RESPECT, COMPASSION, UNDERSTANDING, COMMITMENT, RESPONSIVENESS

OFFICE OF THE CHILD ADVOCATE
CONNECTICUT CHILD FATALITY REVIEW PANEL

AN EXAMINATION OF CHILD FATALITIES
A FIVE YEAR REVIEW 2011-2015
A Message from Dr. Kirsten Bechtel & Child Advocate Sarah Eagan, Co-chairs of the State Child Fatality Review Panel

Since the creation of the Connecticut State Child Fatality Review Panel (CFPR) following the death of Baby Emily in 1995, informing the public as to how children are harmed has been a priority. The purpose of providing the information on how and why children die from unintentional and intentional injuries is to support primary prevention efforts and effect systemic change on behalf of children and families.

This report is offered with an understanding that the loss of any child is devastating to families and communities. The Office of the Child Advocate, in consultation with the CFRP, shares this report with the public, with our elected officials, state policy makers, our prevention partners and with all of our communities, in recognition of our shared and collaborative commitment to keeping our children safe.

We acknowledge and applaud the efforts of first responders, law enforcement, medical professionals, and other professionals who work tirelessly to save our children when tragedy befalls them.

Thank you to all of our partners who care for children and for all you do to prevent childhood injuries and fatalities. Each and every day, collectively you make a difference in the lives of children.

Thank you to the members of the CFRP who over the course of the last five years have championed the Connecticut child fatality review process to better support prevention and intervention efforts throughout our state. Eight members of the CFRP have served on the panel for the past five years; their names are asterisked.

Office of the Child Advocate
The Connecticut Office of the Child Advocate (OCA) is an independent state oversight agency directed by statute to investigate and report on the efficacy of child-serving systems. The OCA is statutorily obligated to evaluate and report regarding the delivery of state-funded services to children; to review state and local agency procedures with a view toward the rights of vulnerable children; to review and investigate complaints concerning the provisions of services to children; to recommend changes in state policies concerning children; and to take all possible action including, but not limited to, conducting reviews of programs of public education, undertaking investigations, legislative advocacy, and making proposals for systemic reform and formal legal action.

The OCA also is charged with examining and investigating unexplained and unexpected child fatalities. The OCA is a permanent member and current co-chair of the CFRP. The OCA is recognized nationally as a leader in fatality review. Publications and investigative reports generated by OCA have been distributed broadly and have garnered national attention.

Child Fatality Review Panel
States across the country, as well as Canada and Great Britain, have child death review processes. In Connecticut, state law governs the child fatality review process and directs the CFRP—comprised of legislative appointees and state agency designees—to “review the circumstances of the death of a child placed in out-of-home care or whose death was due to unexpected or unexplained causes to facilitate the development of prevention strategies to address identified trends and patterns of risk and improve coordination of services for children and families in the state” (Conn. Gen. Stat. § 46a-13). The CFRP, through the expertise of a multidisciplinary panel membership, makes recommendations for child death prevention. The CFRP, which is staffed by OCA, assists with examining risk factors that may have contributed to a child’s death. The panel uses this information to develop and publish recommendations for child death prevention efforts. The panel may direct the OCA to conduct a “fatality investigation” of deaths where it is believed that state agencies may have had direct involvement with a child or family. However, the OCA is authorized to conduct an investigative review independent of the CFRP.

Statutory Reporting Requirements
Pursuant to statutory requirements, the OCA reports annually on all unintentional and intentional child deaths that are reported by the Office of the Chief Medical Examiner. The OCA also provides annualized child fatality data for the CT Kids Report Card Leadership Committee, which is a working group of the CT General Assembly’s Committee on Children. The CT Kids Report Card Leadership Committee is a multidisciplinary working group of key stakeholders who help to identify and promote strategies that ensure Connecticut’s children grow up in stable environments, and that they are safe, healthy, and ready to lead successful lives.

Additional reporting requirements were given to OCA in 2015, with the CT General Assembly’s passage of Public Act 15-221, which directed the OCA and CFRP to review current policies, practices and procedures used to protect children ages birth to three years from unexpected death or critical injury. The CFRP will be reporting its findings during the 2016-2017 legislative session.

PA 15-221 also directed that the Child Advocate submit a report to the joint standing committees of the General Assembly having cognizance of matters relating to children and education regarding the causes and rates of child fatalities in the state and that a public forum regarding child fatalities will take place within 60 days after
receiving the annual report. This five year report is responsive to the new legislative requirement.

The new reporting requirements were created in response to a July 2014 OCA report on the particular risks for untimely death to infants and toddlers. Infants and toddlers are more likely to die from unsafe sleep environments, child abuse or accidental injury, compared to all other fatal injuries to children. The OCA’s 2014 report outlined a series of recommendations to reduce infant-toddler fatalities through health care reform and child welfare practice innovation.

Office of the Chief Medical Examiner
The CFRP and OCA work closely with the Office of the Chief Medical Examiner (OCME). The OCME determines the manner of death (natural, accidental, homicide, or undetermined). Connecticut is fortunate to have a centralized medical examiner system comprised of Board Certified Forensic Pathologists, thereby ensuring a robust examination of cases that fall under the OCME’s purview. The OCME provides the OCA/CFRP with timely notice of child deaths as required by statute.

U.S. Commission to Eliminate Child Abuse and Neglect Fatalities-2016
The Commission to Eliminate Child Abuse and Neglect Fatalities (CECANF)—charged with making recommendations to the President and Congress regarding the prevention of child fatalities, was established under the Protect Our Kids Act of 2012, Public Law 112-275. According to the enabling legislation, the CECANF work included an examination of (i) best practices in preventing child and youth fatalities that are caused due to negligence, neglect, or a failure to exercise proper care; (ii) the effectiveness of federal, state, and local policies and systems aimed at collecting accurate and uniform data on child fatalities; (iii) the current barriers to preventing fatalities from child abuse and neglect (iv) strategies to improve child welfare outcomes; and (v) trends in demographic and other risk factors that can be predictive of child maltreatment. The CECANF completed its work, and in March 2016 published its findings in a comprehensive report entitled Within Our Reach: A National Strategy to Eliminate Child Abuse and Neglect Fatalities. Highlights of the report include the following information:

- The majority of children who die from abuse and neglect are very young; approximately 50 percent are younger than 12 months old, and 75 percent are under 3 years old;
- A call to a child protection hotline is the best predictor of a child's potential risk of future injury or death before age five;
- A number of children who died were not known to child protective services (CPS) but had been seen by other service professionals (e.g., health care), highlighting the importance of coordinated and multisystem efforts to prevent child abuse;
- The report outlined a proactive approach to child safety with stronger collaboration among agencies that come into contact with children, more informed decision-making based on better data and tools, and a public health approach that emphasizes prevention;
- The report recommended that every state review its policies on screening reports of abuse and neglect to ensure that the children most at risk for fatality—those under age three—receive the appropriate response, and they and their families are prioritized for services, with heightened urgency for those under the age of one;
- Law enforcement and child protection staff, due to their respective training and experience, have different perspectives of a family's situation. Sharing information promotes greater depth of analysis and more accurate decision-making by both of those professional groups.
All other programs, such as Medicaid and home visiting programs, should be held accountable for ensuring their services are focused on reducing abuse and neglect fatalities.

