



Child Fatalities in Tennessee Review of 2013 Deaths

Understanding and Preventing Child Deaths



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Thank you to the 34 Child Fatality Review Teams in the judicial districts across the state who treat each case with reverence and compassion, working with a stalwart commitment to preventing future fatalities.

Thank you to the State Child Fatality Prevention Review Team members who find ways to put the recommendations in this report to work in saving lives.

Their efforts, and ours, are reinforced immeasurably by the support and cooperation of the following Tennessee agencies: the Commission on Children and Youth, the Department of Children's Services, the Center for Forensic Medicine, the Office of the Attorney General, the Tennessee Bureau of Investigation, the Department of Mental Health and Substance Abuse Services, Department of Intellectual and Developmental Disabilities, the Tennessee Medical Association, the Department of Education, the State General Assembly, the State Supreme Court, the Tennessee Suicide Prevention Network, Tennessee local and regional health departments, and the National Center for Child Death Review.

It is with deepest sympathy and respect that we dedicate this report to the memory of those children and families represented within these pages.

This report may be accessed online at
<http://health.tn.gov/mch/childfatality.shtml>

DATA CONFIDENTIALITY

Please note: Portions of the information and data contained in this report were compiled from records that are confidential and contain information which is protected from disclosure to the public, pursuant to Tennessee Code Annotated 68-142-108.

EXECUTIVE SUMMARY

2013 State Child Fatality Review Team Recommendations

Safe Sleep

The number of sleep-related deaths decreased in 2013; however, there were still 117 sleep-related infant deaths in 2013 and these deaths accounted for 21.5% of all infant deaths. **The team recommends aggressively continuing the safe sleep campaign with an emphasis on expanding projects already in place to educate health care providers and parents.**

To accomplish this, the Department of Health will partner with Prevent Child Abuse Tennessee, and the Department of Children's Services to distribute a minimum of 80,000 TDH educational materials to caregivers and providers. The Department of Health will specifically collaborate with hospitals to continue to provide education to staff and parents. The Department of Children's Services will expand their safe sleep pilot by developing processes in each region to reliably assess and train families, and deliver sleep furniture to the point of care when needed. Prevent Child Abuse Tennessee will provide education to parents and caregivers. The success of these efforts will be measured by the number of sleep-related infant deaths in subsequent years.

Motor Vehicle

Motor vehicle related fatalities are a substantial contributor to external causes of death among Tennessee's children, particularly among children ages 15-17, who account for 47.7% of all childhood motor vehicle fatalities. **The State Team recommends expanding educational efforts in schools with an emphasis on the regions with the highest motor vehicle crash fatalities among teens (West Tennessee, East Tennessee and Shelby County).**

The Department of Education and the Tennessee Department of Health will collaborate to engage school resource officers in adopting an evidence-based practice from <http://reducetncrashes.org>; a Governor's Highway Safety Office traffic safety awards program. Efforts will be evaluated by tracking the number of schools that have registered with the website and completed activities. The success of these efforts will be measured by the number of motor vehicle fatalities among children in subsequent years.

Suicide

The number of suicide deaths among children remained the same from 2012 to 2013 with 24 deaths. **The State Team recommends expanding the current suicide prevention efforts by increasing education to students to include awareness of warning signs and available resources.**

To accomplish this, the Tennessee Suicide Prevention Network (TSPN), Tennessee Commission on Children and Youth (TCCY) and the Departments of Education, Mental Health and Substance Abuse Services and Health will collaborate to provide education to students through social media and other means on the recognition of suicide warning signs in peers. Specific efforts will include:

- Annual identification of school staff who have been/should be trained in suicide prevention as per the Jason Flatt Act of 2007
- Implementation of the Jason Foundation’s “Promise for Tomorrow” curriculum into more public schools
- Increased provision of suicide prevention and crisis intervention resources and promotional materials, especially those featuring hotline numbers, within schools.
- Widespread propagation of the Columbia Suicide Severity Rating Scale (C-SSRS) among public school staff

The success of these efforts will be measured by the number of suicide deaths among children in subsequent years.

Racial Disparities

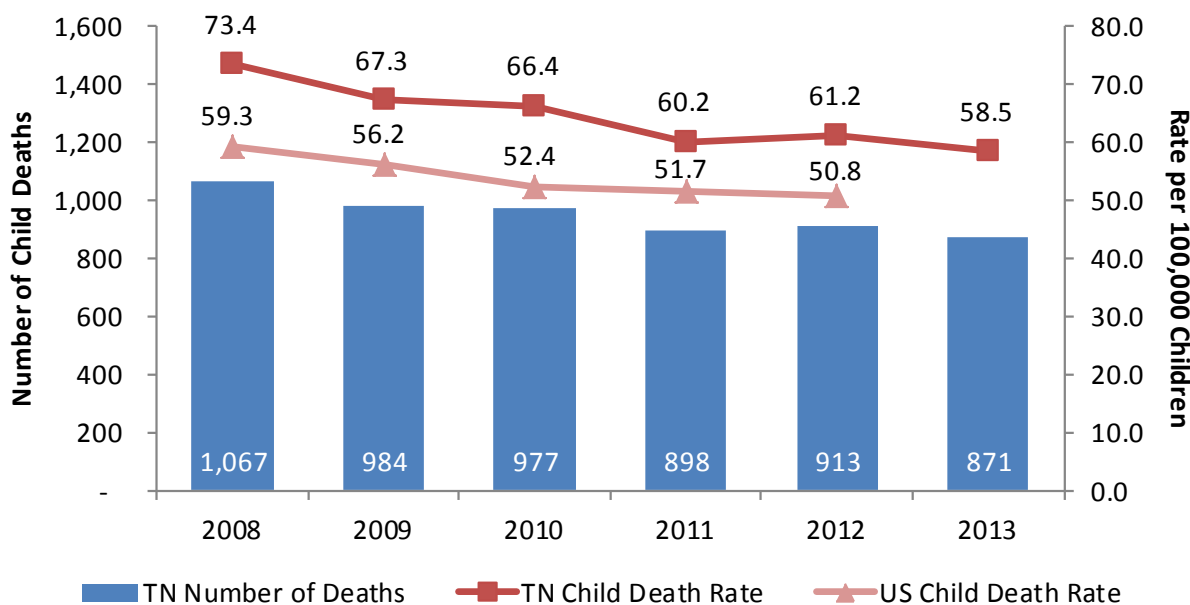
A racial disparity exists among child and infant fatalities. Although the majority of the deaths are comprised of White children, African American children suffer a higher rate of mortality than Whites or other races. **The State Team recommends examining racial disparities through enhanced data analysis and identifying opportunities for prevention efforts.**

To accomplish this, the Department of Health will analyze the data to identify target populations. Data will be analyzed to identify regions with the greatest disparities. For those regions with the highest disparities, cause of death will be analyzed to identify specific prevention efforts.

General

The overall number of deaths and mortality rate for Tennessee children decreased from 2012 to 2013.¹ This decrease is attributed mainly to the decrease in deaths among infants, young children and older teenagers and included reductions in fatalities due to homicide, poisoning/overdose and asphyxia (including preventable sleep-related infant deaths). Since 2008, the overall mortality rate has dropped by 20% for Tennessee children (statistically significant at p-value <0.001). However, Tennessee’s child mortality rate still exceeds the national average of 50.8 per 100,000 in 2012,² the latest year for which the national rate is available. The mortality rates for children in Tennessee and the U.S. ages 0-17 (per 100,000 population) for the last six years are shown in Figure 1.

Figure 1. Number and Rate of Deaths for Children Ages 0-17 in Tennessee, 2008-2013



Data source: Tennessee Department of Health, Division of Health Statistics. U.S. Census Bureau.

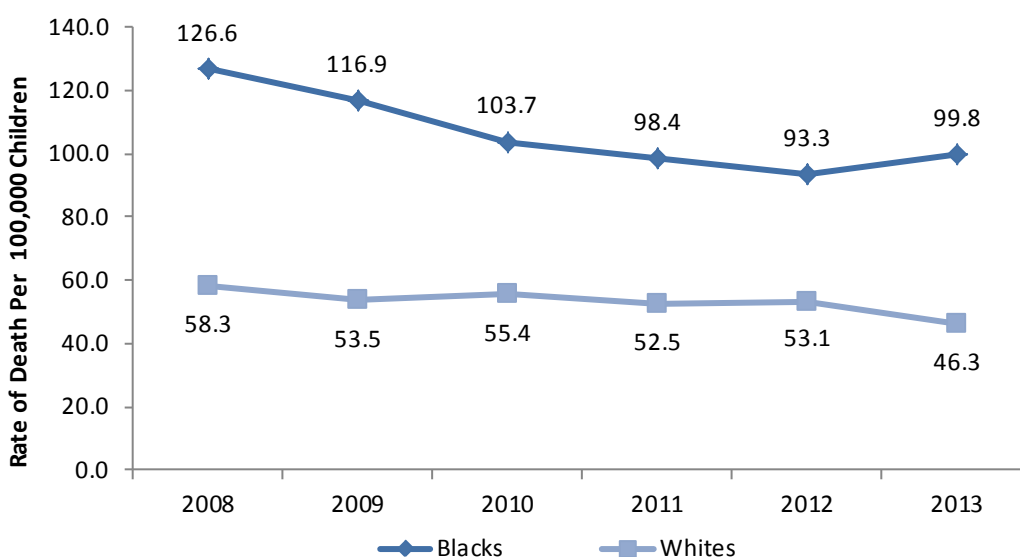
- As expected, the first year of life continues to be the most perilous for Tennessee’s children, accounting for 62% of all deaths through the age of 17. Children between the ages of 15-17 and 1-4 suffered the next highest percentage of deaths at 12% and 11% respectively.

¹ This decrease is not statistically significant (p>0.05).

² Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2012 on CDC WONDER Online Database, released 2014. Accessed at <http://wonder.cdc.gov/ucd-icd10.html>.

- Tennessee’s male children accounted for a disproportionate percentage of child fatalities compared to females (59% vs. 41%, respectively). This pattern has been consistent for the past six years.
- A racial disparity exists among child fatalities. Although the majority of the deaths are comprised of White children, African American children suffer a higher rate of mortality than Whites or other races.³ There was a 21% **statistically significant decline (p-value <0.05) in the overall mortality rate in both African American and White children between 2008 and 2013**. In 2013, there was a slight increase in the African American child mortality rate mainly among children ages 1-14; many of these deaths were due to preventable causes such as motor vehicle accidents and deaths from fire.

Figure 2. Number and Rate of Deaths for Children Ages 0-17 by Race in Tennessee, 2008-2013



Data source: Tennessee Department of Health, Division of Health Statistics. U.S. Census Bureau.

Table 1. Number and Rate of Deaths for Children Ages 0-17 by Race in Tennessee, 2008-2013

Year	Blacks			Whites		
	Number of Deaths	Children Population	Rate per 100,000	Number of Deaths	Children Population	Rate per 100,000
2008	398	314,463	126.6	646	1,108,729	58.3
2009	369	315,749	116.9	597	1,115,107	53.5
2010	329	317,186	103.7	621	1,121,602	55.4
2011	301	306,034	98.4	579	1,102,142	52.5
2012	285	305,376	93.3	583	1,098,938	53.1
2013	302	302,655	99.8	507	1,095,152	46.3

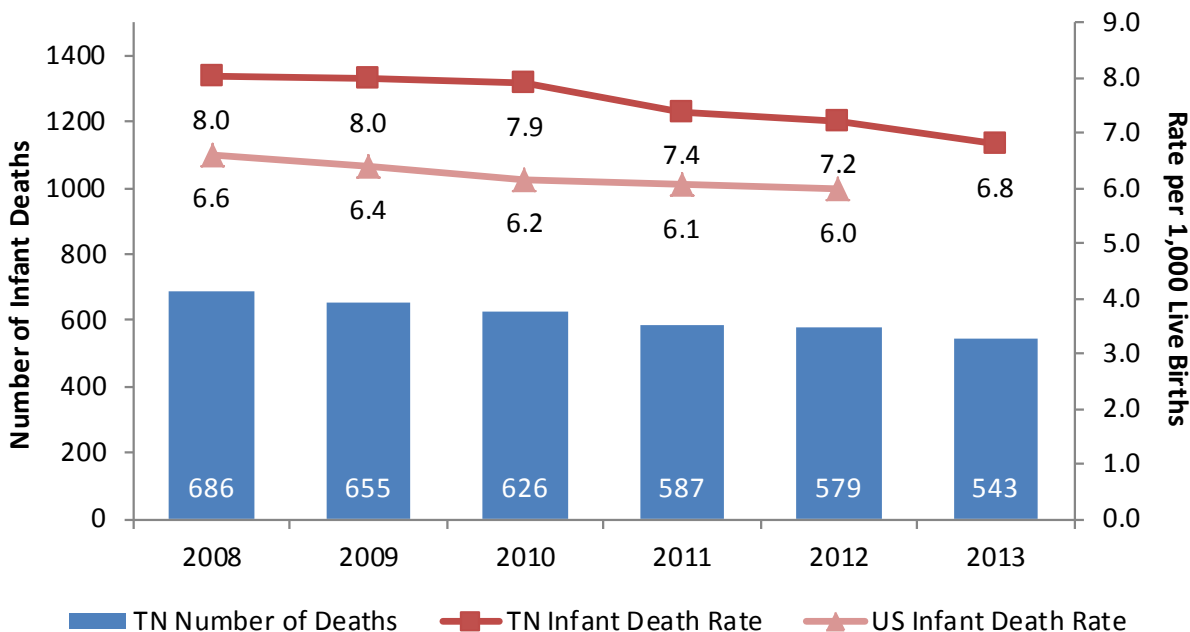
Data source: Tennessee Department of Health, Division of Health Statistics. U.S. Census Bureau.

³ Other race includes all other non-white or non-black races.

Infant Mortality

The number and rate of infant mortality (<1 year of age) in Tennessee has been decreasing since 2008. In 2013, the infant mortality rate dropped by 15% in comparison to 2008 (statistically significant at p-value <0.05). Similar to the overall child fatality rate, Tennessee's infant mortality rate still exceeds the national average of 6.0 per 1,000 live births in 2012,⁴ the latest year for which the national rate is available.

Figure 3. Number and Rate of Deaths for Infants in Tennessee, 2008-2013



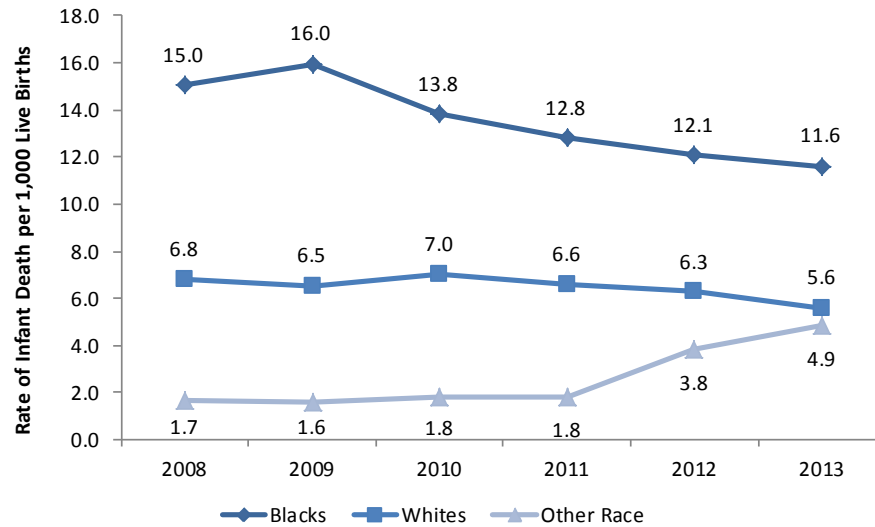
Data source: Tennessee Department of Health, Division of Health Statistics. U.S. Census Bureau.

- 117 infants died from suffocation, strangulation, or other causes in the sleep environment. This represents a decrease of 10% from the 130 infants who died in 2012. A statewide public awareness campaign started in late 2012 may have contributed to the decrease, yet much work remains to be done in order to eliminate these preventable deaths.
- A racial disparity also exists among infants who suffer fatalities. African American infants have a higher rate of mortality than Whites or infants of other race.⁵ While there has been a decline in the infant mortality rates for African Americans and Whites, an increase is observed among infants of other races⁵ beginning in 2011.

⁴ Xu JQ, Kochanek KD, Murphy SL, Arias E. Deaths: Final Data for 2012. National Vital Statistics Reports; Vol 63 No 9. Hyattsville, MD: National Center for Health Statistics. 2014.

⁵ Other race includes all other non-white or non-black races.

Figure 4. Rate⁶ of Deaths for Infants by Race in Tennessee, 2008-2013



Data source: Tennessee Department of Health, Division of Health Statistics. U.S. Census Bureau.

Table 2. Number and Rate⁶ of Deaths for Infants by Race in Tennessee, 2008-2013

Year	Blacks			Whites			Other Race		
	Number of Deaths	Live Births	Rate per 1,000	Number of Deaths	Live Births	Rate per 1,000	Number of Deaths	Live Births	Rate per 1,000
2008	273	18,148	15.0	398	58,380	6.8	15	8,945	1.7
2009	277	17,359	16.0	364	55,752	6.5	14	8,994	1.6
2010	229	16,599	13.8	382	54,583	7.0	15	8,162	1.8
2011	211	16,482	12.8	361	54,765	6.6	15	8,215	1.8
2012	200	16,560	12.1	348	55,548	6.3	31	8,092	3.8
2013	196	16,863	11.6	307	54,877	5.6	40	8,212	4.9

Data source: Tennessee Department of Health, Division of Health Statistics. U.S. Census Bureau.

Manner of Death

- Manner of death refers to the intent of a death (Natural, Accident, Suicide, Homicide, or Undetermined). Additional details are available in the “Data Overview” section of this report.
- 452 deaths were by natural manner (medical causes); 158 deaths were accidents. By comparison, 489 of deaths in 2012 were attributed to natural manner while 156 were attributable to accidental manner.
- Forty deaths of children in 2013 (4.6% of all deaths) were the result of homicide, a decrease from the 48 homicide deaths in 2012.
- Twenty-four young people took their own lives during 2013 (2.8% of all deaths); the same number of suicides observed in 2012. Two-thirds of all suicides involved a weapon; 75% occurred in the child’s home.

⁶ Rates for less than 20 deaths are unstable and must be used with caution

Cause of Death

- Cause of death refers to the effect, illness, or condition leading to an individual's death. The cause may be due to a medical condition or an external cause (injury).
- The majority of the reviewed child deaths (N=467) was due to a medical condition and most were infants. This is a reduction of 9.3% of medical related child deaths compared to 2012 (N=515).
- Congenital anomaly and prematurity were the leading causes of death from a medical condition.
- 236 reviewed child deaths were classified as due to external causes, including motor vehicle, weapons, asphyxia, fire/burns, poisoning or overdose, and fall/crush. This represents a 2.8% decrease from the 243 cases observed in 2012.
 - Sixty-five children (7.5% of all deaths) died in motor vehicle crashes in 2013, a small decrease from the 68 vehicular deaths in 2012.
 - Sixty-three children (7.2% of all deaths) died of asphyxia; 46 of these children died in a sleep-related environment. This represents a decrease in overall asphyxia cases of 8.7% from 2012, when there were 69 asphyxia deaths, 42 of which occurred in a sleep-related environment.
 - Fifty-five children (6.3% of all deaths) died from weapon injuries, a 12.2% increase from the 49 children who died in 2012. Thirty-nine (70.9%) of the weapons-related fatalities were due to firearms, of which 24 were homicides, 11 were suicides and four were accidents.
 - Eighteen children (2.1% of all deaths) died by drowning, a 21.7% drop from the 23 cases in 2012.
 - Sixteen children (1.8% of all deaths) died from a fire, burn or electrocution, a three-fold increase in fatalities compared to the five deaths in 2012. After reviewing each of the cases, we see no obvious reason for the one-year increase in fire-related deaths. It is plausible that the increase may be an anomaly; however, we will continue to monitor this concern.
 - Five children (0.6% of all deaths) died from poisoning, the lowest number of poisoning-related child deaths since 2008. All five poisonings involved prescription drugs.

Table 3 summarizes the most recent year-to-year trends for child fatalities in Tennessee.

Table 3. Summary of Year-to-Year Trends⁷ for Child Fatalities in Tennessee, 2012-2013

Categories	Number of Deaths		Rate of Death per 100,000 ⁷	
	2012	2013	2012	2013
Categories Showing Improvement				
Animal bite or attack	1	0	0.1	0.0
Exposure	3	1	0.2	0.1
SIDS	8	3	0.5	0.2
Fall or crush	4	2	0.3	0.1
Poison-Related	7	5	0.5	0.3
Drowning	23	18	1.5	1.2
Homicide	48	40	3.2	2.7
Categories Showing Small Changes				
Medical Causes	515	467	34.5	31.4
Asphyxia	69	63	4.6	4.2
Sleep-Related	130	117	1.6	1.5
Motor vehicle/Other transport	68	65	4.6	4.4
Suicide	24	24	1.6	1.6
Infant Mortality (<1 year of age)	579	543	7.2	6.8
Categories Showing Worsening Outcomes				
Weapon-Related	49	55	3.3	3.7
Fire, burn, or electrocution	5	16	0.3	1.1

Data source: Tennessee Department of Health, Child Fatality Review Database System.

In Table 3 above, trends in death rates are clustered in three categories: those showing improvements from 2012 to 2013 (more than 10% improvement); those showing relatively no change from 2012 to 2013 (less than 10% improvement or worsening); and those showing worsening outcomes from 2012 to 2013 (more than 10% worsening).

The review of child fatalities in 2013 revealed decreases in preventable deaths related to homicide, drowning, and poisoning. While other preventable deaths such as asphyxia (including preventable sleep-related infant deaths) and suicide have seen small changes, there have been increases in weapon-related injuries and fatalities from fires. The small change and rise of these preventable deaths underscores the need for a continued focus on the careful review of every child death, thoughtful identification of opportunities for prevention, and implementation of strategies to prevent future child deaths.

⁷ Rates for infant mortality and SIDS/Sleep-Related deaths are expressed as rate per 1,000 live births. All other rates are expressed as rate per 100,000 population.

STATE CHILD FATALITY TEAM MEMBERS
(2013 CHILD FATALITY REPORT)

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INTRODUCTION

The Child Fatality Review Process in Tennessee

Child deaths are often regarded as indicators of the health of a community. While mortality data provide an overall picture of child deaths by number and cause, it is from a careful study of each and every child's death that we can learn how best to respond to a fatality and how best to prevent future deaths.

Annually, approximately 40,000 children age 0-17 die in the United States.⁸ Through child death review, local multidisciplinary teams meet in communities across the country to review case information for deaths in the hopes of better understanding why children die and what action can be taken to prevent future deaths. The Maternal and Child Health National Center for Child Death Review provides national-level leadership for state and local child fatality review teams. As of July 2012, every state and the District of Columbia had a system for reviewing child deaths.⁹

The Child Fatality Review and Prevention Act of 1995 established the Tennessee Department of Health's Child Fatality Review (CFR). The mission of the Child Fatality Review is to review deaths in order to promote understanding of the causes of childhood deaths and make and carry out recommendations that will prevent future childhood deaths.

Overview of Child Fatality Review Teams

A local CFR team exists in each of Tennessee's judicial districts; these 34 teams cover all 95 counties, review all deaths of children 17 years of age or younger and make recommendations to the State CFR Team for reduction and prevention of child deaths statewide. Their careful review process results in a thorough description of the factors related to child deaths. Membership of the local teams is outlined in T.C.A. § 68-142-106, and includes the regional health officer, Supervisor of Children's Services, Medical Examiner, Prosecuting Attorney, a member of the local education agency, a mental health professional, a pediatrician or family practice physician, an emergency medical service provider or firefighter, and juvenile court representative. While these members are required to attend by law, other agencies that work with children and their families also attend.

The composition of the State CFR Team is outlined in T.C.A. § 68-142-103, and includes high level officials such as the Health Commissioner, the Attorney General, and political leaders such as State Senators and Representatives. This team reviews the aggregate data from the local teams, analyzes statistics of the incidence and causes

⁸ Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2010 on CDC WONDER Online Database, released 2014. Accessed at <http://wonder.cdc.gov/ucd-icd10.html>.

⁹ National Center for the Review and Prevention of Child Deaths. Keeping Kids Alive: A Report on the Status of Child Death Review in the United States, 2011. Available at: http://www.childdeathreview.org/reports/CDRinUS_2011.pdf.

