South Carolina
State Child Fatality
Advisory Committee

SFY 2018 Report

Report covers SCFAC efforts during the time-period of July 1, 2017 through June 30, 2018.

(238 cases reviewed and completed)

Submitted to the Honorable Henry McMaster

Governor of the State of South Carolina

and the 122nd South Carolina General Assembly

This report is supported by the State Child Fatality Advisory Committee (SCFAC) as appointed by the South Carolina Law Enforcement Division, Department of Child Fatalities, Revenue and Fiscal Affairs Office, Division of Research and Statistics and the South Carolina Department of Health and Environmental Control. Annual report development is funded by the South Carolina Department of Social Services. All opinions and recommendations are those of the State Child Fatality Advisory Committee (SCFAC) membership.

Dedication:

This report reflects the work of numerous dedicated professionals from every community throughout the State of South Carolina who have committed themselves to gaining a better understanding of how and why children die. Their work is driven by a desire to protect and improve the lives of young South Carolinians. Each child's death represents a tragic loss for the family as well as the community. We dedicate this report to the memory of these children and to their families.

Acknowledgments:

The members of State Child Fatality Advisory Committee (SCFAC) recognize that without the participation and support of numerous organizations, agencies and individuals, committee activities and reports would not be possible. These acknowledgments represent a small part of the unified effort in South Carolina to protect the health and safety of children. The SCFAC membership wishes to thank the following organizations and individuals for their assistance and cooperation in compiling this report by providing data, statistical analysis or other pertinent information and support:

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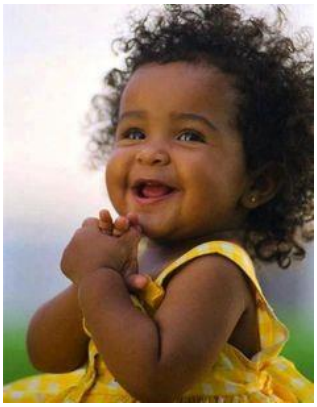

When a child dies unexpectedly, the response by the state and the community about the death must include an accurate and complete determination of the cause of death including a thorough scene investigation and a complete autopsy. Lack of adequate investigation of child deaths impedes the effort to prevent future deaths from similar causes.

S.C. Code 63-11-1950 mandates that the State Child Fatality Advisory Committee (SCFAC) review completed investigations of deaths involving children age 17 years and younger that are unexpected, unexplained, suspicious or criminal in nature. The SCFAC regularly schedules six (6) meetings each State Fiscal Year (SFY), which covers July 1st to June 30th. Following an internal review, a relationship between the State Law Enforcement Division (SLED), and the Department of Health and Environmental Control (DHEC) Vital Records was developed to help ensure all cases meeting SCFAC criteria are reviewed.

During SFY2018, DHEC in coordination with the SCFAC chair and co-chair employed a full-time program coordinator to help coordinate committee efforts and report development while also advocating for local child fatality review or children's health and safety councils, teams, and their enhanced coordination and communication with the SCFAC. The SCFAC Program Coordinator maintained the SCFAC web page, Facebook page and Twitter accounts to help facilitate future SCFAC statewide health communication messaging.

Cases Reviewed and Completed

Since the initiation of this report starting with the 2006 data year, SCFAC has been assigned 2,674 cases. Of those, 2,248 (84.1%) have been completed, leaving a balance of 426 cases to be completed. The SCFAC currently has a caseload balance of 189 cases from 2006-2017 with a year of occurrence breakdown as follows: 2006-2009 (0 cases), 2010 (1 case), 2011-2013 (0 cases), 2014 (6 cases), 2015 (2 cases), 2016 (49 cases) and 2017 (189 cases) remaining to be reviewed and completed (Table A). This is not a summary of all child deaths occurring during the time period of 2006-2016.

Table A. Death Cases By Year Assigned, Cases Completed and Case Balance

Year Case Assigned to SLED	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*	Total
Total Cases Assigned	218	266	233	205	187	170	137	132	351	185	195	216	179	2674
Cases Completed	218	266	233	205	186	170	137	132	345	183	146	27	0	2248
Caseload Balance	0	0	0	0	1	0	0	0	6	2	49	189	179	426
Percent of Cases Completed (%)	100	100	100	100	99.5	100	100	100	98.3	98.9	74.9	12.5	0.0	84.1

*Partial Year

This report includes only the results of the 238 completed case reviews. The SCFAC review determined the following manners of death: Accidental (98 cases), Homicide (30 cases), Natural (5 cases), Suicide

(41 cases), Unknown (11), and Undetermined (53 cases). The majority of the undetermined cases (85%) were unsafe sleep related. Of the 238 cases reviewed and completed, 28 of the victims (11.8 %) had an open child protective services (CPS) case at the time of their death.

