



KANSAS ATTORNEY GENERAL

Derek Schmidt

Kansas State Child Death Review Board



2014 Annual Report (2012 Data)

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Kansas Attorney General Derek Schmidt



October 2014

Dear Fellow Kansans:

The dedicated professionals who serve on the Kansas Child Death Review Board have worked diligently to review the causes of child deaths in our state in an effort to compile meaningful data that will help make our kids safer in the future. They have performed this task since the board was established in 1992. As always, I am grateful for their service.

This report compiles and evaluates information collected during 2012, the most recent year for which data is available. It provides historical context and makes recommendations that the board believes are appropriate for the state's policy makers to consider.

I hope this information will add to the many discussions about our efforts, together and each of us individually, to make Kansas a safer place for our children to grow up. As one of our great Kansans, Dwight David Eisenhower, put it, "There's no tragedy in life like the death of a child. Things never get back to the way they were."

Best wishes,

A handwritten signature in black ink that reads "Derek". The signature is written in a cursive, slightly stylized font.

Derek Schmidt
Kansas Attorney General

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Steve Karrer, J.D., Chairperson (May 2014 – present)
Assistant Attorney General, Topeka

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Kansas Department of Health and Environment, Topeka

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University of Kansas School of Medicine, Wichita

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Dwight Carswell, JD
Assistant Attorney General

Acknowledgments

The review of each child death in Kansas could not be accomplished without the invaluable commitment of many people across the State. The Kansas State Child Death Review Board (SCDRB) remains grateful for the significant contributions of the Office of the Attorney General, county coroners, law enforcement agencies, the Department for Children and Families (DCF), the Kansas Department of Health and Environment (KDHE), physicians, hospitals, child advocates, county and district attorneys, and all others who offer their assistance in supplying the information necessary for our review.

As a multi-disciplinary, multi-agency volunteer board we appreciate the support of our employers who allow us the time necessary to fulfill our responsibilities as board members.

SCDRB SERVES AS A CITIZEN REVIEW PANEL

The Kansas State Child Death Review Board serves in the capacity as one of three Citizen Review Panels in the State. Each state is required by the Federal Child Abuse Prevention and Treatment Act (CAPTA) to establish citizen review panels in order to receive federal funding for child abuse prevention services. The purpose of the citizen review panels is to determine whether state and local agencies are effectively discharging their child protection responsibilities. In addition to the SCDRB, the Kansas Intake to Petition Panel and Kansas Custody to Transition Panel serve as citizen review panels.

Citizen review panels are required by CAPTA to do the following:

- Measure agency performance by determining whether the state agency complies with the state CAPTA plan, including the state's assurances of compliance with federal requirements contained in the plan.
- Determine the extent of the agencies' coordination with the Title IV-E foster care and adoption systems and the review process for child fatalities and near fatalities.
- Prepare and make available to the public an annual report summarizing the panels' activities.
- Review policies and procedures of state and local agencies to evaluate the extent to which the agencies are effectively discharging their child protection responsibilities.
- Provide for public outreach and comments in order to assess the impact of current policies, procedures, and practices upon children and families in the community.
- Provide recommendations to the State and public on improving the child protective services system at the state and local levels.

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Goals and History

The SCDRB has developed the following three goals to direct its work:

- 1) To describe trends and patterns of child deaths (birth through 17 years old) in Kansas and to identify risk factors in the population;
- 2) To improve sources of data and communication among agencies so that recommendations can be made regarding recording of the actual cause of death, investigation of suspicious deaths, and system responses to child deaths. This interagency communication should occur at the individual case level and at the local and state levels;
- 3) To develop prevention strategies including community education and mobilization, professional training, and needed changes in legislation, public policy, and/or agency practices.

The SCDRB was created by the 1992 Kansas Legislature and is administered by the Office of the Kansas Attorney General. SCDRB membership is appointed according to K.S.A. 22a-241 et. seq. Membership includes: one member each from the Office of the Attorney General, the Kansas Bureau of Investigation (KBI), the Department for Children and Families (DCF), the Kansas Department of Health and Environment (KDHE), and the Department of Education; three members appointed by the Board of Healing Arts: a district coroner, a pathologist, and a pediatrician; one representative of a child advocacy group appointed by the Attorney General; and one county or district attorney appointed by the Kansas County and District Attorneys Association. No term limit is set on appointments. In 1994, the Legislature amended the statute to enable the SCDRB to appoint an executive director.

This multi-agency, multi-disciplinary volunteer board meets monthly to examine circumstances surrounding the deaths of Kansas children (birth through 17 years old). Members bring a wide variety of experience and perspective on children's health, safety, and maltreatment issues, which strengthen the decision-making of this body.

With assistance from law enforcement agencies, county and district attorneys, DCF, KDHE, physicians, coroners, and other medical professionals, the SCDRB is given necessary information needed to examine the circumstances which led to the deaths of children. By understanding how children are dying, the SCDRB is able to propose ways of reducing the number of preventable deaths.

When the SCDRB began its work, data was compiled on a fiscal year (July 1993 – June 1994) basis. In 1997, the SCDRB changed its review to a calendar year format, beginning with the 1995 study year, to bring its data in to conformity with fatality review boards in other states, which improves comparison of data and trends related to child deaths.

Methodology

Kansas Child Death Review Board 2012 Data

The SCDRB meets monthly to examine the circumstances surrounding the deaths of all Kansas children aged birth through 17 years old, as well as children who are not residents but died in Kansas. As a rule, the SCDRB is notified of a death when a death certificate, matched with its corresponding birth certificate, is received from the Kansas Department of Health and Environment's Office of Vital Statistics. On a monthly basis, KDHE provides the SCDRB with a list of children whose deaths have been reported. The Office of Vital Statistics also has a close working relationship with other state vital statistics departments and receives death certificates from those departments when a Kansas child dies in another state.

When a death certificate is received, the SCDRB staff creates a file. Death and birth certificates, as well as the coroner information are used to identify sources of additional information necessary for a comprehensive review. Before a case can be reviewed, pertinent records which could provide circumstances that led to the child's demise are collected for the file. Such records may include: coroner reports, autopsy reports and photos, medical records, law enforcement reports, scene photographs, DCF records, school records, media reports and obituaries, and other documents if pertinent to the case. Information obtained by the SCDRB is confidential.

After all records have been collected, cases are assigned to board members for initial review and assessment. Each member is expected to review his or her assigned cases and enter case information into a secure web-based database. All case information entered by the board is maintained in the online database. Transfer of information between outdated software to the new system in 2000 created the possibility for slight number adjustments when reviewing data from past years.

During the SCDRB's monthly meetings, members present their cases orally and circumstances leading to the deaths are discussed. If additional records are needed or specific questions are raised, a case may be continued to the next meeting. Upon agreement of the cause and manner of death, cases are finalized and saved. In some instances the SCDRB may determine that it is appropriate to refer a case to the county or district attorney in the county where the death occurred with recommendations for further action.

It should be noted that the numbers and rates in this report should not be expected to be the same as those reported in the KDHE Annual Summary of Vital Statistics, which monitors deaths of Kansas residents only. Case file information may not be available to the coroner when cause of death is determined, resulting in incomplete information about the circumstances of the death. After review by the board, the classification of the cause or manner of death may be different from the coroner's. For example, an infant death suspicious for asphyxia may be called an undetermined death by the coroner, but after the board reviews medical, law enforcement, and other pertinent reports, additional information may support the board's classification of the death as Sudden Infant Death Syndrome, Category II.

The current publication follows the custom of presenting death rates for infants per 1,000 live births, and death rates for all other age groups per 100,000 age-group population. The exception to this rule is when rates for infants and older children are compared in the same graph. In such an instance, infant mortality is expressed as deaths per 100,000 infant population. An example is the graph for Homicide death rates on [page 25](#).

For calculating the infant death rate per 1,000 live births in a specific year or group of years, the number of deaths is divided by the corresponding number of live births, and then multiplied by 1,000. The Kansas Department of Health and Environment (KDHE) Bureau of Epidemiology and Public Health Informatics (BEPHI) is the source for numbers of live births used as denominators in this report.

Example: Infant death rate, Kansas 2012 =

$$\left(\frac{265 \text{ (number of infant deaths which occurred in 2012, reviewed by the CDRB)}}{40,304 \text{ (number of Kansas resident live births in 2012)}} \right) \times 1,000$$

= 6.6

For calculating the death rate per 100,000 population for an age group for a specific year or group of years, the number of deaths is divided by the corresponding population, and then multiplied by 100,000. The U.S. Census Bureau is the source for population denominators for this report.

Example: Motor Vehicle Death Rate, age 15-17, Kansas 2012 =

$$\left(\frac{19 \text{ (number of MVC deaths age 15-17 which occurred in 2012, reviewed by the CDRB)}}{117,696 \text{ (population of Kansas residents age 15-17 in 2012)}} \right) \times 100,000$$

= 16

Any questions about this report or about the work of the SCDRB should be directed to Angela Nordhus, Executive Director, at (785) 296-7970 or by e-mail at angela.nordhus@ag.ks.gov.

The information and data contained in this report are compiled from multiple reporting sources and have been represented to be accurate as of the date of this report. The information and data contained herein are subject to later modification by the reporting sources.

Executive Summary

The State Child Death Review Board was created by statute in 1992 and is charged with reviewing all deaths of children ages birth through 17 years old who die within Kansas and Kansas residents in that age group who die outside the state. The board works to identify patterns, trends, and risk factors and to determine the circumstances surrounding child fatalities. The ultimate goal is to reduce the number of child fatalities in the state.

The board is unique in its duties as it is the only agency in the State of Kansas that conducts a thorough review of each child death by analyzing medical records, law enforcement reports, social service histories, school records, and other pertinent information. The information collected remains confidential and is used to review and analyze the circumstances of each child's death. The work allows the board to assist other agencies in focusing education and prevention efforts. The board members and staff collaborate with other agencies on child safety issues, testify on pertinent legislation, conduct trainings, and serve on committees and task forces in an effort to streamline the work being done to protect Kansas children.

Since July 1, 2013, board members and the Executive Director have participated in a variety of activities. Two members were selected to serve on the Kansas Judicial Council in reference to SB259/HB2767, bills designed to allow research with the board's data. Two members and the Executive Director serve on the Kansas Power of the Positive Initiative in an effort to improve child abuse prevention efforts. Members conducted presentations on death scene investigations, recognizing child abuse, medical/legal investigations of child deaths; coroners' training programs, Sudden Infant Death Syndrome (SIDS) diagnosis and investigation, suicide prevention.

The Executive Director worked to ensure the board's goals and objectives were met by serving on the: Kansas Blue Ribbon Panel on Infant Mortality; Kansas Occupant Protection Emphasis Area Team; Midwest Regional Child Death Review Coalition; National Child Death Review Coalition; National Vicarious Trauma Workgroup; and Safe Kids Kansas (SKK) participating in four SKK sub-committees – Poison Control, Safe Sleep, Child Passenger Safety, and Legislation. The Executive Director attended the Joint State Fetal Infant Mortality Review team meeting, and the Joint Citizen's Review Panel meeting. She presented information about the work of the board to the Children's Mercy Newborn Intensive Care Unit staff, the Kansas Chapter of the American Academy of Pediatrics, the Kansas Judicial Council, and the Kansas Organization for Victim Assistance (KOVA), and she provided verbal testimony in support of SB259 and HB2767. The Executive Director and the board's Administrative Specialist attended the 16th Annual Crime Victim's Rights Conference and received training on the Kansas Open Records Meeting Act, the Kansas Open Records Act, Information Technology Security Awareness, Active Shooter Awareness, and Governmental Ethics. The Executive Director received additional training in Biased-based Policing and Racial Profiling, Supervisory Skills, the "Handle with Care" School Program, and Trauma-Informed Child Welfare.

Between July 1, 2013 and June 30, 2014, the board:

- Held 13 board meetings
- Reviewed and presented 475 cases
- Made 13 public policy recommendations and prevention strategies
- Attended/participated in 54 public meetings/training seminars
- Provided training to approximately 300 participants
- Submitted one annual report
- Developed Child Autopsy Guidelines and Recommendations for Kansas Coroners (<http://ag.ks.gov/docs/default-source/forms/autopsy-guidlines.pdf?sfvrsn=4>)

Since 1994, the board has reviewed a total of 9,211 child deaths.* In 2012, Kansas had 418 child fatalities. The manners of death are classified into one of the following six categories:

Natural-Except Sudden Infant Death Syndrome – death brought about by natural causes such as prematurity, congenital conditions, and disease. Natural deaths remain the category with the most deaths, 256 in total. More than half (68%) of these deaths were infants less than 30 days of age and 52% were born before 32 weeks gestation. Prematurity and congenital malformations accounted for the majority (68%) of natural deaths in all age groups.

Natural-Sudden Infant Death Syndrome (SIDS) – children who die prior to age one, and display no discoverable cause of death. Kansas statute requires that an investigation and an autopsy be performed before this classification can be applied. There were 25 SIDS cases in 2012, of which 96% were classified as SIDS II. A full description of SIDS categories can be found on [page 14](#).

All of the SIDS deaths noted something about the sleep environment that was felt to be unsafe. There were also 14 Unclassified Sudden Infant Deaths (USID) for which manner of death was categorized as Undetermined. For further description of this category see [page 15](#)

Unintentional Injury – death caused by incidents such as motor vehicle crashes, drowning, or fire, which were not the result of an intentional act. In 2012, there were 81 unintentional injury deaths, 78% of which were noted to be preventable. Forty eight of the total deaths were Motor Vehicle Crash (MVC) fatalities. Of those deaths, 44% were rear-seat passengers. The 15 - 17 year age group made up the majority of the MVC deaths and 68% of those children were not using a safety restraint. That, coupled with inattentive driving, excessive speed, and driver inexperience leaves this age group the greatest at risk.

The second most prevalent unintentional injury was Suffocation/Strangulation. Ninety percent of deaths in this category were children under the age of one. In 80% of the deaths under age 1, an element in the child's sleep environment was deemed unsafe (e.g. co-sleeping, placed in a cluttered crib, on a soft surface, or on a couch/lounge chair).

*The 2011 Annual Report showed a total fatality count of 391. After the report was published the SCDRB became aware of an additional 28 infant deaths that occurred in other states that were not reported to Kansas. A correction has been made to the report showing a total of 419 child deaths for 2011. Processes have been put into place to ensure that out-of-state deaths are reported timely.

