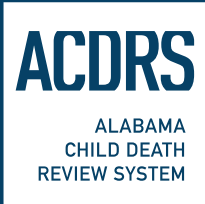




# Alabama Child Death Review System **PROGRESS REPORT – 2017 AND 2018**





**DEATHS AMONG CHILDREN IN ALABAMA  
ALABAMA CHILD DEATH REVIEW SYSTEM**

**Progress Report - 2017 and 2018**

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*This report is based on the most recent data available as of March 2020.*

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## Introduction

In 1997, Alabama enacted legislation creating the Alabama Child Death Review System (ACDRS) to review and identify unexplained or unexpected child deaths in Alabama with the purpose of developing strategies to prevent such deaths from occurring. ACDRS worked with 42 Local Child Death Review Teams (LCDRTs), the State Child Death Review Team (SCDRT), and the Alabama Department of Public Health (ADPH) Central Office staff to collect, review, consolidate, and utilize information on more than 2,050 child deaths since 2009. ACDRS's structure relies upon the time and effort volunteered by our team members throughout the state for in-depth reviews and prevention recommendations that provide the insight needed to prevent these deaths from continuing to occur. ADPH Central Office staff are grateful for each individual and organization who make these efforts possible on behalf of Alabama's children.

In 2017 and 2018, there were 1,440 infant and child deaths in the state of Alabama.\* Every child death is a tragedy, especially for the family and friends of the children lost. However, each death also serves as a powerful warning that other children remain at risk. To better understand how and why children die, the state tasks ACDRS with the following responsibilities: maintain statistics on child mortality; identify deaths that may result from abuse, neglect, or other preventable cases; and from that information, develop and implement measures to help reduce the risk and incidence of future unexplained or unexpected child deaths in Alabama.

Child death reviews make a difference. Through death reviews, ACDRS has identified motor vehicle incidents; sleep-related deaths; and firearm, weapons, and assault-related deaths as the leading causes of death for 2017 and 2018. This report highlights the leading manners and causes of death for Alabama's children, significant risk factors burdening children, recommendations created by SCDRT to reduce preventable child deaths, and statewide initiatives that have been established due to the child death review process. ACDRS seeks to honor the memory of children who have died in Alabama with this report. The hope is that these efforts will lead to a better understanding of how Alabama can be a safer, healthier place for children.

\*Centers for Disease Control and Prevention (CDC) WONDER - <https://wonder.cdc.gov/ucd-icd10>.

## Three Tiers of the Alabama Child Death Review System

### A. ADPH Central Office Staff

The State Child Death Review Office is situated within ADPH, Bureau of Prevention, Promotion, and Support for administrative and budgetary purposes. The ACDRS Central Office consists of four staff members: ACDRS Program Manager, Program Coordinator, Local Team Assistant, and an Epidemiologist. ADPH Central Office staff is responsible for sending death certificates, providing technical assistance, and overseeing the data review process of LCDRTs. ADPH Central Office staff also assist with the development of prevention initiatives, public awareness campaigns, and special interest programs.

### B. State Child Death Review Team

SCDRT is a multidisciplinary, multiagency review team, composed of 28 members which are listed below and the first 7 of whom are ex officio members:

- The Jefferson County Coroner, Medical Examiner.
- The State Health Officer who serves as Chair.

- One member appointed by the Alabama Sheriff's Association.
- The Director of the Alabama Department of Forensic Sciences.
- The Commissioner of the Alabama Department of Human Resources.
- The Commissioner of the Alabama Department of Mental Health and Mental Retardation.
- The Director of the Alabama Department of Public Safety.
- One pediatrician with expertise in Sudden Infant Death Syndrome appointed by the Alabama Chapter, American Academy of Pediatrics.
- One health professional with expertise in child abuse and neglect appointed by ADPH.
- One family practice physician appointed by the Alabama Academy of Family Physicians.
- One pediatric pathologist appointed by the Alabama Department of Forensic Sciences.
- Eight private citizens appointed by the Governor.
- One member of the clergy appointed by the Governor.
- One representative of the Alabama Coroner's Association.
- One representative of the Alabama Network of Children's Advocacy Centers.
- One representative of the Alabama Sheriff's Association.
- One representative of the Alabama District Attorney's Association.
- One specialist in pediatric emergency medicine appointed by the Medical Association of the State of Alabama.
- One representative of the Alabama Association of Chiefs of Police.
- The Chair of the Senate Health Committee or his/her designee and the Chair of the House Health Committee or his/her designee.

SCDRT serves as an advisory board with quarterly meetings to:

- Identify factors which make a child at risk for injury or death.
- Collect and share information among State Team members and agencies which provide services to children and families or investigate child deaths.
- Suggest and recommend improving coordination of services and investigations to appropriate, participating agencies.
- Identify trends relevant to unexpected/unexplained child injury and death.
- Review reports from local child death teams and upon request of a local team, individual cases of child deaths.
- Provide training and written materials to local teams to assist them in carrying out their duties.
- Develop a protocol for child death investigations and revise the protocol as needed.
- Educate the public in Alabama regarding the incidence and causes of child injury and death and the public role in aiding in reducing the risk of such injuries and deaths.
- Provide the Governor and the Legislature with an annual, written report including but not limited to, SCDRT's findings and recommendations of each of its duties; and provide copies of such report to the public.

### **C. Local Child Death Review Teams**

Currently, all 67 counties in Alabama are represented by one of 42 multidisciplinary LCDRTs based in each judicial circuit within Alabama. The district attorneys within these judicial circuits are responsible for appointing a local coordinator and/or overseeing the child death review process for their circuit. Each Alabama county is included in a LCDRT jurisdiction.

The following individuals are LCDRT members:

- The county health officer.
- The director of the county Department of Human Resources.
- The county district attorney.
- The medical examiner.
- The local coroner.
- One investigator with a local sheriff's department who is familiar with homicide investigation.
- One investigator with a local police department who is familiar with homicide investigation.
- One pediatrician, or if no pediatrician is available, a primary care physician appointed by the county medical society.
- One representative from a local child advocacy center, if one exists.

The role of LCDRTs is to hold local review sessions that collect, review, consolidate, and report information regarding child death to the State Team and ADPH Central Office staff. The purpose of these reviews is to decrease the incidence of unexpected or unexplained child injury and death by providing a better understanding of the circumstances surrounding death. LCDRTs accomplish this purpose by completing the following tasks:

- The identification of factors which make a child at risk of injury or death.
- The dissemination of information among the agencies which provide services to children and families, or which investigate child deaths or provide services.
- The improvement of local investigations of unexpected/unexplained child deaths by participating agencies.
- The improvement of existing services and systems and assisting in the establishment of additional services and systems to fill in gaps in the community.
- The identification of trends relevant to unexpected/unexplained child injury and death.
- The education of local public regarding the incidence and causes of child injury and death, and the public role in aiding and reducing the risk of such injuries and deaths.

Reviews by LCDRTs are essential in formulating recommendations that will modify risk factors at both local and state levels. Furthermore, LCDRT reviews of child deaths occurring in 2016 are the foundation for this report.

### **National Fatality Review Case Reporting System (NFR–CRS)**

LCDRTs and ADPH use NFR-CRS as a database and data collection methodology to capture information regarding the circumstances surrounding each reviewed child's death. This database serves as a case reporting tool that documents the often-complex conversations, discussions, and report reviews that happen during the death review process. NFR-CRS also documents many descriptive aspects of the death such as the child's demographics, investigative actions, services provided or needed, risk factors, and LCDRT recommendations on how to prevent future child deaths in Alabama.

### **Alabama Child Death Review System Funding**

ACDRS funding originates in Alabama's portion of the National Tobacco Settlement (NTS), through the Children First Trust Fund (CFTF). The sum of the funding equals 1 percent of the total CFTF portion of NTS but is not to exceed \$300,000.

The Alabama Medicaid Agency also provides some supplemental funding to ACDRS through a reimbursement agreement. These funds are used solely for education and outreach efforts.

## **Alabama Child Death Review System's Prevention Initiatives**

ACDRS has reviewed more than 4,200 child deaths since 2000. Due to these reviews, educational programs and prevention initiatives such as the Teen Driver Safety Campaign, Alabama Sudden Unexpected Infant Death Investigation (SUIDI) Team, the Booster Seat Advocacy Program, and the Healthy Start: Never Ever Shake a Baby Program have been developed.

### **A. Sudden Unexpected Infant Death Investigation Trainings**

To improve data quality and reduce sleep-related child deaths, ACDRS conducted Child Injury and Death Scene Re-enactment and Scene Reconstruction Training sessions. Each session provided investigative protocols for law enforcement, Emergency Medical Services (EMS), district attorneys, medical examiners, coroners, and child protective services. ADPH social workers and nurses were also in attendance. Participants learned the skills necessary to conduct investigations: how to conduct witness interviews, how to perform doll reenactment, and how to develop narrative reports for forensic pathologists that will provide the foundation for a more accurate determination of the cause of injury and the person(s) responsible.

By the completion of the training, investigators were provided the necessary tools and knowledge to accurately complete SUIDI. Standardized reporting forms from the Centers for Disease Control and Prevention (CDC) and SUIDI demonstration dolls were distributed to investigators as investigative tools. The provided training, materials, and tools were based on nationally established CDC curriculum and aligned with CDC guidelines. These trainings and tools should greatly improve infant death scene investigations, the accuracy of infant death diagnoses, and the overall usefulness of the information regarding infant deaths collected by ACDRS. Thorough and standardized investigations will assist ACDRS in obtaining better data. Better data will lead to improved and targeted prevention strategies statewide.

More information about safe sleep practices for children and other educational materials can be found on the ADPH website, [alabamapublichealth.gov](http://alabamapublichealth.gov), by searching for Sudden Unexpected Infant Death (SUID) and Safe Sleep.

### **B. Teen Driver Safety**

ACDRS and the Injury Prevention Branch of ADPH collaborated to create publications to raise awareness of the Graduated Driver's License (GDL) Law as well as information regarding the risks that teen drivers face. In addition, through a partnership with State Farm and Children's of Alabama, ADPH produced #UrKeys2Drv Teen Driving Summit which provides an interactive, educational experience for teen drivers. In 2017, 791 students participated in the teen driving summit to include 60 schools. In 2018, 1,025 students participated to include 52 schools. More about this topic, risk factors, and links to informational materials can be found on the ADPH website, [alabamapublichealth.gov](http://alabamapublichealth.gov), by searching for teen driver safety.

### **C. Car and Booster Seat Clinics**

ADPH has Child Passenger Safety Technicians certified through Safe Kids to educate caregivers on proper installation of their child's car seat. In addition to educating caregivers on proper installation, pregnant women and families receiving federal assistance are eligible to receive a car seat provided by ACDRS. In 2017, a total of 1,370 seats were provided to children of eligible families. In 2018, 1,583 seats were provided. More about this topic, information about state law, and links to informational materials can be found on the ADPH website, [alabamapublichealth.gov](http://alabamapublichealth.gov), by searching for child restraints or car seats.



## **D. Healthy Start: Never Ever Shake a Baby**

To raise public awareness and prevent child death and injury resulting from Shaken Baby Syndrome, ADPH and ACDRS collaborated with many coalition partners on a statewide campaign including television public service announcements (PSAs), educational materials, presentations, billboards, and radio PSAs among other methods to communicate the message, “Never Ever Shake a Baby.” More about this topic can be found on the ADPH website, [alabamapublichealth.gov](http://alabamapublichealth.gov), by searching for Never Ever Shake a Baby.