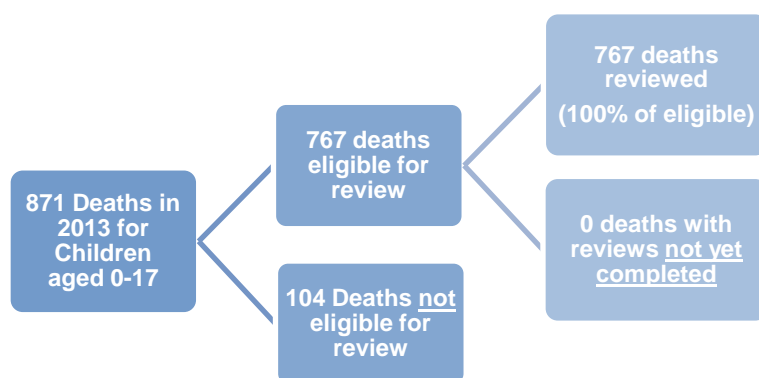
of child deaths, and makes recommendations to the Governor and General Assembly for their consideration in implementing laws, policies, and practices to prevent child deaths in Tennessee and to make improvements in protocols and procedures.

Review of Child Fatality Review Data

The CFR data included in this report represent thoughtful inquiry and discussion by a multi-disciplinary group of community leaders who consider all the circumstances surrounding the death of each child. They bring to the review table information from a variety of agencies, documents, and areas of expertise. Their careful review process results in a thorough description of the factors related to child deaths.

Of the 871 deaths in 2013, 767 met the review criteria. Another 104 cases did not meet the criteria for gestational age or weight (as defined below). Reviews were completed on all (100%) of eligible cases and are represented in this annual report. In previous years, not all child deaths were reviewed before the annual report was released. Such case reviews were considered ongoing and awaited results of contributing information, such as legal investigations or autopsy results. The completion of all 2013 death reviews is a reflection of the significant efforts put in by the local CFR teams and other partnering State agencies.

2013 Child Fatality Review Eligible vs. Reviewed Cases



Fetal deaths of less than 23 weeks gestation and less than or equal to 500 grams in weight are not reviewed because these deaths occur before the currently-accepted limits of viability. Because of these variables, it is usually impossible to find an exact number-for-number match between CFR data and data from other sources such as vital statistics. The unique role of CFR is to provide a comprehensive depth of understanding of the deaths which may have been prevented to augment other, more one-dimensional data sources.

Tennessee Department of Health (TDH) staff oversee the statewide Child Fatality Review (CFR) as mandated in T.C.A. § 68-142-101 et. seq. The CFR process incorporates best practices identified by the National Maternal and Child Health (MCH) Center for Child Death Review, including: central administration of statewide child

fatality reviews; standardized data collection across review teams; and coordination of recommendations to prevent deaths.

Comparison data from the Centers for Disease Control and Prevention (CDC) and population data by county from the Tennessee Department of Health Office of Policy, Planning, and Assessment are used in many of the analyses included in this report.

Limitations of Child Fatality Review Data

Results for the analysis of the CFR data may vary from previous reports due to the nature of how the data is collected and stored. If the CFR team obtains additional information on a child's death after the completion of the annual report, they are allowed to make changes to any of the already reviewed data, which is then overwritten in the database system. Because local CFR teams may have added additional information to cases described in previous CFR reports after the completion of the reports for those years, the results of prior year data in this year's report may not exactly match numbers in prior years' reports.

Local CFR teams analyze each case based on the best information available to them. As such, there may be additional facts not available to the team that would result in a different classification or conclusion; therefore, the numbers contained in this report may not match reports from other agencies or departments.

DATA OVERVIEW

Summary of Child Mortality Data

The overall rate of child fatalities for 2013 was 58.5 per 100,000 in the population of children less than 18 years of age.

In 2013, there were 871 child deaths in Tennessee, of which 767 were reviewed by local CFR teams. Among the reviewed child deaths, the first year of life is the most perilous for Tennessee's children, accounting for 58% of all reviewed deaths through the age of 17 (depicted in Figures 5-7). Males died more frequently than girls (accounting for 59% of child fatalities). A racial disparity exists among child fatalities as well. While the majority of the deaths are among White children, African American children suffer a higher rate of mortality than Whites or other races.¹⁰

Figure 5. Child Deaths by Age Groups in Tennessee, 2013

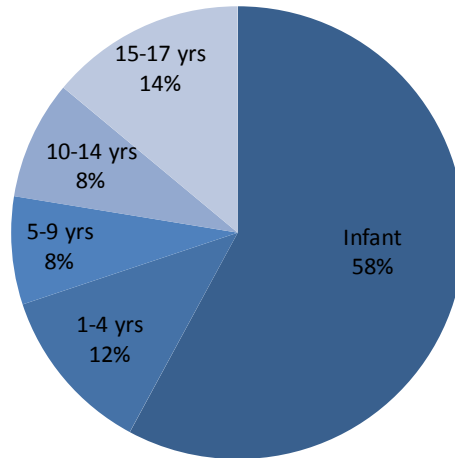


Figure 6. Child Deaths Ages 0-17 by Gender in Tennessee, 2013

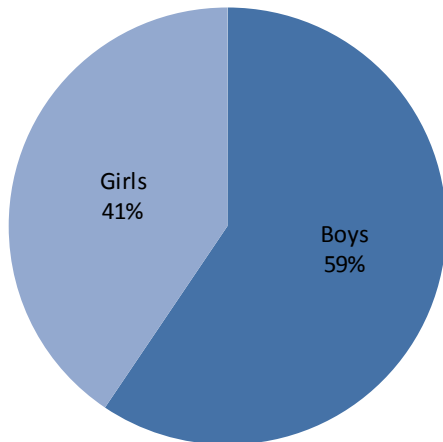
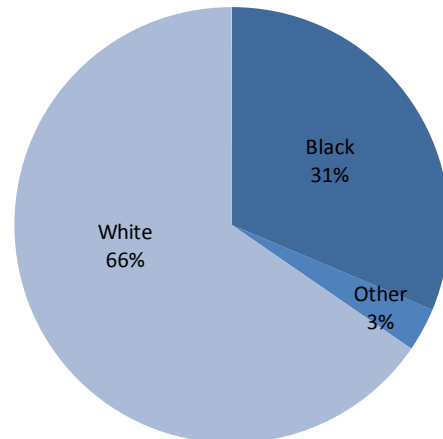


Figure 7. Child Deaths Ages 0-17 by Race in Tennessee, 2013



¹⁰ Other race includes all other non-white or non-black races.

Child deaths are classified by cause and manner of death. There are many complexities involved in determining these classes, and it begins with the difference in their definitions. **Manner of death** describes the intent of a death, i.e. whether a death was caused by an act carried out on purpose by oneself or another person(s). The Child Fatality Review (CFR) case report tool classifies the manner of death as natural (from medical conditions), accidental (unintentional injuries), homicide, suicide, pending, undetermined, and unknown. **Cause of death** is a specific classification of the effect, illness, or condition leading to an individual's death. The causes of death categories are medical, external (injuries), undetermined or unknown. Medical causes are then further delineated by specific disease entities, while external causes are further delineated by the nature of the injury. In general, determining the cause of death can be easier if a death certificate and an autopsy are available, whereas the manner of death may have a pending investigation and cannot be determined until the investigation is finalized.

For deaths being reviewed, the Child Fatality Review (CFR) teams report the cause and manner of death as indicated on the death certificate. In those instances where a cause or manner of death is left blank, CFR teams may make the determination upon conclusion of the review process. Local child fatality review teams determine the cause and manner of death based on the sum of information available to them at the time of review. In some cases, an exact cause or manner of death may not be known to the team. **Undetermined** cases are those in which the investigation of circumstances surrounding a death fails to reveal a clear determination. For example, the investigation of a sudden unexpected infant death (including autopsy, death scene investigation, and medical record review) may fail to reveal whether the death was due to a medical condition or external causes. **Pending** cases are those in which further information is anticipated to be forthcoming. Cases that are marked as **Unknown** are those in which information necessary to determine the exact cause or manner of death is unattainable or unavailable to the team.

Of the 767 deaths reviewed by the CFR teams in 2013:

- 467 cases (61%) were due to **medical** causes.
- 236 cases (31%) were due to **external** causes of injury.
- 64 cases (8%) were **unknown or could not be determined** as a medical or external cause. Of 64 cases marked as “Undetermined” or “Unknown,” **57 (89%) were less than one year of age**. This reflects the inherent complexities in determining the manner and cause of infant deaths.

More detailed data on these deaths is contained in the pages that follow. Figures 8-10 summarize the causes and manners of death for 2013 fatalities. Additionally, Tables 4-6 provide a breakdown of causes by manner, and demographic distributions (age, gender and race) for each cause and manner of death. Note that causes of death are broad categories. Detailed information regarding specific cause of death is contained later in the report.

Figure 8. Manner of Death Summary, Children Ages 0-17 in Tennessee, 2013

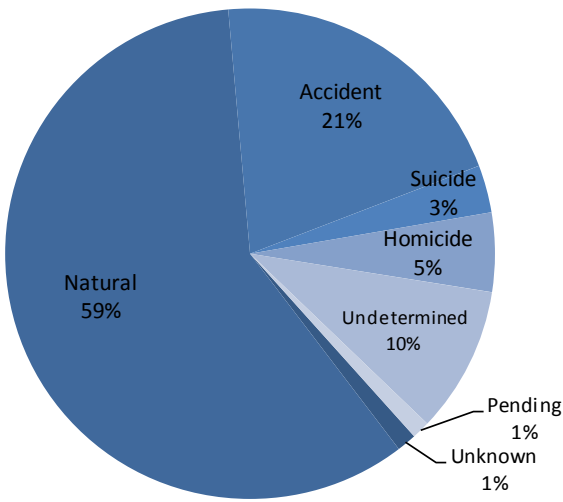


Figure 9. Cause of Death Summary, Children Ages 0-17 in Tennessee, 2013

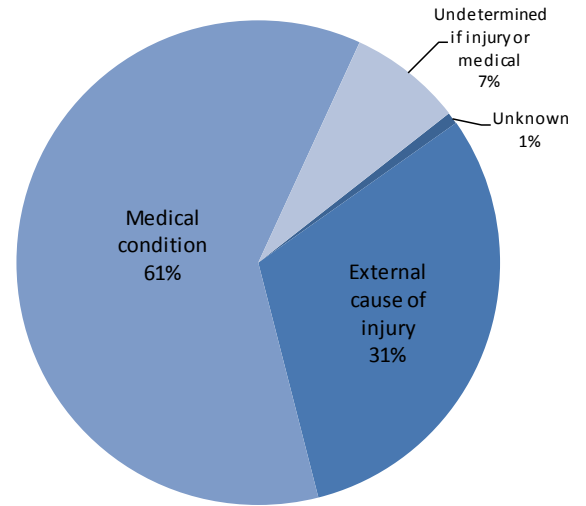
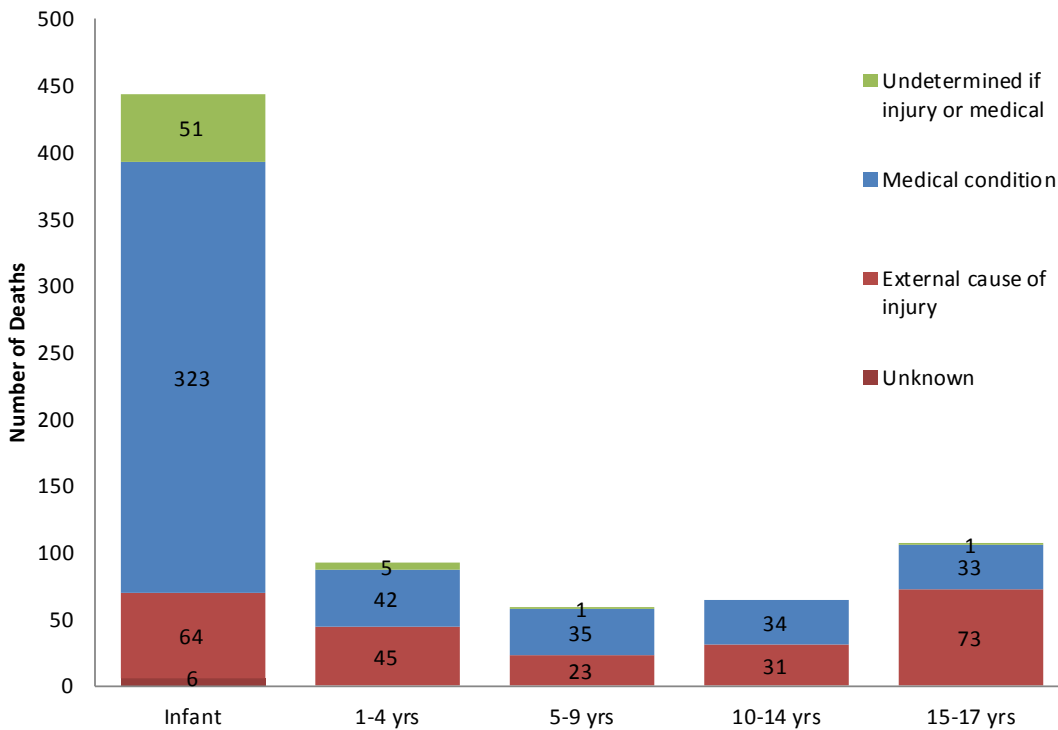


Figure 10. Medical/External Causes of Death for Children Ages 0-17 by Age Group in Tennessee, 2013



In order to better understand cause and manner of death, it is important to examine both their differences and similarities. While cause and manner of death have two very distinct definitions, they are strongly associated. In most cases, there is an obvious link between them. For example a death due to a medical cause would be listed as having occurred in a natural manner or a death due to an external cause of injury might be listed as having occurred in an accidental manner. However, there may be cases where the manner and causes do not obviously relate. As an example, the underlying cause of death could be due to a medical condition, but the manner of death could be homicide in a case where parents knowingly withheld life-saving medical treatment from the child. This relationship is illustrated on Table 4, where the causes of death are stratified by manner.

Table 4. Medical/External Causes of Death by Manner for Children Ages 0-17 in Tennessee, 2013

Cause of Death	Manner of Death							Total
	Natural	Accident	Suicide	Homicide	Undetermined	Pending	Unknown	
Unknown	2	0	0	0	3	0	1	6
External cause of injury	0	158	24	39	13	2	0	236
Medical condition	449	0	0	1	6	3	8	467
Undetermined if injury or medical	1	0	0	0	52	4	1	58
Total	452	158	24	40	74	9	10	767

Table 5. Medical/External Causes of Death Summary for Children Ages 0-17 in Tennessee, 2013

2013	Cause of Death				Total
	External Cause of Injury	Medical Condition	Undetermined if injury or medical	Unknown	
Age					
Infant	64 (27%)	323 (69%)	51 (88%)	6 (100%)	444 (58%)
1-4 yrs	45 (19%)	42 (9%)	5 (9%)	--	92 (12%)
5-9 yrs	23 (10%)	35 (7%)	1 (2%)	--	59 (8%)
10-14 yrs	31 (13%)	34 (7%)	--	--	65 (8%)
15-17 yrs	73 (31%)	33 (7%)	1 (2%)	--	107 (14%)
Total	236 (100%)	467 (100%)	58 (100%)	6 (100%)	767 (100%)
Race					
White	158 (67%)	310 (66%)	27 (47%)	6 (100%)	501 (65%)
Black	72 (31%)	141 (30%)	27 (47%)	--	240 (31%)
Other	6 (3%)	16 (3%)	4 (7%)	--	26 (3%)
Total	236 (100%)	467 (100%)	58 (100%)	6 (100%)	767 (100%)
Gender					
Boys	159 (67%)	263 (56%)	29 (50%)	5 (83%)	456 (59%)
Girls	77 (33%)	204 (44%)	29 (50%)	1 (17%)	311 (41%)
Total	236 (100%)	467 (100%)	58 (100%)	6 (100%)	767 (100%)

Table 6. Manner of Death Summary for Children Ages 0-17 in Tennessee, 2013

2013	Manner of Death							Total
	Natural	Accident	Suicide	Homicide	Undetermined	Pending	Unknown	
Age								
infant	312 (69%)	47 (30%)	--	5 (13%)	66 (89%)	7 (78%)	7 (70%)	444 (58%)
1-4 yrs	40 (9%)	34 (22%)	--	9 (23%)	5 (7%)	2 (22%)	2 (20%)	92 (12%)
5-9 yrs	34 (8%)	18 (11%)	--	5 (13%)	1 (1%)	--	1 (10%)	59 (8%)
10-14 yrs	33 (7%)	20 (13%)	8 (33%)	3 (8%)	1 (1%)	--	--	65 (8%)
15-17 yrs	33 (7%)	39 (25%)	16 (67%)	18 (45%)	1 (1%)	--	--	107 (14%)
Total	452 (100%)	158 (100%)	24 (100%)	40 (100%)	74 (100%)	9 (100%)	10 (100%)	767 (100%)
Race								
White	300 (66%)	107 (68%)	22 (92%)	16 (40%)	40 (54%)	8 (89%)	8 (80%)	501 (65%)
Black	136 (30%)	45 (28%)	2 (8%)	24 (60%)	31 (42%)	--	2 (20%)	240 (31%)
Other	16 (4%)	6 (4%)	--	--	3 (4%)	1 (11%)	--	26 (3%)
Total	452 (100%)	158 (100%)	24 (100%)	40 (100%)	74 (100%)	9 (100%)	10 (100%)	767 (100%)
Gender								
Boys	255 (56%)	102 (65%)	20 (83%)	29 (73%)	40 (54%)	6 (67%)	4 (40%)	456 (59%)
Girls	197 (44%)	56 (35%)	4 (17%)	11 (28%)	34 (46%)	3 (33%)	6 (60%)	311 (41%)
Total	452 (100%)	158 (100%)	24 (100%)	40 (100%)	74 (100%)	9 (100%)	10 (100%)	767 (100%)

Overall, child death rates have been decreasing since 2008. The overall mortality rate has dropped by 20% for Tennessee children since 2008 (from 73.4 to 58.5, p-value 0.001). Deaths due to medical conditions are dropping at a slightly higher rate than deaths due to external causes of injury. From 2008 to 2013, the rate of death due to medical causes decreased nearly 26% while deaths due to injuries decreased 18%. Of the external causes of injury, the rate of fatal motor vehicle accidents and homicides decreased the most, while suicides have remained stable. Figures 11 and 12 depict these yearly trends, and additional information is provided in the next section “Specific Causes of Death.”

Figure 11. Death Rates for Children Ages 0-17 by Cause of Death in Tennessee, 2008-2013

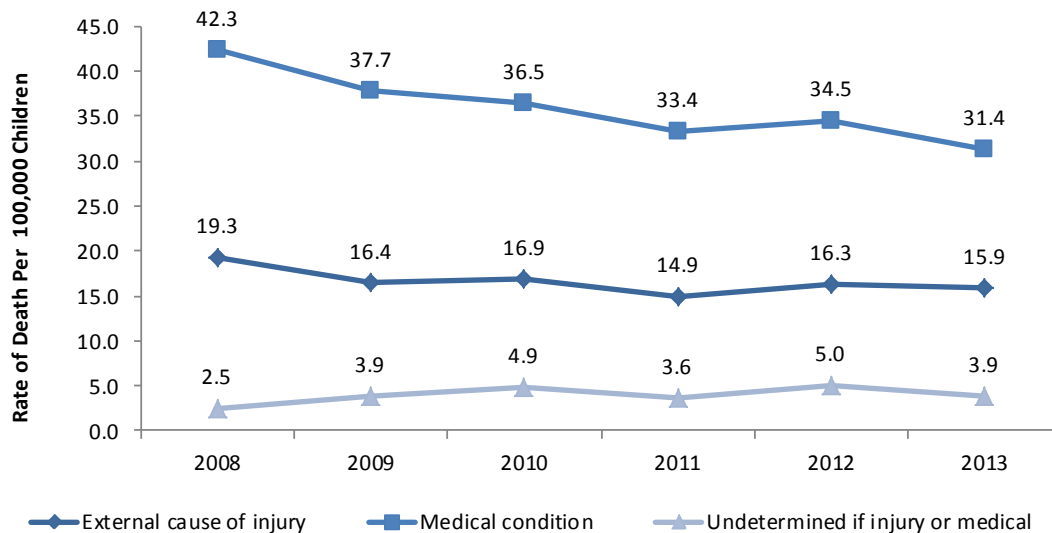
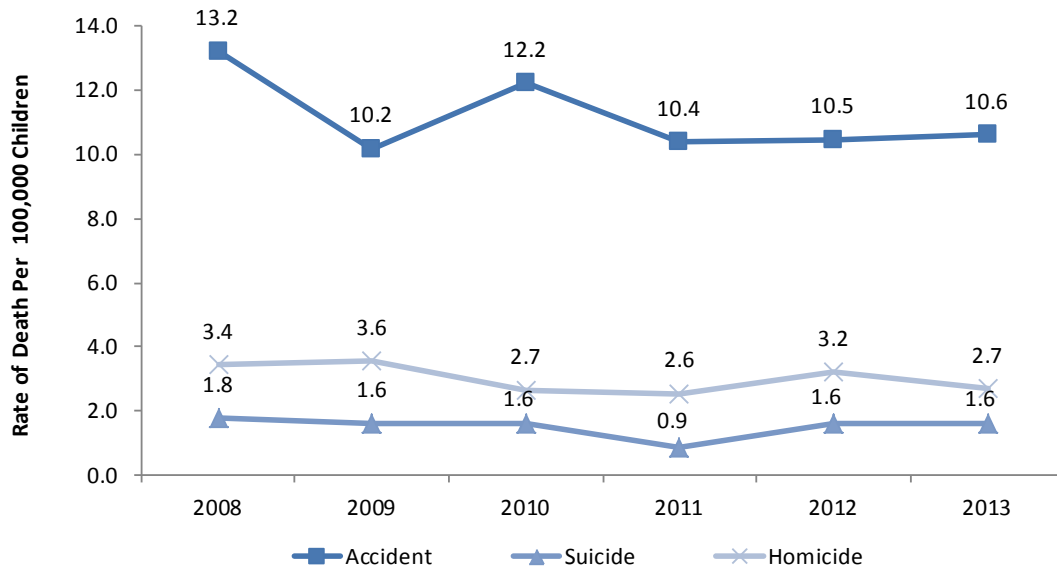


Figure 12. Death Rates for Children Ages 0-17 by Manner of Death in Tennessee, 2008-2013



Specific Causes of Death

The cause of death includes two broad categories: external causes of injury and medical causes. Within the external classification, individual deaths are further classified according to the nature of the injury. In 2013, **236 deaths were attributed to external causes**, which fall into one of the injury categories listed in Table 7. Of the 767 reviewed child deaths, 30.8% were classified as due to external causes, including motor vehicle, weapons, asphyxia, fire/burns, poisoning or overdose, and fall/crush. This represents a slight increase from the 28.9% observed in 2012. Detailed analysis for each specific injury death is provided in later sections of this report.

Table 7. External Cause of Death (Injury Causes) for Children Ages 0-17 by Age Groups in Tennessee, 2013

2013 Injuries	Total	Percent of Reviewed Deaths	Infant	1-4 yrs	5-9 yrs	10-14 yrs	15-17 yrs
Motor vehicle and other transport	65	8.5%	2	10	12	10	31
Asphyxia	63	8.2%	49	6	0	3	5
Weapon, including body part	55	7.2%	4	9	4	8	30
Drowning	18	2.3%	1	8	4	3	2
Fire, burn, or electrocution	16	2.1%	2	8	2	4	0
Poisoning, overdose or acute intoxication	5	0.7%	1	1	0	0	3
Fall or crush	2	0.3%	0	1	0	1	0
Exposure	1	0.1%	0	0	0	0	1
Other	11	1.4%	5	2	1	2	1
Total Injury Causes	236	30.8%	64	45	23	31	73

Within the medical classification, causes are further specified by particular conditions or disease entities. In 2013, **467 deaths were attributed to medical causes**. Medical conditions can include those acquired congenitally (present at birth) or those that develop as the child grows. The majority of deaths from medical causes in Tennessee are related to prematurity and congenital anomalies. Other causes include infections, neurological conditions including seizures, and childhood cancers. In 2013, 60.9% of reviewed deaths were attributed to medical causes; this represents a slight decrease from 61.2% in 2012. Medical causes of death are outlined in Table 8.

