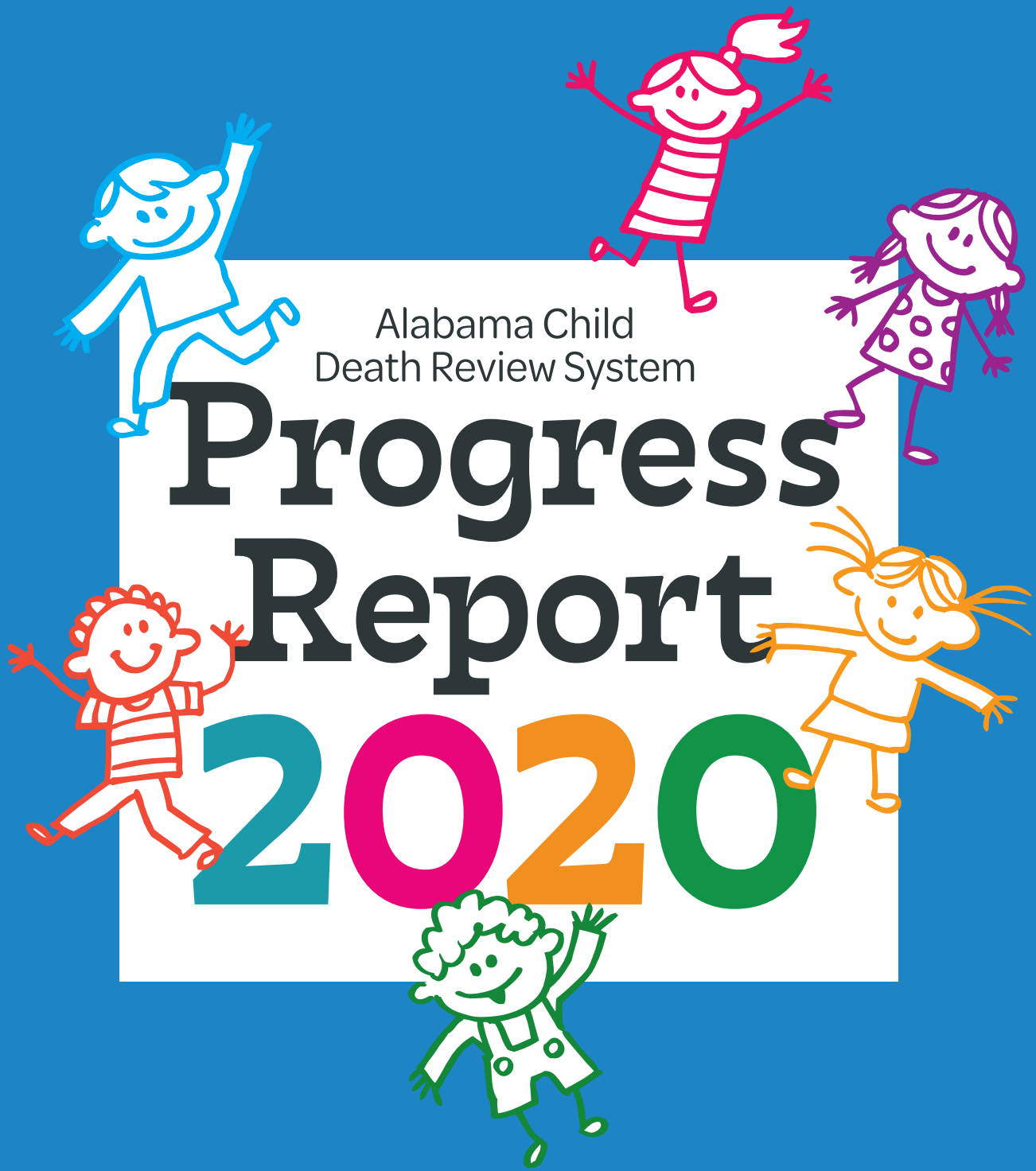
Alabama Child
Death Review System

Progress Report 2020



ACDRS
ALABAMA
CHILD DEATH
REVIEW SYSTEM

ALABAMA
PUBLIC
HEALTH

DEATHS AMONG CHILDREN IN ALABAMA
ALABAMA CHILD DEATH REVIEW SYSTEM

Progress Report - 2020

Scott Harris, M.D., M.P.H.
State Health Officer

Michele Jones, M.S.
Chief of Staff

Jamey Durham, M.B.A.
Director
Bureau of Prevention, Promotion, and Support

Gloria Davis, L.M.S.W.
Director
Surveillance Branch

Kimberly Gordon, L.I.C.S.W
Program Manager
Alabama Child Death Review System

Nicole Lovvorn, L.B.S.W.
Program Coordinator
Alabama Child Death Review System

Stuart Hoyle, M.P.H.
Epidemiologist
Surveillance Branch

Alabama Child Death Review System
The RSA Tower, Suite 960
201 Monroe Street, Montgomery, AL 36104
(334) 206-2085 • (334) 206-3723 (Fax)
alabamapublichealth.gov/cdr

Alabama Department of Public Health
Bureau of Prevention, Promotion, and Support
Surveillance Branch

This report is based on the most recent data available as of January 2023.

Table of Contents

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 2,150 child deaths since 2010. 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 that makes these efforts possible on behalf of Alabama's children.

In 2020, there were 694 infant and child deaths in the state of Alabama.* Every child's 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 sleep-related deaths; firearm, weapon, and assault-related deaths; and motor vehicle incidents as the leading causes of death for 2020. 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 died in Alabama with this report. Hopefully, these efforts will lead to a better understanding of how Alabama can be a safer, healthier place for children.

Three Tiers of the Alabama Child Death Review System

A. ADPH Central Office Staff

The State Child Death Review Office is located within ADPH, Bureau of Prevention, Promotion, and Support, for administrative and budgetary purposes. The ACDRS Central Office consists of four staff members: an ACDRS Program Manager, a Program Coordinator, a 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 developing 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 of the American Academy of Pediatrics.

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

- 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 that make a child at risk for injury or death.
- Collect and share information among State Team members and agencies that 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 fatalities.
- 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. 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 an 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 SCDRT 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 each one. LCDRTs accomplish this purpose by completing the following tasks:

- The identification of factors that put a child at risk of injury or death.
- The dissemination of information among the agencies that 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 establishing additional services and systems to fill gaps in the community.
- The identification of trends relevant to unexpected/unexplained child injury and death.
- The education of the 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 fatalities.

LCDRT reviews are essential in formulating recommendations that will modify risk factors at both local and state levels. Furthermore, LCDRT reviews of child deaths occurring in 2020 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 over 5,300 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 (SUID) Investigation (SUIDI) Team, the Booster Seat Advocacy Program, and the Healthy Start: Never Ever Shake a Baby Program have been developed.

A. SUID Investigation Training

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 re-enactments, 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 completing the training, investigators were provided the necessary tools and knowledge to complete SUIDI accurately. Standardized reporting forms from CDC and SUIDI demonstration dolls were distributed to investigators as investigative tools. The provided training, materials, and tools were based on a nationally established CDC curriculum and aligned

with CDC guidelines. These training 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, by searching for SUID and Safe Sleep.

B. Car and Booster Seat Clinics

ADPH has Child Passenger Safety Technicians certified through Safe Kids to educate caregivers on properly installing 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 2019, 1,777 seats were provided to children of eligible families, and in 2020, an additional 41 seats were distributed. The precipitous drop in car seat distribution was due to the emergence of Coronavirus Disease 2019 (COVID-19) and the interruption of car seat clinics around the state. More about this topic, information about state law, and links to informational materials can be found on the ADPH website, alabamapublichealth.gov, by searching for child restraints or car seats.

C. Healthy Start: Never Ever Shake a Baby

This prevention program targets one of the most serious forms of child abuse in children, Shaken Baby Syndrome (SBS). ADPH and ACDRS provide funding to The Family Center of Mobile to maintain a hospital-based prevention program at the University of South Alabama Health Children's & Women's Hospital. The program focuses on reducing the stress of a new baby on the family and teaching parents how to calm a crying infant using Dr. Harvey Karp's "5S" method. Nearly all babies are shaken because of uncontrollable crying and the parent's frustration at their inability to calm the child. The program is offered directly to the patient while in the hospital, and the mother and other family members are encouraged to take the 30-minute class before leaving care. The class ends with the 8-minute video "Portrait of Promise," which details the devastating effects of SBS. Parents are asked to sign an affidavit stating they took the workshop and understand the dangers of shaking their child. They also promise to share the material provided with other caregivers for their new child. In 2019, the prevention program served 473 families and 43 families in 2020. The sharp drop was due to COVID-19 and limitations to entering the hospital.

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.

2020 Recommendations to the Governor and Legislature

SCDRT recommends the following ongoing prevention strategies:

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.
- Educate new parents 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 Driver's License (GDL) 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 2020, ACDRS reviews were completed for 205 child deaths, or 71.7 percent of the deaths eligible for review. Cases that meet the 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. The manner of death is classified based on the circumstances surrounding death. Cause of death refers to the primary underlying cause of 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 manners of death categories reviewed by ACDRS are accidents, homicides, suicides, undetermined manner, and pending/unknown manners of death.

Manner of Death Update for 2020

2020 reviews of qualifying deaths showed:

- Accidents (unintentional injury deaths) accounted for 90 reviewed deaths.
- Homicides accounted for 26 reviewed deaths.
- Suicides accounted for 13 reviewed deaths.
- Undetermined manner accounted for 58 reviewed deaths.
- Pending or unknown manners accounted for 7 reviewed deaths.

Eleven additional deaths were reviewed and determined to be natural deaths.

Cause of Death Update for 2020

The circumstantial information in the following sections is not mutually exclusive of each other. A single death could involve a combination of circumstances listed below each cause of death.

Firearm, Weapon, and Assault-related Deaths

In 42 reviewed 2020 deaths, a firearm, weapon, or assault was involved:

- In 30 reviewed weapon and assault cases, the child's death involved firearms.
- In 23 reviewed deaths, handguns were involved.

