

# **Arizona Child Fatality Review Program**

**TWENTIETH ANNUAL REPORT  
NOVEMBER 2013**



November 15, 2013

Dear Friends of Arizona's Children:

In 2012, 854 children under 18 years of age died in Arizona. This is an increase from 2011 when 837 children died. The increase in 2012 was due to an increase in deaths among children 1-17 years of age. In contrast, the number of deaths among infants (under one year of age) declined. Deaths due to injuries, natural (medical) causes and homicide increased in 2012 compared to 2011, but deaths due to suicide decreased from 39 in 2011 to 33 in 2012 and child maltreatment deaths decreased from 71 in 2011 to 70 in 2012. Deaths due to prematurity also declined in 2012.

There was an increase in fire-arm related deaths in 2012. The deaths of 32 children were tied to firearms in 2012 compared to 23 in 2011, and firearms were tied to four percent of all child deaths in Arizona in 2012. There was an increase also noted in transportation-related deaths and drowning deaths.

The Arizona Child Fatality Review Program explores the causes and contributing factors associated with child deaths to identify recommendations addressing preventable fatalities of children based upon this collection of work. For each of the past 20 years, the Arizona Child Fatality Review Program has determined that approximately one third of all child deaths were preventable. In 2012, we determined that 290 of the 854 deaths (34%) could have been prevented.

The contributing factors identified by our reviews are the basis for many of the recommendations included in this report. While the factors vary with the cause of death, commonly identified factors include lack of supervision, substance use, and unsafe sleep environments. For example, among children who died in and around the home, 84% of the deaths were considered potentially preventable by addressing these issues as well as access to water. Similarly, 97% of all firearm-related deaths were considered preventable by addressing children's access to guns, supervision, and substance use.

We hope that the information gathered by our Arizona Child Fatality Review Program and our recommendations for prevention will be used by families, communities and policy makers to prevent future deaths.



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Arizona Chapter, American Academy of Pediatrics  
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# ARIZONA CHILD FATALITY REVIEW TEAM

## TWENTIETH ANNUAL REPORT

**NOVEMBER 2013**

### **MISSION:**

To reduce preventable child fatalities through systematic, multidisciplinary, multi-agency and multi-modality review of child fatalities in Arizona through interdisciplinary training, community-based prevention education, and data-driven recommendations for legislation and public policy.

### Submitted to:

The Honorable Janice K. Brewer, Governor, State of Arizona  
The Honorable Andy Biggs, President, Arizona State Senate  
The Honorable Andy Tobin, Speaker, Arizona State House of Representatives

This report is provided as required by A.R.S. §36-3501.C.3

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## ACKNOWLEDGMENTS

We wish to acknowledge the following individuals, businesses and/or organizations for their efforts to reduce child deaths in our communities and their dedication to improving safety for all Arizona residents.

- The more than 250 volunteers who contributed more than 4,000 hours of their time to review child deaths which occurred during 2012. It is through their hard work that we were able to learn about the causes of child fatalities and what we, as individuals and as a society, can do to reduce the number of preventable deaths of children in Arizona.
- Susan Newberry, Maricopa County Coordinator, who is responsible for coordinating the reviews of over 60 percent of all child deaths that occur in Arizona annually. Susan is a tireless champion for Arizona's children who produces effective collaboration, cooperation and communication among team members.
- Markay Adams, ADHS, Office of Prevention Services, for creating the Youth Suicide Death Investigation Checklist which will allow the Child Fatality Review Teams to move forward to better address child suicide in Arizona.
- Brenna V. Rabel, ADHS Office of Injury Prevention, whose knowledge and analysis of data provided the basis of this report.
- All agencies (e.g. hospitals, doctors, medical examiner's, child protective service agencies, and law enforcement) that have promptly provided the CFR program with the records CFR teams have requested. Informed child fatality reviews are only possible when the teams have accurate, current, detailed information to review.

## EXECUTIVE SUMMARY

The Arizona Child Fatality Review Program was created in 1993 with data collection beginning in 1994. A.R.S. §36-3501 through 36-3506 addresses the child fatality review team roles and responsibilities. The reviews of every child death are completed by local teams located within 11 counties. The State Team provides oversight to the local teams, produces an annual report summarizing data as well as findings and identifies recommendations to address preventable fatalities of children based upon this collection of work. The Arizona Department of Health Services provides professional and administrative support to the state and local teams, analyzes review data and works in collaboration with multiple agencies, groups, communities, and individuals who are invested in the needs and care of children.

**In 2012, 854 children under the age of 18 years died in Arizona.** This is a 2% increase from the 837 deaths in 2011. Although in 2012, the population of children ages birth through seventeen years of age decreased less than 1%, there was no significant statistical difference in the death rates from 2011 to 2012.

Arizona Child Fatality Review Teams examined 100 percent of child deaths and determined 34 percent of these deaths could have been prevented. Preventability of some child deaths could not be determined due to lack of adequate information available to the teams.

- 100 percent of homicides were preventable.
- 97 percent of firearm-related deaths were preventable.
- 97 percent of drowning deaths were preventable.
- 97 percent of maltreatment deaths were preventable.
- 91 percent of suicides were preventable.
- 87 percent of accidental deaths were preventable.
- 84 percent of home and safety-related deaths were preventable.
- 83 percent of motor vehicle & other transport deaths were preventable.
- 83 percent of the Sudden Unexplained Infant Deaths (SUID) were preventable.

Compared to 2011, deaths of children between the ages of one and 17 years increased in 2012. Deaths among neonatal infants (0 to 27 days old) and postneonatal infants (28 to 365 days old) decreased.

**Deaths continued to be disproportionately higher among some minorities in Arizona during 2012.** American Indian children comprised five percent of the population and 11 percent of deaths. African American children comprised 5 percent of the population and nine percent of deaths.

**There was a marked increase in fire-arm related deaths.** Thirty-two children died from firearms in 2012, compared to 23 in 2011. Firearms accounted for four percent of all child deaths in Arizona in 2012.

**There were 121 deaths associated with substance use in 2012, a decrease from the 215 deaths associated with substance use in 2011.** A child's death would be considered "associated with substance use" if the child or the child's parent or caretaker, or the person responsible for the incident leading to the death, abused substances. Deaths associated with substances included illegal drugs, prescription drugs and/or alcohol. Alcohol is the most commonly used substance associated with a child's death in Arizona, followed by marijuana use and methamphetamine use. Substance abuse was associated with deaths of children due to accidents, homicide, suicide, and maltreatment.

**Prematurity accounted for 192 of all child deaths in 2012.** Although prenatal care is one of the known factors contributing to infant prematurity, the mother's health prior to and during pregnancy is another factor. Medical factors during pregnancy were contributing factors to prematurity deaths. Fifteen percent of the pregnant mothers received no prenatal care during pregnancy. Seventy-seven percent of mothers started prenatal care in the first trimester; 8 percent began prenatal care in the second trimester.

**In 2012, eighty-one infants died from Sudden Unexpected Infant Death (SUID) related causes.** Eighty-three percent of the deaths were determined to have been preventable. Sixty-three percent of these deaths were due to unsafe sleep conditions, 12 percent were associated with drugs and/or alcohol use and 21 percent were associated with exposure to tobacco.

**Fifty-one infants died in unsafe sleep environments; this is a decrease from the sixty-four deaths in unsafe sleep environments in 2011.** Thirty infants died while co-sleeping (bed sharing with adults and/or other children). Suffocation was determined to be the cause of death for 46 infants.

**Eighty-eight children died in motor vehicle crashes and other transportation related accidents.** In 2011, there were 70 child fatalities in this category. Seventy-three transportation related deaths were determined to have been preventable in 2012. Lack of vehicle restraint was identified as the leading preventable factor accounting for 31 motor vehicle crash fatalities.

**Drowning deaths increased from thirty-two children in 2011 to thirty-six in 2012.** One-half of the drowning deaths were among children ages one through four years.

**Child suicides decreased to thirty-three in 2012 from thirty-nine in 2011.** The use of drugs and/or alcohol was the most commonly identified preventable factor in suicides. Twenty-four children between the ages of 15-17 died from suicide; nine children between the ages 10-14 died from suicide.

**Child fatalities due to maltreatment decreased slightly to 70 deaths in 2012 from 71 deaths in 2011.** Eighty percent of children who died due to maltreatment were less than 5 years old. In 61 maltreatment deaths, the perpetrator was the child's mother or father. Substance use was associated with forty-seven maltreatment deaths. In 2011, 15 of the deaths had a case open with a child protective services agency at the time of death; in 2012, 11 deaths had an open case with a child protection services agency at the time of death. Additionally, mandatory reporting of child maltreatment cases increased nine percent in 2012 from 2011.

## **OUTCOMES RELATED TO PREVIOUS RECOMMENDATIONS**

### ***Deaths due to injuries***

Arizona Injury Prevention Centers provide numerous intervention programs and materials aimed at reducing childhood injuries and deaths by promoting safe and healthy children, families and communities. These include: child passenger safety, bike and pedestrian safety, child restraint and seat belt safety, child abuse prevention, home safety, water safety, etc. These centers also distributed car seats and performed car seat checks, distributed thousands of clings and safety information promoting safety in and around cars, distributed helmets and presented information to numerous schools on safety while walking to/from school, and distributed cribs to parents to promote safe sleeping environments for infants.

Thousands of children, families, and parents have been served with injury prevention material and equipment through the good work of Phoenix Children's Hospital, Banner Good Samaritan, Barrow Neurological Institute, Cardon Children's Medical Center, University of Arizona Department of Surgery, St. Joseph's Hospital and Medical Center, Tuba City Regional Health Facility, Indian Health Services, the Colorado River Indian Tribes, the Gila River Indian Community, the Hualapai Tribe, the San Carlos Apache Tribe, all the Safe Kids Coalitions and many other Injury Prevention facilities and hospitals.

StrongFamiliesAz, Arizona's alliance of home visitors has included home safety as a professional development focus. Home visitors have been provided trainings on car seat safety, safe sleep, child abuse prevention and domestic violence screening in addition to site specific issues.

With Title V MCH funding, a number of county health departments are building infrastructure by putting a system in place that will address injury from a policy perspective.

### ***Deaths due to substance abuse***

The Screening, Brief Intervention and Referral to Treatment (SBIRT) grant will continue to help primary care and mental health providers to identify patients at risk for or who have underlying substance abuse problems which might otherwise go unnoticed and untreated. This grant will be incorporated with funding from the 2012 Affordable Care Act Prevention and Public Health Fund to help reduce the number of substance use related deaths and the prevalence of substance abuse disorders in the northern Arizona counties served by Northern Arizona Regional Behavioral Health Authority (NARBHA). Integration of behavioral health services into primary care centers and hospital emergency rooms provides opportunities for early intervention with at-risk substance users before more severe consequences occur. SBIRT funds will provide pre-screenings for substance abuse services, full screenings for intervention services, and treatment referrals.

### ***Unexplained infant deaths, including unsafe sleep environments***

Arizona's Safe Kids Coalition and the Arizona Department of Health Services (ADHS), created the Infant Death Checklist and Unexplained Infant Death Investigation Protocol for first responders. ADHS has distributed the checklist to law enforcement agencies statewide. The checklist standardizes child death scene investigations throughout the state and ensures medical examiners are provided sufficient information to assist in determining the cause and manner of the death. Additionally, ADHS purchased 52 Little Angel SUIDI Dolls (investigation dolls for sudden unexplained death) which will be made available to law enforcement investigators while conducting death scene re-enactments.

### ***Deaths due to prematurity***

Last year the President of the Association of State and Territorial Health Officials selected the Healthy Babies Project for his national initiative - challenging each state to implement strategies to reduce prematurity and infant mortality based on successful national, regional, and state efforts to improve the health status of babies. Arizona has joined a national pledge to set a goal of reducing premature births by 8 percent by 2014.

The Arizona Department of Health Services (ADHS) is working with the Arizona Perinatal Trust (APT) and the Arizona March of Dimes to implement evidence-based strategies to reduce prematurity including:

- Expanding home visiting programs to families and pregnant women in high-risk communities;
- Developing standards for home visiting programs throughout Arizona and providing professional development for home visitors so that these visits maximize opportunities to reduce risks for premature birth;
- Expanding awareness of importance of preconception health and implementation of the Arizona Preconception Health Strategic Plan;
- Continuing to support the March of Dimes "Healthy Babies are Worth the Wait" 39 Week Toolkit;
- Renewing focus on infant safe sleeping practices to reduce post-neonatal infant mortality; and
- Using social media and public relations events to promote the overall campaign.

ADHS continues to serve on the Centers for Disease Control (CDC) Preconception Health Consumer Workgroup and screened preconception health materials designed for consumers prior to posting on the CDC Preconception Health Resource Center. In February 2013, Arizona successfully launched the preconception health social marketing campaign working with partners across the state to assist with expanding the campaign's reach.

ADHS is participating in the National Governor's Association and the Association of Maternal and Child Health Programs to develop an Arizona Improving Birth Outcome Learning Collaborative to foster healthy pregnancy and diminish the incidents of premature birth.

## **RECOMMENDATIONS**

Based upon the reviews of child deaths occurring in 2012 as well as in previous years, the State Child Fatality Review Team recommends specific actions to prevent future child deaths in Arizona:

### **To Prevent Deaths Due to Firearms**

There was an increase in firearm-related deaths in 2012 when thirty-two children were killed. Seventeen of these deaths were suicides. Teams determined that thirty-one firearm-related deaths were preventable.

Recommendation to Parents and Firearm Owners: Families with children should store all firearms unloaded, in a secure locked location. Firearms should be removed from homes where children, adolescents or caregivers have exhibited or are exhibiting signs or symptoms of substance abuse or mental illness, including depression.

Recommendation to Health Care Providers: Continue to educate parents about gun safety by asking whether or not there are firearms in the home, how those guns are stored, and the presence or absence of signs or symptoms of substance abuse or mental illness including depression among children, adolescents and other family members.

Recommendation to the Community: Provide free or low cost locks for firearms.

### **To Prevent Deaths Associated With Substance Use**

Substance use (including illegal drugs, prescription drugs, and/or alcohol) was associated with 121 child deaths during 2012, accounting for 14 percent of all child fatalities. Substance use was associated with child deaths in several different categories including but not limited to homicide, suicide, drowning, motor vehicle collisions and overdoses.

Recommendation to Clinicians: Screen adults, including young adults, pregnant women, and teens about alcohol misuse and substance use and provide persons engaged in risky or hazardous behavior with counseling interventions to reduce alcohol and/or substance use. Educate your patients about the use of medications and the impact to their unborn child.

Recommendation to Parents: All medications, vitamins and household cleaning products should always be kept secure, away and out of your child's contact or sight. Properly and safely dispose of medications.

## **To Prevent Premature Infant Deaths**

In 2012, there were 192 deaths due to prematurity accounting for 22 percent of all Arizona child fatalities. In 161 deaths, the pregnant mother had a medical condition that contributed to the infant's prematurity and death. In 23 infant deaths due to prematurity, the mother reported never receiving prenatal care.

Recommendations to all Women and Men of Reproductive Age Regarding Preconception Health: Improve your reproductive, nutritional, physical and mental health prior to pregnancy, as well as access quality health care; comply with medical treatment plans for chronic illness; abstain from tobacco and illegal drugs; use prescription drugs as directed by your doctor; do not abuse alcohol.

Recommendation to Clinicians Caring for Women of Reproductive Age: Utilize established preconception health screening tools; educate on the importance of preconception health and refer when appropriate.

Recommendation to Pregnant Women: Obtain early and ongoing prenatal care and comply with medical treatment plans. Abstain from non-prescribed drugs, alcohol, and tobacco.

Recommendations to Clinicians: Ensure pregnant mothers receive substance abuse education during pregnancy. Discuss the impact of substance use/abuse during pregnancy and refer pregnant women who are abusing drugs and/or alcohol to treatment programs.

## **To Prevent Sleep Related Infant Deaths and Sudden Unexpected Infant Deaths**

In 2012, 30 infants were co-sleeping (sleeping with one or more adults or children when they died). Seventeen infants were on their stomach and 14 infants were on their side when they died.

Eighty-one children died due to sudden unexpected infant death (SUID) in 2012. Seventy-seven infants died in sleep environments including cribs with soft bedding and other soft items, adult beds, couches, chairs, fluffy pillows. Forty-six infants died from suffocation.

Recommendation to the Community: Increase "Safe Sleep" education for everyone having responsibility for caring for children throughout the first year of life at every contact.

Recommendations to Parents: Parents should follow "Safe Sleep" practices and ensure that those who care for their children do the same. "Safe Sleep" practices include:

- Always place infants to sleep on their back.
- Always place infants to sleep in a crib or bassinet.
- Keep soft objects or loose bedding out of the crib including bumper pads, pillows and toys.

Recommendation to the Arizona Department of Health Services: Provide training to law enforcement in the use of the death scene investigation dolls.

Recommendation to Arizona Hospitals Caring for Infants: Model safe-sleep practices, using the recommendations from the American Academy of Pediatrics, including placing infants to sleep on their back and having cribs free of soft objects and loose bedding.

Recommendations to In-Home Visitors, Physicians, Nurses, Child Care Providers, Child Protective Service Workers and Anyone Else Who Provides Care, Treatment or Services to Parents with Infants: Have discussions about safe sleep environments with parents and those who care for infants at every visit. For those who provide their services in the family's home, include in these discussions assessment of the sleep environment. When an unsafe sleep environment is identified, develop a plan with the parent to resolve concerns.

Recommendation to Law Enforcement: Complete a thorough investigation utilizing the death scene investigation dolls and protocol for every unexpected infant death.

### **To Prevent Deaths Due to Motor Vehicle Collisions**

Primary seatbelt laws are important not only for promoting adult safety belt use but also for increasing the number of children who are protected by occupant restraints. Research shows when adults do not buckle-up, children will not either. Arizona's secondary seat belt law does not allow law enforcement officers to stop and cite a driver for non-use of a seat belt unless the driver has committed another offense. Thirty-five percent of the child deaths in motor vehicle crashes in 2012 involved a driver or passenger known to have either been improperly restrained or not restrained.

Recommendations to the Arizona Legislature: Enact a primary seat belt law to allow law enforcement officers to cite a driver and occupants for not wearing a seat belt in the absence of other traffic violations.

Recommendations to the Arizona Legislature: Enact distracted driving laws to include prohibition of mobile device usage while driving.

Recommendation to Tribal Entities/Communities without Child Passenger Safety Laws: Many Tribal communities have enacted child passenger safety laws. For Tribal entities or communities who have not enacted child passenger safety laws, recommend adoption of Arizona Revised Statutes regarding the usage of child safety seats.

Recommendation to Law Enforcement: Enforce A.R.S. §28-907 for current child passenger safety restraint laws. Data from the Governor's Office of Highway Safety shows a decline in child restraint use over the last three years.

Recommendations to Pediatric Offices: Continue education of child safety restraints.

Recommendations to Parents: Model good behavior while driving including wearing a seat belt and avoiding distractions while driving.

### **To Prevent Deaths Due to Drowning**

In 2012, 36 children died due to drowning. Lack of supervision and access to water were the leading preventable factors identified.

Recommendations to Parents: When family and friends are gathered, at least one responsible adult should be designated to monitor the pool area. If a child is a non-swimmer and is in the pool, an adult must be in the pool with the child. Do not rely upon water wings or inflatables as these are toys, not life-saving devices. Always utilize “touch supervision,” meaning the adult can reach out and touch the child at all times.

Recommendation to the Arizona Legislature: Strengthen current legislation regarding pool fencing to require four-sided fencing with self-closing and self-latching gates for all backyard pools where children live or play.

Recommendation to City and County Governments: Strengthen and/or develop ordinances regarding pool fencing to require four-sided fencing with self-closing and self-latching gates for all backyard pools where children live or play.

Recommendations to the Community: Expand the number of free or low-cost swimming classes available to children.

### **To Prevent Deaths Due to Suicide**

In 2012, 33 children took their own lives, accounting for four percent of all child deaths. This was a decrease from 2011, when 39 children died by suicide. The primary mechanism by which a child completed suicide was by firearm (n=17).

Recommendation to the Arizona Department of Health Services: Train law enforcement on the use of the Suicide Investigation Checklist when investigating child deaths if suicide is suspected.

Recommendation to Law Enforcement: Utilize the new Suicide Investigation Checklist.

Recommendations to Parents: Learn the warning signs for suicide for your children and their peers. Treat all suicidal talk and threats seriously. The National Suicide Prevention Lifeline phone number is 1-800-273-8255. Encourage teens to use the Teen Lifeline 1-800-248 TEEN (8336).

## **To Prevent Deaths Due to Child Maltreatment**

Communities and families have a duty to report suspected child abuse or neglect. The responsibility to protect Arizona's most vulnerable population, our children, lies not only with the immediate family of the child, social service agencies, or even medical professionals, but with the community at large as well. Eleven percent of child maltreatment deaths in 2012 were not reported to child protective services, a decrease from 2011 where 20 percent of child maltreatment deaths were not reported to Arizona child protective services. When a community member, family member or family friend has reason to believe a child is being or has been abused or neglected, each person has a responsibility to report that suspicion.

Recommendation to Community Members: When abuse or neglect of a child is suspected, report suspicions to Arizona's Child Abuse Hotline at 1-888-SOS-CHILD (1-888-767-2445).

Recommendation to all Arizona Law Enforcement Officers, Physicians and other Mandated Reporters: When abuse or neglect of a child is suspected, report suspicions to Arizona's Child Abuse Hotline at 1-888-SOS-CHILD (1-888-767-2445).

Recommendation to Arizona's Congressional Delegation: Support the development of a national child abuse registry which would provide critical information when assessing a child's safety.

Recommendation to the Arizona Legislature: Increase funding to the Arizona Department of Economic Security Division of Children, Youth and Families in order to reinstate child maltreatment prevention programs and reduce the caseload of Child Protective Services Specialists.

Recommendation to the Arizona Legislature: Increase funding to the Department of Economic Security to increase safety-net resources to reduce stress and support families such as Temporary Assistance for Needy Families (TANF), child care subsidies, domestic violence prevention programming, homeless family supports, and substance abuse and mental health treatment.

# INTRODUCTION

The Arizona Child Fatality Review Program was created in 1993 (A.R.S. § 36-342, 36-3501-4) and data collection began in 1994. The state team is statutorily mandated to produce an annual report compiling the findings. The state team is likewise authorized to study the adequacy of existing statutes, ordinances, rules, training, and services to ascertain changes necessary to diminish or eliminate preventable child fatalities. Furthermore, the state team is charged with educating the public regarding the number and causes of child fatalities. Arizona statute directs the state team to include representatives from:

- Attorney's General Office
- Bureau of Women's and Children's Health in the Department of Health Services
- Division of Behavioral Health in the Department of Health Services
- Division of Developmental Disabilities in the Department of Economic Security
- Division of Children, Youth and Families in the Department of Economic Security
- Governor's Office for Children, Youth and Families
- Administrative Office of the Courts
- Arizona Chapter of the American Academy of Pediatrics
- Medical Examiner's Office
- Maternal Child Health Specialist who works with members of Tribal Nations
- Private nonprofit organization of Tribal Governments
- The Navajo Nation
- United States Military Family Advocacy Program
- Prosecuting Attorney's Advisory Council
- Law Enforcement Officer's Advisory Council with experience in child homicide
- Association of County Health Officers
- Child Advocates not employed by the state or a political subdivision of the state
- A member of the public

Reviews of individual child deaths are conducted by 11 local child fatality review teams. These teams are located throughout the state and must include local representatives from Child Protective Services, a county medical examiner's office, a county health department, law enforcement, and a county prosecuting attorney's office. Membership also includes a pediatrician or family physician, a psychiatrist or psychologist, a domestic violence specialist, and a parent.

## Child Fatality Review Process

When a child younger than 18 years of age dies in Arizona, a copy of the death certificate is sent to the appropriate Local Child Fatality Review Team. The local team coordinator or chairperson then requests relevant documents which may include the child's autopsy report, hospital records, Child Protective Services' records, law enforcement reports, and any other information that may provide insight into the death. If the child was younger than one year of age at the time of death, the birth certificate is also reviewed. Legislation requires that hospitals and state agencies release this information to the Arizona Child Fatality Review Program's local teams. Team members

are required to maintain confidentiality and are prohibited from contacting the child's family.

According to the National Center for Child Death Review ([www.childdeathreview.org](http://www.childdeathreview.org)), there are six steps to a quality review of a child's death:

1. Share, question, and clarify all case information.
2. Discuss the investigation that occurred.
3. Discuss the delivery of services (to family, friends, schoolmates, community).
4. Identify risk factors (preventable factors or contributing factors).
5. Recommend systems improvements (based on any identified gaps in policy or procedure).
6. Identify and take action to implement prevention recommendations.

Next, the local team completes a standardized Child Death Review Case Report (version 2.2) that includes extensive information regarding the circumstances surrounding the death. The case report was created by the National Center for Child Death Review.

Local Child Fatality Review Teams review deaths throughout the year and submit all reviews to the Child Fatality Review Program for inclusion in the annual report published each November. Local team coordinators as well as staff members within the Arizona Department of Health Services, Bureau of Women's and Children's Health enter all submitted case reports into a confidential database created by the National Center for Child Death Review. The Arizona Department of Health Services provides professional and administrative support for the teams, and analyses of the data are completed by staff within the Bureau of Women's and Children's Health.

