location*	Number	Percent
Child's Home	24	35%
Friend/Relative's Home	13	19%
Other (i.e., Parking Lot, Driveway, Stores, Other Homes)	13	19%
Road	12	18%
Recreational Area (i.e., Parks)	6	9%
*More than one location may have been identified for each death.		

The majority of firearm injury deaths occurred in urban counties in Arizona (90%) (Table 26).

Table 26. Number and Percentage of Firearm Injury Deaths by Residency, Ages Birth to 17 Years, Arizona and Out of State, 2023 (n=68)

Residency	Number	Percent
Arizona Urban Counties	61	90%
Arizona Rural Counties	6	9%
Out of State	*	*
*Number/Percentage suppressed due to count less than 6		

In 40% of firearm injury deaths, the firearm was used for self-harm (Table 27).

Table 27. Uses of Firearm Involved in Firearm Injury Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=68)

Use of Firearm**	Number	Percent
Self-Harm	27	40%
Drug Deal/Criminal Activity	10	15%
Argument	8	12%
Child was a Bystander	8	12%
Self Defense	*	*
Playing with Firearm	*	*
Gang Violence	*	*
Showing to Others	*	*
Child Abuse	*	*
Jealousy	*	*
Other (i.e., Intimate Partner Violence, Lethal Games)	*	*
*Number/Percentage suppressed due to count less than 6.		
**More than one use may have been identified in each death.		

Infectious Disease-Related Deaths

Infectious disease-related deaths are deaths in which an infectious disease caused or contributed to the death. See the Glossary for further explanation.

Total Infectious Disease-Related Deaths

93

(11% of all child deaths)

5.7% increase

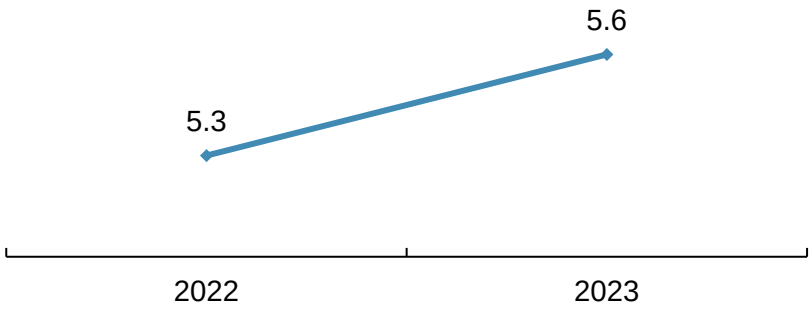
in mortality rate from 2022

(5.6 deaths per 100,000 children in 2023)

28%

of Infectious Disease-Related Deaths were Preventable

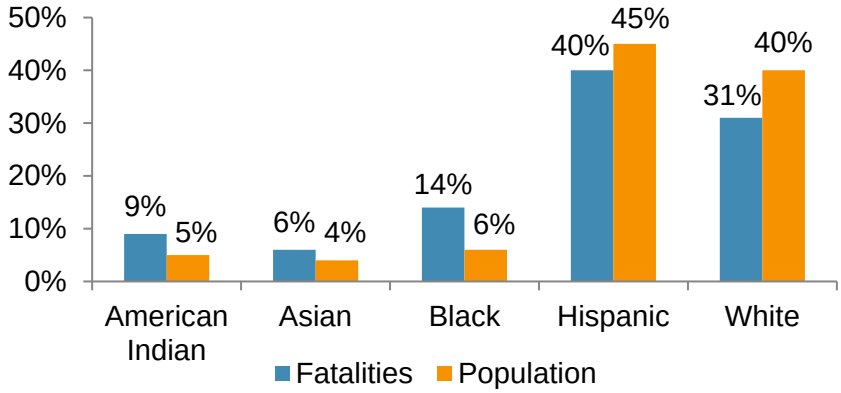
Mortality Rate per 100,000 Children Due to Infectious Disease-Related Deaths, Ages Birth to 17 Years[2-3]



Top Causes of Infectious Disease-Related Deaths:

Prematurity	Other Infections	Pneumonia	Other Medical Conditions	Cardiovascular
33% (31 deaths)	29% (27 deaths)	14% (13 deaths)	10% (9 deaths)	8% (7 deaths)

Percentage of Infectious Disease-Related Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years[2]



52% of infectious disease-related deaths occurred in **infants (less than one year of age)**

62% of infectious disease-related deaths were among **males**

Leading Risk Factors of Infectious Disease-Related Deaths*:

Poverty	Child's Chronic Condition	CPS History with the Family	Maternal Infection	Parent Substance Use History
45%	41%	28%	27%	19%

*More than one risk factor may have been identified for each death.

Top 5 Infectious Disease-Related Death Prevention Recommendations*:

(1) Increase the availability of affordable and accessible healthcare and telehealth care for families and children.

(2) Promote vaccination and vaccine confidence through ongoing, proactive messaging (i.e., reminder recall, vaccine appointment/clinics), update vaccinations, and provide vaccine education at all health care visits, including emergency room visits.[83]

(3) Increase access to home visiting programs through the state and provide health care information on the importance of keeping medical appointments and vaccinations.[84]

(4) Provide community resources for parents to find accessible, affordable, and qualified childcare.

(5) Provide parental education on the importance of following prescription instructions and not stopping treatment without talking to a healthcare provider.[85]

*See the Infectious Disease-Related Death Prevention Recommendations for additional evidence-based recommendations.

Resources:**

ADHS COVID-19 Dashboard
- https://www.azdhs.gov/covid19/data/index.php

Vaccines.gov
- https://www.vaccines.gov/en/

Syphilis During Pregnancy
- https://www.cdc.gov/std/syphilis/stdfact-congenital-syphilis.htm

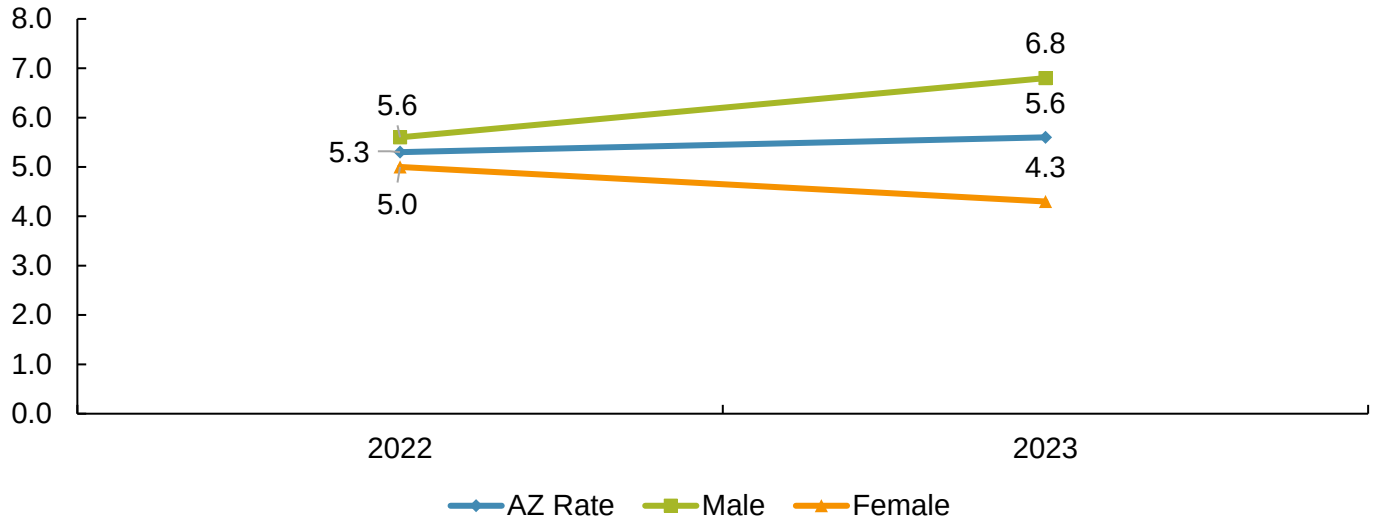
Sexually Transmitted Infection
- https://www.azdhs.gov/preparedness/epidemiology-disease-control/disease-integration-services/std-control/index.php

Not sure where to get tested? Find a clinic here:
- https://gettested.cdc.gov/search_results?location

**See the Infectious Disease-Related Death Prevention Resources for additional resources.

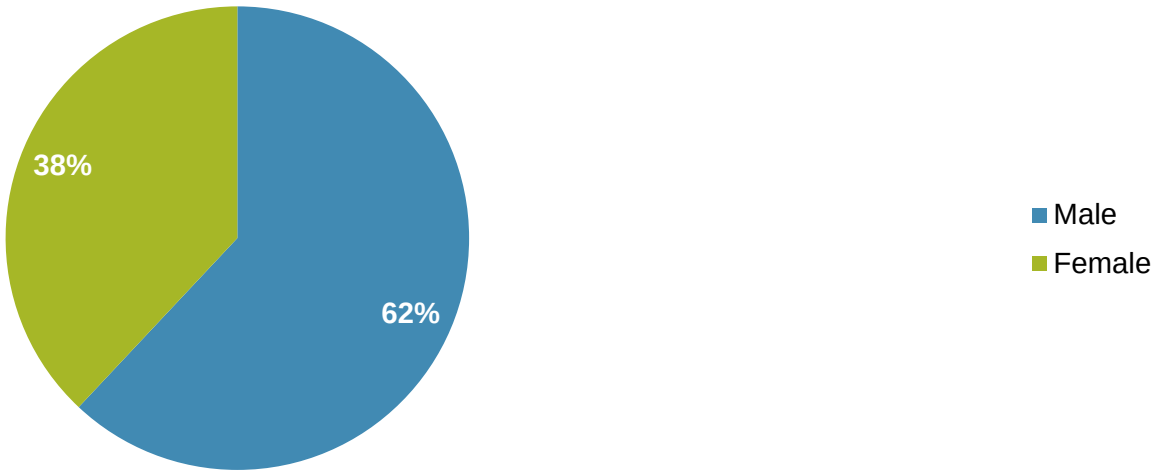
Arizona's infectious disease-related death rate has increased by 5.7%, from 5.3 deaths per 100,000 children in 2022 to 5.6 deaths per 100,000 children in 2023. Males have consistently had a higher firearm injury mortality rate compared to females since 2022 (Figure 48).

Figure 48. Mortality Rate per 100,000 Children due to Infectious Disease-Related Deaths by Sex, Ages Birth to 17 Years, Arizona, 2022-2023[2-3]



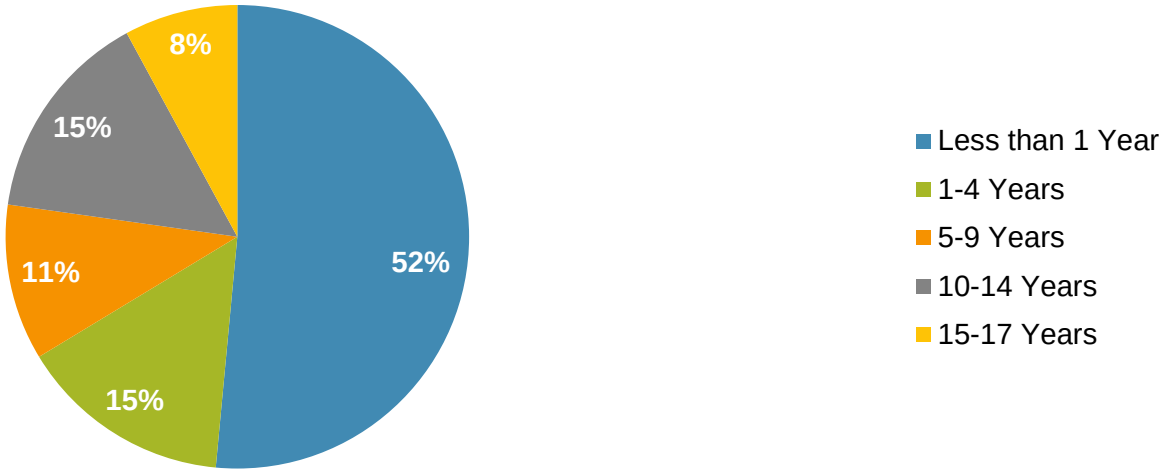
The majority of infectious disease-related deaths occurred among males (62%) (Figure 49).

Figure 49. Percentage of Infectious Disease-Related Deaths by Sex, Ages Birth to 17 Years, Arizona, 2023 (n=93)



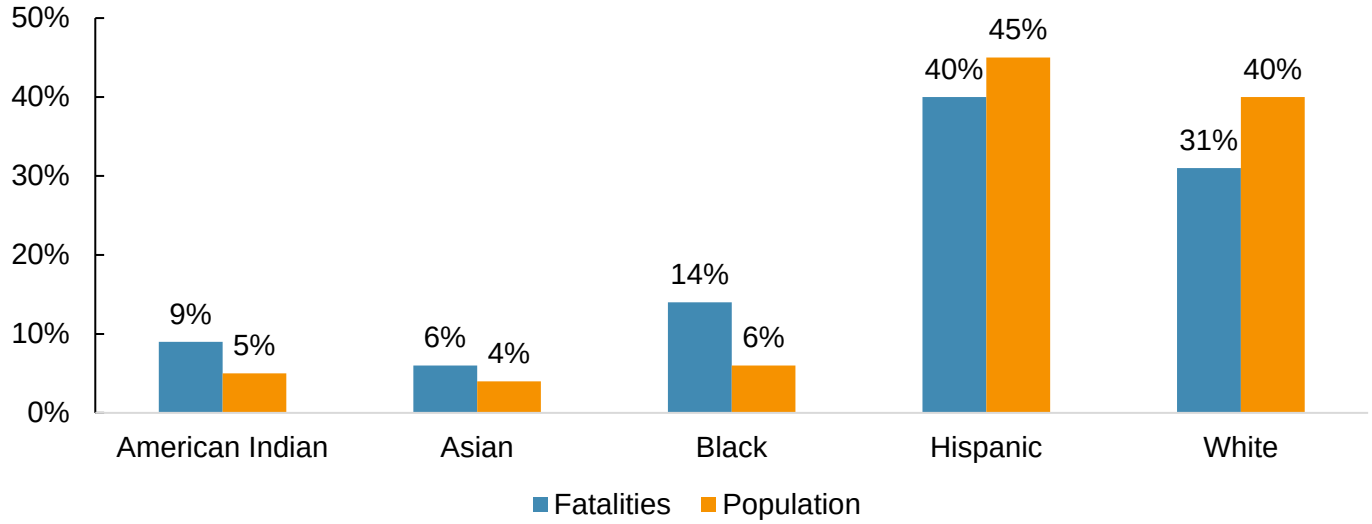
The majority of infectious disease-related deaths occurred among children less than one year of age (52%) (Figure 50).

Figure 50. Percentage of Infectious Disease-Related Deaths by Age Group, Ages Birth to 17 Years, Arizona, 2023 (n=93)



American Indian and Black children made up 9% and 14% of infectious disease-related deaths, respectively, but only comprised 5% and 6% of the total child population. Additionally, Asian children made up 6% of infectious-disease-related deaths but only comprised 4% of the total child population. The majority of infectious disease-related deaths were among Hispanic (40%) and White (31%) children (Figure 51).

Figure 51. Percentage of Infectious Disease-Related Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years, Arizona, 2023 (n=93)[2]



Among infectious disease-related deaths, Prematurity (33%), Other Infections (e.g., Influenza, Sepsis, RSV, Meningitis, and Congenital Syphilis) (29%), and Pneumonia (14%) were the leading causes for children aged birth to 17 (Table 28). Prematurity as a cause of death refers to the infection that contributed to the prematurity.

Table 28. Cause of Infectious Disease-Related Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=93)

Cause of Death	Number	Percent
Prematurity*	31	33%
Other Infections (i.e., Influenza, Sepsis, RSV, Meningitis, Congenital Syphilis)	27	29%
Pneumonia	13	14%
Other Medical Conditions (i.e., Congenital Anomaly, Cancer, Neurological, Other)	9	10%
Cardiovascular	7	8%
COVID-19	6	6%
*Prematurity as a cause of death refers to the infection that contributed to the prematurity		

While numerous preventable risk factors contribute to infectious disease-related deaths among children aged birth to 17 years, poverty (45%) was the most identified risk factor. 41% of children had a chronic condition, and 27% of children's mothers had an infection that complicated the child's health (Table 29).

Table 29. Risk Factors of Infectious Disease-Related Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=93)

Risk Factors*	Number	Percent
Poverty	42	45%
Child's Chronic Condition	38	41%
CPS History with the Family	26	28%
Inadequate Treatment, including vaccine-preventable diseases	25	27%
Maternal Infection	25	27%
Parent Substance Use History	18	19%
Inadequate Treatment	14	15%
*More than one use may have been identified in each death.		

Motor Vehicle Crash (MVC)-Related Deaths

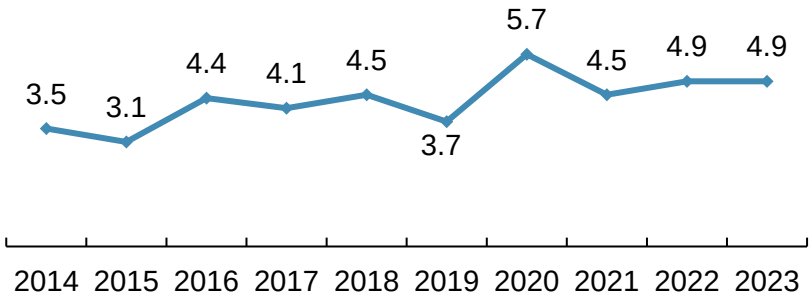
Death caused by injuries from a motor vehicle incident, including injuries to motor vehicle occupant(s), pedestrian(s), pedal cyclist(s), or another person. See the Glossary for further explanation.

Total MVC-Related Deaths
82
(10% of all child deaths)

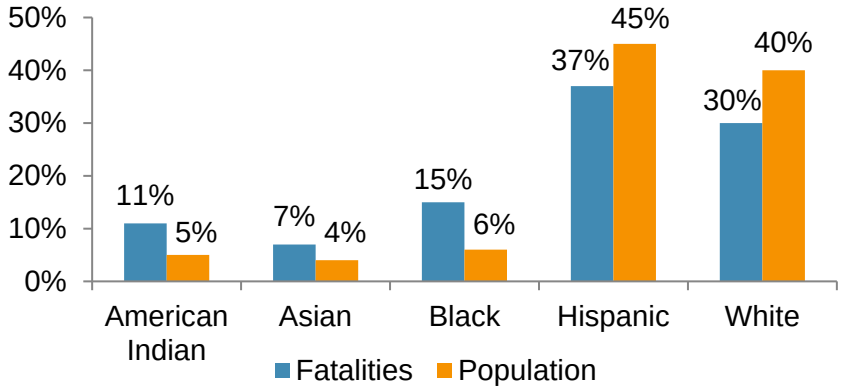
No Change
in mortality rate from 2022
(4.9 deaths per 100,000 children in 2023)

99%
of MVC-Related Deaths were Preventable

Mortality Rate per 100,000 Children Due to MVC-Related Deaths, Ages Birth to 17 Years[2-11]



Percentage of MVC-Related Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years[2]



41% of MVC-related deaths occurred in **children ages 15-17 years**

55% of MVC-related deaths were among **males**

Leading Risk Factors of MVC-Related Deaths*:

Lack of Seat Restraint	Reckless Driving	Substance Use	CPS History with the Family	Inexperienced Driver
49%	45%	43%	38%	27%

*More than one risk factor may have been identified for each death.

Top 5 Motor Vehicle Crash-Related Death Prevention Recommendations*:

(1) Families should follow the four evidence-based recommendations provided by the American Academy of Pediatrics (AAP), healthychildren.org, and NHTSA for best practices in the choice of a child restraint system to optimize safety in passenger vehicles for children:[88]
   a. Birth-12 Months: Your child under age one should always ride in a rear-facing car seat. There are different types of rear-facing car seats:
      i. Infant-only seats can only be used rear-facing.
      ii. Convertible and all-in-one car seats typically have higher height and weight limits for the rear-facing position, allowing you to keep your child rear-facing for longer.
   b. 1 – 3 Years: Your child should remain in a rear-facing car seat until they reach the height or weight limit your car seat's manufacturer allows. Once your child outgrows the rear-facing car seat, your child is ready to travel in a forward-facing car seat with a harness and tether.
   c. 4 – 7 Years: Keep your child in a forward-facing car seat with a harness and tether until they reach the height or weight limit your car seat's manufacturer allows. Once your child outgrows the forward-facing car seat with a harness, it's time to travel in a booster seat, but still in the back seat.
   d. 8 – 12 Years: Keep your child in a booster seat until they are big enough to fit in a seat belt properly. For a seat belt to fit properly, the lap belt must lie snugly across the upper thighs, not the stomach. The shoulder belt should lie snugly across the shoulder and chest and not cross the neck or face. Remember: your child should still ride in the back seat because it's safer there.
   e. 12+ Years: Lap and shoulder seat belts for all who have outgrown booster seats. All children (especially those younger than 13) should ride in the rear seats of vehicles.

(2) Continue promoting the importance of safety seats for children and providing parents with information on the locations of certified seat installers. Train parents and caregivers on how to install car safety seats correctly.[88, 90, 93]
   a. Child safety seats and seat belts save lives and increase safety for little ones, which is also required by Arizona law. Children younger than eight and shorter than 4 feet 9 inches must be properly secured in a safety or booster seat. Increase access and opportunities to provide education and resources to families on properly installing and using car seats for young children.

(3) Implement education, campaigns, and initiatives to promote safe, sober, distraction-free defensive driving for young drivers and their parents/caregivers with a focus on education on the risks of driving while intoxicated/under the influence (youth and adults).

(4) Require training/certification for adolescents operating vehicles. Ensure that children under the age of 16 do not ride an ATV. If done, ensure that the child wears a helmet, does not ride with or as a passenger, stays off and does not cross public roads, does not ride it at night, does not ride it under the influence, and uses an ATV that is the right size for the driver. Also, ensure that children under six do not operate an ATV or be passengers in the vehicle.[94]

(5) Educate children, parents, and caregivers on safe pedestrian practices, avoiding distracted walking, and awareness of proper use of crosswalks, especially at night with low visibility.[87, 88]

*See the Motor Vehicle Crash-Related Death Prevention Recommendations for additional evidence-based recommendations.