***ACDRS continues to rely on SCDRT, LCDRTs, strategic partners, and the public to promote the program’s mission. Although significant improvements have been made, ACDRS will continue to make strides that reduce child death through awareness, education, and prevention efforts.***

## **2019 Recommendations to the Governor and Legislature**

### **State Child Death Review Team Recommends the Following: Implement Prevention Education Statewide**

#### **Statewide**

- Use alternative channels such as social service agencies, houses of worship, and youth organizations to implement prevention education statewide.
- Improve media coverage on suicide prevention to encourage those who are vulnerable or at risk to seek help.
- Support annual suicide prevention education in schools to promote emotional well-being and connectedness among the entire school community.
- Encourage the safe storage of firearms by distributing gun locks as a safety precaution.
- Implement public education and awareness campaigns about the need for adult supervision around open bodies of water.
- Expand and mandate SUIDI training for EMS, law enforcement, coroners, and child protective services.
- Provide new parent education regarding newborn and infant safety recommendations such as safe sleep environments and car seat use/installation.
- Increase rural car seat distribution/education.
- Prevent co-sleeping through public education and awareness campaigns.

#### **Build Partnerships to Serve Alabama’s Children and Families**

- Establish a partnership with Nurse-Family Partnership.
- Increase collaboration with the Alabama Suicide Prevention and Resources Coalition (ASPARC).

### **Educate, Enforce, and Improve Graduated Drivers License Policy**

- Educate parents and law enforcement of GDL Law.
- Support further enhancement of the GDL by improving night driving restrictions for teen drivers (10 p.m.-5 a.m.).
- Include a questionnaire to determine knowledge of the GDL policy in the drivers' education exam.
- Implement a Statewide Teen Driver Safety Course for high school sophomores.

### **Cooperate and Collaborate for Legislative Action**

- Improve ACDRS case review rates by considering alternative lead agencies for LCDRTs.
- Improve gun safety laws.

### **Improve Public and Private Funding for Children's Services**

- Advocate for increased funding for children's services.
- Increase funding for mental health.
- Explore private funding as an avenue for additional support of ACDRS.

### **Create a Comprehensive Data System to Improve Prevention Initiatives**

- Establish a standardized case management system for coroners and medical examiners.
- Increase collection and utilization of new sources of data.

## **Key Findings**

In 2017, ACDRS reviews were completed for 205 child deaths or 67.9 percent of the deaths eligible for review and in 2018, 184 child deaths or 68.4 percent of eligible deaths. Cases that meet criteria for review are those involving deaths in Alabama of infants and children from live birth to less than 18 years of age whose deaths are considered unexpected or unexplained. Reviewed cases are categorized based on the manner and cause of death. Manner of death is classified based on the circumstances surrounding death. Cause of death refers to the primary underlying cause of a death which is the disease or injury/action initiating the sequence of events that led directly to death, or the circumstances of the accident or violence that produced the fatal injury. The five manner of death categories reviewed by ACDRS are accidents, homicides, suicides, undetermined manners, and pending/unknown manners of death.

### **Manner of Death Update for 2017 and 2018**

Current collection for the 2017 calendar year shows:

- Accidents (unintentional injury deaths) accounted for 80 reviewed deaths.
- Homicides accounted for 29 reviewed deaths.
- Suicides accounted for 18 reviewed deaths.
- Undetermined manner accounted for 70 reviewed deaths.
- Pending or unknown manners accounted for 6 reviewed deaths.

Current collection for the 2018 calendar year shows:

- Accidents (unintentional injury deaths) accounted for 84 reviewed deaths.
- Homicides accounted for 36 reviewed deaths.
- Suicides accounted for 21 reviewed deaths.
- Undetermined manner accounted for 28 reviewed deaths.
- Pending, unknown, or other manners accounted for 15 reviewed deaths.

### **Cause of Death Update for 2017 and 2018**

*The circumstantial information in the following bullets below are not mutually exclusive of each other. A single death could involve a combination of any number of circumstances listed below.*

### **Firearm, Weapon, and Assault-related Deaths**

In 50 reviewed 2017 deaths, a firearm, weapon, or assault was involved:

- In 32 reviewed weapon and assault cases, the child's death involved firearms:
  - In 18 reviewed deaths, handguns were involved.

In 56 reviewed 2018 deaths, a firearm, weapon, or assault was involved:

- In 38 reviewed weapon and assault cases, the child's death involved firearms:
  - In 26 reviewed deaths, handguns were involved.

### **Motor Vehicle Incidents**

In 44 reviewed 2017 deaths, the child was involved in a fatal motor vehicle incident:

- In 20 reviewed motor vehicle deaths, the child was a passenger in the car during the incident.
- In 8 reviewed motor vehicle deaths, the child was a pedestrian struck by a motor vehicle.
- In 12 reviewed motor vehicle deaths, the child was the driver of the motor vehicle.
- In 11 reviewed motor vehicle deaths, speeding contributed to death.

In 47 reviewed 2018 deaths, the child was involved in a fatal motor vehicle incident:

- In 24 reviewed motor vehicle deaths, the child was a passenger in the car during the incident.
- In 8 reviewed motor vehicle deaths, the child was a pedestrian struck by a motor vehicle.
- In 12 reviewed motor vehicle deaths, the child was the driver of the motor vehicle.
- In 11 reviewed motor vehicle deaths, speeding contributed to death.

### **Sleep-related Death and Sudden Unexplained Infant Death**

In 22 reviewed 2017 deaths, the child was sleeping or in the sleep environment at the time of death, and for an additional 21 reviewed deaths, reviewers classified the incidents as SUID.

- In 19 reviewed sleep-related deaths and 14 SUID, the child was not sleeping on a recommended sleep surface (such as a crib or bassinet).
- In 18 reviewed sleep-related deaths and 11 SUID, the child was co-sleeping with either an adult or another child on the same sleep surface.

In 19 reviewed 2018 deaths, the child was sleeping or in the sleep environment at the time of death and for an additional 15 reviewed deaths, reviewers classified the incidents as SUID.

- In 13 reviewed sleep-related deaths and 15 SUID, the child was not sleeping on a recommended sleep surface (such as a crib or bassinet).
- In 14 reviewed sleep-related deaths and 7 SUID, the child was co-sleeping with either an adult or another child on the same sleep surface.

## **Additional External Causes of Death**

### **Drowning**

In 8 reviewed 2017 deaths, drowning was the cause of death:

- In less than 5 reviewed drowning deaths, open water was involved.

In 14 reviewed 2018 deaths, drowning was the cause of death:

- In 7 reviewed drowning deaths, a pool, hot tub, or other similar body of water was involved.
- In 9 reviewed drowning deaths, death occurred when the child was taking part in recreational activities.

### **Suffocation**

In 12 reviewed 2017 deaths, asphyxiation was the cause of death and 7 of those asphyxiations were sleep-related deaths due to hazards in the sleep environment.

In 13 reviewed 2018 deaths, asphyxiation was the cause of death and 10 of those asphyxiations were sleep-related deaths due to hazards in the sleep environment.

### **Fires**

In less than 8 reviewed 2017 deaths, fires and fire-related injuries were the cause of death.

- In 6 reviewed deaths, the death resulted from the fire itself.

In less than 7 reviewed 2018 deaths, fires and fire-related injuries were the cause of death.

- In 6 reviewed deaths, the death resulted from smoke inhalation.

### **Poisoning or Overdose**

In less than 5 reviewed 2017 and 2018 deaths, intentional or unintentional poisonings and overdoses were the cause of death.

## Location of Death

### Location of Child's Death - 2017 and 2018 Reviewed Deaths

<b>Home</b>	105		85	
<b>Relative's Home</b>	19	11		
<b>Friend's Home</b>	9	6		
<b>Road</b>	36		46	
<b>Unknown or Other</b>	36		36	

■ 2017 ■ 2018

## Review Process and Timeline

### Review Process

The ACDRS Central Office receives copies of all Alabama death certificates issued for decedents under 18 years of age. ACDRS assesses each certificate to determine if it meets review criteria. Cases that meet the criteria are then assigned to the appropriate LCDRT on a case-by-case basis.

Upon reviewing individual cases, LCDRTs complete the appropriate data collection form and submit the information to the ACDRS Central Office. LCDRTs make recommendations to SCDRT and take appropriate actions within communities to prevent additional deaths.

The ACDRS Central Office collects and analyzes information submitted by LCDRTs to answer requests for specific data and generate reports.

SCDRT meets quarterly to review the statewide data, consider LCDRT recommendations and performance, and conduct general ACDRS business. SCDRT acts on ACDRS issues in the form of education programs, informational publications, and other similar efforts.

### Efforts to Increase Review Rates

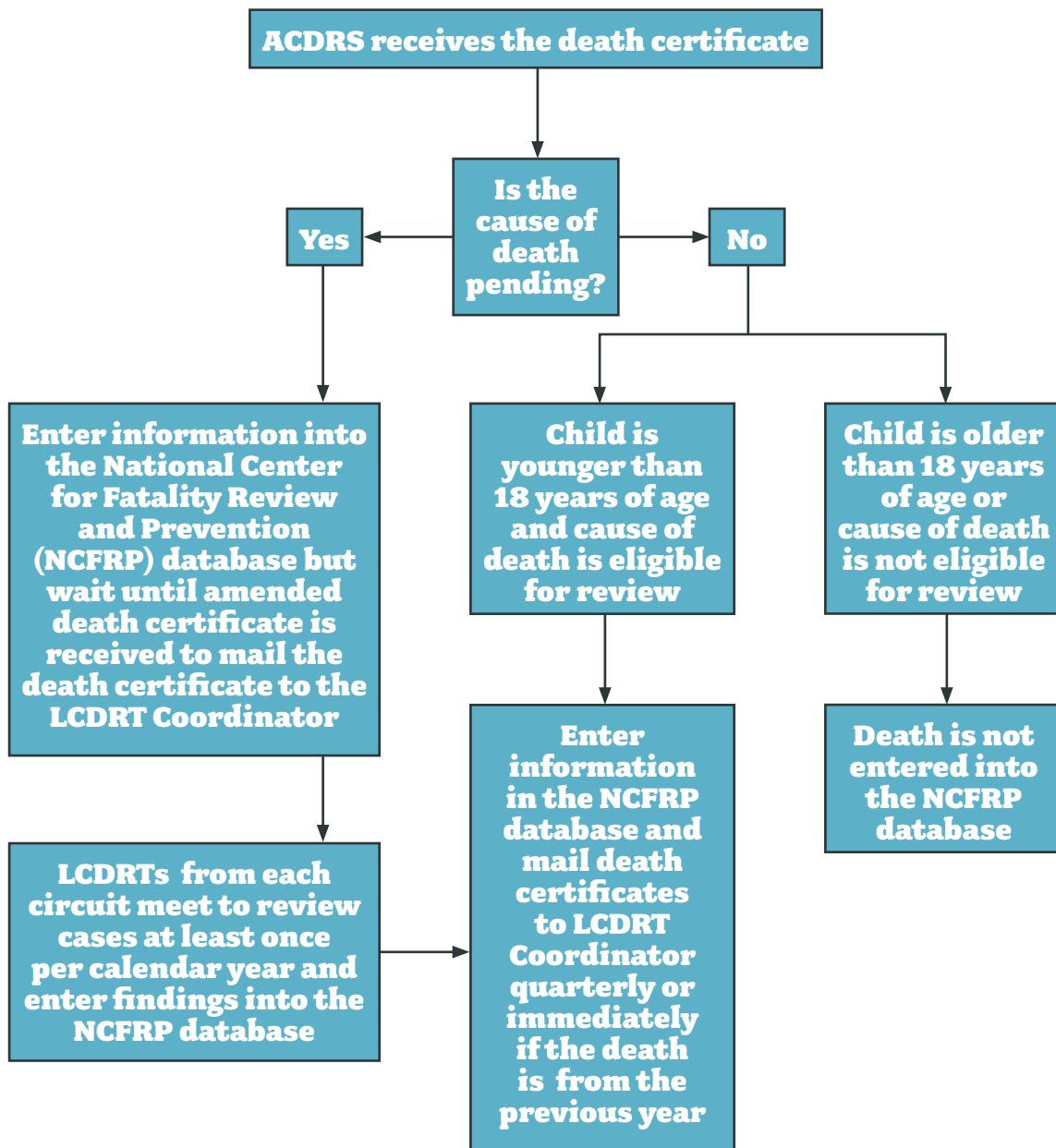
ACDRS Central Office staff:

- Maintain a constant flow of communication with local team coordinators.
- Attend local review team meetings and enter data when needed.
- Have developed a tool that makes the review process more streamlined.
- Mail death certificates quarterly and encourage quarterly meetings.