The SCFAC continues to identify unsafe sleep as being a major causal factor in child deaths with **96** deaths or 40% of the total deaths reviewed during SFY2018 attributable to unsafe sleeping conditions. The issue of unsafe sleeping conditions was a factor among 84% (96 out of 114) of deaths in children under the age of 12 months.

Cause and Manner of Death

The most common cause and manner of death in children varied by age group (Table B.) In infants (less than one year of age) the most common causes of death were unsafe sleep-related. This is 84% of all deaths in infants. Of the 96 unsafe sleep-related deaths, 98% were deemed to be accidental, 1 was considered homicide, and 6 were undetermined as to manner. In the 1 to 4 age group, drowning was found to be the most common cause of death. Of these deaths, 10 (90%) of these were accidental and 1 was undetermined. Drowning consisted of 27.5% of the total deaths in the 1 to 4 age group. Weapon, including body part, was the most common cause of death in the 5 to 10, 11 to 14, and 15 to 17 age groups. In the 5 to 10 age groups, the 3 weapons-related deaths comprised 27.3% of the total deaths. Of these deaths, 2 of the 3 were suicides and 1 homicide. In the 11-14 Age Group, all 13 of the weapons-related deaths were suicides. This comprised 81% of all deaths in this age group. In the 15-17 Age Group there were 38 deaths by weapons, 66.7% of the deaths in that age group. Of those, 63% were suicides.

Table B. Most Common Cause and Manner of Death in Children by Age Group

Age Group	Cause of Death	Accident		Homicide		Suicide		Undeter-mined		Unknown		Total	
		#	%	#	%	#	%	#	%	#	%	#	%
Less than 1 Year	Unsafe sleep	51	98.1	0	0.0	0	0.0	39	88.6	6	85.7	95	84.2
1 to 4	Drowning	10	47.6	0	0.0	0	0.0	1	12.5	0	0.0	11	27.5
5 to 10	Weapon, including body part	0	0.0	1	50.0	2	100	0	0.0	0	0.0	3	27.3
11 to 14	Weapon, including body part	0	0.0	0	0.0	13	100	0	0.0	0	0.0	13	81.3
15 to 17	Weapon, including body part	1	5.9	12	100	24	92.3	1	100			38	66.7

*****Percentages presented are representative of cause and manner of death within specific age groups.

SFY2019 Plans:

The SCFAC will **(a)** conduct 6 meetings, **(b)** develop and publish an Annual Report based on committee efforts/findings, **(c)** use identified trends and themes emerging from child death review meetings to recommend specific areas that could be improved by state government, community, and/or non-profit actions, **(d)** ensure primary prevention messages developed in the meetings are included in annual reporting, **(e)** enhance health communication messaging while engaging the SCFAC membership in the process, and **(f)** enhance coordination, collaboration and communication with local child fatality efforts.

SCFAC SFY2018 Recommendations

It is the intent of the SCFAC to help ensure that parents and caregivers of all infants receive evidence-based education on Safe Sleeping practices for infants to help them have a safe and healthy environment in which they can live, learn, travel, and play.

Recommendation 1: Unsafe Sleeping Conditions

Sleeping position is critical to safe sleeping environments for infants. It is recommended that babies be put to sleep on their backs. Due to the high percentage (84%) of fatalities due to unsafe sleeping conditions among infants (less than 12 months), the SCFAC recommends that the S.C. General Assembly make unsafe sleep a legislative priority by allocating fiscal resources to support:

> Marcus's father had just gotten home from work and fell asleep with 4 month old Marcus on his chest while sitting on the couch. Father was giving mother a break so she could rest. Father woke up to mother screaming and found Marcus wedged beside him on the couch.

a) A coordinated media campaign designed to reinforce a common, clear and unified message around safe sleep, including ABC (alone, on their back and in a crib) messaging. Evidence-based prevention strategies have proven to be cost effective demonstrating a return on investment (ROI) estimated at $2.20[1] for every $1 spent on health promotion[2].
b) Prevention strategies designed to reach parents, grandparents, family members, caregivers, and healthcare professionals with current evidence-based information on safe sleeping practices. Evidence-based prevention strategies have proven to be cost effective demonstrating a return on investment (ROI) estimated at $5.60[3] or every $1 spent on public health programs focused on wider determinates of health.
c) Continued collaboration with the South Carolina Birth Outcomes Initiative (BOI).
d) The establishment of a legislative mandate to require blood testing for alcohol and drugs of caregivers

[1] Masters R,Anwar E, Collins B, et al. J. Epidemiol Community Health. 2017;**71**:827–834.
[2] Masters R,Anwar E, Collins B, et al. J. Epidemiol Community Health. 2017;**71**:827–834
[3] Public Health Newswire. What is public health's ROI? Apr 1, 2013

involving the suspicious, unexplained or unexpected sleep related death of a child under the age of 1 year.

