2018

State Child Death Review Board

KANSAS ATTORNEY GENERAL
Derek Schmidt

2018 Annual Report
(2016 Data)

www.ag.ks.gov/scdrb

Kansas Attorney General Derek Schmidt

September 28, 2018

Dear Fellow Kansans:

For more than a quarter of a century, dedicated professionals serving on the State Child Death Review Board have worked diligently to review the causes of child death in our state. They toil to compile meaningful data and analysis that can be the basis for actions that will make our children safer. This year, as always, I am grateful for their service.

This report compiles and evaluates information collected from 2016, the most recent year for which data is available. It provides analysis, context and "prevention points" – recommendations for action that can help prevent similar deaths in the future. It also makes several public policy recommendations intended to reduce child mortality.

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

Best wishes,

Derek

Derek Schmidt
Kansas Attorney General

Executive Summary

The State Child Death Review Board (SCDRB) was created by statute in 1992. The Board 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 entity 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 including birth certificate, death certificate and autopsy findings. The information collected is maintained confidentially and is used to review and analyze the circumstances of each child's death. This review allows the Board to assist other agencies in prioritizing 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 support the work of protecting Kansas children.

Between July 1, 2017, and June 30, 2018, the Board:

- Held 13 board meetings
- Reviewed the deaths of 394 children
- Made 13 public policy recommendations
- Attended/participated in 86 public meetings/training seminars
- Submitted an annual report

Since 1994, the Board has reviewed 10,856 child deaths. In 2016, Kansas had 394 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, cancer and disease. Natural death remains the category with the most deaths: 241 in total. Of those causes, 39 percent were due to prematurity, 33 percent were due to congenital anomalies, and 7 percent were due to cancer.

- **Natural-Sudden Infant Death Syndrome (SIDS)** – children who die prior to age one, and display no discoverable cause of death. K.S.A 22a-242 requires an investigation and an autopsy be performed before this classification can be applied. There were 25 SIDS cases in 2016, 24 of those cases were classified as SIDS II, indicating the presence of one or more elements of unsafe sleep.

  In addition, there were seven Unclassified Sudden Infant Deaths (USID) for which manner of death was categorized as Undetermined.

- **Unintentional Injury** – death caused by incidents such as motor vehicle crashes, drowning or fire, which were not the result of an intentional act. In 2016, there were 80 total unintentional injury deaths with the leading cause of death being motor vehicle crashes (MVC). Forty-one

children died because of a MVC. Of all the age groups, the 15-17 year old group accounted for the majority of the MVC deaths. Only 27 percent of the children in the 15-17 year old age group were using a safety restraint at the time of the crash. That, coupled with inattentive driving, excessive speed and driver inexperience leaves this age group at the greatest risk of death or injury in MVCs.

The second most prevalent unintentional injury death was asphyxia. In 2016, 20 infants/children died due to unintentional asphyxia, 17 of which were sleep-related with 16 of the 17 under the age of one. All 17 sleep-related asphyxia/suffocation deaths included the presence of unsafe sleep factors.

- **Homicide** – death due to an intentional act, unintentional act, or criminally negligent act leading to the death of another human being, including Child Abuse Homicide and Gang-Related Homicide. There were 16 child homicides in 2016; nine were the result of child abuse.

  In five of the 16 homicides (31 percent), the Board found sufficient evidence, after thorough review, to classify the deaths as homicides even though they were not originally classified in that manner on the death certificate.

- **Suicide** – death due to the intentional taking of one's own life. In 2016, there were 20 suicide deaths, seven of which were age 14 or younger. The rate of suicides by Kansas youth continues to climb, despite a decline in the overall rate of child deaths. Of the 20 youths who committed suicide, 40 percent had previously received or were receiving mental health services at the time of their death. In 35 percent of the deaths, the youth had a history of substance abuse.

- **Undetermined** – cases in which the manner of death could not be identified from the evidence collected. In 2016, 12 cases were classified as Undetermined and seven of those were listed as Unclassified Sudden Infant Death (USID). Of the deaths listed as undetermined, 58 percent were children less than 1 year of age. Often the undetermined classification is assigned when there is a lack of thorough, comprehensive investigation and/or autopsy. In 2016, four of the 12 cases had an inadequate autopsy or no autopsy.

The Board strongly encourages the members of the State Legislature to consider each of the Public Policy recommendations beginning on page 53 during the 2019 legislative session. The Board has prioritized the improvement of statutory authority of the SCDRB as necessary for accurate collection of child fatality review findings, data reporting, and providing meaningful recommendations to prevent future deaths of Kansas children.

Contents

Acknowledgments 1
Board Members 2
2016 Overview 3
Mortality Affecting Infants 6
Sudden Infant Death Syndrome (SIDS) 10
Unintentional Injury – Asphyxia Deaths 13
Sleep Related Deaths 15
Deaths in Non-Relative Childcare Homes and Centers 18
Mortality Affecting Children Ages 1-17 19
Unintentional Injury – Motor Vehicle Crash Deaths 22
Unintentional Injury – Drowning Deaths 28
Unintentional Injury – Fire Deaths 31
Asthma 33
Homicide 36
Suicide 43
Undetermined Manner 48
Autopsy Examinations – All Manners of Death 50
SCDRB Public Policy Recommendations 53
Appendix: Death by County of Residence 60
Methodology 64
Goals and History 66
References 67

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 time to fulfill our responsibilities as Board members.

SCDRB SERVES AS A CITIZEN REVIEW PANEL

The Federal Child Abuse Prevention and Treatment Act (CAPTA) requires each state 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. The Kansas State Child Death Review Board serves in the capacity as one of the three Citizen Review Panels in the State. In addition to the SCDRB, the Kansas Intake to Petition Panel and Kansas Custody to Transition Panel serve as citizen review panels.

The citizen review panels, as a group, are required by CAPTA to accomplish 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.

Board Members

Attorney General appointee

Melissa G. Johnson, J.D., Chairperson
Assistant Attorney General, Topeka

Director of Kansas Bureau of Investigation appointee

Tony Weingartner, Assistant Director
Kansas Bureau of Investigation, Topeka

Secretary for Children and Families appointee

Susan Gile, Deputy Secretary
Department for Children and Families, Topeka

Secretary of Health and Environment appointee

Elizabeth W. Saadi, Ph.D., State Registrar
Kansas Department of Health and Environment, Topeka

Commissioner of Education appointee

Aarion Gray, Ed.D.
Randolph Elementary School, Topeka

State Board of Healing Arts appointees

Erik Mitchell M.D. (Pathologist Member) September 2014- February 2018
Deputy Coroner, Kansas City

Jamie Oeberst M.D. (Coroner member), January 2018-Present
District Deputy Coroner, Wichita

Katherine J. Melhorn, M.D. (Pediatrician member)
University of Kansas School of Medicine, Wichita

Attorney General appointee to represent advocacy groups

Mary A. McDonald, J.D.
McDonald Law LLC, Newton

Kansas County and District Attorneys Association appointee

CJ Rieg, J.D.
Douglas County District Attorney's Office, Lawrence

Staff
Executive Director
Sara Hortenstine

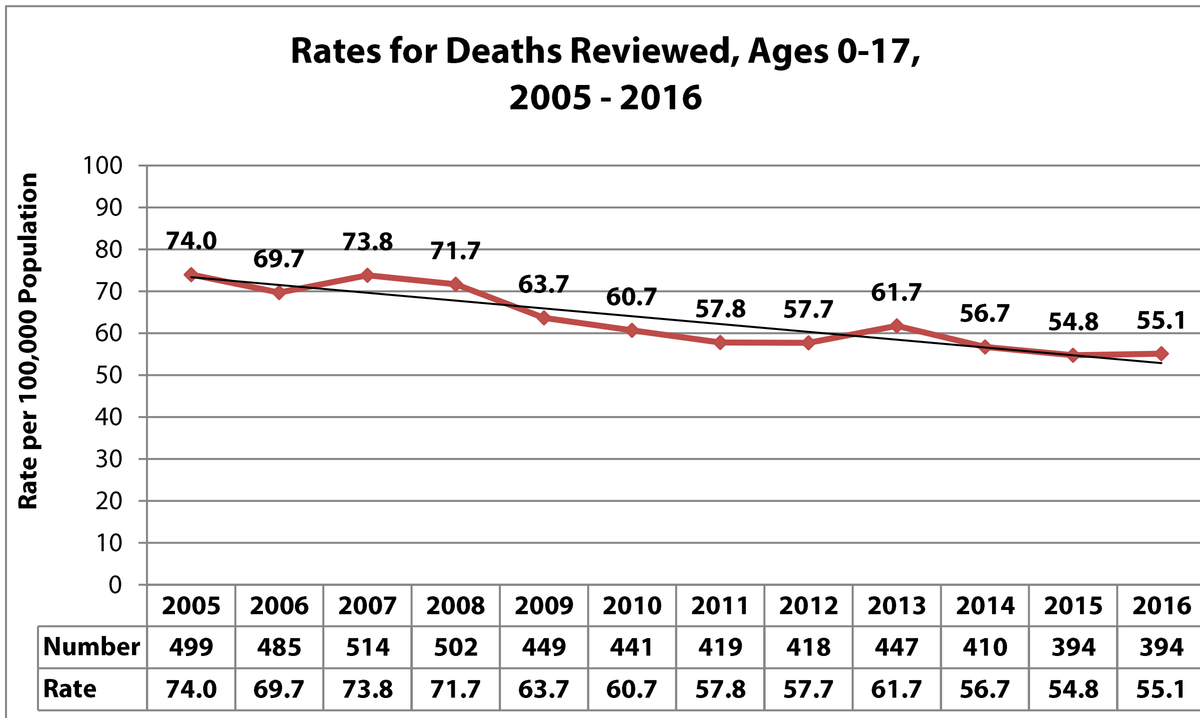
Staff
Administrative Specialist
Susan Croucher

General Counsel
Assistant Attorney General
Craig Paschang, J.D.

2016 Overview

The State Child Death Review Board reviewed the deaths of 394 children, aged 0-17, who died in Kansas, or were Kansas residents who died outside of the state during the year 2016. The death rate calculated per 100,000 Kansas children has remained relatively stable for the last 3 years and was 55.1 for calendar year 2016 (Figure 1).

Figure 1



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Number	499	485	514	502	449	441	419	418	447	410	394	394
Rate	74.0	69.7	73.8	71.7	63.7	60.7	57.8	57.7	61.7	56.7	54.8	55.1

Figure 2

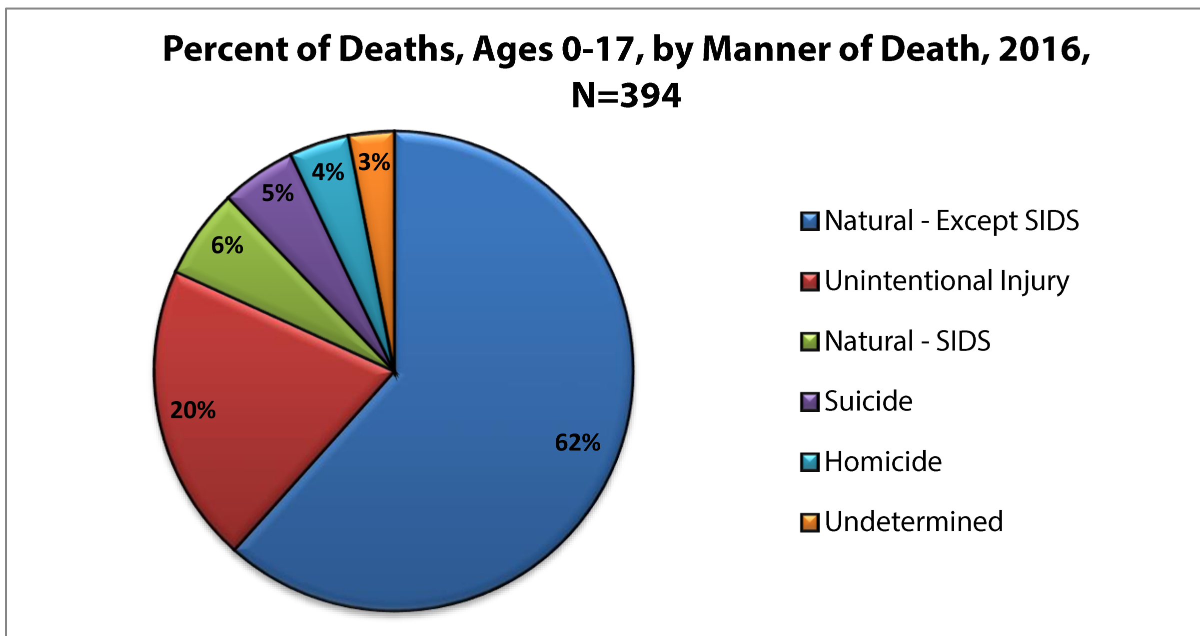


Figure 3

Manner Of Death	Number	Male	Female
Natural - except SIDS	241	127	114
Unintentional Injury - MVC	41	27	14
Unintentional Injury	39	26	13
Homicide	16	8	8
Natural - SIDS	25	11	14
Suicide	20	13	7
Undetermined	12	8	4
Total	**394**	**220**	**174**

In 2016, death by natural manner, excluding SIDS, made up the largest percentage of child deaths and claimed the lives of 241 Kansas children (Figures 2 and 3). Sixty three percent of natural deaths, excluding SIDS, occurred in children who were less than 29 days of age, and 11 percent were ages 30 days to one year. Prematurity and congenital anomalies accounted for 71 percent of the natural deaths excluding SIDS. Cancer claimed the lives of 17 children and was the third-leading natural cause of death, excluding SIDS (Figure 5).

Of the total deaths, 20 percent were due to unintentional injuries, 6 percent were due to Sudden Infant Death Syndrome (SIDS) and 4 percent were due to homicide. Males accounted for more deaths in most age groups and comprised 56 percent of all child deaths in 2016 (Figures 3 and 4).

Figure 4

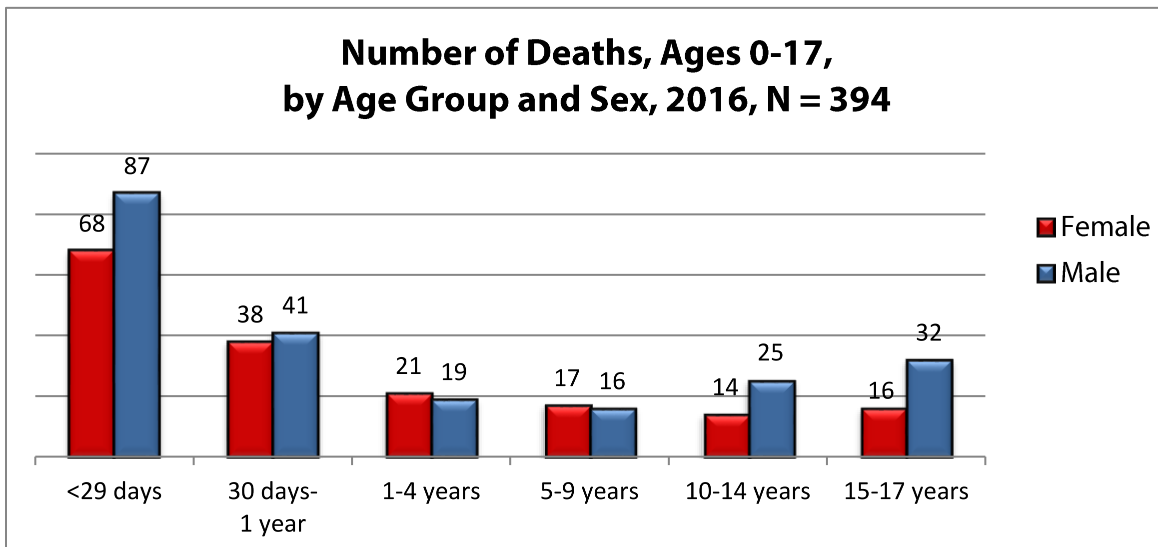
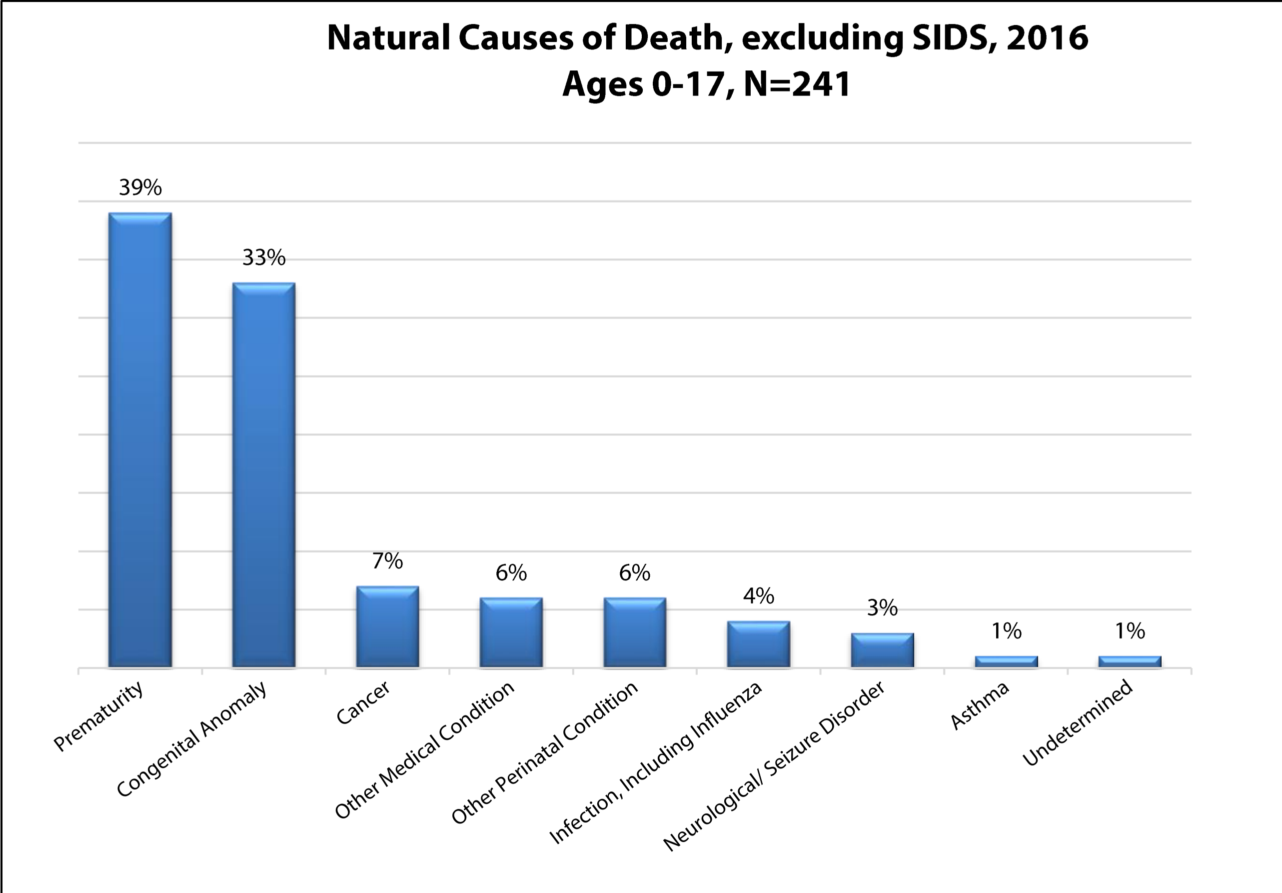


Figure 5



Mortality Affecting Infants

(Age Less Than 1 Year)

In Kansas, special emphasis has been placed on infant mortality (age less than 1 year) as an area in need of improvement. There were 234 infants who died in 2016. The rate of infant deaths per 1,000 live births was 6.2 as noted in Figure 6.

