Georgia Child Fatality Review Panel

Annual Report – Calendar Year 2017

C. LaTain Kell
Panel Chairman

Nathan Deal
Governor

The Child Fatality Review Panel Members

C. LaTain Kell – Panel Chair, Judge, Cobb County Superior Court

Peggy Walker – Panel Vice-Chair, Judge, Douglas County Juvenile Court

Vernon Keenan – Director, Georgia Bureau of Investigation

Mandi Ballinger – Member, Georgia House of Representatives

Kathleen Bennett – Retired Mental Health Specialist,
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Judy Fitzgerald – Commissioner, Department of Behavioral Health and Developmental Disabilities

Gloria Butler – Member, Georgia State Senate

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Charles Fuller – Chair, Criminal Justice Coordinating Council

Virginia Pryor – Director, Division of Family and Children Services

Tiffany Sawyer – Prevention Director, Georgia Center for Child Advocacy

Richard Hawk – Coroner, Coweta County

Paula Sparks – Investigator, Georgia Peace Officer Standards and Training Council

Dr. Jonathan Eisenstat – Chief Medical Examiner, Georgia Bureau of Investigation

Tom Rawlings – Director, Office of the Child Advocate

Ashley Wright – District Attorney, Augusta Judicial Circuit

Amy Jacobs – Commissioner, Department of Early Care and Learning

Vacant – Member, State Board of Education

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Mission

The mission of the Georgia Child Fatality Review Panel is to provide the highest quality of child fatality data, training, technical assistance, investigative support services, and resources to any entity dedicated to the well-being and safety of children to prevent and reduce child abuse and fatality in the state. This mission is accomplished by promoting more accurate identification and reporting of child fatalities, evaluating the prevalence and circumstances of both child abuse and child fatalities, and developing and monitoring the statewide child injury prevention plan.

The Georgia Child Fatality Review Panel, each county-level review committee, their functions and membership requirements are established in Georgia statute (§19-15-1 through -6).

Acknowledgments

The Georgia Child Fatality Review Panel acknowledges the following people and entities whose enormous commitment, dedication and unwavering support to child fatality review have made this report possible:

- All the members who serve on each of the County Child Fatality Review Committees;
- John T. Carter, Ph.D., M.P.H., Epidemiology Department, Rollins School of Public Health, Emory University

This report was developed by the staff members of the Child Fatality Review Unit within the Georgia Bureau of Investigation, the Injury Prevention Research Center at Emory (IPRCE), Dr. John Carter and Dr. Ruppa Sharon

Letter from the CFR Panel Chair

Honorable Governor Nathan Deal and Members of the Georgia General Assembly:

We are honored to present the Annual Report of the Georgia Child Fatality Review Panel for data collected in calendar year 2017. This data has been reported to the Panel by the 159 county fatality review panels of the state pursuant to statutory requirements. As always, this information is provided to you as part of our mutual ongoing efforts to prevent and decrease child fatalities in Georgia. I thank you for the continuing partnership in this important effort.

The bank of data collected by the Panel during the past six years could have significant impact on predicting patterns for future child fatality prevention. A large-scale analysis of this data, together with data collected by other agencies, is needed. The Panel requests your assistance in securing the necessary resources to perform this analysis as soon as possible.

This year's spike in teenage suicides has caused the panel to focus attention and resources in the final quarter of 2017 and the coming year on significant prevention efforts. Members of the Panel from the Department of Education, the Department of Behavioral Health and Developmental Disabilities and the Department of Public Health along with Children's Healthcare of Atlanta and Voices for Georgia's Children are partnering in this effort.

Sleep-related infant deaths remain the leading cause of post-neonatal deaths in the 2016 data. We hope that increased education and public awareness efforts are beginning to have some effect. Efforts in the state's hospitals and neonatal units have continued to bring this topic to the attention of new mothers and families across the state. The panel will continue to work with both state and private partners to bring attention to this issue.

Maltreatment-related deaths continue to be a priority as well. Again this year, the panel staff has conducted statewide training to assist law enforcement, service providers and first responders in identifying the signs of maltreatment and the proper reporting of such maltreatment. The panel continues to emphasize the importance of maltreatment identification as a vital component of prevention.

The Georgia Bureau of Investigation and Director Keenan and his agents and staff continue to enhance their support of this Panel's mission. Their contributions are exceptional.

I greatly appreciate your attention to this report and its findings. Together, we hope to accomplish our mission to reduce and prevent child deaths in Georgia.

Sincerely,

Judge LaTain Kell
Chairman, Child Fatality Review Panel

Background and History

The child fatality review process was initiated in Georgia in 1990 as an amendment to an existing statute for child abuse protocol committees. The legislation provided that each county child abuse protocol committee establish a subcommittee to systematically and collaboratively review child deaths that were sudden, unexpected, and/or unexplained, among children younger than 18 years of age.

The child fatality review committees became a statewide, multidisciplinary, multi-agency effort to prevent child deaths. Georgia Code section 19-15-1 through -6 has been amended over the years, adding more structure, definition and members to the process. Members now form a stand-alone committee instead of a subcommittee, which has added emphasis to the importance of the function. Through the State Panel and the work of the local committees, there is opportunity to learn from tragedy, prevent deaths and give a new generation hope. Agencies and organizations working together at the state and local levels offer the greatest potential for effective prevention and intervention strategies.

The purpose of these reviews is to describe trends and patterns of child deaths in Georgia and to identify prevention strategies. As mandated in statute, this report identifies specific policy recommendations to reduce child deaths in Georgia.

The members of the Georgia Child Fatality Review Panel are experts in the fields of child abuse prevention, mental health, death investigation and injury prevention. The variety of disciplines involved and the depth of expertise provided by the State Review Panel results in comprehensive prevention recommendations, allowing for a broad analysis of both contributory and preventive factors of child deaths.

The History of Child Fatality Review in Georgia

1990–1993

- Legislation established the Statewide Child Fatality Review Panel with responsibilities for compiling statistics on child fatalities and making recommendations to the Governor and General Assembly based on the data. It established local county protocol committees and directed that they develop county-based written protocols for the investigation of alleged child abuse and neglect cases. Statutory amendments were adapted to:
  - Establish a separate child fatality review team in each county and determine procedures for conducting reviews and completing reports.
  - Require the Panel to:
    - Submit an annual report documenting the prevalence and circumstances of all child fatalities with special emphasis on deaths associated with child abuse.
    - Recommend measures to reduce child fatalities to the Governor, the Lieutenant Governor and the Speaker of the Georgia House of Representatives.
    - Establish a protocol for the review of policies, procedures and operations of the Division of Family and Children Services (DFCS) for child abuse cases.

1996–1998

- The Panel established the Office of Child Fatality Review (OCFR) with a full-time director to administer the activities of the Panel.
- Researchers from Emory University and Georgia State University conducted an evaluation of the child fatality review process. The evaluation concluded that there were policy, procedure and funding issues that limited the effectiveness of the review process. Recommendations for improvement were made to the General Assembly.
- Statutory amendments were adopted to:
  - Identify agencies required to be represented on child fatality review teams and establish penalties for nonparticipation.
  - Require that all child deaths be reported to the coroner/medical examiner in each county.

1999–2001

- Child Fatality Investigation Teams (CFIT) were initially developed in four judicial circuits as a pilot project, with six additional teams later added. Teams assumed responsibility for conducting death scene investigations of child deaths that met established criteria within their judicial circuit.
- Statutory amendments were adopted which resulted in the Code section governing the Child Fatality Review Panel, child fatality review committees and child abuse protocol committees being completely rewritten. This was an attempt to provide greater clarity and a more comprehensive, concise format.
- The Panel's budget was increased.

2002–2005

- The Panel published and distributed a child fatality review protocol manual to all county committee members.
- Statutory amendments were adopted which resulted in the following:
  - Appointment of District Attorneys to serve as chairpersons of local committees in their circuits.
  - Authority of the Superior Court Judge on the Panel to issue an order requiring the participation of mandated agencies on local child fatality review committees. Failure to comply would be cause for contempt.
  - Authority of the Panel to compel the production of documents or the attendance of witnesses pursuant to a subpoena.
  - Director of the Department of Behavioral Health and Developmental Disabilities added as a member of the Panel.
- Funding was secured and an on-line reporting system was established for both the child fatality review report and the coroner/medical examiner report.
- A collaboration was established between the OCFR and the National Center for Child Death Review (NCDR).
- The Georgia Child Fatality Investigation Program was established through a partnership between OCFR, DFCS and the Georgia Bureau of Investigation. A director was hired to advance a multi-disciplinary approach to child death investigation through development and training of local teams.
- Conducted the first statewide Prevention Readiness Assessment, to evaluate resources and stakeholders available in counties to implement and sustain prevention efforts.
- A Statewide Model Child Abuse Protocol was developed and distributed to all Protocol committee members.
- A Prevention Advocate was added, by policy, to all child fatality review committees Statewide training was conducted for all prevention advocate members.
- A quarterly newsletter was created and distributed to all child fatality review members.
- Annual awards were established for the Child Fatality Review Coroner of the Year and Child Fatality Review County Committee of the Year. Awards were presented at the annual Child Fatality and Serious Injury Conference sponsored by the Panel, DHS, GBI and the Office of the Child Advocate.
- A sub-committee of the Panel was formed to begin working on a Statewide Prevention Plan.

2006–2008

- The Child Fatality Review (CFR) committee protocol was revised and updated to reflect best practices.
- The Protocol was presented to all county committee members and is also available online.
- The Panel subcommittee on prevention completed the Statewide Child Fatality Prevention Framework. The Framework was presented to the Governor's Office and other agency partners.
- An annual award was established for the Outstanding Investigator/Team of the Year for death investigation cases.
- The CFIT Program expanded to address all types of multi-disciplinary child abuse investigations, including sex abuse, physical abuse and neglect as well as homicides.
- The Panel added a Prevention Specialist staff position to assist the local efforts in child fatality prevention.
- Annual CFR Coroner of the Year and CFR Committee of the Year winners were recognized by the Georgia Senate honoring their work.
- The Office of Child Fatality Review merged with the Office of the Child Advocate.

2009–2013

- Adopted National Center for Child Death Review online reporting form for all child deaths, allowing Georgia child death data to be captured on a nationally standardized surveillance tool.
- Included as one of five states to participate in a three-year Centers for Disease Control (CDC) pilot project to improve investigation, review and reporting of sudden and unexpected infant deaths.
- Expanded CFIT program to include a child abuse investigation training academy.
- Continued involvement with the Southeast Coalition on Child Fatalities, providing support to other CFR programs within the southeastern states.
- Conducted second Prevention Readiness Assessment of counties to determine the local resources and stakeholders available to implement and sustain prevention efforts.
- Created and maintained a CFR Panel subcommittee to address infant sleep-related deaths; the Georgia Infant Safe Sleep Coalition (GISSC) serves as a strong resource for state and local partners, providing evidence-based best practice for prevention and implementation assistance.

2014

- Senate Bill 365 was signed by the Governor, moving oversight of the CFR Panel from the Office of the Child Advocate to the GBI. The bill also added language including "child abuse" as one of the criteria for determining a reviewable death, and placed two additional members on the Panel: a member of the state Board of Education, and the commissioner of the Department of Early Care and Learning.

2015

- The Georgia Bureau of Investigation CFR Unit in partnership with the Division of Family and Children Services, and Department of Public Health, embarked on an aggressive campaign to prevent sleep-related deaths of infants in Georgia. This was the first law enforcement driven video designed to educate individuals and raise awareness to these tragic preventable deaths.
- GBI CFR was awarded a $200,000 grant from the Centers for Disease Control and Prevention (CDC) to help establish the Sudden Death in the Young (SDY) Registry. Nine other states received funding as well. The goals of the SDY registry are to a) establish the incidence of sudden death in the young in the United States using a population-based approach through state public health offices, and b) investigate the etiologies and risk factors for sudden death in the young, including sudden unexpected infant death (SUID), sudden cardiac death (SCD) and sudden unexpected death in epilepsy (SUDEP).

2016

- CFR began a campaign to prevent firearm-related deaths by participating in community events/forums around the state and distributed free cable locks for gun owners to promote safe storage of firearms.

2017

- CFR, the Georgia Department of Education, Department of Public Health, and Children's Healthcare of Atlanta, began a partnership for the awareness and prevention of youth suicide. A state-wide campaign was launched to educate all school personnel on the warning signs of a youth who may be in crisis. A series of Suicide Prevention Summits were conducted around the state. Districts that were selected met the criteria of having suicides consecutively for the previous three years.

Executive Summary

Child deaths are often viewed as an indicator of the health of the community in which they occur. While child death data provide an overall picture of child deaths by number and cause, it is the meticulous review of each child's death that can teach how to best prevent future deaths. Each year the Georgia Child Fatality Review Panel (Panel) publishes an annual report detailing these tragic and often preventable deaths of children in Georgia.

Local child fatality review (CFR) committees examine child deaths that are sudden, unexpected, or unexplained ("eligible") and complete a standardized form detailing the circumstances of the deaths. These child death data are useful in revealing patterns, prevention gaps and opportunities. Encourage all who are concerned about the welfare of Georgia's children to use these data to make life-saving decisions for our children.

Key Findings and Recommendations

ALL REVIEWED DEATHS

In 2017, 516 of 1,451 child deaths met the eligibility criteria for county level child fatality review committee review. Of the 516 deaths that met the criteria, 412 were reviewed (79.8%), which is less than the desired goal of 90% or higher.