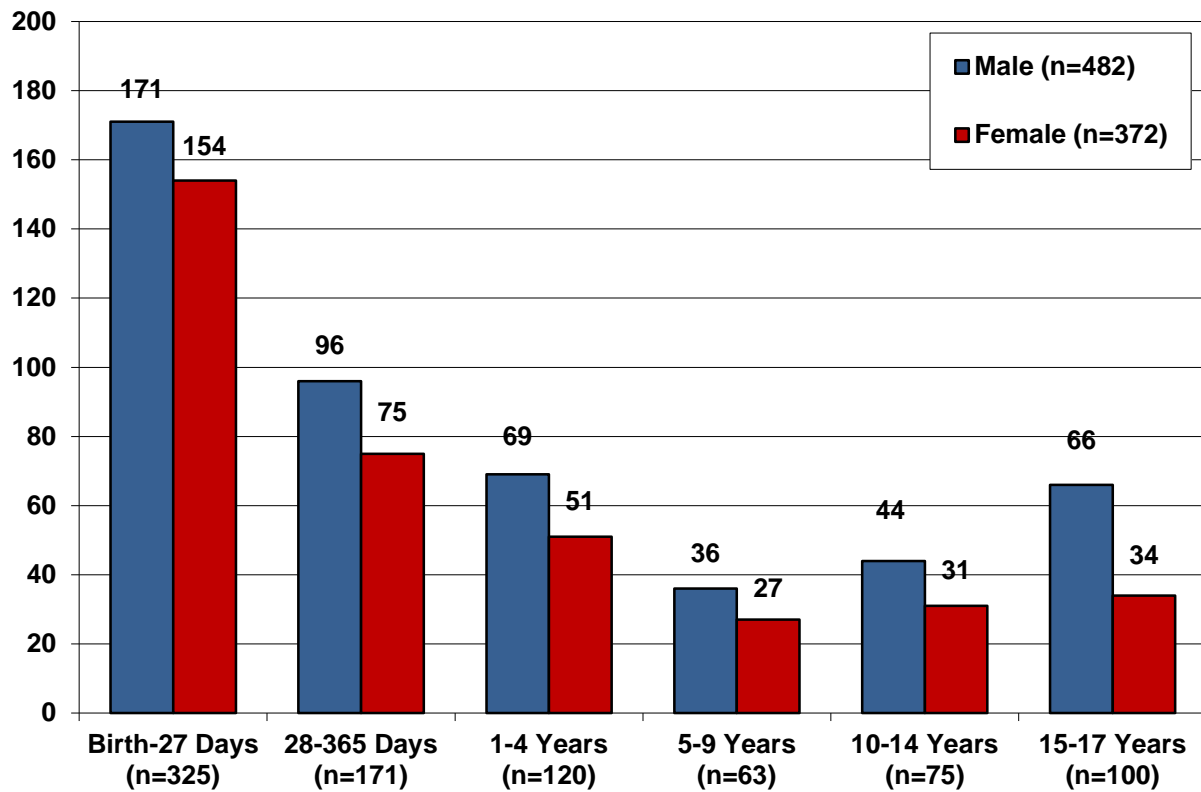
Since 2005, the Arizona Child Fatality Review Program has reviewed the death of every child who died in the state. By completing 100 percent of child death reviews, data can be compared from year to year, and trends can be identified. Where possible throughout this report, multiple years of data are presented. In cases where comparable data were not available for a given year, that year has been omitted from the chart or table.

This is the twentieth annual report issued by the Arizona Child Fatality Review Program. Each year, the state team makes recommendations regarding the prevention of child deaths. These recommendations have been used to educate communities, initiate legislative action, and develop prevention programs. Because these reviews are completed by a multidisciplinary team of well-respected professionals, the team's recommendations are often adopted.

## 2012 DEMOGRAPHICS

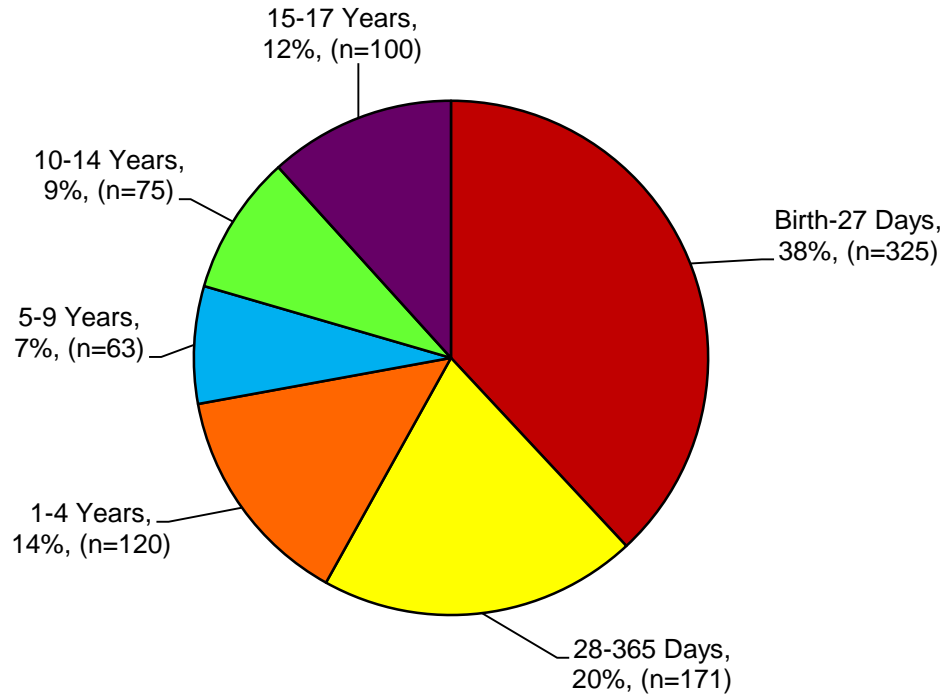
During 2012, there were 854 fatalities among children younger than 18 years of age in Arizona. This was a slight increase from 2011 when 837 died. Males accounted for 56 percent of deaths (n=482) while females accounted for 44 percent (n=372). More males died in each age group, a trend that has been observed in previous years. Figure 1 shows deaths among children by age group and sex.

**Figure 1. Deaths Among Children by Age Group and Sex, Arizona, 2012 (n=854)**



The largest percentage of deaths was among infants younger than 28 days (38 percent, n=325). Figure 2 shows deaths among children by age group.

**Figure 2. Deaths Among Children by Age Group, Arizona, 2012 (n=853\*)**



Compared to 2011, there was an increase in the percentage of deaths among children ages one through 17 years. Deaths among neonatal and post neonatal infants decreased. Table 1 shows deaths among children by age group for 2007 through 2012.

Age Group	2007		2008		2009		2010		2011		2012	
0-27 Days	485	42%	423	42%	366	39%	334	38%	334	40%	325	38%
28-365 Days	225	20%	211	20%	183	19%	192	22%	175	21%	171	20%
1-4 Years	113	10%	126	12%	130	14%	119	14%	106	13%	120	14%
5-9 Years	67	6%	67	6%	67	7%	58	7%	54	6%	63	7%
10-14 Years	92	8%	74	7%	73	8%	66	8%	72	9%	75	9%
15-17 Years	161	14%	137	13%	128	14%	93	11%	96	11%	100	12%
<b>Total</b>	<b>1,143</b>		<b>1,038</b>		<b>947</b>		<b>862</b>		<b>837</b>		<b>854</b>	

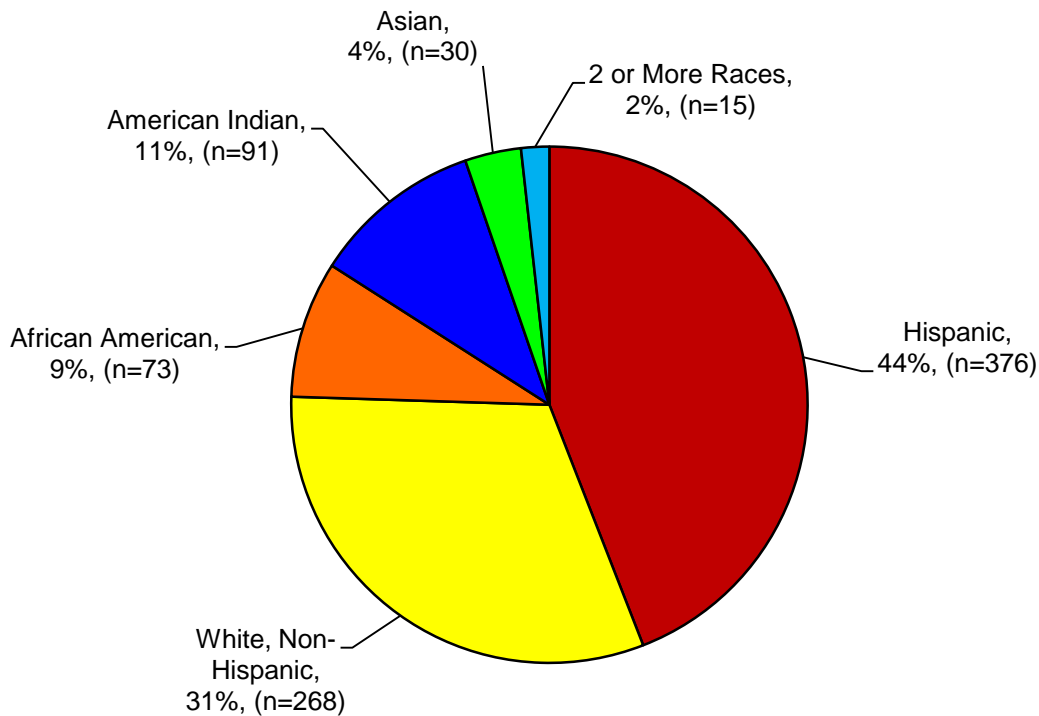
For the first time since 2007, the mortality rate increased (from 51.0 in 2011 to 52.4 in 2012). However, the rate of child death has decreased over the past five years, with the largest decrease occurring among children 15-17 years of age (58.0 deaths per 100,000 population in 2007 to 37.0 deaths per 100,000 population in 2012). Table 2 shows the mortality rate among children in Arizona per 100,000 population by age group.

Table 2. Mortality Rates per 100,000 Population Among Children by Age Group, Arizona, 2007-2012						
Age Group	2007	2008	2009	2010	2011	2012
<1 Year*	692.1	640.0	595.0	600.8	577.0	568.9
1-4 Years	28.5	31.0	32.0	32.3	28.6	33.6
5-9 Years	14.6	14.4	14.3	12.8	11.8	13.7
10-14 Years	20.2	16.0	15.6	14.7	15.9	16.5
15-17 Years	58.0	48.6	45.0	34.3	35.2	37.0
<b>Total</b>	<b>67.6</b>	<b>60.7</b>	<b>55.1</b>	<b>52.9</b>	<b>51.0</b>	<b>52.4</b>

\*As population denominators are only available for children younger than one year of age, deaths in the neonatal and post-natal periods have been combined.

Forty-four percent of child deaths in 2012 were among Hispanics (n=376), 31 percent were among non-Hispanic Whites (n=268), nine percent were among African Americans (n=73), eleven percent were among American Indians (n=91), four percent were among Asians (n=30), and two percent were among children with two or more races (n=15). Figure 3 shows deaths among children by race/ethnicity.

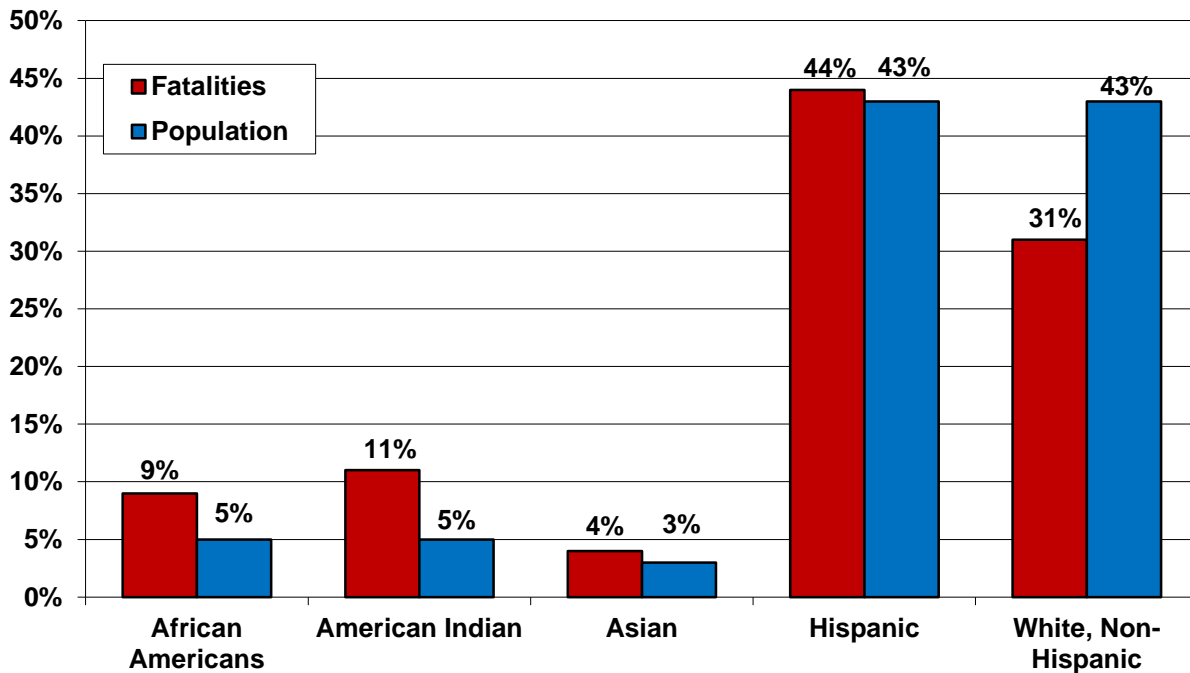
**Figure 3. Deaths Among Children by Race/Ethnicity, Arizona, 2012 (n=853\*)**



\*Does not include missing information on race/ethnicity.

Deaths were over-represented among three of the four racial/ethnic groups in 2012 which is comparable to previous years. African American children comprised five percent of the population in Arizona but nine percent of fatalities. American Indian children comprised five percent of the population and 11 percent of deaths. Asian children comprised three percent of the population and four percent of deaths. Hispanic children accounted for 43 percent of the population and 44 percent of fatalities in 2012. Figure 4 shows child fatality percentages by race/ethnicity compared to child population percentages.

**Figure 4. Deaths among Children by Race/Ethnicity Compared to Population, Arizona, 2012 (n=838\*)**



\*Does not include categories for Unknown or 2 or more races

Compared to 2011, the percentages of fatalities among African American children, American Indian children and Asian children increased in 2012. For all other races/ethnicities, the percentages of child deaths declined or remained unchanged compared to 2011. Table 3 shows deaths among children by race/ethnicity from 2007 through 2012.

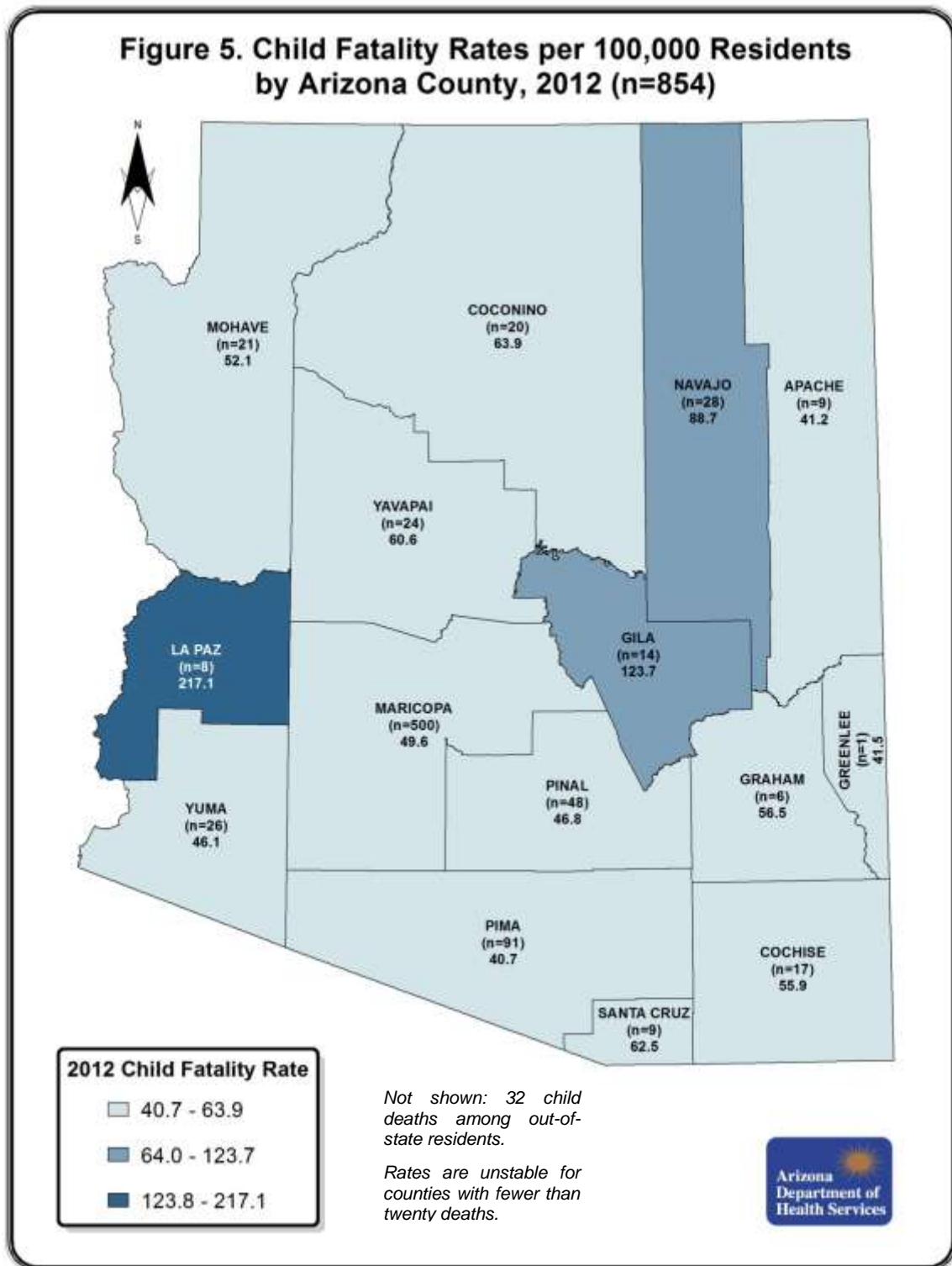
Table 3. Deaths Among Children by Race/Ethnicity, Arizona, 2007-2012												
Race/Ethnicity	2007		2008		2009		2010		2011		2012	
African American	75	7%	102	10%	93	10%	68	8%	65	8%	73	9%
American Indian	104	9%	86	8%	85	9%	74	9%	80	10%	91	11%
Asian	26	2%	41	4%	22	2%	32	4%	19	2%	30	4%
Hispanic	529	46%	456	44%	420	44%	393	45%	374	45%	376	44%
White, Non-Hispanic	409	36%	353	34%	327	35%	289	33%	293	35%	268	31%
<b>Total</b>	<b>1,143</b>		<b>1,038</b>		<b>947</b>		<b>856*</b>		<b>831*</b>		<b>838*</b>	

\*Does not include category for 2 or more races.

Table 4 shows deaths among children by county of residence. In 2012, there were increases in the percentages of deaths among children who resided in the counties of Gila, Graham, La Paz, Maricopa, Santa Cruz and those children who resided outside of Arizona. The percentages of children who died in 2012 declined or remained unchanged in the counties of Apache, Coconino, Greenlee, Mohave, Pima, Pinal and Yuma.

<b>Table 4. Deaths Among Children by County of Residence, Arizona, 2007-2012</b>												
<b>County</b>	<b>2007</b>		<b>2008</b>		<b>2009</b>		<b>2010</b>		<b>2011</b>		<b>2012</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Apache	13	1	20	2	26	3	12	1	15	2	9	1
Cochise	27	2	24	2	21	2	20	2	15	2	17	2
Coconino	25	2	21	2	18	2	26	3	19	2	20	2
Gila	17	1	15	1	9	1	12	1	9	1	14	2
Graham	12	1	11	1	5	<1	6	<1	4	<1	6	1
Greenlee	0	--	1	<1	0	--	2	<1	5	<1	1	<1
La Paz	1	<1	5	<1	5	<1	2	<1	3	<1	8	1
Maricopa	648	57	577	56	542	57	486	56	478	57	500	59
Mohave	27	2	11	1	21	2	22	3	23	3	21	2
Navajo	39	3	30	3	22	2	23	3	26	3	28	3
Pima	148	13	165	16	130	14	130	15	109	13	91	11
Pinal	64	6	52	5	60	6	40	5	51	6	48	6
Santa Cruz	6	<1	6	<1	7	1	9	1	4	<1	9	1
Yavapai	28	2	17	2	20	2	20	2	14	2	24	3
Yuma	35	3	39	4	28	3	31	4	33	4	26	3
Outside AZ	53	5	44	4	33	3	21	2	29	3	32	4
<b>Total</b>	<b>1,143</b>		<b>1,038</b>		<b>947</b>		<b>862</b>		<b>837</b>		<b>854</b>	

Statewide, the death rate has increased. Figure 5 shows child fatality rates per 100,000 residents by county; rates are unstable for counties with fewer than 20 deaths.



# CHILD FATALITY REVIEW FINDINGS

## *Cause and Manner of Child Fatalities*

Cause of death refers to the injury or medical condition resulting in death (e.g. firearm-related injury, motor vehicle accident, pneumonia, cancer, etc.). Manner of death is defined differently than cause of death, referring specifically to the intentionality of the cause.

For example, if the cause of death was a firearm-related injury, the manner of death may have been intentional or unintentional. If it was intentional, the manner of death would be determined “suicide” or “homicide.” If it was unintentional, “accident” would be the manner of death. In some cases, there was insufficient information to determine the manner of death even when the cause was known. It may not be clear when a firearm death is due to an accident, suicide, or homicide, and in these cases, the manner of death will be listed as undetermined.

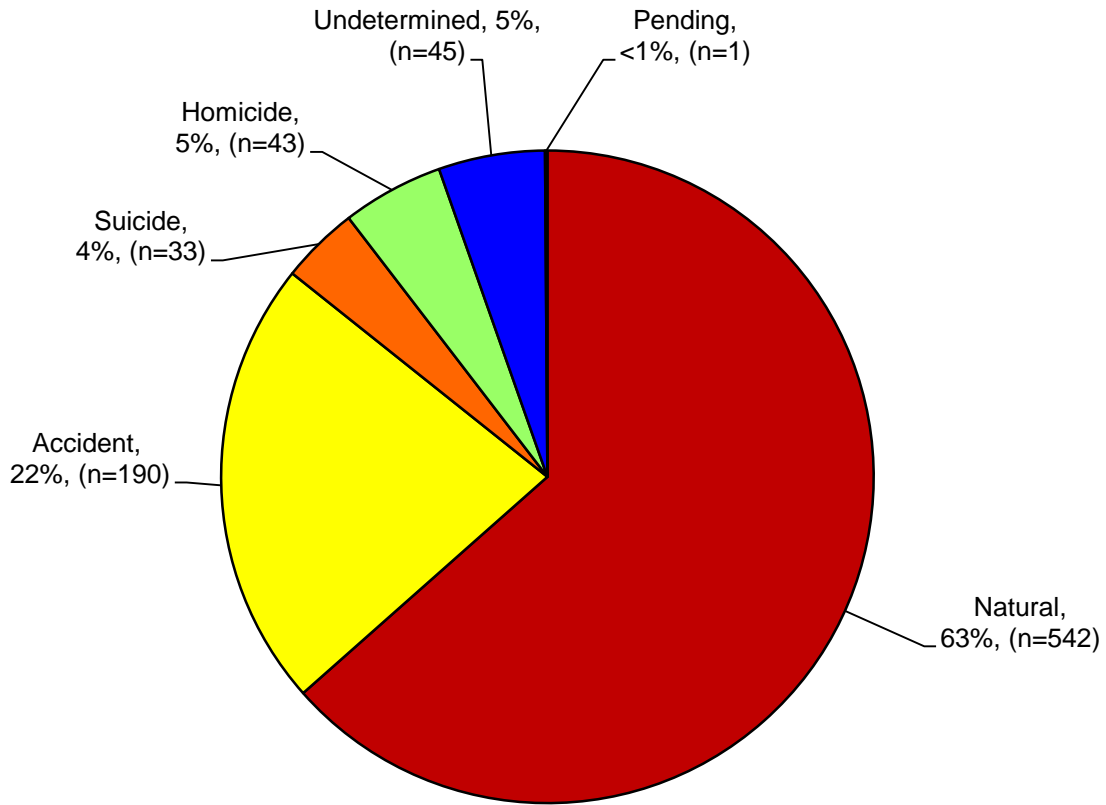
Manners of death include:

- natural (e.g., cancer)
- accident (e.g., unintentional car crash)
- homicide (e.g., assault)
- suicide (e.g., self-inflicted intentional firearm injury)
- undetermined

In addition to reviewing medical examiner reports, Child Fatality Review Teams also review records from hospitals, emergency departments, law enforcement, child protective service agencies, behavioral health reports and other sources. As a result of this comprehensive, multidisciplinary approach, the teams’ determinations of cause and manner of death sometime differ from those recorded on the death certificate. In the following sections, deaths are counted once for each applicable section based upon team consensus of the cause and manner of death. For example, a homicide involving a firearm injury perpetrated by an intoxicated caregiver would be counted in each section addressing firearm injuries, homicides, substance use, and maltreatment fatalities.

Natural deaths accounted for 63 percent of all child deaths during 2012 (n=542); 22 percent of child deaths were accidents (n=190); five percent were homicides (n=43); four percent were suicides (n=33); and five percent were of an undetermined manner (n=45). There was one death in 2012 in which the information was still pending at the time of the writing of this report. Deaths are listed as having an undetermined manner or cause of death if a definitive manner or cause cannot be determined by the review team following review of all the available information pertaining to the death. Deaths are listed as having a pending manner if information was not available to the review team. Figure 6 shows deaths among children by manner.

**Figure 6. Deaths Among Children by Manner, Arizona, 2012 (n=854)**



The distribution of deaths by manner varied by age group with the percentage of natural deaths overwhelmingly affecting neonatal infants. Homicides occurred in each age group, but nearly half of them (40 percent) occurred among children 1-4 years. Suicides occurred among the two older age groups. Table 5 shows the distribution of manner of death by age group.

Manner	Birth-27 Days (n=325)	28-365 Days (n=171)	1-4 Years (n=120)	5-9 Years (n=63)	10-14 Years (n=75)	15-17 Years (n=100)
Natural	58%	15%	11%	7%	7%	2%
Accident	2%	25%	21%	12%	14%	26%
Homicide	5%	23%	40%	7%	5%	21%
Suicide	0%	0%	0%	0%	27%	73%
Undetermined	9%	64%	16%	2%	2%	7%

The most common causes of death in most age groups were medical causes. The leading cause of death for 15-17 year olds was motor vehicle crash/other transportation-related. Table 6 shows the four most common causes of death for each age group.

Table 6. Leading Causes of Death by Age Group, Arizona, 2012							
Rank	0-27 Days 38%, n=325	28-365 Days 20%, n=171	1-4 Years 14%, n=120	5-9 Years 7%, n=63	10-14 Years 9%, n=72	15-17 Years 12%, n=100	All Deaths 100%, n=854
1	Prematurity n=172, 20%	Other Medical Condition n=46, 5%	Other Medical Condition n=43, 5%	Other Medical Condition n=34, 4%	Other Medical Condition n=33, 4%	MVC/other Transport n=38, 4%	Other Medical Condition n=239, 28%
2	Congenital Anomaly n=73, 9%	Suffocation n=44, 5%	Drowning n=18, 2%	Transport n=12, 1%	Transport n=21, 2%	Firearm n=22, 3%	Prematurity n=192, 22%
3	Other Medical Condition n=70, 8%	Undetermined n=26, 3%	Congenital Anomaly n=14, 2%	Drowning n=5, 1%	Hanging n=7, 1%	Other Medical Condition n=13, 2%	Congenital Anomaly n=114, 13%
4	Undetermined n=5, 1%	Congenital Anomaly n=22, 3%	MVC/other Transport n=11, 1%	Fire/Burn n=3, <1%	Drowning Firearm n=4, <1% n=4, <1%	Hanging n=9, 1%	Transport n=88, 10%

The percentage of accidental deaths increased in 2012 while natural deaths, suicides and deaths of an undetermined manner decreased slightly. Homicides of children remained unchanged from 2011 to 2012. Table 7 shows deaths among children by manner from 2007 through 2012.

