



TENNESSEE

Special Emphasis Report: Infant and Early Childhood Injury, 2012

Injury is a Leading Cause of Death in Children

Injury is the leading cause of children’s death and a major public health problem across the U.S. While fatal injuries are tragic, they represent a small portion of the actual burden injuries have in our population. Hundreds of injured children in Tennessee face disability and chronic pain for the rest of their lives, and these injuries are often predictable and preventable.

In 2012, there were 191 deaths of children ages 0-5 in Tennessee as a result of an injury. For every child that died, there were four hospitalizations, and approximately 330 emergency department (ED) visits. These numbers do not include cases treated at home or in a physician’s office.

Many of the cases are identifiable in the vital records, but most of the infant deaths (63%) were found to be injury related only after they were reviewed by the Child Fatality Review (CFR) teams, particularly those sleep-related.

Figure 1: Annual Injuries among Children Ages 0-5 Years, Tennessee, 2012

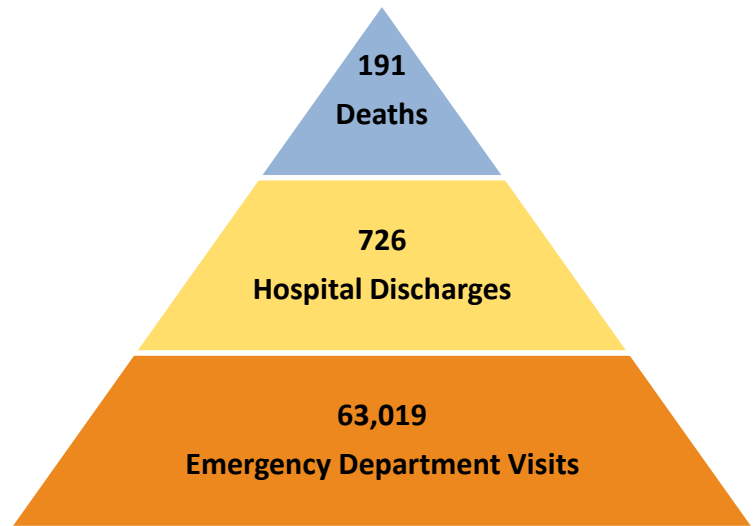
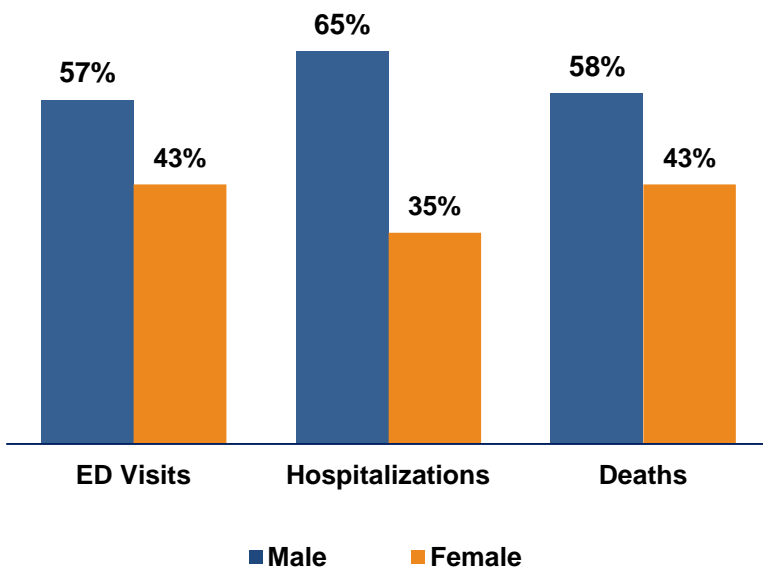


Figure 2: Percent of Injury Deaths, Hospitalizations and Emergency Department Visits among Children Ages 0-5 Years, by Sex, Tennessee, 2012



Childhood Injury by Sex

Overall, boys account for a greater percentage of fatal and nonfatal injuries among Tennessee children than girls as depicted in Figure 2. In 2012, 65% of injury hospital stays, 57% of injury ED visits, and 58% of injury deaths occurred among boys.