Recommendations:

- Encourage local review team to complete a high percentage of review to equal 90% or above.
- Continue to provide guidance to local teams.

ETHNIC AND RACIAL DISPARITIES

The likelihood of an infant or child death is not the same for all children in Georgia. Children from some ethic and racial groups have higher rates of death than other groups. In 2017 key findings are:

- Black, non-Hispanic children represented 50% of the child deaths, yet they represent only 33% of the child population.
- From 2015–2017: Black, non-Hispanic children age 0-4 years had 3.5 times the homicide rate of White, non-Hispanic children in the same age group, and Black, non-Hispanic children age 15-17 had almost 8 times the rate of White, non-Hispanic children in the same age group.
- From 2015–2017: White, non-Hispanic children had 1.8 times the suicide rate of Black, non-Hispanic in the 15 to 17-year-old age group.
- White children have 1.6 times the rate of motor-vehicle crash deaths (age 0-17 years) as Black, non-Hispanic children.

Recommendations:

- Ethnic and racial disparities must be addressed at the community and state level by improving neighborhood conditions that can encourage violence, concentrated poverty and lack of access to educational opportunities and health care.

UNINTENTIONAL INJURIES

Motor Vehicle Crash Deaths: In 2017, there were a total of 93 reviewed motor vehicle deaths in Georgia, a slight decrease from 2016. Key findings are:

- The most impacted group was the 15 to 17-year-old age group which encompassed 44% of the deaths.
- 28 of the 93 deaths (30%) where the decedent was a driver or passenger involved no restraints or the improper use of them.

Recommendations include:

- All occupants in a vehicle should ride correctly restrained at all times. In a press release from February 2018, NHTSA highlighted that there were 10,428 unbuckled vehicle occupants killed in motor-vehicle crashes.
- One in three motor vehicle deaths involves a drunk driver. Effective strategies used to curtail these activities in adult and young drivers include impaired driving laws, sobriety checkpoints, mass media campaigns and school-based instructional programs.[1]

Drowning: There were 32 reviewed drowning deaths in Georgia in 2017. Key findings are:

- 18 of the deaths lacked children appropriate supervision.
- 14 of the 18 who lacked appropriate supervision were under the age of 5.

Recommendations include:

- All children need to be actively supervised in and around open water or a pool.
- Infants and young children should not be left in a bathtub without constant supervision.
- Stakeholders shall continue to promote Georgia's statewide water safety initiative SPLASH (Supervision, Prevention, Look before you leap, Arms length, Swim lessons, Have a water safety plan).

INTENTIONAL INJURIES

Homicide: In 2017 there were a total of 64 reviewed homicide deaths. Key findings are:

- Since 2015, homicides have more than doubled for youth in the 15-17 age category.
- A firearm was involved in 30 of the 64 reviewed homicides and 25 of the 26 homicides involving 15 to 17-year-old in 2017.
- 2017 has the highest rate of infant homicides (from 2010–2017).

1 http://www.cdc.gov/motorvehiclesafety/impaired_driving/strategies.html

Recommendations include:

- Instruction that help caregivers understand infant and child crying and implement strategies for soothing the infant or child.
- Strengthen awareness of child abuse protocols for those who respond to domestic violence incidents.
- For youth, implementation of a multifaceted community response consistent with Striving To Reduce Youth Violence Everywhere (STRYVE)'s recommendations and guidelines is necessary.

Suicide: In 2017, 48 reviewed deaths were deemed suicides. Key findings are:

- Over 54% of 2017 reviewed suicide deaths involved the use of a firearm.
- Over 33% of reviewed 2017 suicide deaths were by hanging.
- Most reviewed suicide deaths were involved decedents in the 15 to 17-year-old age group (31 of 48).

Recommendations include:

- Gather further information to determine contributing factors to suicidal ideation and attempts, to assist in development of community strategies.
- Provide awareness of suicide prevention applications that are designed to connect children and youth with help when they are depressed or considering suicide.
- Providing awareness of mental health providers and community resources that are available for youth.
- Continue to educate the community, school personnel, and parents regarding risk factors and warning signs

Maltreatment: There were 146 reviewed deaths with a reported cause or history of maltreatment. Key findings are:

- Of the 412 reviewed deaths, 35% had a history or reported maltreatment cause.
- A disturbing number (30) of homicides had abuse as the cause. Twenty-seven of these 30 were infants (12) or toddlers, ages 1-4 (15).

Recommendations include:

- Children in families with maltreatment history are at risk for serious injury and death.
- Screen parents for Adverse Childhood Experiences (ACES) to determine appropriate community services.
- Educate parents on how their childhood experiences impacts their parenting to prepare them to engage in community services.
- Connect, support and monitor implementation of community services to promote change in parenting capacity for safe, stable and nurturing relationships.

SLEEP-RELATED INFANT DEATHS

In 2017, there were 146 reviewed sleep-related deaths in Georgia. Key findings are:

- 52.7% of infants were found in an adult bed at the time of death.
- 86% of deaths occurred prior to six months of age.

Recommendations include:

- Provide and promote adequate health care coverage for pregnant women and postpartum women. Work with health care providers to emphasize safety of infants and toddlers during pregnancy and in the infant and toddler stages through Safe Sleep practices of Alone, on the Back, in a Crib (ABC's of Safe Sleep).
- Continue safe sleep awareness campaigns particularly targeted at parents and caregivers.

PREVENTABILITY

Determining why a death occurred and utilizing the information to prevent future deaths is a focus of the CFR team. Key findings are:

- In 2017, almost 90% of non-medical deaths could have been prevented.
- Of the 412 reviewed deaths it is possible that 365 deaths could have been prevented.
- The CFR teams also determined that every non-medical cause of death category had a prevention percentage of over 80% except suicide where 65.6% of the deaths were determined to have been preventable.

Recommendations:

- Survey communities to determine how they have implemented CFR Team recommendations including identification of strategies and programs in the community that address prevention of child deaths.
- Provide adequate resources to evaluate prevention strategies and programs that were implemented for their effectiveness.
- Support replication of effective prevention strategies and programs that are evidence-based through resources for both education and implementation.

All Child Deaths in Georgia

Table 1 summarizes infant/child deaths in Georgia for 2017. The information provided below was taken from the Online Analytical Statistical Information System (OASIS), which serves as the official Georgia public vital records source.

- Medical causes (birth defects, cancers and other issues) were the top cause of child death in Georgia.
- Sleep-related infant deaths were the top non-medical cause of death, followed by motor vehicle crash, other unintentional injuries (primarily falls, firearms and poisoning), homicide, suicide and drowning.
- There were far more infant deaths than deaths in any other age group, primarily due to sleep-related or medical issues.

Table 1: Infant and Child Deaths, in 2017 in Georgia by Cause of Death and Age Group

	Age Group (Years)					
Cause of Death	**Infant**	**1-4**	**5-9**	**10-14**	**15-17**	**Totals**
Unintentional						
Motor-Vehicle Crash	4	18	17	19	44	102
Drowning	3	21	7	6	2	39
Other Unintentional	14	26	15	8	15	78
Intentional						
Homicide	17	13	3	4	35	72
Suicide			1	19	39	59
Sleep-Related	166					166
Medical Causes	728	65	55	53	34	935
All Deaths	**932**	**143**	**98**	**109**	**169**	**1,451**

†The infant age group includes birth through 12 months of age.

Figures 1 and 2 show Georgia infant and child death rates as compared to the overall U.S. rate. This includes all infant and child deaths from 2010–2017. Georgia's infant death rate has climbed over the past several years, reaching 8 deaths per 1,000 in 2015, and has decreased to 7.4 in 2017. Georgia's child death rate has been higher than the U.S. 7 of the 8 years, while the U.S. rate has remained fairly stable. However, Georgia has a higher rate of minorities than the U.S. average. Georgia's death rate has been trending down over the past three years and appears to be closing the gap.

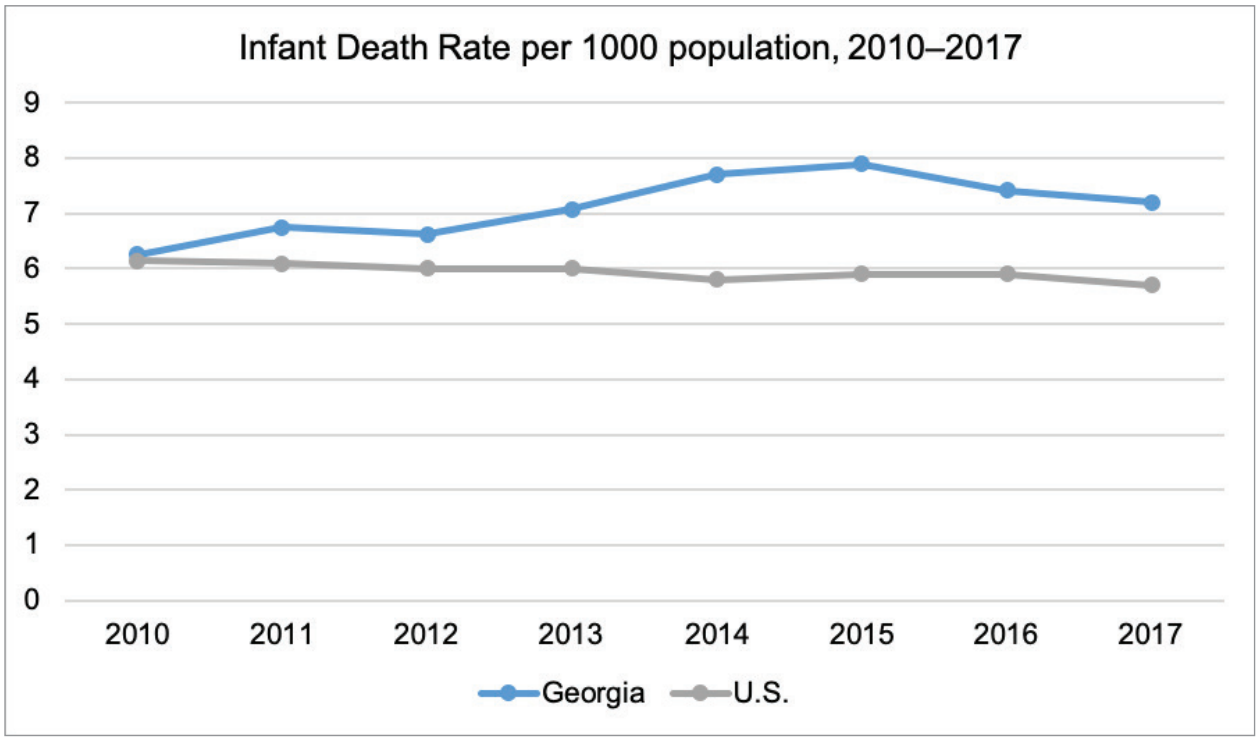


Figure 1. Infant (age < 1) death rates in Georgia and the United States from 2010 through 2017

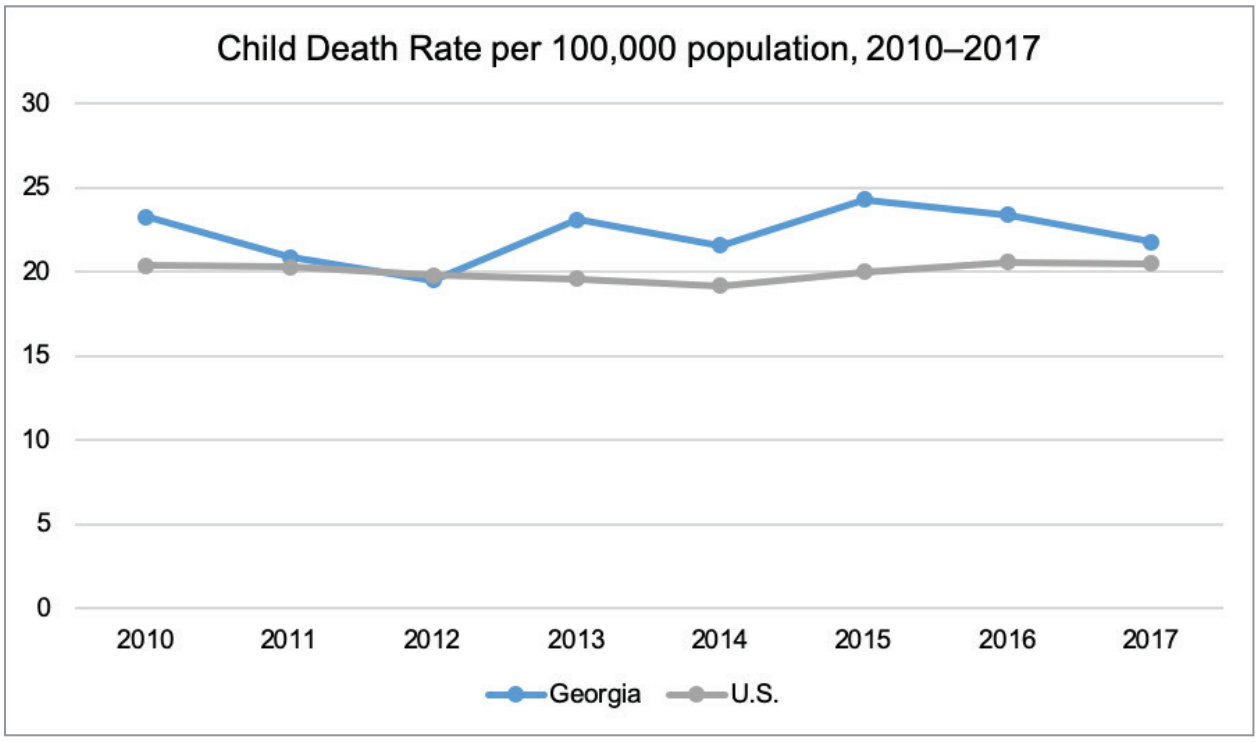


Figure 2. Child (ages 1-17) death rates in Georgia and the United States from 2010 through 2017

Trends in Infant/Child Deaths, Georgia 2010–2017

Table 2 presents a summary of infant and child deaths in Georgia from 2010 through 2017 based on data from OASIS. The totals in Table 2 for past years may differ slightly from death certificate counts in prior CFR annual reports due to rolling adjustments or corrections.