Figure 6

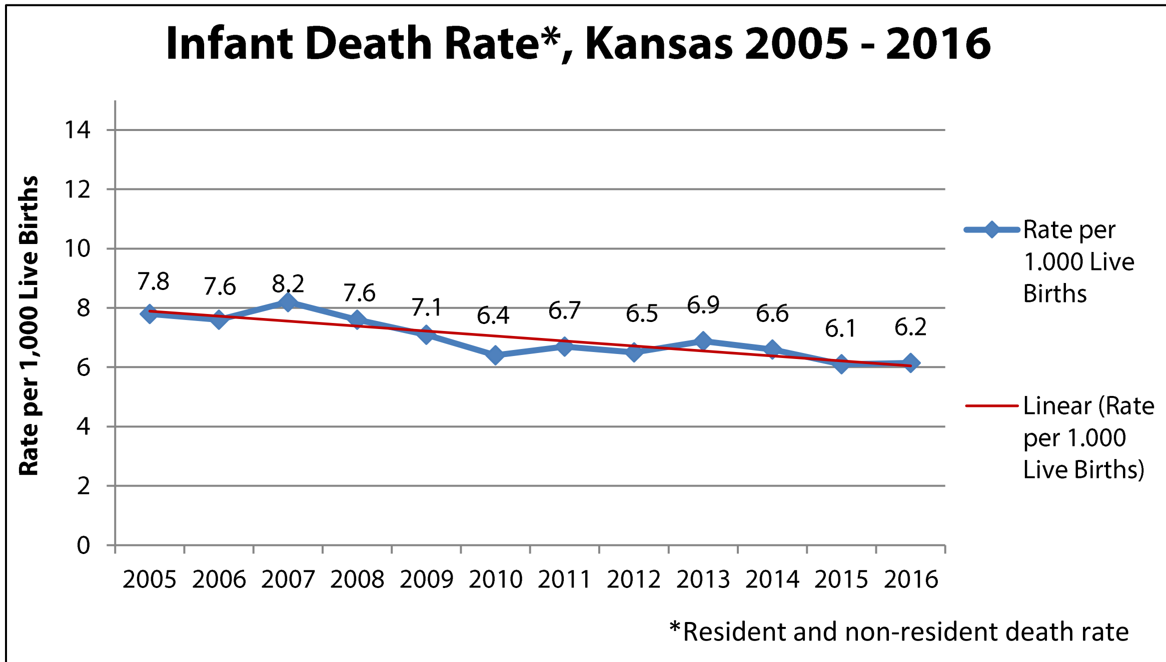


Figure 7

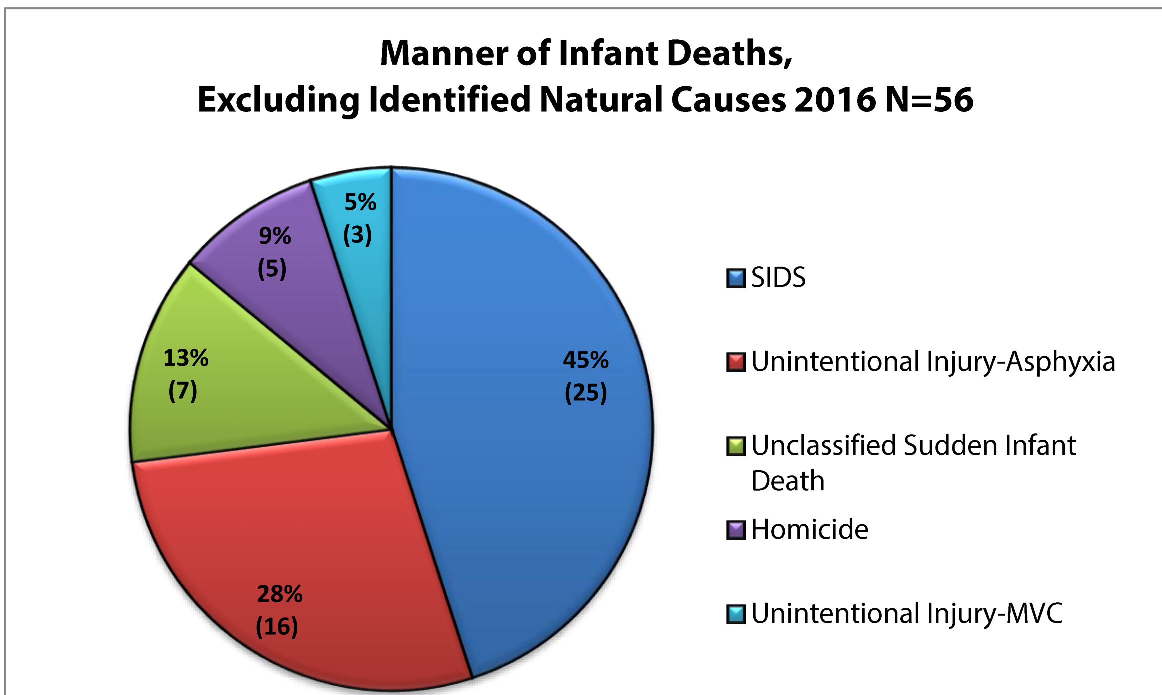
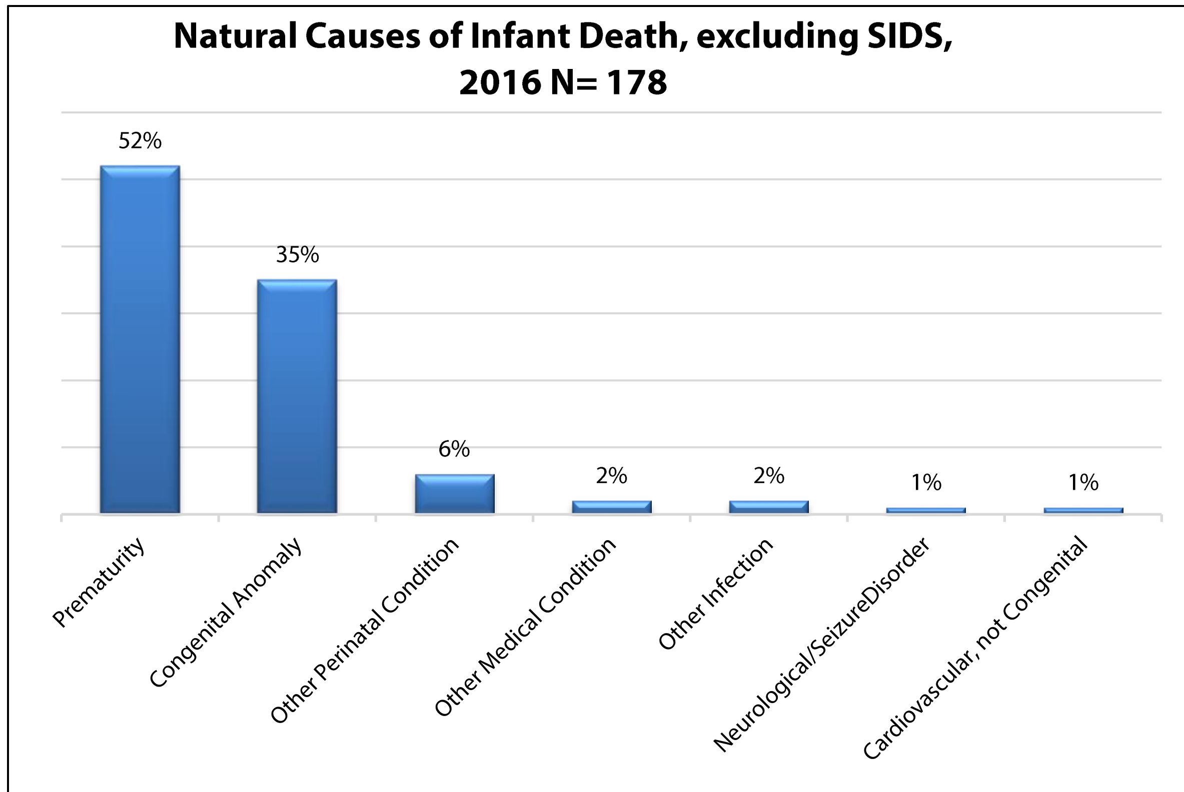


Figure 8



Of the 234 infant deaths in 2016, almost 25 percent (56) were due to reasons other than identified natural causes. Sudden Infant Death Syndrome accounted for 45 percent (25) of those infant deaths while another 28 percent (16) were due to Unintentional Injury by Asphyxia. Thirteen percent (7) were listed as Unclassified Sudden Infant Death. The remaining non-natural infant deaths were the result of Homicides and Motor Vehicle Crashes (MVC) (See Figure 7).

It is important to note that SIDS is considered a natural manner of death when entered on a Kansas death certificate. The SCDRB classifies SIDS deaths separately due not only to the lack of a known cause, but also due to the unique and potentially preventable risk factors associated with those deaths.

Figure 9

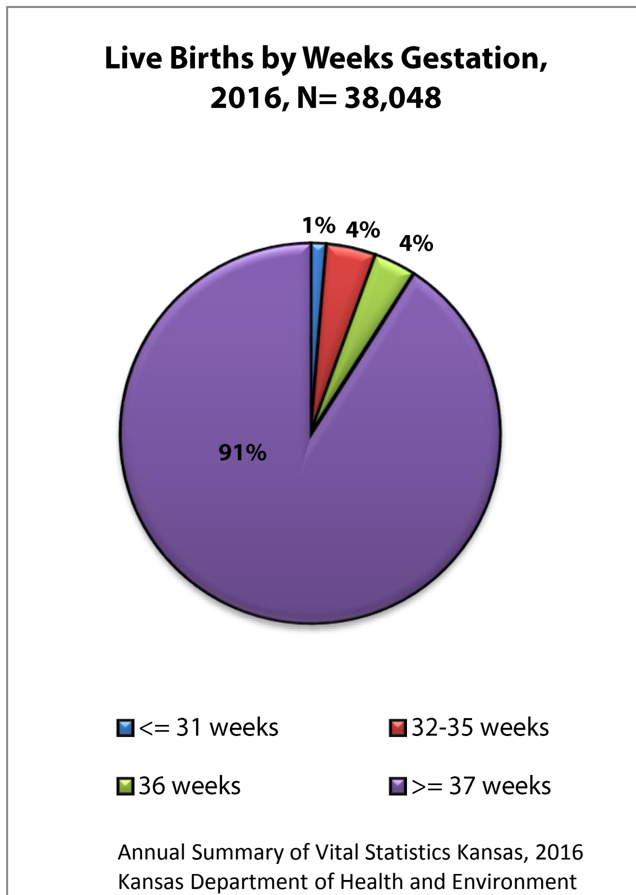
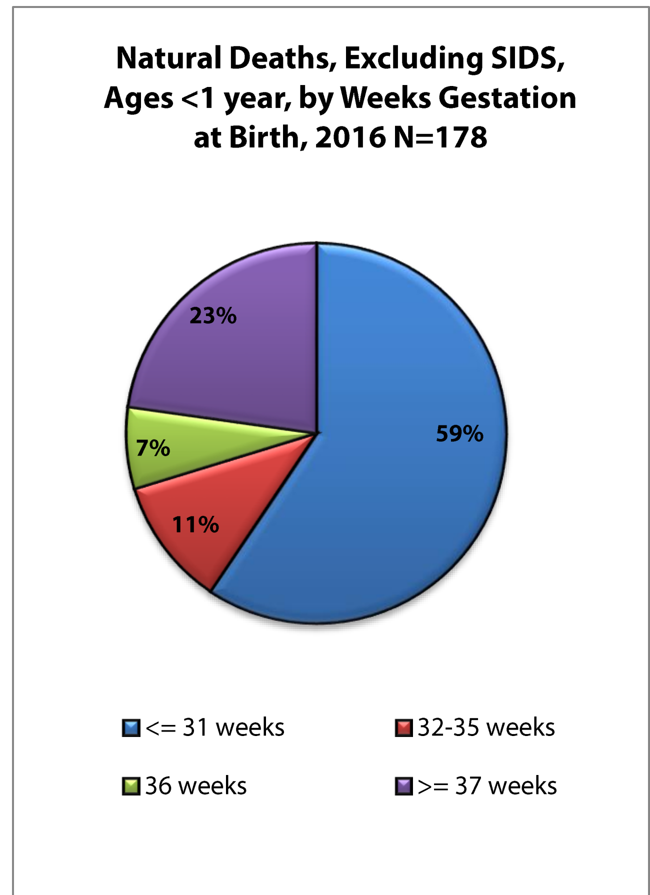


Figure 10



As shown in Figures 9 and 10, 59 percent of the children who died from natural causes other than SIDS were born at 31 weeks gestation or earlier. Although the majority (91%) of infants are born at or after 37 weeks gestation, deaths are disproportionately associated with those born prior to 37 weeks gestation. In addition to being a direct cause of death, prematurity is an important risk factor for infant mortality from other causes.

PREVENTION POINTS

- **Prenatal Care** – Medical care during a pregnancy can identify risk factors and health problems, allowing for 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 must be avoided during pregnancy. These elements are known to cause serious health problems and increase the risk for death in newborns and infants.

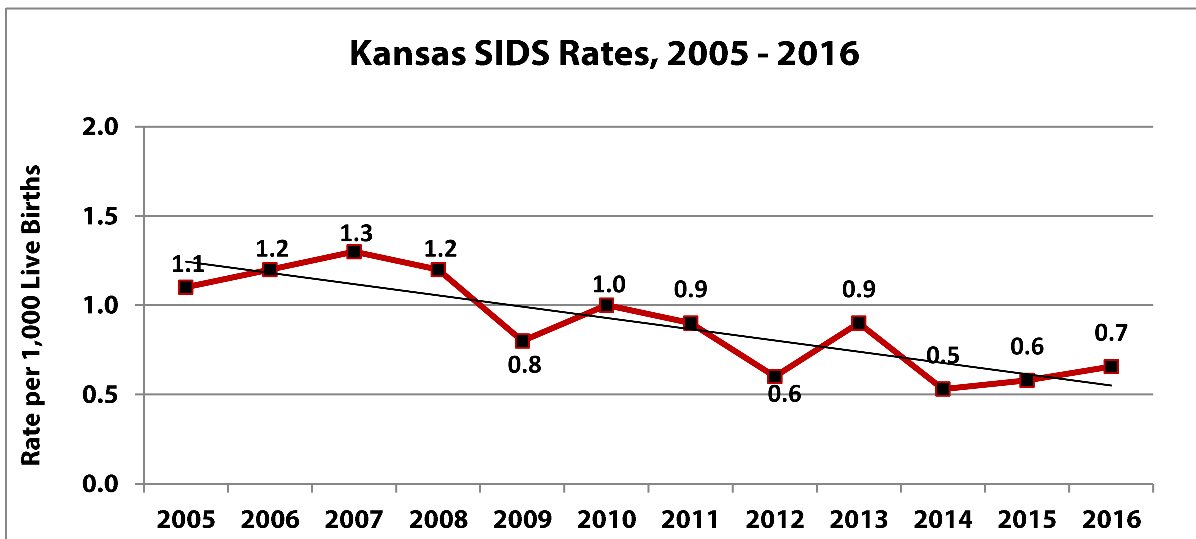
- **Diagnose and Manage Chronic Health Conditions** – Medical care for infants and children with chronic health conditions can optimize health. Having a medical home is essential for improving such conditions. The medical home is a care delivery model where patient treatment is coordinated through a primary care physician to ensure children receive necessary and consistent care when and where they need it, in a manner that is understood, and in which education and care for chronic conditions and illnesses can be monitored.

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 2016. There were another seven deaths, which were Unclassified Sudden Infant Deaths (USID), and were listed as an undetermined manner of death.

As shown in Figure 11, the rate of SIDS per 1,000 live births in Kansas for 2016 has remained relatively low.

Figure 11



Characteristics of the 25 SIDS Deaths, 2016

- 96% had one or more elements of unsafe sleep
- 76% were not sleeping in a crib/bassinet
    - 84% of whom had a crib or bassinet in the home
- 76% occurred at the decedent's residence, 20% at a relative's home, and 4% occurred in an unlicensed child care home
- 72% were less than 4 months old
- 60% were sleeping in an adult bed
    - 73% of whom were co-bedding
- 52% were documented as not being placed supine to sleep (recommended position)
- 44% had current or past DCF child protective services involvement with the family
- 28% had parental alcohol or substance abuse concerns prior to or at the time of death
- 4% were sleeping on a couch, while co-bedding

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 Fatality Review and Preventions, Case Reporting System (CRS) between 2004 and 2012, showed that 69 percent of the infants were co-bedding 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. Causation and risk cannot be determined from these findings without a comparison group; however, it appears bed-sharing continues to be a significant risk factor for SIDS. Data for this study was obtained from the CRS, a database comprising reports of individual child deaths reviewed by state child death review teams. As of late 2017, 44 states were participating in the database. Kansas is one of the few states not participating in the CRS.

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 are enhanced. The SCDRB has adopted the following sub-classifications for SIDS deaths:

<u>Category IA</u>: 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.

<u>Category IB</u>: 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.

<u>Category II</u>: 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 (USID): 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 classifies the manner of death for these cases as Undetermined.

After thorough review, the SCDRB categorized the following child deaths due to SIDS and Unclassified Sudden Infant Death (USID) between 2012 and 2016 as follows:

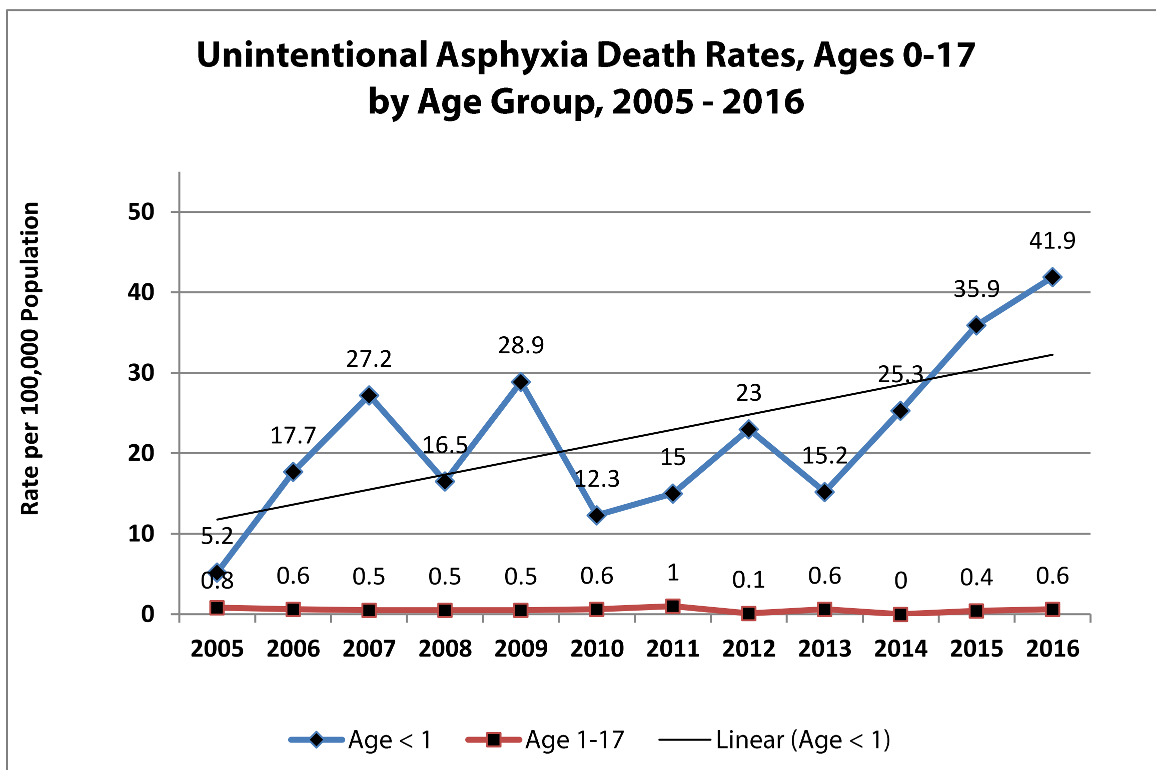
Category	2012	2013	2014	2015	2016	Description of 2016 Cases in Respective Categories
SIDS 1A	1	1	2	0	0	No infants met the criteria for this category in 2016.
SIDS 1B	0	1	1	0	1	This infant's death had incomplete scene investigation records but otherwise met criteria for SIDS classification.
SIDS II	24	34	15	23	24	In all of these cases, an overlay or positional asphyxia could not be ruled out and each case had one or more elements that contributed to an unsafe sleep environment.
USID	14	9	3	4	7	All had an element of unsafe sleep environment. Additionally, 71 percent of the cases had current or past DCF child protective services involvement. Two cases were classified as USID due in part to an incomplete autopsy. Information on autopsy guidelines can be found at http://ag.ks.gov/docs/default-source/forms/autopsy-guidlines.pdf.