Motor Vehicle Incidents

In 44 reviewed 2020 deaths, the child was involved in a fatal motor vehicle incident:

- In 24 reviewed motor vehicle deaths, the child was a passenger.
- In 12 reviewed motor vehicle deaths, the child was the driver of the motor vehicle.
- In 14 reviewed motor vehicle deaths, speeding contributed to the event that caused death.
- In 11 reviewed motor vehicle deaths, drugs or alcohol contributed to the event that caused death.
- In 8 reviewed motor vehicle deaths, a proper restraint was not in use at the time of the event.

Sleep-related Death and SUID

In 64 reviewed 2020 deaths, the child was sleeping or in the sleep environment at the time of death:

- In 50 reviewed sleep-related deaths, the child was not sleeping on a recommended sleep surface (such as a crib or bassinet).
- In 40 reviewed sleep-related deaths, the child was co-sleeping with an adult on the same sleep surface.

In 35 reviewed 2020 deaths, reviewers classified the incidents as Sudden Infant Death Syndrome (SIDS) or SUID:

- In 22 reviewed SIDS/SUID deaths, the sleep environment contributed to death.

Additional External Causes of Death

Drowning

In 4 reviewed 2020 deaths, drowning was the cause of death. Fortunately, this cause of death was not prevalent in Alabama during 2020, although the low count restricts most of the analysis available to the ACDRS Program.

Suffocation

In 24 reviewed 2020 deaths, asphyxiation was the cause of death, and 20 of those asphyxiations were determined to be sleep-related deaths caused by various hazards in the sleep environment.

Fires

In 10 reviewed 2020 deaths, fires were the cause of death:

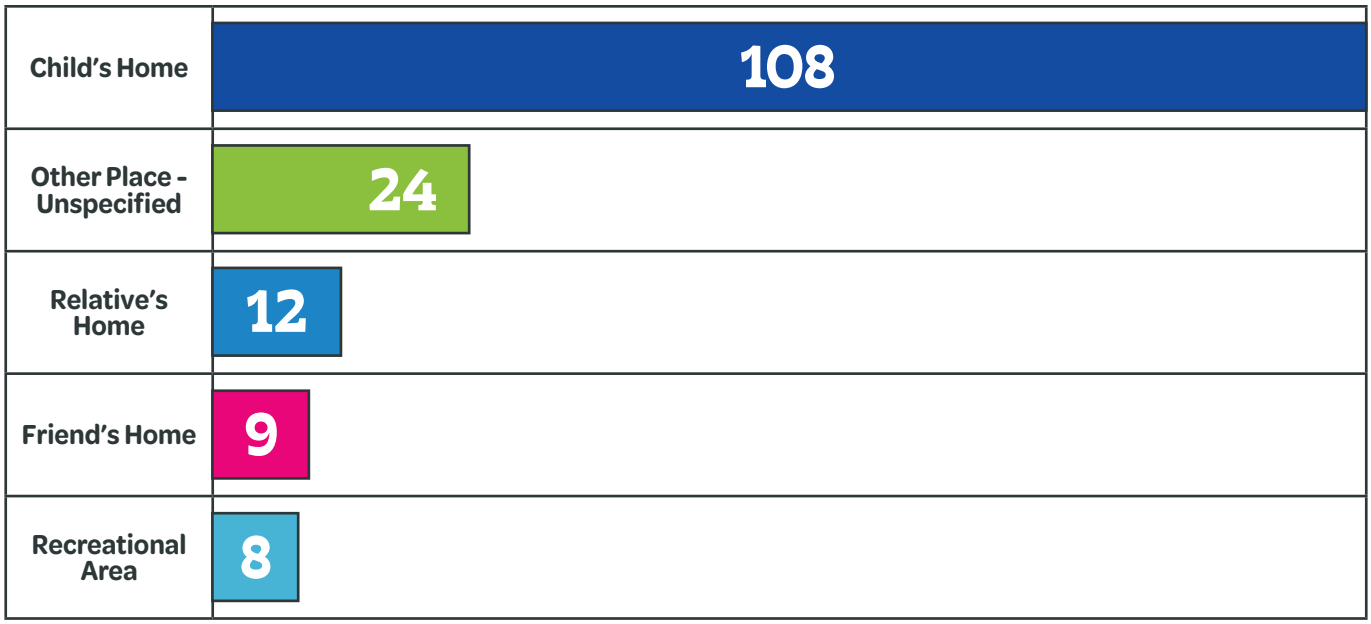
- In 8 reviewed deaths, the fire started in a trailer or mobile home.
- The most frequent cause of the fatal fire was space heaters, with five incidents.

Poisoning or Overdose

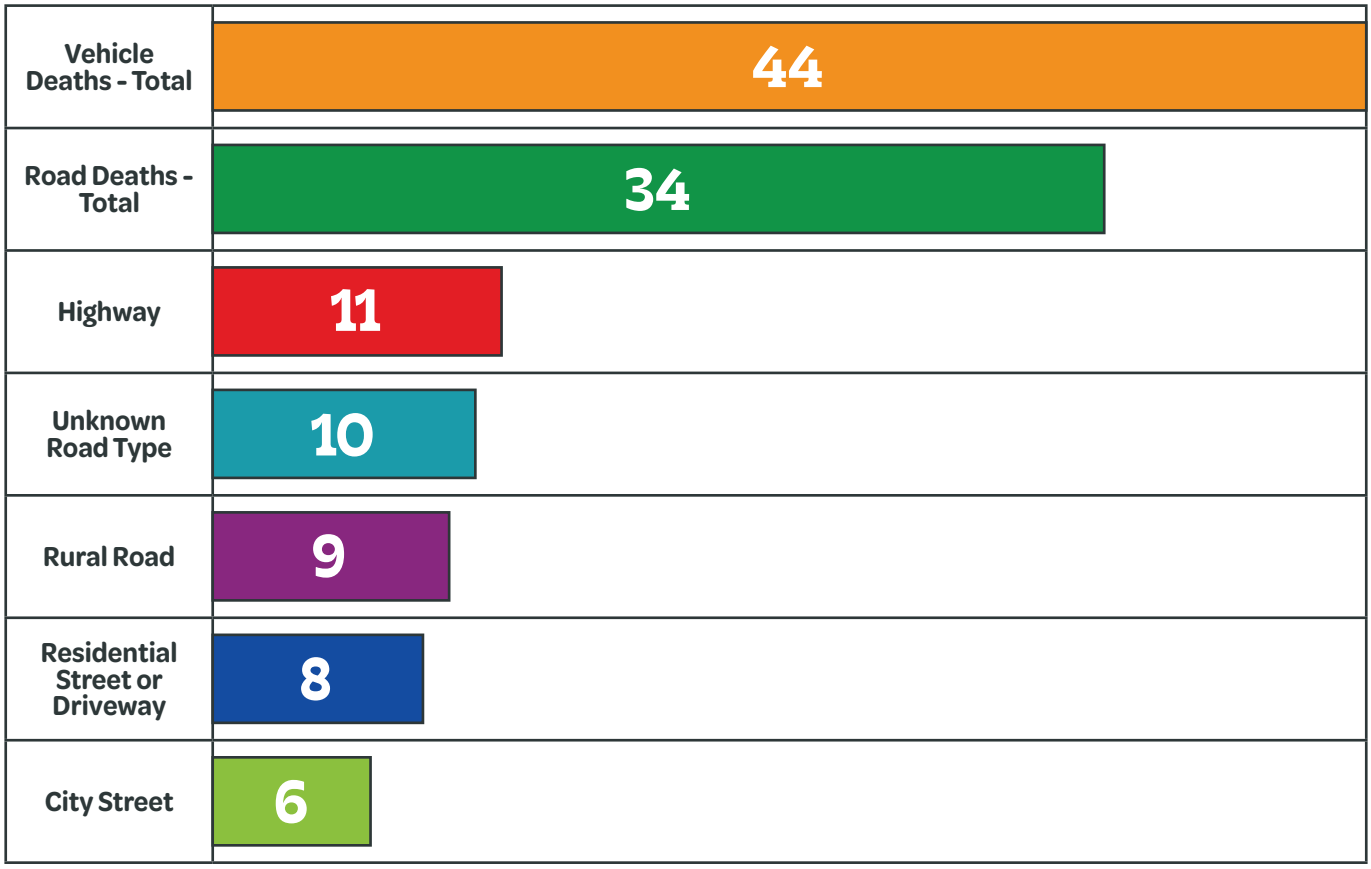
In less than 5 reviewed 2020 deaths, intentional or unintentional poisonings and overdoses were the cause of death. Fortunately, this cause of death was not prevalent in Alabama during 2020, although the low count restricts most of the analysis available to the ACDRS Program.

Location of Death

Location of Child's Death - 2020 Reviewed Deaths (Non-Vehicle Related)



Location of Fatal Motor Vehicle Incidents Involving a Child Death - 2020 Reviewed Deaths*



**Locations are not mutually exclusive. For example, a driveway at the child's home would be marked both "Driveway" and "Home."*

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. SCRDT acts on ACDRS issues through educational programs, informational publications, and other similar efforts.