While the gender distribution of non-fatal injuries was similar across age groups, the percentage of infant boys who died (64%) was larger than of children ages 1-5 years (49%).





TENNESSEE

Special Emphasis Report: Infant and Early Childhood Injury, 2012

Injury Deaths in Infants

In Tennessee, the majority (74%) of fatal injuries among children ages 0-5 were infants (under one year of age). Of the 142 infant deaths, the great majority (88%) were unintentional, and one in every 13 (8%) was a homicide.

Among the 126 unintentional infant deaths, 34 were due to suffocation, which represents 24% of all infant fatal injuries. A quarter of those suffocations occurred while in bed. This figure, however, is an underestimation of the actual number of deaths that occur due to an unsafe sleep environment. Sleep-related deaths are difficult to classify. Some are diagnosed as suffocation, while others are diagnosed as sudden infant death syndrome (SIDS) or undetermined. Thus, to better determine the burden of this injury in Tennessee, further detailed review of infant deaths is conducted by the Child Fatality Review (CFR) teams. The detailed CFR process and data results are provided in the Sleep-Related Infant Deaths section of this report.

Figure 3: Injury Deaths among Infants Less than 1 Year, Tennessee, 2012

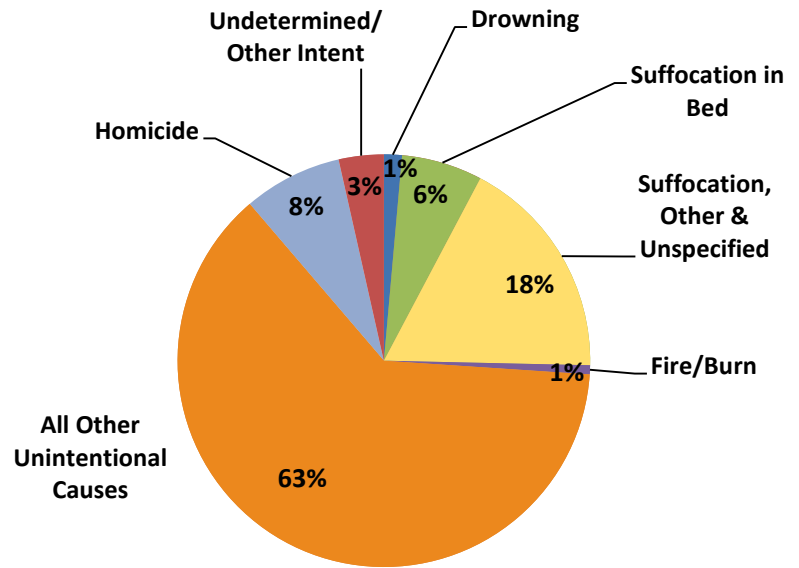
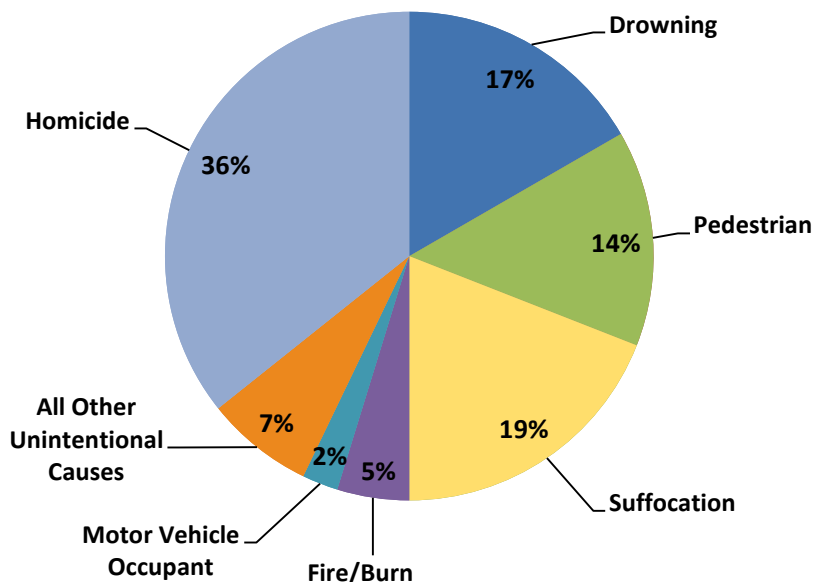


