IDAHO CHILD MORTALITY REVIEW TEAM

Review of 1999 Child Deaths

Published 2002

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EXECUTIVE SUMMARY

The Idaho Child Mortality Review Team (CMRT) presents the third annual report on child deaths in Idaho. The many helpful comments we received from our readers aided us in improving this report, which covers deaths occurring in 1999. In our review process, the team relies on information already gathered by coroners, law enforcement, and medical personnel. The team does not contact the family or friends of children who have died. The team is gratified to know some changes in child health activities have been initiated as a result of our first 2 years of review. In keeping with our objective to identify potential risk factors and preventable causes of death, we hope to be able to provide a basis for changes to reduce child deaths in Idaho.

Positive changes that have occurred in Idaho since our last report are:

- **Graduated Driver's Licensure**. You can be licensed in Idaho when you are 15 years old. However, teenagers under 17 years old, must first successfully complete an approved driver's training program. Under Idaho's Graduated Driver's License Program, all drivers must then complete a Supervised Instruction Period (SIP). After completing the SIP, the driver will be eligible to apply for a driver's license. This license will be restricted to driving during daylight hours only until the driver is 16 years old. Daylight hours are defined as from "1/2 hour before sunrise to 1/2 hour after sunset."

- **Development of a community-based 'System of Care'** for children with serious emotional disturbance and their families. The Idaho Council on Children's Mental Health (ICCMH) is leading this effort under the direction of the Lieutenant Governor and through statewide collaboration between the directors of agencies that serve children, advocates and providers of mental health services.
- **Development of a statewide suicide prevention plan**. The Suicide Prevention Advocacy Network (SPAN) -Idaho Board of Directors is leading this effort, with support from the Governor's Generation of the Child Initiative, Department of Health and Welfare and other public and private organizations. The purpose of this plan is to coordinate activities related to prevention, survivor support and awareness/education of suicide in Idaho.
- **A pediatric training session** for First Responders, EMT's, and Paramedics at each of the 5 Regional Emergency Medical Services conferences. The initial training sessions were pediatric airway or child abuse awareness training.

Challenges that we believe continue to hinder our ability to provide thorough case review and informed recommendations include:

- Inability to obtain medical records.

- Incomplete information on records, such as coroner reports on SIDS deaths, suicides, and other non-motor vehicle accidents.

- Lack of subpoena power to obtain medical records

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Of 231 deaths in 1999, 128 were presented to the CMRT, and 126 were reviewed:

- **A review could not be completed on 2 cases presented to the team due to investigations still pending, and incomplete information.**

- **Forty-eight (48) Idaho children died in motor vehicle accidents in Idaho in 1999.**

  The team recommends:

  - A standard (primary) seat belt law that covers all ages and all seating positions.
  - Child safety restraint education for parents based on National guidelines according to the child's age and size.
  - Public education on the danger of riding unrestrained in pickup truck beds.

  The team supports the Department of Education proposed revised rules for minimum course standards for the delivery of teen driver education and training.

- **Twenty (20) Idaho children died of Sudden Infant Death Syndrome (SIDS) in Idaho in 1999.**

  The team is concerned about the lack of information available on SIDS deaths and the ongoing behavior of not placing infants on their backs to sleep.

  We recommend:

  The CDC SIDS investigation form be used for all cases of suspected SIDS. The form is available at www.cdc.gov/mmwr/PDF/rr/rr4510.pdf.

  An ongoing effort to educate new mothers about the risk factors that can contribute to SIDS, including advice from the American Academy of Pediatrics that parents and caregivers should place healthy infants on their backs to sleep. www.aap.org/family/infsids.htm

- **Twelve (12) Idaho children died due to suicide in Idaho in 1999.**

  The team was challenged by the lack of a consistent investigation of child suicide deaths and the lack of information regarding the medical, social, school, and psychological history of the victim.

  We recommend professional education addressing the importance of collecting medical histories, performing thorough scene investigations, conducting psychological autopsies, and toxicological exams on victims of suicide.

- **Seven (7) Idaho children died due to drowning accidents in Idaho in 1999.**

  The team recommends that small children NEVER be left unsupervised around any container of water large enough for the child to get their head in. This includes mop buckets, toilets, bathtubs, pools, spas and open bodies of water such as canals, rivers and reservoirs.

- **Seventeen (17) child death reviews were hampered by lack of access to complete records and were so incomplete that preventability could not be determined.**

  The team is concerned about the inability to provide a meaningful review of child deaths due to the lack of information available.
  We recommend a mechanism to assist the review team in obtaining records surrounding the child death. There are multiple options used successfully by other states including:

  - Granting the team statutory authority to access applicable records.
  - Statutory authority through a State Medical Examiner system to obtain applicable records.
  - Granting the team subpoena power to request applicable records.
  - Laws protecting the team review documents from discoverability.

HISTORY

Concern for the welfare of children, particularly those who are abused or neglected, has been longstanding among public and private social service agencies, professionals, and the general public. In response to this concern, Los Angeles County, California started child mortality review in 1978. Their success in identifying preventable child deaths has led to many states instituting statewide child mortality review teams. The overall goals of the teams include focusing on creating effective multi-agency case management and improving prevention and intervention programs to protect children from serious injury and death.

In response to this same concern, then-Governor Philip E. Batt, with Executive Order No. 98-10 (Appendix A), formed Idaho's Child Mortality Review Team on July 16, 1998. The team is appointed by the Director of the Department of Health and Welfare and consists of a multidisciplinary, multi-agency board. Bureaus within the Division of Health and the Idaho Transportation Department's Office of Highway Safety provide support to the team.

In 22 years, child mortality review teams have become a national standard in the effort to protect children. According to the National Center on Child Fatality Review, as of 2000, multi-agency child death review teams exist in all 50 states and the District of Columbia.