Efforts to Increase Review Rates

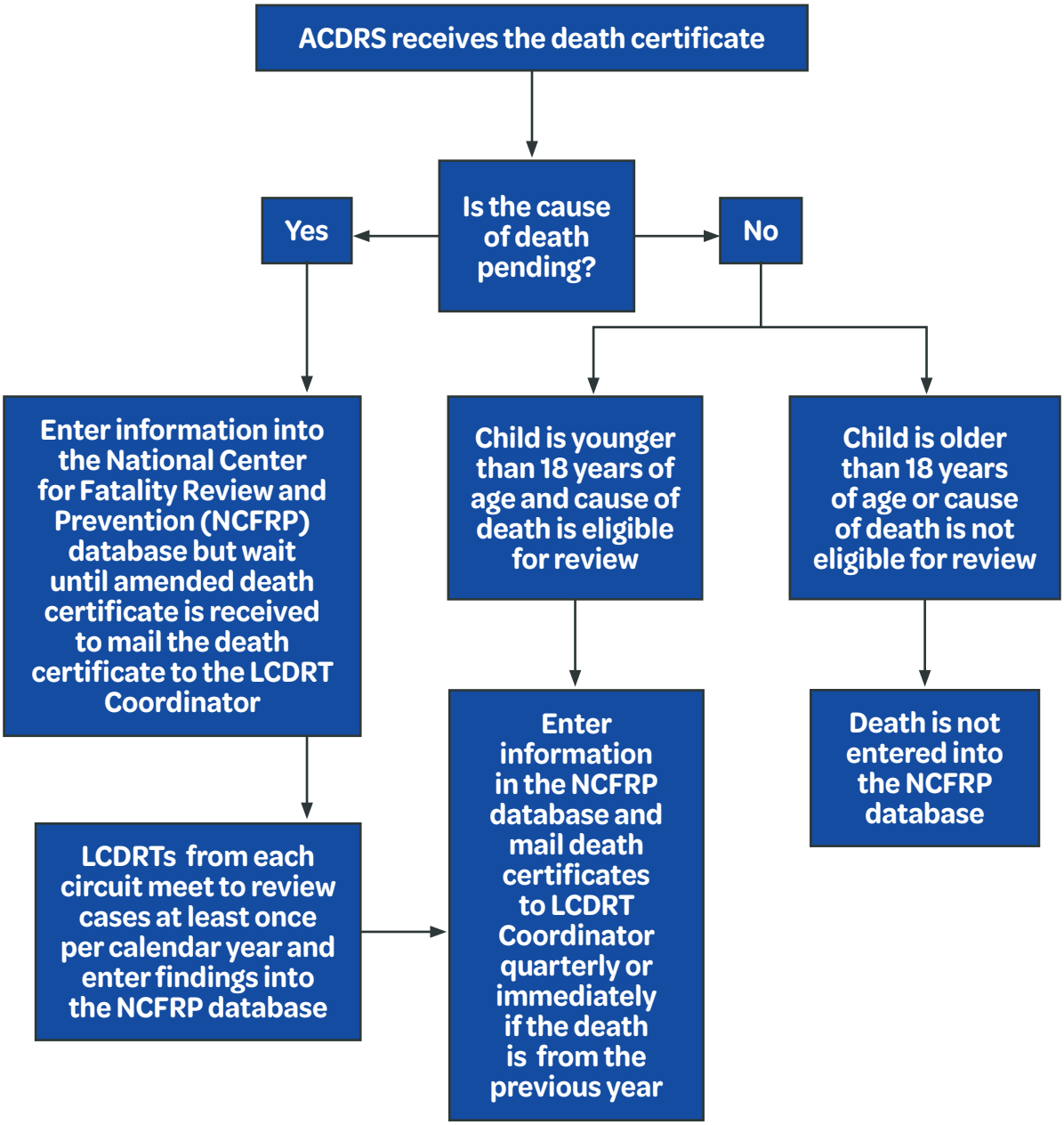
ACDRS Central Office staff:

- Maintain a constant flow of communication with local team coordinators.
- Attend local review team meetings and enter data when needed.
- Develop 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.

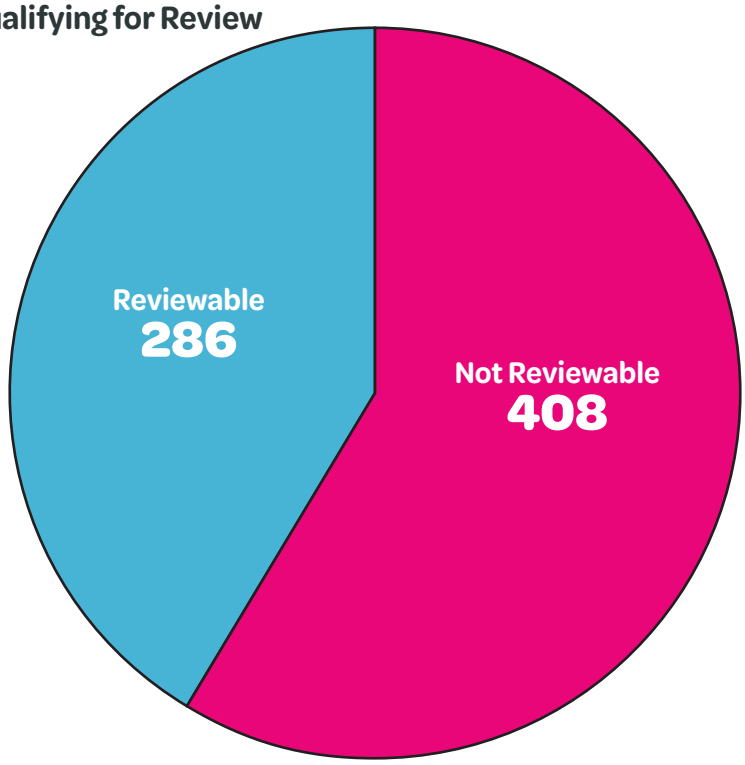

ACDRS receives the death certificate
Is the cause of death pending?
Yes
No
Enter information into the National Center for Fatality Review and Prevention (NCFRP) database but wait until amended death certificate is received to mail the death certificate to the LCDRT Coordinator
Child is younger than 18 years of age and cause of death is eligible for review
Child is older than 18 years of age or cause of death is not eligible for review
LCDRTs from each circuit meet to review cases at least once per calendar year and enter findings into the NCFRP database
Enter information in the NCFRP database and mail death certificates to LCDRT Coordinator quarterly or immediately if the death is from the previous year
Death is not entered into the NCFRP database

2020 Reviewed Child Deaths

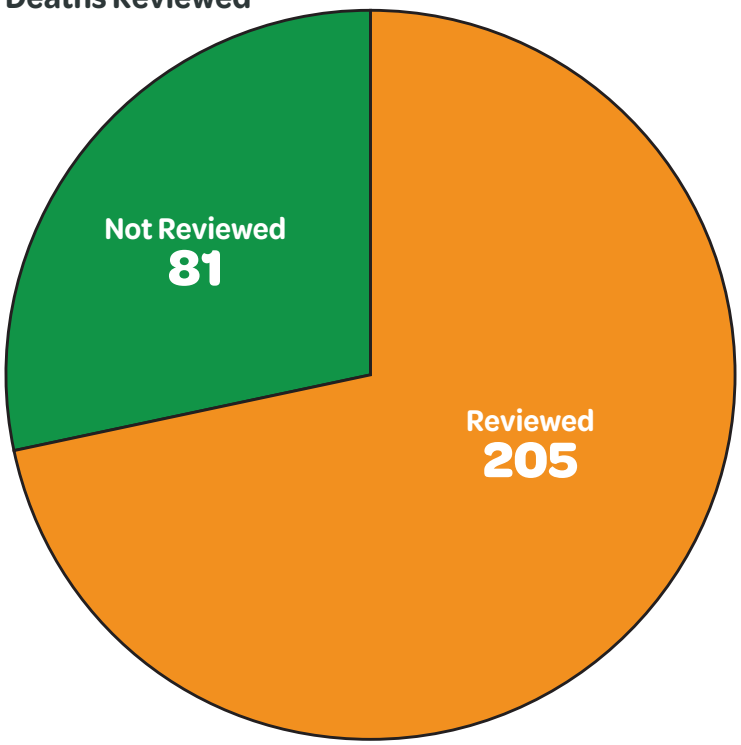
Local Child Death Review Team Success Rates:

There was a total of 694 child deaths in Alabama in 2020*, and 286 qualified for review under ACDRS guidelines. Of the qualified 2020 deaths, LCDRTs returned 205 completed reviews, or 71.7 percent.

2020 Child Deaths Qualifying for Review



2020 Qualifying Child Deaths Reviewed



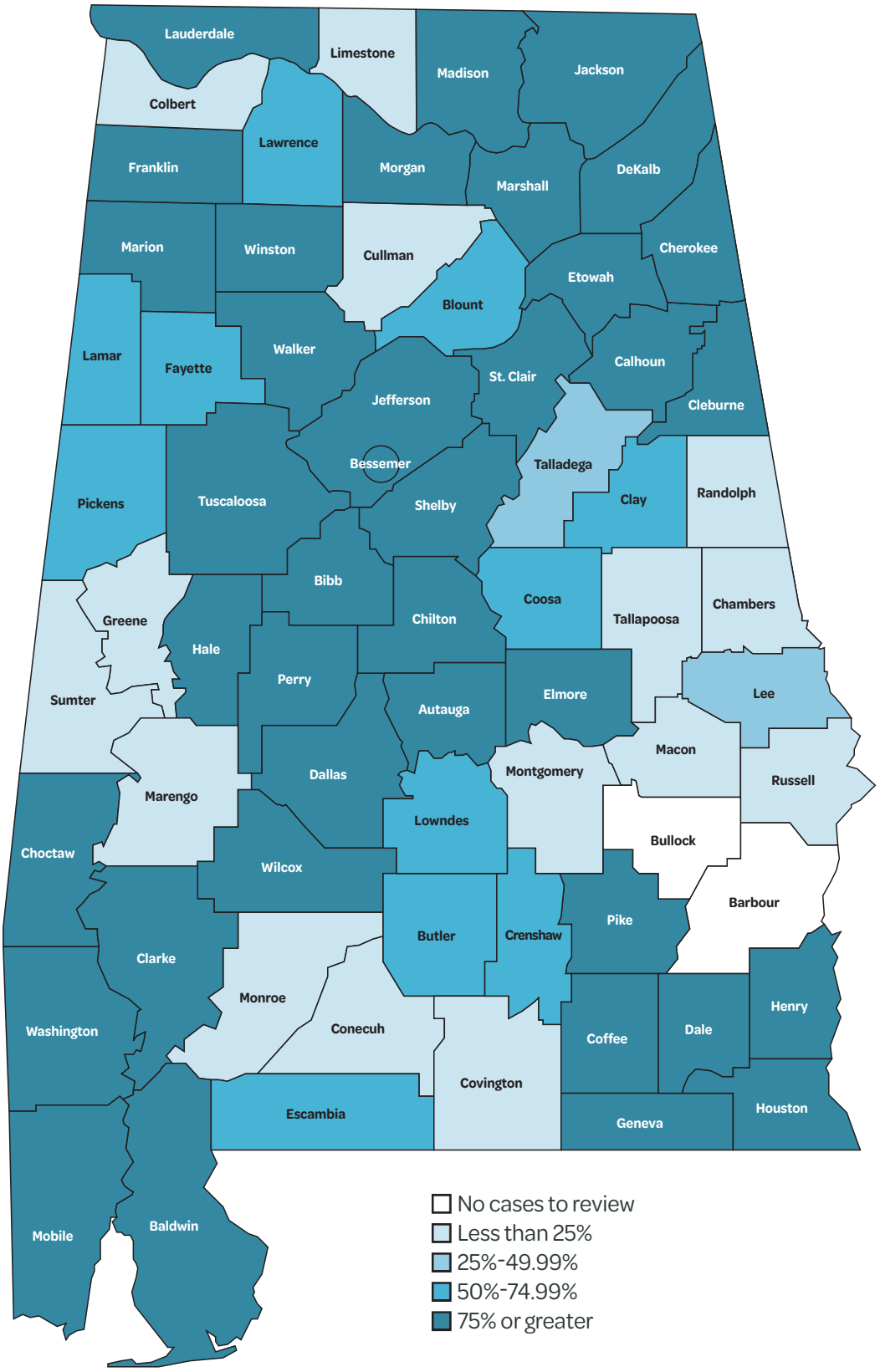
**CDC WONDER - https://wonder.cdc.gov/ucd-icd10-expanded.html*