Table 2: Infant and Child Deaths, Age 0 - 17, Georgia Residents

	Year of Death							
Cause of Death	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Unintentional								
Motor-Vehicle Crash	127	103	78	104	87	109	111	102
Drowning	39	32	27	29	49	34	41	39
Other Unintentional	82	83	62	81	72	67	65	78
Intentional								
Homicide	58	59	59	58	47	79	74	72
Suicide	30	22	32	39	30	51	57	59
Sleep-Related	168	161	138	131	163	166	162	166
Medical Causes	883	936	942	1,035	1,067	1,093	1,007	935
Total Deaths	**1,387**	**1,396**	**1,338**	**1,477**	**1,515**	**1,599**	**1,517**	**1,451**

Table 2 illustrates the number of children that have died over a span of the past 8 years due to injury and sleep-related causes. Key findings include:

- The number of unintentional injury deaths have slightly decreased.
- Sleep-related deaths have remained stable.
- Intentional deaths have increased.
- Sleep-related infant deaths remain the leading cause of post-neonatal deaths in Georgia.

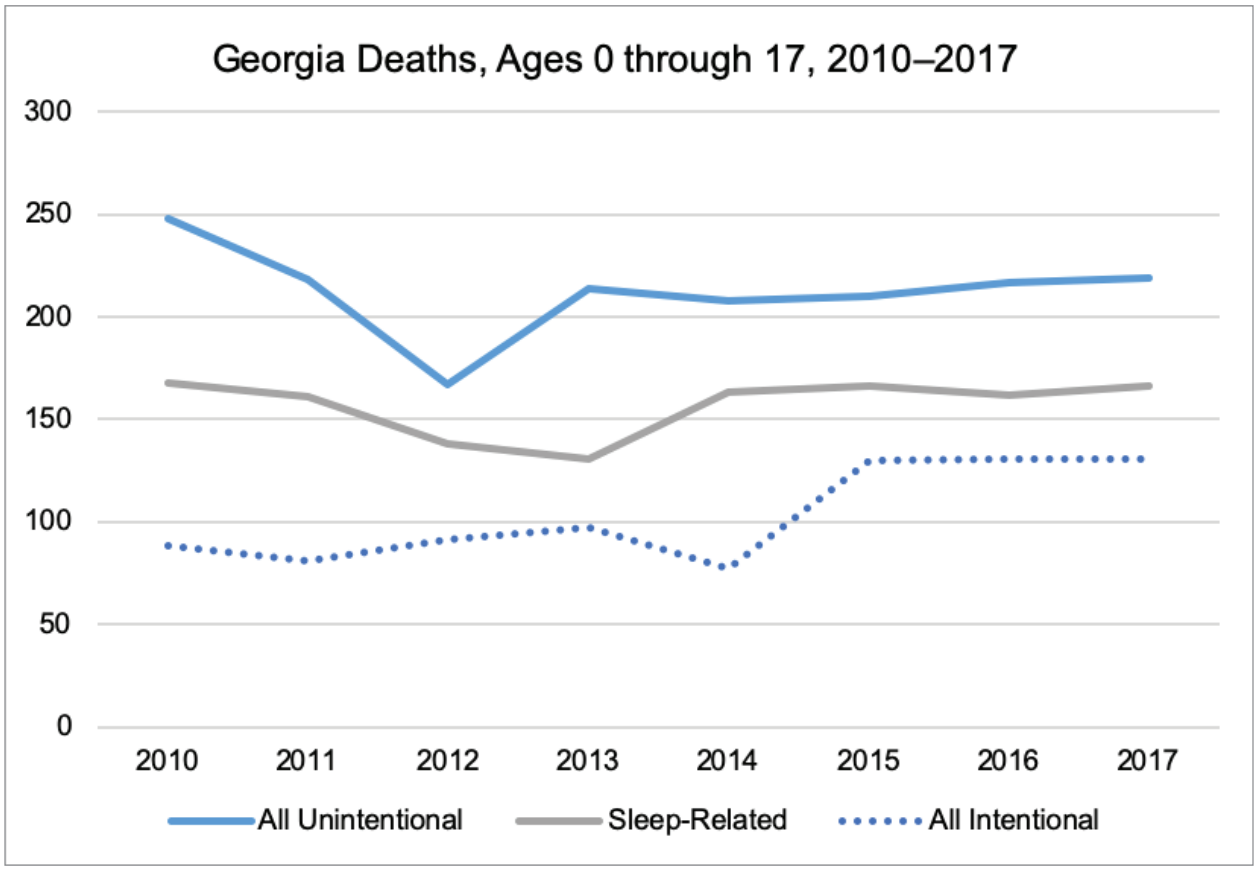


Figure 3. Trends in unintentional, sleep-related and intentional deaths for children from birth through age 17 in Georgia from 2010 through 2017

Child Deaths Reviewed by Child Fatality Review Committees

Which deaths are eligible for review?

In Georgia, a child's death is eligible for review when the death is sudden, unexpected, unexplained, suspicious, or attributed to unusual circumstances. More specifically, this includes Sudden Unexplained Infant Death, deaths that occur as a result of intentional or unintentional acts, or medical conditions when unattended by a physician.

In general, deaths recorded in the Georgia Vital Record file, are defined as "reviewable" if they have a recorded cause of death as unknown, or sleep-related. Teams may decide that additional deaths should be reviewed. Teams may also learn of and review a death for which no death certificate was recorded.

How are child deaths reviewed?

In Georgia, every county is legislatively required to convene a local Child Fatality Review committee. The determination regarding which reviewable deaths are reviewed is made by the Child Fatality Review Committee. This committee is comprised of professionals from multiple disciplines that analyze the critical aspects of child deaths to aid in reducing preventable injuries and child deaths in Georgia. Death notifications are obtained from a variety of sources to include the coroner, medical examiner, vital records death certificates, law enforcement and the Division of Family and Children Services (DFCS). Death data are linked with vital records data to ensure a comprehensive and accurate representation of all child deaths in the state of Georgia.

What sources provide the data for this report?

The information used in the preparation of this annual child fatality review report is primarily drawn from two "dynamic" data systems — death certificates submitted to the Georgia Vital Records Office and fatality reviews submitted to the National Child Death Review database. These two systems are referred to as "dynamic" because new records are continuously entered into the systems (and previously entered records corrected or completed). The number of reported deaths or reviews on December 1 is likely to be greater than on October 1 and may change after the date that data was obtained for this report. The process of comparing death data from the Georgia Vital Records Office and fatality reviews submitted to the National Child Death Review database and adjusting both due to results of the comparison yields death counts slightly different for the Georgia results on the OASIS database.

Trends in CFR Review Rates

The Georgia CFR process has been in place and operating since 1991. Over these past 27 years, the Georgia Office of Child Fatality Review and the county teams have worked diligently to complete reviews and enter them into the state (now national) Child Death Review Database. Their efforts are commendable.

Table 3 shows the numbers of reviewable deaths by decedent age group in 2017 from OASIS. Of these 1,451 deaths 516 met criteria for review. However, only 412 (79.8%) of the deaths that met the criteria for review by local teams were actually reviewed. Figure 3 illustrates how the CFR review rates have been changing over time in Georgia. In 2012 and 2013, over 90% of all child deaths deemed reviewable by CFR committees were actually reviewed. However, in 2017, only 79.8% of child deaths were reviewed. The data in Appendix B provide breakdowns of review rates by county and show that 126 of Georgia's 158 counties reviewed all reviewable deaths.

Table 3: Infant and Child Deaths, by Cause of Death and Age Group, 2017

Cause of Death	Number of Deaths	% Reviewed
Unintentional		
Motor-Vehicle Crash	102	85.3
Drowning	39	76.9
Other Unintentional	78	76.9
Intentional		
Homicide	72	79.2
Suicide	59	84.7
Sleep-Related	166	77.1

Table 4 provides the number of deaths reviewed by age group in 2017. A total of 516 deaths were reviewed.

Table 4: Completed 2017 Georgia Child Fatality Reviews, by Cause and Age

Cause of Death	Infants	1-4	5-9	10-14	15-17	Totals
Unintentional						
Motor-Vehicle Crash	4	14	17	17	41	93
Drowning	1	20	5	4	2	32
Other Unintentional	13	16	6	8	10	53
Intentional						
Homicide	15	16	3	4	26	64
Suicide			1	16	31	48
Sleep-Related	146					146
Medical	31	18	13	9	9	80
All Deaths	**210**	**84**	**45**	**58**	**119**	**516**

Ethnic and Racial Disparities in Child Deaths

Table 5 provides the percentage of the population, number and percentage of deaths, and percentage of reviews for all race/ethnicity groups in Georgia.

Key findings include that:

- Black, non-Hispanic children are over represented in death data, accounting for 50% of all child deaths (age < 18) but only 33% of the under 18 population.
- White, non-Hispanic children have the highest percentage of cases reviewed (84.7% of child deaths) while Hispanic children had the lowest percentage of cases reviewed (74.1%).
- Black, non-Hispanic children accounted for the greatest number of non-medical child deaths (i.e., deaths from unintentional and intentional injuries or sleep-related causes).

Table 5: Georgia Population, All Deaths, Non-Medical Deaths, and Non-Medical Deaths Reviewed By CFR Committees by Race/Ethnicity for Ages 0-17 in 2017

	Georgia Population Age 0-17		Deaths		Non-Medical Deaths		Non-Medical Deaths Reviewed		
Race/Ethnicity	Count	%	Count	%	Count	%	Count	%	% Reviewed
White, non-Hispanic	1,101,318	43.9	502	34.6	202	39.1	171	41.5	84.7
Black, non-Hispanic	844,955	33.7	725	50.0	238	46.1	183	44.4	76.9
Other, non-Hispanic*	195,367	7.8	63	4.3	18	3.5	15	3.6	83.3
Hispanic	366,971	14.6	160	11.0	58	11.2	43	10.4	74.1
Totals	**2,508,611**		**1,450**		**516**		**412**		**79.8**

*"Other, non-Hispanic" is the sum of the Asian, Multi, and Other non-Hispanic categories

Figure 4 compares distributions of all child deaths, non-medical child deaths, and non-medical child deaths reviewed for the most common race/ethnicity combinations to the distributions of these populations in the overall population in Georgia. Percentages of deaths for a race/ethnicity combination that are greater than the percentages of race/ethnicity in the overall child population indicate that population dies at a higher rate.

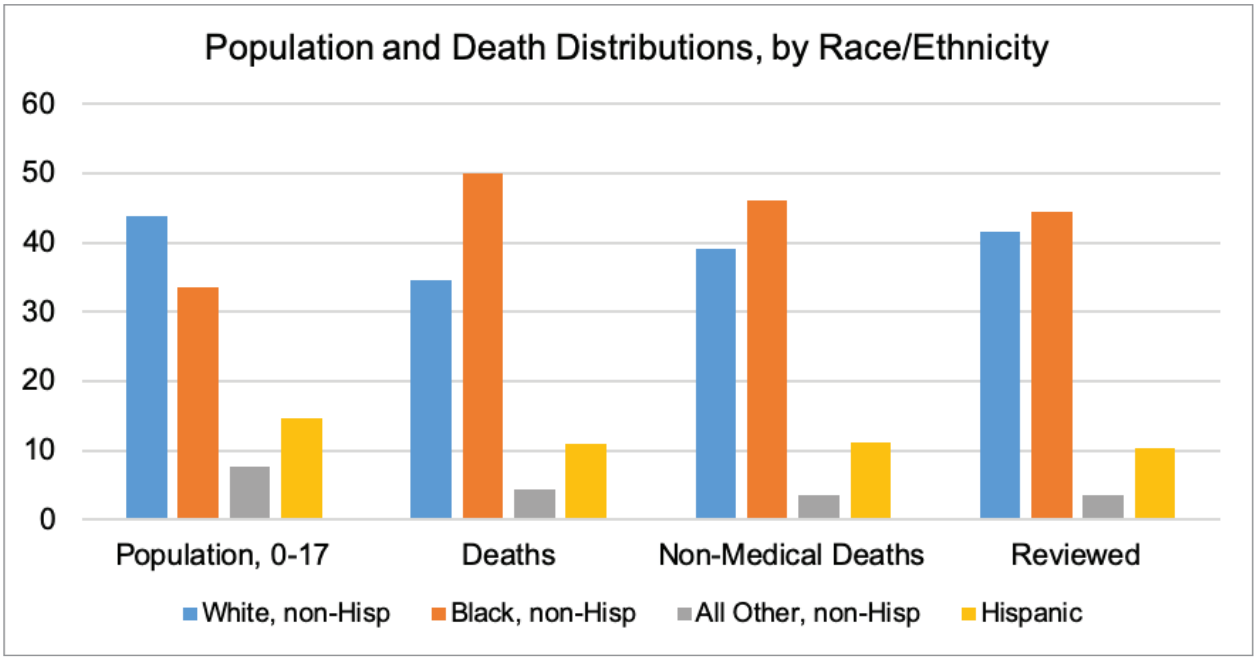


Figure 4. 2017 Race/ethnicity distributions (% of total) for the most common race/ethnicity combinations in Georgia population ages 0-17 compared to race/ethnicity distribution in all child deaths (from OASIS), all non-medical deaths (from OASIS) and all reviewed deaths (from CFR data)

Table 6 shows how deaths and death rates (per 100,000 population) for different causes of death have changed from 2015–2017 for White and Black children based on OASIS data. Key findings include that:

- Black, non-Hispanic children 0-4 years of age had almost 4 times the homicide rate of White people, and almost 8 times the rate of Whites in the 15 to 17-year-old age group.
- White, non-Hispanic people had 1.8 times the suicide rate as Black, non-Hispanic children in the 15 to 17-year-old age group and 1.6 times the rate of motor-vehicle deaths (0-17 years) as Black, non-Hispanic.