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 as some of these deaths may have been preventable had the child been in a safe sleeping environment.

Unintentional Injury – Asphyxia Deaths

Twenty children between the ages of 0-17 died in 2016 due to unintentional asphyxia such as suffocation, strangulation, or choking. Of the 20 children who died due to unintentional asphyxia, 16 (20.5 percent) were under the age of 1. As shown in Figure 12, the rate of death by unintentional suffocation/strangulation in children under one year of age has increased in the past three reporting years. Compared to a rate of 15.2 deaths per 100,000 population in 2013, in 2016 the rate increased to 41.9.

Figure 12



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 these deaths. These include sleeping somewhere other than a crib or bassinette, sleeping in a cluttered area, being placed on a soft surface such as an air mattress, pillow or quilt, and bed-sharing with parents or siblings. Of the 20 unintentional asphyxia deaths, 17 were sleep-related. One of those 17 deaths occurred to a child over 1 year of age. All of the sleep-related, unintentional asphyxia deaths included one or more of the above-described factors as a cause of the suffocation/asphyxia.

Some cribs, bassinets, playpens and child beds have been recalled because of known or suspected risk of strangulation. Before caregivers purchase furniture for children, they should ensure no recalls have been issued. The U.S. Consumer Product Safety Commission (http://www.cpsc.gov/) is a resource for recall information.

Characteristics of the 20 Unintentional Asphyxia Deaths in 2016

- 85% (17) of the deaths were sleep-related
    - All 17 had elements of unsafe sleep
    - 82% (14) occurred when children were not sleeping in a crib or bassinette.
        - 11 of those 14 homes had a crib or bassinette available
    - 76% (13) were sharing a sleep surface with another person (co-bedding)
- 80% (16) of all unintentional asphyxia deaths occurred in children under the age of 1
- 35% had parental/caregiver alcohol or substance abuse concerns prior to or at the time of death.
- 15% (3) deaths were not sleep-related, and were a result of either unintentional strangulation or unintentional suffocation
- 60% had current or past DCF child protective services involvement with the family

PREVENTION POINTS

- **Proper Supervision** – Young children should be watched attentively. Leaving them alone for even a few minutes allows opportunities for unintentional injuries. 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 such as chests/coolers, hanging cords or plastic bags, which may not be threats to adults, 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 in the crib so the child cannot be trapped between the mattress and side of the crib. No other items, including blankets, bumper pads, pillows, stuffed animals or infant supplies should be in the crib with the baby, as they create a risk for suffocation.

Sleep Related Deaths

Sleep-related deaths of infants (less than 1 year of age) may be classified in one of three manners depending on the circumstances and the cause of death:

1. SIDS deaths, as described previously, are categorized as Natural Manner of death by convention.
2. Unintentional Injury Manner if the cause of death is the result of suffocation or strangulation.
3. Undetermined Manner, or USID sleep-related deaths, as described in the previous section.

Although the only deaths known to be preventable deaths are those in the Unintentional Injury category, the risk factors for SIDS and USID overlap those for suffocation/strangulation deaths. Therefore, the Board is including this section to demonstrate the characteristics of sleep location and bed-sharing of all 2015 and 2016 sleep-related deaths (Figure 13).

Figure 13

All Sleep Related Deaths by Cause , Sleep Location, and Bed-sharing 2015 and 2016; Age <1 year								
Total 2015	**USID**	**SIDS**	**Suffocation**	**Sleep Location**	**Suffocation**	**SIDS**	**USID**	**Total 2016**
22	**2**	**15**	**5**	**Adult Bed Total**	**8**	**15**	**4**	**27**
2	0	2	0	Infant Alone	0	4	0	4
19	2	12	5	Infant Bed-Sharing	8	11	4	23
1	0	1	0	Unknown	0	0	0	0
5	**0**	**3**	**2**	**Couch Total**	**2**	**1**	**0**	**3**
1	0	0	1	Infant Alone	0	0	0	0
4	0	3	1	Infant Bed-Sharing	2	1	0	3
9	**2**	**3**	**4**	**Crib or Bassinette***	**3**	**6**	**3**	**12**
0	**0**	**0**	**0**	**Chair**	**1**	**0**	**0**	**1**
2	**0**	**1**	**1**	**Floor**	**0**	**1**	**0**	**1**
2	**0**	**0**	**2**	**Other +**	**2**	**2**	**0**	**4**
1	**0**	**1**	**0**	**Unknown**	**0**	**0**	**0**	**0**
41	**4**	**23**	**14**	**Total**	**16**	**25**	**7**	**48**

*Recommended Sleep Location

+Other includes- Swings, Boppy pillows, air mattresses, trundle bed etc.

The American Academy of Pediatricians (AAP), recommends infant be placed on a firm, sleep surface (e.g., a mattress in a safety-approved crib) covered by a fitted sheet with no other bedding or soft objects in the crib. It is also recommended that infants sleep in close proximity to their parents (room sharing) without bed-sharing. Bed-sharing refers to an infant sleeping on the same surface (bed, couch, chair, etc.) with another person.

Our data reflect some concerning findings regarding sleep-related deaths. When combining data from 2015 and 2016 (Figure 13), only 24 percent of the sleep-related deaths occurred when the infant was in a crib or bassinet as recommended.

Bed-sharing was also examined. Of the 57 infant deaths that occurred while sleeping on an adult bed or couch, 88 percent were sharing the sleeping surface with another person(s) at the time of the incident. Placing infants to sleep on couches or armchairs puts them at greater risk of death from SIDS or suffocation. Not only can infants become wedged in the furniture, the potential for overlay is increased when infants share a small space with another person.

The Board stresses the importance of thorough investigations by law enforcement and medical personnel, along with properly conducted complete autopsies. In 16 of the total 48 sleep-related death investigations in 2016, the Board believed additional investigative information would have been helpful in more clearly determining the manner of death. The recommendations from these cases includes using scene recreations and re-enactments with dolls, additional witness interviews, improving the quality of scene photographs, and documenting room temperature, availability of a crib, and size of the bed. Use of the Center for Disease Control's Sudden Unexpected Infant Death Investigation Form would aid in obtaining critical information at the scene and from interviews: https://www.cdc.gov/sids/pdf/suidi-form2-1-2010.pdf.

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 separate, but proximate sleeping environment is recommended. Bed-sharing with adults or other siblings should be avoided. Infants should 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 significantly increased risk of sudden death.
- A firm sleep surface should be used. Soft materials such as pillows, quilts, comforters, or sheepskins should not be placed with the infant.
- Sleep clothing, such as wearable blankets designed to keep the infant warm, should be used instead of blankets and quilts that could overheat the infant or cover the baby's head. Avoid overheating the infant's room.
- Smoking during pregnancy and in the infant's environments are risk factors and should be avoided.
- Mothers should be encouraged and supported to breastfeed, not only for the known nutritional value but as a protective factor against SIDS. Infants brought to the adult bed for nursing, should be returned to a separate safe surface (i.e. crib or bassinet) when the parent is ready to return to sleep.
- Many 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 products such as sleep positioners or wedges.
- For more information on safe sleep, visit these websites: SCDRB at http://ag.ks.gov/scdrb, the AAP at http://www.aap.org/, or Kansas Infant Death and SIDS Network at www.kidsks.org.

Deaths in Non-Relative Childcare Homes and Centers

Since many infants and children spend a significant portion of their time in day care or other childcare environments, assuring safe sleeping arrangements and compliance with state safety regulations at every site is critical. Parents should talk about safe sleep practices with anyone who will be caring for their baby, including family, friends, babysitters and childcare providers.

Many SIDS deaths have been associated with the child being prone, especially when the baby is accustomed to sleeping on his or 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. In licensed childcare settings, it is expected that safe sleep environments and sleep position recommendations be followed. For general information regarding the basis and purpose of childcare regulations, please visit http://www.kdheks.gov/bcclr/gen_info.html.

In the last seven years (2010-2016), there have been 26 childcare deaths in Kansas with four of those occurring in 2016. Children under the age of 1 have accounted for 23 of these deaths. Of those 23 deaths, 20 were sleep-related and had unsafe sleep factors. The other three deaths that occurred to children under the age of 1 included two child abuse homicides and one death by natural causes.

Beginning in 2015, the board recognized the need to track deaths of children that take place at the residence of the child when that residence is being used as a licensed or unlicensed childcare home for other children. Since 2015, there has been one death that met these criteria.

PREVENTION POINTS FOR PARENTS WHEN SELECTING CHILDCARE HOMES AND CENTERS

- Childcare homes and centers must be licensed by the Kansas Department of Health and Environment. Parents should ask to see the license or certificate – it documents the license type and maximum number of children that may be enrolled in that home or center.
- The compliance history of a childcare facility in Kansas can be accessed by calling the Kansas Department of Health and Environment Child Care Licensing Program at (785) 296-1270 or visiting https://kscapportalp.dcf.ks.gov/OIDS/.
- Childcare providers should develop a safe sleep policy that is discussed with parents.
- Childcare providers and parents should communicate frequently to assure they understand safe sleep and that these practices are followed at home and in childcare. Safe sleep recommendations are listed with the Sleep Related Deaths prevention points on page 17.

Mortality Affecting Children Ages 1-17

As with infant mortality, the mortality rate for children ages 1-17 has remained relatively stable for the last three years. Overall, death rates for children ages 1-17 have declined since 2005. There were 160 deaths in this age group in 2016. Figure 14 indicates rates per 100,000 population for the past 12 years. Figure 15 shows relative percentages of death by non-natural causes in this age group.

Figure 14

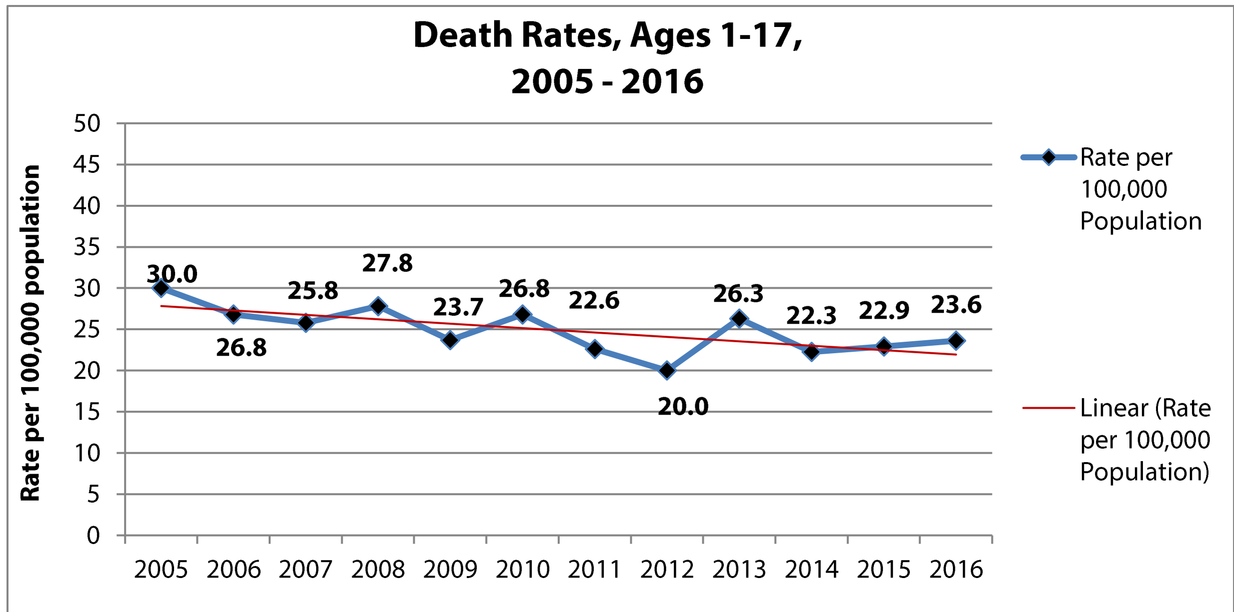


Figure 15

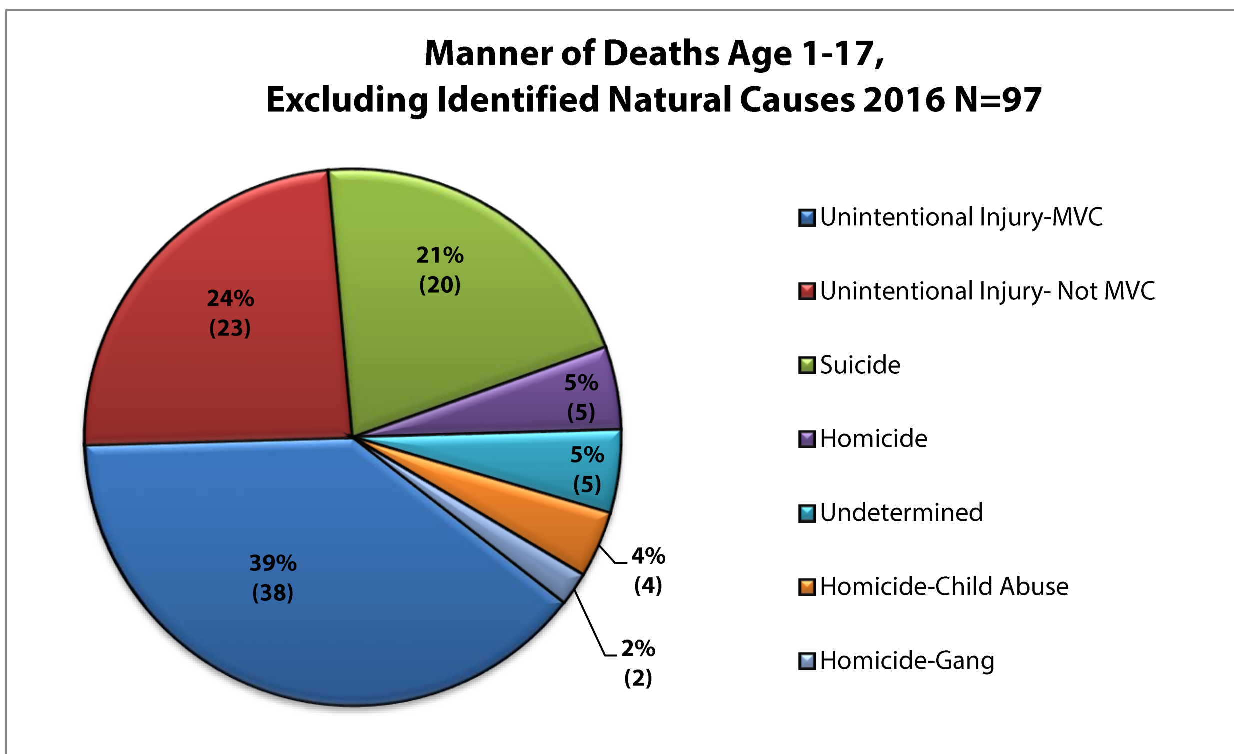


Figure 16

Unintentional Injury By Cause and Age Classification Age 1-17, 2015-2016 N=122				
	Age 1-4	**Age 5-9**	**Age 10-14**	**Age 15-17**
MVC and Other Transport	8	20	16	31
Asphyxia	5	1	1	0
Drowning	7	1	4	4
Fire, Burn, Electrocution	4	2	1	1
Weapon, Including Body Part	3	1	0	1
Poisoning, Overdose or Acute Intoxication	0	0	0	5
Undetermined	0	0	0	1
Fall or Crush	1	0	0	0
Animal Bite or Attack	1	0	0	0
Exposure	1	0	0	0
Other Causes	0	0	1	1

Figure 16 shows the number of unintentional injuries by age classification, excluding infants. Motor vehicle crashes (MVC) remain the primary cause of Unintentional Injury deaths for all age groups.

It should not go unnoticed that the second leading cause of unintentional injury death for teens aged 15-17 was poisoning, overdose, or acute intoxication. A youth's environment can influence whether he or she will try drugs or other substances. Whether at home, school or in the community, caregivers, and school educators should address the dangers of drugs and alcohol and the risk of lethality from misuse or abuse. The Centers for Disease Control and Prevention measures the prevalence of risk behaviors for students in grades 9-12 through the national Youth Risk Behavior Surveillance System (YRBSS). YRBSS monitors six categories of priority health-risk behaviors amongst youth and young adults. One of those categories is Alcohol and Other Drug Use. In 2017, 14.5 percent of the youth in Kansas reported having taken "prescription pain medicine without a doctor's prescription or differently than how a doctor told them to use it." More information regarding this data can be found at https://www.cdc.gov/healthyyouth/data/yrbs/index.htm.

OVERDOSE PREVENTION POINTS

Young people are at high risk of substance abuse. These steps may help prevent teens from using alcohol and abusing prescription medications.

- **Discuss the dangers and rules of taking medications.** Medications are prescribed by physicians for specific patients and specific purposes. The fact that they are prescribed does not make them safe for others. Children and teens should be instructed to never take medications that are not prescribed for them, never share their medications with any other person, and not combine medications without being instructed to by a pharmacist or physician.
- **Discuss the dangers of alcohol use.** Using alcohol with medications can increase the risk of accidental overdose.
- **Prescription medications should not be accessible to children.** Quantities of medications should be tracked and all medications kept in a locked cabinet.
- **The ability to order medications online is a risk factor for teens to access medications.** Some websites sell counterfeit and dangerous drugs that may not require a prescription. Internet use should be monitored and parents should assure teens are not accessing drugs through friends or outside sources.
- **Properly dispose of medications.** Unused or expired drugs should be discarded. Patient information guides with the medication may provide disposal instructions, or pharmacies can be contacted for advice on disposal.

Source: http://www.mayoclinic.org/diseases-conditions/prescription-drug-abuse/basics/prevention/con-20032471

Unintentional Injury – Motor Vehicle Crash Deaths

In 2016, 41 children died in Kansas due to unintentional injuries sustained in Motor Vehicle Crashes (MVC). Figure 17 shows the MVC death rate has remained low over the last 6 years.