With infant deaths, it is important to note that when SIDS and/or a Sudden Unexplained Infant Death (SUID) is identified on a death certificate, it is classified under cause as “Medical” or “Undetermined.”

Table 8. Medical Cause of Death (Medical Causes) for Children Ages 0-17 by Age Groups, 2013

2013 Medical Causes	Total	Percent of Reviewed Deaths	Infant	1-4 yrs	5-9 yrs	10-14 yrs	15-17 yrs
Congenital anomaly	107	14.0%	92	11	4	0	0
Prematurity	92	12.0%	92	0	0	0	0
Cancer	34	4.4%	3	7	8	10	6
Cardiovascular	33	4.3%	19	6	3	2	3
Other perinatal condition	34	4.4%	34	0	0	0	0
Other infection	18	2.3%	12	1	2	2	1
Pneumonia	17	2.2%	9	3	3	1	1
Neurological / seizure disorder	12	1.6%	4	0	3	2	3
Asthma	8	1.0%	0	2	2	3	1
Influenza	4	0.5%	0	2	0	2	0
SIDS	3	0.4%	3	0	0	0	0
Undetermined medical cause	2	0.3%	2	0	0	0	0
Unknown	1	0.1%	1	0	0	0	0
Other medical condition*	102	13.3%	52	10	10	12	18
Total Medical Causes	467	60.9%	323	42	35	34	33

*Other medical condition includes all other conditions that fall under a different category than those listed above, e.g. myocarditis or intestinal infarction.

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Routine vaccination of infants and children against diseases such as pertussis, measles, and influenza.
- Early and regular prenatal care for pregnant women.
- Avoidance of tobacco by pregnant women.
- Promotion of social services that are available to low-income, child-bearing age and pregnant women.
- Widespread messaging campaigns to promote the importance of birth spacing.

Current prevention efforts in Tennessee include:

- The Tennessee Department of Health funds the Tennessee Tobacco QuitLine which offers smoking cessation services to anyone, including pregnant women.
- The Tennessee Department of Health operates the “ABC’s of Safe Sleep” campaign to reduce SIDS and other sleep-related deaths.
- Tobacco settlement funds are being used in all counties to increase tobacco prevention and cessation efforts, including reducing smoking among pregnant women.

Summary of Infant Mortality Data

Infant mortality is defined as a death during infancy (the first 12 months of life). Infant mortality accounts for the largest single component of the Child Fatality Review process and is of particular concern in the state of Tennessee. The state's infant mortality rate has steadily declined over the past five years, from 8.0 in 2008 to 6.8 deaths per 1,000 live births in 2013, a decrease of 15.0%. Tennessee still exceeds the national average for infant mortality (6.0 in 2012).¹¹

In 2012 (the most recent year for which national data is available), 23,629 infants died prior to their first birthday in the United States. While the overall infant mortality rate in the U.S. is 6.0 per 1,000 live births, two-thirds of infant deaths occur during the first twenty eight days. Child deaths in the first twenty eight days, known as neonatal mortality, are linked to shorter gestation, low birth weight, and other prematurity-related conditions. Post neonatal mortality (death between 28-364 days) is linked to Sudden Infant Death Syndrome (SIDS), unintentional injuries, and congenital malformations. The leading causes of infant mortality nationally in 2012 were congenital malformations, short gestation and low birth weight related disorders, and SIDS.¹²

In 2013, **444** Tennessee infant deaths¹³ were reviewed by local child fatality review teams. Table 9 provides a snapshot of the risk factors readily associated with infant mortality. It is important to note that, because the categories are not mutually exclusive, their total will exceed that of the 444 deaths.

Table 9. Risk Factors Associated with Infant Deaths Reviewed by Tennessee CFR Teams, 2013

Risk Factors	Unknown	Natural	Accident	Homicide	Undetermined	Pending	Total Infant Deaths	Percent of Total Infant Deaths
Deaths Reviewed	7	312	47	5	66	7	444	100%
Premature (<37 weeks)	4	223	6	0	13	3	249	56%
Low birth weight (<2500 grams)	3	131	8	0	8	2	152	34%
Known Intrauterine Smoke Exposure	3	66	22	2	27	3	123	28%
Late (>6 months) or No Prenatal Care	0	22	1	0	4	0	27	6%
Known Intrauterine Drug Exposure	0	14	4	0	7	0	25	6%
Known Intrauterine Alcohol Exposure	0	2	0	0	0	0	2	0%

¹¹ Centers for Disease Control and Prevention. Deaths: Final Data for 2012. National Vital Statistics Reports; Vol 63 No 9. Hyattsville, MD: National Center for Health Statistics. 2014.

¹² Xu JQ, Kochanek KD, Murphy SL, Arias E. Mortality in the United States, 2012. NCHS Data Brief; No 168. Hyattsville, MD: National Center for Health Statistics. 2014.

¹³ Fetal deaths of less than 23 weeks' gestation and less or equal than 500 grams in weight are not reviewed. Therefore, this number may differ from that published in other Departmental reports.

As indicated in Table 9, prematurity and low birth weight were risk factors associated with many infant deaths; this is consistent with other analyses that indicate prematurity and low birth weight are major contributors to Tennessee's infant mortality rate. Additionally, 27.7% of infant deaths were associated with known intrauterine smoke exposure. Smoking during pregnancy is known to be associated with both prematurity and low birth weight, both of which are independent risk factors for infant mortality.

A detailed county-level listing of infant mortality rates can be found in Appendix D. The count of infants deaths reported there differs from that reported through the Child Fatality Review process, as the local CFR teams only review deaths in which the infant was born weighing over 500 grams and at 23 weeks' gestational age or greater; whereas Appendix D includes infant deaths for all live-born children, regardless of weight or gestational age.

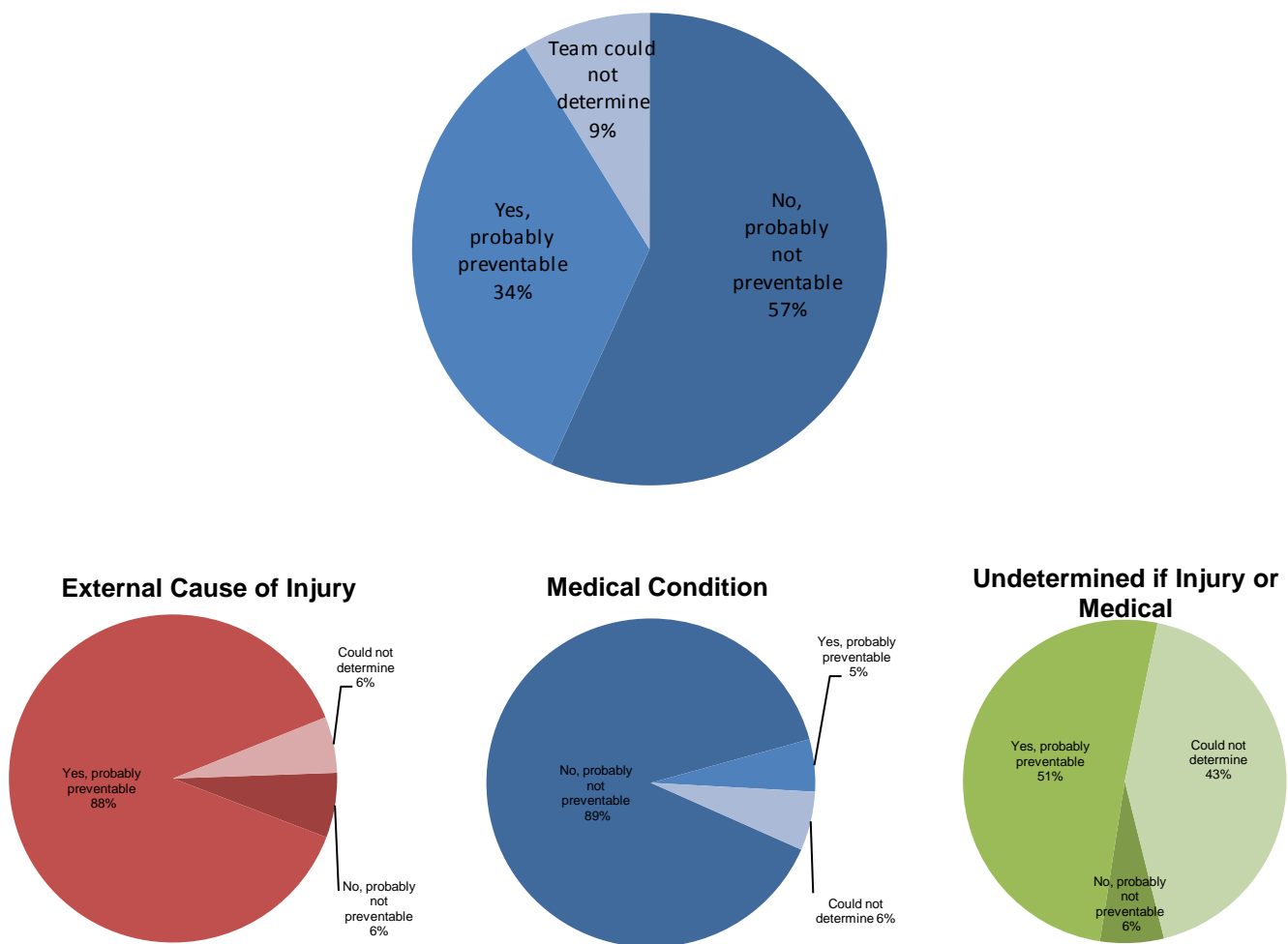
Prevention Analysis

The overarching goal of the Child Fatality Review Program is to craft and adopt recommendations for actions that can prevent future child deaths. In Tennessee, several policies have been the direct result of the Child Fatality Review process.

If an individual or the community could reasonably have done something that would have changed the circumstances leading to a child's death, that fatality is considered to have been **preventable**. CFR teams carefully examine each death in an effort to determine preventability.

Of the cases reviewed, CFR teams determined that **263 deaths (34.3%) could probably have been prevented**, as shown in Figure 13. As suspected, the great majority of the preventable deaths are those caused by an external cause of injury (207 cases) versus medical causes (24 cases).

Figure 13. Preventability of Child Deaths Ages 0-17 by Cause of Death in Tennessee, 2013



Prevention of future child deaths is the primary goal of Child Fatality Review. Spread throughout this year's report are highlighted boxes labeled **"Focusing on Prevention."** These boxes contain nationally-recommended strategies for preventing a particular type of death as well as highlights of current TN initiatives focused on preventing death in a particular category.

Medical Causes of Death

A medical cause can result from one of many serious health issues: from existing conditions, congenital anomalies, prematurity, disease, other medical causes, SIDS, genetic disorders, etc. Medical causes of death are outlined in Table 12.

With infant deaths, it is important to note that when SIDS and/or a Sudden Unexplained Infant Death (SUID) is identified on a death certificate, it is classified under manner as "Natural" or "Undetermined."

Table 12—Cause of Death (Medical Cause)

Cause of Death	All Deaths		Age					
	Total	Percent	11	1-4	5-9	10-14	15-19	20+
Prematurity	145	33.0%	142	3	0	0	0	0
Other medical condition	98	22.2%	81	12	14	7	14	
Congenital anomaly	62	14.2%	57	7	3	0	1	
Cancer	42	9.5%	3	14	4	13	9	
Cardiovascular	30	6.8%	15	7	1	1	6	
Other infection	20	4.1%	10	3	2	1	1	
Other perinatal condition	20	4.1%	20	0	0	0	0	
Pneumonia	10	2.1%	8	1	2	2	2	
SIDS	8	1.7%	8	0	0	0	0	
Neurologic/leisure disorder	7	1.4%	5	0	0	0	0	
Undetermined medical condition	3	0.6%	1	0	0	0	1	
Suicide	2	0.4%	0	0	0	0	0	
Any injury	1	0.2%	0	0	0	0	1	
Unknown	1	0.2%	0	1	0	0	0	
Total	434	100%	345	50	38	25	30	

FOCUSING ON PREVENTION

Potential prevention opportunities include:

- Routine vaccination of infants and children against diseases such as pertussis, measles, and influenza
- Early and regular prenatal care for pregnant women
- Avoidance of tobacco by pregnant women

Current prevention efforts in Tennessee include:

- The Tennessee Department of Health funds the Tennessee Tobacco QuitLine which offers smoking cessation services to anyone, including pregnant women
- The Tennessee Department of Health operates the "ABC's of Safe Sleep" campaign to reduce SIDS and other sleep-related deaths

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FOCUSING ON PREVENTION

Potential prevention opportunities include:

- Routine vaccination of infants and children against diseases such as pertussis, measles, and influenza
- Early and regular prenatal care for pregnant women
- Avoidance of tobacco by pregnant women

Current prevention efforts in Tennessee include:

- The Tennessee Department of Health funds the Tennessee Tobacco QuitLine which offers smoking cessation services to anyone, including pregnant women
- The Tennessee Department of Health operates the "ABC's of Safe Sleep" campaign to reduce SIDS and other sleep-related deaths

Acts of Child Abuse or Neglect

Child abuse or neglect represents a serious concern for the United States. In 2012, it is estimated that 686,000 children were victims of child abuse across the U.S, of whom approximately 1,640 children died.¹⁴ Of the children who died from child abuse in the U.S, 70% experienced neglect and 44% experienced physical abuse. Children ages 0-5 years account for 47% of child abuse victims, but approximately 70% of child abuse fatalities occurred to children under the age of 3.

In Tennessee, 10,069 children were determined to have been victims of child abuse in 2012 and 31 of those children died. Of the children who died from child abuse in 2012, 77% experienced neglect and 23% experienced physical abuse. Children ages 0-5 accounted for 96.7% of all child abuse deaths, but the majority (81%) of child abuse fatalities occurred to children under the age of 3.¹⁵

A portion of preventable deaths are either directly or indirectly related to the lack of quality care or supervision on the part of a child's parents, guardians, or supervisors at the time of, or the time leading up to, death. Supervision may be entirely absent or inadequate for the age or activity of the child or the child's supervisor may willfully endanger the child's health and welfare. These numbers reflect all cases in which the local team determined there was poor supervision, abuse or neglect and do not necessarily represent the legal definition of poor supervision, abuse or neglect. These numbers may vary from DCS because DCS counts cases in which abuse or neglect are substantiated while the TDH local teams are examining deaths from a public health approach to determine whether there was opportunity for improvement with supervision, abuse or neglect.

Table 10 below describes the cases¹⁶ for which review teams found there was poor or absent supervision, child abuse, child neglect,¹⁷ or other negligence among 2013 deaths.¹⁷

¹⁴ Centers for Disease Control and Prevention, National Center for Injury Prevention and Control: Division of Violence Prevention. Child Maltreatment: Facts at a Glance, 2014. Available at: <http://www.cdc.gov/violenceprevention/pdf/childmaltreatment-facts-at-a-glance.pdf>

¹⁵ Data source: Children's Bureau (Administration on Children, Youth and Families, Administration for Children and Families) of the U.S. Department of Health and Human Services. These figures will vary from those reported by DCS as child fatalities are reported to the Children's Bureau (NCANDS) based on the date of the abuse or neglect substantiation. All NCANDS data is based on a Federal Fiscal Year reporting cycle.

¹⁶ There will always be differences in the numbers of child abuse and neglect deaths reported by DCS and DOH because the reporting focus is different for each agency. DCS reporting is focused on child deaths based on standards of proof for legal culpability. DOH reporting is focused on identifying opportunities to **prevent** child deaths, regardless of culpability.

¹⁷ For purposes of this Child Fatality Review, **neglect** is defined as: "failure to act on the part of a parent or caregiver which results in death, or presents an imminent risk of serious harm." **Other negligence** is defined as: "acts or failures to act that are neglectful including criminal negligence, vehicular manslaughter, voluntary intoxication, but not restricted to the level of criminal culpability." Source: National MCH Center for Child Death Review, Child Death Review Case Reporting System Data Dictionary. Available at: <https://www.cdrdata.org/forms/DataDictionary.pdf>

Table 10. Acts of Child Abuse or Neglect Among Reviewed Deaths for Children Ages 0-17 in Tennessee, 2013

Age Group	Poor/absent supervision	Child abuse	Child neglect	Other negligence	Total
Infant	4	0	10	50	64
1-4 yrs	8	1	1	3	13
5-9 yrs	7	0	1	2	10
10-14 yrs	0	0	0	8	8
15-17 yrs	0	0	0	11	11
Total	19	1	12	74	106

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Increased child abuse awareness and training in schools.
- Educational and family support programs for lower income families to promote child social and cognitive development and increase parental participation.

Current prevention efforts in Tennessee include:

- The Tennessee Department of Health funds evidence-based home visiting programs in at-risk counties; these programs have been shown to reduce child maltreatment.
- Tennessee Department of Health staff receives in-service training on detection and reporting of child maltreatment, including human trafficking.
- The Department of Children's Services (DCS) utilizes In Home Tennessee (IHT) to build organizational and community capacity, improve access and quality of services, and enhance how DCS works with families. In October 2014, the IHT unit began the rollout of the federal IV-E waiver allowing states to use federal dollars in a more flexible way, focusing on prevention services.
- The DCS Child Abuse Hotline (CAH) handled 147,589 calls in CY 2013. The CAH is on track to handle over 140,000 calls in CY 2014. The CAH's performance level has maintained at the highest industry standard of 80/20. That is, 80% of calls are answered in 20 seconds or less. For perspective, in 2013 almost 120,000 calls to the hotline were answered in 20 seconds or less. Additionally, the CAH has maintained a call abandonment rate under 5%.

Continued on next page

FOCUSING ON PREVENTION



- DCS continues to make significant progress toward improving CPS investigations. In November 2013, the Department held its first ever CPS Investigator Academy. Since November, the Department has graduated over 100 investigators and supervisors. In October 2014, DCS piloted the newly developed CPS Investigator Post Academy (Post Academy). A few of the topics offered in this program include safety and risk, domestic violence, mental health and substance abuse, drug exposed children and disabilities. Upon graduating from the three week CPS Investigator Training Academy, staff will be scheduled to attend the Post Academy. A full rollout of the program is scheduled for 2015.
- Beginning in November 2014, DCS began rolling out 2,600 tablet computers to all frontline staff and supervisors. This technology will allow staff to have real-time access to the Tennessee Family and Child Tracking System (TFACTS) and increase timeliness in documentation.
- Using safety science, the DCS Child Death Review (CDR) process was created to increase safe outcomes by identifying and learning from those factors which influence the quality and delivery of service provided to children and their families. CDRs are conducted by Safety Analysts working in a collaborative relationship with multidisciplinary participants from various divisions in DCS, alongside community partners. Quarterly and annual reports are created to guide the development of recommendations intended to address and improve policy and practice.

Current prevention efforts in Tennessee also include numerous efforts by Prevent Child Abuse Tennessee (PCAT), such as:

- This year PCAT helped create the Nashville Child Protection Coalition and serves on the steering committee. The coalition's goal is to diminish the incidence and impact of child sexual abuse by teaching 5% of the adult population in Nashville how to recognize and react responsibly to child sexual abuse. PCAT was designated as the organization responsible for coordinating efforts and facilitating Stewards of Children training opportunities for nonprofit organizations, businesses, congregations and parents. In 2014, the organization trained 35,624 adults and added 164 trained facilitators.
- In 2013, PCAT implemented a Shaken Baby Prevention pilot project in Middle Tennessee hospitals. Building on the success of the pilot project, the materials are now disseminated statewide to every birthing hospital in Tennessee. Hospitals use the materials to talk to parents of newborns about the stress of parenting, what to do if you become stressed in caring for your baby and how to communicate with others the danger of shaking a baby. Data from this project show that hospitals in which the program has been implemented have seen a decrease in the number of incidents of abusive head trauma by 57%.

Deaths to Children with Special Circumstances

Two-thirds of the deaths in 2013 involved children known to have suffered from a disability or chronic illness. Of those 295 children, 15 were enrolled in the Tennessee Department of Health's Children's Special Services program (CSS). CSS is a voluntary program that provides care coordination and payments for medical services for families of children with special health care needs. The families of 31 children were known by the local Child Fatality Review Teams to have been involved in an open Child Protective Services case at the time of their deaths.¹⁸

Table 11. Children with Disability Among Reviewed Deaths of Children Ages 0-17 by Age Groups in Tennessee, 2013

Type of Disability	Infant	1-4 yrs	5-9 yrs	10-14 yrs	15-17 yrs	Total Cases with Disability	Percent of Total Cases with Disability
Physical	148	38	28	26	27	267	91%
Mental	3	1	7	2	8	21	7%
Sensory	1	2	2	2	0	7	2%
Total	152	41	37	30	35	295	100%

Table 12. Children with Special Circumstances¹⁸ Among Reviewed Deaths of Children Ages 0-17 in Tennessee, 2013

Circumstance	Number of Deaths
If disabled, child was receiving Children's Special Services (CSS)	15
Open child protective services (CPS) case at time of death ¹⁸	31

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Provide respite care and other support services for families of children who are at high risk for abuse and neglect, including children and youth with special health care needs.

Current prevention efforts in Tennessee include:

- Tennessee Department of Health staff receives in-service training on detection and reporting of child maltreatment, including human trafficking.
- The Tennessee Department of Health operates Children's Special Services in all 95 counties. Trained care coordinators work with children with special health care needs and their families. Care coordinators refer families to community resources to help meet family-specific needs and improve coping with the child's condition.

¹⁸ This figure will vary from the data reported by DCS as child fatalities from DCS are based on the date of the abuse or neglect substantiation and not the date of death; thus the reporting timeframe for DCS is different than TDH. Local Child Fatality Review Teams report based on information available to them from team members and other organizations in making their determinations at the time of the review.

DETAILED REVIEW: SPECIFIC CAUSES OF DEATH

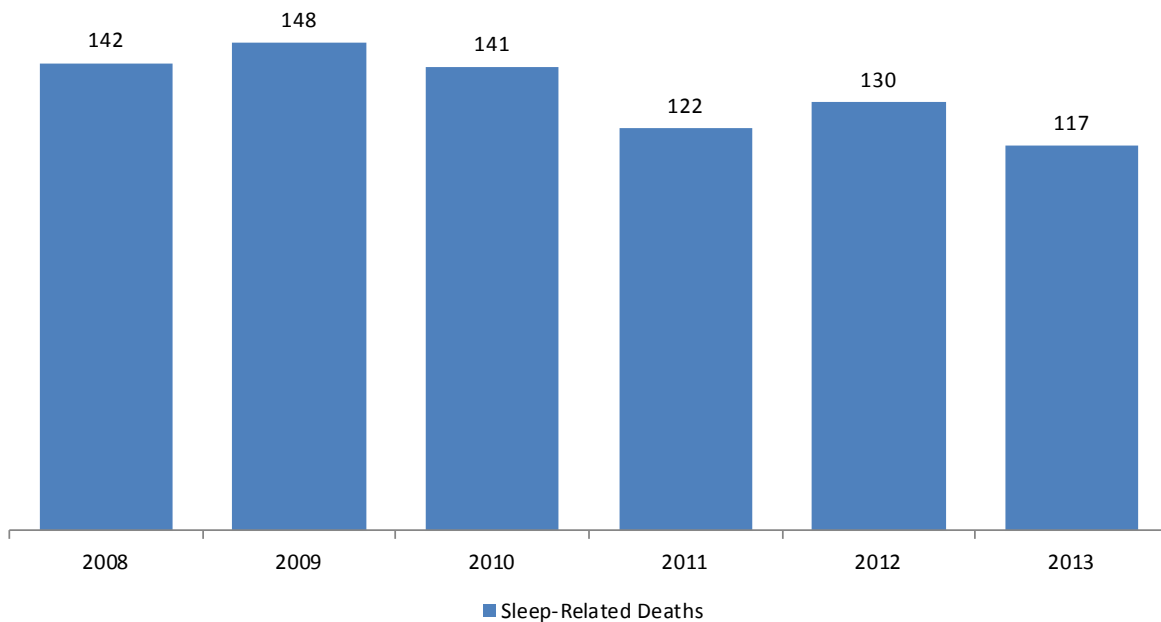
Sleep-Related Infant Deaths

Sleep related infant deaths are identified when a baby is found deceased in a sleeping environment with a history of his or her head pressed into the mattress or pillow, with a co-sleeper, or when he or she is found wedged against an object and other causes that may have contributed to the infant’s suffocation or strangulation. Sudden Infant Death Syndrome (SIDS) is an exclusionary cause of death for children under one year of age, indicating that all evidence (including an autopsy, death scene investigation, and review of the medical record) has failed to yield the specific cause of a natural death; they are classified under sleep-related infant deaths.