Resources:**

The Community Guide: Motor Vehicle Injury Prevention:

- https://www.thecommunityguide.org/topics/motor-vehicle-injury.html

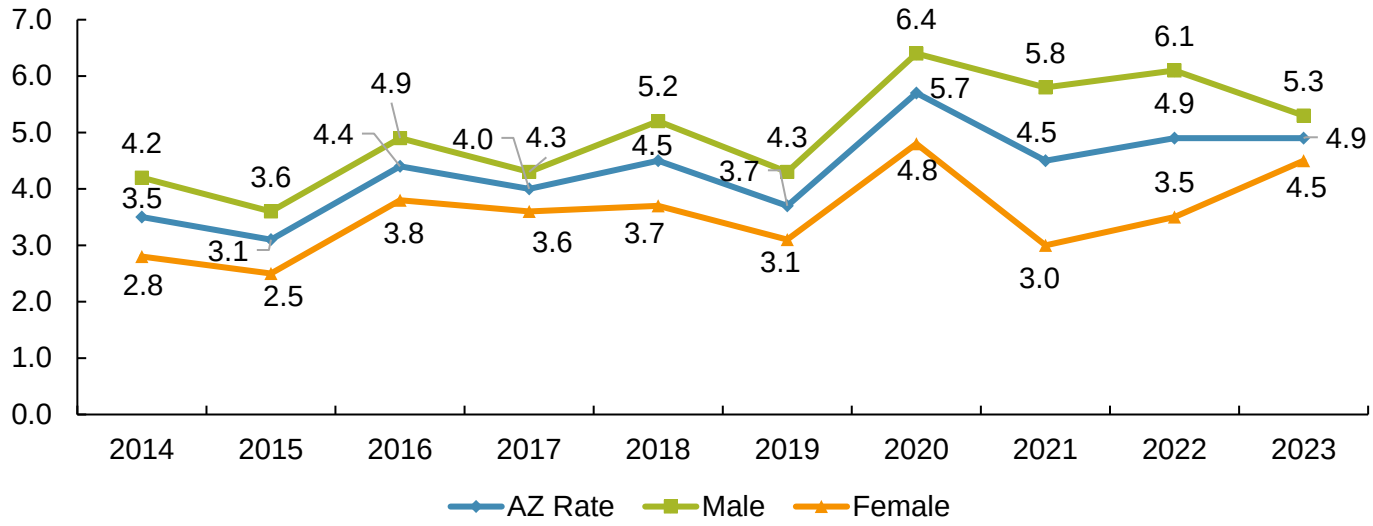
National Safety Council – Arizona Chapter

- https://www.acnsc.org/resources

**See the Motor Vehicle Crash-Related Death Prevention Resources for additional resources.

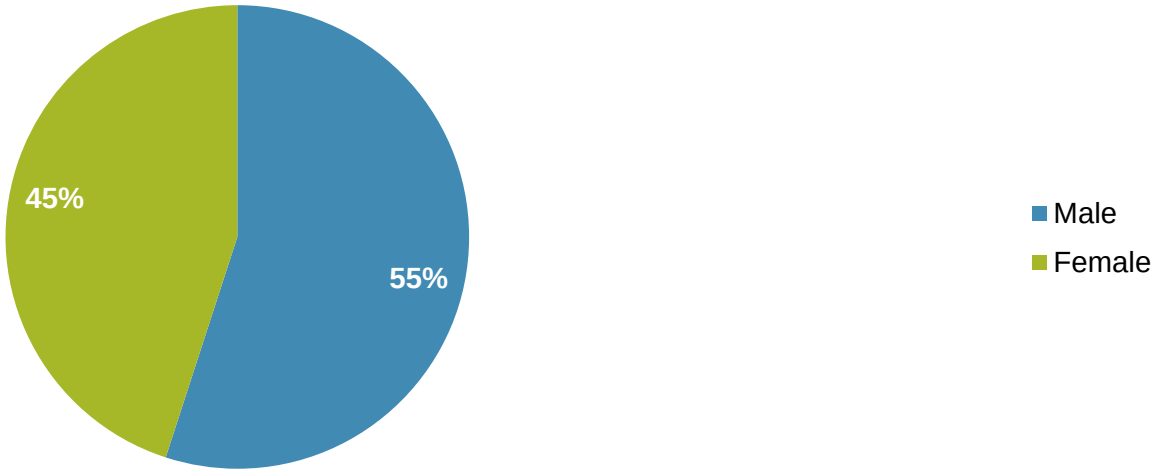
The MVC-related mortality rate has fluctuated since 2014 but has remained relatively consistent since 2022. Compared to 2022, there was a decrease in the male mortality rate but an increase in the female mortality rate. However, males have consistently had a higher MVC mortality rate than females since 2014 (Figure 52).

Figure 52. Mortality Rate per 100,000 Children due to Motor Vehicle Crash-Related Deaths by Sex, Ages Birth to 17 Years, Arizona, 2014-2023 [2-11]



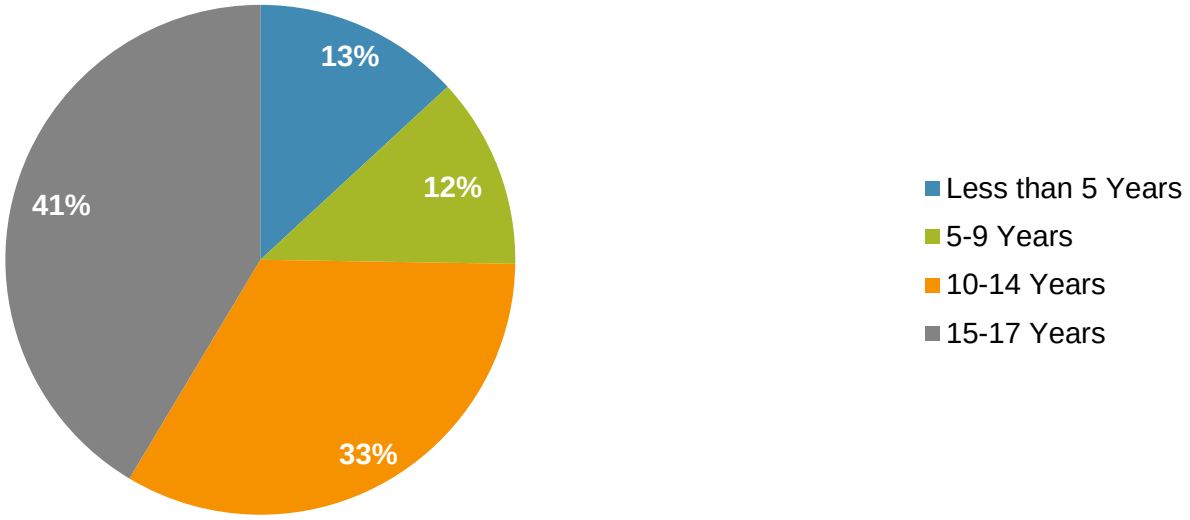
The majority of MVC-related deaths occurred among males (55%) (Figure 53).

Figure 53. Percentage of Motor Vehicle Crash-Related Deaths by Sex, Ages Birth to 17 Years, Arizona, 2023 (n=82)



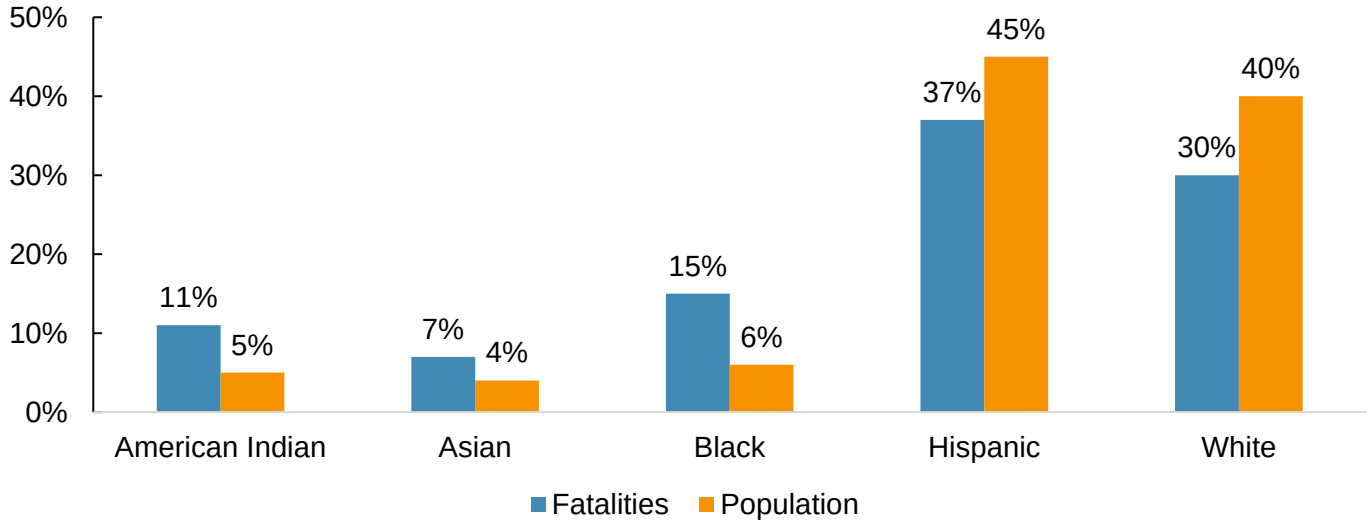
The highest number of MVC deaths occurred among children aged 15 to 17 years (41%), followed by children aged 10 to 14 years (33%). (Figure 54).

Figure 54. Percentage of Motor Vehicle Crash-Related Deaths by Age Group, Ages Birth to 17 Years, Arizona, 2023 (n=82)



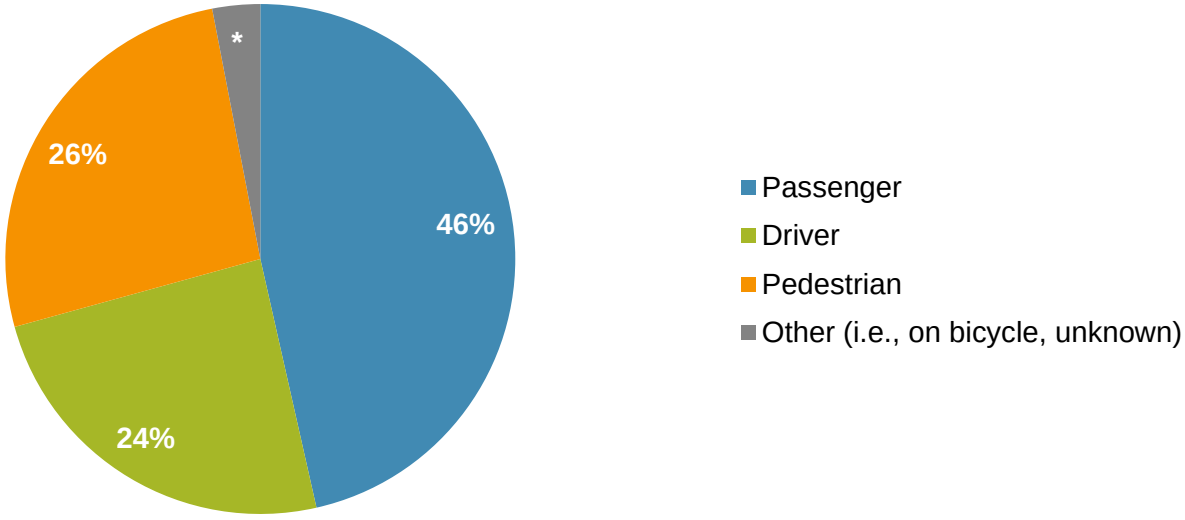
American Indian and Black children made up 11% and 15% of MVC-related deaths, respectively, but only comprised 5% and 6% of the total child population. Additionally, Asian children made up 7% of MVC-related deaths but only comprised 4% of the total child population. The largest percentage of MVC deaths were among Hispanic (37%) children (Figure 55).

Figure 55. Percentage of Motor Vehicle Crash-Related Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years, Arizona, 2023 (n=82)[2]



In most of the MVC-related deaths, the child was the passenger (46%) (Figure 56).

Figure 56. Percentage of Motor Vehicle Crash-Related Deaths by Location of Child in Accident, Ages Birth to 17 Years, Arizona, 2023 (n=82)



*Percentage suppressed due to count less than 6.

The largest percentage of motor vehicle crash deaths among children occurred in a car (32%), followed by the child being a pedestrian (24%). Twelve percent of child deaths occurred in an All-Terrain Vehicle (ATV) (Table 30).

Table 30. Number and Percentage of Motor Vehicle Crash-Related Deaths by Type of Vehicle, Ages Birth to 17 Years, Arizona, 2023 (n=82)

Type of Vehicle	Number	Percent
Car	26	32%
Pedestrian	20	24%
Other (i.e., Motorcycle, Truck, Bicycle, Van, Other)	13	16%
Sport Utility Vehicle (SUV)	10	12%
All-Terrain Vehicle (ATV)	10	12%
Unknown	*	*

*Number/Percentage suppressed due to count less than 6.

Looking at the location of the MVC-related deaths, 32% of the deaths occurred on city streets, followed by highways (28%) rural roads (15%), and intersections (11%) (Table 31).

Table 31. Location of Motor Vehicle Crash-Related Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=82)

Location**	Number	Percent
City Street	26	32%
Highway	23	28%
Rural Road	12	15%
Intersection	9	11%
Residential Street	8	10%
Off-Road	8	10%
Other (i.e., Driveway, Other Location)	*	*
*Number/Percentage suppressed due to count less than 6.		
**More than one location may have been identified for each death.		

Among the drivers in motor vehicle crash-related deaths (including ATVs), 40% were aged 19 and above, 27% were aged 16 to 18, and 12% were aged 13 to 15 (Table 32). Of the 13-15-year-olds, 6 were in an ATV.

Table 32. Age of Driver in Motor Vehicle Crash Related-Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=82)

Age of Responsible Driver	Number	Percent
19 years and above	33	40%
16 to 18 years	22	27%
13 to 15 years	10	12%
Unknown/Other	17	21%

While numerous risk factors contribute to MVC deaths, the most commonly identified risk factors were lack of seat restraint (49%), reckless driving (45%), and substance use (43%) (Table 33). 17% of the children involved in the MVC death were not wearing a helmet.

Table 33. Risk Factors of Motor Vehicle Crash Related-Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=82)

Risk Factors*	Number	Percent
Lack of Seat Restraint	40	49%
Reckless Driving	37	45%
Substance Use	35	43%
CPS History with the Family	31	38%
Inexperienced Driver	22	27%
Excess Speed	20	24%
Lack of Supervision	19	23%
Criminal Activity	18	22%
Careless Driving	16	20%
Rollover	15	18%
Driver Error	14	17%
Unsafe Speed for Conditions	14	17%
No Helmet	14	17%
Changing Lanes	12	15%
Poverty	11	13%
Running a Red Light	9	11%
Ran Over a Child	8	10%
Poor Visibility	8	10%
Distracted Driver	6	7%
*More than one risk factor may have been identified in each death.		

Neglect/Abuse-Related Deaths

An act of neglect or physical, emotional, or sexual abuse against a child. See the Glossary for further explanation.

Total Neglect/Abuse-Related Deaths

116

(14% of all child deaths)

21.8% decrease

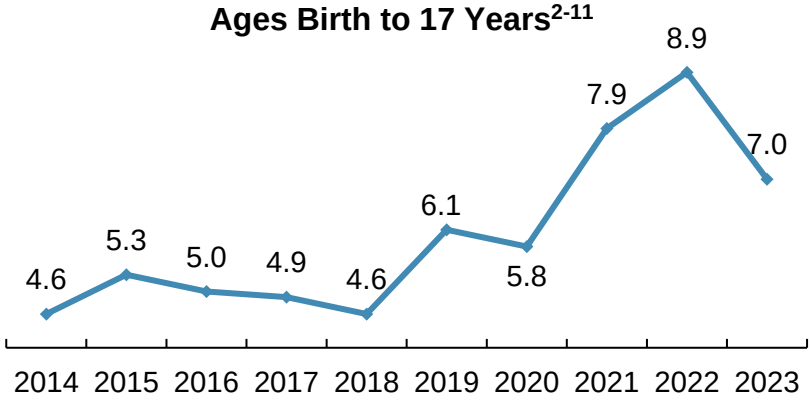
in mortality rate from 2022

(7.0 deaths per 100,000 children in 2023)

100%

of Neglect/Abuse-Related Deaths were Preventable

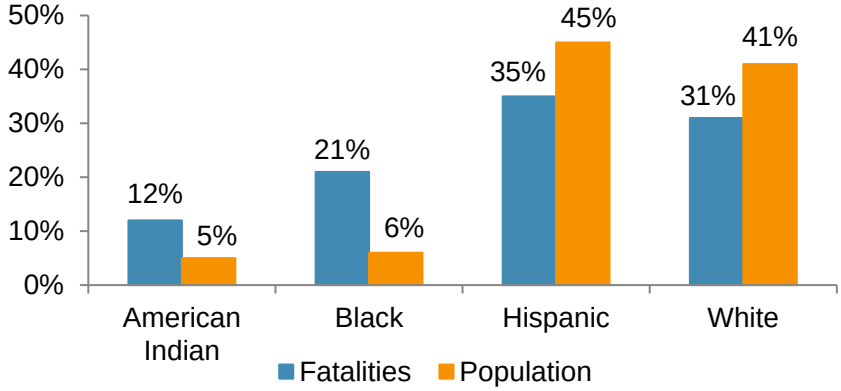
Mortality Rate per 100,000 Children Due to Neglect/Abuse-Related Deaths, Ages Birth to 17 Years[2-11]



Top Causes of Neglect/Abuse-Related Deaths:

Suffocation	Blunt Force Injury	Poisoning	Drowning	Firearm Injury
19% (22 deaths)	15% (17 deaths)	11% (13 deaths)	9% (10 deaths)	9% (10 deaths)

Percentage of Neglect/Abuse-Related Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years[2]**



44% of neglect/abuse-related deaths occurred in **infants (less than one year of age).**

59% of neglect/abuse-related deaths were among **males**

**Data for Asian children suppressed due to counts less than 6.

Leading Risk Factors of Neglect/Abuse-Related Deaths*:

Parent Substance Use History	CPS History with the Family	Poverty	Substance Use	Lack of Supervision
71%	63%	59%	54%	30%

*More than one risk factor may have been identified for each death.

Top 5 Neglect/Abuse-Related Death Prevention Recommendations*:

(1) The state should support community-based efforts to develop, operate, enhance, and coordinate initiatives, programs, and activities to prevent child abuse and neglect. They should also support the coordination of resources and activities to strengthen and support families to reduce the likelihood of child abuse and neglect among diverse populations.[97]

(2) Arizona should invest in families' financial well-being, including increasing access to concrete supports like food, housing, and childcare.[106, 107]
   a. Research shows this reduces both poverty-related neglect and the need for foster care.

(3) Increase awareness on how and when to report suspected child abuse and neglect so that any individual who knows about a child who is being abused or neglected can act by calling 911 in an emergency or the Arizona Child Abuse Hotline (1-888-SOS-CHILD).[100]

(4) Home visiting programs and resources throughout the state should be increased.[98]
   a. Home visits are associated with a decrease in substantiated reports of child abuse and neglect.

(5) Increase utilization of mental health professionals to respond to emergency calls where mental health issues may be a factor.

*See the Neglect/Abuse-Related Death Prevention Recommendations for additional evidence-based recommendations.

Resources:**

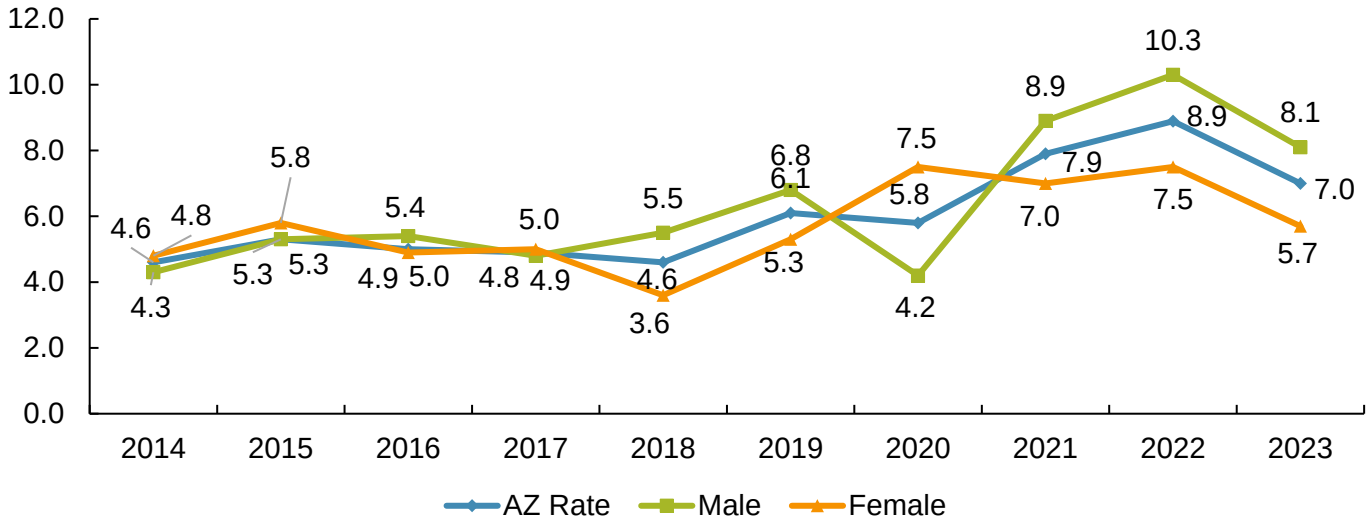
Arizona Department of Child Safety
- 1-888-SOS-CHILD (1-888-767-2445)

National Child Abuse Hotline
- 1-800-4-A-CHILD (24 hours, 7 days a week)

**See the Neglect/Abuse-Related Death Prevention Resources for additional resources.

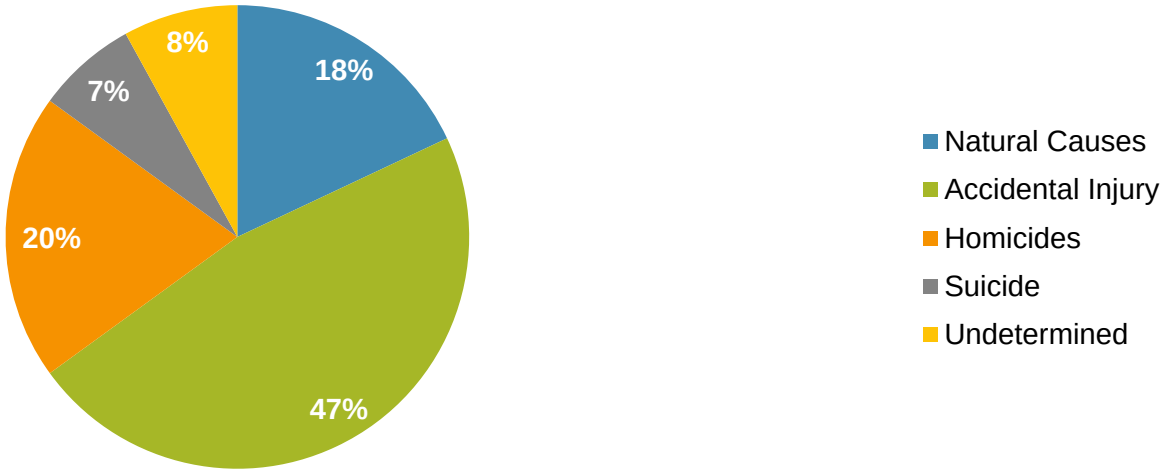
Overall, Arizona's neglect/abuse-related mortality rate has increased since 2014 until 2023 when Arizona's neglect/abuse-related mortality rate decreased by 21.8% from 8.9 deaths per 100,000 children in 2022 to 7.0 deaths per 100,000 children in 2023 (Figure 57).

Figure 57. Mortality Rate per 100,000 Children due to Neglect/Abuse-Related Death by Sex, Ages Birth to 17 Years, Arizona, 2014-2023 [2-11]



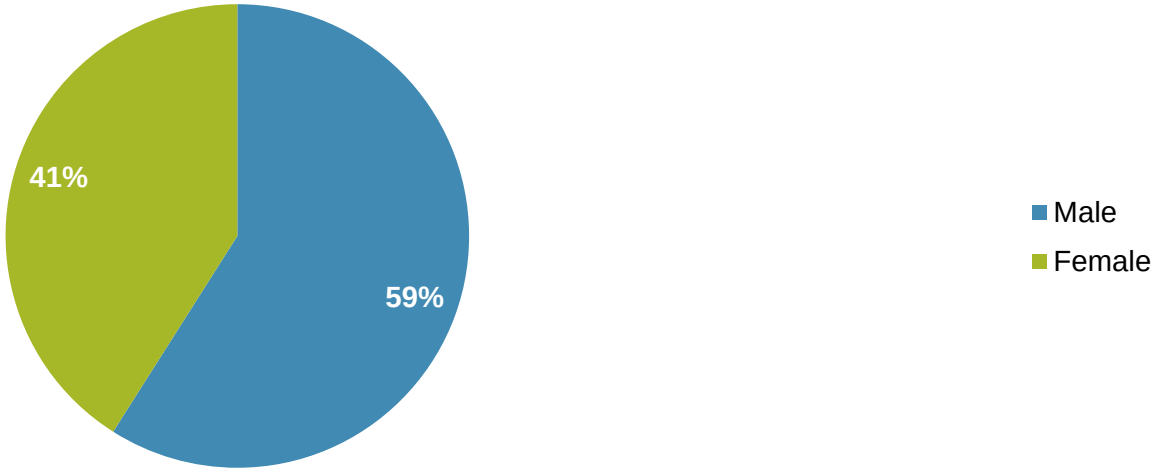
The most common manner of death classification of neglect/abuse-related deaths was accidental injuries (47%), followed by homicides (20%) and natural causes (18%) (Figure 58).