The entire report can be viewed at:
https://eliminatechildabusefatalities.sites.usa.gov/

Not a day has gone by that we haven’t thought about these children, pictured their faces, and reflected on the many lives cut short.

Solving the issue of child abuse and neglect fatalities is within our reach, if we can apply the lessons of the past, act with urgency to protect children at risk today, and create a new vision for a more effective child welfare system of the future.

Dr. David Sanders  
Chairman  
Commission to Eliminate Child Abuse and Neglect Fatalities

Overview
This report outlines aggregate data and provides analysis of trends in child death. The information is used to support and inform a variety of prevention initiatives throughout the state. Connecticut is 1 of over 40 states that inputs child fatality data into a secure national server for the purpose of understanding how children die across the country. In 2015, OCA successfully merged nearly 2000 cases from an outdated internal data system into the national database. The data is secured by the Center for Fatality Review and Prevention (National CFRP), Michigan Public Health Institutes, and is funded through the Center for Disease Control and Prevention (CDCP), and the Health and Human Services Administration, Maternal Child Health Bureau. OCA has shared de-identified trend data with the National CFRP and the CDCP in an effort to advance research and public policy discussions specifically related to infant safe sleep.

Connecticut has one of the lowest child fatality rates in the country according to Kids Count.  
A project of the Annie E. Casey Foundation  
www.kidscount.org

Summary of Connecticut Findings 2011-2015
This five-year report examines all unintentional and intentional injuries of children that resulted in death between January 1, 2011 and December 31, 2015, and serves as the 2015 annual report. This report is a follow-up to OCA’s 10-year child fatality report that covered the period of January 1, 2001 to December 31, 2010. This report provides specific information on (i) the persistent heightened risk of death for infants and toddlers; (ii) child fatality trends related to homicide and suicide which have not significantly changed in the
past 5 years; (iii) the decrease in childhood fatalities related to accidental deaths from both motor vehicle related accidents and drowning, and (iv) an appendix in the report which shows child fatality trends over a 15 year period broken down in five-year increments.

While this five-year report focuses on intentional and unintentional injuries of children, the death of children due to natural causes is no less tragic. A child’s death is determined to be “natural” when it results from a serious health problem. Children may have suffered from congenital anomalies, genetic disorders, cancer, heart problems, infectious diseases, and asthma. In general, most natural deaths are not considered to be preventable.

However, professionals believe that some child deaths classified as natural can be avoided with medication, vaccination, genetic testing, and routine, comprehensive well-child, dental, behavioral health, prenatal care, and reducing health disparities.

Between 2011-2015, 367 children died from unintentional and intentional injuries in Connecticut. The vast majority of those children were under the age of 1. Infants younger than 12 months of age have the highest risk for premature death, more so than at any other time during childhood and adolescence. The graph below depicts all unintentional and intentional injuries to children, birth through 17, in the 5 year period under review.

### Intentional/Unintentional Fatalities

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<tr>
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<td>74</td>
<td>60</td>
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<td>367</td>
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</table>

### Accidental Deaths

In the United States unintentional injuries due to accidents are the leading manner of preventable death across the life span of children. In Connecticut, 150 children died during this review period from unintentional injuries that were ultimately classified by the Medical Examiner as accidental.

In an examination of accidental deaths of children in Connecticut between 1999 and 2003 (5 years) there were 239 child fatalities from accidental causes. While the number of accidental child deaths has appreciably declined, too many children are still dying in ways that are preventable, and accidental deaths still account for the highest proportion of preventable child deaths. (See appendix, pg. 19.) Generally, accidental/unintentional injuries are the result of motor vehicle crashes (drivers, passengers, and pedestrians), drowning, fires, drug overdose, falls, positional asphyxia, and other injuries.
Motor Vehicle Accidents/Crashes
In Connecticut, for the period of 2011-2015, 69 out of 150 accidental deaths (46%) were due to motor vehicle crashes. These motor vehicle related fatalities are across all age categories.

33 children were killed while passengers in a motor vehicle:
- 5 were ages 0-3
- 12 were ages 4-10
- 8 were ages 11-15
- 8 were ages 13-17

26 children were pedestrians hit by a vehicle these children were either walking, riding a bike, or were in a driveway
- 4 were 0-3
- 8 were 4-10
- 9 were ages 11-15
- 5 were ages 16-17

10 teen drivers were killed in this 5 year period.
- 3 were 16 years-old
- 5 were 17 years-old
- 2 were unlicensed

Teen Driving
Connecticut has one of the strictest graduated driving laws in the nation. New teen drivers have passenger and curfew restrictions, they must have had 40 hours of behind-the-wheel training before applying for a driver’s license, and an eight-hour safe driving course is required for permit holders along with a two-hour class for teens and parents or legal guardians.

In 2014, no teen driver with a valid license was killed in Connecticut. While this was remarkable news, 2015 did not continue the same positive trend. Notably, in CT teen driving-related fatalities remain on the decline. National research shows that 16-year-old drivers who are in accidents were typically at fault and 16 and 17 year-old drivers with one or more passengers in the car participated in more “general foolishness” and distracted behavior (The National Resource Center for Child Death Review). Unfortunately, OCA is not in a position to determine how many of the passenger fatalities or pedestrian fatalities in Connecticut may have been caused by an inexperienced teen driver.

Recommendations for prevention of motor vehicle related fatalities
- Increase public education awareness efforts to highlight the number of deaths due to motor vehicle crashes and public safety efforts to prevent them
- Continue prevention partnerships to focus initiatives on reduction of motor vehicle crashes and work collaboratively with children’s safety advocates on prevention messages.

Drowning
Drowning is the second leading cause of accidental/unintentional deaths of children in Connecticut. It takes as little as 20 seconds for a child to drown. Children ages 1-4 are particularly at risk for drowning. Young children in general can be fascinated by water, and children with autism and other disabilities can be at increased
risk for drowning due to their fascination around water. Drowning deaths, like all accidental/unintentional deaths in Connecticut, continued to decline during the most recent five year period. For the period of 2011-2015, 23 children drowned.

11 children drowned in pools:
- 7 were under the age of 4
- 1 was 7 years old
- 3 were teenagers (14-15)

9 children drowned in open bodies of water (rivers, lakes, ponds, and the ocean)
- 2 were between the ages of 4-6
- 3 were between the ages of 10-12
- 4 were teens (13-17)

3 children drowned in bathtubs
- 2 were infants and one was a young teen with special health care needs.

Connecticut’s stricter pool regulations and increased signage posted in areas off limits to swimmers are two examples of efforts to reduce drowning. However, learning how to swim is the key prevention initiative to continue reducing drowning deaths.