Table 7. Deaths Among Children Birth Through 17 Years by Manner, Arizona, 2007-2012												
Manner	2007		2008		2009		2010		2011		2012	
Natural	769	67%	702	68%	641	68%	565	66%	537	64%	542	63%
Accident	227	20%	168	16%	165	17%	160	19%	167	20%	190	22%
Undetermined	53	5%	73	7%	63	7%	74	9%	52	6%	45	5%
Homicide	66	6%	60	6%	51	5%	36	4%	42	5%	43	5%
Suicide	28	2%	35	3%	27	3%	24	3%	38	5%	33	4%
<b>Total</b>	<b>1,143</b>		<b>1,038</b>		<b>947</b>		<b>859*</b>		<b>836*</b>		<b>853*</b>	

\*Does not include deaths of pending manner.

In 2012, there were 353 child deaths due to medical conditions including three homicides; 192 deaths were due to prematurity; 88 deaths involved motor vehicle crashes or some other type of transportation. Fifty-three children died from suffocation, one of which was a homicide; in 40 deaths, there was insufficient information available to determine the manner or cause of death. There were 36 drowning deaths, 32 firearm-related deaths. There was one death from exposure and no child died in

Arizona while crossing the Mexico and United States border. Table 8 shows deaths among children by cause and manner.

<b>Cause</b>	<b>Natural</b>	<b>Accident</b>	<b>Suicide</b>	<b>Homicide</b>	<b>Undetermined</b>	<b>Total</b>
Pending	0	0	0	0	1	1
Medical*	348	2	0	3	0	353
Prematurity	192	0	0	0	0	192
Transport	0	87	0	1	0	88
Firearm	0	0	17	14	1	32
Suffocation	0	48	0	1	4	53
Drowning	0	34	0	0	2	36
Blunt Force Trauma	0	0	0	19	0	19
Hanging	0	3	15	1	1	20
Undetermined	2	1	0	2	35	40
Other Non-Medical	0	0	0	1	0	1
Poisoning	0	5	1	0	1	7
Fire/Burn	0	5	0	0	0	5
Exposure	0	0	0	1	0	1
Fall/Crush	0	5	0	0	0	5
Other Injury	0	0	0	0	1	1
<b>Total</b>	<b>542</b>	<b>190</b>	<b>33</b>	<b>43</b>	<b>46</b>	<b>854</b>

The percentages of deaths caused from transportation-related and firearms-related injuries increased significantly while all other causes of death declined or remained unchanged. Table 9 shows deaths among children by cause from 2007 through 2012.

<b>Cause</b>	<b>2007</b>		<b>2008</b>		<b>2009</b>		<b>2010</b>		<b>2011</b>		<b>2012</b>	
Pending	-	-	-	-	-	-	-	-	-	-	1	<1%
Medical*	420	37%	420	40%	372	39%	359	42%	342	41%	353	41%
Prematurity	321	28%	271	26%	241	25%	197	23%	199	24%	192	22%
Transport	122	11%	82	8%	82	9%	61	7%	70	8%	88	10%
Firearm	48	4%	49	5%	32	3%	22	3%	23	3%	32	4%
Suffocation	27	2%	21	2%	17	2%	25	3%	50	6%	53	6%
Drowning	23	2%	29	3%	35	4%	33	4%	32	4%	36	4%
Blunt Force Trauma	18	1%	16	1%	13	1%	11	1%	26	3%	19	2%
Hanging	13	1%	21	2%	20	2%	19	2%	27	3%	20	2%
Undetermined	34	3%	59	6%	57	6%	74	9%	46	6%	40	5%
Other Non-Medical	-	-	-	-	-	-	-	-	-	-	1	<1%
Poisoning	24	2%	14	1%	17	2%	18	2%	10	1%	7	1%
Fire/burn	6	1%	4	1%	3	<1%	6	<1%	6	1%	5	1%
Exposure	8	1%	9	1%	7	1%	11	1%	0	0%	1	<1%
Fall/crush	9	1%	9	1%	7	1%	4	<1%	4	<1%	5	1%
Other Injury	33	3%	14	1%	16	2%	21	2%	0	0%	1	<1%
SIDS	37	3%	20	2%	28	3%	1	<1%	2	<1%	0	0%
<b>Total</b>	<b>1,143</b>		<b>1,038</b>		<b>947</b>		<b>862</b>		<b>837</b>		<b>854</b>	

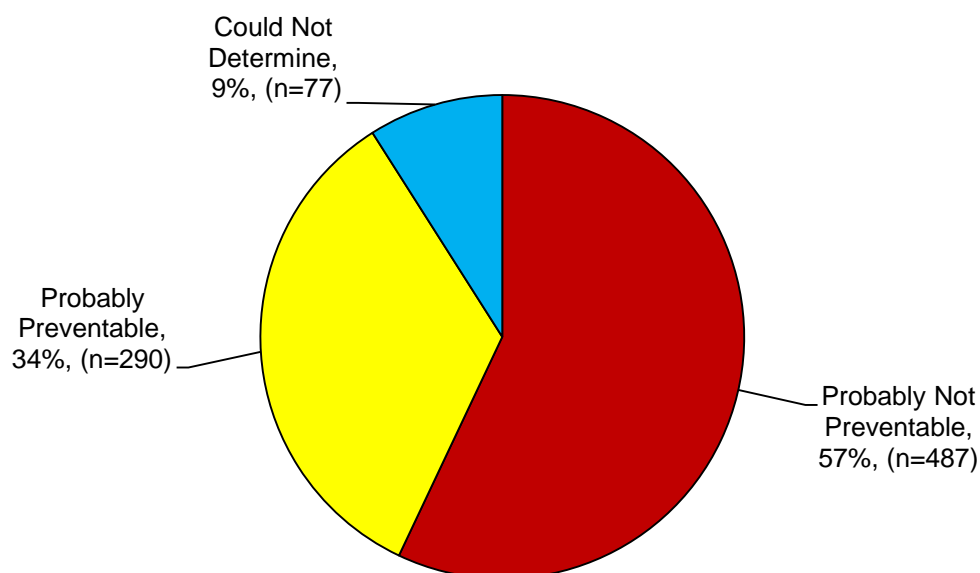
\*Excluding SIDS and prematurity.

## PREVENTABILITY

The child fatality review process in Arizona is grounded in the principles of public health and is focused on the prevention of all child deaths. Child Fatality Review Teams consider a child's death preventable if some action could have reasonably been undertaken by an individual, or by the community as a whole, to prevent the death. The determination of preventability for an individual case is a consensus decision by the local team made after discussing and reviewing all available data regarding the circumstances of a child's death. In some cases, there is insufficient information available to determine preventability or the team cannot reach consensus on preventability. In 2012, Child Fatality Review Teams determined 290 child deaths were probably preventable (34 percent), 487 child deaths (57 percent) were probably not preventable, and in nine percent of child deaths, the teams could not determine preventability (n=77).

During the review of each child's death, teams identify factors believed to have contributed to the death. Although the presence of a contributing factor typically led to the determination that a death was preventable, this was not always the case. For example, the team may have concluded that an unsafe sleep environment (e.g., infant sleeping on an adult bed) was a contributing factor in an unexpected infant death. However, the team may not have had sufficient information (e.g., the child's autopsy report or an adequate death scene investigation) to determine that the death could have been prevented. Figure 7 shows deaths among children by preventability in Arizona.

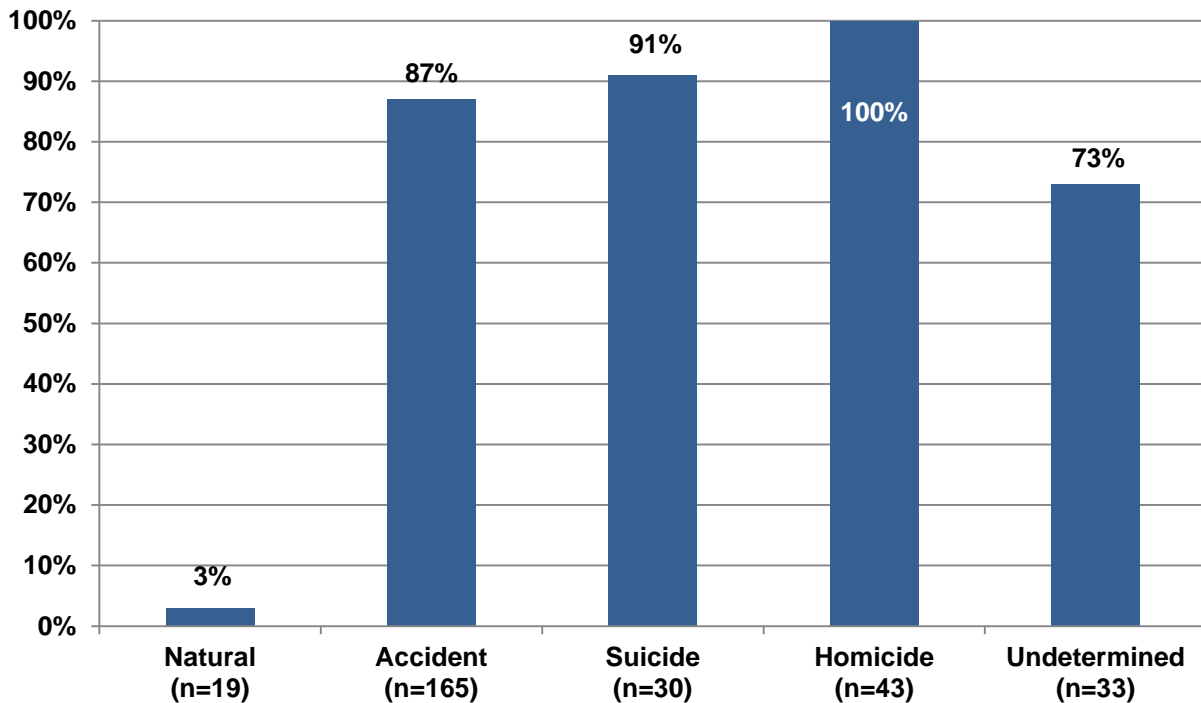
**Figure 7. Deaths Among Children by Preventability, Arizona, 2012 (n=854)**



Child Fatality Review Teams determined 87 percent of accidental deaths were preventable (n=165), 100 percent of homicides were preventable (n=43), and 91 percent of suicides were preventable (n=30). Only three percent of natural deaths were determined to have been preventable (n=19). Figure 8 shows preventable deaths among children by manner.

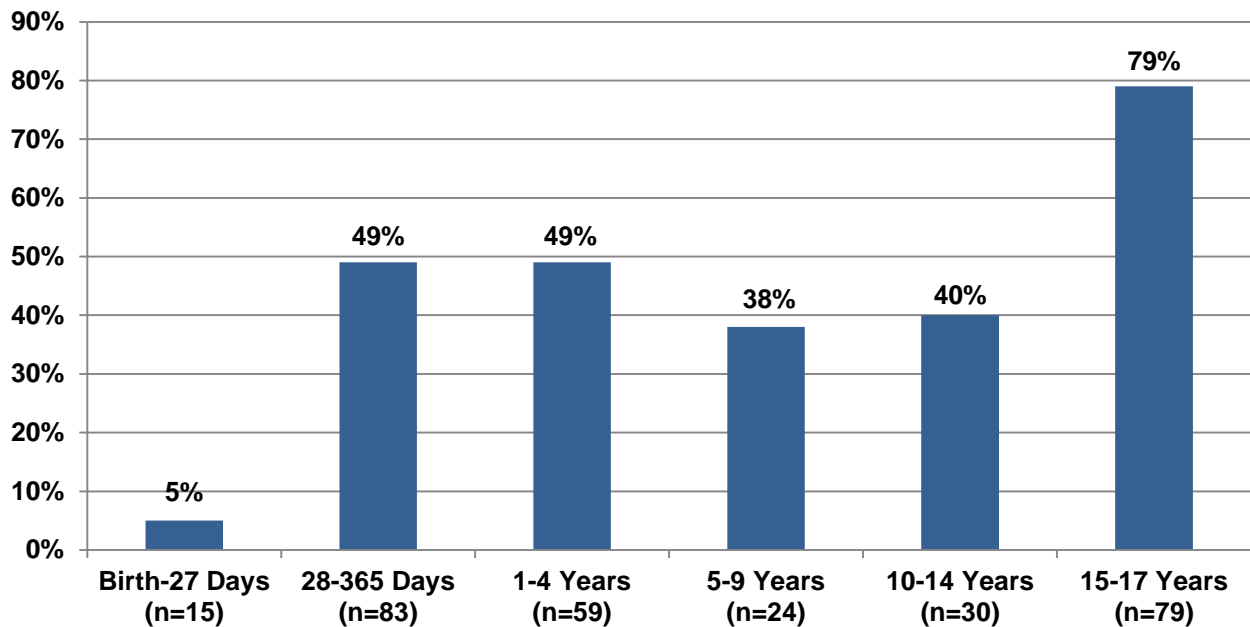
**Figure 8. Percentage of Preventable Deaths Among Children by Manner\*, Arizona, 2012**

\*Manner of death pending in one case



Preventability also varied by age group. Neonatal infants (birth to 27 days) had the lowest percentage of preventable deaths (5 percent, n=15). The highest percentage of preventable deaths was among youth between the ages of 15-17 years (79 percent, n=79). Figure 9 shows preventable deaths among children by age group.

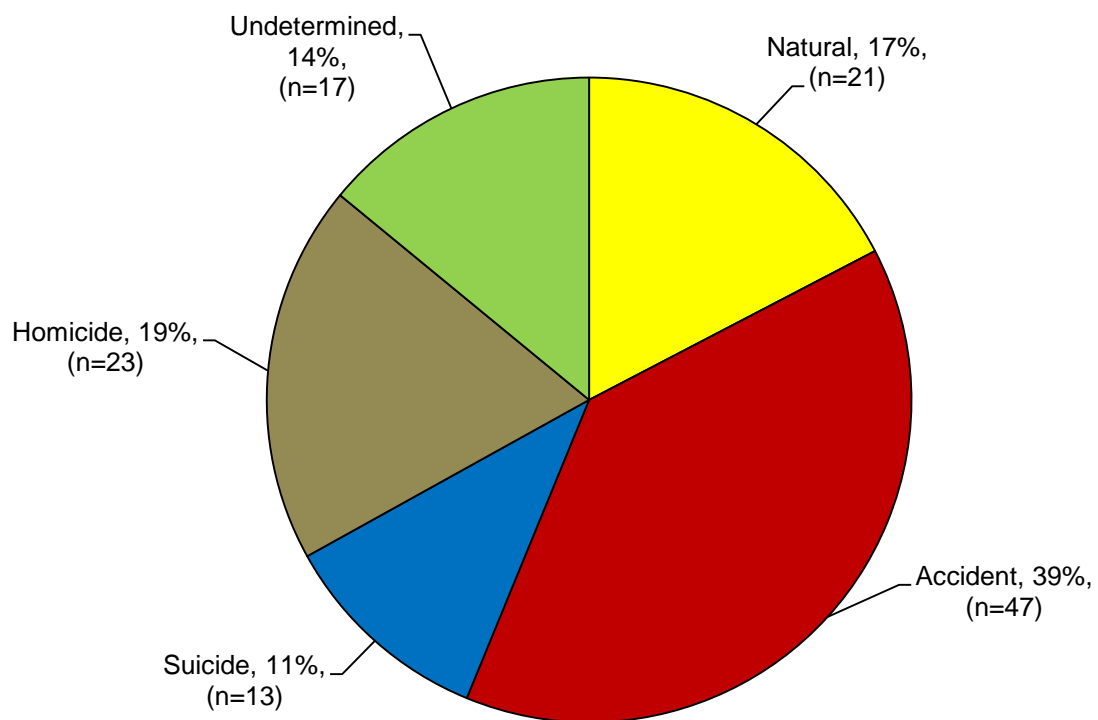
**Figure 9. Percentage of Preventable Deaths Among Children by Age Group, Arizona, 2012**



## SUBSTANCE USE

A child's death would be considered associated with substance use if the child or the child's parent or caretaker or the person responsible for the incident leading to the death abused substances, including illegal drugs, prescription drugs, and/or alcohol. Substance use was associated with 14 percent of the fatalities (n=121) in 2012. Figure 10 shows the distribution of child deaths involving drugs and/or alcohol and/or prescription drugs by manner of death.

**Figure 10. Cause of Death Among Children with Drugs and/or Alcohol and/or Prescription Drugs by Manner Arizona, 2012 (n=121)**



Drugs, alcohol and/or prescription drug use was associated with twenty-two percent of motor vehicle or other types of transport collision related deaths (n=27); fifteen percent of deaths involved medical conditions (n=18); and 12 percent were due to blunt force trauma (n=14). In 12 percent of these cases the teams could not determine the cause of death (n=15). Table 10 shows cause of child deaths associated with drugs and/or alcohol and/or prescription drugs by manner in 2012.

**Table 10. Child Deaths Associated With Drugs and/or Alcohol by Cause and Manner, Arizona, 2012 (n=121)**

Cause	Accident	Homicide	Suicide	Natural	Undetermined	Total
Medical*	0	1	0	17	0	18
Prematurity	0	0	0	4	0	4
Motor Vehicle or Other Transport Collision	26	1	0	0	0	27
Firearm Injury	0	5	5	0	1	11
Suffocation	12	0	0	0	1	13
Drowning	4	0	0	0	0	4
Blunt/Sharp force trauma	0	14	0	0	0	14
Hanging	0	1	7	0	0	8
Undetermined	0	1	0	0	14	15
Poisoning	5	0	1	0	1	7
<b>Total</b>	<b>47</b>	<b>23</b>	<b>13</b>	<b>21</b>	<b>17</b>	<b>121</b>

\*Excluding SIDS and prematurity

Of the drugs and/or alcohol or prescription drugs associated with death, alcohol contributed to the deaths of 56 children (seven percent); marijuana was associated with 43 deaths (five percent); and methamphetamine was associated with 25 deaths (three percent). Table 11 shows substances associated in deaths from 2007 through 2012.

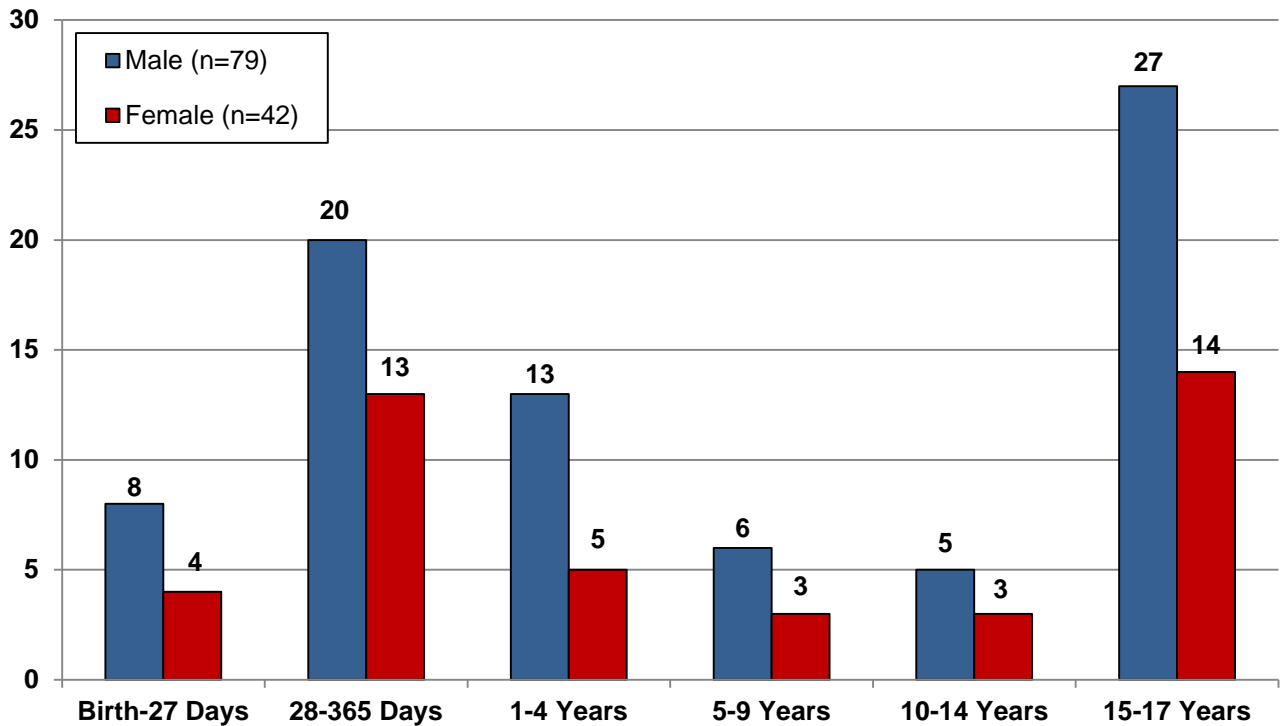
**Table 11. Substances Associated in Deaths Among Children, Arizona, 2007-2012**

Substance*	2007		2008		2009		2010		2011		2012	
Alcohol	80	7%	76	7%	51	5%	65	7%	81	10%	56	7%
Marijuana	76	7%	57	5%	67	7%	70	8%	95	11%	43	5%
Methamphetamine	48	4%	39	4%	53	6%	33	4%	34	4%	25	3%
Cocaine	31	3%	21	2%	17	2%	15	2%	24	3%	12	1%
Opiates	16	1%	18	2%	24	3%	22	3%	17	2%	17	2%

\*More than one substance may have been associated with a single death

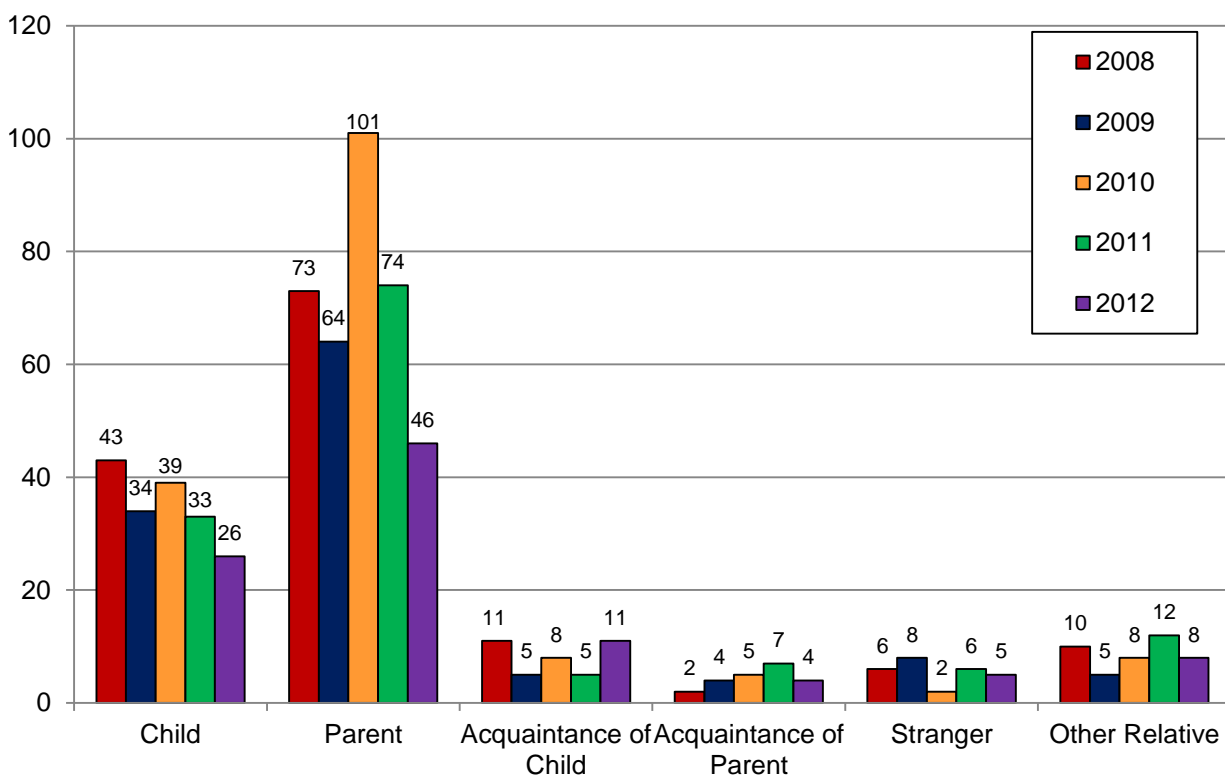
Drugs, alcohol and/or prescription drugs were determined to have been associated with deaths among males and females in all age groups, with male decedents being disproportionately higher in each age group. Substance use was more commonly associated with the death of male children (n=79) than with female children (n=42). Figure 11 shows child deaths involving substance use by the child's gender and age group.

**Figure 11. Child Deaths Involving Substance Use by Gender and Age Group, Arizona, 2012 (n=121)**



For each child death associated with substance use, the individual who used the substance may have been the parent, the child, an acquaintance of the child or family, a relative, or a stranger. For example, if the child was a passenger in a car hit by an intoxicated driver of another car, the individual who used the substance was classified as a “stranger.” In some deaths, more than one individual may have been using substances. For 46 deaths in 2012, the user was the parent, and for 26 deaths, the user was the child themselves. Figure 12 shows child deaths associated with drugs and/or alcohol by substance user for 2008 through 2012.

