STATE OF SOUTH CAROLINA

STATE CHILD FATALITY ADVISORY COMMITTEE

2006 - 2012 Report

(1,248 case reviews completed of 1,525 total)

The Honorable Nikki R. Haley
Governor of the State of South Carolina
and the 120th South Carolina General Assembly

This report is supported by Child Fatality Data provided by the South Carolina Law Enforcement Division, Department of Child Fatalities, the South Carolina Budget and Control Board, 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).

This report may be viewed at the following web address:

http://www.scdhec.gov/health/chcdp/injury/child_fatality_advisory_committee.htm

Please address any questions in writing to the following address:

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Attn: Diane Shutters, Admin Assistant,
SLED, Special Victims Unit

December 2014

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South Carolina
State Child Fatality Advisory Committee

Letter from the Chairperson

Susan Luberoff, M.D.

Dear Children's Health and Safety Advocates,

The purpose of the State Child Fatality Advisory Committee (SCFAC) is to decrease child deaths in South Carolina. Our goal is to use a multidisciplinary approach to investigate the causes of death of children from birth to 17 years of age to gain a better understanding of the circumstances surrounding each death. Recognizing child death risk factors will enable better use of existing resources and the creation of new practices to protect our children.

Regrettably, each year in our state many children die from both preventable and intentional causes. Since 2006, there have been 1,525 child deaths in South Carolina that were unexpected and unexplained and met criteria to be reviewed by the Committee. This report reflects information on the 1,248 cases of the 1,525 total cases that have undergone a complete review by the committee as of October 2014 and provides highlighted information on the 68 homicide, suicide, accidental, natural and undetermined child deaths occurring in 2012 that have been reviewed and completed.

A child's death is a tragedy that has a profound effect on families and communities. What can South Carolinians do to keep our children healthy, safe, and protected so they can grow into viable, productive young adults? We can create a safe nurturing environment in which our children can live, learn, and play. Child wellbeing is a shared responsibility that reaches every segment of our society.

Sincerely,

Susan Luberoff, M.D.
Chairperson, SCFAC
SC Chapter of the Academy of Pediatrics

Current South Carolina State Child Fatality Advisory Committee (SCFAC) Membership

Susan Luberoff, M.D., SCFAC Chairperson

Position	Representative	Contact Information
South Carolina Department of Social Services	Sandra M. Sturkie	SC Department of Social Services (DSS) P: 843-413-6471 Sandra.Sturkie@dss.sc.gov
South Carolina Department of Health and Environmental Control	Lisa Hobbs	SC Department of Health and Environmental Control (DHEC) Bureau of Maternal and Child Health P: 803-898-0811 hobbslb@dhec.sc.gov
South Carolina Department of Education	Barbara Drayton	SC Department of Education (SDE) P: 803-734-3393 bdrayton@ed.sc.gov
South Carolina Criminal Justice Academy	Rita Yarborough	SC Criminal Justice Academy P: 803-896-8353 RAYarborough@sccja.sc.gov
State Law Enforcement Division	Captain Emily Reinhart	State Law Enforcement Division (SLED) P: 803-896-7331 ereinhart@sled.sc.gov
South Carolina Department of Alcohol and Other Drug Abuse Services	Hannah Bonsu	SC Department of Alcohol and Other Drug Abuse Services (DAODAS) P: 803-896-4198 hbonsu@daodas.state.sc.us
South Carolina Department of Mental Health	Renaye Long	SC Department of Mental Health (DMH) P: 803-898-8340 Rsl58@scdmh.org
South Carolina Department of Disabilities and Special Needs	Jennifer Buster	SC Department of Disabilities and Special Needs (DDSN) Office of Children's Services P: 803-898-9621 jbuster@ddsn.sc.gov

South Carolina Department of Juvenile Justice	Dececo Sampay-Johnson	SC Department of Juvenile Justice (DJJ) Office of Internal Affairs P: (803) 896-9749 dtsamp@scdjj.net
Children's Trust of South Carolina	Sue Williams	Children's Trust of South Carolina P: 803-744-4023 swilliams@scchildren.org
South Carolina Senator	Katrina Shealy	SC Senate katrinashealy@scsenate.gov
South Carolina Representative	Kristopher Crawford	SC House of Representatives 217 Dozier Blvd., Suite 105 Florence, SC 29501
South Carolina Office of the Attorney General	Heather Weiss	SC Office of the Attorney General Assistant Deputy Attorney General P: 803-734-3970 hweiss@scag.gov
County Coroner or Medical Examiner	Rae Wooten	Charleston County Coroner P: 843-746-4030 rwooten@charlestoncounty.org
Pediatrician	Dr. Susan Luberoff	SC Chapter of the American Academy of Pediatrics (SC AAP) P: 803-898-1470 SBL61@scdmh.org
Solicitor	Scarlett A. Wilson	Ninth Circuit Solicitor Office: 843-958-1900 Fax: 843-958-1905 wilsons@scsolicitor9.org
Forensic Pathologist	Dr. Amy Dursor	Palmetto Health Richland Department of Pathology P: 919-549-6237 amy.durso@ppspath.com
Member of Public (private nonprofit children's advocate organization)	Kimberly Hamm	SC Network of Children's Advocacy Centers P: 803-777-1226 kimhamm@mailbox.sc.edu
Member of Public	Laura Hudson	SC Crime Victims' Council P: 803-413-5040 laurahudson@sccvc.org

State Child Fatality Advisory Committee (SCFAC)
History and Mission

History:

The State Child Fatality Advisory Committee (SCFAC) was enacted in 1993. Since its enactment, the committee has completed review of 3,860 cases as of August 2014.

The Committee is mandated by S.C. Code 63-11-1950 to identify patterns in child fatalities that will guide efforts by agencies, communities, and individuals to decrease the number of preventable child deaths.

As defined by S.C. Code 63-11-1910 and S.C. Code 17-5-540, a "child" means a person less than eighteen years of age. Any child death under the age of 18 is investigated when the death is unexpected and unexplained; including, but not limited to, an act of violence, possible sudden infant death syndrome (SIDS), when unattended by a physician, or when occurring in any unusual or suspicious manner.

The Committee does not review motor vehicle traffic deaths except as related to injuries on private property or injury involving a pedestrian. The South Carolina Department of Public Safety (SCDPS) investigates all motor vehicle traffic deaths.

The mission of the Committee is to decrease the incidence of preventable child deaths and make the public more aware of intentional child deaths by:

- Developing an understanding of the causes of child death;
- Developing plans for implementing changes within the agencies represented;
- Advising the Governor and the General Assembly on statutory, policy and practice changes which will prevent child deaths.

The Committee is composed of 18 members, including law enforcement, legal, medical, and political arenas, and two members from the general public. Law enforcement has representation from the State Law Enforcement Division (SLED), the Departments of Social Services (DSS) and Juvenile Justice (DJJ), and the SC Criminal Justice Academy. The legal

community is represented by an attorney experienced in prosecuting children's crimes and someone from the solicitor's office. The medical community has a representative from each of the following agencies: the Departments of Mental Health (DMH), Health and Environmental Control (DHEC), Alcohol and Other Drug Abuse Services (DAODAS), and Disabilities and Special Needs (DDSN), as well as a county coroner or medical examiner, a pediatrician, and a forensic pathologist. Membership from the general public includes representation by a private nonprofit organization that advocates for children's services and a member of the public at large. The Committee must also include one South Carolina Senator, one South Carolina Representative, and a representative from the State Department of Education (SDE).

It is our vision to prevent future deaths of children by developing an understanding of how and why children die in the State of South Carolina.

Dedication and Acknowledgements

Dedication

This report reflects the work of the numerous dedicated professionals of 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.

Acknowledgements

The members of the Committee recognize that without the participation and support of numerous organizations, agencies and individuals, committee activities and reports would not be possible. These acknowledgements represent a small part of the unified effort in South Carolina to protect the health and safety of children.

The Committee 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:

South Carolina Law Enforcement Division (SLED), Special Victims Unit
Captain Michael Greene
Ms. Diane Shutters
South Carolina Coroners Association
Local Children's Health and Safety Councils and Child Death Review Teams
South Carolina Department of Health and Environmental Control (DHEC), Office of Public Health Statistics and Information Services

Report Edited by:

Dr. Susan Luberoff	SCFAC Chairperson, SC Chapter, American Academy of Pediatrics
Ms. Laura Hudson	SCFAC Co-Chairperson, SC Crime Victims Council
Ms. Jennifer Buster	SCFAC Member, Director of Children's Services, SC DDSN
Ms. Lisa Hobbs	SCFAC Member; Perinatal Consultant, SC DHEC
Capt. Michael Greene	SLED, Special Victims Unit

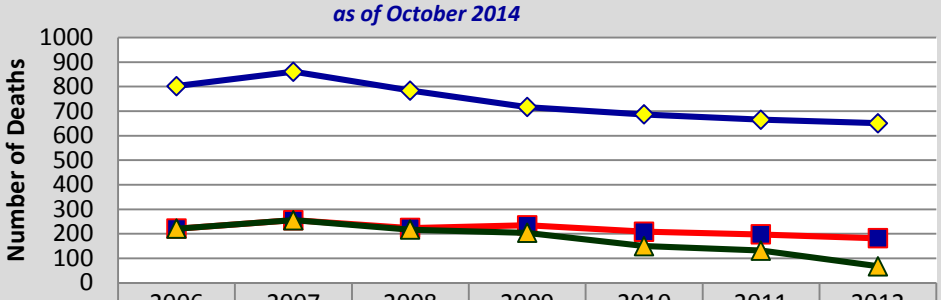
Report Prepared by:

Dr. Patsy Myers	DHEC, Epidemiologist
Ms. Jill Varn	DHEC, Program Coordinator
Mr. Owens Goff	DHEC, Program Manager

I. Executive Summary

Mortality data provide an overall picture of child fatalities by number and cause of death. It is from a careful study of every reported child death that we, as a Committee, work to identify patterns in child fatalities that will guide efforts by agencies, communities, and individuals to decrease the number of preventable child deaths.

Figure 1: 2006 - 2012
South Carolina Child Fatalities
Total SC Deaths 0-17 Years of Age
SLED Deaths Assigned and SCFAC Case Reviews Completed by Year of Death
as of October 2014



	2006	2007	2008	2009	2010	2011	2012
Total SC Deaths 0-17	802	861	784	717	687	665	651
SLED Deaths Assigned	221	256	224	235	209	198	182
SCFAC Death Reviews Completed	221	256	217	204	150	132	68

The South Carolina Department of Health and Environmental Control (DHEC), Office of Public Health Statistics and Information Services reports there were 5,167 fatalities in South Carolina to residents 0 to 17 years of age from 2006 to 2012 (**Figure 1**). Of these child fatalities, 1,525 (29.5% of deaths) were eligible for review by the State Child Fatality Advisory Committee (SCFAC) based on the criteria established by legislative mandate of unexpected and unexplained deaths which excludes motor vehicle traffic deaths on public roadways. This report reflects findings from the 1,248 completed cases of the 1,525 total assigned deaths that have undergone review by the committee as of October 2014 and provides highlighted information on the 68 homicide, suicide, accidental, natural and undetermined child deaths occurring in 2012 that have completed case reviews.

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

The Committee meets every other month and reviews approximately 200 cases annually which are presented by the State Law Enforcement Division (SLED) Special Victims Unit. Each death case is reviewed and analyzed to develop an understanding of the causes and various manners of child deaths, to implement changes and initiate action within agencies represented on the committee and to propose changes in statutes, regulation, policies and procedures to ultimately prevent and reduce the number of child deaths in the state.

Since 2006, the Committee has completed its review of 1,248 cases. Of these cases, the manner of death determination revealed 448 (35.9%) were accidental, 202 (16.2%) were homicide, 344 (27.6%) were natural, 58 (4.6%) were suicide and 196 (15.7%) were undetermined. Of these 1,248 cases, 584 (46.8%) of the victims were Black, 556 (44.6%) were White, 58 (4.6%) were Hispanic and 50 (4.0%) were categorized as Other (includes Native Americans, Asians, Biracial and Race Unknown).

Table 1 provides a summary of the SCFAC 2006-2012 completed case reviews as of October 2014 by manner of death, gender, race and ethnicity.