Figure 58. Percentage of Neglect/Abuse-Related Deaths by Manner of Death, Ages Birth to 17 Years, Arizona, 2023 (n=116)



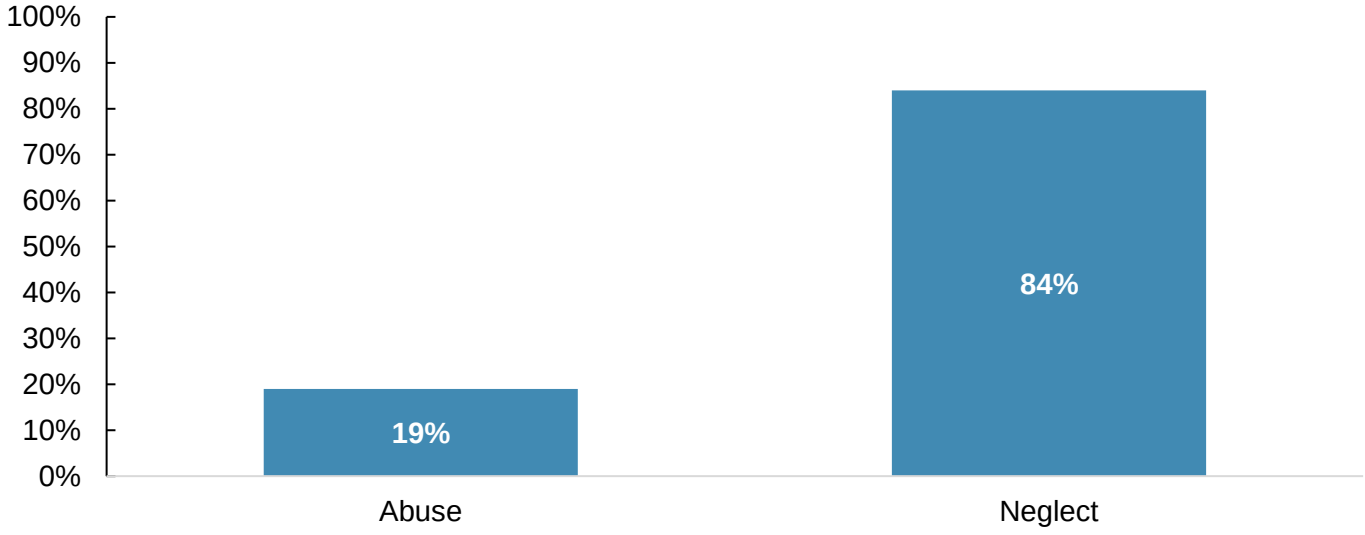
The majority of neglect/abuse-related deaths occurred among male children (59%) (Figure 59).

Figure 59. Percentage of Neglect/Abuse-Related Deaths by Sex, Ages Birth to 17 Years, Arizona, 2023 (n=116)



In 2023, 84% of all neglect/abuse-related deaths involved neglect, and 19% involved abuse. In some deaths, the child was a victim of both neglect and abuse (Figure 60).

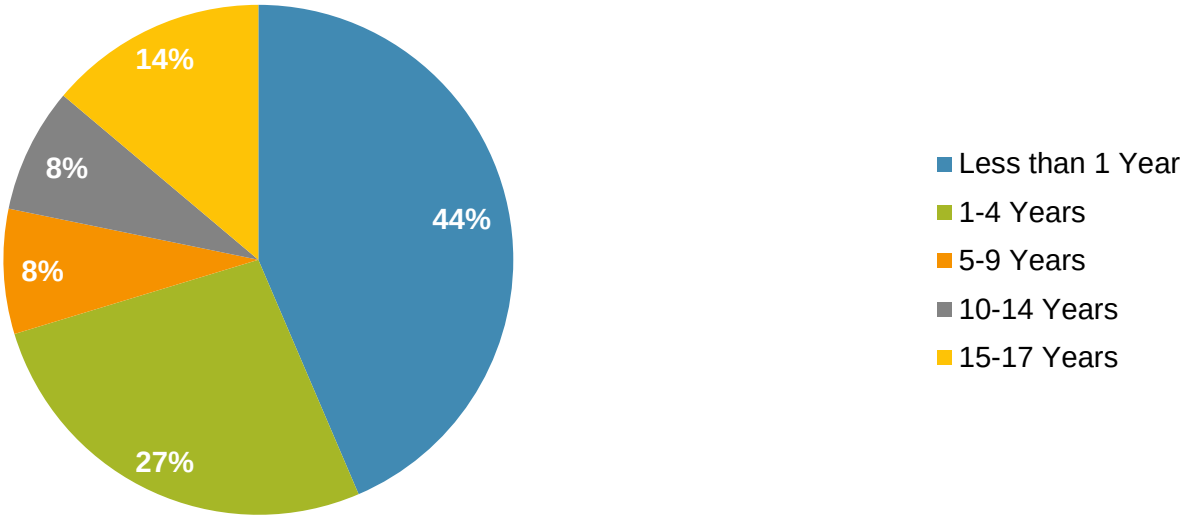
Figure 60. Percentage of Neglect/Abuse-Related Deaths by Abuse and Neglect, Ages Birth to 17 Years, Arizona, 2023 (n=116)*



*Totals do not equal 100%, as abuse and neglect may have both been involved.

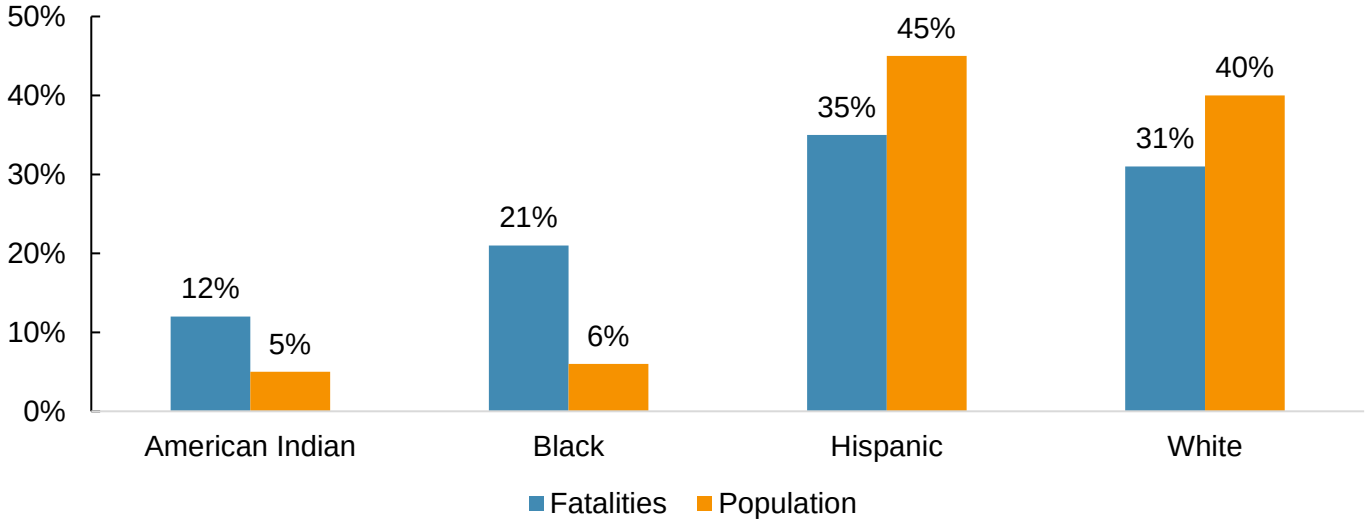
Neglect/abuse-related deaths occurred primarily among infants less than one year of age (44%), followed by children aged 1-4 years (27%) (Figure 61).

Figure 61. Percentage of Neglect/Abuse-Related Deaths by Age Group, Ages Birth to 17 Years, Arizona, 2023 (n=116)



American Indian and Black children made up 12% and 21% of neglect/abuse-related deaths, respectively, but only comprised 5% and 6% of the total child population. The most significant percentage of neglect/abuse-related deaths were among Hispanic (35%) children (Figure 62).

Figure 62. Percentage of Neglect/Abuse-Related Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years, Arizona, 2023 (n=116)*[2]



*Data for Asian children suppressed due to counts less than 6.

The child's mother was a perpetrator in 69% of neglect/abuse-related deaths, and the child's father was a perpetrator in 41% of the neglect/abuse-related deaths among children aged birth to 17 years (Table 34).

Table 34. Number and Percentage of Neglect/Abuse-Related Deaths by Perpetrator, Ages Birth to 17 Years, Arizona, 2023 (n=116)

Perpetrator*	Number	Percent
Mother/Birth Parent	80	69%
Father/Alternative Parent	47	41%
Other (i.e., Child Care Provider, Another Caregiver)	9	8%
Parent's Partner	8	7%
Other Relative	6	5%
*There may be more than one perpetrator in each death.		

Among neglect/abuse-related deaths, suffocation was the leading cause of death for children aged birth to 17 years (19%) (Table 35).

Table 35. Causes of Neglect/Abuse-Related Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=116)

Cause of Death	Number	Percent
Suffocation	22	19%
Blunt Force Injury	17	15%
Other Medical (i.e., Perinatal, Influenza, Diabetes, Pneumonia, etc.)	14	12%
Poisoning	13	11%
Drowning	10	9%
Firearm Injury	10	9%
Motor Vehicle Crash	8	7%
Undetermined	8	7%
Prematurity	7	6%
Other Injury (i.e., animal attack, fire, hyperthermia)	7	6%

While numerous preventable risk factors contribute to neglect/abuse-related deaths among children aged birth to 17 years, parent substance use history (71%) was the most identified risk factor. In 63% of child neglect/abuse-related deaths, the child's family had prior involvement with a Child Protective Service (CPS) agency (Table 36).

Table 36. Risk Factors of Neglect/Abuse-Related Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=116)

Risk Factors*	Number	Percent
Parent Substance Use History	82	71%
CPS History with the Family	73	63%
Poverty	69	59%
Substance Use	63	54%
Lack of Supervision	35	30%
Unsafe Sleep Environment	26	22%
Child's Chronic Condition	26	22%
Housing Insecurity	25	22%
Substance Exposed Newborn (SEN)	23	20%
Family Discord	23	20%
*More than one risk factor may have been identified in each death.		

Fifty-four percent (63 cases) of neglect/abuse-related deaths involved substance use (Table 36). Of those, marijuana was the most identified substance, contributing to 44% of child neglect/abuse-related deaths, followed by alcohol (32%) (Table 37).

Table 37. Number and Percentage of Substance Type Identified in Neglect/Abuse-Related Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=63)

Substance Type**	Number	Percent
Marijuana	28	44%
Alcohol	20	32%
Opiate	17	27%
Methamphetamine	10	16%
Other (i.e., Prescription Drugs, Cocaine)	*	*
*Number/Percentage suppressed due to count less than 6.		
**More than one substance may have contributed to each death.		

Of the 63 cases of neglect/abuse-related deaths involved substance use, the biological parent was the substance user in 84% of the cases (Table 38).

Table 38. Number and Percentage of Substance Users Identified in Neglect/Abuse-Related Deaths Involving Substance Use, Ages Birth to 17 Years, Arizona, 2023 (n=63)

Substance User**	Number	Percent
Biological Parent	53	84%
Child	7	11%
Another Caregiver/Supervisor	*	*
*Number/Percentage suppressed due to count less than 6.		
**More than one person may have been using a substance.		

Premature Deaths

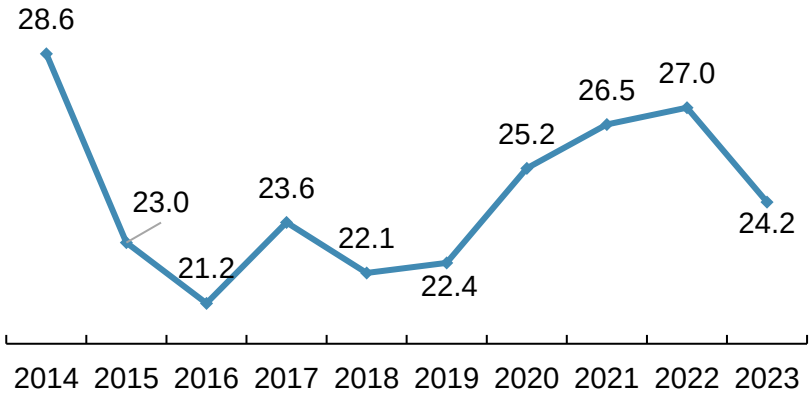
Death of an infant born before 37 weeks gestation and the cause of death was related to premature birth. See the glossary for further explanation.

Total Premature Deaths
191
(22% of all child deaths)

10.3% decrease
in mortality rate from 2022
(24.2 deaths per 100,000 premature births in 2023)

14%
of Premature Deaths were Preventable

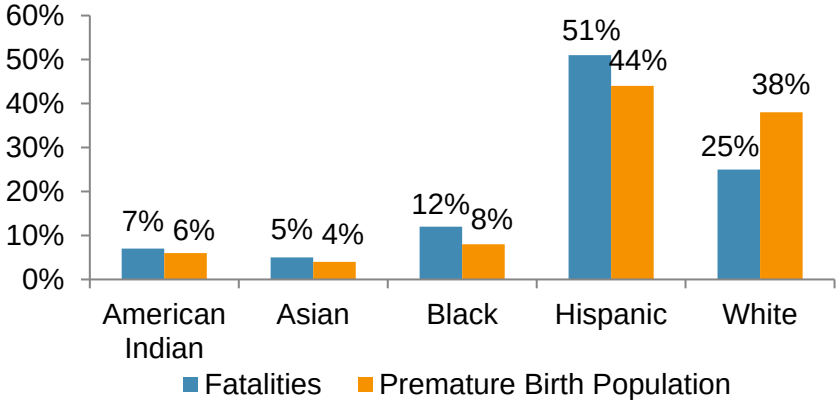
Mortality Rate per 1,000 Premature Births Due to Premature Deaths, Less than 1 Year of Age[52-61]



Top Causes of Premature Deaths:

Prematurity	Perinatal Condition
87% (166 deaths)	**13%** (25 deaths)

Percentage of Premature Deaths by Race/Ethnicity, compared to the Premature Birth Population, Less than 1 Year of Age[61]



57% of premature deaths were among **males**

Leading Risk Factors of Premature Deaths*:

Poverty	Premature Rupture of Membrane (PROM)	Preterm Labor	Previous Preterm Birth	Multiple Births
51%	**45%**	**23%**	**23%**	**20%**

*More than one risk factor may have been identified for each death.

Top 5 Premature Death Prevention Recommendations*:

(1) Increase accessibility to prenatal care, which can help prevent complications and inform women about necessary steps they can take to protect their infant and ensure a healthy pregnancy, especially for pregnant women who use substances and the immigrant population.[109]

(2) Increase availability and accessibility of affordable quality family planning and parenting services/support.[110]
   a. Sustain the Family Planning programs in Arizona to continue to emphasize the importance of a reproductive life plan and increase access to effective contraceptive methods throughout the state.

(3) Increase availability and accessibility of affordable mental health and substance use treatment services.[109]

(4) Expand innovative approaches to increasing access to prenatal services, such as group prenatal care and telemedicine for rural and dispersed populations.[110]

(5) Increase education and community awareness of the risks of smoking nicotine, drinking alcohol, and using marijuana and drugs during pregnancy because it increases the risk of preterm birth or other complications.[108]
   a. Pregnant people who smoke tobacco should be referred to the Arizona Smokers Helpline (ASHLine / 1-800-556-6222).
   b. Pregnant people with substance use disorder should be referred to the Opioid Assistance Referral Line (OAR Line).

*See the Premature Death Prevention Recommendations for additional evidence-based recommendations.

Resources:**

High-Risk Perinatal Program (HRPP)
- https://www.azdhs.gov/prevention/womens-childrens-health/childrens-health/index.php#hrpp

Taking Steps to Prevent Premature Births
- https://directorsblog.health.azdhs.gov/taking-steps-to-prevent-premature-births/

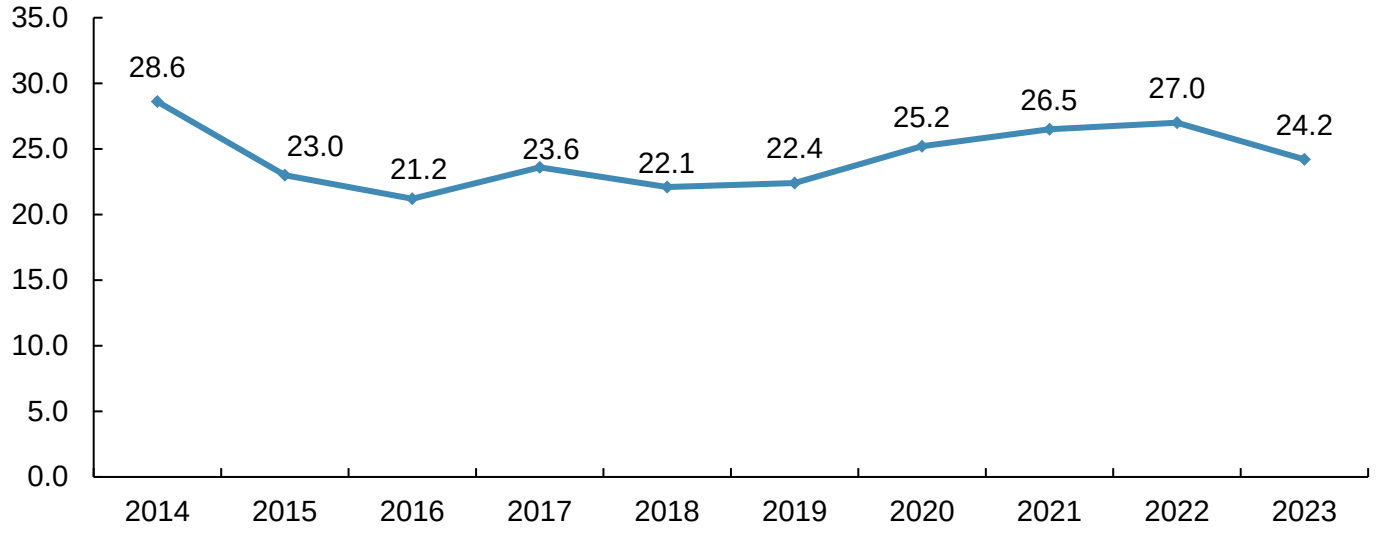
Count the Kicks
- https://countthekicks.org/statistics/az/

Arizona Early Intervention Program (AzEIP)
- https://des.az.gov/azeip

**See the Premature Death Prevention Resources for additional resources.

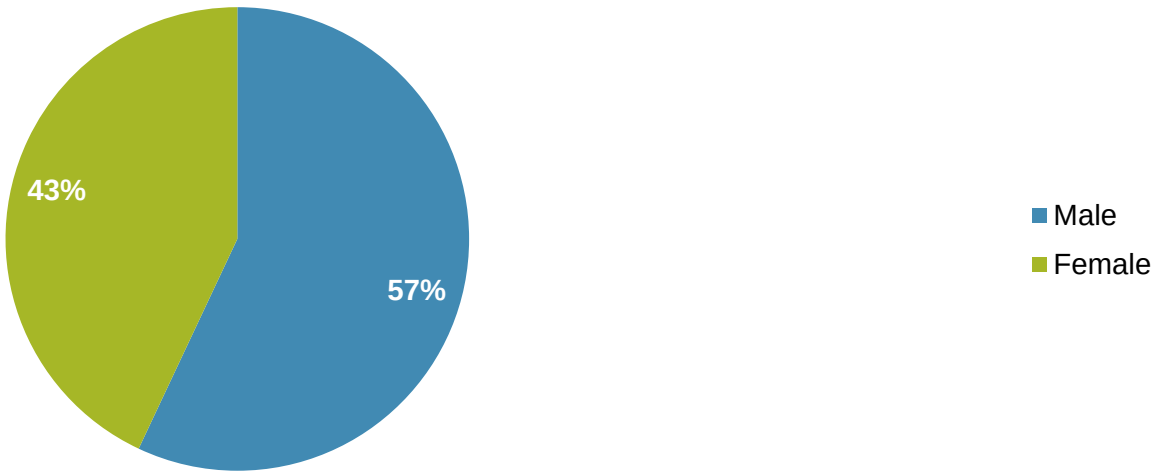
The premature mortality rate includes those who were identified as dying of prematurity (<37 weeks' gestation) but also includes children who died of other perinatal conditions that lead to premature births. Arizona's prematurity mortality rate decreased by 10.3% from 27.0 deaths per 1,000 premature births in 2022 to 24.2 deaths per 1,000 premature births in 2023 (Figure 63).

Figure 63. Mortality Rate per 1,000 Premature Births due to Premature Deaths, Less than 1 Year of Age, Arizona, 2014-2023 [52-61]



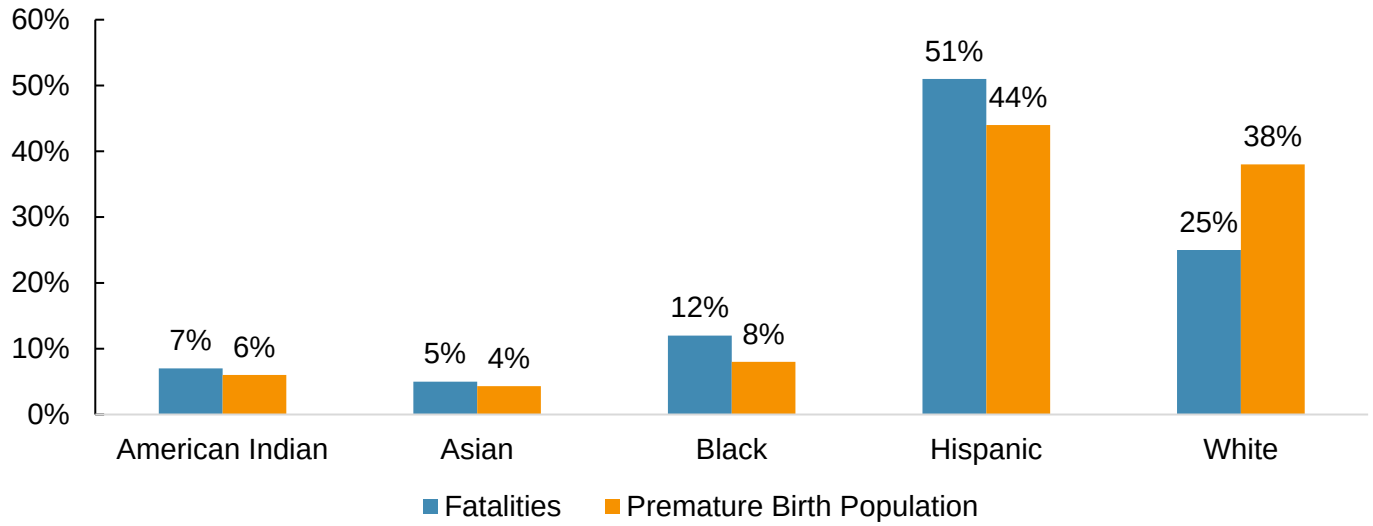
The majority of premature deaths occurred among males (57%) (Figure 64).