Figure 4: Injury Deaths in Children Ages 1 – 5 Years, Tennessee, 2012



Injury Deaths in Young Children

In 2012, there were 49 injury deaths of young children ages 1-5 years in Tennessee. While the majority of these deaths (64%) were unintentional, one in every three (36%) was a homicide. Most of the unintentional deaths (56%) were girls, while most of the homicide cases (60%) were boys.

The leading causes of fatal injuries were homicide, followed by unintentional suffocation and drowning. None of the suffocation cases occurred in bed.

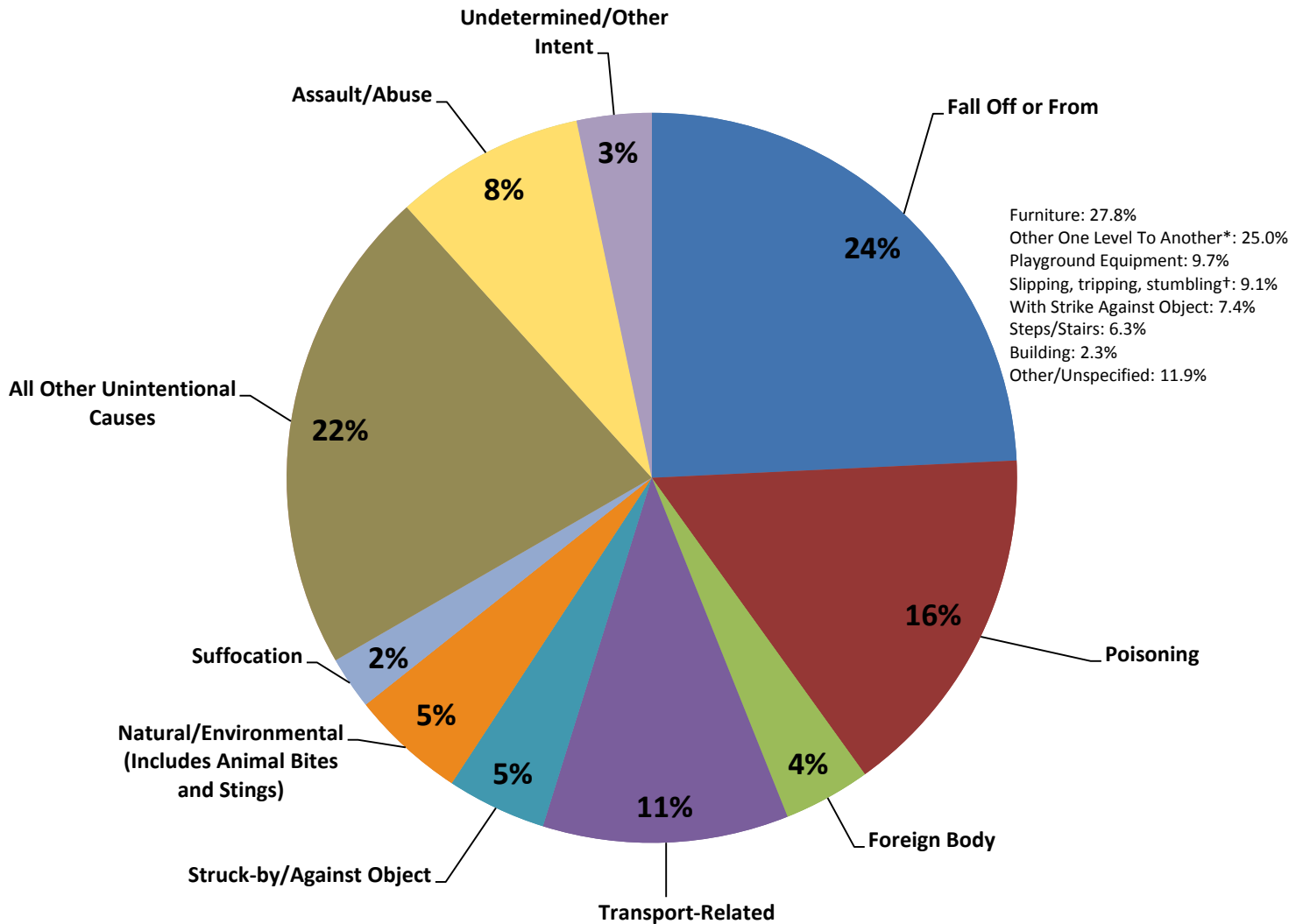


TENNESSEE

Special Emphasis Report: Infant and Early Childhood Injury, 2012

Injury-Related Hospitalizations

Figure 5: Injury-Related Hospital Discharges among Children Ages 0 – 5 Years, Tennessee, 2012



In 2012, there were 726 injury-related hospitalizations of Tennessee infants and children ages 1-5 years. While most of the injuries were unintentional for both infants (70%) and children ages 1-5 years (94%), nearly a quarter of the hospitalized infants (24%) were due to injuries from an assault or abuse.

The top two leading causes of injury hospitalizations for all children ages 0-5 years were unintentional falls and poisoning. The most common causes of fall hospitalizations were falls from furniture (27.8%) and from one level to another* (25.0%). The third leading cause of unintentional injury hospitalizations was suffocation for infants, and transport-related accidents (including motor-vehicle occupant, bicycle and pedestrian accidents) for children ages 1-5 years.

*Includes falls from one level to another not already included in a fall category.

†Includes falls from skateboards, skis, snowboards, etc.