LCDRT Recognition

The ACDRS goal is for each LCDRT to have a 100 percent case completion rate. The table below recognizes the outstanding efforts of several LCDRTs that achieved this goal. Unfortunately, pending death certificates often prevent LCDRTs from reaching 100 percent completion, as the death is difficult to review without the official cause and manner.

LCDRT Recognition		Completion (%)
Team 1	Choctaw, Clarke, and Washington	100.00
Team 4	Bibb, Dallas, Hale, Perry, and Wilcox	100.00
Team 7	Calhoun and Cleburne	100.00
Team 8	Morgan	100.00
Team 9	Cherokee and DeKalb	100.00
Team 10A	Jefferson	100.00
Team 10B	Bessemer	100.00
Team 11	Lauderdale	100.00
Team 12	Coffee and Pike	100.00
Team 14	Walker	100.00
Team 18	Shelby	100.00
Team 20	Henry and Houston	100.00
Team 27	Marshall	100.00
Team 28	Baldwin	100.00
Team 33	Dale and Geneva	100.00
Team 34	Franklin	100.00
Team 38	Jackson	100.00

2020 Review Completion Rate by County



LCDRT Recognition	
Team 1	Choctaw, Clarke, and Washington
Team 2	Butler, Crenshaw, and Lowndes
Team 3	Barbour and Bullock
Team 4	Bibb, Dallas, Hale, Perry, and Wilcox
Team 5	Chambers, Macon, Tallapoosa, and Randolph
Team 6	Tuscaloosa
Team 7	Calhoun and Cleburne
Team 8	Morgan
Team 9	Cherokee and 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, and Sumter
Team 18	Shelby
Team 19	Autauga, Chilton, and Elmore
Team 20	Henry and Houston
Team 21	Escambia
Team 22	Covington
Team 23	Madison
Team 24	Fayette, Lamar, and Pickens
Team 25	Marion and 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 and Geneva
Team 34	Franklin
Team 35	Conecuh and Monroe
Team 36	Lawrence
Team 37	Lee
Team 38	Jackson
Team 39	Limestone
Team 40	Clay and Coosa
Team 41	Blount

Alabama Child Death Trend Rates from 2010 to 2020

Trends in Rate of Death by Manner and Race

As the following graphs indicate, African American and Caucasian children suffer from a disproportionately higher rate of death depending on their manner of death. African American children usually suffer a much higher rate of death from homicide, and Caucasian children generally suffer a higher rate of suicide. Regarding accidental manners of death, African American and Caucasian rates of death vary from year to year. In 2020, the rate of death from accidental manners was higher for African American children, a change from 2019 when Caucasian children suffered a higher rate of death.

In the following graphs of race and manner of death, certain races and ethnicities were excluded due to extremely small counts of related deaths, which triggered ACDRS' internal suppression rules. This measure preserves the confidentiality of the data collected by ACDRS.

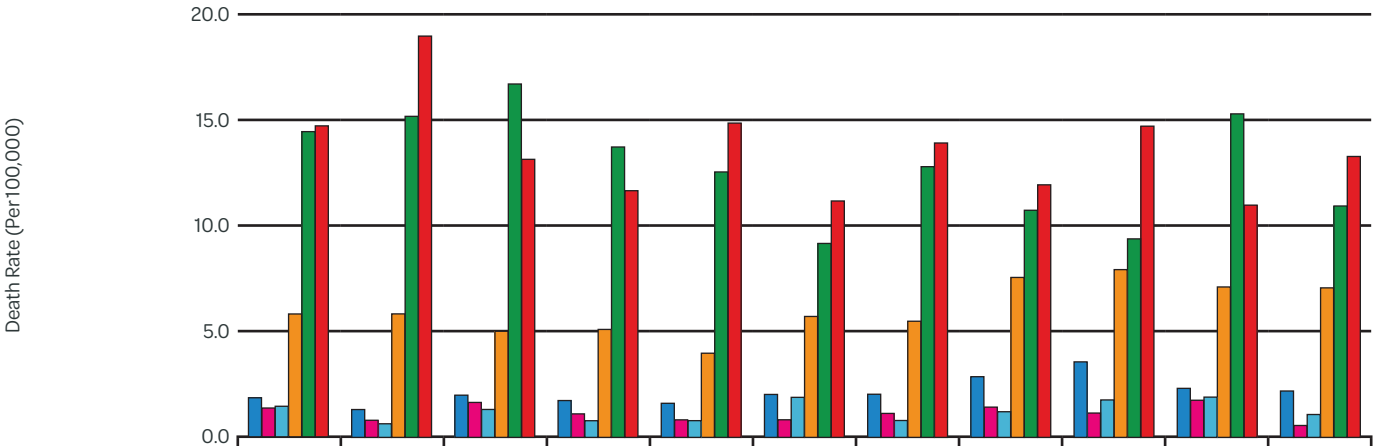
The rates depicted in the following graphs are calculated by dividing the number of an affected population, such as child deaths, by the total number of children in Alabama and then multiplying by 100,000 to normalize the calculation and allow easy comparisons between different races and ethnicities.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

(# Child Deaths / Total # of Children in Alabama) × 100,000 = Rate

An example of a rate calculation for 2020:

(45 African American Accidental Deaths / 337,717 African American Children in Alabama*) × 100,000 = 13.3 African American Accidental Child Deaths per 100,000 in 2020

Rate of Death by Manner and Race - 2010-2020^

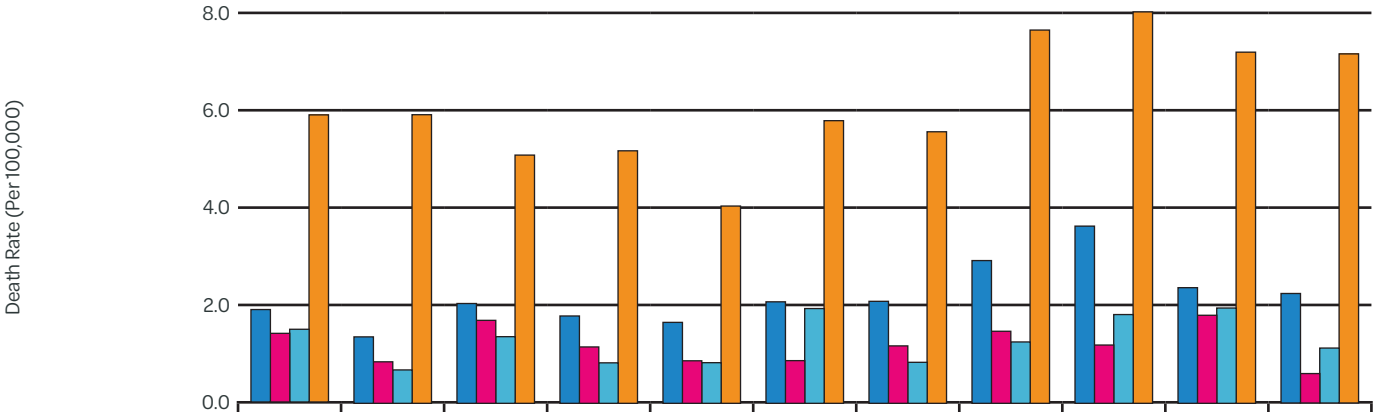


	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
W Suicide Rate	1.9	1.35	2.0	1.8	1.6	2.1	2.1	2.9	3.6	2.3	2.2
B Suicide Rate	1.4	0.8	1.7	1.1	0.9	0.9	1.2	1.5	1.2	1.8	0.6
W Homicide Rate	1.5	0.7	1.4	0.8	0.8	1.9	0.8	1.2	1.8	1.9	1.1
B Homicide Rate	5.8	5.9	5.1	5.1	4.0	5.8	5.5	7.6	8.0	7.1	7.1
W Accident Rate	14.5	15.2	16.8	13.8	12.6	9.2	12.8	10.8	9.4	15.3	11.0
B Accident Rate	14.7	19.0	13.2	11.7	14.9	11.2	14.0	12.0	14.8	11.0	13.3

**CDC WONDER - https://wonder.cdc.gov/ucd-icd10-expanded.html*

^CDC WONDER. Causes of death are 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.