Table 1: Manner of Death and Race, 2006-2012
SCFAC Case Reviews Completed

	Black			Hispanic			White			Other			Totals		
Manner	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Accidental	127	60	187	13	8	21	139	85	224	9	7	16	288	160	448
Homicide	87	31	118	5	2	7	42	26	68	3	6	9	137	65	202
Natural	93	78	171	11	7	18	80	62	142	7	6	13	191	153	344
Suicide	6	2	8	2	1	3	29	14	43	4	0	4	41	17	58
Undetermined	63	37	100	5	4	9	51	28	79	2	6	8	121	75	196
Totals	376	208	584	36	22	58	341	215	556	25	25	50	778	470	1248

The Committee has completed its review of 68 cases in which the child death occurred during the year 2012. Of these 68 cases, the manner of death determination revealed 22 (32.4%) were accidental, 17 (25%) were natural, 14 (20.5%) were homicide, 12 (17.6%) were undetermined and 3 (4.4%) were suicide. The case review revealed 33 (48.5%) of the victims were Black, 34 (50%) were White, none were Hispanic, 1 (1.5%) was categorized as Other (includes Native Americans, Biracial and/or Asian).

Table 2 provides a summary of the SCFAC 2012 completed case reviews as of October 2014 by manner of death, gender, race and ethnicity.

Table 2: Manner of Death and Race, 2012 SCFAC Case Reviews Completed															
Manner	Black			Hispanic			White			Other			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Accidental	7	3	10	0	0	0	5	7	12	0	0	0	12	10	22
Natural	6	5	11	0	0	0	3	3	6	0	0	0	9	8	17
Homicide	3	1	4	0	0	0	7	2	9	0	1	1	10	4	14
Undetermined	5	2	7	0	0	0	3	2	5	0	0	0	8	4	12
Suicide		1	1	0	0	0		2	2	0	0	0	0	3	3
Totals	21	12	33	0	0	0	18	16	34	0	1	1	39	29	68

Table 3 below provides a summary of the SCFAC 2006-2012 completed case reviews as of October 2014 by county.

Table 3: SCFAC Completed Case Reviews By County 2006-2012									
County	2006	2007	2008	2009	2010	2011	2012	Totals	Percent
Abbeville	2	3		2	2		1	10	0.8%
Aiken	12	5	3	4	8	3		35	2.8%
Allendale		2		1				3	0.2%
Anderson	4	9	10	4	2	3	6	38	3.0%
Bamberg	2	1	1		1	1	1	7	0.6%
Barnwell	1	2	2	1		1	1	8	0.6%
Beaufort	6	7	3	6	6	4	1	33	2.6%
Berkeley	14	16	11	6	11	3	1	62	5.0%
Calhoun		2		2	1			5	0.4%
Charleston	24	22	17	17	17	8	7	112	9.0%
Cherokee	3	6	4	4	3	3		23	1.8%
Chester	1	2	1	2				6	0.5%
Chesterfield		1	3	3	1	2		10	0.8%
Clarendon	1	4	2	1		1		9	0.7%
Colleton	3	4	3	2		2	1	15	1.2%
Darlington	4	4	4	6	5	4	4	31	2.5%
Dillon	3	4	4	2	2	1		16	1.3%
Dorchester	2	6	3	3		5	1	20	1.6%
Edgefield	1	1						2	0.2%
Fairfield		2			1		1	4	0.3%
Florence	6	3	11	5	3	9	7	44	3.5%
Georgetown	6	3	2	4			2	17	1.4%
Greenville	17	11	10	12	8	22	4	84	6.7%
Greenwood	6	7	3	5	2	2		25	2.0%
Hampton	1	2	2					5	0.4%
Horry	17	19	19	7	12	9	3	86	6.9%
Jasper	1	1	2		1			5	0.4%
Kershaw	3	4	2	3	2	1		15	1.2%
Lancaster	2		4	2	2	3	1	14	1.1%
Laurens	4	6	5	6		4	3	28	2.2%
Lee	2	2						4	0.3%
Lexington	11	13	13	20	8	4	5	74	5.9%
McCormick	2	1			1			4	0.3%
Marion	1				1	1	1	4	0.3%
Marlboro						1	1	2	0.2%
Newberry	1	3	3	1			1	9	0.7%
Oconee		7	3	3	2	1	2	18	1.4%
Orangeburg	8	7	7	4	11	4	1	42	3.4%
Pickens	2	2	6	4	3	1	1	19	1.5%
Richland	15	23	24	20	13	9	4	108	8.7%
Saluda		2	1	1		1		5	0.4%
Spartanburg	11	14	14	26	11	12	2	90	7.2%
Sumter	9	8	7	5	4	1	3	37	3.0%
Union	1	1		3				5	0.4%
Williamsburg	6	2		2	1			11	0.9%
York	6	12	8	5	5	6	2	44	3.5%
Totals	221	256	217	204	150	132	68	1248	100.0%

II. 2012 SCFAC Recommendations

Homicide – The Committee will enhance data collected regarding death due to homicide where the cause of death involved child maltreatment.

Action: (1) effective February 2015, the DSS representative to the SCFAC will identify child death cases reviewed during each committee meeting where there has been prior DSS agency involvement with either the victim or family member, and highlight (for documentation and future reporting purposes) the cases where there was identified maltreatment of the victim; (2) on an ongoing basis, the DSS representative to the SCFAC will continue utilizing child death review findings to (a) work with agency leadership to make ongoing improvements to the system (policies and practices) and technical assistance and training processes focused on improving the skills and abilities of staff, and (b) strengthen the SCFAC recommendations and action steps identified in each Annual Report, and (3) on an ongoing basis, the DSS representative to the SCFAC will continue working with agency leadership to strengthen partnerships with local law enforcement agencies and Coroner Offices to improve the quality of data collected for the purpose of improving the accuracy of the data on child maltreatment deaths being reported to the Department of Health and Environmental Control's vital statistics department, SLED's Special Victims Unit and to the National Child Abuse and Neglect Data System.

Suicide – The Committee encourages the State of South Carolina to strengthen its safety net for children who may be experiencing depression and/or are at risk of suicide by increasing community knowledge and awareness of warning signs and risk factors for suicide in order to provide rapid access to treatment.

Action: During the 2014-2015 time-period, the Committee will: (1) request for its representatives from the House and Senate to submit coordinated legislation that provides fiscal support for recurring professional development targeting public/private school personnel, law enforcement, and school-based behavioral health staff. State Department of Education approved suicide prevention training programs, such as *More than Sad* (American Foundation for Suicide Prevention), the Jason Foundation, and *QPR: Question, Persuade, and Refer* (Mental Health America) will be implemented in order to promote early identification of youth at risk. The training program will be jointly administered by the Department of Mental Health and State Department of Education in collaboration with the Department of Alcohol and other Drugs, the Children's Law Office, and community suicide prevention advocacy organizations; (2) recommend that the Department of Mental Health and Department of Alcohol and Other Drugs develop evidenced-based screening, risk assessment, and treatment protocols based upon clinical best practices for school settings; and (3) actively support the youth suicide prevention and teacher training provisions of Section 59-26-110 of the S.C. Code of Laws, which helps expand the availability of suicide prevention training opportunities for teacher recertification.

The State Department of Education will include suicide prevention education in its school training programs.

Accidental:

Asphyxiation/Suffocation (Unsafe Sleep): The Committee encourages South Carolina to take a stronger and more coordinated statewide approach with regard to increasing awareness, knowledge, and skills of adults/caregivers in how to best avoid preventable child deaths due to unsafe sleep habits. Recommended practices are:

- Alone – the safe place for babies to sleep is in the same room as their parent, but alone in a safe sleep area.
- Back –babies should always be placed on their back to sleep.
- Crib – babies need their own safe place to sleep with the sleep area free from all loose objects, soft toys and bedding.

Action: During the 2014-2015 time period, the Committee will: (1) request for its representatives from the House and Senate to submit coordinated legislation which provides fiscal support for a state-wide, evidence-based safe sleep outreach/health communication campaign which will be administered by Children's Trust of South Carolina; (2) request SCFAC members to work within their respective agencies and organizations to identify two to three strategies each for implementing the safe sleep/injury prevention tool and disseminating the "Baby's Crib Safety Checklist" clings. This information will be shared with the DHEC representative for vetting and incorporation into the annual Maternal and Child Health work plan, and (3) request for the SC Hospital Association, the SC Chapter of the American Academy of Pediatrics, and the SC Primary Health Care Association to encourage their membership to address unsafe sleep as part of prenatal care and/or as part of the hospital discharge process.

Drowning: Trisha Korioth, Staff Writer for *AAP News*, the official newsmagazine of the American Academy of Pediatrics, shared in her 2014 article that, "Although drowning can be prevented, it remains the second most common cause of accidental injury and deaths in children 15 – 19 years old," according to U.S. data. The Committee encourages parents and family members to set a positive example and wear a lifejacket since adolescents are 20 percent more likely to wear a life jacket (according to a study of Washington State boaters) when they see an adult wearing one, and enroll children ages 4 and over in swim lessons and make sure they learn water survival skills. Adolescents should never swim alone. Individuals, especially children and adolescents, should swim with a friend, preferably in water with lifeguard supervision.

Action: During the 2014-2015 time period, the Committee will: (1) request for its representatives from the House and Senate to submit a letter to the Governor of South Carolina requesting that June 2015 be designated Water Safety Month; (2) submit a letter to the South Carolina Department of Education to work with school districts to enhance health education

instruction on water safety and drowning prevention; (3) continue working in partnership with SC Children's Trust, Safe Kids and the SC Department of Social Services to enhance the number of foster parents that know how to swim, and (4) continue working in partnership with SC Children's Trust and Safe Kids to (a) encourage the State Department of Natural Resources to place Danger Drowning/No Swimming signs around all ponds and rivers, and (b) enhance adoption of the Life Jacket Loaner Program.

Fire: The Committee recommends that each county adopt the current state law, through establishment of a county ordinance that requires a landlord to ensure all rental properties, especially mobile homes and apartments, have working smoke alarms.

Action: During the 2014-2015 time period, the Committee will: (1) contact the SC State Fireman's Association and the SC Fire Marshall's Office and ask them to contact each county's Legislative Delegation to encourage them to support and enforce fire and life safety through the passage of a local ordinance that requires a landlord to ensure all rental properties, especially mobile homes and apartments, have working smoke alarms. The 'ask' has a focus on the local enforcement of the state law, for example, SC Code of Laws, Section 5-25-1330. The Committee wants to encourage local municipalities to adopt the state law as a city or county ordinance so it can be enforced by designated officials, such as, fire and law enforcement. Example: A firefighter responds to a call at a home where an elderly tenant has fallen and, while at the residence, the firefighter can address the identified issue of missing or not-working smoke alarms. This issue could be addressed directly with the landlord as an enforceable ordinance. Locally, the fire marshals and fire chiefs are aware of the state law and lack of enforcement capacity. And, (2) request for its representatives from the House and Senate to submit coordinated legislation which provides fiscal support for a fire and life safety program and the purchase of fire/smoke safety alarms. The fire and life safety program would be administered by the SC Fire Marshall's Office.

Transportation: Like the Governor's Highway Safety Association, the SCFAC acknowledges the various issues surrounding teen drivers – inexperience, coupled with immaturity, often resulting in risk-taking behaviors such as speeding, alcohol use and not wearing a seatbelt – that contribute to an increased death rate. The SCFAC supports enactment of graduated drivers licensing laws that include: (a) learner's permits beginning no earlier than age 16 which last a minimum of six months and includes at least 30-50 hours of parent-certified supervised practice, (b) an intermediate stage that lasts until age 18 and includes a nighttime driving restriction starting at 9:00 or 10:00 pm and either no or a maximum of one teen passenger, and (c) a ban on all cell phone use and electronic communication devices while driving.

Action: During 2014-2015, the Committee will: (1) ask its representative from SC Children's Trust to work with organizational partners to adopt and implement a campaign, such as "It Can Wait" which works to save lives by calling on the public, law enforcement, educators, corporations, consumer safety groups and legislators to help find solutions to prevent the

dangers of texting and driving; (2) ask its representative to jointly review and work with members of the General Assembly to strengthen both primary and secondary seat belt laws, especially primary enforcement of child passenger safety related to children up to age 16 in all seating positions, and (3) reach out to the South Carolina Department of Public Safety to discuss the potential data collection and dissemination opportunities with regard to incidents and fatality information involving children age 17 and older.

III. Overview of Injury Deaths

South Carolina versus National

The top three leading causes of death in the United States[i] and in South Carolina in 2012 for adolescents and young adults ages 15 to 24 were unintentional injury, homicide, and suicide. These causes are highly associated with behaviors such as not using seatbelts, being in a physical fight, carrying a weapon, and making a suicide plan.

Youth violence includes a wide range of behaviors including bullying, slapping, or hitting that may cause more emotional than physical harm. These behaviors can cause as much or more emotional harm than assault and robbery, with or without a weapon, which can lead to serious injury or death. A young person may be involved in violence as the victim, the offender, or as a witness. Violence is the second leading cause of death for young people in the U.S. between the ages of 10 and 24.[ii] Students who are victims of bullying are more likely to experience depression, suicidal thoughts, repeated common health problems, school absenteeism, psychological distress, and feeling unsafe at school.