CHILD MORTALITY REVIEW TEAM

The Idaho Child Mortality Review Team represents a combination of public, criminal justice, health, and social service organizations. Team members participate in the review and make decisions by voting on the preventability of the death and identification of prevention activities and target audiences. The following members were appointed to the team by the Director of the Department of Health and Welfare and participated in the 1999 reviews:

Matthew Brown, MD, Pediatrician, Chair

Shirley Alexander, MSW, Child Protection Program Specialist, and Children at Risk Task Force Member

D. Lee Binnion, MD, Emergency Physician

Robert Cihak, MD, Pathologist

Vicki DeGeus-Morris, Coroner, Canyon County

Eve Dickinson, Keeping Children Safe Panel Member, Community Representative

Kip Manwaring, Prosecuting Attorney, Bonneville County

Christine Hahn, MD, State Epidemiologist

Julene Parsons, MD, Pediatrician

Tony Wallace, Sgt., Boise Police Department

ASSISTANTS TO THE CHILD MORTALITY REVIEW TEAM

The Child Mortality Review Team has the support of many state agencies in their efforts to review child deaths. The assistants provide record review and clerical support. They do not have decision making or voting authority on the team. The Epidemiologist and Child Protection Program Specialist from the team meet with the screening group monthly. The following assistants provided support to the team during the 1999 reviews:

Dia Gainor, Chief, Emergency Medical Services Bureau

Boni Carrell, EMS for Children Planner, Emergency Medical Services Bureau

Pam Marcum, Consultant, (former Forensic Scientist, Idaho Department of Law Enforcement)

Jo Ann Moore, Manager, Office of Highway Safety

Susan Mulkey, IT Production Specialist, Office of Highway Safety

Kathy Simplot, Senior Research Analyst, Bureau of Vital Records and Health Statistics

Diane Prince, Administrative Assistant, Bureau of Clinical and Preventive Services

Members bring a wide variety of experience and perspectives on children's health, safety, and maltreatment issues. Because of the varied expertise the team possesses, the ability to identify prevention and intervention activities is greatly enhanced.

MISSION STATEMENT

To reduce preventable child fatalities through systemic, multidisciplinary, multi-agency review of child fatalities; resulting in data-driven recommendations for legislation, public policy, statewide and community-based prevention education, and systems improvement.

OBJECTIVES

The team has developed the following objectives to direct its work:

- Identify potentially preventable causes of death.
- Identify the risk factors leading to the death.
- Collect and organize the information into meaningful summaries of causes of child death in Idaho.
- Make specific and feasible recommendations to the Governor and Chairs of the Senate and House Health and Welfare committees on ways in which child mortality can be reduced in Idaho.

METHODOLOGY

Deaths of Idaho resident children, less than 18 years of age, dying in Idaho during 1999 were reviewed. Deaths of children dying out of state were not reviewed since records surrounding circumstances of their deaths are unavailable for the team's use.

The Bureau of Vital Records and Health Statistics identified the child deaths. An abstract of each death certificate was supplied to the screening group, which met monthly to view the abstracts and identify potentially preventable deaths. The screening group selected a death for further review when it met one or more of the following criteria:

- Death was due to an external cause, or
- Death was unexplained, or
- Death was due to a cause with identified risk factors.

The death was assessed to identify additional information necessary for a comprehensive review. Additional information was requested from the appropriate agency. The sources of information could include:

- Autopsy reports
- Coroner reports
- Law enforcement reports
- Medical records
- Emergency medical system records
- Child protection records

Recognizing that the records of child deaths and circumstances leading to the deaths are kept by multiple agencies, the team strives to examine the events leading to death across systems and over time. The team does not have subpoena power and cannot always obtain confidential records.

Of 231 deaths in 1999, 126 met the criteria for review and additional information was requested. After available records were collected, the assistants reviewed the information, and the cases were prepared for presentation before the Child Mortality Review Team (CMRT).

The team, including the assistants, met quarterly. Available information from records on the child deaths were presented with additional input from the team members and assistants.

The 126 deaths selected for review included all accident, suicide, homicide, Sudden Infant Death Syndrome, and deaths of undetermined intent. Eleven of the deaths due to natural causes were also reviewed. Deaths that were not sent for further review included most deaths due to extreme prematurity, cancer, and

severe multiple congenital anomalies, unless preventive measures could clearly have reduced the risk of infant death (e.g., trauma leading to a premature birth). Detailed technical notes can be found under Appendix B.

Only deaths that were judged to be definitely or probably preventable were considered "preventable" for the purposes of this document. The teams' working definition for preventability was:

> *Preventability refers to the ability of an individual or community to reasonably have done something to alter the conditions that led to the child's death, thereby preventing the child's death, or reasonably do something now to reduce the likelihood of future deaths. Examples include, but are not limited to, implementing safety rules, laws, or policies; creating or improving barriers around dangerous areas; educating children or adults in the community; or improving access to health care.*

The preventability of each death was stratified into categories as outlined by identifying documented risk factors which would have likely contributed to the death.

Preventable	**Definition**
Definitely	Definite actions could have been taken to prevent this death.
Probably	Certain actions may have decreased the likelihood of this death.
Probably not	This death was probably not preventable.
Not preventable	No preventive measures were found.
Unable to determine	

Risk factors, prevention opportunities, and intervention activities were identified. A data collection form was completed on each case reviewed. If additional records were needed, or specific questions were raised that required more information, a case review was continued at the next meeting. If additional information was unobtainable, the case was considered incomplete, and a determination of preventability was not made.

Of the 126 cases presented to the CMRT, 17 cases were considered incomplete and preventability could not be determined. The following table identifies the 17 deaths by manner.

Manner	**Number**
Natural	4
Sudden Infant Death Syndrome	11
Suffocation/Strangulation	1
Assault (Homicide)	1
Total	**17**

Information from the data collection form was entered into an Access 97 database, from which this report was produced.

IDAHO POPULATION

The population of Idaho in 1999 was estimated at 1,251,700. Children under the age of 18 comprised about 28% of the population. There were approximately 180,000 resident males under the age of 18, and approximately 170,000 resident females.