Figure 64. Percentage of Premature Deaths among Infants by Sex, Less than 1 Year of Age, Arizona, 2023 (n=191)



Black and Hispanic infants made up 12% and 51% of premature deaths, respectively, but only comprised 8% and 44% of premature births. Additionally, Asian and American Indian infants made up 5% and 7% of premature deaths, respectively, but only comprised 4% and 6% of premature births. The majority of premature deaths were among Hispanic (51%) children (Figure 65).

Figure 65. Percentage of Premature Deaths among Infants by Race/Ethnicity, compared to the Premature Birth Population, Less than 1 Year of Age, Arizona, 2023 (n=191)[61]



While numerous risk factors can contribute to premature deaths, the most commonly identified risk factors were poverty (51%), premature rupture of membrane (PROM) (45%), and preterm labor (23%) (Table 39).

Table 39. Risk Factors for Premature Deaths among Infants, Less than 1 Year of Age, Arizona, 2023 (n=191)

Risk Factors*	Number	Percent
Poverty	97	51%
Premature Rupture of Membrane (PROM)	85	45%
Preterm Labor	44	23%
Previous Preterm Birth	43	23%
Multiple Births (i.e., Twins, Triplets, etc.)	39	20%
No Prenatal Care	35	18%
Hypertension	34	18%
Advance Maternal Age (over 35 years of age)	32	17%
Maternal Infection	24	13%
Parent Substance Use History	22	12%
Placental Abruption	16	8%
Substance Exposed Newborn (SEN)	14	7%
Incompetent Cervix	14	7%
Diabetes	13	7%
Eclampsia/ Pre-eclampsia	13	7%
Smoking during Pregnancy	13	7%

*More than one risk factor may have been identified in each death.

Substance Use-Related Deaths

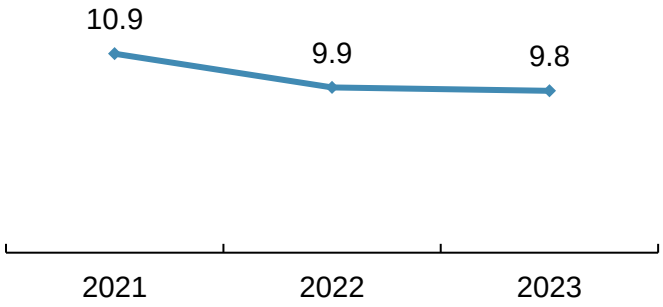
Death where the child or any individual involved in the death of the child used or abused substances, such as alcohol, illegal drugs, and/or prescription drugs, and this substance use was a direct or contributing factor in the child's death. See the glossary for further explanation.

Total Substance Use-Related Deaths
163
(19% of all child deaths)

1.5% decrease
in mortality rate from 2022
(9.8 deaths per 100,000 children in 2023)

100%
of Substance Use-Related Deaths were Preventable

Mortality Rate per 100,000 Children Due to Substance Use-Related Deaths, Ages Birth to 17 Years[2-4]

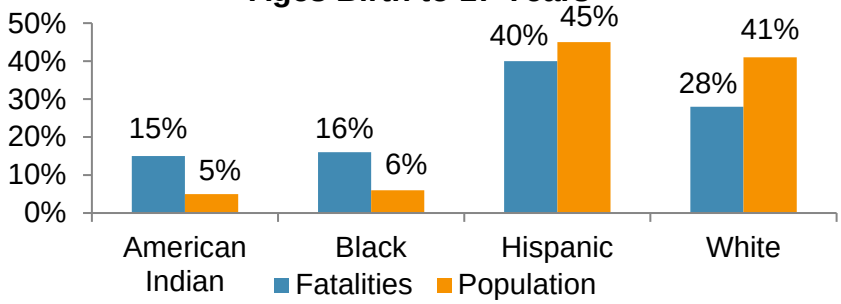


Top Causes of Substance Use-Related Deaths:

Firearm Injuries	MVC	Poisoning	Suffocation	Other Injuries
23% (38 deaths)	21% (35 deaths)	20% (33 deaths^)	9% (15 deaths)	8% (13 deaths)

^Of the 33 poisoning deaths, 27 were opiate overdoses. Fentanyl was responsible for all of the opiate poisonings. Of the 27 fentanyl poisonings, eight were among children less than five years of age.

Percentage of Substance Use-Related Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years[2]



48% of substance use-related deaths occurred in **ages 15-17 years.**

57% of substance use-related deaths were among **males**

**Data for Asian children suppressed due to counts less than 6.

Leading Risk Factors of Substance Use-Related Deaths*:

Parent Substance Use History	CPS History with the Family	Poverty	History of Trauma/Violence	Lack of Supervision
66%	66%	42%	36%	34%

*More than one risk factor may have been identified for each death.

Top 5 Substance Use-Related Death Prevention Recommendations*:

(1) Increase the availability of affordable and accessible substance use treatment healthcare and telehealth care for families and children.

(2) Implement universal screening for substance use and mental health issues during adolescent well visits.[114-116]

(3) Increase adolescents' awareness of the risks of opioid use, especially fentanyl, and how to respond to and identify signs of an overdose.

(4) Improve access to personalized substance use disorder treatment plans.[111, 115]
   a. Forming treatment plans based on individuals' strengths can keep children engaged in their care and increase the likelihood of successful treatment and better health outcomes.

(5) To reduce overdose deaths, clinicians should be encouraged to co-prescribe naloxone to patients who are at risk for opioid overdose. This includes patients who are prescribed benzodiazepines.[117, 118]
   a. Families with loved ones who struggle with opioid addiction should have naloxone nearby; ask their family members to carry it and let friends know where it is.

*See the Substance Use-Related Death Prevention Recommendations for additional evidence-based recommendations.

Resources:**

Poison Helpline
- 1-800-222-1222

Hushabye Nursery
- 480-628-7500
- http://www.hushabyenursery.org

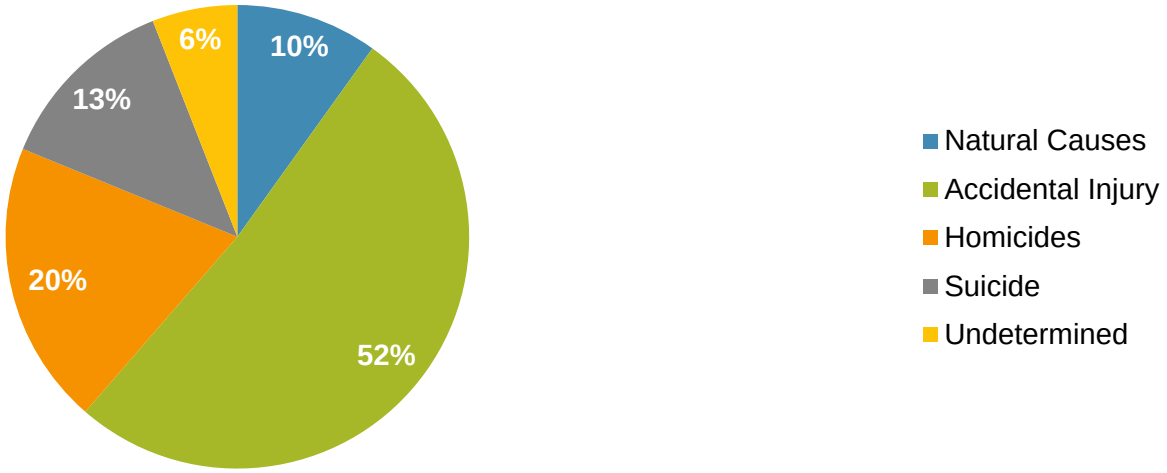
Arizona Substance Abuse Prevention
- 1-800-662-HELP (4357)
- https://goyff.az.gov/content/arizona-substance-abuse-prevention-resource

Addiction Treatment for Teens
- 602-847-9887
- https://zenithbh.com/adolescent-treatment-phoenix-arizona/dual-diagnosis-teens/addiction-treatment/

**See the Substance Use-Related Death Prevention Resources for additional resources.

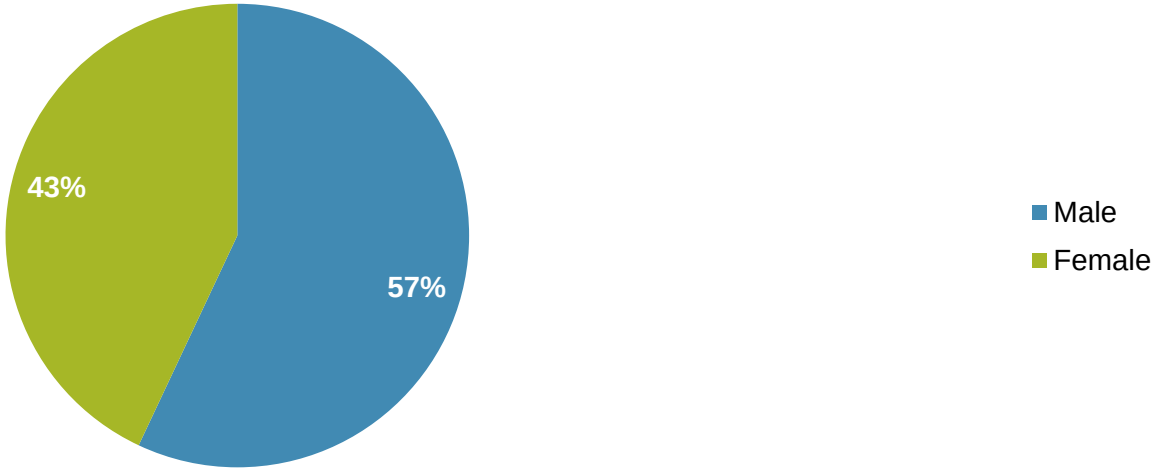
The most common manner of death classification of substance use-related deaths was accidental injuries (52%), followed by homicides (20%) and suicides (13%) (Figure 66).

Figure 66. Percentage of Substance Use-Related Deaths by Manner of Death, Ages Birth to 17 Years, Arizona, 2023 (n=163)



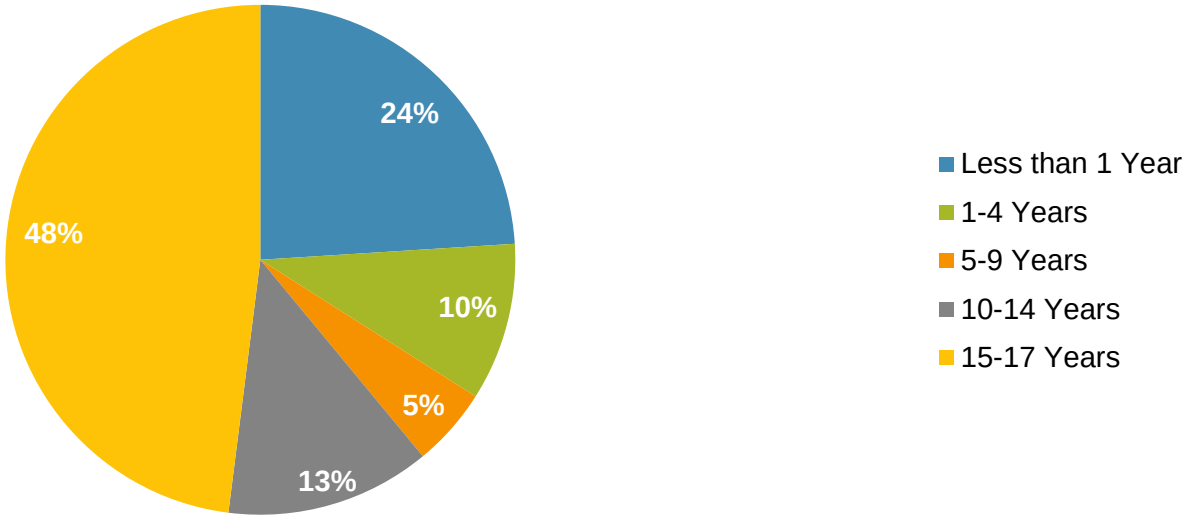
The majority of substance use-related deaths occurred among males (57%) (Figure 67).

Figure 67. Percentage of Substance Use-Related Deaths by Sex, Ages Birth to 17 Years, Arizona, 2023 (n=163)



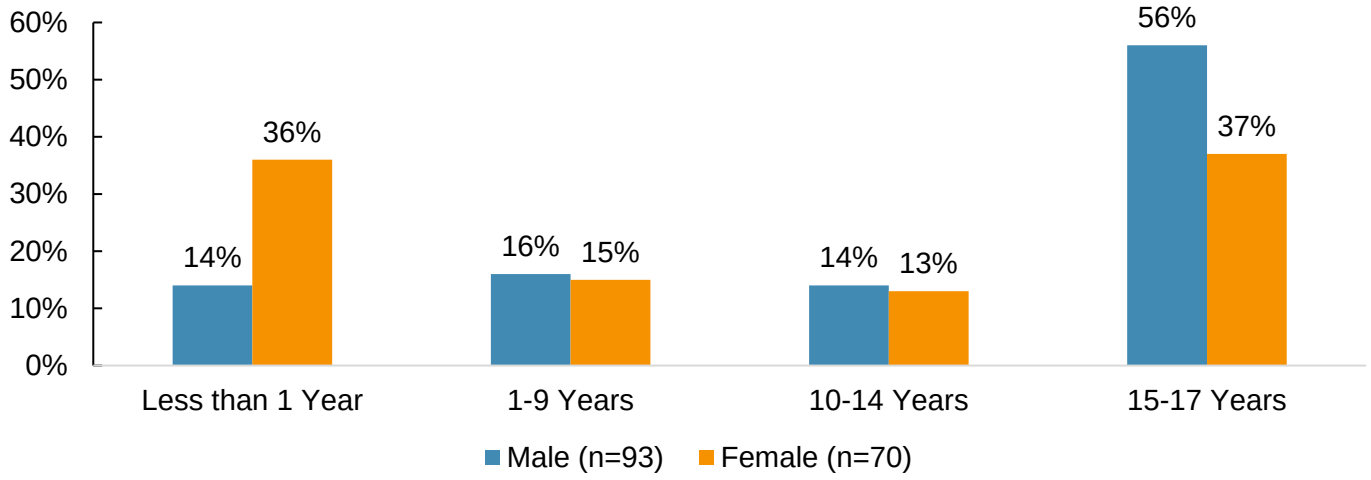
The largest percentage of substance use-related deaths occurred among children aged 15 to 17 years (48%), followed by infants less than one year of age (24%) (Figure 68).

Figure 68. Percentage of Substance Use-Related Deaths by Age Group, Ages Birth to 17 Years, Arizona, 2023 (n=163)



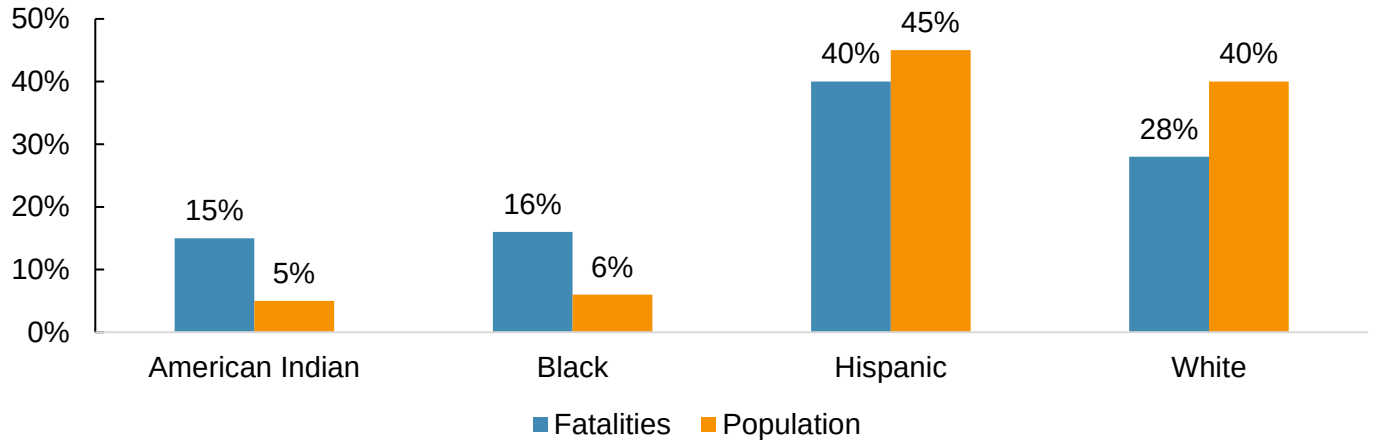
The majority of substance use deaths among males occurred in those aged 15-17 years (56%). The majority of substance use deaths among females occurred in those aged 15-17 years (37%), followed by less than one year (36%) (Figure 69).

Figure 69. Percentage of Substance Use Related Deaths by Age Group and Sex, Ages Birth to 17 Years, Compared to the Population, Arizona, 2023 (n=163)



American Indian and Black children made up 15% and 16% of substance use-related deaths, respectively, but only comprised 5% and 6% of the total child population. The majority of substance use-related deaths were Hispanic (40%) and White (28%) children (Figure 70).

Figure 70. Percentage of Substance Use-Related Deaths by Race/Ethnicity, compared to the Population, Ages Birth to 17 Years, Arizona, 2023 (n=163)*[2]



*Data for Asian children suppressed due to counts less than 6.

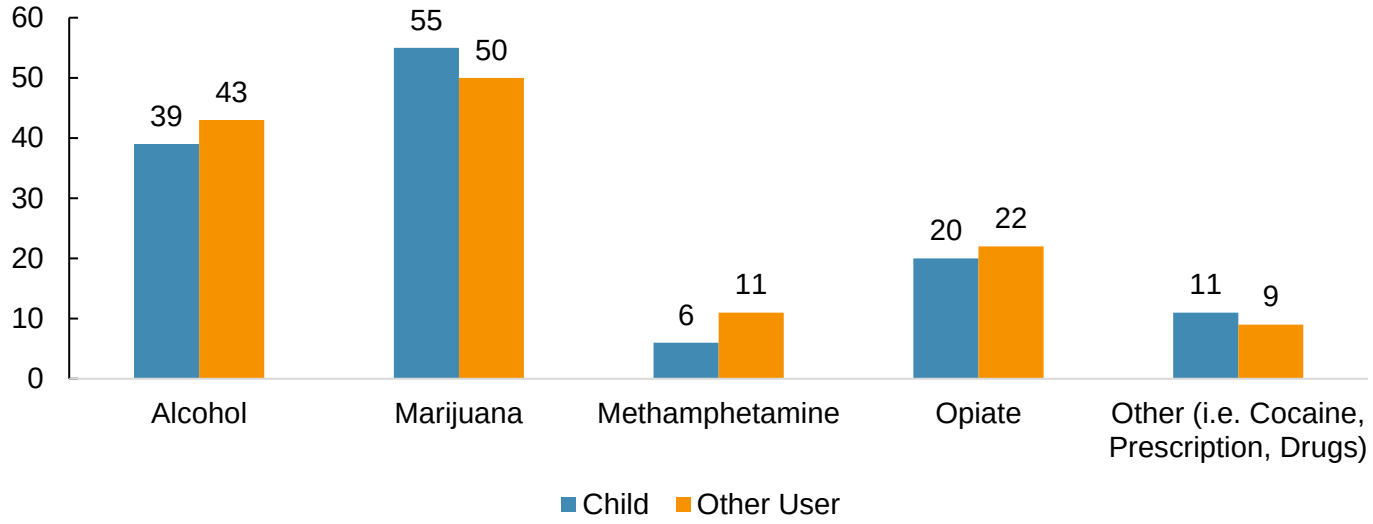
Among substance use-related deaths, firearm injuries (23%) followed by motor vehicle crashes (21%) were the leading factors that caused or contributed to the death of a child aged birth to 17 years. Poisoning, as a factor, caused or contributed to the death of children aged birth to 17 years in 20% of the cases. Of the 33 poisoning deaths, 27 were opiate overdoses, and fentanyl was responsible for all opiate poisonings. Of the 27 opioid poisonings, eight were among children less than five years of age (Table 40).

Table 40. Cause of Death where Substance Use was a Direct or Contributing Factor among Children, Ages Birth to 17 Years, Arizona, 2023 (n=163)

Cause of Death	Number	Percent
Firearm Injuries	38	23%
Motor Vehicle Crashes	35	21%
Poisoning	33	20%
Suffocation	15	9%
Other Injury Causes	13	8%

Local review teams identified the type of substances used by the child or by other individuals contributing to the death. Marijuana was the most common substance used by the child and by other individuals, followed by alcohol and opiates. There may be more than one substance and more than one individual using a substance in a death (Figure 71).

Figure 71. Number of Substances Identified as Causing or Contributing to Child Deaths, by the Child or Other User, Ages Birth to 17 Years, Arizona, 2023 (n=163)*



*More than one substance may have been identified for each death.

While numerous risk factors can contribute to substance use-related deaths, the most commonly identified risk factors were parent substance use history (66%), CPS history with the family (66%), and poverty (42%) (Table 41).

Table 41. Risk Factors of Substance Use-Related Deaths, Ages Birth to 17 Years, Arizona, 2023 (n=163)

Risk Factors*	Number	Percent
Parent Substance Use History	108	66%
CPS History with the Family	107	66%
Poverty	69	42%
History of Trauma/Violence	59	36%
Lack of Supervision	56	34%
Child Relationship Issues	50	31%
Criminal Activity	35	21%
Child's Chronic Condition	31	19%
Substance Exposed Newborn (SEN)	28	17%
Inadequate Treatment	21	13%
Child's Mental Health or Substance Use Disorder	12	7%
*More than one risk factor may have been identified in each death.		

Sudden Unexpected Infant Death (SUID)

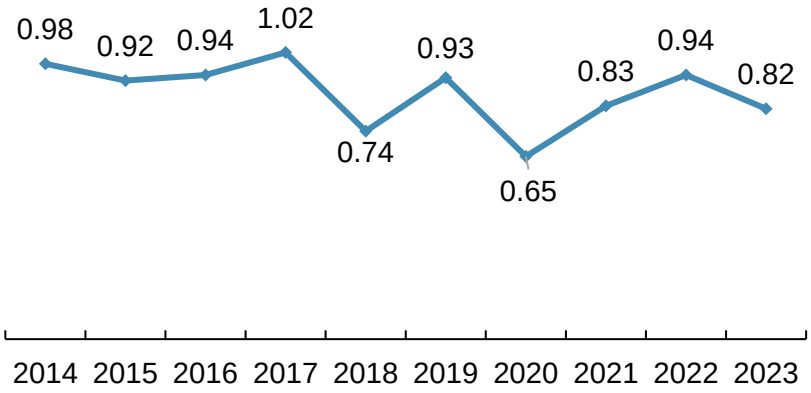
Death of an infant (less than one year of age) where the cause of death was not apparent before a death investigation. Most of the SUIDs are due to suffocation and unsafe sleep environments, but not all SUIDs are unsafe sleep-related. See the glossary for further explanation.