**Figure 12. Child Deaths Associated With Drugs and/or Alcohol and/or Prescription Drugs by User, Arizona, 2008-2012**

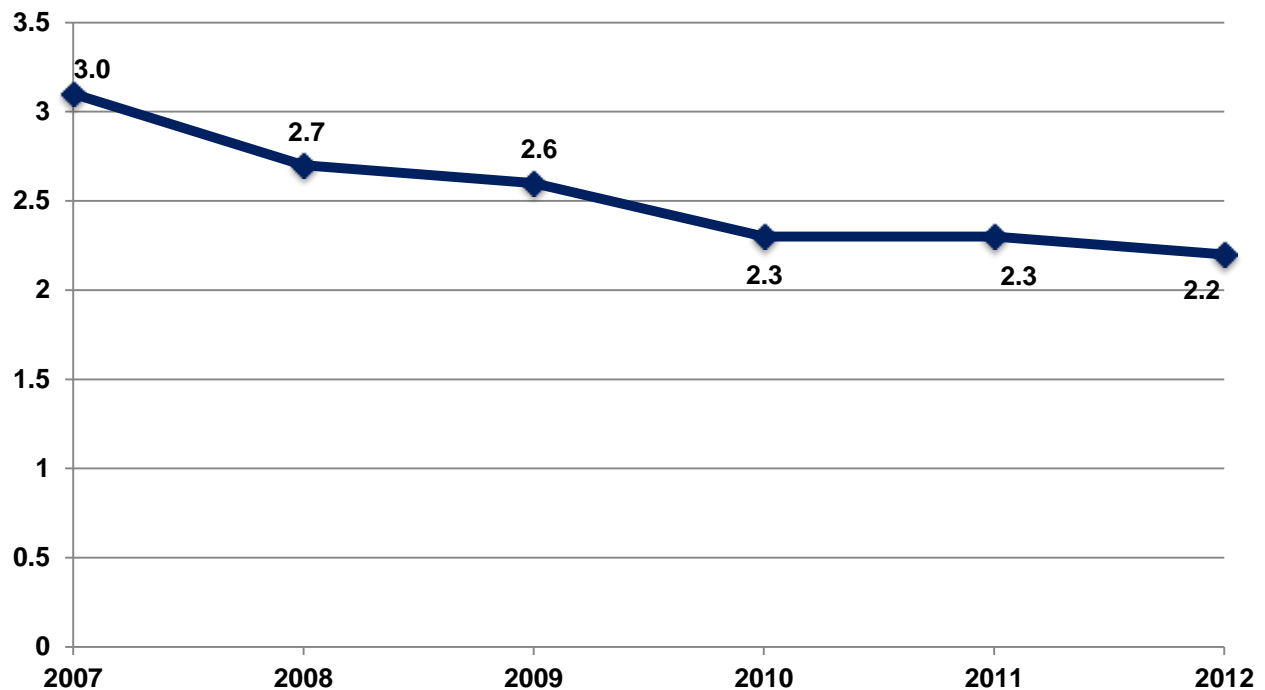


In 2012, child deaths associated with substance use by the parent or the child are lower than in the years between 2008 and 2011. Child deaths associated with substance use by the parent’s acquaintance are lower in 2012 than in 2010 and 2011. Substance use by a stranger or a relative contributed to fewer child deaths in 2012 than in 2011.

## PREMATURITY

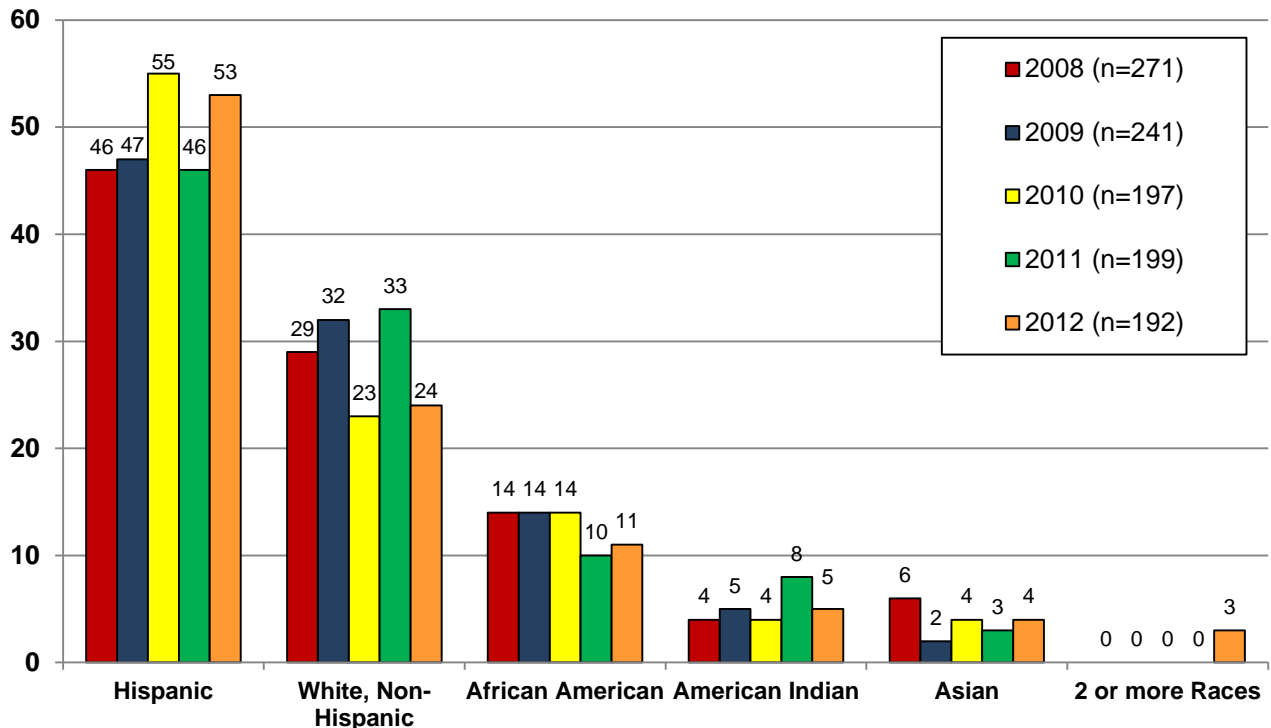
Local teams consider a child's cause of death to be due to prematurity if the infant was born prior to 37 weeks gestation and had no other underlying cause of death. Infants born prior to 37 weeks gestation, whose death was attributed to congenital anomalies or other medical conditions, were not included in the prematurity category. In 2012, there were 192 deaths due to prematurity, which accounted for 22 percent of all child deaths. There were 199 deaths due to prematurity in 2011 (24 percent of all child deaths). The rate of death due to prematurity in 2012 was 2 deaths per 1,000 live births. This is slightly lower than the rate in 2011. Figure 13 shows the rate of child deaths due to prematurity from 2007 through 2012.

**Figure 13. Rate of Child Deaths due to Prematurity (per 1,000 live births), Arizona, 2007-2012**



In 2012, 57 percent of premature infants who died were male (n=109) and 43 percent were female (n=83). Over half of the premature infant deaths were Hispanic (53 percent, n=101), 24 percent were White/Non-Hispanic (n=47), 11 percent were African American (n=22), five percent were American Indian (n=10), 4 percent were Asian (n=7) and 3 percent were children of two or more races (n=5). In 53 cases, at least one of the parents was known to have been a first generation immigrant. Figure 14 shows percentage of child deaths due to prematurity by race/ethnicity from 2008 through 2012.

**Figure 14. Percentage of Child Deaths due to Prematurity by Race/Ethnicity, Arizona, 2008-2012**



In 2012, the majority of prematurity-related deaths were among infants who were 19 through 24 weeks gestational age (68 percent, n=131), followed by infants who were 25 through 31 weeks gestational age (20 percent, n=38). Five deaths were infants whose gestational age was between 31 through 36 weeks (3 percent). There were 25 deaths due to prematurity among infants in multiple births; 22 were twins and 3 were triplets.

For 12 percent of the deaths, the mother reported she did not receive any prenatal care (n=23). However, 77 percent of mothers started prenatal care within the first trimester of pregnancy (n=147). In 18 percent of the prematurity deaths, the mother was 16 through 19 years of age at the time of the birth (n=34). Forty-five percent of the mothers were 20 through 29 years of age (n=86); 31 percent were 30 through 39 years of age (n=59), and four percent of mothers were 40 through 43 years of age (n=7). In six cases, the age of the mother at the time of infant's death was unknown (3 percent).

Sixty-three percent of mothers whose infants died from prematurity were insured by the Arizona Health Care Cost Containment System (AHCCCS) (n=121). Sixteen percent of mothers had less than a high school education (n=30); 47 percent completed high school (n=91); and 28 percent attended at least some college (n=54); four percent were post-graduates (n=7); and another four percent of the mother's educational status was unknown (n=7). In 53 percent of prematurity deaths, mothers experienced preterm labor (n=102). In 84 percent of deaths due to prematurity, the mother experienced medical complications during pregnancy (n=161). Table 12 shows risk factors for prematurity deaths.

<b>Table 12. Risk Factors for Prematurity Deaths, Arizona, 2012</b>		
<b>Factor*</b>	<b>Number</b>	<b>Percent</b>
Medical complications during pregnancy	161	84
Preterm labor	102	53
Chorioamnionitis (bacterial infection)	28	15
No prenatal care	23	12
Cervical insufficiency	17	9
Tobacco use	17	9
Drugs and/or alcohol use	12	6
*More than one factor may have been identified for each death		

## SUDDEN UNEXPECTED INFANT DEATHS

Sudden infant death syndrome (SIDS) is the sudden death of an infant younger than one year of age that cannot be explained after a thorough investigation has been conducted including a complete autopsy, an examination of the death scene, and a review of the clinical history. SIDS is a type of sudden unexpected infant death (SUID). Other types of SUID include infant deaths due to suffocation, asphyxia, poisoning, undetected medical disorders, hypothermia and hyperthermia, and even some abuse and neglect cases. These are the definitions local review teams utilize when determining if an infant's death occurred suddenly and unexpectedly while not in the care of a medical professional. For these deaths, manner and cause of death may not be immediately obvious prior to investigation.

The American Academy of Pediatrics recommends ensuring safe sleep environments for infants include:

1. Encouraging mothers to breastfeed their infant at least until the infant is 6 months old, which may lower the risk of unexpected infant deaths.
2. Ensure the infant receives all recommended vaccinations; evidence suggests this reduces the risk of sudden unexpected infant deaths.
3. Keep soft objects or loose bedding out of the crib including bumper pads, pillows and toys.
4. Have the infant sleep in the same room as the parents but not in the same bed.
5. Always place the infant to sleep on their back.

In 2012, there were 81 sudden unexpected infant deaths in Arizona, nine percent of all child deaths, compared to 14 percent of all child deaths in 2011. Fifty-nine percent of sudden unexpected infant deaths were among males (n=48) and 41 percent were among females (n=33).

Hispanic infants and White/Non-Hispanic infants accounted for 44 percent each of sudden unexpected infant deaths (n=31 respectively); African American infants comprised ten percent of SUID fatalities (n=8); American Indian infants accounted for nine percent (n=7); Asian infants totaled three SUID fatalities (four percent); and infants of two or more Races comprised one percent (n=1).

Fifteen deaths were among infants age one month or less (19 percent); 14 infants who died unexpectedly were between one and two months of age (17 percent) while another 12 infant deaths were between two and three months of age (15 percent). Seventeen unexpected deaths were among infants three to four months of age (21 percent).

For 29 SUID deaths, teams were unable to determine the cause of death (36 percent). Forty-six infants who died were due to suffocation (57 percent). Table 13 illustrates sudden unexpected infant deaths by cause in 2012.

<b>Cause</b>	<b>Number</b>	<b>Percent</b>
Suffocation	46	57
Undetermined	29	36
Medical Condition	5	6
Hanging	1	1
<b>Total</b>	<b>81</b>	

### **Investigations of Sudden Unexpected Infant Deaths**

In 2012, law enforcement conducted scene investigations in seventy-six sudden unexpected infant deaths (94 percent). The remaining six percent of the scene investigations were conducted by the Federal Bureau of Investigation (FBI) as these investigations were conducted on Tribal land. Ninety-nine percent of the deaths were referred to a Medical Examiner or hospital physician. There was only one SUID case in which a death scene investigation was not conducted.

Seventy-three children were known to have had toxicology tests performed. Eighty-six percent of them tested negative for substances and ten percent had positive toxicology results. Sixty-nine children were known to have had x-rays.

Sixty-seven of the Sudden Unexpected Infant Deaths were determined by the local review teams to have been preventable (83 percent). For 11 deaths, local review teams were unable to determine if death could have been prevented (14 percent). In three deaths, local teams determined the deaths probably were unpreventable (four percent). In forty-six deaths, lack of supervision was a preventable factor (57 percent). Table 14 shows preventable factors for sudden unexpected infant deaths in 2012.

<b>Factor*</b>	<b>Number</b>	<b>Percent</b>
Unsafe sleep environment	51	63
Lack of supervision	46	57
Infant exposure to smoking	17	21
Drugs and/or alcohol	10	12
*More than one factor may have been identified for each death		

## **Unsafe Sleep Environments**

Of the 81 unexpected infant deaths, seventy-seven occurred in sleep environments (95 percent). Fifty-one of these environments were determined unsafe (63 percent). One infant died while sleeping on a couch; one infant died while sleeping in a chair; thirty-one infants died while sleeping on their side or stomach. Suffocation was the cause of 46 unsafe sleep-related deaths. For 29 deaths, the cause of death was undetermined. Thirty infants died while co-sleeping (bed sharing with adults and/or other children). Among co-sleeping deaths associated with the parent's use of substances, five infants were known to have had a crib available within the home.

## **Sudden Infant Death Syndrome (SIDS)**

SIDS is the diagnosis given to the sudden death of an infant younger than one year of age that remains unexplained after a complete postmortem investigation, including an autopsy, a death scene investigation, and a review of the child's medical history. There were no deaths identified as SIDS in 2012, compared to two in 2011, one in 2010, and 28 deaths in 2009.

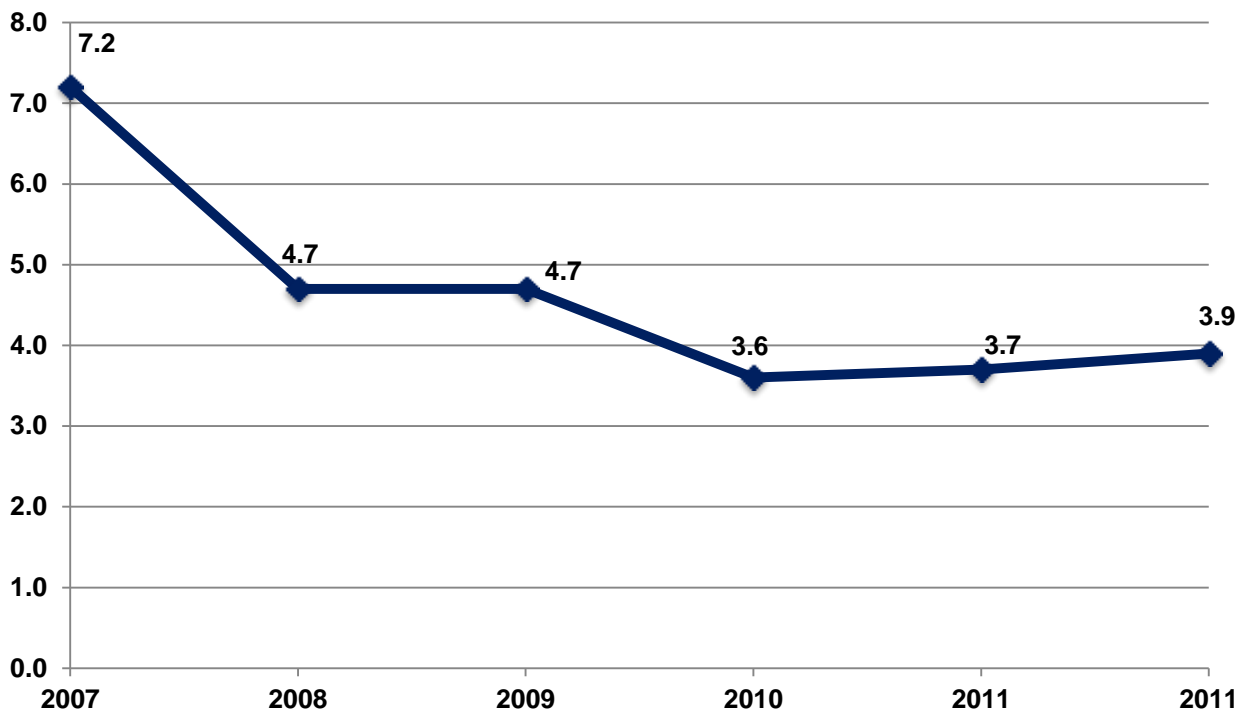
This does not mean there has been a rapid decline in the number of infants who died suddenly or unexpectedly. In 2012, Arizona established a SUID Committee to review unexplained or unexpected infant deaths. Prior to the SUID committee's process, local teams were asked to use more stringent guidelines when classifying a death as SIDS. Therefore, there was a decrease in the number of fatalities classified as SIDS; while at the same time there was a significant increase in the number of deaths classified as having an undetermined cause of death as well as an increase in infant deaths due to suffocation.

## MOTOR VEHICLE CRASHES AND OTHER TRANSPORT FATALITIES

In 2012, 88 children died as the result of motor vehicle crashes (MVC) and other types of transportation (ten percent of all child fatalities). Ninety-five percent of the fatalities resulted from motor vehicle-related crashes (n=84) and the remaining included air transit, bicycles, or all-terrain vehicles.

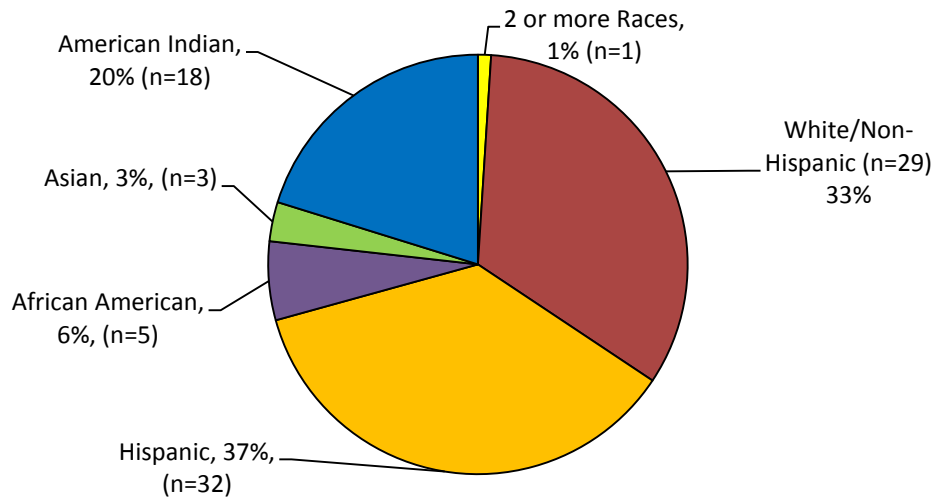
The rate of MVC/transport fatalities in 2012 was 3.9 deaths per 100,000 children, a slight increase from 2011 when 3.7 deaths per 100,000 children. Figure 15 shows the rates of child deaths due to MVC/other transport from 2007 through 2012.

**Figure 15. Rate of Child Deaths due to Motor Vehicle Crashes and Transport (per 100,000 children), Arizona, 2007-2012**



Fifty-four transportation-related deaths in 2012 were among males (61 percent) while 34 deaths were among females (39 percent). Thirty-two children were Hispanic (36 percent); twenty-nine children were White/Non-Hispanic (33 percent); eighteen children were American Indian (21 percent). Figure 16 shows MVC and other transport-related deaths by race/ethnicity. Figure 17 demonstrates the disparity in deaths.

**Figure 16. Motor Vehicle and Other Transport Deaths by Race/Ethnicity, Arizona, 2012 (n=88)**



**Figure 17. Motor Vehicle and Other Transport Deaths by Race/Ethnicity, Compared to Populations, Arizona, 2012**

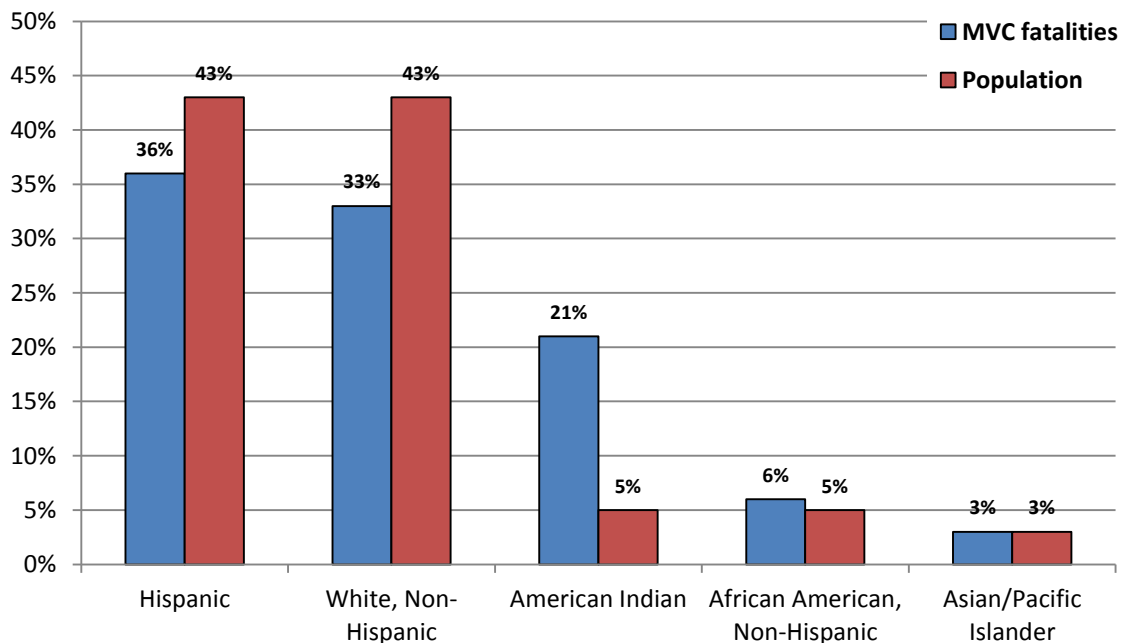
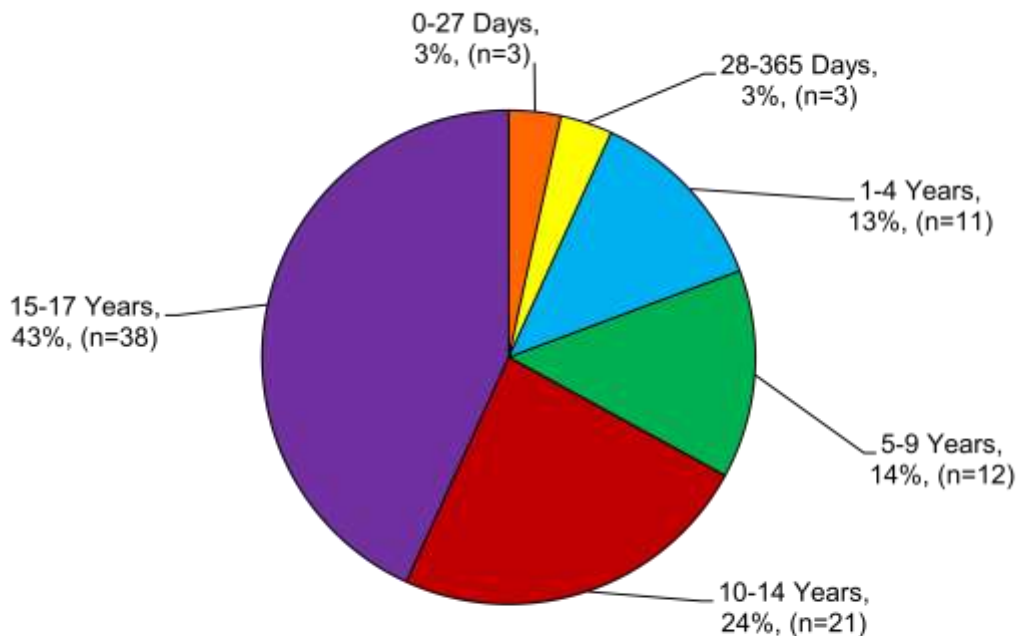


Table 15 reflects motor vehicle and other transport fatalities among children by race/ethnicity from 2007 through 2012.

<b>Table 15. Motor Vehicle and Other Transport Deaths Among Children by Race/Ethnicity, Arizona, 2007-2012</b>												
<b>Race/Ethnicity</b>	<b>2007</b>		<b>2008</b>		<b>2009</b>		<b>2010</b>		<b>2011</b>		<b>2012</b>	
American Indian	20	12%	15	18%	10	12%	11	18%	13	19%	18	21%
Hispanic	69	42%	36	44%	37	45%	26	43%	28	40%	32	36%
White, non-Hispanic	66	40%	26	32%	31	38%	20	33%	24	34%	29	33%
Other	9	5%	5	6%	4	5%	4	6%	5	7%	9	10%
<b>Total</b>	<b>164</b>		<b>82</b>		<b>82</b>		<b>61</b>		<b>70</b>		<b>88</b>	

In 2012, the greatest percentage of MVC/other transport deaths were among youth ages 15 through 17 years (43 percent, n=38), which increased five percent from 2011. The next largest percentage of MVC/other transport fatalities was of children ages 10 through 14 years (24 percent, n=21). Figure 18 shows MVC/other transport deaths by age group.

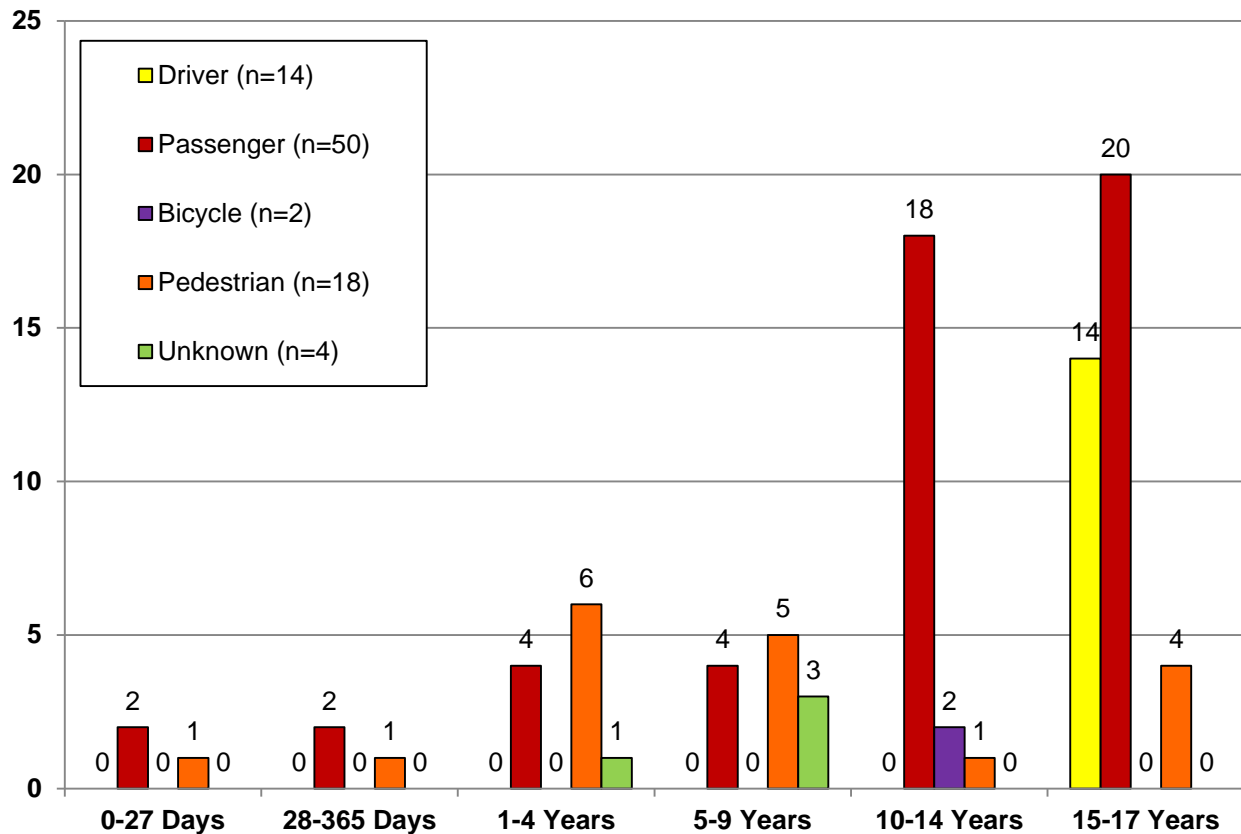
**Figure 18. Motor Vehicle and Other Transport Deaths by Age Group, Arizona, 2012 (n=88)**



Of the 88 children who died in motor vehicles and other types of transportation, 64 children were vehicle occupants, 18 children were pedestrians, two children were riding bicycles, and the information was unknown for the remaining four children. Among the 64 motor vehicle occupant fatalities, 14 children were drivers and 50 were passengers. Among the pedestrian deaths, two children were killed due to vehicle back overs.