POPULATION	NUMBER	%
Idaho Total	**1,251,700**	**100.0**
Idaho residents 0-17	***350,464***	***28.0***
SEX, RESIDENTS 0-17		
Males	180,122	51.4
Females	170,342	48.6
RACE, RESIDENTS 0-17		
White	338,028	96.5
Black	2,334	0.6
American Indian	5,529	1.6
Asian / Pacific Islander	4,573	1.3
ETHNICITY, RESIDENTS 0-17		
Hispanic	38,547	11.0
Non-Hispanic	311,917	89.0

Population estimates: U.S. Census Bureau, Internet release September 15, 2000

Only deaths of Idaho resident children less than 18 years of age dying in Idaho during 1999 were reviewed.

DEATHS TO CHILDREN, OCCURRING IN 1999

	Population				
Manner of Death	***(A) Idaho Resident Children, dying in Idaho****	(B) Idaho Resident Children, dying outside Idaho	(C) TOTAL: Idaho Resident Children Deaths (A + B)	(D) Non-Resident Children, dying in Idaho	(E) TOTAL: Child deaths occurring in Idaho (A + D)
Natural	***135***	35	170	2	137
Accidents	***73***	7	80	7	80
Suicide	***12***	0	12	0	12
Homicide	***7***	0	7	0	7
Injury of Unknown Intent	***3***	0	3	0	3
Manner Pending Investigation	***1***	0	1	0	1
TOTAL	***231***	42	273	9	240

NOTE: Figures in this table for child deaths other than Idaho resident children dying in Idaho (column A) are for informational and comparison purposes only.
*All numbers presented in this report will be for Idaho resident children, dying in Idaho unless otherwise specifically stated. The reader should keep in mind while reviewing this report that findings are based on the population in column (A) only.

Deaths of the 42 children dying out of state were not reviewed. The records surrounding circumstances of their deaths were unavailable for the team's use.

Deaths of non-resident children were also not reviewed.

NON-RESIDENT CHILDREN, DYING IN IDAHO, 1999
STATE OF RESIDENCE

Child's Resident State	Number of Deaths
Nevada	1
Oregon	2
Utah	1
Washington	5

TRENDS IN CHILD MORTALITY

Mortality statistics are compiled in accordance with the World Health Organization (WHO) regulations, which specify that member nations, including the United States, classify and code causes of death in accordance with the International Statistical Classification of Diseases and Related Health Problems. The tenth revision of the International Classification of Diseases (ICD-10) was implemented in the United States beginning with deaths occurring in 1999 and replaces the ninth revision of the ICD (ICD-9), which was used from 1979 through 1998. Data presented for 1992-1998 have been adjusted for comparability to 1999 data and may differ from data previously published. Refer to Technical Notes for further explanation and methodology.

In 1999 the Idaho death rate for children aged 15-17 was significantly higher than the U.S.

IDAHO RESIDENT DEATHS
DECEDENT LESS THAN 18 YEARS
IDAHO AND UNITED STATES BY AGE, 1999

STATISTIC	AGE GROUP			
	<1	1-4	5-14	15-17
Idaho Number	134	29	57	53
Idaho Rate*	674.4*	39.2	29.7	80.8
U.S. Rate	705.6*	34.7	19.2	57.5

*Death rates to children <1 are per 100,000 live births occurring in 1999. Rates for other age groups are per 100,000 population in the age group.

Idaho Accidental deaths, Suicide deaths, and deaths of Undetermined Intent were all significantly higher than in the U.S.

IDAHO RESIDENT DEATHS
DECEDENT LESS THAN 18 YEARS
IDAHO AND UNITED STATES BY MANNER, 1999

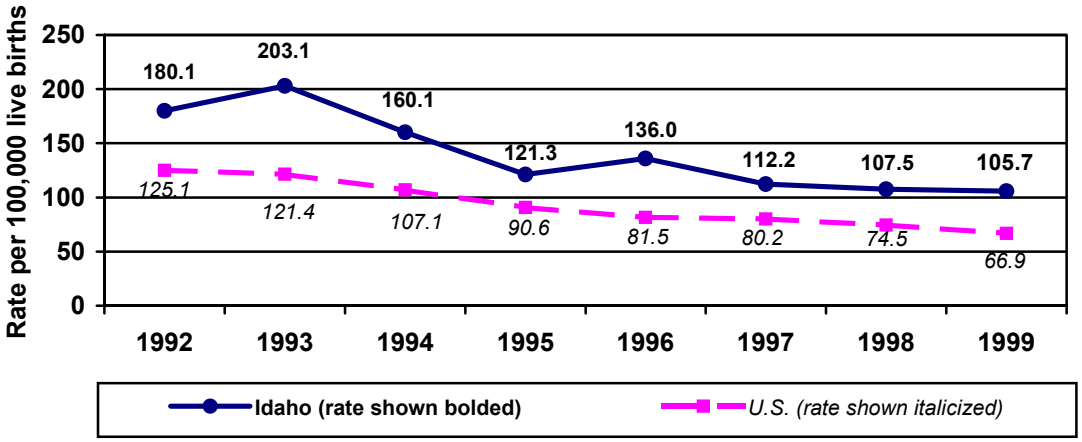
POPULATION	NATURAL	ACCIDENTAL	SUICIDE	HOMICIDE	UNDETERMINED INTENT
Idaho Total*	170	80	12	7	3
Idaho Rate	48.5	22.8	3.4	2.0	0.9
U.S. Rate	50.1	13.0	1.4	2.9	0.3

*Total will not add to 231 due to the manner of one death pending investigation.

Sudden Infant Death Syndrome (SIDS)

There has been a significant decline in SIDS rates in the U.S. since 1992. Idaho rates are higher than the U.S., but the difference is not significant.

Idaho* and United States SIDS death rates, 1992-1999:



* This trend includes SIDS deaths to all Idaho resident infants (under the age of 1) for the years shown, occurring both in and outside of Idaho.

Due to revisions in the database, data may differ slightly from those previously published by the Bureau of Vital Records and Health Statistics.