Rate of Death by Violent Manner and Race 2010-2020^

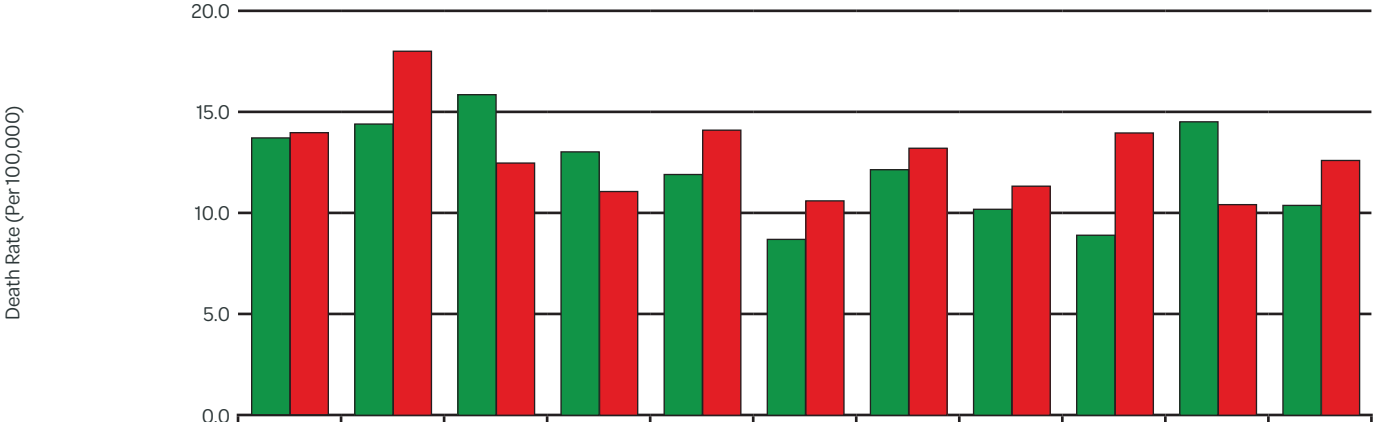


	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
W Suicide Rate	1.9	1.35	2.0	1.8	1.6	2.1	2.1	2.9	3.6	2.3	2.2
B Suicide Rate	1.4	0.8	1.7	1.1	0.9	0.9	1.2	1.5	1.2	1.8	0.6
W Homicide Rate	1.5	0.7	1.4	0.8	0.8	1.9	0.8	1.2	1.8	1.9	1.1
B Homicide Rate	5.8	5.9	5.1	5.1	4.0	5.8	5.5	7.6	8.0	7.1	7.1

As shown in the preceding graph, African American children suffer a significantly larger rate of death from homicide, and Caucasian children suffer a higher rate of suicide. The rate of homicide in African American children is drastically higher than that of Caucasian children and was increasing for the period between 2014 and 2018. The rate of homicide for African American children showed a decrease in 2019, and a slight decrease further in 2020. The upward trend for homicides within the population of Caucasian children was present from 2016 to 2018, but a decrease in homicide rates was observed in both 2019 and 2020.

The rate of suicide for Caucasian children increased each year from 2014 to 2018, as shown in the preceding graph. This upward trend amongst Caucasian suicides stopped in 2019, and a decline in suicide rates was observed in 2020. Among African American children, suicide rates increased each year from 2016 to 2019 and have declined in 2020.

Rate of Accidental Death by Race 2010-2020^



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
W Accident Rate	14.5	15.2	16.8	13.8	12.6	9.2	12.8	10.8	9.4	15.3	11.0
B Accident Rate	14.7	19.0	13.2	11.7	14.9	11.2	14.0	12.0	14.8	11.0	13.3

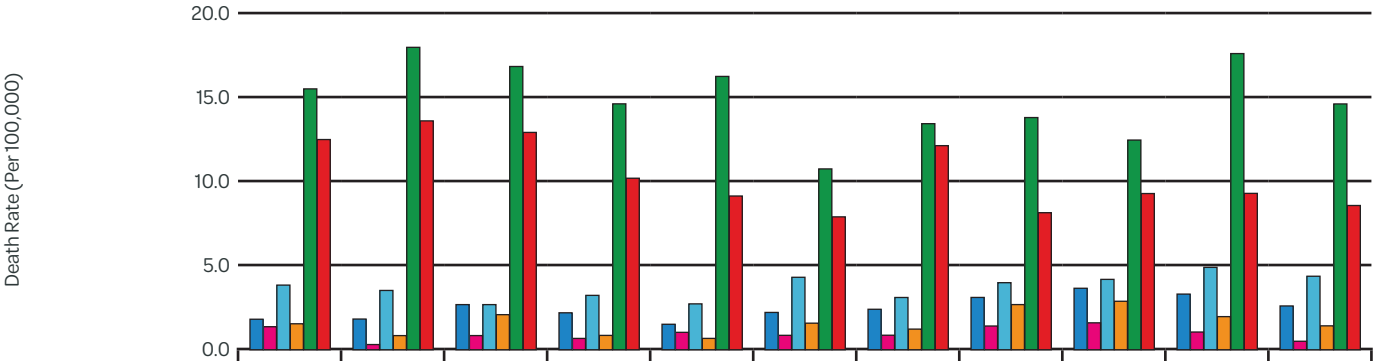
As the preceding graph indicates, African American and Caucasian children often suffer from differing rates of accidental death depending on the year. Consistently, accidental death rates among children have surpassed the rates of death for violent manners but have shown a general downward trend since 2011. Rates based on race fluctuate from year to year, and this can be observed in the changes from 2018 to 2019, and from 2019 to 2020, as Caucasian and African American children switched leading positions regarding the rate of accidental death.

^CDC WONDER. Causes of death are 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.

Trends in Rate of Death by Manner and Gender

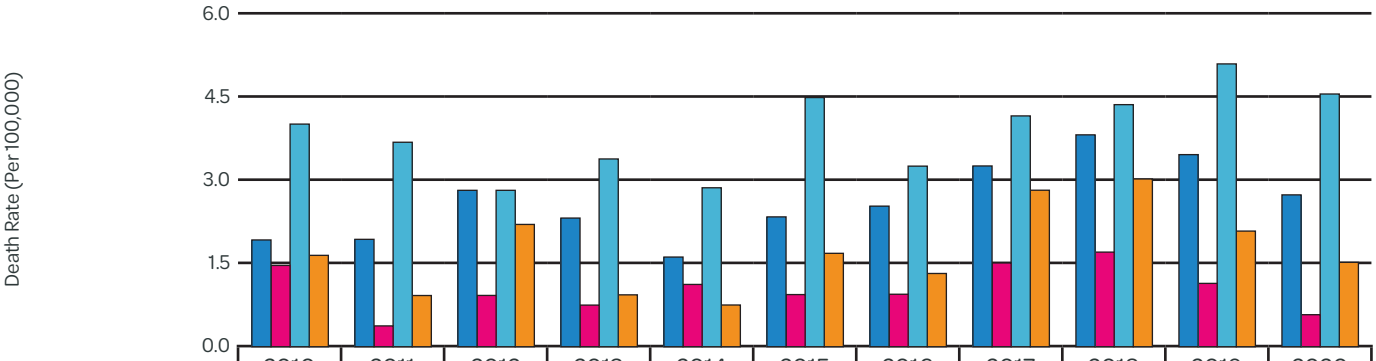
Male children have historically had a higher rate of death for both accidental and violent manners than female children. This higher rate of death persists through all 11 years included in the three following graphs.

Rate of Death by Manner and Gender 2010-2020^



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
M Suicide Rate	1.9	1.9	2.8	2.3	1.6	2.3	2.5	3.2	3.8	3.4	2.7
F Suicide Rate	1.4	0.4	0.9	0.7	1.1	0.9	0.9	1.5	1.7	1.1	0.6
M Homicide Rate	4.0	3.6	2.8	3.4	2.8	4.4	3.2	4.1	4.3	5.1	4.5
F Homicide Rate	1.6	0.9	2.2	0.9	0.7	1.7	1.3	2.8	3.0	2.1	1.5
M Accident Rate	15.9	18.4	17.3	15.0	16.7	11.0	13.8	14.2	12.8	18.0	15.0
F Accident Rate	12.8	14.0	13.3	10.5	9.4	8.1	12.4	8.4	9.5	9.5	8.8

Rate of Death by Violent Manner and Gender 2010-2020^

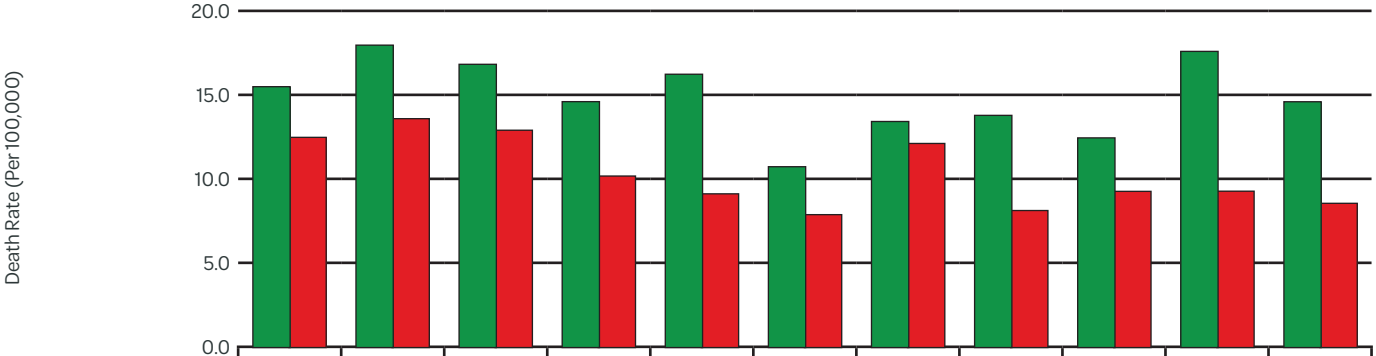


	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
M Suicide Rate	1.9	1.9	2.8	2.3	1.6	2.3	2.5	3.2	3.8	3.4	2.7
F Suicide Rate	1.4	0.4	0.9	0.7	1.1	0.9	0.9	1.5	1.7	1.1	0.6
M Homicide Rate	4.0	3.6	2.8	3.4	2.8	4.4	3.2	4.1	4.3	5.1	4.5
F Homicide Rate	1.6	0.9	2.2	0.9	0.7	1.7	1.3	2.8	3.0	2.1	1.5

As shown in the preceding graph, male children typically suffer a significantly 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, nearly double the rate. From 2014 to 2018, the rate of suicide for male children has been increasing yearly. Furthermore, between 2016 and 2018, the rate of suicide for male children has significantly narrowed the difference between their suicide rate and homicide rate. This upward trend in suicide rates among male children is also present amongst female children from 2015 to 2018. However, female children's increase in suicide rate is surpassed by the increase in their rate of homicide since 2014. Suicide and homicide rates among male and female children have begun a downward trend since 2018, with rates similar to those during 2015.