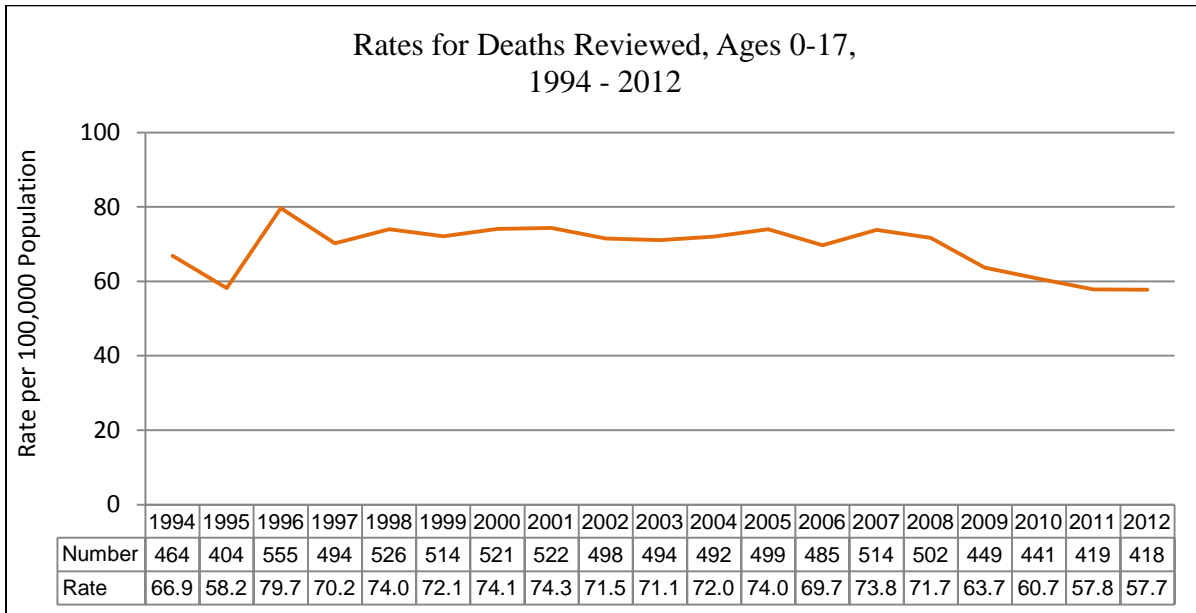
Homicide – death due to an intentional, unintentional, or criminally negligent act leading to the death of another human being, including Child Abuse Homicide and Gang-Related Homicide. There were 13 homicides in 2012, the lowest number of child homicide deaths since 2005. Of those, 46% were under age 4 and 42% fell into the 15 - 17 age group. All of the deaths under age 4 were the result of child abuse. Crying was the suspected trigger in 40% of those cases. All of the deaths in the 15 - 17 age group were due to being shot with a firearm.

Suicide – death due to the intentional taking of one’s own life. In 2012, there were 19 suicide deaths, 6 of which were age 14 or under. Of the 19 suicides, 84% were male, 95% were white, and 32% had received mental health services. Additionally, 32% died from mechanical asphyxia or strangulation and 63% used a firearm.

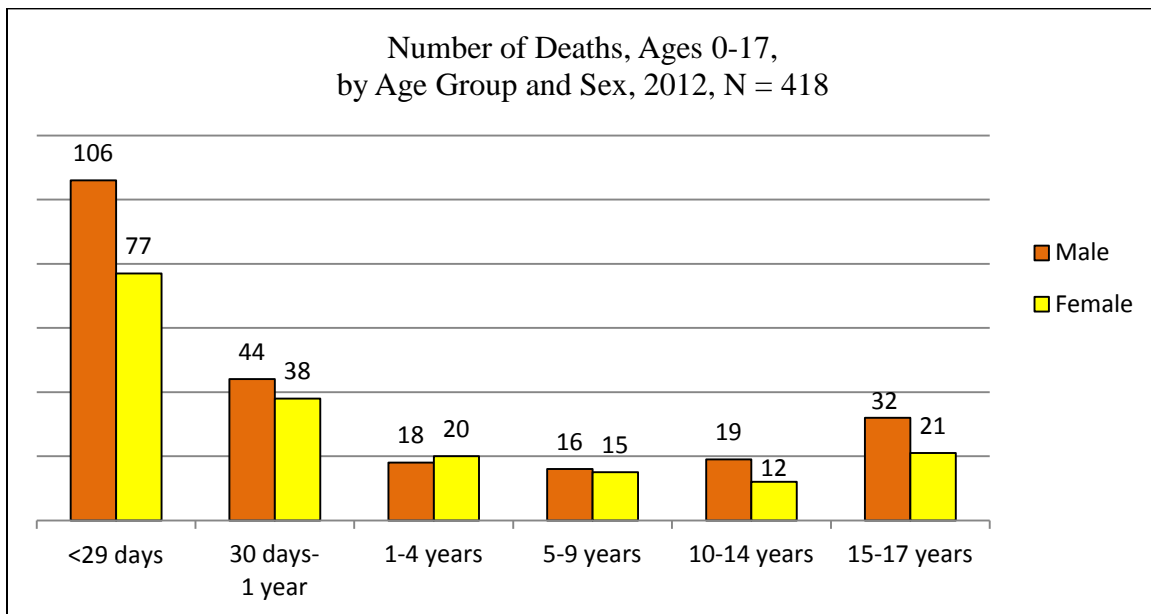
Undetermined – cases in which the manner of death could not be positively identified from the evidence collected. Twenty four cases in 2012 were classified as Undetermined and 14 of those were listed as USID. Seventy five percent of these deaths were less than 1 year of age. Often the undetermined classification is assigned when there is a lack of thorough, comprehensive investigation and/or autopsy; however, in 2012, seventy nine percent of the deaths were noted to have a complete investigation and the autopsy did not reveal an anatomic cause of death. Three cases were noted to have inconsistent scene information, including one for which the board was uncertain if an out-of-state agency conducted an investigation.

2012 Overview

In 2012, the State Child Death Review Board reviewed the deaths of 418 children, aged 0-17, who died in Kansas, or were Kansas residents who died in another state. Between 2007 and 2012 the Kansas population rate showed a slight increase¹; however, data shows that the child fatality rate is steadily decreasing.*

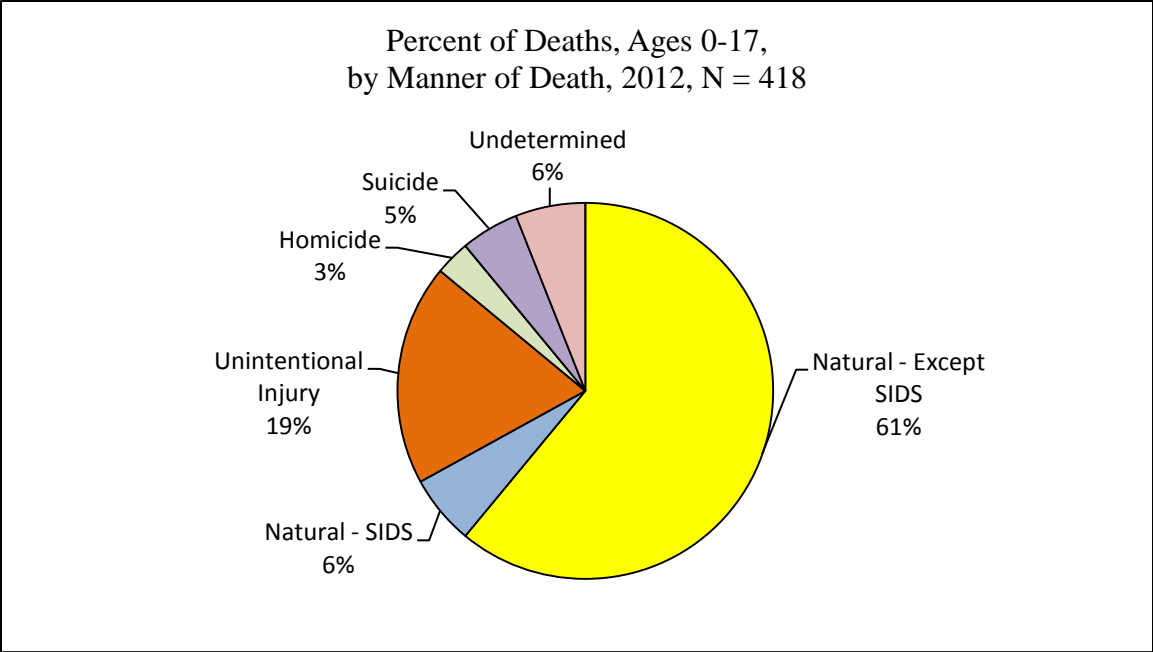


The highest percentage of child deaths occurred in the youngest age groups, with 44% less than 29 days of age, and 20% ages 30 days to 1 year. Males accounted for more deaths in most of the age groups, and comprised 56% of all child deaths in 2012.

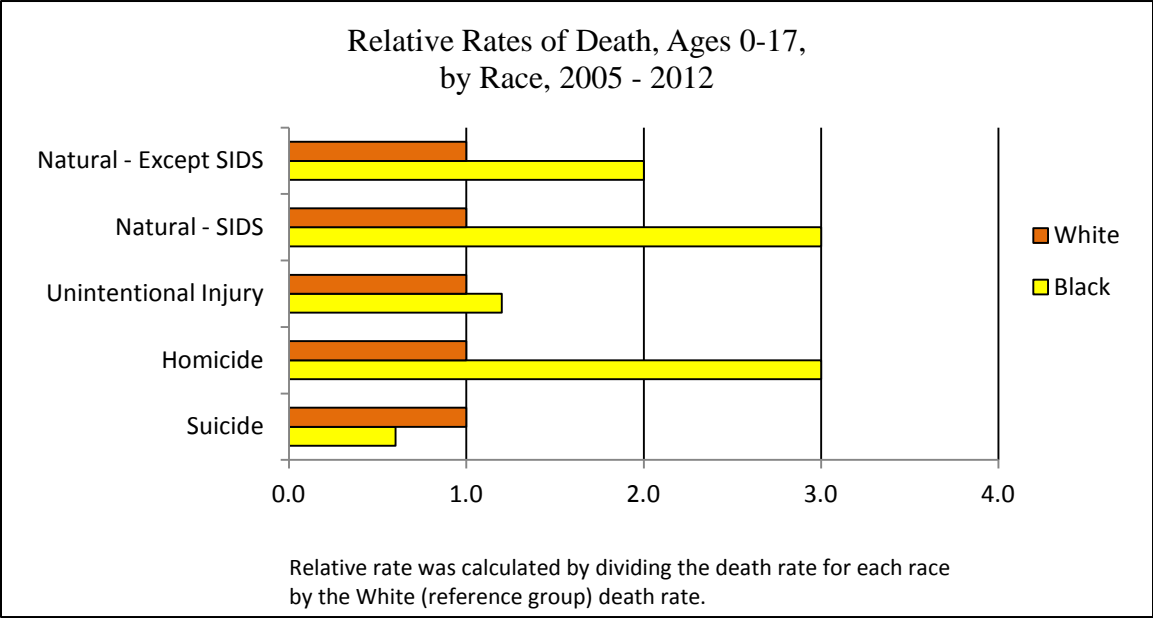


*The 2011 Annual Report showed a total fatality count of 391. After the report was published the SCDRB became aware of an additional 28 infant deaths that occurred in other states that were not reported to Kansas. A correction has been made to the report showing a total of 419 child deaths for 2011. Processes have been put into place to ensure that out-of-state deaths are reported timely.

The majority of the 418 deaths in 2012 were from natural causes, with prematurity being the most prevalent. Nineteen percent of the total deaths were from unintentional injuries, a 10% increase from 2011. The board was unable to determine a manner of death for 6% of the fatalities.



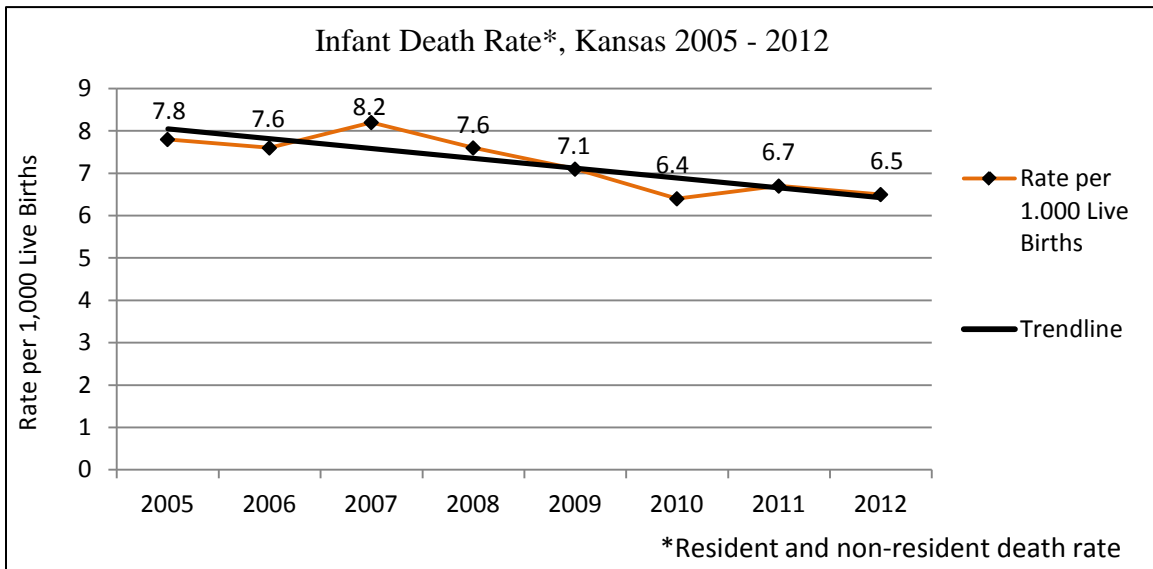
Death rates for black children were higher than white children for each manner of death except Suicide, with the greatest discrepancy in the SIDS and Homicide category.