**Case Review Criteria**

To be considered for ACDRS review, the case must meet the following criteria:

- The deceased must have died in Alabama.
- The deceased must have been born alive. ACDRS does not review fetal deaths.
- The deceased must be less than 18 years of age.
- The cause of death must be non-medical, unexpected, or unexplained.

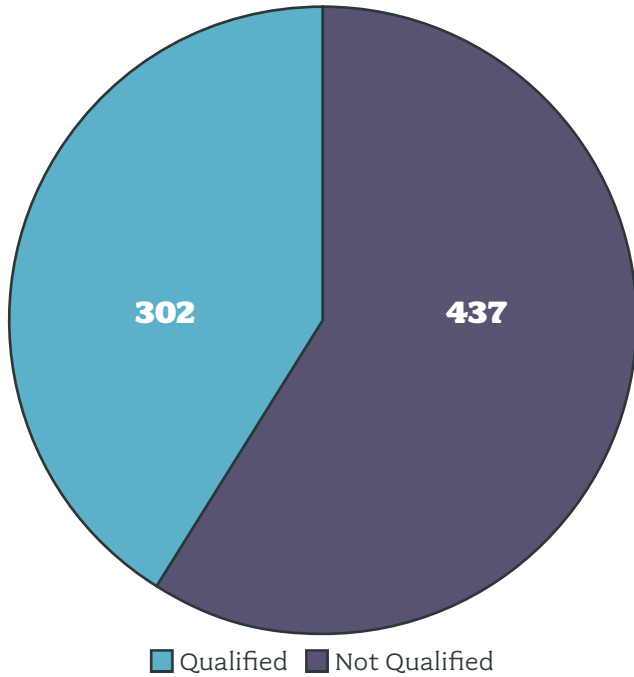


## 2017 and 2018 Reviewed Child Deaths

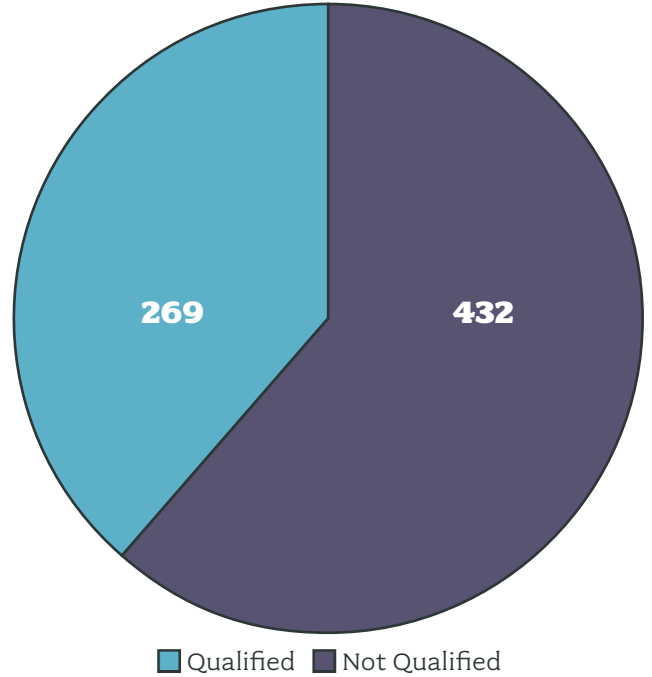
### Local Child Death Review Team Success Rates:

There was a total of 739 child deaths in Alabama in 2017\*, and 302 qualified for review under ACDRS guidelines. Of qualified 2017 deaths, LCDRTs returned 205 completed reviews or 67.9 percent. For 2018, there was a total 701 child deaths in Alabama\*, and 269 qualified for review by ACDRS. Of qualified 2018 deaths, LCDRTs returned 184 completed reviews or 68.4 percent.

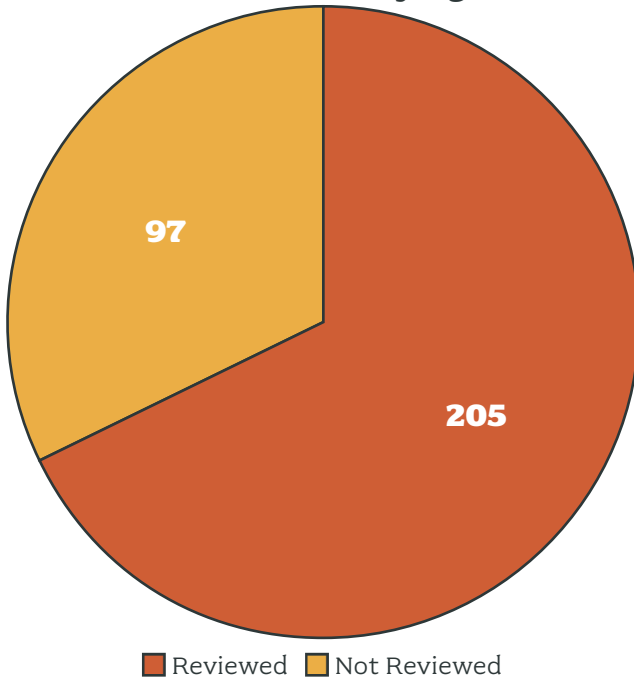
**2017 Child Deaths Qualifying for Review**



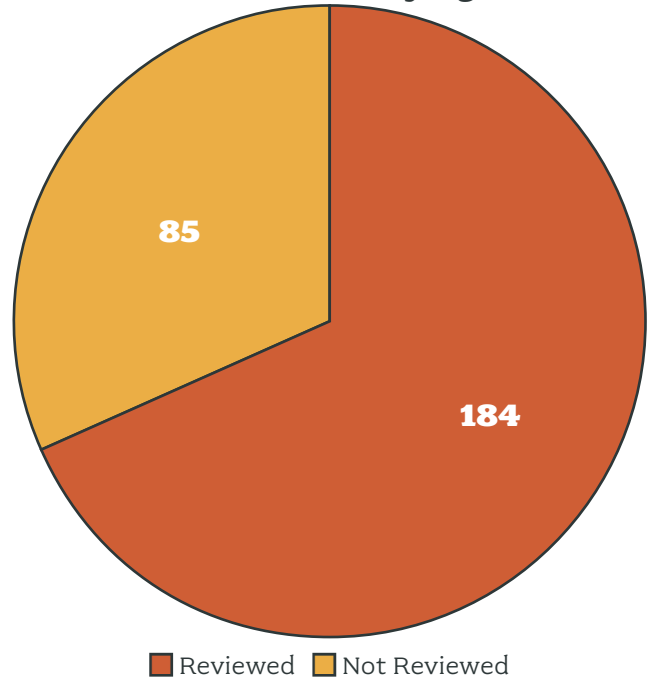
**2018 Child Deaths Qualifying for Review**



**2017 Child Deaths Qualifying for Review**



**2018 Child Deaths Qualifying for Review**



\*CDC WONDER - <https://wonder.cdc.gov/ucd-icd10>

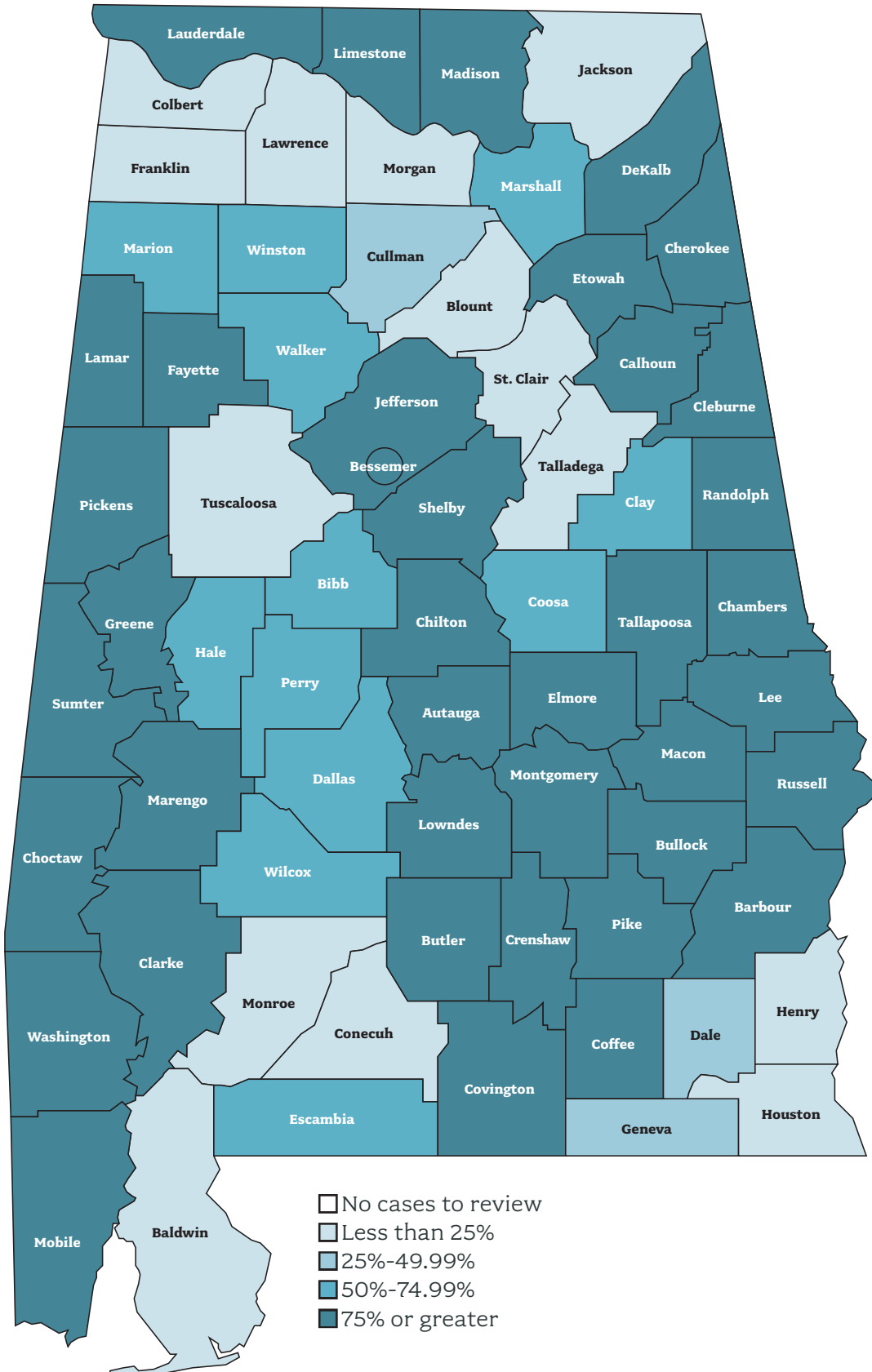
## Local Child Death Review Team Recognition

The ACDRS goal is to have case completion rates of 100 percent for each LCDRT. The table below recognizes the outstanding efforts of several LCDRTs that achieved this goal.