The disparities in age, race, and gender related to violence are highlighted in the South Carolina *2013 Youth Risk Behavior Survey* (YRBS)[iii]. Overall, 40% of middle school students reported carrying a weapon such as a gun, knife, or club at least once in 2013, including 50% of males and 27% of females. Twenty-seven percent of African Americans, 33% of Hispanics and 48% of White middle school students have carried a weapon to school. In each race/ethnic group, males were about twice as likely as females to have carried a weapon to school. In high school, about one in five (21.3%) students reported having carried a weapon at least once and males were about three times as likely as females to have carried a weapon in 2013.

Indicators related to safety at school highlighted in the 2013 YRBS revealed that one in five (20%) high school students had been bullied, and 14% reported being electronically bullied (through e-mail, chat rooms, instant messaging, web sites or texting). Female high school students were almost twice as likely as male students to have been bullied on school property and about 30% more likely to have been electronically bullied.

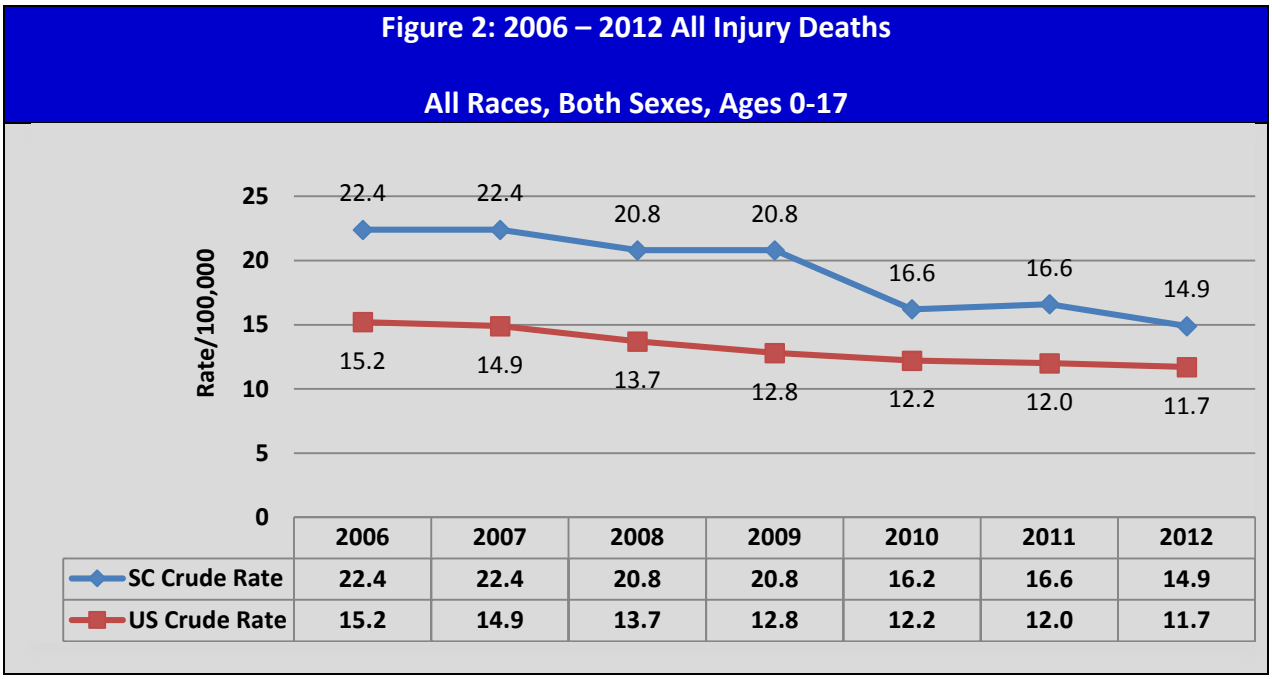
Nationally, suicide is the third leading cause of death among adolescents ages 15 to 19.[iv] In South Carolina, suicide was the third leading cause of death in this age group in 2012.[v] Among young people 10 to 24 years of age, males were three times more likely than females to die from a suicide attempt[vi], but more females than males tried to kill themselves.

Just over one in eight (13%) high school students reported seriously considering attempting suicide, and slightly less (12%) had made a suicide plan. About one in ten students reported having attempted suicide. Suicidal thoughts and attempts were more common in females than

in males, and Blacks were twice as likely to attempt suicide as Whites. One in five middle school students reported having considered suicide.

Though the injury mortality rate has been decreasing among children over the last five years, South Carolina remains higher than the national rate (**Figure 2**).

Figure 2: 2006 – 2012 All Injury Deaths, All Races, Both Sexes, Ages 0-17



Crude rate refers to rates per 100,000 population
Data Source: US CDC WONDER, DHEC, Division of Biostatistics

South Carolina – Fast Facts, DHEC, 2012 Injury Profile

In 2012, there were 3,364 total deaths in South Carolina due to all injury, intentional and unintentional, and the age adjusted death rate was 69.7 per 100,000 population.

The top five causes of injury deaths for all ages were: motor vehicle traffic incidents, suicide, poisoning, homicide, and falls (**Table 4**). The top five causes of injury deaths among children 0 to 17 years of age were: motor vehicle traffic incidents, suffocation, homicide, suicide, and drowning.

Table 4: 2012 South Carolina Causes of Injury Deaths

Table 4: 2012 South Carolina Causes of Injury Deaths					
All Ages			**0-17 Years**		
Cause of Injury	**No.**	**Rate**	**Cause of Injury**	**No.**	**Rate**
ALL INJURY	3,364	69.7	**ALL INJURY**	162	14.9
Motor Vehicle Traffic Incident	818	17.1	Motor Vehicle Traffic Incident	47	4.3
Suicide	665	13.5	Suffocation	45	4.1
Poisoning	512	10.8	Homicide	18	1.7
Homicide	377	8.2	Suicide	16	1.5
Fall	339	6.7	Drowning	11	1
Other specified, unspecified causes	182	3.6	Firearm	5	0.5
Suffocation	161	3.3	Fire or hot object	4	#
Drowning	85	1.7	Other specified, unspecified	4	#
Fire or hot object	79	1.5	Undetermined Intention	3	#
Undetermined Intention	34	0.7	Pedestrian, other	2	#
Firearm	26	0.6	Fall	1	#
Natural/Environmental	18	0.4	Natural/Environmental	1	#
Pedestrian, other	15	0.3	Poisoning	1	#
Machinery	11	0.3	Struck by/caught In	1	#
Struck by/caught In	10	0.2			
Pedal Cyclists, other	5	0.1			
Legal Intervention	4	#			
Cut/Pierce	1	#			
Transport, other	1	#			

Age-adjusted rate per 100,000 population ***Age specific rate per 100,000***
#--No rate generated for numbers less than 5 ***#--No rate generated for numbers less than 5***
All Causes are Unintentional except suicide, homicide, legal intervention and undetermined intention
Data Source: DHEC, Division of Biostatistics

There were 162 deaths among children 0 to 17 years of age (rate 14.9 per 100,000 population) in 2012. Among counties that had at least 20 deaths, the highest age-adjusted death rate was in Marion County (37 injury deaths, with a rate of 118.7 per 100,000 population). Of these deaths, one was between the ages of 0 and 17 years of age.

The lowest age-adjusted death rate was in Dorchester County (75 total deaths, with a rate of 53.4 per 100,000 population). Of these deaths, four were of children 0 to 17 years of age.

IV. 2006 - 2012 Child Death by Manner – Case Reviews Completed

Note: Although incomplete (68 of 182 assigned death cases completed) 2012 is highlighted in these next sections, since it represents the most recent available data.

1. Homicide

Homicide – is the act or instance of unlawfully killing another human being, whether intentionally or unintentionally.[vii] Cases reviewed revealed that family members, through beatings and suffocations, commit the most homicides of young children. Middle childhood is a time when a child's homicide risk is relatively low. Most homicides of teenagers involve male victims killed by male offenders using firearms, often gang and drug related. In 2012,

2012-- SCFAC Case Review--Homicide	
Cases Assigned:	182
Cases Completed:	68
Homicide:	14
Percent of Completed Cases:	20.6%
7Y Overall Percent:	16.0%

South Carolina had a total of 377 homicides (rate of 8.2 per 100,000 population), 18 (rate of 1.7 per 100,000) of which were children 0 to 17 years of age, and of these 18 cases, 14 needed further investigation.

A mother and her children had recently moved to SC to be with the mother's boyfriend. Services for the 3 year old, with disabilities, were no longer sought for the child by the mother. The child was not seen by family, DSS, or neighbors. When the child was taken to the ER, it was determined that the child had been abused, including burns to genitals, teeth aggressively pulled, head shaved and bruises all over the body. In addition, the 3 year old had an infection and never received medical attention. The manner of death was homicide. Both the mother and boyfriend were charged.

Since 2006, the Committee has completed its review of 1,248 cases with 202 (16.2%) cases with a manner of death determination of homicide. Of these 202 cases, 118 (58.4%) were Black, 68 (33.7%) were White, 7 (3.5%) were Hispanic and 9 (4.5%) were categorized as Other (includes Native Americans, Biracial and/or Asians).

Homicide by Child Abuse - In the event that a child dies, immediate circumstances surrounding the death do not always indicate that a homicide has occurred. Through a thorough investigation and an autopsy, other evidence is obtained which strongly suggests that the death is homicide by child abuse.

Fatal child abuse may be the result of abuse recurring over time. The incidence of child abuse appears to be associated with other social problems, such as domestic violence, substance abuse, multiple stresses on families, and poverty. Child maltreatment deaths occur in the greatest numbers among infants, followed by toddlers and preschool children. Children

younger than 6 years of age are most vulnerable because of their small size, incomplete verbal skills, and limited contact with adults other than their primary caregivers (Herman-Giddens, 2001).

In most cases infant homicides occur when the child is in the care of a relative or someone the child knows. Some injuries are the result of deliberate intent to do harm such as beating, suffocation, strangulation, severe inflicted burns, scalding, or the use of a weapon. Some fatal injuries may have no external signs of trauma.

Young children killed by their parents are most often beaten, shaken, or suffocated to death. Older maltreatment fatality victims, especially teenagers, are more likely to be killed with guns or other weapons (Herman-Giddens, 2001).

Shaken Baby Syndrome/Abusive Head Trauma (SBS/AHT) is a term used to describe the constellation of signs and symptoms resulting from violent shaking or shaking and impacting of the head of an infant or small child.[viii] The resulting whiplash effect can cause bleeding within the brain or the eyes.[ix]

According to the U.S. Centers for Disease Control and Prevention's (CDC) National Center for Injury Prevention and Control: With Traumatic Brain Injury (TBI), nearly all victims of SBS suffer serious health consequences and at least one of every four babies who are violently shaken dies from this form of child maltreatment.

Prevention Points:[x]

- **Family Violence:** Most homicides occur between family members, friends, and neighbors. Often they involve infants who are killed when emotions are running high and restraint of those emotions is not exercised.
- **Young Children:** Child abuse homicide often occurs in younger children. Inexperienced and frustrated caregivers, often without any parental training, cause the death of a child. Abusive head trauma is an example of how impact or violently shaking a baby can cause serious or fatal trauma to the child's brain. Caregivers should be mindful of a child's limited capabilities and susceptibility. Child care education can be provided at all points of contact with parents and caregivers.
- **Signs of Child Abuse:** It is important to pay attention and familiarize yourself with signs of child abuse. It is equally important to use common sense in trying to determine if a child is being abused. Normal, active children get bruises and bumps from everyday play. These bruises are most often over bony areas such as the knees, elbows, and shins. However, if a child has injuries on other parts of the body such as the stomach, cheeks, ears, buttocks, mouth or thighs, consider the possibility that the child is being abused, particularly if the

appearance of the injury does not correspond to the child's account of the event. Black eyes, human bite marks, and round burns the size of a cigarette should be considered highly suspicious and reported to the appropriate authorities. SC Code of Laws, Section 63-7310-50.

- **Gang Violence:** ***How can you keep your child from joining a gang?*** Educate yourself about gang and drug activity in your community. Know where your child is and be aware that 3-6 pm is not a safe time to leave your child unsupervised. Demonstrate love and acceptance at home (many kids join gangs to feel a sense of connection and approval). Get your child involved in quality, out of school activities, such as sports, music or art. Volunteer at your child's school. Establish strong parental rules, set limits, and be consistent, firm, and fair. Get to know your child's friends and their parents. Listen to your child. Talk with your child. Show respect for your child's feelings and attitudes. Do not buy or allow your child to buy gang-style clothing.
- **Shaken Baby Syndrome:** ***How can SBS be prevented?*** Research shows that shaking most often results from crying or other factors that may trigger frustration or anger in the baby's caregiver. Crying—including long bouts of inconsolable crying—is normal developmental behavior in infants. The problem is not the crying, it's how caregivers respond to it. Picking up a baby and shaking, throwing, hitting, or hurting him/her is never an appropriate response. Everyone, from caregivers to bystanders, can do something to prevent SBS. Giving parents and caregivers tools to know how they can cope if they find themselves becoming frustrated are important components of any SBS prevention initiative. You can play a key role in reinforcing prevention by helping people understand the dangers of violently shaking a baby, the risk factors, and the triggers for it, and ways to lessen the burden of stress on parents and caregivers, all of which may help to reduce the number of children affected by SBS.