Recommendations for drowning prevention
Caregiver anticipatory guidance to prevent drowning should contain the following points:

- Never leave your child unattended around water. While swimming in a public place, always swim where there is a lifeguard on duty. However, it is important to supervise your child in the water even when there is a lifeguard present.
- Sign your child up for swim lessons at a young age to increase their comfort level in the water and decrease their risk of drowning.
- Ensure that all wading pools, tubs, buckets and containers are immediately emptied after use. When finished, store these items upside down and away from where children can reach them.
- Towns and state organizations should work to ensure access to affordable swim lessons for all children. Efforts should include reasonable accommodations to support swim instruction for children with disabilities.
- Parents and other caregivers knowing CPR could save a child’s life.

Other Accidental Deaths
A variety of tragedies can befall children. Children are adventurous and can quickly get into mischief that may lead to serious harm or death. Children learn by exploring, and while we want to encourage exploration, we must be vigilant and provide supervision at all times for children under the age of 6. During the period under review, children died in our state from the following types of injuries:

- 15 children died from asphyxia/strangulation; 13/15 children were infants whose deaths were attributed to positional asphyxia or lay-over by an adult or other children sleeping in the same bed;
- 11 children died in house fires; 3 of these house fires had multiple child fatalities (these children were between the ages of 9 months and 13 years);
- 9 children died from accidental/unintentional drug overdose (all were teens between the ages of 14-17);
- 5 children died from accidents involving ATVs/dirt bikes (these children were between the ages of 11-17);
- 4 children died from falls (these children were ages: 1, 2, 8, & 15);
- 4 children died from choking (3 were toddlers);
• 10 children died by other causes: crushed by falling objects, boating accident, dog bite, and a plane crash (these children were of all ages)

Recommendations to prevent other accidental related fatalities
• Constant supervision at all times for children especially under the age of 6 is paramount to their safety. Children must be within sight and sound proximity to their caregiver.
• Working smoke detectors are key to fire safety. Change batteries annually, batteries should never be removed to be used for other purposes. Smoke detectors can be obtained free of charge from local fire departments.
• Great care should be used in the winter months when utilizing any type of alternative heat source.
• Fire safety tips can be found at www.usfa.fema.gov/prevention.
• Ensure that all medications and prescriptions are securely stored.

Undetermined Deaths
A. “Undetermined” manner of death is given by the Medical Examiner when there is no finding regarding a medical, environmental, or physical cause of a child’s death. The vast majority of infant deaths classified as “Undetermined” were infants found in unsafe sleep conditions which is referred to as sudden infant death. Other risk factors associated with sudden infant death include parental substance abuse, including alcohol or drugs, smoking in the home, parental obesity and co-sleeping.

In Connecticut, during the most recent 5-year period, the manner of death for 90 children was classified by the medical examiner as Undetermined. Of those 90 children, 84 were infants, 4 were toddlers, and 2 were teens.

B. Across the country there has been a transformation in how unexpected infant deaths are investigated. For decades, the untimely death of an infant was thought to be associated with Sudden Infant Death Syndrome (SIDS), a sudden death of an infant during sleep for no discernable or discoverable reason. A generation ago these deaths were called “crib deaths;” babies simply did not wake up from sleep. In 1992, the American Academy of Pediatrics (AAP) issued the recommendation that babies sleep on their backs or sides to reduce the risk of SIDS (a statement that was later revised in 1996 to say that only the back was safest). While those guidelines led to a decrease in “crib deaths,” the decrease was not sustained. In recent years, there has been a greater focus on conducting a more in-depth scene investigation of sudden unexpected infant deaths to understand how and why babies continue to die. These investigations revealed that many of these babies whose deaths were previously deemed inexplicable had actually been placed in sleep environments or in a sleep position that research has determined to be harmful (such as stomach sleeping or sleeping with blankets and pillows in a crib).

C. In response to the findings that “crib deaths” were often correlated to unsafe sleep environment or unsafe sleep position, public health organizations across the country spearheaded robust dissemination of information regarding “safe sleep” to parents and caregivers. This first wave of public health information regarding “safe sleep” for babies was provided to parents, day care providers, and other care givers, and campaigns

<table>
<thead>
<tr>
<th>Infant Deaths Birth to 12 months</th>
<th>2011-2015</th>
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<tbody>
<tr>
<td>Undetermined</td>
<td>84</td>
</tr>
<tr>
<td>Accident</td>
<td>16</td>
</tr>
<tr>
<td>Homicide</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>113</td>
</tr>
</tbody>
</table>

Infants are the most vulnerable and dependent of any age group of children. Over this 5 year period, 113 infants died.

For all age groups of children, infants are at the greatest risk for death from intentional or unintentional injuries.
emphasized the necessity of placing babies on their backs to sleep. The national ‘Back to Sleep’ campaign remains one of the essential messages for safe sleep practices. However, national infant-death data reveals that while the “back to sleep” campaign was highly successful in reducing the number of preventable infant deaths, the reductions have plateaued in recent years (See Appendix). Infant deaths from unsafe practices often persist as the state’s leading cause of the preventable death of healthy babies, even today.

Connecticut investigation of this public health concern revealed that the number of infants who died in Connecticut between 2001 and 2013 and who were found in unsafe sleep conditions was almost three times the number of infants who died from child abuse (See OCA/CFPR Public Health Advisory, April 2014). An average of 20 infants died each year who were placed in unsafe sleep environments. Given the persistence of these preventable and tragic infant deaths, we must redouble our efforts to disseminate safe sleep messages to caregivers, and ensure that messages emphasize the need for babies to sleep in their own sleep environments (crib, bassinette, or pack-n-play).

Babies should also not be overdressed because they can overheat. They should have nothing in their sleep space but a tightly fitted sheet and a light blanket (no toys, stuffed animals, pillows, blankets, comforters, or adults or other children).

Nationally, it is estimated that as many as 3,500 babies each year die from complications associated with sleeping position and sleeping environments. The nomenclature has changed to describe these deaths. Today these infant deaths are referred to as Sudden Unexpected Infant Deaths associated with an unsafe sleep environment. The term SIDS is reserved for only those cases in which the sleep environment was not found to be unsafe. The number of SIDS cases has consequently declined dramatically due to the scene investigation that is more often done at the time of the infant’s death.

Recommendations to prevent Sudden Unexplained Infant Deaths associated with safe sleep
- Ensure consistent “safe sleep” counseling by health care providers. Connecticut recently passed legislation requiring hospitals to disseminate information about safe sleeping practices to new parents.
- Increase screening for maternal depression, as research has identified parental isolation and depression as a risk factor associated with sudden infant death.
- Expansion of evidence-based home universal visiting programs for parents and children that increase parental capacity and improve child well-being. Home visiting providers play a key role in supporting and educating new parents or caregivers regarding child developmental and infant care, including safe sleep practices.
- Ensure uniform law enforcement and first responders understand the medical examiner protocols for sudden unexplained infant death investigations. Scene investigations are critical for understanding the likely cause or manner of infant death. Accuracy regarding the manner of infant death is crucial to better inform the efficacy of state prevention efforts.
- Increase screening in health care offices to assist with identification of high need or at-risk caregivers so that these caregivers can be effectively referred to available community supports such as maternal-infant child health programs and home visiting programs.
- Providers should directly address unsafe bedding and the overall sleep environment with parents and caregivers.
- Encourage breastfeeding and safe sleep practices.
Homicide Deaths
A homicide is defined as the taking of a life by another human being. Although the term homicide is sometimes used synonymously with murder, homicide is broader in scope than murder. Murder is a form of criminal homicide; however there may be other forms of homicide that may not be deemed criminal acts.