Total SUIDs
65
(8% of all child deaths)

12.8% decrease
in mortality rate from 2022
(0.82 deaths per 1,000 live births in 2023)

97%
of SUIDs were Preventable

Mortality Rate per 1,000 Live Births Due to SUIDs, Less than 1 Year of Age[22-31]

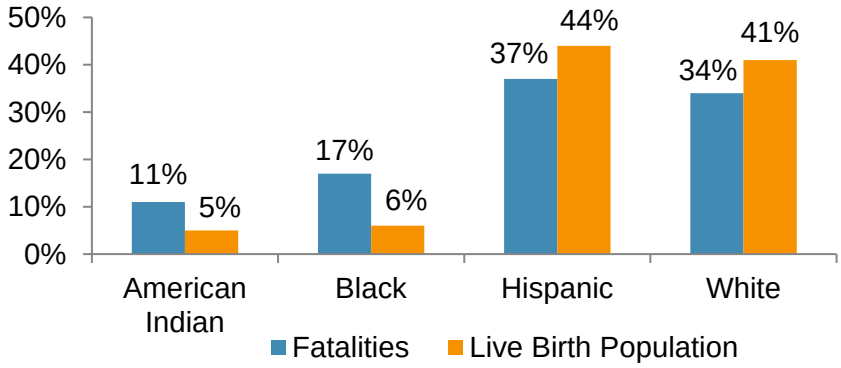


Top Causes of SUIDs:

Suffocation	Undetermined	Other Causes
74%	23%	*
(48 deaths)	(15 deaths)	(<6 deaths)

*Number/Percentage suppressed due to count less than 6.

Percentage of SUIDs by Race/Ethnicity, compared to the Live Birth Population, Less than 1 Year of Age[31]



91% of SUIDs occurred in **post-neonates (infants 28 days and older but less than one year of age).**

57% of SUIDs were among **males**

**Data for Asian children suppressed due to counts less than 6.

Leading Risk Factors of SUIDs*:

Unsafe Sleep Environment	Objects in Sleep Environment	Poverty	Unsafe Sleep Location	Bedsharing
95%	82%	69%	69%	65%

*More than one risk factor may have been identified for each death.

Top 5 Sudden Unexpected Infant Death Prevention Recommendations*:

(1) Educate caregivers and family members on the dangers of using sleep products not explicitly marketed for infants. Examples include rocking sleepers, nursing pillows, and infant loungers.[147]
   a. Importance should also be given to recalling items and how to properly buy products for their infants, even from a second-hand store.

(2) Educate parents on safe sleeping environments in multiple languages.[144, 145, 147]
   a. Infants should be placed on their backs to sleep for every sleep on a firm, flat, non-inclined sleep surface.
      i. Alone, on my Back, in a Crib (ABCs) is the safest sleeping practice for an infant until it is one year old.
   b. The ideal safe sleeping environment for an infant requires a firm sleeping surface with only a fitted sheet and no additional bedding.
      i. The area should also be void of toys, cushions, handling cords, or other items that pose a potential risk of suffocation or strangulation.
   c. Any alternative sleep surface should adhere to the current CPSC rule that any infant sleep product must meet federal safety standards for cribs, bassinets, play yards, and bedside sleepers.

(3) Establish or fund a program that helps low-income families afford a crib that can reduce bed-sharing frequency. Bed-sharing is associated with a significantly increased risk of sleep-related deaths.[144, 145, 148]
   a. Continue to provide families with safe sleep training and resources such as cribs and sleep sacks for families that cannot provide a safe sleep environment for their babies.

(4) Increase home visiting programs for infants following birth for up to one year and educate home visitors on the importance of discussing safe sleep at every visit.

(5) Increase the availability and accessibility of affordable mental health and substance use treatment services.

*See the Sudden Unexpected Infant Death Prevention Recommendations for additional evidence-based recommendations.

Resources:**

ADHS Stillbirth and Infant Mortality Action Plan
- https://www.azdhs.gov/topics/index.php#baby-home

ADHS Safe Sleep
- https://www.azdhs.gov/prevention/womens-childrens-health/safe-sleep/index.php

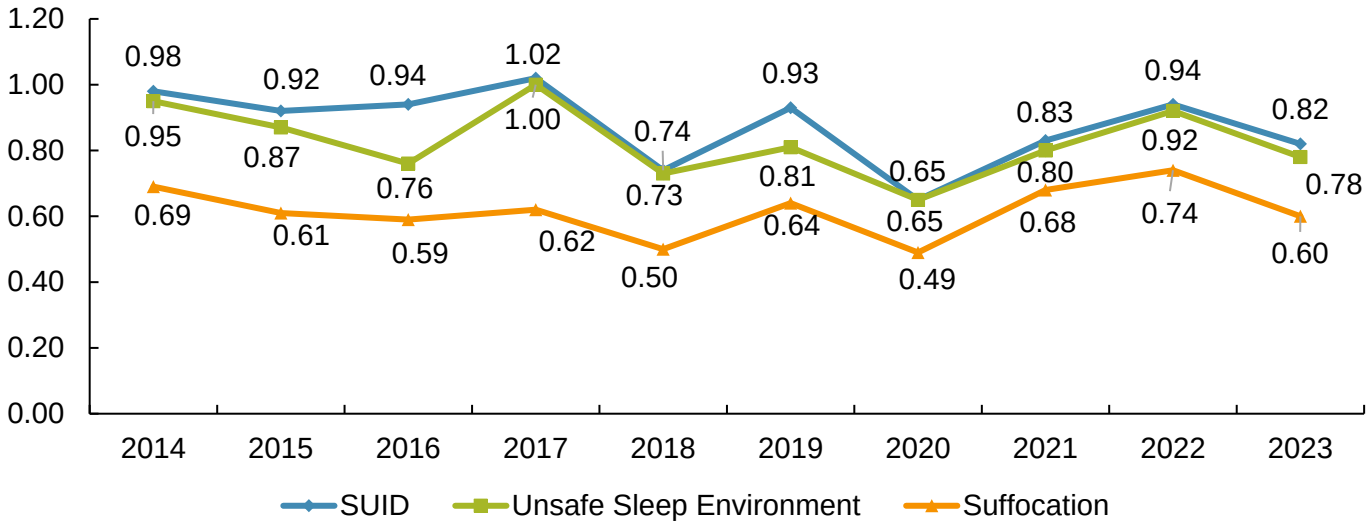
MISS Foundation
- https://www.missfoundation.org/

Consumer Product Safety Commission
- https://www.cpsc.gov/SafeSleep

**See the Sudden Unexpected Infant Death Prevention Resources for additional resources.

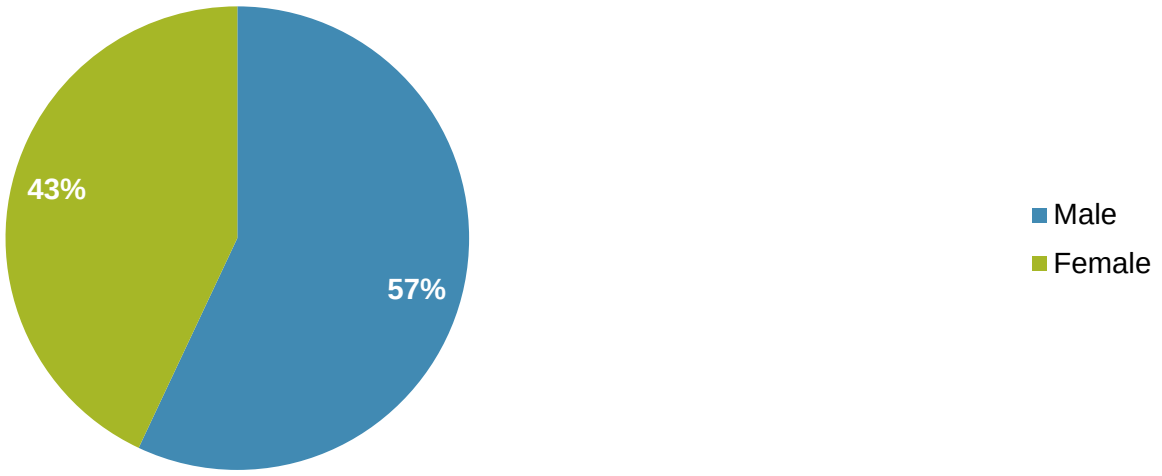
Arizona's SUID mortality rate decreased 12.8% from 0.94 deaths per 1,000 live births in 2022 to 0.82 deaths per 1,000 live births in 2023. Additionally, Arizona's unsafe sleep environment mortality rate and suffocation mortality rate decreased from 2022 to 2023 (Figure 72).

Figure 72. Mortality Rate per 1,000 Live Births due to Sudden Unexpected Infant Death, Unsafe Sleep Environment, and Suffocation, Less than 1 Year of Age, Arizona, 2014-2023 [22-31]



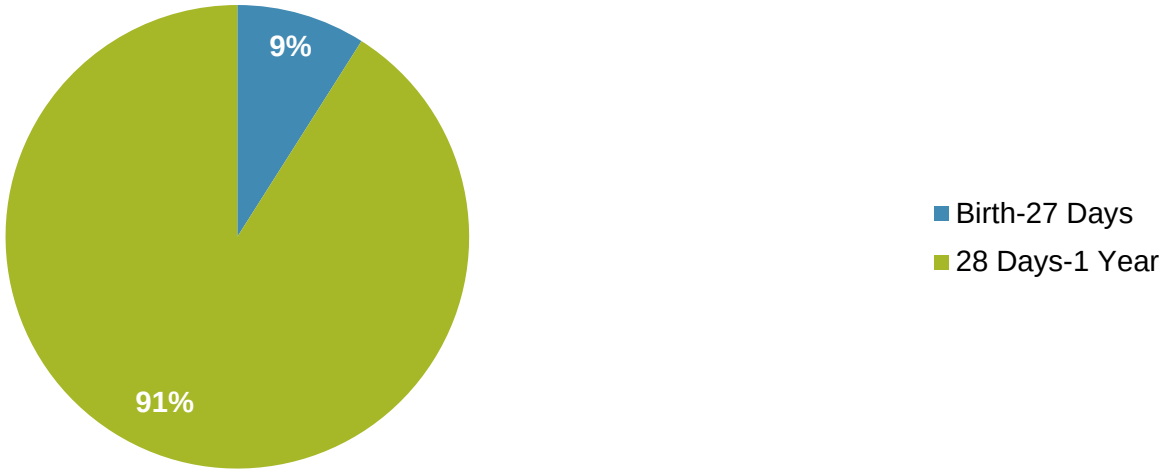
A greater percentage of SUIDs were among males (57%) (Figure 73).

Figure 73. Percentage of Sudden Unexpected Infant Deaths by Sex, Less than 1 Year of Age, Arizona, 2023 (n=65)



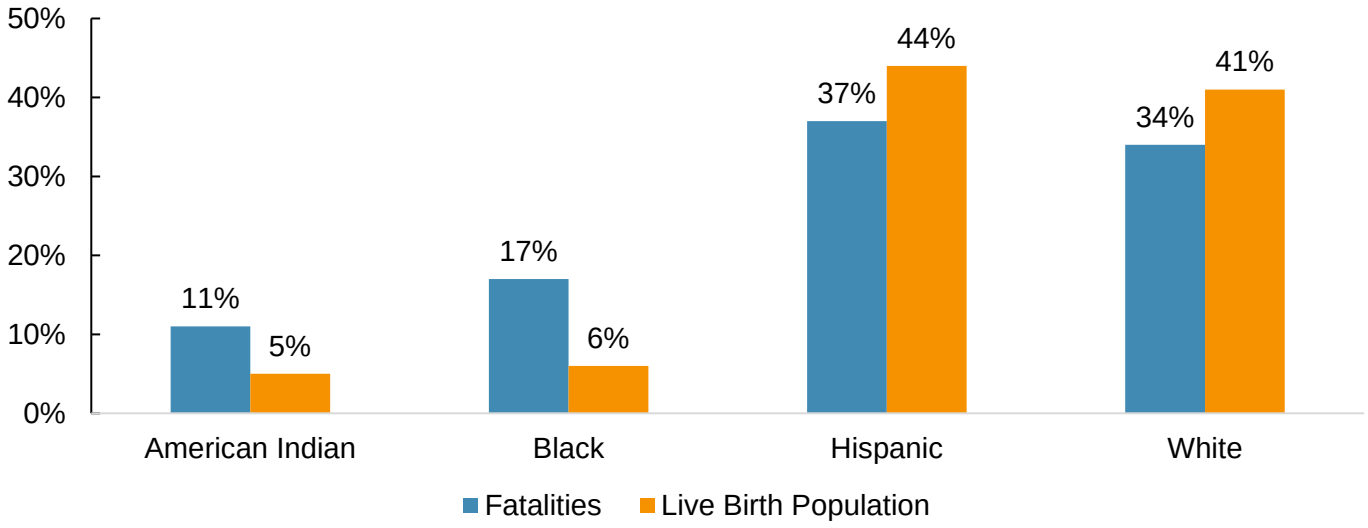
The majority of SUIDs occurred among infants 28 days to less than one year of age (91%) (Figure 74).

Figure 74. Percentage of Sudden Unexpected Infant Deaths by Age, Less than 1 Year of Age, Arizona, 2023 (n=65)



American Indian and Black children made up 11% and 17% of SUIDs, respectively, but only comprised 5% and 6% of the total live birth population. Hispanic children (37%) had the largest number of SUIDs (Figure 75).

Figure 75. Percentage of Sudden Unexpected Infant Death by Race/ Ethnicity, compared to the Live Birth Population, Less than 1 Year of Age, Arizona, 2023 (n=65) *[31]



*Data for Asian children suppressed due to counts less than 6.

Of the 65 SUIDs in 2023, 74% were due to suffocation (Table 42).

Table 42. Cause of Sudden Unexpected Infant Death, Less than 1 Year of Age, Arizona, 2023 (n=65)

Cause of Death	Number	Percent
Suffocation	48	74%
Undetermined Cause	15	23%
Other	*	*
*Number/Percentage suppressed due to count less than 6.		

While numerous risk factors can contribute to SUID, the leading risk factor was an unsafe sleep environment (95%), followed by objects in the sleep environment (82%) (Table 43).

Table 43. Risk Factors for Sudden Unexpected Infant Deaths, Less than 1 Year of Age, Arizona, 2023 (n=65)

Risk Factors*	Number	Percent
Unsafe Sleep Environment	62	95%
Objects in Sleep Environment	53	82%
Poverty	45	69%
Unsafe Sleep Location	45	69%
Bedsharing	42	65%
Parent Substance Use History	32	49%
CPS History with the Family	27	42%
Unsafe Sleep Position	23	35%
Substance Use	17	26%
Lack of Supervision	14	22%
Exposure to Smoking	11	17%
*More than one risk factor may have been identified in each death.		

Section 5: Prevention Recommendations

Introduction to Prevention Recommendations

Given the outcomes presented in Sections 1-4, the State CFRP, in conjunction with the local CFR teams, identified the following recommendations to prevent these outcomes in the future. Except for accidental injury deaths, the recommendations are presented in four categories that align with the stakeholders involved in improving child and infant health: healthcare providers, policymakers, participating agencies, schools, community-based organizations, researchers, families and caregivers, and other stakeholders. Prevention recommendations for accidental injury deaths are categorized based on injury.

These recommendations were initially derived from the recommendations made during the local CFR team's case reviews. Local CFR staff completed qualitative analysis on all recommendations for 2022-2023 deaths and presented the initial synthesized recommendations to the State CFR team. Following presentations of aggregate CFR data, the State CFR team added to and adjusted the list of recommendations based on overarching findings and observations from these analyses. The top five recommendations in each section, except for accidental injury deaths, reflect the recommendations the State CFRP Team prioritized at various State CFRP Team Meetings. The recommendations were prioritized based on whether the action would drive significant systematic improvements in child fatality prevention, if it would benefit a broad group of people, and if it would help reduce health inequalities and lead to better health results. Prioritizing the prevention recommendations helped identify areas to focus on and did not eliminate any lower-prioritized recommendations. It is also important to note that while some data associated with this recommendation may be suppressed in Sections 1-4 due to numbers being less than six, the recommendations are not suppressed in this section. To better understand the preventable nature of accidental injury deaths, prevention recommendations provided by local review teams that would typically be organized under child neglect/abuse are now highlighted under accidental injury. This approach brings to light important recommendations that might otherwise be overlooked within broader categories, ensuring they receive focused attention for preventive action.

These recommendations intend to be widely disseminated so that partners and key stakeholders across the state will consider them for implementation. In some cases, the recommendations may currently be in practice. This is particularly true for some policy or practice recommendations geared toward payers, such as the Arizona Health Care Cost Containment System (AHCCCS), which has already implemented several of the models included in these recommendations.

Accidental Injury Death Prevention Recommendations

Sport Injuries

- Ensure affordable, accessible sports medicine evaluations.
- Ensure accessibility to medical home.
- Families should be educated on the lifelong consequences of Traumatic Brain Injury (TBI).[151]
- Schools and private and public organizations should require a medical screening for applications to play sports.[151]
- Providers should educate parents and caregivers on when to obtain immediate medical evaluation of a child after a head injury.[151]

Choking Injuries

- Pediatricians, dentists, and other infant and child health providers should provide choking-prevention counseling to parents as an integral part of anticipatory guidance activities.[152]
- Parents/caregivers should be educated about home safety, supervising young children who are at high risk for choking, and to routinely check toys for broken pieces.[152, 153]
- Ensure infants and children have toys that are appropriate for their age and developmental status.[152]

Fire Injuries

- Parents/caregivers and rental property staff should ensure residents are equipped with working smoke alarms and that families follow important fire safety tips, including[154]
  - Installing working smoke alarms on every level of homes, outside sleeping areas, and inside bedrooms.
  - Replacing smoke alarm batteries and testing alarms once every year.
  - Always stay in the kitchen when cooking.
  - Know how to escape if there is a fire in your home. Have a plan and practice it with your family.
  - Replace smoke alarms that are more than ten years old.
- Increase education and community awareness of fire dangers and fire safety in partnership with local fire departments and community organizations.[155]
- Consult fire officials when recommending and/or installing door-locking mechanisms.[154]

Dog Bite Injuries

- Increase public awareness/education on proper animal enclosures/maintenance.[156]
- Increase public awareness/education on the risk of dog bites[156]
  - Almost 1 in 5 people bitten by dogs require medical attention. For children, the injuries are more likely to be serious since the majority of injuries occur in the head, face, or neck. Parents should be aware of some simple steps that can prevent dog bites.
- Follow AAP guidelines on preventing dog bites, including[156]
  - Never leave a small child and a dog alone together, no matter if it is the family dog, a dog that is known to you, or a dog that you have been assured is well-behaved. Any dog can bite.
  - Do not allow your child to play aggressive games with a dog, such as tug-of-war or wrestling, as this can lead to bites.
  - Teach your child to ask a dog owner for permission before petting any dog.
  - Let a dog sniff you or your child before petting, and stay away from the face or tail. Pet the dog gently, and avoid eye contact, particularly at first.
  - Never bother a dog that is sleeping, eating, or caring for puppies. Dogs in these situations are more likely to respond aggressively, even with a person who is familiar with them.

  - Teach your child to move calmly and slowly around dogs.
  - Teach your child that if a dog is behaving in a threatening manner – for example, growling and barking – to remain calm, avoid eye contact with the dog, and back away slowly until the dog loses interest and leaves.
  - If you or your child is knocked over by a dog, curl up in a ball and protect the eyes and face with arms and fists.

Heat-Related Injuries

- Educate parents and caregivers that it is unsafe to leave a young child alone in a car under any circumstances and for any length of time.[157]
- Broader awareness of what resources are available to support refugee families.[159]
- Increase parent/caregiver understanding of how to protect children from extreme heat, including recognizing the dangers of heat exposure and signs of adverse reactions.[158]

Fall/Crush-Related Injuries

- Educate parents on how to respond to fall/crush injuries and when/where to seek help.
- Increase community understanding of 911 and call it during an emergency.
  - Parents/caregivers should be encouraged to call 911 instead of driving a critically injured child to the hospital.

Drowning Death Prevention Recommendations

Parents/Caregivers

- Ensure pools have a proper enclosure and are up to code.[64-67]
  - Pools must be enclosed on all four sides by a wall, fence, or barrier to restrict young children's access. Pool enclosures must be at least 5 feet tall and 20 inches from the water's edge and have a gate at least 54 inches above the floor that swings away from the pool. The gate should have a self-closing/latching mechanism. There should be no openings in pool enclosures wide enough for a child to get through or under. There should also be no protrusions, like handholds, which can be used to climb the enclosure.
- Have children wear appropriately fitted Coast Guard-approved life jackets when on a boat, dock, or near bodies of water.[66]
  - Inflatable swimming aids and personal flotation devices are not a substitute for a life jacket.
- Ensure children are not left unattended near pools or pool areas. A focused adult supervisor should watch children in or around open water, pools, and spas.[63-68]
  - This is especially true for high-risk groups such as refugee families, families with young children, and children with special needs, e.g., autism, seizure disorders, etc.
- If possible, teach children to swim after the age of 1.[64-66]
  - This is one of the most effective interventions that can reduce child drowning.
- Provide constant supervision of children under four during bath time, mainly since drowning can occur rapidly in any water source, including bathtubs.[63-68]
  - Adult supervision is the key to preventing children from drowning.

Provider/Healthcare Facilities

- Increase drowning education and family outreach to promote water safety in multiple languages.[63-68]
  - Parents and caregivers should ensure children are not left unattended near pools or pool areas. A focused adult supervisor should watch children in or around open water, pools, and spas.

        - This is especially true for high-risk groups such as refugee families, families with young children, and children with special needs, i.e., autism, seizure disorders, etc.[63-68]
    - Parents and caregivers should constantly supervise children under four during bath time and how rapidly a drowning can occur in any water source, including bathtubs.
        - Adult supervision is the key to preventing children from drowning. These points should continue to be reiterated, and drowning prevention education should be expanded.[63-68]

Policy Makers/Participating Agencies/Schools

- Ensure availability and accessibility of CPR training for parents/caregivers.[69]
- Ensure public pools and businesses (including rental properties) with pools have a proper enclosure and are up to code.[64-67]
    a. Pools must be enclosed on all four sides by a wall, fence, or barrier to restrict young children's access. Pool enclosures must be at least 5 feet tall and 20 inches from the water's edge and have a gate at least 54 inches above the floor that swings away from the pool. The gate should have a self-closing/latching mechanism. There should be no openings in pool enclosures wide enough for a child to get through or under. There should also be no protrusions, like handholds, which can be used to climb the enclosure.
- Ensure availability and accessibility of affordable swim lessons that are developmentally, culturally, and linguistically appropriate, especially for children after the age of 1.[64,] 66
- Create a state fund to assist families with pool safety devices if they cannot afford them while informing parents that inflatable swimming aids and personal flotation devices are not a substitute for a life jacket.[66]
    a. Families should have their children wear appropriately fitted Coast Guard-approved life jackets when on a boat, dock, or near bodies of water.
- Ensure appropriate rescue devices and signage are available at all pools in all languages
- Increase drowning education and family outreach to promote water safety in multiple languages.[63-68]
    a. Parents and caregivers should ensure children are not left unattended near pools or pool areas. A focused adult supervisor should watch children in or around open water, pools, and spas.
        i. This is especially true for high-risk groups such as refugee families, families with young children, and children with special needs, e.g., autism, seizure disorders, etc.[63-68]
    b. Parents and caregivers should constantly supervise children under four during bath time and how rapidly a drowning can occur in any water source, including bathtubs.
        i. Adult supervision is the key to preventing children from drowning. These points should continue to be reiterated, and drowning prevention education should be expanded.[63-68]

Community-Based Organizations

- Ensure availability and accessibility of CPR training for parents/caregivers.[69]
- Ensure public pools and businesses (including rental properties) with pools have a proper enclosure and are up to code.[64-67]
    a. Pools must be enclosed on all four sides by a wall, fence, or barrier to restrict young children's access. Pool enclosures must be at least 5 feet tall and 20 inches from the water's edge and have a gate at least 54 inches above the floor that swings away from the pool. The gate should have a self-closing/latching mechanism. There should

be no openings in pool enclosures wide enough for a child to get through or under. There should also be no protrusions, like handholds, which can be used to climb the enclosure.