Resources:

- Brady Campaign to Prevent Gun Violence - http://www.bradycampaign.org
- CDC Division of Violence Prevention - http://www.cdc.gov
- Center for the Prevention of School Violence - http://www.ncdjjdp.org
- National Center on Shaken Baby Syndrome – http://dontshake.org

2. Suicide

Suicide – the act or an instance of taking one's own life voluntarily and intentionally.

Since 2006, the Committee has completed its review of 1,248 cases with 58 (4.6%) cases with a manner of death determination of suicide. Of these 58 cases, 43 (74.1%) were White, 8 (13.8%)

2012-- SCFAC Case Review--Suicide	
Cases Assigned:	182
Cases Completed:	68
Suicide:	3
Percent of Completed Cases:	4.4%
7Y Overall %:	4.6%

were Black, 4 (6.9%) were categorized as Other (includes Native Americans, Biracial and/or Asians) and 3 (5.2%) were Hispanic.

There are often stressors associated with the completion of suicide. Feelings of despair and helplessness contribute to the lack of desire to live. Suicide can possibly be linked to a clinical diagnosis of depression, bipolar disorders, and substance abuse. Yet, risk factors for suicide can often go undiagnosed, untreated or ignored. Suicides are more common than previously perceived.

Children who experience violence, drug and/or alcohol addiction, poverty, or sexual, physical, and/or emotional abuse have much higher risk for suicide. Many times suicides happen because the existing problem in a child's life is perceived to be insurmountable without resolution and it seems that the current situation will last forever. Despite the fact that research indicates more females attempt suicides, more males actually complete suicides. A prior suicide attempt is an important risk factor for an eventual completion. There are risk factors and warning signs for suicide.

Information from the *2013 SC Youth Risk Behavior Survey*, South Carolina Department of Education indicates:

- 22% of middle school students have seriously considered suicide, 14% have made suicide plans, and 9% have tried to kill themselves.
- 13% of high school students seriously considered suicide, 12% made a suicide plan, 9.4% attempted suicide, and 4% made a suicide attempt that resulted in injury, poisoning, or overdose that required treatment by a doctor or nurse.
- Older middle school students were more likely than younger students to have made a suicide plan, and female middle school students were more likely than male students to have seriously considered suicide.
- Female high school students were more likely than male students to have experienced symptoms of depression, considered suicide, and made a suicide plan.
- The percentage of high school students who experienced symptoms of depression (past 12 months) decreased significantly from 31% in 2011 to 26.6% in 2013.

A 17 year old male had just received information that he was not going to complete high school with the rest of his friends and he became depressed. He had also been kicked off the baseball team recently, due to his failing grades. On the way home from school, he was ticketed for rolling through a stop sign. When he got home he told his mother about the ticket and she became upset with her son. She took his keys and told him he could ride the bus for the remainder of the school year. The teenage boy went to his room. Fifteen minutes later the mother heard a gunshot; she went to her son's room and found him dead from a gunshot wound to the head.

- The percentage of high school students who seriously considered suicide (past 12 months) decreased by 48%, from 26% in 1991 to 13% in 2013.
- The percentage of high school students who made a suicide plan (past 12 months) decreased by 26%, from 16% in 1991 to 12 percent in 2013.

Prevention Points:

- **Early Diagnosis and Treatment:** Early involvement by mental health professionals may prevent suicide attempts. Special caution should be taken with children who are taking anti-depressant medication as health officials have issued warnings that these medications might increase the risk of hostility, mood swings, aggression, and suicide in children or adolescents.
- **Observations:** Watch for changes in a young person's psychological state (increase in rage, anxiety, depression, or hopelessness), withdrawal, reckless behavior, or substance use.
- **Evaluation of Thinking:** ***Do not ignore statements about suicide, even if they seem casual or fake.*** The months following a suicide attempt or severe depression can be a time of increased risk, no matter how well the child seems to be doing. This is a critical time for family interaction and securing family support systems.
- **Limit Access to Fatal Agents:** Easily obtained or improperly secured firearms and other weapons are often used in suicides. The harder it is for children to put their hands on these items, the more likely they are to rethink their intentions, allowing time for someone to intervene.
- **Talk about Issues:** Bringing up suicide does not "give kids the idea", but rather gives them the opportunity to discuss their thoughts and concerns. This communication can be a significant deterrent.

Resources:

- "Suicide Prevention: Youth Suicide". Centers for Disease Control and Prevention. http://www.cdc.gov/ViolencePrevention/pub/youth_suicide.html
- American Academy of Pediatrics – http://www.aap.org
- Youth Suicide Prevention Program – http://www.yspp.org
- American Foundation of Suicide Prevention – http://www.afsp.org
- KidsHealth – http://www.kidshealth.org
- Out of the Darkness – http://www.outofthedarkness.org

3. Accidental

Since 2006, the Committee has completed its review of 1,248 cases with 448 (35.9%) cases with a manner of death determination of accidental. Of these 448 cases, 224 (50%) were White, 187 (41.7%) were Black, 21 (4.6%) were Hispanic and 16 (3.6%) were categorized as Other (includes Native Americans, Biracial and/or Asians).

Table 5 provides a summary of the 2006-2012 case reviews completed with an accidental manner of death determination.

Table 5: SCFAC Case Reviews Completed, 2006-2012 Accidental Manner of Death Determination = 448 Cases								
Case Reviews Completed as of October 2014								
	2006	2007	2008	2009	2010	2011	2012	Totals
Drowning	16	10	2	8	9	6	1	52
Fire	15	6	10	14	1	4	1	51
Firearm	2	3	3	5	5	4	2	24
Poisoning	2	1	2	1	0	1	0	7
Asphyxiation	32	53	50	37	21	18	16	227
Transportation	8	10	8	2	2	6	1	37
Other	5	15	5	5	9	10	1	50
Totals	80	98	80	72	47	49	22	448

Drowning – the suffocation by submersion especially in water. The CDC reports that about ten people die daily in the United States from unintentional drowning, and that drowning ranks 5th among the leading causes of unintentional injury death in the United States. Of this daily number, two are to children aged 14 or younger.

2012-- SCFAC Case Review--Drowning	
Accidental Deaths	22
Drowning	1
Percent of Accidental Deaths	4.5%
7Y Overall %:	11.6%

Since 2006, the Committee has completed its review of 52 (11.6%) cases with a manner of death determination as drowning.

Who is most at risk? CDC reports that nearly 80% of people who die from a drowning are male. Children ages 0 to 4 have the highest drowning rates. In 2011, among children 1 to 4 years of age who died from an unintentional injury, almost 20% died from drowning[xi]. Among children ages 1 to 4 years of age, most drowning deaths occur in home swimming pools. Drowning is responsible for more deaths among children 1-4 years of age than any other cause of death, except congenital anomalies (birth defects). Among those 1 to 14 years of age, fatal drowning remains the second leading cause of unintentional injury-related death, behind motor vehicle crashes.

Between 2006 and 2012, the fatal unintentional drowning rate for Blacks was 12% higher than that for Whites of all ages. The disparity is widest among children 5 to 14 years of age. The drowning rate of Black children ages 10 to 14 is more than three times that of White children in the same age range.

The South Carolina Department of Health and Environmental Control's Office of Public Health Statistics and Information Services reports that in 2012 the state suffered 85 drowning deaths with 11 occurring in residents in the 0 to 17 years of age population group.

What are the factors influencing drowning risk? The main factors that affect drowning risk are (a) lack of swimming ability with many adults and children reporting that they cannot swim, (b) lack of barriers (e.g., pool fencing, locked gates) to prevent unsupervised water access by children, (c) lack of close supervision while swimming or bathing, (d) failure to wear life jackets, (e) alcohol use among adolescents and adults since it influences balance, coordination and judgment and the effects heightened by sun exposure and heat, and (f) seizure disorders with the bathtub as the site of highest drowning risk.

Prevention Points:[xii]

- Learn life-saving skills: Everyone should know the basics of swimming (floating, moving through the water) and cardiopulmonary resuscitation (CPR).
- Fence it off: Install a four-sided isolation fence, with self-closing and self-latching gates, around backyard swimming pools. This can help keep children away from the area when they are not supposed to be swimming. Pool fences should completely separate the house and play area from the pool.
- Make life jackets a "must": Make sure children wear life jackets in and around natural bodies of water, such as lakes or the ocean, even if they know how to swim. Life jackets can be used in and around pools for weaker swimmers too.
- Be on the lookout: When kids are in or near water (including bathtubs), closely supervise them at all times. Adults watching kids in or near water should avoid distracting activities like playing cards, reading books, talking on the phone, and using alcohol or drugs.

Resources

- Centers for Disease Control and Prevention - http://www.cdc.gov
- Safe Kids Worldwide – http://www.safekids.org
- American Academy of Pediatrics – http://www.aap.org
- American Red Cross – http://www.redcross.org

Fire – is a chemical change that releases heat and light and is accompanied by flame. Nationally, and within the State of South Carolina, it is residential fires that cause many casualties.

2012-- SCFAC Case Review--Fire	
Accidental Deaths	22
Fire	1
Percent of Accidental Deaths	4.5%
7Y Overall %:	11.4%

Since 2006, the Committee has completed its review of 51 (11.4%) cases with a manner of

death determination as fire related.

According to the 2012 "Fire Loss in the US " report from the National Fire Protection Association, fire departments responded to 366,600 home fires in the United States that claimed the lives of 2,370 people and injured another 13,210, not including firefighters.[xiii]

In the United States, at least 80% of all fire related deaths occur in the home. They are most commonly associated with cooking, smoking, electrical malfunctions involving overloaded circuits or makeshift wiring, and children playing with matches. The second leading cause of residential fires and the major cause of fire in commercial properties is arson. The third leading cause of home fires is a faulty heating system; individual homeowners are less likely to have their heating systems maintained than apartment owners. Having working fire alarms dramatically increases the chances of surviving a fire at home.

"I left food cooking on the stove while I stepped out of the house for a few minutes to speak to my neighbor," stated the mother of three small children killed as a result of a cooking related fire. There were no operable smoke detectors found in the home.

According to CDC, Injury and Violence Prevention, Home Safety Information, children from low income families are at greater risk of fire-related death due to lack of working smoke alarms, sub-standard housing, use of alternative heating sources and being left unattended due to unaffordable or inaccessible child care while parents work.

- From 2008 to 2012, there were 347 fire related fatalities in South Carolina.
- From 2008 to 2012, the months of January, February, and December were the most deadly, accounting for 144 (52%) of the state's 347 total fire fatalities.
- From 2008 to 2011, Charleston, Lexington and Spartanburg Counties have had the highest number of fire fatalities.
- From 2008 to 2011, the population age of 20 and under has experienced 40 fire related deaths.[xiv]

The South Carolina Division of Fire and Life Safety, Office of State Fire Marshall (OSFM), collects various statistics related to fire fatalities.

"Our statistics show fires consistently rank high as a cause of death for children in our state," State Fire marshal Chief Bert Polk said. "We average 10 child fire fatalities per year with 90 percent occurring in homes and 50 percent without a working smoke alarm."

THE OSFM Community Risk Reduction Team remains actively involved in educating the public regarding home fire safety for families statewide.