Figure 17

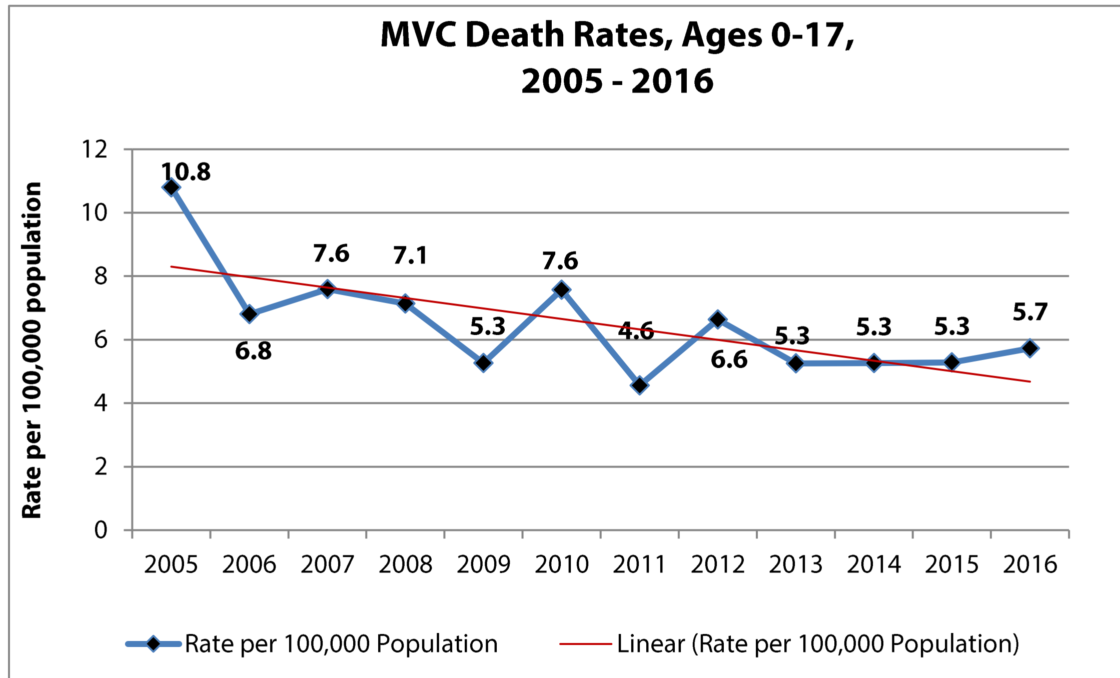
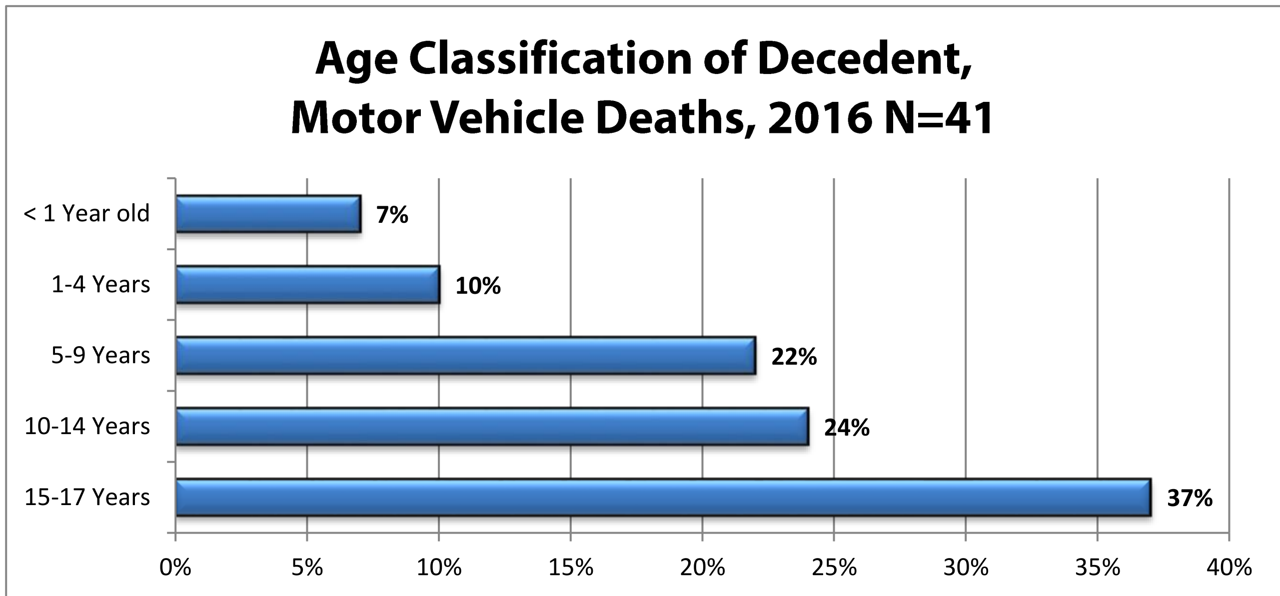


Figure 18

Motor Vehicle Death Rates per 100,000 Population, Ages 0-17, by Age Group, 2005-2016					
	< 1 Year	Age 1-4	Age 5-9	Age 10-14	Age 15-17
2005	2.0	4.0	8.3	6.4	34.5
2006	3.0	2.6	2.1	7.3	18.9
2007	3.0	5.1	1.1	6.9	23.2
2008	0.0	5.6	2.1	6.9	21.2
2009	4.0	4.3	1.0	1.6	18.9
2010	0.0	6.1	5.9	3.0	22.5
2011	2.5	4.9	3.5	3.5	8.4
2012	2.5	4.3	3.9	6.5	16.1
2013	2.8	2.5	2.9	4.5	15.2
2014	5.0	2.5	3.9	4.0	13.5
2015	2.6	2.5	5.4	3.0	13.3
2016	7.9	2.6	4.5	5.0	12.5
Average	**2.9**	**3.9**	**3.7**	**4.9**	**18.2**

As noted in Figures 18 and 19, the likelihood of a child dying due to a motor vehicle crash increases as the child becomes older. Teens aged 15-17 accounted for the highest percentage of MVC deaths.

Figure 19



It is important to note that there are multiple factors that can lead to a MVC death. When combining deaths for 2015-2016 there were 79 fatalities. Of those fatalities, there were 190 combined factors that were reported as having contributed to those deaths. A list of those factors can be found in Figure 20.

Speeding, whether over the limit or unsafe for the conditions, was a contributing factor in 54 percent of the combined MVC deaths in 2015-2016. Driver inexperience accounted for another 37 percent of the MVC deaths. Of note, while 19 percent of the MVC deaths during these two years had a contributing factor of alcohol or drug use, in only two of these deaths was the decedent the one operating the vehicle while under the influence. Despite the low incidence of MVC deaths with contributing factors of teen drinking for this reporting period, the board continues to have concerns regarding accessibility of alcohol to minors.

Figure 20

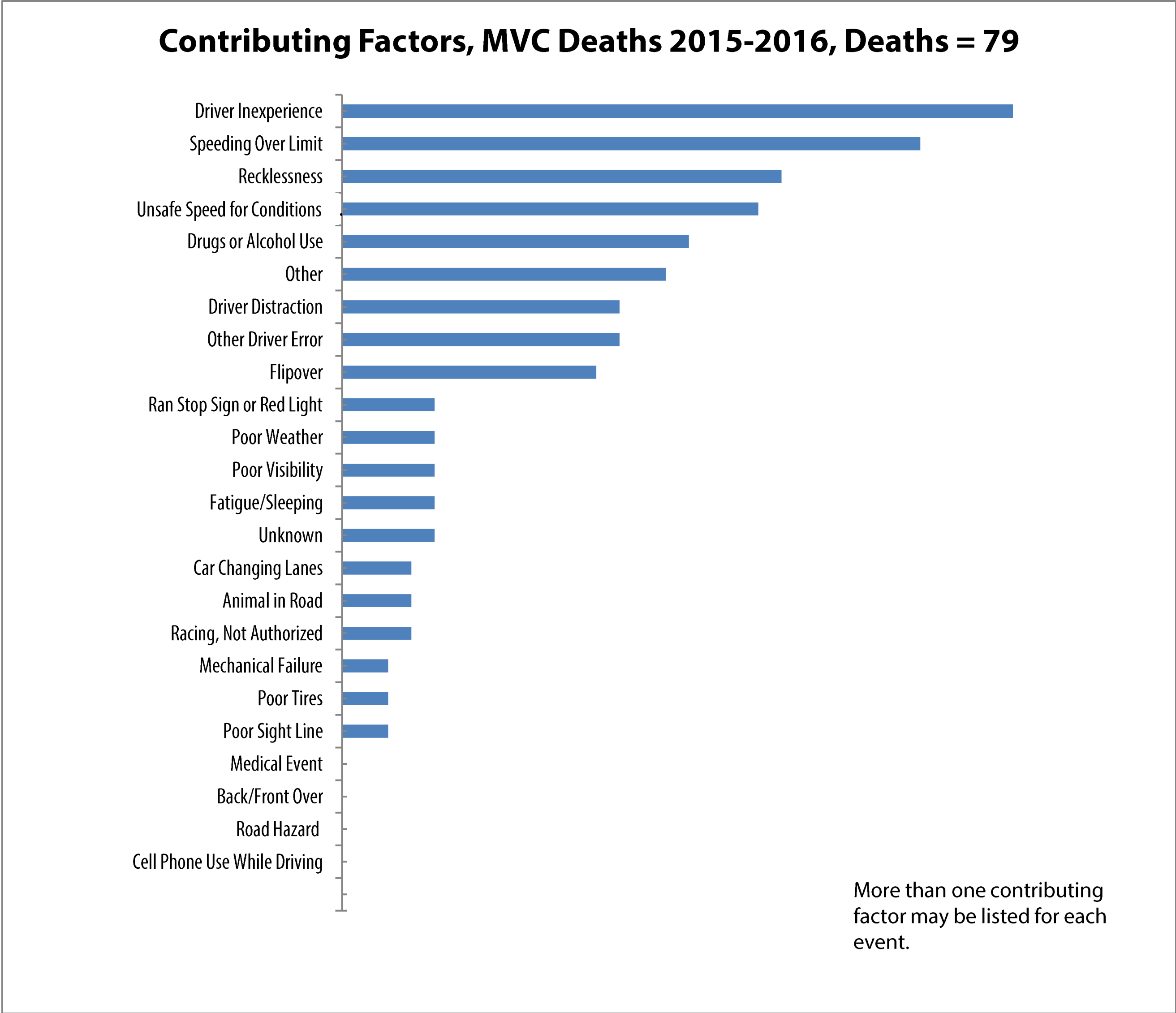


Figure 21 breaks down the contributing factors by where the decedent was at the time of the crash. In instances where the decedent was a driver, speed and driver inexperience played the largest roles in the crash. When decedents were passengers in vehicles, unsafe speed for conditions, recklessness, driver distraction, and alcohol or drug use were the primary contributing factors. No deaths during this period were attributed to having "cellphone use while driving." The board requires documentation of cell phone use in investigative reports before classifying this as a contributing factor. It is important for investigators to document contributing factors, such as cell phone use while investigating and reporting MVCs.

Of the 41 Motor Vehicle Deaths in 2016, 38 of the children were known to be either the driver or the passenger of the vehicle. The remaining three children were pedestrians.

Figure 21

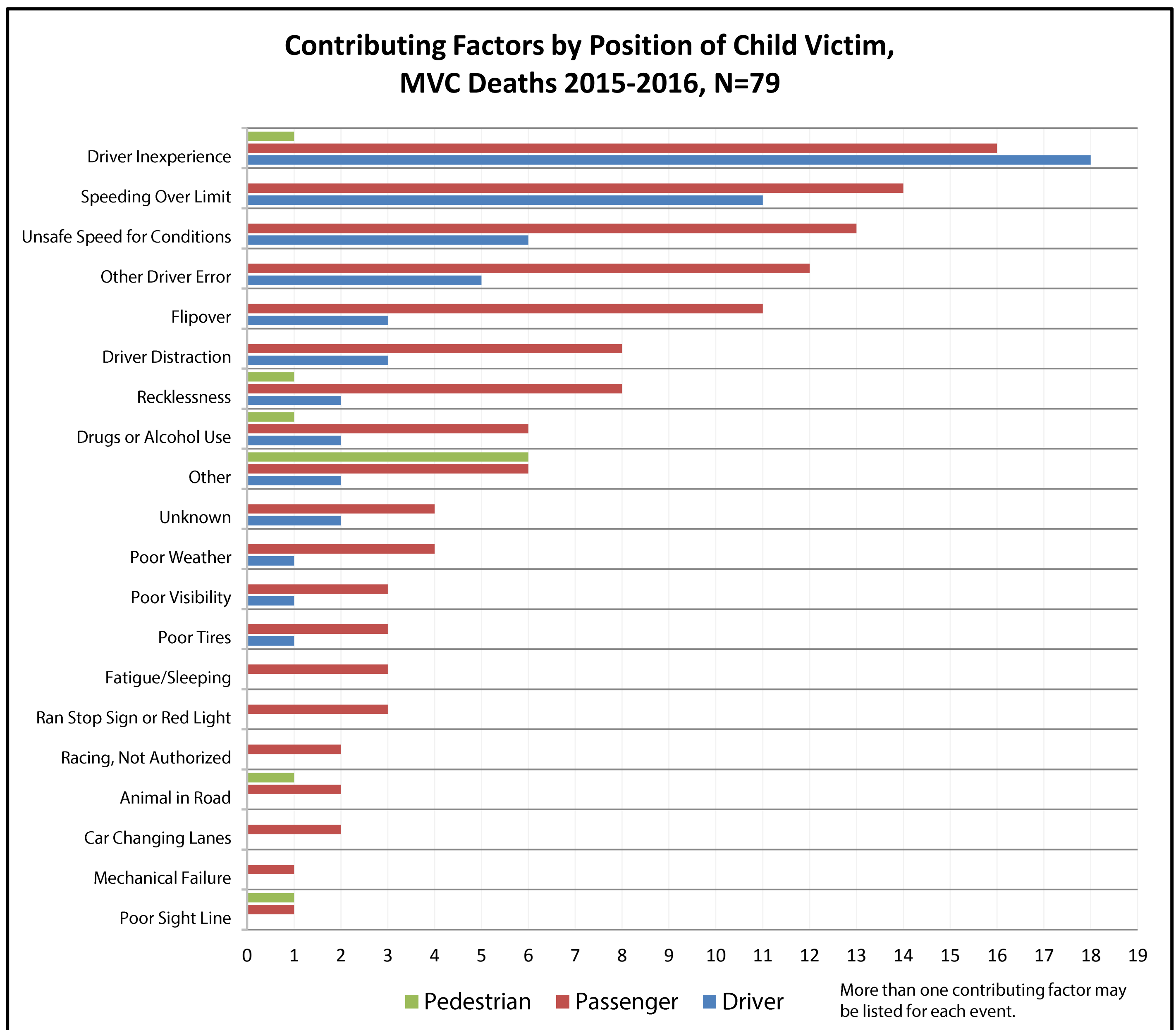


Figure 22 displays the type of safety restraint used based on the location of the victim in the vehicle. Between the years of 2015 and 2016 there were 70 deaths of children due to MVCs. In only 21 of these deaths was the decedent restrained correctly. Figure 22 does not include pedestrian deaths in its total.

Figure 22

Safety Restraint Use by Decedent, 2015-2016 N=70					
	Driver	**Passenger Front Seat**	**Passenger Back Seat**	**Passenger Other**	**Total**
Restrained	8	2	11	0	21
Restrained, Incorrectly	0	2	2	0	4
Unrestrained	13	8	14	2	37
Unknown if Restrained	3	3	0	0	6
Other	0	1	0	1	2
Total	**24**	**16**	**27**	**3**	**70**

Kansas experienced five child deaths from All Terrain Vehicle (ATV) crashes in 2015 and another four in 2016. According to the 2016 Annual Report of ATV-Related Deaths and Injuries published by the U.S. Consumer Product Safety Commission, "In 2016, there were an estimated 101,200 ATV-related, emergency department-treated injuries in the United States. An estimated 26 percent of these involved children younger than 16 years of age."

The number of crashes and injuries while utilizing these vehicles continues to increase. ATV use is popular in both recreation and work. This type of vehicle size, maneuverability and durability makes it extremely handy and fun to ride. Drivers of ATVs often use roadways not designed for ATV travel and often drive at unsafe speeds.

In Kansas, children ages 10-14 comprise the largest number of ATV child-related fatalities since the board began reviewing child deaths in 1994. In 2016, two children in this age group died in an ATV crash. Young riders lack the size and strength to safely control an ATV. Operating or riding in an ATV carries a substantial risk of serious injury or death. At minimum, all ATV users should wear a helmet, eye protection, and protective clothing when riding an ATV.

Characteristics of the 41 Motor Vehicle Crash Deaths, 2016

- 27 were male; 14 were female
- Only 14 of the decedents were driving a vehicle at the time of their demise
  - 10 male; 4 female
  - 3 of the drivers were operating an ATV, one was operating a motorcycle, the remaining were operating a car or truck
  - Only 4 of the 14 drivers were known to be properly restrained
- 3 were pedestrians when struck
- 3 were passengers in a tractor or other vehicle that was being used for farm purposes at the time of their death
- 4 were either driving or riding in an ATV at the time of the crash

PREVENTION POINTS

- **Use of Proper Safety Restraints** – Wear seat belts. Seat belts and appropriate child safety restraints consistently prevent serious injury and death. 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 in the back seat. Parental seatbelt use as an example to children and passengers is invaluable.

- **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 in Kansas.

- **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.

Unintentional Injury – Drowning Deaths

In 2016, six children died by unintentional 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 minutes and in only a few inches of water. Between 2005 and 2016, the Board has reviewed 111 unintentional drowning cases. Since 2005, the 1-4 year age group, on average, has accounted for the highest rate of deaths compared to the other age groups. Figure 23 shows drowning death rates for ages 0-17. Figure 24 shows the rates listed by age group (both per 100,000 population for the last 12 years).