Homicide deaths of children tell two stories in Connecticut and across the country; these child victims are most under the age of three or teens. Infants and toddlers accounted for 27 of the 78 homicides during this 5 year period (13 infants & 14 toddlers) and teens accounted for 28 homicide deaths. In Connecticut, children between the ages of 4-12 are not typically victims of homicide. However, in this 5 year reporting period, 20 children from Sandy Hook Elementary School ages 6 & 7 were victims of homicide. Also, in this 5 year period, 3 other children under age 10 (one an arson fire, and 2 allegedly from their mother giving them lethal doses of drugs) died from homicide. Young homicide victims generally die as a result of abusive head trauma and other forms of inflicted child abuse. Teens most often die from weapon related injuries, primarily guns, followed by stab wounds. Comparing data from five year reviews, there has not been a statistically significant difference in the number of children who have died by homicide. (See Appendix)

<table>
<thead>
<tr>
<th>Homicide 2011-2015</th>
<th>N</th>
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<tr>
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<td>15</td>
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<tr>
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<tr>
<td>6-8 years</td>
<td>23</td>
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<td>8-12 years</td>
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<tr>
<td>13-17 years</td>
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<td>2</td>
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<tr>
<td>Total</td>
<td>78</td>
<td>51</td>
<td>27</td>
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</table>

78 Homicides
- Gunshot wounds=48
- Inflicted fatal child abuse=21 children (all of these children were under 4 years old)
- Stab wounds=7
- Other=4 (fire, drowning, medical neglect and drug toxicity).

28 Homicides of teenagers 13 through 17
- 26 were boys and 2 were girls.
- 19 of these teens were Black, 4 were Hispanic/White and 5 were White.
- 21 of the 28 youth died from gunshot wounds, 6 died from stab wounds, and 1 adolescent died from complications of child maltreatment.

23 Homicides of Children ages 6-12
- Death by homicide in this age group is a rare event. However, the devastating tragedy at Sandy Hook Elementary School accounted for 20 of the 23 child victims of homicide during this 5-year period.

Zero Homicides of Preschool aged children ages 4 & 5
- There were no children in this age group that died from homicide.

14 Homicides of toddlers ages 1-3
- 8 of the children were boys and 6 were girls.
- All 14 children died from inflicted injuries.

13 Homicides of infants ages birth to 12 months
- 6 of the children were girls and 7 were boys.
Homicide and Firearms
In the United States, firearms are responsible for the majority of homicides for all age groups. Nationally, on average 10 children die every day from firearm injury (The National Resource Center for Child Death Review). In Connecticut, during this 5-year period, 46 children died from homicide due to firearms and 10 youth who died by suicide used a firearm. There were no reported accidental child fatalities due to firearms during this 5-year period. In 2013, Connecticut passed some of the most stringent state firearms laws in the country. The law significantly expands the list of banned firearms considered assault weapons, and also prohibits the sale or possession of large capacity magazines. The law also expands the background check requirements to include transfers of shotguns and rifles in addition to the previous requirements for handguns.

Homicide of Very Young Children
Over the last 15 years (see Appendix) there were 69 homicides of children age birth through three years of age. Over 75% of these young children sustained fatal child abuse associated with head and/or abdominal blunt force trauma. There were no infant or toddler homicides in 2012—an unusual year. However, in 2013 there were 9 infant-toddler homicides—the highest number of infant and toddler homicides recorded by OCA in a single year. In 2014, there was only a slight decline with 8 infant-toddler deaths. In 2015, there were 4 homicide deaths of very young children: 2 infants and 2 toddlers.

The significant majority of suspected and confirmed perpetrators for these deaths were typically male figures in the child’s life—often fathers or boyfriends of the child’s mother. However, mothers also can be perpetrators. Some of these perpetrators reported that they fatally injured the infant or child because they lost patience when the child would not stop crying. Male caregivers are less likely to accompany mothers and their children to well-child care appointments and therefore may be missing important information about child development. Fatherhood initiatives are key to ensuring that male caregivers have critical information about early childhood developmental milestones.

Recommendations to prevent infant and toddler homicide
- Devise legislation to encourage or require reimbursement to primary care providers for the time spent counseling families regarding infant and child crying and developing a safety plan for crying. Similar initiatives have been undertaken in other states such as Washington for other health care purposes in pediatric primary care (www.innovations.ahrq.gov).
- Devise legislation that mandates health care providers deliver training or information to caregivers prior to hospital discharge regarding the dangers of shaking infants and alternatives for maintaining a baby’s safety during episodes of prolonged crying. Currently 17 states have legislation related to shaken baby prevention and public awareness. www.ncsl.org/research/human-services/shaken-baby-syndrome-prevention-legislation.aspx).
- Devise legislation that provides support for evidence-based fatherhood programs that teach fathers and other male caregivers to become capable caregivers of infants and children. An example of such a program would be a home visiting program specifically designed for male caregivers.

Suicide Deaths
During the past 5 years, 49 youth died by suicide. Of these youth, 39 died from asphyxia or hanging, and 10 died from injuries from gunshot wounds. There were 26 boys and 23 girls who died by suicide. Over the past two years, girls in Connecticut have surpassed boys in dying by suicide. Of the youth that die by suicide 41 (83%) were White.

Critical to suicide prevention initiatives is the restriction of lethal means. For Connecticut youth, restriction to lethal means is not
only access to firearms, but an increased awareness that most household items can be used to cause asphyxia or can be fashioned into a ligature. Youth may also be at increased risk for overdose by taking both prescribed and unprescribed medication. Parents, health care professionals, educators, and others need to understand both warning signs and youth risk for suicide ideation and suicide behavior.

**Warning signs for suicide include**

Hopelessness, rage, anger, acting reckless or engaging in risky activities, feeling trapped—like there’s no way out, alcohol or drug use/abuse, withdrawing from friends, family, or society, anxiety, agitation, unable to sleep, or sleeping all the time, dramatic mood changes, no reason for living and no sense of purpose in life.

Connecticut School Health Survey—Youth Behavior Component identifies numerous risk factors for suicidal behavior that are prevalent in teens.

The Connecticut School Health Survey is a student questionnaire, based on a CDC model survey that asks high school students about their habits and choices regarding health behaviors. This survey is part of a national public health and education surveillance system that monitors health-risk behaviors that contribute to the leading causes of death and disability among youth. The survey asks youth questions related to positive influences in their life, but primarily focuses on risky behaviors related to alcohol and drug use, diet and nutrition, physical activity, mental health, sexual behaviors, school environment, and behaviors that contribute to unintentional injuries and violence.