Prevention Points:[xv]

- Keep all matches and lighters out of the hands of children. If possible, keep these sources of fire in locked drawers. Consider buying only "child-proof" lighters—but be aware that no product is completely child-proof.
- Children as young as two years old can strike matches and start fires.
- Consider establishing a “No-Smoking” policy inside the home. This eliminates the need for frequent use of matches and lighters.
- Never leave children unattended near operating stoves or burning candles, even for a short time.
- Teach children not to pick up matches or lighters they may find. Instead, they should tell an adult immediately.
- Smoke alarms should be installed on every level of the home, especially near sleeping areas.
- Smoke alarms should be kept clean of dust by regularly vacuuming over and around them.
- Replace batteries in smoke alarms at least once a year. Replace the entire unit after ten years of service, or as the manufacturer recommends.
- Families should plan and practice two escape routes from each room of their home.
- Regularly inspect the home for fire hazards.
- If there are adults in the home who smoke, they should use heavy safety ashtrays and discard ashes and butts in metal, sealed containers or the toilet.
- If there is a fireplace in the home, the entire opening should be covered by a heavy safety screen. The chimney should be professionally inspected and cleaned annually.
- Children should cook only under the supervision of an adult or with their permission.
- Children should never play with electrical cords or electrical sockets. They should ask adults for help plugging in equipment.
- Children should stay away from radiators and heaters, and they should be taught that these devices are not toys. Young children in particular must be taught not to play with or drop anything into space heaters. Nothing should be placed or stored on top of a heater.
- Pots on stovetops should always have their handles turned toward the center of the stove where children cannot reach up and pull or knock them over onto themselves.
- Teach children to turn off lights, stereos, TVs and other electrical equipment when they are finished using them. In the case of a room heater, children should ask an adult to turn it off when the room will be empty.
- Children should never touch matches, lighters or candles. If they find matches or lighters within reach, they should ask an adult to move them.
- No one should stand too close to a fireplace or wood stove or other types of heaters, where clothes can easily catch fire.

Resources:

- US Fire Administration - http://www.usfa.fema.gov/kids/discuss/index.shtm

- SC Department of Labor, Licensing and Regulation: Office of State Fire Marshal http://scfiremarshal.llronline
- The National Child Traumatic Stress Network (NCTSN) – http://nctsn.org
- Centers for Disease Control and Prevention - http://www.cdc.gov/HomeandRecreationalSafety/Fire-Prevention/tools.html

Firearm – a weapon, especially a pistol or rifle, capable of firing a projectile and using an explosive as a propellant. According to Safe Kids Worldwide, exposure to guns and access to a loaded firearm increase the risk of unintentional firearm-related deaths and injury to children. Unrealistic perceptions of children's capabilities and behavioral tendencies with regard to guns are common. These include misunderstanding a child's ability to gain access to and fire a gun, distinguish between real and toy guns, make good judgments about handling a gun and consistently follow rules about gun safety. Promoting the safe storage of firearms in the home and reducing their availability and accessibility are important steps in preventing unintentional firearm-related death and injury among children.

2012-- SCFAC Case Review--Firearm	
Accidental Deaths	22
Firearm	2
Percent of Accidental Deaths	9.1%
7Y Overall %:	5.4%

Since 2006, the Committee has completed its review of 24 (5.4%) cases with a manner of death determination as firearm related.

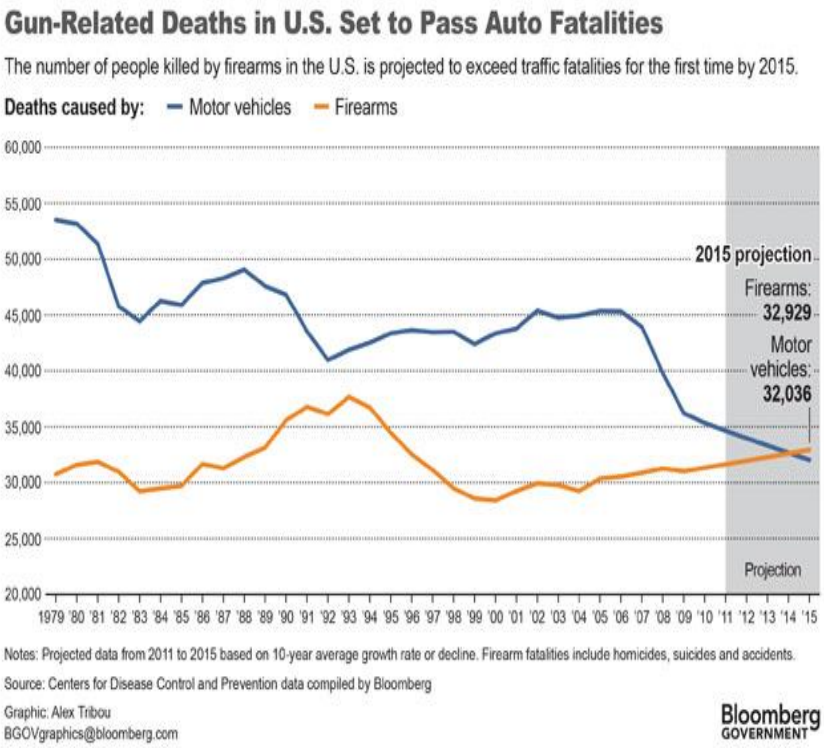
In 2011, CDC reported 851 deaths due to accidental discharge of firearms, 38,285 deaths by suicide, 19,766 (51%) of which were by discharge of firearms, and 15,953 homicides, 11,101 (69%) of which were committed by discharge of firearms.

Parents of a 3 year old had gotten out of their vehicle to look at a motorcycle for sale. The 3 year old was left in the vehicle alone. The parents heard a "pop" and looked in the vehicle to discover their 3 year old was dead from a gunshot wound to his head. The firearm belonged to one of the parents and was not properly stored. The firearm was loaded and had been hidden under the front seat. The cause of death was accidental due to gunshot wound to the head with massive cerebral trauma and the manner of death was accidental.

The 851 accidental firearm discharge death number is a very low number considering there are 93 guns for every 100 people in the United States (not including the military and law enforcement - which would essentially make the ratio 1/1); 350,000,000 guns with less than 1,000 accidental deaths annually. However, this remarkably low number represents 851 preventable deaths and could create a source of lifelong negative physical, emotional and social consequences for family members.

The South Carolina Department of Health and Environmental Control's Office of Public Health Statistics reports 24 unintentional firearm related deaths in 2012 with 5 deaths occurring to residences 0 to 17 years of age. The South Carolina Department of Education's *2013 Youth Risk Behavior Survey* reports 8% of high school students carried a gun to school in the past 30 days, and that white male high school students were 30% more likely than black male students to have carried a weapon.

Nonfatal Firearm-Related Injuries – In the June 7, 2013 publication of the American Academy of Pediatrics article, "*Firearm-Related Injuries Affecting the Pediatric Population*"[xvi], data gathered from emergency departments in the 66 hospitals in the National Electronic Injury Surveillance System All-Injury Program revealed an estimated 73,505 people of all ages were treated for nonfatal firearm-related injuries in US hospital emergency departments in 2010. Among them were 15,576 children and adolescents younger than 20 years. Of those, 6,236 (40%) required hospitalization for their injuries. Adolescents 15 to 19 years of age had nonfatal firearm injury rates nearly 3 times that of the general population (62.9 vs 23.9 per 100 000). Most (79%) of the nonfatal injuries to adolescents were attributable to assault, and assault-related injuries were responsible for 84.5% of hospitalizations. In SC, 1,184 people were treated for firearms-related injuries in emergency departments in 2011. Of those, 493 (42%) were between the ages of 15 and 24 years of age. Overall, males accounted for 90% of firearm-related emergency department visits.



Prevention Points[xvi]:

In Your Home

- Before you buy a gun, consider less dangerous ways to keep your family and property safe, such as burglar alarms, window locks, dogs, etc.
- Don't buy a gun unless you have the necessary knowledge to use it safely.

- Firearms should be stored unloaded and in a locked place.
- Firearms should be locked up in a place that children cannot reach since children often have trouble telling the difference between a toy gun and a real gun.
- Bullets should be locked up in a place separate from where guns are secured.
- Trigger locks can be a helpful additional precaution for unloaded firearms. They must be applied to an unloaded firearm.
- Some locks can be removed in as few as 6 seconds.
- If you keep an unlocked gun under your pillow at night, lock it in the morning before you go to work.

Teach Your Children

- Explain to children that guns are dangerous and that they should never touch guns without your permission.
- Talk to your children about the difference between the violence that they see on television or in the movies and real-life violence, where adults and children really get hurt.
- Tell your children that if they find a gun anywhere they should not touch it and should leave the area and go tell an adult. If they are in school and know of other children carrying a handgun they should tell an adult.

Resources:

- Brady Campaign to Prevent Gun Violence - http://www.bradycampaign.org
- Law Center to Prevent Gun Violence - http://smartgunlaws.org/gun-law-statistics-and-research/
- Injury Free Coalition for Kids - http://www.injuryfree.org/resources/FirearmInjuryPreventionChecklist.pdf

Poisoning - poison is any substance, including medications, that is harmful to your body if too much is eaten, inhaled, injected, or absorbed through the skin. Any substance can be poisonous if too much is taken.

2012-- SCFAC Case Review--Poisoning	
Accidental Deaths	22
Poisoning	0
Percent of Accidental Deaths	0.0%
7Y Overall %:	1.6%

Since 2006, the Committee has completed its review of 7 (1.6%) cases with a manner of death determination as poisoning. The CDC reports that every day in the United States 99 people die as a result of unintentional poisoning and another 2,893 are treated in emergency departments (ED). Poisonings are either intentional or unintentional. If the person taking or giving a substance did not mean to cause harm, then it is an unintentional poisoning.

Unintentional poisoning includes the use of drugs or chemicals for nonmedical purposes in excessive amounts, such as an "overdose." It also includes the excessive use of drugs or chemicals for non-recreational purposes, such as by a toddler.

Among children, emergency department visits for medication poisonings (excluding misuse or abuse) are twice as common as poisonings from other household products (such as cleaning solutions and personal care products).[xvii]

Latest Poison News Alerts can be obtained by visiting the American Association of Poison Control Centers at: http://www.aapcc.org/

Prevention Points[xvii]:

Drugs and Medicines

- Only take prescription medications that are prescribed to you by a healthcare professional. Misusing or abusing prescription or over-the-counter medications is not a "safe" alternative to illicit substance abuse.
- Never take larger or more frequent doses of your medications, particularly prescription pain medications, to try to get faster or more powerful effects.
- Never share or sell your prescription drugs. Keep all prescription medicines (especially prescription painkillers, such as those containing methadone, hydrocodone, or oxycodone), over-the-counter medicines (including pain or fever relievers and cough and cold medicines), vitamins, and herbals in a safe place that can only be reached by people who take or give them.
- Follow directions on the label when you give or take medicines. Read all warning labels. Some medicines cannot be taken safely when you take other medicines and you should never take medications and drink alcohol.
- Turn on a light when you give or take medicines at night so that you know you have the correct amount of the right medicine.
- Keep medicines in their original bottles or containers.
- Monitor the use of medicines prescribed for children and teenagers, such as medicines for attention deficit hyperactivity disorder (ADHD).
- Properly dispose of unused, unneeded, or expired prescription drugs.

Household Chemicals and Carbon Monoxide

- Always read the label before using a product that may be poisonous.
- Keep chemical products in their original bottles or containers. Do not use food containers such as cups, bottles, or jars to store chemical products such as cleaning solutions or beauty products.

- Never mix household products together. For example, mixing bleach and ammonia can result in toxic gases.
- Wear protective clothing (gloves, long sleeves, long pants, socks, shoes) if you spray pesticides or other chemicals.
- Turn on the fan and open windows when using chemical products such as household cleaners.

Keep Young Children Safe from Poisoning

Be Prepared

- Put the poison help number, 1-800-222-1222, on or near every home telephone and save it on your cell phone. The line is open 24 hours a day, 7 days a week.

Be Smart about Storage

- Store all medicines and household products up and away and out of sight in a cabinet where a child cannot reach them.
- When you are taking or giving medicines or are using household products: Do not put your next dose on the counter or table where children can reach them—it only takes seconds for a child to get them.
- If you have to do something else while taking medicine, such as answer the phone, take any young children with you.
- Secure the child safety cap completely every time you use a medicine.
- After using them, do not leave medicines or household products out. As soon as you are done with them, put them away and out of sight in a cabinet where a child cannot reach them.
- Be aware of any legal or illegal drugs that guests may bring into your home. Ask guests to store drugs where children cannot find them. Children can easily get into pillboxes, purses, backpacks, or coat pockets.

Other Tips

- Do not call medicine "candy."
- Identify poisonous plants in your house and yard and place them out of reach of children or remove them.

Resources

- American Association of Poison Control Center - http://www.aapcc.org/prevention/children/
- Household Hazardous Materials: A Guide for Citizens - http://training.fema.gov

- North American Guidelines for Children's Agricultural Tasks - http://www.nagcat.org

Asphyxiation (Suffocation/Strangulation) – to die from lack of respiration. This includes inhalation and ingestion of food or object, which cause the obstruction of the respiratory tract or suffocation. This group also includes accidental mechanical suffocation (e.g. by plastic bag, closed up in air tight place, accidental hanging).

2012-- SCFAC Case Review-- Asphyxiation	
Accidental Deaths	22
Asphyxiation	16
Percent of Accidental Deaths	72.7%
7Y Overall %:	51.7%

An exhausted mother laid her 4 month old baby in the bed with her at 3:00 a.m. after feeding him. When she awoke at 6:00 a.m. she discovered she had rolled over on her baby. The baby was blue and not breathing. The cause of death was suffocation due to unsafe sleeping. The manner of death was accidental.