Figure 19 shows motor vehicle crashes (excluding other types of transportation-related deaths) by age group and location of the child.

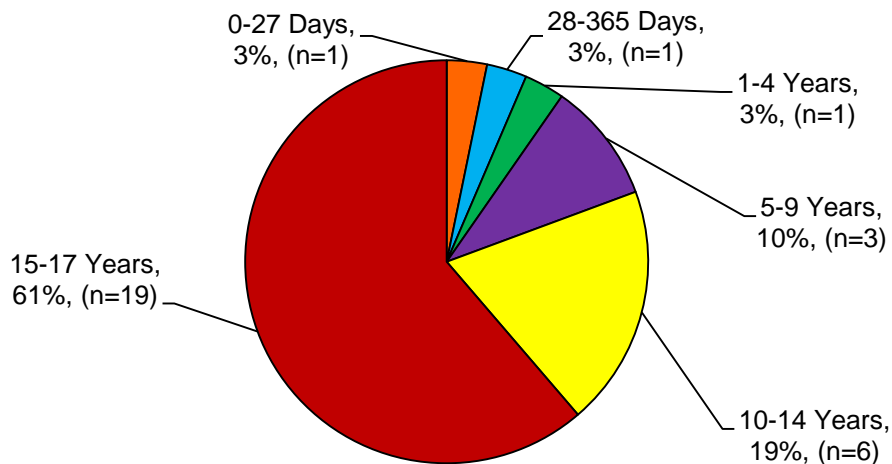
**Figure 19. Motor Vehicle Crash Deaths by Age Group, Arizona, 2012 (n=88)**



Among the passenger deaths, thirteen children were seated in the vehicle's front seat, 19 children were seated in the back seat, and two children were riding in a truck bed. In 13 child fatalities, the seating position within the vehicle was unknown. Three deaths were child passengers in air transit. Two deaths were children driving All-Terrain Vehicles (ATVs), both of whom were not wearing helmets which were located inside the vehicle.

Thirty-one children were known to have been improperly or not restrained in vehicles (35 percent). Twenty-five children of the children who were not properly restrained were between the ages of 10 and 17 years (80 percent). Figure 20 shows improper or unknown restraint use by age group.

**Figure 20. Motor Vehicle and Other Transport Deaths Improper or Unknown Restraint by Age Group, Arizona, 2012 (n=31)**



Among the MVC/other transport deaths in 2012, as in 2011, there were zero deaths resulting from in-utero injuries or dirt bikes.

In 2012 seventy-three deaths in MVC/other transport were determined to have been preventable (83 percent). Lack of or improper use of vehicle restraints was identified as a preventable factor for 31 transportation-related deaths (35 percent). Twenty children died in vehicles driven at excessive speed (23 percent); seventeen children died from reckless driving (19 percent) while fifteen children died in crashes in which drugs and/or alcohol was a factor (17 percent). Ten children died as a result of driver distraction (11 percent) while twelve children died because the driver was inexperienced (14 percent). Table 16 shows preventable factors for MVC/other transport deaths among children. This table does not include factors identified for air transportation or ATV deaths.

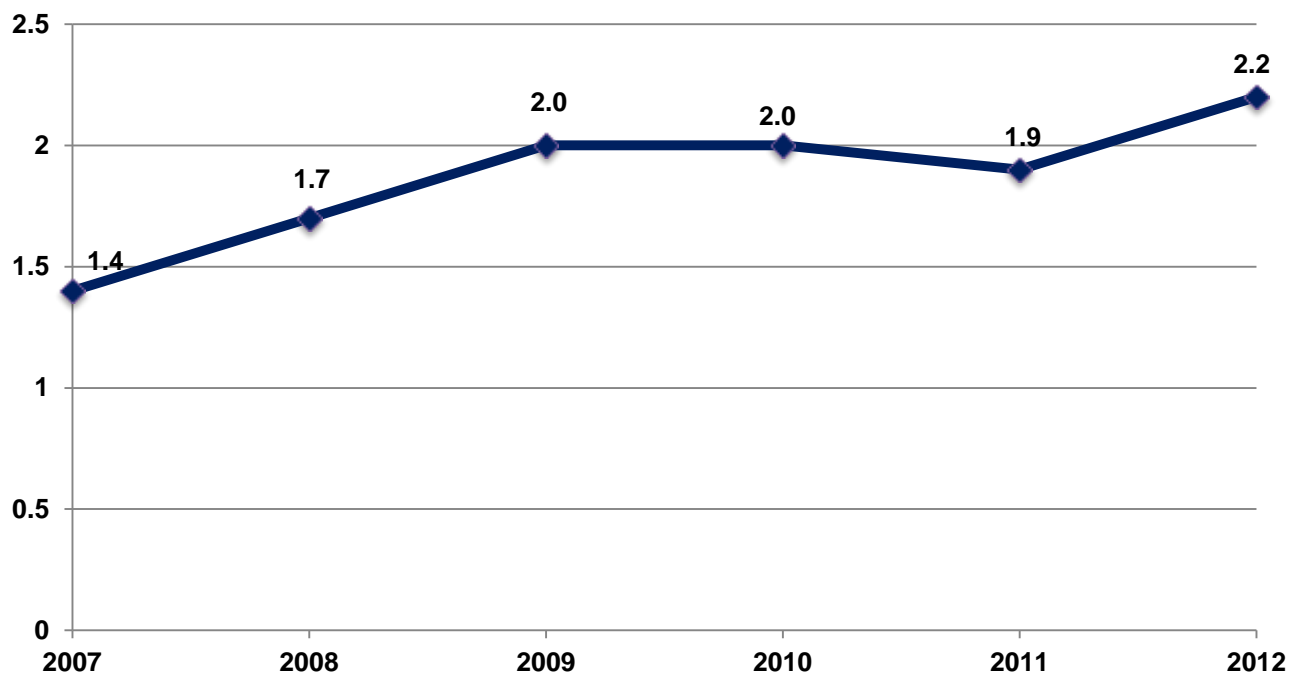
<b>Table 16. Preventable Factors for Transportation-Related Deaths Among Children, Arizona, 2012</b>		
<b>Factor*</b>	<b>Number</b>	<b>Percent</b>
Lack of vehicle restraint	31	35
Excessive driving speed	20	23
Reckless driving	17	19
Drugs and/or alcohol	15	17
Driver inexperience	12	14
Driver distraction	10	11
Lacking helmet	5	6
Red light running	3	3
Driver fatigue	3	3
*More than one factor may have been identified for each death		

## DROWNING

In 2012, there were 36 child deaths due to drowning, which accounted for four percent of all child deaths in Arizona. In 2011, there were 32 deaths from drowning, also four percent of total child deaths that year. The rate of drowning fatalities in 2012 was 2.2 deaths per 100,000 children. Figure 21 shows the rates of child deaths due to drowning from 2007 through 2012.

A lack of supervision of children near water is the leading preventable factor to eliminate death by drowning. Supervision may be direct and constant, intermittent, or focused on an area of play space. The type of supervision a child requires is dependent upon the activity and location as well as the age and skill of the child. As an example, proper supervision of a young non-swimmer requires the supervising adult to be within an arm's length to provide "touch supervision."

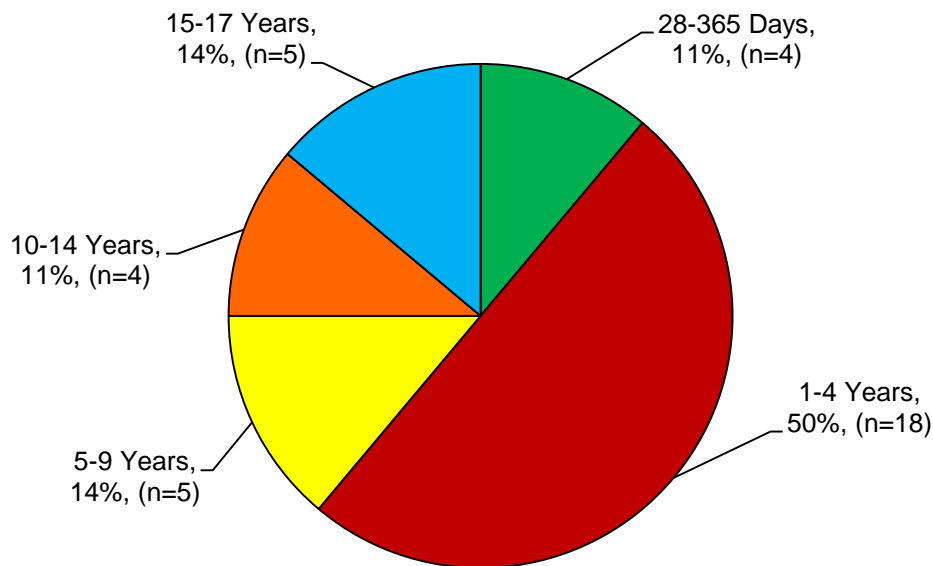
**Figure 21. Rate of Drowning Deaths per 100,000 Children, Ages 0-17, Arizona, 2007-2012**



Twenty-two drowning deaths were among males (61 percent) and 14 were among females (39 percent). Seventeen children who drowned were White/Non-Hispanic (47 percent); nine were Hispanic (25 percent); four were American Indian (11 percent) while three children were Asian (8 percent) and three children were African American (8 percent).

Eighteen drowning deaths were among children ages one through four years (50 percent); five children who drowned were ages five through nine years (14 percent) while five drowning deaths were children ages 15 through 17 years (14 percent). Four children between the ages of 10 through 14 years died while drowning (11 percent) and four drowning deaths were infants between 28-365 days (11 percent). Figure 22 shows drowning deaths by age group.

**Figure 22. Drowning Deaths by Age Group Among Children, Arizona, 2012 (n=36)**



The largest percentage of drowning deaths continues to be among children ages one through four. The percentage of deaths decreased to 50 percent in 2012 (n=18) from 56 percent in 2011 (n=18). There were four drowning deaths in infants under the age of one year in 2012, a two percent increase from 2011. Drowning deaths in children between the ages of 10 and 17 increased in 2012. Table 17 shows drowning deaths among children by age group from 2007 through 2012.

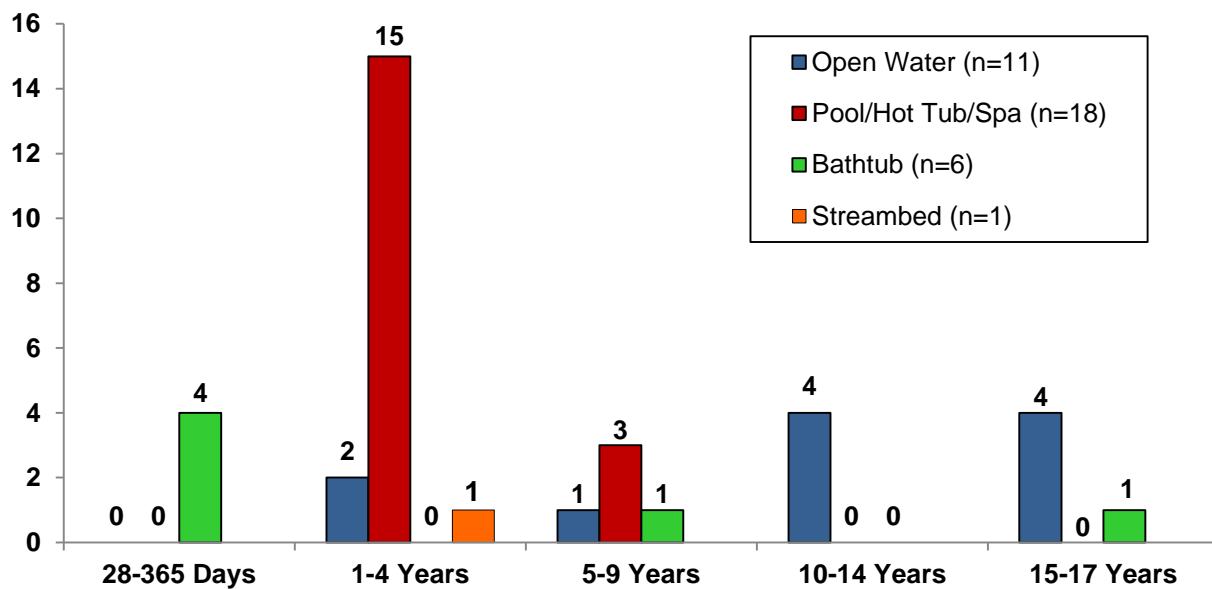
Age Group	2007		2008		2009		2010		2011		2012	
0-27 Days	1	4%	0	0%	0	0%	0	0%	0	0%	0	0%
28-365 Days	5	22%	1	3%	3	9%	2	6%	3	9%	4	11%
1-4 Years	12	53%	25	87%	24	68%	22	67%	18	56%	18	50%
5-9 Years	4	17%	2	7%	3	9%	4	12%	7	22%	5	14%
10-14 Years	1	4%	0	0%	1	3%	2	6%	2	6%	4	11%
15-17 Years	0	0%	1	3%	4	11%	3	9%	2	6%	5	14%
<b>Total</b>	<b>23</b>		<b>29</b>		<b>35</b>		<b>33</b>		<b>32</b>		<b>36</b>	

In 2012, 17 drowning deaths occurred in a pool/hot tub/spa (47 percent). Eight drowning deaths occurred in open water and five in bathtubs. Table 18 shows drowning fatalities by location.

Location	Number	Percent
Pool/hot tub/spa	17	47
Open water	8	22
Bathtub	5	14
Other	4	11
Undetermined	2	6
<b>Total</b>	<b>36</b>	

The highest number of pool drowning deaths were among children ages one through four years (69 percent, n=18). Figure 23 shows drowning location by age group.

**Figure 23. Drowning Deaths by Age Group and Location Among Children, Arizona, 2012 (n=36)**



Thirty-five child drowning fatalities were identified as preventable (97 percent). Lack of supervision was the most commonly identified preventable factor in child drowning fatalities (72 percent, n=26), followed by access to water (64 percent, n=23). Table 19 shows preventable factors for child drowning deaths in Arizona during 2012.

Factor*	Number	Percent
Lack of supervision	26	72
Access to water	23	64
Drugs and/or alcohol	3	8

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

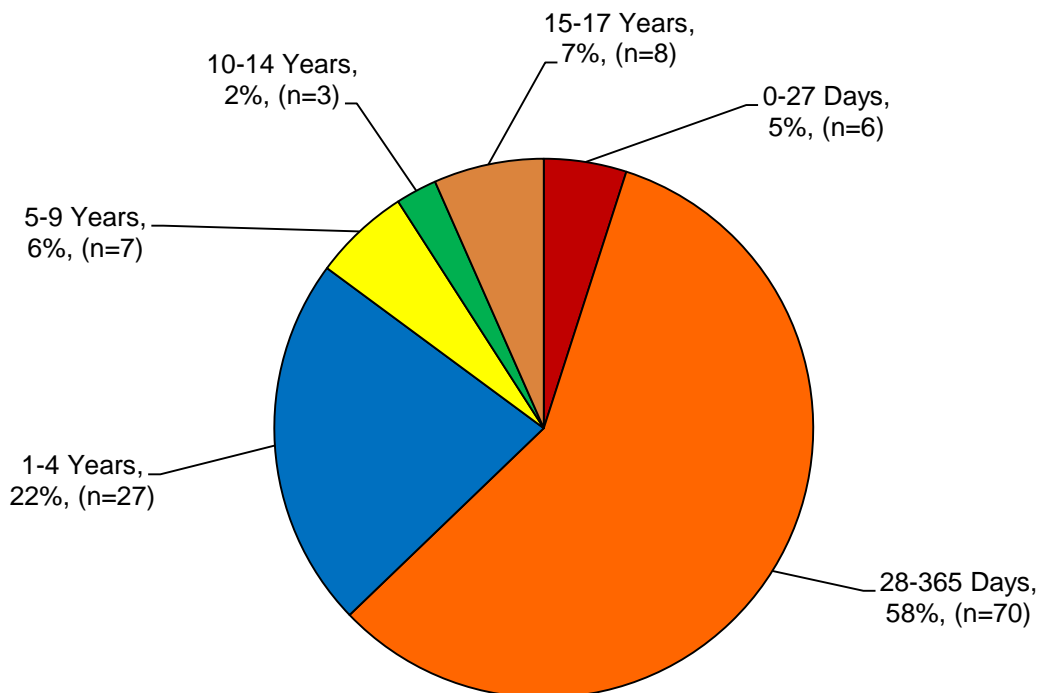
## HOME SAFETY-RELATED DEATHS

Deaths included in this section occurred in or around home environments (e.g. bedroom, driveway, yard, etc.) and were of accidental or undetermined manners. Suicides, homicides, and natural deaths were excluded from this category. In 2012, 121 children died in or around their home (14 percent of all deaths that year). The majority of these deaths occurred among males (61 percent, n=73) and 40 percent were among females (n=48).

In 2012, fifty deaths occurring in or around the home were among White/Non-Hispanic children (41 percent); forty-four were among Hispanic children (36 percent); eleven were among American Indian children (nine percent) and eleven were among African American children (nine percent); three child deaths each were among Asian children (two percent) and among children of two or more races (two percent).

Over half of the deaths that occurred in or around the home during 2012 were infants between the ages of 28-365 days (58 percent, n=70). Twenty-seven deaths were among children ages one through four years (22 percent). Figure 24 shows home safety-related deaths by age group.

**Figure 24. Home Safety-Related Deaths Among Children by Age Group, Arizona, 2012 (n=121)**



The most common cause of death in or around the home was suffocation (41 percent, n=50). Thirty-four deaths were of an undetermined cause (28 percent). Seventeen children died in drowning incidents at home (14 percent). Five children died in house fires (four percent). Four children died as a result of poisoning (three percent). Three children, ages one through four, were found hanged (two percent). Table 20 shows child deaths occurring in or around the home by cause in 2012.

<b>Table 20. Child Deaths In or Around the Home by Cause, Arizona, 2012 (n=121)</b>		
<b>Cause</b>	<b>Number</b>	<b>Percent</b>
Suffocation	50	41
Undetermined	34	28
Drowning	17	14
Fire/Burn	5	4
Poisoning	4	3
Hanging	3	2
Motor vehicle collision	3	2
Medical (no SIDS or prematurity)	2	2
Fall/crush	2	2
Other injury	1	1
<b>Total</b>	<b>121</b>	

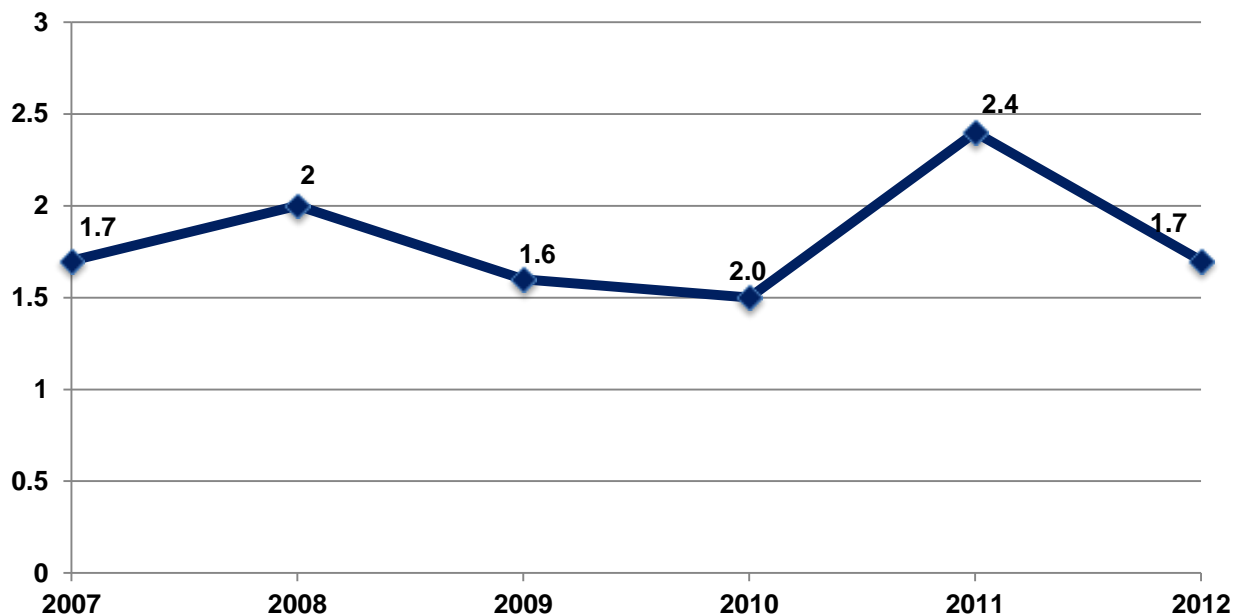
One hundred and two home safety related deaths were determined to have been preventable (84 percent), and for sixteen deaths, teams were unable to determine preventability (13 percent). The most commonly identified preventable factors were lack of supervision (55 percent, n=66), unsafe sleep environments for infants (42 percent, n=51) and substance use (39 percent, n=47). Table 21 shows preventable factors for home safety-related deaths in 2012.

<b>Table 21. Preventable Factors for Child Deaths In or Around the Home, Arizona, 2012</b>		
<b>Factor*</b>	<b>Number</b>	<b>Percent</b>
Lack of supervision	66	55
Unsafe sleep environment	51	42
Substance use	47	39
Access to water	9	7
*More than one factor may have been identified for each death		

## SUICIDES

In 2012, there were 33 suicides among children in Arizona, which accounted for four percent of all child deaths. In 2011, 39 child suicides accounted for five percent of all child deaths. The child suicide rate in 2012 was 1.7 deaths per 100,000 children. This was a decrease from 2011 when the suicide rate was 2.4 deaths per 100,000 children. Figure 25 shows the rates of child suicides from 2007 through 2012.

**Figure 25. Rate of Suicides (per 100,000 children), Arizona, 2007-2012**



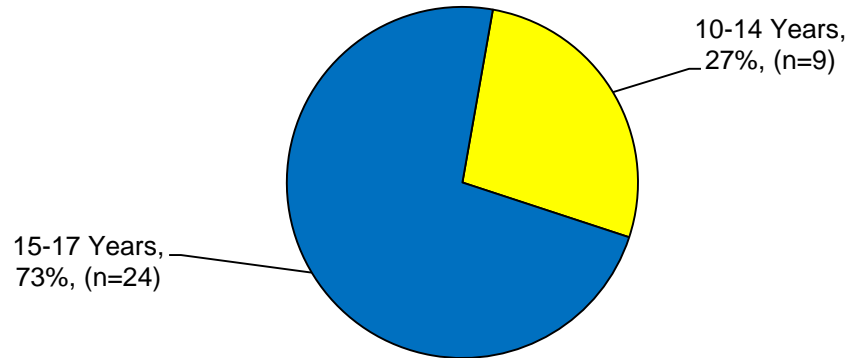
Twenty-five children who died by suicide during 2012 were males (76 percent) and eight were females (24 percent). Seventeen children were White/Non-Hispanic (52 percent); nine children who died by suicide were American Indian (27 percent); five child suicides were Hispanic (15 percent) and two children were African American (six percent).

The distribution of suicide by race/ethnicity varies by year. White/Non-Hispanic children comprised more than half of all child suicides in 2012 (52 percent, n=17). Table 22 shows suicides among children by race/ethnicity from 2007 through 2012.

<b>Table 22. Suicides Among Children by Race/Ethnicity, Arizona, 2007-2012</b>												
<b>Race/Ethnicity</b>	<b>2007</b>		<b>2008</b>		<b>2009</b>		<b>2010</b>		<b>2011</b>		<b>2012</b>	
American Indian	4	14%	6	17%	5	19%	6	25%	7	18%	9	27%
Hispanic	15	54%	9	26%	12	44%	8	33%	10	26%	5	15%
White/Non-Hispanic	8	29%	18	51%	9	33%	9	38%	19	49%	17	52%
Other	1	3%	2	6%	1	4%	1	4%	3	7%	-	-
African American	-	-	-	-	-	-	-	-	-	-	2	6%
<b>Total</b>	<b>28</b>		<b>35</b>		<b>27</b>		<b>24</b>		<b>39</b>		<b>33</b>	

In 2012, the majority of suicides were among youth ages 15 through 17 years (73 percent, n=24); nine children were 10 through 14 years of age (27 percent). Figure 26 shows suicides among children by age group.

**Figure 26. Suicides Among Children by Age Group, Arizona, 2012 (n=33)**

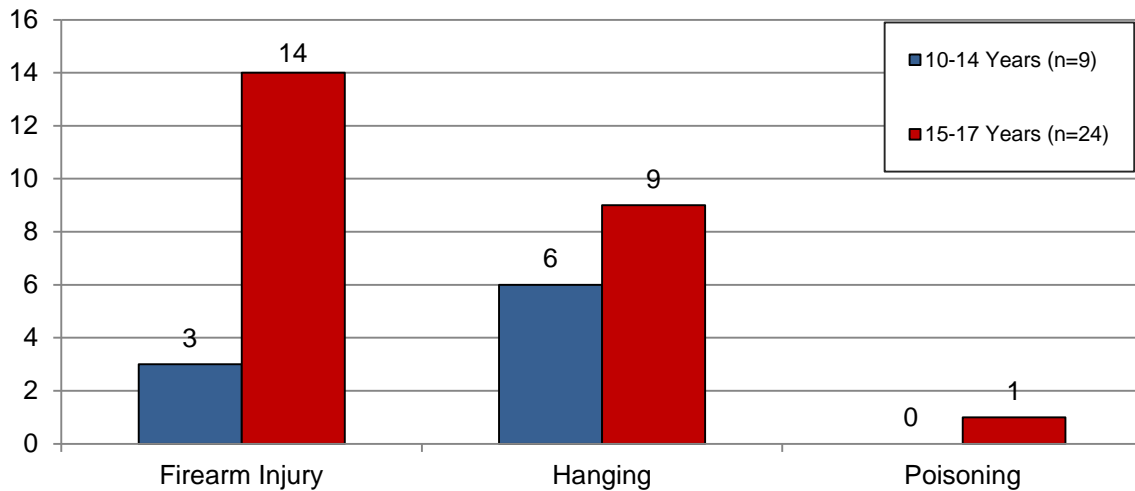


The distribution of suicides by age group has remained consistent since 2005, with a larger proportion of child suicides among children 15 through 17 years of age. Table 23 shows suicides among children by age group for 2007 through 2012.