These differences are likely due to difference in exposure associated with race. For example, White, non-Hispanic teens have a higher motor-vehicle crash fatality rate than Black, non-Hispanic teens; however, the difference may be explained by White, non-Hispanic teens having a greater access to cars. Also, Black, non-Hispanic teens have a higher homicide rate than White, non-Hispanic teens, which may be explained by a greater exposure to violence.

Table 6: Georgia Deaths and Death Rate, 2015–2017 (Source: OASIS)

	2015		2016		2017		Selected Years Total	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Homicide (Rate per 100,000 Population)								
Ages 0 to 4								
White, non-Hispanic	7	1.9	8	2.2	10	2.7	25	2.3
Black, non-Hispanic	22	9.5	14	6	20	8.6	56	8
Ages 15-17								
White, non-Hispanic	7	2.9	6	2.5	5	2.1	18	2.5
Black, non-Hispanic	28	18.5	33	21.5	30	19.3	91	19.8
Suicide, Ages 15-17 (Rate per 100,000 Population)								
White, non-Hispanic	23	9.6	26	10.8	28	11.5	77	10.7
Black, non-Hispanic	11	7.3	7	4.6	9	5.8	27	5.9
MVC (Rate per 100,000 Population)								
White, non-Hispanic	35	14.7	30	12.5	30	12.4	95	13.2
Black, non-Hispanic	14	9.3	13	8.5	11	7.1	38	8.3
Infant Mortality (Rate per 1,000 Births)								
All Deaths								
White, non-Hispanic	402	5.3	389	5.3	354	4.8	1145	5.1
Black, non-Hispanic	587	13	542	12.1	529	11.6	1658	12.2
SIDS								
White, non-Hispanic	41	0.5	36	0.5	44	0.6	121	0.5
Black, non-Hispanic	64	1.4	58	1.3	61	1.3	183	1.3

As shown in Table 7, the infant mortality rate for Black, non-Hispanic infants is 2.3 times the rate of White, non-Hispanic infants. Some reasons may include:

- Black, non-Hispanic infants have a higher rate of sleep-related deaths.
- Black, non-Hispanic mothers have a higher rate of pre-term labor and pre-term births than White mothers.
- The SIDS death rate for Black, non-Hispanic infants is 2.5 times that of the rate for White, non-Hispanic infants.

Table 7: Georgia Child Mortality Rates and Ratio

	Infant	Ages 1-17
White, non-Hispanic	5.2	21.2
Black, non-Hispanic	12.1	26.3
Black-to-White Risk Ratio	2.3	1.2

Unintentional Injury Deaths

Unintentional injuries are injuries that are incurred when there is no intent to harm oneself or someone else. According to the Centers for Disease Control and Prevention, unintentional injuries such as those caused by falls, poisoning, drowning and motor vehicle crash are the leading cause of death among children in the United States.

Table 8 shows the change in the numbers of unintentional child deaths per year since 2010. Table 9 provides the numbers of child deaths in 2017 attributed to unintentional causes by age group. The following subsections provide additional detail on motor-vehicle crash and drowning deaths.

Table 8: Unintentional Infant and Child Deaths, Age 0-17, Georgia Residents

	Year of Death							
Cause of Death	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Motor-Vehicle Crash	127	103	78	104	87	109	111	102
Drowning	39	32	27	29	49	34	41	39
Other Unintentional*	82	83	62	81	72	67	65	78
Total	**248**	**218**	**167**	**214**	**208**	**210**	**217**	**219**

*Other deaths include fire, falls, poisoning and firearms, with those deaths remaining stable over the past 8 years.

Table 9: 2017 Georgia Infant and Child Unintentional Deaths, by Cause of Death and Age Group

	Age Group (years)					
Cause of Death	**Infants**	**1-4**	**5-9**	**10-14**	**15-17**	**Totals**
Motor-Vehicle Crash	4	18	17	19	44	102
Drowning	3	21	7	6	2	39
Other Unintentional*	14	26	15	8	15	78
Total	**21**	**55**	**37**	**33**	**61**	**219**

*Other unintentional deaths include fire, falls, poisoning and firearms.

Motor-Vehicle Deaths

In the United States, motor-vehicle crashes are one of the leading causes of death for children under the age of 18. In 2016, 723 children age 12 and under were killed as a result of a motor vehicle crash; of those killed, 35% were not buckled up. Many of these crash-related injuries and deaths are preventable. Consistent, correct use of restraint systems, from seat belts to child safety seats, along with modeling safe driving practices are some of the evidence-based strategies that have proven effective.[2]

In 2017, motor vehicle-related deaths were the leading cause of unintentional injury-related deaths (ages 1-17) in Georgia. The annual count (as reported in death certificate data) has varied from 78 to 127 over the past eight years, with an average of 103 per year.

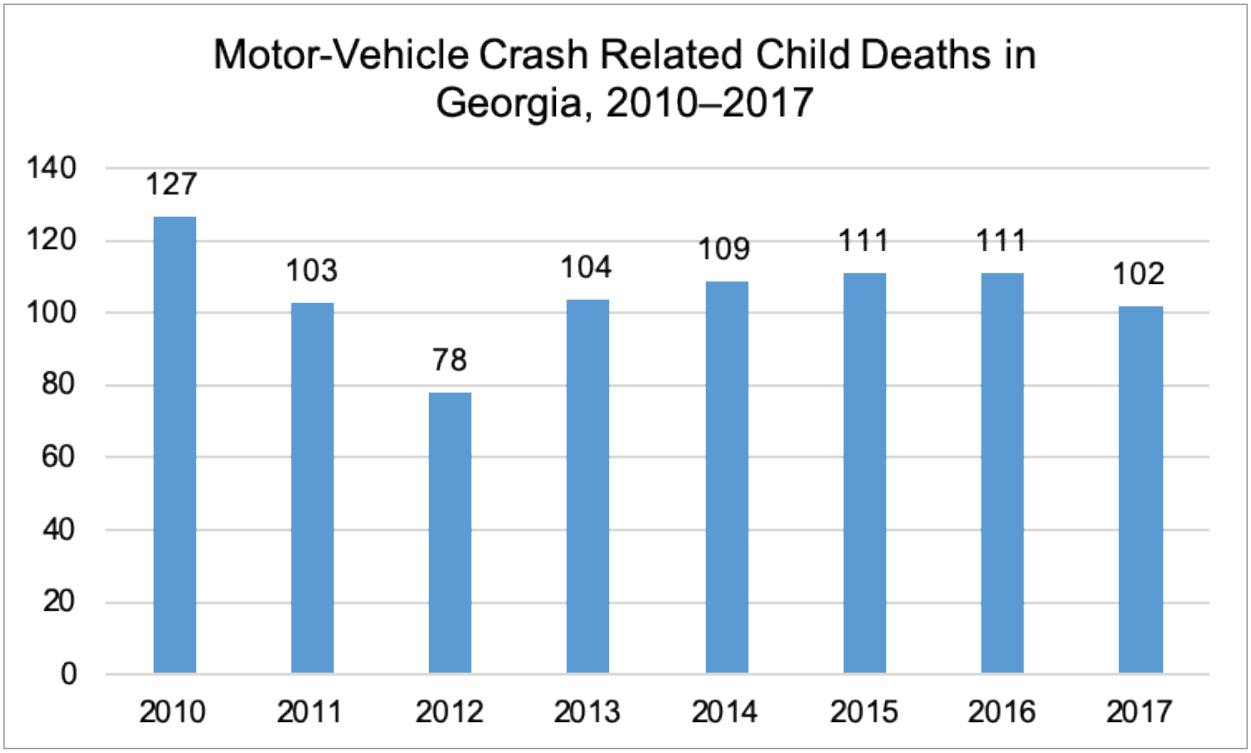


Figure 5. Motor vehicle-related child deaths in Georgia from 2010–2017

Georgia CFR teams reviewed 93 motor-vehicle deaths that occurred in 2017. The following discussion addresses information from those 93 reviews.

2 https://www.cdc.gov/motorvehiclesafety/child_passenger_safety/cps-factsheet.html

Table 10: Demographics of Reviewed Motor Vehicle-Related Deaths, GA, 2017

Race/Ethnicity	Sex	Infant	1-4	5-9	10-14	15-17	Total
White, non-Hispanic	Male		2	3	5	9	19
	Female	1	1	4	1		7
Black, non-Hispanic	Male	2	4	5	7	12	30
	Female	1	5	4	3	14	27
Other	Male				1	6	7
	Female		2	1			3
Total		**4**	**14**	**17**	**17**	**41**	**93**

In terms of demographics, the most impacted age group from MVC deaths is the 15 to 17-year-old group, which encompassed 44% of all MVC deaths reviewed in 2017. The gender split for MVC deaths from infants to 17-year-olds is 60% male and 40% female. White children were the most heavily impacted group, consisting of 57 of 93 reviewed deaths.

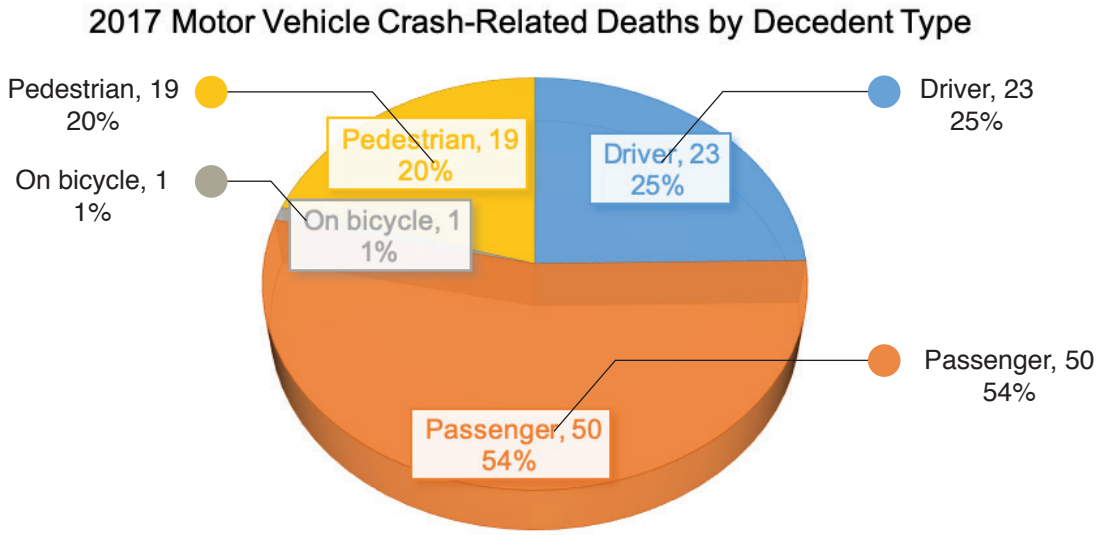


Figure 6. Reviewed motor vehicle-related deaths by decedent road user type, 2017 (N=93)

Eighty-four percent (42 out of 50) of MVC victims who were passengers were in cars, vans or SUVs. Figure 7 describes reported occupant restraint use for this group. Correct restraint use for children ages 0-7 is based on the use of a child safety seat, while children ages 8-17 are based off the use of lap seat belt or lap-shoulder seat belt, whichever was present.