Idaho* and U.S. SIDS Deaths and Rates, 1992-1999:

Idaho Resident Death	1992	1993	1994	1995	1996	1997	1998	1999
Occurring in Idaho	29	35	27	21	25	20	21	21
Occurring outside of Idaho	2	0	1	1	1	1	0	0
Total Resident SIDS deaths	*31*	*35*	*28*	*22*	*26*	*21*	*21*	*21*
Idaho Resident SIDS death rate	180.1	203.1	160.1	121.3	136.0	112.2	107.5	105.7
U.S. Resident SIDS death rate	125.1	121.4	107.1	90.6	81.5	80.2	74.5	66.9

*Idaho rates are based on resident data and are comparable to U.S. data.

Rate: Number of deaths per 100,000 live births.

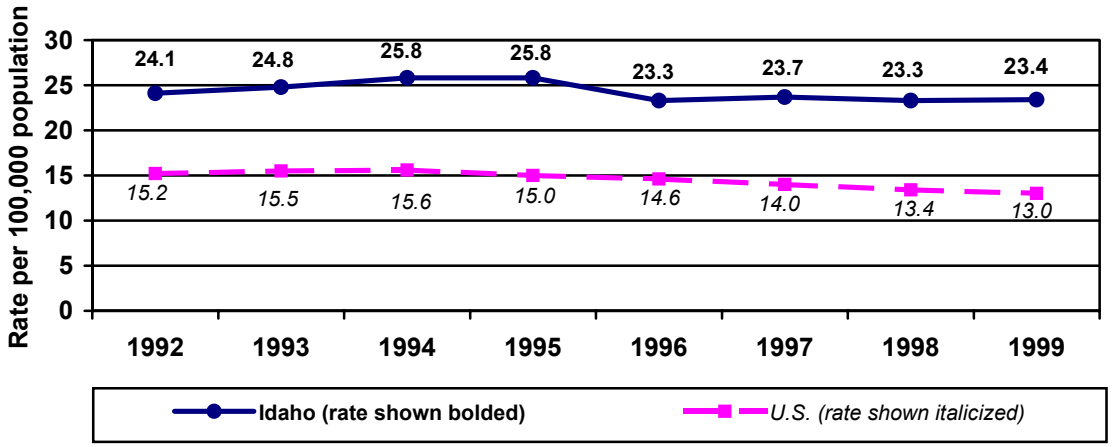
Note: Rates based on fewer than 20 deaths are subject to relatively large and random variation. Use with caution.

Death numbers and rates for deaths occurring from 1992-1998 have ICD-9/ICD-10 comparability ratios applied and may differ from data previously published. Comparability ratio for SIDS: 1.04. See Technical Notes.

Unintentional Injury

Unintentional injury death rates in Idaho have been significantly higher than the U.S. rate for the last 8 years for children aged 0-17. Motor Vehicle injury accounts for the majority of unintentional deaths in children.

Idaho* and United States Unintentional injury death rates, children under 18, 1992-1999:



*This trend includes Unintentional injury deaths to all Idaho resident children under the age of 18 for the years shown, occurring both in and outside of Idaho.

Due to revisions in the database, data may differ slightly from those previously published by the Bureau of Vital Records and Health Statistics.

Idaho* and United States Unintentional injury deaths and rates, children under 18, 1992-1999:

Idaho Resident Death	1992	1993	1994	1995	1996	1997	1998	1999
Occurring in Idaho	70	72	81	79	67	76	72	75
Occurring outside of Idaho	8	10	7	10	14	7	10	7
Total Resident Unintentional injury deaths	*78*	*82*	*88*	*89*	*81*	*83*	*82*	*82*
Idaho Resident Unintentional injury death rate	24.1	24.8	25.8	25.8	23.3	23.7	23.3	23.4
U.S. Resident Unintentional injury death rate	15.2	15.5	15.6	15.0	14.6	14.0	13.4	13.0

*Idaho resident rates are based on total Idaho resident deaths and are comparable to U.S. rates.

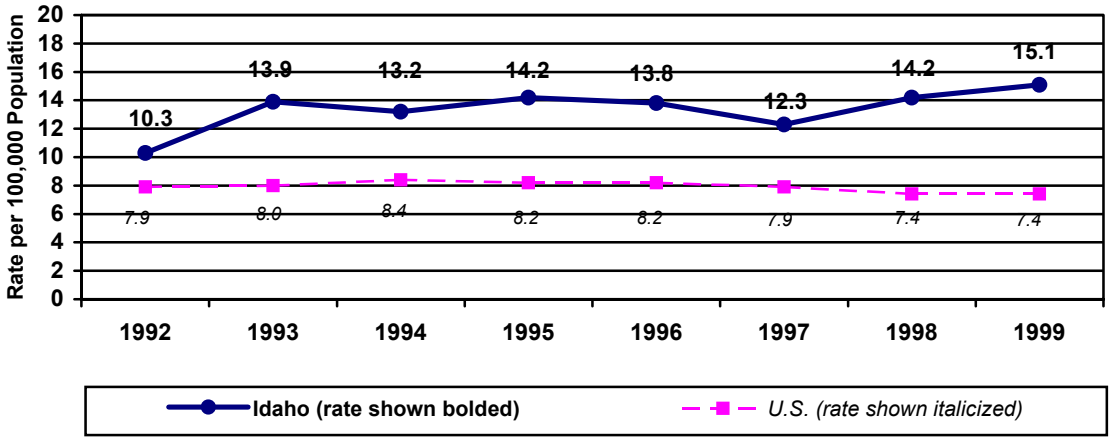
Rate: Number of deaths per 100,000 population aged less than 18 years of age.

Note: Death numbers and rates for deaths occurring from 1992-1998 have ICD-9/ICD-10 comparability ratios applied and may differ from data previously published. Comparability for Unintentional injury: 1.03. See Technical Notes.

Motor Vehicle Collisions

Motor vehicle accident (MVA) death rates in Idaho have been significantly higher than the U.S. for the last 8 years.

Idaho* and United States MVA death rates, children under 18, 1992-1999:



*This trend includes MVA deaths to all Idaho resident children under the age of 18 for the years shown, occurring both in and outside of Idaho.