Table 23. Suicides Among Children by Age Group, Arizona, 2007-2012												
Age Group	2007		2008		2009		2010		2011		2012	
<10 Years	0	0%	0	0%	0	0%	0	0%	1	3%	0	0%
10-14 Years	7	25%	9	26%	3	11%	9	37%	13	33%	9	27%
15-17 Years	21	75%	26	74%	24	89%	15	63%	25	64%	24	73%
<b>Total</b>	<b>28</b>		<b>35</b>		<b>27</b>		<b>24</b>		<b>39</b>		<b>33</b>	

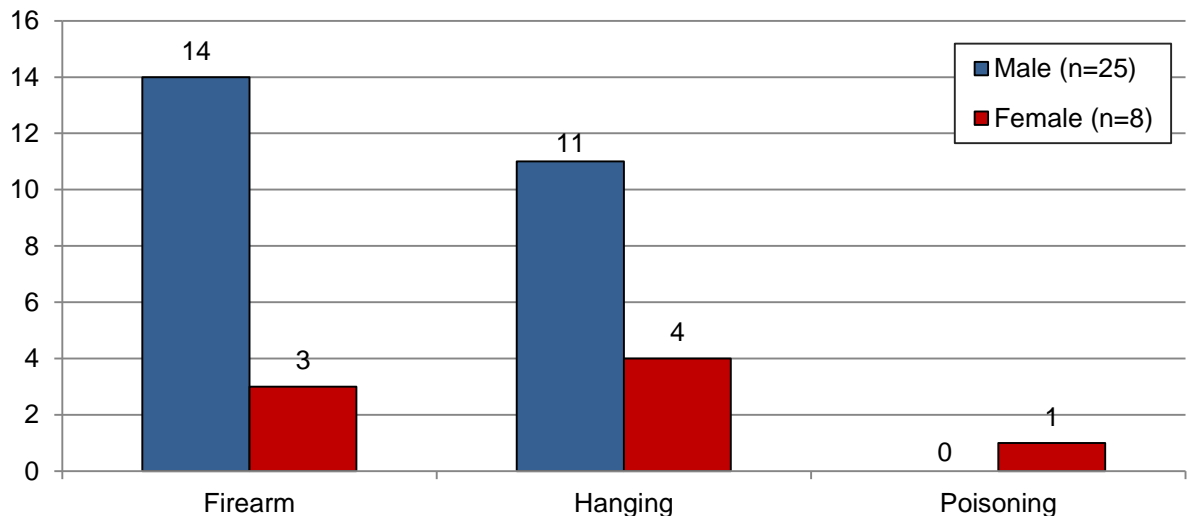
Firearm injuries accounted for seventeen child suicides during 2012 (52 percent) and suicide by hanging accounted for fifteen deaths (45 percent). The objects utilized for hanging suicides included belts, rope, string and other. Figure 27 shows suicides among children by cause of death and age group.

**Figure 27. Suicides Among Children by Age Group and Cause of Death, Arizona, 2012 (n=33)**



In 2012, the distribution of cause of death by suicide varied by the sex of the child. As has been observed in previous years, females were less likely to have used firearms to complete suicide. Figure 28 shows suicides among children by cause of death and sex.

**Figure 28. Suicides Among Children by Cause of Death and Sex, Arizona, 2012 (n=33)**



Eight children who took their own lives in 2012 were known to have talked about suicide to others (24 percent); five children had made prior suicide attempts (15 percent). Eleven children left a suicide note (33 percent). In 11 cases, the child's suicide was completely unexpected by family, friends or acquaintances (33 percent). Only three children were known to have been on medication for mental illness at the time of their deaths (nine percent). Thirteen children who committed suicide were known to have

received prior mental health services (39 percent), but only six children were receiving mental health services at the time of their suicide (18 percent).

Review teams were able to identify several factors that may have contributed to the child’s despondency prior to the suicide. The most common factor was a history of drug/alcohol use by the child, which was identified in eight suicides (24 percent) and if the child had an argument with their parent prior to the suicide, which was identified in another eight children (24 percent). Table 24 identifies factors contributing to the child’s despondency prior to suicide.

<b>Table 24. Factors That May Have Contributed to the Child’s Despondency Prior to Suicide, Arizona, 2012</b>		
<b>Factor*</b>	<b>Number</b>	<b>Percent</b>
History of drug/alcohol use	8	24
Argument with parent	8	24
History of family discord	7	21
History/recent break-up	4	12
Failure in school	4	12
History of suicide within the family	4	12
Death in the family	3	9
Victim of bullying	3	9
History of parent divorce	2	6
Argument with boyfriend or girlfriend	2	6
History of issues related to sexual orientation	2	6
History of physical abuse	2	6
History of sexual abuse	1	3
History of problems with the law	1	3
*More than one factor may have been identified for each death.		

For many of the child suicides, important information regarding risk factors was unknown or unavailable to review teams, even after law enforcement records were available. Prior mental health services provided to the child and outcomes were unknown to teams in all cases.

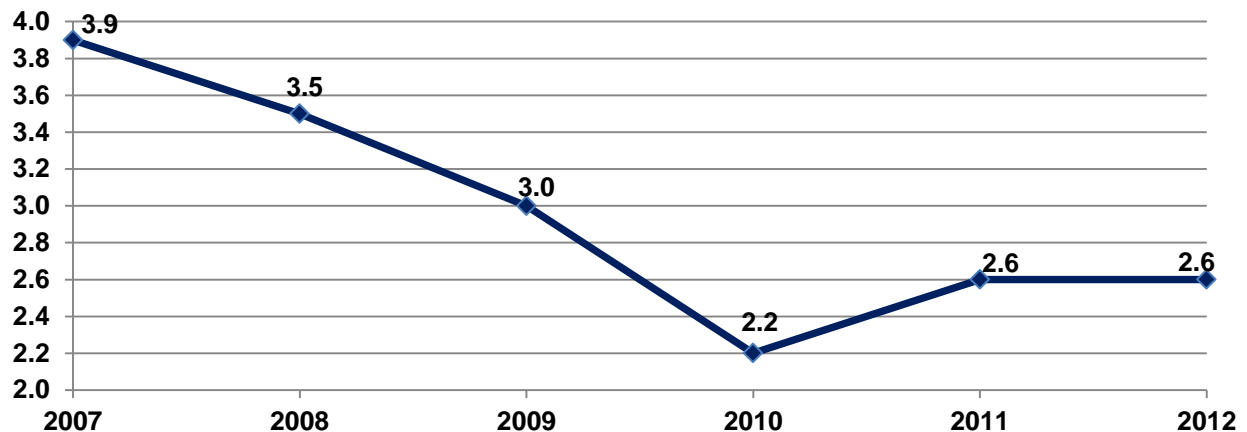
Thirty child suicides were determined by the local teams to have probably been preventable (91 percent). In nine percent of the suicides, the teams could not make a determination regarding preventability. The use of drugs was the most common identified preventable factor (70 percent, n=23), followed by alcohol use (33 percent, n=11) and lack of supervision (12 percent, n=4). Table 25 shows preventable factors for child suicides in 2012.

<b>Table 25. Preventable Factors for Child Suicides, Arizona, 2012</b>		
<b>Factor*</b>	<b>Number</b>	<b>Percent</b>
Drug use	23	70
Alcohol use	11	33
Lack of supervision	4	12
*More than one factor may have been identified for each death.		

## HOMICIDES

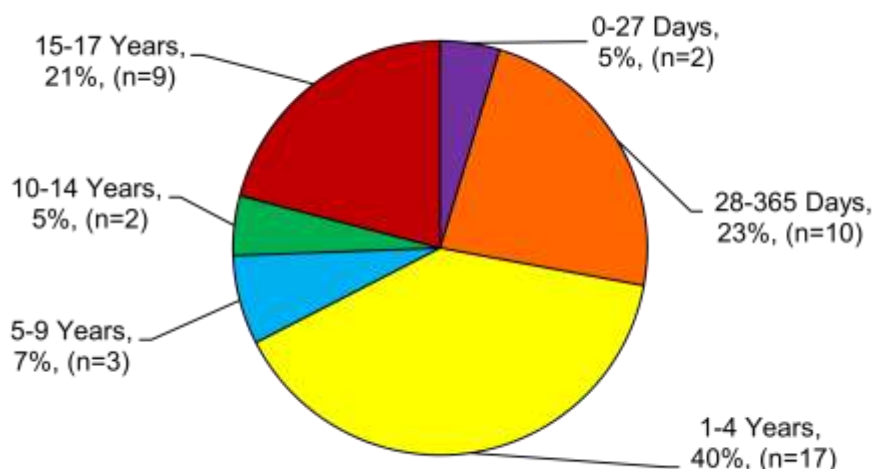
Forty-three children were victims of homicide in Arizona during 2012, accounting for five percent of all child deaths. The child homicide rate in 2012 was 2.6 deaths per 100,000 children. This rate remained unchanged from 2011. Figure 29 shows the rates of child homicides from 2007 through 2012.

**Figure 29. Rate of Homicides (per 100,000 Children), Arizona, 2007-2012**



In 2012, 23 homicide victims were female (53 percent) and 20 were male (47 percent). Almost half of the homicides were among Hispanic children (44 percent, n=19), 26 percent were among White/non-Hispanics (n=11), and 12 percent, respectively, were among American Indian (n=5) and African American children (n=5); the remaining child homicide victims were Asian/Pacific Islander/Hawaiian and children of two or more races. Twenty-nine homicides were among children from birth to four years of age (68 percent). Nine homicides were children between ages 15-17 years (21 percent). Figure 30 shows homicides among children by age group.

**Figure 30. Homicides Among Children by Age Group, Arizona, 2012 (n=43)**

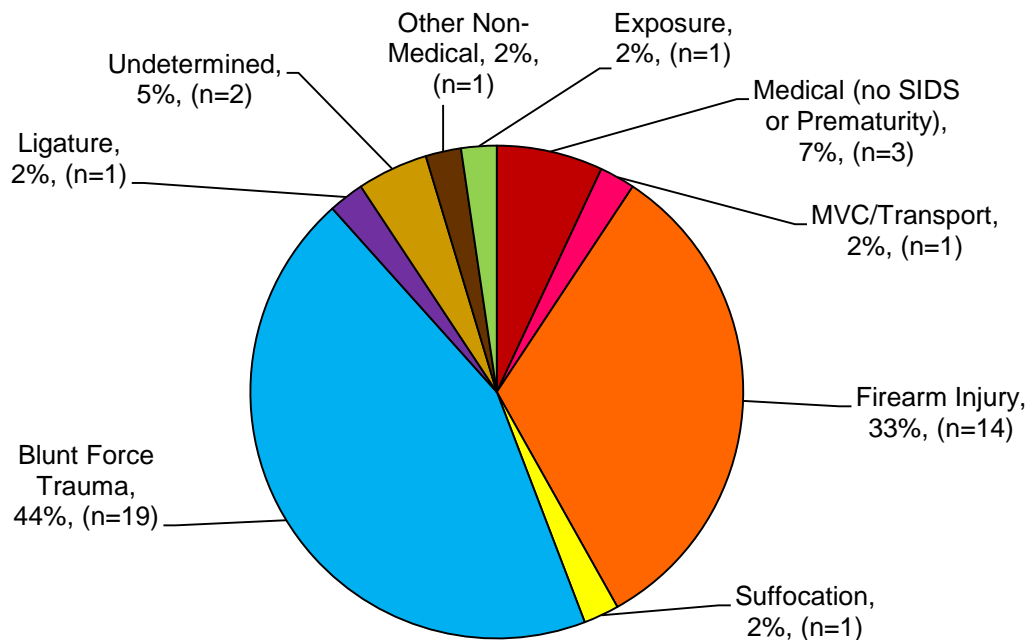


Compared to 2011, the greatest increase in homicides was observed among children ages 1-4 years (from 29 percent to 40 percent). Table 26 shows homicides among children by age group for 2007 through 2012.

Table 26. Homicides Among Children by Age Group, Arizona, 2007-2012												
Age Group	2007		2008		2009		2010		2011		2012	
0-27 Days	3	4%	1	2%	3	6%	1	3%	1	2%	2	5%
28-365 Days	13	20%	14	23%	7	14%	8	22%	12	29%	10	23%
1-4 Years	12	18%	7	12%	12	24%	6	16%	12	29%	17	40%
5-9 Years	7	11%	2	3%	5	10%	6	16%	4	9%	3	7%
10-14 Years	5	8%	6	10%	4	8%	4	11%	2	5%	2	5%
15-17 Years	26	39%	30	50%	20	39%	11	31%	11	26%	9	21%
<b>Total</b>	<b>66</b>		<b>60</b>		<b>51</b>		<b>36</b>		<b>42</b>		<b>43</b>	

In 2012, blunt force trauma was the leading cause of death among child homicides (44 percent, n=19), followed by firearm injuries (33 percent, n=14). Figure 31 shows homicides among children by cause of death.

**Figure 31. Homicides Among Children by Cause of Death, Arizona, 2012 (n=43)**



In 2012 twenty child homicides were perpetrated by the biological parent of the child (47 percent). The mother's partner was responsible for six homicides (14 percent). In three homicides, the perpetrator was an acquaintance of the child (7 percent) and in three homicides the perpetrator was a stranger (7 percent). Teams were unable to identify the nature of the relationship between the perpetrator and the child in three homicides (7 percent). Table 27 shows homicides among children by perpetrator.

<b>Table 27. Homicides Among Children by Perpetrator, Arizona, 2012 (n=43)</b>		
<b>Perpetrator*</b>	<b>Number</b>	<b>Percent</b>
Biological Parent	20	47
Mother's Partner	6	14
Other Relative	5	12
Acquaintance	3	7
Stranger	3	7
Unknown	3	7
Adoptive Parent	1	2
Step Parent	1	2
Foster Parent	1	2
*Perpetrator may fall into more than one category for each death.		

One hundred percent of child homicides were determined to have been preventable (n=43). Drugs, alcohol and lack of supervision were the most commonly identified preventable factors in child homicides. Table 28 shows preventable factors for child homicides in Arizona during 2012.

<b>Table 28 Preventable Factors for Child Homicides, Arizona, 2012</b>		
<b>Factors*</b>	<b>Number</b>	<b>Percent</b>
Drugs	28	65
Lack of supervision	17	40
Alcohol	11	26
Involvement in gang	3	7
*More than one factor may have been identified for each death.		

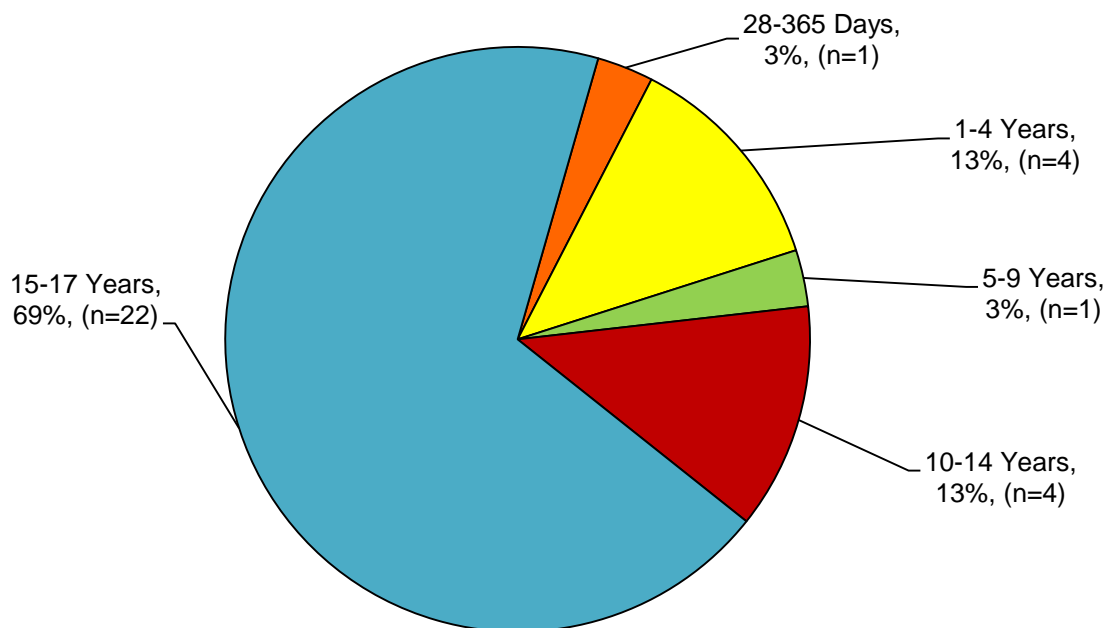
## FIREARM-RELATED FATALITIES

There were 32 firearm-related fatalities in 2012, compared to 23 in 2011. Firearms accounted for four percent of all child deaths in 2012; a one percent increase from 2011. Twenty-six firearm-related deaths in 2012 were among males (81 percent) and six were among females (19 percent). Eighteen of these deaths were among White/Non-Hispanic children (56 percent) and nine deaths were among Hispanic children (28 percent). Three firearm-related deaths were among African American children (nine percent) and two deaths were among American Indian children (6 percent).

In 2012, children ages 15-17 years accounted for twenty-two firearm-related deaths (69 percent). Figure 32 shows the firearm-related deaths among children by age group, while Table 29 shows the distribution of firearm-related child fatalities from 2007 through 2012.

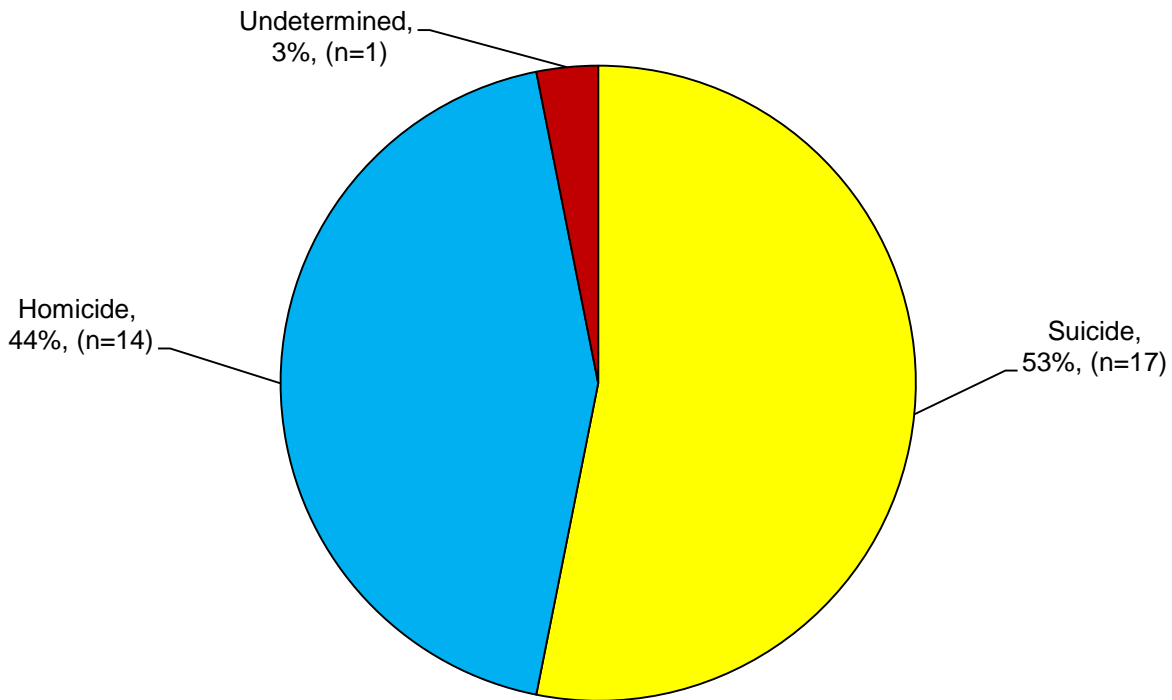
Table 29. Firearm-Related Deaths Among Children by Age Group, Arizona 2007-2012												
Age Group	2007		2008		2009		2010		2011		2012	
<10 Years	5	10%	5	10%	8	25%	7	32%	5	22%	6	19%
10-14 Years	7	15%	7	14%	1	3%	8	36%	3	13%	4	13%
15-17 Years	36	75%	37	76%	23	72%	7	32%	15	65%	22	69%
<b>Total</b>	<b>48</b>		<b>49</b>		<b>32</b>		<b>22</b>		<b>23</b>		<b>32</b>	

**Figure 32. Firearm-Related Deaths Among Children by Age Group, Arizona, 2012 (n=32)**



In 2012, seventeen firearm-related deaths were a result of suicide (53 percent); fourteen firearm-related deaths were homicides (44 percent); in three percent of the child deaths the teams were unable to determine the manner of death due to inadequate information. Figure 33 shows firearm-related deaths among children by manner.

**Figure 33. Firearm-Related Deaths Among Children by Manner, Arizona, 2012 (n=32)**

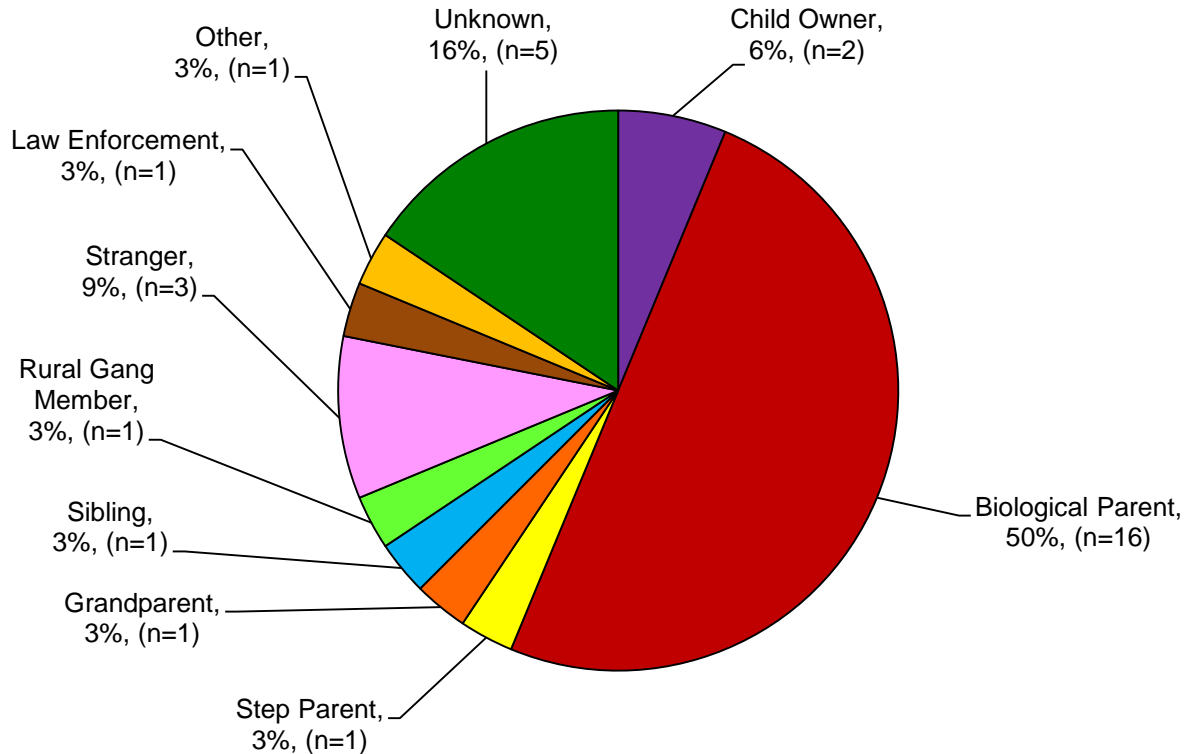


Handguns accounted for the majority of firearm-related fatalities among children in 2012 (75 percent, n=24). Hunting rifles comprised 13 percent (n=4) of firearm-related deaths. Table 30 shows the types of firearms involved in child deaths during 2012.

<b>Table 30. Types of Firearms Involved in Child Deaths, Arizona, 2012 (n=32)</b>		
<b>Type</b>	<b>Number</b>	<b>Percent</b>
Handgun	24	75
Hunting rifle	4	13
Assault Rifle	2	6
Unknown	2	6
<b>Total</b>	<b>32</b>	

Among the 32 firearm-related deaths, it is known that three firearms were stored loaded (nine percent); two firearms were stored unloaded (six percent); in 84 percent of the cases, there was insufficient data to determine if the firearm was loaded when stored (n=27). In sixteen cases, the biological parent was the owner of the fatal firearm (50 percent). Figure 34 shows the owners of firearms used in child deaths.

**Figure 34. Owners of Firearms Involved in Child Deaths, Arizona, 2012 (n=32)**



In almost half of firearm-related child deaths, the storage location of the firearm was unknown to the review teams (47 percent, n=15). Four of the firearms were not stored (13 percent). Three firearms were kept in a locked cabinet and one was kept in an unlocked cabinet. Table 31 summarizes the locations of the firearms involved in child deaths during 2012.

Location	Number	Percent
Unknown	15	47
Other	7	22
Not Stored	4	13
Locked Cabinet	3	9
Unlocked Cabinet	1	3
Glove Compartment	1	3
Under Mattress/Pillow	1	3
<b>Total</b>	<b>32</b>	

The teams determined ninety-seven percent of the firearm-related child deaths in 2012 were preventable (n=31). Drug use is known to have been involved in seventeen deaths (53 percent); alcohol use factored in eight deaths (25 percent). Lack of supervision contributed to seven deaths (22 percent), and gang involvement was a factor in two firearm-related deaths (six percent). Table 32 shows preventable factors for firearm-related fatalities of children in Arizona during 2012.