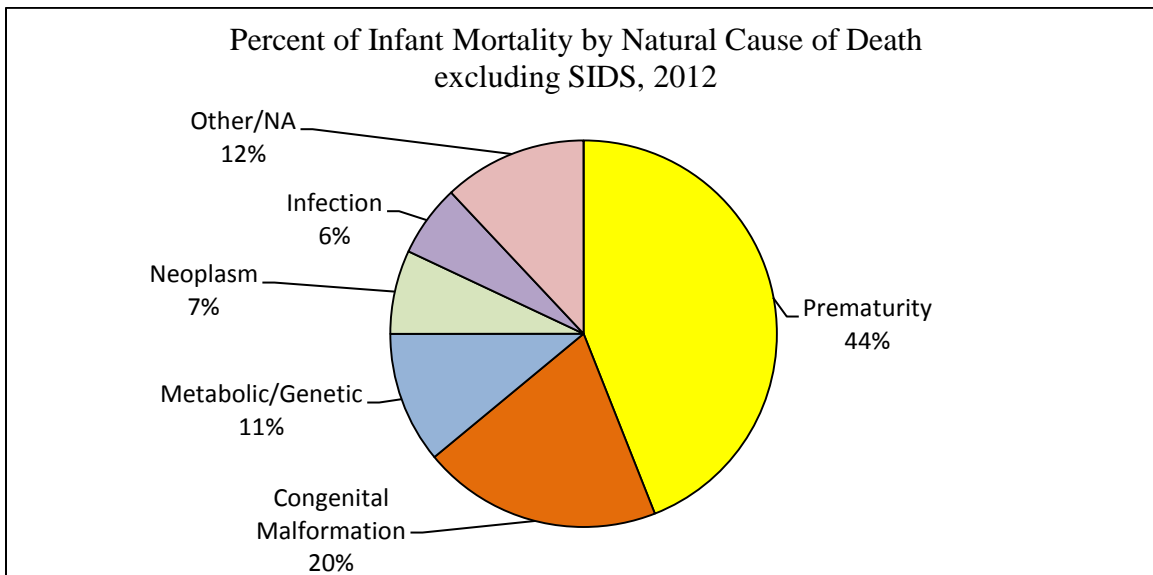
Mortality Principally Affecting Infants

(Age Less Than One Year)

In Kansas, special emphasis has been placed on infant mortality (age less than one year) as an area in need of improvement. As such, it was listed as an objective in the Healthy People 2020 report, with Kansas having a target infant mortality rate of no higher than 6.0.² In 2012, the rate of infant deaths per 1,000 live births decreased to 6.5. As previously mentioned in the Methodology section of this report, numbers and rates by the SCDRB should not be expected to be the same as those reported in the KDHE Annual Summary of Vital Statistics, which monitors deaths of Kansas residents only.



Prematurity was the leading cause of infant death in Kansas in 2012, followed by congenital malformation and metabolic/genetic conditions. The “Other” designation included a variety of causes such as encephalopathy and cerebral palsy. Infants accounted for 11(14%) of the total unintentional injury deaths, one of which was from a MVC, and 3 (23%) of homicides, all the result of child abuse.

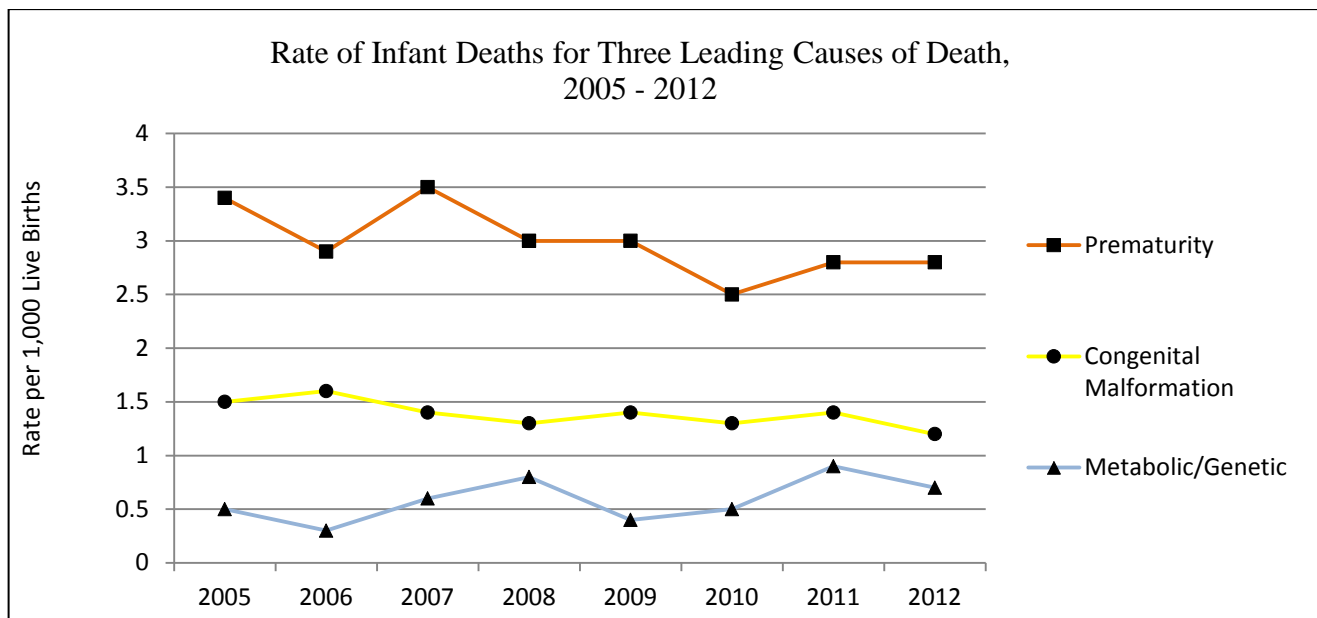


Natural Deaths – Except SIDS

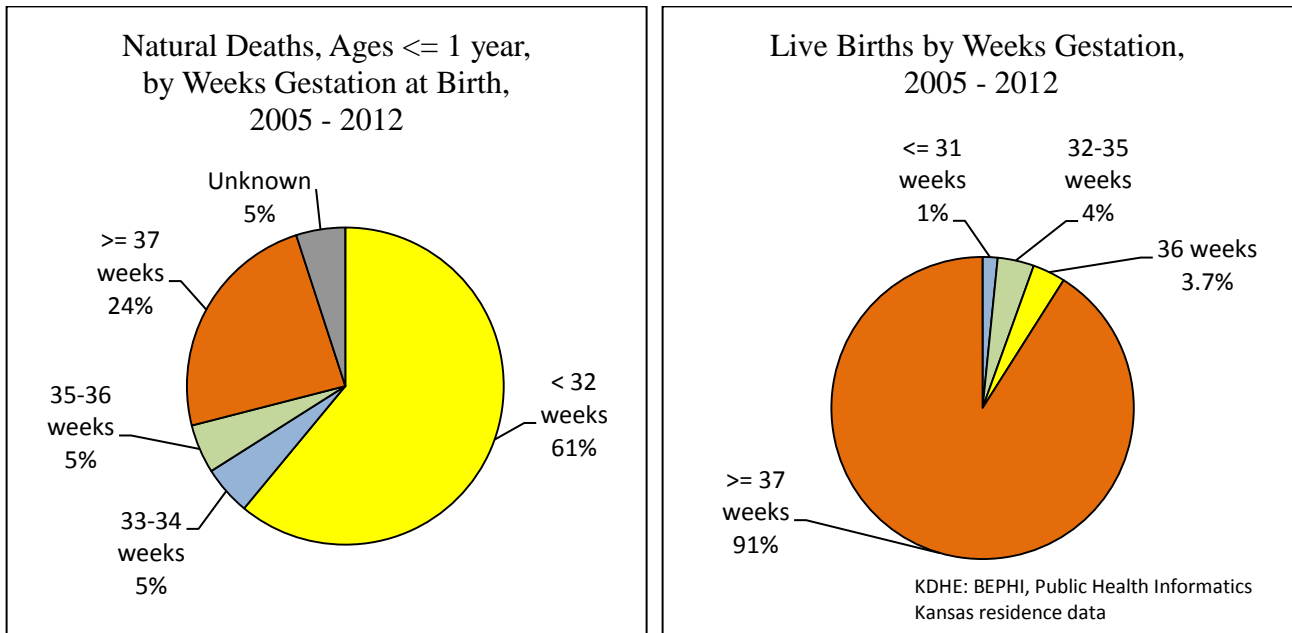
According to the KDHE Research Summary of data collected between 2008-2012, “Selected Special Statistics, Stillbirths and Infant Deaths, Kansas, 2012,” congenital malformations of the circulatory system were the most frequently occurring congenital anomaly (24%), followed by chromosomal abnormalities (18%).³ Seventy-one percent of deaths due to congenital anomalies occurred before age 28 days.

As of July 1, 2008, state law expanded newborn screening to include the 29 conditions recommended by the American College of Medical Genetics and the March of Dimes. These are conditions for which early intervention or treatment may prevent early death or lifelong disability. Over 40,000 initial tests are conducted each year.⁴ Retesting was done where indicated, and newborns with positive test results were referred to medical specialists.

The State of Kansas Genetics Plan, released August 19, 2010, notes that “genetics expertise in the state is currently insufficient to meet clinical and patient needs”⁵ and calls for continuing education for primary care physicians to enable them to discuss the impact of genetics on health outcomes.



Gestational age of an infant is one of the most important predictors of his or her chance of survival. The 2010 National Vital Statistics Report, which showed the link between infant births and deaths, reported that for every year from 2005 to 2010 approximately 35% of infant deaths were “preterm-related”. It also noted that “Two-thirds of all infant deaths (66.7%) occurred to the 12% of infants who were born preterm. Infant mortality rates are highest for very preterm infants (<32 weeks) and the risk decreases sharply with increasing gestational age.”⁶ Furthermore, the higher rates of prematurity among infants born to non-Hispanic black women were a major factor in the higher mortality rate for those infants. “The disparity in the infant mortality rate between non-Hispanic black and non-Hispanic white women has been more than double over the past decade.”⁶



The National Vital Statistics Report notes that other factors associated with increased infant mortality rates included maternal age. Infants born to teenagers and women aged 40 and over had the highest risk of death. Additionally, infants born to unmarried mothers had a mortality rate 77% higher than those born to married mothers, though marital status is often a reflection of social, emotional, and financial resources.

In 2009, the Kansas Blue Ribbon Panel on Infant Mortality (KBRPIM) was formed under the direction of the Secretary of the Kansas Department of Health and Environment. The SCDRB is represented on the panel. The panel lists the above factors as well as mothers' low educational attainment, lack of prenatal care, and smoking at any time during pregnancy as being associated with increased infant mortality rates. It also notes that multiple births (twins, triplets, etc.) greatly increased the risk of poor birth outcomes.

In February 2010, the panel submitted a list of recommendations to the Secretary of Health and Environment through the Governor's Child Health Advisory Committee. Chief among these were the call to "promote healthy lifestyles among women of childbearing age" and to "support practices and policies that improve access to early, targeted, and comprehensive prenatal care and education."⁷

In 2011, KBRPIM created the "Road Map for Preventing Infant Mortality in Kansas," a document outlining infant mortality risk factors, barriers to improvement, resources, and recommendations. To read more visit http://www.kansasinfantmortality.org/files/Logic_Model.pdf.

The panel's current and planned initiatives include:

- Conduct a multi-year statewide infant mortality public awareness campaign
- Establish and maintain evidence-based community initiatives, including Fetal and Infant Mortality Review (FIMR) programs and home visitation for high-risk families

- Support partner efforts already underway, such as the March of Dimes Prematurity Coalition and Kansas Infant Death and SIDS Network (KIDS Network) safe sleep activities
- Create a neonatal-perinatal quality improvement collaborative
- Enhance surveillance systems to assess and report infant mortality and disparities

An array of social, economic, health and behavioral factors contribute to infant mortality. Kansas Maternal Child Health Program staff note, “Neonatal mortality (death in the first 27 days of life) tends to be associated with influences prenatally, during birth, in the newborn period, and even before conception. Post neonatal mortality (28 days to 1 year) is often associated with environmental circumstances for the infant, particularly those linked to poverty (inadequate food/sanitation), unsafe housing, and inadequate supervision.”

The degree to which congenital anomalies and prematurity/low birth weight can be prevented is unknown; however, it is known that the mother’s health and medical condition can play a role in an infant’s health. Maternal risk factors include:

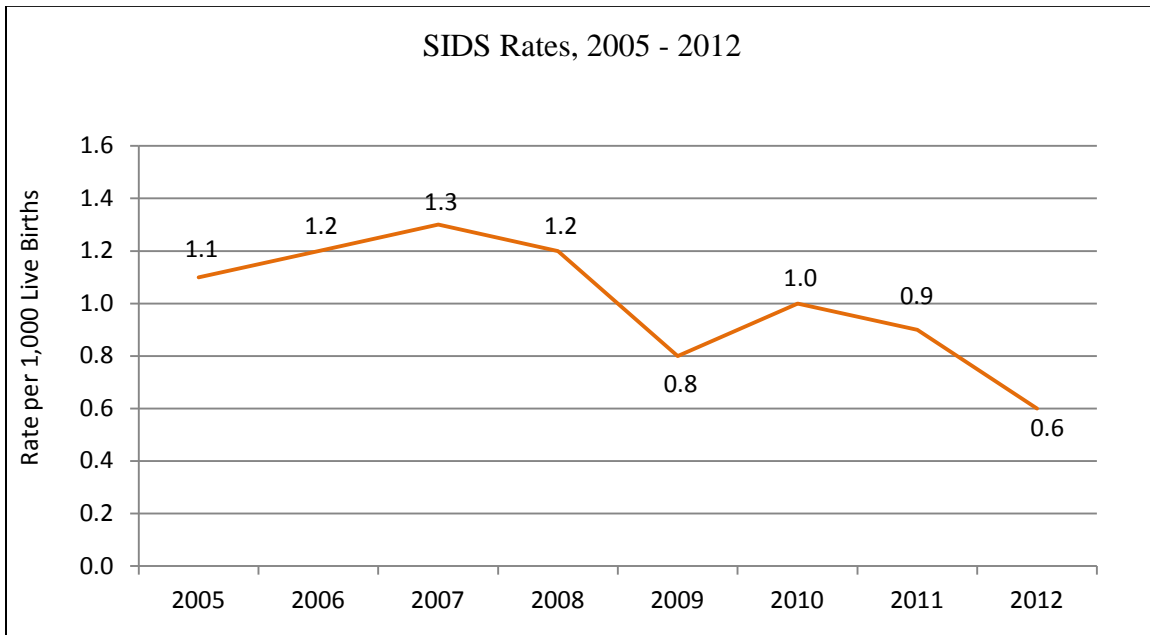
- previous fetal or infant loss
- poor health prior to or during pregnancy
- inadequate prenatal nutrition
- young or advanced maternal age
- low socioeconomic status
- low education attainment
- smoking
- substance abuse
- physical abuse

PREVENTION POINTS

- **Prenatal Care** – Medical care during a pregnancy can identify risk factors and health problems, allowing early treatment and minimizing poor outcomes. Proper nutrition is vital to a pregnancy. Iron and folic acid supplements, along with other physician prescribed regimens can help ensure a healthy pregnancy and newborn.
- **Avoid Drugs, Alcohol, and Nicotine** – The use of illicit substances, alcohol, and nicotine should be avoided during pregnancy. These elements all have the ability to cause serious health issues and sometimes death for newborns and infants.
- **Diagnose and Manage Chronic Health Conditions** – Medical care for infants and children with chronic health conditions can optimize health. Having a medical home in which education and coordinated care for chronic conditions and illnesses such as diabetes and asthma is provided, will reduce poor outcomes.

Sudden Infant Death Syndrome (SIDS)

SIDS is defined as the sudden unexpected death of an infant less than 1 year of age with onset of the fatal episode apparently occurring during sleep, which remains unexplained after a thorough investigation, including performance of a complete autopsy and review of the circumstances of death and clinical history. There were 25 SIDS deaths in Kansas in 2012, and 14 Unclassified Sudden Infant Deaths (USID), which were listed as an Undetermined manner of death ([page 31](#)).