<b>Team</b>	<b>2017</b>	<b>2018</b>
Choctaw, Clarke, and Washington	100.00	
Barbour and Bullock		100.00
Chambers, Macon, Tallapoosa, and Randolph	100.00	100.00
Calhoun and Cleburne	100.00	100.00
Cherokee and DeKalb	100.00	100.00
Jefferson - Bessemer Division	100.00	100.00
Lauderdale	100.00	100.00
Coffee and Pike		100.00
Etowah	100.00	100.00
Greene, Marengo, and Sumter	100.00	100.00
Shelby	100.00	
Autauga, Chilton, and Elmore		100.00
Escambia	100.00	
Covington	100.00	100.00
Madison	100.00	
Fayette, Lamar, and Pickens	100.00	
Marion and Winston	100.00	
Russell	100.00	100.00
Marshall		100.00
Lee	100.00	100.00
Limestone	100.00	100.00
Clay and Coosa	100.00	



### 2017 and 2018 Review Completion Rate by County



No cases to review  
 Less than 25%  
 25%-49.99%  
 50%-74.99%  
 75% or greater

LCDRT Recognition	
Team 1	Choctaw, Clarke, Washington
Team 2	Butler, Crenshaw, Lowndes
Team 3	Barbour, Bullock
Team 4	Bibb, Dallas, Hale, Perry, Wilcox
Team 5	Chambers, Macon, Tallapoosa, Randolph
Team 6	Tuscaloosa
Team 7	Calhoun, Cleburne
Team 8	Morgan
Team 9	Cherokee, DeKalb
Team 10A	Jefferson
Team 10B	Bessemer
Team 11	Lauderdale
Team 12	Coffee, Pike
Team 13	Mobile
Team 14	Walker
Team 15	Montgomery
Team 16	Etowah
Team 17	Greene, Marengo, Sumter
Team 18	Shelby
Team 19	Autauga, Chilton, Elmore
Team 20	Henry, Houston
Team 21	Escambia
Team 22	Covington
Team 23	Madison
Team 24	Fayette, Lamar, Pickens
Team 25	Marion, Winston
Team 26	Russell
Team 27	Marshall
Team 28	Baldwin
Team 29	Talladega
Team 30	St. Clair
Team 31	Colbert
Team 32	Cullman
Team 33	Dale, Geneva
Team 34	Franklin
Team 35	Conecuh, Monroe
Team 36	Lawrence
Team 37	Lee
Team 38	Jackson
Team 39	Limestone
Team 40	Clay, Coosa
Team 41	Blount

## Alabama Child Death Trend Rates from 2004 to 2018

### Trends in Rate of Death by Manner and Race

As the following graph indicates, African American children and Caucasian children suffer from a disproportionately higher rate of death depending on their manner of death. African American children suffer a much larger rate of death from homicide and Caucasian children suffer a higher rate of suicide. As for accidental manners of death, African American and Caucasian rates rose and fell with the years on a general downward trend. Currently, the rate of death from accidental manners is higher for African Americans and this has been maintained for several years. The concerning issue is that higher rates of death for African American children persist despite numbering less than half of the number of Caucasian children in Alabama for the 15 years included in the following graph\*.

In the following graphs of race and manner of death, certain races and ethnicities were excluded from graphs due to extremely small numbers of related deaths triggering internal suppression rules. This measure is in place to preserve the confidentiality of the data collected by ACDRS.

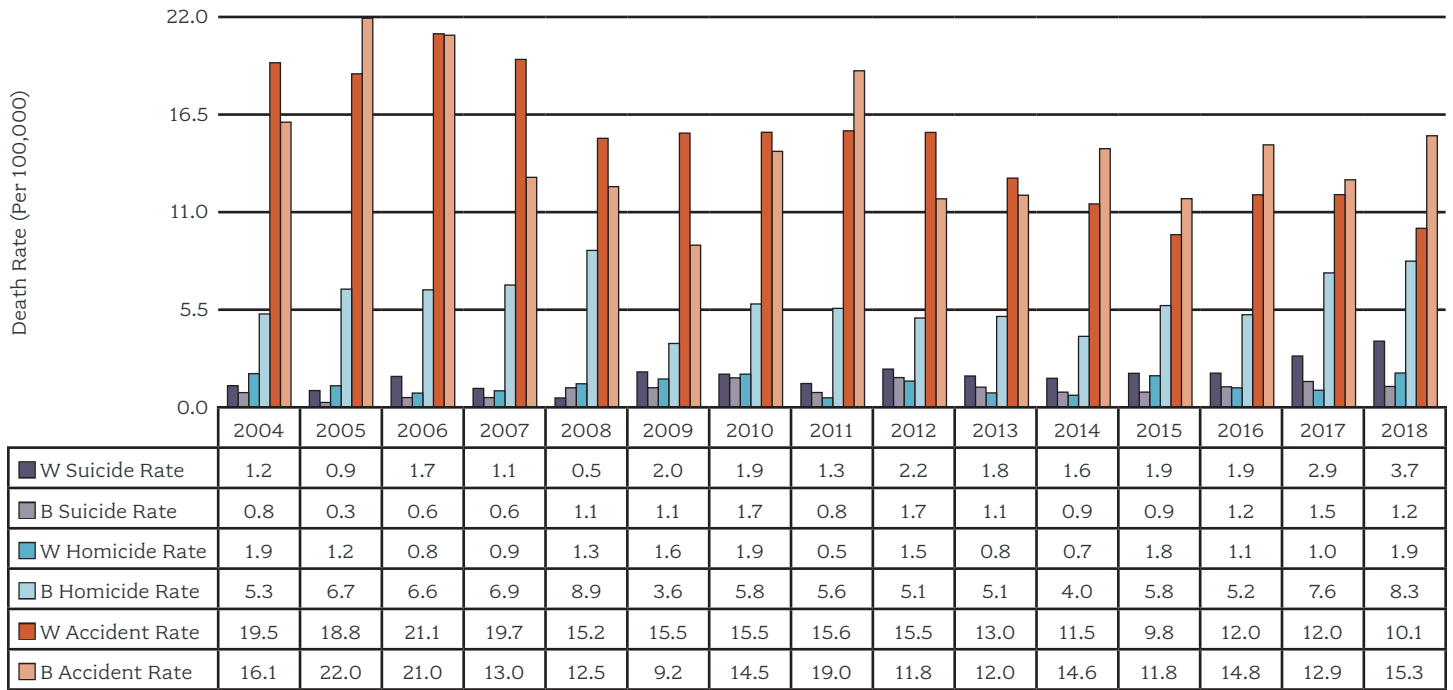
The rates depicted in the following graphs are calculations of the number of an affected population, such as child deaths, divided by the total amount of the child population in Alabama and then multiplied by 100,000 to normalize the calculation and allow easy comparisons between different races and ethnicities. The following calculation is used to determine rates.

$$(\# \text{ Child Deaths} / \text{Total \# of Children in Alabama}) \times 100,000 = \text{Rate}$$

An example of a rate calculation for 2018:

$$(52 \text{ African American Accidental Deaths} / 338,778 \text{ African American Children in Alabama}^*) \times 100,000 = 15.3 \text{ Child Deaths per 100,000 in 2018.}$$

**Rate of Death by Manner and Race - 2004 to 2018<sup>^</sup>**



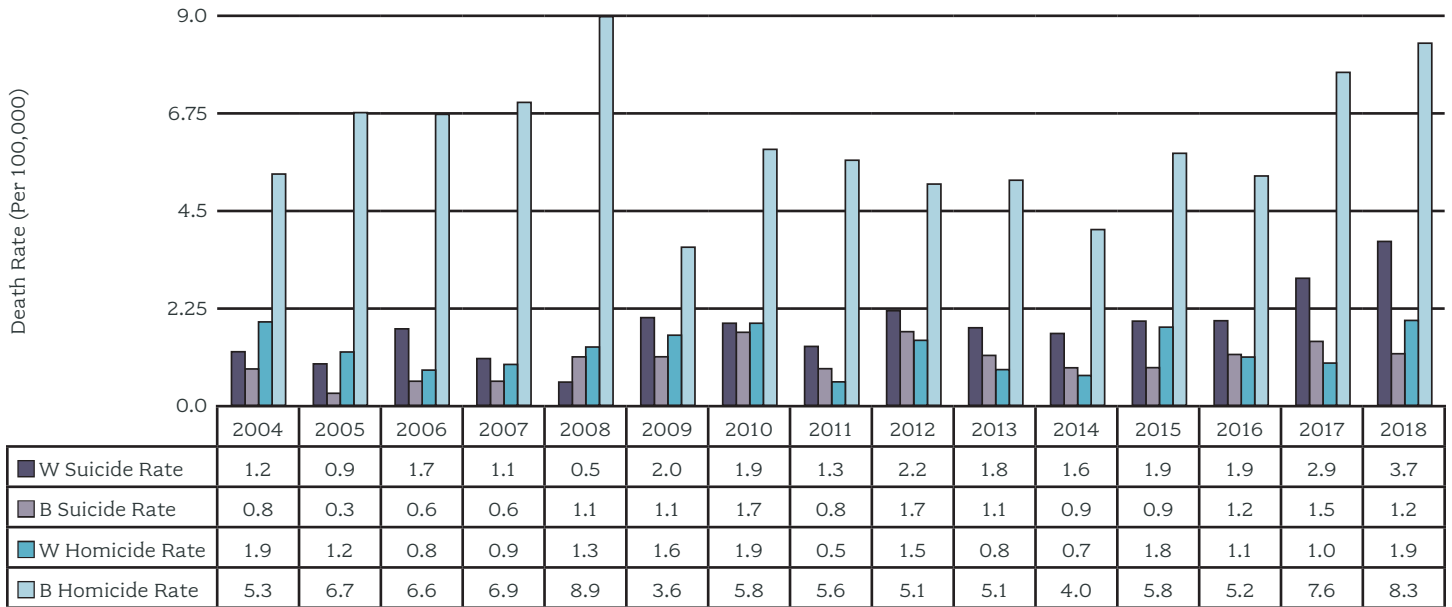
\*CDC WONDER - <https://wonder.cdc.gov/ucd-icd10>.

<sup>^</sup>Causes of death pulled from death certificates and are based on the following International Classification of Diseases (ICD-10) codes: accidental causes of death from V01 to X59, suicide causes of death from X60 to X84, and homicide causes of death from X85 to Y09.

As shown in the following graph and as stated above, African American children suffer a much larger rate of death from homicide and Caucasian children suffer a higher rate of suicide. African American children’s rate of homicide is drastically higher than that of Caucasian children and is on an increasing trend for the period between 2014 and 2018. The same drastic upward trend for homicides within the population of Caucasian children is not seen, although the average rate of homicides for Caucasian children has been increasing slightly for the period of time between 2014 and 2018.