The 2015 student survey results indicated that in an average class room of 30 high school students, youth reported the following related to their mental health in the past 12 months:

- 5-6 students said they did something to purposely hurt themselves without wanting to die, such as cutting or burning themselves;
- 8 students said they felt sad or hopeless for 2 weeks or more;
- 4 students said they seriously considered attempting suicide one or more times;
- 2-4 students said they actually attempts suicide one or more times;
- Out of 10 students who felt sad, empty, hopeless, angry, or anxious, 2-3 students said they got the help they needed when feeling that way;
- 7 students said they saw a doctor, nurse, or counselor about stress, depression, or problems with their emotions.

**Connecticut youth who say their family loves them, gives them help and support, and asks where they are going or with whom they will be with when not at home tend to have lower rates of risky behavior.** ([www.ct.gov/dph/cshs](http://www.ct.gov/dph/cshs)).

<table>
<thead>
<tr>
<th>Suicide</th>
<th>N=</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanging</td>
<td>39</td>
</tr>
<tr>
<td>Gunshot</td>
<td>10</td>
</tr>
<tr>
<td>Boys</td>
<td>26</td>
</tr>
<tr>
<td>Girls</td>
<td>23</td>
</tr>
<tr>
<td>White</td>
<td>41</td>
</tr>
<tr>
<td>Hispanic/White</td>
<td>4</td>
</tr>
<tr>
<td>Black</td>
<td>3</td>
</tr>
<tr>
<td>Other Race</td>
<td>1</td>
</tr>
<tr>
<td>10-12 years old</td>
<td>2</td>
</tr>
<tr>
<td>13 years old</td>
<td>4</td>
</tr>
<tr>
<td>14 years old</td>
<td>6</td>
</tr>
<tr>
<td>15 years old</td>
<td>10</td>
</tr>
<tr>
<td>16 years old</td>
<td>16</td>
</tr>
<tr>
<td>17 years old</td>
<td>11</td>
</tr>
</tbody>
</table>

Recommendations to Prevent Youth Suicide

- Implement recommendations from the Governor’s Sandy Hook Commission Report and the OCA’s Report regarding Sandy Hook to increase youth and family access to mental health supports for children
- Increase screening opportunities for depression and mandate the use of a simple suicidality screening tool by health care providers and school systems by utilizing evidence based screening tools such as the Columbia Suicide Severity Rating Scale.
• Ensure simple access to timely and effective clinical care for mental health, physical health, and substance use disorders.
• Widely distribute information about protective factors such as increased family and community connections, building youths’ skills in problem solving and conflict resolution.
• Increase training opportunities for school and community officials to help them identify students at risk, how to respond to a student in crisis and how to appropriately address the aftermath of a death of a student.
• Make sure all schools have knowledge and ability to support the healthy social-emotional development of children.

State of Connecticut Suicide Prevention Plan 2020
Since January 2012, the CT Suicide Advisory Board (CTSAB) has functioned as the single state-level suicide advisory board in CT that addresses suicide prevention and response across the lifespan. It is cooperatively co-chaired by the CT Departments of Mental Health and Addiction Services and Children and Families (DCF), and is legislatively mandated under DCF. The mission of the CTSAB is a network of diverse advocates, educators, and leaders concerned with addressing the problem of suicide with a focus on prevention, intervention, and health and wellness promotion. The CTSAB’s vision is to reduce and eliminate suicide by instilling hope across the lifespan and through the use of culturally competent advocacy, policy, education, collaboration, and networking.

The Connecticut Suicide Prevention Plan 2020 outlines a series of comprehensive priorities to eliminate the risk of suicide. Each of the 5 goals have multiple objectives including raising awareness of the statewide campaign:

“1 WORD, 1 VOICE, 1 LIFE…
Be the 1 to start the conversation”

Goal I: Integrate and coordinate suicide prevention activities across multiple sectors and settings
Goal II: Develop, implement, and monitor effective programs that promote wellness and prevent suicide and related behaviors
Goal III: Promote suicide prevention as a core component of health care
Goal IV: Promote efforts to reduce access to lethal means of suicide among individuals with identified suicide risk
Goal V: Increase the timeliness and usefulness of state and national surveillance systems relevant to suicide prevention and improve the ability to collect, analyze and use this information for action.

For more information on suicide prevention in Connecticut visit the website below: www.preventsuicidect.org

Fatality Investigations
The OCA and CFRP reports are public documents and can be obtained from the Office of the Child Advocate upon request and can also be found online at www.oca.state.ct.us. The OCA conducts investigative reports either at the behest of the CFRP, the legislature, or at the OCA’s own initiation. When possible, the CFRP is a collaborative partner on the OCA’s review. The CFRP will also publish various alerts to the public regarding how children are dying in Connecticut. The following fatality investigations and public health alerts were conducted during the five years between January 1, 2011 to December 31, 2015.
OCA Investigative Reports

Sandy Hook Elementary School Massacre
On December 14, 2012, twenty elementary school children and six educators were killed at Sandy Hook Elementary School. In January 2013, the OCA was directed by the CFRP to prepare a report that would focus on the individual responsible for this tragedy. The charge by the CFRP was to develop any recommendations for public health system improvement that emanated from the review. The investigative report outlined a series of systemic recommendations.

Infant and Toddler Fatality Overview
In July 2014, OCA released a report on children birth to 3. In that report, OCA reported that infants and toddlers are more likely to die from unsafe sleep environments, child abuse, or accidental injury compared to all other fatal injuries to children. OCA reviewed all 82 fatalities of children age birth to three that came to the attention of the Office of the Chief Medical Examiner (OCME) in 2013. The report outlines the findings from these reviews and recommendations to reduce child fatalities through health care reform and child welfare practice innovation.

Zaniyah C. Child Fatality Investigation Joint Report
On August 18, 2014, Zaniyah was a one-year old girl when her uncle stabbed her to death. The Committee on Children of the General Assembly requested that the Office of the Child Advocate (OCA) conduct an in-depth investigation into her death.

Improving Outcomes for Children & Youth Exposed to Family Violence Workgroup Findings & Recommendations
The report on Improving Outcomes for Children and Families Impacted by Family Violence is a product of the June 2014 Children Witness to Domestic Violence Roundtable hosted at the Legislative Office Building in Hartford, Connecticut by the Office of the Child Advocate and Connecticut Coalition Against Domestic Violence. The purpose of the roundtable was to discuss a series of domestic violence homicides where children were present at the scene, with a broader aim to establish stronger policy and practice amongst Connecticut systems and stakeholders who respond to children and youth exposed to domestic violence.

Londyn S. Child Fatality Investigative Report
On October 19, 2014, Londyn was transported to a community hospital where she was pronounced dead. Due to her untimely death, the Office of the Chief Medical Examiner (OCME) did an investigation, including a full autopsy, and on March 11, 2015 made a finding of homicide due to Suboxone toxicity. Londyn's mother was subsequently arrested. On April 15, 2015, the CFRP voted unanimously to direct the OCA to investigate and issue a report regarding the circumstances surrounding the death of Londyn.