SF2018 Note: The SC BOI, a statewide collaborative of public and private stakeholders focused on improving the health of moms and babies in SC, launched a Safe Sleep Initiative in 2017. The mission is to eliminate sleep-related deaths by providing prevention education and consistent message and support to healthcare providers, parents, caregivers and the community. In July 2017, SC BOI received letters of support and commitment from all SC birthing hospitals. In 2018, SC BOI created an educational brochure, entitled "Safe Sleep, Every Sleep". Copies of the brochure can be requested free-of-charge in the DHEC Educational Materials Library.

On May 15, 2018, the Governor signed bill S-891. This statute amended Section 44-37-50 of the SC Code of Law and required that the video presentation, used by hospitals and DSS explaining the dangers association with shaking infants and young children be revised to include safe sleep practices and the causes of Sudden Unexpected Infant Death (SUID). The law was effective on November 15, 2018. SC DHEC, in collaboration with partners has provided to hospitals and DSS an educational video on Safe Sleep, Every Sleep for Infants and has updated the educational video on preventing Abusive Head Trauma.

Recommendation 2: Suicide Prevention

Given that the SCFAC has found 13 of the 16 deaths in 11-14 year-olds (82%) and 25 of the 57 deaths in 15-17 year-olds (45%) were suicide-related, the Committee recommends that the S.C. General Assembly make suicide prevention a legislative priority by allocating fiscal resources to support:

12 year old Simon had been sent home from school for disruptive behavior. He was having a tough time because the girl he liked had rejected him. Father sent Simon to his room and took his phone. Father heard a gunshot and found Simon in his room with his hunting rifle.

a) Statewide suicide prevention, intervention and post-vention protocols and policies within school systems that offer efficient and effective methods of connecting youth with the continuous clinical care they need to survive their suicidal experiences. The SC Schools Suicide Prevention Program developed by the SC Youth Suicide Prevention Initiative, an SCDMH program, have proven to cost very little – if nothing at all – for schools to implement. More than 45 schools have implemented or are at various stages in the process of implementing the program, so far.
    1) Expanded training for all levels of law enforcement concerning the investigative practices used in determining if a child's death was a suicide. For example, suicide notes are rare, so the absence of a letter or note during the investigation of a suspected suicide should not be considered a potential disqualifier. Many potential suicides discussed by the Coalition have sparked debates centered around how much or what kinds of evidence are required to confidently identify a death as a suicide. The choking game is often cited with asphyxiation deaths of youth, but in suicidology, the questions we ask to determine if a behavior is suicidal in nature is, "Did the person doing this know they could die from it?" If yes, then it's a suicide attempt. If it results in death, it's a suicide.

2) Improved and more-publicized education regarding the reduction of access to lethal means for youth.
3) Increased funding for statewide school-based mental health services currently offered by SCDMH.

Recommendation 3: Unsecured Firearm Safety

Given that the SCFAC has found that 66 of the 238 (27.7%) child fatalities involved a non-secured firearm leading to an accidental firearm discharge, homicide or suicide, the Committee recommends that the S.C. General Assembly make firearm security a legislative priority by allocating fiscal resources to support:

Five year old Trevor shared a room with his 17 year old brother. Trevor found his brother's loaded handgun in the bedside table drawer and was showing it off to his friend. The gun accidentally discharged into the friend.

a) Primary prevention strategies designed to reach children, youth, teenagers, parents, grandparents, and family members and that encourage firearm owners to embrace the importance of proper firearm handling, use of cable-style gunlocks, and adequate storage that is out of sight and out of reach. Evidence-based prevention strategies have proven to be cost effective demonstrating a return on investment (ROI) estimated at $4.10 for every $1 spent on local level public health programs[4]

Recommendation 4: Water Safety

Given that the SCFAC has found 26 of the 238 (10.9%) child fatalities are due to drowning, the Committee recommends that the S.C. General Assembly make water safety a legislative priority by allocating fiscal resources to support:

Monique's family was vacationing at the beach. It was time for dinner and the other children ran into the house. Aunt was watching the children and did not see Monique. Four year old Monique was found at the bottom of the pool without her arm floaties, which had slipped off.