Conversely, the rate of suicide for Caucasian children has been greatly increasing since 2014, as shown in the following graph. This upward trend among suicides is also seen in African American children, but not nearly to the same extent.

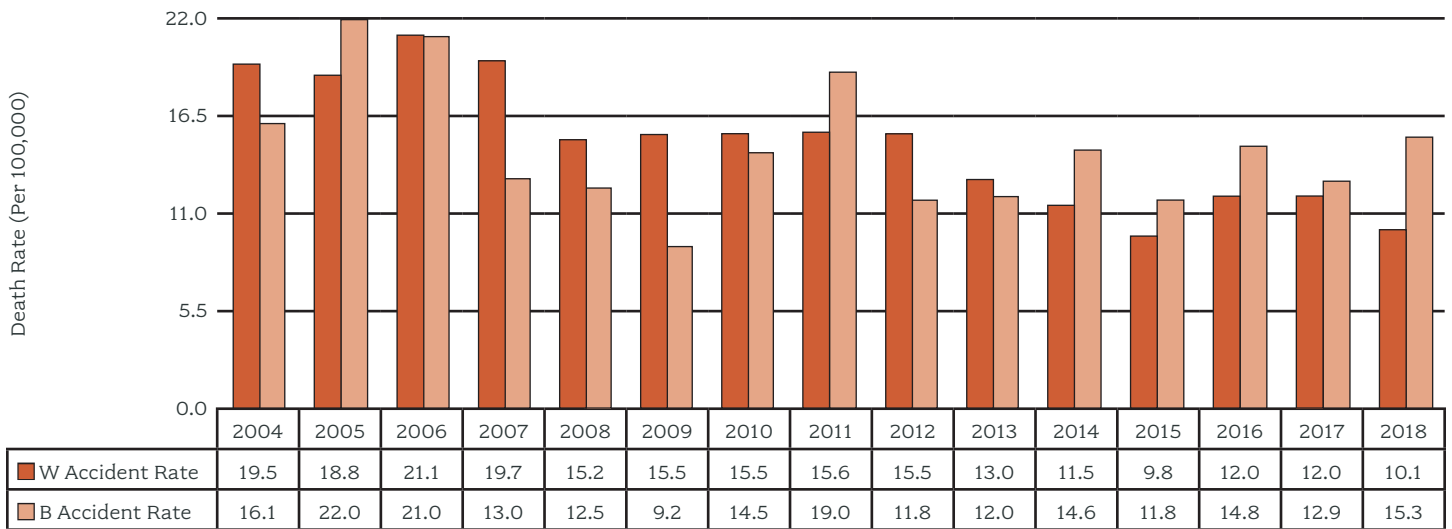
**Rate of Death by Violent Manner and Race - 2004 to 2018<sup>^</sup>**



<sup>^</sup>Causes of death pulled from death certificates and are based on ICD-10 codes: accidental causes of death from V01 to X59, suicide causes of death from X60 to X84, and homicide causes of death from X85 to Y09.

As the following graph indicates, African American children and Caucasian children often suffered from widely differing rates of accidental death depending on the year. Consistently, accidental death rates among children have easily surpassed the rates of death for violent manners but have shown a general downward trend since 2004. Rates based on race fluctuated widely from year-to-year, and prior to 2014, African American children did not consistently have a higher rate of accidental death than Caucasian children.

**Rate of Accidental Death by Race - 2004 to 2018<sup>^</sup>**

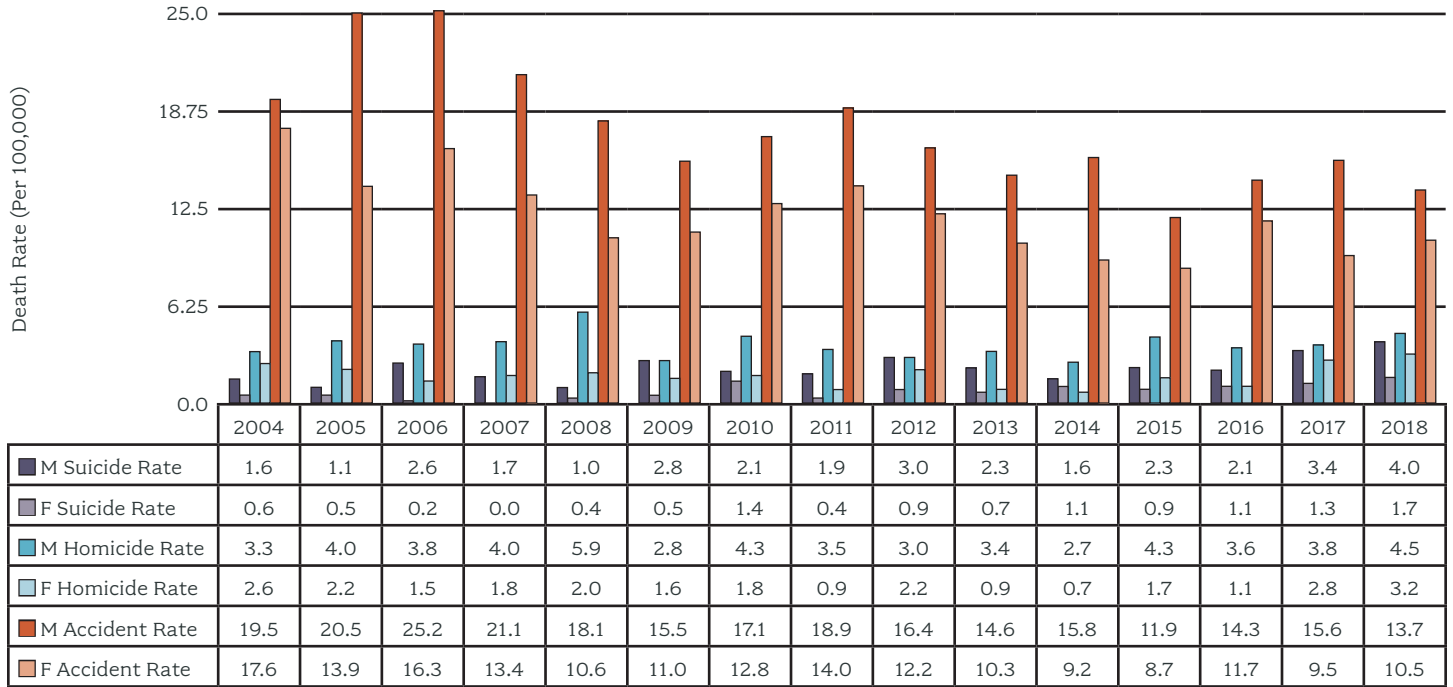


<sup>^</sup>Causes of death pulled from death certificates and are based on the ICD-10 codes: accidental causes of death from V01 to X59, suicide causes of death from X60 to X84, and homicide causes of death from X85 to Y09.

**Trends in Rate of Death by Manner and Gender**

Male children have historically had a higher rate of death for both accidental and violent manners than female children. This higher rate of death persists through all 15 years included in the three following graphs.

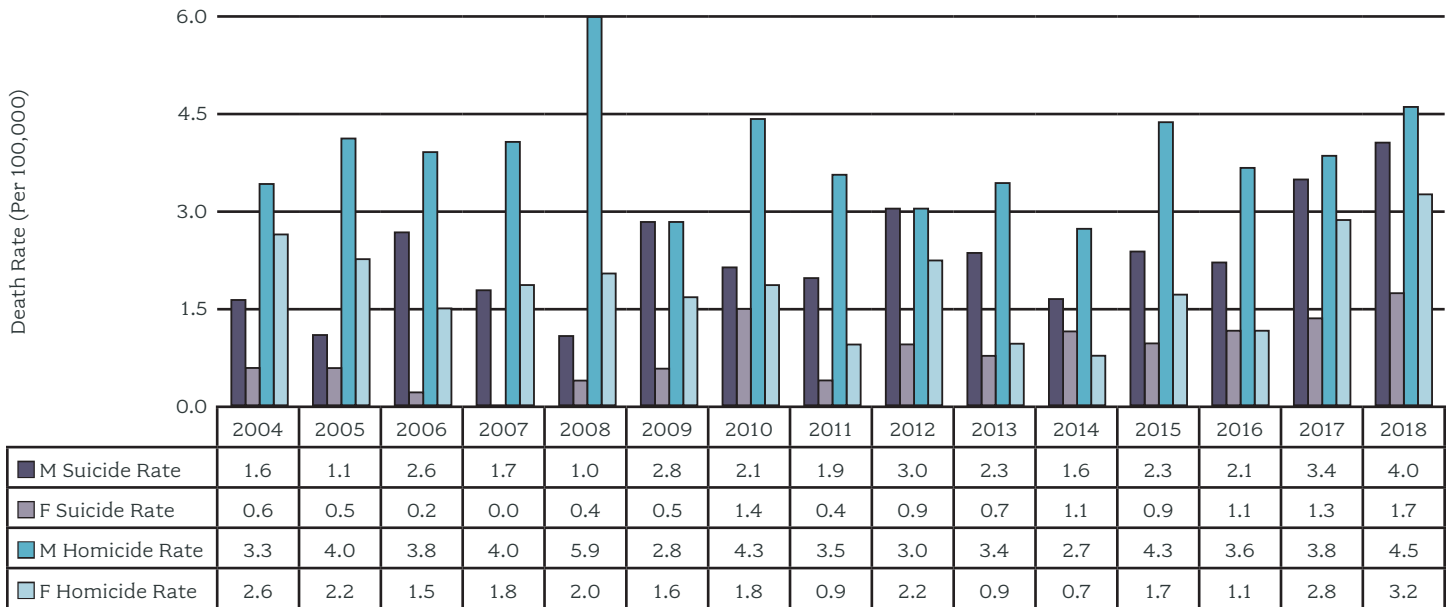
**Rate of Death by Manner and Gender - 2004 to 2018<sup>^</sup>**



<sup>^</sup>Causes of death pulled from death certificates and are based on the following ICD-10 codes: accidental causes of death from V01 to X59, suicide causes of death from X60 to X84, and homicide causes of death from X85 to Y09.

As stated above and shown in the graph on the following page, male children suffer a much higher rate of death from homicide and suicide than female children. Prior to 2016, male children suffered from a much higher rate of homicide than suicide. However, since 2014, the male children’s rate of suicide has increased drastically and since 2016, nearly mirrors their rate for homicide. This upward trend in suicide rates among male children is also present among female children, but not to the same extent. Conversely, female children’s increase in rate of suicides is easily surpassed by their increase in their rate of homicides since 2014.