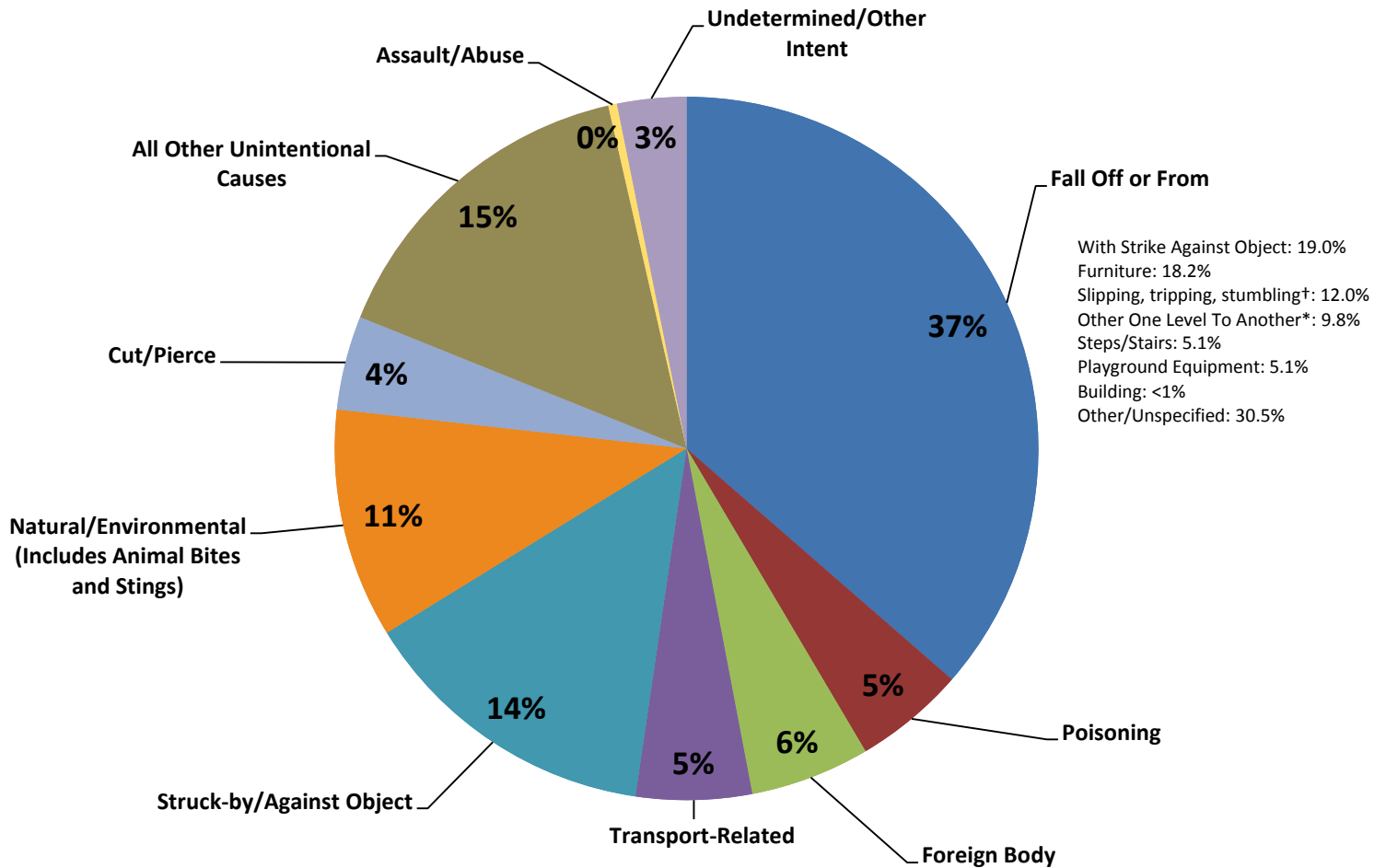


TENNESSEE

Special Emphasis Report: Infant and Early Childhood Injury, 2012

Injury-Related Emergency Department Visits

Figure 6: Injury-Related Emergency Department Visits among Children Ages 0 – 5 Years, Tennessee, 2012



In 2012, there were 63,019 injury-related emergency department visits among Tennessee children ages 0-5 years. The top three leading causes of injury emergency department (ED) visits were the same for both infants and children ages 1-5 years : unintentional falls (37%), being struck by/against an object (14%), and natural/environmental (11%).

Fall was by far the main reason children visited the ED, 46% for infants and 37% for children ages 1-5 years. The most common causes of fall ED visits were those resulting in a strike against an object (19%) followed by falls from furniture (18%). Most of the injury ED visits (95%) caused being struck by/against an object were among children ages 1-5 years; and animal bites/insect stings accounted for 99% of all ED visits due to a natural/environmental cause.

*Includes falls from one level to another not already included in a fall category.

†Includes falls from skateboards, skis, snowboards, etc.



TENNESSEE

Special Emphasis Report: Infant and Early Childhood Injury, 2012