CFRP-OCA Public Health Alerts

Infant and Toddler Homicide Alert:
Highlighted the unprecedented number of infant and toddler homicides in 2013. The alert provided guidelines for key stakeholders regarding this public health issue and prevention of untimely child deaths.

Suicide Alert:
Focused on the 10 youth that died by suicide in 2013. Five of the ten youth died within 6 weeks of the start of school. While boys are more likely to complete suicide than girls (81% vs. 19%), in Connecticut, girls are beginning to surpass boys.

Infant Safe Sleep Alert:
Provided an overview of the SUID cases from 2011-2012 with a particular focus on the 23 infants that died in 2013 that were classified SUID, SIDS, or Undetermined. This alert included recommendations for prevention that were geared to policy makers, services providers and health care providers.
OCA Partnerships for Child Fatality Prevention
Prevention and key stakeholder partnerships that support child well-being initiatives are crucial to the child fatality review process. Over the past many years, OCA staff have participated in a variety of prevention efforts statewide and nationally to further prevention efforts for children who have died or are at risk of serious injury.

Below are partnerships that support child-well-being efforts and that OCA participates in:

**Infant and Toddler Initiatives**
- Maternal Child Health Coalition
- Improving Birth Outcomes
- Children’s Prevention Partnership
- Substance Exposed Infants Work Group
- Abusive Head Trauma Prevention Working Group
- Child Abuse Prevention Coalition
- Safe Sleep Coalition

**State and National Partnerships**
- Board Member, National Center for the Review and Prevention of Child Deaths
- Governor’s Task Force on Justice for Abused Children
- CT Violent Death Registry Advisory Board
- CT Academy of Science and Engineering– Family Violence Study Committee
- Multidisciplinary Team and Children’s Advocacy Center Work Group
- Child Poverty and Prevention Council
- Domestic Violence Fatality Review Committee

**Youth & Teen Safety Initiatives**
- Department of Motor Vehicles Commissioner’s Advisory Committee
- CT Teen Driving Safety Partnership
- Trafficking of Persons Council
- Domestic Minor Sex Trafficking Committee
- Drug Endangered Children’s Task Force
- Board of Directors Northern CT Chapter of the American Foundation for Suicide Prevention
- Statewide Suicide Advisory Board
- Safe School Climate Coalition
Introduction
The Office of the Child Advocate has collected information on child fatalities over the past fifteen years. To gain a better understanding of preventable child fatality trends, an analysis was conducted, calculating rates for unintentional and intentional manners of death (i.e., Unintentional/Accident, Homicide, Suicide, and Undetermined). This section shows the results for the collective and individual preventable manners of death between 2001 and 2015, in five year groupings.

Methodology
Inclusions: Fatalities were included in the analysis where four criteria were met. Fatalities needed to have taken place among Connecticut residents or in Connecticut. Fatalities needed to have occurred between 2001 and 2015. The manner of death needed to be classified as Unintentional/Accident, Homicide, Suicide, or Undetermined. Finally, the fatalities needed to take place in children under eighteen years of age. The Office of the Chief Medical Examiner determined the manner of death classification.

Definition of Rates: Two types of rates were calculated – age-adjusted and crude. Age-adjusted rates were calculated when at least twenty child fatalities were recorded in each age-specific category. Crude rates were calculated when fewer than twenty child fatalities were recorded in at least one age-specific category. The reference population for calculating the rates was based on the population estimates listed in the Connecticut State & County Population by Age, Sex, Race and Hispanic Ethnicity (ASRH), provided by the Connecticut Department of Public Health. At the time of this report, population estimates were not available for 2015. Therefore, the estimates for 2014 were used in calculations related to 2015.

Analysis: Fatalities were grouped into three categories, based on the fatality year (i.e., 2001-2005, 2006-2010, and 2011-2015). Statistical

<table>
<thead>
<tr>
<th>Manner of Death</th>
<th>2001-2005 N (%)</th>
<th>2006-2010 N (%)</th>
<th>2011-2015 N (%)</th>
<th>Total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Manners of Death</td>
<td>359 (33.8)</td>
<td>335 (31.6)</td>
<td>367 (34.6)</td>
<td>1061 (100.0)</td>
</tr>
<tr>
<td>Unintentional/Accident</td>
<td>229 (63.8)</td>
<td>173 (51.6)</td>
<td>150 (40.9)</td>
<td>552 (52.0)</td>
</tr>
<tr>
<td>Homicide</td>
<td>52 (14.5)</td>
<td>55 (16.4)</td>
<td>78 (21.3)</td>
<td>185 (17.4)</td>
</tr>
<tr>
<td>Suicide</td>
<td>45 (12.5)</td>
<td>32 (9.6)</td>
<td>49 (13.4)</td>
<td>126 (11.9)</td>
</tr>
<tr>
<td>Undetermined</td>
<td>33 (9.2)</td>
<td>75 (22.4)</td>
<td>90 (24.5)</td>
<td>198 (18.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>2001-2005 N (%)</th>
<th>2006-2010 N (%)</th>
<th>2011-2015 N (%)</th>
<th>Total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>112 (31.2)</td>
<td>131 (39.1)</td>
<td>164 (44.7)</td>
<td>407 (38.4)</td>
</tr>
<tr>
<td>5-11</td>
<td>41 (11.4)</td>
<td>24 (7.2)</td>
<td>55 (15.0)</td>
<td>120 (11.3)</td>
</tr>
<tr>
<td>12-17</td>
<td>206 (57.4)</td>
<td>180 (53.7)</td>
<td>148 (40.3)</td>
<td>534 (50.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th>2001-2005 N (%)</th>
<th>2006-2010 N (%)</th>
<th>2011-2015 N (%)</th>
<th>Total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>107 (29.8)</td>
<td>113 (33.7)</td>
<td>150 (40.9)</td>
<td>370 (34.9)</td>
</tr>
<tr>
<td>Male</td>
<td>251 (69.9)</td>
<td>222 (66.3)</td>
<td>217 (59.1)</td>
<td>690 (65.0)</td>
</tr>
<tr>
<td>Missing</td>
<td>1 (0.3)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>1 (0.1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>2001-2005 N (%)</th>
<th>2006-2010 N (%)</th>
<th>2011-2015 N (%)</th>
<th>Total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic White</td>
<td>293 (64.9)</td>
<td>161 (48.1)</td>
<td>195 (53.1)</td>
<td>589 (55.5)</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>70 (19.5)</td>
<td>96 (28.7)</td>
<td>90 (24.5)</td>
<td>256 (24.1)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>26 (7.2)</td>
<td>59 (17.6)</td>
<td>69 (18.8)</td>
<td>154 (14.5)</td>
</tr>
<tr>
<td>Asian</td>
<td>6 (1.7)</td>
<td>10 (3.0)</td>
<td>6 (1.6)</td>
<td>22 (2.1)</td>
</tr>
<tr>
<td>Native American</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>1 (0.3)</td>
<td>1 (0.1)</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0.0)</td>
<td>1 (0.3)</td>
<td>4 (1.1)</td>
<td>5 (0.5)</td>
</tr>
<tr>
<td>Missing</td>
<td>24 (6.7)</td>
<td>8 (2.4)</td>
<td>2 (0.5)</td>
<td>34 (3.2)</td>
</tr>
</tbody>
</table>
significance was determined through confidence intervals (CIs) at the 95% level. Rates were considered to be different and statistically significant, at the 95% level, when two intervals did not overlap (i.e., significantly different).