<b>Table 32. Preventable Factors for Firearm-Related Deaths Among Children, Arizona, 2012</b>		
<b>Factor*</b>	<b>Number</b>	<b>Percent</b>
Drug use	17	53
Alcohol use	8	25
Lack of supervision	7	22
Gang activity	2	6
*More than one factor may have been identified for each death		

## **MALTREATMENT FATALITIES**

In 2012, there were 70 deaths classified as maltreatment which was eight percent of all child deaths that year. This was a decrease from 2011 when 71 child deaths were from maltreatment. Forty-one maltreatment deaths were among males (59 percent) and twenty-nine were among females (41 percent). Twenty-nine children who died due to maltreatment were Hispanic (41 percent); twenty-two children were White/Non-Hispanic (31 percent); thirteen children were American Indian (19 percent); four children were African American (six percent); one percent were of two or more races; one percent were of unknown race/ethnicity

The number of child maltreatment deaths presented in this report is not comparable to child maltreatment deaths reported by the Arizona Department of Economic Security (ADES) for the National Child Abuse and Neglect Data System (NCANDS). NCANDS includes maltreatment deaths identified through child protective services investigations, and because some maltreatment deaths identified by Local Child Fatality Review Teams may not have been reported to child protective services or were within the jurisdiction of Tribal Nations or other states, these deaths would not be included in ADES's annual report to NCANDS. However, when a Local Child Fatality Review team identifies a death due to maltreatment that had not been previously reported to child protective services, the Local Child Fatality Review Program notifies child protective services of the team's assessment so that an investigation can be initiated.

It is important to note the differences in reporting of maltreatment numbers in this report compared to the number of maltreatment fatalities reported by ADES. ADES may report a fatality that the maltreatment subcommittee does not. Similarly, some maltreatment fatalities in this report are not posted by ADES. There are several cases where Arizona Child Protective Services would not have had information based on prior reports or open cases at the time of a child's death. For instance, the maltreatment subcommittee may determine a death to be maltreatment when a death occurred because vehicle restraints were available and not used.

Per A.R.S. § 8-807, ADES is required to post information on child fatalities due to abuse or neglect by the child's parent, custodian or caregiver. This information is posted when the information comes to ADES' attention and a final determination of the fatality due to abuse or neglect has been made. The determination is made by either a substantiated finding or specific criminal charges filed against a parent, guardian or caregiver for causing the fatality or near fatality.

To gain greater understanding of the contribution of abuse and neglect to child mortality, the Arizona Child Fatality Review Teams answered several questions regarding maltreatment. In order for a death to be classified as a result of maltreatment, the following four conditions must be met:

1. Was there "An act or failure to act by a parent, caregiver, or other person as defined under State law which results in physical abuse, neglect, medical

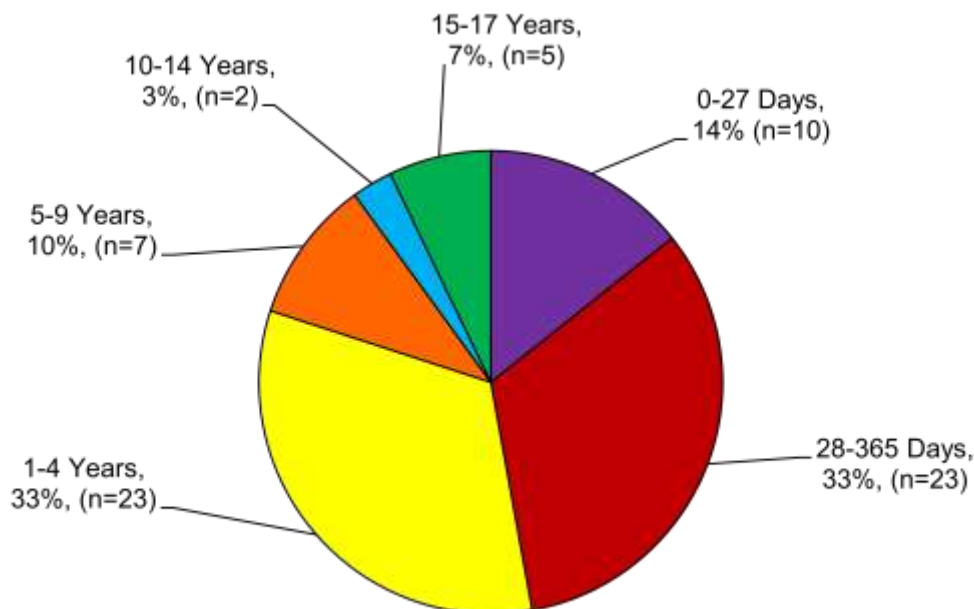
neglect, sexual abuse, emotional abuse, or an act or failure to act which presents an imminent risk of serious harm to a child” as it applied to the circumstances surrounding the death? (From the U.S. Department of Health and Human Services definition of maltreatment).

2. The relationship of the individual accused of committing the maltreatment to the child must be the child’s parent, guardian, or caretaker.
3. A team member, who is a mandated reporter, would be obligated to report a similar incident to child protective services.
4. Was there an act or failure to act during critical moments in which the child, left without adequate supervision, food, shelter or medical care died by a suddenly arising danger?

Deaths classified as maltreatment are also reported in other categories by manner and cause of death. For example, a death due to abusive head trauma would be classified as a homicide, by manner, with a cause of blunt force trauma, and a maltreatment death. An accidental or natural death might also be classified as a maltreatment death if, in the opinion of the team, a caretaker’s negligence or actions contributed to or caused the death. For example, a child who died in a motor vehicle crash due to the parent driving while intoxicated would be considered a maltreatment death.

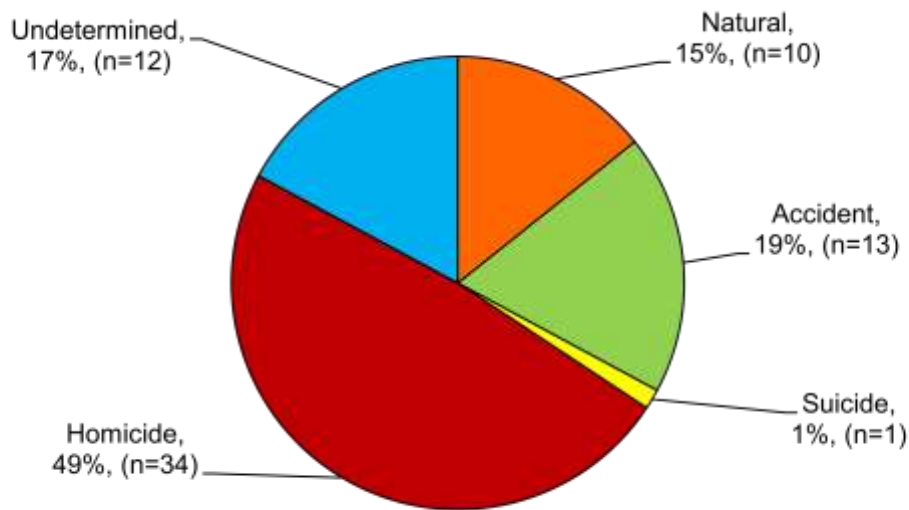
In 2012, there were 70 deaths classified as maltreatment which was eight percent of all child deaths that year. This was a decrease from 2011 when 71 child deaths were from maltreatment. Forty-one maltreatment deaths were among males (59 percent) and twenty-nine were among females (41 percent). Twenty-nine children who died due to maltreatment were Hispanic (41 percent); twenty-two children were White/Non-Hispanic (31 percent); thirteen children were American Indian (19 percent); four children were African American (six percent); one percent were of two or more races; one percent were of unknown race/ethnicity.

**Figure 35. Maltreatment Deaths Among Children by Age Group, Arizona, 2012 (n=70)**



Homicide was the leading manner of maltreatment deaths for Arizona children in 2012 (49 percent, n=34). Thirteen maltreatment deaths were determined accidental in manner (19 percent). Accidental maltreatment-related child deaths include unintended injuries or severe neglect due to drug/alcohol abuse by a caregiver. Teams were unable to determine the manner of death in twelve cases of maltreatment-related child deaths (17 percent). Ten maltreatment deaths were due to natural manner (15 percent). Examples of maltreatment deaths due to natural manner of death included prenatal substance use resulting in premature birth or failure to obtain medical care. Figure 36 shows maltreatment deaths of children by manner.

**Figure 36. Maltreatment Deaths Among Children by Manner, Arizona, 2012 (n=70)**



Blunt/sharp force trauma, medical conditions, and firearm injury were the leading causes of maltreatment-related deaths among children in Arizona in 2012. Table 33 shows maltreatment deaths among children by cause and manner.

**Table 33. Maltreatment Deaths Among Children by Cause and Manner, Arizona, 2012 (n=70)**

Cause	Natural	Accident	Suicide	Homicide	Undetermined	Total
Medical	7	0	0	3	0	10
Prematurity	3	0	0	0	0	3
Motor Vehicle Crash	0	3	0	1	0	4
Firearm Injury	0	0	1	8	0	9
Suffocation	0	3	0	1	3	7
Drowning	0	6	0	0	2	8
Blunt/sharp Force Trauma	0	0	0	16	0	16
Ligature	0	0	0	1	0	1
Undetermined	0	0	0	2	6	8
Other Non-Medical	0	0	0	1	0	1
Poisoning	0	1	0	0	1	2
Exposure	0	0	0	1	0	1
<b>Total</b>	<b>10</b>	<b>13</b>	<b>1</b>	<b>34</b>	<b>12</b>	<b>70</b>

Eleven children who died due to maltreatment during 2012 were known to have some physical, mental, and/or sensory disabilities (16 percent), including one child with profound delays due to brain injury.

For forty-two maltreatment deaths, the perpetrator was the child’s biological mother (60 percent). In 19 maltreatment deaths, the perpetrator was the child’s biological father (27 percent). In eight maltreatment deaths, the perpetrator was the mother’s partner (11 percent); in eight deaths the perpetrator was the child’s relative (11 percent); and in four deaths the perpetrator was a non-relative (three percent). Table 34 shows maltreatment deaths among children by perpetrator.

<b>Perpetrator*</b>	<b>Number</b>	<b>Percent</b>
Mother	42	60
Father	19	27
Mother’s partner	8	11
Other relative	8	11
Other non-relative	4	6

\*In some cases, there was more than one perpetrator in a death due to maltreatment.

There were six fatalities among children two years of age or younger due to abusive head trauma. Five of the children were known to have been shaken violently, suffering retinal hemorrhage prior to death.

Sixty-eight child maltreatment deaths in 2012 were determined to have been preventable (97 percent). For two maltreatment deaths, review teams were unable to determine preventability (three percent). Substance use contributed to forty-seven deaths (67 percent). Among the nine maltreatment deaths occurring in a sleep environment, eight children were determined to be in an unsafe sleep environment. Lack of supervision contributed to thirty-three maltreatment deaths (47 percent). Table 35 shows preventable factors in child maltreatment deaths.

<b>Factor*</b>	<b>Number</b>	<b>Percent</b>
Substance use	47	67
Lack of supervision	33	47
Unsafe sleep environment	8	11

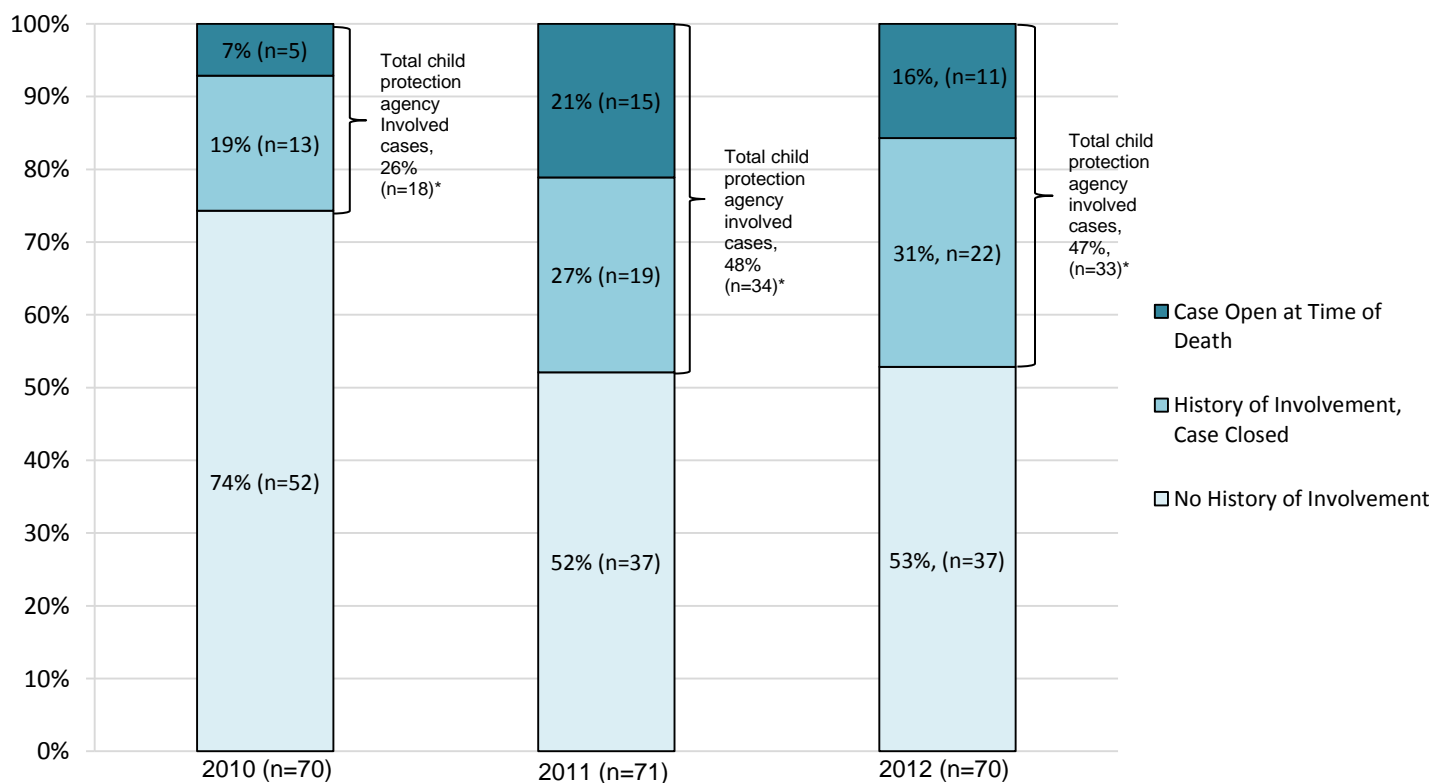
\*More than one factor may have been identified for each death

## Child Protective Services Involvement with Families of Children Who Died Due to Maltreatment

Local Child Fatality Review Teams attempt to obtain records from child protective services agencies, including Arizona Child Protective Services and child protective agencies in other jurisdictions, such as tribal authorities and other states. If a child protective agency investigated a report of maltreatment for any child in the family prior to the incident leading to the child's death, then the family was considered to have had previous involvement with a child protective agency. This includes reports in which the maltreatment was not substantiated.

In 2012, 33 children who died from maltreatment were from families with prior involvement with a child protective agency (47 percent). Among these families, 11 had an open case with a child protective agency at the time of the child's death (16 percent); 22 families had a history of child protective agency involvement but the case was closed at the time the child died (31 percent). This was a decrease from 2011, when 34 families had prior child protective agency involvement (48 percent), and of these, 15 were open at the time of the child's death. Thirty-seven child fatalities occurred in families with no prior child protective agency involvement (53 percent). Figure 37 shows child maltreatment deaths by status with a child protective service agency.

**Figure 37. Deaths Among Children by Status With A Child Protective Service Agency, Arizona, 2010 through 2012**



\*These cases may not have been under the jurisdiction of Arizona Child Protective Services. This happens when prior history is identified through a tribal agency or other state or country.

Of the 70 maltreatment deaths in 2012, eight were not reported to Arizona Child Protective Services (11 percent). These cases were reported to Child Protective Services by the Child Fatality Review Program. The number and percentage of maltreatment deaths not reported to Arizona Child Protective Services decreased from 14 in 2011 (20 percent). In 2012 legal charges were filed against the perpetrators in 21 maltreatment cases by the time of the review (30 percent). In 25 child maltreatment deaths, legal charges were not filed (36 percent) and in seven cases (10 percent), legal charges were not filed because the perpetrator was deceased. In four cases, legal charges were pending (six percent) and in 13 cases (19 percent), the teams did not have information regarding legal charges.

## APPENDIX A: CHILD DEATHS BY AGE GROUP

The following section of this report provides data on the causes and manners of child deaths by age group. The information provided for each age group can be used to guide prevention efforts within each stage of development. For the past eight years, 100 percent of Arizona child fatalities have been reviewed and data from 2007 through 2012 are included in the following tables in order to provide six years of comparison data.

### The Neonatal Period, Birth Through 27 Days

**Table 36. Deaths Among Children Ages Birth Through 27 Days by Cause and Manner, Arizona, 2012 (n=325)**

Cause	Natural	Accident	Suicide	Homicide	Undetermined	Total
Medical*	143	0	0	0	0	143
Prematurity	172	0	0	0	0	172
Suffocation	0	2	0	0	0	2
Blunt Force Trauma	0	0	0	0	0	0
Undetermined	0	0	0	1	4	5
MVC/other Transport	0	2	0	1	0	3
<b>Total</b>	<b>315</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>325</b>

\*Excluding SIDS and prematurity

**Table 37. Deaths Among Children Ages Birth Through 27 Days by Cause, Arizona, 2007-2012**

Cause	2007		2008		2009		2010		2011		2012	
Prematurity	281	58%	256	60%	221	60%	180	54%	181	54%	172	53%
Medical*	180	37%	155	37%	128	35%	145	43%	143	43%	143	44%
Undetermined	4	1%	6	1%	5	1%	6	2%	5	2%	5	2%
SIDS	4	1%	3	1%	1	<1%	0	0%	0	0%	0	0%
MVC/Transport	5	1%	2	<1%	2	<1%	1	<1%	0	0%	3	1%
Other	5	1%	1	<1%	5	1%	0	0%	1	<1%	0	0%
Suffocation	5	1%	0	0%	4	1%	1	<1%	5	1%	2	1%
Exposure			0	0%	0	0%	1	<1%	0	0%	0	0%
Drowning	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Total</b>	<b>485</b>		<b>423</b>		<b>366</b>		<b>334</b>		<b>334</b>		<b>325</b>	

\*Excluding SIDS and Prematurity

**Table 38. Deaths Among Children Ages Birth Through 27 Days by Manner, Arizona, 2007-2012**

Manner	2007		2008		2009		2010		2011		2012	
Natural	464	96%	414	98%	349	95%	324	97%	318	95%	315	58%
Undetermined	6	1%	6	1%	7	2%	7	2%	8	2%	4	9
Accident	12	2%	2	<1%	7	2%	2	1%	7	2%	4	2%
Homicide	3	1%	1	<1%	3	1%	1	<1%	1	<1%	2	5%
Suicide	0		0	0%	0	0%	0	0%	0	0%	0	0%
<b>Total</b>	<b>485</b>		<b>423</b>		<b>366</b>		<b>334</b>		<b>334</b>		<b>325</b>	

## The Post-Neonatal Period, 28 Days Through 365 Days

**Table 39. Deaths Among Children Ages 28 Days Through 365 Days by Cause and Manner, Arizona, 2012 (n=171)**

Cause	Natural	Accident	Suicide	Homicide	Undetermined	Total
Medical*	67	0	0	1	0	68
Prematurity	17	0	0	0	0	17
MVC/Transport	0	3	0	0	0	3
Firearm	0	0	0	1	0	1
Suffocation	0	40	0	0	4	44
Drowning	0	4	0	0	0	4
SIDS	0	0	0	0	0	0
Blunt Force Trauma	0	0	0	6	0	6
Hanging	0	0	0	0	1	1
Undetermined	0	1	0	1	24	26
Exposure	0	0	0	1	0	1
<b>Total</b>	<b>84</b>	<b>48</b>	<b>0</b>	<b>10</b>	<b>29</b>	<b>171</b>

**Table 40. Deaths Among Children 28 Days Through 365 Days by Cause, Arizona, 2007-2012**

Cause	2007		2008		2009		2010		2011		2012	
Medical*	83	37%	91	43%	77	42%	82	43%	75	43%	68	40%
Undetermined	25	11%	44	21%	35	19%	56	29%	30	17%	26	15%
Suffocation	21	9%	21	10%	13	7%	22	11%	34	19%	44	26%
SIDS	33	15%	17	8%	27	15%	1	<1%	2	1%	0	0%
Prematurity	35	15%	15	7%	18	10%	17	9%	17	10%	17	10%
Blunt Force Trauma	8	3%	9	4%	3	2%	6	3%	9	5%	6	4%
Other non-Medical	5	2%	6	3%	3	2%	3	2%	1	<1%	0	0%
MVC/Transport	7	3%	6	3%	2	1%	1	<1%	4	2%	3	2%
Drowning	5	2%	1	<1%	3	2%	2	1%	3	2%	4	2%
Exposure	2	1%	1	<1%	0	0%	1	<1%	0	0%	1	1%
Fire/Burn	6	3%	0	0%	0	0%	0	0%	0	0%	1	1%
Poisoning	1	0%	0	0%	1	<1%	1	<1%	0	0%	0	0%
Hanging	1	0%	0	0%	0	0%	0	0%	0	0%	1	1%
<b>Total</b>	<b>225</b>		<b>211</b>		<b>183</b>		<b>192</b>		<b>175</b>		<b>171</b>	

\*Excluding SIDS and Prematurity

**Table 41. Deaths Among Children Ages 28 Days Through 365 Days by Manner, Arizona, 2007-2012**

Manner	2007		2008		2009		2010		2011		2012	
Natural	147	65%	116	55%	116	63%	109	57%	92	53%	84	49%
Undetermined	27	12%	52	25%	42	23%	50	26%	32	18%	29	17%
Accident	38	17%	29	14%	18	10%	25	13%	38	22%	48	28%
Homicide	13	6%	14	7%	7	4%	8	4%	12	7%	10	6%
Suicide	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Unknown	0	0%	0	0%	0	0%	0	0%	1	<1%	0	0%
<b>Total</b>	<b>225</b>		<b>211</b>		<b>183</b>		<b>192</b>		<b>175</b>		<b>171</b>	

## Children, One Through Four Years of Age

**Table 42. Deaths Among Children Ages One Through Four Years by Cause and Manner, Arizona, 2012 (n=120)**

Cause	Natural	Accident	Suicide	Homicide	Undetermined	Total
Medical*	54	1	0	2	0	57
Prematurity	3	0	0	0	0	3
MVC/Transport	0	11	0	0	0	11
Firearm	0	0	0	4	0	4
Suffocation	0	4	0	1	0	5
Drowning	0	17	0	0	1	18
Blunt Force Trauma	0	0	0	9	0	9
Hanging	0	3	0	0	0	3
Undetermined	0	0	0	0	4	4
Other Non-Medical	0	0	0	1	0	1
Poisoning	0	0	0	0	1	1
Fire/Burn	0	1	0	0	0	1
Fall/Crush	0	2	0	0	0	2
Other Injury	0	0	0	0	1	1
<b>Total</b>	<b>57</b>	<b>39</b>	<b>0</b>	<b>17</b>	<b>7</b>	<b>120</b>

**Table 43. Deaths Among Children Ages One Through Four Years by Cause, Arizona, 2007-2012**

Cause	2007		2008		2009		2010		2011		2012	
Medical*	45	40%	67	53%	50	38%	52	44%	40	38%	57	48%
Drowning	12	11%	25	20%	24	18%	22	18%	18	17%	18	15%
MVC/Transport	21	18%	10	8%	20	15%	19	16%	15	14%	11	9%
Other non-Medical	11	10%	7	5%	11	8%	7	6%	0	0%	1	1%
Undetermined	8	7%	7	5%	10	8%	6	5%	5	5%	4	3%
Blunt Force Trauma	7	6%	4	3%	7	5%	4	3%	10	9%	9	8%
Firearm	2	2%	2	2%	4	2%	2	2%	1	1%	4	3%
Poisoning	2	2%	2	2%	0	0%	0	0%	1	1%	1	1%
Exposure	1	1%	2	2%	0	0%	2	2%	0	0%	0	0%
Fire/burn	2	2%	1	1%	3	2%	2	2%	2	2%	1	1%
Fall/crush	-	-	-	-	-	-	2	2%	2	2%	2	2%
Hanging	-	-	-	-	-	-	1	<1%	3	3%	3	3%
Prematurity	0	0%	0	0%	1	1%	0	0%	1	1%	3	3%
Suffocation	2	2%	0	0%	0	0%	0	0%	8	8%	5	4%
Other Injury	-	-	-	-	-	-	-	-	-	-	1	1%
<b>Total</b>	<b>113</b>		<b>126</b>		<b>130</b>		<b>119</b>		<b>106</b>		<b>120</b>	

\*Excluding SIDS and Prematurity

**Table 44. Deaths Among Children Ages One Through Four Years by Manner, Arizona, 2007-2012**

Manner	2007		2008		2009		2010		2011		2012	
Natural	49	43%	67	53%	54	42%	52	44%	40	38%	57	48%
Accident	45	40%	43	34%	56	43%	52	44%	47	44%	39	33%
Undetermined	7	6%	9	7%	8	6%	8	7%	7	7%	7	6%
Homicide	12	11%	7	5%	12	9%	6	5%	12	11%	17	14%
Suicide	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Unknown	-	-	-	-	-	-	1	<1%	0	0%	0	0%
<b>Total</b>	<b>113</b>		<b>126</b>		<b>130</b>		<b>119</b>		<b>106</b>		<b>120</b>	

## Children, Five Through Nine Years of Age

**Table 45. Deaths Among Children Ages Five Through Nine Years by Cause and Manner, Arizona, 2012 (n=63)**

Cause	Natural	Accident	Suicide	Homicide	Undetermined	Total
Medical*	36	1	0	0	0	37
MVC/Transport	0	12	0	0	0	12
Firearm	0	0	0	1	0	1
Suffocation	0	0	0	0	0	0
Drowning	0	4	0	0	1	5
Blunt Force Trauma	0	0	0	2	0	2
Hanging	0	0	0	0	0	0
Undetermined	1	0	0	0	0	1
Fire/Burn	0	3	0	0	0	3
Fall/Crush	0	2	0	0	0	2
<b>Total</b>	<b>37</b>	<b>22</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>63</b>

\*Excluding SIDS and prematurity

**Table 46. Deaths Among Children Ages Five Through Nine Years by Cause, Arizona, 2007-2012**

Cause	2007		2008		2009		2010		2011		2012	
Medical	37	55%	43	64%	42	63%	31	53%	26	48%	37	59%
Prematurity	0	0%	0	0%	1	1%	0	0%	0	0%	0	0%
MVC/Transport	13	19%	10	15%	15	22%	10	17%	13	34%	12	19%
Other	7	10%	8	12%	6	9%	2	3%	0	0%	0	0%
Drowning	4	6%	2	3%	3	4%	4	7%	7	13%	5	8%
Fire/Burn	1	1%	2	3%	0	0%	2	3%	1	2%	3	5%
Hanging	1	1%	1	1%	0	0%	0	0%	1	2%	0	0%
Firearm	-	-	-	-	-	-	5	9%	3	6%	1	2%
Undetermined	-	-	-	-	-	-	1	2%	1	2%	1	2%
Fall/Crush	-	-	-	-	-	-	2	3%	0	0%	2	2%
Blunt Force Trauma	1	1%	1	1%	0	0%	0	0%	1	2%	2	2%
Suffocation	1	1%	0	0%	0	0%	1	2%	1	2%	0	0%
Poisoning	2	3%	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Total</b>	<b>67</b>		<b>67</b>		<b>67</b>		<b>58</b>		<b>54</b>		<b>63</b>	