Since 2006, the Committee has completed its review of 227 (51.7%) cases with a manner of death as asphyxiation.

Positional asphyxia happens when a person can't get enough air to breathe due to the positioning of his/her body. This happens most often in infants, when an infant dies and is found in a position where his/her mouth and nose is blocked, or where his/her chest may be unable to fully expand. It is felt that the positioning of the infant led to a lack of oxygen and a death by asphyxia (suffocation.) Examples include an infant found wedged between a mattress and the wall, or an infant sleeping on a couch who is found with his face pushed against the cushions of the couch.

Positional asphyxia varies from Sudden Infant Death Syndrome (SIDS) in a few important ways. A child is said to die of SIDS if he/she:

- is less than 1 year of age,
- died while sleeping and that death remains unexplained after a thorough investigation, including a complete autopsy and review of the circumstances of death and clinical history.

A father gave his 2 year old a peanut. The child swallowed the peanut and it became lodged in his throat. The parents tried to remove the peanut and were unsuccessful. The child was taken to the local hospital where attempts to resuscitate were unsuccessful. An autopsy revealed foreign material, a peanut, was lodged in the child's airway. The cause of death was airway obstruction. The manner of death was accidental.

Prevention Points:

- Place baby on a firm flat surface without pillows, wedges, or toys during sleeping.
- Place baby on their back while sleeping or napping.
- Remove cords and drawstrings from a child's clothing.
- Place all plastic bags or wrapping where children cannot reach them.
- Check floors for small objects such as buttons, beads, marbles, or coins.
- Avoid giving infants and young children small, firm food items such as hot dogs, grapes, peanuts, popcorn kernels and carrots.

Resources:

- Centers for Disease Control and Prevention – http://www.cdc.org
- American Academy of Pediatrics – http://www.aap.org
- U. S. Consumer Product Safety Commission – http://www.cpsc.gov
- National Safety Council – http://www.nsc.org
- Baby your Baby - http://babyyourbaby.org/infants/positional-asphyxia.php

Transportation (Private Property Only): Although motor vehicle traffic incidents are the number one cause of accidental injury deaths among youth, the Committee does not review these deaths unless they are a result of an injury on private property or injury involving a pedestrian. However, the South Carolina Department of Public Safety (SCDPS) investigates all motor vehicle traffic deaths.

2012– SCFAC Case Review--Transportation	
Accidental Deaths	22
Transportation	1
Percent of Accidental Deaths	4.5%
7Y Overall %:	8.3%

A child was killed while riding on the back of an ATV driven by his 13 year old cousin. Neither of the children was wearing a helmet and the cause of death was blunt force trauma to the head. "It is a very sad way of ending a Memorial Day Holiday and my prayers go out to this family and the child driver," stated a neighbor of the 12 year old.

Since 2006, the Committee has completed its review of 37 (8.3%) cases with a manner of death determination as transportation related.

State Information 0-17 years population: ATV usage has become popular for both recreation and work. Their size, maneuverability, and durability make ATVs extremely handy and fun to ride. Unfortunately, each year in the United States more than 50 children ages 16 and under are killed and approximately 29,000 are injured on ATVs [xviii] Young riders lack the size and strength to safely control an ATV. ATV drivers often travel on roadways which are not designed for ATV travel and drive at unsafe speeds. The American Academy of Pediatrics recommends that no one under 16 years of age ride or drive ATVs or other motorized vehicles. Manufacturers warn that full-sized ATVs are not designed for those under 16 years of age to operate. Please also refer to SC Code of Laws, Section 50-26-40 for state law restrictions on use of ATVs.

In recent years, golf carts have become popular with older and younger drivers. They are no longer used solely on golf courses, but rather in communities. The carts are a convenient and energy efficient way for residents to get around, but they also pose risks. According to the Consumer Products Safety Commission (CPSC), there are approximately 15,000 golf cart related emergency department visits in the United States every year. Based on the CPSC statistics, 40% of the injuries involve a person falling out of a cart and occur to children under the age of 16.

Please also refer to SC Code of Laws, Section 56-2-105 for state laws on golf cart permitting and regulations on the operation of a golf cart.

Prevention Points[xviii]:

ATV safety:

- Attend an ATV driver's safety course.

- Never use a 3-wheeler. They are unsafe and are no longer manufactured.
- Ride an age-appropriate ATV.
- Children under age 16 should never operate an ATV**.**
- Never carry passengers. ATVs are designed for one person.
- Do not use ATVs on the streets or at night.
- Always wear an approved helmet with eye protection.
- Wear non-skid, closed toe shoes.
- Wear long pants and a long-sleeve shirt.
- Never operate an ATV under the influence of drugs or alcohol.

Golf Cart Safety:

- If children ride on a golf cart without seat belts, mounted hand holds should be provided to reduce the possibility of ejection.
- Additions of seat belts, doors, and netting can be used to improve occupant retention.

Resources:

- Injury Free Coalition for Kids – http://www.injuryfree.org
- Consumer Product Safety Commission – http://www.cpsc.gov

Other Causes: Since 2006, 50 (11.2%) deaths occurred in children from other accidental causes to include: animal attacks, crushing, fall, struck by falling object, hyperthermia, and electrocution. From 1998-2012 a total of six children in South Carolina have died from heatstroke from being left in hot cars with a rate of 6.1 per million population. South Carolina ranks no. 27 in deaths of children in hot cars[xix] (http://ggweather.com/heat/per_capita.htm).

2012 – SCFAC Case Review Accidental-Other Causes	
Accidental Deaths	22
Other Causes	1
Percent of Accidental Deaths	4.5%
7Y Overall %:	11.2%

4. Natural

Natural deaths can be attributed to diseases and conditions such as cardiac arrhythmia, meningitis, myocarditis, pneumonia, and sickle cell disease. Metabolic disorders and birth defects also contribute to the cause of death among children. Many natural deaths are not preventable; however, some are preventable.

2012-- SCFAC Case Review--Natural	
Cases Assigned:	182
Cases Completed:	68
Natural:	17
Percent of Completed Cases:	25.0%
7Y Overall Percent	27.6%

A natural death may occur suddenly, unexpectedly or progressively due to an underlying condition that is unknown to the guardian of a child. Many times the

cause of death is undetectable until a thorough autopsy is performed**.**

Since 2006, the Committee has completed its review of 344 (27.6%) cases with a manner of death determination as natural. Of these 344 cases, 171 (49.7%) were Black, 142 (41.3%) were White, 18 (5.2%) were Hispanic and 13 (3.8%) were categorized as Other (includes Native Americans, Biracial and/or Asians).

Sickle Cell Disease (SCD) is a group of inherited red blood cell disorders. Healthy red blood cells are round, and they move through small blood vessels to carry oxygen to all parts of the body. If someone has SCD, the red blood cells become hard and sticky and look like a C-shaped farm tool called a "sickle." The sickle cells die early, which causes a constant shortage of red blood cells. Pain is the most common complication of SCD, and the top reason that people with SCD go to the emergency room or hospital. When sickle cells travel through small blood vessels they can get stuck and clog the blood flow. This causes pain that can start suddenly, be mild to severe and can last for any length of time. However, people with SCD can live full lives and enjoy most of the activities that other people do.

People with SCD, especially infants and children, are more at risk for harmful infections. Pneumonia is a leading cause of death in infants and young children with SCD.

Prevention Points:

Vaccines can protect against harmful infections.

- Babies and children with SCD should have all of the recommended childhood vaccines, plus a few extra. The extra ones are:
  - ✓ Flu vaccine (influenza vaccine) every year after 6 months of age.
  - ✓ A special pneumococcal vaccine (called 23-valent pneumococcal vaccine) at 2 and 5 years of age.
  - ✓ Meningococcal vaccine, if recommended by a doctor.
- In addition, children with SCD should receive a daily dose of penicillin, an antibiotic medicine, to help prevent infections. This can begin at 2 months of age and continue until the child is at least 5 years of age.

Sickle Cell Trait - People who inherit one sickle cell gene and one normal gene have *sickle cell trait* (SCT). People with SCT usually do not have any of the symptoms of sickle cell disease (SCD), but they can pass the trait on to their children.

Sickle Cell Trait and Athletes - Some people with SCT have been shown to be more likely than those without SCT to experience heat stroke and muscle breakdown when doing intense exercise, such as competitive sports or military training under unfavorable temperatures (very high or low) or conditions.

Studies have shown that the chance of this problem can be reduced by avoiding dehydration and getting too hot during training.

People with SCT who participate in competitive or team sports (i.e. student athletes) should be careful when doing training or conditioning activities.

Prevention Points:

- Set your own pace and build your intensity slowly.
- Rest often in-between repetitive sets and drills.
- Drink plenty of water before, during, and after training and conditioning activities.
- Keep the body temperature cool when exercising in hot and humid temperatures by misting the body with water or going to an air conditioned area during breaks or rest periods.
- Immediately seek medical care when feeling ill.

Resources:

- Centers for Disease Control and Prevention - http://www.cdc.gov/ncbddd/sicklecell/index.html
- American Academy of Pediatrics – http://www.aap.org
- National Institutes of Health - http://www.ghr.nlm.nih.gov/condition/sickle-cell-disease

5. Undetermined

The Undetermined category includes cases that have been investigated, but a manner of death cannot be determined based on the available information surrounding each case. Often, multiple causes are possible, but none can be conclusively proven (e.g., Sudden Infant Death Syndrome (SIDS) vs. Overlay vs. Intentional Suffocation). SIDS is defined by the American Academy of Pediatrics (AAP) as the sudden death of an infant less than 1 year of age, which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene and review of the clinical history.

Since 2006, the Committee has completed its review of 196 (15.7%) cases with a manner of death determination as undetermined. Of these 196 cases, 100 (51.0%) were Black, 79 (40.3%) were White, 9 (4.6%) were Hispanic and 8 (4.1%) were categorized as Other (includes Native Americans, Biracial and/or Asians).

2012-- SCFAC Case Review— Undetermined Cause	
Cases Assigned:	182
Cases Completed	68
Undetermined:	12
Percent of Completed Cases:	17.6%
7Y Overall Percent:	15.7%

Table 6 provides a summary of the 2006-2012 child fatality cases assigned to SLED with a manner of death determination as undetermined, by gender, race and ethnicity.

Table 6: Child Fatality Cases Assigned To SLED: 2006-2012
Case Reviews Completed: Undetermined Manner of Death = 196
15.7% of 1,248 Total Case Reviews Completed

	Black			Hispanic			White			Other			Totals		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
2006	11	6	17	1		1	7	2	9	2	1	3	21	9	30
2007	10	5	15	1		1	10	5	15	0	3	3	21	13	34
2008	11	5	16	1	1	2	11	8	19	0	1	1	23	15	38
2009	11	8	19	2		2	7	2	9	0	0	0	20	10	30
2010	7	6	13		1	1	11	5	16	0	0	0	18	12	30
2011	8	5	13		2	2	2	4	6	0	1	1	10	12	22
2012	5	2	7			0	3	2	5	0	0	0	8	4	12
Totals	63	37	100	5	4	9	51	28	79	2	6	8	121	75	196

Individuals Aged 17 & Under and total case reviews completed through October 2014.

Many sleep related infant deaths occur in a manner consistent with SIDS, but case investigation shows that the child was in a potentially unsafe sleep situation at the time of death. In these cases, it is not possible to rule out accidental suffocation, which means the diagnosis of SIDS or intentional suffocation could not be made. Therefore, the official cause of death is listed as "undetermined" following complete autopsy and thorough investigation.

A 21 year old mother stated, "I laid my 4 month old baby down for a nap and covered him with a blanket. When I checked on him, he was not breathing."

Table 7 below details Infant Mortality for Sudden Infant Death Syndrome for South Carolina Residents and provides the number of deaths for years 1992 through 2012 and rates.

Table 7: Infant Mortality For South Carolina Residents County: All Counties in South Carolina Infant Mortality Variables: Sudden Infant Death Syndrome (R95)* (798.0)**		
Year	Frequency	Rate
1992	77	137.3
1993	70	130.3
1994	50	96.3
1995	51	100.2
1996	40	78.3
1997	47	90.0
1998	51	94.7
1999	51	93.2
2000	37	66.1
2001	38	68.2
2002	37	67.9
2003	33	59.5
2004	29	51.3
2005	48	83.4
2006	44	70.7
2007	46	73.1
2008	57	90.4
2009	44	72.5
2010	49	84.0
2011	45	78.5
2012	33	57.8
1992-2012	977	78.8

Cause Specific Rate Calculated per 100,000 Live Births **** ICD 10 Code – cause of death (SIDs)***
Data Source: DHEC, Division of Biostatistics ***** ICD 9 Code – cause of death (SIDs)***

The AAP has placed an increased emphasis on issues related to SIDS deaths. Co-sleeping with adults or older children, sleeping on waterbeds or couches having pillows, and stuffed animals or excess bedding in the same bed with an infant can be hazardous. The side-sleeping position is not an acceptable alternative to the prone position due to the infant's potential to roll from his or her side into the prone position.