a) A coordinated media campaign designed to help raise public consciousness of the importance of water safety, especially the prevention of unintended drowning/submersions. Evidence-based prevention strategies have proven to be cost effective demonstrating a return on investment (ROI) estimated at $2.20 for every $1 spent on health promotion.[5]
b) Primary prevention strategies, including swim and water survival classes, life jacket loaner programs and boating safety instruction designed to reach children, youth, parents, grandparents, and family members. Evidence-based prevention strategies have proven to be cost effective demonstrating a return on investment (ROI) estimated at $4.10 for every $1 spent on local level public health programs.[6]

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[4] Masters R,Anwar E, Collins B, et al. J. Epidemiol Community Health. 2017;**71**:827–834.
[5] Masters R,Anwar E, Collins B, et al. J. Epidemiol Community Health. 2017;**71**:827–834.
[6] Masters R,Anwar E, Collins B, et al. J. Epidemiol Community Health. 2017;**71**:827–834.

c) Education regarding water safety to become a part of well-child education of children and parents during their medical visits with their primary care medical provider.
d) Allocate fines from unsatisfactory public pool inspections to strengthen primary prevention efforts.

Recommendation 5: Transportation Safety

Based on the information shared by the DHEC Office of Vital Records related to **54** motor vehicle fatalities among individuals 17 years and younger in 2017, the SCFAC recommends that the S.C. General Assembly make the issue of motor vehicle injuries involving children a legislative priority by allocating fiscal resources to support:

a) A coordinated media campaign designed to help raise public consciousness of best practices and various transportation safety-related laws. Evidence-based prevention strategies have proven to be cost effective demonstrating a return on investment (ROI) estimated at $2.20 for every $1 spent on health promotion[7].
b) Expanding primary prevention strategies designed to reach teenagers, parents and caregivers, such as School Transportation Safety Observations to improve safety and child safety restraint utilization and Alive at 25 to educate youth about the dangers of driving. Evidence-based road safety programs have proven to be cost effective demonstrating a return on investment (ROI) estimated at $35.20 for every $1 spent.[8]
c) Adoption of the Centers for Disease Control and Prevention's (CDC) recommendations found in the Prevention Status Report (PSR) related to best practices for a child passenger restraint law, graduated drivers licensing, learner's permit age, learner's permit holding period, young passenger restrictions, unrestricted licensure age, and ignition interlock system. Midnight driving curfew combined with provisional licensing for teenage drivers yields an estimated cost saving ratio of $8 to $1 spent. Zero alcohol tolerance for drivers under 21 yields an estimated cost savings ratio of $24.50 to $1 spent. [9]

Recommendation 6: Fire Safety

Given that the SCFAC has found 9 of the 238 (3.8%) child fatalities are fire-related, the Committee recommends that the S.C. General Assembly make fire safety a legislative priority by allocating fiscal resources to support:

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[7] Masters R,Anwar E, Collins B, et al. J. Epidemiol Community Health. 2017;**71**:827–834.
[8] Masters R,Anwar E, Collins B, et al. J. Epidemiol Community Health. 2017;**71**:827–834.
[9] Masters R,Anwar E, Collins B, et al. J. Epidemiol Community Health. 2017;**71**:827–834.

a) A coordinated media campaign designed to help raise public consciousness regarding residential fire safety. Evidence-based prevention strategies have proven to be cost effective demonstrating a return on investment (ROI) estimated at $2.20 for every $1 spent on health promotion[10].
b) A residential fire safety initiative involving the purchase and distribution of fire alarms, especially in rural or underserved communities across South Carolina. Evidence-based alarm distribution initiatives have proven to be cost effective demonstrating a return on investment estimated at $18.33 benefit to society for every $1 spent.[11]

[10] Masters R,Anwar E, Collins B, et al. J. Epidemiol Community Health. 2017;**71**:827–834.

[11] Masters R,Anwar E, Collins B, et al. J. Epidemiol Community Health. 2017;**71**:827–834.

SFY18 Cases Reviewed and Completed

Section 1. Demographics

During FY2018 the SCFAC reviewed a total of 238 cases (Table 1). Of those 111 (47%) were non-Hispanic White, 115 (48%) were non-Hispanic Black, and 12 (5%) were Hispanic. A total of 64% (152) were male and 36% were female (86). Almost half, (49%) were infants, less than 12 months old. In addition there were 40 1-4 year olds, 11 5-10 year olds, 16 11-14 year olds, and 57 15-17 year olds.

Table 1. Demographics

	Frequency	Percent (%)
Total	238	100
Race		
Non-Hispanic Black	115	48.3
Non-Hispanic White	111	46.6
Hispanic	12	5.0
Sex		
Male	152	63.9
Female	86	36.1
Age Group		
less than 12 months	114	47.9
1 to 4 years	40	16.8
5 to 10 years	11	4.6
11 to 14 years	16	6.7
15 to 17 years	57	23.9

Section 2. Cause and Manner of Death

The most common manner of death over all age groups was Accidental, followed by Undetermined (Table 2). The most common cause of death was from an external cause, as opposed to a medical condition or condition undetermined (Table 3).