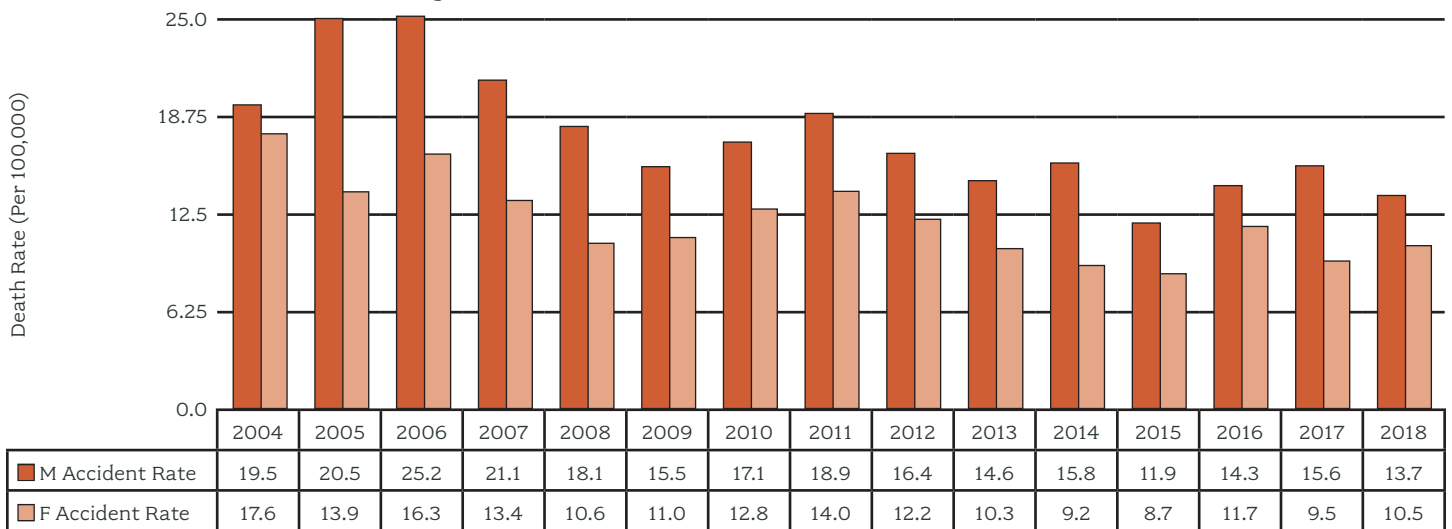
**Rate of Violent Death by Gender - 2004 to 2018<sup>^</sup>**



<sup>^</sup>Causes of death pulled from death certificates and are based on the following ICD-10 codes: accidental causes of death from V01 to X59, suicide causes of death from X60 to X84, and homicide causes of death from X85 to Y09.

As seen in the following graph, male children have historically suffered from a higher rate of accidental death than female children. However, accidental deaths in both genders have been on a general downward trend since 2004.

**Rate of Accidental Death by Gender - 2004 to 2018<sup>^</sup>**



<sup>^</sup>Causes of death pulled from death certificates and are based on the following ICD-10 codes: accidental causes of death from V01 to X59, suicide causes of death from X60 to X84, and homicide causes of death from X85 to Y09.

## Manner of Death Summary – 2017 and 2018 Reviewed Deaths

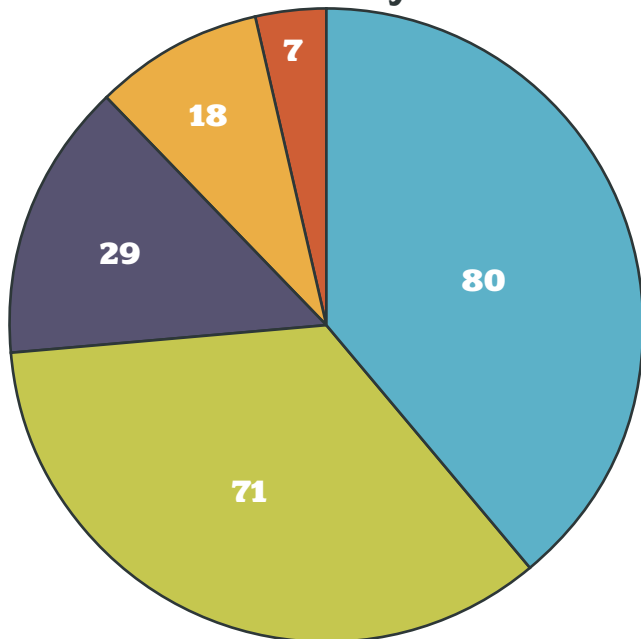
Manner of death is a determination of the broad classification of death and is typically made by a coroner, medical examiner, police, or other official. The distinction between manner and cause of death is that cause is a specific disease, injury, or other mechanism of death whereas manner is primarily a legal determination.

For the purposes of this report, manner of death refers to one of the six general categories of death listed on the Alabama Death Certificate. The six categories are:

1. Pending Investigation: a death which is still under review by coroners or medical examiners.
2. Accident: a death resulting from a non-intentional injury.
3. Homicide: a death resulting from an intentional act committed by another person to cause fear, harm, or death.
4. Suicide: a death that results from an intentional, self-inflicted act committed to do self-harm or death.
5. Undetermined Circumstances (Undetermined): a death in which, after all available information has been considered, information pointing to one manner of death is no more compelling than one or more competing manners of death.
6. Natural Causes: death not due to external means (i.e., a death that occurred as the expected outcome of a disease, birth defect, or congenital anomaly). In other words, death resulting from natural or medical causes, such as illness or disease. Normally, ACDRS does not review such cases. However, reviewed cases in which the cause of death is initially classified as pending or unknown are commonly discovered upon review to have occurred by natural causes.

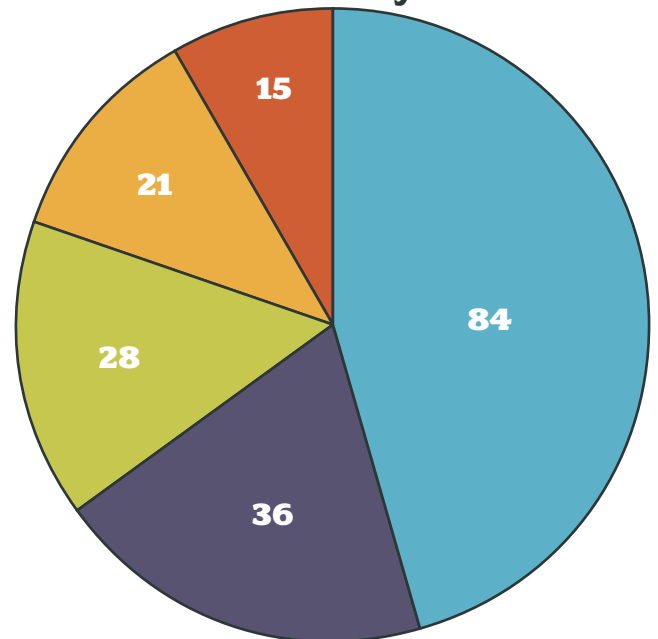
As information collection is still ongoing for 2017 and 2018, unclassified manners of death not currently marked as an official manner are included as “other” manner of death. This manner of death may contain natural deaths that are not generally qualifying for inclusion in ACDRS as they have not been classified at the time of this report.

**Reviewed Child Death by Manner - 2017**



■ Accidents   
 ■ Undetermined   
 ■ Homicides  
■ Suicides   
 ■ Pending, Unknown, or Other

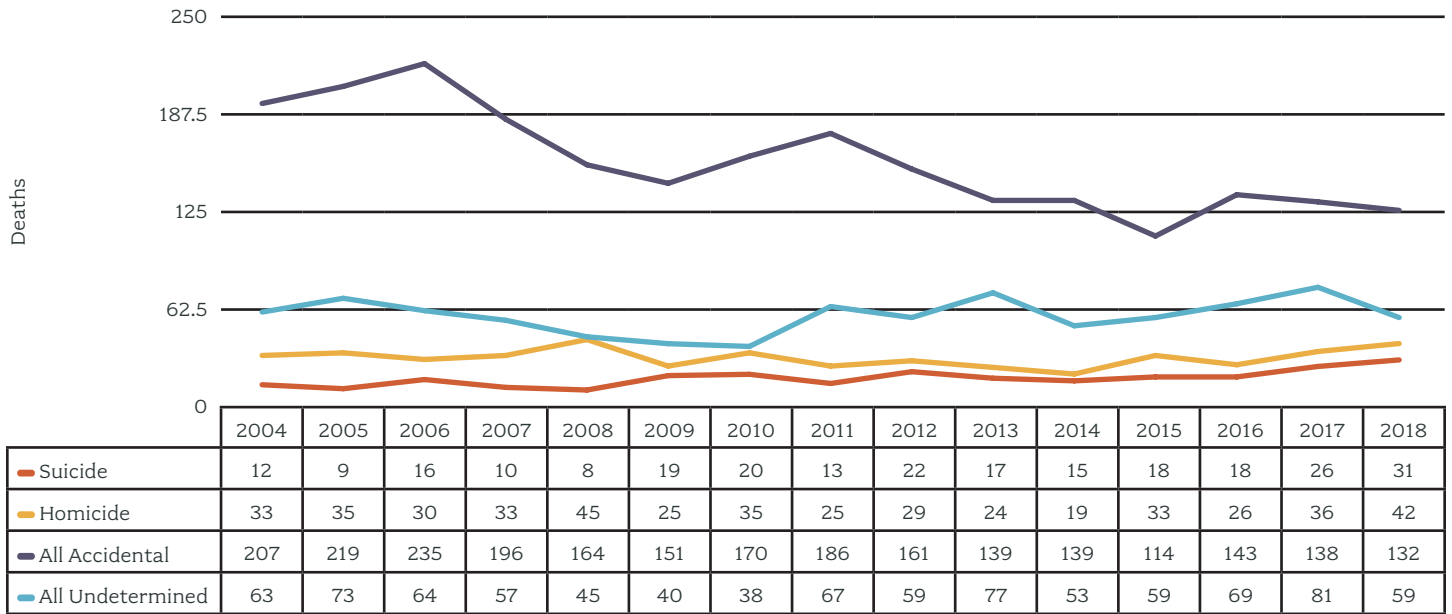
**Reviewed Child Death by Manner - 2018**



■ Accidents   
 ■ Undetermined   
 ■ Homicides  
■ Suicides   
 ■ Pending, Unknown, or Other

The following graph shows the trend of Alabama child deaths for the listed manners of death from 2004 to 2018.

**Major Child Death Manners - 2004 to 2018<sup>^</sup>**



<sup>^</sup>Causes of death pulled from death certificates and are based on the following ICD-10 codes: suicide causes of death from X60 to X84, homicide causes of death from X85 to Y09, accidental causes of death from V01 to X59, and undetermined causes of death from Y10 to Y34.



## Cause of Death Summary – 2017 and 2018 Reviewed Deaths

For the purposes of this report, the term cause of death refers to the disease, injury, or mechanism of action initiating the sequence of events that leads directly to death, or the circumstances of the accident or violence that produced the fatal injury.