The cause and manner of death in these cases are determined from the information obtained in the death scene investigation and after a Medical Examiner’s autopsy. When seemingly healthy infants fail to awaken from sleep, their deaths may be SIDS, the result of suffocation related to the sleep environment, or the sign of an undiagnosed childhood malady.

In 2013, the cause of death in 51 fatalities (11.5%) of children under the age of one year was classified as “Undetermined.” This number reflects the complexities inherent in determining the exact cause of a sudden infant death. Figure 14 displays the number of infant deaths that were found in a sleep environment. **There were 117 infant deaths resulted from an unsafe sleep environment, of which 3 were SIDS.**

Figure 14. Number of Sleep-Related Infant Deaths in Tennessee, 2008-2013



In many cases, family members or others who find the baby may not be able to provide a detailed history of what transpired. When investigators arrive on the scene, the baby has usually been moved, and accurately recreating the death scene may not be possible. Thus, despite autopsies and the effort of Child Fatality Review Teams, the exact cause of infant sleep-related deaths may never be known for some infants and their families.

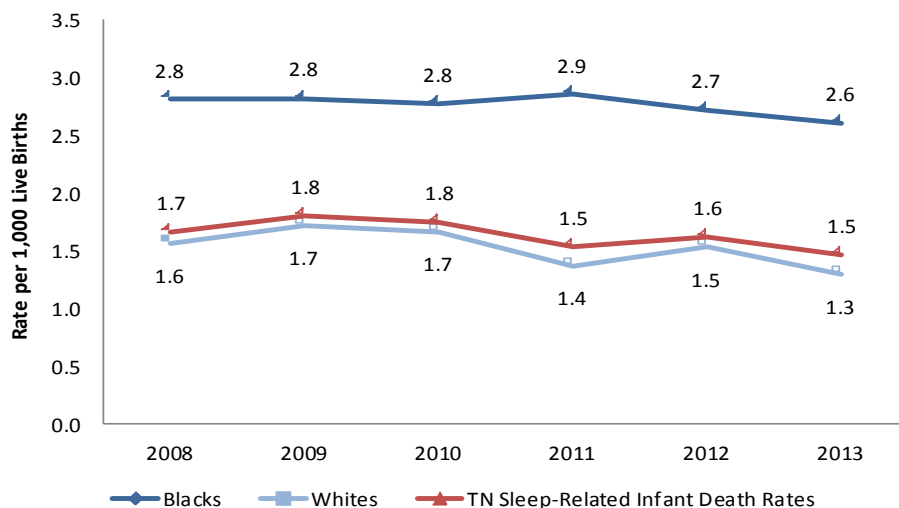
Of the 117 sleep-related deaths, 46 deaths were confirmed as asphyxia in the sleep environment. Sleep-related deaths account for 21.5% of all infant deaths in Tennessee, and they have been decreasing since 2009. There was a 10.0% and 5.9% decrease in deaths and rates, respectively, from 2012 to 2013. The decrease was mainly among white infants.

Among the sleep related infant deaths, there is also a statistically significant racial disparity, where African American infants are twice as likely to suffer a sleep-related fatality as a White infant, as seen in Table 13. A higher percentage of male infants suffered this fatality (51.3%) than females (48.7%).

Table 13. Number of Sleep-Related Infant Deaths and Rates per 1,000 Live Births by Race in Tennessee, 2013

Year	Blacks			Whites			TN Sleep-Related Infant Death Rates
	Number of Deaths	Live Births	Rate per 1,000	Number of Deaths	Live Births	Rate per 1,000	
2008	51	18,148	2.8	91	58,380	1.6	1.7
2009	49	17,359	2.8	96	55,752	1.7	1.8
2010	46	16,599	2.8	91	54,583	1.7	1.8
2011	47	16,482	2.9	75	54,765	1.4	1.5
2012	45	16,560	2.7	85	55,548	1.5	1.6
2013	44	16,863	2.6	71	54,877	1.3	1.5

Figure 15. Sleep-Related Death Rates per 1,000 Live Births by Race in Tennessee, 2008-2013



Additionally, a regional distribution of the sleep related infant deaths is provided in Figure 16. The region with the highest number of sleep related infant deaths is Shelby County with 32 cases (27.3% of all sleep related deaths), followed by West Tennessee with 15 cases (12.8%) and Mid-Cumberland with 14 cases (12.0%).

Figure 16. Number of Sleep-Related Infant Deaths in Tennessee by Region, 2013

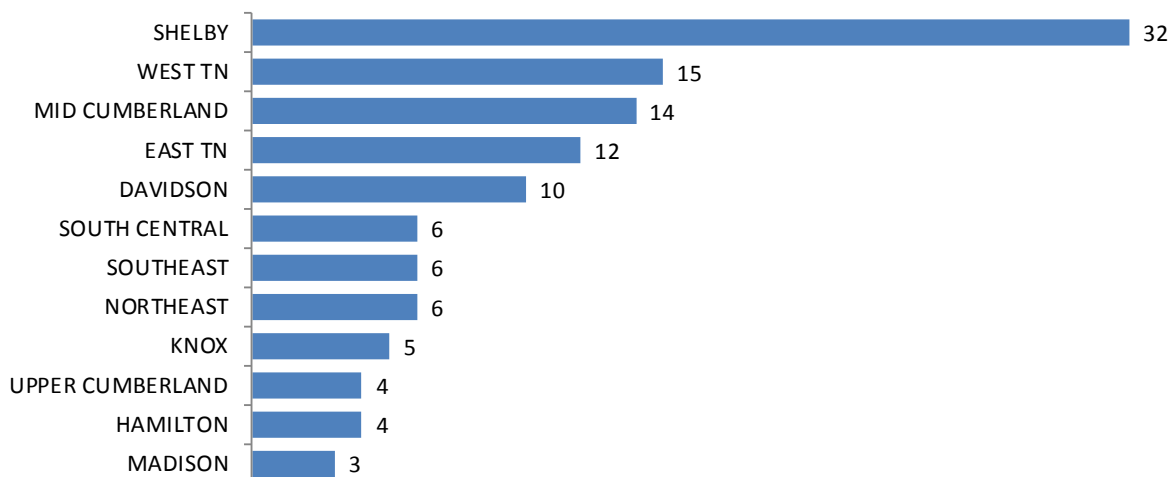


Table 14. Contributing Factors in Sleep-Related Infant Deaths¹⁹ in Tennessee, 2008-2013

Circumstance	2008	2009	2010	2011	2012	2013	2013 Percent of Sleep-Related Infant Deaths
Infant found not sleeping in crib or bassinette	106	114	112	100	95	88	75%
Unsafe bedding or toys in sleeping area*	54	61	59	56	53	72	62%
Infant found not sleeping on back	60	72	64	66	72	71	61%
Infant sleeping with other people	62	72	95	73	68	67	57%
Infant sleeping with obese adult	9	4	13	9	9	13	11%
Drug impaired adult sleeping with infant	0	1	1	5	1	5	4%
Adult fell asleep while bottle feeding	2	0	3	1	0	3	3%
Adult fell asleep while breast feeding	0	3	1	1	2	3	3%
Alcohol impaired adult sleeping with infant	1	1	2	3	2	2	2%

*includes comforter, blanket, pillow, bumper pads, toys, plastic bags and other

¹⁹ Because more than one contributing factor may have been present in a single death, the total number of contributing factors exceeds the number of sleep environment deaths.

As indicated in Table 14, four main contributing factors are consistently present in sleep-related infant deaths: infant not sleeping in a crib or bassinette (75% of cases), unsafe bedding or toys in sleeping area (62% of cases), infant not sleeping on their back (61% of cases), and infant not sleeping alone (57% of cases). These risk factors are key points for education in the Tennessee Department of Health's "ABC's of Safe Sleep" campaign (Babies should sleep Alone, on their Back, and in a Crib).

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Widespread messaging campaigns particularly targeted at parents and caregivers of infants.
- Provision of portable cribs to families with limited resources.
- Modeling of correct safe sleep practices by trusted professionals such as physicians and nurses.

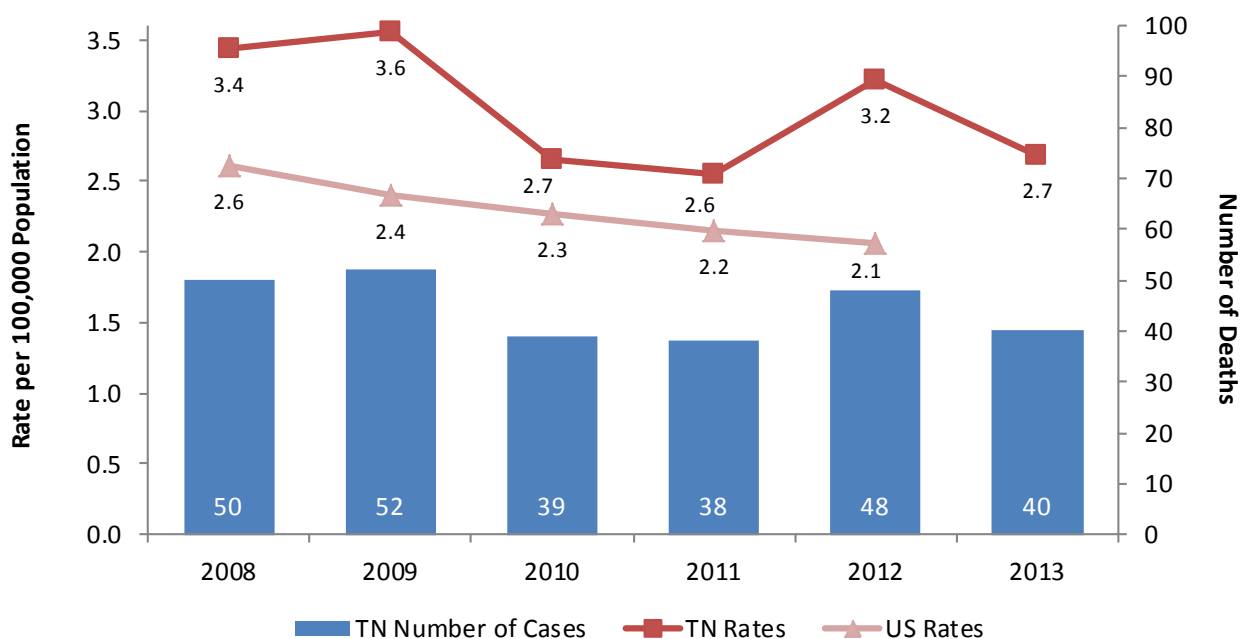
Current prevention efforts in Tennessee include:

- The Tennessee Department of Health partnered with 100% of birthing hospitals (66) and 5 non-delivery hospitals across Tennessee in 2014 to spread the Safe Sleep message. The hospitals agreed to develop and implement safe sleep policies to include: modeling of safe sleep behavior in the hospital, education for parents and caregivers and education for staff. In addition, hospitals were asked to conduct quarterly crib audits to monitor compliance with their safe sleep policy. As of December 2014, 67 hospitals have developed and implemented their policy.
- The Tennessee Department of Health partnered with University of Tennessee Medical Center and Metro Nashville Health Department to launch the Direct On Scene Education (D.O.S.E.) program. When responding to an emergency or non-emergency call from a household with a pregnant woman or infant, responders are trained to look for unsafe sleep conditions and offer the residence a safe sleep kit with information on the ABC's of Safe Sleep. As of December 2014, 17 first responder agencies across the state are participating in the D.O.S.E. program.
- The Tennessee Department of Health implemented the safe sleep floor talker project. This project places large plastic decals on the floors of stores and businesses to promote the safe sleep message. In 2014, 120 floor talkers were placed in various places including stores, clinics, and health departments.
- Safe sleep educational flip charts were provided to home visitors throughout the state to ensure a consistent message is taught to all parents and caregivers.
- In 2014, Tennessee Department of Children's Services (DCS) piloted a safe sleep initiative in Knox County to provide education to biological and resource parents and to provide cribs to families with limited resources. Building on the success of the pilot, DCS will be expanding their safe sleep initiative by developing processes in each of the seven regions.

Homicide Deaths

Homicide is a serious problem nationally in the United States, affecting people across all stages of life, from infants to the elderly. In 2012, over 16,688 people nationwide were homicide victims.²⁰ Youth violence is the third leading cause of death for young people between the ages of 15 and 24; in 2012 1,230 aged 1 to 17 were homicide victims. African American children (vs. White) and boys (vs. girls) had higher homicide rates in 2012 nationally.

Figure 17. Homicide Deaths and Rates per 100,000 Children Population Ages 0 to 17 in Tennessee and the US, 2008-2013



Tennessee's child homicide rate has remained consistently above the national rate. In 2013, **forty children died of homicide in Tennessee**, a decrease from the 48 cases from the previous year. This number represents **4.6 percent of all child deaths**. Twenty-nine homicide victims were boys; 11 were girls. Over half of the victims (24 cases) were African American children and 16 were White. Older teenagers and toddlers suffered the highest percentage of fatalities, 45.0% and 22.5% respectively. More than half of all homicides (60.0%) involved firearms, and 42.5% occurred in the child's home.

²⁰ Centers for Disease Control and Prevention: National Center for Injury Prevention and Control. Injury Prevention Web-based Injury Statistics Query System (WISQARS). 2014. Accessed at http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html

Figure 18. Demographic Distribution of Homicide Deaths for Children Ages 0-17 in Tennessee, 2013

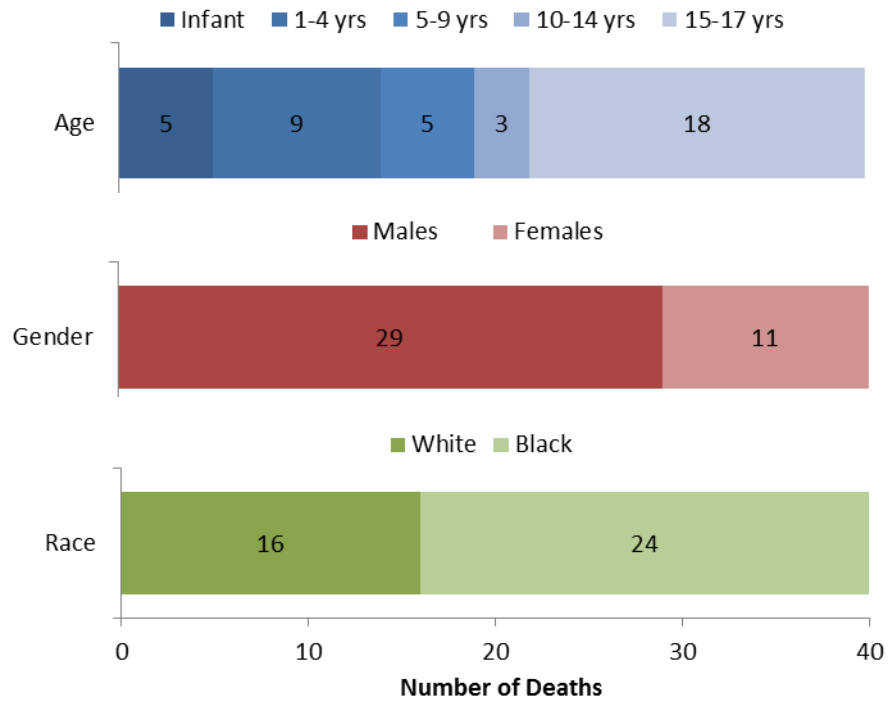
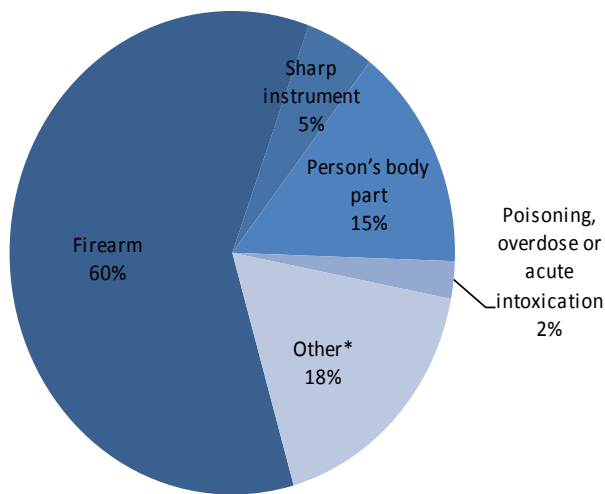


Figure 19. Cause of Homicide Deaths Children Ages 0-17 in Tennessee, 2013



* includes cases that did not involve a weapon such as starvation or shaking baby

Table 15. Homicide Deaths for Children Ages 0-17 by Victim's Location in Tennessee, 2013

Incident Location	Number of Deaths
Child's home	17
Roadway	5
Friend's home	3
Other parking area	2
Relative's home	1
Unlicensed day care home	1
Other recreation area	1
Other	10
Total	40

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Targeted activities in neighborhoods with high homicide rates including; enhanced police presence, neighborhood watch and after school recreation programs.
- Increased intensive early intervention services for high-risk parents.

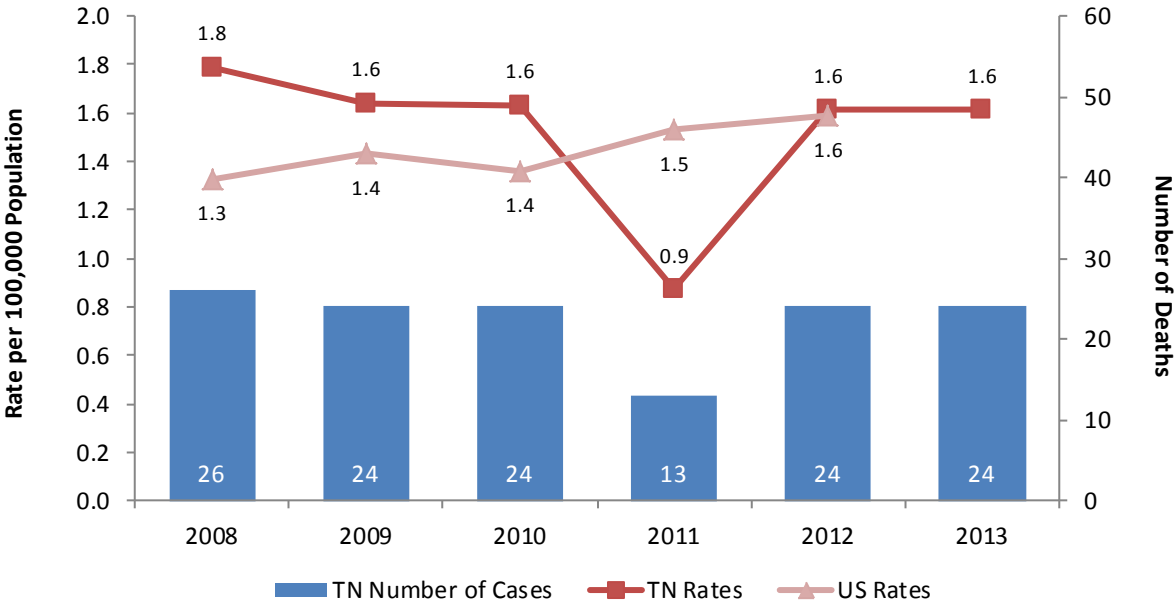
Current prevention efforts in Tennessee include:

- Shaken Baby Syndrome prevention education is being provided at several hospitals throughout Tennessee.
- The Tennessee Department of Health provides presentations in schools on bullying and violence prevention among adolescents and teens.
- The Tennessee Commission on Children and Youth awards grants to agencies to provide services for at-risk youth to prevent criminal behavior. The grants allow agencies to provide interventions to ensure that youth who commit offenses receive proper services.
- School districts and other non-profit agencies across the state that primarily serve students who attend schools with a high concentration of low-income students receive federal funding from the 21st Century Community Learning Centers initiative to support afterschool programs designed to reinforce and complement the regular academic program; other approved activities include parent involvement, counseling programs, character education, and drug and violence prevention.

Suicide Deaths

Nationally, suicide is a serious public health issue with complex causes and long lasting harms to individuals, families and communities. Suicide is the second leading cause of death for youth ages 15 to 24 nationwide.²¹ In 2012, 1,170 children between ages 1-17 died of suicide (1.59 per 100,000) throughout the United States.²² White (vs. African American) children and boys (vs. girls) had higher rates of suicide nationally in 2012.

Figure 20. Suicides and Suicide Rates per 100,000 Children Population Ages 0-17 in Tennessee and the US, 2008-2013



In Tennessee, **twenty-four** young people took their own lives during 2013, a figure that represents **2.8 percent of all deaths**. Almost two-thirds of all suicide cases involved a weapon. The suicides were more frequent among boys (N=20) than girls (N=4), and among Whites (N=22) than African Americans (N=2). The majority of the cases (71%) occurred in the child’s home.

²¹ Centers for Disease Control and Prevention: National Center for Injury Prevention and Control. Understanding Suicide. Accessed at http://www.cdc.gov/violenceprevention/pdf/suicide_factsheet-a.pdf
²² Centers for Disease Control and Prevention: National Center for Injury Prevention and Control. Injury Prevention Web-based Injury Statistics Query System (WISQARS). 2014. Accessed at http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html

Figure 21. Demographic Distribution of Suicides for Children Ages 0-17 in Tennessee, 2013

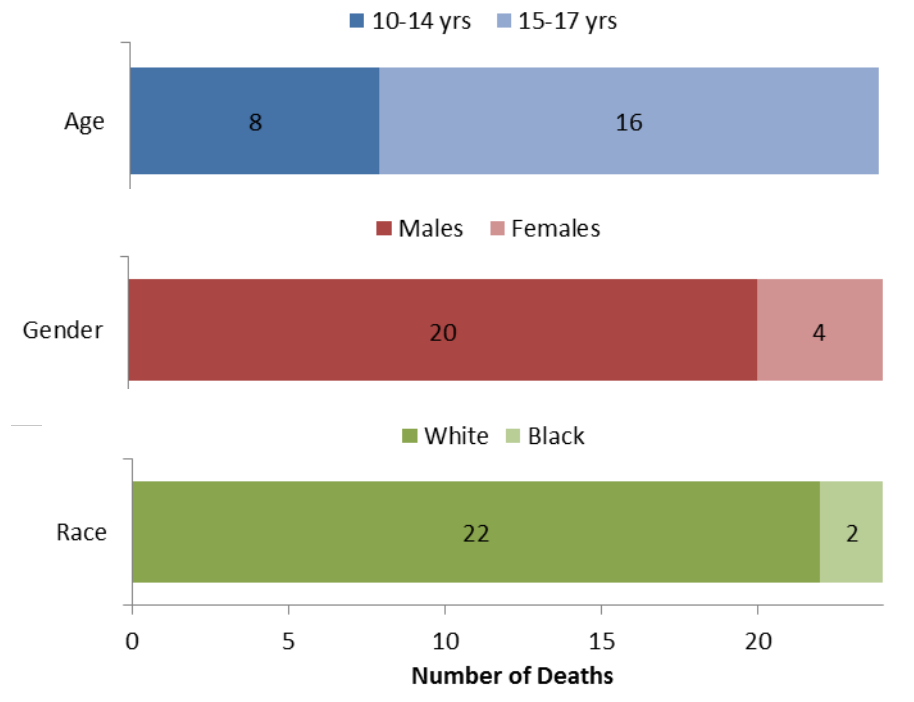


Table 16. Suicides for Children Ages 0-17 in Tennessee by Victim's Location, 2013

Incident Location	Number of Deaths
Child's home	18
Relative's home	2
Relative foster care home	2
Other	2
Total	24

Figure 22. Cause of Suicides for Children Ages 0-17 in Tennessee, 2013

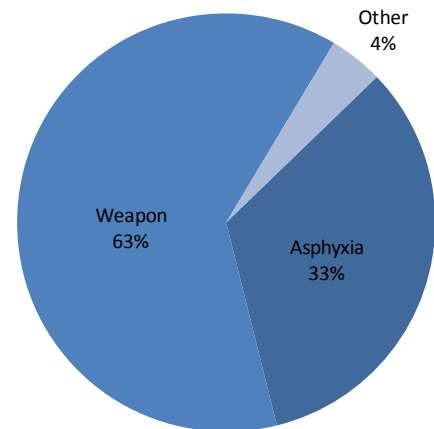


Table 17. Suicide for Children Ages 0-17 by Victim's Age and Cause in Tennessee, 2013

Cause	10-14 yrs	15-17 yrs	Total Number of Deaths
Asphyxia	3	5	8
Weapon	5	10	15
Other	0	1	1
Total	8	16	24

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Increase education targeted towards teens to help them understand warning signs of suicide.
- Increase training to help school staff identify and refer students at risk and respond to suicide or other crises in the school.
- Restrict access to lethal means of suicide, including removal of firearms in homes of high-risk teens.