Characteristics of SIDS Deaths, 2012

- 98% had one or more factors that contributed to an unsafe sleep environment
- 60% were co-sleeping with adults and/or other children
- 96% occurred at the decedent's residence; none occurred in a child care setting.
- 84% were less than 4 months of age
- 28% were placed on their back to sleep
- 48% were found on their abdomen or side

All of the infants placed to sleep in a crib or portable playpen had additional items in the sleep environment such as pillows, blankets, or stuffed animals, which contributed to an unsafe sleep environment

The board's concerns about unsafe sleep environments are affirmed in a safe-sleep study published in August 2014 in *Pediatrics*, the journal of the American Academy of Pediatrics. A cross-sectional examination of 8,207 sleep-related infant deaths extracted from the National Center for the Review and Prevention of Child Deaths Case Reporting System representing 24 states between 2004 and 2012, showed that 69% of the infants were bed-sharing (co-sleeping) at the time of their demise. It also noted that "older infants (ages 4 months to 12 months) were more likely than younger infants to have

objects in their sleep area, such as pillows, blankets, bumper pads and stuffed animals, at the time of death.”⁸ Causation cannot be determined from these findings and without a comparison group, risk cannot be determined either. However, by comparing these data with surveys of parents such as noted in the following paragraph, it would appear that co-sleeping especially continues to be a significant risk factor for SIDS.

In a study presented at the Pediatric Academic Societies in May 2014, the authors surveyed a nationally representative sample of 1,030 mothers of 2 - 6 month old infants recruited from 32 hospitals across the country. Overall, 18.5 % of mothers reported sharing a bed with their infant. The rate was highest among Hispanics (28%) followed by blacks (18.4%) and whites (13.7%). About 10 percent of all mothers put their babies to sleep on their stomachs. The rate of prone placement was highest among blacks (21.6%) followed by whites (10.4%) and Hispanics (7.1%).⁹ This again highlights the need to provide education about safe sleep environments.

In 2004, the CJ Foundation (<http://www.cjsids.org/>) sponsored a meeting of experts in SIDS research. The panel agreed that the existing definition of SIDS was in some cases being applied too generally and in others, too restrictively. By more clearly defining subsets of infant deaths that occur suddenly and unexpectedly, uniformity of diagnosis, accuracy of information, and accumulated data for research and assessment of recommendations could be enhanced. The recommendations include the following sub-classifications:

Category IA: Classic Features of SIDS Present and Completely Documented

- Age more than 21 days and less than 9 months.
- Normal clinical history, growth, and development.
- No similar deaths in the family, or in the custody of the same caregiver.
- Found in a safe sleeping environment with no evidence of accidental death.
- No evidence of unexplained trauma, abuse, neglect or unintentional injury.
- No evidence of substantial thymic stress effect.
- Negative results of toxicologic, microbiologic, radiologic, vitreous chemistry, and metabolic screening studies.

Category IB: Classic Features of SIDS Present, but Incompletely Documented

Investigation of the various scenes where incidents leading to death might have occurred was not performed and/or one or more of the analyses listed above was not performed.

Category II: Infant Deaths That Meet Category I Criteria Except for One or More of the following:

- Age range outside Category I.
- Similar deaths among family members or in the custody of the same caregiver.
- Neonatal or perinatal conditions that have resolved by the time of death.
- Mechanical asphyxia, or suffocation caused by overlay, cannot be ruled out with certainty.
- Presence of abnormal growth and development not thought to have contributed to the death.
- Marked inflammatory changes or abnormalities not sufficient to be unequivocal causes of death.

Unclassified Sudden Infant Death:

Includes deaths that do not meet the criteria for Category I or II SIDS but for which alternative diagnoses of natural or unnatural conditions are equivocal, including cases for which autopsies were not performed. The board most generally classifies these cases as Undetermined.

In 2012, the SCDRB categorized the SIDS and Unclassified Sudden Infant Death (USID) deaths as follows:

1 = SIDS IA: This infant was placed to sleep alone in a crib on his/her side.

0 = SIDS IB: There were no cases that fell into this category in 2012.

24 = SIDS II: In all of these cases an overlay or positional asphyxia could not be ruled out. In previous years, medical problems or inflammatory changes, such as evidence of a respiratory infection that were present, but not sufficient to be clear causes of death, have been factors in cases in this category.

14 = USID: All of the USID cases had an element of unsafe sleep environment. Additionally, 4 of the cases had an incomplete or no autopsy, concerns of a medical condition or possible abuse-related injuries were cited in 6 cases, 3 had inconsistent scene information, and in 1 a positive toxicology report was of concern. The board stresses the importance of concise and thorough investigations by law enforcement and medical personnel, and properly conducted/complete autopsies. Information on autopsy guidelines can be found at <http://ag.ks.gov/docs/default-source/forms/autopsy-guidlines.pdf?sfvrsn=4> .

The SCDRB has significant concern about the number of SIDS deaths classified as Category II. Most Category II deaths are classified as such due to the inability to definitively eliminate overlay or positional asphyxia as a cause of death. These are babies sleeping with parents or siblings, placed to sleep on soft surfaces, or with pillows or excessive bedding in the sleep environment. Although these cases are suitable to classify as SIDS, the possibility exists that some of the deaths are due to overlay by a parent, or mechanical asphyxia from bedding or pillows. The large number of infants who sleep in less than ideal circumstances is a continued concern for the board.

PREVENTION POINTS

- Infants should be placed to sleep in a supine position (on the back). Side sleeping is not as safe as supine sleeping and is not advised.
- A firm sleep surface should be used. Soft materials such as pillows, quilts, comforters, or sheepskins should not be placed with the infant.
- Use sleep clothing, such as sleep sacks designed to keep the infant warm, instead of bedding that could overheat the infant or cover the baby's head. Avoid overheating the infant's room.
- Smoking during pregnancy is a major risk factor and should be avoided.
- A separate, but proximate sleeping environment is recommended. Bed-sharing (co-sleeping) with adults or other siblings should be avoided.
- Devices promoted to reduce SIDS have not been proven to reduce the incidence of SIDS. Obtain an evaluation/recommendation from a medical professional before use of such products.
- For more information on safe sleep, visit the SCDRB's website at <http://ag.ks.gov/scdrb>, the AAP at <http://www.aap.org/>, or Safe Kids Kansas at <http://www.safekidskansas.org/>.

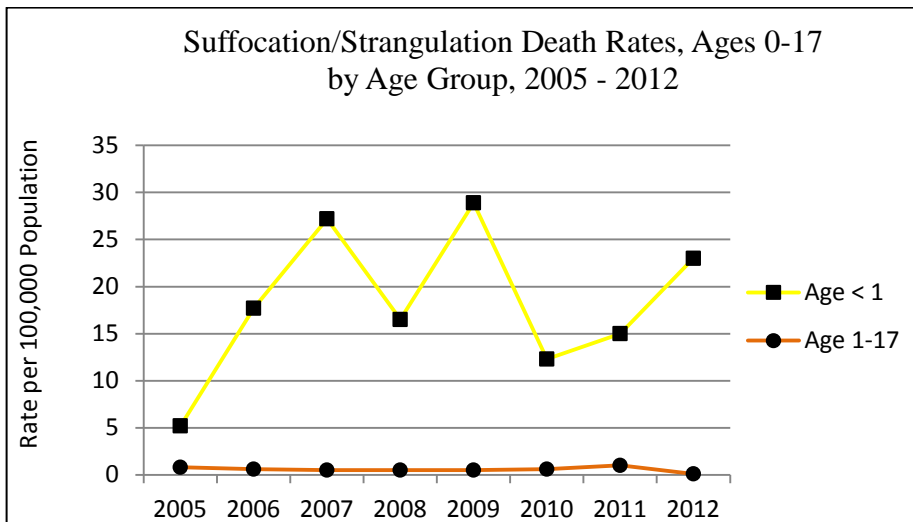
Since 2005, eighty percent of the total SIDS deaths reviewed by the board have occurred in the infant's residence, 9% of the total deaths took place in daycare/child care settings, and 9% listed "other residence" (e.g. relative, friend, neighbor, etc.) as the place of death. Since many infants spend a significant portion of their time in daycare or other child care environments, assuring safe sleeping arrangements at every site is critical. Many SIDS deaths have been associated with the child being prone, especially when the baby is used to sleeping on his/her back. Babysitters and family members who provide periodic care for babies may not be aware of the importance of supine sleeping and other safe sleeping arrangements. For these reasons, the board strongly supports and promotes a vigorous state-wide safe sleep educational campaign as described in the Public Policy Recommendations at the end of this report.

PREVENTION POINTS FOR PARENTS WHEN SELECTING CHILD CARE HOMES AND CENTERS

- Child care homes and centers must be licensed by the Kansas Department of Health and Environment. Ask to see the license or certificate – it will tell you the type of license held and the maximum number of children that may be enrolled.
- Check the compliance history of a regulated child care facility in Kansas by calling the Kansas Department of Health and Environment Child Care Licensing Program at 785-296-1270 or visit <https://kscaportalp.def.ks.gov/OIDS/>.
- Child care providers should develop a safe sleep policy and discuss it with parents when enrolling infants.
- Child care providers and parents should communicate frequently to assure that they understand safe sleep practices and that these practices are followed at home and at the child care location.
- Babies must always be placed on their backs to sleep during every sleep period, including naps. Sleep position should be consistent each time and at every location. When babies who usually sleep on their backs are placed to sleep on their stomachs, they are at a markedly increased risk of sudden death.
- Place a baby on a firm tight-fitting mattress, covered by a fitted sheet, in a crib that meets current safety standards. Never allow a gap between the sides of the crib and the mattress. The same guidelines apply to portable cribs/playpens and bassinets.
- Do not use old, broken, or modified cribs; regularly tighten hardware to keep the sides firm.
- Use sleep clothing, such as a one-piece sleeper, instead of a blanket or heavy quilt. The safest sleepwear is a comfortable fitting garment made of fabric labeled as flame resistant.
- Do not let a baby overheat. Babies are comfortable with the same layers of clothing and bedding as the adults in the same environment.
- Remove all blankets, pillows, quilts, comforters, stuffed animals, toys, bumper pads, and other baby products from the baby's sleep area.
- Do not use sleep-positioning devices, and make certain your child care provider is not positioning the baby in any manner that you have not approved.

Suffocation/Strangulation

Unintentional asphyxia deaths most often affect very young children who have not yet developed the strength or motor skills to remove themselves from dangerous situations. Reviews from Kansas and across the nation show there are several common practices that increase the risk for asphyxial death. These include sleeping somewhere other than a crib, being placed on the abdomen to sleep, sleeping in a cluttered area, being placed on a soft surface such as a pillow or quilt, and bed-sharing (co-sleeping) with parents or siblings. Some cribs, bassinets, and playpens have been recalled because of known or suspected risk of strangulation. Before purchasing baby furniture ensure no recalls have been issued. The U.S. Consumer Product Safety Commission (<http://www.cpsc.gov/>) is a resource for recall information.



Of the 10 suffocation/strangulation deaths in 2012:

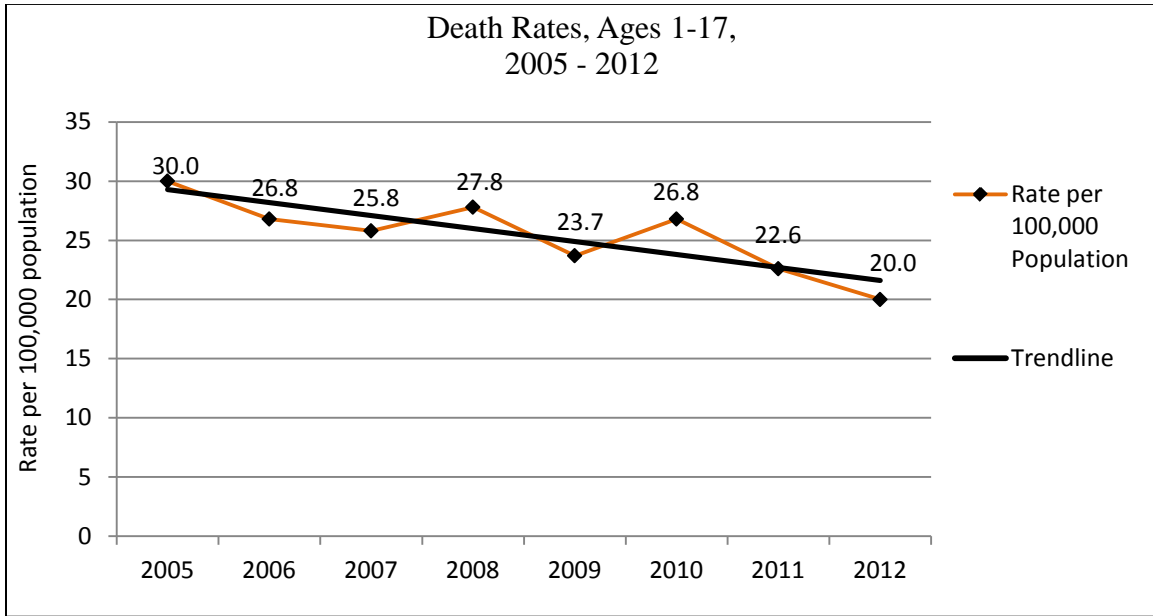
- 9 were less than one year of age
- 8 were in unsafe sleeping environments, (co-sleeping with an adult or sibling, placed on soft surface, etc.)