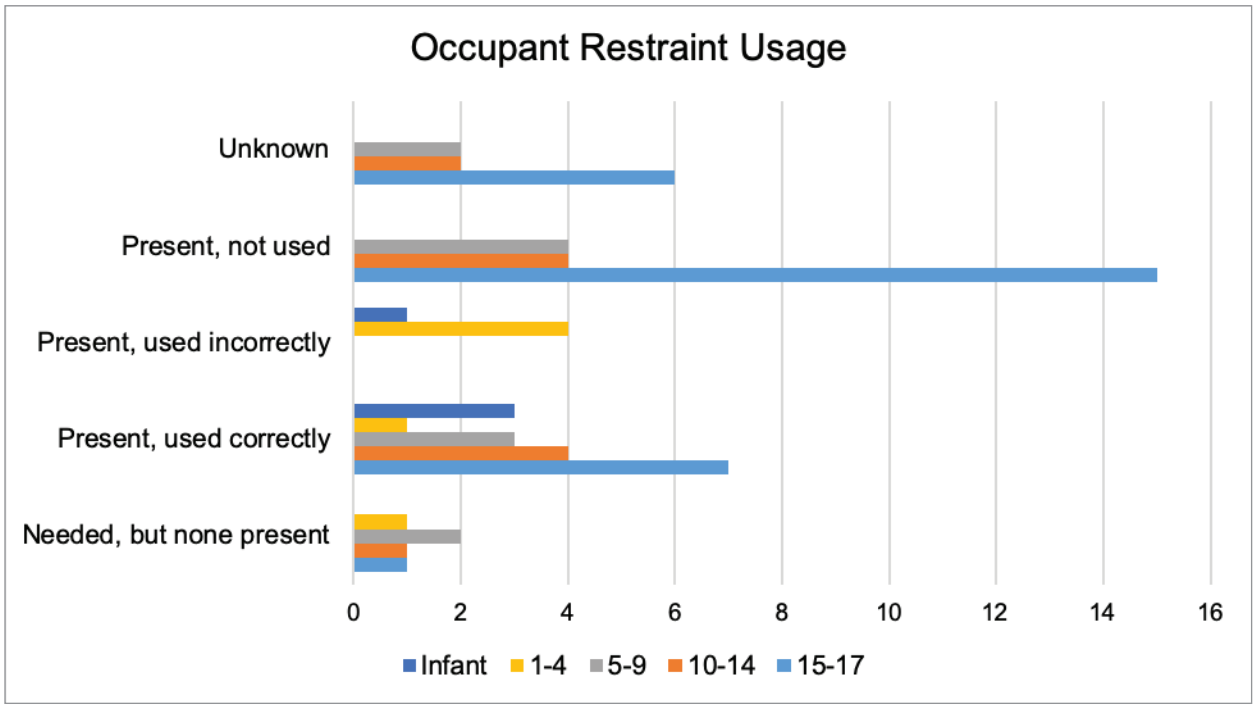


Figure 7. Occupant Restraint Usage (Drivers and Passengers), 2017 (N=61). These data includes only passenger vehicles (cars, SUVs, trucks, vans)

Nationally, child restraints are often used incorrectly. Two studies published in 2015 estimate that 46% of child restraints are misused in a way that could reduce the safety of a child in a crash[3].

According to the Georgia Governor's Office of Highway Safety, state law requires that:

- Children under 8 years of age must ride in an approved child restraint that is suited for their height and weight.
- Children under 8 years of age must ride in the back seat. If the back seat is occupied by other passengers a child may ride in the front seat, provided he or she is secured correctly in an appropriate restraint.
- A child of any age who is 57 inches or taller may use a seat belt in lieu of a booster seat.

Per the best practice recommendations from the American Academy of Pediatrics[4]:

- Infants and toddlers should ride in a rear-facing car seat for as long as possible until they reach the highest weight or height allowed by the car seat manufacturer.
- Children who have met the height or weight limit of a rear-facing seat should transition to a forward-facing seat with a harness for as long as possible until they reach the highest weight or height allowed by the car seat manufacturer.

3 https://www.cdc.gov/motorvehiclesafety/child_passenger_safety/cps-factsheet.html
4 https://healthychildren.org/English/safety-prevention/on-the-go/Pages/Car-Safety-Seat-Checkup.aspx

Prevention Opportunities

- Georgia law requires caregivers to follow manufacturer instructions for use of child restraints until the child is age 8 or is 4' 9" tall. The best practice recommendation from the American Academy of Pediatrics is to keep children in a rear-facing seat as long as possible[5].
- Children who have graduated to a forward-facing seat with a harness should continue to use it until they reach the maximum height or weight limit of the seat, as "... a forward-facing seat with a harness is safer than a booster."[6]
- After outgrowing a forward-facing seat with a harness, a child may use a belt positioning booster seat and still must remain in the back seat. A booster seat should be used until a child "is big enough to fit in a seat belt properly."[7]

For a seat belt to fit properly, the lap belt must lie snugly across the upper thighs, not the stomach. The shoulder belt should lie snug across the shoulder and chest and not cross the neck or face. If you are not sure if your child needs a booster seat, you can take the 5-step test developed by Safety Belt Safe U.S.A. at www.carseat.org.

- Once a child transitions to a seat belt, the best practice recommendation from the AAP states that a child should remain in the back seat until at least 13 years of age.[8]
- All occupants in a vehicle should ride correctly restrained at all times. In a press release from February 2018, NHTSA highlighted that there were 10,428 unbuckled passenger vehicle occupants killed in crashes in the United States in 2016. If all passenger vehicle occupants 5 and older involved in fatal crashes had worn their seat belts, an additional 2,456 lives could have been saved.[9]
- In 2016, drunk driving accounted for 1,554 fatalities in Georgia, and nationwide about 1 in 3 motor vehicle deaths involved a drunk a driver. Effective strategies used to curtail these activities in adult and young drivers include impaired driving laws, sobriety checkpoints, mass media campaigns and school-based instructional programs.[10]
- Drivers are encouraged to minimize as many distractions as possible when on the road, as distracted driving has also become an issue for occupant safety. Nationwide in 2015, 3,477 people were killed in crashes involving a distracted driver. An additional 391,000 people were injured in motor-vehicle crashes involving a distracted driver. Using a cell phone, texting and eating are all instances of distracted driving.[11]

Other risk factors are driver age, with younger, less experienced drivers being more at risk; state of impairment; and the type of distracting activity. Interventions such as media awareness campaigns and laws limiting or prohibiting the use of electronic devices while driving are being employed to address this issue.

5 https://www.aap.org/en-us/about-the-aap/aap-press-room/pages/aap-updates-recommendation-on-car-seats.aspx
6 https://www.aap.org/en-us/about-the-aap/aap-press-room/Pages/AAP-Updates-Recommendations-on-Car-Seats-for-Children.aspx
7 http://www.safercar.gov/parents/CarSeats/Right-Seat-Age-And-Size-Recommendations.htm
8 https://www.aap.org/en-us/about-the-aap/aap-press-room/pages/aap-updates-recommendation-on-car-seats.aspx#sthash.rqMUaosc.dpuf
9 https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812494
10 http://www.cdc.gov/motorvehiclesafety/impaired_driving/strategies.html
11 http://www.cdc.gov/motorvehiclesafety/distracted_driving/index.html

Drowning

According to the CDC, over 3,500 people died from unintentional drownings is the U.S. from 2005–2014. About one in five people in the U.S. who die from unintentional drowning are children 14 and younger. As described in Table 11, in Georgia there were a total of 32 reviewed drowning deaths in 2017. Most drowning victims were toddlers ages 1-4 (20 of 32). More males drown than females (22 males vs. 10 females). More drowning victims were White, non-Hispanic children than Black, non-Hispanic children (21 White, non-Hispanic vs. 8 Black, non-Hispanic). As shown in Table 12, most children who drown lacked appropriate supervision (18 of 32) and were in a pool rather than open water (18 in a pool vs. 11 in open water).

Table 11: Reviewed Drowning Deaths by Race/Sex, 2017

		Age Group (Years)					
Race/Ethnicity	**Sex**	**Infant**	**1-4**	**5-9**	**10-14**	**15-17**	**Totals**
White, non-Hispanic	Male		10	3	2		15
	Female		4	2			6
Black, non-Hispanic	Male	1			2	1	4
	Female		4				4
Other	Male		2			1	3
Totals		**1**	**20**	**5**	**4**	**2**	**32**

Table 12: Location of Drowning and Need of Supervision, Reviewed Deaths, 2017

		Age Group (Years)				
Location	**Supervision**	**Infant**	**1-4**	**5-9**	**10-14**	**15-17**
Open water	Not needed					2
	No/But needed		3		1	
	Yes		2	2	1	
Pool/Spa	No/But needed		9	2		
	Yes		5	1	1	
Bath Tub	No/But needed	1				
Well/Cistern/Septic	No/But needed		1			
Other	No/But needed				1	
Total		**1**	**21**	**5**	**4**	**2**

Prevention Opportunities

Drowning can happen quickly and silently. Georgia data indicates that 56% of child drowning deaths lacked appropriate supervision and 78% of the deaths that lacked supervision were children under the age of 5.

- Active supervision of children in or around open water or a pool is critical.
- Avoid distractions while supervising a child near open water or a pool, as a child can disappear under water suddenly.
- Older children also need supervision, even if they know how to swim, as they may attempt to explore beyond their limits.
- Infants and young children should not be left in a bathtub without constant supervision.

Intentional Injuries

Intentional injury refers to injuries resulting from purposeful human action, whether directed at others or oneself. Intentional injuries include self-inflicted and interpersonal acts of violence with the intent to cause harm.

The last three years (2015–2017) have seen an increase (from the prior three-year period, 2012–2014) in both homicide and suicide deaths. Comparing the consecutive three-year periods, homicides increased 37% and suicides increased 65%. Forty-two of the additional 61 homicide deaths (comparing the two three-year periods) were Black, non-Hispanic males ages 15-17. However, the increase in child suicide deaths (comparing the three-year periods) was distributed across all four major race/sex categories. The largest number (23) and percent (135%) increases were among White, non-Hispanic females.

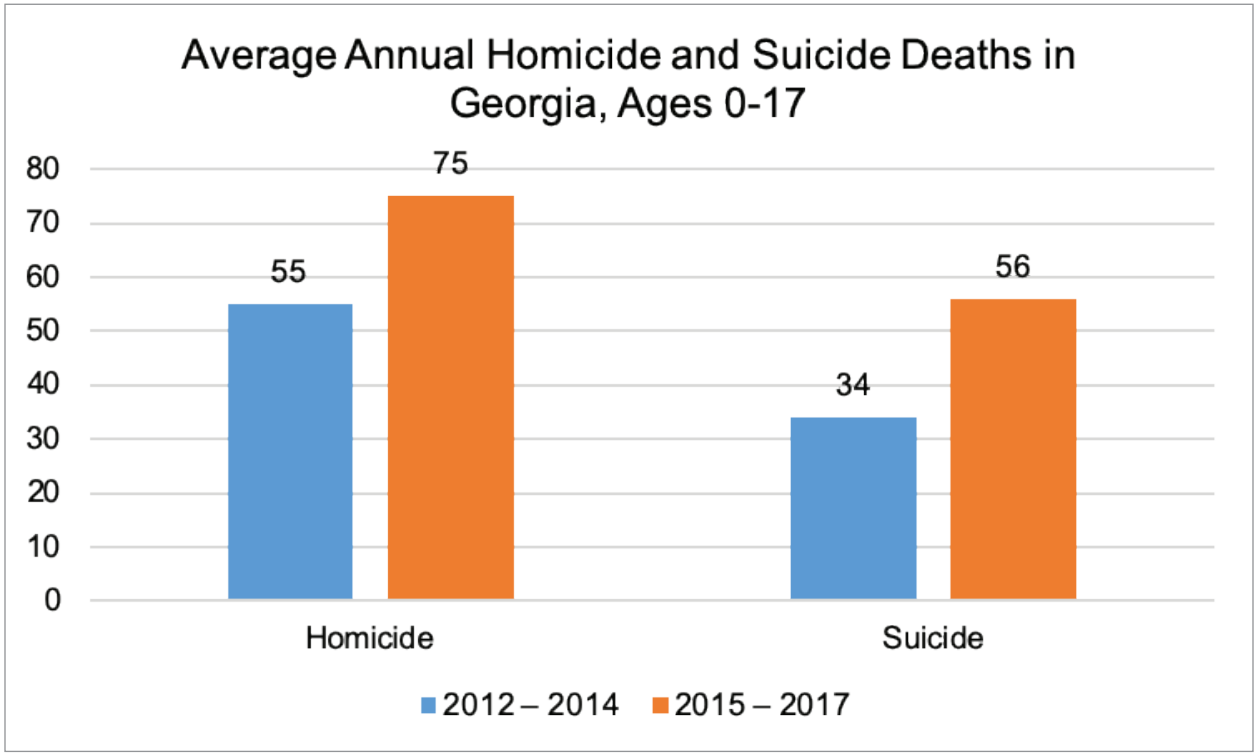


Figure 8. Average annual homicide and suicide death in Georgia, Ages 0-17 from 2012 to 2014 vs. 2015 to 2017

There were a total of 131 intentional injury deaths in 2017, 72 homicides and 59 suicides. The CFR teams reviewed 64 deaths that they determined to be homicides and 48 deaths determined to be suicide. The following Homicide and Suicide discussions address findings from those 2017 reviewed deaths.

Homicide

According to the CDC, homicide is the fourth leading cause of death for children ages 1-14 in the United States, behind unintentional injuries and medical causes (cancer and congenital anomalies separately counted) and is the third leading cause of death for youth and adults ages 15-24, behind unintentional injuries and suicide.[12]

Table 13 shows the distributions of child deaths reviewed by CFR committees determined to be homicides by child age group, race and sex. Over all ages, Black, non-Hispanic males experienced a greater number of deaths (and a higher death rate) than white males. Much of this is associated with a larger number of Black, non-Hispanic male deaths in the 15-17 age group.

As shown in Table 14, the weapon (or "mechanism") associated with a homicide death varies with age group. Most deaths in the 15-17 age group were associated with firearms, while 21 of the 31 infant/toddler deaths were associated with blunt force trauma (the decedent was struck by someone). Table 15 indicates that the person responsible for the majority of infant deaths was the biological mother or father.