Table 2. CFAC Manner of Death

Manner of Death	Frequency	Percent (%)
Accident	98	41.2
Undetermined	54	22.6
Suicide	41	17.2
Homicide	29	12.1
Unknown	11	4.6
Natural	5	2.1
Total	238	100

Table 3. Primary Cause of Death		
Cause of Death	**Frequency**	**Percent (%)**
From an external cause of injury	170	71.4
Undetermined if injury or medical cause	59	24.8
From a medical condition	9	3.8
Total	238	100

Section 2.1 Cause and Manner of Death in Infants Less than 12 Months of Age

The most common cause of death in infants less than 12 months of age was unsafe sleep related. A total of 96 of the 114 infant deaths were related to unsafe sleep. Of these deaths due to unsafe sleep, 51 were thought to be accidental, 45 were undetermined or unknown. (Table 4). Other causes of death include burns, drowning, 3 homicides, and 8 undetermined. There was 1 death which was due to prematurity, 2 were due to other perinatal conditions and 1 due to pneumonia.

Table 4. Cause and Manner of Death in Children Less than 12 Months of Age												
	Unknown		**Natural**		**Accident**		**Homicide**		**Undetermined**		**Total**	
	#	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Unsafe sleep	6	85.7	0	0.0	51	98.1	0	0.0	39	88.6	96	84.2
Fire, burn, or electrocution	0	0.0	0	0.0	1	1.9	0	0.0	0	0.0	1	0.9
Drowning	0	0.0	0	0.0	0	0.0	2	28.6	0	0.0	2	1.8
Weapon, including body part	0	0.0	0	0.0	0	0.0	3	42.9	0	0.0	3	2.6
Undetermined	1	14.3	1	0.0	0	0.0	0	0.0	6	13.6	8	7.0
Pneumonia	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	0.9
Prematurity	0	0.0	0	0.0	0	0.0	1	14.3	0	0.0	1	0.9
Other perinatal condition	0	0.0	2	0.0	0	0.0	0	0.0	0	0.0	2	1.8
Total	7	100	4	0.0	52	100	7	100	44	100	114	100

Section 2.2 Cause and Manner of Death in Children Ages 1 to 4 Years

The most common cause of death in children ages 1 to 4 years is drowning (Table 5). All of these drowning deaths except one were determined to be accidental. Other causes of death in this age group included asphyxia, fire, poisoning, weapons, pneumonia, and unsafe sleep. Five deaths were of undetermined cause.

Table 5. Cause and Manner of Death in Children Ages 1 to 4										
	Unknown		Accident		Homicide		Undetermined		Total	
	#	%	#	%	#	%	#	%	#	%
Unsafe sleep	0	0.0	1	4.8	0	0.0	2	25.0	3	7.5
Fire, burn, or electrocution	0	0.0	4	19.0	0	0.0	0	0.0	4	10.0
Drowning	0	0.0	10	47.6	0	0.0	1	12.5	11	27.5
Asphyxia	0	0.0	3	14.3	0	0.0	1	12.5	4	10.0
Weapon, including body part	0	0.0	2	9.5	7	77.8	0	0.0	9	22.5
Poisoning, overdose or acute intoxication	1	50.0	0	0.0	1	11.1	0	0.0	2	5.0
Undetermined	1	50.0	0	0.0	0	0.0	4	50.0	5	12.5
Pneumonia	0	0.0	1	4.8	1	11.1	0	0.0	2	5.0
Total	2	100	21	100	9	100	8	100	40	100

Section 2.3 Cause and Manner of Death in Children Ages 5 to 10 Years

In children age 5 to 10, a total of 11 cases were reviewed. The causes of death varied widely. The most common was weapon, including body part. Of the 3 deaths by a weapon, 2 were ruled as suicide and 1 was homicide. Other causes of death included fire, drowning, asphyxia, poisoning and undetermined (Table 6).