- Ensure availability and accessibility of affordable swim lessons that are developmentally, culturally, and linguistically appropriate, especially for children after the age of 1.[64, 66]
- Create a state fund to assist families with pool safety devices if they cannot afford them while informing parents that inflatable swimming aids and personal flotation devices are not a substitute for a life jacket.[66]
    a. Families should have their children wear appropriately fitted Coast Guard-approved life jackets when on a boat, dock, or near bodies of water.
- Ensure appropriate rescue devices and signage are available at all pools in all languages
- Increase drowning education and family outreach to promote water safety in multiple languages.[63-68]
    a. Parents and caregivers should ensure children are not left unattended near pools or pool areas. A focused adult supervisor should watch children in or around open water, pools, and spas.
        i. This is especially true for high-risk groups such as refugee families, families with young children, and children with special needs, e.g., autism, seizure disorders, etc.[63-68]
    b. Parents and caregivers should constantly supervise children under four years of age during bath time and how rapidly a drowning can occur in any water source, including bathtubs.
        i. Adult supervision is the key to preventing children from drowning. These points should continue to be reiterated, and drowning prevention education should be expanded.[63-68]

Firearm Injury Death Prevention Recommendations

Parents/Caregivers

- Increase awareness that the most effective way to prevent firearm-related deaths in children and adolescents is to remove all firearms in households.[70-72]
    - The presence of firearms in a household increases the risk of suicide among adolescents. Parents of all adolescents should remove all firearms, especially if there is a history of mental health issues or substance use issues.
    - Gun owners should practice safe storage of their firearms, which requires keeping the gun unloaded and locked in a safe separate from the ammunition.
- Provide positive strategies in the home related to:[75, 76]
    - Proper supervision of teens
    - Internet/social media safety
    - Increased supervision for children, especially those in distress, risks of isolation for children in distress, alternatives to restricting technology
    - How to handle challenging behaviors and discipline
    - Conflict resolution

Provider/Healthcare Facilities

- Have mental health materials present and available in the pediatrician's office and other healthcare facilities and screen patients for substance abuse and mental health concerns.[70, 71, 73]

Policy Makers/Participating Agencies/Schools

- Increase public awareness that the most effective way to prevent firearm-related deaths in children and adolescents is to remove all firearms in households.[70-72]
  - The presence of firearms in a household increases the risk of suicide among adolescents. Parents of all adolescents should remove all firearms, especially if there is a history of mental health issues or substance use issues.
  - Gun owners should practice safe storage of their firearms, which requires keeping the gun unloaded and locked in a safe separate from the ammunition.
- The state should implement policies, programs, and initiatives focused on responsible firearm access and ownership in households with children. This could include:[104, 105]
  - Requiring mental health screening and gun safety training as part of the firearm purchasing process
  - Licensing and tracking firearm ownership
  - Increase public awareness of reporting stolen firearms and establish penalties for failing to report.
- Increase funding, access, and use of quality and affordable youth mental health and community intervention programs.[73, 74]
- Provide bullying prevention programming for children and youth[77, 78]
- Increase implementation of gang prevention programs for children and youth[80]

Community-Based Organizations

- Increase public awareness that the most effective way to prevent firearm-related deaths in children and adolescents is to remove all firearms in households.[70-72]
  - The presence of firearms in a household increases the risk of suicide among adolescents. Parents of all adolescents should remove all firearms, especially if there is a history of mental health issues or substance use issues.
  - Gun owners should practice safe storage of their firearms, which requires keeping the gun unloaded and locked in a safe separate from the ammunition.
- Provide parent education on positive parenting strategies[75, 76]
  - Proper supervision of teens
  - Internet/social media safety
  - Increased supervision for children, especially those in distress, risks of isolation for children in distress, alternatives to restricting technology
  - How to handle challenging behaviors and discipline
  - Conflict resolution
- Increase funding, access, and use of quality and affordable youth mental health and community intervention programs.[73, 74]
- Collaborate with firearm dealers or firearm retailers to offer firearm storage resources that are low-cost and accessible to firearm owners.
- Increase community/diversion mentorship programs and extracurricular activities for children and youth.
  - Sponsor firearm safety events because of their potential to reach a population with a high prevalence of firearm ownership.
- Provide bullying prevention programming for children and youth[77, 78]
- Increase implementation of gang prevention programs for children and youth[80]
- Increase availability of domestic violence services for families[79]

Infectious Disease-Related Death Prevention Recommendations

Parents/Caregivers

- Emphasize the importance of keeping immunizations up-to-date for both children and adults.[83]
- Understand the signs and symptoms of common infectious diseases that affect children and when to seek medical attention.
- Emphasize the importance of following prescription instructions and not stopping treatment without talking to a healthcare provider.[85]

Provider/Healthcare Facilities

- Increase the availability of affordable and accessible healthcare and telehealth care for families and children.
- Increase access to home visiting programs throughout the state and provide health care information on the importance of keeping medical appointments and vaccinations.[84]
- Provide community resources for parents to find accessible, affordable, and qualified childcare.
- Work with healthcare offices to use various CDC-established procedures to help prevent healthcare-associated infection (HAI) and Hospital infection risk mitigation.[86] This includes:
  - Performing hand hygiene
  - Use PPE whenever there is an expectation of possible exposure to an infectious material.
  - Follow respiratory hygiene/cough etiquette principles
  - Ensure appropriate patient placement
  - Handle, clean, and disinfect patient care equipment and instruments/devices. Clean and disinfect the environment appropriately.
  - Handle textiles and laundry carefully
  - Follow safe injection practices
- Promote vaccination and vaccine confidence through ongoing, proactive messaging (i.e., reminder recall, vaccine appointment/clinics), update vaccinations, and provide vaccine education at all health care visits, including emergency room visits.[83]
- Provide parental education on the importance of following prescription instructions and not stopping treatment without talking to a healthcare provider.[85]

Policy Makers/Participating Agencies/Schools

- Increase the availability of affordable and accessible healthcare and telehealth care for families and children.
- Increase access to home visiting programs throughout the state and provide health care information on the importance of keeping medical appointments and vaccinations.[84]

Community-Based Organizations

- Increase the availability of affordable and accessible healthcare and telehealth care for families and children.
- Increase access to home visiting programs throughout the state and provide health care information on the importance of keeping medical appointments and vaccinations.[84]
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- Work with healthcare offices to use various CDC-established procedures to help prevent healthcare-associated infection (HAI) and Hospital infection risk mitigation.[86] This includes:
  - Performing hand hygiene

- Use PPE whenever there is an expectation of possible exposure to an infectious material.
- Follow respiratory hygiene/cough etiquette principles
- Ensure appropriate patient placement
- Handle, clean, and disinfect patient care equipment and instruments/devices. Clean and disinfect the environment appropriately.
- Handle textiles and laundry carefully
- Follow safe injection practices

- Promote vaccination and vaccine confidence through ongoing, proactive messaging (i.e., reminder recall, vaccine appointment/clinics), update vaccinations, and provide vaccine education at all health care visits, including emergency room visits.[83]
- Provide parental education on the importance of following prescription instructions and not stopping treatment without talking to a healthcare provider.[85]

Motor Vehicle Crash-Related Death Prevention Recommendations

Parents/Caregivers

- Families should follow the four evidence-based recommendations provided by the American Academy of Pediatrics (AAP), healthychildren.org, and NHTSA for best practices in the choice of a child restraint system to optimize safety in passenger vehicles for children:[88]
  - Birth-12 Months: Your child under age one should always ride in a rear-facing car seat. There are different types of rear-facing car seats:
    - Infant-only seats can only be used rear-facing.
    - Convertible and all-in-one car seats typically have higher height and weight limits for the rear-facing position, allowing you to keep your child rear-facing for longer.
  - 1 – 3 Years: Your child should remain in a rear-facing car seat until they reach the height or weight limit your car seat's manufacturer allows. Once your child outgrows the rear-facing car seat, your child is ready to travel in a forward-facing car seat with a harness and tether.
  - 4 – 7 Years: Keep your child in a forward-facing car seat with a harness and tether until they reach the height or weight limit your car seat's manufacturer allows. Once your child outgrows the forward-facing car seat with a harness, it's time to travel in a booster seat, but still in the back seat.
  - 8 – 12 Years: Keep your child in a booster seat until they are big enough to fit in a seat belt properly. For a seat belt to fit properly, the lap belt must lie snugly across the upper thighs, not the stomach. The shoulder belt should lie snugly across the shoulder and chest and not cross the neck or face. Remember: your child should still ride in the back seat because it's safer there.
  - 12+ Years: Lap and shoulder seat belts are recommended for children with outgrown booster seats. All children (especially those younger than 13) should ride in the rear seats of vehicles.
- Continue promoting the importance of safety seats for children.[88, 90, 93]
  - Child safety seats and seat belts not only save lives and increase safety for little ones, but child safety seats are required by Arizona law. Children younger than eight and shorter than 4 feet, 9 inches, must be adequately secured in a safety or booster seat. Increase access and opportunities to provide education and resources to families on properly installing and using car seats for young children.

- Educate children, parents, and caregivers on safe pedestrian practices, avoiding distracted walking, and awareness on proper use of crosswalks, especially at night with low visibility.[87, 88]
- Ensure that children under 16 do not ride an ATV. If done, ensure that the child wears a helmet, does not ride with or as a passenger, stays off and does not cross public roads, does not ride it at night, does not ride it under the influence, and uses an ATV that is the right size for the driver. Also, ensure that children under six do not operate an ATV or be passengers in the vehicle.[94]
- Encourage drivers to be aware of cyclists, significantly when visibility is impaired at night.[89, 91]
    - Cyclists should wear high-visibility clothing during the day and reflectors and lights at night. They should also ride defensively and avoid distractions like music or texting.

Provider/Healthcare Facilities

- Encourage families to follow the four evidence-based recommendations provided by the American Academy of Pediatrics (AAP), healthychildren.org, and NHTSA for best practices in choosing a child restraint system to optimize child safety in passenger vehicles.[88]
- Continue promoting the importance of safety seats for children and provide parents with information on the locations of certified seat installers. Provide training to parents and caregivers on properly installing car safety seats.[88, 90, 93]

Policy Makers/Participating Agencies/Schools

- Implement education, campaigns, and initiatives to promote safe, sober, distraction-free defensive driving for young drivers and their parents/caregivers with a focus on education on the risks of driving while intoxicated/under the influence (youth and adults).
- Require training/certification for adolescents operating road vehicles. Ensure that children under the age of 16 do not ride an ATV. If done, ensure that the child wears a helmet, does not ride with or as a passenger, stays off and does not cross public roads, does not ride it at night, does not ride it under the influence, and uses an ATV that is the right size for the driver. Also, ensure that children under six do not operate an ATV or be passengers in the vehicle.[94]
- Expand legislation to protect child passengers and young drivers (seatbelt use, graduated driver licenses, rear-facing car seats)[88, 93]
- Increase availability/accessibility of public transportation[95]
- Ensure better lighting, sidewalk availability, crosswalks, pedestrian walkways, etc., in high-traffic areas and areas with pedestrians [90, 92]
    - Implement systems that encourage crosswalk use (i.e., relocate bus stops closer to crosswalks).
    - Increase the use of protected turn signals in intersections, huge high-traffic intersections, and intersections with high incidences of failure to yield left-turn accidents.
        - Require cities to maintain proper visibility at intersections through monitored landscaping and maintenance. (For example, trim trees and bushes at intersections to improve visibility and provide paved or designated well-lit sidewalks to local parks and bus stops.)
    - Red light cameras significantly reduce mortality from motor vehicle crashes among children. An increased number of these cameras may be beneficial.
    - Installation of wrong-way driver warning signs and education on what to do in the case of a wrong-way driver
- Implement more substantial and ongoing DUI enforcement

- More regulation on selling and buying used car seats (ex., Yuma works with a technician to make sure they go over with parents the safety of car seats/boosters and to examine them to make sure if they are used, they can still be used)
    - Parents should not use a used car seat as car seats with unknown histories that have been involved in an accident or have been recalled are no longer safe for use.
        - Healthychildren.org provides these recommendations
        - **https://events.safekids.org/** to look up car seat checkups in the community

Community-Based Organizations

- Encourage families to follow the four evidence-based recommendations provided by the American Academy of Pediatrics (AAP), healthychildren.org, and NHTSA for best practices in choosing a child restraint system to optimize child safety in passenger vehicles.[88]
- Continue promoting the importance of safety seats for children and provide parents with information on the locations of certified seat installers. Provide training to parents and caregivers on properly installing car safety seats.[88, 90, 93]
- Implement education, campaigns, and initiatives to promote safe, sober, distraction-free defensive driving for young drivers and their parents/caregivers with a focus on education on the risks of driving while intoxicated/under the influence (youth and adults).
- Educate children, parents, and caregivers on safe pedestrian practices, avoiding distracted walking, and awareness on proper use of crosswalks, especially at night with low visibility.[87, 88]
- Encourage drivers to be aware of cyclists, significantly when visibility is impaired at night. Cyclists should wear high-visibility clothing during the day and reflectors and lights at night. They should also ride defensively and avoid distractions like music or texting[89, 91]
- Support youth and parents/caregivers when getting licensed (graduated driver licensing made simple video – should be available in Spanish)

Neglect/Abuse-Related Death Prevention Recommendations

Parents/Caregivers

- Families should follow the American Academy of Pediatrics tips for keeping medications out of the hands of children and adolescents.[102, 103]
    - Store all medications in a cupboard or high shelf, well out of a child's sight. In about half of over-the-counter medication poisonings, the child climbed onto a chair, toy, or other object to reach the medication.
    - Keep medicines in their original containers, with child-safety caps.
    - If there are controlled substances (like prescription pain medications or ADHD medicine), consider using a locked box for extra safety.
    - Keep track of how many pills are in the bottle and write the start date on the label. If a spill occurs, you will know if any are missing.
    - When giving your child medicine, lean over a counter or table. This helps contain any accidental spills.
    - Any medication can be dangerous, so treat all products equally. We worry about opioids, but some blood pressure and diabetes medications can be fatal to a toddler who swallows only one pill.
    - If a medication spill, vacuum or sweep the area as an extra precaution to ensure nothing is missed.
    - Dispose of unused medications—especially opioids—at pharmacies, drug "take back" programs, or doctors' offices

    - Know basic first aid and keep the Poison Center Number (1-800-222-1222) in your phone.
    - Get into the practice of safe medication storage, starting as soon as your baby is born.
    - Use of home drug deactivation kits to properly dispose of prescription drugs, pills, patches, liquids, creams, and films to reduce the risk of drug misuse and diversion.
- Increase availability of services for victims of domestic and interpersonal violence, raise awareness about available resources and support, and how/where to seek help
- Know how and when to report suspected child abuse and neglect so that any individual who knows about a child who is being abused or neglected can act by calling 911 in an emergency or the Arizona Child Abuse Hotline (1-888-SOS-CHILD).[100]
- Education/awareness on proper supervision of infants, children, and teens, primarily related to the dangers of supervising children while under the influence of drugs and/or alcohol.
- Know the risks associated with substance use, including marijuana, during pregnancy, including premature birth and other complications[108]

Provider/Healthcare Facilities

- Increase utilization of mental health professionals to respond to emergency calls where mental health issues may be a factor.
- Increase awareness of adverse childhood experiences (ACEs) as they can have lasting, adverse effects on health, well-being, and opportunity.[101]
    - ACEs and their associated harms are preventable. Creating and sustaining safe, stable, nurturing relationships and environments for all children and families can prevent ACEs and help them reach their total health and life potential.
- Increase awareness of the risks associated with substance use, including marijuana, during pregnancy, including premature birth and other complications.[108]

Policy Makers/Participating Agencies/Schools

- The state should support community-based efforts to develop, operate, enhance, and coordinate initiatives, programs, and activities to prevent child abuse and neglect. They should also support the coordination of resources and activities to strengthen and support families to reduce the likelihood of child abuse and neglect among diverse populations.[97]
- Arizona should invest in families' financial well-being, including increasing access to concrete supports like food, housing, and childcare.[106, 107]
    - Research shows this reduces both poverty-related neglect and the need for foster care.
- Home visiting programs throughout the state should be increased.[98]
    - Home visits are associated with a decrease in substantiated reports of child abuse and neglect.
- Increase utilization of mental health professionals to respond to emergency calls where mental health issues may be a factor.
- Increase availability of services for victims of domestic and interpersonal violence, raise awareness about available resources and support, and how/where to seek help.
- Engage federal partners to secure funding for the implementation of a national child abuse and neglect database to better track out-of-state DCS involvement with the child and/or family.
- The state should implement policies, programs, and initiatives focused on responsible firearm access and ownership in households with children. This could include:[104, 105]

    - Requiring mental health screening and gun safety training as part of the firearm purchasing process
    - Licensing and tracking firearm ownership
    - Increase public awareness of reporting stolen firearms and establish penalties for failing to report.
- The state and community-based organizations should collaborate to increase awareness and support the All-Babies Cry Program.[99]
- Disseminate online factsheets published by Child Welfare Information Gateway on healthy parenting to parents and other caregivers.[96]
    - The website is run by the U.S. Department of Health & Human Services and provides knowledge on healthy parenting.
    - Disseminate to community members online factsheets on recognizing the signs of potential child maltreatment.
- Establish Community-Based Child Abuse Prevention (CBCAP) programs.[97]
    - These programs strengthen families while promoting a safe and healthy environment for raising children.

Community-Based Organizations

- Increase awareness on how and when to report suspected child abuse and neglect so that any individual who knows about a child who is being abused or neglected can act by calling 911 in an emergency or the Arizona Child Abuse Hotline (1-888-SOS-CHILD).[100]
- Home visiting programs throughout the state should be increased.[98]
    - Home visits are associated with a decrease in substantiated reports of child abuse and neglect.
- Increase utilization of mental health professionals to respond to emergency calls where mental health issues may be a factor.
- Increase availability of services for victims of domestic and interpersonal violence, raise awareness about available resources and support, and how/where to seek help.
- Increase awareness of adverse childhood experiences (ACEs) as they can negatively affect health, well-being, and opportunity.[101]
    - ACEs and their associated harms are preventable. Creating and sustaining safe, stable, nurturing relationships and environments for all children and families can prevent ACEs and help them reach their total health and life potential.
- Education/awareness on proper supervision of infants, children, and teens, primarily related to the dangers of supervising children while under the influence of drugs and/or alcohol.
- Increase awareness of the risks associated with substance use, including marijuana, during pregnancy, including premature birth and other complications.[108]
- Disseminate online factsheets published by Child Welfare Information Gateway on healthy parenting to parents and other caregivers.[96]
    - The website is run by the U.S. Department of Health & Human Services and provides knowledge on healthy parenting.
    - Disseminate to community members online factsheets on recognizing the signs of potential child maltreatment.
- The state and community-based organizations should collaborate to increase awareness and support the All-Babies Cry Program.[99]

Premature Death Prevention Recommendations

Parents/Caregivers

- Be aware of the risks of smoking nicotine, drinking alcohol, and using marijuana and drugs during pregnancy because it increases the risk of preterm birth or other complications.[108]
    - Pregnant people who smoke tobacco should be referred to the Arizona Smokers Helpline (ASHLine / 1-800-556-6222).
    - Pregnant people with substance use disorder should be referred to the Opioid Assistance Referral Line (OAR Line).
- Receive pre-pregnancy care visits with a healthcare provider for women of reproductive age.[108]
- Receive routine prenatal care, which can help prevent complications and inform women about necessary steps they can take to protect their infant and ensure a healthy pregnancy, especially for pregnant women who use substances.[109]

Provider/Healthcare Facilities

- Increase accessibility to prenatal care, which can help prevent complications and inform women about necessary steps they can take to protect their infant and ensure a healthy pregnancy, especially for pregnant women who use substances and the immigrant population.[109]
- Increase availability and accessibility of affordable quality family planning and parenting services/support.[110]
    - Sustain Family Planning programs in Arizona to continue to emphasize the importance of a reproductive life plan and increase access to effective contraceptive methods throughout the state.
- Increase availability and accessibility of affordable quality mental health and substance use treatment services.[109]
- Expand innovative approaches to increasing access to prenatal care services, such as group prenatal care and telemedicine for rural and dispersed populations.[110]
- Increase education and community awareness of the risks of smoking nicotine, drinking alcohol, and using marijuana and drugs during pregnancy because it increases the risk of preterm birth or other complications.[108]
    - Pregnant people who smoke tobacco should be referred to the Arizona Smokers Helpline (ASHLine / 1-800-556-6222).
    - Pregnant people with substance use disorder should be referred to the Opioid Assistance Referral Line (OAR Line).
- Identify women at risk for preterm delivery and increase their access to effective treatments to prevent preterm birth.[110]
- Increase awareness of the risk factors and signs of premature labor via statewide-centered campaigns.

Policy Makers/Participating Agencies

- Increase accessibility to prenatal care, which can help prevent complications and inform women about necessary steps they can take to protect their infant and ensure a healthy pregnancy, especially for pregnant women who use substances and the immigrant population.[109]
- Increase availability and accessibility of affordable quality family planning and parenting services/support.[110]

    - Sustain Family Planning programs in Arizona to continue to emphasize the importance of a reproductive life plan and increase access to effective contraceptive methods throughout the state.
- Increase availability and accessibility of affordable quality mental health and substance use treatment services.[109]
- Expand innovative approaches to increasing access to prenatal care services, such as group prenatal care and telemedicine for rural and dispersed populations.[110]

Community-Based Organizations

- Increase education and community awareness of the risks of smoking nicotine, drinking alcohol, and using marijuana and drugs during pregnancy because it increases the risk of preterm birth or other complications.[108]
    - Pregnant people who smoke tobacco should be referred to the Arizona Smokers Helpline (ASHLine / 1-800-556-6222).
    - Pregnant people with substance use disorder should be referred to the Opioid Assistance Referral Line (OAR Line).
- Increase awareness of the risk factors and signs of premature labor via statewide-centered campaigns.