^CDC WONDER. Causes of death are 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.

Rate of Accidental Death by Gender 2010-2020^



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
M Accident Rate	15.9	18.4	17.3	15.0	16.7	11.0	13.8	14.2	12.8	18.0	15.0
F Accident Rate	12.8	14.0	13.3	10.5	9.4	8.1	12.4	8.4	9.5	9.5	8.8

As shown in the preceding graph, male children have historically suffered from a higher rate of accidental death than female children. The rate of accidental death in both genders showed a general downward trend between 2011 and 2015, and an upward trend from 2015 to 2017. Since 2017, the rates of accidental death for both genders appear to have plateaued on average, with a spike in male accidental deaths in 2019. This spike in male accidental deaths, observed in 2019, decreased in 2020.

Manner of Death Summary – 2020 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.

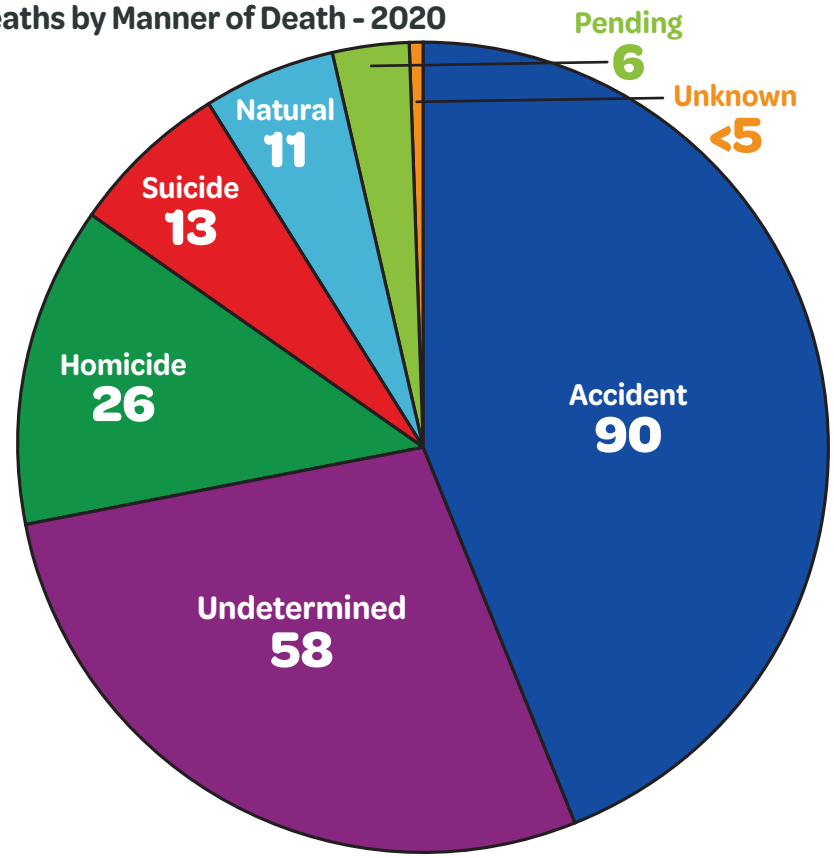
For the purposes of this report, manner of death refers to 1 of the 6 general categories of death listed on the Alabama Death Certificate. The six categories are:

1. Pending Investigation: a death that 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 self-harm or which causes 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 results 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 was collected for 2020, unclassified manners of death not currently marked as an official manner are included as "other" manners of death. This manner of death may contain natural deaths that do not generally qualify for inclusion in ACDRS as they have not been classified or reviewed at the time of this report.

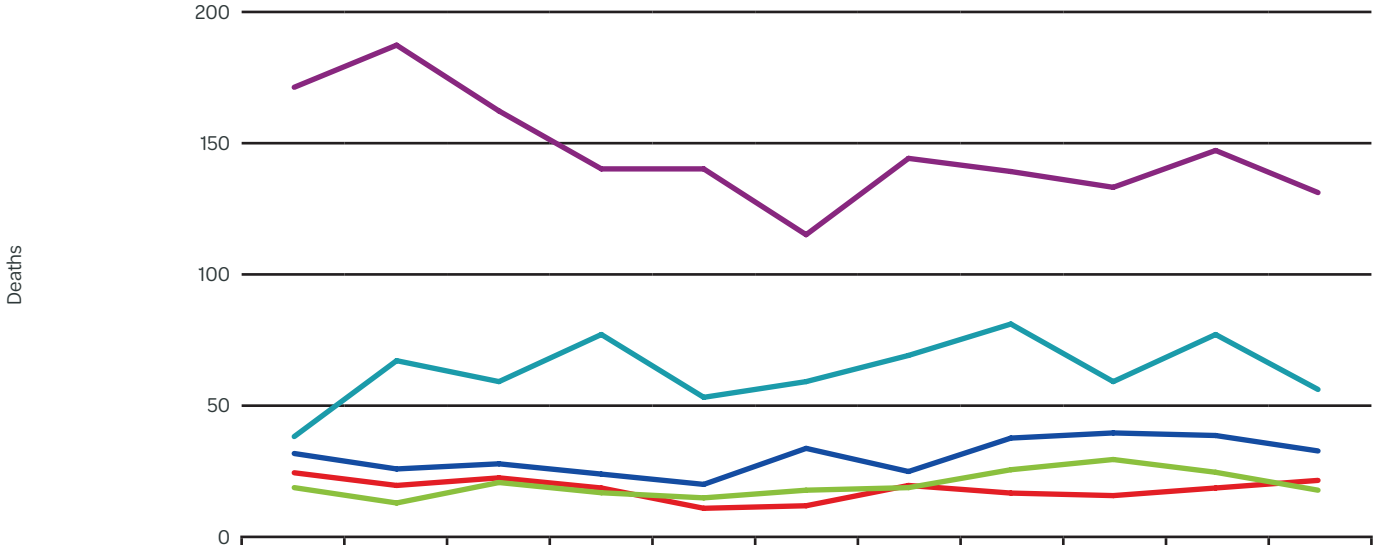
^CDC WONDER. Causes of death are pulled from death certificates and are based on the following International Classification of Diseases (ICD-10) codes: accidental causes of death from V01 to X59, suicide causes of death from X60 to X84, and homicide causes of death from X85 to Y09.

Reviewed Child Deaths by Manner of Death - 2020



The following graph shows the trend of Alabama child deaths for the listed manners of death from 2010 to 2020.

Major Child Death Manners 2010-2020^



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Suicide	19	13	21	17	15	18	19	26	30	25	18
Homicide	32	26	28	24	20	34	25	38	40	39	33
All Accidental	170	186	161	139	139	114	143	138	132	146	130
All Undetermined	38	67	59	77	53	59	69	81	59	77	56
Asphyxia	25	20	23	19	11	12	20	17	16	19	22

^CDC WONDER. Causes of death are 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, and accidental causes of death from V01 to X59.

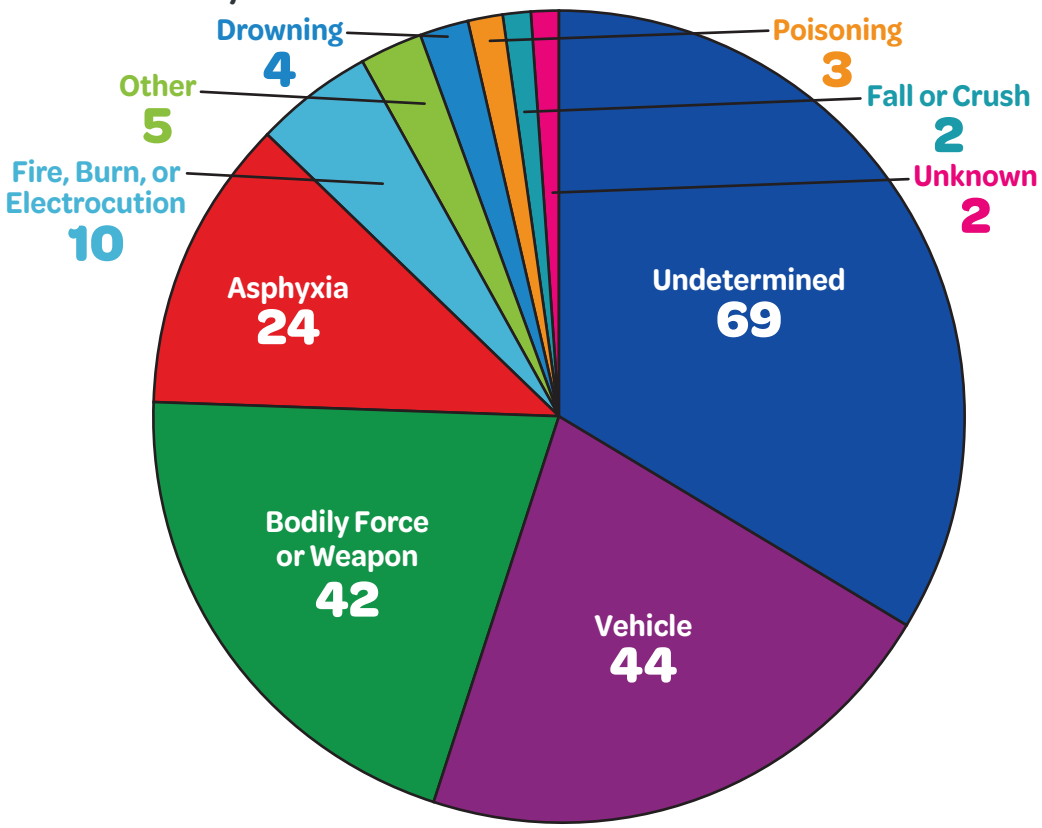
Cause of Death Summary – 2020 Reviewed Deaths

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 2020, the three most frequently reviewed known causes of death due to injury were:

1. Sleep-Related causes (64 deaths).
2. Motor vehicle incidents (44 deaths).
3. Assault and weapon-related causes (42 deaths).