Table 6. Cause and Manner of Death in Children Ages 5 to 10										
	Unknown		Accident		Suicide		Homicide		Total	
	#	%	#	%	#	%	#	%	#	%
Fire, burn, or electrocution	0	0.0	2	40.0	0	0.0	0	0.0	2	18.2
Drowning	0	0.0	1	20.0	0	0.0	0	0.0	1	9.1
Asphyxia	0	0.0	1	20.0	0	0.0	0	0.0	1	9.1
Weapon, including body part	0	0.0	0	0.0	2	100	1	50.0	3	27.3
Fall or crush	0	0.0	0	0.0	0	0.0	1	50.0	1	9.1
Poisoning, overdose or acute intoxication	0	0.0	1	20.0	0	0.0	0	0.0	1	9.1
Undetermined	1	50.0	0	0.0	0	0.0	0	0.0	1	9.1
Undetermined medical cause	1	50.0	0	0.0	0	0.0	0	0.0	1	9.1
Total	2	100	5	100	2	100	2	100	11	100

Section 2.4 Cause and Manner of Death in Children Ages 11 to 14 Years

A total of 16 deaths in children ages 11 to 14 were reviewed. The most common cause of death was use of a weapon, including a body part. Of those weapon related deaths, all 13 were suicides. Other causes of deaths included accidental poisoning, drowning, and fire (Table 7).

Table 7. Cause and Manner of Death in Children Ages 11 to 14

	Accident		Suicide		Total	
	#	%	#	%	#	%
Weapon, including body part	0	0.0	13	100	13	81.3
Fire, burn, or electrocution	1	33.3	0	0.0	1	6.3
Drowning	1	33.3	0	0.0	1	6.3
Poisoning, overdose or acute intoxication	1	33.3	0	0.0	1	6.3
Total	3	100	13	100	16	100

Section 2.5 Cause and Manner of Death in Children Ages 15 to 17 Years

In adolescents age 15 to 17, a total of 56 deaths were reviewed. In this age group, the most common manner of death is weapon, including body part, -related (38 deaths, 66.7% of total deaths). Of those, 24 (63%) were suicide, and 12 (32%) were homicides, with 1 accidental firearm death. The second most common cause of death in this age group was drowning. There were 11 deaths from drowning. Ten of those were accidental and 1 was ruled a suicide (Table 8). The other 8 deaths were caused by poisoning, burns, falls, motor vehicle accidents and medical issues.

Table 8. Cause and Manner of Death in Children Ages 15 to 17

	Natural		Accident		Suicide		Homicide		Undetermined		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
Weapon, including body part	0	0.0	1	5.9	24	92.3	12	100.0	1	100	38	66.7
Drowning	0	0.0	10	58.8	1	3.8	0	0.0	0	0.0	11	19.3
Poisoning, overdose or acute intoxication	0	0.0	3	17.6	1	3.8	0	0.0	0	0.0	4	7.0
Fire, burn, or electrocution	0	0.0	1	5.9	0	0.0	0	0.0	0	0.0	1	1.8
Fall or crush	0	0.0	1	5.9	0	0.0	0	0.0	0	0.0	1	1.8
Motor vehicle and other transport	0	0.0	1	5.9	0	0.0	0	0.0	0	0.0	1	1.8
Cardiovas-cular	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	1.8
Total	1	100	17	100	26	100	12	100	1	100	57	100

Section 3. Details of Most Common Cause and Manner of Death

Section 3.1. Details of Unsafe Sleep-Related Deaths

Sudden unexplained infant death is one of the leading causes of death for infants in South Carolina and nationally. In the United States, there are over 4,500 sudden unexplained infant deaths (SUID) related to unsafe sleeping conditions each year.[12] There are 3 types of SUID: 1) Sudden Infant Death Syndrome (SIDS), 2) Unknown and accidental suffocation and 3) Strangulation in bed.[13] Causes of accidental suffocation and strangulation include suffocation on soft surfaces and bedding, overlay of another body over the infant, wedging between two objects or entrapment, and strangulation by sheets or crib railings. In the reviewed and completed SCFAC cases for SFY2018, approximately 84% of all infant deaths were related to unsafe sleeping conditions.

Of the 96 cases that were determined to be due to unsafe sleep, children in 42 cases were reported to be put to sleep on their backs, 27 were put to sleep on their stomach, and 15 were put to sleep on their side. In 12 cases the position in which the child was put to sleep was unknown. When the children were found, 36 of 96 (37 %) were found on their stomach and only 27% (26) were found on their back. In 21 cases, the position in which the children were found is unknown (Table 9a).

Unsafe sleep is the most common cause of deaths in infants less than 12 months of age. According to the investigation, only 42 (43%) of infants were put to sleep on their back as per recommendations. Only 26 (27%) of infants were found on their backs (Table 9a).

Table 9a. Child's Sleeping Position

	Child put to sleep		Child found	
	#	%	#	%
On back	42	43.8	26	27.1
On stomach	27	28.1	36	37.5
On side	15	15.6	15	15.6
Unknown	12	12.5	21	21.9
Total	96	100	96	100

The most common object or person found in the sleeping area was an adult in the same bed with the infant (60.4% of deaths). The second-most common object/person was a pillow. Other objects/persons found in the sleeping area included blankets, comforters, other children, cushions, the crib railing or wall (infant gets wedged between mattress and crib railing or wall), a Boppy or U-shaped pillow, sleep positioner or clothing (Table 9b).