PREVENTION POINTS

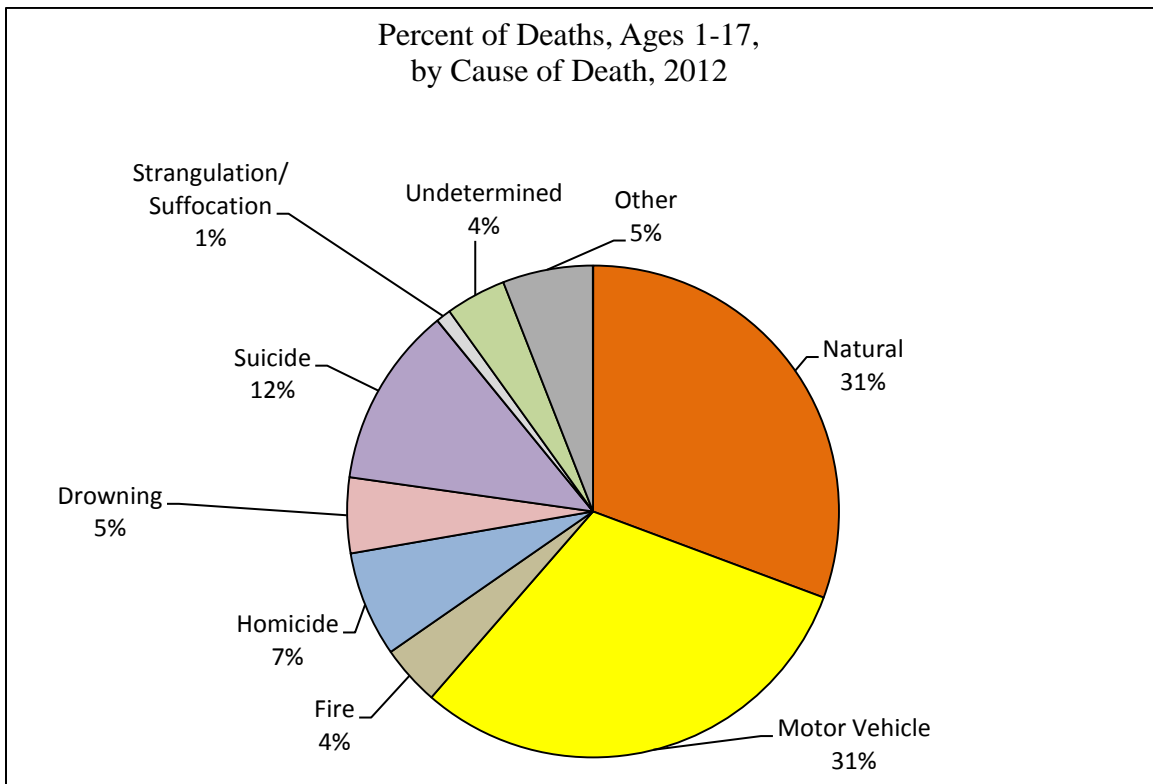
- **Proper Supervision** - Young children should be watched attentively. Leaving them alone for even a few minutes allows opportunities for accidents. Child-specific training in CPR and other emergency responses can help prevent death.
- **Safe Environments** - Be vigilant about potential dangers to children. Consideration must be given to their size, curiosity, and motor ability. Living, sleeping, and play areas should be routinely inspected for dangers which may not be threats to adults (e.g. chests/coolers, hanging cords, plastic bags), but can be deadly to children. Check play areas for hazards like protruding bolts that can catch clothing and strangle a child. Check playground equipment parts and hand rails for spaces that may be large enough to allow a child's body to slip through causing strangulation by trapping the head or neck.
- **Infant Sleeping Arrangements** - The safest sleeping arrangement for an infant is alone in an approved crib, on his or her back. Babies should not sleep in adult beds and should not be placed in bed with parents or siblings. The crib mattress should be firm and fit tightly so the child cannot be trapped between the mattress and side of the crib. Soft items such as blankets, bumper pads, pillows, and stuffed animals are at risk for suffocation and should not be in the crib with the baby.

Mortality Principally Affecting Children Ages 1-17

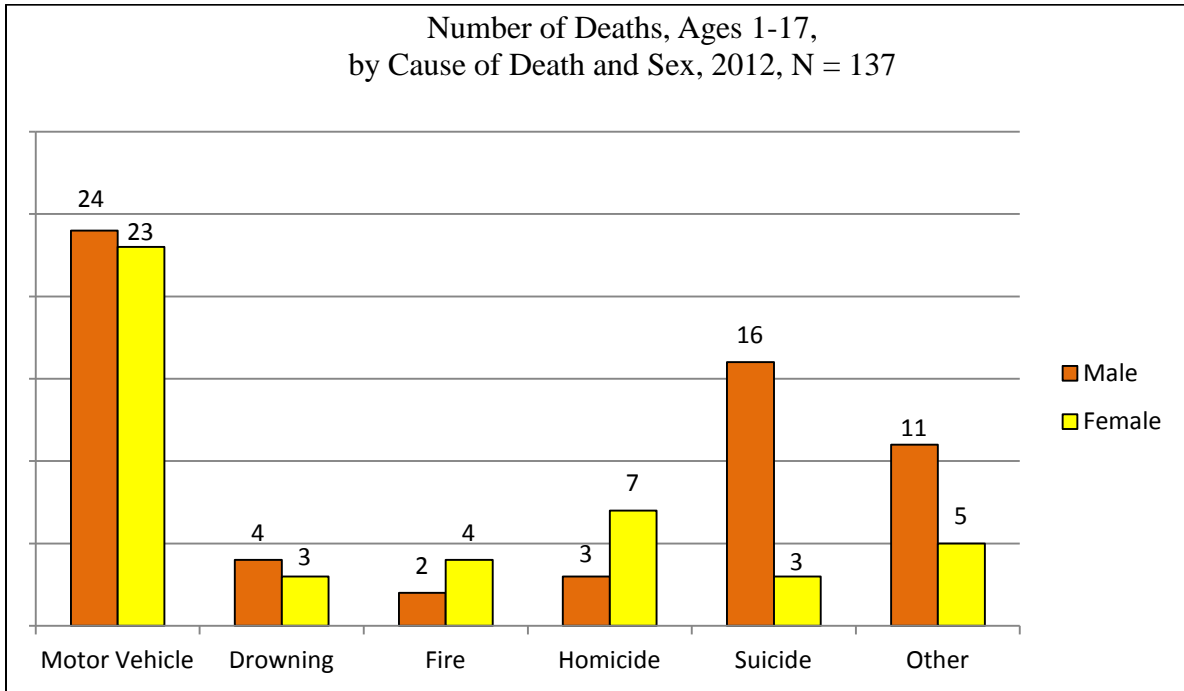
Overall death rates for children ages 1-17 have declined since 2005. In part, this is attributed to the mandatory seatbelt law and graduated driver's license laws. There were 153 deaths in this age group in 2012.



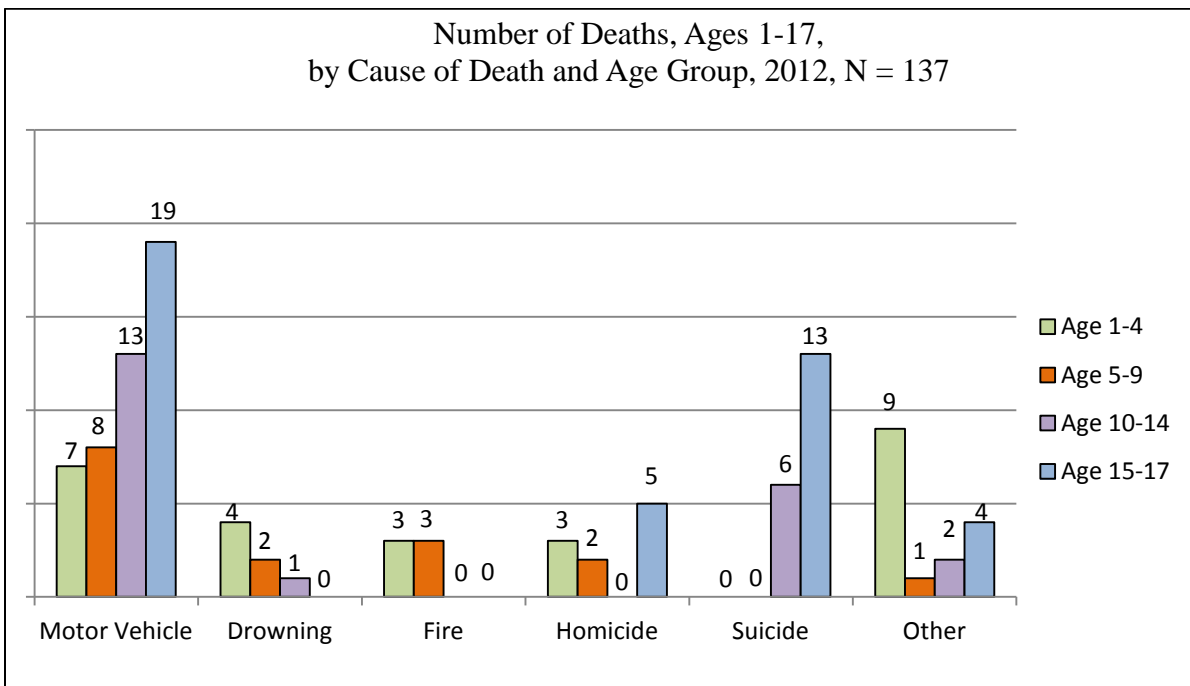
Forty-seven percent of the deaths age 1-17 were the result of unintentional injuries, including 31% from motor vehicle crashes and 5% from drowning. Natural causes such as cancer, heart conditions, or respiratory diseases such as asthma, accounted for another 31%.



The following chart excludes Natural deaths and shows cause of death for 137 children ages 1-17 by sex. Overwhelmingly more males commit suicide than females both nationwide and in Kansas. Females account for a larger percentage of deaths in motor vehicle crashes than in the past.

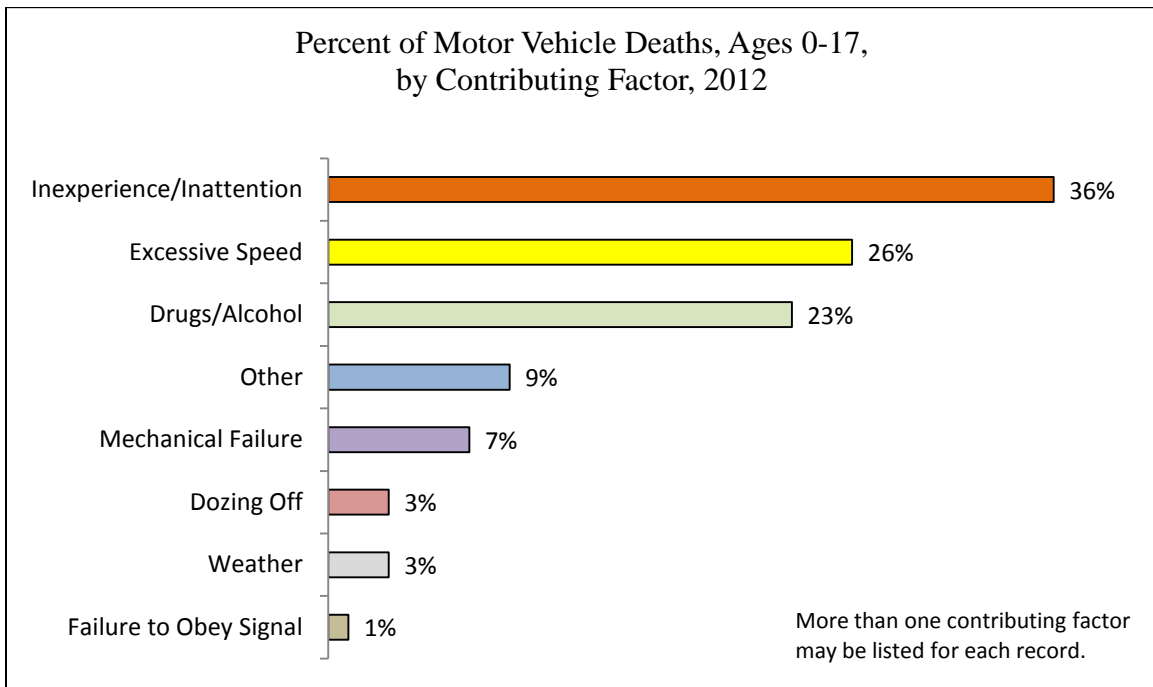
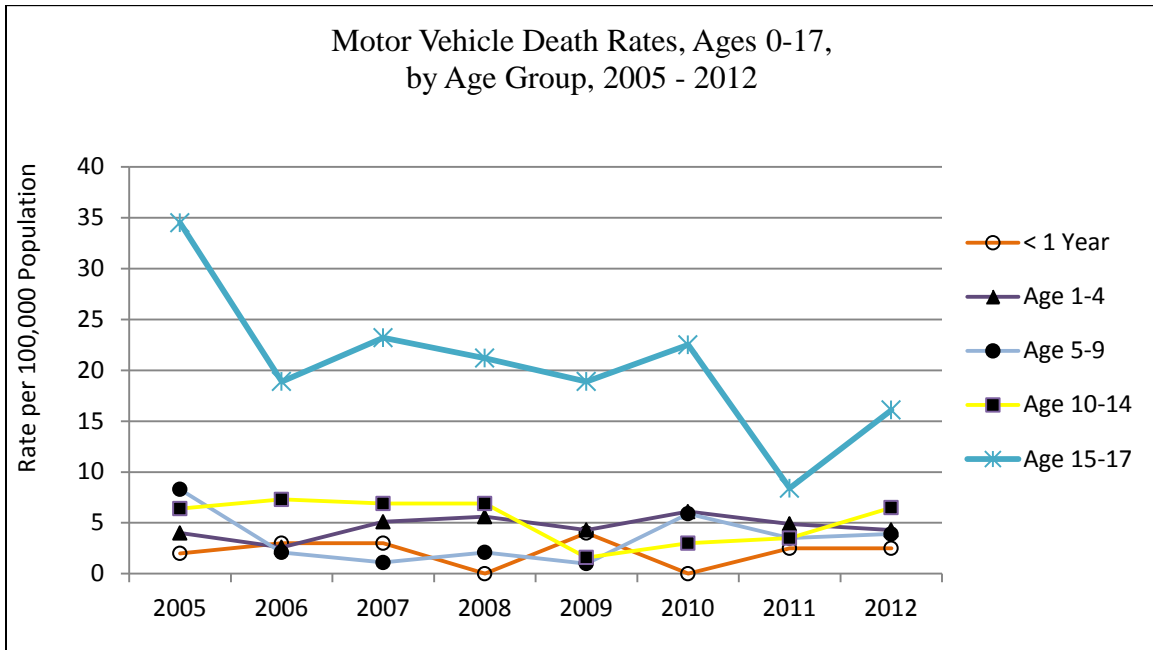


Older children account for more motor vehicle crash deaths and suicides, while younger children account for a larger number of deaths by drowning and fire. The “Other” category includes causes such as overdoses/ingestions, electrocutions, and falls.



Motor Vehicle Crash

In 2012, 48 children died in Kansas as a result of a Motor Vehicle Crash (MVC) a 45% increase from the preceding year. Of the 48 fatalities, 44% were rear-seat passengers and 50% were either not using a safety restraint or were using it improperly. Children ages 0 - 4 were restrained, but 4% in the 5 - 9 age group and 15% in the 10 - 14 age group were unrestrained. There were 19 deaths ages 15 - 17 and 68% of those were unrestrained. Driver inexperience and inattentive driving were noted as contributing factors in 52% of the total cases and excessive speed was noted in 36%. Drugs and/or alcohol use was noted to be a contributory factor in 23% of the cases.