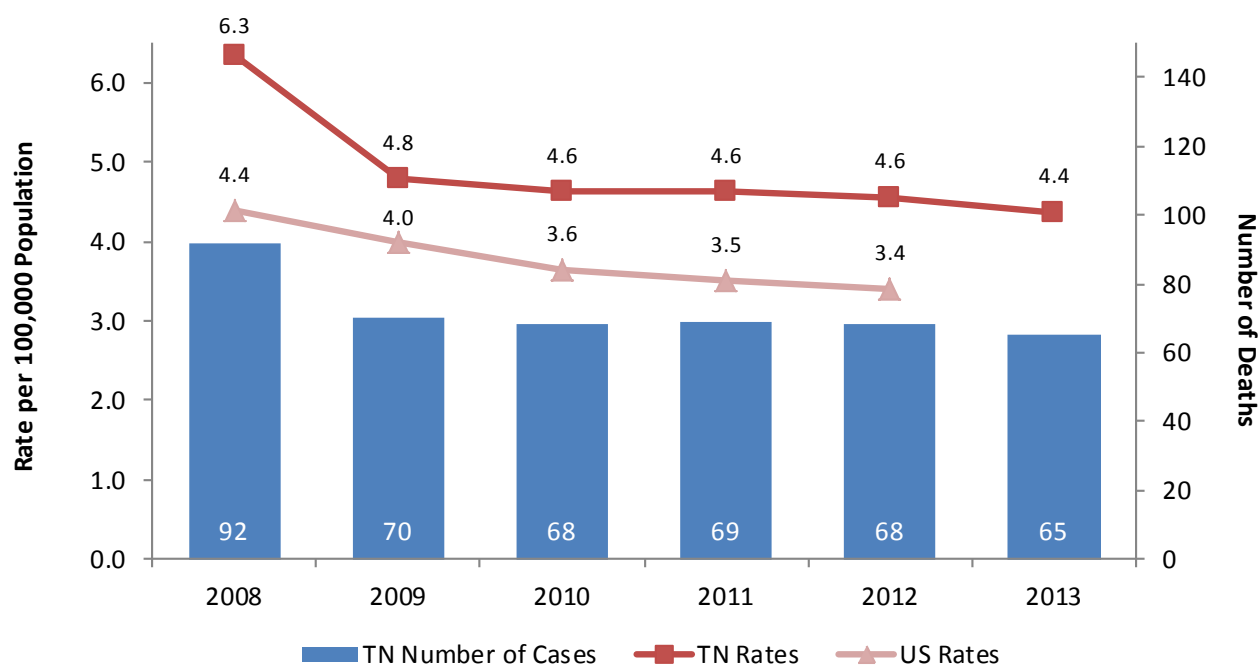
Current prevention efforts in Tennessee include:

- In collaboration with the Jason Foundation and Tennessee Department of Mental Health and Substance Abuse Services, the Tennessee Department of Education offers a no cost, web-based professional development training series on suicide prevention.
- The Tennessee Suicide Prevention Network has a number of efforts aimed at reducing suicide, including:
 - Distribute resources on suicide grief across the state. These include, but are not limited to the pamphlet “Survivors of Suicide” and regional resource directories. During FY 2014, TSPN trained 11,631 people in some form of suicide prevention, provided 81 general presentations on suicide prevention, and set up 130 booths and/or displays at events across the state, serving an estimated 25,889 people.
 - Provide postvention and debriefing services to schools affected by confirmed or suspected suicide death of a teacher and student.
 - Connect families who have recently experienced a suicide death with other survivors to guide them through the grief and recovery process
 - Provide funeral homes across the state with materials to help survivors of suicide loss. These include the survivor pamphlet and [“Supporting Survivors of Suicide Loss”](#), a guide for funeral directors published by the U.S. Department of Health and Human Services.

Motor Vehicle and Other Transportation Deaths

Motor vehicle crashes are the number one cause of child deaths ages 1 to 19 nationally.²³ In 2012, motor vehicle crashes resulted in 2,174 deaths among children 17 and under (as either occupants or drivers). Teenagers and males make up the majority (58% and 76% respectively) of child motor vehicle fatalities.²⁴ Teens are more likely than older drivers to underestimate dangerous situations. In addition, teens have the lowest rate of seat belt use compared to other age groups.

Figure 23. Motor Vehicle Related Deaths and Rates per 100,000 Children Population Ages 0-17 in Tennessee and the US, 2008-2013



In Tennessee, deaths related to motor vehicle incidents represent the highest number of fatalities among all external causes of death. In 2013, **65 deaths** were related to motor vehicles and other transportation modalities, representing **7.5 percent of all child fatalities in 2013**. Motor vehicle deaths occurred more frequently among boys (N=43) than girls (N=22), and among Whites (N=46) than African Americans (N=15).

Motor vehicle deaths were experienced among every age category, although, predictably, those of driving age (within the 15-17 year age cohort) were affected most frequently. Of the 31 teen (ages 15-17 years) fatalities, 64.5% (20 cases) were drivers

²³ Safe Kids Worldwide. Motor Vehicle Safety Fact Sheet (2014). Accessed at http://www.safekids.org/sites/default/files/documents/skw_motor_vehicle_fact_sheet_september_2014.pdf

²⁴ Centers for Disease Control and Prevention: National Center for Injury Prevention and Control. Injury Prevention Web-based Injury Statistics Query System (WISQARS). 2014. Accessed at http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html

in the accident. Table 18 summarizes the position of the children in vehicle at the time of the accident.

Eighty percent of the deaths (N=53) were victims of a motor vehicle crash. As shown in Table 19, more than half (N=27) did not use any protective measure, such as a seat belt, helmet or a child/booster seat. An additional ten child fatalities were pedestrians and two were on bicycles.

Figure 24. Demographic Distribution of Motor Vehicle Fatalities for Children Ages 0-17 in Tennessee, 2013

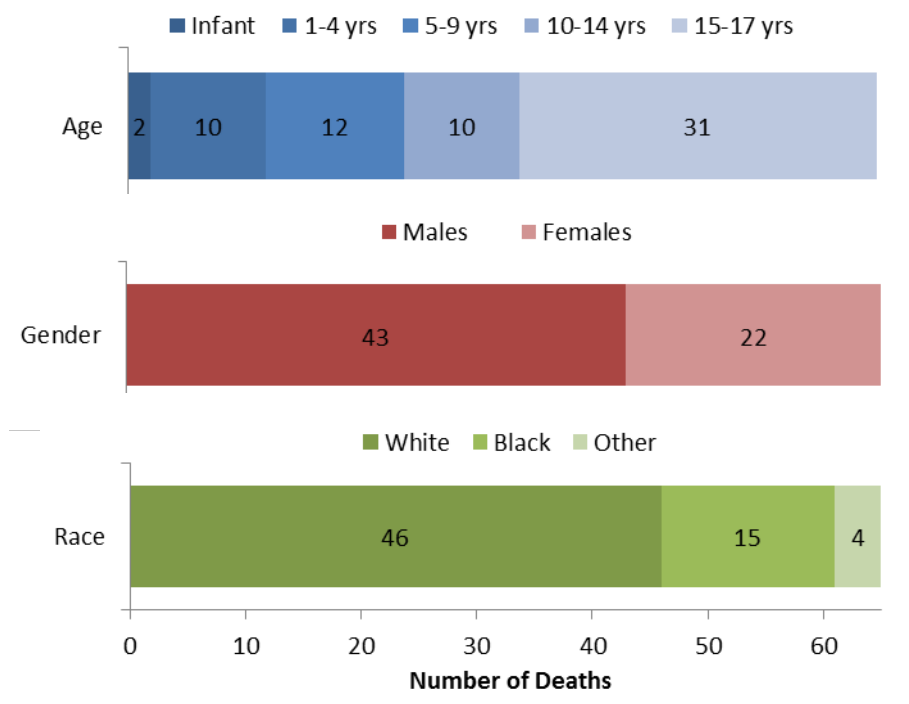


Table 18. Motor Vehicle/Other Transport Fatalities for Children Ages 0-17 by Age and Position in Vehicle in Tennessee, 2013

Position in Vehicle	Infant	1-4 yrs	5-9 yrs	10-14 yrs	15-17 yrs	Total
Driver	0	0	0	0	20	20
Passenger	2	5	9	8	9	33
Bicycle	0	0	0	2	0	2
Pedestrian	0	5	3	0	2	10
Total	2	10	12	10	31	65

Table 19. Motor Vehicle Deaths for Children Ages 0-17 by Vehicle Type and Protective Measure Not Used in Tennessee, 2013

Vehicle Type	Protection Not Used				Total Deaths
	No Belt	No Helmet	No Child/Booster Seat	Total Deaths without	
Car	8	0	7	15	35
Van	0	0	1	1	1
Sport utility vehicle (SUV)	5	0	1	6	8
Truck	1	0	0	1	5
All terrain vehicle (ATV)	0	3	0	3	2
Motorcycle	0	1	0	1	1
Other	0	0	0	0	1
Total Motor Vehicle Related	14	4	9	27	53

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Imposition of stricter nighttime driving restriction for teen drivers.
- Use of infant car seats and booster seats for toddlers and young children.
- Stricter enforcement of the “no texting and driving” law.
- Encourage school participation in a seat belt use awareness program such as “Battle of the Belt”.

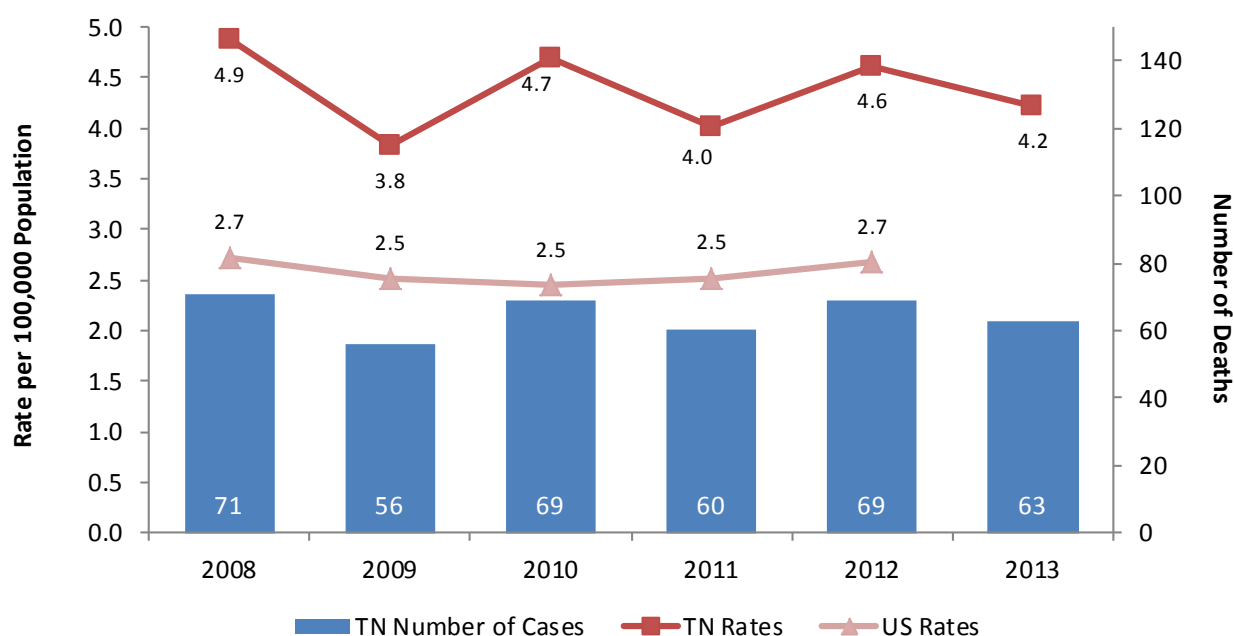
Current prevention efforts in Tennessee include:

- Tennessee was the first state in the country to have a child safety seat law, passed in the late 1970’s. Tennessee still maintains strong laws for infant car seats and toddler/child booster seats.
- The Tennessee General Assembly passed a Graduated Driver’s License law in 2001.
- The Tennessee Department of Health, in conjunction with the regional trauma centers, sponsors “Battle of the Belt,” a seat belt competition among Tennessee high schools. 17 high schools are participating in the 2014-15 school year.
- The Tennessee Department of Health provides funding to 32 agencies to purchase and distribute car seats and booster seats to families that cannot afford them.

Asphyxia Deaths

Asphyxia is the leading cause of death of children under the age of one, and accounts for approximately 1,000 infant deaths nationally.²⁵ Accidental suffocation rates have increased fourfold since 1984. While infant asphyxia deaths are closely linked to sleep environment factors, older children such as toddlers are more likely to suffocate from choking on food or toys. Nationally, males (vs. females) and African American (vs. White) infants have higher rates of death due to asphyxia.

Figure 25. Asphyxia Deaths and Rates per 100,000 Children Population Ages 0-17 in Tennessee and the US, 2008-2013



In Tennessee, **sixty-three** children died of asphyxia in 2013. This number represents **7.2 percent of all deaths** in 2013. Asphyxia cases may be related to either suffocation, strangulation, or choking. Forty nine of the asphyxia cases were infants under the age of one year who died due to suffocation or choking. **Forty-six of these 49 infants expired in a sleep-related environment.**

Eight children of the 63 who suffered an asphyxia fatality were due to self-inflicted strangulation, which accounts for one third of the suicide deaths.

²⁵ Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report. Suffocation Deaths Associated with Use of Infant Sleep Positioners. Accessed at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6146a1.htm>

Figure 26. Demographic Distribution of Asphyxia Deaths for Children Ages 0-17 in Tennessee, 2013

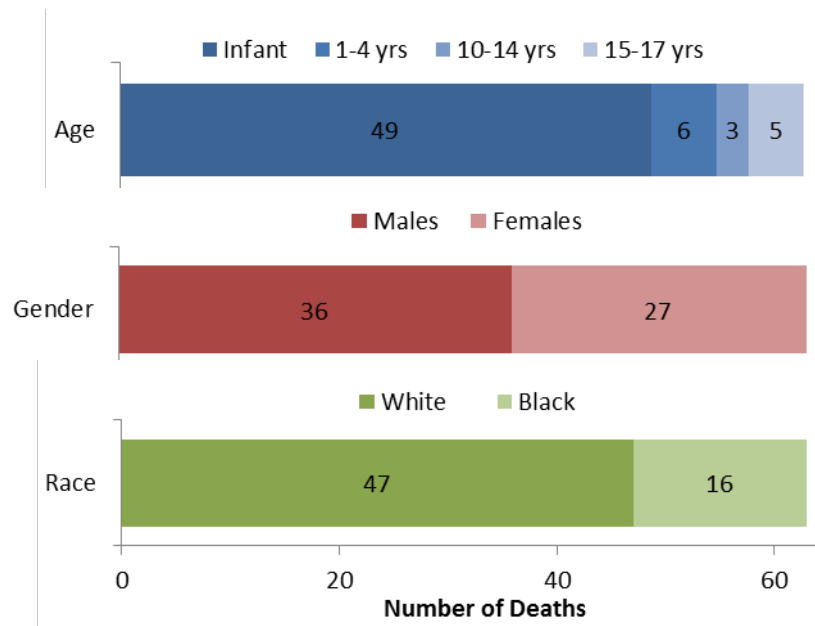


Table 20. Asphyxia Cause and Manner of Death for Children Ages 0-17 by Age in Tennessee, 2013

Cause/Manner of Asphyxia	Infant	1-4 yrs	5-9 yrs	10-14 yrs	15-17 yrs	Total
Sleep-related	46	0	0	0	0	46
Wedged in tight space, not sleep-related	0	1	0	0	0	1
Choking	2	3	0	0	0	5
Suicide	0	0	0	3	5	8
Other	1	2	0	0	3	3
Total	49	6	0	3	8	63

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Increased education regarding importance of safe sleep environment for infants.
- Safer meal and play time education (importance of monitoring toddlers during meal and play time).
- Basic first aid and CPR education for child care professionals and parents to safely remove airway obstructions.
- Educate parents of young children on how to properly child-proof the home.

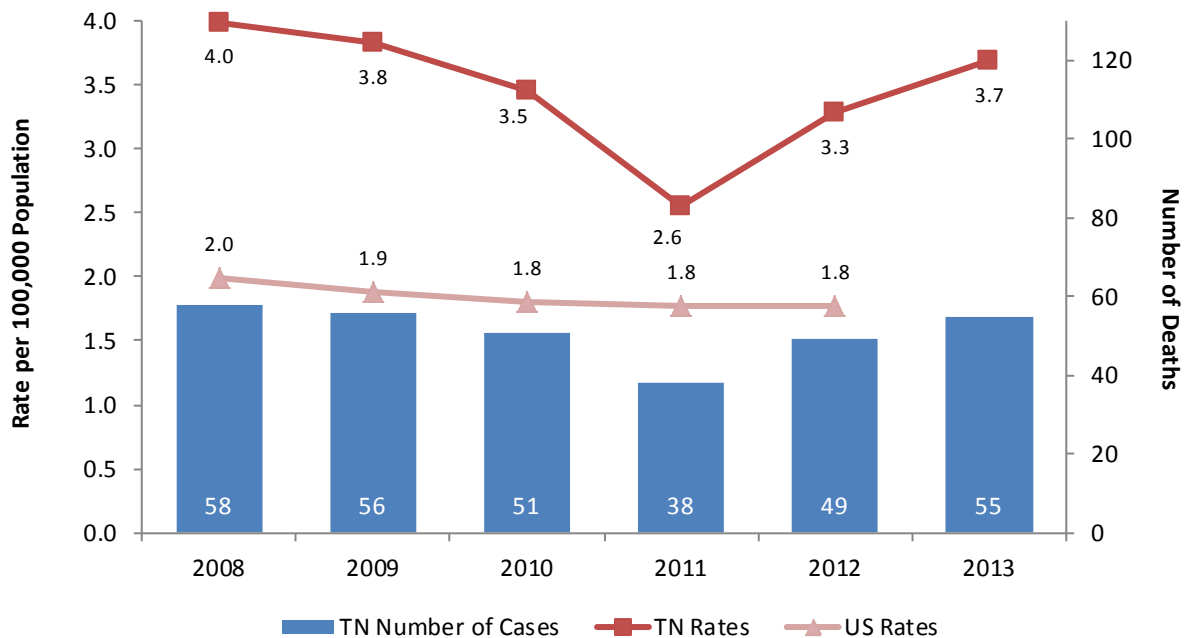
Current prevention efforts in Tennessee include:

- The Tennessee Department of Health’s “ABC’s of Safe Sleep” campaign educates parents on the dangers of asphyxia in the sleep environment.
- Safe Kids promotes a video on prevention of choking in children with special needs.
- Safe Kids sends out a monthly email to alert parents and caregivers of recent recalls specific to children.

Weapon-Related Deaths

In 2012, firearms alone accounted for 1,301 child deaths (1.77 per 100,000) nationally of children ages 0 to 17.²⁶ An additional 1,492 children (2.02 per 100,000) died from violence involving weapons other than firearms such as body parts, knives or other objects.

Figure 27. Weapon-Related Deaths and Rates per 100,000 Children Population Ages 0-17 in Tennessee and the US, 2008-2013



In Tennessee, **fifty-five** children died via weapon injuries in 2013, a 12.2% increase from 2012. This number represents **6.3 percent of all deaths**. Of the 55 deaths, 45 were boys and 10 were girls. Although the number of White children who died from a weapon injury was greater than the number of African-American children who died, the rate of fatality is higher among African-American children; most of the victims (65.5%) are from homicide.

For classification purposes, body parts are included as weapons. Seventy-one percent (N=39) of all weapon fatalities were the result of firearms. Of the 39 deaths involving firearms, 30 were related to handguns, two were related to shot guns, and the remaining were other guns.

²⁶ Centers for Disease Control and Prevention: National Center for Injury Prevention and Control. Injury Prevention Web-based Injury Statistics Query System (WISQARS). 2014. Accessed at http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html

Figure 28. Demographic Distribution of Weapon-Related Deaths for Children Ages 0-17 in Tennessee, 2013

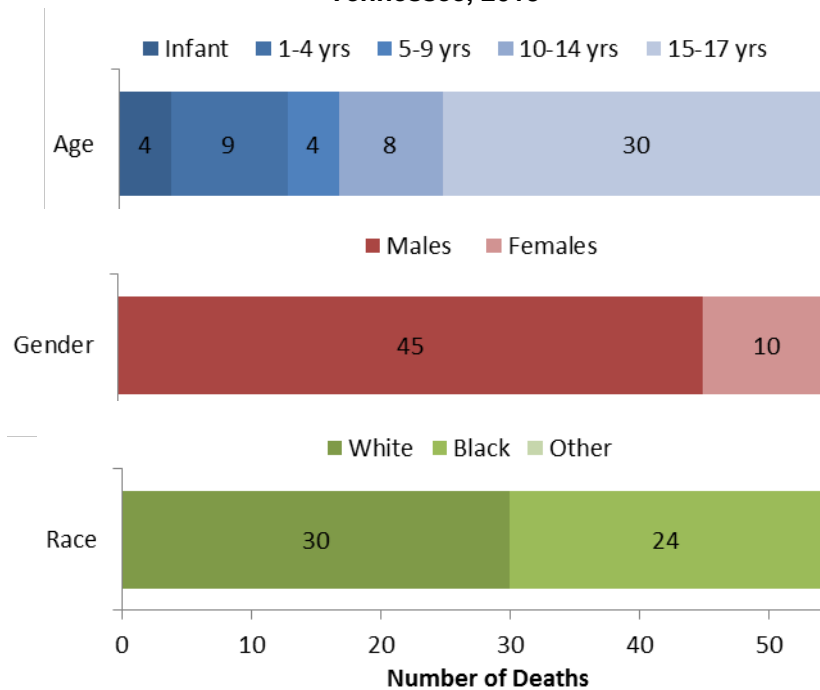


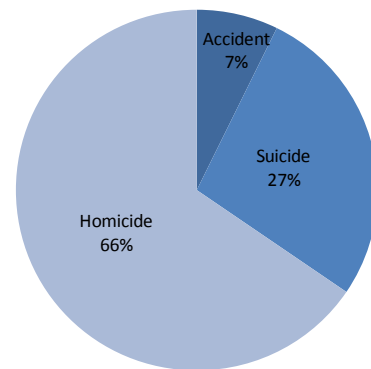
Table 21. Weapon-Related Deaths for Children Ages 0-17 by Manner of Death and Age in Tennessee, 2013

Manner of Death	Infant	1-4 yrs	5-9 yrs	10-14 yrs	15-17 yrs	Total
Accident	1	1	0	0	2	4
Suicide	0	0	0	5	10	15
Homicide	3	8	4	3	18	36
Total	4	9	4	8	30	55

Table 22. Weapon-Related Deaths for Children Ages 0-17 in Tennessee by Weapon Type,²⁷ 2013

Weapon Type ²⁷	Total
Firearm	39
Sharp instrument	2
Person's body part	6
Rope	3
Unknown	5
Total	55

Figure 29. Weapon-Related Deaths Children Ages 0-17 in Tennessee by Manner of Death, 2013



²⁷ There are multiple cases, particularly for infants, where the exact weapon type is unknown. These may include cases where the medical records showed evidence of "blunt force trauma" but the source of the trauma is not evident by history or exam.

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Increase awareness of safer firearm handling practices.
- Promote safety programs targeting parents to encourage supervision to prevent unsafe child-weapon interactions.
- Promote safe gun and weapon storage to eliminate child access to weapons.