[12] First Candle. (n.d.). Retrieved from http://www.firstcandle.org/grieving-families/sids-suid/about-sids-suid/sids-facts-faq/
[13] Centers for Disease Control and Prevention. (n.d.). Retrieved from http://www.cdc.gov/sids/aboutsuidandsids.htm

Table 9b. Object(s) /Person in Sleeping Area		
Object/Person	**Frequency**	**Percent (%)**
Adult(s)	58	60.4
Pillow	54	56.3
Comforter, quilt or other	30	31.3
Child(ren)	17	17.7
Other	6	6.3
Cushion	5	5.2
Toy(s)	5	5.2
Crib railing/side	3	3.1
Wall	3	3.1
Boppy or U-shaped pillow	2	2.1
Sleep positioner	2	2.1
Clothing	1	1.0

Section 3.2. Details of Suicide Deaths

Suicide was the most common cause of death in children ages 11 to 14 and the second-most common cause of death in adolescents ages 15 to 17 years. A total of 41 suicide cases were reviewed during FY2018. Most of these (63%) occurred in the 15-17 age group. The most common weapon used was a handgun, with 39% of suicides using handguns. Other weapons included shotguns and rifles, drowning, hanging and poisoning (Table 10a).

Table 10a. Cause of Suicide Death by Age Group								
	5 to 10 years		**11 to 14 years**		**15 to 17 years**		**Total**	
	#	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Handgun	0	0.0	5	38.5	11	42.3	16	39.0
Other	2	100	5	38.5	7	26.9	14	34.1
Shotgun	0	0.0	2	15.4	3	11.5	5	12.2
Hunting rifle	0	0.0	1	7.7	2	7.7	3	7.3
Drowning	0	0.0	0	0.0	1	3.8	1	2.4
Rope	0	0.0	0	0.0	1	3.8	1	2.4
Poisoning, overdose or acute intoxication	0	0.0	0	0.0	1	3.8	1	2.4
Total	2	100	13	100	26	100	41	100

During FY2018, suicides were far more common in males than in females. Of the 41 suicides reviewed in FY2018, three out of four (75%) were in males. In males the most common type of weapon used was a handgun. Shotguns and hunting rifles were also used. In addition there was 1 hanging, 1 drowning, and 8 suicides by other means. In females, only 3 used guns, 1 died by poisoning, and 6 by other means (Table 10b).

Table 10b. Cause of Suicide Death by Gender						
	Male		Female		Total	
	#	%	#	%	#	%
Handgun	13	41.9	3	30.0	16	39.0
Other	8	25.8	6	60.0	14	34.1
Shotgun	5	16.1	0	0.0	5	12.2
Hunting rifle	3	9.7	0	0.0	3	7.3
Drowning	1	3.2	0	0.0	1	2.4
Rope	1	3.2	0	0.0	1	2.4
Poisoning, overdose or acute intoxication	0	0.0	1	10.0	1	2.4
Total	31	100	10	100	41	100

Section 3.3. Details of Weapon-Related Deaths

Each day approximately 2 South Carolinians (an average of 711 incidents annually) die from a preventable incident involving an unsecured firearm. During FY2018 there were 66 weapon-related deaths reviewed. The most common type of weapon used was a handgun. A total of 27 deaths (40.9% of all weapon-related deaths) used handguns. Of these 16 (59.3%) were suicides, 9 (33.3%) were homicides and 2 (7.4%) were accidental. Other weapons used included shotguns and rifles, unknown firearm types, a person's body part, and one hanging by a rope.

Many of these incidents involve children age 17 years and younger.[14] The South Carolina Victim Assistance Network data[15] shows approximately one third of households with children ages 18 and younger have a gun in the home. Further, more than half of these firearm owners keep their firearms loaded and accessible.

[14] DHEC, SCAN. (n.d.). Retrieved October 18, 2016 from http://scangis.dhec.sc.gov/scan/bdp/tables/death2table.aspx
[15] Gun Sense SC. (n.d.). Danger within. Retrieved October 28, 2016 from http://gunsensesc.org/wp-content/uploads/2015/11/DANGER-WITHIN-ARTICLE.pdf