Figure 23

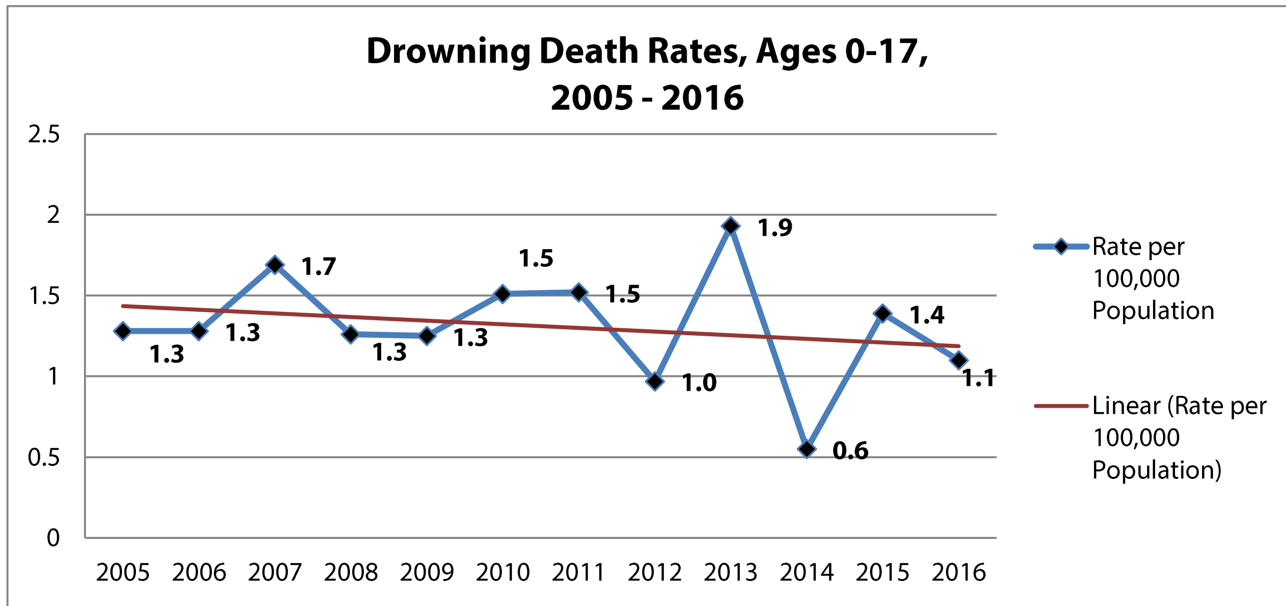


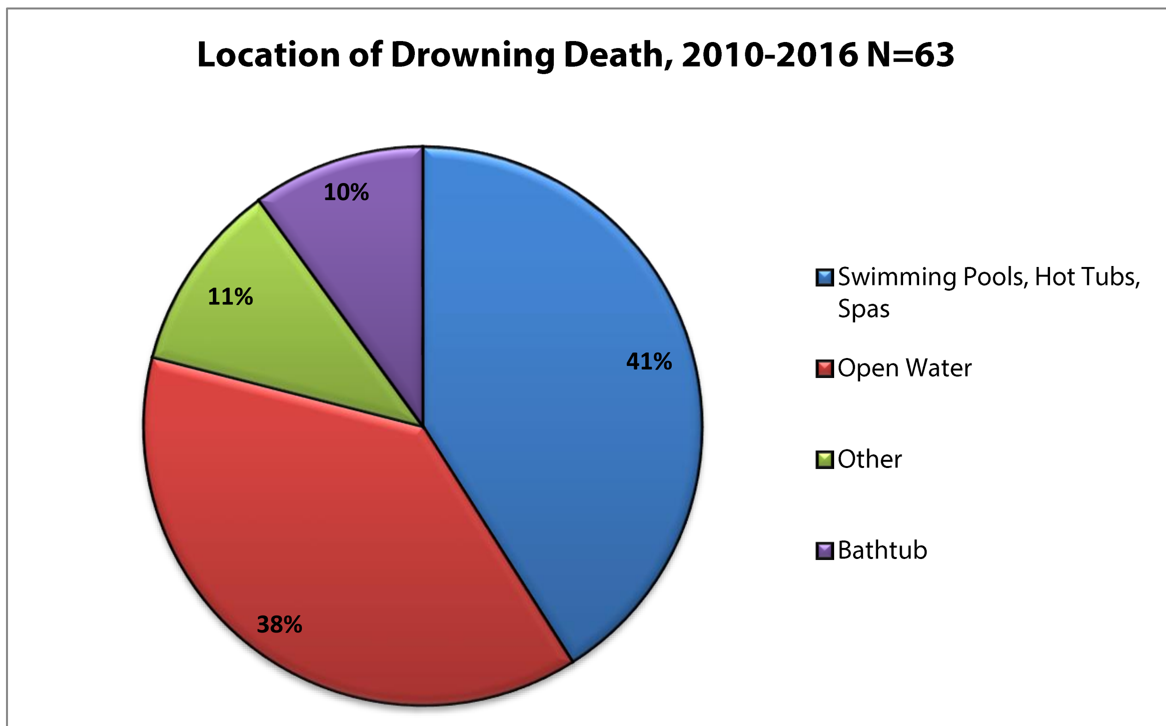
Figure 24

Drowning Death Rates per 100,000 population, Ages 0-17, by Age Group, 2005-2016					
	< 1 Year	Age 1-4	Age 5-9	Age 10-14	Age 15-17
2005	0.0	5.4	0.0	0.5	0.0
2006	1.0	2.6	0.5	0.0	2.0
2007	2.0	3.2	0.5	1.6	0.8
2008	0.0	4.4	0.5	0.0	0.8
2009	0.0	3.1	0.5	1.1	0.9
2010	0.0	3.6	1.5	1.0	0.0
2011	0.1	0.4	0.6	0.1	0.3
2012	0.0	2.4	1.0	0.5	0.0
2013	0.0	3.1	0.5	2.5	4.2
2014	0.0	1.9	0.0	0.0	0.8
2015	0.0	3.2	0.5	1.5	0.8
2016	0.0	1.3	0	0.5	2.5
Average	**0.3**	**2.9**	**0.5**	**0.8**	**1.1**

As shown in Figure 25, swimming pools have been the primary location of child drownings for the last seven years. Proper supervision and floatation devices for children of all ages are very important. Children not only are at risk during the summer when pools are mainly in use, but also when they are not in use and still accessible. Four-sided fencing of swimming pools, including soft-sided pools on residential properties is an additional and necessary tool to prevent drownings.

Many of the same prevention points can be applied to the second most common locations for drownings over the last six years. Open water, which includes rivers, lakes, and ponds, are often very popular areas for Kansas children to visit. It is important to remember that despite the ability to swim, swimming in open water is more challenging than in a pool. Children and youth can tire quickly and if going under, the murky water and currents can make it difficult for even the best swimmer to be seen and rescued.

Figure 25



The use of personal floatation devices is essential for children of any age despite their ability to swim. In 2016, none of the children who died due to unintentional drowning was wearing a floatation device. In four of the six deaths, poor or absent supervsion was noted as a contributing factor. Every minute counts in drowning situations. Proper supervision and appropriate personal floatation devices are critical prevention measures when children are near water.

PREVENTION POINTS

- **Proper Supervision** – An adult capable of responding to an emergency should always supervise children around water. The adult should actively watch and avoid distractions. Assigning swim "buddies" is recommended, especially if there are many swimmers. Supervision also applies to bathtubs, where children should never be left alone even for brief periods of time.

- **Pool Environment Safety** – Most cities/counties have ordinances 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 and PFDs.

- **Water conditions** – Lakes, ponds and ditches often contain murky water and tangled branches or other items that pose a potential danger to swimmers. Research these areas and become familiar with possible dangers such as large rocks and underwater currents. Know water depth and underwater hazards before allowing children to jump into any body of water. It is also advised to check local weather conditions prior to swimming or boating as thunderstorms with lightning or strong winds could be fatal.

Unintentional Injury – Fire Deaths

In 2016, four Kansas children died in unintentional fire-related incidents. Nationwide, fires and burns are a common cause of unintentional injuries and deaths. Figures 26 and 27 indicate child fire death rates and rates listed by age group per 100,000 population for the past 12 years in Kansas. Children 4 years and under are most at risk.

Figure 26

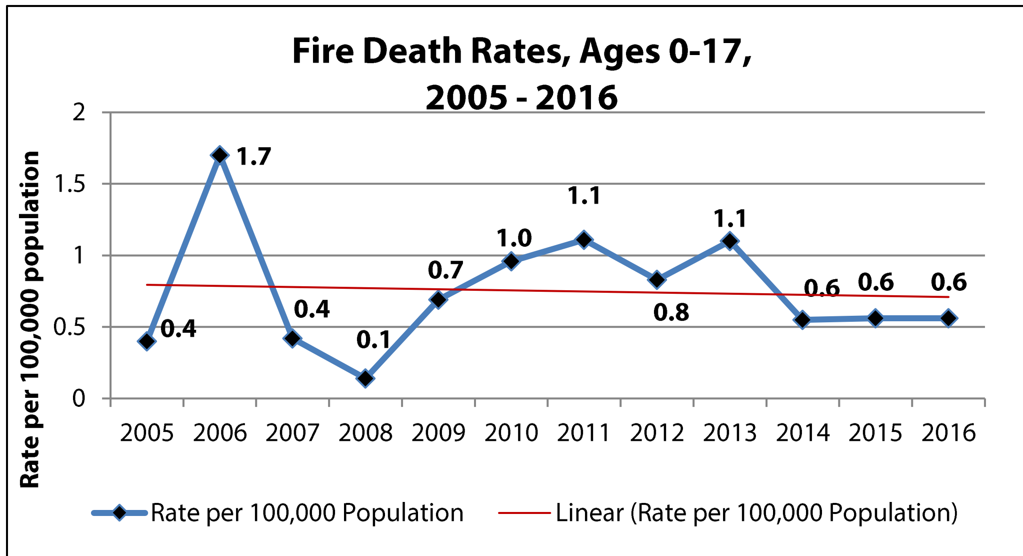


Figure 27

Fire Death Rates per 100,000 population, Ages 0-17, by Age Group, 2005-2016					
	< 1 Year	Ages 1-4	Ages 5-9	Ages 10-14	Ages 15-17
2005	0.0	1.3	0.0	0.0	0.8
2006	5.3	2.7	0.6	2.2	0.8
2007	0.0	0.7	1.0	0.0	0.0
2008	0.0	0.7	0.0	0.0	0.0
2009	0.0	2.0	1.0	0.0	0.0
2010	0.0	2.0	1.6	0.5	0.0
2011	2.5	1.2	1.5	0.5	0.8
2012	0.0	1.8	1.5	0.0	0.0
2013	0.0	3.7	0.5	0.5	0.0
2014	0.0	0.0	1.0	0.5	0.8
2015	0.0	1.3	0.0	0.5	0.8
2016	0.0	1.3	1.0	0.0	0.0
Average	**0.7**	**1.6**	**0.8**	**0.4**	**0.3**

Parents and caregivers must 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 should be tested once a month, have new batteries at least once a year, and be replaced every 10 years. Close supervision of children, safe storage of matches and lighters, and working smoke detectors in the home are critical.

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.

Characteristics of the Four Fire-Related Deaths, 2016

- In three of the four fire related deaths, there was no working smoke detector
- In two of the four fire related deaths, a cigarette lighter was used as the ignition source by a child under the age of 10
- In one of the four deaths, clutter was a barrier that prevented a safe exit

PREVENTION POINTS

- **Proper Supervision** – Young children must be watched closely. Leaving them unsupervised, especially if there are objects such as 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 inside each bedroom, outside each sleeping area and on every level of the house, including the basement. Smoke detectors should be 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. Ensure that gates or unnecessary clutter do not block exits. Designate a central meeting location outside of the home and have regular fire drills.

Asthma

In the last seven years of SCDRB cases (2010-2016) there have been 16 deaths due to asthma. These deaths occurred in children from ages 1-14 with the majority of deaths occurring to children in the 10-14 age group. Although the number of deaths is small, even one death is too many since asthma is a treatable disease.

The numbers and rates of pediatric asthma hospitalizations are one indication of how well a state overall is managing asthma. If asthma is well controlled a child should rarely need to be hospitalized for the disease.

Figure 28

Numbers and Rates of Pediatric Asthma Hospitalizations* Kansas, 2009 - 2016		
Year	**Number**	**Rate**
2009	794	123.7
2010	732	113.3
2011	700	108.5
2012	886	138.2
2013	600	93.5
2014	726	112.6
FFY 2015 †	554	86.2
2016 §	482	75.5

* Admissions with a principal diagnosis of asthma per 100,000 population, ages 2 through 17 years. Excludes cases with a diagnosis code for cystic fibrosis and anomalies of the respiratory system, obstetric admissions, and transfers from other institutions
† Calendar year rate cannot be calculated due to presence of ICD9CM and ICD10CM diagnoses. Federal fiscal year used.
§ Rate calculated using ICD10CM diagnoses. Due to the difference in the coding methods, 2016 rate cannot be compared to prior years.

Residence Data
Source data: Kansas Hospital Association
Calculated using Agency for Healthcare Research and Quality Pediatric Quality Indicator software.

Prepared by:
Kansas Department of Health and Environment
Bureau of Epidemiology and Public Health Informatics
Created: July 31, 2018
Contact: KDHE.HealthStatistics@ks.gov

Asthma is a chronic disease that affects the airways in the lungs. It is characterized by inflammation that restricts the ability to move air out of the lungs and leads to episodes of wheezing, coughing, shortness of breath and chest tightness. Severe asthma can lead to complete closure of the airways and is life threatening. There is no cure for asthma. It can be controlled with a management plan that includes rescue inhalers and preventive medications through quality medical care and asthma education. This also includes the ability to recognize and avoid each child's specific triggers such as allergens, exercise, tobacco smoke, air pollution and infections. It is estimated that one in 11 children have asthma, which makes it a common problem. Because it is common, parents and care providers often fail to understand that asthma is not a one-size-fits-all disease and do not appreciate how life threatening it can be if not treated quickly and appropriately.

It is imperative that children have access to medical providers who can effectively manage and control asthma, provide ongoing education and monitoring, and work with families, childcare facilities and schools to improve the lives of children with asthma and prevent asthma related deaths. Childcare providers and school personnel, including coaches and trainers, must have appropriate asthma education and access to each child's asthma action plan and medications. Immediate access to medical providers who can provide direction in urgent situations is also important to those caring for children with asthma.

Efforts to improve asthma care and education are part of hospital quality improvement efforts across the state. Involving families and other care providers in education is also essential. Continued monitoring of Kansas asthma hospitalizations and deaths will help in our assessment of how well our state is caring for children with asthma.

PREVENTION POINTS

- **Assessment and Monitoring** – Asthma is highly variable over time. Periodic, scheduled monitoring by health care providers familiar with standardized and evidence-based care is essential, even if the patient and family feel the child is doing well.
- **Education** – Teaching and reinforcement of self-monitoring skills and devices, use of a written asthma action plan, correct use of medications and devices, and avoidance of asthma triggers in the environment are areas of knowledge to adapt and integrate into all points of a child's care.
- **Control of Environmental Factors and Comorbid Conditions** – Avoidance of cigarette smoke exposure, determining and reducing exposures to allergens, consideration of allergen immunotherapy if indicated, and management of obesity, gastroesophageal reflux, obstructive sleep apnea and infections (including annual use of influenza vaccine) are important steps in asthma control.
- **Medications** – Medications and delivery devices must meet the child's needs and circumstances. A stepwise approach with therapy adjustments based on the child's asthma control are outlined with evidence-based support in Guidelines for the Diagnosis and Management of Asthma published by the National Heart, Lung and Blood Institute of the National Institutes of Health.
(http://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines/full-report)

Homicide

Homicide is defined as the death of one person resulting from an intentional act, unintentional act, or criminally negligent act leading to the death of another person. The Board reviewed 16 child homicides in 2016. Figure 29 indicates rates per 100,000 population for the past 12 years.

Figure 29

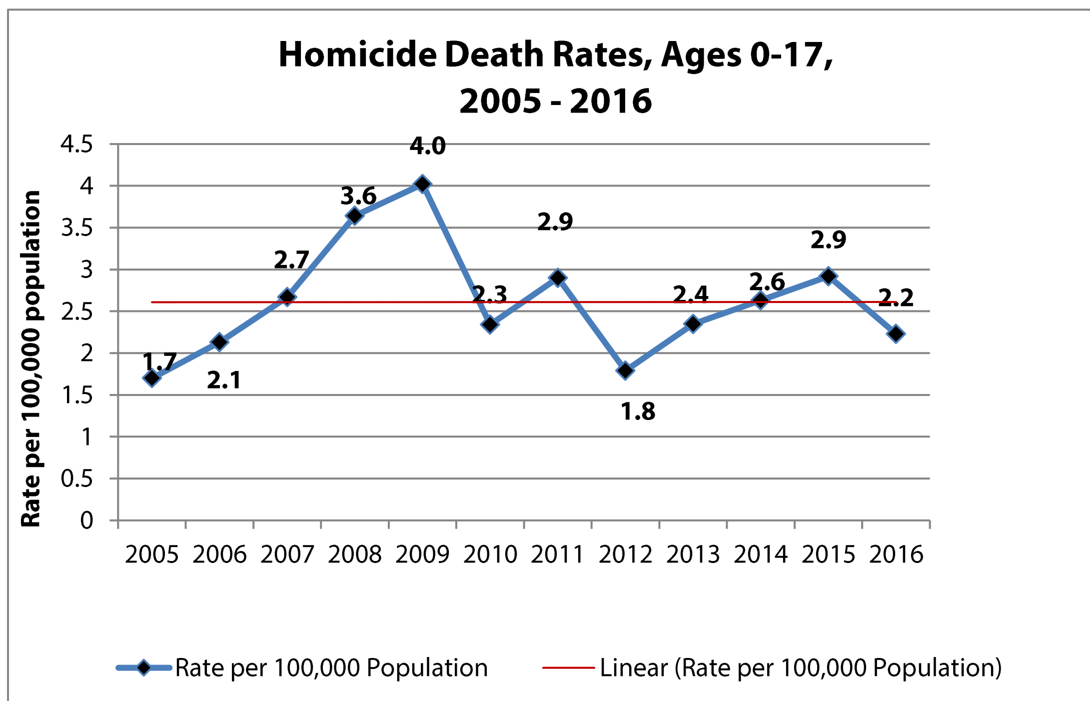


Figure 30 demonstrates homicide rates per 100,000 population by age group. When examining child homicides, the rate for infants is more than three times higher than other age groups. This difference is explained by the unique characteristics of the circumstances surrounding child abuse homicides, which account for nearly all infant homicides, and the vulnerability of very young children who are not capable of defending themselves against an assault, are small enough to pick up and shake, throw or strike, and whose crying and behavior can be frustrating to caregivers. This is discussed in more detail in the Homicide – Child Abuse section on page 38.

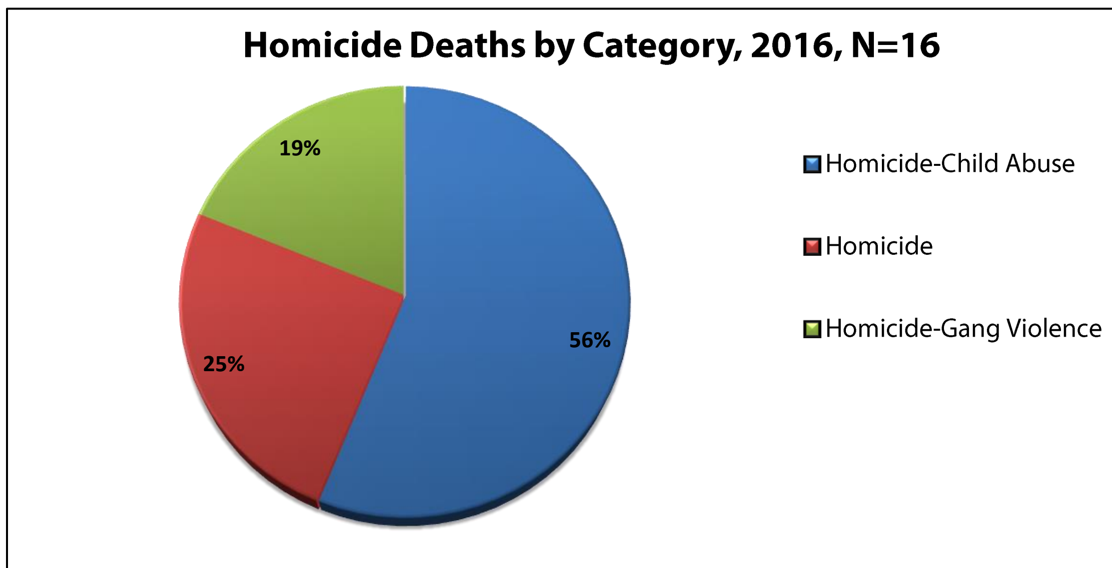
Figure 30

Homicide Death Rates per 100,000 population, Ages 0-17, by Age Group, 2005-2016					
	Age <1	**Age 1-4**	**Age 5-9**	**Age 10-14**	**Age 15-17**
2005	10.4	2.7	0.6	0.0	2.5
2006	7.6	0.6	1.6	1.6	4.1
2007	14.8	3.2	0.0	0.5	5.8
2008	16.5	5.6	0.0	0.0	8.5
2009	19.3	3.7	1.0	3.7	5.2
2010	9.8	3.6	0.5	1.5	2.5
2011	12.5	3.6	0.5	1.5	2.5
2012	7.5	1.8	1.0	0.0	4.2
2013	12.6	2.4	1.5	1.0	1.7
2014	15.0	3.1	1.0	2.0	1.7
2015	23.1	3.2	1.0	0.0	4.2
2016	13.1	2.6	1.0	0.5	3.3
Average	**13.5**	**3.0**	**0.8**	**1.0**	**3.9**

Each child homicide was categorized into the following groups (Figure 31). By categorizing homicides in this way, the Board is able to look in depth at specific issues pertaining to each category.