Nationally, SIDS is the leading cause of death for babies 1 to 12 months of age. The peak age for SIDS deaths is 2 to 4 months of age and 90% occur at 1 to 6 months of age.

Despite a major decrease in the incidence of SIDS since the AAP released its recommendation in 1992 that infants be placed for sleep in a non-prone position, this decline has plateaued in recent years. Concurrently, other causes of sudden unexpected infant death that occur during

sleep (sleep-related deaths), including suffocation, asphyxia, and entrapment, and ill-defined or unspecified causes of death have increased in incidence. It has become increasingly important to address these other causes of sleep-related infant death. Many of the modifiable and non-modifiable risk factors for SIDS and suffocation are strikingly similar. Therefore, the AAP is expanding its recommendations from focusing only on SIDS to focusing on a safe sleep environment that can reduce the risk of all sleep-related infant deaths, including SIDS.

Prevention Points:

Level A Recommendations:

- Always place baby on his or her back to sleep, for naps and at night.
- Use a firm sleep surface.
- Room-sharing without bed-sharing is recommended.
- Keep soft objects and loose bedding out of the crib.
- Pregnant women should receive regular prenatal care.
- Avoid smoke exposure during pregnancy and after birth.
- Avoid alcohol and illicit drug use during pregnancy and after birth.
- Breastfeeding is recommended.
- Consider offering a pacifier at nap time and bedtime.
- Avoid overheating.
- Do not use home cardiorespiratory monitors as a strategy for reducing the risk of SIDS.
- Expand the national campaign to reduce the risks of SIDS to include a major focus on the safe sleep environment and ways to reduce the risks of all sleep-related infant deaths, including SIDS, suffocation and other accidental deaths; pediatricians, family physicians, and other primary care providers should actively participate in this campaign.

Level B Recommendations:

- Infants should be immunized in accordance with recommendations of the AAP and Centers for Disease Control and Prevention.
- Avoid commercial devices marketed to reduce the risk of SIDS.
- Supervised, awake tummy time is recommended to facilitate development and to minimize development of positional plagiocephaly.

Level C Recommendations:

- Health care professionals, staff in newborn nurseries and NICUs, and child care providers should endorse the SIDS risk-reduction recommendations from birth.
- Media and manufacturers should follow safe-sleep guidelines in their messaging and advertising.

- Continue research and surveillance on the risk factors, causes, and pathophysiological mechanisms of SIDS and other sleep-related infant deaths with the ultimate goal of eliminating these deaths entirely.

These recommendations are based on the US Preventive Services Task Force levels of recommendation (http://www.uspreventiveservicestaskforce.org/uspstf/grades.htm).

Level A: Recommendations are based on good and consistent scientific evidence (i.e., there are consistent findings from at least 2 well-designed, well-conducted case-control studies, a systematic review, or a meta-analysis). There is high certainty that the net benefit is substantial and the conclusion is unlikely to be strongly affected by the results of future studies.

Level B: Recommendations are based on limited or inconsistent scientific evidence. The available evidence is sufficient to determine the effects of the recommendations on health outcomes, but confidence in the estimate is constrained by such factors as the number, size or quality of individual studies or inconsistent findings across individual studies. As more information becomes available, the magnitude or direction of the observed effect could change and this change may be large enough to alter the conclusion.

Level C: Recommendations are based primarily on consensus and expert opinion.

Resources:

- SIDS Network – http://www.SIDS-network.org
- Back to Sleep Campaign – http://www.nichd.nih.gov/sids
- American Academy of Pediatrics – http://www.aap.org
- CJ Foundation for SIDS – http://www.cjsids.com
- American Sudden Infant Death Syndrome Institute – http://www.sids.org
- National Sudden and Unexpected Infant/Child Death Resource Center – http://www.sidscenter.org
- National Sudden and Unexpected Infant/Child Death and Pregnancy Loss Program Support Center - http://www.firstcandle.org
- National Adolescent Health Information Center Unintentional Injury Fact Sheet – http://www.childdeathreview.org
- The Consumer Product and Safety Commission – http://www.cpsc.gov

V. Appendices

Appendix 1 - Child Death Investigations

Any child death under the age of 18 is investigated when the death is unexpected and unexplained including, but not limited to, possible sudden infant death syndrome; as a result of violence, when unattended by a physician and in any suspicious or unusual manner. When a child dies, the response by the state and the community must include an accurate and complete determination of the cause of death to include a thorough scene investigation and a complete autopsy. Lack of adequate investigations of child deaths impedes the effort to prevent future deaths from similar causes.

Multi-disciplinary and multi-agency reviews of deaths can assist the state in the investigation of child deaths, in the development of a greater understanding of the incidence and causes of child death and the methods for preventing such deaths, and in identifying gaps in services to children and families. Law enforcement, coroners, public health officials, educators, medical personnel, social workers and mental health providers must collaborate on child death investigations. This cooperation increases the ability to accurately identify the cause and manner of child fatalities.

The American Academy of Pediatrics describes an adequate death investigation as including a complete autopsy, investigation of circumstances of death, review of the child's medical and family history, and review of information from relevant agencies and health care professionals. An autopsy is essential to determine the cause and manner of death and toxicology samples are necessary to indicate the presence of drugs and/or alcohol. When an autopsy is not performed, it greatly limits the investigation and the Committee's ability to gain insight into the death to make recommendations to prevent future deaths. A thorough death scene investigation by law enforcement and the coroner is also essential. Child death scene investigation protocols from various sources and coroner's protocols and initial intake sheets are available.

In the state of South Carolina, the State Law Enforcement Division provides, upon request, assistance in the sometimes lengthy investigations of child deaths. Services include the assistance of experienced crime scene investigators (CSI) who can assist local agencies in documenting and gathering evidence from a child death scene and/or autopsy. Local agencies can also request the use of the SLED Toxicology Department. Child Fatality cases have preliminary testing completed within 48 hours (most are within 24 hours). More comprehensive testing is completed within two weeks (unless further specialized testing is required). The 24- to 48-hour turnaround time is provided on all child fatality cases that are visibly marked and noted as a child fatality case. The preliminary results will be called to the coroner upon request and these services are provided free of charge. The State Law Enforcement Division also provides experienced investigators from the Special Victims Unit

(SVU) who are specially trained in the investigation of child deaths to assist in every step of the investigation from the initial scene to the final court date.

Appendix 2 - Injury Morbidity and Mortality ICD Codes

Cause of Injury Death	ICD-9	ICD-10
All Injury	E800-E869, E880-E929, E950-E999	V01–Y36, Y85–Y87, Y89, *U01-*U03
Suicide	E950-E959	X60–X84, Y87.0
Homicide	E960-E969	X85–Y09, Y87.1
Unintentional	E800-E869,E880-E929	V01–X59, Y85–Y86
Cut or pierce	E920	W25–W29, W45, W46
Drowning	E830,E832,E910,E954,E964,E984	W65–W74
Fall	E880-E886,E888	W00–W19
Fire or hot object	E890-E899	X00–X19
Firearm	E922	W32–W34
Machinery	E919	W24, W30–W31
Motor Vehicle Traffic	E810-E819	[V02–V04](.1,.9), V09.2, [V12–V14](.3–.9), V19(.4–.6), [V20–V28](.3–.9), [V29–V79](.4–.9), V80(.3–.5), V81.1, V82.1, [V83–V86](.0–.3), V87(.0–.8), V89.2
Pedal cyclist, other	[E800–E807](.3),[E820–E825](.6),E826(.1,.9)	V10–V11, [V12–V14](.0–.2), V15–V18, V19(.0–.3,.8,.9)
Pedestrian, other	[E800–E807](.2), [E820–E825](.7), [E826–E829](.0)	V01, [V02–V04](.0), V05, V06, V09(.0–.1,.3,.9)
Natural or environmental	E900.0–E909, E928(.0–.2)	W42–W43, W53–W64, W92–W99, X20–X39, X51–X57
Overexertion	E927	X50
Poisoning	E850–E869	X40–X49
Struck by or against	E916–E917	W20–W22, W50–W52
Suffocation	E911–E913	W75–W84
Other specified, unspecified	E846–E848, E887, E914–E915, E918, E921(.0–.9), E923(.0–.9), E925.0–E926.9, E928(.8,.9),E929(.0–.5,.8,.9)	W23, W35–W41, W44, W49, W85–W91, X58, X59, Y85, Y86
Legal intervention	E970–E978,E990–E999	Y35–Y36, Y89(.0,.1)
Undetermined	E980–E989	Y10–Y34, Y87.2, Y89.9

Appendix 3 - County Mortality Data for 2006-2012 Deaths, by Manner of SCFAC Case Reviews Completed, as of October 2014.

County	*Manner of Death*	2006	2007	2008	2009	2010	2011	2012	Totals:
Abbeville	*Accident*	2	0	0	1	2	0	0	5
	Homicide	0	1	0	0	0	0	1	2
	Natural	0	2	0	1	0	0	0	3
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	0	0	0	0
	Totals	**2**	**3**	**0**	**2**	**2**	**0**	**1**	**10**
Aiken	*Accident*	5	2	2	1	4	3	0	17
	Homicide	4	0	1	1	1	0	0	7
	Natural	2	2	0	1	2	0	0	7
	Suicide	0	0	0	1	1	0	0	2
	Undetermined	1	1	0	0	0	0	0	2
	Totals	**12**	**5**	**3**	**4**	**8**	**3**	**0**	**35**
Allendale	*Accident*	0	1	0	0	0	0	0	1
	Homicide	0	0	0	0	0	0	0	
	Natural	0	1	0	0	0	0	0	1
	Suicide	0	0	0	0	0	0	0	
	Undetermined	0	0	0	1	0	0	0	1
	Totals	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**3**
Anderson	*Accident*	1	6	3	3	1	2	5	21
	Homicide	1	1	4	0	0	1	1	8
	Natural	2	2	2	1	1	0	0	8
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	1	0	0	0	0	1
	Totals	**4**	**9**	**10**	**4**	**2**	**3**	**6**	**38**

County	*Manner of Death*	2006	2007	2008	2009	2010	2011	2012	Totals:
Bamberg	*Accident*	2	1	0	0	0	0	1	4
	Homicide	0	0	0	0	0	0	0	0
	Natural	0	0	0	0	1	1	0	2
	Suicide	0	0	0	0	0	0	0	
	Undetermined	0	0	1	0	0	0	0	1
	Totals	**2**	**1**	**1**	**0**	**1**	**1**	**1**	**7**
Barnwell	*Accident*	1	1	0	0	0	0	0	2
	Homicide	0	0	0	0	0	0	0	
	Natural	0	1	2	1	0	0	1	5
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	0	1		1
	Totals	**1**	**2**	**2**	**1**	**0**	**1**	**1**	**8**
Beaufort	*Accident*	2	3	1	2	3	1		12
	Homicide	2	1		3		1	1	8
	Natural	0	2	1	1		2		6
	Suicide	0	0	0	0	1	0	0	1
	Undetermined	2	1	1		2	0	0	6
	Totals	**6**	**7**	**3**	**6**	**6**	**4**	**1**	**33**
Berkeley	*Accident*	10	4	4	1	1	2	0	22
	Homicide	3	3	2	2	3	1	1	15
	Natural	1	3	2	2	1	0	0	9
	Suicide	0	0	0	0	1	0	0	1
	Undetermined		6	3	1	5	0	0	15
	Totals	**14**	**16**	**11**	**6**	**11**	**3**	**1**	**62**
Calhoun	*Accident*	0	1	0	0	1	0	0	2
	Homicide	0	0	0	1	0	0	0	1
	Natural	0	1	0	1	0	0	0	2
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	0	0	0	0
	Totals	**0**	**2**	**0**	**2**	**1**	**0**	**0**	**5**