Table 1: Injury-Related Hospital Discharges and Emergency Department (ED) Visits among Children Ages 0 -5 Years, by Age Group, Tennessee, 2012

	Infants less than 1 Year		Children Ages 1-5 Years	
	Hospital Discharges	ED Visits	Hospital Discharges	ED Visits
Unintentional Injuries	124	5,859	517	54,907
Cut/pierce	2	137	5	2,585
Drowning/submersion	2	9	18	71
Falls (<i>off/from</i>):	54	2,675	122	20,266
Furniture	24	1,110	25	3,076
Steps/stairs	2	114	9	1,052
With strike against object	2	282	11	4,067
Slipping/tripping/stumbling	5	109	11	2,636
Playground equipment	0	11	17	1,169
Building	0	-	4	30
Other fall from one level to another	19	503	25	1,747
Other/unspecified	2	542	19	6,453
Fire/Burn	7	175	67	1,256
Foreign Body	4	279	24	3,188
Natural and Environmental	8	519	29	6,132
Excessive heat	0	12	2	25
Dog bites	0	30	16	965
Other bites/stings/animal injury	2	457	7	5,113
All other natural/environmental	6	20	4	29
Poisoning	9	345	106	2,870
Struck-by/against object	7	546	25	8,212
Suffocation	8	33	9	68
Transport-related	2	396	77	2,954
Motor vehicle (MV)-occupant	2	368	36	1,717
Bicycle/tricycle (MV & non-MV)	0	-	5	677
Pedestrian (MV & non-MV)	0	1	20	110
Other transport	0	27	16	450
All other unintentional causes	21	745	35	7,305
Assault/Abuse	41	34	20	220
Undetermined/Other Intent	13	236	11	1,763
Total Injury-Related Cases	178	6,129	548	56,890