Table 13: Age/Race/Sex Distribution, Reviewed Homicide Deaths, 2017

		Age Group (Years)					
Race/Ethnicity	**Sex**	**Infant**	**1-4**	**5-9**	**10-14**	**15-17**	**Totals**
White, non-Hispanic	Male		3	1		3	7
	Female	2	3	1	1		7
Black, non-Hispanic	Male	6	7	1	3	15	32
	Female	3	3			3	9
Other	Male	1				5	6
	Female	3					3
Totals		**15**	**16**	**3**	**4**	**26**	**64**

Table 14: Reviewed Homicide Deaths by Cause and Age Group, 2017

	Age Group (Years)					
Cause	**Infant**	**1-4**	**5-9**	**10-14**	**15-17**	**Total**
Blunt force trauma	12	9				21
Drowning		1		1		2
Fire		2				2
Firearm	1		2	2	25	30
Heat	1					1
Poison	1	1				2
Stabbing		2	1	1	1	5
Suffocation		1				1
Total	**15**	**16**	**3**	**4**	**26**	**64**

12 https://www.cdc.gov/injury/images/lc-charts/leading_causes_of_death_age_group_2016_1056w814h.gif

Table 15: Reviewed Homicide Deaths by Person Responsible

	Age Group (Years)					
Person Responsible	**Infant**	**1-4**	**5-9**	**10-14**	**15-17**	**Total**
Missing		3		1	13	17
Acquaintance		1			6	7
Adoptive parent				1		1
Biological father	8	1				9
Biological mother	5	7	1	2		15
Child's boyfriend/girlfriend					1	1
Foster parent		1				1
Friend		1			2	3
Grandparent	1					1
Mother's partner	1	2	1			4
Other			1		1	2
Stranger					2	2
Unknown					1	1
Total	**15**	**16**	**3**	**4**	**26**	**64**

Prevention Opportunities

Over 60% of the homicide deaths were determined to involve maltreatment as a cause of death. The majority of the deaths occurred in children ages 0-4 and youth ages 15-17. Different prevention approaches are required for these age groups.

For children 0-4:

- Parent education that provides understanding and strategies for providing a stable nurturing relationship for infants and young children.
- Specific programs that help caregivers understand infant and child crying and strategies for soothing the infant or child.
- Strengthen awareness of child abuse protocols for those who respond to domestic violence incidents.
- Continued community education on the definition and prevention of child abuse, including mandated reporter trainings.

For youth 15-17:

The Children's Safety Network provides information and resources to address youth violence and homicide.[13] Factors that may protect youth include:

- Connectedness to parents or other positive adults.
- Involvement in school and social activities.
- Other mentoring adults.
- Programs that address gang membership and drug use.

Striving to Reduce Youth Violence Everywhere is a collaborative effort under the guidance of the CDC that provides strategies and effective evidence-based programs for a multifaceted, community-based, action-oriented response to violence.

13 https://www.childrenssafetynetwork.org/injurytopic

Suicide

Suicide is the second leading cause of death for youth and adults ages 10-34 in the United States, behind unintentional injuries (primarily motor-vehicle crashes)[14]. Using CDC's categorization for causes of death, in Georgia, suicide is the third leading cause of death for the 10-14 age group and the second leading cause of death for the 15-17 age group. (see Table 3).

Forty-eight of the reviewed 2017 deaths were determined to be suicides. A majority of the decedents were White, non-Hispanic (60%) and over two-thirds (69%) were male.

Table 16: Age/Race/Sex Distribution, Reviewed Data, Suicide Deaths, 2017

		Age Group (Years)			
Race/Ethnicity	Sex	5-9	10-14	15-17	Totals
White, non-Hispanic	Male		8	12	20
	Female		4	5	9
Black, non-Hispanic	Male		1	7	8
	Female		2	2	4
Other	Male	1	1	3	4
	Female			2	2
	Totals	1	16	31	48

The majority of youth are committing suicide by use of a firearm (54%), with an additional 1/3 choosing death by hanging.

Table 17: Suicide Mechanism by Age Group, Reviewed Deaths, 2017

	Age Group (Years)					
Cause	Infant	1-4	5-9	10-14	15-17	Total
Blunt Force Trauma					1	1
Fall					1	1
Firearm			1	6	19	26
Hanging				8	8	16
Poison				1	2	3
Suffocation				1		1
Totals	0	0	1	16	31	48
Total	15	16	3	4	26	64

Prevention Opportunities

The rate of suicide is increasing in Georgia's youth population, which is an alarming trend. The greatest increase is White females, and the lowest increase is White males.

- Further information needs to be gathered in the Georgia Youth Risk Factor Surveillance Survey to help determine the contributing factors to suicide, suicide attempts and ideation.
- Provide educational programs like (LEADS[15]) in our schools, which is a recognized evidence-based program.
- Provide awareness of suicide prevention apps that are designed to connect children and youth with help when they are depressed or considering suicide.
- Provide awareness of mental health providers and community resources that are available for youth.

14 https://www.cdc.gov/injury/images/lc-charts/leading_causes_of_death_age_group_2016_1056w814h.gif
15 https://www.sprc.org/resources-programs/leads-youth-linking-education-and-awareness-depression-and-suicide-0

Maltreatment

The World Health Organization defines child maltreatment as all forms of child abuse, including physical harm, emotional abuse, neglect, sexual abuse resulting in actual or potential harm to the child's health, development or survival. The connection between infant/child maltreatment and child death can be very clear for some deaths:

"As the baby cried louder, the defendant turned his music up louder to drown out his crying. The music did not deter the infant from crying so the father slapped the baby. When he slapped the infant, the infant hit the wall and slid in between the dresser by the bed. … The cause of death is blunt force trauma to the head and this case has been ruled as a homicide."

For cases where there was only a prior history of child neglect, there may not be any clear link between the neglect and a subsequent child death. However, the existence of a maltreatment history indicates that there was an opportunity for intervention. This Maltreatment section describes the reported maltreatment (and other care-related risks) with the intent of defining research questions and stimulating prevention actions.

The revised Child Death Review (CDR) form (version 5, used for the 2017 deaths) has questions related to any "act" (or person's action) that caused or contributed to the death. In addition, there are questions regarding any prior history of maltreatment. (See Appendix A for a more detailed discussion of the CDR maltreatment variables.) These variables define a "Maltreatment typology" that is provided in Table 18 with counts for the number of deaths in each category. Two counts are provided:

- The first is the count for each category, allowing for duplication (one death could have a maltreatment cause and history, and would be counted in each category);
- The second count is an "un-duplicated" count with the more severe maltreatment assigned to the death. "Cause" is considered (arbitrarily) more severe than "History" and "Abuse" more severe than "Neglect."

The questions in the CDR form on "act" include "Poor supervision" and "Exposure to hazard" as options for the type of act that caused/contributed to the death. This has been included in the typology, although the focus of this section will be on the four maltreatment-related categories.

Table 18: Maltreatment Reports and Other Adverse Acts

		All Reports	Un-Duplicated
Cause/Contributor	Abuse	32	32
	Neglect	27	23
History	Abuse	49	35
	Neglect	68	56
Poor Supervision		93	73
Exposure to Hazard(s)		121	72

There were 146 reviewed deaths with a reported maltreatment cause or history (the sum of the first four values in the "Un-Duplicated" column). Table 19 presents the age/race/sex distribution of the 146 reviewed deaths with a reported maltreatment cause or history. Of the 412 total reviewed deaths, 35% had a history or reported maltreatment cause. The race distributions do not indicate any Black/White disparity in the frequency of maltreatment (approximately 29% for both races, combining male and female). It appears that infants and older teens have lower maltreatment rates for reviewed deaths, but the counts are relatively small.

Table 19: Age/Race/Sex Distribution, Reviewed Deaths with Maltreatment Noted

		Age Group (Years)						
Race/Ethnicity	Sex	Infants	1-4	5-9	10-14	15-17	Totals	% of All Reviewed
White, non-Hispanic	Male	6	7	6	4	9	32	25.4
	Female	10	8	3	6	5	32	34.8
Black, non-Hispanic	Male	14	13	1	8	11	47	30.5
	Female	9	3	6	3	2	23	28.0
Other	Male	3				3	6	14.0
	Female	5				1	6	31.6
Totals		**47**	**31**	**16**	**21**	**31**	**146**	
% of All Reviewed		**22.4**	**36.9**	**35.6**	**36.2**	**26.1**	**28.3**	

A summary of the four categories of maltreatment by the major cause of death categories (Table 20) reveals a disturbing number (30) of homicides with abuse as the cause. Twenty-seven of these 30 are infants (12) or toddlers, ages 1-4 (15).

Table 20: Maltreatment by Cause of Death and Type/Association, GA, 2017 Reviewed Deaths

	Maltreatment Category						
	Cause/Contribute		History				
Cause of Death	Abuse	Neglect	Abuse	Neglect	No Maltreatment	Totals	% w/ Maltreatment
Unintentional Injuries							
Motor Vehicle Crash		3	10	6	74	93	20.4
Drowning		2		4	26	32	18.8
Other Unintentional		3	4	7	39	53	26.4
Intentional Injuries							
Homicide	30	1	3	5	25	64	60.9
Suicide	1	4	5	6	32	48	33.3
Sleep-Related		9	4	13	120	146	17.8
Medical	1	1	9	15	54	80	33.8
All Reviewed	32	23	35	56	370	516	28.3
Duplicated Counts	32	27	49	68			

Prevention Opportunities

- Children with maltreatment in their history are at risk for injury. Parents should be screened for Adverse Childhood Experiences (ACES) and connected with community mental health and social service agencies.
- Parents with ACES can seek parenting education classes that will help them understand how having ACES affects their ability to parent and how to build safe, stable relationships.
- Prevention of child maltreatment takes community awareness and the building of resources that provide parents and families with the skills they need to achieve emotional, physical and financial stability.

Sleep-Related Deaths

Infant Sleep-related Deaths, 2017:

Excluding the "medical cause" deaths (a majority of which are neonatal deaths), the cause of death category with the largest number of infant deaths is sleep-related death. The death certificate "case definition" for a sleep-related death currently includes three International Classification of Disease (ICD) (v.10) codes: R95 (SIDS), R99 (unknown) and W75 (suffocation/ strangulation in bed). Using this definition, **Georgia has averaged 164 sleep-related deaths per year (or about 3 per week) for 2014–2017**

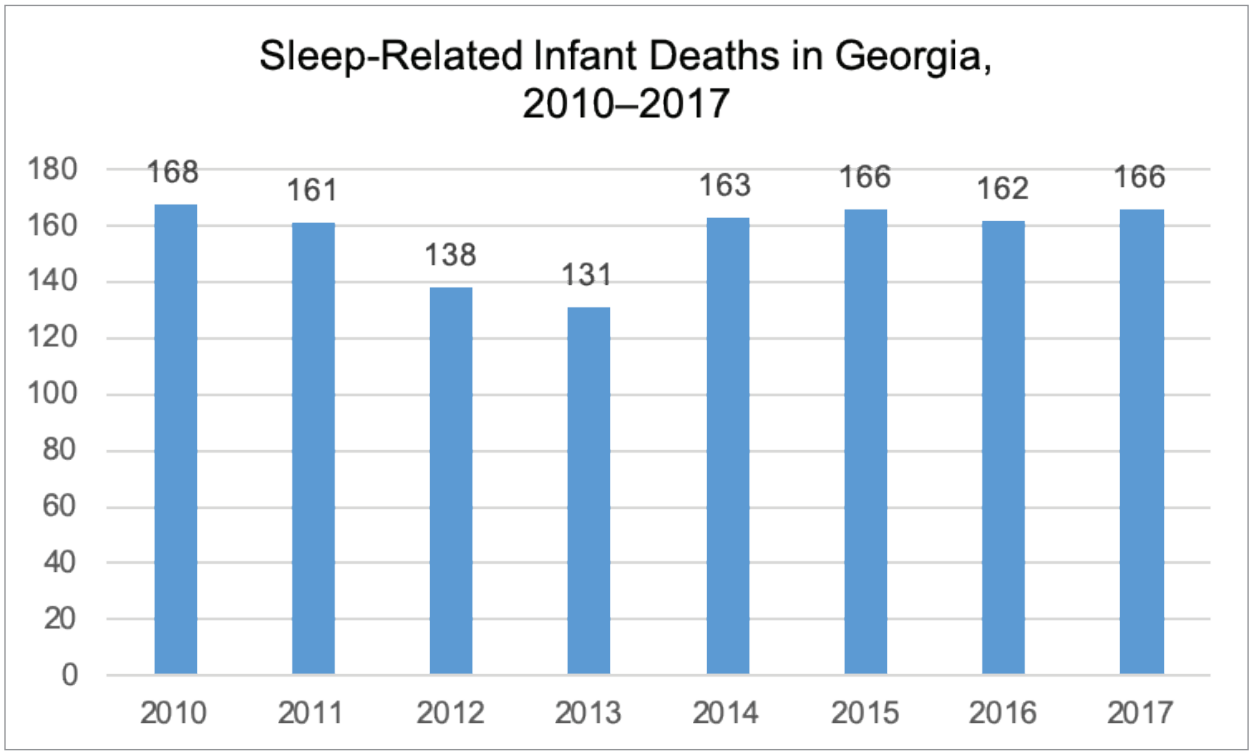


Figure 9. Trends in sleep-related infant deaths in Georgia

Infant sleep-related deaths, as defined above, have similar characteristics every year. Each year, the majority of deaths occur prior to 6 months of age and in an adult bed or other unsafe sleep environment. Nationally, non-Hispanic Black infants die at a rate two times higher than other races and ethnicities, except American Indian/Alaskan Native (CDC, 2016). This disparity occurs in Georgia as well. The rate of death for non-Hispanic Black infants due to sleep-related causes was 1.3 per 1,000 births as compared to 0.6 for non-Hispanic White infants.