Of the total homicides in all categories for 2016, 56 percent (9) were due to child abuse and 19 percent (3) were due to gang violence. The other 25 percent (4) were attributed to deaths that did not fall under child abuse or gang violence definitions.

Figure 31



HOMICIDE – CHILD ABUSE

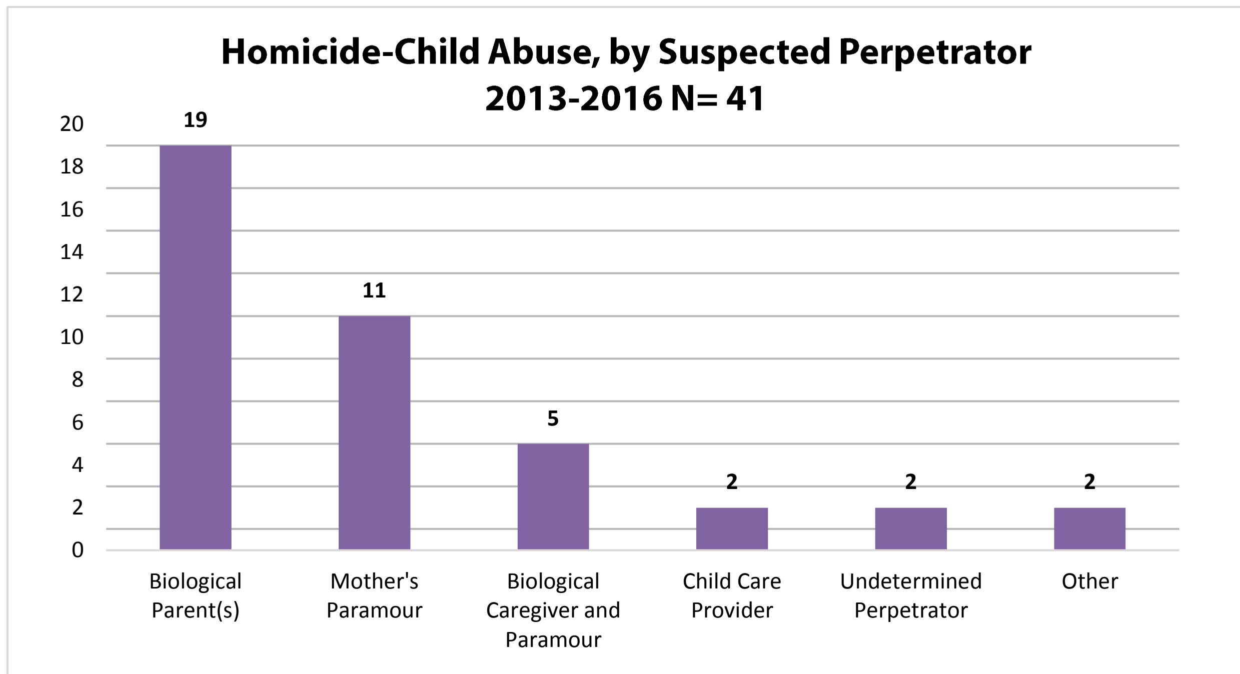
The Board defines Child Abuse Homicide as resulting from abuse (inflicting injury with malicious intent, usually as a form of punishment or out of frustration with a child's crying or perceived misbehavior) or neglect (failing to provide shelter, safety, supervision and nutritional needs) by caretakers. Child abuse is a complex problem that stems from a variety of factors including, but not limited to, financial stressors, domestic violence, 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), previously 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. Because of the internal head injuries, the child may encounter trouble breathing or lose consciousness, which can cause additional 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 without visible external evidence of trauma.

Caring for children can be overwhelming at times. Often parents and caregivers are facing multiple stressors and may have limited access to support. There are several risk factors associated with child abuse homicide including maternal risk factors (young age, less than 12 years of education, and being a single parent) and household risk factors (non-biological caregiver in the home, prior substantiation of child abuse and neglect, substance abuse, and low socioeconomic status). Many of the child abuse homicides occurred when the primary caregiver was away from the home. Often the child was being cared for by the mother's paramour or by a relative who was not the primary caregiver.

Figure 32 categorizes the suspected perpetrators in each of the child abuse homicides over the last four years. In 46 percent of these deaths, the suspected perpetrator was a biological parent of the child. Mother's paramour was the suspected perpetrator in 27 percent of the child abuse homicides. In 12 percent a biological caregiver and his or her paramour were both responsible for the death. The two child abuse homicides in which the perpetrator was listed as "undetermined" involved cases where the perpetrator could not be positively identified or determined.

Figure 32



SCDRB data reflect what is found in studies of characteristics of infant homicides from other states. Infant homicide is proportionately greater and has findings that are different from those of other child homicides. Research indicates that the circumstances of infant homicides include a majority of them perpetrated by someone in a caregiving role and who is less than 25 years of age. More than 80 percent occurred in the child's home and in more than half there were suspicions of previous abuse of the victim by the perpetrator or another person, or previous abuse of another child by the perpetrator. In sharp contrast to teen homicides where the majority involve guns or knives, the majority of infant and young child homicides are the result of beatings, shakings and chokings by someone entrusted with caring for the child.

Infant homicides call for attention aimed at prevention. 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 childhood behaviors and age appropriate discipline, and information on how to select appropriate child caregivers. Educational interventions to identify abuse cases before they lead to severe injuries or death, and to teach skills for dealing with angry and impulsive responses to infant crying, are necessary.

HOMICIDE – GANG VIOLENCE

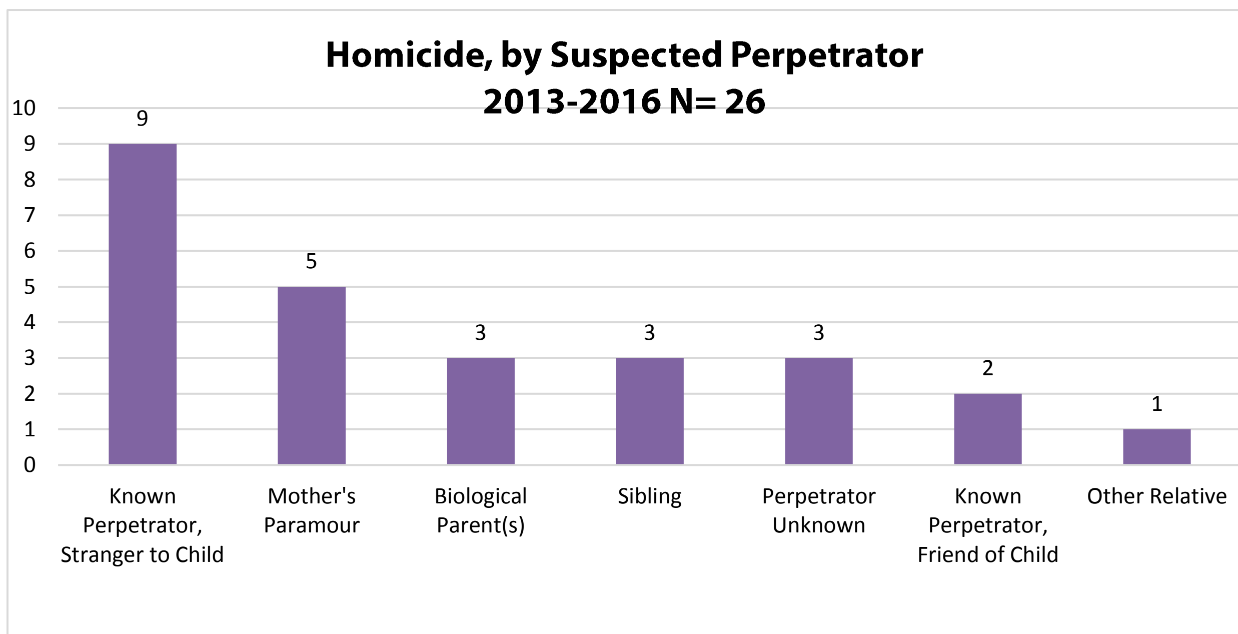
The Board will categorize a homicide as the result of gang violence when there is evidence to support the child died from direct or indirect actions carried out by known or suspected gang members. In many of the cases reviewed, children are at the “wrong place at the wrong time” and unintentionally are caught in the gang violence. This can occur while the child is outside playing or even in the safety of his or her own home. In locations with gang activity, a child living in a home that has other household members with gang associations is a significant risk factor. In other circumstances, the children killed are members of a gang and die during disputes related to gang activity.

Between the years of 2013 and 2016 there have been six homicides due to gang violence; in only half of the deaths was a suspect identified/charged with the murder. Gun violence was the cause of death in all six of these homicides.

HOMICIDE

Any death not categorized as Homicide-Child Abuse or Homicide-Gang Violence is categorized as Homicide. In many of these deaths, the act of violence against the child is more random in nature and a clear indication for the murder may not be evident. In other situations, there are clear indications why the child was killed, however the circumstances had nothing to do with child abuse or gang related violence. Figure 33 indicates that of the 26 deaths in this category over the last four years, in 48 percent the child victim knew the perpetrator. Of the deaths in which the perpetrator was a stranger to the victim or was unknown, 83 percent involved gun violence. This is in contrast to only 14 percent involving gun violence when the child victim knew the perpetrator.

Figure 33



Characteristics of the 16 Child Homicides, 2016

- 9 children died from child abuse, 4 were under 1 year of age
- 10 of the families had current or past DCF child protective service involvement
  - 4 of the 6 cases without DCF history were child abuse/neglect deaths that occurred in the first year of the child's life
    - 2 of the deaths occurred in a childcare setting
    - 2 deaths were not jointly investigated by Law Enforcement and DCF as recommended for thoroughness and to assess safety of other children
  - Of the 10 families who had current or past DCF child protective service involvement:
    - 3 were cases in which the perpetrator was not charged with the homicide; in 2 of those a perpetrator could not be identified
    - In 2 cases, there was a history of the victim having been removed from the home and placed in the custody of the state. In both cases, the child had been reintegrated with the biological parent(s) prior to the death
- 5 of the deaths occurred at the child's home
- In 4 of the 16 homicides a firearm was used
- In 5 of the 16 homicides, the Board found sufficient evidence, after thorough review, to classify the deaths as homicides even though they were not originally classified in that manner. The death certificates in these 5 cases noted manner of death as follows:
  - 1 was listed as Natural
  - 3 were listed as Accident
  - 1 was listed as Undetermined

PREVENTION POINTS

- **Family Violence** – The safety of children living in homes where domestic violence occurs needs to be addressed by DCF and law enforcement when visits are made to the home. Children living in such environments are at increased risk of abuse, neglect or death.
- **Drug Environments** – Children living in environments where they are exposed to drugs (including illicit drugs, prescription medication misuse and alcohol abuse) are at increased risk of abuse, neglect or death. If drug use is suspected, the safety of the children should be addressed.
- **Education for Caregivers of 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. Education should be provided at all points of contact with parents and caregivers, especially addressing positive ways to respond to infant crying, supporting parents through stressful periods, and adjusting work policies to give parents quality time with their young children.
- **Education about Signs of Child Abuse –** Most cases of child abuse can be suspected with attention to the characteristics of the injuries. 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. If a child has injuries on areas such as the cheeks, ears, mouth, stomach, buttocks or thighs, the possibility that the child is being abused should be considered. Bruises in these areas, human bite marks, round burns the size of a cigarette, or larger poorly explained burns seldom come from everyday activities. Young children who are not crawling or walking rarely sustain bruises – "if you don't cruise, you don't bruise." Any bruises noted on a child less than 9 months of age, especially if recurrent, patterned, or in unusual locations on the body should be evaluated for the possibility of abuse. If there is suspicion a child is being abused or neglected, a report should be made to the Kansas Protection Report Center at 1-800-922-5330 (toll-free) or 911 if the child is in imminent danger.

Suicide

In 2016, 20 children in Kansas between the ages of 10-17 died by suicide; 13 were male and seven were female. According to the Centers for Disease Control and Prevention, in 2016 suicide was the second-leading cause of death among U.S. children 10-14 and young people 15-24 years of age. Similar to national studies, in Kansas, adolescent females are more likely to attempt suicide, but adolescent males are more likely to complete it. Suicide rates increase after puberty, and the rates of suicide vary according to race and ethnicity, with the adolescent suicide rate highest for white males. Figures 34 and 35 show suicide rates per 100,000 population for children ages 0-17, and by age group for the last 12 years.

Figure 34

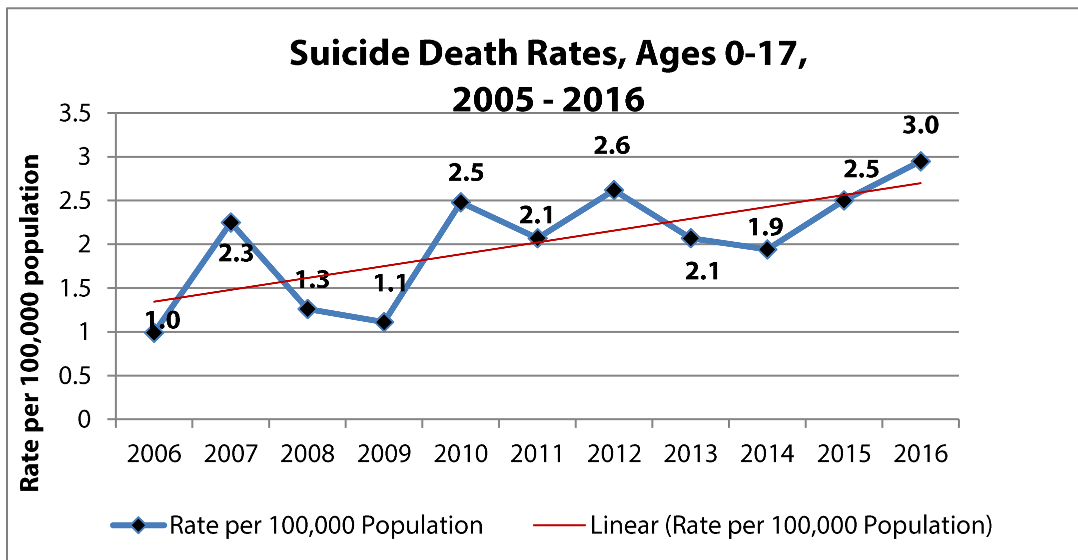


Figure 35

Suicide Death Rates per 100,000 age-related population, Ages 10-17, by Age Group, 2005-2016		
	Age 10-14	Age 15-17
2005	0.5	5.9
2006	1.6	11.5
2007	2.6	9.1
2008	1.1	5.9
2009	2.7	3.5
2010	1.0	12.5
2011	1.5	10.1
2012	3.0	11.0
2013	2.0	9.3
2014	2.5	7.6
2015	3.0	10.0
2016	3.5	10.8
Average	**2.1**	**8.9**

Various methods are used when children and adolescents die by suicide. The most common method for males is the use of a firearm; females more frequently use hanging, suffocation or drugs. While it is known there is a connection between suicide and vehicular crashes, the number of intentional crashes remains unidentified. Many suicide attempts, as well as suicides reviewed by the board, occur when the child is in short-term crisis. It is important for parents and caregivers to prevent access to lethal means during periods of increased risk of suicide or self-harm. Figure 36 indicates the methods used by gender of the child over the last seven years.

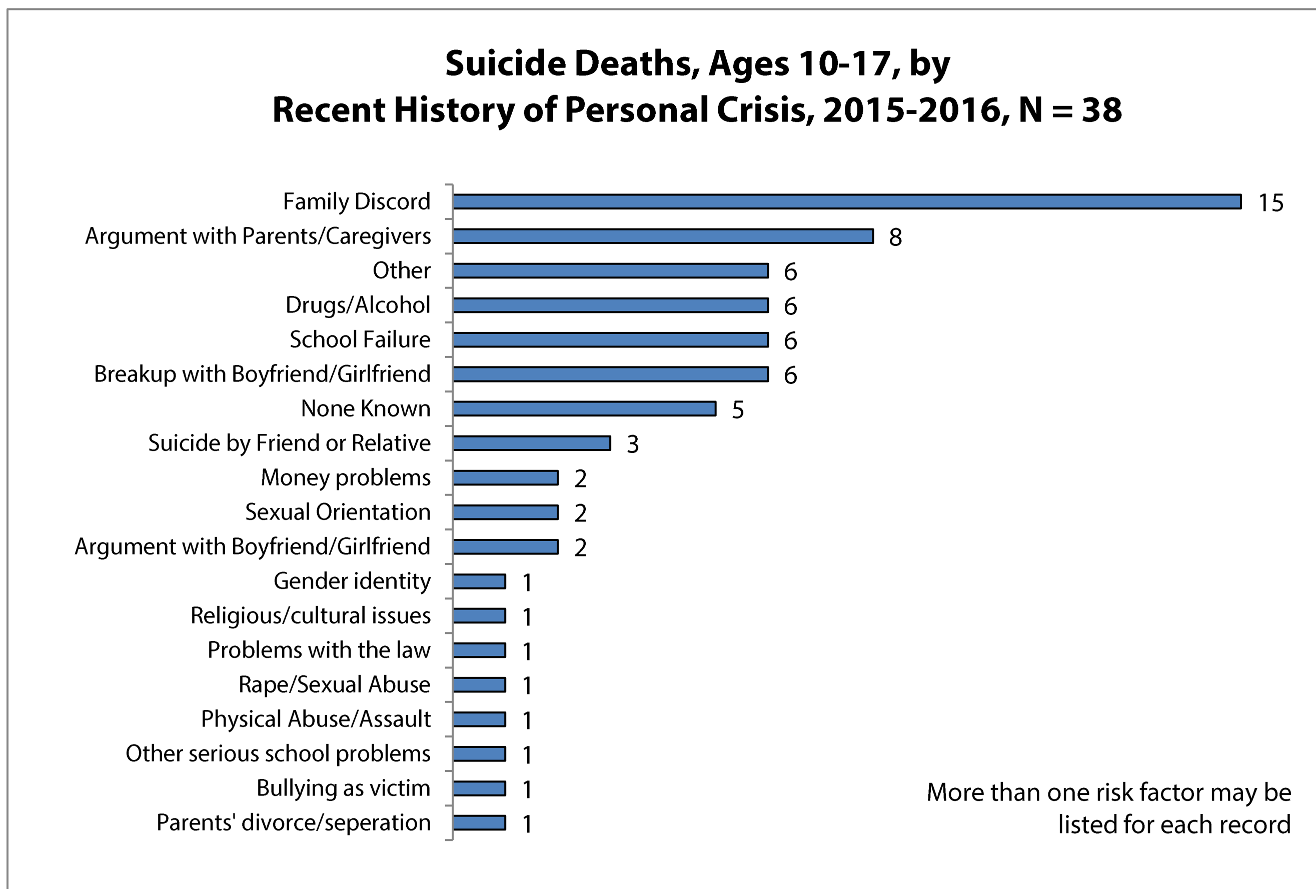
Figure 36

Suicides by Method and Gender, 2010-2016				
Ranking of Method (1 highest)	**Method**	**Male**	**Female**	**Total**
1	Asphyxia	39	17	56
2	Firearm	45	8	53
3	Poisoning, Overdose or Acute Intoxication	3	5	8
4	Fall*	0	1	1
	Other Transport-Train*	0	1	1
***denotes equal ranking**				

Risk factors for adolescent suicide are categorized as predisposing and precipitating factors. Predisposing factors include mental health problems and psychiatric disorders, previous suicide attempt, family history of suicide, history of physical or sexual abuse, and exposure to violence. Precipitating factors include access to means, alcohol and drug use, exposure to suicide and suicide attempts, social stress and isolation, and emotional and cognitive factors. Well-identified examples of social stress include parental divorce or separation, gender identity and sexual orientation, or the breakup of a significant relationship. Bullying has been identified as a risk factor, placing both bullies and victims at risk. Additionally, an increased risk for suicide for females has been correlated with a recent family move. An increased risk for males correlates with the loss of a relationship.

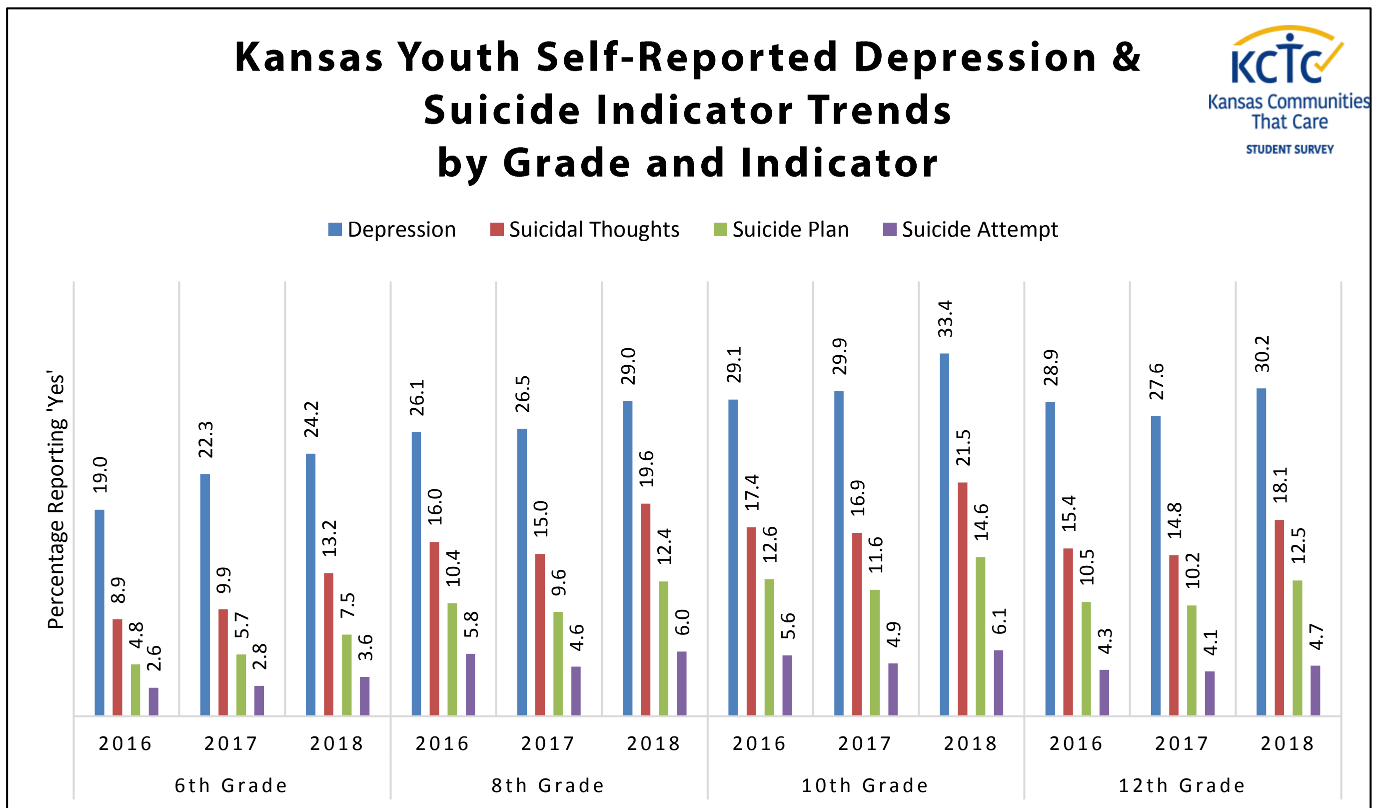
Figure 37 lists the recent personal crisis associated with the suicides in 2015 and 2016. Of note, in many cases, the family felt the suicide was completely unexpected as the child did not have a history of mental illness, suicidal ideation, or other risk factors associated with suicide. This is important to understand, as suicide is described as a "silent epidemic." Causes of suicide can be complex and challenging to identify, however suicides can be preventable. Parents, caregivers, friends, school personnel, and others need to be aware of warning signs to identify those who may be considering harming themselves. There are many protective factors that can buffer individuals from suicidal thoughts and behaviors, including clinical care for mental health and substance abuse, family and community support, and promoting skills in problem solving and conflict resolution.

Figure 37



The findings of the Board are consistent with The Kansas Communities That Care (KCTC) Student Survey. The survey is administered annually, free of charge to all public and private schools in Kansas. Figure 38 represents a recent enhancement to the survey which measures youth depression and suicide thoughts, plans and attempts. Youth as young as sixth grade are reporting thoughts, plans and attempts of suicide. Each grade surveyed has shown an increase in suicide ideation between 2016 and 2018. These self-reported indicators parallel the preliminary data of the SCDRB which show that the rate of Kansas children who died by suicide is not only increasing, but includes children as young as elementary and middle school. Prevention efforts aimed at reducing youth suicide should be offered to children as early as elementary school.

Figure 38



Due to ongoing concern about adolescent suicides, the Kansas Legislature passed SB323 in 2016. This legislation requires suicide prevention training for school district personnel and a building crisis plan be developed for each school that includes steps for recognizing suicide ideation, appropriate methods of intervention, and a crisis recovery plan. This law is modeled after the Jason Flatt Act, making Kansas the 19th state to pass similar legislation since 2007. More information regarding the Jason Flatt Act can be found at http://jasonfoundation.com/.

In response to the increased rate of youth suicide, Kansas Attorney General Derek Schmidt and the Tower Foundation launched a Youth Suicide Prevention Task Force. The task force will survey ongoing local and state efforts to combat youth suicide in Kansas, and review the "Safe2Tell" phone application and similar methods aimed at increasing communication with youth. The task force will be

making recommendations for changes in practice, policy or law aimed at preventing youth suicide in Kansas.

Characteristics of the 20 Suicide Deaths, 2016

- 65% of the suicide deaths were male
- 60% had a significant argument or family conflict just prior to the suicide
- 50% of the suicides were completed with a firearm
- In 50% of the cases the decedent had previously talked about suicide
- 45% of the decedents left a suicide note
- 40% were currently receiving or previously had received mental health services
- 35% of the suicides were completed by hanging or other method of suffocation

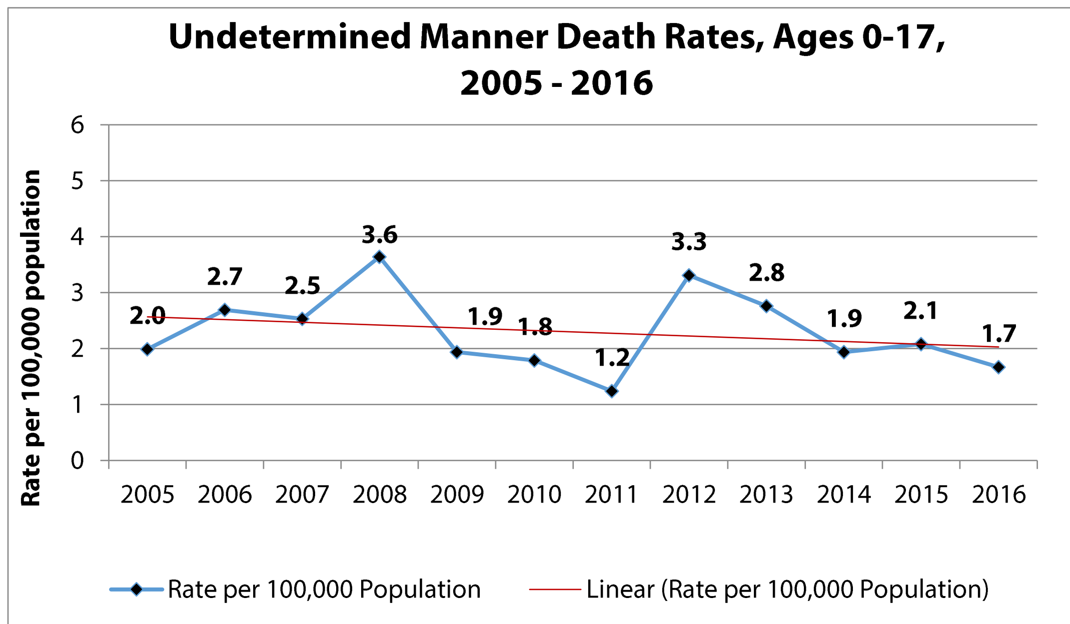
PREVENTION POINTS

- **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 antidepressant 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** – Changes in a young person's psychological state (increase in rage, anxiety, depression or hopelessness), withdrawal, reckless behavior or substance use indicate a need for intervention.
- **Evaluation of Suicide Threats or Ideation – Do not ignore statements about suicide, even if they seem casual or fake.** The months following a suicide attempt or severe depression are 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, and means such as prescription and over the counter medications, are often used in suicides. The harder it is for children to put their hands on these items, the more time they have to rethink their intentions, or to allow 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.
- **Monitor Difficult Situations** – A child's response to parental separation, a relationship breakup, or a peer suicide may include signs or symptoms of depression or hopelessness. Counseling and support to address depression or situational difficulties is imperative.

Undetermined Manner

Periodically, the Board encounters a case where questions remain as to the cause or manner of the child's death. When there are multiple circumstances that may 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 358 deaths as undetermined manner since the board began reviewing cases in 1994. Figure 39 shows Undetermined Manner death rates for the last 12 years of case reviews.

Figure 39



In 2016, there were 12 such deaths. Of the 12 deaths, seven were Unclassified Sudden Infant Death (USID), all of which were sleep-related. 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 alternative diagnoses of natural or unnatural conditions are unclear. The seven USID cases for 2016 were listed as such due to the age of the child (three cases were less than 1 week of age), improperly conducted or incomplete autopsies (two cases), or concern that the death may have been the result of neglect, or intentional injuries or actions. In past years, incomplete scene investigations contributed to classification as undetermined but that was not noted in any undetermined cases for 2016.

Of the 12 deaths classified as undetermined by the Board, four did not have an adequate autopsy completed or should have had additional studies performed based on the findings. Three of these inadequate autopsies were performed by the same pathologist.

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 apparent life-threatening event of unknown etiology that is likely to be fatal.

Historically, 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.

Autopsy Examinations – All Manners of Death

In total, for all manners of death, there were 19 child deaths in 2016 to which the Kansas coroner or pathologist did not complete an autopsy when the board felt one was warranted by the circumstances, or did not meet the minimum expectations for the autopsy components. An additional three children died from non-natural causes in out of state events or facilities and did not have autopsies.

The minimum expectations for autopsies on children ages birth to 17 years with unexplained death suggest that in addition to a thorough investigation, an autopsy should include at a minimum, the following as appropriate for the age and circumstances of the child at death:

- Photographs of the child and of all external and pertinent internal injuries.
- Examination of all clothing and items accompanying the body, preserving all materials for later examination by a crime lab.
- Evidence of therapy and resuscitation.
- Radiographs for a complete survey of the skeletal structures, especially in children less than 2 years of age; films should be reviewed by a radiologist or physician experienced in child trauma whenever possible.
- Blood, urine and vitreous should be collected for possible use as an adjunct to toxicology or if metabolic or hydration status is an issue.
- Toxicological studies should include ethanol and common drugs of abuse, including cold medications, if being used; prescription drugs should be tested for based on history and scene investigation.
- The external examination should give consideration to and document the general appearance, cleanliness, nutrition (heights and weights compared to standard growth charts), dehydration, failure to thrive, congenital anomalies, evidence of abuse or neglect, evidence of sexual abuse; if not found, these should be recorded as essential negative findings.
- An autopsy should be performed on an unembalmed body and include in-situ examination of the brain, neck structures, thoraco-abdominal and pelvic organs with removal and dissection. Weights of organs should be documented. In suspected injury cases, lengthwise incisions through skin and subcutaneous tissues should document the depth of the hemorrhage. If there is no gross cause of death, microscopic examination should be conducted on the brain, heart, lungs, liver, kidneys and other organs as indicated. Stock tissue and paraffin blocks should be retained.
- DNA should be archived for genetic testing, if indicated.
- Metabolic screening results should be determined from the medical birth record. In cases where a metabolic condition is considered (e.g. preceding viral illness, period of starvation, nocturnal death, positive findings such as fatty liver), particularly in children under 2 years of age, further tissues should be preserved. A blood spot card should be prepared and retained in case autopsy findings suggest a metabolic disorder.

Combined with thorough 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 toxicological studies. Kansas is in need of improvements in the coroner system to include standards for medicolegal death investigation, procedures, and appropriate filing of causes of deaths. Reimbursement opportunities are available for child autopsies through the District Coroner's fund managed by KDHE. More information is available at the SCDRB's website: http://ag.ks.gov/scdrb

Of the 19 cases in 2016 where the board determined that either an autopsy should have been considered, or was not properly conducted, seven of those were performed by pathologists who did not follow standards of practice and five did not have autopsies which the board determined should have been performed. These 12 cases are organized by the judicial district that held jurisdiction of the death, Figure 40. As shown on pages 50 and 58, the SCDRB has established protocols and guidelines for when an autopsy should be completed. Furthermore, as described within Board recommendations, when these standards of practice are not followed, the SCDRB should have the ability to refer the case to the KS State Board of Healing Arts for additional review.

Kansas Counties by Judicial District

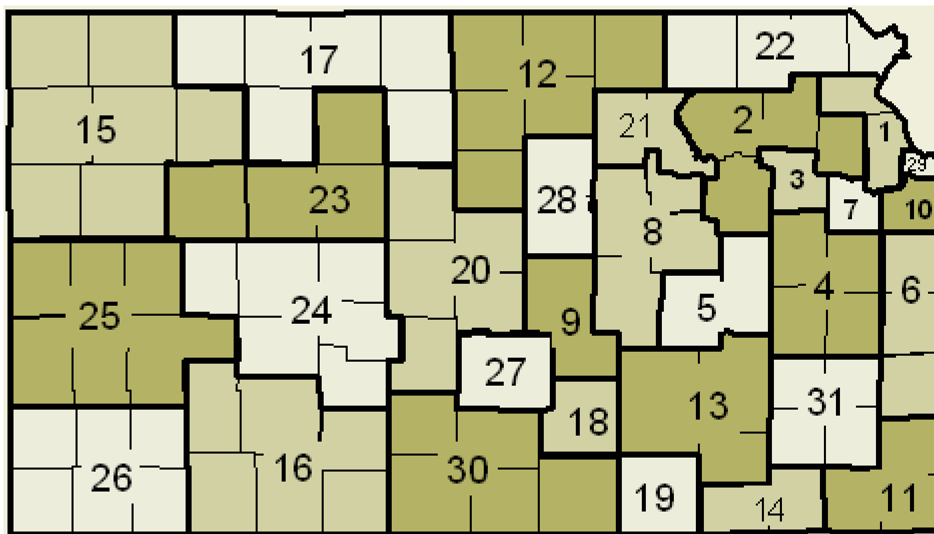


Figure 40

District	Counties in District	# of child deaths not autopsied, despite guidelines		# of child deaths incompletely autopsied, despite guidelines	
		2015	2016	2015	2016
District 1	Atchison, Leavenworth	0	1	0	0
District 10	Johnson	1	0	0	1
District 12	Cloud, Jewell, Lincoln, Mitchell	0	2	0	0
District 15	Cheyenne, Logan, Rawlins, Sheridan, Sherman, Thomas, Wallace	1	0	0	3
District 16	Clark, Comanche, Ford, Gray, Kiowa, Meade	1	0	1	0
District 18	Sedgwick	0	0	0	1
District 20	Barton, Ellsworth, Rice, Russell, Stafford	1	0	2	1
District 23	Ellis, Gove, Rooks, Trego	1	2	1	0
District 24	Edwards, Hodgeman, Lane, Ness, Pawnee, Rush	0	0	1	0
District 28	Ottawa, Salina	0	0	0	1

SCDRB Public Policy Recommendations

The Board strongly encourages the members of the State Legislature to consider each of the following policy recommendations during the 2019 legislative session. The Board has prioritized the improvement of statutory authority of the SCDRB as an immediate need necessary for the Board to continue to review child fatalities, report findings, and provide recommendations to prevent future deaths of Kansas children.

Recommendations to Improve the Statutory Authority of the SCDRB

The statutes governing the SCDRB should be changed to allow Kansas to participate in the National Child Death Review (CDR) Case Reporting System (CRS). The CRS is a standardized case reporting tool available to states as a mechanism to enter case data, and to complete data analysis to develop recommendations and reports specific to child deaths. The current Kansas statute has been interpreted in a way that is preventative for the Board to utilize the CRS despite it being an improvement (in comparison) to the current database utilized by the Board. The CRS is provided at no cost to the states using it. Since the inception of the board, the information reviewed as well as the amount of data collected has increased. The ability to utilize an upgraded database would significantly enhance the Board's ability to collect and report data regarding child deaths in Kansas.

K.S.A. 22a-243(j) should be clarified to indicate that State Child Death Review Board information may be disclosed to professional licensing organizations, if Board members are otherwise under a professional responsibility to disclose that information to comply with their professional licensure. The Kansas Legislature should be aware that in 2016 alone, there were 11 child fatalities in which either an autopsy was not performed, or was performed in a manner that did not meet the minimum expectation for autopsies of children. It is imperative that SCDRB members and staff have the ability to comply with their professional responsibility to report suspected medical misconduct or negligence.

K.S.A. 22a-243(j) should be clarified to allow the release of information to the county or district attorney in the jurisdiction where the death occurred if it appears that the information is necessary for the county or district attorney to prosecute the perpetrator, or the cause of the child's death was from abuse or neglect, or cases where there is known criminal activity. As mentioned within the homicide section of this report, the Board found sufficient evidence after thorough review to classify five deaths in 2016 as homicides even though they were not originally classified in that manner on the death certificate. It is imperative that the Board be able to communicate those findings to the county or district attorney.