Due to revisions in the database, data may differ slightly from those previously published by the Bureau of Vital Records and Health Statistics.

Idaho* and United States MVA deaths and rates, children under 18, 1992-1999:

Idaho Resident Death	1992	1993	1994	1995	1996	1997	1998	1999
Occurring in Idaho	29	40	43	43	40	40	42	48
Occurring outside of Idaho	4	5	2	6	8	3	8	5
Total Resident MVA deaths	*33*	*45*	*45*	*49*	*48*	*43*	*50*	*53*
Idaho Resident MVA death rate	10.3	13.9	13.2	14.2	13.8	12.3	14.2	15.1
U.S. Resident MVA death rate	7.9	8.0	8.4	8.2	8.2	7.9	7.4	7.4

*Idaho resident rates are based on total Idaho resident deaths and are comparable to U.S. rates.

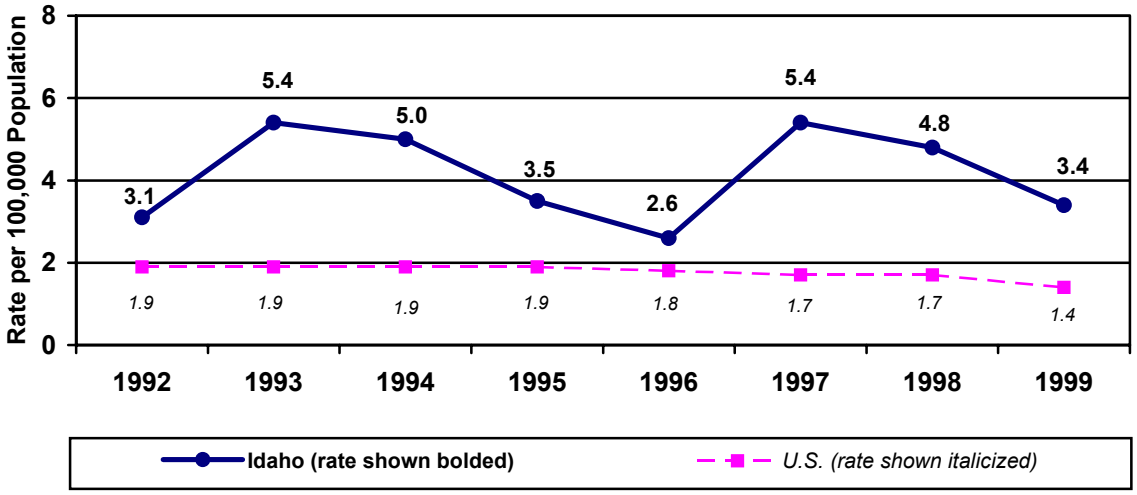
Rate: Number of deaths per 100,000 population aged less than 18 years of age.

Note: Death numbers and rates for deaths occurring from 1992-1998 have ICD-9/ICD-10 comparability ratios applied and may differ from data previously published. Comparability for Motor vehicle accidents: 0.98. See Technical Notes.

Suicide

Idaho's suicide death rate among children fluctuates from year to year, but has been significantly higher than the U.S. rate for 6 of the last 8 years. It was not significantly higher in 1992 and 1996.

Idaho* and United States Suicide death rates, children under 18, years 1992-1999:



*This trend includes suicide deaths to all Idaho resident children under the age of 18 for the years shown, occurring both in and outside of Idaho.

Due to revisions in the database, data may differ slightly from those previously published by the Bureau of Vital Records and Health Statistics.

Idaho* and United States Suicide deaths and rates, children under 18, 1992-1999:

Idaho Resident Death	1992	1993	1994	1995	1996	1997	1998	1999
Occurring in Idaho	10	18	17	10	9	16	14	12
Occurring outside of Idaho	0	0	0	2	0	3	3	0
Total Resident suicide deaths	*10*	*18*	*17*	*12*	*9*	*19*	*17*	*12*
Idaho Resident suicide death rate	3.1	5.4	5.0	3.5	2.6	5.4	4.8	3.4
U.S. Resident suicide death rate	1.9	1.9	1.9	1.9	1.8	1.7	1.7	1.4

*Idaho resident rates are based on total Idaho resident deaths and are comparable to U.S. rates.

Rate: Number of deaths per 100,000 population aged less than 18 years of age.

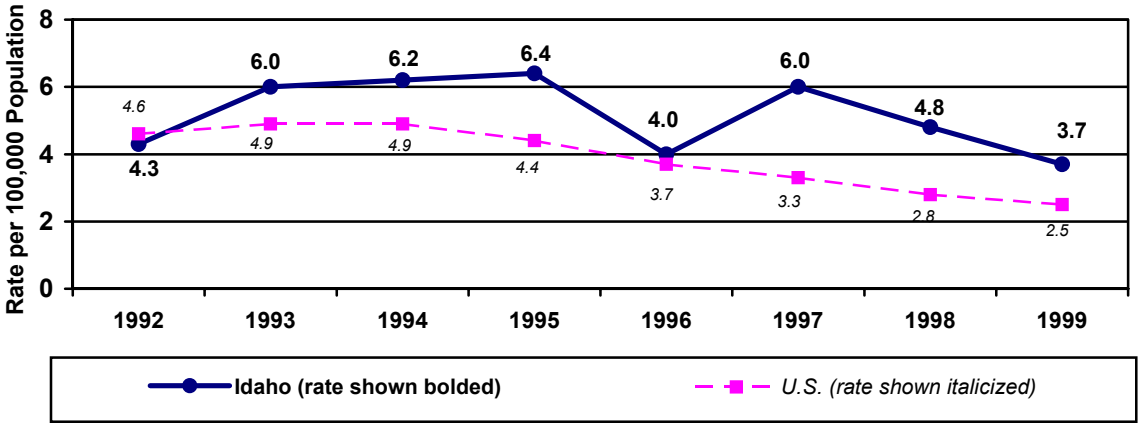
Note: Rates based on fewer than 20 deaths are subject to relatively large and random variation. Use with caution.

Death numbers and rates for deaths occurring from 1992-1998 have ICD-9/ICD-10 comparability ratios applied and may differ from data previously published. Comparability ratio for Suicide: 1.00. See Technical Notes.

Firearms

Rates for firearm deaths have been higher than the U.S. for the last 8 years, but only significantly higher in 1997.

Idaho* and U.S. Firearm deaths and rates, children under the age of 18, 1992-1999:



*This trend includes firearm deaths to all Idaho resident children under the age of 18 for the years shown, occurring both in and outside of Idaho.

Due to revisions in the database, data may differ slightly from those previously published by the Bureau of Vital Records and Health Statistics.

Idaho* and U.S. Firearm deaths and rates, children under the age of 18, 1992-1999:

Idaho Resident Death	1992	1993	1994	1995	1996	1997	1998	1999
Occurring in Idaho	13	19	21	19	14	19	15	13
Occurring outside of Idaho	1	1	0	3	0	2	2	0
Total Resident firearm deaths	14	20	21	22	14	21	17	13
Idaho Resident firearm death rate	4.3	6.0	6.2	6.4	4.0	6.0	4.8	3.7
U.S. Resident firearm death rate	4.6	4.9	4.9	4.4	3.7	3.2	2.8	2.5

*Idaho resident rates are based on total Idaho resident deaths and are comparable to U.S. rates.

Rate: Number of deaths per 100,000 population aged less than 18 years of age.

Note: Rates based on fewer than 20 deaths are subject to relatively large and random variation. Use with caution.

Death numbers and rates for deaths occurring from 1992-1998 have ICD-9/ICD-10 comparability ratios applied and may differ from data previously published. Comparability ratio for Firearm deaths: 1.00. See Technical Notes.

AUTOPSIES

Autopsy and subsequent pathological examination offers conclusive information about clinical characteristics present at the time of death, as well as manifestations indicative of conditions surrounding the death. This evidence may illuminate, confirm, or in some cases, contradict the conclusion about cause based solely on external review.

Autopsies are an important aspect of many death investigations but are not mandated by Idaho State law. The table below shows the number and percent of autopsies performed on the 231 deaths occurring to resident children in Idaho in 1999.

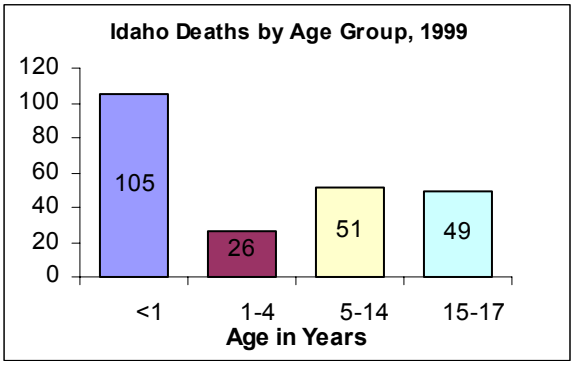
AUTOPSIES PERFORMED: CHILDREN UNDER THE AGE OF 18, IDAHO RESIDENTS DYING IN IDAHO, BY CAUSE OF DEATH:

Cause of Death	% autopsied	Number of deaths	Number of Autopsies
Injury of undetermined intent	100.0	3	3
SIDS	95.0	20	19
Assault (Homicide)	71.4	7	5
Suffocation or strangulation	33.3	6	2
Trauma—other	22.2	9	2
Natural—not SIDS	21.9	114	25
Drowning or submersion	14.3	7	1
Motor vehicle accidents	8.3	48	4
Fire or burns	0.0	5	0
Intentional self-harm (Suicide)	0.0	12	0
ALL CAUSES	**26.4**	**231**	**61**

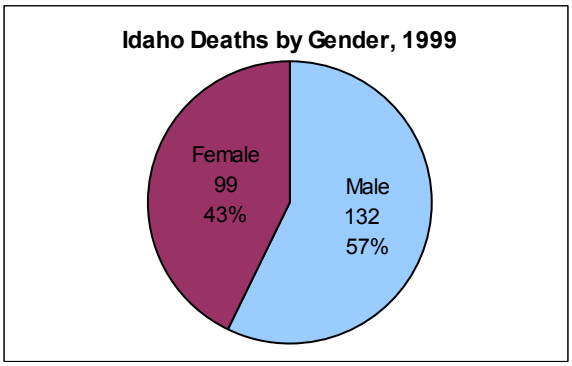
OVERVIEW

To reduce the number of child deaths in Idaho, it is important to understand how and why children die. In 1999 children under the age of 18 dying in Idaho had the following characteristics.

The largest number of deaths occurred in children less than one year of age.



The percentage of males dying was higher than females.



The race and ethnicity of the children who died reflects the race and ethnicity of the Idaho population under the age of 18 years.

Race	
Asian / Pacific Islander	1
Black	3
Native American	5
White	222
Total	231

Ethnicity	
Hispanic	26
Non-Hispanic	205
Total	231

The manner of death is documented on the death certificate by the coroner or a physician and provides a classification for each child death. The following table identifies the deaths by manner.

AGE/GENDER	MANNER OF DEATH				
	Natural	Accidental	Suicide	Homicide	Events of Undetermined Intent
<1	98 *72.6%*	4 *5.4%*	0 *0.0%*	2 *28.6%*	1 *33.3%*
1-4	10 *7.4%*	11 *14.9%*	0 *0.0%*	4 *57.1%*	1 *33.3%*
5-14	18 *13.3%*	29 *40.5%*	2 *16.7%*	1 *14.3%*	1 *33.3%*
15-17	9 *6.7%*	29 *39.2%*	10 *83.3%*	0 *0.0%*	0 *0.0%*
Male	70 *51.9%*	44 *60.8%*	9 *75.0%*	5 *71.4%*	3 *100.0%*
Female	65 *48.1%*	29 *39.2%*	3 *25.0%*	2 *28.6%*	0 *0.0%*
Total*	135 *100.0%*	73 *100.0%*	12 *100.0%*	7 *100.0%*	3 *100.0%*

*Total adds to 230 deaths rather than 231, due to the manner of one death still pending investigation.
percentages may not add to 100 due to rounding.