In 2017, local Child Fatality Review (CFR) teams reviewed 146 infant deaths that they determined to be sleep-related. The CFR data is used to classify sleep-related deaths into three categories, which differ slightly from the ICD10 codes for the death certificate categories:

- SUID (sudden, unexpected infant death), medical cause: There is an underlying medical problem, but the condition would not be expected to lead to death.
- SUID, asphyxia: There was an identified risk factor in the immediate sleep environment i.e., pillows, excessive bedding and prone position.
- SUID, undetermined cause: There was no specific risk factor identified.

Table 21 provides the distribution of reviewed deaths by race, sex and SUID category.

Table 21: 2017 Reviewed Sleep-Related Deaths, by Race/Sex and SUID Category

	White, non-Hispanic		Black, non-Hispanic		Other Race		Total
SUID Category	Male	Female	Male	Female	Male	Female	
Medical	4		1	3		2	10
Asphyxia	9	10	15	11	4	2	51
Undetermined	12	14	32	17	7	3	85
Total	**25**	**24**	**48**	**31**	**11**	**7**	**146**

The findings from the reviews are discussed in Figure 10.

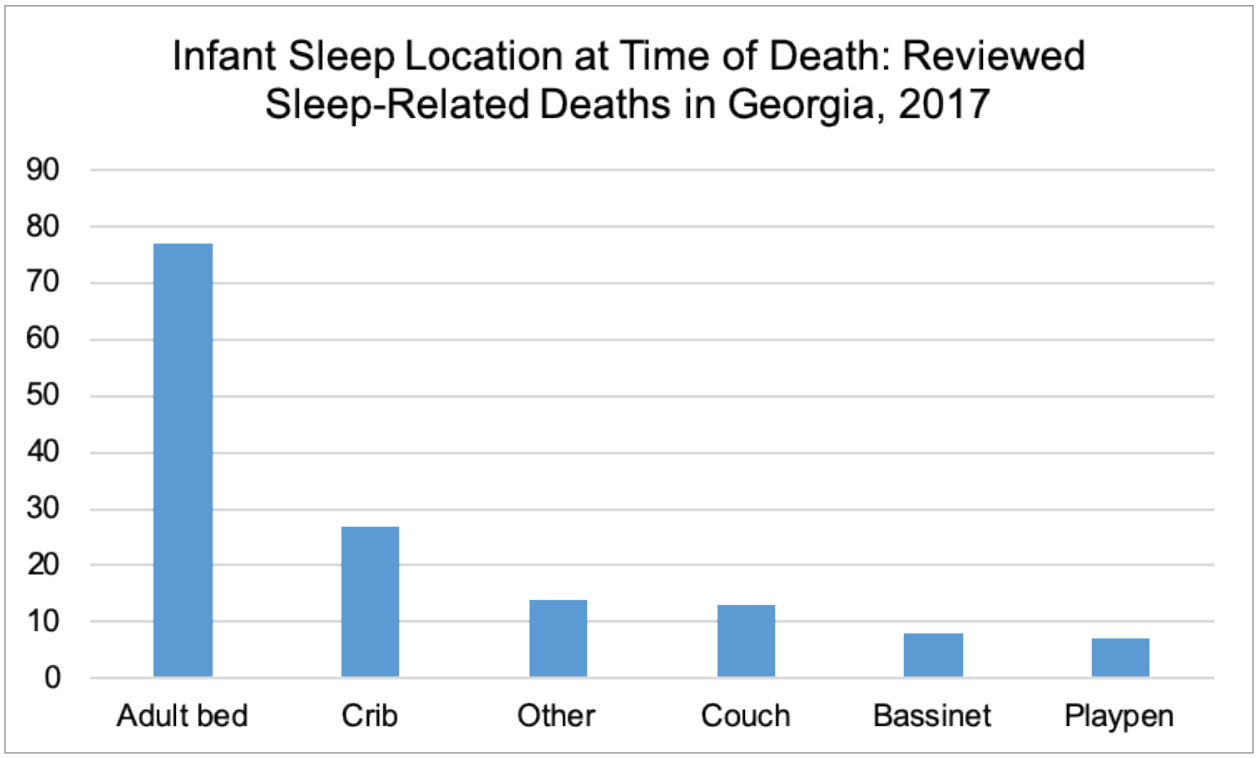


Figure 10: Sleep Locations Associated with Infant Sleep-Related Deaths, 2017

In 2017, 52.7% of infants that died from a sleep-related cause were found in the adult bed at the time of death. To help reduce the risk of asphyxia, the American Academy of Pediatrics recommends that all infants "be placed on a firm sleep surface (e. g., a mattress in a safety-approved crib) covered by a fitted sheet with no other bedding or soft objects." Parents and caregivers should also avoid placing infants on adult beds, couches, chairs and any other surface that is not firm, and flat, for sleep.

Additionally, "the AAP recommends room-sharing because this arrangement decreases the risk of SIDS by as much as 50% and is safer than bed sharing, or solitary sleeping (when the infant is in a separate room). Room-sharing is most likely to prevent suffocation, strangulation, and entrapment that may occur when the infant is sleeping in the adult bed."

Example of room-sharing as defined by the American Academy of Pediatrics

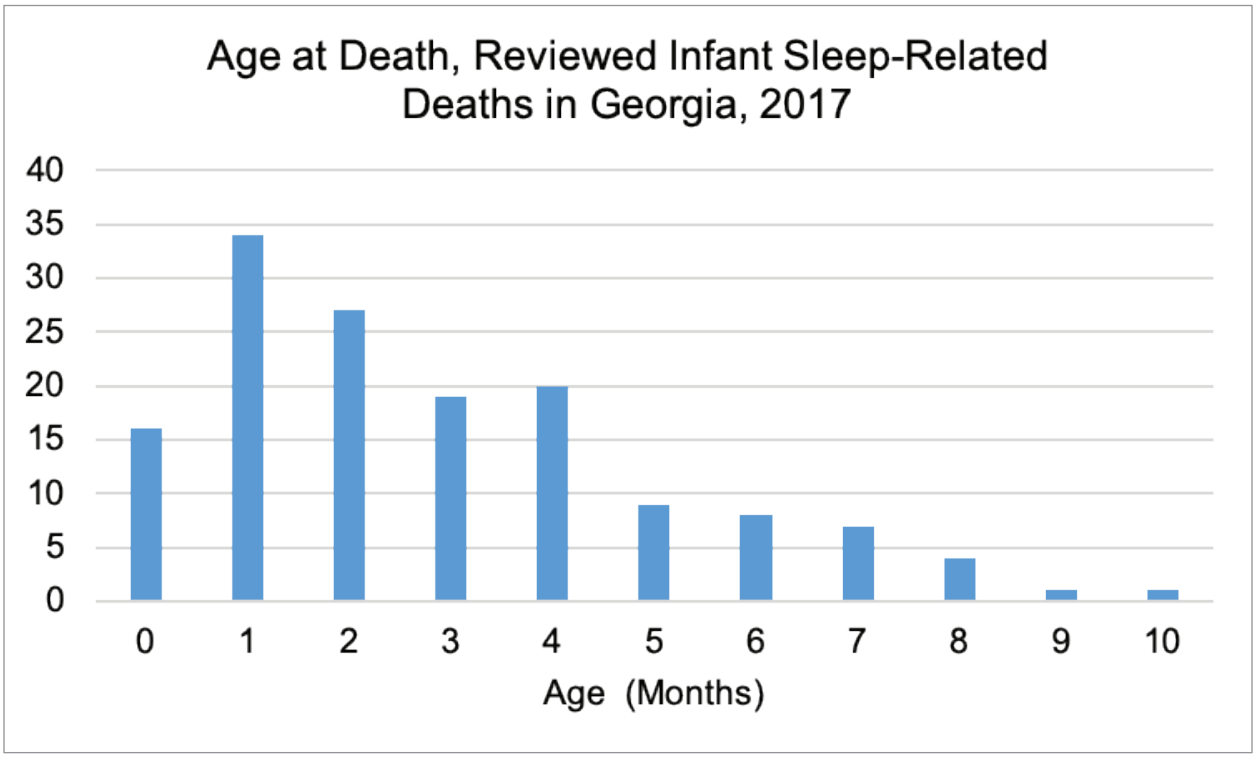


Figure 11. Age at death in months for infant sleep-related deaths, 2017

In 2017, 86% of infant, sleep-related deaths occurred prior to 6 months of age. Infants younger than 6 months of age are at an increased risk due to the critical development period they are experiencing.

Newborns are adjusting to life outside the womb and are learning the critical behaviors of life such as eating, sleeping, regulating their temperatures, etc. Newborns and infants younger than 6 months of age are also developing their muscle strength and coordination. When placed into environments considered unsafe, they are at risk for getting into soft bedding, pillows or blankets. Additionally, if they slide between objects and become entrapped i.e., between a wall and a mattress, they are not physically capable of removing themselves from the potentially deadly situation.

There are other potential risk factors that contribute to their higher risk for this age range, and these factors are actively being studied and investigated. For now, professionals interested in prevention can educate caregivers and all professionals working with infants, about the AAP recommendations and the steps they can take to provide the safest sleep environment for infants.

Educating expecting parents, caregivers and health professionals on the AAP recommendations and education alone doesn't automatically equal behavior change; therefore, prevention efforts should also include methods to address lack of resources, cultural differences, social norms and other barriers.

Prevention Opportunities

Possible societal approaches to reduce infant mortality and sleep-related deaths include[16,17]:

- Implementing work policies that support breastfeeding through paid leave and appropriate lactation rooms.
- Providing adequate health coverage for the expecting mothers and postpartum checkups to screen for issues the mother might be facing.
- Assuring affordable quality childcare in facilities that follow infant safe sleep practices.

16 https://www.cdc.gov/sids/data.htm
17 http://pediatrics.aappublications.org/content/138/5/e20162938

Preventability of Reviewed Deaths

Determining why a death occurred and utilizing the information to prevent future deaths is the focus of each CFR team. Although prevention recommendations are located in each of the sections, it also important to review preventability of reviewed deaths. In 2017, almost 90% of non-medical deaths could have been prevented. Of the 412 reviewed deaths it is possible that 365 deaths could have been avoided. As shown in Table 22, The CFR teams also determined that every cause of death category had a prevention percentage of over 80% except suicide where 65.6% of the deaths were determined to have been preventable.

Table 22: CFR Team Determination of Preventability of Reviewed Deaths

	Could the death have been prevented?				
Cause of Death	**Missing**	**No, probably not**	**Yes, Probably**	**Undetermined**	**% Preventable***
Asphyxia	1		11	3	100.0
Drowning		1	29	2	96.7
Motor-Vehicle Crash	1	2	82	8	97.6
Other, Unintentional		6	26	9	81.3
Homicide		2	54	8	96.4
Suicide	1	11	21	15	65.6
SUID**, Asphyxia	1	3	34	13	91.9
SUID**, Medical		6	2	2	
SUID**, Undetermined	2	8	47	28	85.5
Medical	3	45	4	25	8.2
Total	**9**	**84**	**310**	**113**	**78.7**
Non-Medical	**6**	**39**	**306**	**88**	**88.7**

*%Preventable: Excludes Missing ("0") and Team could not determine
**SUID: Sudden Unexpected Infant Death

The CDR form, Section L. Prevention Initiatives Resulting from the Review has two comprehensive questions related to prevention:

L.1. *Were new or revised agency services, policies or practices recommended or implemented as a result of the review?*

L.3. *What recommendations and/or initiatives resulted from the review?*

There were 20 "Yes" responses to the "Agency" question (L.1), with eleven of the 20 having specific information for L.1. A total of 136 out of the 412 reviews had specific responses regarding prevention recommendations or actions. An additional 56 reviews had notes in the prevention section (L.2) for risk factors "...that the team feels need to be addressed."

Table 23: Prevention Education Recommendations, by Cause

Cause	Recommendation	Implementation
Asphyxia	9	
Drowning	8	1
Motor-Vehicle Crash	53	8
Poison	0	7
Weapon	4	
Other	5	1
Sleep-Related	82	26
Homicide	10	
Suicide	46	7
Total	**217**	**50**

As shown in Table 23, sleep-related causes had the highest number of recommendations and also the highest number of implementations.

Table 24: Prevention Recommendations by Intervention Category

	Recommendation	Implementation
Education		
Media campaign	32	5
School program	39	6
Community safety project	40	11
Provider education	19	5
Parent education	60	16
Public forum	12	4
Other education	15	3
	217	50
Law		
New law/ordinance	2	1
Amended law/ordinance	2	
Enforcement of law/ordinance	6	2
	10	3
Environment		
Modify a consumer product		
Recall a consumer product		
Modify a public space	1	
Modify a private space(s)	2	1
Other, specify	3	
	6	1

As shown in Table 24, of the educational recommendations, the highest number was in parent education. Ten recommendations were made in Law and three were implemented, including a new law and enforcement of two existing laws or ordinances.