Substance Use-Related Death Prevention Recommendations

Parents/Caregivers

- Increase adolescents' awareness of the risks of opioid use, especially fentanyl, and how to respond to and identify signs of an overdose.
- Increase the caregiver's awareness of the dangers associated with caring for children while under the influence of drugs and/or alcohol.
- Educate family members about how to properly respond to a child's potential substance abuse/use, i.e., seeking treatment and community resources (mental health, addiction treatment).
- Families should follow the American Academy of Pediatrics tips for keeping medications out of the hands of children and adolescents.[102, 103]
    - Store all medications in a cupboard or high shelf, well out of a child's sight. In about half of over-the-counter medication poisonings, the child climbed onto a chair, toy, or other object to reach the medication.
    - Keep medicines in their original containers, with child-safety caps.
    - If there are controlled substances (like prescription pain medications or ADHD medicine), consider using a locked box for extra safety.
    - Keep track of how many pills are in the bottle and write the start date on the label. If a spill occurs, you will know if any are missing.
    - When giving your child medicine, lean over a counter or table. This helps contain any accidental spills.
    - Any medication can be dangerous, so treat all products equally. We worry about opioids, but some blood pressure and diabetes medications can be fatal to a toddler who swallows only one pill.
    - If a medication spills, vacuum or sweep the area as an extra precaution to ensure nothing is missed.
    - Dispose of unused medications—especially opioids—at pharmacies, drug "take back" programs, or doctors' offices

  - Know basic first aid and keep the Poison Center Number (1-800-222-1222) in your phone.
  - Get into the practice of safe medication storage, starting as soon as your baby is born.
  - Use of home drug deactivation kits to properly dispose of prescription drugs, pills, patches, liquids, creams, and films to reduce the risk of drug misuse and diversion.
- Families with loved ones who struggle with opioid addiction should have naloxone nearby; ask their family members to carry it and let friends know where it is.[117, 118]

Provider/Healthcare Facilities

- Increase the availability of affordable and accessible substance use treatment healthcare and telehealth care for families and children.
- Implement universal screening for substance use and mental health issues during adolescent well visits.[114-116]
- Improve access to personalized substance use disorder treatment plans.[111, 115]
  - Forming treatment plans based on individuals' strengths can keep children engaged in their care and increase the likelihood of successful treatment and better health outcomes.
- To reduce overdose deaths, clinicians should be encouraged to co-prescribe naloxone to patients who are at risk for opioid overdose; this includes patients who are prescribed benzodiazepines.[117, 118]
  - Families with loved ones who struggle with opioid addiction should have naloxone nearby; ask their family members to carry it and let friends know where it is.
- Ensure that all adolescents have access to substance use treatment programs, and for those in foster care, ensure that all out-of-home placements have the education, training, and resources to support children struggling with substance use.
- Educate family members about how to properly respond to a child's potential substance abuse/use, i.e., seeking treatment and community resources (mental health, addiction treatment).
- Healthcare providers should adapt services to address ACEs and train more professionals in trauma-informed care.[111-114]
- Increase training for law enforcement, medical providers, service providers, and other first responders on the impacts of trauma and trauma-informed approaches when working with sex trafficking victims.[121]
  - Strategies should also be provided for victims with rapid access to substance use disorder treatments.
- Support the implementation of harm reduction strategies to reduce drug overdoses and poisonings.[119, 120]
  - This can include the provision of sterile syringes, naloxone distribution, fentanyl testing, overdose prevention, and education, including safer drug use education and other activities that can lessen the risk of adverse outcomes associated with using drugs.
  - Harm reduction programs also offer critical linkages to treatment for substance use disorders (SUDs) and other resources for populations with less access to care.
- Increase the availability of naloxone training to reduce overdose deaths.[111, 115]
  - Overdose fatalities in large populations can be prevented by expanding access to naloxone. Outreach and education programs to communities, persons at risk for opioid-related overdose, and their friends and family members can improve access to naloxone, which can reverse potentially lethal opioid overdoses.

Policy Makers/Participating Agencies

- Expand access to services for people with unstable housing and those who are experiencing homelessness because they are at higher risk for substance use.
- Ensure that all children have access to substance use treatment programs, and for those in foster care, ensure that all out-of-home placements have the education, training, and resources to support children struggling with substance use.
- Increase training for law enforcement, medical providers, service providers, and other first responders on the impacts of trauma and trauma-informed approaches when working with sex trafficking victims.[121]
    - Strategies should also be provided for victims with rapid access to substance use disorder treatments.
- Support the implementation of harm reduction strategies to reduce drug overdoses and poisonings.[119, 120]
    - This can include the provision of sterile syringes, naloxone distribution, fentanyl testing, overdose prevention, and education, including safer drug use education and other activities that can lessen the risk of adverse outcomes associated with using drugs.
    - Harm reduction programs also offer critical linkages to treatment for substance use disorders (SUDs) and other resources for populations with less access to care.
- Ensure group homes have the funding and resources needed to care for youth and that they are placed in homes with proper care for their needs.
- Increase community/diversion mentorship programs and extracurricular activities for children and youth.

Community-Based Organizations

- Increase adolescents' awareness of the risks of opioid use, especially fentanyl, and how to respond to and identify signs of an overdose.
- Expand access to services for people with unstable housing and those who are experiencing homelessness because they are at higher risk for substance use.
- Ensure that all adolescents have access to substance use treatment programs, and for those in foster care, ensure that all out-of-home placements have the education, training, and resources to support children struggling with substance use.
- Increase the caregiver's awareness of the dangers associated with caring for children while under the influence of drugs and/or alcohol.
- Increase training for law enforcement, medical providers, service providers, and other first responders on the impacts of trauma and trauma-informed approaches when working with sex trafficking victims.[121]
    - Strategies should also be provided for victims with rapid access to substance use disorder treatments.
- Support the implementation of harm reduction strategies to reduce drug overdoses and poisonings.[119, 120]
    - This can include the provision of sterile syringes, naloxone distribution, fentanyl testing, overdose prevention, and education, including safer drug use education and other activities that can lessen the risk of adverse outcomes associated with using drugs.
    - Harm reduction programs also offer critical linkages to treatment for substance use disorders (SUDs) and other resources for populations with less access to care.
- Increase the availability of naloxone training to reduce overdose deaths.[111, 115]

    - Overdose fatalities in large populations can be prevented by expanding access to naloxone. Outreach and education programs to communities, persons at risk for opioid-related overdose, and their friends and family members can improve access to naloxone, which can reverse potentially lethal opioid overdoses.
- Increase community/diversion mentorship programs and extracurricular activities for children and youth.
- Educate family members about how to properly respond to a child's potential substance abuse/use, i.e., seeking treatment and community resources (mental health, addiction treatment).

Suicide Prevention Recommendations

Parents/Caregivers

- Increase awareness of the 988 hotline, which anyone can call, text, or chat with online at 988lifeline.org if they are worried about a loved one who may need crisis support.[137]
- Safely store prescription medications/drugs out of reach of children.[139]
- Teach adolescents and parents about technology and empower them to be responsible online participants at the appropriate age.[134]
    - This can be done by monitoring their social media use, providing education on how to browse the web safely, and having algorithms on all social media platforms to screen for posts/videos of concern.
- Increase awareness of risk factors and warning signs for suicide and connect people in crisis to care.[122, 123, 127, 128]
- Educate that the presence of a firearm in the house significantly increases the risk of suicide for adolescents.[124, 129]
- Parents should talk with children about healthy relationships with peers to prevent dating violence.[136]
- Parents should meet children's teachers and school counselors to keep up to date with their kids' lives.[130, 131]
    - This can help prevent bullying and keep parents connected to their children.

Provider/Healthcare Facilities

- Increase awareness of the 988 hotline, which anyone can call, text, or chat with online at 988lifeline.org if they are worried about a loved one who may need crisis support.[137]
- Ensure the availability and accessibility of counseling, therapy, grief, crisis, behavioral, and mental health services that are culturally competent and linguistically appropriate, outreach to rural populations, age-appropriate, and availability of telehealth.[122, 126, 132]
    - Increase access to effective mental health care for Arizonans by adopting the Zero Suicide model statewide. Implement communication strategies using traditional and new media for school personnel that promote suicide prevention, emotional well-being, and mental health.
- Ensure availability and accessibility of LGBTQ and gender-affirming medical providers for children and teens.[138]
- Provide education on how to safely store prescription medications/drugs out of reach of children.[139]
- Adapt services to address adverse childhood experiences (ACEs) better and train more professionals in trauma-informed care.[133]

- Increased coordination of care and follow-ups from providers for youth mental health concerns and after a suicide attempt (i.e., Warm handoffs to community organizations/providers to assess and provide ongoing mental health care).[140]
- Support parents/caregivers to ensure understanding and implementation of mental health provider recommendations and what to do if the child is non-compliant with care.[141]
- Increase public awareness of risk factors and warning signs for suicide and connect people in crisis to care.[122, 123, 127, 128]
- Providers should talk with children about healthy relationships with peers to prevent dating violence.[136]
- Promote and deliver resources to families available from the Arizona Suicide Coalition.[135]
    - Parents and caregivers have an essential role in helping prevent adolescent suicides. They must be provided with the appropriate tools and guidance to offer caring, non-judgmental support for their child's needs.

Policy Makers/Participating Agencies/Schools

- Increase awareness of the 988 hotline, which anyone can call, text, or chat with online at 988lifeline.org if they are worried about a loved one who may need crisis support.[137]
- Increase public awareness of risk factors and warning signs for suicide and connect people in crisis to care.[122, 123, 127, 128]
- Public and Private Schools should have the resources to:[122-125, 132]
    - Have a suicide management protocol and be aware of resources like the suicide prevention toolkits developed by the Substance Abuse and Mental Health Services Administration and the American Foundation for Suicide Prevention.
    - Provide appropriate mental health services for students at risk for suicide. If the school cannot provide the services, they should identify mental health providers to whom students can be referred.
    - Educate staff members on the effects that suicide contagion can have on a student population. Adolescents are vulnerable to suicide contagion, and it is essential for schools not to glamorize, simplify, or romanticize the death of a student.
    - Use simultaneous complementary strategies. Simultaneous interventions involving parents, changing the school environment, and improving students' skills have been effective.
- Schools should talk with children about healthy relationships with peers to prevent dating violence.[136]
- Teach adolescents about technology and empower them to be responsible online participants at the appropriate age.[134]
    - This can be done by monitoring their social media use, providing education on how to browse the web safely, and having algorithms on all social media platforms to screen for posts/videos of concern.
- Promote and deliver resources to families available from the Arizona Suicide Coalition.[135]
    - Parents and caregivers have an essential role in helping prevent adolescent suicides. They must be provided with the appropriate tools and guidance to offer caring, non-judgmental support for their child's needs.

Community-Based Organizations

- Increase awareness of the 988 hotline, which anyone can call, text, or chat with online at 988lifeline.org if they are worried about a loved one who may need crisis support.[137]
- Teach adolescents about technology and empower them to be responsible online participants at the appropriate age.[134]

    - This can be done by monitoring their social media use, providing education on how to browse the web safely, and having algorithms on all social media platforms to screen for posts/videos of concern.
- Provide education on how to safely store prescription medications/drugs out of reach of children.[139]
- Increased coordination of care and follow-ups from providers for youth mental health concerns and after a suicide attempt (i.e., warm handoffs to community organizations/providers to assess and provide ongoing mental health care).[140]
- Increase public awareness of risk factors and warning signs for suicide and connect people in crisis to care.[122, 123, 127, 128]
- Adapt services to address adverse childhood experiences (ACEs) better and train more professionals in trauma-informed care.[133]
- Educate parents/families/caregivers that the presence of a firearm in the house significantly increases the risk of suicide for adolescents.[124, 129]
- Promote and deliver resources to families available from the Arizona Suicide Coalition.[135]
    - Parents and caregivers have an essential role in helping prevent adolescent suicides. They must be provided with the appropriate tools and guidance to offer caring, non-judgmental support for their child's needs.

Sudden Unexpected Infant Death Prevention Recommendations

Parents/Caregivers

- Ensure infants are in a safe sleeping environment:[144, 145, 147]
    - Infants should be placed on their backs to sleep for every sleep on a firm, flat, non-inclined sleep surface.
        - Alone, on my Back, in a Crib (ABCs) is the safest sleeping practice for an infant until it is one year of age.
    - The ideal safe sleeping environment for an infant requires a firm sleeping surface with only a fitted sheet and no additional bedding.
        - The area should also be void of toys, cushions, handing cords, or other items that pose a potential risk of suffocation or strangulation.
    - Any alternative sleep surface should adhere to the current CPSC rule that any infant sleep product must meet federal safety standards for cribs, bassinets, play yards, and bedside sleepers.
- New mothers should be encouraged to breastfeed because any amount of breastfeeding is associated with a reduced risk of SUID.[144, 146]
- Encourage them to stop swaddling when their baby shows signs of trying to roll over. Do not use weighted swaddles or weighted blankets, which can place too much pressure on a baby's chest and lungs.[150]
- Avoid alcohol, marijuana, opioids, and illicit drug use during pregnancy and after birth. Parents and caregivers should also be encouraged to not smoke during pregnancy and not smoke or allow smoke to be around the baby.[148]
    - Parents should be referred to the Arizona Smokers Helpline (ASHLine / 1-800-556-6222).
- Educate on the dangers associated with using products for sleep that are not explicitly marketed for infant sleep. Examples include rocking sleepers, nursing pillows, and infant loungers.[147]

- Importance should also be given to recalling items and how to properly buy products for their infants, even from a second-hand store.

Provider/Healthcare Facilities

- Educate parents on safe sleeping environments in multiple languages.[144, 145, 147]
- Provide caregivers and family members with education on the dangers associated with using products for sleep that are not explicitly marketed for infant sleep. Examples include rocking sleepers, nursing pillows, and infant loungers.[147]
  - Importance should also be given to recalling items and how to properly buy products for their infants, even from a second-hand store.
- Encourage new mothers to breastfeed because any amount of breastfeeding is associated with a reduced risk of SUID.[144, 146]
- Increase the availability and accessibility of affordable quality mental health and substance use treatment services.
- Encourage parents to stop swaddling when their baby shows signs of trying to roll over. Do not use weighted swaddles or weighted blankets, which can place too much pressure on a baby's chest and lungs.[150]
- Increase caregiver education/awareness on the dangers of supervising infants while under the influence of drugs and/or alcohol.
- Improve continuity care for infants following hospital discharge.
- Increase awareness that parents should avoid alcohol, marijuana, opioids, and illicit drug use during pregnancy and after birth. Parents and caregivers should also be encouraged to not smoke during pregnancy and not smoke or allow smoke to be around the baby.[148]
  - Parents should be referred to the Arizona Smokers Helpline (ASHLine / 1-800-556-6222).
- Promote vaccination and vaccine confidence through ongoing, proactive messaging (i.e., reminder recall, vaccine appointment/clinics) and use existing patient visits as an opportunity to promote and provide COVID-19 vaccine and education.[142]
- Introduce a statewide hospital policy that requires parents to receive safe sleep information before discharge and sign off that they understood the material.[144, 145]
- Increase availability and accessibility of care/support for post-partum depression.[149]
- Increase awareness on how and when to report suspected child abuse and neglect so that any individual who knows about a child who is being abused or neglected can act by calling 911 in an emergency or the Arizona Child Abuse Hotline (1-888-SOS-CHILD).[143]

Policy Makers/Participating Agencies/Schools

- Establish or fund a program that helps low-income families afford a crib that can reduce bed-sharing frequency. Bed-sharing is associated with a significantly increased risk of sleep-related deaths.[144, 145, 148]
  - Continue to provide families with safe sleep training and resources such as cribs and sleep sacks for families that cannot provide a safe sleep environment for their babies.
- Increase home visiting programs for infants following birth for up to one year and educate home visitors on the importance of discussing safe sleep at every visit.
- Increase the availability and accessibility of affordable quality mental health and substance use treatment services.
- Introduce a statewide hospital policy that requires parents to receive safe sleep information before discharge and sign off that they understood the material.[144, 145]
- Increase the availability of WIC services and home visits to help families feel less isolated and teach them safe sleeping practices.[144, 145]

- Increase awareness of the WIC Program and the availability of virtual services for families. Virtual services allow families to participate in appointments from the comfort of their homes. It also removes barriers that require them to travel to clinics and transport children for appointments.

Community-Based Organizations

- Educate parents on safe sleeping environments in multiple languages.[144, 145, 147]
- Provide caregivers and family members with education on the dangers associated with using products for sleep that are not explicitly marketed for infant sleep. Examples include rocking sleepers, nursing pillows, and infant loungers.[147]
  - Importance should also be given to recalling items and how to properly buy products for their infants, even from a second-hand store.
- Encourage new mothers to breastfeed because any amount of breastfeeding is associated with a reduced risk of SUID.[144, 146]
- Increase the availability and accessibility of affordable quality mental health and substance use treatment services.
- Provide community resources for parents to find accessible, affordable, and qualified childcare.
- Encourage parents to stop swaddling when their baby shows signs of trying to roll over. Do not use weighted swaddles or weighted blankets, which can place too much pressure on a baby's chest and lungs.[150]
- Increase caregiver education/awareness on the dangers of supervising infants while under the influence of drugs and/or alcohol.
- Increase awareness that parents should avoid alcohol, marijuana, opioids, and illicit drug use during pregnancy and after birth. Parents and caregivers should also be encouraged to not smoke during pregnancy and not smoke or allow smoke to be around the baby.[148]
  - Parents should be referred to the Arizona Smokers Helpline (ASHLine / 1-800-556-6222).
- Increase availability and accessibility of care/support for post-partum depression.[149]
- Increase awareness on how and when to report suspected child abuse and neglect so that any individual who knows about a child who is being abused or neglected can act by calling 911 in an emergency or the Arizona Child Abuse Hotline (1-888-SOS-CHILD).[143]

Section 6: Appendix

Appendix A: Neglect/Abuse Data Disclaimers

Disclaimer for the Department of Child Safety (DCS)/ Child Protective Services (CPS):

- Local CFRP teams attempt to obtain records from child protective services (CPS) agencies, including the Department of Child Safety (DCS) and CPS agencies in other jurisdictions, such as tribal authorities and agencies in different states.
- Review teams consider a family as having previous involvement with a CPS agency if the agency investigated a report of neglect/abuse for any child in the family before the incident leading to the child's death.
- Unsubstantiated reports of neglect/abuse are also included in this definition; however, calls to DCS that did not meet the criteria to be made into a report and was taken as "information only" are not included in the CFRP annual report.

Department of Child Safety (DCS) Definition of Abuse/Neglect:

Definitions of abuse and neglect observed by DCS are set in the Arizona Revised Statutes Title 8. Child Safety 8-201; Section 2 and Section 25:

- Section 2: "Abuse" means the infliction or allowing of physical injury, impairment of bodily function or disfigurement, or the infliction of or allowing another person to cause serious emotional damage as evidenced by severe anxiety, depression, withdrawal or untoward aggressive behavior and which emotional damage is diagnosed by a medical doctor or psychologist and is caused by the acts or omissions of an individual who has the care, custody, and control of a child. Abuse includes:
    - (a) Inflicting or allowing sexual abuse under §13-1404, sexual conduct with a minor under §13-1405, sexual assault under §13-1406, molestation of a child under §13-1410, commercial sexual exploitation of a minor under §13-3552, sexual exploitation of a minor under §13-3553, incest under §13-3608 or child sex trafficking under §13-3212.
    - (b) Physical injury that results from permitting a child to enter or remain in any structure or vehicle in which volatile, toxic, or flammable chemicals are found, or any person possesses the equipment to manufacture a dangerous drug as defined in §13-3401.
    - (c) Unreasonable confinement of a child.
- Section 25: "Neglect" or "neglected" means:
    - (a) The inability or unwillingness of a parent, guardian, or custodian of a child to provide that child with supervision, food, clothing, shelter, or medical care if that inability or unwillingness causes unreasonable risk of harm to the child's health or welfare, except if the inability of a parent, guardian or custodian to provide services to meet the needs of a child with a disability or chronic illness is solely the result of the unavailability of reasonable services.
    - (b) Permitting a child to enter or remain in any structure or vehicle where volatile, toxic, or flammable chemicals are found or any person possesses equipment to manufacture a dangerous drug as defined in §13-3401.
    - (c) A health professional determined that a newborn infant was exposed prenatally to a drug or substance listed in §13-3401 and that this exposure was not the result of a medical treatment administered to the mother or the newborn infant by a health professional. This subdivision does not expand a health professional's duty to report neglect based on prenatal exposure to a drug or substance listed in §13-3401 beyond the requirements prescribed under §13-3620, subsection E. The determination by the health professional shall be based on one or more of the following:

        - (i) Clinical indicators in the prenatal period, including maternal and newborn presentation.
        - (ii) History of substance use or abuse.
        - (iii) Medical history.
        - (iv) Results of a toxicology or other laboratory test on the mother or the newborn infant.
    - (d) Diagnosis by a health professional of an infant under one year of age with clinical findings consistent with fetal alcohol syndrome or fetal alcohol effects.
    - (e) Deliberate exposure of a child by a parent, guardian, or custodian to sexual conduct as defined in §13-3551 or to sexual contact, oral sexual contact, or sexual intercourse as defined in §13-1401, bestiality as prescribed in §13-1411 or explicit sexual materials as defined in §13-3507.
    - (f) Any of the following acts committed by the child's parent, guardian, or custodian with reckless disregard as to whether the child is physically present:
        - (i) Sexual contact as defined in §13-1401.
        - (ii) Oral sexual contact as defined in §13-1401.
        - (iii) Sexual intercourse as defined in §13-1401.
        - (iv) Bestiality as prescribed in §13-1411.