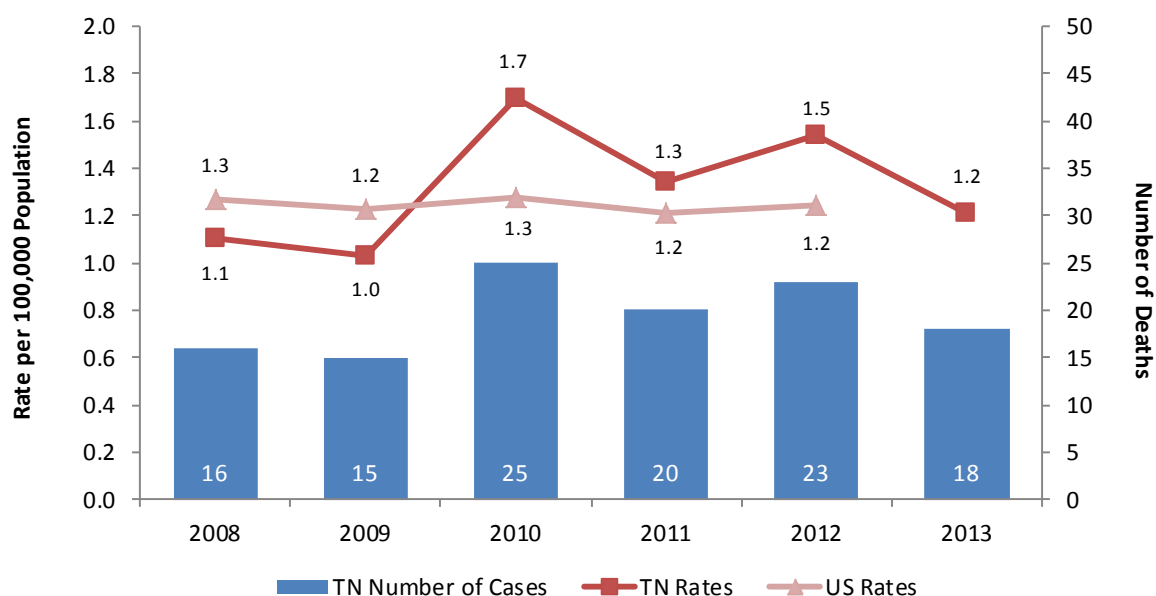
Current prevention efforts in Tennessee include:

- The Tennessee Department of Safety requires firearm safety training and certification by a licensed trainer for all hand gun owners prior to carrying hand guns.
- The Tennessee Department of Health provides education in the schools on bullying and violence prevention.

Drowning Deaths

Drowning ranks fifth nationally among the causes of unintentional injury deaths.²⁸ Between 2008 and 2012, an average of 868 fatal drownings of children ages 0 to 17 occurred annually in the United States.²⁹ Since 2005, drowning has become the leading cause of death for boys ages 1 to 4 from unintentional injury. Nationwide, drowning occurred most often in a bath tub for infants and swimming pools for children ages 1 to 4.³⁰

Figure 30. Drowning Deaths and Rates per 100,000 Children Population Ages 0-17 in Tennessee and the US, 2008-2013



In Tennessee, **eighteen** children perished by drowning in 2013. This number represents **2.1 percent of all deaths**. Drowning deaths were more frequent in boys (N=13) and Whites (N=10) than girls (N=5) and other races (N=8). Of the 18 drowning case reports, in only one case was there definitive acknowledgement that the child was able to swim.

Most of these deaths (N=12) occurred while children were playing near the water, mainly by the pool, as shown in Table 23 and Figure 32. Of the nine drowning deaths that occurred in a pool, only four had some kind of barrier/protection around the pool. Two of the accidents occurred in a bathtub.

²⁸ Centers for Disease Control and Prevention: National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention. Unintentional Drowning: Get the Facts. Accessed at <http://www.cdc.gov/HomeandRecreationalSafety/Water-Safety/waterinjuries-factsheet.html>

²⁹ Centers for Disease Control and Prevention: National Center for Injury Prevention and Control. Injury Prevention Web-based Injury Statistics Query System (WISQARS). 2014. Accessed at http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html

³⁰ Control and Prevention: National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention. Unintentional Drowning Deaths in the U.S. (2014). Accessed at <http://www.cdc.gov/nchs/data/databriefs/DB149.pdf>

Figure 31. Demographic Distribution of Drowning Deaths for Children Ages 0-17 in Tennessee, 2013

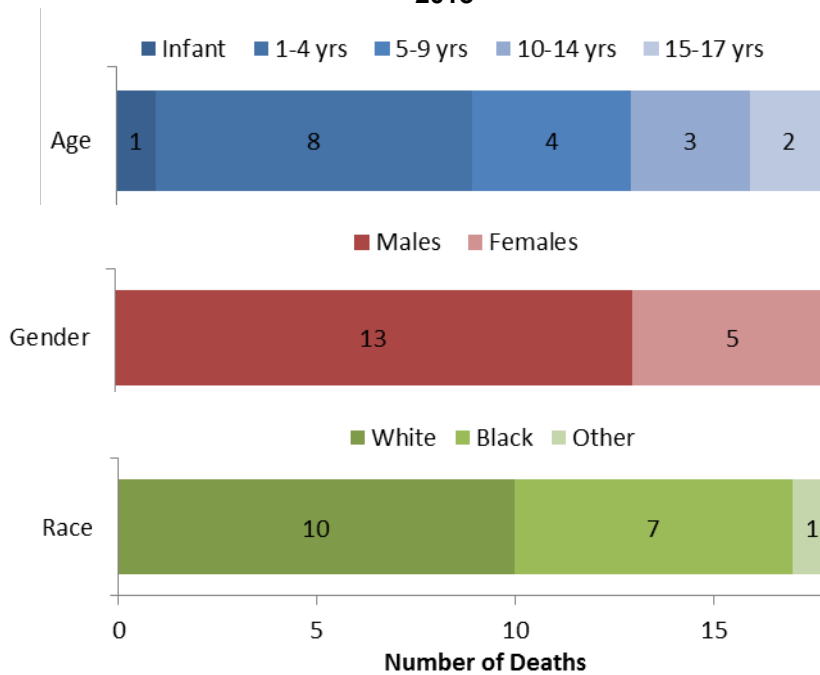
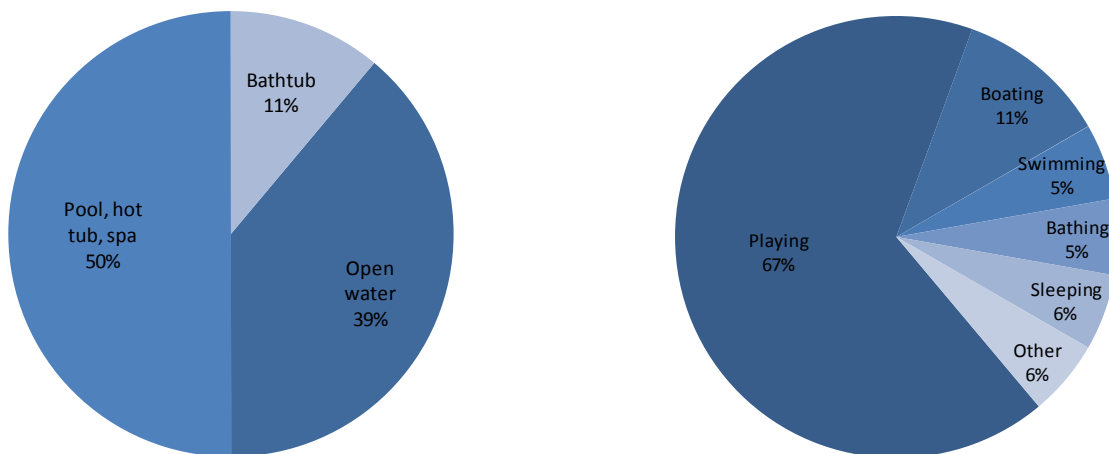


Table 23. Drowning Deaths for Children Ages 0-17 by Location³¹ and Age in Tennessee, 2013

Location of Accident	Infant	1-4 yrs	5-9 yrs	10-14 yrs	15-17 yrs	Total
Open water	0	2	2	2	1	7
Pool, hot tub, spa	0	6	2	0	1	9
Bathtub	1	0	0	1	0	2
Total	1	8	4	3	2	18

Figure 32. Drowning Deaths for Children Ages 0-17 by Location and Activity at the Time of Death in Tennessee, 2013



³¹ Cases that occur in bathtubs among non-infants may be due to a medical condition that disabled the child at the time of death.

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Educational efforts to promote “Buddy System” when swimming.
- Promotion of formal swimming lessons for young children.
- Teaching CPR skills to children in school to reach those at the greatest risk for drowning.
- Fencing pools with four sided isolation fences, with self-closing and self-latching gates.

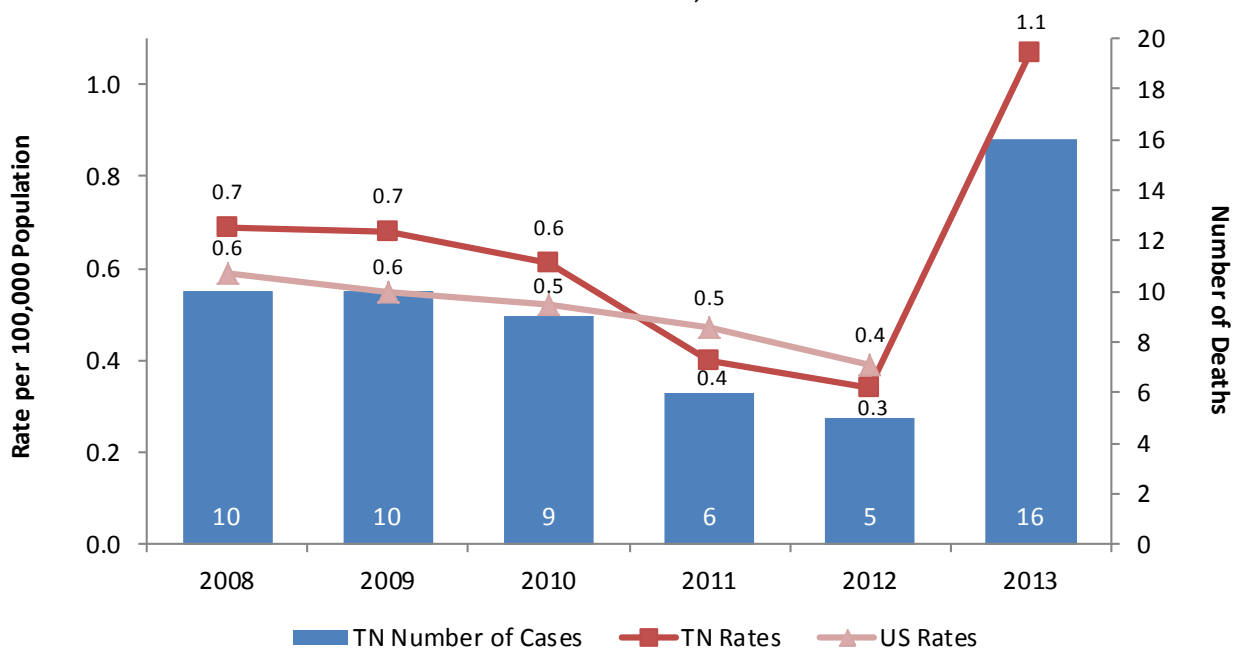
Current prevention efforts in Tennessee include:

- Safe Kids promotes a community awareness/marketing campaign each spring and fall to educate on water safety.
- On June 28, 2014, Splash Mid-South, Le Bonheur and Safe Kids Mid-South offered three free classes to equip parents and caregivers with the skills and knowledge of how to perform CPR.

Fire/Burn Deaths

Fire deaths in the U.S. have declined gradually over the past several decades; however fire deaths remain the third leading cause of fatal home injury.³² In 2012, 242 children ages 1 to 17 (0.33 per 100,000) died from unintentional fires nationally, of which 207 occurred in residential structures.³³ Fire deaths are more common among African American (vs. White) children nationally. Cooking is the leading cause of residential fires; however most fires that result in deaths are a result of smoking.

Figure 33. Fire/Burn Deaths and Rates per 100,000 Children Population Ages 0-17 in Tennessee and the US, 2008-2013



Tennessee had observed a gradual decline in fire/burn deaths; however, in 2013, there was an unusually high number of child fatalities resulting from fires/burns. They claimed the lives of **sixteen** children, a three-fold increase from the five deaths in 2012.

Half of the children who died were toddlers ages 1-4 years (N=8), and most were males (N=9). Even though more White children died from a fire, as it is nationally, African American children in Tennessee are at a higher risk of dying from fires/burns.

Most of these tragedies occurred in single homes. One case was an electrocution from an electrical wiring, and of the eight known sources of fire, six reported not having a smoke detector or a properly working one in the residence.

³² Federal Emergency Management Agency: U.S. Fire Administration. Child Fire Death Rates and Relative Risk 2001-2010. Accessed at http://www.usfa.fema.gov/statistics/estimates/trend_child.shtm

³³ Centers for Disease Control and Prevention: National Center for Injury Prevention and Control. Injury Prevention Web-based Injury Statistics Query System (WISQARS). 2014. Accessed at http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html

After reviewing each of the cases, we see no obvious reason for the one-year increase in fire-related deaths. It is plausible that the increase may be an anomaly; however, we will continue to monitor this concern.

Figure 34. Demographic Distribution of Fire/Burn Deaths for Children Ages 0-17 in Tennessee, 2013

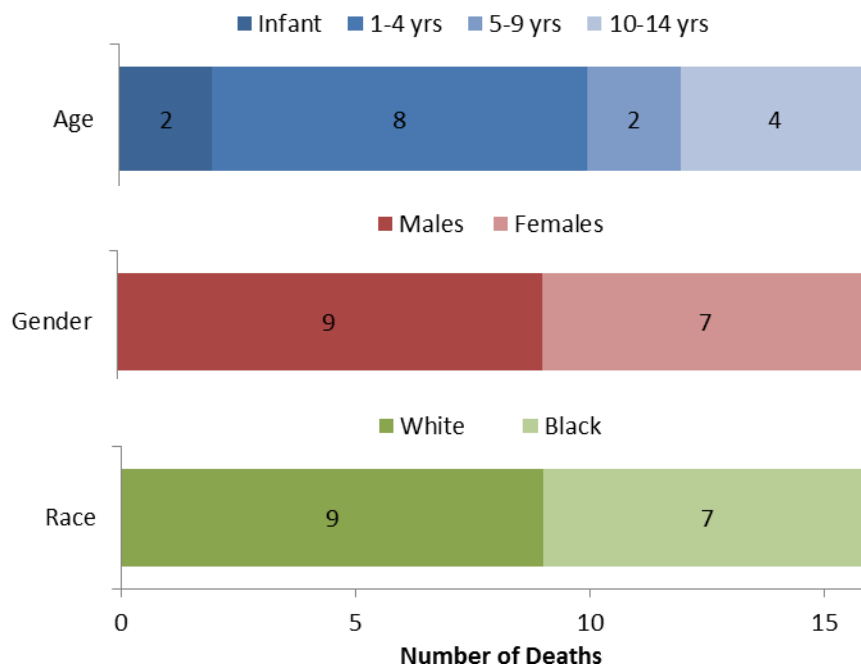


Table 24. Cause of Fire/Burn Deaths for Children Ages 0-17 by Age Groups in Tennessee, 2013

Cause	Infant	1-4 yrs	5-9 yrs	10-14 yrs	15-17 yrs	Total
Fire	2	8	1	4	0	15
Electrocution	0	0	1	0	0	1
Total	2	8	2	4	0	16

Table 25. Fire/Burn Deaths for Children Ages 0-17 by Fire Source in Tennessee, 2013

Fire Source	Number Deaths
Cigarette lighter	1
Candles	1
Cooking stove	2
Space heater	2
Electrical wiring	1
Other	2
Unknown	7
Total	16

Table 26. Fire/Burn Deaths for Children Ages 0-17 by Structure Type in Tennessee, 2013

Structure Type	Number Deaths
Unknown	1
Single home	12
Duplex	1
Trailer home	2
Total	16

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Increased education to create awareness of fire safety and cost of fires.
- Incorporation of fire-safe features into high risk devices (ex. stoves, lighters).
- Assure that smoke detectors are present and working in children's homes.

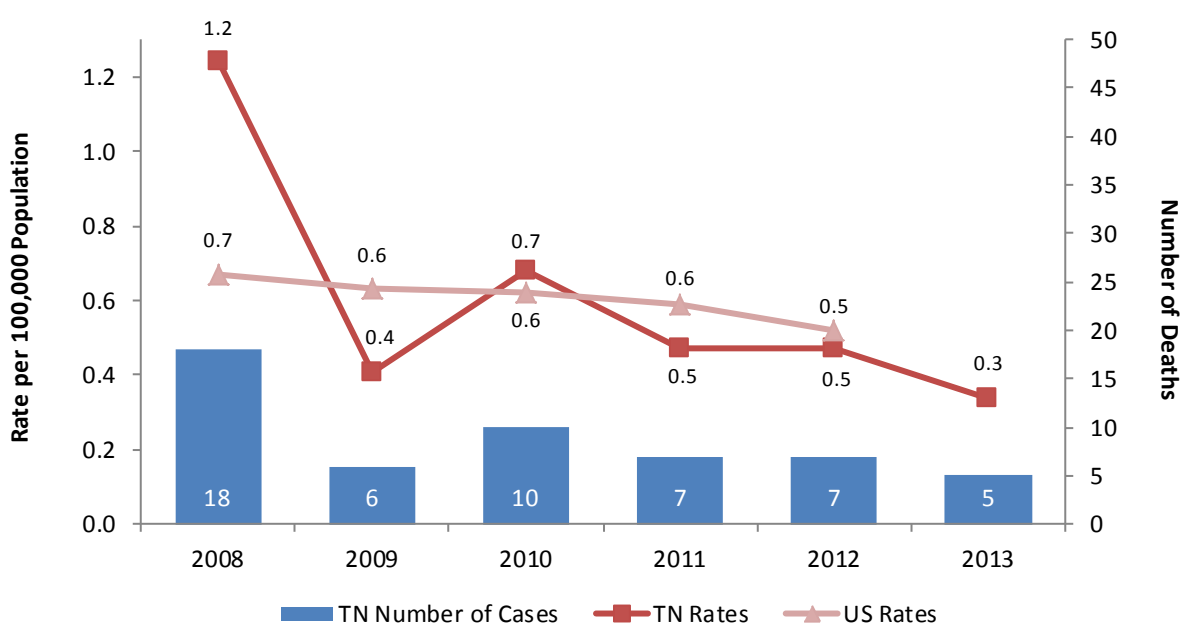
Current prevention efforts in Tennessee include:

- The Tennessee Department of Commerce and Insurance holds an annual fire safety poster contest for school students.
- Several fire departments throughout Tennessee provide and install free smoke detectors to families that cannot afford them.

Poisoning Deaths

Poisoning deaths have increased in the United States, with legal and illegal drugs causing the majority of poisoning deaths.³⁴ Unintentional poisoning deaths among children ages 0 to 17 increased by 94% from 1999 to 2009, but the rates have been decreasing since. Opioid analgesic pain relievers were the most-frequently involved drug in the drug poisoning deaths. Nationally, males (vs. females) and teens are more likely to die than girls from unintentional poisoning.³⁵

Figure 35. Poisoning Deaths and Rates per 100,000 Children Population Ages 0-17 in Tennessee and the US, 2008-2013



Five children died in Tennessee as the result of a poison-related incident in 2013, representing **0.6 percent of all child fatalities**. Most of the cases occurred among teenagers of ages 15-17 years. Three of the deaths were to males, two were females, and all were White children. **All five poisoning fatalities in Tennessee involved prescription drugs.**

³⁴ Centers for Disease Control and Prevention: National Center for Health Statistics. NCHS Fact Sheet: NCHS Data on Drug Poisoning. Accessed at http://www.cdc.gov/nchs/data/factsheets/factsheet_drug_poisoning.htm

³⁵ Centers for Disease Control and Prevention: National Center for Injury Prevention and Control. Injury Prevention Web-based Injury Statistics Query System (WISQARS). 2014. Accessed at http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html

Figure 36. Demographic Distribution of Poison-Related Deaths for Children Ages 0-17 in

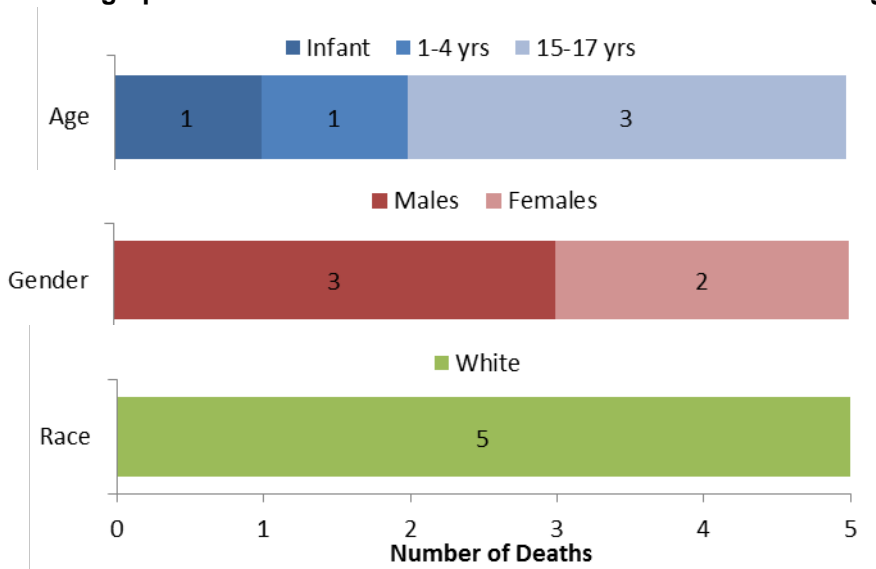


Table 27. Poison-Related Deaths for Children Ages 0-17 by Substance³⁶ and Age Group in Tennessee, 2013

Type of Drug	Infant	1-4 yrs	5-9 yrs	10-14 yrs	15-17 yrs
Antidepressant	0	0	0	0	2
Pain killer	1	1	0	0	2
Methadone	0	0	0	0	1
Total Deaths	1	1	0	0	5

FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Educational campaign regarding prescription drug abuse and proper disposal of prescription drugs.
- Increase access to secure drop-off locations for unused medications. Recent changes in federal regulations allow licensed retail pharmacies, hospital pharmacies, manufacturers, wholesalers, distributors, and reverse distributors that have a valid DEA registration to accept returns of unused legend drugs from end-users.

Current prevention efforts in Tennessee include:

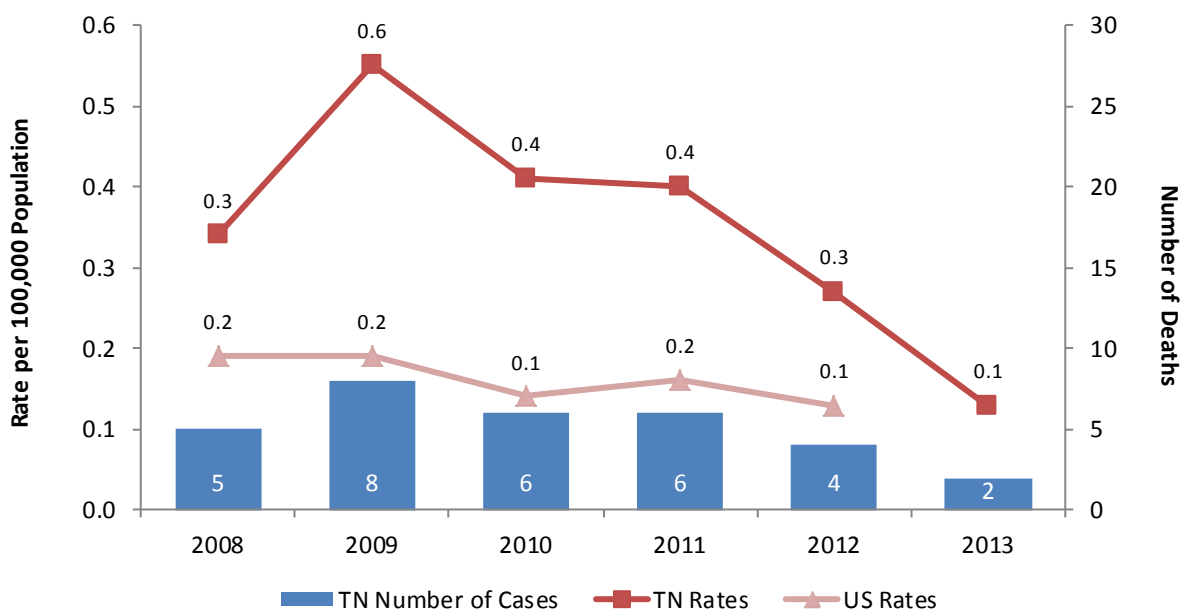
- The Department of Health and Department of Environment and Conservation have partnered to place 111 secure drop off boxes in 60 of 95 counties in Tennessee.
- The Tennessee General Assembly passed Tenn. Code 53-11-308(e) (2014) which prohibits a prescription for any opioids or benzodiazepines dispensed in quantities greater than a thirty-day supply.
- The Bureau of TennCare has developed prior authorization requirements for long-acting narcotic medications.