Characteristics of Motor Vehicle Crash Deaths, 2012

- 15% were pedestrians or were riding a bicycle
- 28% occurred between 9:00 p.m. and 3:00 a.m.
- 44% of the decedents were rear-seat passengers
- 50% of the decedents did not use, or misused, safety restraints

PREVENTION POINTS

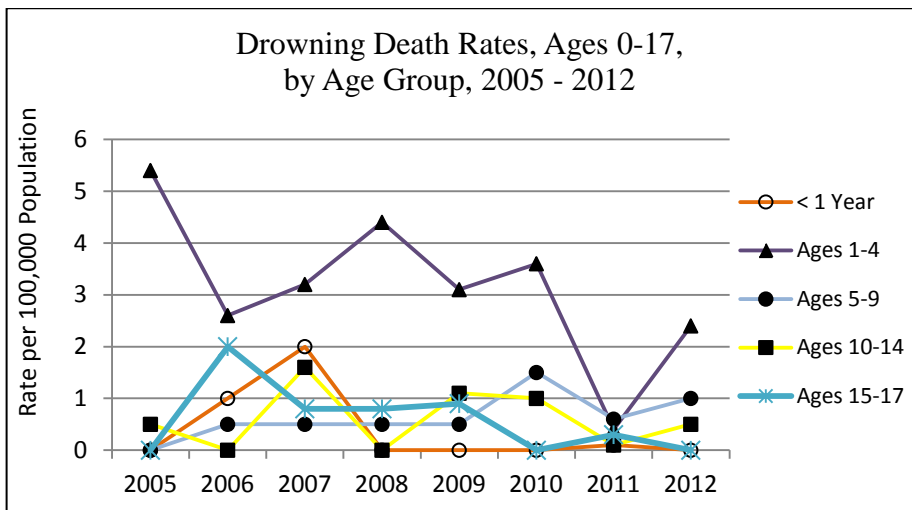
- **Use of Proper Safety Restraints** - Wear seat belts. Seat belts and appropriate child safety restraints consistently prevent serious injury and death. The importance of parental seat belt use as an example is invaluable. According to the National Highway Traffic Safety Administration, parents who buckle up are more likely to use safety restraints for their children. Children under 4 years of age should be placed in a child safety seat firmly secured in the backseat. Children between the ages of 4 and 8 should be in belt-positioning booster seats.
- **Attentive Driving** - Avoid distractions such as cell phones and other electronic devices. Novice drivers should have limits placed on the number of passengers and nighttime driving, both known risk factors. As of January 1, 2011, a person who is operating a motor vehicle is prohibited from using a wireless communication device to write, send, or read a written communication.
- **Avoiding Alcohol or Drug Use** - It is never safe to drive after drinking alcohol or using narcotics or other mood-altering drugs. Avoid riding with anyone who is suspected of being under the influence of drugs or alcohol.
- **Driving Experience** - Driving is not a quickly learned skill and requires practice, focus and good judgment. Young drivers should be accompanied by an experienced adult and avoid complex driving situations. In January 2010, the revised graduated driver's license system was enacted and does not confer full driving privileges until age 17 and after significant supervised driving time.

All-terrain vehicle use has become popular in both recreation and work. Their size, maneuverability, and durability make them extremely handy and fun to ride. Unfortunately, the thrills can quickly turn to tragedy. “In 2012, there were an estimated 107,900 ATV-related, emergency department-treated injuries in the United States. An estimated 26,500 (25%) of these were children younger than 16 years of age.”⁹ In Kansas, children ages 10 - 14 have comprised the highest number of ATV-related fatalities since 1994. Young riders lack the size and strength to safely control an ATV. ATV drivers often travel on roadways which are not designed for ATV travel and drive at speeds that are unsafe. In addition to the 2 Kansas child deaths in 2012, the board is aware of countless life-altering injuries that have resulted from ATV-related crashes. The board's recommendations regarding the use of ATVs can be found in the Public Policy Recommendations section at the end of this report.

Drowning

Children are drawn to water. They like to splash and play in it, but this lure is deceptive and can lead to tragedy. Children can drown in a couple of minutes and in only a few inches of water. Drowning is a leading cause of unintentional injury deaths nationwide. In 2012, seven children died from drowning in Kansas. In all of those cases, the children had been left alone or were being improperly supervised at the time of the incident.

Between 1994 and 2012, the board has reviewed 210 drowning cases. In total, 38% occurred in rivers/lakes, 38% in a pool or hot tub, and 25% were in other locations including bathtubs. Since 1994, the 1 - 4 year age group has accounted for the largest number of drowning deaths.



Of the 7 drowning deaths in 2012:

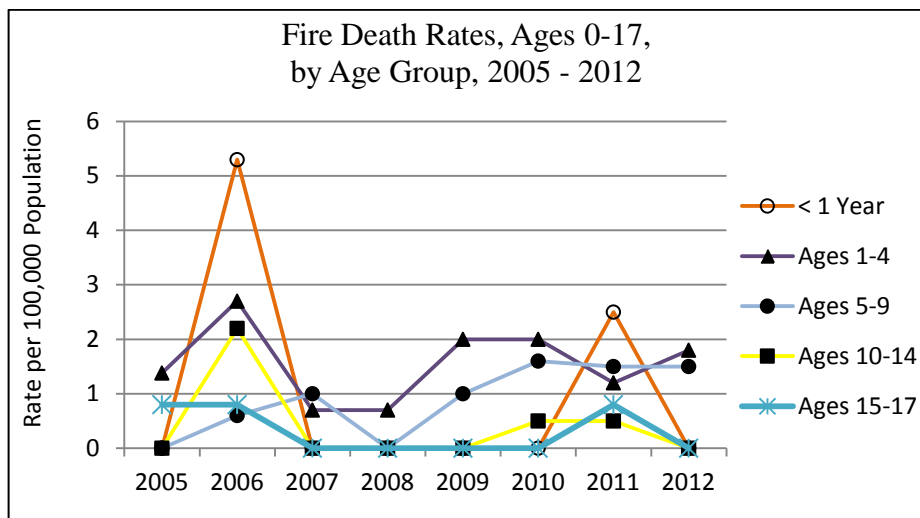
- All were improperly supervised
- 5 were swimming in a pool or hot tub
- None of the decedents were using a personal flotation device
- 2 knew how to swim

PREVENTION POINTS

- **Proper Supervision** - There should always be an adult who is capable of responding to an emergency, observing children around water. The adult should be actively watching and avoid distractions. Assigning swimming “buddies” is a good idea, especially if there are many swimmers. Supervision also applies to bathtubs, where children should never be left alone even for short periods of time.
- **Pool/Environment Safety** - Most cities/counties have ordinances in place regarding fencing around pools. A five-foot fence with safety latched gates completely encircling a pool or hot tub is recommended. In bathtubs, seats designed to hold a baby’s head above water are no substitution for adult supervision. Also, small children can drown after falling into buckets, toilets, washing machines or other such water holding basins. Caregivers must be vigilant about these less obvious dangers.
- **Use of Safety Equipment** - When participating in water activities, children should always wear Personal Flotation Devices (PFDs) that are Coast Guard Approved and suited for the proper weight of the child. PFDs should be checked for broken zippers and buckles. “Water wings” and other inflatable items are not adequate substitutes.
- **Water Safety Education** - Children should have swimming lessons and water safety education. The American Academy of Pediatrics recommends waiting until age 4 to begin lessons. While this is vital, swimming ability alone does not relieve the need for adult supervision or PFDs.

Fire

Nationwide, fires and burns are a common cause of unintentional injury deaths and home injury in the United States. Children 4 years old and under are most at risk. According to the United States Fire Association, in 2012 there were 2,855 reported civilian residential fire deaths in the United States,¹⁰ twenty-nine of those were Kansans, and 6 were children.



Of the 6 fire-related deaths in 2012:

- 6 were age 1 to 10
- 5 had no working smoke detector in the home
- 3 were started by cooking appliances
- 6 occurred at the decedent's residence

Fire is often started by children playing with matches or lighters. It is vital for parents and caregivers to keep all lighters, matches, and other igniting sources out of reach of children. They also need to educate children on the dangers of fire and practice escape routes in the event a fire does occur.

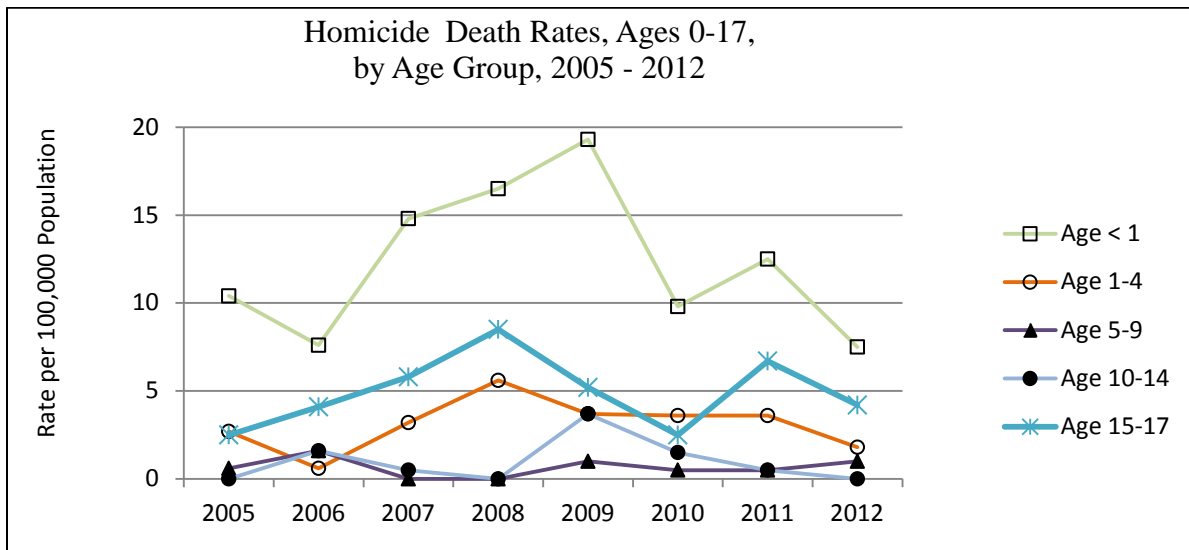
The Consumer Product Safety Commission conducted a national study and found that in one-fifth of all homes with smoke detectors, none were working.¹¹ In 2012, five of the six Kansas fire deaths of children occurred in a home that had no working smoke detector. Parents and caregivers should be diligent about having functional smoke detectors in all appropriate locations in the home. Smoke detectors need to be installed on every level in the home and by each sleeping area. They need to be tested once a month, have new batteries at least once a year, and should be replaced every 10 years. Close supervision of children, safe storage of matches and lighters, and working smoke detectors in the home are critical.

PREVENTION POINTS

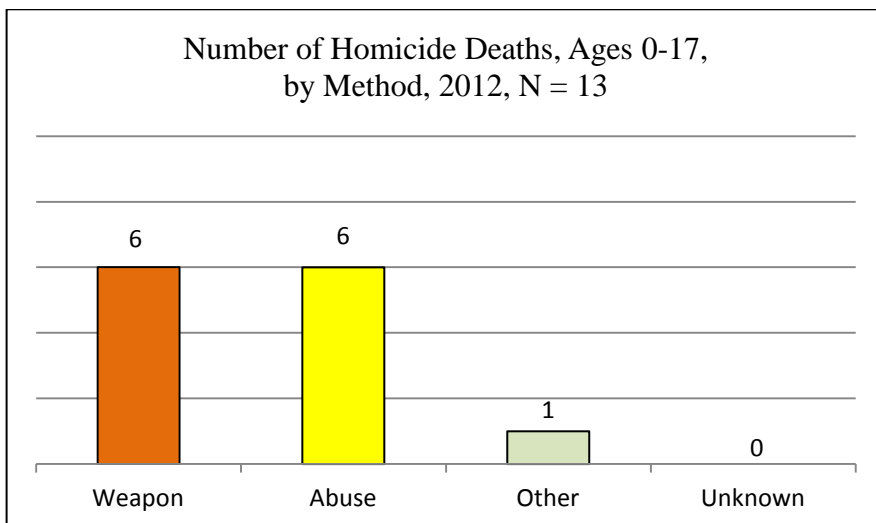
- **Proper Supervision** - Young children must be watched closely. Leaving them unsupervised, especially if there are objects like candles or matches within their reach, could result in a serious injury or death.
- **Prevent Access to Fire-starting Material** - Matches, lighters, candles, etc. should be kept away from children. *Do not assume a young child cannot operate a lighter or match.*
- **Working Smoke Detectors** - Smoke detectors should be placed in several locations throughout the house and tested once a month to ensure they are working.
- **Emergency Fire Plan** - Everyone in the house, including the children, should know all exits from the house in case of a fire. Designate a central meeting location outside of the home and practice fire drills.

Homicide

Homicide is defined as the death of one person resulting from the intentional or unintentional actions of another person. In 2012, Kansas experienced a total of 91 homicides, 13 of which were children.¹² Since 2006, Kansas has seen an overall decline in the homicide rate for both children and adults when the rate was 4.6 (rate per 100,000 population). In 2012 the total Kansas homicide rate was 2.9. When looking at child homicides, the rate for the less than 1 year age group is much higher than the other age groups.



The majority (58%) of the 13 child homicides in 2012 occurred at the decedent’s residence. Seventy-five percent of the perpetrators were noted to have prior criminal history and 50% of the cases involved drug use. A firearm was used in each of the cases in the 15 - 17 age group. From 2005 - 2012, forty-two percent of the total homicides involved the use of a firearm. The board recommends all firearms be stored with gun locks in a secure and locked case with ammunition stored separately. Parents and caregivers are encouraged to discuss the dangers of firearms with children and coach them on what to do if they are in a situation where a firearm is present.



Of the 6 Child Abuse Homicides in 2012:

- 4 were killed by the mother’s boyfriend (not the biological father) who was left alone to care for the child
- the biological parent was a suspect in 3 cases
- 5 were the result of abusive head trauma

The board defines Child Abuse Homicide as resulting from of abuse (inflicting injury with malicious intent, usually as a form of punishment or out of frustration with a child's crying or perceived misbehavior) or neglect (failing to provide shelter, safety, supervision, and nutritional needs) by caretakers. Child abuse is a complex problem that stems from a variety of factors, including, but not limited to, stress, poverty, substance abuse, and mental illness.

The method of child abuse homicide can vary. In general, most occur as a result of blunt force trauma. The most prevalent form is abusive head trauma (AHT), commonly referred to as Shaken Baby or Shaken/Impact Syndrome. AHT occurs when an infant or toddler is severely or violently shaken resulting in serious injury and/or death. When infants are shaken or their heads sustain a severe impact, the brain moves back and forth within the skull. The blood vessels and brain tissue cannot tolerate the sheering force caused by the violent shaking. Blood vessels will break causing internal bleeding, and brain cells are damaged. As a result of the internal head injuries, the child may encounter trouble breathing or lose consciousness, which can cause brain damage due to lack of oxygen. These injuries lead to serious complications such as blindness or eye damage, delay in normal development, seizures, damage to the spinal cord (paralysis), brain damage, or death. It is important to note that it is common for children who die from AHT to have autopsy evidence of impact injuries, but no visible external evidence of trauma.