Table 11. Weapon by Manner of Death										
Type of Weapon	**Accident**		**Suicide**		**Homicide**		**Undetermined**		**Total**	
	#	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Handgun	2	66.7	16	41.0	9	39.1	0	0.0	27	40.9
Shotgun	0	0.0	5	12.8	0	0.0	1	100	6	9.1
Hunting rifle	1	33.3	3	7.7	0	0.0	0	0.0	4	6.1
Assault rifle	0	0.0	0	0.0	1	4.3	0	0.0	1	1.5
Unknown Firearm type	0	0.0	0	0.0	2	8.7	0	0.0	2	3.0
Persons body part	0	0.0	0	0.0	7	30.4	0	0.0	7	10.6
Rope	0	0.0	1	2.6	0	0.0	0	0.0	1	1.5
Other Non-Firearm	0	0.0	14	35.9	1	4.3	0	0.0	15	22.7
Unknown	0	0.0	0	0.0	3	13.0	0	0.0	3	4.5
Total	3	100	39	100	23	100	1	100	66	100

During SFY2018, weapon-related deaths were the most common cause of death in teens, 11 to 14 and 15 to 17 years of age. A total of 66 cases involving a weapon-related death were reviewed and completed. Of those, 3 cases (4.5%) were accidental, 39 cases (59.1%) were suicides, 23 cases (34.8%) were homicides, and one (1.5%) was undetermined.

Section 3.4. Details of Drowning-Related Deaths

Monthly, approximately one (1) resident of South Carolina age 17 years of age and younger dies (19 deaths in 2017) from a preventable drowning with the death rate of 1.7, higher than the rate for all ages of 1.4 per 100,000 population.

In drowning deaths reviewed by the advisory committee, the location of drownings varies widely by age group. The 2 infants who drowned were found in a pond or creek. There was 1 child age 1 to 4 who drowned in a bathtub and 7 children in this age group drowned in a pool, hot tub or spa. Other drowning locations included lakes, ponds, rivers, and the ocean (Table 12.)

Table 12. Drowning Location by Age		
Location	**Number of Drownings**	**Percent (%)**
Less than 12 months		
Pond	1	50.0
Creek	1	50.0
1 to 4 years		
Lake	1	9.1
Pond	2	18.2
Pool, hot tub, spa	7	63.6
Bathtub	1	9.1
5 to 10 years		
Pool, hot tub, spa	1	100
11 to 14 years		
River	1	100
15 to 17 years		
Lake	2	18.2
River	4	36.4
Ocean	4	36.4
Canal	1	9.1

Section 3.5. Details of Motor Vehicle Crash Deaths

Approximately **3 South Carolina residents die daily** from a preventable transportation-related incident. In 2017 there were 1097 deaths from transportation accidents: motor vehicle fatalities (1056), other land transportation fatalities (20) or other types, to include water, air, etc. (21). About 5% of these incidents involve children age 17 years and younger.[16] Weekly, approximately 1 South Carolina child age 17 years and younger (55 incidents in 2017) dies from a preventable transportation-related incident:

Section 3.6. Details of Fire and Burn-Related Deaths

A total of 9 deaths were due to burns or electrocutions. Of those, 8 were burns and 1 electrocution. In 4 of the 9, sources of burns/electrocution included cigarettes or cigars, space heaters, and a power line (Table 13a). Seven of 8 deaths from fire were due to smoke inhalations. The structures involved in the fires included single homes in 75% of cases and mobile homes in 25% of cases (Table 13b).

[16] DHEC, SCAN. (n.d.). Retrieved Jan. 3, 2019 from http://scangis.dhec.sc.gov/scan/bdp/tables/death2table.aspx

Table 13a. Burn, Scald or Electrocution Source		
Source	**Frequency**	**Percent (%)**
Cigarette or cigar	1	11.1
Space heater	2	22.2
Power line	1	11.1
Unknown	5	55.6
Total	9	100

One of the fires was reported to be started by an individual and 2 of the 8 fires had smoke detectors present in the building.

Table 13b. Type of Building on Fire		
Type of Structure	**Frequency**	**Percent (%)**
Single home	6	75.0
Trailer/mobile home	2	25.0

Section 3.7 Details of Child Maltreatment Deaths

Child abuse includes physical, sexual and emotional abuse, as well as exposure to domestic violence. Child neglect may be defined as when a child's needs are not being met, including basic needs, supervision, education, medical needs and emotional needs. The total lifetime economic cost of child abuse and neglect is estimated at $124 billion each year [17].

In the United States, about 1,750 children died from abuse or neglect in 2016[18]. South Carolina had 22 deaths due to abuse and neglect[19]. South Carolina had the 27th highest mortality rate due to child abuse or neglect in 2016.

[17] Centers for Disease Control and Prevention (2018) Retrieved from https://www.cdc.gov/violenceprevention/childabuseandneglect/index.html.
[18] Centers for Disease Control and Prevention (2018) Retrieved from https://www.cdc.gov/violenceprevention/childabuseandneglect/index.html.
[19] U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2018). *Child maltreatment 2016*. Available from https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment