Iowa's CHILD DEATH Review Team

Report to the Governor and General Assembly

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Annual Report for Years 2008 and 2009

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Foreword

In 1995, Iowa Code 135.43 and Iowa Administrative Rule 641-90 established the Iowa Child Death Review Team. This team is a dynamic group of individuals who donate their time and expertise to review and evaluate the deaths of Iowa's children. The group has been given responsibility to identify those things that take our most valuable resource, our children, from us. We often wonder in this time of improved safety devices, vehicles, and smoke detectors why our children still die? Children are the future of our state and it is our challenge to identify threats to their safety in order to ensure they can grow up without danger. In order to meet this goal, the team reviews circumstances and the investigation surrounding the death of individual Iowa children.

The data and recommendations included in this report give us direction for achieving needed change within our state. Many childhood deaths are considered preventable. Preventable child death is defined as "one in which an individual or a community could have reasonably done something that would have changed the circumstances that lead to the death."

The members of the Child Death Review Team have prepared a report that is concise and outlines achievable goals for our communities, families, healthcare institutions, and government. We have identified several common themes contributing to the death of children in Iowa. These include, but are not limited to, lack of parent and caregiver education and support, drug and alcohol use by caregivers and teens, and unsafe sleep and home environments. These commonalities and others will be further detailed in this report.

Our data and recommendations have not substantially changed since the team was founded. In our frustration, we wonder if our information is not reaching those who are empowered to make change. Each member of the team is charged with disseminating our data to our own disciplines, but we must also expect lawmakers to herald our cause and assist us as we attempt to mitigate risk for Iowa children. The review and discussion of these deaths are heart wrenching, but the passion of the members of the team has never wavered. It is our continued obligation to reach our communities and peers to make Iowa a safer place to raise our children.

Respectfully Submitted,

Laurie Gehrke, R.N., BSN, CPEN, CEN, CMTE
Chairperson, Iowa Child Death Review Team

Executive Summary
2008-2009 Iowa CDRT Report

The goal of the Iowa Child Death Review Team is to identify those risks or factors in childhood (ages 17 and under) that result in fatal outcomes through a retrospective review of child death cases. A multidisciplinary team approach to reviewing child death cases is conducted. Recommendations made by the Team are based on data, which then are used to identify trends that require systemic solutions.

In reviewing the number of child deaths in years 2008 and 2009, one can quickly discern that child death rates declined from 2008 to 2009, decreasing from 386 to 311 deaths. The incidence of child death was higher in those counties with greater populations within our state.

Overall, deaths resulting from accidents and homicides are considered preventable through adequate education, parental intervention and supervision, and through following established laws. Suicides could be prevented through timely interventions when depression and bullying are identified. SIDS and other undetermined infant deaths may be significantly reduced through education of parents and caregivers on the American Academy of Pediatrics' risk reduction recommendations in creating infant safe sleep environments. Natural deaths, including premature birth, birth defects and cancer are much more difficult to prevent. Reducing the pregnant mother's exposure to second-hand smoke and eliminating prenatal smoking, alcohol and illicit drug use are likely to significantly reduce the number of natural deaths.

NATURAL DEATHS: The majority of Iowa children die by natural means, which include prematurity, congenital anomalies, infections, cancers and other illnesses. The 234 natural deaths in 2008 comprise 60 percent of all child deaths. The 202 natural deaths in 2009 comprise 65 percent of all child deaths.

ACCIDENTS: It is believed that most accidents are considered preventable. To reduce the number of accidental deaths, better parental and caretaker supervision should be initiated in regards to assuring and implementing safety measures. Decisions to enclose and limit access to swimming pools, installing working smoke detectors in residences, wearing helmets when riding bicycles, ATVs and motorcycles, reducing the possibility of distracted driving by teens and instilling a sense of respect and responsibility when operating a motor vehicle would reduce the number of accidental deaths. Continuing to educate and encourage the public on seat belt use, proper installation of car seats for infants and toddlers and limiting the number of passengers (especially other teenagers) riding with a teen driver will also help reduce the number of accidental deaths. Underage alcohol consumption and illicit drug use were also identified as contributing factors in some of the motor vehicle collisions. In 2008, 87 children died from accidents, comprising 23 percent of all child deaths. In 2009, 62 children died from accidents, comprising 20 percent of all child deaths. For both 2008 and 2009, the majority of accidental child deaths were the result of motor vehicle accidents.

SUICIDES: In 2008, there were 10 child suicides, comprising 2.5 percent of all child deaths. Most of the decedents fell between the ages of 15 and 17. The most common method used by these children to inflict self-harm was a firearm. Controlling and restricting access to firearms

should be considered. In 2009, there were 8 child suicides, comprising 2.6 percent of all child deaths. Most of these decedents were again between the ages of 15 and 17. In 2009, hanging was the most common method used by children to cause self-harm. There were 21 reported child suicides in 2006 and 13 reported child suicides in 2007. As one can see, the incidence of child suicide in Iowa is decreasing, a trend that is moving in the right direction.

HOMICIDES: There were 19 child homicides in 2008, a year noted as having the second highest number of homicides since 1997. Multiple mass murders occurred this year involving families in which a parent, paramour or sibling were identified as the perpetrator in these most horrible of acts. These extraordinary crimes explain the sudden anomaly in homicide deaths between years 2007 and 2009. Increased awareness and utilization of family support and counseling services may be options when internal family strife is present. In 2009, there were six homicides involving children. The year 2009 is notable for having the lowest number of homicides since 1999. In 2007, there were nine homicide deaths involving children. Strategies to prevent homicides in children include educating parents and caregivers on how best to react to stressful and chaotic situations when caring for crying or difficult infants and children, enrolling in parenting classes, taking anger management classes and choosing very carefully others whom they allow to watch and care for their children.

UNDETERMINED: In 2008, there were 36 deaths classified as undetermined. In 2009, there were 33 deaths classified as undetermined. In both 2008 and 2009, the majority of child deaths certified as undetermined contained an environmental component creating an unsafe sleep environment, as did some of the accidental deaths in this report. Children whose combined deaths were the result of Sudden Infant Death Syndrome, Sudden Unexplained Infant Deaths and an unsafe sleep environment together make up a majority of these cases. It is difficult to determine a degree of risk attached to a particular unsafe sleep environment component, but enough evidence suggests that any one component or risk factor or combination of other risk factors do create an environment that increases the risk of injury or death to a child during sleep.

APPENDIX SUMMARY

At the end of this report is an Appendix that contains data on those deaths that were deemed sleep-related. A subcommittee was formed to explore and analyze data obtained from those deaths in years 2008 and 2009 that were sleep-related. The sub-committee found that of the 91 total infant deaths (death of a child 1 year of age or less), the two most common sleep surfaces involved were adult beds and couches. Soft bedding was a significant factor in 65 of the total deaths. In 34 deaths, the infant was placed to sleep in the prone position and in 48 of the total cases, the infant was found deceased in the prone position. In 40 of the 91 infant deaths, co-sleeping with one or more adults or older children was a contributing factor in the deaths. Fifty-three infants were exposed to tobacco products and 45 infants were exposed to alcohol or illicit drugs either in utero, environmentally or their caretakers at the time of death were under the influence or these substances (8 deaths were reported as unknown use of tobacco, drugs or alcohol). Of the 91 infant sleep-related deaths examined by the sub-committee, 42 deaths were certified as Sudden Unexplained Infant Death (SUID) and 22 were certified as Sudden Infant Death Syndrome (SIDS). The acronym and certification of SUID is commonly used when a "non-natural" factor may have contributed to the death, such as exposure to drugs or alcohol, an

unsafe sleep environment, etc. The acronym and certification of SIDS implies that the death scene investigation, autopsy and other laboratory tests and interviews of witnesses did not reveal any concerns or suspicions and no readily identifiable cause of death were found.

In its research, the sub-committee found that a majority of infant sleep-related deaths included identifiable risk factors in the baby's sleep environment that research shows increases an infant's risk of SIDS and can directly contribute to accidental sleep related deaths in infants. All infants should sleep in a safety approved crib, with a firm mattress, no additional soft bedding, including bumper pads, blankets, pillows, or any other extraneous items. Sharing a bed or other adult sleep surfaces such as couches with adults or siblings should be eliminated. Caretakers of all children should never be under the influence of alcohol or drugs and their attention should be focused on creating a safe environment for the infant.

John C. Kraemer, PA, F-ABMDI
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State Child Death Review Team Coordinator
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Iowa Department of Public Health

History of the Iowa Child Death Review Team

The State Child Death Review Team was first established in 1995 via Iowa Code 135.43 and is governed through Iowa Administrative Rule 641-90. The Team is composed of 14 members and seven state government liaisons. Each of the 14 members represents a different professional organization or medical specialty. Team members represent such disciplines as Perinatology, Neonatology, Pediatrics, Law Enforcement, Social Work, Substance Abuse, Mental Health, Domestic Violence, Family Practice, Forensic Pathology, Law, SIDS, Nursing, EMS, Trauma Services and Insurance. Each of the aforementioned disciplines recommends an individual who has demonstrated a commitment to improving the health and safety of children in Iowa to serve on the Team and represent their professional organizations. Team liaisons representing the Departments of Human Services, Public Health, Transportation, Attorney General, Education, and Public Safety are also involved with case review and the development of recommendations.

The 1995 legislation mandated review of child deaths through age 6 years. In 2000, the law was amended to mandate that child deaths ages 17 and under be reviewed. In 2005, legislation was passed to allow the State Child Death Review Team to recommend to the Department of Human Services, appropriate law enforcement agencies and other persons involved with child protection, interventions that may prevent harm to a child who is living in the same household as a child whose case is reviewed by the Team.

Prior to 2009, the Iowa Child Death Review Team was coordinated by two individuals within the Bureau of Family Health within the Iowa Department of Public Health (IDPH). The Team had an annual budget of $28,000. Funding for this program came from the Department of Public Health's MCH Block Grant ($8,000) and the state's general fund ($20,000). Funding was year-to-year. This funding was allocated to support the two IDPH employees assigned to help coordinate the team, pay for supplies and to allow Team members to be reimbursed for their travel to Des Moines, Iowa and other associated expenses in order to participate in regularly scheduled meetings. In 2009, staffing and funding for this program was eliminated due to significant federal and state budget cuts. In the spring of 2009, the Iowa Office of the State Medical Examiner (IOSME) was assigned the coordination of the team with no funding or staff due to budget cut-backs. One full-time and two part-time IOSME staff members were given the additional responsibility of assisting the Chief State Medical Examiner with case review and team management. The team members and liaisons continue to attend a minimum of four scheduled meetings annually and do such on a strictly voluntary basis with knowledge that reimbursement for their expenses is not possible. This exemplifies the true passion, commitment and dedication Team members have in preventing childhood injuries and deaths.

Due to the work involved in transitioning and integrating the Team into the IOSME and the necessary updating of the Iowa Code and Administrative Rules to reflect the change in Team coordination and focus, the Team was inactive for several months. In April, 2010 the Team held its first meeting under the auspices of the IOSME. Every child death is reviewed by the CDRT Coordinator and then is subsequently entered into the National Child Death Reporting System Database. The CDRT Coordinator then selects those cases where there was a noted deficiency in reporting, investigating and lack of appropriate resource allocation involving a child death to the Team for more in-depth analysis. The Team had to initially finish the review and discussion of cases from 2008 and 2009 all the while begin reviewing cases for 2010, hence the delay in

completion of this annual report. In the interest of time, the Team agreed to compile this one report and include in it years 2008 and 2009.

Using the current model of operation in today's challenging economic environment, the Child Death Review Team re-focused its mission and objectives. The purpose of the Team is to aid in the reduction of preventable deaths of children under the age of 18 years through the identification of unsafe consumer products; identification of unsafe environments; identification of factors that play a role in accidents, homicides and suicides which may be eliminated or counteracted; and promotion of communication, discussion, cooperation, and exchange of ideas and information among agencies investigating child deaths.

You will find that this and future annual reports will be direct, concise and highlight only those areas in child death where improvements can be made and future lives can be saved.

Iowa Child Death Review Team
Annual Report Recommendations

1. Based on recent review of infant deaths, the Iowa Child Death Review Team (ICDRT) recommends that appropriate safe sleep educational resources based on the American Academy of Pediatrics Safe Sleep Recommendations, be distributed and discussed by healthcare professionals with all new parents before discharge from an Iowa hospital in an effort to proactively campaign to reduce SIDS deaths and other infant accidental sleep-related deaths. In regard to childcare providers providing care for infants less than one year of age, the ICDRT recommends that mandatory safe sleep training is completed by childcare providers within the first three months of employment. Please refer to Appendix for sleep-related death data.

2. The (ICDRT) recommends immediate collection of evidence for evaluation of drug and/or alcohol screening of caretakers present when a child dies in a suspected accident, homicide, or in an undetermined manner. In addition, all drivers involved in a fatal motor vehicle crash (MVC) will be tested for drugs and/or alcohol at the time of the crash.

3. The ICDRT recommends development of criteria for when an autopsy must be performed upon the death of any child, unless deferred by the Iowa Office of the State Medical Examiner. These autopsies will be strongly encouraged or mandatory, and will include toxicologic evaluation. This recommendation will apply to every child who dies, with the exception of children who are known to have died of a disease process while under the care of a physician or under extenuating circumstances as determined in consultation with the Iowa State Medical Examiner.

4. The ICDRT recommends establishing a statewide system of community child death review teams comprised of representation similar to the state team. These community teams will review all deaths of children 17 years or younger that occur in their area. These teams will be permitted the same statutory authority as the ICDRT to gather and review information related to child deaths, as long as they operate under strict confidential guidelines. As with the ICDRT, all members will be volunteers. Community CDRTs will submit information regarding their reviews to the ICDRT.

5. The ICDRT recognizes the importance of prevention of child death and as such, supports efforts to educate those professionals involved in the lives of children. This will include formal and informal education.

2008 Deaths by County

Code	County	Count
1	Adair	5
4	Appanoose	1
6	Benton	1
7	Black Hawk	20
8	Boone	1
9	Bremer	1
10	Buchanan	4
11	Buena Vista	3
14	Carroll	2
15	Cass	1
16	Cedar	3
17	Cerro Gordo	5
18	Cherokee	1
19	Chickasaw	2
21	Clay	1
22	Clayton	2
23	Clinton	9
24	Crawford	2
25	Dallas	5
26	Davis	1
28	Delaware	1
29	Des Moines	4
30	Dickinson	1
31	Dubuque	12
32	Emmet	1
33	Fayette	3
34	Floyd	3
35	Franklin	1
36	Fremont	3
37	Greene	1
38	Grundy	3
39	Guthrie	2
40	Hamilton	3
41	Hancock	1
42	Hardin	2
43	Harrison	1
44	Henry	3
45	Howard	4
46	Humboldt	3
47	Ida	2
48	Iowa	2
49	Jackson	1
50	Jasper	3
52	Johnson	14
53	Jones	3

Code	County	Count
54	Keokuk	2
56	Lee	5
57	Linn	30
58	Louisa	3
59	Lucas	2
61	Madison	1
62	Mahaska	3
63	Marion	6
64	Marshall	5
65	Mills	5
66	Mitchell	2
68	Monroe	2
70	Muscatine	2
71	Obrien	1
73	Page	1
75	Plymouth	2
77	Polk	58
78	Pottawattamie	8
79	Poweshiek	1
82	Scott	20
84	Sioux	4
85	Story	11
87	Taylor	1
88	Union	1
90	Wapello	5
91	Warren	5
92	Washington	2
93	Wayne	1
94	Webster	5
95	Winnebago	1
97	Woodbury	18
98	Worth	1
99	Wright	1
	TOTAL	**362**

State	Count
GA	1
IL	7
IN	1
MN	1
MO	4
NE	8
WY	2
TOTAL	**24**

*Counties not listed reflect 0 child deaths

2009 Deaths by County

Code	County	Count
1	Adair	1
2	Adams	1
3	Allamakee	2
5	Audubon	1
6	Benton	1
7	Black Hawk	11
8	Boone	1
9	Bremer	2
11	Buena Vista	2
12	Butler	1
13	Calhoun	1
14	Carroll	3
16	Cedar	3
17	Cerro Gordo	6
19	Chickasaw	1
20	Clarke	1
21	Clay	1
22	Clayton	2
23	Clinton	9
24	Crawford	1
25	Dallas	1
26	Davis	1
28	Delaware	7
29	Des Moines	3
30	Dickinson	1
31	Dubuque	7
33	Fayette	2
34	Floyd	2
35	Franklin	1
36	Fremont	1
38	Grundy	1
39	Guthrie	1
40	Hamilton	1
42	Hardin	1
43	Harrison	1
44	Henry	1
46	Humboldt	1
47	Ida	1
48	Iowa	1
50	Jasper	2
51	Jefferson	2
52	Johnson	34
53	Jones	1

Code	County	Count
56	Lee	4
57	Linn	18
58	Louisa	1
59	Lucas	1
61	Madison	1
63	Marion	2
64	Marshall	3
65	Mills	1
69	Montgomery	2
70	Muscatine	6
71	Obrien	2
73	Page	1
76	Pocahontas	1
77	Polk	68
78	Pottawattamie	8
82	Scott	13
84	Sioux	3
85	Story	7
88	Union	2
90	Wapello	3
91	Warren	3
92	Washington	3
93	Wayne	1
94	Webster	5
96	Winneshiek	1
97	Woodbury	13
98	Worth	1
99	Wright	2
	TOTAL	**301**

*Resident not marked in 4 cases

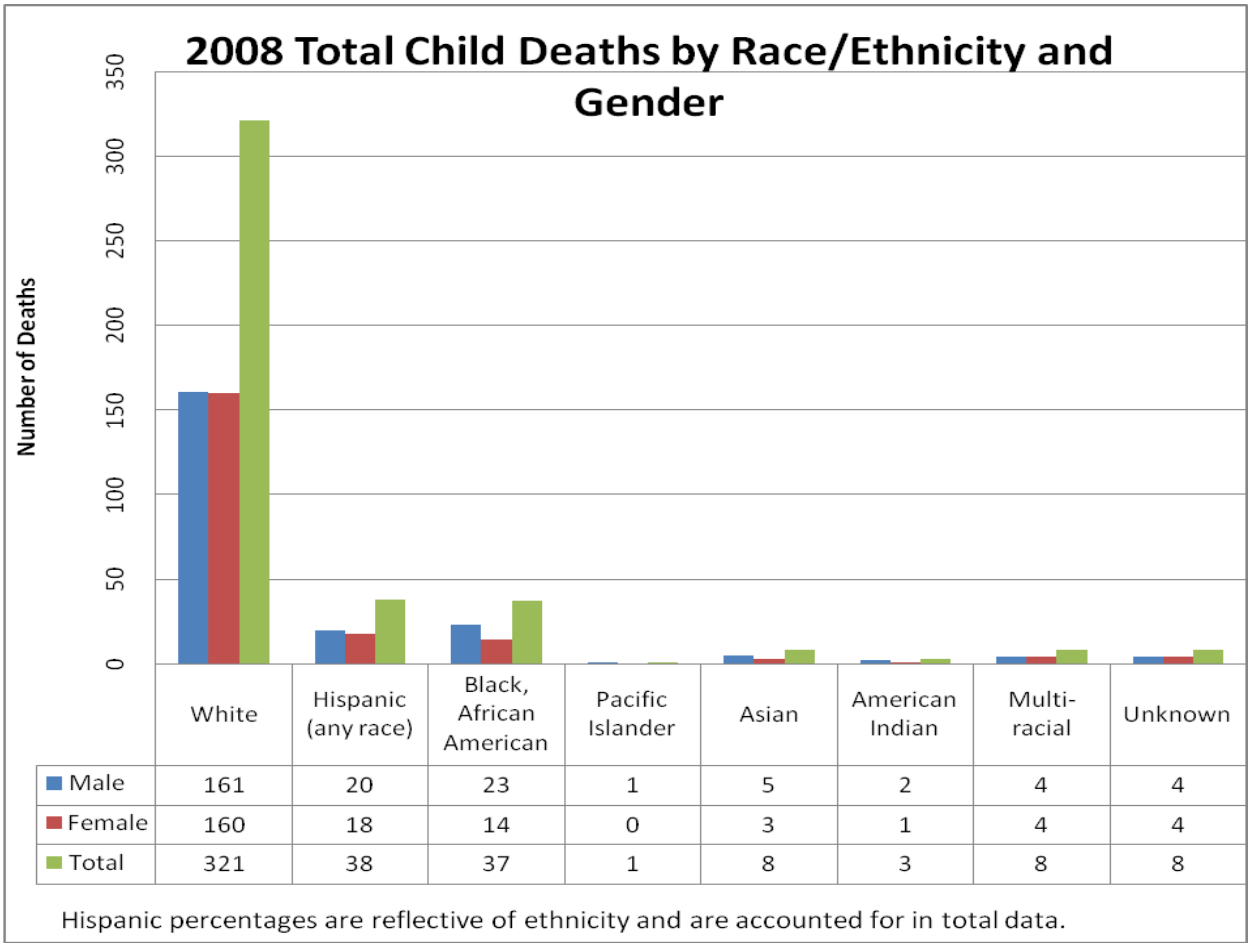
**Counties not listed reflect 0 child deaths In 2009

State	Count
IL	2
NE	3
TX	1
TOTAL	**6**

2008 Total Child Deaths by Race/Ethnicity and Gender

In 2008 there were a total of 386 deaths involving Iowa children ages 17 and under. Of this total number of deaths, 24 Iowa children died out-of-state. As the below graph shows, a majority of deaths occurred within the Caucasian population. This is to be expected as a majority of Iowa's population is Caucasian.

More than one decedent was known to have declared multiple races/ethnicity, therefor the data numbers are not reflective of the total number of deaths

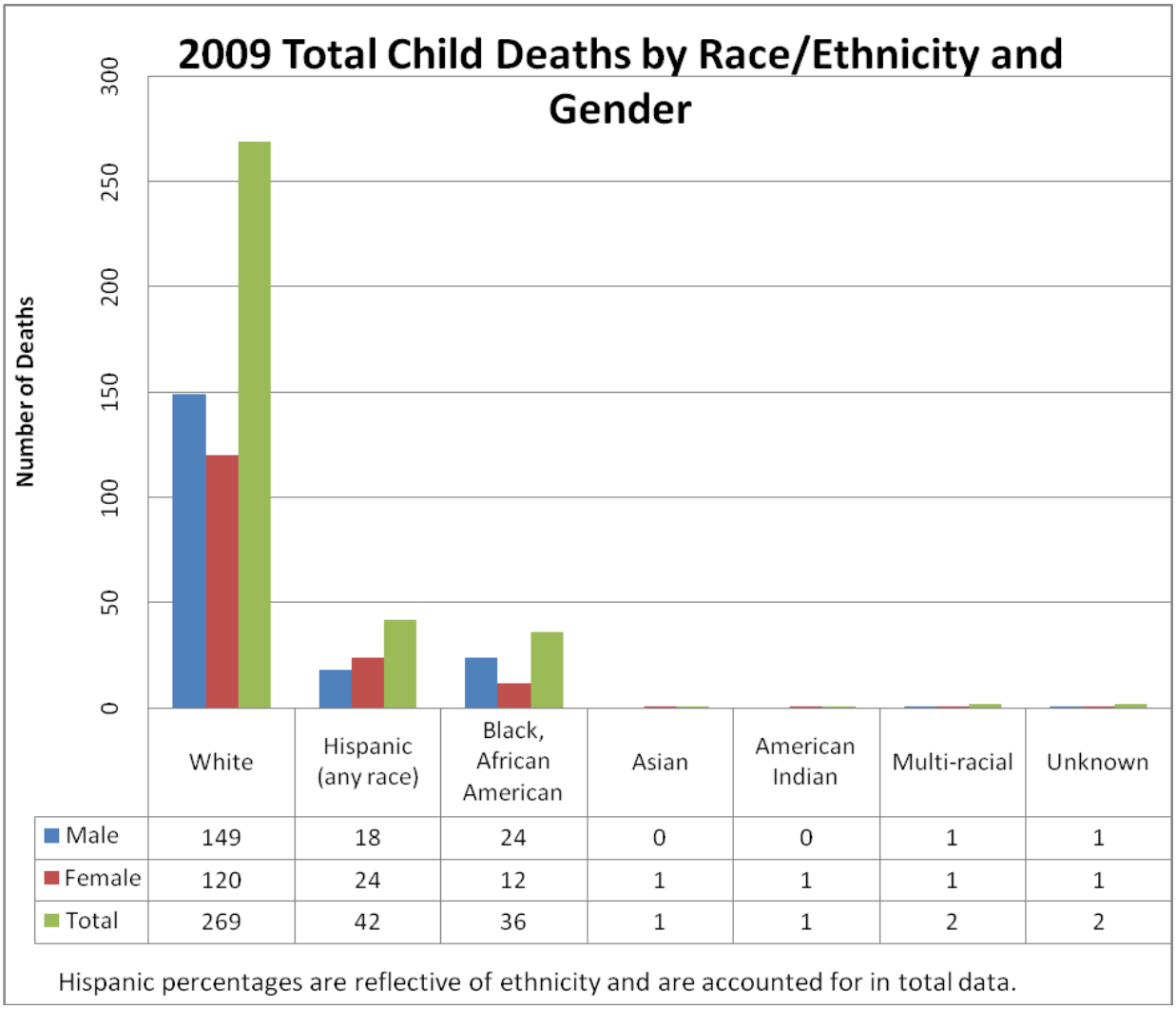


Race/ Ethnicity	Male	Female	Total	% of Total
White	161	160	321	83.2%
Hispanic (any race)	20	18	38	9.8%
Black, African American	23	14	37	9.6%
Pacific Islander	1	0	1	0.3%
Asian	5	3	8	2.1%
American Indian	2	1	3	0.8%
Multi-racial	4	4	8	2.1%
Unknown	4	4	8	2.1%
Total	**220**	**204**	**424**	**100.0%**

2009 Total Child Deaths by Race/Ethnicity and Gender

In 2009 there were a total of 311 deaths involving Iowa children ages 17 and under. Of this total number of deaths, six Iowa children died out-of-state. In four cases, there were discrepancies in the location of death. As the below graph shows, a majority of deaths occurred within the Caucasian population. This is to be expected as a majority of Iowa's population is Caucasian.

** More than one decedent was known to have declared multiple races/ethnicity, therefor the data numbers are not reflective of the total number of deaths**



Race/ Ethnicity	Male	Female	Total	% of Total
White	149	120	269	86.5%
Hispanic (any race)	18	24	42	13.5%
Black, African American	24	12	36	11.6%
Asian	0	1	1	0.3%
American Indian	0	1	1	0.3%
Multi-racial	1	1	2	0.6%
Unknown	1	1	2	0.6%
Total	**193**	**160**	**353**	**100.0%**

2008 and 2009 Manners of Death

In Iowa, the attending physician or medical examiner certifies the cause and manner of death. The cause of death is defined as an event or action which ultimately caused the decedent's death. The manner of death is defined as the overall circumstances surrounding the decedent's death. Iowa's death certificate allows the certifier to choose from five different manners of death (natural, accident, suicide, homicide or undetermined).

The five manners of death are defined as follows:

Natural - death resulted from a natural process such as disease, prematurity or a congenital defect. Most deaths of this manner are considered by the CDRT to be non-preventable.

Accident - death resulted from an unintentional act or an uncontrolled external environmental influence.

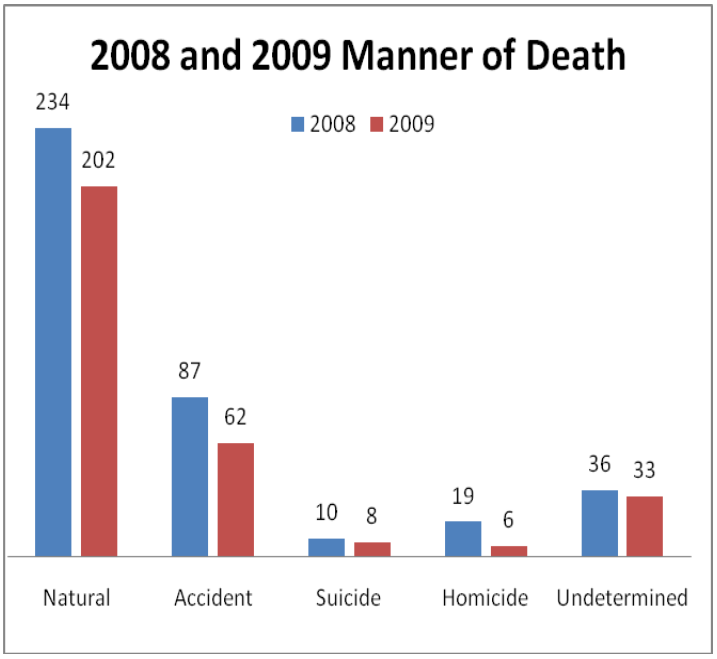
Suicide - death resulted from one's own intentional actions. Evidence to support this manner can be both explicit and implicit.

Homicide - death resulted from the actions of another individual with or without the intent to kill.

Undetermined - investigation of circumstances and autopsy did not clearly identify the manner of death or evidence gathered supported equally two or more other manners of death.

2008 MOD	
Natural	234
Accident	87
Suicide	10
Homicide	19
Undetermined	36
Total	**386**

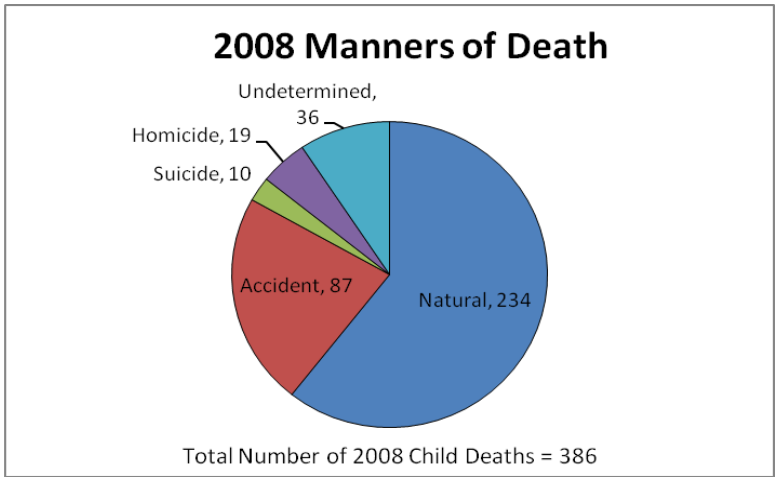
2009 MOD	Deaths
Natural	202
Accident	62
Suicide	8
Homicide	6
Undetermined	33
Total	**311**



2008 Manners of Death

In 2008, the data showed that a majority of child deaths were certified as natural followed by accidental, undetermined, homicide and then suicide.

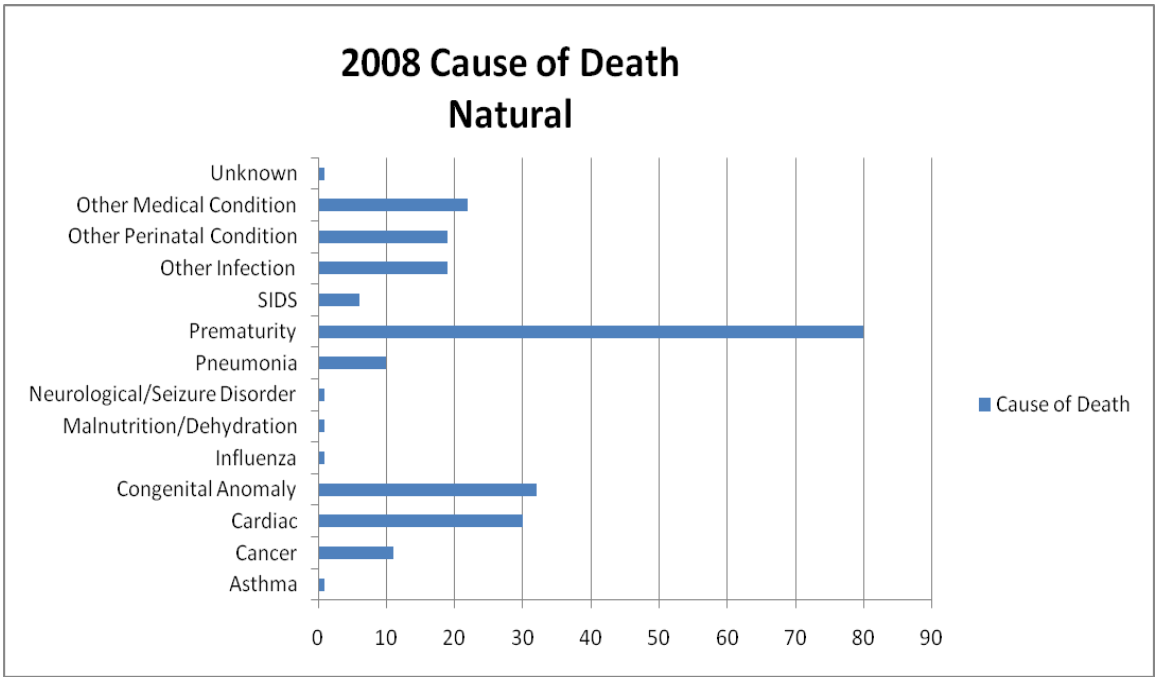
2008 statistics revealed a sharp increase in the number of children who died by homicide. In year 2007 there were nine homicides. In 2008 there were 19 homicides and in year 2009 there were six homicides. The sharp increase in 2008 child homicides can be attributed to the fact that the state experienced several cases in which multiple children in a family were murdered by a parent, sibling or paramour (mass murders).



2008 Natural Deaths

A majority of child deaths in 2008 were the result of prematurity, congenital defects and malformations and cancer. These deaths were the result of natural factors affecting the mother, the developing fetus and child during pregnancy, child birth and development. Such factors can include infection, cancer, developmental anomalies, nuchal cord and other complications affecting pregnancy, delivery and development.

By definition, cases where the cause of death was certified as Sudden Infant Death Syndrome (SIDS), the investigation, autopsy, death scene and interview findings revealed no suspicions that any action or event was non-natural.

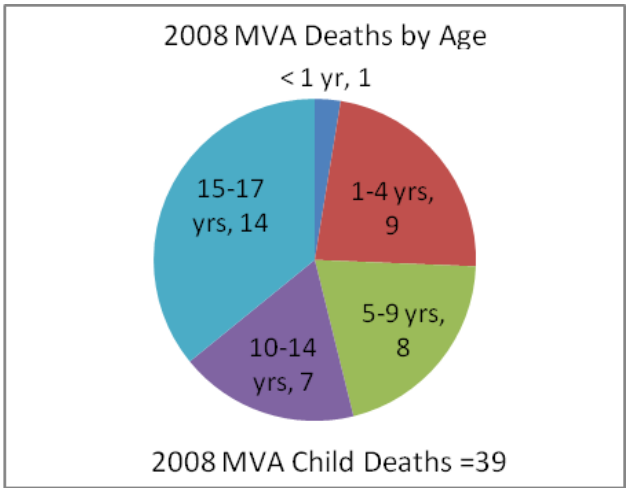


Cause	Deaths
Asthma	1
Cancer	11
Cardiac	30
Congenital Anomaly	32
Influenza	1
Malnutrition/Dehydration	1
Neurological/Seizure Disorder	1
Pneumonia	10
Prematurity	80
SIDS	6
Other Infection	19
Other Perinatal Condition	19
Other Medical Condition	22
Unknown	1
Total	**234**

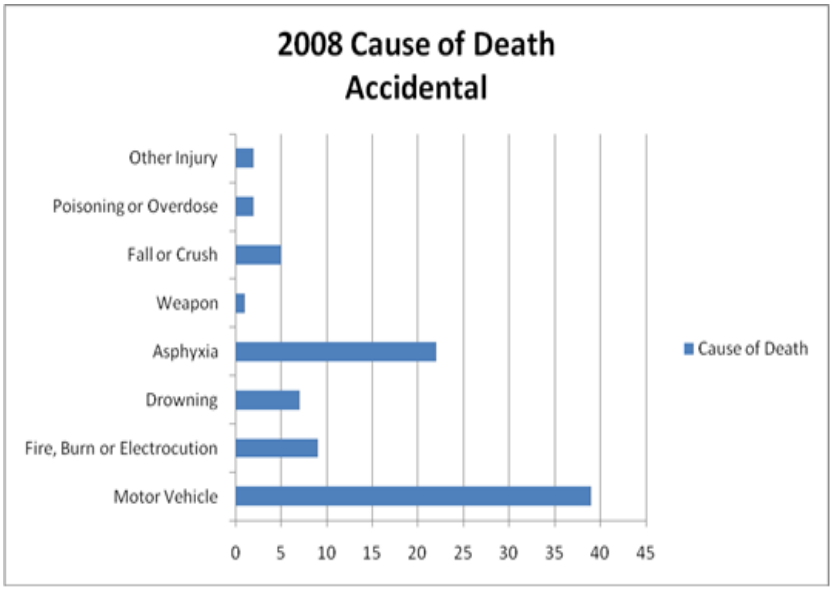
2008 Accidental Deaths

There were 87 reported accidental deaths in 2008. A vast majority of these deaths were the result of motor vehicle collisions and asphyxia.

The deaths resulting from motor vehicle collisions can be attributed to not wearing seat belts, careless driving (inexperience, speeding and distractive driving being contributing factors) and impairment.



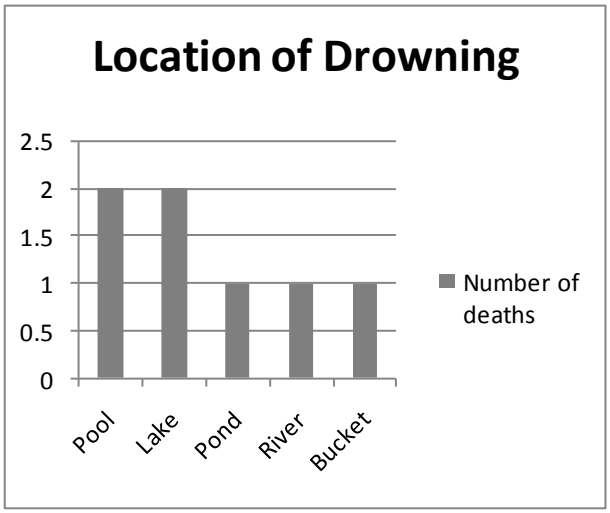
Asphyxial deaths result from inadequate oxygenation due to airway obstruction or the individual's inability to breathe. Asphyxiation may result from positional, mechanical, chemical, and oxygen-deficient atmospheres. These deaths include autoerotic activities, farm accidents (tractor roll-overs, grain/corn engulfment), drowning, infants co-sleeping with adults and entrapment of children between bedding and walls/objects (wedging).

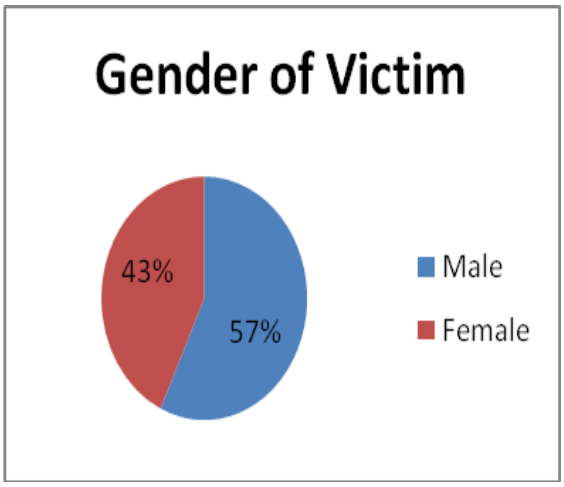


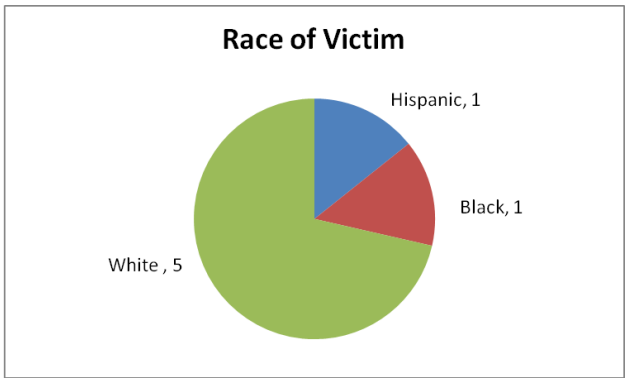
Cause	Deaths
Motor Vehicle	39
Fire, Burn or Electrocution	9
Drowning	7
Asphyxia	22
Weapon	1
Fall or Crush	5
Poisoning or Overdose	2
Other Injury	2
Total	**87**

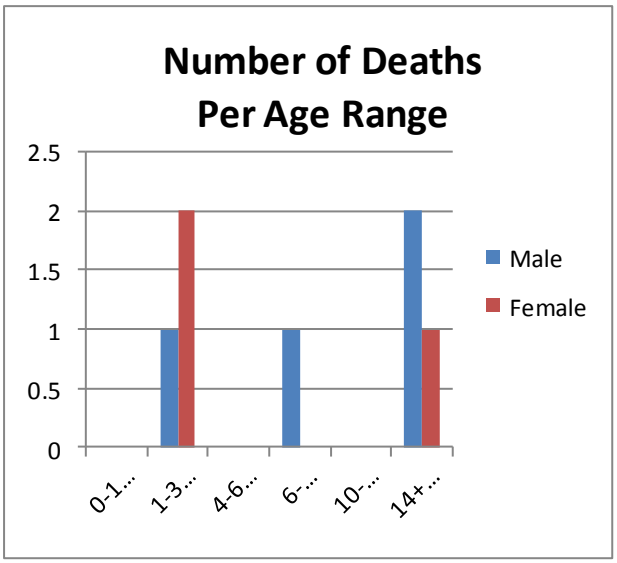
Nine fatalities were the result of fire, burns or electrocutions. One statistic of note was that in these deaths, the family's home lacked either a working smoke detector or did not have one at all.

Of the 87 accidental child deaths reported in 2008, seven were the result of drowning. Many of these drowning incidents can be attributed to inadequate supervision or failure of inexperienced swimmers not knowing truly their swimming abilities or the lack of use of a personal flotation device (PFD).







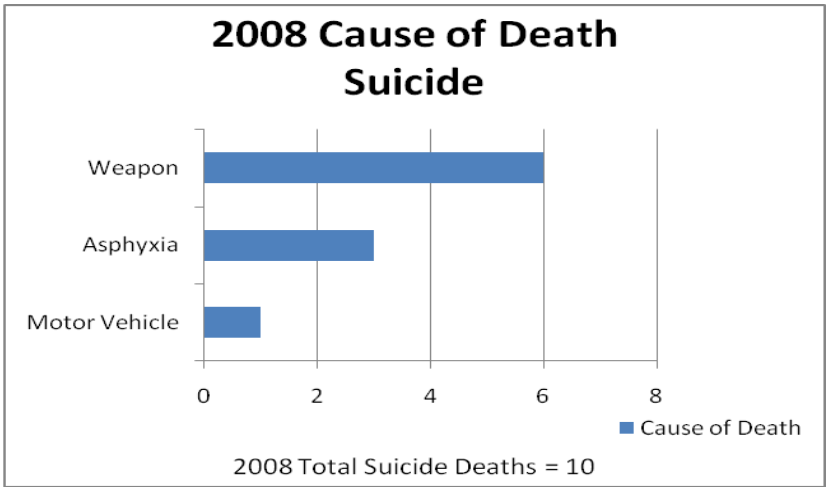


Four of the crush injuries were the result of a tornado and one fall injury was the result of a fall off an escalator. One case was the result of an unintentional poisoning due to carbon monoxide. And lastly, one case was determined as other as the injury was blunt force trauma possibly related to an unwitnessed fall or crush.

2008 Suicide Deaths

In 2008, 10 suicides were observed affecting children ages 17 and under. Of these 10 deaths, nine were between the ages of 15 to17 years and one was between the ages of 10 to14 years. Six children utilized a firearm, three hanged themselves and one used a motor vehicle

The ICDRT strongly recommends full investigation, including autopsy, in the case of a death by suicide.

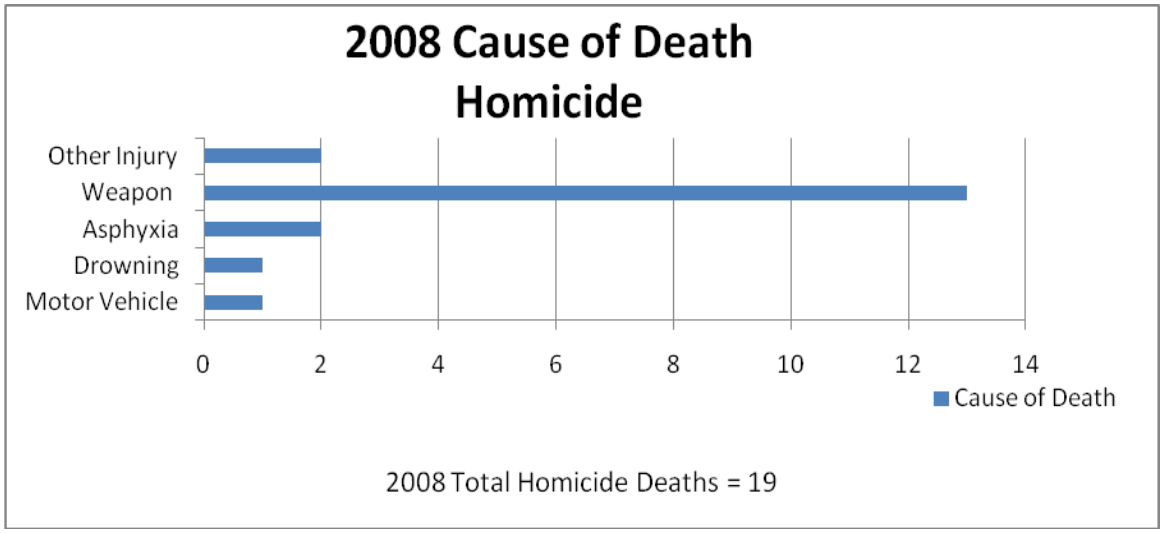


2008 Homicide Deaths

In 2008, Iowa experienced nineteen homicides affecting children ages 17 and under. This proved to be the year with the second highest number of homicides involving children since 1997. Year 2000 experienced 20 homicides (the most since 1997).

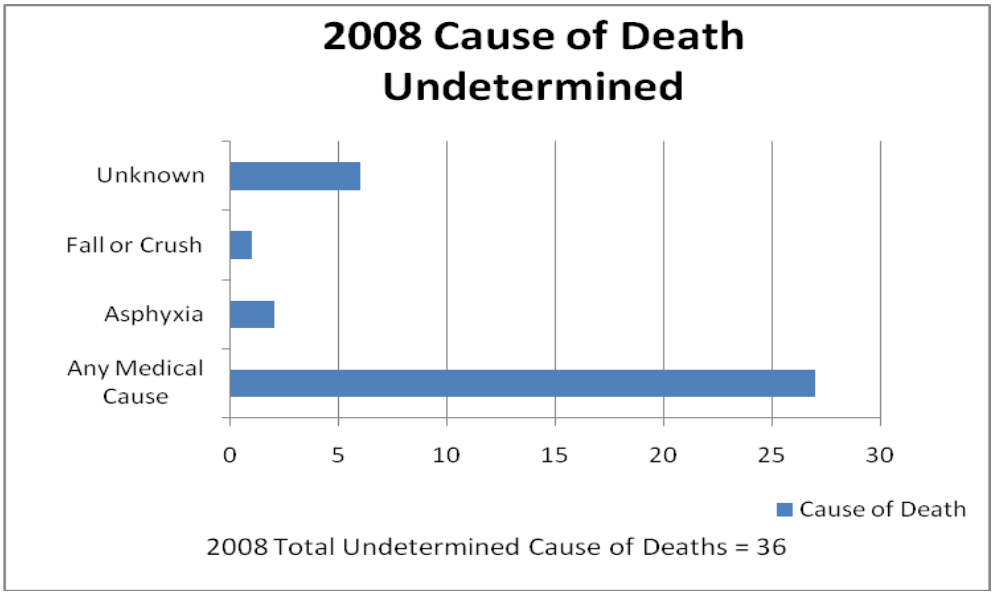
An explanation exists as to why 2008 experienced such a dramatic increase in child homicides compared to the last five years leading up to 2008. In 2008, there were multiple cases across Iowa involving children within a family being murdered. These cases would be considered mass murders where the perpetrator of these crimes was determined to be a parent, sibling or paramour.

Thirteen cases involved a weapon. Of these thirteen, four involved firearms, one a knife, and eight were from bodily assault. Two cases were from asphyxia involving strangulation. One case involved the purposeful drowning of a child. One case involved the use of a motor vehicle. And, finally, the two cases which were classified as "other injury" involved one child dying from dehydration due to neglect and another child from abusive head trauma in which the method of abuse was undetermined.



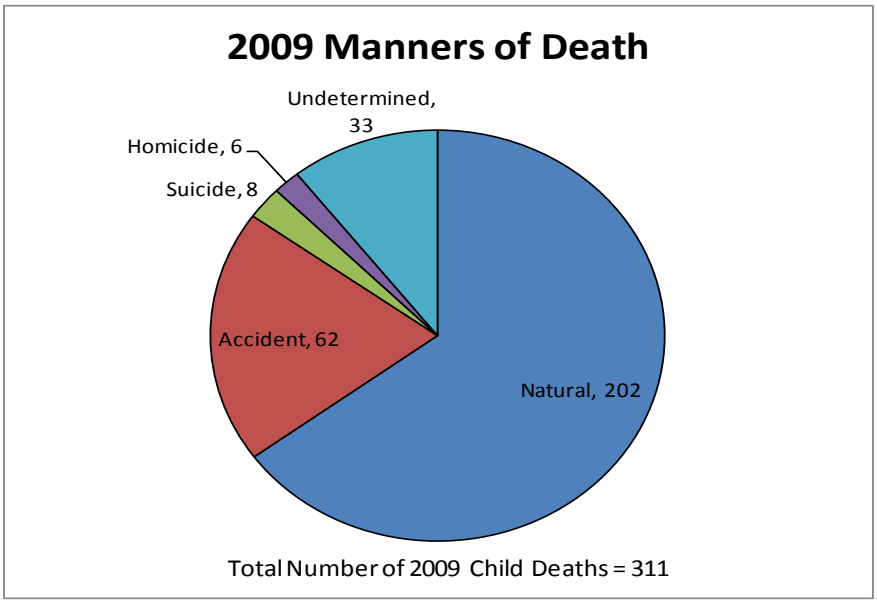
2008 Undetermined Deaths

In 2008, the exact cause of death for 36 children could not be definitively determined. The graph below shows general categories or events that likely caused or contributed to the children's deaths. A vast majority of these deaths were categorized as medical causes, which in the context of the exact cause being undetermined, implicates these deaths as likely being due to Sudden Infant Death Syndrome (SIDS) or Sudden Unexplained Infant Deaths (SUIDs).



2009 Manners of Death

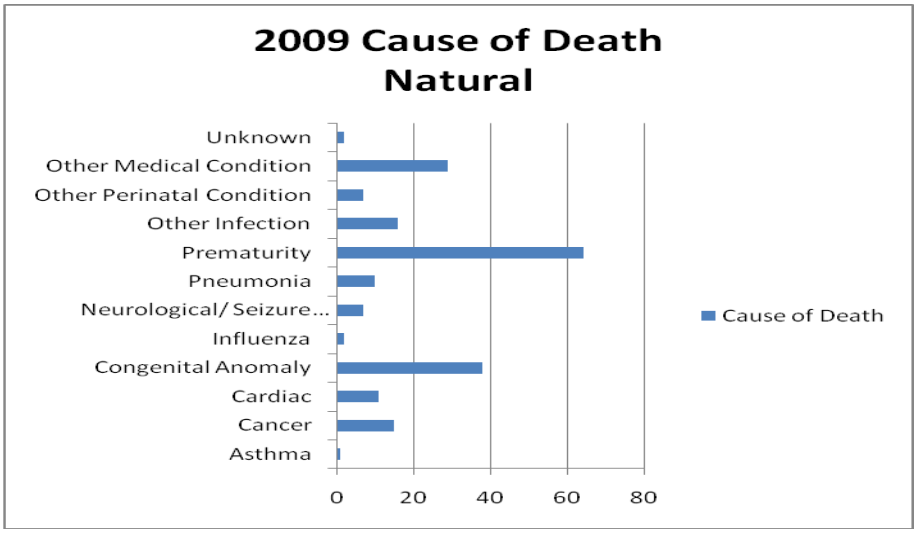
In 2009, data showed that a majority of child deaths were certified as natural, followed by accidents, undetermined, suicide and then homicide. Compared with 2008 data, there were 75 fewer child deaths in 2009. Homicides decreased from a total of 19 cases in 2008 to six cases in 2009. Accidental deaths in children decreased from 87 cases in 2008 to 62 cases in 2009. Suicides involving children decreased from 10 cases in 2008 to eight cases in 2009. Natural deaths decreased from 234 cases in 2008 to 202 cases in 2009. Finally, those cases where the circumstances surrounding a child death was certified as undetermined went from 36 cases in 2008 to 33 cases in 2009. Of note, significant decreases occurred in the categories of homicide, accidental and natural deaths. Reasons for such improvements in the frequencies of these deaths can be attributed to many factors, such as increased educational outreach and awareness of safe sleep environments and education and outreach to young and inexperienced drivers on driver responsibilities and safety. However, the comparison being made is only between years 2008 and 2009 and we will need to further study future year's data to determine with more confidence that preventative strategies including awareness and education are the sources for these decreases.



2009 Natural Deaths

A majority of child deaths in 2009 were the result of prematurity, congenital defects and malformations. These deaths were the result of natural factors affecting both mother and developing fetus during pregnancy and child birth. Such factors can include infection, developmental anomalies, nuchal cord and other complications affecting pregnancy, delivery and development.

By definition, cases where the cause of death was certified as Sudden Infant Death Syndrome (SIDS), the investigation, autopsy, death scene and interview findings revealed no suspicions that any action or event was non-natural.

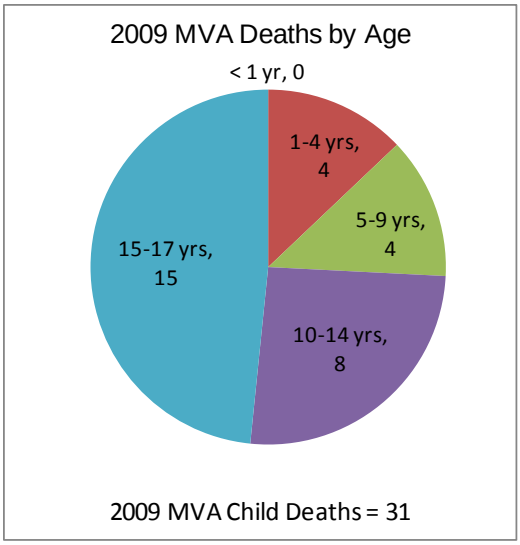


Cause	Deaths
Asthma	1
Cancer	15
Cardiac	11
Congenital Anomaly	38
Influenza	2
Neurological/ Seizure Disorder	7
Pneumonia	10
Prematurity	64
Other Infection	16
Other Perinatal Condition	7
Other Medical Condition	29
Unknown	2
Total	**202**

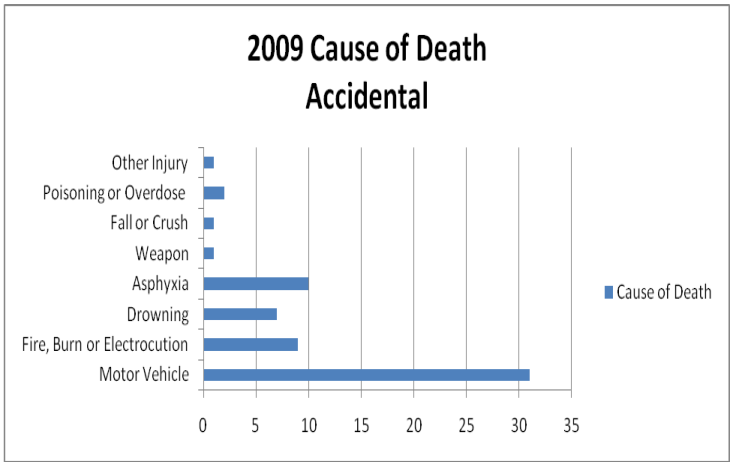
2009 Accidental Deaths

There were 62 accidental deaths in 2009. A vast majority of these deaths were the result of motor vehicle collisions, fires and asphyxial events.

The deaths resulting from motor vehicle collision can be attributed to not wearing seat belts, careless driving (inexperience, speeding and distractive driving being contributing factors) and impairment.



Asphyxial deaths result from inadequate oxygenation due to airway obstruction or the individual's inability to breathe. Asphyxiation may result from positional, mechanical, chemical and oxygen-deficient atmospheres. These deaths include autoerotic activities, farm accidents (tractor roll-overs, grain/corn engulfment), drowning, infants co-sleeping with adults and entrapment of children between bedding and walls/objects (wedging).

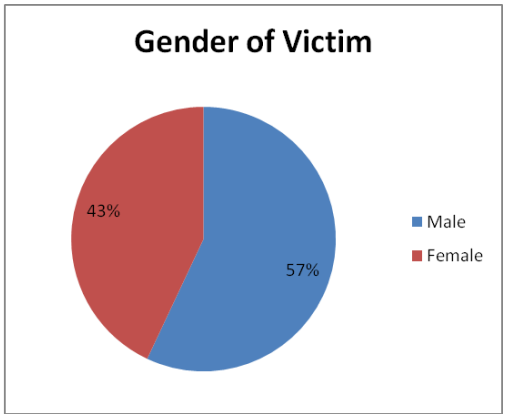


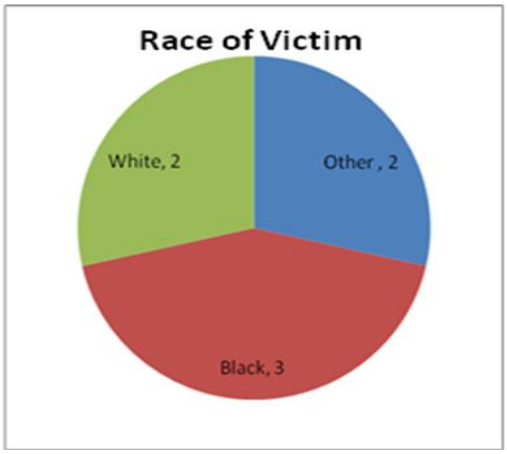
Cause	Deaths
Motor Vehicle	31
Fire, Burn or Electrocution	9
Drowning	7
Asphyxia	10
Weapon	1
Fall or Crush	1
Poisoning or Overdose	2
Other Injury	1
Total	**62**

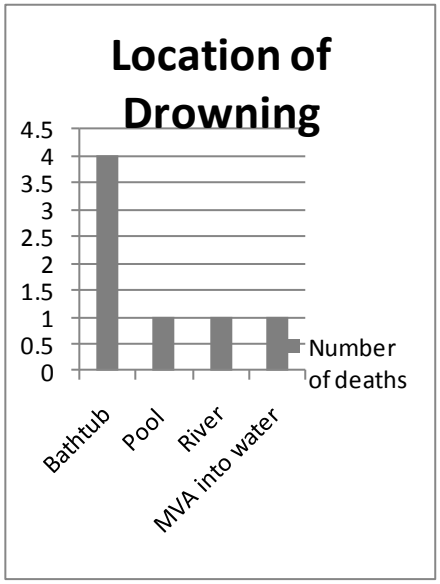
In 2009, there were nine child deaths which were the result of fires. All nine of these children died from fires which began inside their homes.

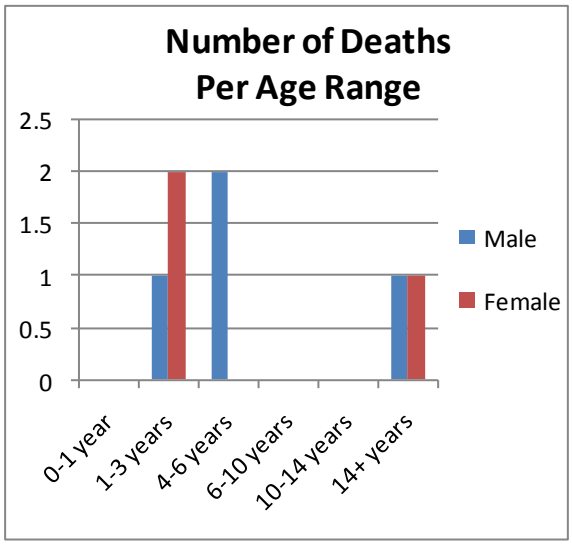
Of the 62 accidental child deaths reported in 2009, seven were the result of drowning. Many of these deaths can be attributed to inadequate supervision or failure of inexperienced swimmers to be fitted with adequate safety equipment such as personal flotation devices (life jackets) or the swimmers not knowing the limits of their swimming abilities.

One case was classified as a fall/crush which involved a toddler who had fallen unintentionally down stairs. One case involved the accidental discharge of a firearm. Two cases were classified as poisoning/overdose. Of these cases, one was attributed to carbon monoxide poisoning from a fire and the other was due to an accidental overdose of a prescription pain medication. Lastly, one child died from infection related to an accidental injury (lawnmower).





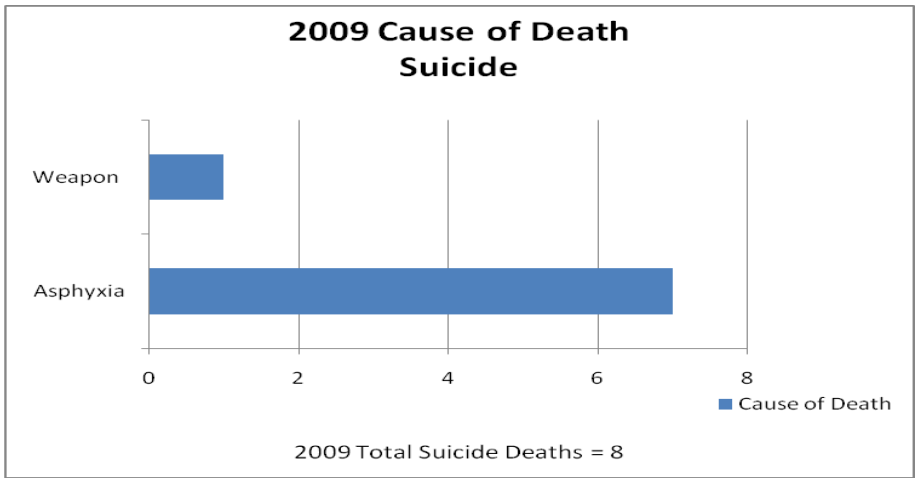




2009 Suicide Deaths

In 2009, eight suicides were observed affecting children ages 17 and under. Of these eight deaths, seven were from asphyxia (hanging) and one utilized a weapon (firearm). Two of the eight suicide deaths were between ages of 10 and 14 years and six of the suicide deaths were between 15 to 17 years of age.

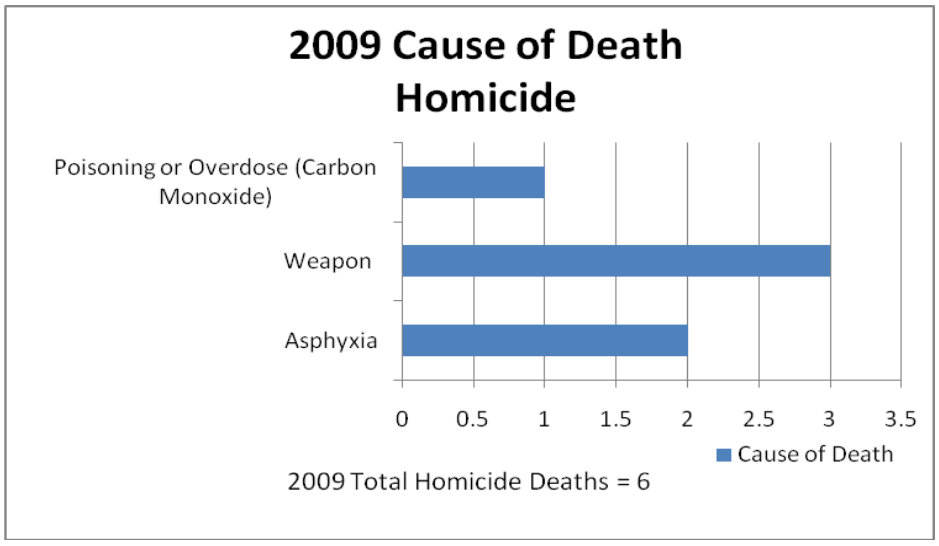
The ICDRT strongly recommends full investigation, including autopsy, in the case of a death by suicide.



2009 Homicide Deaths

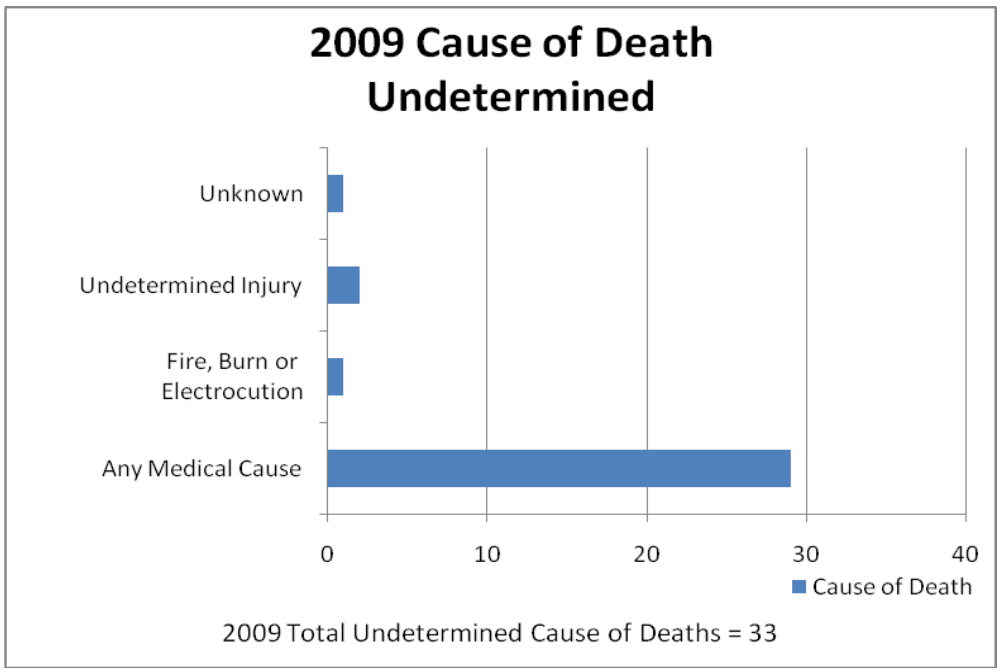
In 2009, there were six homicides affecting children ages 17 and under. Iowa child homicide rates for year 2009 ranked the lowest since 1999.

Of the six homicide cases, two deaths were from bodily assault and one death was caused by a knife. One death was the result of carbon monoxide poisoning from an intentionally set fire. Both of the deaths by asphyxia were the result of strangulation.



2009 Undetermined Deaths

In 2009, the exact cause of death for 33 children could not be determined. The graph below shows general categories or events that likely caused or contributed to a child's death. A vast majority of these deaths were categorized as medical causes, which in the context of the exact cause being undetermined, implicates these deaths as likely being due to Sudden Infant Death Syndrome (SIDS) or Sudden Unexplained Infant Deaths (SUIDs).



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2008-2009 Sleep Associated Death Data

Collected 01-11-11

Iowa Office of the State Medical Examiner

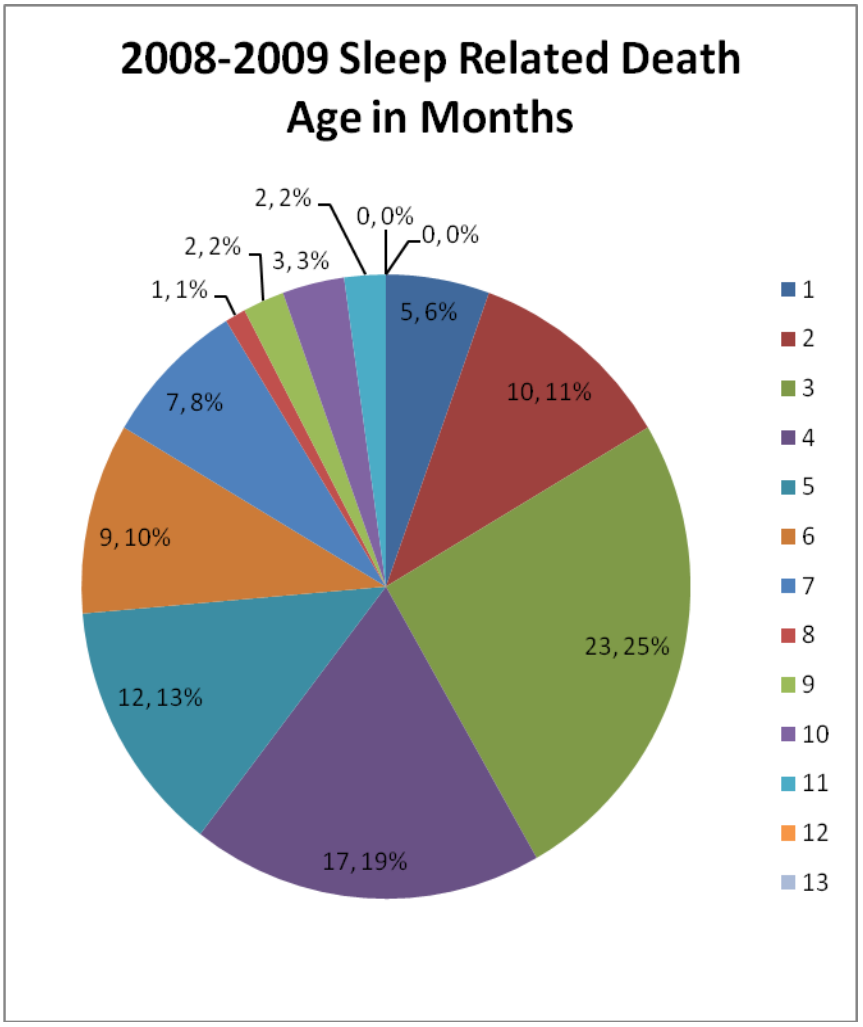
Iowa Child Death Review Team

APPENDIX SUMMARY

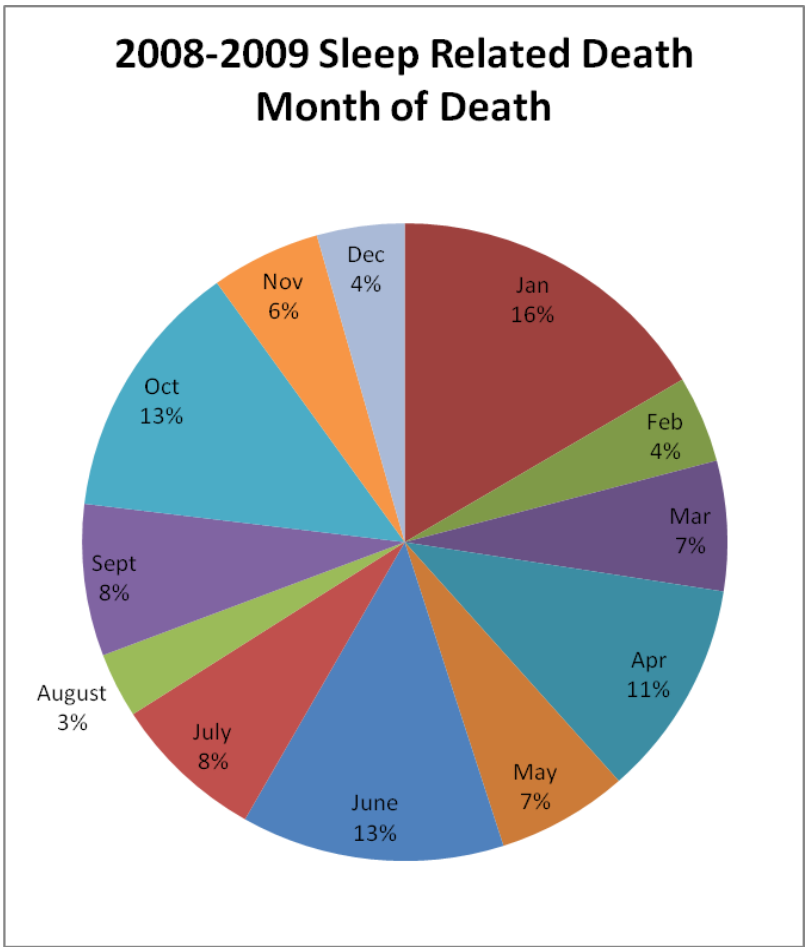
A subcommittee of the Iowa Child Death Review Team was formed to explore and analyze data obtained from deaths in years 2008 and 2009 that were sleep-related. The sub-committee found that of the 91 total infant deaths (death of a child 1 year of age or less), the two most common sleep surfaces involved were adult beds and couches. Soft bedding was a significant factor in 65 of the total deaths. In 34 deaths, the infant was placed to sleep in the prone position and in 48 of the total cases, the infant was found deceased in the prone position. In 40 of the 91 infant deaths, co-sleeping with one or more adults or older children was a contributing factor in the deaths. Fifty-three infants were exposed to tobacco products and 45 infants were exposed to alcohol or illicit drugs either in utero, environmentally or their caretakers at the time of death were under the influence or these substances (eight deaths were reported as unknown use of tobacco, drugs or alcohol). Of the 91 infant sleep-related deaths examined by the sub-committee, 42 deaths were certified as Sudden Unexplained Infant Death (SUID) and 22 were certified as Sudden Infant Death Syndrome (SIDS). The acronym and certification of SUID is commonly used when a "non-natural" factor may have contributed to the death, such as exposure to drugs or alcohol, an unsafe sleep environment, etc.). The acronym and certification of SIDS implies that the death scene investigation, autopsy and other laboratory tests and interviews of witnesses did not reveal any concerns or suspicions and no readily identifiable cause of death were found.

What this sub-committee did find in their research was that a majority of infant sleep-related deaths included identifiable risk factors in the baby's sleep environment that research shows increases an infant's risk of SIDS and can directly contribute to accidental sleep related deaths in infants. All infants should sleep in a safety approved crib, with a firm mattress, no additional soft bedding, including bumper pads, blankets, pillows, or any other extraneous items. Sharing a bed or other adult sleep surfaces such as couches with adults or siblings should be eliminated. Caretakers of all children should never be under the influence of alcohol or drugs and their attention should be focused on creating a safe environment for the infant.

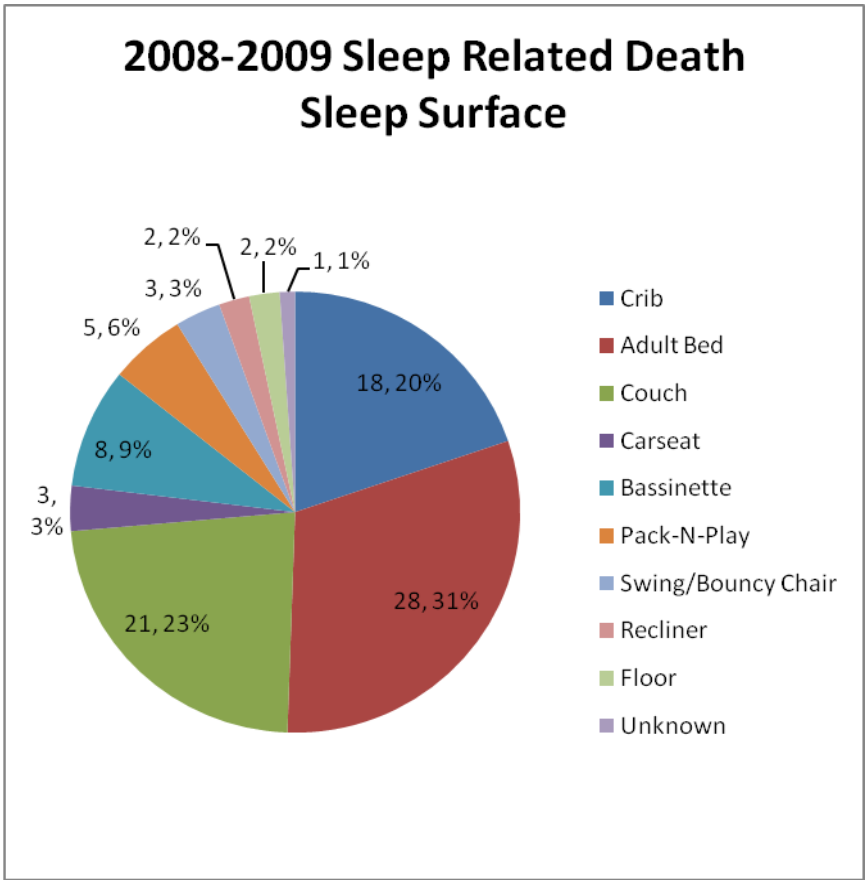
Age in months	
Less than 1	5
1	10
2	23
3	17
4	12
5	9
6	7
7	1
8	2
9	3
10	2
11	0
12	0
Total	**91**



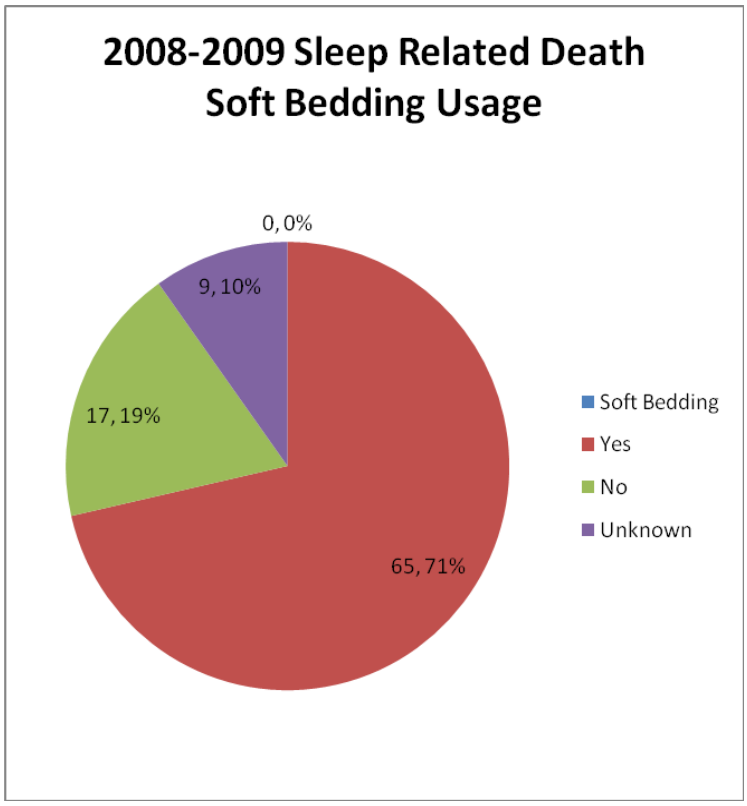
Month of Death	
Jan	15
Feb	4
Mar	6
Apr	10
May	6
June	12
July	7
August	3
Sept	7
Oct	12
Nov	5
Dec	4
Total	**91**



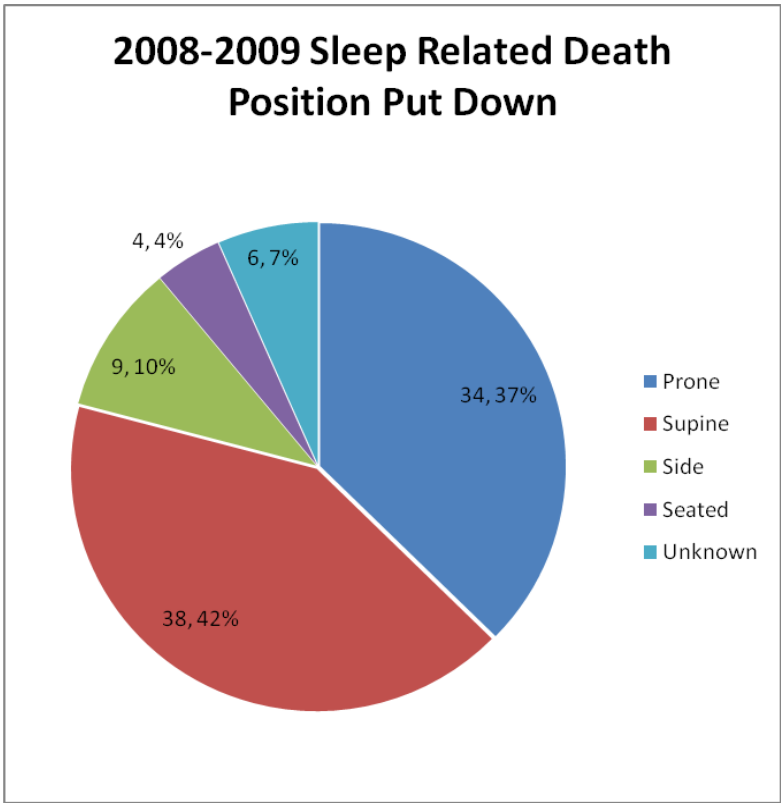
Sleep Surface	
Crib	18
Adult Bed	28
Couch	21
Car seat	3
Bassinette	8
Pack-N-Play	5
Swing/Bouncy Chair	3
Recliner	2
Floor	2
Unknown	1
Total	**91**



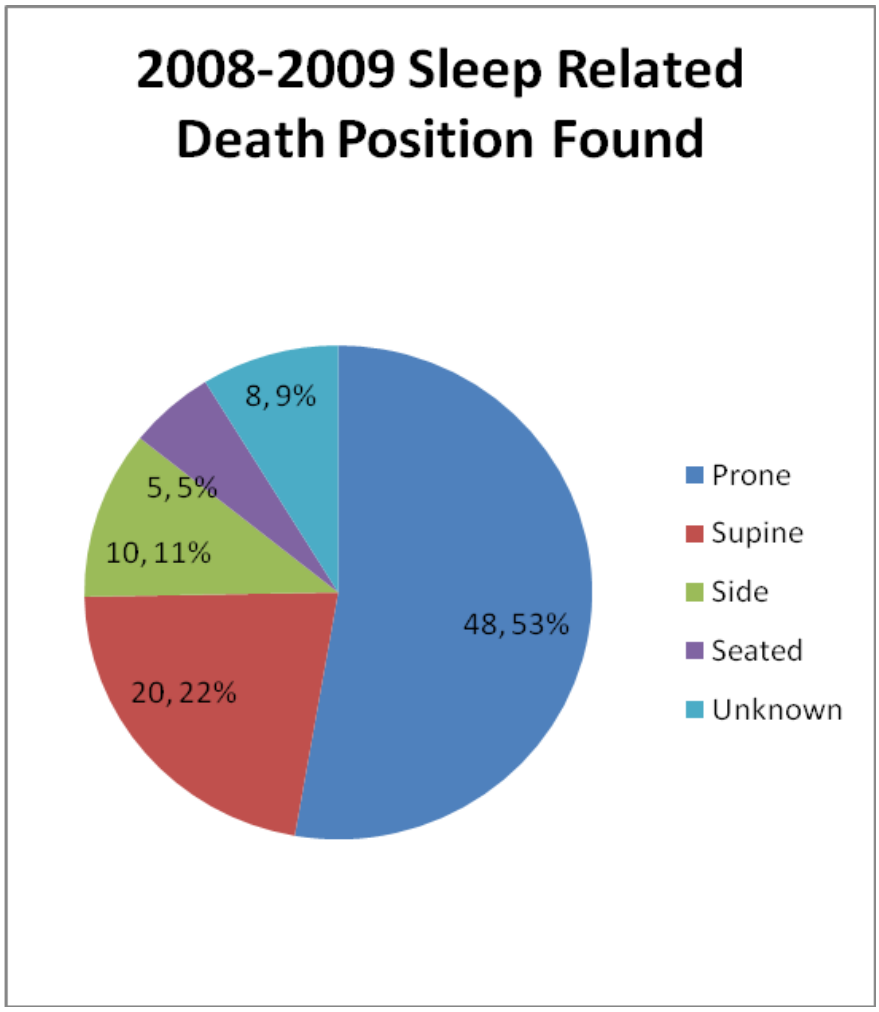
Soft Bedding	
Yes	65
No	17
Unknown	9
Total	**91**



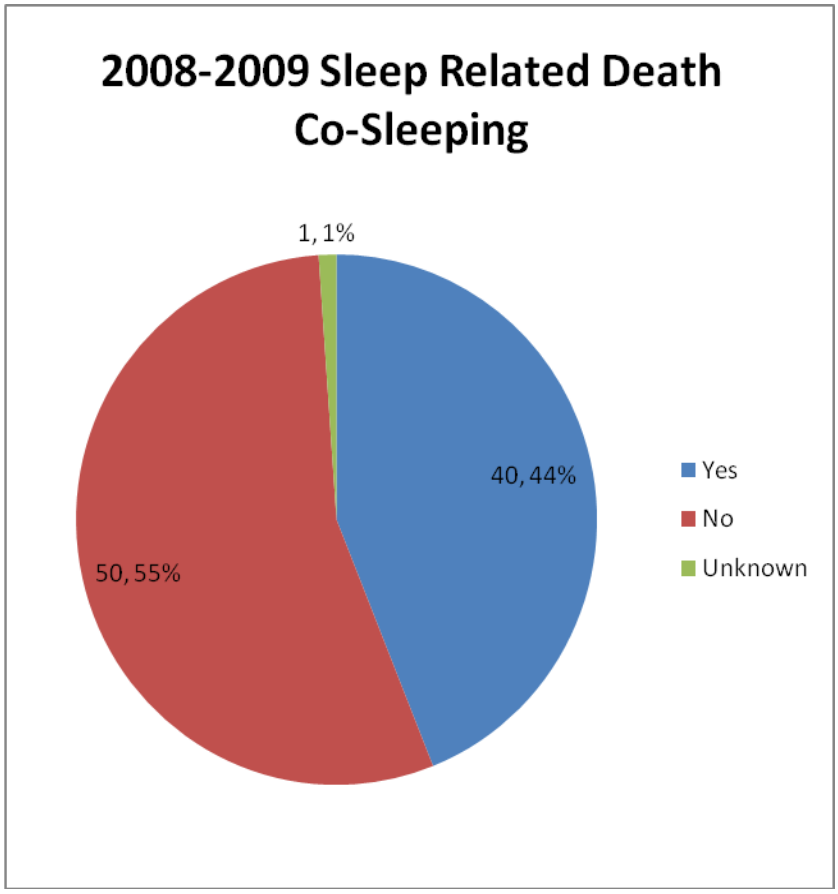
Position Put Down	
Prone	34
Supine	38
Side	9
Seated	4
Unknown	6
Total	**91**



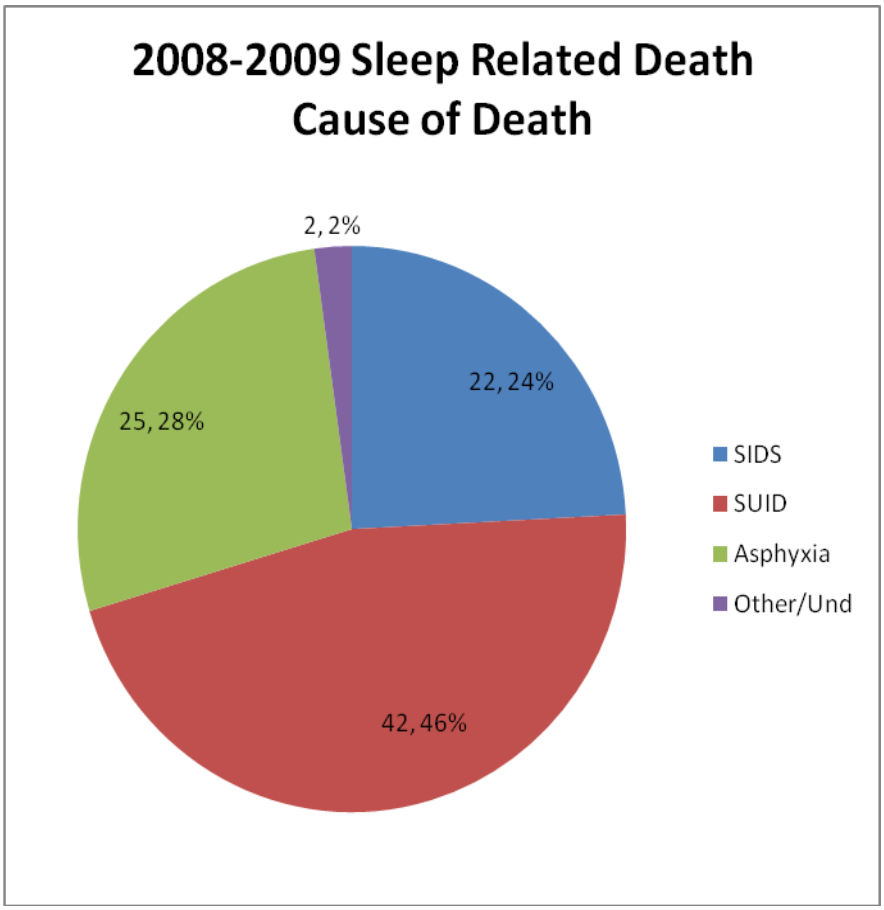
Position Found	
Prone	48
Supine	20
Side	10
Seated	5
Unknown	8
Total	**91**



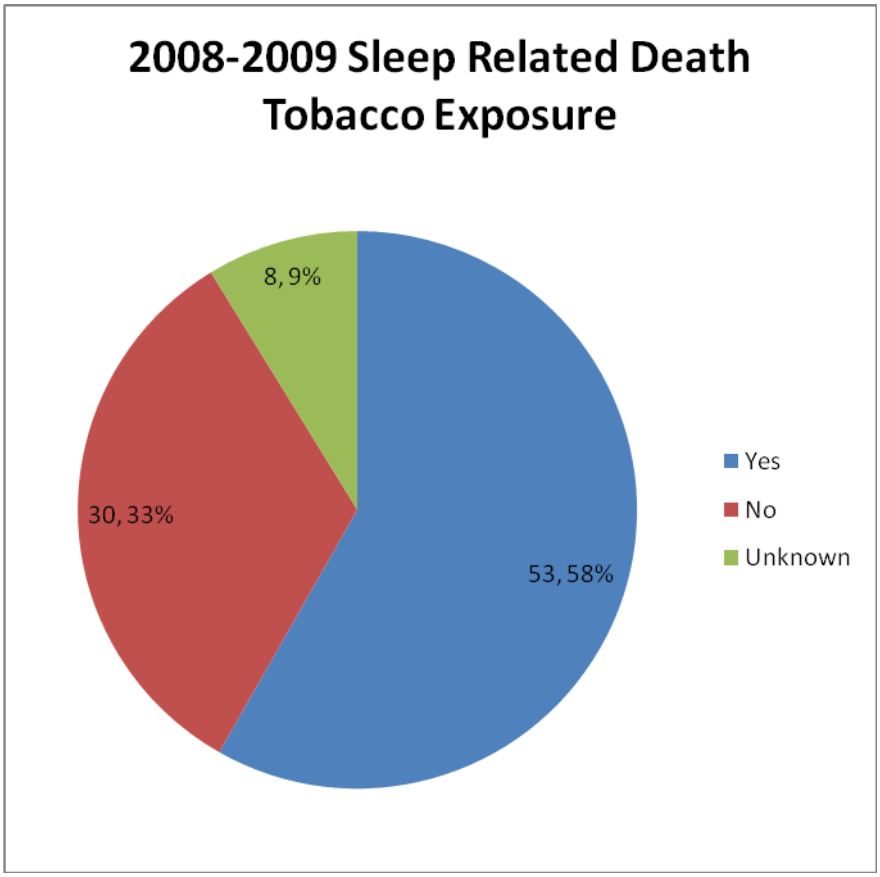
Co-Sleeping	
Yes	40
No	50
Unknown	1
Total	**91**



Cause of Death	
SIDS	22
SUID	42
Asphyxia	25
Other/Und	2
Total	**91**



Tobacco Exposure	
Yes	53
No	30
Unknown	8
Total	**91**



Drug or Alcohol Exposure	
Yes	45
No	38
Unknown	8
Total	**91**

Considered yes if child was exposed to drugs in utero, environmentally or was being cared for by someone under the influence of drugs or alcohol.