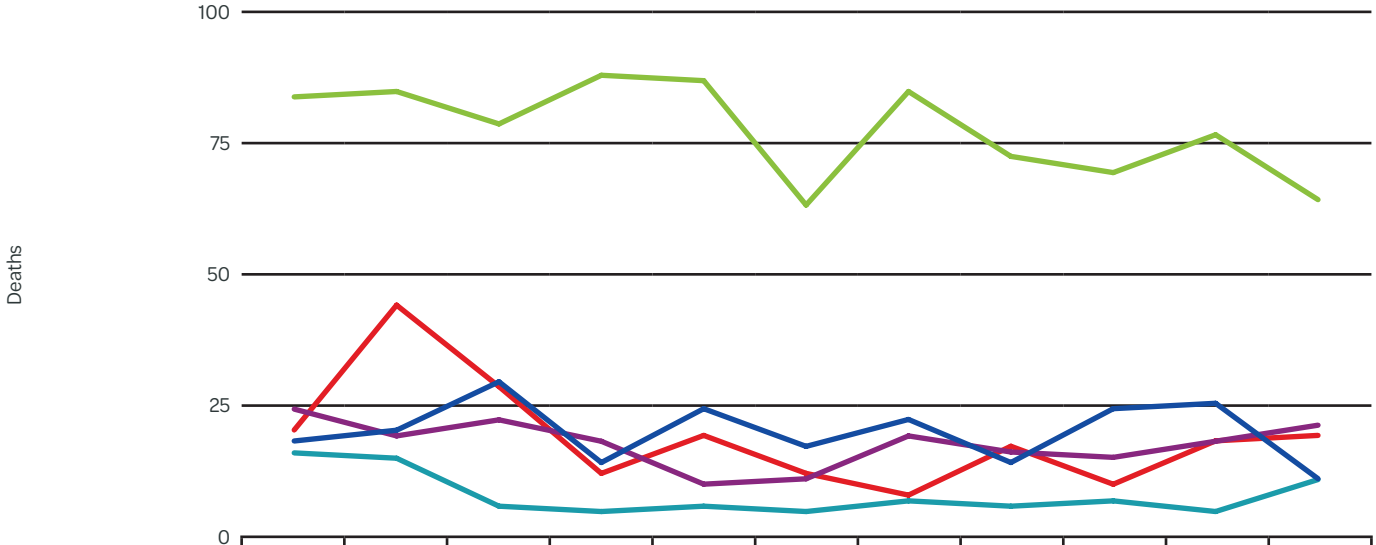
Reviewed Child Deaths by Cause of Death - 2020



As undetermined causes of death are unable to be classified, they were not reported in the most frequent causes of death lists. Additionally, as "other" cause is a combination of various causes of death, it was also excluded from the frequent causes of death list.

The following graph shows the trend of Alabama child deaths for the listed causes of death over the period from 2010 to 2020.

Major Causes of Accidental Child Death - 2010 to 2020^



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Vehicle	82	83	77	86	85	62	83	71	68	75	63
Drowning	19	21	30	15	25	18	23	15	25	26	12
Asphyxia	25	20	23	19	11	12	20	17	16	19	22
Fire/Smoke*	17	16	7	6	7	6	8	7	8	6	12
Other Accidental	21	44	29	13	20	13	9	18	11	19	20

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, but are not limited to, firearms, sharp or blunt instruments, a person's body part, and explosive devices. 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 a weapon or showing it to friends.

For 2020, there were 42 reviewed deaths from weapon and assault-related incidents among children in Alabama.

Cause of Death:

- In 30 reviewed weapon and assault cases, the child's death involved firearms, and in 23 of these 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 less than 5 reviewed deaths, a child was playing with the firearm when the death occurred.
- In 11 reviewed deaths, the firearm was loaded when the child obtained possession of the weapon.
- In less than 5 reviewed deaths, an argument was occurring at the time of death.

^CDC WONDER. Causes of death are based on the following ICD-10 codes: vehicle cause of death from V01 to V99, 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.

**Death Certificate Data*

Owner of the Firearm:

- In 9 reviewed deaths, the owner of the firearm was a caregiver, a parent, or a direct family member of the child who died.
- In 5 reviewed deaths, the owner of the firearm was a friend of the child.
- In less than 5 reviewed deaths, the owner of the firearm was a non-caregiver family member.

B. Homicides and Suicides

Homicide:

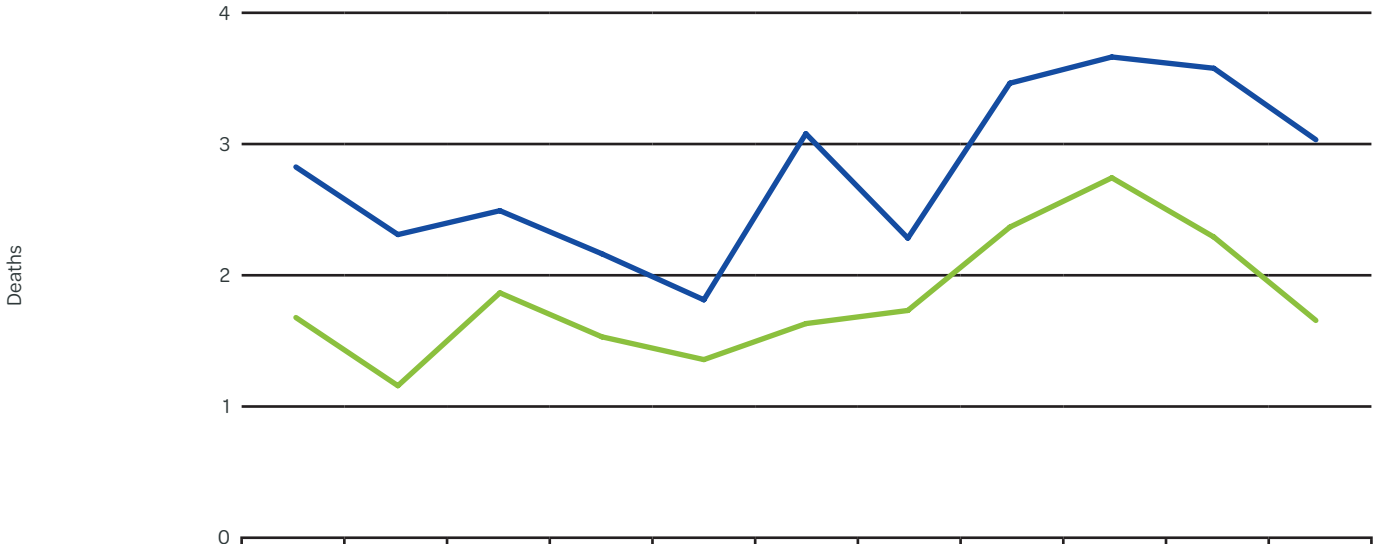
- There were 24 reviewed homicides, and those deaths were the result of weapon or assault-related causes of death.
- In 13 reviewed deaths, a firearm was used, and of those deaths, 10 involved the use of a handgun.
- In less than 5 reviewed deaths, a long gun, such as a shotgun, hunting rifle, or assault rifle, was involved.
- In 5 reviewed homicide deaths, a friend was the person who injured the child.

Suicide:

- There were 11 reviewed suicides, and all the deaths were the result of weapon causes of death.
- All 11 reviewed suicides amongst children in 2020 involved a firearm.
- Of the firearms used in these suicides.
  - In 7 deaths, a handgun was involved.
  - In 5 of these deaths, the firearm was loaded when it was found by the child.
  - In 5 of these deaths, the firearm was owned by a caregiver, a parent, or a direct family member of the child.

As shown in the following graph, the homicide rate among children was on a gradual decline, despite periodic spikes in the rate of death until 2014, at which time rates began a relatively consistent climb until 2018, at which time the rate of death began falling. Similarly, suicide rates were on an upward trend from 2014 to 2018, until decreasing much like the rate of death in homicides have since 2018.

Rate of Violent Death Among Children - 2010 to 2020^



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Rate - Suicide	1.68	1.15	1.87	1.53	1.35	1.63	1.73	2.37	2.75	2.30	1.66
Rate - Homicide	2.83	2.31	2.49	2.16	1.81	3.08	2.28	3.47	3.67	3.58	3.04

^Causes of death are 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-expanded.html.

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 2020, there were 44 deaths from motor vehicle-related incidents.

Child Position in or Around the Vehicle:

- 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 less than 5 reviewed deaths, the child was riding in a truck bed at the time of the incident.

Circumstances Contributing to the Motor Vehicle Incident:

- In 14 reviewed deaths, speeding was reported as a contributing factor.
- In 11 reviewed deaths, drug or alcohol use was reported as a contributing factor.
- In 11 reviewed deaths, reckless driving was reported as a contributing factor.
- In 6 reviewed deaths, driver inexperience was reported as a contributing factor.
- In 5 reviewed deaths, distracted driving was reported as a contributing factor
- In less than 5 deaths, the cause of the motor vehicle accident was a vehicle that ran a red light.