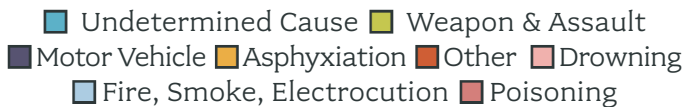
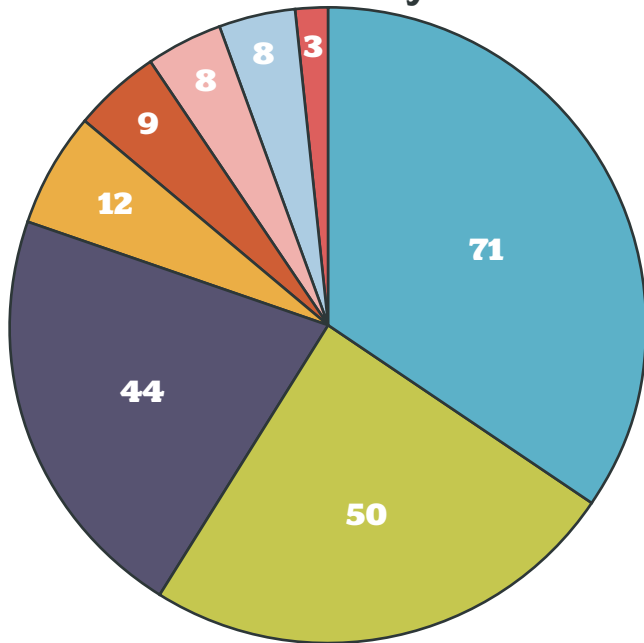
In 2017, the three most frequently reviewed causes of death due to injury were:

1. Assault and weapon-related causes (50 deaths).
2. Motor vehicle incidents (44 deaths).
3. Asphyxiation (12 deaths).

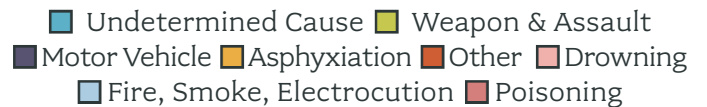
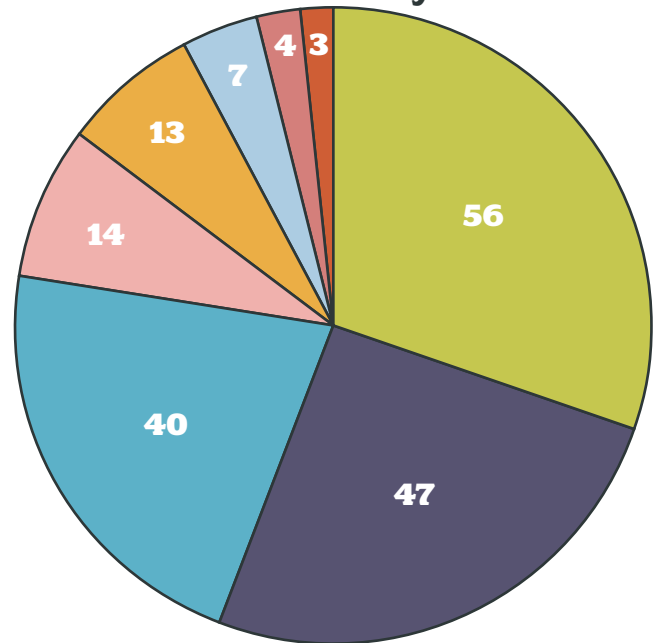
In 2018, the three most frequently reviewed causes of death due to injury were:

1. Assault and weapon-related causes (56 deaths).
2. Motor vehicle incidents (47 deaths).
3. Drowning (14 deaths).

**Reviewed Child Death by Cause - 2017**



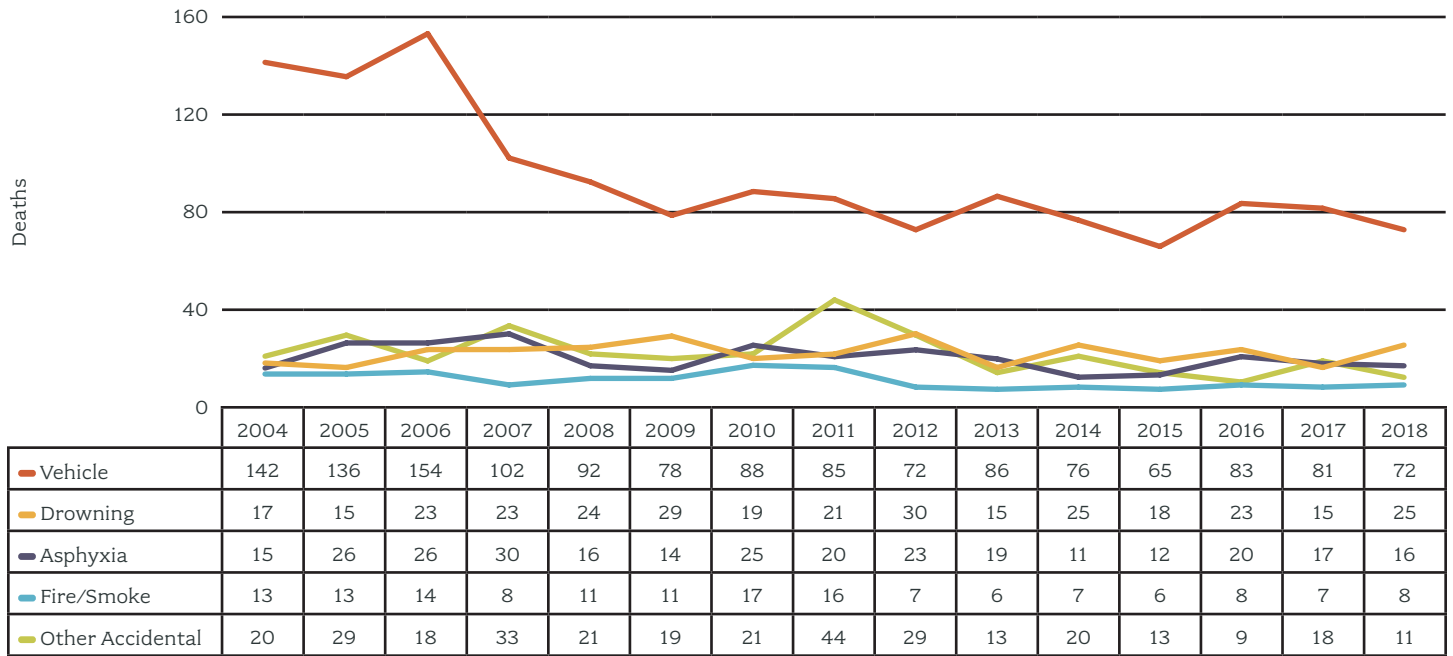
**Reviewed Child Death by Cause - 2018**



As undetermined causes of death are unable to be classified, they were not reported in the most frequent causes of death lists.

The following graph shows the trend of Alabama child deaths for the listed causes of death over the time period from 2004 to 2018.

**Major Causes of Accidental Child Death - 2004 to 2018<sup>^</sup>**



<sup>^</sup>Causes of death pulled from death certificates and are based on the following ICD-10 codes: vehicle cause of death from V01 to V95, drowning causes of death from W65 to W74, asphyxia causes of death from W75 to W84, fire and smoke-related causes of death from X00 to X09, and other accidental causes from W00 to W64, W85 to W99, and X10 to X59.

## Review of the Common Causes of Child Death in Alabama

### A. Firearm, Weapon, and Assault Deaths

This category includes deaths due to weapon-related injuries, either accidentally or intentionally inflicted. Types of weapons include firearms, sharp or blunt instruments, a person's body part, and explosive devices among others. The use of the weapons in this category may be determined as self-injury; the result of violence, such as gang-related activity; the result of aggressive behavior, such as bullying or a heated argument; or accidental, as in cases of a child playing with the weapon or showing it to friends.

From information collected and reviewed for 2017, there were 50 deaths from weapon and assault-related incidents currently identified among children in Alabama. In addition, there were 56 deaths from weapon and assault-related incidents currently identified and reviewed for 2018.

#### Cause of death:

2017

- In 32 reviewed weapon and assault cases, the child's death involved firearms:
  - In 18 reviewed deaths, a handgun was involved.
  - In 5 reviewed deaths, a long gun, such as a shotgun, hunting rifle, or assault rifle was involved.
  - In the remaining 9 deaths, the firearm involved was unknown.
- In 5 reviewed deaths, a person's body part was the weapon involved.
- In less than 5 reviewed deaths, a rope was the weapon involved.
- In less than 5 reviewed deaths, a child was playing with the firearm when the death occurred.

2018

- In 38 reviewed weapon and assault cases, the child's death involved firearms:
  - In 26 reviewed deaths, a handgun was involved.
  - In 6 reviewed deaths, a long gun, such as a shotgun, hunting rifle, or assault rifle was involved.
  - In the remaining 6 deaths, the firearm involved was unknown.
- In 5 reviewed deaths, a person's body part was the weapon involved.
- In 7 reviewed deaths, a child was playing with the firearm when the death occurred.

#### Firearm storage:

2017

- In 10 reviewed deaths, the firearm used was not stored or was in an unsecured location such as under a mattress, pillow, or unlocked cabinet.
- In 9 reviewed deaths, the firearm was stored loaded.
- In 5 reviewed deaths, the firearm was stored in the same location as the ammunition for the firearm.

2018

- In 7 reviewed deaths, the firearm used was not stored in a secure location.
- In 5 reviewed deaths, the firearm was stored loaded.
- In less than 5 reviewed deaths, the firearm was stored in the same location as the ammunition for the firearm.

**Owner of the firearm:**

2017

- In 8 reviewed deaths, the owner of the firearm was either the biological or step-parent of the child who died.
- In 5 reviewed deaths, the owner of the firearm was either a friend of the child, an acquaintance of the child, or a classmate of the child who died.

2018

- In 8 reviewed deaths, the owner of the firearm was either the biological, step-parent, or grandparent of the child who died.
- In 5 reviewed deaths, the owner of the firearm was either the child themselves, a sibling, a friend of the child, or a classmate of the child who died.

**B. Homicides and Suicides**

From information collected and reviewed for 2017, there were 18 suicides and 29 homicides currently identified among children in Alabama. In addition, there were 21 suicides and 35 homicides currently identified and reviewed for 2018.

**Homicide:**

2017

- There were 29 reviewed homicide: and all 29 deaths were the result of weapon or assault-related causes of death.

2018

- There were 35 reviewed homicides and of these: 32 were the result of weapon or assault-related causes of death while 3 were due to other causes of death.

**Suicide:**

2017

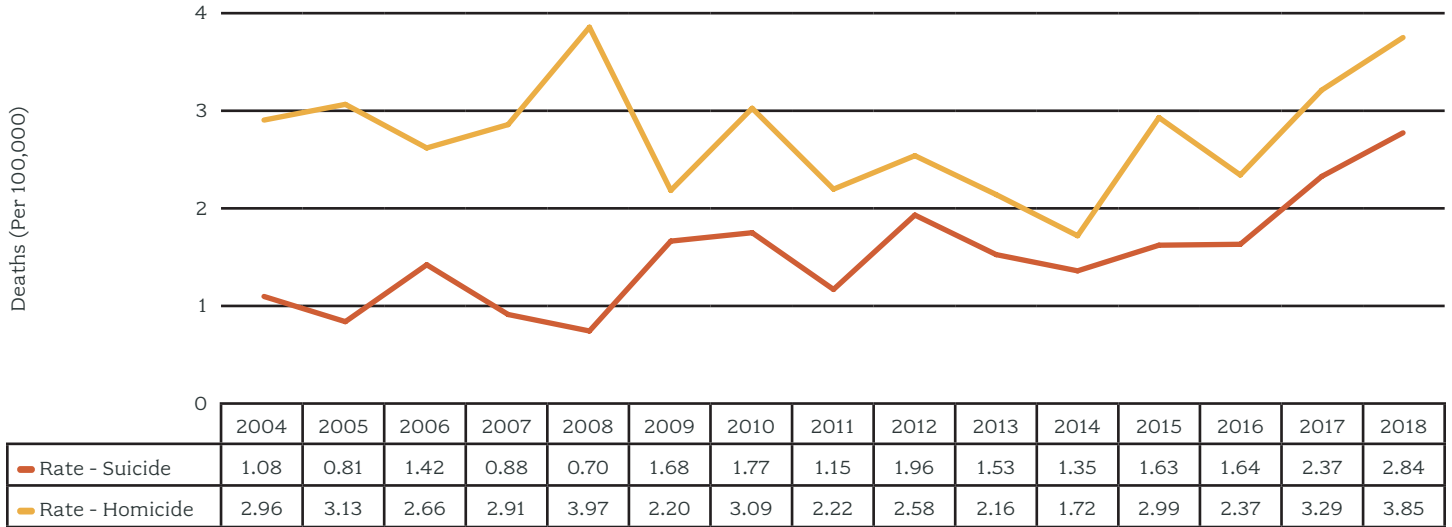
- There were 18 reviewed suicides and of these: 15 were the result of weapon or assault-related causes of death while 3 were due to other causes of death.