Appendix B: Prevention Resources

Drowning Death Prevention Resources:

- ADHS Water Safety and Drowning Prevention
  - https://www.azdhs.gov/prevention/womens-childrens-health/injury-prevention/drowning-prevention/index.php
- Drowning Prevention Coalition of Arizona
  - https://www.preventdrownings.org/

Firearm Injury Death Prevention Resources:

- CCHHS Firearm Safety and Education
  - https://www.coconino.az.gov/249/Injury-Prevention#FirearmSafetyandEducation
- Safe Gun Storage
  - https://www.coconino.az.gov/DocumentCenter/View/64285/Safe-Gun-Storagae-ask-tip-sheet
- How to Talk to Your Kids About Guns
  - https://www.coconino.az.gov/DocumentCenter/View/64286/Talking-to-your-kids-about-guns

Infectious Disease-Related Death Prevention Resources:

- ADHS COVID-19 Dashboard
  - https://www.azdhs.gov/covid19/data/index.php
- Vaccines.gov
  - https://www.vaccines.gov/en/
- Syphilis During Pregnancy
  - https://www.cdc.gov/std/syphilis/stdfact-congenital-syphilis.htm
- Sexually Transmitted Infection
  - https://www.azdhs.gov/preparedness/epidemiology-disease-control/disease-integration-services/std-control/index.php
- Not sure where to get tested? Find a clinic here:
  - https://gettested.cdc.gov/search_results?location

Motor Vehicle Crash-Related Death Prevention Resources:

- The Community Guide: Motor Vehicle Injury Prevention:
  - https://www.thecommunityguide.org/topics/motor-vehicle-injury.html
- National Safety Council – Arizona Chapter
  - https://www.acnsc.org/resources

Neglect/Abuse-Related Death Prevention Resources:

- Arizona Department of Child Safety
  - 1-888-SOS-CHILD (1-888-767-2445)
- National Child Abuse Hotline
  - 1-800-4-A-CHILD (24 hours, 7 days a week)

Premature Death Prevention Resources:

- High-Risk Perinatal Program (HRPP)
  - https://www.azdhs.gov/prevention/womens-childrens-health/childrens-health/index.php#hrpp
- Taking Steps to Prevent Premature Births
  - https://directorsblog.health.azdhs.gov/taking-steps-to-prevent-premature-births/
- Count the Kicks
  - https://countthekicks.org/statistics/az/
- Arizona Early Intervention Program (AzEIP)
  - https://des.az.gov/azeip

Substance Use-Related Death Prevention Resources:

- Poison Helpline
  - 1-800-222-1222
- Hushabye Nursery
  - 480-628-7500
  - http://www.hushabyenursery.org
- Arizona Substance Abuse Prevention
  - 1-800-662-HELP (4357)
  - https://goyff.az.gov/content/arizona-substance-abuse-prevention-resource
- Addiction Treatment for Teens
  - 602-847-9887
  - https://zenithbh.com/adolescent-treatment-phoenix-arizona/dual-diagnosis-teens/addiction-treatment/

Sudden Unexpected Infant Death Prevention Resources:

- ADHS Stillbirth and Infant Mortality Action Plan
  - https://www.azdhs.gov/topics/index.php#baby-home
- ADHS Safe Sleep
  - https://www.azdhs.gov/prevention/womens-childrens-health/safe-sleep/index.php
- MISS Foundation
  - https://www.missfoundation.org/
- Consumer Product Safety Commission
  - https://www.cpsc.gov/SafeSleep

Suicide Prevention Resources:

- Suicide Prevention Resource Center
  - https://sprc.org/populations/adolescents/
- Teen Lifeline
  - https://teenlifeline.org/
- Arizona Department of Child Safety
  - https://dcs.az.gov/services/prevention/suicideprevention
- Suicide Hotline: 988
  - https://www.azdhs.gov/988

Appendix C: State and Local CFRP Teams

Arizona Department of Health Services, State CFRP Team:

Chairperson:
Mary Ellen Rimsza, MD, FAAP
American Academy of Pediatrics

Members:

Anndrea Kawamura
Protective Services
Child & Family Protective Division
Office of the Attorney General

Laura Luna Bellucci, MBA
Chief, Bureau of Women's and Children's Health, Arizona Department of Health Services
Arizona MCH & CSHCN Director

Jakenna Lebsock, MPA
Rachael Salley, MPH (Proxy)
AHCCCS Division of Health Care Management

Anthony Dekker, DO
Vicki Copeland, MD (Proxy)
Division of Developmental Disabilities,
Arizona Department of Economic Security

Rebecca Krumm
Julia Leight (Proxy)
Division of Children, Youth, & Families

Tonya Hamilton
Amy Peep (Proxy)
Governor's Office for Youth, Faith, and Family

David K. Byers
Robert Shelley (Proxy)
Administrative Office of the Courts

Douglas Sargent
Dr. Grant Phillips (Proxy)
Arizona Department of Juvenile Corrections

David Winston, MD, PhD
Forensic Pathologist

Susan Newberry, MEd
Maricopa County CFR Team

Amy Lebbon
Phoenix Indian Medical Center

Verna Johnson
InterTribal Council of Arizona

Amber-Rose Begay
Navajo Maternal and Child Health Projects
At Dine College

Nicola Winkel, MPA
Arizona Coalition for Military Families

Dyanne Greer
Maricopa County Attorney's Office

Matt Giordano
Law Enforcement Council, AZPOST

Diana Gomez, MPH
Ryan Butcher, B.S. (Proxy)
Yuma County Public Health Services District

Molly Dunn, JD
Director of Child Welfare & Juvenile Justice Policy, Children's Action Alliance

Arizona Department of Health Services, State Subcommittee Neglect/Abuse CFRP Team:
Chairperson:
Mary Ellen Rimsza, MD, FAAP
Arizona Chapter of the American Academy of Pediatrics

Members:

Morgan Anderson, MPH
Arizona Department of Health Services

Megan Carey
Arizona Department of Child Safety

Yomaira Castillo, CPSTI
Arizona Department of Health Services

Michelle Cervantes
Phoenix Police Homicide Detective

Katie Goggans, MSQ
Arizona Department of Child Safety

Tiffany Isaacson, BS
Senior Injury Prevention Specialist Phoenix Children's Hospital

Jeff Johnson, MD
Maricopa County Office of the Medical Examiner

Anndrea Kawamura
Protective Services
Child & Family Protective Division
Office of the Attorney General

April King
Family Involvement Center

Karin Kline, MSW
Family Involvement Center

Kiran Lalani, MPH
Arizona Department of Health Services

Julia Leight
Arizona Department of Child Safety

Susan Newberry, MEd
Arizona Department of Health Services, CFRP Contractor

Mary Glidden, MPH
Arizona Department of Health Services

Leah Reach, MSW
Arizona Department of Child Safety, OLR

Stephanie Zimmerman, MD
Attending Physician, Emergency Department
Phoenix Children's Hospital

Kaitlyn Miller
Arizona Chapter of the American Academy of Pediatrics

Ashley Warner, DPT
Phoenix Children's Hospital

Bianca Cardiel, BSW
Community Outreach Program Assistant
Phoenix Children's Hospital

Laura Prefling
Parent

Edwin Wangler
Arizona Department of Child Safety

Arizona Department of Health Services, State Subcommittee SUID CFRP Team:

Chairperson:
Stephanie Zimmerman, MD
Attending Physician, Emergency Department
Phoenix Children's Hospital

Members:

Morgan Anderson, MPH
Arizona Department of Health Services

Yomaira Castillo, CPSTI
Arizona Department of Health Services

Michelle Cervantes
Phoenix Police Homicide Detective

Katie Goggans, MSQ
Arizona Department of Child Safety

Jeff Johnson, MD
Maricopa County Office of the Medical Examiner

Anndrea Kawamura
Protective Services
Child & Family Protective Division
Office of the Attorney General

Karin Kline, MSW
Family Involvement Center

Kiran Lalani, MPH
Arizona Department of Health Services

Julia Leight
Arizona Department of Child Safety

Susan Newberry, MEd
Arizona Department of Health Services, CFRP Contractor

Mary Glidden, MPH
Arizona Department of Health Services

Leah Reach, MSW
Arizona Department of Child Safety, OLR

Kaitlyn Miller
Arizona Chapter of the American Academy of Pediatrics

Edwin Wangler
Arizona Department of Child Safety

Fred Santesteban
Retired Program Manager Juvenile Justice Services Division, Arizona Supreme Court

Ilce Alexander
Phoenix Children's Hospital

Nicole Schuren, MSW, LMSW
Mayo Clinic

Coconino County, CFRP Team:

Chairperson:
Heather Williams
Injury Prevention Program Manager
Coconino County Health & Human Services

Co-Chair:
Michael Madsen
Coconino County
Medical Examiner

Members:

Glen Austin, MD
Pediatrician, Flagstaff Pediatric Care

Shawn Bowker
Flagstaff Medical Center

Tracilynn Carl
Health Educator
Coconino County Public Health Services District

Shannon Claw
Tuba City
Regional Medical Center Trauma

Jim Driscoll Sheriff,
Coconino County Sheriff's Office

Deborah Fresquez
Coconino County Victim/Witness Services

Brian Fuller
Federal Bureau of Investigations

Diana Hu, MD
Tuba City
Regional Health Care Corporation

Cindy Sanders, BSN, RN
Flagstaff Medical Center NICU

James Steng, Detective
Flagstaff Police Department

VACANT
Coconino County Attorney

Zeke Ziegler, Major
Arizona Department of Public Safety

Gila County, CFRP Team:

Chairperson:
Elena Warner
Director of Operations, Time Out Shelter

Coordinator:
Kathleen Kelly, RN

Members:

Gabrielle Bibars Psychologist,
Payson School District

Susan Campbell Counselor,
Payson School District

Kristin Crowley
Gila Community College

Sharon Dalby
Child Safety Family Services Payson

Tanya Dean
Investigator, Child Protective Services

Pattie Dremler
CASA Coordinators

Donald Engler
Payson Chief of Police

Tom Fife
Battalion Chief, Payson Fire Department

Joshua George
San Carlos Apache
Health Care Nurse Manager

Thomas Greene
Case Worker, Dept. Child Safety

Sherrie Harris
Chief Prosecutor

Von Harris
Child Safety Family Services, Payson

Mellissa Hazelo
Banner Payson

Mara Hover, DO
Pediatric Director
San Carlos Apache Healthcare

Staffanie Jenson, RN
Payson Banner Medical Center ER

Maraih Lantz
CASA Coordinator

Tracey Manigault Psychologist,
Payson School District

Michael McAnerny
Payson Police Department

Emily Nader
CASA Coordinator

Becky Nissila
ER Director, Payson Regional Medical Center

Ashley Oviedo, RN
Payson Banner ER

Michael Patch
Executive Director, Time Out Shelter

Kim Reger
Associate Director
Payson Banner Regional Medical Center

Mary Schlosser
Sheriff, Tonto Apache Tribe Payson

Shelly Soroka-Spence
Payson Child Help

Jason Stein
Director, Gila County DPS

Linda Timmer
Director, Payson Time Out Shelter

Dana Tuerr
San Carlos
Apache Health Center Nurse Manager

Michele Warburton
Director of Special Services, PUSD

Tila Warner
Child Help

Andrea Weins
Medical Examiner

Graham & Greenlee Counties, CFRP Team:

Chairperson:
Emily Riddle, Public Health Improvement Coordinator,
Graham County Health Department

Members:

Scot Bennett
County Attorney Graham
County Attorney's Office

Brian Douglas
Health Director
Graham County Health Department

Misty Gregory, RN
Greenlee County Health Department

Dr. Richard Keith
Pediatrician
Gila Valley Clinic

Melissa Lunt, RN
Graham County Health Department

Josh McClain
Detective, Safford Police Department

Jason Stein
Department of Child Safety Program Manager

Natalie Thompson
EMT, Lifeline

Maricopa County, CFRP Team:

Chairperson:
Susan Newberry, M.Ed.

Coordinator:
Kaitlyn Miller
Arizona Chapter of the American Academy of Pediatrics

Members:

Gabriela Aguyayo
Child Passenger Safety Specialist
Phoenix Children's Hospital

IIce Alexander
Senior Injury Prevention Specialist
Phoenix Children's Hospital

Carla Allan, PHD
Division Chief, Division of Psychology
Phoenix Children's Hospital

Savannah Apodaca, MSN, FNP-BC
Banner Children's Specialists
Banner Desert Medical Center &
Banner Thunderbird Medical Center

Angelica M. Baker
Injury Prevention Manager
Phoenix Children's Hospital

Darcey Barakat, MC
Crisis Counselor, Childhelp National Hotline

Julie Baumgarth
Phoenix Children's Hospital

Wendy Bernatavicius, MD
Division Chief, General Pediatrics
Phoenix Children's Hospital

John Bobola
Product Safety Investigator
US Consumer Product Safety Commission

John Boyd
Injury Prevention Specialist
Phoenix Children's Hospital

Courtney Caithamer
Safety Analyst, Arizona Department of Child Safety

Bianca Cardiel, BSW
Community Outreach Program Assistant
Phoenix Children's Hospital

Yomaira Castillo
Injury Prevention Manager
Arizona Department of Child Safety

Detective Michelle R. Cervantes
Phoenix Police Department

Kimberly Choppi, MSN-Ed, RN, CPEN
Valleywise Health

Kathleen Collett
Safety Analyst, Arizona Department of Child Safety

Shawn Cox, LCSW
Victim Services Division Chief,
Maricopa County Attorney's Office

Frances L.L. Dailey, Ph.D.
Professional Counselor, Supervisor, and Educator Dailey Consulting

Frances Baker Dickman, PhD, JD

Haley Dietzman, NP-C, N, SANE-P
Phoenix Children's Hospital

Ilene L Dode, Ph.D., LPC CEO Emeritus
LaFrontera Arizona, Empact Suicide Prevention Center

John Fraleigh, MSN, RN, CFRN
Faculty Clinical Instructor
Banner Estrella Hospital

Elisha Franklin, MC, LASAC Director
United Health Care

Jasmine Gonzalez
Injury Prevention Specialist
Phoenix Children's Hospital

Merideth Gradowski, BSN, RN, CPEN
Dignity Health

Dyanne Greer, MSW, JD
Deputy County Attorney
Family Violence Bureau Maricopa County Attorney's Office

Ipod Hassan
Phoenix Children's Hospital

Ryan Herold, RN
Civilian EMS Coordinator
Mesa Fire and Medical Department

Brandon Hestand, BSN, RN
Program Manager Emergency Services
Dignity Health

Diane Hindman, MD
Emergency Medicine, Phoenix Children's Hospital

Brett Hurliman, MD
Pediatrician, Phoenix Children's Hospital

Tiffaney Isaacson
Senior Injury Prevention Specialist
Phoenix Children's Hospital

Kim Jackson
Boating & OHV Education Program Manager
Arizona Game and Fish Department

Jeffrey Johnston, MD
Chief Medical Examiner, Maricopa County

Robert D. Jones, MD
Arizona Department of Juvenile Corrections

A. Mini Kang, MD, FAAP
U of A College of Medicine-Phoenix
Phoenix Children's Hospital, Banner University Medical Center Phoenix

Anndrea Kawamura
Protective Services Section
Child & Family Protection Division
Office of the Attorney General

Justin Kern
Assistant Director, Aquatics and Safety Education
Arizona State University

Karin Kline, MSW
Family Involvement Center

Justine Kundert, BSN, CPEN, CEN
Trauma Process Improvement Coordinator
Valleywise Health

Julia Leight
Safety Analyst, Arizona Department of Child Safety

Nancy L Mangieri
Epidemiologist
Salt River Pima Maricopa Indian Community

Sandra McNally, MA, LISAC
Prevention Manager
La Frontera Arizona, EMPACT Suicide Prevention Center

Amanda Mihalik, MD
Palliative Care Specialist
Phoenix Children's Hospital

Kyra O'Sullivan
Director of Access to Care, AzAAP

Elizabeth Perez, BSW
Injury Prevention Specialist
Phoenix Children's Hospital

Maureen Roland, BSN, RN, CSPI
Managing Director
Banner Poison and Drug Information Center

Amanda Sahli, MSC LAMFT
Bereavement & Family Support Coordinator
Associate Mental Health Therapist, Phoenix Children's Hospital

Fred Santesteban
Retired Program Manager Juvenile Justice Services Division, Arizona Supreme Court

Michele F. Scott, MD
Phoenix Children's Hospital

Maria Aldana Sierra, MD
Phoenix Children's Hospital

Shawn Singleton
Pediatrician, Banner Health Services

David Solomon, MD
Phoenix Children's Hospital

Robert Staab, MD
Phoenix Children's Hospital

Tomi St. Mars, MSN, RN, EEN, FAEN

Melissa Sutton, MBA
Past President
Drowning Prevention Coalition of Arizona

Denis Thirion, MA
Crisis Call Center Manager
LaFrontera Arizona, Empact Suicide Prevention Center

Christina Tijerina, CPS-I
Community Outreach Program Assistant
Phoenix Children's Hospital

Allison Uber, MD
Palliative Care Specialist
Phoenix Children's Hospital

Angela Valdez-Huizar, MD
Phoenix Children's Hospital

Blanca Villaseñor
Senior Injury Prevention Specialist
Phoenix Children's Hospital

Christine Warren, RN BSN
CCRN TCRN
Trauma Injury Prevention and Outreach
Registered Nurse Chandler Regional Medical Center

Janelle Westfall, LPC, LBA, BCBA
Devereux Advanced Behavioral Health

Billie Winegard, MD
Palliative Care Specialist
Phoenix Children's Hospital

Monte Yazzie
SRPMIC Injury Prevention
Salt River Pima Indian Community

Stephanie Zimmerman, MD
Phoenix Children's Hospital

Mohave & La Paz Counties, CFRP Team:

Chairperson and Coordinator:
Anna Scherzer
Mohave County Department of Public Health

Members:

Dawn Abbott
Mohave Mental Health Clinic, Inc.

Amanda Claerhout
Attorney, Mohave County

Suzanne Clarke
Kingman Aid to Abused People

David Coffin
Mohave County Sheriff's Office

Sara Colbert
Mohave County Probation Department

Natalie Eggers
Mohave County Probation Department

Melissa McCapes
Arizona DPS

Heather Miller
Kingman Regional Medical Center

Archaius Mosley, MD
Mohave County Medical Examiner's Office

Dr. Vic Oyas
Havasu Rainbow Pediatrics

Melissa Palmer
Mohave County Department of Public Health

Carrie Pastella, LSAT
Mohave County Department of Public Health

Susan Plourde
Mohave County Medical Examiner's Office

Melissa Register, MS, LPC
Terros Health

Debra Walgren, M.Ed,
CPM Arizona DPS

Jessica Willard
Mohave County Department of Public Health

Chaun Williams
Mohave County Sheriff's Office

Jason Zappela
Mohave County Sheriff's Office

Navajo & Apache Counties, CFRP Team:

Chairperson:
Amy Stradling
Education and Outreach Division Manager
Navajo County Public Health Services

Coordinator:
Alyssa Lemmon, BSN, RN
Navajo County Public Health Services

Members:

Daniel Brewer
Summit Healthcare, Pediatrician

Ricky Bunch
Pinetop Lakeside PD, Detective

Madisyn Conriquez
Coconino County, Medical Examiner's Office

Charasea Curell
SUD/Mental Health
Program Manager Navajo County
Public Health Service District

Catherine Doyle
FAC Navajo County

Angelica Estrada
FAC Navajo County

Anne Frank
NCPHSD – Data Support Specialist

Brian Goodman, DO, MBA
Medical Director, Navajo County

Chelsea Haas
Pinetop Lakeside PD, Detective

Devon Hall
Navajo County Attorney

Jenny Hancock
Navajo County, Medical Examiner's Office

Ryanne Hale
Navajo County, Medical Examiner's Office

Nathan Henderson
Coconino County, Medical Examiner's Office

Anna Kuykendall
Coconino County, Medical Examiner's Office

Dr. Mike Madsen
Coconino County, Medical Examiner's Office

Brian Mitchell
Child Fatality Review Program Manager

Becky Montoya
Junior High Counselor
Blue Ridge Unified School District

Reeder Nez
Navajo Nation Criminal Investigations
(Kayenta)

Nikki Olson
Sr. Medico-Legal Death Investigator
Navajo County Medical Examiner's Office

Roxanne Pergeson
Navajo County Victim Services Department
Victim Services Manager

Kateri Piecuch
Arizona Department of Child Safety, Northeast Region
DCS Program Manager

Danielle Poteet, RN
Summit Healthcare, Pediatric Nurse Liaison

Lindsey Retterath
ER Physician, IHS

Margaret Riesop, RN
NCPHSD

Jared Robinson
Navajo County Attorney

Maggie Roche
Coconino County, Medical Examiner's Office

Charlie Rosenblum
Coconino County, Medical Examiner's Office

Yasmine Sealy
Coconino County, Medical Examiner's Office

Margaret Sotom
Coconino County, Medical Examiner's Office

Amity Toth
Snowflake Taylor PD, Detective

Devin Wood
EMS Division Chief
Timber Mesa Fire and Medical District

Shaelee Virtue
NCPHSD – Injury Prevention Coordinator

Law Enforcement-as identified for each review

Pima, Cochise, & Santa Cruz Counties, CFRP Team:

Chairperson:
Dale Woolridge, MD
Department of Emergency Medicine
University of Arizona

Co-Chair:
Becky Lowry
University of Arizona

Members:

Jillian Aja
Pima Co. Office of Children's Counsel

Victoria Altamirano
Pima County Health Department

Sgt. Basilio Angulo
Nogales Police Dept.

Athene Archer
Pima County Health Dept.

Sgt. James Banuelos
Pascua Yaqui PD

Kathy Benson
Retired School Nurse

Stg. Russell Bocks
Arizona Dept. of Public Safety

Kathy Bowen, MD
Pediatrician

Sgt. James Brown
Pima County Sheriff Dept., Homicide Unit

Susan Buxbaum
Southern Arizona, Children's Advocacy Center

Captain Hector Carpio
Tucson Fire Department

Jennifer Chen, MD
Office of the Medical Examiner

Stacey Christian
Northwest Fire Department

Rosanna Cortez
Victim Compensation
Program Coordinator Victim Services,
Pima County Attorney's Office

Rachel Cramton, MD
Department of Pediatrics, University of Arizona

Alison Crane
Office of the Attorney General

Sgt. Lluvia Garcia
Santa Cruz Co. Sheriff Dept.

Capt. John Gjerde
Cochise Co. Sheriff Dept.

Lori Groenewald
Tucson Medical Center

Ryder Hartley
U of A Dept. of Emergency Medicine

Karen Ives
Retired from OCWI

Alexis Johnson
Banner University Medical Center

Det. Meghan Johnson
Tucson Police Dept.

Dr. Chan Lowe
Banner University Medical Center

Heather McAlees
Northwest Fire District

Det. Courtney McMullen
Tucson Police Dept.

Lisa Manuel
Tohono O'odham, Child Welfare

Abby Michieli
Southern Arizona
Children's Advocacy Center

Tracy Miller
Pima County Attorney's Office

Dr. Marie Olson
Banner and Tucson Medical Center

Sgt. Jeremy Peuschold
Cochise Co. Sheriff Dept.

Dora Renkert
Tohono O'odham, Community member

Sgt. Lisa Rizzi
Tucson Police Dept.

Det. Rhonda Thrall
Tucson Police Dept.

Czarina Valadez
Division of Children, Youth, and Families
Arizona Dept. of Economic Security

Dr. Marisa Werner
Indian Health Services

Reagan Zimmerman
Southern Arizona Children's Advocacy Center

Dr. Melissa Zukowski
Banner University Medical Center

Pinal County, CFRP Team:

Chairpersons:

Shawn Singleton, MD
Banner Health Hospital

Emily Vecchi
Pinal County Medical Examiner's Office

Coordinator:
Melissa Zazueta
Pinal County Public Health Services

Assistant Coordinator:
Ronica Holsinger
Pinal County Public Health Services

Members:

Elizabeth Antone
Gila River Indian Community
Police Department

Savannah Apodaca
Banner Health Hospital

Andre Davis
Pinal County Medical Examiner's Office

Teri DeLaCruz
Ak-Chin Health Education Department

Linda Devore
Retired Educator

John Hu, MD
Pinal County Medical
Examiner's Office

Audrey Lenchner
Arizona Department of Child Safety

Merissa Mendoza, MPA, RDN, IBCLC, Director
Pinal County Public Health Services

Breanna McGinnis
Pinal County Medical Examiner's Office

Kelsey McLeod
Arizona Department of Child Safety

Charles "Donta" McNeil
Community Medical Services

Naomi Murrietta
Pinal County Public Health Services

Valerie Silvas
Pinal County Juvenile Court Services

Scotty Smith
Pinal County Adult Probation

Brooke Soltero
Arizona Department of Child Safety

Dr. Andrea Wiens Oeinck
Pinal County Medical Examiner's Office

Cori Wilson
Pinal County Public Health Services

Raegan Wittig
Pinal County Attorney's Office

Jan Vidimos
Pinal County Public Health Services

Yavapai County, CFRP Team:
Chairperson and Coordinator:
Sally Slater, BS, RN
Public Health Nurse Manager
Yavapai County Community Health Services

Members:

Amanda Abstance
Dignity Health/YRMC

Ed Bills
Yavapai County Attorney's Office

Savannah Davis
Yavapai County Medical Examiner's Office

Cindy Garman
Yavapai County Community Health Services

Arielle Gunderson
Dignity Health/YRMC

Henry Kaldenbaugh, MD,
Retired Pediatrician

Dawn Kimsey
Department of Child Safety

Kathy McLaughlin
Citizen Advocate

Courtney Osterfelt
The Launch Pad Teen Center

Courtney Routson, DNP
Polara Health

Missy Sikora
Yavapai Family Advocacy Center

Stephen Everett
Yavapai County Community Health Services

Caroline Cross, MD
Yavapai County Medical Examiner's Office

Jolie DeLeo
Yavapai County Community Health Services

Tina Boden-Blake
US Vets

Kelly Lee
MATFORCE

Monica Belknap
Yavapai College

Erin Kantor
Polara Health

Yuma County, CFRP Team:

Chairperson:
Patti Perry, MD, FAAP
Yuma Regional Medical Center

Coordinator/Co-Chair:
Ryan Butcher
Yuma County Health District

Member:

Megan Barry, MSN, RN, CEN
Trauma Program Manager
Yuma Regional Medical Center

Jennifer Hulbert
Community Engagement Specialist
Yuma County Health District

Tori Bourguignon
Director, Amberly's Place

Mary Megui,
Program Manager
AZ Department of Child Safety

Lieutenant Jay Carlson
Yuma County Sheriff's Office

Nicole Meyer
Resident Physician,
Yuma Regional Medical Center

Ruby Garza
Program Specialist
AZ Department of Child Safety

Tom Slade
CJP Coordinator, Amberly's Place

Henry Gonzalez,
Health and Safety Director,
Yuma Union High School District

Lisa Green-White
Nurse Educator/Centricity Perinatal System Manager, Yuma Regional Medical Center

Appendix D: References

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