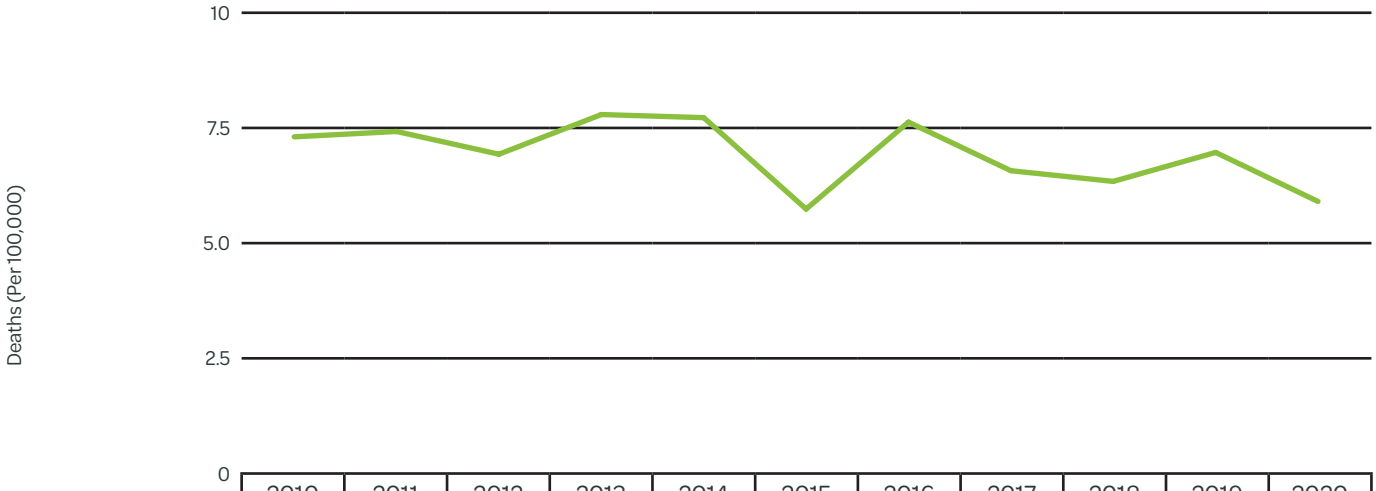
Seatbelt and Other Restraint Use:

In 13 reviewed deaths, a restraint was in use during the incident, and in 8 reviewed deaths, a restraint was not in use during the incident. In the remaining reviewed deaths, source documents did not report restraint use for the child(ren).

- In 6 reviewed deaths, a car seat or booster seat was used at the time of the incident.
- In 7 reviewed deaths, a shoulder belt was used at the time of the incident.

As shown in the following graph, the rate of child deaths from motor vehicle incidents has been on a slight downward trend since 2010.

Rate of Child Vehicle Accidents - 2010 to 2020^



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Vehicle	7.24	7.36	6.85	7.74	7.67	5.62	7.57	6.48	6.24	6.89	5.79

^Causes of death are 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 V01 to V89. Population counts gathered from CDC WONDER - https://wonder.cdc.gov/ucd-icd10-expanded.html.

D. SUID 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 SIDs, which cannot be attributed to any established cause or contributing factor. These deaths typically occur in children under 12 months of age, just as in 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 attributed to 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 2020, there were 64 sleep-related deaths and 35 SUIDs (22 of which sleep environment contributed) identified among children in Alabama.

Sleep-related deaths and SUIDs are not mutually exclusive or mutually inclusive in the following counts, and there is overlap. For example, the 22 SUIDs that the sleep environment contributed to are included in the 64 sleep-related death count. Many SUIDs are determined to have sleep-related connections without a specific cause of death. However, not all SUIDs are also sleep-related deaths, and not all sleep-related deaths are also SUIDs. ACDRS believes that presenting the data in the following way will give a good representation of the burden that Alabama children bear regarding SUIDs and sleep-related deaths.

Manner of Death - Sleep-Related:

- In 37 reviewed deaths, the manner of death was undetermined.
- In 19 reviewed deaths, the manner of death was accidental.
- In 5 reviewed deaths, the manner was pending or unknown.
- In less than 5 reviewed deaths, the manner was natural.

Cause of Death - Sleep-Related:

- In 21 reviewed deaths, the cause of death was unintentional asphyxia.
- For the remaining 43 reviewed deaths, the cause of death was unknown.

Sleep-Related Deaths - Sleep Surface:

- In 5 reviewed sleep-related deaths and 5 sleep-related SUIDs, the child was sleeping on a recommended sleep surface (such as a crib or bassinet).
- In 36 reviewed sleep-related deaths and 17 sleep-related SUIDs, the child was not sleeping on a recommended sleep surface (such as a crib or bassinet).
- In 28 reviewed sleep-related deaths and 14 sleep-related SUIDS, the child was sleeping on an adult bed.
- In 6 reviewed sleep-related deaths and less than 5 sleep-related SUIDs, the child was sleeping on a couch, chair, or car seat.

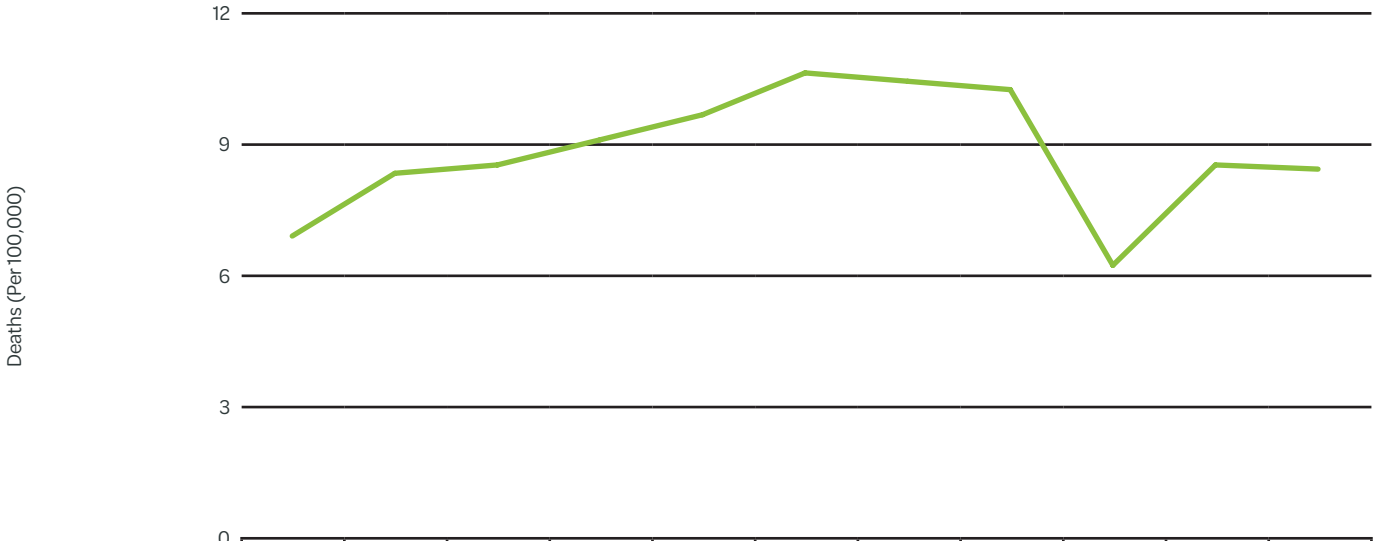
Sleep-Related Deaths - Co-Sleeping:

- In 21 reviewed sleep-related deaths and in 9 sleep-related SUIDs, the child was co-sleeping with only an adult(s) on the same sleep surface.
- In less than 5 reviewed sleep-related deaths and less than 5 sleep-related SUIDs, the child was co-sleeping with only another child(ren) on the same sleep surface.
- In 7 reviewed sleep-related deaths and less than 5 sleep-related SUIDs, the child was co-sleeping with both another child(ren) and an adult(s) on the same sleep surface.

As shown in the following graph, the rate of SIDs and SUIDs had generally increased for the period between 2010 and 2015, before decreasing since 2016. Part of this increase between 2010 and 2015 may be due to increasing knowledge regarding these types of child deaths, and thus, more accurate classification of deaths. As a result, deaths that previously would have been classified as undetermined manners of death, accidents, or other types of death, are now classified as SIDs or SUIDs under the current system.

ACDRS has strived 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 about 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 - 2010 to 2020^



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Rate of SIDS/SUID	6.9	8.4	8.6	9.2	9.8	10.8	10.6	10.4	6.2	8.6	8.5

^Causes of death are 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-expanded.html.

State Child Death Review Team Members

Scott Harris, M.D., M.P.H.
State Health Officer/Chair
Alabama Department of Public Health

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

Sheriff Bobby Timmons
Executive Director
Alabama Sheriff's Association

Angelo Della Manna
Director
Alabama Department of Forensic Sciences

Nancy Buckner
Commissioner
Alabama Department of Human Resources

Lynn Beshear
Commissioner
Alabama Department of Mental Health

Charles Ward
Director
Alabama Department of Public Safety

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

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

Max Capouano, M.D
Alabama Academy of Family Physicians Appointee

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

Jerry H. Williams
Alabama Coroners Association Appointee

Lynn Bius
Alabama Network of Children's Advocacy Centers Appointee

Sheriff Bill Franklin
Alabama Sheriff's Association Appointee

Jill Lee
Alabama District Attorney's Association Appointee

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

Chief Jerry Taylor
Alabama Association of Chiefs of Police Appointee

Representative April Weaver
Chair
House Health Committee

Senator Jim McClendon
Chair
Senate Health Committee

LaBeatrix Tatum
Clergy
Governor Appointee

Jannah Bailey
Private Citizen
Governor Appointee

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

Chris Newlin
Private Citizen
Governor Appointee

Sallye Longshore
Private Citizen
Governor Appointee

Tim Davis
Private Citizen
Governor Appointee

Cindy Hines
Private Citizen
Governor Appointee

Bob Hinds
Private Citizen
Governor Appointee