**Results**

Between 2001 and 2015, there were a total of 1,061 child fatalities that met the four criteria described in the methodology. Each five-year grouping encompassed approximately one-third of child fatalities (see Table 1).

Unintentional/Accident was the most frequently reported manner of death, followed by Undetermined and Homicide (52.0%, 18.7%, and 17.4%, respectively) (see Table 1). The highest percentages of fatalities were observed among persons between 12 and 17 years of age (50.3%) and males (65.0%) (see Table 1).

**Age-Adjusted Rates**

Age-adjusted rates (AARs) were calculated for all manners of death, Unintentional/Accident, and Homicide. In the case of Homicide, two models were calculated. The first Homicide model included all the child fatalities in the three different time periods. The second model excluded the twenty child fatalities that were observed in 2012, due to a mass shooting at a Connecticut school – Sandy Hook Elementary School.

Trends and statistical significance varied for all manners of death, Unintentional/Accident, and Homicide classifications between the three different time periods (i.e., 2001-2005, 2006-2010, and 2011-2015). In the case of all manners of death, no linear trend was observed between 2001-2005, 2006-2010, and 2011-2015, with a dip in child fatalities observed in 2006-2010 (AAR=8.39, AAR=8.00, AAR=9.43, respectively) (see Table 2). While there was an increase in AAR for all manners of death in 2011-2015 compared to 2001-2005 or 2006-2010, the AARs were not found to be significantly different (see Table 2 and Figure 1).

A downward linear trend was observed for Unintentional/Accident fatalities between 2001-2005, 2006-2010, and 2011-2015. Furthermore, there was a significant decrease in Unintentional/Accident fatalities between 2001-2005 and 2011-2015 (AAR=5.31, 95% CI [4.62, 6.00]) and (continued on page 20) AAR=3.76, 95% CI [3.16, 4.36], respectively) (see Table 2 and Figure 2). This signifies that the AAR of 2011-2015 was significantly lower than the AAR of 2001-2005.

<table>
<thead>
<tr>
<th>Manner of Death/Time Period</th>
<th>Age-Adjusted Rate</th>
<th>Lower CI</th>
<th>Upper CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Manners of Death</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001-2005</td>
<td>8.39</td>
<td>7.52</td>
<td>9.26</td>
</tr>
<tr>
<td>2006-2010</td>
<td>8.00</td>
<td>7.14</td>
<td>8.86</td>
</tr>
<tr>
<td>Unintentional/Accident</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001-2005*</td>
<td>5.31</td>
<td>4.62</td>
<td>6.00</td>
</tr>
<tr>
<td>2006-2010</td>
<td>4.03</td>
<td>3.43</td>
<td>4.63</td>
</tr>
<tr>
<td>2011-2015*</td>
<td>3.76</td>
<td>3.16</td>
<td>4.36</td>
</tr>
<tr>
<td>Homicide (with Sandy Hook)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001-2005</td>
<td>1.22</td>
<td>0.89</td>
<td>1.55</td>
</tr>
<tr>
<td>2006-2010</td>
<td>1.29</td>
<td>0.95</td>
<td>1.63</td>
</tr>
<tr>
<td>2011-2015</td>
<td>1.99</td>
<td>1.54</td>
<td>2.48</td>
</tr>
<tr>
<td>Homicide (without Sandy Hook)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001-2005</td>
<td>1.22</td>
<td>0.89</td>
<td>1.55</td>
</tr>
<tr>
<td>2006-2010</td>
<td>1.29</td>
<td>0.95</td>
<td>1.63</td>
</tr>
<tr>
<td>2011-2015</td>
<td>1.45</td>
<td>1.08</td>
<td>1.82</td>
</tr>
</tbody>
</table>

* Statistically Different

Table 2

**Fatality Review Report 2011-2015**
Figure 1: Age-Adjusted Rates Per 100,000 Persons: All Manners of Death

Figure 2: Age-Adjusted Rates Per 100,000 Persons: Unintentional/Accident Deaths

Figure 3: Age-Adjusted Rates Per 100,000 Persons: Homicide Deaths (w/ Sandy Hook)

Figure 4: Age-Adjusted Rates Per 100,000 Persons: Homicide Deaths (w/o Sandy Hook)
Both Homicide models showed an upward linear trend between 2001-2005, 2006-2010, and 2011-2015, with the Homicide model that took into account all fatalities (i.e., including fatalities in Sandy Hook) showing a greater increase from 2006-2010 to 2011-2015: AAR=1.29 to AAR=1.9 including Sandy Hook compared to AAR=1.29 to AAR=1.45 excluding Sandy Hook (see Figure 3 and Figure 4). However, the increases were not found to be significantly different (see Table 2).

**Crude Rates**

Crude rates (CRs) were calculated for Suicide and Undetermined fatalities. Crude rates were calculated since fatalities were polarized. Specifically, the majority of Suicide fatalities took place among persons between 12 and 17 years of age, with a few fatalities observed in persons between 5 and 11 years of age, and no fatalities among persons between 0 and 4 years of age. Conversely, the majority of Undetermined fatalities took place among persons between 0 and 4 years of age, with a few persons between 5 and 17 years of age.

There was no linear trend in crude rates for Suicide fatalities between 2001-2005, 2006-2010, and 2011-2015 (AAR=1.06, AAR=0.77, AAR=1.25, respectively). While there was an increase in Suicide fatalities in 2011-2015, the increase was not found to be significantly different from the two other time periods (see Table 3 and Figure 5).

There was an upward linear trend for Undetermined fatalities between 2001-2005, 2006-2010, and 2011-2015 (AAR=0.78, AAR=1.81, AAR=2.29, respectively). The increase in Undetermined fatalities between 2001-2005 and 2011-2015 was found to be significantly different (CR=0.78, 95% CI [0.51, 1.04] and CR=2.29, 95% CI [1.82, 2.76], respectively). In addition, the increase between 2001-2005 and 2006-2010 was found to be significantly different (CR=0.78, 95% CI [0.51, 1.04] and CR=1.81, 95% CI [1.40, 2.22], respectively). This signifies an increase in undetermined fatalities since 2001-2005 (see Table 3 and Figure 6).