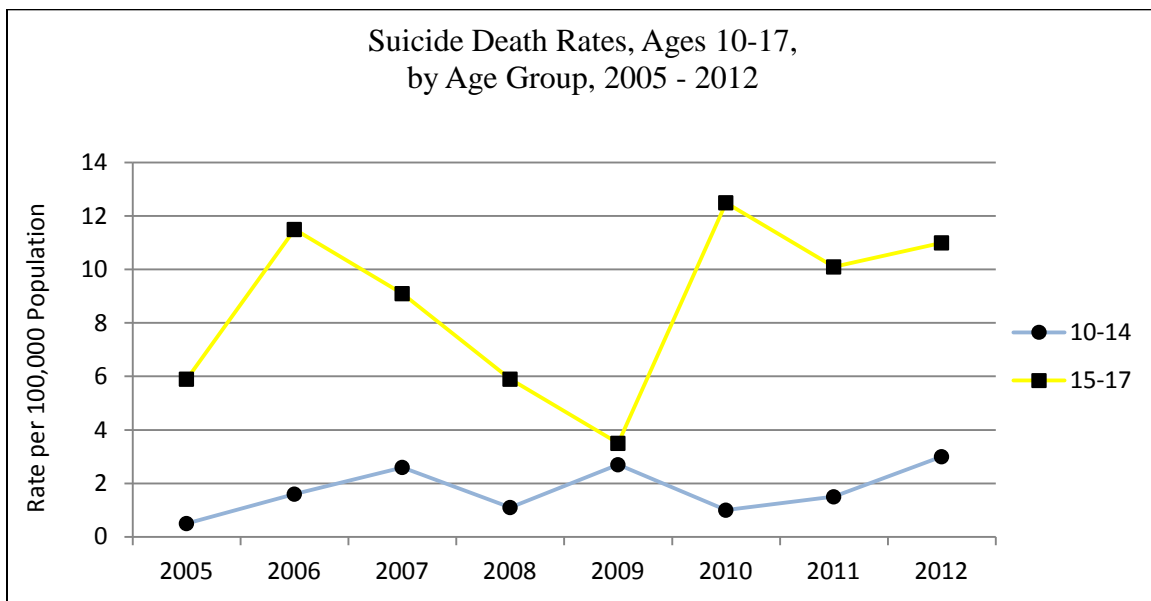
There are several risk factors associated with child abuse homicide including maternal risk factors (young age, less than twelve years of education, and being a single parent) and household risk factors (male not related to the child in home, prior substantiation of child abuse and neglect, substance abuse, and low socioeconomic status). Effective methods for preventing child abuse involve programs that enhance parenting skills for at-risk parents. Examples include home visits by nurses who provide information on quality childhood programs; coaching in parenting skills which include parent training and education about normal child behaviors and appropriate discipline; and educating parents of newborns about appropriate responses to infant crying and how to select appropriate child caregivers.

Prevention Points

- **Family Violence** - Domestic violence history is not consistently made available to the board; thus, data is not available to report the degree to which it plays a part in child fatality cases. However, national studies indicate domestic violence is a risk factor for child abuse.
- **Drug Environments** - Extra care should be given to ensure children living in homes where drugs (including illicit prescription medication and alcohol) are used. Children living in such environments are at increased risk of abuse, neglect, or death.
- **Take Extra Care with Young Children** - The victims of child abuse homicide are more often in the younger age categories. Frustrated caregivers, often without any parental training, combine unrealistic expectations for children's behavior with a lack of appreciation for their vulnerability. Abusive head trauma is an example of how an impact or violent shaking of a baby can cause serious or fatal trauma to the child's brain. Caregivers should be mindful of a child's capabilities and susceptibility. Education should be provided at all points of contact with parents and caregivers.
- **Pay Attention, Familiarize Yourself with Signs of Child Abuse** - It is important to use common sense in trying to determine if a child is being abused. Normal, active children get bruises and bumps from everyday play. These bruises are most often over bony areas such as the knees, elbows, and shins. However, if a child has injuries on other parts of the body, such as the cheeks, ears, mouth, stomach, buttocks, or thighs consider the possibility that the child is being abused. Bruises in these areas, human bite marks, and round burns the size of a cigarette seldom come from everyday play. If you suspect a child is being abused or neglected, please call the Kansas Protection Report Center at 1-800-922-5330 (toll-free) or call 911 if the child is in imminent danger.

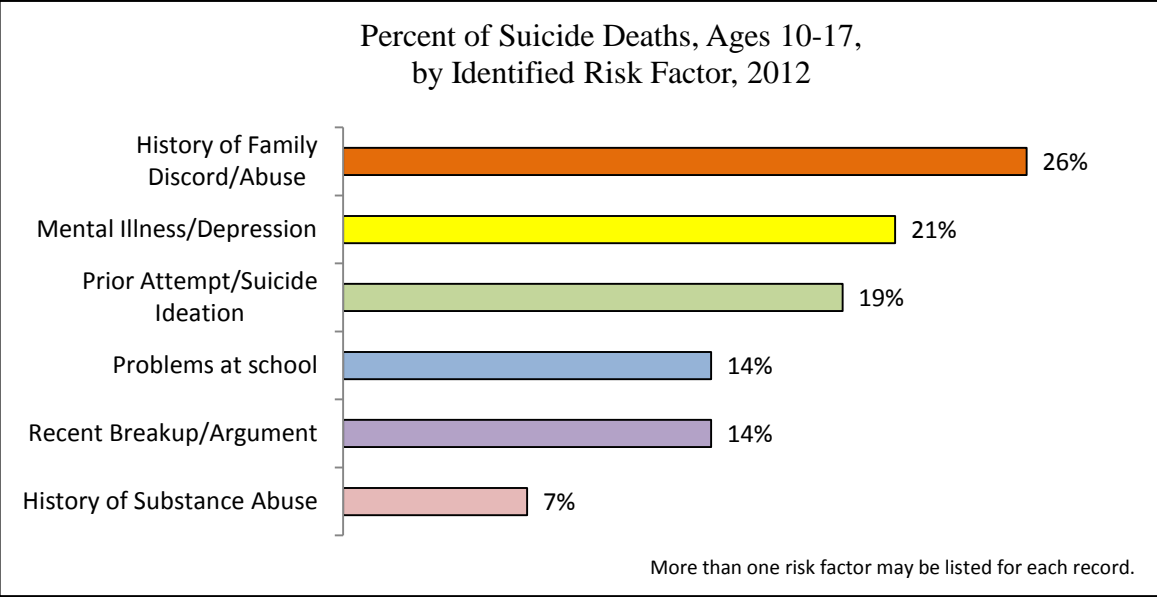
Suicide

In 2012, the suicide rate in Kansas increased 31% from the preceding year.¹³ According to the Centers for Disease Control, suicide is the third leading cause of death among US children and adolescents (age 10 - 24), exceeded only by injuries and homicides.¹⁴ Nineteen Kansas children committed suicide in 2012 and 84% of them were male. Adolescent females are more likely than males to attempt suicide, but teenage males are more likely to complete it. The rates of suicide vary according to race and ethnicity, with the adolescent suicide rate highest for white males. Suicide rates increase with age after puberty, but prepubescent suicide does occur and is an alarming finding for the board. Traditionally the most common method for suicide by males is firearms, while females more frequently use hanging and suffocation.



Risk factors for adolescent suicide may be categorized as predisposing and precipitating factors. Predisposing factors include psychiatric disorders, previous suicide attempt, family history of suicide, history of physical or sexual abuse, exposure to violence, and biologic factors. Precipitating factors include access to means, alcohol and drug use, exposure to suicide, social stress and isolation, and emotional and cognitive factors. In recent years, binge drinking has been identified as a significant risk factor. Well-identified examples of social stress include parental divorce or separation, or the breakup of a significant relationship. Recently, bullying has been identified as a risk factor, placing both bullies and victims at risk. The impact of Internet sites that promote suicide and those which facilitate suicide pacts among strangers has not been determined. Social isolation may be a risk factor for adolescent suicide; indeed, an increased risk for suicide for a female has been correlated with a recent family move and an increased risk for males is the loss of a relationship.

While it can be a painful process, thorough investigations of suicides are necessary for developing effective prevention strategies. Often the board reviews suicide deaths and discovers the family has not been thoroughly interviewed or autopsies have not been performed in a manner which would provide a complete evaluation of the youth’s situation and health at the time of death. The desire of families and communities to put such tragedies behind them is understandable. However, the lack of thorough investigations and autopsy examinations can hinder efforts to prevent further deaths of Kansas children.



Characteristics of Suicide Deaths, 2012

- 84% were male
- 47% were 17 years of age
- 63% involved the use of a firearm
- 21% had mental illness or depression as a risk factor

PREVENTION POINTS

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

Undetermined Manner

Periodically, the board encounters a case where questions remain as to the cause and manner of the child's death. Contributing factors might include medications the child has taken or been exposed to, a complex medical history with no obvious cause of death, a child not being properly supervised, illicit drugs in the environment, or other concerns about the social circumstances. When there are multiple circumstances that could have contributed to the child's death and no identifiable cause is established, the board will classify the death as undetermined. The SCDRB has classified 298 deaths as undetermined since 1994.

In 2012, there were 24 such deaths; 83% occurred at the decedent's residence and 96% were less than 4 years old. Of the 24, fourteen were Unclassified Sudden Infant Death (USID). As noted in the SIDS section of this report, USID includes deaths that do not meet the criteria for SIDS I or II and for which an alternative diagnoses of natural or unnatural conditions are unclear. The 14 USID cases were listed as such due to partial scene investigations, improperly conducted/incomplete autopsies, possible underlying medical conditions, and positive toxicology results.

All non-natural child deaths should be exhaustively investigated. The circumstances and family situation should not affect the detail of the inquiry. Hospitals need to have protocols in place to ensure law enforcement is notified when a child dies from other than expected natural causes and when a child is admitted with what appears to be an acute life threatening event of unknown etiology that is likely to be fatal. Investigations in the Undetermined cases varied significantly. In some instances, although every effort was made to determine why a death occurred, the cause of death could not be ascertained. Other cases revealed incomplete investigations or law enforcement agencies not being informed of the death. In some, autopsies were not performed or were incomplete, or toxicology testing on the victim was not performed. These issues are why the SCDRB has once again included in its Public Policy Recommendations a call for thorough investigations.

Combined with excellent law enforcement investigations, complete autopsies often provide a better understanding of child deaths. However, there are situations in which an autopsy should have been performed and was not, or the autopsy did not include all aspects of a standard forensic investigation such as full-body x-rays, cultures, metabolic and toxicologic studies. Coroners must be mindful of their statutory duties and should be aware of the autopsy reimbursement program through KDHE. Visit the SCDRB's website at <http://ag.ks.gov/about-the-office/affiliated-orgs/scdrb> for additional information.

Public Policy Recommendations

The Child Death Review Board has chosen to provide policy recommendations in areas that could significantly affect child deaths in Kansas. The information gathered and analyzed by the board provides compelling support for the recommendations made below.

IMPROVE MATERNAL HEALTH TO LOWER INFANT MORTALITY

The majority of the cases reviewed by the SCDRB are Natural deaths. While there are a variety of reasons for these deaths, prematurity and congenital malformations are the most frequent cause of infant deaths. Healthy women are more likely to have a healthy pregnancy. Factors that can impact pregnancy outcomes include maternal preconception and prenatal health, nutritional status, use of substances such as alcohol, tobacco or drugs, educational and income level, age, ethnicity, presence of domestic abuse, and desire for the pregnancy.

Improving the health of women before conception and during pregnancy can help prevent poor birth outcomes for both the mother and her baby. Measures that improve preconception health include: reducing obesity, managing chronic health conditions, improving nutritional status, taking folic acid, and improving health behaviors that include smoking cessation and avoiding alcohol consumption. Other measures that may be helpful are healthy spacing of pregnancies, improving social conditions such as education, income, and personal relationships, and having access to a regular source of health care prior to and throughout the pregnancy.

The board supports collaborative efforts with KDHE for a more thorough review of neonatal and infant deaths to determine the underlying causes that have contributed to the death. The board encourages KDHE to inform and educate the public about infant deaths in Kansas, including the risk factors contributing to premature births, birth defects, and domestic violence. The board recommends a community-based approach for preconception education for women of child-bearing age with an emphasis on improved health and access to a regular source of health care.

In 2009, the Governor's Kansas Blue Ribbon Panel on Infant Mortality was created and charged with the duty to review infant mortality in Kansas and deliver recommendations to the Secretary of KDHE through the Governor's Child Health Advisory Committee. The Panel held a series of meetings and submitted a list of recommendations to the Secretary in February of 2010. To learn more or to see the Panel's full list of recommendations visit <http://www.kansasinfantmortality.org/>.

STRENGTHEN PARTNERSHIPS FOR PUBLIC EDUCATION PURPOSES

The board's partnership with agencies such as Safe Kids Kansas, the Kansas Infant Death & SIDS Network, Inc. (KIDS Network), and the Kansas Department of Health and Environment is crucial in promoting safety and preventing child deaths. In the 2007 SCDRB Annual Report, the board expressed

the need for a state-wide safe sleep campaign. The board, along with other agencies, supported the safe sleep campaign in Sedgwick County and encouraged its expansion statewide. The KIDS Network created a campaign, which is presently being circulated statewide.

As lack of supervision continues to be a concern, particularly in relation to drowning deaths, the board also supports a state-wide awareness campaign to prevent drowning. The campaign should be orchestrated through agency partnership and be designed to encompass all ages of children, focusing on the importance of supervision and water safety.

INCREASE AWARENESS OF PERTUSSIS VACCINATIONS FOR ALL CAREGIVERS

Pertussis, commonly called “whooping cough”, is an infectious respiratory illness that can result in severe complications such as pneumonia, resulting in hospitalizations and death. Infants less than twelve months of age are at greatest risk for severe disease and death and have one of the highest reported rates of pertussis. According to the U.S. Centers for Disease Control and Prevention, in 2012 Kansas experienced 877 of the total 48,277 nationally reported cases of pertussis.¹⁵ The most prevalent age group affected was 11 - 19 years followed by the 20 and over age group. One of the greatest concerns of adult pertussis is the risk of transmission to vulnerable infants. Studies have shown that in infant cases where a source was identified, approximately 70% of the infants acquired the infection from an immediate family member. A source was defined as a person with an acute cough illness who had contact with the infant 7 to 20 days before the infant’s onset of cough.