K.S.A. 22a-243(a) should be modified to allow a board member to appoint one consistent substitute when needed for board meetings, as well as a suggested timeframe for the appointing agency to fill Board vacancies. It is imperative that the Board have full membership at all times due to the large number of child deaths that are reviewed each year, and the considerable amount of time and effort it takes to review data and offer effective recommendations to prevent future deaths of Kansas children.

Recommendations to Prevent Child Abuse and Neglect Deaths

Increase Access to Affordable, High-Quality Child Care

Homicides, particularly of children under the age of 2, continue to occur when infants are left in the care of persons who are unprepared or unable to care for them.

Kansas Department of Health and Environment (KDHE) and the Kansas Department for Children and Families (DCF) should continue working towards ensuring families have access to high quality and affordable childcare. Children, and particularly young children, should be cared for by persons who are experienced and have reasonable expectations for children and their behaviors. Having access to affordable, high-quality childcare would help decrease future child deaths.

Policies that expand access to community-based home nurse visitation programs for all families with new infants, and ensure paid parental leave for families should receive state support.

Enhance Training and Access to Appropriate Information for Child Welfare Professionals

Kansas DCF should continue to develop and provide enhanced training for both their employees as well as employees of all contracted agencies. It is imperative that every employee of each agency charged with the investigation of abuse and neglect or assessing the continued risk of children under their supervision or custody have current, high quality training regarding child abuse and neglect as well as other topics related to safety assessment.

Through privatization of many parts of the state child welfare system, additional issues have developed regarding the flow of information to all necessary persons. In reviewing DCF files in situations where children and their families were receiving services, it is apparent that workers who had frequent interaction with the families were unaware of information DCF had regarding a particular family. Each report should not be looked at as an individual incident, but all available information should be reviewed in its entirety to look for repeated reports of similar behavior prior to developing case plans or making recommendations regarding a child.

Kansas DCF cannot address allegations and concerns of abuse or neglect without thorough historical and investigative information in a form that is comprehensive and easily accessible. Medical histories and law enforcement investigative information about the child is critical for DCF assessments regarding the safety and well-being of a child. Medical providers who report suspicions of abuse or neglect must provide medical information and records appropriate to the case investigation.

Recommendations to Prevent Youth Suicides

Increase Accessibility to Crisis Services and Mental Health Services for Youth within Kansas Communities

Community Mental Health Centers should increase outreach to raise awareness regarding available mental health services for children and youth to ensure parents, caregivers, educators, and other community members are aware of the resources in their community and state.

The Board has concerns regarding the access to mental health services in all areas of the state. Community mental health centers and other agencies providing mental health services to children should reduce barriers to accessibility at the time of crisis as well as for counseling services. The board is encouraged by the creation and work of the Youth Suicide Prevention Task Force. Recommendations from the Task Force will enhance the prevention efforts in the state.

Increase the Depth of Suicide Investigations

Law Enforcement should increase the depth of suicide investigations to include social, mental health and medical histories of the child. Information regarding family stressors, past history of attempts, involvement in mental health services, and relevant social media information should be included. The board recommends initiating a policy of standard training and the use of a protocol for suicide investigations, including the use of a suicide death scene investigation form to assist in collecting all pertinent information. By better understanding the precipitating events leading to youth suicide, Kansas will be better equipped to understand these deaths and how to prevent them.

Ensure Training of Education Professionals Regarding the Prevention, Assessment and Intervention of Suicide

All public school personnel must comply with required annual training that provides practical guidance and best practices on the proactive development and implementation of programs to assess risk of suicide and intervene effectively. Educators, and school personnel are in a position to best identify at-risk children as well as support other children if a peer has committed suicide. This is particularly crucial as deaths due to suicide are increasing and include more children of younger ages.

Recommendations to Prevent Motor Vehicle Deaths of Children and Youth

Strengthen Seat Belt Usage

Citizens and lawmakers should support efforts in Kansas that aim to increase the use of seatbelts among drivers and child passengers. In 2016, 49 percent of the children who died due to motor vehicle crashes were unrestrained or improperly restrained. In another 7 percent, the restraint use of the victim was unknown. According to the State of Kansas Highway Safety Plan Federal Fiscal Year (FFY) 2017, “Children are much more likely to be buckled up if the driver is also belted. If the driver is belted, about 95 percent of the children are also belted. If the driver is not belted, only about 25 percent of the

observed children were also belted." Efforts to increase the number of drivers who are properly restrained will also increase the likelihood that our children will be properly restrained. In 2017, legislation passed in Kansas increased the fine for those who are unrestrained. The board is hopeful this legislation will help decrease the number of Kansas children who are unrestrained.

Decrease Distracted Driving in Kansas

Citizens and lawmakers should support efforts in Kansas to promote and encourage individuals to reduce the use of hand-held devices while operating a motor vehicle. According to the State of Kansas Highway Safety Plan Federal Fiscal Year (FFY) 2017, "Distracted driving is listed as a contributing circumstance for about 25 percent of all reported crashes in the state". Ordinances, promotional materials and advertising can all be effective ways to encourage Kansas drivers to be less distracted while driving.

Improve investigations and strengthen penalties of providing alcohol to minors

More thorough investigations of social hosting as well as increased penalties for providing alcohol to children and teens will help deter adults from providing alcohol to children and decrease alcohol related motor vehicle deaths. The public should also be made aware of the dangers of teen drinking.

Recommendations to Prevent Sleep-Related Deaths

Increase Education on Safe Sleep for Parents and Caregivers

Delivery hospitals in Kansas should create or adopt policies regarding hospital safe sleep education for new parents prior to discharge from the hospital. The education should include statistics on sleep-related deaths, as well as consistent messaging supporting the ABCs of safe sleep. Children should be placed **A**lone on their **B**acks in a **C**rib.

Professionals should use sleep-related suffocation language to clarify for parents that in many cases of sleep-related deaths, children do not die from unexplained reasons but due to overlay, positional asphyxia and other forms of suffocation/strangulation. Parents and caregivers should always remember the ABCs of safe sleep. Kansas communities should enhance education for primary care physicians, childcare providers and at-risk populations in the state, including low-income and adolescent parents, to provide consistent messages about safe sleep.

Recommendations to Improve the Quality of Investigations and Prosecution of Child Deaths and Near Fatalities

DCF should adopt and consistently follow a best practices approach in the investigation of all allegations of abuse and neglect

DCF should review and adopt a best practice approach for the investigation of all allegations of abuse and neglect. Once adopted, training should be conducted with all employees to ensure they understand

the scope and extent of investigation necessary in all allegations of abuse and neglect. Those standards for investigation should be carried out consistently among workers and among regions of the state. Caseloads should be limited to ensure DCF workers have adequate time to investigate and follow up on allegations of abuse and neglect. Additionally, funding for DCF should be adequate to allow for the hiring of qualified, experienced workers to perform those investigations and supervise contractors appropriately.

Children referred to DCF for injuries must be evaluated medically by health professionals with experience and training in detecting and assessing potential child abuse injuries. It is not uncommon to find underlying injuries or evidence of neglect that were missed, or trauma for which the significance of the mechanism of injury is not recognized.

All investigative information obtained should be evaluated in an objective manner. An uncorroborated denial by a parent, in and of itself, should never be grounds for unsubstantiating a claim of abuse or neglect when there is other credible evidence to support such a finding. DCF should also consider any other information collected through law enforcement investigations and any prior or related judicial proceedings in evaluating whether an adult should be substantiated for purposes of the child abuse registry. Workers who consistently fail to conduct adequate investigations should receive additional training to correct those deficiencies or have disciplinary action taken if necessary.

Prior history and investigations should be reviewed before placement of any children. DCF and contracted providers should also develop a reliable system to ensure they have all relevant and necessary information for children in their custody in order that the child's health and well-being does not rely on the child or a relative to provide necessary information to the contractor or DCF. A child's safety should not be compromised because the case decision-maker did not have access to relevant information when making placement decisions.

Improve the Quality of Law Enforcement Investigations for Infant Deaths

Referrals made to law enforcement regarding child abuse and neglect should be investigated by a trained and experienced investigator. Law Enforcement should increase investigators' knowledge of child fatality investigations through high quality training including the adoption of the Center for Disease Control's Sudden Unexpected Infant Death Investigation (SUIDI) protocols, and the use of scene recreation and photography. Each year the SCDRB reviews deaths of infants in which law enforcement did not collect adequate information in the investigation for the Board to determine a cause of death.

The Board recommends that Kansas law enforcement adopt procedures based upon best practices regarding the investigation of child abuse or neglect and child death investigations. Once adopted, training should be conducted with all law enforcement officers to ensure they understand the scope and extent of the investigation necessary in all infant deaths. Those standards for investigation should be carried out consistently among officers in all jurisdictions.

Improve the Quality of Prosecutorial Decision Making regarding Infant Deaths

All prosecutors tasked with reviewing infant death cases should have specialized knowledge or the ability to contact prosecutors with such specialized knowledge to assist in reviewing evidence in cases where criminal conduct is suspected. Particularly, child abuse homicide cases require a heightened level of knowledge and experience in order to reach informed, well-reasoned decisions that are consistent throughout the state.

Prosecutors should also work with local law enforcement agencies to have a coordinated effort toward using a best practices approach to the investigation of all allegations of abuse and neglect.

Improve Coordination and Communication between DCF and Law Enforcement

Kansas DCF should immediately notify law enforcement in instances where the reported abuse may be criminal in nature for law enforcement investigation. K.S.A. 38-2226 requires a joint investigation if there is a report of child abuse or neglect that indicates serious physical harm or sexual abuse and that action may be required to protect the child. Law Enforcement receiving a report of abuse or neglect should assure that a DCF intake is made.

DCF and health care providers, including hospitals, should report any unwitnessed, unexplained or suspicious death or near death of a child to law enforcement for investigation. The SCDRB has reviewed many cases in which law enforcement was not contacted in a timely manner, which impeded the ability of law enforcement to conduct their investigation. The investigations should be a coordinated effort by DCF and law enforcement to ensure thorough investigations and the safety of surviving children.

Improve the Quality of Forensic Investigations and Autopsies of Child Deaths

Thorough and complete investigations and autopsies are essential for proper death certification and eventual review and analysis of the circumstances of infant, child and adolescent deaths. The Kansas State Child Death Review Board recommends the following protocols as a guideline for a comprehensive investigation and pediatric autopsy.

A forensic pathologist should investigate all:

- Known or suspected non-natural deaths, including those due to violence, trauma, drugs or associated with police action;
- Unexpected or unexplained deaths of infants and children, including those with underlying or chronic illness;
- Deaths occurring under the unusual or suspicious circumstances;
- Deaths of children or youth in custody;
- Deaths known or suspected to involve diseases constituting a threat to public health; or
- Deaths of persons not under the care of a physician.

A forensic pathologist should perform the autopsy when the:

- Death is known or suspected to have been caused by violence, trauma, drugs or associated with police action;
- Death occurs in custody of a local, state, or federal institution;
- Death is unexpected and unexplained in an infant or child;
- Death is due to acute workplace injury;
- Death is the result of a motor vehicle crash. Clinical judgment is recommended in the case of delayed deaths;
- Death is caused by or involves apparent injury, including but not limited to electrocution, fire, chemical exposure, intoxication by alcohol, drugs, or poison, unwitnessed or suspected drowning or fall;
- Body is unidentified and the autopsy may aid in identification; or
- Death is unexpected, including those that are sports related, suicides, possible cardiac related and motor vehicle crashes.

Pathologists who perform forensic autopsies of children should be required to obtain a significant number of CME hours specifically related to the best practices of child autopsies and investigations.

Coroners must review any law enforcement investigations of child deaths, and when appropriate, respond to the scene prior to declaring the official cause and manner of death.

Appendix: Death by County of Residence

County	Population Age 0-17	Total Deaths	Natural Deaths Except SIDS	Unintentional Injury Motor Vehicle	Unintentional Injury	Natural SIDS	Homicide	Suicide	Undetermined
Allen	2,917	1						1	
Anderson	1,932	1		1					
Atchison	3,805	2	2						
Barber	1,050	0							
Barton	6,472	1							1
Bourbon	3,693	2	2						
Brown	2,417	2	2						
Butler	17,228	5	4					1	
Chase	567	0							
Chautauqua	700	0							
Cherokee	4,761	3	1	1				1	
Cheyenne	559	0							
Clark	510	0							
Clay	1,926	2	2						
Cloud	2,035	2		1	1				
Coffey	1,882	0							
Comanche	458	1	1						
Cowley	8,616	0							
Crawford	8,660	5	4	1					
Decatur	564	0							
Dickinson	4,593	6	2		2		1	1	
Doniphan	1,577	0							
Douglas	22,483	11	9		1		1		
Edwards	690	0							
Elk	506	3		1		2			
Ellis	6,232	5	3	1	1				
Ellsworth	1,127	0							

County	Population Age 0-17	Total Deaths	Natural Deaths Except SIDS	Unintentional Injury Motor Vehicle	Unintentional Injury	Natural SIDS	Homicide	Suicide	Undetermined
Finney	11,335	2	2						
Ford	10,350	3	2		1				
Franklin	6,289	5	4		1				
Geary	10,868	7	3	2	1	1			
Gove	629	1	1						
Graham	538	0							
Grant	2,427	0							
Gray	1,766	0							
Greeley	328	0							
Greenwood	1,274	1					1		
Hamilton	759	1	1						
Harper	1,398	0							
Harvey	8,647	4	3				1		
Haskell	1,144	1	1						
Hodgeman	423	1	1						
Jackson	3,328	4	2			2			
Jefferson	4,367	2			1			1	
Jewell	551	2	1	1					
Johnson	145,106	43	27	3	4	2		6	1
Kearny	1,120	0							
Kingman	1,638	0							
Kiowa	542	0							
Labette	4,785	4	3			1			
Lane	370	0							
Leavenworth	19,128	12	8	2	1		1		
Lincoln	740	0							
Linn	2,244	1	1						
Logan	647	0							
Lyon	7,491	3	2		1				

Appendix: Death by County of Residence, continued

County	Population Age 0-17	Total Deaths	Natural Deaths Except SIDS	Unintentional Injury Motor Vehicle	Unintentional Injury	Natural SIDS	Homicide	Suicide	Undetermined
Marion	2,613	1				1			
Marshall	2,308	1	1						
McPherson	6,614	4	2	2					
Meade	1,094	2	1				1		
Miami	8,342	3	2		1				
Mitchell	1,421	1	1						
Montgomery	7,768	6	4		2				
Morris	1,135	1	1						
Morton	723	0							
Nemaha	2,674	1	1						
Neosho	4,013	2		1	1				
Ness	641	1	1						
Norton	1,043	1	1						
Osage	3,717	2	1			1			
Osborne	756	0							
Ottawa	1,379	2	2						
Pawnee	1,196	0							
Phillips	1,273	0							
Pottawatomie	6,865	1				1			
Pratt	2,345	0							
Rawlins	535	0							
Reno	14,524	4	3	1					
Republic	949	1	1						
Rice	2,304	1		1					
Riley	12,527	6	3			2	1		
Rooks	1,157	1	1						
Rush	595	1	1						
Russell	1,534	0							
Saline	13,165	9	4	1	1	1	1		1
Scott	1,322	0							

County	Population Age 0-17	Total Deaths	Natural Deaths Except SIDS	Unintentional Injury Motor Vehicle	Unintentional Injury	Natural SIDS	Homicide	Suicide	Undetermined
Sedgwick	133,677	94	64	5	9	5	2	3	6
Seward	7,181	2	1				1		
Shawnee	42,829	33	15	6	3	4	1	3	1
Sheridan	580	0							
Sherman	1,414	1							1
Smith	701	1	1						
Stafford	1,016	0							
Stanton	567	1			1				
Stevens	1,656	1	1						
Sumner	5,668	2	1	1					
Thomas	1,827	2	1						1
Trego	537	1						1	
Wabaunsee	1,667	1						1	
Wallace	370	0							
Washington	1,253	1	1						
Wichita	575	0							
Wilson	2,046	0							
Woodson	676	0							
Wyandotte	45,987	29	18	3	3	2	3		
Out of State		24	13	7	2		1	1	
Total	**714,951**	**394**	**241**	**41**	**39**	**25**	**16**	**20**	**12**

Methodology

Kansas Child Death Review Board 2016 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 has a close working relationship with other state vital statistics departments per inter-jurisdictional agreement and receives death certificates from those departments when a Kansas child dies in another state. This provides relevant information about out of state deaths to the SCDRB for review.

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 that 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 relevant documents. Information obtained by the SCDRB is confidential.

After all records have been collected, cases are assigned for review and assessment. 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. 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 or Unintentional Injury due to asphyxia depending on the review findings.

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 36.

To determine the infant death rate per 1,000 live births in a specific year or 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 2016=

$$\left(\frac{\text{234 (number of infant deaths that occurred in 2016, reviewed by the CDRB)}}{\text{38,048 (number of Kansas resident live births in 2016)}} \right) \text{X} \quad 1{,}000$$

= 6.15

To determine the death rate per 100,000 population for an age group for a specific year or the number of deaths is divided by the corresponding population, and then multiplied by 100,000. The Kansas Department of Health and Environment (KDHE) Bureau of Epidemiology and Public Health Informatics (BEPHI) is the source for numbers of resident population data used as denominators in this report.

Example: Motor Vehicle Death Rate, age 15-17, Kansas 2016=

$$\left(\frac{\text{15 (number of MVC deaths age 15-17 that occurred in 2016, reviewed by the CDRB)}}{\text{119,898 (population of Kansas residents age 15-17 in 2016)}} \right) \text{X} \quad 100{,}000$$

= 12.51

Any questions about this report or about the work of the SCDRB should be directed to Sara Hortenstine, Executive Director, at (785) 296-7970 or by e-mail at sara.hortenstine@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.

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; and

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 that 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 death.

References

1. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. (2016) Available from URL: www.cdc.gov/injury/wisqars

2. Centers for Disease Control and Prevention, Youth Risk Behavior Survey Questionnaire [online]. (2017). Available from URL: www.cdc.gov/yrbs

3. Colvin, J.D., V. Collie-Akers, C. Schunn, and R. Y. Moon. "Sleep Environment Risks for younger and Older Infants." Pediatrics 134:2 (2014)

4. Fujiwara, T., Barber, C., Schaechter, J., and Hemenway, D., "Characteristics of Infant Homicides: Findings From a U.S. Multisite Reporting System." Pediatrics 124:2 (2009)

5. Kansas Communities That Care (KCTC) Student Survey: [online]. (2018). Available from URL: www.kctcdata.org

6. Kansas Department of Transportation, State of Kansas Highway Safety Plan FFY 2017, [online].(2018)

7. Oakley D, Crawford G, Savage C. 2016 Kansas Annual Summary of Vital Statistics. Topeka, KS: Kansas Department of Health and Environment, (2016).

8. R.Y. Moon. "SIDS and Other Sleep-Related Infant Deaths: Evidence Base for 2016 Updated Recommendations for a Safe Infant Sleeping Environment" Pediatrics (2016)

9. J. Topping. 2016 Annual Report of A TV-Related Deaths and Injuries, US product Consumer Safety Commission.[Online]. (2017)

State Child Death Review Board
120 SW 10th Ave, 2nd Floor
Topeka, KS 66612-1597
(785) 368-7376
(785) 296-7796 (Fax)
www.ag.ks.gov