<table>
<thead>
<tr>
<th>Manner of Death/ Time Period</th>
<th>Crude Rate</th>
<th>Lower CI</th>
<th>Upper CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Suicide</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001-2005</td>
<td>1.06</td>
<td>0.75</td>
<td>1.37</td>
</tr>
<tr>
<td>2006-2010</td>
<td>0.77</td>
<td>0.51</td>
<td>1.04</td>
</tr>
<tr>
<td>2011-2015</td>
<td>1.25</td>
<td>0.90</td>
<td>1.59</td>
</tr>
<tr>
<td><strong>Undetermined</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001-2005*</td>
<td>0.78</td>
<td>0.51</td>
<td>1.04</td>
</tr>
<tr>
<td>2006-2010*</td>
<td>1.81</td>
<td>1.40</td>
<td>2.22</td>
</tr>
<tr>
<td>2011-2015*</td>
<td>2.29</td>
<td>1.82</td>
<td>2.76</td>
</tr>
</tbody>
</table>

* Statistically Different

Table 3
Unintentional/Accident and Undetermined manners of death were the two manners of death in which the rate differences were observed to be significantly different, over the three time periods (i.e., 2001-2005, 2006-2010, and 2011-2015). The decrease in Unintentional/Accident fatalities may be attributed to a decrease in the two leading causes of death—motor vehicle-related and drowning fatalities. Motor vehicle-related fatalities were the leading cause of Unintentional/Accident deaths between the three time periods (see Table 4). Furthermore, the number of motor vehicle-related fatalities decreased by approximately half between 2001-2005 and 2011-2015 (−43.4%) (see Table 4). Similarly, the number of drowning fatalities decreased by over one-third between 2001-20015 and 2011-2015 (−41.0%) (see Table 4). The decrease in motor vehicle-related fatalities may be the result of teen driver laws. Between 2001-2005 and 2011-2015, the number of fatalities for teen related to motor vehicles accidents declined by over half (−56.8%, from 88 to 38 fatalities among teens thirteen to seventeen years of age) (not shown).

The increase in Sudden Unexplained Infant Death/Sudden Infant Death Syndrome (SUID/SIDS) fatalities is likely a result of increased use of the classification of “Undetermined manner of death” to describe the death of an infant, as opposed to using the classification of “Natural manner of death.”

It should be noted that statistical testing was not conducted when analyzing cause of death data for this cohort of child fatalities. The increase is not reflective of an overall increase in the number of babies dying in this manner, but reflective only of the classification of Undetermined as the manner of death—in light of the research shedding more light on the preventable nature of infant death, as they are often associated with unsafe sleep environmental factors. SUID/SIDS was the leading cause for the Undetermined manner of death between the three time periods covering 15 years. (see Table 4).

Conclusion
Child fatality data, based on manner of death, varied in trend and significance between the three time periods examined (i.e., 2001-2005, 2006-2010, and 2011-2015). Mortality age-adjusted and crude rates increased in the cumulative and independent manners of death between 2001-20015 and 2011-2015, except in Unintentional/Accident fatalities where a decrease was observed. Rates were only observed to be statistically different for Unintentional/Accident and Undetermined fatalities at the 95% confidence interval level.
The decrease in Unintentional/Accident mortalities may be attributed to the decrease in motor vehicle-related and drowning fatalities.

The increase in Undetermined cases may be attributed to the increase in SUID/SIDS classification and Undetermined cases. However, statistical significance analysis was not conducted when analyzing causes of death.

<table>
<thead>
<tr>
<th>Manner of Death/ Cause of Death</th>
<th>2001-2005 N (%)</th>
<th>2006-2010 N (%)</th>
<th>2011-2015 N (%)</th>
<th>Total N (%)</th>
<th>Δ N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unintentional/Accident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle Related</td>
<td>122 (58.3)</td>
<td>94 (54.3)</td>
<td>69 (46.0)</td>
<td>285 (51.6)</td>
<td>-53 (-34.4)</td>
</tr>
<tr>
<td>Drowning</td>
<td>39 (17.0)</td>
<td>29 (16.8)</td>
<td>23 (15.3)</td>
<td>91 (16.5)</td>
<td>-16 (-41.0)</td>
</tr>
<tr>
<td>Suffocation/Asphyxia</td>
<td>19 (8.3)</td>
<td>15 (8.7)</td>
<td>19 (12.7)</td>
<td>53 (9.6)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Drug Overdose</td>
<td>13 (5.7)</td>
<td>10 (5.8)</td>
<td>9 (6.0)</td>
<td>32 (5.8)</td>
<td>-4 (-30.8)</td>
</tr>
<tr>
<td>Fire</td>
<td>13 (5.7)</td>
<td>7 (4.0)</td>
<td>11 (7.3)</td>
<td>31 (5.6)</td>
<td>-2 (-15.4)</td>
</tr>
<tr>
<td>Blunt Force/Other Trauma</td>
<td>13 (5.7)</td>
<td>7 (4.0)</td>
<td>9 (6.0)</td>
<td>29 (5.3)</td>
<td>-4 (-30.8)</td>
</tr>
<tr>
<td>Recreational Activities</td>
<td>6 (2.6)</td>
<td>5 (2.9)</td>
<td>6 (4.0)</td>
<td>17 (3.1)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Fall</td>
<td>2 (0.9)</td>
<td>5 (2.9)</td>
<td>4 (2.7)</td>
<td>11 (2.0)</td>
<td>2 (100.0)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (0.9)</td>
<td>1 (0.6)</td>
<td>0 (0.0)</td>
<td>3 (0.5)</td>
<td>-2 (-100.0)</td>
</tr>
<tr>
<td>Undetermined</td>
<td>33 (16.7)</td>
<td>75 (37.9)</td>
<td>90 (45.5)</td>
<td>198 (100.0)</td>
<td>57 (172.7)</td>
</tr>
<tr>
<td>SIDS/SUID</td>
<td>8 (24.2)</td>
<td>48 (64.0)</td>
<td>54 (60.0)</td>
<td>110 (55.6)</td>
<td>46 (575.0)</td>
</tr>
<tr>
<td>Undetermined</td>
<td>16 (48.5)</td>
<td>18 (24.0)</td>
<td>32 (35.6)</td>
<td>66 (33.3)</td>
<td>16 (100.0)</td>
</tr>
<tr>
<td>Suffocation/Asphyxia</td>
<td>3 (9.1)</td>
<td>3 (4.0)</td>
<td>1 (1.1)</td>
<td>7 (3.5)</td>
<td>-2 (-66.7)</td>
</tr>
<tr>
<td>Blunt Force/Other Trauma</td>
<td>3 (9.1)</td>
<td>1 (1.3)</td>
<td>1 (1.1)</td>
<td>5 (2.5)</td>
<td>-2 (-66.7)</td>
</tr>
<tr>
<td>Medical Related</td>
<td>1 (3.0)</td>
<td>3 (4.0)</td>
<td>1 (1.1)</td>
<td>5 (2.5)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Drowning</td>
<td>0 (0.0)</td>
<td>2 (2.7)</td>
<td>1 (1.1)</td>
<td>3 (1.5)</td>
<td>1 (100.0)</td>
</tr>
<tr>
<td>Drug Overdose</td>
<td>2 (6.1)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>2 (1.0)</td>
<td>-2 (-100.0)</td>
</tr>
</tbody>
</table>


Table 4

Special thanks to Victor Cabada, MPH for his contributions to this report.