³⁶ Because more than one type of substance may have been used in a single death, the total number of substances exceeds the number of poisoning-related deaths.

Fall/Crush Deaths

While falls are the leading cause of both fatal and non-fatal injuries among older adults, falls are the leading cause of non-fatal injuries among children 0 to 18.³⁷ Approximately 2.8 million children nationally are treated in emergency rooms for fall related injuries. In 2012, 78 children ages 0 to 17 died nationally of unintentional fall injuries (0.11 per 100,000);³⁸ males have higher rates of fall-related deaths than females.

Figure 37. Fall/Crush Deaths and Rates per 100,000 Children Population Ages 0-17 in Tennessee and the US, 2008-2013

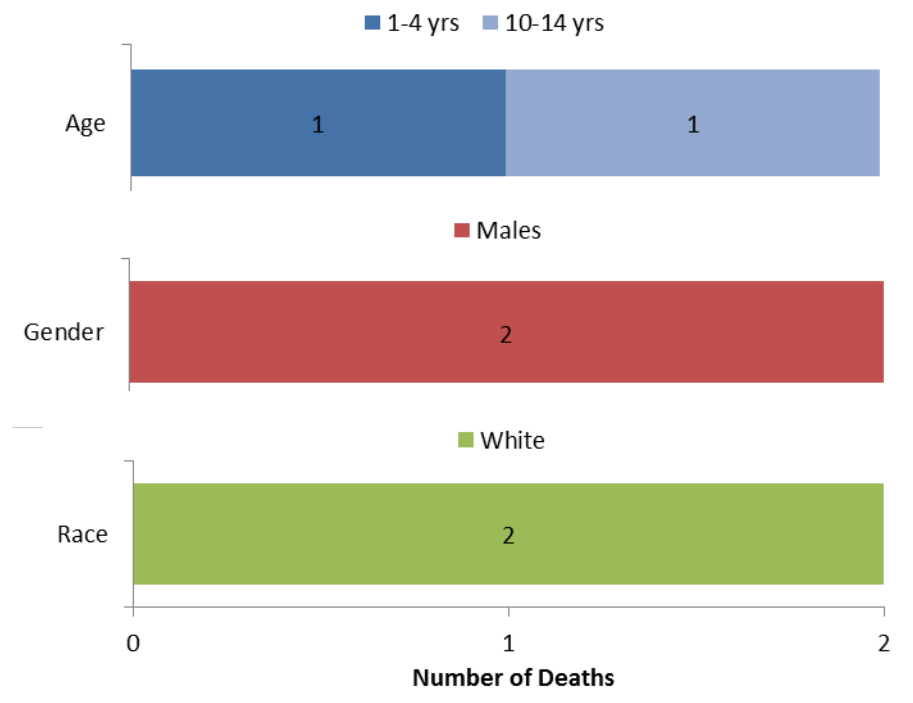


In Tennessee, two children died as the result of a crush or fall injury in 2013. They were both boys and White. **These two deaths represent 0.2 percent of all child fatalities.**

³⁷ Centers for Disease Control and Prevention: National Center for Injury Prevention and Control. Protect the Ones You Love. Falls: The Reality <http://www.cdc.gov/safecild/Falls/index.html>

³⁸ Centers for Disease Control and Prevention: National Center for Injury Prevention and Control. Injury Prevention Web-based Injury Statistics Query System (WISQARS). 2014. Accessed at http://www.cdc.gov/injury/wisqars/fatal_injury_reports.html

Figure 38. Demographic Distribution of Fall/Crush Deaths for Children Ages 0-17 in Tennessee, 2013



FOCUSING ON PREVENTION



Potential prevention opportunities include:

- Safety checks on playgrounds to ensure that playground equipment is safe and well-maintained.
- Encourage child safety features in homes such as window guards, stair gates, and guard rails to prevent accidental falls.
- Increase awareness regarding importance of supervision in both the home and at play.

Current prevention efforts in Tennessee include:

- Safe Kids provides education for parents and the community around TV/furniture tip-overs.
- Safe Kids has developed a falls prevention video for parents and caregivers of children with special health care needs.
- Safe Kids has published multiple media reports about fall/crush injuries over the last 2–3 years.

DATA TO ACTION

State-Level Activities

In December 2013, the State Child Fatality Review Team met to review aggregate child death data from the 2012 death reviews and to consider recommendations from local teams. State Team members considered the latest trends in the causes of child deaths and contemplated strategies for reducing future fatalities. In contrast to previous years during which a longer list of recommendations was released, the State Team decided to focus on a few key strategies for reducing child fatalities in Tennessee. This decision reflected a potentially better practice identified during a series of national meetings aimed at strengthening state child fatality reviews.

The State Team made the following recommendations in the 2012 report:

- Continue the safe sleep campaign with particular emphasis on education for caregivers (grandparents, parents, and babysitters) and health care providers (pediatricians, family physicians, obstetricians, and nurse practitioners).
- Partner with schools to educate parents and teens concerning proper restraints and distracted driving while in a motor vehicle.
- Identify current mental health services in the community, particularly in schools, communicate existing resources to key school personnel, and explore opportunities for expanding school-based mental health services.
- Increase the number of Sudden Unexpected Infant Death Investigation (SUIDI) forms that are completed by the person conducting the death scene investigation and within 24 hours of the time of death.

Tennessee Department of Health staff, in conjunction with colleagues from other state agencies, local child fatality review teams, and other community partners accomplished the following related to the priorities outlined above:

Safe Sleep

- The Tennessee Department of Health partnered with agencies across the state to distribute educational materials to parents, healthcare providers, child care agencies, social services providers and other caregivers.
- The Tennessee Department of Children's Services (DCS) provided safe sleep education for infants discharged from the hospitals into DCS custody in East Tennessee. A pack 'n play was provided to families without a safe place for the infant to sleep.
- The Tennessee Department of Health partnered with 100% of birthing hospitals (66) and 5 non-delivery hospitals across Tennessee in 2014 to spread the Safe Sleep message. Hospitals agreed to develop a safe sleep policy to include: modeling of safe sleep behavior in the hospital, education for parents and caregivers and education for staff.
- The Tennessee Department of Health launched the Direct on Scene Education (D.O.S.E.) program. When responding to an emergency or non-emergency call from a household with a pregnant woman or infant, first responders are trained to

look for unsafe sleep conditions and offer the residents a safe sleep kit with information on the ABC's of Safe Sleep. As of December 2014, 17 first responder agencies across the state are participating in the D.O.S.E. program.

- Pack 'n plays were distributed to the regional health departments to provide a safe sleep environment to families that could not afford one.
- TDH implemented the safe sleep floor talker project. This project places large plastic decals on the floors of businesses and other agencies. As of December 2014, 120 businesses and agencies are using the safe sleep floor talkers.
- The safe sleep educational flipchart was provided to home visiting staff statewide to ensure a consistent message is taught to parents.

Teen Driving

- The Department of Health collaborated with the Department of Education and the Trauma Centers to promote involvement in the Battle of the Belt seat belt program. An evaluation by the University of Tennessee showed that for schools who submitted comparison data, the program achieved an overall improvement in seat belt compliance of 8%. In the current 2014-15 school year, 17 schools are participating in the competition.
- A teen driving task force with representation from the Department of Health, Department of Education, Governor's Highway Safety Office, Tennessee Highway Patrol, Vanderbilt Trauma Center and UT Trauma Center continues to meet. The goal of this task force is to increase the teen motor vehicle accident prevention education taking place in schools. In particular, the task force is looking at the schools in the counties with the highest rates of teen motor vehicle accidents and encouraging them to participate in motor vehicle prevention activities.
- The Governor's Highway Safety Office website promotes teen driving prevention activities among the schools. The website allows anyone to click on a county and view a list of motor vehicle prevention activities that are available in that particular county. Each school can also input prevention activities in which they are participating. A letter encouraging participation was sent to the schools in October 2014 by the teen driving task force. Within 3 weeks, the letter resulted in an increase from 78 to 111 schools reporting activities in which they are participating.

Mental Health

- The Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) regionalized the way in which mobile crisis services are provided around the state to ensure that more children and youth who face a mental health crisis receive the services that they need in a timely and cost-effective manner.
- TDMHSAS has been in contact with local mental health agencies to ascertain that local Child Fatality Review teams have access to information on resources and support groups that are available in their area.
- Tennessee Suicide Prevention Network provided suicide prevention training to 11,631 people during FY 2014. These trainings included participants at non-TSPN functions such as Jason Foundation seminars.

Sudden Unexplained Infant Death Investigation Form Completion

- Baseline data was collected to determine: the number of deaths that required a SUIDI form vs. the percentage of those that had a completed SUIDI form; the average time taken to complete the SUIDI forms; and the personnel completing the SUIDI form. The data showed 66% of deaths requiring a SUIDI form actually had one completed. The regions with the lowest rate of completion were East, West and Shelby County. The data showed the average time taken to complete the SUIDI form from the time of the child's death was two and a half hours. The areas with the highest average completion time were Davidson and Hamilton counties, due to SUIDI forms that took more than one day to be completed (three cases in Davidson and one in Hamilton). Otherwise, Knox County had the highest average time of completion. The data also showed the majority of forms were completed by the first responder or medical examiner (66%).
- The Office of the Chief Medical Examiner hired its first State Medico-legal Death Scene Investigator, who will be responsible for providing training to County Medical Examiners, County Medical Investigators, and law enforcement in death investigation.
- The Tennessee Department of Health has worked with Middle Tennessee State University (MTSU) to develop an online death scene investigation course to allow first responders the flexibility of completing the required course at any time rather than waiting for a scheduled in-person session.
- To increase capacity to complete the SUIDI form, funding has been obtained to provide the materials needed by first responders and medical examiners. MTSU purchased 200 SUIDI dolls to encourage the medical examiners to conduct doll reenactments at the scene. The doll reenactments allow the medical examiner to see exactly what happened and how the baby was found.
- The Office of the Chief Medical Examiner received a small grant to provide comprehensive death scene investigation kits for 17 counties. The kits will include a tablet or laptop, digital camera and a SUIDI doll. The kits will allow medical examiners to take pictures of the death scene, upload them and complete the SUIDI form while at the scene. This will increase the percentage of SUIDI forms completed and increase the quality of the data obtained.
- The Tennessee Department of Health received funding through the CDC Sudden Death in the Young (SDY) grant to purchase an additional 60 death scene investigation kits.

Local Activities

As part of the CFR process, the review of each case and discussions that follow identify opportunities for preventing future child deaths. In addition to submitting recommendations for state- level policy or program changes, local teams also engage in prevention efforts in their own communities.

Examples of local prevention activities implemented over the past year by local CFR teams include:

- Teams in the Upper Cumberland, East, South Central, and Southeast regions have worked diligently to recruit area businesses, including retail stores, grocery stores, day cares and pediatrician offices to display the TDH's safe sleep floor talker. As of November 2014, 120 floor talkers have been placed throughout the state.
- After noting a cluster of deaths to children of parents with prenatal or postnatal substance use, a team in Northeast region sent letters to opiate medical providers to encourage their partnership with TDH to educate patients regarding NAS and family planning services.
- A team in the South Central region recognized a need to focus on keeping children safe in and around cars. The Regional Health Office's Maternal and Child Health Primary Prevention Initiative (PPI) team, which included a local CFR team member, used this information to develop a campaign to remind parents and caregivers to never leave children alone in or near vehicles. 100% of the day cares in Maury County agreed to display a car safety reminder poster in their facilities; and Centerstone partnered with the group to print out 200 car safety reminder decals to be displayed in the facilities' windows. The PPI group also plans to visit all of the day cares to deliver car safety brochures in December 2014.
- Members of an East Tennessee CFR team assisted with car seat safety checks during Blount County's Child Car Safety Day event sponsored by area businesses.
- Members of the East Tennessee CFR team participated in Lafollette's National Night Out event on August 5, 2014. During the event, members distributed child safety tips and safe sleep materials.

CONCLUSION

The goal of child fatality review is to better understand the causes of death to children in Tennessee and to identify strategies for preventing future deaths. As indicated in this report, there has been a significant reduction in the child fatality rate in Tennessee—20% over the last five years. However, our child fatality rate remains above the national average, leaving important work to be done by all of us in order to protect our children.

Several key areas identified in this report warrant further attention, as recommended by the state team. We encourage all who read this report to utilize the data contained herein to explore opportunities for improving the health and well-being of children in your own community.

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Appendix B—Glossary

Asphyxia – Oxygen starvation of tissues. Asphyxia is a broad cause of death that may include more specific causes, such as strangulation, suffocation, or smothering.

Autopsy – Medical dissection of a deceased individual for the purpose of determining or confirming an official manner and cause of death.

Birth Certificate – Official documentation of human birth, filed with the Tennessee Office of Vital Records.

Cause of Death – The effect, illness, or condition leading to an individual's death: Medical Condition or External Cause (Injury). A different classification from Manner of Death.

CFRT (Child Fatality Review Team) – Tennessee's local/regional groups, comprised of such agencies as public health, law enforcement, social services, etc., that examine the deaths of children aged 17 and under with the ultimate goal of preventing future fatalities.

Child Maltreatment – Intentional injury of a child, involving one or more of the following: neglect, physical harm, sexual abuse or exploitation, or emotional abuse.

Circumstances – Situational findings.

Commission (Act of) – Supervision that willfully endangers a child's health and welfare.

Congenital anomaly – A medical or genetic defect present at birth.

Contributing Factors – Behavioral actions that may elevate the potential risk of fatality.

Coroner – Jurisdictional official charged with determining the manner and cause of death for individuals perishing in sudden, violent, or suspicious circumstances. Performs much the same function as a Medical Examiner, but may or may not be a physician.

CPS (Child Protective Services) – Social service system engaged in protecting children from maltreatment.

CSS (Children's Special Services) – Tennessee Department of Health program that provides medical care and coordination to families with severely ill or disabled children under the age of 21.

Death Certificate – Official documentation of an individual's death, indicating the manner and cause of death.

Death Scene Investigation – Portion of the Child Fatality Review process that gathers relevant information and interviews at the site of a child's death for the purpose of determining or confirming the manner and cause of death.

Exposure – Cause of death directly related to environmental factors; typically death from hyper- or hypothermia.

External – Categorization of non-medical manners of death: i.e., accident, homicide, or suicide.

Full-term – A gestation of 37 or more weeks.

Homicide – Death perpetrated by another with the intent to kill or severely injure.

Hyperthermia – High body temperature.

Hypothermia – Low body temperature.

Infant – Child under one year of age.

Manner of Death – The intent of a death, i.e. whether a death was caused by an act carried out on purpose by oneself or another person(s): Natural, Accident, Suicide, Homicide, or Undetermined.

Medical Examiner – Physician charged with determining the manner and cause of death for individuals perishing in sudden, violent, or suspicious circumstances.

Missing – Case information or data that has not been included on the Child Fatality Review reporting form.

Natural – Categorization of deaths indicating a medical cause, such as congenital conditions, illness, prematurity, or SIDS.

Neglect – Failure to provide basic needs, such as food, shelter, and medical care.

Omission (Act of) – Supervision entirely absent or inadequate for the age or activity of the child.

Pending – Indication that an official manner of death awaits further investigation.

Preterm – Birth occurring at a gestation of less than 37 weeks.

Preventability – Indicates the likelihood that a death could have been averted with reasonable efforts on the part of an individual or community.

Sudden Infant Death Syndrome (SIDS) – An exclusionary manner of death for children less than one year of age, indicating that all evidence (including an autopsy, death scene investigation, and review of the medical record) has failed to yield the specific cause of a natural death.

Supervisor – Individual charged with the care of a child at the time of his or her death.

Undetermined – Default manner of death when circumstances and/or investigation fail to reveal a clear determination.

Unknown – Case information or data that is unattainable or unavailable after review by the CFRT.

Appendix C—Child Deaths by County of Residence

Table 28. Child Fatalities (Number and Rate) by County, 2013

Child Deaths in 2013			
County Name	Number of Child Deaths	Children Ages 0-17 Population	Rates per 100,000
TENNESSEE	871	1,488,976	58.5
ANDERSON	12	15,736	76.3
BEDFORD	6	11,999	50.0
BLEDSON	2	2,458	81.4
BLOUNT	11	26,479	41.5
BRADLEY	14	22,991	60.9
CAMPBELL	6	8,430	71.2
CANNON	3	2,829	106.0
CARROLL	2	6,297	31.8
CARTER	5	11,081	45.1
CHEATHAM	5	9,274	53.9
CHESTER	2	4,004	50.0
CLAIBORNE	2	6,194	32.3
COCKE	9	7,349	122.5
COFFEE	6	12,664	47.4
CUMBERLAND	10	10,461	95.6
DAVIDSON	102	144,155	70.8
DECATUR	1	2,355	42.5
DEKALB	3	4,276	70.2
DICKSON	6	11,796	50.9
DYER	4	9,228	43.3
FAYETTE	9	8,157	110.3
FENTRESS	5	3,914	127.7
FRANKLIN	1	8,836	11.3
GIBSON	9	11,982	75.1
GILES	3	6,082	49.3
GRAINGER	3	4,776	62.8
GREENE	8	13,761	58.1
GRUNDY	1	2,931	34.1
HAMBLEN	7	14,660	47.7
HAMILTON	36	74,632	48.2
HARDEMAN	8	5,235	152.8
HARDIN	6	5,373	111.7
HAWKINS	12	11,968	100.3
HAYWOOD	3	4,315	69.5
HENDERSON	7	6,531	107.2

HENRY	5	6,690	74.7
HICKMAN	4	5,179	77.2
HUMPHREYS	2	3,978	50.3
JEFFERSON	6	11,087	54.1
JOHNSON	3	3,135	95.7
KNOX	43	96,834	44.4
LAKE	2	1,249	160.1
LAUDERDALE	4	6,426	62.2
LAWRENCE	3	10,300	29.1
LEWIS	2	2,637	75.8
LINCOLN	1	7,578	13.2
LOUDON	6	10,037	59.8
MCMINN	3	11,288	26.6
MCNAIRY	7	5,875	119.1
MACON	2	5,527	36.2
MADISON	11	23,484	46.8
MARION	2	6,000	33.3
MARSHALL	6	7,338	81.8
MAURY	11	19,659	56.0
MEIGS	2	2,350	85.1
MONROE	4	9,818	40.7
MONTGOMERY	28	49,859	56.2
MOORE	1	1,295	77.2
MORGAN	1	4,229	23.6
OBION	4	6,837	58.5
OVERTON	1	4,937	20.3
PERRY	1	1,725	58.0
POLK	6	3,497	171.6
PUTNAM	8	16,126	49.6
RHEA	8	7,607	105.2
ROANE	6	10,444	57.4
ROBERTSON	11	16,919	65.0
RUTHERFORD	21	71,322	29.4
SCOTT	3	5,313	56.5
SEQUATCHIE	2	3,225	62.0
SEVIER	13	19,772	65.7
SHELBY	191	239,975	79.6
SMITH	2	4,473	44.7
SULLIVAN	16	31,066	51.5
SUMNER	17	40,824	41.6
TIPTON	7	15,821	44.2
TROUSDALE	2	1,788	111.9

UNICOI	6	3,477	172.6
UNION	1	4,376	22.9
VAN BUREN	1	1,057	94.6
WARREN	12	9,454	126.9
WASHINGTON	16	25,310	63.2
WAYNE	3	3,037	98.8
WEAKLEY	2	7,120	28.1
WHITE	3	5,743	52.2
WILLIAMSON	12	55,864	21.5
WILSON	8	29,402	27.2

Data source: Tennessee Department of Health, Division of Health Statistics.

Appendix D—Infant Deaths by County of Residence

Table 29. Infant Mortality (Number and Rate) by County, 2013

Infant Deaths in 2013			
County Name	Number of Infant Deaths	Live Births	Rates per 1,000
TENNESSEE	543	79954	6.8
ANDERSON	5	765	6.5
BEDFORD	3	603	5.0
BLOUNT	4	1307	3.1
BRADLEY	10	1241	8.1
CAMPBELL	2	420	4.8
CANNON	2	130	15.4
CARROLL	2	305	6.6
CARTER	2	501	4.0
CHEATHAM	4	429	9.3
COCKE	5	382	13.1
COFFEE	2	661	3.0
CUMBERLAND	5	527	9.5
DAVIDSON	76	9911	7.7
DECATUR	1	136	7.4
DEKALB	1	222	4.5
DICKSON	2	619	3.2
DYER	1	452	2.2
FAYETTE	4	411	9.7
FENTRESS	5	187	26.7
GIBSON	5	610	8.2
GILES	1	317	3.2
GRAINGER	1	216	4.6
GREENE	7	643	10.9
HAMBLEN	4	760	5.3
HAMILTON	28	4170	6.7
HARDEMAN	4	274	14.6
HARDIN	3	282	10.6
HAWKINS	7	523	13.4
HAYWOOD	2	237	8.4
HENDERSON	4	319	12.5
HENRY	2	352	5.7
HICKMAN	2	284	7.0
HUMPHREYS	2	198	10.1
JEFFERSON	2	500	4.0
JOHNSON	2	144	13.9

KNOX	26	5113	5.1
LAKE	1	63	15.9
LAUDERDALE	3	288	10.4
LEWIS	2	118	16.9
LOUDON	5	543	9.2
MCMINN	2	589	3.4
MCNAIRY	3	269	11.2
MACON	2	311	6.4
MADISON	8	1256	6.4
MARION	2	315	6.3
MARSHALL	3	350	8.6
MAURY	4	1045	3.8
MEIGS	1	136	7.4
MONROE	3	535	5.6
MONTGOMERY	20	3220	6.2
MOORE	1	59	16.9
OBION	2	334	6.0
POLK	2	167	12.0
PUTNAM	7	888	7.9
RHEA	5	402	12.4
ROANE	4	476	8.4
ROBERTSON	6	872	6.9
RUTHERFORD	17	3742	4.5
SCOTT	2	296	6.8
SEQUATCHIE	1	163	6.1
SEVIER	10	1003	10.0
SHELBY	127	13760	9.2
SULLIVAN	10	1587	6.3
SUMNER	12	2000	6.0
TIPTON	1	757	1.3
TROUSDALE	2	98	20.4
UNICOI	2	166	12.0
WARREN	6	507	11.8
WASHINGTON	11	1327	8.3
WAYNE	3	132	22.7
WEAKLEY	1	349	2.9
WHITE	2	317	6.3
WILLIAMSON	7	2096	3.3
WILSON	5	1374	3.6

Data source: Tennessee Department of Health, Division of Health Statistics.

Hospitals Promote Safe Sleep to Save Babies Lives

The Tennessee Department of Health (TDH) partnered with 100% of birthing hospitals (66) and 5 non-delivery hospitals across the state in 2014 to spread the Safe Sleep message to parents and caregivers. These hospitals have agreed to develop and implement a hospital Safe Sleep policy, which at minimum must contain the following:

- At least annual education to all perinatal staff (OB, peri/postpartum and pediatrics) on Safe Sleep recommendations
- Requirements for staff to model Safe Sleep recommendations
- Plan for at least quarterly internal compliance audits with hospital policy

Once the Safe Sleep policy is written and submitted to Tennessee Department of Health, partner hospitals receive enough “Sleep Baby Safe and Snug” board books for each birth at their facility for a year, “ABC’s of Safe Sleep” educational materials, recognition on the TDH website, a signed certificate from the TDH Commissioner and a press release template.

Even though the overall infant mortality rate and number of infant deaths has been declining over the past few years, there has been an increase in the number of sleep-related deaths. In 2013, out of 543 infant deaths, 114 were due to sleep-related causes (21% of all infant deaths). The main contributors to sleep-related deaths in Tennessee are: Baby not sleeping in a crib or bassinette (76% of deaths), unsafe bedding or toys in the crib (62% of deaths), and infant not sleeping on back (61%). These data show why it is important to follow the ABC's of safe sleep—babies should sleep **A**lone, on their **B**ack, and in a **C**rib. If we could eliminate these preventable sleep-related deaths, we would move from the bottom five states in infant mortality to the national average.