TENNESSEE

Special Emphasis Report: Infant and Early Childhood Injury, 2012

Sleep-Related Infant Deaths

Tennessee’s 34 local Child Fatality Review (CFR) teams review all eligible infant deaths (born after 22 weeks of gestation or weighing over 500 grams) to determine whether an infant death was truly sleep-related. The review process consists of the collection, careful review and discussion of pertinent reports with information about the infant’s usual sleep environment and position, where the child was last placed to sleep, the sleep position the infant was found in, the types of objects found near the body, and whether any of those object obstructed the infant’s airways.

In 2012, the CFR teams identified 122 infant deaths that resulted from an unsafe sleep environment. As mentioned before, 34 (29%) of the cases were classified as suffocation while the majority were undetermined.*

- More infant boys (77) died in sleep-environments than girls (45).
- Most of the infants were also white (76). However, black infants had a higher death rate (2.7 per 1,000 live births) and are at a higher risk of suffering this fatality than white infants (1.3 per 1,000 live births).
- Among many factors that can contribute to these deaths, there were three major ones: infant not sleeping alone (93%), infant not sleeping in a crib or bassinette (75%), and infant not sleeping on their back (71%).

Figure 7: Infant Sleep-Related Deaths by Underlying Cause of Death from a Death Certificate, Tennessee, 2012

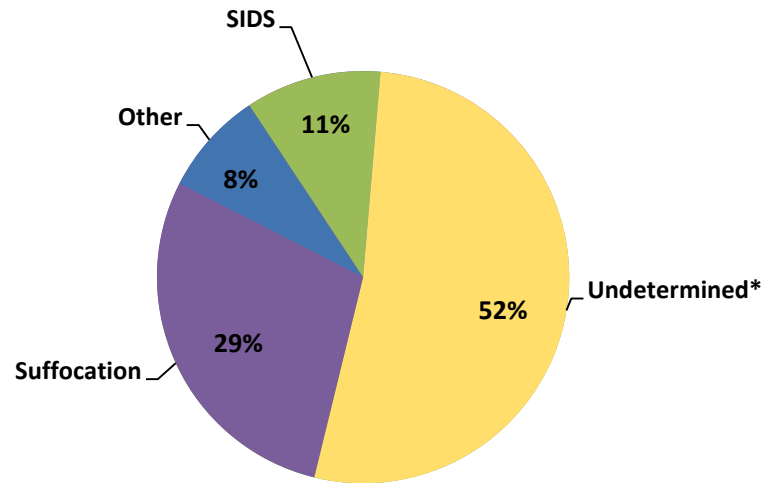
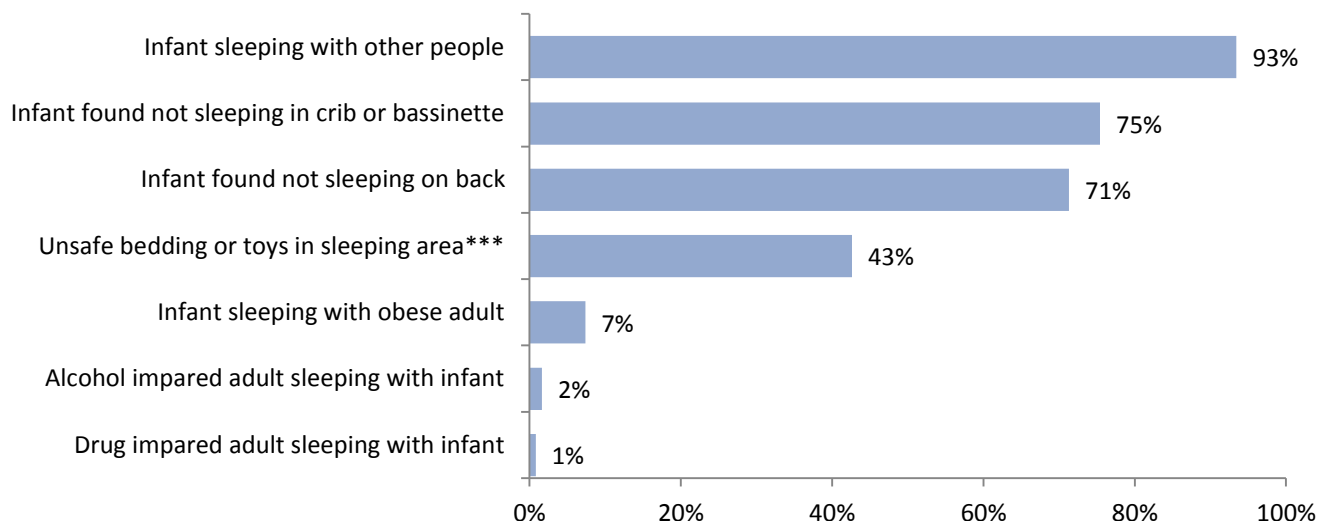