2018

- There were 21 reviewed suicides and of these: 13 were the result of weapon or assault-related causes of death, less than 5 were due to asphyxiations, and the rest were due to other causes of death.

As seen in the following graph, the homicide rate among children was on a gradual decline despite periodic spikes in rate until 2014, at which time the rate began a relatively consistent climb. Conversely, suicide rates have been on an upward trend since 2004 with fluctuations from year to year.

**Rate of Violent Death Among Children - 2004 to 2018**



<sup>^</sup>Causes of death pulled from death certificates and are based on the following ICD-10 codes: suicide causes of death from X60 to X84, and homicide causes of death from X85 to Y09. Population counts gathered from CDC WONDER - <https://wonder.cdc.gov/ucd-icd10>.

**C. Motor Vehicle-related Deaths**

This category includes all deaths occurring to children who are drivers, passengers, pedestrians, or occupants of all forms of vehicles, including bicycles, motorcycles, all-terrain vehicles (ATVs), trains, etc. The manner of death is usually accidental but can also include suicides or homicides.

From information collected and reviewed for 2017, there were 43 deaths from motor vehicle-related incidents currently identified among children in Alabama. In addition, there were 47 deaths from motor vehicle-related incidents currently identified and reviewed for 2018.

**Child position in or around the vehicle:**

2017

- In 20 reviewed deaths, the child was a passenger.
- In 12 reviewed deaths, the child was the driver of the vehicle.
- In 8 reviewed deaths, the child was a pedestrian.
- In 3 reviewed deaths, the child’s position in the car was unknown.

2018

- In 24 reviewed deaths, the child was a passenger.
- In 12 reviewed deaths, the child was the driver of the vehicle.
- In 8 reviewed deaths, the child was a pedestrian.
- In 3 reviewed deaths, the child’s position in the car was unknown.

**Circumstances contributing to the motor vehicle incident:**

2017

- In 11 reviewed deaths, speeding was reported as a contributing factor.
- In 6 reviewed deaths, drug or alcohol use was reported as a contributing factor.
- In 6 reviewed deaths, distracted driving was reported as a contributing factor.
- In less than 5 reviewed deaths, reckless driving was reported as a contributing factor.

2018

- In 11 reviewed deaths, speeding was reported as a contributing factor.
- In 7 reviewed deaths, drug or alcohol use was reported as a contributing factor.
- In less than 5 reviewed deaths, distracted driving was reported as a contributing factor.
- In less than 10 reviewed deaths, reckless driving was reported as a contributing factor.
- In 5 reviewed deaths, driver inexperience was reported as a contributing factor.

**Seatbelt and other restraint use:**

2017

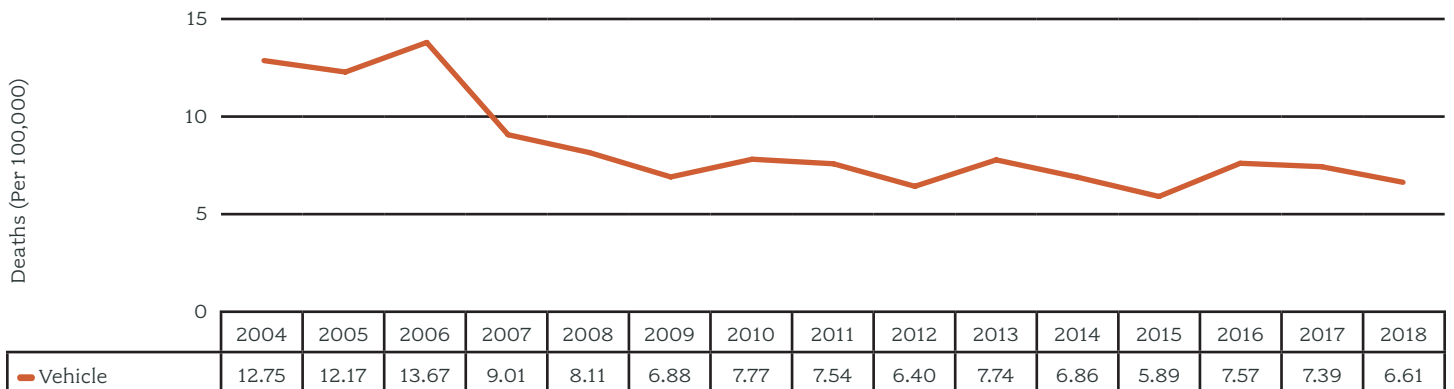
- In 5 reviewed deaths, a car seat or booster seat was present and used correctly at the time of the incident.
- In less than 5 reviewed deaths, a car seat or booster seat was reported as needed but was not available at the time of the incident.
- In 7 reviewed deaths, a shoulder belt was available but was not used at the time of the incident.

2018

- In less than 5 reviewed deaths, a car seat or booster seat was needed and present but was either not used at the time of the incident or was used incorrectly.
- In less than 5 reviewed deaths, a car seat was present and used correctly at the time of the incident.
- In 7 reviewed deaths, a car seat or booster seat was needed but was not available at the time of the incident.
- In 8 reviewed deaths, a shoulder belt was available but was not used at the time of the incident.

As seen in the following graph, the rate of child deaths from motor vehicle incidents has been on a general downward trend since 2006, though the rate has leveled off and been slow to decrease significantly since 2009.

**Rate of Child Vehicle Accidents - 2004 to 2018<sup>^</sup>**



<sup>^</sup>Causes of death pulled from death certificates and are based on the following ICD-10 codes: vehicle-related causes of death from V01 to V95. Population counts gathered from CDC WONDER - <https://wonder.cdc.gov/ucd-icd10>.

## **D. Sudden Unexpected Infant Death and Sleep-related Deaths**

Sleep-related and SUID are deaths that can be attributed to specific causes or factors in the sleep environment after investigation and are distinct from Sudden Infant Deaths which cannot be attributed to any established cause or contributing factor. These deaths typically occur in children under 12 months of age, just as SIDs, and are commonly classified as undetermined manners of death due to the difficulty of establishing convincing contexts of injury for such deaths. These deaths may be contributed to by improper sleep surfaces, co-sleeping, toys or other objects in the sleep environment, and various other hazards to the child's health.

From information collected and reviewed for 2017, there were 21 SUID and 22 sleep-related deaths currently identified among children in Alabama. In addition, there were 15 SUID and 19 sleep-related deaths currently identified and reviewed for 2018.

### **Cause of death – sleep-related:**

2017

- In 7 reviewed deaths, the cause of death was unintentional asphyxia.
- In the remaining 15 sleep-related deaths, sleep environment was found to contribute to the deaths, but a specific cause of death was unable to be determined conclusively.

2018

- In 9 reviewed deaths, the cause of death was unintentional asphyxia.
- In the remaining 10 sleep-related deaths, sleep environment was found to contribute to the deaths, but a specific cause of death was unable to be determined conclusively.

The cause of death for reported and reviewed SUIDs were marked as undetermined for both 2017 and 2018.

### **Sleep surface:**

2017

- In 19 reviewed sleep-related deaths and 14 SUID, the child was not sleeping on a recommended sleep surface (such as a crib or bassinet).

2018

- In 13 reviewed sleep-related deaths and in 15 SUID, the child was not sleeping on a recommended sleep surface (such as a crib or bassinet).

### **Co-sleeping:**

2017

- In 18 reviewed sleep-related deaths and 11 SUID, the child was co-sleeping with either an adult or another child on the same sleep surface.

2018

- In 14 reviewed sleep-related deaths and 7 SUID, the child was co-sleeping with either an adult or another child on the same sleep surface.

As seen in the following graph, the rate of SIDs and SUIDs have been increasing for the time period between 2004 and 2018. Part of this increase may be due to increasing knowledge regarding these types of child death and better classification. As a result, deaths that previously would have been classified as undetermined manners of death are now classified as SIDs or SUIDs under the current system.

AVDRS has endeavored to increase the proper use of SIDs and SUIDs classifications and has worked with coroners, medical examiners, law enforcement, and others within Alabama to educate people classifying death in this use. Only through the proper classification of these types of death can an accurate view of the burden that SIDs and SUIDs place on Alabama children be measured and addressed.

**Rate of SIDS/SUID - 2004 to 2018<sup>^</sup>**



<sup>^</sup>Causes of death pulled from death certificates and are based on the following ICD-10 codes: SIDS, SUID, and other ill-defined causes of death R95 and R99. Population counts gathered from CDC WONDER - <https://wonder.cdc.gov/ucd-icd10>.



## State Child Death Review Team Members

**Scott Harris, M.D., M.P.H.**  
State Health Officer/Chair

**Scott Anderson**  
Alabama District Attorney's  
Association Appointee

**Tom Anderson**  
Alabama District Attorney's  
Association Appointee

**Jannah M. Bailey**  
Private Citizen  
Governor Appointee

**Lynn Beshear, Commissioner**  
Alabama Department  
of Mental Health

**Melanie Bridgeforth**  
Private Citizen  
Governor Appointee

**Nancy Buckner, Commissioner**  
Alabama Department  
of Human Resources

**Christina Cochran, M.D.**  
Medical Association of the  
State of Alabama Appointee

**Gregory Davis, M.D.**  
Coroner/Medical Examiner  
Jefferson County

**Angelo Della Manna, Director**  
Alabama Department  
of Forensic Sciences

**Senator Gerald Dial**  
Chair  
Senate Health Committee

**Candice Dye, M.D.**  
Alabama Department of Public  
Health Appointee

**Sheriff Bill Franklin**  
Alabama Sheriff's Association  
Appointee

**Reverend Joseph Godfrey**  
Clergy  
Governor Appointee

**Timothy Kimbrell**  
Alabama Coroners  
Association Appointee

**Marian Loftin**  
Private Citizen  
Governor Appointee

**Sallye Longshore**  
Private Citizen  
Governor Appointee

**Katie Beth McCarthy**  
Network of Children's  
Advocacy Centers Appointee

**Chris Newlin**  
Private Citizen  
Governor Appointee

**Marsha Raulerson, M.D.**  
Alabama Academy  
of Pediatrics Appointee

**Colonel John E. Richardson**  
Director  
Alabama Department  
of Public Safety

**David Rydzewski, M.D.**  
Alabama Department  
of Forensic Sciences Appointee

**Gina South**  
Network of Children's  
Advocacy Centers Appointee

**Michael Sparks, Director**  
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of Forensic Sciences

**Chief Jerry Taylor**  
Alabama Association of  
Chiefs of Police Appointee

**Michael A. Taylor, M.D.**  
Private Citizen  
Governor Appointee

**Sheriff Bobby Timmons**  
Executive Director  
Alabama Sheriff's Association

**Charles Ward, Director**  
Alabama Department  
of Public Safety

**Representative April Weaver**  
Chair  
House Health Committee

**Jerry H. Williams**  
Alabama Coroners  
Association Appointee

### Key Dates for 2020

**State Team Meetings**  
July 23, 2020, and October 22, 2020