County	*Manner of Death*	2006	2007	2008	2009	2010	2011	2012	Totals:
Charleston	*Accident*	6	8	4	6	5	3	1	33
	Homicide	8	2	0	3	5	1	1	20
	Natural	4	2	3	0	2	2	4	17
	Suicide	2	1	2	0	3	0	1	9
	Undetermined	4	9	8	8	2	2	0	33
	Totals	**24**	**22**	**17**	**17**	**17**	**8**	**7**	**112**
Cherokee	*Accident*	1	2	0	1	0	2	0	6
	Homicide	0	0	0	0	2		0	2
	Natural	2	4	2	3	1	0	0	12
	Suicide	0	0	0	0	0	1	0	1
	Undetermined	0	0	2	0	0	0	0	2
	Totals	**3**	**6**	**4**	**4**	**3**	**3**	**0**	**23**
Chester	*Accident*	0	1	0	1	0	0	0	2
	Homicide	0	0	1	1	0	0	0	2
	Natural	1	1	0	0	0	0	0	2
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	0	0	0	0
	Totals	**1**	**2**	**1**	**2**	**0**	**0**	**0**	**6**
Chesterfield	*Accident*	0	1	0	0	0	1	0	2
	Homicide	0	0	0	0	0	0	0	0
	Natural	0	0	3	3	0	0	0	6
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	1	1	0	2
	Totals	**0**	**1**	**3**	**3**	**1**	**2**	**0**	**10**
Clarendon	*Accident*	0	1	0	1	0	0	0	2
	Homicide	0	0	0	0	0	1	0	1
	Natural	0	2	2	0	0	0	0	4
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	1	1	0	0	0	0	0	2
	Totals	**1**	**4**	**2**	**1**	**0**	**1**	**0**	**9**

County	*Manner of Death*	2006	2007	2008	2009	2010	2011	2012	Totals:
Colleton	*Accident*	1	2	1	0	0	0	1	5
	Homicide	0	1	0	1	0	1	0	3
	Natural	1	1	0	0	0	0	0	2
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	1		2	1	0	1	0	5
	Totals	**3**	**4**	**3**	**2**	**0**	**2**	**1**	**15**
Darlington	*Accident*	0	1	2	1	2	1	1	8
	Homicide	0	0	0	1	0	0	0	1
	Natural	2	2	2	4	2	1	1	14
	Suicide	1	0	0	0	0	0	0	1
	Undetermined	1	1	0	0	1	2	2	7
	Totals	**4**	**4**	**4**	**6**	**5**	**4**	**4**	**31**
Dillon	*Accident*	0	2	4	1	0	1	0	8
	Homicide	3	1	0	0	0	0	0	4
	Natural	0	1	0	1	1	0	0	3
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	1	0	0	1
	Totals	**3**	**4**	**4**	**2**	**2**	**1**	**0**	**16**
Dorchester	*Accident*	0	3	2	2	0	2	0	9
	Homicide	0	3	0	0	0	2	1	6
	Natural	1	0	1	1	0	0	0	3
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	1	0	0	0	0	1	0	2
	Totals	**2**	**6**	**3**	**3**	**0**	**5**	**1**	**20**
Edgefield	*Accident*	0	0	0	0	0	0	0	0
	Homicide	0	1	0	0	0	0	0	1
	Natural	0	0	0	0	0	0	0	0
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	1	0	0	0	0	0	0	1
	Totals	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**2**

County	*Manner of Death*	2006	2007	2008	2009	2010	2011	2012	Totals:
Fairfield	*Accident*	0	0	0	0	1	0	1	2
	Homicide	0	0	0	0	0	0	0	0
	Natural	0	1	0	0	0	0	0	1
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	1	0	0	0	0	0	1
	Totals	**0**	**2**	**0**	**0**	**1**	**0**	**1**	**4**
Florence	*Accident*	1	1	3	1	1	4	2	13
	Homicide	1	1	2	0	0	1	0	5
	Natural	2	1	1	1	1	2	4	12
	Suicide	1	0	0	0	0	1	0	2
	Undetermined	1	0	5	3	1	1	1	12
	Totals	**6**	**3**	**11**	**5**	**3**	**9**	**7**	**44**
Georgetown	*Accident*	0	2	0	2	0	0	0	4
	Homicide	2	1	0	0	0	0	0	3
	Natural	4	0	2	0	0	0	0	6
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	2	0	0	2	4
	Totals	**6**	**3**	**2**	**4**	**0**	**0**	**2**	**17**
Greenville	*Accident*	5	1	2	1	3	5	3	20
	Homicide	2	2	1	2	1	2	1	11
	Natural	5	6	3	7	2	6	0	29
	Suicide	2	1	0	0	0	3	0	6
	Undetermined	3	1	4	2	2	6	0	18
	Totals	**17**	**11**	**10**	**12**	**8**	**22**	**4**	**84**
Greenwood	*Accident*	3	6	2	4	1	1	0	17
	Homicide	1	0	0	0	0	0	0	1
	Natural	1	1	0	1	0	1	0	4
	Suicide	0	0	1	0	1	0	0	2
	Undetermined	1	0	0	0	0	0	0	1
	Totals	**6**	**7**	**3**	**5**	**2**	**2**	**0**	**25**

County	*Manner of Death*	2006	2007	2008	2009	2010	2011	2012	Totals:
Hampton	*Accident*	0	1	0	0	0	0	0	1
	Homicide	0	0	2	0	0	0	0	2
	Natural	0	1	0	0	0	0	0	1
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	1	0	0	0	0	0	0	1
	Totals	**1**	**2**	**2**	**0**	**0**	**0**	**0**	**5**
Horry	*Accident*	10	6	2	5	5	3	0	31
	Homicide	0	2	4	0	0	1	0	7
	Natural	7	8	11	1	4	5	3	39
	Suicide	0	1	2	0	1	0	0	4
	Undetermined	0	2	0	1	2	0	0	5
	Totals	**17**	**19**	**19**	**7**	**12**	**9**	**3**	**86**
Jasper	*Accident*	1	1	1	0	0	0	0	3
	Homicide	0	0	0	0	0	0	0	0
	Natural	0	0	0	0	1	0	0	1
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	1	0	0	0	0	1
	Totals	**1**	**1**	**2**	**0**	**1**	**0**	**0**	**5**
Kershaw	*Accident*	2	1	1	0	1	0	0	5
	Homicide	0	1	0	1	1	0	0	3
	Natural	1	2	1	1	0	0	0	5
	Suicide	0	0	0	1	0	0	0	1
	Undetermined	0	0	0	0	0	1	0	1
	Totals	**3**	**4**	**2**	**3**	**2**	**1**	**0**	**15**
Lancaster	*Accident*	0	0	2	1	2	1	0	6
	Homicide	1	0	0	0	0	1	0	2
	Natural	1	0	0	1	0	1	0	3
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	2	0	0	0	1	3
	Totals	**2**	**0**	**4**	**2**	**2**	**3**	**1**	**14**

County	*Manner of Death*	2006	2007	2008	2009	2010	2011	2012	Totals:
Laurens	*Accident*	2	2	2	2	0	3	1	12
	Homicide	0	0	0	2	0	0	0	2
	Natural	2	1	3	2	0	0	0	8
	Suicide	0	0	0	0	0	1	1	2
	Undetermined	0	3	0	0	0	0	1	4
	Totals	**4**	**6**	**5**	**6**	**0**	**4**	**3**	**28**
Lee	*Accident*	1	1	0	0	0	0	0	2
	Homicide	0	0	0	0	0	0	0	0
	Natural	1	1	0	0	0	0	0	2
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	0	0	0	0
	Totals	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**4**
Lexington	*Accident*	6	6	6	12	2	4	4	40
	Homicide	1	2	3	2	1	0	1	10
	Natural	3	3	2	3	1	0	0	12
	Suicide	1	0	1	1	2	0	0	5
	Undetermined	0	2	1	2	2	0	0	7
	Totals	**11**	**13**	**13**	**20**	**8**	**4**	**5**	**74**
Marion	*Accident*	1	1	0	0	0	0	0	2
	Homicide	0	0	0	0	0	0	0	0
	Natural	0	0	0	0	0	0	0	0
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	1	0	0	0	1	0	0	2
	Totals	2	1	0	0	1	0	0	4
Marlboro	*Accident*	0	0	0	0	0	0	0	0
	Homicide	0	0	0	0	0	1	1	2
	Natural	0	0	0	0	1	0	0	1
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	1	0	0	0	0	0	0	1
	Totals	1	0	0	0	1	1	1	4

County	*Manner of Death*	2006	2007	2008	2009	2010	2011	2012	Totals:
McCormick	*Accident*	0	0	0	0	0	1	0	1
	Homicide	0	0	0	0	0	0	0	0
	Natural	0	0	0	0	0	0	0	0
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	0	0	1	1
	Totals	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**2**
Newberry	*Accident*	1	0	3	0	0	0	0	4
	Homicide	0	0	0	1	0	0	0	1
	Natural	0	3	0	0	0	0	1	4
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	0	0	0	0
	Totals	**1**	**3**	**3**	**1**	**0**	**0**	**1**	**9**
Oconee	*Accident*	0	6	3	1	2	1	0	13
	Homicide	0	0	0	1	0	0	1	2
	Natural	0	0	0	0	0	0	1	1
	Suicide	0	1	0	1	0	0	0	2
	Undetermined	0	0	0	0	0	0	0	0
	Totals	**0**	**7**	**3**	**3**	**2**	**1**	**2**	**18**
Orangeburg	*Accident*	1	2	3	1	2	1	0	10
	Homicide	1		2	1	2	0	1	7
	Natural	6	5	1	1	6	1	0	20
	Suicide	0	0	0	1	1	1	0	3
	Undetermined	0	0	1	0	0	1	0	2
	Totals	**8**	**7**	**7**	**4**	**11**	**4**	**1**	**42**
Pickens	*Accident*	1	1	3	3	1	1	1	11
	Homicide	1	0	1	0	1	0	0	3
	Natural	0	1	1	1	1	0	0	4
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	1	0	0	0	0	1
	Totals	**2**	**2**	**6**	**4**	**3**	**1**	**1**	**19**

County	*Manner of Death*	2006	2007	2008	2009	2010	2011	2012	Totals:
Richland	*Accident*	6	9	12	6	3	3	0	39
	Homicide	2	10	3	5	4	3	0	27
	Natural	7	4	7	8	1	1	1	29
	Suicide	0	0	1	1	1	0	1	4
	Undetermined	0	0	1	0	4	2	2	9
	Totals	**15**	**23**	**24**	**20**	**13**	**9**	**4**	**108**
Saluda	*Accident*	0	0	1	0	0	0	0	1
	Homicide	0	1	0	0	0	0	0	1
	Natural	0	1	0	1	0	0	0	2
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	0	1	0	1
	Totals	**0**	**2**	**1**	**1**	**0**	**1**	**0**	**5**
Spartanburg	*Accident*	2	4	3	7	2	2	0	20
	Homicide	0	2	2	6	1	2	1	14
	Natural	2	4	6	3	2	3	0	20
	Suicide	2	1	0	1	1	3	0	8
	Undetermined	5	3	3	9	5	2	1	28
	Totals	**11**	**14**	**14**	**26**	**11**	**12**	**2**	**90**
Sumter	*Accident*	3	2	3	1	1	0	0	10
	Homicide	0	3	1	2	1	1	2	10
	Natural	3	3	3	2	1	0	0	12
	Suicide	1	0	0	0	0	0	0	1
	Undetermined	2	0	0	0	1	0	1	4
	Totals	**9**	**8**	**7**	**5**	**4**	**1**	**3**	**37**
Union	*Accident*	0	1	0	0	0	0	0	1
	Homicide	0	0	0	0	0	0	0	0
	Natural	1	0	0	3	0	0	0	4
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	0	0	0	0	0	0	0	0
	Totals	**1**	**1**	**0**	**3**	**0**	**0**	**0**	**5**

County	*Manner of Death*	2006	2007	2008	2009	2010	2011	2012	Totals:
Williamsburg	*Accident*	3	0	0	2	0	0	0	5
	Homicide	0	1	0	0	0	0	0	1
	Natural	1	0	0	0	1	0	0	2
	Suicide	0	0	0	0	0	0	0	0
	Undetermined	2	1	0	0	0	0	0	3
	Totals	**6**	**2**	**0**	**2**	**1**	**0**	**0**	**11**
York	*Accident*	0	4	5	2	1	1	1	14
	Homicide	0	3	0	1	1	2	0	7
	Natural	5	3	1	1	3	2	1	16
	Suicide	0	0	1	1	0	1	0	3
	Undetermined	1	2	1	0	0	0	0	4
	Totals	**6**	**12**	**8**	**5**	**5**	**6**	**2**	**44**
		2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**Total:**
	Totals	**221**	**256**	**217**	**204**	**150**	**132**	**68**	**1248**

		2006	2007	2008	2009	2010	2011	2012	Total:
All County Totals By Manner Of Death	*Accident*	80	98	80	72	47	49	22	448
	Homicide	33	43	29	37	24	22	14	202
	Natural	68	76	62	57	36	28	17	344
	Suicide	10	5	8	8	13	11	3	58
	Undetermined	30	34	38	30	30	22	12	196
	Totals	**221**	**256**	**217**	**204**	**150**	**132**	**68**	**1248**

Endnotes:

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