Since 98.7 percent of Tennessee babies are born in hospitals, hospitals play an important role in educating new parents and caregivers about ways to keep babies safe while sleeping. A 1998 study showed that among parents who observed stomach sleeping in hospital, 93% intended to place infant on stomach at home. A 2001 study showed parents who saw exclusive back sleeping in the nursery are more likely to put baby on back at home.

The goal of the hospital safe sleep policy project is to teach all new parents about safe sleep before their infants are discharged, teach all obstetrics and perinatal staff about safe sleep and model safe sleep behavior in the hospital. A safe sleep educational flipchart was created for the hospitals to utilize to ensure that a consistent message is taught at all hospitals throughout Tennessee.

Currently, 94.3% (67) of the hospitals that signed the pledge to participate have developed and implemented their safe sleep policy. The births at these hospitals also represents approximately 94% of all births in Tennessee, therefore the majority of new parents are now receiving education on safe sleep before being discharged home with their infants. Safe sleep education has shown to be successful in the past. From 2012-2013 sleep related deaths decreased from a rate of 1.56 to a rate of 1.14 per 1,000 live births. During this time, education was provided to some parents throughout Tennessee. Now with parents receiving safe sleep education at hospitals statewide, we expect to see additional decreases in sleep-related deaths in future years.

Tennessee Schools Compete to Increase Seat Belt Use

The Tennessee Department of Health (TDH) partnered with trauma centers to assist schools with promotion of seat belt use. Trauma center staff provided technical assistance and resources to student groups as they developed and implemented educational programming with the goal of increasing seat belt compliance. According to the National Highway Traffic Safety Administration, observed seat belt use among teens and young adults is the lowest of any age group, with 56% of young people 16 to 20 years old involved in fatal crashes being unbuckled. Overall seat belt usage rate among Tennesseans in 2012 was 84.6%. Baseline data from *Battle of the Belt* School compliance checks in the fall of 2013 showed a 75% seat belt use rate.

The *Battle of the Belt* program's main goal is to reduce the number of motor vehicle related injuries and fatalities among Tennessee high school students by increasing seat belt use in Tennessee. The target audience is teen drivers, but other school personnel such as faculty and staff may also be impacted by the program.

Trauma Center Directors, Injury Prevention Specialists, State Troopers, and others worked together to recruit and support school districts to provide ongoing educational programming and seat belt checks on their local campuses. Partners included: Monroe Carell Jr. Children's Hospital at Vanderbilt, University of Tennessee Medical Center, Erlanger Medical Center, Holston Valley Medical Center, Regional One Health, Bristol Regional Medical Center, and Johnson Center Medical Center. This year, two new trauma centers were recruited including: TriStar Skyline Medical Center and Starr Medical Center. The Governors' Highway Safety Office, The Tennessee Colleges of Applied Technology, School Resource Officers, Tennessee Department of Education, Coordinated School Health, Tennessee Association Health Occupations Students of America (HOSA) all donated time and resources to the program.

With assistance from trauma centers and other partners, schools completed an initial baseline seat belt compliance check and then developed and conducted ongoing educational programming about the value of seat belt use. The goal of the programming was to increase seat belt compliance and measure this increase by completing two unannounced subsequent checks throughout the school year. Schools submitted their educational programming and compliance check data online.

Twenty-eight schools participated in the program in 2013-14, conducting a total of 64 seat belt compliance checks, capturing seat belt usage information on 25,001 drivers and passengers. Schools also submitted online public service announcements and a "competition packet" detailing the educational programming designed to increase seat belt use in their school community. A majority of the schools who conducted at least two seat belt checks demonstrated an increase in seat belt use. Hixson High School was declared the "Overall Winner" and "Best Educational Campaign Winner" while achieving an increase in seatbelt use of 17%. Summertown High School won "Highest Increase In Seatbelt Use" award for 2013-14 with an increase in seatbelt use of 40%. An evaluation by the University of Tennessee showed that for schools who submitted comparison data, the program achieved an overall improvement in seat belt compliance of 8%.

Improving SUIDI Form Completion

The prevention of child deaths is facilitated through gathering data when deaths occur to determine what could be done in the future to prevent the death. The completion of the Sudden Unexplained Infant Death Investigation (SUIDI) form is crucial to gather necessary information for infant deaths. Baseline data on SUIDI form completion was collected in 2014. The data showed there are many opportunities for improvement in gathering complete and accurate data after an infant death.

In 2012, a SUIDI form should have been completed for 169 of the 576 infant deaths. Baseline data showed a SUIDI form was completed for 66.3% (N=112) of infant deaths requiring one. The area with the best SUIDI completion form rate was the Northeast region, which completed a form for 90% of infant deaths that occurred. The metro region with the best SUIDI completion form rate was Sullivan County, where investigators completed a form for 100% of the infant deaths (N=6). The area with the lowest SUIDI completion form rate was the West region, which completed a form for 3 of the 8 (38%) infant deaths that occurred. The metro region with the lowest SUIDI completion form rate was Shelby County, where a form was completed for 17 of the 33 (52%) infant deaths.

Several steps have been taken to improve the SUIDI form completion rate including: developing an online death scene investigation training; obtaining funding to purchase materials for death investigators; and increasing training. An online death scene investigation training is being developed by MTSU to allow EMS, firefighters and police to take the course at any time rather than wait for a scheduled class. The training covers basic information first responders should know when responding to the scene of the death of an infant. Topics include the SUIDI “Top 25” questions, the role of the child fatality review teams and the law pertaining to death scene investigation.

To increase capacity to complete the SUIDI form, funding has been obtained to provide the materials needed by first responders and medical examiners. MTSU purchased 200 SUIDI dolls to encourage the medical examiners to conduct doll reenactments at the scene. The doll reenactments allow the medical examiner to see exactly what happened and how the baby was found.

In addition to the SUIDI dolls, funding was obtained through the CDC Sudden Death in the Young (SDY) grant to purchase 60 death scene investigation kits. The kits will include a tablet or laptop, digital camera and a SUIDI doll. The kits will allow medical examiners to take pictures of the death scene, upload them and complete the SUIDI form while at the scene. This should increase the percentage of SUIDI forms completed and increase the quality of the data obtained.

East Tennessee Children’s Hospital Promotes Safe Sleep

Accidental suffocation or asphyxia is the leading cause of preventable infant death in Knox County. Approximately 20% of the infant deaths reviewed in Knox County since 2010 have been sleep-related. In some cases, a family does not have a safe place for their infant to sleep. Education efforts have previously only focused on education at obstetrical and pediatric offices and birth hospitals; Knox County’s CFR team discovered that the emergency rooms can also proactively promote safe sleep. In response to a case that Knox County’s CFR team reviewed involving a sleep-related death, the team made the following recommendation:

For all infant patients, add a question on the electronic medical record (EMR) that the physician completes asking about where the infant sleeps. If a family does not have a designated safe place for the infant to sleep, educate on why this is important. If they indicate they cannot afford a crib or pack ‘n play, provide them with one, show them how to set it up, and refer them to a partnering home visiting program for follow-up. If possible, this could also be incorporated into nursing discharge.

Dr. Mary Palmer, a child abuse specialist/emergency room physician at East Tennessee Children’s Hospital (ETCH) and Knox County’s CFR team leader, led this project. She met with the appropriate individuals at ETCH to inquire about adding a question for all infant patients on sleep location to the electronic medical record. Prior to discussion with the hospital team, Dr. Palmer had already secured assistance from the East Tennessee Safe Sleep Initiative’s (ETSSI) local Cribs for Kids program, who agreed to supply pack ‘n plays to families who reported no other means of acquiring one.

The CFR team anticipated that the suggestion would be met with resistance since (1) it would require physicians to gather additional information during the hospital emergency room visit; and (2) many physicians don’t complete EMR in the patient room, so they would have to remember to ask the question. After Dr. Palmer explained that adding this new question to the EMR would assist in safe sleep hospital designation and possibly save lives, the hospital team had no objections.

The recommendation took two months to implement at the agency. In September 2014, six pack ‘n plays were provided to East Tennessee Children’s Hospital. In October 2014, two pack ‘n plays were distributed to families identified as needing a safe place for their infant to sleep. This would not be possible without the additional information being collected at discharge.

Since East Tennessee Children’s Hospital initiated this process, University of Tennessee Medical Center has started asking about a safe place for infant to sleep at discharge and they have given out a pack ‘n play as well.

Appendix G—Local Child Fatality Review Team Members and Staff

(Team leaders are in **bold** print. JD=Judicial District)

JD 1 (Carter, Johnson, Unicoi, and Washington Counties)

Beth Bare	Kim Garland	Pat Rash
Regina Bowman	David Kirschke, MD	Joanna Roy
Gary Cutshall, LSCW	Sgt. Diane Mays	Fay Willis, RN
Mike DeVoe, MD		

JD2 (Sullivan County)

Kathy Benedetto	Capt. Joel Jones	John Raymond
Julie Canter, JD	Stephen May, MD	Debbie Richmond
Lt. Sean Chambers	Gary Mays	Sam Rutherford
Stephen Combs, MD	Darrell Mears	Lib Sells
John Eanes	Janice Miller, RN	Barry Staubus, JD
Danielle Eller	Marjorie Miller	Michelle Steadman
William Harper, JD	Heather Mullins	Capt. Chris Tincher
Pam Harr	Teresa Nelson, JD	Myra Winters
Cindy Hawkins	Jim Perry	Chasty Zeolia

JD3 (Greene, Hamblen, Hancock, and Hawkins Counties)

Kristina Adams	Russell Clark	Det. Christian Newman
Carmelia Alexander, RN	Betty Davis	Det. Michael O'Keefe
Brenda Cannon, RN	Eddie Davis	Pat Rash
Chief Terry Cannon	Kim Fox	Joanna Roy
Diane Cofield	David Kirschke, MD	

JD4 (Cocke, Grainger, Jefferson, and Sevier Counties)

Charles Arms, JD	Kristin Dean, PhD	Atty. Charles Murphy
Don Best	Rita Hillhouse, RN	Sheri Smith, RN
Kari Bowling, RN	John Holland	Tara Sturdivant, MD
Amy Ball	David McConnell, MD	Capt. Derrick Woods
Susan Blair, RN	Teresa Moyers	

JD5 (Blount County)

Atty. Charles Arms	Mike Flynn, JD	Det. Mike Seratt
Lori Baxter, MD	Amanda May	Sheri Smith, RN
Mary Beth Blevins, RN	Sara Loudermilk, Phd	Tara Sturdivant, MD
Kari Bowling, RN	Sgt. Ronnie Pryor	Michael Teague, MD
Cindy Crawford	Jonathon Rodgers	
Tabitha Damron	Det. Kris Sanders	

JD6 (Knox County)

Mona Blanton-Kitts, LCSW	Rita Hillhouse, RN David Kitts, PhD	Robin Slattery, D-ABMDI Det. Miranda Spangler
LeeAnn Brabson	Alicia Mastronardi, MPH	Joanie Stewart, JD
John Brinkley	Ashley McDermott, JD	Barbara Summers, MD
Angie Bowen, RN	Christopher McLain	David Teaster, MD
Kimberly Christensen	Mary Palmer, MD	Lisa Wagoner, MSN, RN
Tracy Davis	Det. Heather Reyda	Zachary Young-Lutz, RN
Chris Gregory	Kit Rodgers, JD	

JD7 (Anderson County)

Lt. Vaughn Becker	Bobbi Jo Henderson	Joe Pinkerton
Kari Bowling, RN	Jamie Jordan	April Seiber
Patty Campbell, RD	Darinka Mileusnic- Polchan, MD, PhD	Robin Slattery
Thomas Clary, MD	Stacy Park, LCSW	Sheri Smith, RN
Det. Kevin Craig	Angela Perez	
Margaret Durgin		

JD8 (Campbell, Claiborne, Fentress, Scott, and Union Counties)

Kari Bowling, RN	Shannon Follett	Danny M. Sheckles
Kerri Byrd-Hamby	Kim Hammock	Sheri Smith, RN
Steve Carson	Det. Ricky Jeffers	Barbara Williams
Samantha Cardwell- Jennings	Andrea Meadows, MD	Zachary Young-Lutz, RN
Rev. Martha Anne Fairchild	Kim Sanderson	
	Mary Lou Seamon	

JD9 (Loudon, Meigs, Morgan, and Roane Counties)

Kari Bowling, RN	Sherriff Tim Guider	Mona William-Hayes, PhD
Julia Clevenger	Mary Harding, EdS	Tara Sturdivant, MD
Heather Cupp	Dennis Humphrey, JD	Millicent Thomas
Melissa Denton	Alyson Kennedy	
Vickie Fox	Missy Layne	
James P. Guider, MD	Sheri Smith, RN	

JD10 (Bradley, McMinn, Monroe, and Polk Counties)

Robin Allen	Det. Brandon Edwards	Dewayne Scoggins
Jeannie Bentley	Det. Shaunda Efaw	Lt. David Shoemaker
Elisa Bishop, BSN	Tina Florey	Jackie Thompson
Kimberly Bishop	Det. Cody Hinson	Eloise Waters
Deanna Brooks	Susan Merriman	Andy Wattenbarger
Allyson Cornell, MD	Gayla Miller	Laura Wittmaier
Debbie Cox	Inv. Calvin Rockholt	Roxanne Wooten
Steve Crump, JD	Melissa Rodante	

JD11 (Hamilton County)

Beverly Allen	Denise Black	Barbara Breedwell
Sharon Barker	Valerie Boaz, MD	Dr. AnnaMaria Church

Jackie Jolley	Lt. Henry McElvain	James Metcalfe, MD
Leslie Lonshore, JD	Shelley McGraw	Sheryl Rogers, RN
Lisa Lowery-Smith, MD	Det. Ed Merritt	Sgt. Joe Shaw

JD12 (Bledsoe, Franklin, Grundy, Marion, Rhea, and Sequatchie Counties)

Robin Allen	Debbie Cox	Charlene Nunley
Kimberly Bishop	Kimberly A. Dean	Jackie Thompson
Vickie Carr	Dianne Easterly	
Allyson Cornell, MD	Susan Merriman	

JD13 (Clay, Cumberland, DeKalb, Overton, Pickett, Putnam, and White Counties)

Jean Coffee	Tara LeMaire, MD	Carolyn Valerio, PsyD
Chip Cook	John Rust	Richard Williams
Tina Farr, RN	Tonya Scott	
Hoyte Hale	Ann Stamps	

JD14 (Coffee County)

Kelsey Adams	Leanne Eaton	Clifford Seyler, MD
Al Brandon, DO	Susan Ferencei	Lang Smith, MD
Debbie Broadway	Susan Minger	Paul Tibbs
David Brumley, DDS	Deborah Molder	L.B. Windley, Jr., DVM
Mile Clements	Kellie Lusk	Jan Winters
Robin Cutrell	Jason Ponder	

JD15 (Jackson, Macon, Smith, Trousdale, and Wilson Counties)

Alison Asaro, MD	Tina Farr, RN	Tonya Scott
Jean Coffee	Scott Giles, DO	
Chip Cook	John Rust	

JD16 (Cannon and Rutherford Counties)

Alison Asaro, MD	Carl Hudgens	Lt. Britt Reed
Peggy Bratcher	Jason Lamberth	Det. Tommy Roberts
Jennifer Croft	Toni McDaniel	Det. Kevin Stolinsky
Karmen Davis	Capt. Nathan McDaniel	Dwight Stone
Tina Farr, RN	Nicole Miller	Kari Stevens
Doris Denton	Christina Moody	Monty Terry
Dana Garrett	Sgt. Paul Mongold	Sharon Woodard, RN
Laural Hemenway, JD	Carrie Niederhauser	

JD17 (Bedford, Lincoln, Marshall, and Moore Counties)

Cindy Abels	Mike Clements	Kenneth Phelps, MD
Sarah Bates	Abgie Daulkner	William Reuter
Cindy Bolton	Jeremy Ezell	Lang Smith, MD
Det. Scott Braden	Susan Ferencei	Kyle Spears, MD
Debbie Broadway	Deborah Molder	Jan Winters
Brian Bruce	Jill Murdock	Richard Wright
David Brumley, DDS	Elizabeth Osborne	

JD18 (Sumner County)

Chief Kenny Armstrong	Jan Lovell	Chief K.D. Smith
Alison Asaro, MD	Chief Joe Palmer	Richard Smith
Jay Austin	Morgan Radley	Ricky Troupe
Amy Burke-Saylers	Inv. Emily Renz	Det. Jim Vaughn
Karmen Davis	Inv. Pete Ritchie	Ray Whitley, JD
Chief Mark Jenkins	Angela Sadler	Sharon Woodard, RN
Tammy Lee	Sgt. Chris Shockley	Tara Wyllie

JD1901 (Montgomery County)

Alison Asaro, MD	Menzo Faassen	Capt. Justin Sterne
Maj. Amanda L. Antie	Patrice Jessie	Joey Smith
Eric Berg, MD	Maj. Scott Leifson	Inv. Julie Webb
David Brown, MD	Kimberly Lund, JD	Sarah Wilkins
John Carney, JD	David Mendoza, MD	Sgt. Mark Wojanrek
Stacey Coulter	Angela Miller	Danette T. Woodcock
Mary Davila	Maj. Domenick Nardi	Sharon Woodard, RN
Karmen Davis	Samuel M. Peik, MD	
Marianne Erdman	Angela Sadler	

JD1902 (Robertson County)

Alison Asaro, MD	Karmen Davis	Nicole Martin
Jennifer Ashworth, MD	Regina Duffie	Sandra Uhles
Hunter Butler, MD	Det. James Kendrick	Vanessa Watkins
Rebecca Chafatelli	Det. Elizabeth Leonard	Sharon Woodard, RN

JD20 (Davidson County)

Maryam Abdallah	Charlsi Legendre	Janet Nielsen, MA
Vicki Beaver, RN	Amanda Holley, MPH	Sgt. Danny Postiglione
Bonnie Beneke, LCSW	Atty. Brian Holmgren	William Paul, MD, MPH
Vickie Blair-	Leslie Howell	Michelle Rikli, LCSW
Fleming, LMSW	Carol Jones, BSHA	Carolyn Riviere, MS
Verena Brown, MD	Det. Selene Julia	Sue Ross, RNC, PNP
Det. Sarah Bruner	Tina Lester, RN, MSN	Danielle Russell, RN
Allison Butler, RN	Adele Lewis, MD	Tom Sharp
Amy Campbell-Pittz	Deborah Lowen, MD	Robert Taylor
Det. Ron Carter	Brooke McKelvey, MPH	Purnima Unni, MPH
Abbey Chamness	Michael Meadors, MD	Jennifer Weatherly, RN
Karen Grimm, BSW, MA	Katy Miller, JD	

JD2101 (Hickman, Lewis, and Perry Counties)

Angie Arnold	Susan Ferencei	Deborah Molder
David Brumley, DDS	David Fitzgerald	David Rash
Mike Clements	Susan Franks	Lang Smith, MD
Robin Crowell	Jennifer Harris	Teresa Taylor
Tammy Dixon	Zachary Hutchens, MD	Jan Winters

JD2102 (Williamson County)

Charles Achinger	Feng Li, MD	Tamara Swinson
Alison Asaro, MD	Sheriff Jeff Long	Monty Terry
Stokey Bourke	Zannie Martin	Kathy VanBuren
Det. Robert Carden	Tamara Mick	Richard Westgate, RN
Karmen Davis	Catherine Montgomery	Lt. John P. Wood
Regina Duffie	Lisa Robison	Sharon Woodard, RN
Sgt. Tommy Justus	Det. Tameka Sanders	
Shannon Langford	Samuel Smith, MD	

JD2201 (Giles, Lawrence, and Wayne Counties)

Christie Brown	Susan Franks	Janet McAlister
Jamie Brown	Gena Garrard	Deborah Molder
Tracy Brumit	Joyce Green	Lt. Joel Robison
David Brumley, DDS	Roy Griggs	Lang Smith, MD
Mike Clements	Jack Grinnell	Keith Tolar MD
Susan Ferencei	Lisa Hardison	Jan Winters

JD2202 (Maury County)

Tony Bailey	Stephanie Dunn	Troy Potts
David Brumley, DDS	Susan Ferencei	Lang Smith, MD
Mike Clements	Barbara Heier	Stephanie H. Williams
Elizabeth Cook	E. Ann Ingram	Jan Winters
Danny Cupples	Johnny Luttrell	
Jeff Duncan	Deborah Molder	

JD23 (Cheatham, Dickson, Houston, Humphreys, and Stewart Counties)

Karen Anderson	Lt. Shannon Heflin	Donna Nichols
Alison Asaro, MD	Inv. Brian Hooper	Det. Stacey Patterson
Marion Biggs	James Hutcherson	Inv. Glenn Dale Smith
Sgt. J.D. Blackwell	Det. Johnny Hunter	Shayna L. Smith
Comm. Eddie Breeden	Lawrence Jackson, MD	James Snodgrass
Alana Carmical	Donna Leedle	Vanessa Watkins
Karmen Davis	Ginger Lyle, RN	Judy Wilson
Inv. Bryan DeRose	Venk Mani, MD	Sharon Woodard, RN
Regina Duffie	Kay Marshock	
Maggie Filson	Vinny Morgano	

JD24 (Benton, Carroll, Decatur, Hardin, and Henry Counties)

Steve Cantrell	Ricky Inman	James Vinson
Shavetta Conner, MD	Diane Oman	Inv. Gary Vandiver
Christy Espey	Trooper Ollie Parker	Becky Butler White
Lt. Johnny Hill	Danny Tucker	

JD25 (Fayette, Hardeman, Lauderdale, McNairy, and Tipton Counties)

Kinney Bridges	Karen Codjoe, MD	Shavetta Conner, MD
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Scottie DeLashmit
Richard Griggs
Linda F. Moss

Det. Jay Rodriguez
Kaleb Sanders
Kathy Smith

Catherine Walsh, JD
Det. Sheri Wassel
Inv. David Webb

JD26 (Chester, Henderson, and Madison Counties)

Inv. David Dowdy
Mary Beth Duke
Christy Epsey
Harlin Fesmire
Capt. Jeff Fitzgerald

Sgt. Danielle Jones
Rodger Jowers
Stuart Mills
Lisa Piercey, MD
Shanna Shearon, MPH

Lt. Felicia Stacy
Lt. Brad Wilbanks
Tina Williams, Ed.D

JD27 (Obion and Weakley Counties)

Shavetta Conner, MD
Christy Espey
Lt. Phillip A. Gibson
Keith Jones

Laura Toney
Kathy Smith
Tommy Thomas
Chief Randall Walker

Inv. Candice Winstead
Inv. Angie Workman
Rick Workman

JD28 (Crockett, Gibson, and Haywood Counties)

Gary Brown, JD
Shavetta Conner, MD
Mary Beth Duke
Tony Emison. MD

Chief Roger Jenkins
Tonika Noble
Sgt. Michael Phillips
Elashia Ramsey

Kathy Smith
Jimmy Studdard

JD29 (Dyer and Lake Counties)

Phil Bivens, JD
Sheriff Jeff Box
John Cummings, MD
Shavetta Conner, MD
Chief Dep. Joe England

Christy Espey
Chad McNeil
Chief James Medling
Jack Mauldin
Jessica Roser, RN

Chad Sipes
Kathy Smith
Lisa Stanley, RN
Chief Charles Stewart
Lt. Billy Williams

JD30 (Shelby County)

Patricia Bafford, Ed.D.
Jamila Batts, RN
Maxine Bowles, RN
Lee Branch
Sgt. D. Brunson
Mark Bugnitz, MD
Karen Chancellor, MD
Eric Christensen, JD
Meg Harmeier
Sgt. Paula Harris

Chief Andrew Hart
Dep. Chief Jim Harvey
Susan Helms, RN
Gannon Hill
Danielle Hobbs
Karen Lakin, MD
Sean Lester
Jason Martin
Katie McKinnie
Helen Morrow, MD

Jennifer Nichols, JD
Vanessa Roberts
Col. Mike Ryall
Sam Sheppard
Ajay Talati, MD
Det. Jason Valentine
Denise Webb
Evelyn Young

JD31 (Van Buren and Warren County)

Jean Coffee
Chip Cook

Tina Farr, RN
John Rust

Tonya Scott

Statement of Compliance with 2012 Tenn. Pub. Acts, ch. 1061 (the “Eligibility Verification for Entitlements Act”) as required by Tenn. Code Ann. § 4-57-106(b)
None of the department’s activities relative to the Child Fatality Review Teams involve the provision of services to individuals who are subject to the SAVE Act.