Figure 8: Contributing Factors in Sleep-Related Deaths, Tennessee, 2012**



*Includes ICD-10 Codes R95 and R99

**More than one contributing factor may have been present in a single death

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



TENNESSEE

Special Emphasis Report: Infant and Early Childhood Injury, 2012

Tennessee Child Injury Prevention Activities

The goal of the Tennessee Injury and Violence Prevention Program (TIVPP) is to reduce the number of injuries to Tennesseans through data collection and analysis of vital and hospital records. A major achievement in 2014 was the implementation of a statewide initiative for a hospital Safe Sleep policy. All (100%) birthing hospitals and five non-delivery hospitals agreed to adopt a policy to educate and model Safe Sleep recommendations. Also, a First Responder D.O.S.E. (Direct On-Scene Education) training was conducted to equip first responders to educate families about safe sleep.

Other activities include Tennessee's Child Safety Fund, which provides 32 agencies with funds quarterly to purchase and distribute child safety seats throughout the state.



Tennessee Healthier Beginnings Home Visiting Program

The Healthier Beginnings Home Visiting Program provides intensive and consistent services to expectant or new families to improve the health and developmental outcomes of children from birth through age five. The Tennessee Department of Health provides funding to eight community based agencies to offer home visiting services using the Healthy Families America (HFA), Nurse Family Partnership (NFP) and Parents as Teachers (PAT) evidence-based models. These home visiting programs are offered in thirty counties.

Goals of the Healthier Beginnings Program include:

- Improve the quality of home visiting services for children and families in Tennessee
- Improve outcomes for young children and families by identifying needs and referring for other services prior to school entry
- Strengthen the early childhood home visiting workforce in Tennessee
- Promote a comprehensive, high quality early childhood system in Tennessee that includes home visiting programs.

Tennessee Essentials for Childhood Activities

Tennessee is one of seventeen states receiving technical assistance only from the Centers for Disease Control by participating in conferences, webinars and activities related to the Essentials for Childhood Framework. Tennessee has established a Young Child Wellness Council; created a Strategic Action Plan; and is working to achieve the vision "that all Tennessee children will realize their optimal development and wellness during the early years to create a foundation for life-long success."

Data sources: Tennessee Department of Health; Death Statistical and Hospital Discharge Data Systems. All data in this report are based on the CDC injury definition, whereby injury cases are selected based on ICD-10 underlying cause codes (deaths), ICD-9-CM primary diagnosis codes (hospitalizations), and either ICD-9-CM primary diagnosis or external cause of injury codes (ED visits). All injuries are considered unintentional unless specified otherwise. Percentages in some tables/graphs may not sum to 100% due to rounding. Reference to any commercial entity or product or service on this page should not be construed as an endorsement by the Government of the company or its products or services.