Resources

US Department of Transportation, Federal Highway Administration (www.fhwa.dot.gov)

National Highway Traffic Safety Administration (www.nhtsa.gov)

Georgia Department of Driver Services (www.dds.ga.gov)

Georgia Governor's Office of Highway Safety (www.gohs.state.ga.us)

American Red Cross (www.redcross.org)

Centers for Disease Control and Prevention (www.cdc.gov)

Children's Safety Network (www.childrensafetynetwork.org)

United States Consumer Product Safety Commission (www.cpsc.gov)

American Academy of Pediatrics (www.aap.org)

American Association of Suicidology (www.suicidology.org)

Centers for Disease Control and Prevention, Injury Prevention & Control:
Division of Violence Prevention (www.cdc.gov/violenceprevention)

Georgia Department of Public Health, Youth Risk Behavior Surveillance System
(www.dph.georgia.gov/YRBS)

Georgia General Assembly (www.legis.ga.gov)

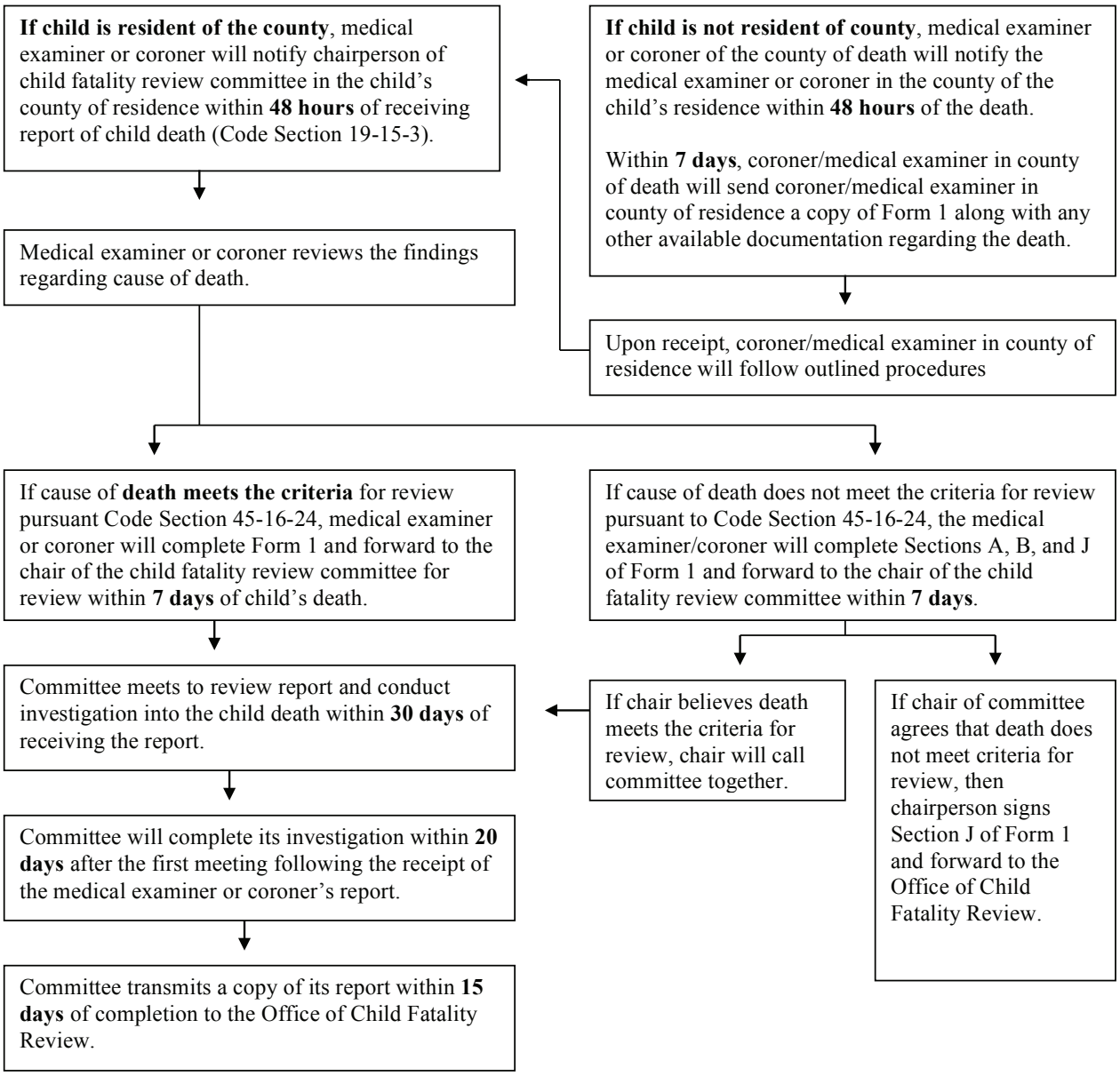
The Jason Foundation (www.jasonfoundation.com)

Suicide Awareness Voices of Education (www.save.org)

Georgia General Assembly Legislation (www.legis.ga.gov)

Prevent Child Abuse America (www.preventchildabuse.org)

Child Fatality Review Committee Timeframes and Responsibilities



Send copy of the report within **15 days** to district attorney of the county in which the committee was created if the report concludes that the death was a result of: SIDS without confirmed autopsy report; accidental death when death could have been prevented through intervention or supervision; STD; medical cause which could have been prevented through intervention by agency involvement or by seeking medical treatment; suicide of a child under the custody of DHR or when suicide is suspicious; suspected or confirmed child abuse; trauma to the head or body; or homicide.

Appendix A

CDR Maltreatment Questions and Interpretation

Information related to child maltreatment is collected in several sections of the Child Death Review (CDR) form, and the questions were modified in Version 5 of the CDR form (implemented for the reporting on 2017 deaths). Prior versions distinguished between maltreatment as a causal factor versus a contributing factor. That explicit distinction is dropped in Version 5. Items 3 and 4 in the following list of CDR form questions related to child maltreatment demonstrate this merger of "cause" and "contribution."

Five sections of the CFR form contribute child maltreatment information:

A. Child Information, Question 22. Child had history of child maltreatment? The type of maltreatment, the source of the history information, and whether there was an open CPS case (Question 23) are also asked.

1. F. Investigation Information, Q.15. Did any investigation find evidence of prior abuse? If yes, source of evidence and was CPS action taken (Q.16)?
1. I5. (New) Child Abuse, Neglect, Poor Supervision, and Exposure to Hazards. I.5.a. Did child abuse, neglect, poor or absent supervision, or exposure to hazards cause or contribute to the child's death? Maltreatment is identified if I.5.a (2nd part) response is abuse or neglect.
1. J. Person Responsible (other than decedent) (New). J1. Did a person or persons other than the child do something or fail to do something that caused or contributed to the death? J2. What act? Maltreatment is identified as a cause if abuse or neglect is identified as the "act."
1. B. Biological Parent Information, C. Primary Caregiver(s) Information, D. Supervisor Information, and J. Person Responsible. Questions address whether any of these were child maltreatment perpetrators or victims.

Three of the CDR variables are used (in this analysis) to determine if maltreatment caused or contributed to the death. Question I.5 (item 3) asks whether an action (or failure to act) caused or contributed to the death. Question J.1 (item 4) asks about any person involved in the act and allows for two persons. There are four valid responses for specifying the "act" in I.5 and six for the person's act in J.1. An un-duplicated count has been provided for each of the action rows, but the same record can have multiple reported actions. (For example, four deaths had both abuse and neglect cited, and those four are counted in both action categories. An un-duplicated count of deaths with abuse and/or neglect would be = 32 + 27 – 4 = 55.)

Appendix B

County Level Data

** Note that there may be a difference in the numbers of cases deemed reviewable (see "All Reviewed" section of this Report for review ability criteria) and the number of cases that were reviewed by each county committee.

Table B1: Deaths, Reviewable Deaths, Reviewable Deaths Reviewed, and All Death Reviewed by County.

County	All Deaths	Reviewable	Reviewable Reviewed	All Reviewed
Appling	4	1	0	1
Atkinson	2	2	2	2
Bacon	0	0	0	0
Baker	0	0	0	0
Baldwin	7	2	2	3
Banks	3	0	0	0
Barrow	14	7	7	8
Bartow	11	7	7	7
Ben Hill	0	0	0	1
Berrien	4	2	1	1
Bibb	29	6	5	10
Bleckley	1	0	0	0
Brantley	5	1	1	1
Brooks	5	2	2	1
Bryan	3	1	1	1
Bulloch	8	2	2	3
Burke	6	0	0	0
Butts	5	4	4	4
Calhoun	0	0	0	0
Camden	8	4	4	5
Candler	1	1	1	1
Carroll	17	6	1	1
Catoosa	8	3	3	3
Charlton	2	1	1	1

County	All Deaths	Reviewable	Reviewable Reviewed	All Reviewed
Chatham	50	17	0	0
Chattahoochee	3	0	0	0
Chattooga	2	2	2	2
Cherokee	23	6	6	7
Clarke	19	7	6	7
Clay	0	0	0	0
Clayton	72	24	19	28
Clinch	1	0	0	0
Cobb	91	25	22	29
Coffee	13	3	3	2
Colquitt	8	4	4	5
Columbia	15	8	7	7
Cook	2	0	0	0
Coweta	11	4	2	4
Crawford	3	2	2	2
Crisp	6	2	2	5
Dade	2	1	1	1
Dawson	0	0	0	0
Decatur	1	1	0	0
DeKalb	133	40	34	43
Dodge	5	2	2	3
Dooly	1	1	1	0
Dougherty	16	10	9	10
Douglas	14	5	3	5
Early	1	1	1	1
Echols	0	0	0	0
Effingham	7	3	3	3
Elbert	2	0	0	0
Emanuel	6	2	0	0
Evans	2	2	2	2
Fannin	3	2	2	2

County	All Deaths	Reviewable	Reviewable Reviewed	All Reviewed
Fayette	8	3	3	4
Floyd	14	7	7	8
Forsyth	20	6	6	7
Franklin	2	1	1	2
Fulton	113	45	23	32
Gilmer	3	0	0	0
Glascock	0	0	0	0
Glynn	11	5	2	3
Gordon	8	6	6	7
Grady	5	2	0	0
Greene	3	0	0	1
Gwinnett	125	39	37	42
Habersham	4	2	2	2
Hall	24	10	10	12
Hancock	0	0	0	0
Haralson	2	1	1	1
Harris	4	1	1	1
Hart	3	1	1	2
Heard	0	0	0	0
Henry	25	10	9	10
Houston	21	2	2	6
Irwin	4	2	2	3
Jackson	5	2	2	4
Jasper	0	0	0	0
Jeff Davis	5	4	1	1
Jefferson	1	0	0	0
Jenkins	1	0	0	0
Johnson	3	0	0	0
Jones	2	0	0	0
Lamar	4	1	1	1
Lanier	3	0	0	0

County	All Deaths	Reviewable	Reviewable Reviewed	All Reviewed
Laurens	15	4	4	4
Lee	6	2	2	3
Liberty	12	5	0	0
Lincoln	0	0	0	0
Long	5	3	0	0
Lowndes	21	6	5	7
Lumpkin	4	2	2	2
Macon	4	1	1	1
Madison	4	1	1	3
Marion	0	0	0	0
McDuffie	3	0	0	1
McIntosh	4	0	0	1
Meriwether	5	2	2	2
Miller	0	0	0	0
Mitchell	5	1	0	1
Monroe	5	2	2	2
Montgomery	0	0	0	0
Morgan	1	0	0	0
Murray	5	1	0	1
Muscogee	36	10	10	10
Newton	17	5	5	6
Oconee	1	0	0	1
Oglethorpe	0	0	0	0
Paulding	16	5	5	6
Peach	2	1	1	1
Pickens	4	4	4	4
Pierce	3	2	2	2
Pike	2	2	0	0
Polk	8	1	1	1
Pulaski	1	0	0	0
Putnam	2	2	2	3

County	All Deaths	Reviewable	Reviewable Reviewed	All Reviewed
Quitman	0	0	0	0
Rabun	3	2	2	3
Randolph	2	1	1	1
Richmond	47	19	17	21
Rockdale	8	3	3	4
Schley	2	0	0	0
Screven	5	2	2	2
Seminole	1	1	1	1
Spalding	11	5	2	2
Stephens	5	4	4	4
Stewart	0	0	0	0
Sumter	5	1	1	1
Talbot	1	0	0	0
Taliaferro	0	0	0	0
Tattnall	2	2	0	0
Taylor	1	0	0	0
Telfair	1	0	0	0
Terrell	0	0	0	0
Thomas	10	1	1	1
Tift	4	2	2	3
Toombs	5	2	2	4
Towns	1	0	0	0

County	All Deaths	Reviewable	Reviewable Reviewed	All Reviewed
Treutlen	0	0	0	0
Troup	8	3	3	4
Turner	0	0	0	0
Twiggs	3	0	0	0
Union	1	0	0	0
Upson	3	2	2	2
Walker	7	4	3	3
Walton	13	5	5	7
Ware	5	3	3	5
Warren	2	1	1	1
Washington	1	1	1	1
Wayne	7	3	3	3
Webster	0	0	0	0
Wheeler	0	0	0	0
White	4	2	2	2
Whitfield	9	5	4	4
Wilcox	0	0	0	0
Wilkes	2	2	2	2
Wilkinson	0	0	0	0
Worth	3	2	2	2
Totals	**1,451**	**516**	**412**	**516**

Georgia Child Fatality Review Panel
Annual Report 2017