In 2001, the Global Pertussis Initiative was implemented, and a key strategy of “cocooning” was recommended, which includes vaccinating family members and close contacts of newborns. The Advisory Committee for Immunization Practices (ACIP) mirrored these recommendations in 2006, stating, “vaccinating adults...with Tdap (pertussis vaccine) who have or who anticipate having close contact with an infant could decrease the morbidity and mortality of pertussis among infants by preventing pertussis in the adult and thereby preventing transmission to the infant.” In response to these recommendations, the Kansas Department of Health and Environment created the Cocoon Pilot Program in January of 2010, which is aimed at increasing pertussis awareness and reducing number of infants exposed to pertussis from parents and other caregivers. This program resulted in vaccination rates at the pilot sites above 80% for postpartum women and greater than 65% for other caregivers. The pilot program also provided methods for best practices for future program implementation. It is now recommended that all caregivers receive the immunization, as well as pregnant women beyond 20 weeks gestation, who are not already immunized. To learn more about the Cocoon Pilot Program, visit <https://cdc.confex.com/cdc/nic2011/webprogram/Paper25496.html>.

ALL-TERRAIN VEHICLE (ATV) USAGE LAWS

ATV use in Kansas has increased, and with it, the ATV injury and fatality rate. Compared to a bicycle crash, an ATV crash is six times as likely to send a child to the hospital, and twelve times as likely to result in a fatality. From 1982 through 2012, the US Consumer Product Safety Commission (CPSC)

received reports of 2,944 ATV-related fatalities involving children younger than 16 years of age.⁹ Of those, 43% were children younger than age 12. The 2012 CPSC report on ATV-related deaths and injuries noted there were an estimated 107,900 ATV-related emergency department visits in the United States and 25% of those were children younger than 16 years of age.⁹ In 2012, the SCDRB reviewed 2 ATV-related deaths of Kansas children. These two deaths are included in a total of 47 ATV-related child deaths since 1994. Contributing factors involved speed, inexperience, and road surface.

To prevent such incidents, the board makes the following recommendations:

- All ATVs should be registered and titled.
- No child under the age of 12 should be permitted to operate an ATV of any size.
- Passengers should not be carried on ATVs.
- All riders should be required to wear a helmet and use other appropriate safety equipment.
- ATV use on highways, byways, city and county roadways, or right-of-ways should be prohibited; except for stipulations as stated in K.S.A. 8-15, 100 (b).

ENACT LAWS PROHIBITING UNATTENDED CHILDREN IN VEHICLES

There is no substitute for supervision, especially when it involves children and vehicles. The board reviews cases of children who died as a result of being left unattended in a vehicle. Most often the deaths take place within minutes of the child being left alone, and usually occur from one of following:

- Hyperthermia.
- Hypothermia.
- Strangulation from a car seat belt.
- Strangulation from an automatic power window.
- A motor vehicle crash due to the child accidentally or intentionally putting the vehicle in gear.

Another significant risk of leaving a child unattended in a vehicle is a car-jacking or theft. Vehicles left with the engine running are at a high risk of being stolen for joy rides or used in the commission of a crime. If a child is in the vehicle when the thief takes control, the outcome could be tragic. An unattended child can also become locked in the trunk compartment and suffocate while a frantic parent searches the surrounding area for the missing child.

It is the board's recommendation that the Legislature enact laws that encompass the following:

- No child under the age of 5 should be left in a motor vehicle unless accompanied by another person 13 years of age or older.
- No child under the age of 5 should be left unsupervised or unattended in a vehicle, unless the vehicle is being loaded or unloaded and an adult is visually supervising the child.
- A reasonable fine should be imposed for the first violation. Subsequent violations that occur within three years should result in a minimum fine ranging between \$250 and \$500.

FARM-RELATED PERMITS

Kansas has a rich farming history and Kansas farmers are dependent on young teens for farm help. The board recognizes this invaluable relationship while also recognizing the dangers of teen driving. It is with this understanding that the board proposes changes to Kansas law which will reduce the number of MVC fatalities of teens driving on a farm-related driving permit.

To obtain a Farm Permit for driving purposes in Kansas an applicant must be at least 14 years of age, have formal government issued proof that the person either lives on or works for a farm, have a signed affidavit by either a parent or guardian stating that the applicant has completed at least 50 hours of adult supervised driving with at least 10 of those hours being at night, and have passed a written and vision test. When using a farm permit, the driver's travel is restricted to and from, or in connection with, farm-related work and may not transport non-sibling minor passengers. The board has reviewed several cases that indicate the farm permit requirements were not followed and contributed to a fatality.

The board would like to see the following changes made to the Kansas Farm Permit law:

- All drivers should be required to pass a formal driver's education course.
- Driving to and from school should be prohibited.
- Strict adherence to, and enforcement of, Kansas law by law enforcement officials.

COMPREHENSIVE INVESTIGATION OF CHILD DEATHS

Thorough investigation of child deaths is a mandate of the State Child Death Review Board and the National Center for Child Death Review, which lists the following operating principles of child death review:

- The death of a child impacts the entire community.
- A child's death is a sentinel event that should urge communities to identify other children at risk for illness or injury.
- A death review requires multidisciplinary participation from the community.
- A review of case information should be comprehensive and broad.
- A review should lead to an understanding of risk factors.
- A review should focus on prevention and should lead to effective recommendations and actions to prevent deaths and to keep children healthy, safe and protected.

Such an investigation must include more than the cause of death and manner of death. An understanding of the mechanisms of death is of critical importance if we are to develop strategies for the prevention of future deaths. Investigations should include sufficient examination of: home environment; family/domestic history; social circumstances, DCF history; and any other mechanical or physical factors that could have contributed to the death. Also, thorough investigations should include examination of medical history and other potential medical factors such as previously undiagnosed

physical infirmities or illnesses. A complete and properly conducted autopsy must be performed, which includes toxicology. While some incidents are deceptively simple on superficial examination, there can be factors that contributed to the death for which only a detailed examination of the event and the decedent will lead to a complete understanding of how and why this death occurred.

The State Child Death Review Board has long recognized the limitations of resources that inhibit the extent of child death investigations. In an attempt to minimize the limitations, the SCDRB sought and obtained a change in statute in 2005 to allow counties to obtain a reimbursement of reasonable expenses for child autopsies from the District Coroner Fund in cases that fall within guidelines set by the SCDRB. If an autopsy is performed where there is reason to believe that unnatural mechanisms (accident, suicide, and homicide) or SIDS are the cause or manner of death, the County can request and receive reimbursement for reasonable autopsy costs from the District Coroner's Fund. It is hoped that the availability of funds will encourage the inclusion of autopsies in these types of cases.

The State Child Death Review Board would be incapable of performing its work without the dedicated efforts of law enforcement officers, social workers, medical personnel, and county and district coroners. While the investigation of child deaths is a difficult task, it is only through thorough examinations of these incidents that the board is able to gather accurate information. From comprehensive investigations, the SCDRB is able to assemble accurate information into a database that can be used to formulate recommendations for prevention and public policy.

Appendix

CHILD DEATHS BY COUNTY OF RESIDENCE IN 2012

County	Population Age 0-17	Death Rate 2008 - 2012*	Total Deaths	Natural - Except SIDS	UI - MVC	UI	Natural - SIDS	Undetermined	Homicide	Suicide
Allen	3,135	45.5	1	1	0	0	0	0	0	0
Anderson	1,998	***	0		0	0	0	0	0	0
Atchison	3,984	64.4	3	2	1	0	0	0	0	0
Barber	1,066	***	0	0	0	0	0	0	0	0
Barton	6,765	56.7	3	3	0	0	0	0	0	0
Bourbon	3,727	69.4	3	3	0	0	0	0	0	0
Brown	2,447	88.7	1	0	0	0	0	1	0	0
Butler	17,203	56.5	6	3	2	0	0	0	1	0
Chase	590	***	0	0	0	0	0	0	0	0
Chautauqua	742	***	1	1	0	0	0	0	0	0
Cherokee	5,214	57.8	1	0	0	0	0	1	0	0
Cheyenne	556	***	1	1	0	0	0	0	0	0
Clark	550	***	0	0	0	0	0	0	0	0
Clay	2,009	119.6	1	1	0	0	0	0	0	0
Cloud	2,115	108.7	1	1	0	0	0	0	0	0
Coffey	1,931	70.4	0	0	0	0	0	0	0	0
Comanche	465	***	0	0	0	0	0	0	0	0
Cowley	8,773	67.4	5	3	1	0	0	0	0	1
Crawford	8,739	39.3	3	0	0	2	0	1	0	0
Decatur	514	***	1	1	0	0	0	0	0	0
Dickinson	4,820	72.4	5	4	0	1	0	0	0	0
Doniphan	1,682	***	0	0	0	0	0	0	0	0
Douglas	21,099	40.9	12	8	0	0	0	3	0	0
Edwards	686	***	3	3	0	0	0	0	0	0
Elk	542	***	0	0	0	0	0	0	0	0
Ellis	6,154	58.3	3	2	0	0	1	0	0	0
Ellsworth	1,220	***	1	1	0	0	0	0	0	0
Finney	11,868	60.8	10	5	1	2	1	0	0	0
Ford	10,866	86.5	9	4	1	1	2	0	1	0
Franklin	6,495	51.2	4	2	0	1	1	0	0	0
Geary	11,340	111.8	11	4	6	0	0	1	0	0
Gove	657	8	1	0	0	0	0	0	1	0
Graham	501	***	1	0	0	0	0	1	0	0
Grant	2,539	83.4	2	1	0	0	0	1	0	0
Gray	1,793	82.3	0	0	0	0	0	0	0	0
Greeley	301	***	0	0	0	0	0	0	0	0
Greenwood	1,414	***	1	1	0	0	0	0	0	0

* Number of Deaths per 100,000 population ages 0-17

*** Numbers are too small to calculate statistically reliable rates.

CHILD DEATHS BY COUNTY OF RESIDENCE IN 2012, CONTINUED

County	Population Age 0-17	Death Rate 2008 - 2012*	Total Deaths	Natural - Except SIDS	UI - MVC	UI	Natural - SIDS	Undetermined	Homicide	Suicide
Hamilton	769	***	1	0	1	0	0	0	0	0
Harper	1,409	88.2	1	0	0	0	0	1	0	0
Harvey	8,781	58.4	3	2	0	0	1	0	0	0
Haskell	1,322	141.4	1	1	0	0	0	0	0	0
Hodgeman	454	***	0	0	0	0	0	0	0	0
Jackson	3,471	74.4	2	1	0	0	1	0	0	0
Jefferson	4,464	72.6	2	1	0	0	1	0	0	0
Jewell	560	***	0	0	0	0	0	0	0	0
Johnson	144,109	39.1	47	35	2	5	2	1	0	2
Kearny	1,187	99.2	1	0	1	0	0	0	0	0
Kingman	1,864	***	0	0	0	0	0	0	0	0
Kiowa	509	***	0	0	0	0	0	0	0	0
Labette	5,103	89.2	4	2	1	0	0	0	0	1
Lane	367	***	0	0	0	0	0	0	0	0
Leavenworth	18,848	31.9	3	1	1	0	0	0	0	1
Lincoln	754	***	1	0	0	0	0	0	0	1
Linn	2,129	***	2	2	0	0	0	0	0	0
Logan	621	***	0	0	0	0	0	0	0	0
Lyon	7,788	73.2	5	5	0	0	0	0	0	0
Marion	2,678	81.9	0	0	0	0	0	0	0	0
Marshall	2,263	70.9	0	0	0	0	0	0	0	0
McPherson	6,835	54.1	2	2	0	0	0	0	0	0
Meade	1,171	***	1	1	1	0	0	0	0	0
Miami	8,510	43	3	2	1	0	0	0	0	0
Mitchell	1,371	***	1	0	1	0	0	0	0	0
Montgomery	8,129	53.8	5	1	0	1	2	1	0	0
Morris	1,218	***	1	0	0	0	0	0	0	1
Morton	824	***	0	0	0	0	0	0	0	0
Nemaha	2,589	61.7	3	3	0	0	0	0	0	0
Neosho	4,009	101.6	4	0	0	1	2	1	0	0
Ness	651	***	1	1	0	0	0	0	0	0
Norton	1,089	***	1	0	0	0	0	1	0	0
Osage	3,925	66	1	1	0	0	0	0	0	0
Osborne	760	***	1	1	0	0	0	0	0	0

* Number of Deaths per 100,000 population ages 0-17

*** Numbers are too small to calculate statistically reliable rates.

CHILD DEATHS BY COUNTY OF RESIDENCE IN 2012, CONTINUED

County	Population Age 0-17	Death Rate 2008 - 2012*	Total Deaths	Natural - Except SIDS	UI - MVC	UI	Natural - SIDS	Undetermined	Homicide	Suicide
Pawnee	1,476	***	2	1	0	1	0	0	0	0
Phillips	1,298	***	1	1	0	0	0	0	0	0
Pottawatomie	6,472	36.4	3	1	0	2	0	0	0	0
Pratt	2,210	***	0	0	0	0	0	0	0	0
Rawlins	475	***	0	0	0	0	0	0	0	0
Reno	15,097	61.7	5	3	0	0	0	2	0	0
Republic	940	***	0	0	0	0	0	0	0	0
Rice	2,331	59.8	1	0	1	0	0	0	0	0
Riley	13,710	57.3	9	8	0	0	1	0	0	0
Rooks	1,209	***	0	0	0	0	0	0	0	0
Rush	614	***	0	0	0	0	0	0	0	0
Russell	1,448	98	1	0	1	1	0	0	0	0
Saline	13,965	61.4	9	3	3	1	1	0	1	0
Scott	1,282	201	5	1	1	3	0	0	0	0
Sedgwick	135,161	65	89	60	5	4	6	3	5	6
Seward	7,687	55.3	5	4	1	0	0	0	0	0
Shawnee	43,934	65.5	27	16	2	5	1	1	1	1
Sheridan	574	***	2	1	1	0	0	0	0	0
Sherman	1,399	***	2	1	0	0	0	1	0	0
Smith	729	***	1	1	0	0	0	0	0	0
Stafford	1,019	***	1	1	0	0	0	0	0	0
Stanton	598	***	0	0	0	0	0	0	0	0
Stevens	1,723	***	2	1	0	0	0	0	0	1
Sumner	6,009	66.2	3	2	0	0	0	0	0	1
Thomas	1,833	135.7	0	0	0	0	0	0	0	0
Trego	576	***	0	0	0	0	0	0	0	0
Wabaunsee	1,776	***	0	0	0	0	0	0	0	0
Wallace	366	***	1	0	1	0	0	0	0	0
Washington	1,307	***	0	0	0	0	0	0	0	0
Wichita	597	***	2	1	1	0	0	0	0	0
Wilson	2,132	72.4	0	0	0	0	0	0	0	0
Woodson	696	***	0	0	0	0	0	0	0	0
Wyandotte	45,134	77.9	35	23	2	2	2	2	2	2
Out of State			19	10	7	0	0	1	1	0
Total	315,777	59.1	418	256	48	33	25	24	13	19

* Number of Deaths per 100,000 population ages 0-17

*** Numbers are too small to calculate statistically reliable rates.

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