Of the 231 deaths in 1999, 128 were presented to the CMRT and 126 were reviewed. Of the 126 reviewed deaths, 105 were considered to be preventable after team review; 4 were considered not preventable. Seventeen (17) were classified as unable to determine preventability due to lack of sufficient information.

Preventable?	**Definition**	
Definitely	Definite actions could have been taken to prevent this death.	103
Probably	Certain actions may have decreased the likelihood of this death.	2
Probably not	This death was probably not preventable.	4
Not Preventable	No preventive measures were found.	0
Unable to Determine		17

Two deaths presented to the team were not reviewed because investigations were pending. The cases were:

- A fall of a 15 year old from a bridge
- An unexplained cause of death of an infant

NATURAL DEATHS

The rate of death from natural causes in children is highest in the first year of life and generally results from such causes as pregnancy complications, congenital anomalies, and SIDS. Natural causes of death quickly become less common as children grow older. Of the 126 deaths reviewed by the team, 11 were identified as natural. Of the 11 natural deaths preventability could not be determined for 4 deaths due to lack of information. There were 3 natural deaths reviewed in which no preventable measures were found. Four (4) of the deaths were determined to be definitely or probably preventable. Two (2) of the 4 preventable deaths are summarized below.

A teenager died due to diabetic coma, due to untreated juvenile diabetes.

A child born with multiple birth defects from exposure to the prescription drug Accutane® (Isotretinoin) during pregnancy died from cardiopulmonary arrest at a young age.

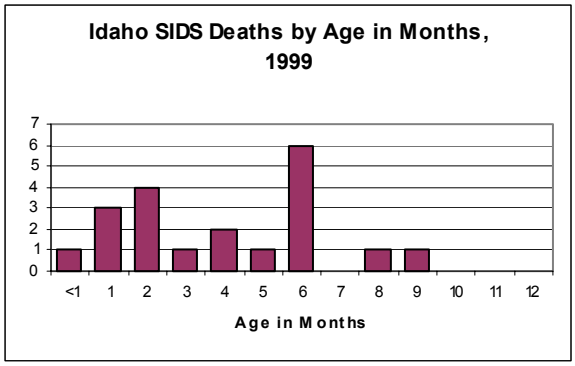
1999 Conclusions and recommendations

The team recommends that parents be made aware of the danger of not getting medical treatment for children who have symptoms of illness.

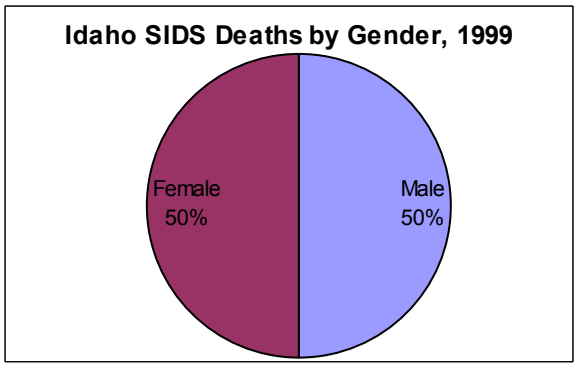
SUDDEN INFANT DEATH SYNDROME (SIDS)

SIDS is the leading cause of death in babies from 1 month to 1 year of age. SIDS is defined as the sudden death of an infant less than one year of age which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and a review of the clinical history. There were 20 SIDS deaths in Idaho in 1999.

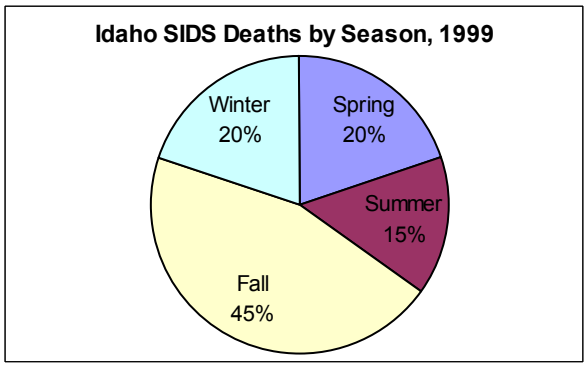
Nationally most SIDS deaths occur when a baby is between 1 and 4 months old. In Idaho in 1999 half (10) of SIDS deaths occurred between 1 and 4 months of age.



More boys than girls are victims of SIDS nationally. In 1999 in Idaho, the SIDS deaths were equal for males (10) and females (10).



Nationally most SIDS deaths occur during the fall, winter, and early spring months. Most SIDS deaths in Idaho in 1999 occurred in the fall.



1999 Equinoxes: March 21, September 23, Solstices: June 21, Dec 22.

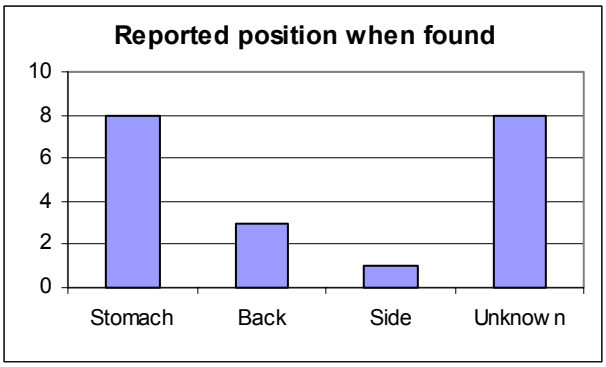
The Centers for Disease Control and Prevention (CDC) reports that SIDS deaths occur among all socioeconomic and racial/ethnic groups, but nationally are higher among African Americans and some American Indian tribes. The table identifies the race and ethnicity of the SIDS deaths in Idaho in 1999.