\*Excluding SIDS and Prematurity

**Table 47. Deaths Among Children Ages Five Through Nine Years by Manner, Arizona, 2007-2012**

Manner	2007		2008		2009		2010		2011		2012	
Natural	37	55%	42	63%	43	64%	32	55%	26	48%	37	59%
Accident	23	34%	19	28%	19	28%	20	34%	22	41%	22	35%
Undetermined	0	0%	4	6%	0	0%	0	0%	1	2%	1	2%
Homicide	7	10%	2	3%	5	7%	6	10%	4	7%	3	5%
Suicide	0	0%	0	0%	0	0%	0	0%	1	2%	0	0%
<b>Total</b>	<b>67</b>		<b>67</b>		<b>67</b>		<b>58</b>		<b>54</b>		<b>63</b>	

## Children, 10 Through 14 Years of Age

**Table 48. Deaths Among Children Ages 10 Through 14 Years by Cause and Manner, Arizona, 2012 (n=75)**

Cause	Natural	Accident	Suicide	Homicide	Undetermined	Total
Medical	35	0	0	0	0	35
MVC/Transport	0	21	0	0	0	21
Firearm	0	0	3	1	0	4
Suffocation	0	1	0	0	0	1
Drowning	0	4	0	0	0	4
Blunt Force Trauma	0	0	0	0	0	0
Hanging	0	0	6	1	0	7
Undetermined	1	0	0	0	1	2
Fire/Burn	0	1	0	0	0	1
<b>Total</b>	<b>36</b>	<b>27</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>75</b>

\*Excluding SIDS and prematurity

**Table 49. Deaths Among Children Ages 10 Through 14 Years by Cause, Arizona, 2007-2012**

Cause	2007		2008		2009		2010		2011		2012	
Medical	40	43%	34	46%	43	59%	29	44%	34	47%	35	47%
MVC/Transport	27	29%	19	26%	13	18%	12	18%	17	24%	21	28%
Firearm	7	8%	7	9%	1	1%	8	12%	3	4%	4	5%
Hanging	6	6%	6	8%	3	4%	7	11%	10	14%	7	9%
Other	4	4%	2	3%	8	11%	1	2%	0	0%	0	0%
Fall/Crush	3	3%	2	3%	2	3%	0	0%	0	0%	0	0%
Poisoning	2	2%	2	3%	0	0%	1	2%	0	0%	0	0%
Blunt Force Trauma	1	1%	1	1%	0	0%	0	0%	2	3%	0	0%
Exposure	1	1%	1	1%	2	3%	1	2%	0	0%	0	0%
Suffocation	0	0%	0	0%	0	0%	0	0%	1	1%	1	1%
Drowning	1	1%	0	0%	1	1%	2	2%	2	3%	4	5%
Undetermined	-	-	-	-	-	-	3	5%	1	1%	2	3%
Fire/burn	-	-	-	-	-	-	2	2%	2	3%	1	1%
	<b>92</b>		<b>74</b>		<b>73</b>		<b>66</b>		<b>72</b>		<b>75</b>	

\*Excluding SIDS and Prematurity

**Table 50. Deaths Among Children Ages 10 Through 14 Years by Manner, Arizona, 2007-2012**

Manner	2007		2008		2009		2010		2011		2012	
Natural	40	43%	33	45%	47	64%	30	45%	34	47%	36	48%
Accident	35	38%	26	35%	17	23%	18	27%	22	31%	27	36%
Suicide	7	8%	9	12%	3	4%	9	14%	13	18%	9	12%
Homicide	5	5%	6	8%	4	5%	4	6%	2	3%	2	3%
Undetermined	5	5%	0	0%	25	3%	5	8%	1	1%	1	1%
<b>Total</b>	<b>92</b>		<b>74</b>		<b>73</b>		<b>66</b>		<b>72</b>		<b>75</b>	

## Children, 15 Through 17 Years of Age

**Table 51. Deaths Among Children Ages 15 Through 17 Years by Cause and Manner, Arizona, 2012 (n=100)**

Cause	Natural	Accident	Suicide	Homicide	Undetermined	Pending	Total
Medical*	13	0	0	0	0	0	13
MVC/Transport	0	38	0	0	0	0	38
Firearm	0	0	14	7	1	0	22
Suffocation	0	1	0	0	0	0	1
Drowning	0	5	0	0	0	0	5
Blunt Force Trauma	0	0	0	2	0	0	2
Hanging	0	0	9	0	0	0	9
Undetermined	0	0	0	0	2	0	2
Poisoning	0	5	1	0	0	0	6
Fire/Burn	0	0	0	0	0	0	0
Fall/Crush	0	1	0	0	0	0	1
Other	0	0	0	0	0	1	1
<b>Total</b>	<b>13</b>	<b>50</b>	<b>24</b>	<b>9</b>	<b>3</b>	<b>1</b>	<b>100</b>

\*Excluding SIDS and prematurity

**Table 52. Deaths Among Children Ages 15 Through 17 Years by Cause, Arizona, 2007-2012**

Cause	2007		2008		2009		2010		2011		2012	
Firearm	36	22%	37	27%	23	18%	7	8%	15	16%	22	22%
MVC/Transport	49	30%	35	25%	30	23%	18	19%	21	22%	38	38%
Medical*	35	22%	30	22%	32	25%	20	22%	25	26%	13	13%
Hanging	6	4%	13	9%	12	9%	11	12%	13	14%	9	9%
Poisoning	17	11%	10	7%	15	12%	16	17%	9	9%	6	6%
Other	7	4%	4	3%	4	3%	8	9%	0	0%	1	1%
Exposure	4	2%	4	3%	5	4%	6	6%	0	0%	0	0%
Drowning	0	0%	1	1%	4	3%	3	3%	2	2%	5	5%
Undetermined	4	2%	1	1%	1	1%	2	2%	4	4%	2	2%
Fall/Crush	0	0%	1	1%	0	0%	0	0%	2	2%	1	1%
Blunt Force Trauma	0	0%	1	1%	2	2%	1	1%	3	3%	2	2%
Fire/Burn	3	2%	0	0%	0	0%	0	0%	1	1%	0	0%
Suffocation	-	-	-	-	-	-	1	1%	1	1%	1	1%
<b>Total</b>	<b>161</b>		<b>137</b>		<b>128</b>		<b>93</b>		<b>96</b>		<b>100</b>	

\*Excluding SIDS and Prematurity

**Table 53. Deaths Among Children Ages 15 Through 17 Years by Manner, Arizona, 2007-2012**

Manner	2007		2008		2009		2010		2011		2012	
Accident	74	46%	49	36%	48	37%	43	46%	31	32%	50	50%
Natural	34	21%	30	22%	32	25%	18	19%	27	28%	13	13%
Homicide	26	16%	30	22%	20	16%	11	12%	11	11%	9	9%
Suicide	21	13%	26	19%	24	19%	15	16%	25	26%	24	24%
Undetermined	6	4%	2	1%	4	3%	4	4%	2	2%	3	3%
Unknown	-	-	-	-	-	-	2	2%	0	0%	-	-
Pending	-	-	-	-	-	-	-	-	-	-	1	1%
<b>Total</b>	<b>161</b>		<b>137</b>		<b>128</b>		<b>93</b>		<b>96</b>		<b>100</b>	

## **APPENDIX B: POPULATION DENOMINATORS FOR ARIZONA CHILDREN**

The population denominators shown below were used in computing the rates presented in this report. Denominators for 2007 through 2012 were provided by the Arizona Department of Health Services Bureau of Public Health Statistics, available online at: <http://www.azdhs.gov/plan/menu/info/pd.htm>.

Population denominators for 2010 were tabulated from the 2010 Decennial Census, Summary File 1, available online from: [www.census.gov](http://www.census.gov).

2011 population denominators were pulled from the Arizona Vital Statistics, 2011 from: <http://www.azdhs.gov/plan//menu/info/pop/pop11/pd11.htm>

2012 population denominators were pulled from the Arizona Vital Statistics, 2012 from: <http://www.azdhs.gov/plan//menu/info/pop/pop12/pd12.htm>

<b>Table 54. Population of Children Ages Birth Through 17 Years by County of Residence, Arizona, 2007-2012</b>						
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Apache	25,708	25,713	25,888	22,660	22,808	21,843
Cochise	34,478	34,786	35,356	30,250	30,099	30,434
Coconino	35,867	35,840	36,439	31,788	31,716	31,310
Gila	13,130	13,545	14,002	11,471	11,451	11,317
Graham	9,833	10,536	10,819	10,575	10,718	10,623
Greenlee	2,355	2,551	2,496	2,463	2,463	2,408
La Paz	4,143	4,130	4,074	3,678	3,682	3,685
Maricopa	1,051,575	1,059,737	1,064,572	1,007,861	1,014,790	1,008,347
Mohave	45,146	45,589	45,296	41,265	41,301	40,338
Navajo	35,821	35,684	35,814	31,973	31,901	31,551
Pima	242,411	243,987	244,390	225,316	226,652	223,677
Pinal	72,802	80,600	81,414	99,700	101,929	102,591
Santa Cruz	14,624	14,880	14,898	14,560	14,752	14,396
Yavapai	43,925	44,725	44,969	40,269	40,305	39,602
Yuma	58,446	59,083	59,089	55,185	56,547	56,415
<b>Total</b>	<b>1,690,264</b>	<b>1,711,386</b>	<b>1,719,515</b>	<b>1,629,014</b>	<b>1,641,114</b>	<b>1,628,537</b>

<b>Table 55. Population of Children Ages 0 Through 17 Years by Age Group, Arizona, 2007-2012</b>						
	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<1 Year	102,587	98,995	92,263	87,557	88,211	87,184
1-4 Years	396,458	402,486	406,201	368,158	370,926	356,828
5-9 Years	457,956	465,088	469,372	453,680	457,080	459,232
10-14 Years	455,724	462,890	467,149	448,664	451,989	454,826
15-17 Years	277,927	281,927	284,530	270,955	272,914	270,469
<b>Total</b>	<b>1,690,264</b>	<b>1,711,386</b>	<b>1,719,515</b>	<b>1,629,014</b>	<b>1,641,108</b>	<b>1,628,539</b>

## **APPENDIX C: DATA ANALYSIS METHODOLOGY**

Child fatality review data include a variety of data sources which may not be available to other individuals, programs or research endeavors. Arizona statute facilitates data collection among protected data sources, including, but not limited to, health and law enforcement records (A.R.S. §36-3503). Confidentiality of records is strictly enforced and meetings where cases are reviewed are not open to the public. Case review records are destroyed after publication of the annual report.

All reasonable efforts are made to obtain complete records for each death. However, if records are unavailable, case reviews will be conducted without all information. Records may be difficult to obtain for a various number of reasons; this may include children who died in Arizona but had lived in other states or countries, for children whose families only recently moved to Arizona or for children residing in tribal communities, among other reasons. Data from these cases likely had additional risk factors unknown, and therefore, uncollected, by review teams.

The reliability of child fatality data are subordinate to the accuracy of the records provided for review. Data presented in the Child Fatality Review Annual Report may differ from other published sources.

After case review by the local teams, aggregate review data are entered into an electronic database maintained by the National Center for Child Death Review. This database is then reviewed, for quality assurance, by the Arizona Department of Health Services, Office of Injury Prevention. Completed data are downloaded from the National Center for Child Death Review database, cleansed, and analyzed using SAS software, Version 9.3 (copyright 2010, SAS Institute Inc., Cary, NC).

## APPENDIX D: RESOURCES

Additional information regarding the **American Academy of Pediatrics** updated recommendations regarding safe sleep environments for infants can be found at <http://HealthyChildren.org>.

The American Academy of Pediatrics  
141 Northwest Point Boulevard  
Elk Grove Village, IL 60007-1098  
847/434-4000 (tel)  
800/433-9016 (toll-free tel)  
847/434-8000 (fax)

### **Arizona Firearm Injury Prevention Coalition**

P.O. Box 1809  
Phoenix, AZ 85001  
602/550-0133  
Joseph T. Zerella MD, President [dzerella@aol.com](mailto:dzerella@aol.com)

### **Suicide Prevention**

<http://www.suicidepreventionlifeline.org/getinvolved/locator.aspx>

# APPENDIX E: SUICIDE PREVENTION CHECKLIST

## SUSPECTED YOUTH SUICIDE DEATH INVESTIGATION

A. DECEASED INFORMATION	
Name (First, Middle, Last):	
B. CAUSE OF DEATH – FIREARM	
Firearm owned by: <input type="checkbox"/> Decedent <input type="checkbox"/> Family member <input type="checkbox"/> Friend <input type="checkbox"/> Unknown <input type="checkbox"/> Other:	
Had decedent received safety training or supervised training/range experience with an adult? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown    Training agency/ organization:	
Firearm stored in: <input type="checkbox"/> Safe <input type="checkbox"/> Locked box <input type="checkbox"/> Trigger lock <input type="checkbox"/> Drawer <input type="checkbox"/> Closet <input type="checkbox"/> Unknown <input type="checkbox"/> Other:	
Firearm stored with ammunition: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
History of reckless behavior/playing with firearms (Russian Roulette, etc.): <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
C. SUICIDAL INTENT	
Had decedent communicated distress to others: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, to whom:
Had suicidal intent been expressed: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, to whom:  How long ago had suicidal intent been expressed: hours ago                      months ago                      years ago
Were family/friends concerned of risk of suicide: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Was there social media sites/history of suicidal intent: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, which site:
D. NOTE/LETTER	
Note written by decedent: <b>If yes, please provide copy</b>	
E. POTENTIAL RISK FACTORS FOR SUICIDE	
Sexual orientation: <input type="checkbox"/> Heterosexual <input type="checkbox"/> Homosexual <input type="checkbox"/> Bisexual <input type="checkbox"/> Transsexual/Transgender <input type="checkbox"/> Unknown	
Recent life stressors: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, any interpersonal stressors: <input type="checkbox"/> Divorce <input type="checkbox"/> Death or suicide of loved one <input type="checkbox"/> Fear of being a burden <input type="checkbox"/> Break-up <input type="checkbox"/> Victim of domestic violence <input type="checkbox"/> Academic difficulties <input type="checkbox"/> Isolation <input type="checkbox"/> Perpetrator of abuse <input type="checkbox"/> Online related conflict <input type="checkbox"/> Suicide pact <input type="checkbox"/> Anniversary of death of loved one <input type="checkbox"/> Pregnancy or Abortion
If yes, any legal stressors: <input type="checkbox"/> Recent charges <input type="checkbox"/> Law enforcement contact <input type="checkbox"/> School related <input type="checkbox"/> Custody dispute	If yes, any financial stressors: <input type="checkbox"/> Debt <input type="checkbox"/> Unemployment <input type="checkbox"/> Gambling <input type="checkbox"/> Other:
If yes, any medical/psychological stressors: <input type="checkbox"/> Depression <input type="checkbox"/> Chronic pain <input type="checkbox"/> Terminal illness <input type="checkbox"/> Injury <input type="checkbox"/> Decreased quality of life <input type="checkbox"/> Illicit drug addiction <input type="checkbox"/> Alcohol addiction <input type="checkbox"/> Disability <input type="checkbox"/> Prescription drug addiction <input type="checkbox"/> Previous suicide attempt <input type="checkbox"/> Psychiatric diagnosis	
If yes, any additional specific stressors:	
Any cultural considerations:	If yes, describe:

<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
<b>F. ALCOHOL AND DRUG USE</b>	
History of alcohol abuse or drug addiction: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Comments (please note if alcohol or drug paraphernalia was found at scene and/ or any indication of drug misuse):	
<b>G. BEHAVIORAL HEALTH HISTORY</b>	
Behavioral health provider contacted during last year: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Formal psychiatric diagnosis at time of death: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, describe: Age at diagnosis:
Did the decedent receive prior treatment for disorder? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, type of treatment: <input type="checkbox"/> Counselor <input type="checkbox"/> Psychologist <input type="checkbox"/> Alcohol treatment center <input type="checkbox"/> Support group <input type="checkbox"/> Chaplain <input type="checkbox"/> Drug treatment center <input type="checkbox"/> Psychiatrist <input type="checkbox"/> Web-based <input type="checkbox"/> Voluntary hospitalization <input type="checkbox"/> Medication <input type="checkbox"/> Self-help <input type="checkbox"/> Involuntary hospitalization <input type="checkbox"/> Unknown
Family mental health history, describe:	
<b>H. SUICIDAL HISTORY</b>	
History of suicide attempts: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, method: <input type="checkbox"/> Hanging <input type="checkbox"/> Firearm <input type="checkbox"/> Jumping <input type="checkbox"/> Poison <input type="checkbox"/> Drug intoxication <input type="checkbox"/> Suffocation <input type="checkbox"/> Sharp object <input type="checkbox"/> Unknown <input type="checkbox"/> Other:
Number of suicide attempts: _____	
Age(s) at suicide attempts: _____	
History of self-harm behaviors without suicide intent: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, describe:
Family history of death by suicide: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, relation to decedent:
<b>I. EDUCATION</b>	
School	Recent changes in grades or behavior: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
	Recent discipline: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
	Complaints of bullying: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Other school issues (recent cut from team, college admissions, etc.):	
Interpersonal conflict with family: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, describe:
<b>J. ADDITIONAL INFORMATION</b>	
Please provide any additional information you feel is relevant to the case (i.e. suspect physical and/ or sexual abuse, neglect, etc.) that may have contributed to the suicide :	
Resources provided to survivors (family /friends interviewed) of the suicide: <input type="checkbox"/> Yes <input type="checkbox"/> No	
COMPLETED BY:	
AGENCY:	
DATE COMPLETED:	

# APPENDIX F: ARIZONA CHILD FATALITY REVIEW TEAMS AND ARIZONA DEPARTMENT OF HEALTH SERVICES STAFF

## *State Child Fatality Review Team*

### Chair

Mary Ellen Rimsza, MD, FAAP  
University of Arizona College of Medicine  
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Pima County Forensic Science Center

## ***Apache County Child Fatality Review Team***

### **Chair/Coordinator**

Rebecca Stinson, Coordinator  
Apache County Youth Council  
Apache County Drug Free Alliance

### **Members**

Matrese Avila  
Apache County Youth Council

Debbie Padilla  
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Orlando Bowman  
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Scott Poche  
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Chief Mike Hogan  
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Mike Johnson  
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Detective Mike Nuttall  
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Detective Mike Sweetser  
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## ***Cochise County Child Fatality Review Team***

### **Chair/Coordinator**

Nilda Townsend

Committee for the Prevention of Child Abuse

### **Recording Secretary**

Paula Peters

Cochise County Medical Examiner's Office

### **Members**

Joy Craig  
Arizona Department of Public Safety  
Parent Representative

Vincent Fero  
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Tonianne Goebel  
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Avneesh Gupta, MD

Angela Hillig  
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Nicole Sanchez  
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Delcy Scull  
Cochise County Juvenile Court

Mary Scott  
Cochise County Prosecutor's Office

Hal Thomas, EdD  
Sierra Vista Public Schools Board Member

## **Coconino County Child Fatality Review Team**

### **Chair/Coordinator**

Heather Taylor  
Injury Prevention Program Manager  
Coconino County Public Health Department

### **Co-Chair**

Arch Mosely, MD  
Coconino County Medical Examiner

### **Members**

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Flagstaff Pediatrician

Lizette Melis  
Coconino County Health Educator

Jordan Begay  
Tuba City Injury Prevention

Sheriff Bill Pribil  
Coconino County Sheriff's Office

Shawn Bowker  
Flagstaff Medical Center Trauma Registrar

Detective MacDonald Rominger  
Federal Bureau of Investigation

Orlando Bowman  
IHS Police Department

Detective Casey Rucker  
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Ann J. Goh  
Coconino County Administration

Cindy Sanders, RN  
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Kris Stark  
Victim Witness Advocate

Shannon Johnson  
Tuba City Trauma Registrar

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Coconino County Attorney

Jared Wotasik  
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## ***Gila County Child Fatality Review Team***

### **Chair/Coordinator**

Lana Bird  
Time Out, Inc.

### **Members**

Lucinda Campbell, RN, BSN  
Gila County Health Department

Yvonne Harris  
Arizona Department of Economic Security  
Division of Children, Youth and Families

Kathleen Kelly  
Emergency Room Nurse

Deana Monk  
Time Out, Inc.

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## ***Graham County and Greenlee County Child Fatality Review Team***

### **Chair/Coordinator**

Brandie Lee  
CASA of Graham County

### **Members**

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Graham County Health Department

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## ***Maricopa County Child Fatality Review Team***

### **Chair**

Mary Ellen Rimsza, MD, FAAP  
American Academy of Pediatrics  
University of Arizona College of Medicine

### **Coordinator**

Susan Newberry, LBSW, MEd.

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Voices Empowered

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Katrina Taylor  
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## ***Mohave County and La Paz County Child Fatality Review Team***

### **Chair**

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Havasu Rainbow Pediatrics

### **Coordinator**

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Mohave County Department of Public Health

### **Members**

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Suzanne Clark  
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Kingman Aid to Abused People

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Detective Todd Foster  
Kingman Police Department

Loria Gattis  
Mohave County Medical Examiner

Lieutenant Larry Kubacki  
La Paz County Sheriff's Department

Patty Mead, RN, MS  
Mohave County Health Department

Angelica Pichardo  
Mohave County Health Department

Melissa Register  
Mohave County Probation Department

Lieutenant Steve Smith  
Bullhead City Police Department

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Arizona Department of Economic Security  
Division of Children, Youth and Families

Rexene Worrell, MD  
Mohave County Medical Examiner

## ***Navajo County Child Fatality Review Team***

### **Chair/Coordinator**

Janelle Linn, RN  
Navajo County Public Health Services

### **Co-chair**

Susie Sandahl, RN  
Navajo County Public Health Services

### **Members**

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Navajo Nation Highway Safety Program

Orlando Bowman  
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Whiteriver Indian Health Services  
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Department of Highway Safety

Trent Clatterbuck  
Navajo County Public Health  
Medical Examiner Investigator

Kirk Grugel  
Navajo County Court Appointed Special  
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Navajo County Public Health Services  
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Kateri Piecuch  
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Mary Robertson-Begay  
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Medical Examiner Investigator

Jerry Sowers, DO  
Navajo County Court Appointed Special  
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Navajo County Public Health  
Injury Prevention & Safe Kids

Siona Willie  
Navajo Area Indian Health Services

## ***Pima County and Santa Cruz County Child Fatality Review Team***

### **Chair**

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### **Coordinator**

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University of Arizona

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University of Arizona

Kathy Benson, RN  
Retired School Nurse

Lee Bucklin  
Rincon Valley Fire Department

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Tucson Police Department

Detective Marty Fuentes  
Tohono O'odham Police Department

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Southern Arizona Child Advocacy Center

Captain Ryder Hartley  
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Pima County Medical Examiner's Office

Karen Ives  
Pima County Juvenile Detention Center

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Pilot Parents Program of Southern Arizona

Patricia Kleiman  
Retired Teacher  
Special Needs Instructor

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Drexel Heights Fire Department

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Arizona Department of Economic Security

Sue Rizzi  
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Commander Donald Williams  
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## ***Pinal County Child Fatality Review Team***

### **Chair/Coordinator**

Leah Lara  
Against Abuse, Inc.

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Pinal County Sherriff's Department

Graham Briggs  
Pinal County Health Department

Mark Bonsall  
Casa Grande Police Department

Linda Devore  
Teacher, retired

Mark Dyrdaahl  
Arizona Department of Economic Security  
Division of Children, Youth and Families

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Maricopa Medical Center

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Pinal County Attorney's Office

Christina Holt  
Children's Justice Coordinator  
Pinal County Advocacy Center

Rocky Jimenez  
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Pinal County Sheriff's Department

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Coolidge Police Department

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Pinal County Attorney's Office

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Director of the Free Pediatric Clinic of Casa Grande

Leann Mclean

Jesus Noriega-Lopez

Paul Parker  
Chief Investigator  
Pinal County Medical Examiner's Office

JD Sanchez

Detective Troy Schmitz  
Pinal County Attorney's Office

Gerald Smith  
Pinal County Attorney's Office

Sergeant Rodney Smith  
Investigations Division  
Coolidge Police Department

Detective Ashley Walker  
Criminal Investigations Division  
Coolidge Police Department

## ***Yavapai County Child Fatality Review Team***

### **Chair/Coordinator**

Barbara Jorgensen, MSN, RN  
Yavapai County Community Health Services

### **Administrative Specialist**

Carol Espinosa

### **Members**

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Law Enforcement,  
Yavapai County Attorney's Office

Kathy McLaughlin  
Community at large – Family advocacy

Sue Carlson  
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Cynthia Ross  
Yavapai County Medical Examiner's Office

Kathryn Chapman  
Family Advocacy Center

Kathy Swope, RN  
School Nurse

Karen Dansby, MD  
Pediatrician, retired  
Consultant

Erin Wright  
Arizona Department of Economic Security  
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## ***Yuma County Child Fatality Review Team***

### **Chair**

Patti Perry, MD  
Yuma Regional Medical Center/Cactus Kids

### **Coordinator**

Ryan Butcher  
Yuma County Health District

### **Members**

Maria Estrada  
Division of Children, Youth and Families  
Arizona Department of Economic Security

Auchai'a Farley  
Dr. Perry's Intern  
Public Citizen

Raul Garcia  
Yuma County Sheriff's Office

Melvin Lawson  
Accident Investigations  
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Yuma County Public Health Services

Detective Debbie Machin  
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Lt. David McBride  
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Mary Mochnal  
Women and Children  
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Ben Rodriguez  
Border Patrol – CID  
Yuma County Sheriff's Office/U.S.

Chip Schneider  
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Robert Vigil  
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Yuma County Sheriff's Office

***Arizona Department of Health Services  
Bureau of Women's and Children's Health***

**Office of Injury Prevention**

Tomi St. Mars, MSN, RN, CEN, FAEN, Chief, Office of Injury Prevention

Cecelia M. Gonzales, BA, Child Fatality/Maternal Mortality Review Program Manager

Brenna V. Rabel, MPH, Injury Epidemiologist

Teresa Garlington, Administrative Secretary

To obtain further information, contact:

Arizona Department of Health Services  
Bureau of Women's and Children's Health  
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Child Fatality Review Program  
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Information about the Arizona Child Fatality Review Program may be found on the internet through the Arizona Department of Health Services at:

<http://www.azdhs.gov/phs/owch/cfr.htm>\*