Idaho SIDS deaths, 1999	Number
Race	
White	20
Ethnicity	
Hispanic	1
Non-Hispanic	19

According to the CDC, an infant who sleeps on its stomach is more at risk for SIDS. Babies who are not breastfed, who are exposed to tobacco smoke, and who get overheated because of too many clothes also seem to be at increased risk, as are infants whose sleeping surface is too soft and excessively padded. The risk increases when a baby shares a bed with an adult; the risk is greater still if more than one adult is in the bed or if the adult is under the influence of alcohol or drugs. SIDS is not caused by vomiting and choking, or minor illnesses such as colds or infections.

In Idaho and the rest of the northwest, SIDS rates have been historically higher than the national average. There has been a significant decline in SIDS rates in the U.S. since 1992 (see page 13). The decline is attributable in part to the recognition that SIDS risks decrease with the placement of infants on their backs for sleep and the CDC's "Back to Sleep" campaign. Research shows that having infants sleep on their backs reduces the risk of SIDS by 30-50 percent.

In Idaho in 1999 the majority of infants who died from SIDS were found on their stomachs when the position was known.



According to the Idaho Bureau of Vital Records and Health Statistics, "PRATS: Pregnancy Risk Assessment Tracking System, 1999 Survey" Idaho resident mothers reported

- Nearly two-thirds (62%) put their baby down to sleep on his/her back, most of the time.
- Over one-fourth (28.4%) put their baby on his/her side, most of the time.
- 8.4% reported that they placed their baby on his/her stomach to sleep most of the time.

Nine (9) of the 20 SIDS deaths reviewed were thought to be definitely preventable. Many of the 20 SIDS deaths reviewed had modifiable risk factors identified. The risk factors are not exclusive of one another. There can be more than one risk factor identified in each case.

RISK FACTOR	NUMBER
Soft bedding	8
Exposure to tobacco smoke	6
Regular sleeping position other than back	3
Co-sleeping with 2 people	3
Co-sleeping with 1 person	2
Infant overheated/overdressed	0

The ideal sleep surface for infants is firm with no soft items under or near the baby. Thirty percent (6) of the infants dying of SIDS in Idaho in 1999 were in their cribs when they were discovered. The others were found in the following locations:

- 5 were in beds
- 2 were on the floor
- 2 were on sofas
- 1 in a stroller
- 1 in a bassinet
- 1 on a mattress
- 2 of the records did not state the location of discovery.

Eleven (11) of the SIDS deaths reviewed had insufficient evidence to determine preventability.

While the cause of SIDS remains unknown, the risk can be reduced by understanding and being aware of risk factors, but no one behavior can eradicate the risk completely.

An infant was breast fed and placed in the crib to sleep. The position the child was placed in to sleep was not documented on any of the available records. The parents checked on the child 6 hours later and found the child not breathing.

Data Gaps

For a SIDS diagnosis to be made there has to be a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history. Most SIDS deaths did not have a SIDS investigation form completed and much information was missing. For example, reports received did not include information on sleep position, maternal smoking, or sleeping surface. The SIDS investigation form is available at www.cdc.gov/mmwr/PDF/rr/rr4510.pdf

The team is concerned about the lack of information available on SIDS deaths and the ongoing behavior of not placing infants on their backs to sleep.

We recommend:

- The CDC SIDS investigation form should be used for all cases of suspected SIDS. The SIDS investigation form is available at www.cdc.gov/mmwr/PDF/rr/rr4510.pdf.

- An ongoing effort to educate new mothers about the risk factors that can contribute to SIDS, including this advice from the American Academy of Pediatrics web site www.aap.org/family/infsids.htm.

Infant Sleep Positioning and SIDS

Parents and caregivers should place healthy infants on their backs when putting them down to sleep. This is because recent studies have shown an increase in Sudden Infant Death Syndrome (SIDS) in infants who sleep on their stomachs. There is no evidence that sleeping on the back is harmful to healthy infants.
Keep the following points in mind

- Placing a child to sleep on the back has the lowest risk and is preferred. Sleeping on the side, however, is a reasonable alternative and is safer than sleeping on the stomach.
- Do not place your infant to sleep on waterbeds, sofas, soft mattresses, or other soft surfaces. Pillows, quilts, comforters, or sheepskins should not be placed under your infant.
- Soft materials such as pillows, quilts, comforters, sheepskins, or stuffed toys should be kept out of an infant's bed. These items can cover your child's airway even if he is lying on his back.
- Devices designed to maintain sleep position or to reduce the risk of rebreathing are not recommended since many have not been tested sufficiently for safety. None have been shown to reduce the risk of SIDS.
- This recommendation is for healthy infants. Some infants with certain medical conditions or malformations may need to be placed on their stomachs to sleep. For these children, talk to your pediatrician about which sleep position is best.
- This recommendation is for *sleeping* infants. A certain amount of "tummy time," while the baby is awake and observed, is recommended for developmental reasons and to avoid flat spots on the head.

Additional tips to reduce the risk of SIDS

- Do not smoke during pregnancy; continue to provide a smoke-free environment for your baby.
- Make sure your baby does not become overheated. Keep the temperature in the baby's room so it feels comfortable for an adult, and dress your baby in as much or little clothing as you would wear.
- Share all of these important tips for preventing SIDS with baby-sitters, grandparents, and other caregivers.

UNINTENTIONAL INJURY

Injuries play a greater role in mortality as children grow older. Injuries are the leading cause of death in children from 1-17 years of age. Of the 126 deaths reviewed by the team, injuries claimed the lives of 92 children; the majority (73) of the deaths were unintentional.

Unintentional injuries are those that appear to occur by chance. Intentional injuries are those that appear to have been planned or are inflicted by a person. Suicide and Homicide are intentional injuries. The classification of injuries into two categories, intentional and unintentional, allows emphasis to be placed on prevention activities. The phrase "unintentional injury" is used in this document interchangeably with accident.

Unintentional injuries are generally understandable, predictable, and most importantly, preventable. Understanding injury patterns is key to prevention. Each type of unintentional injury has a particular pattern, based on the following factors:

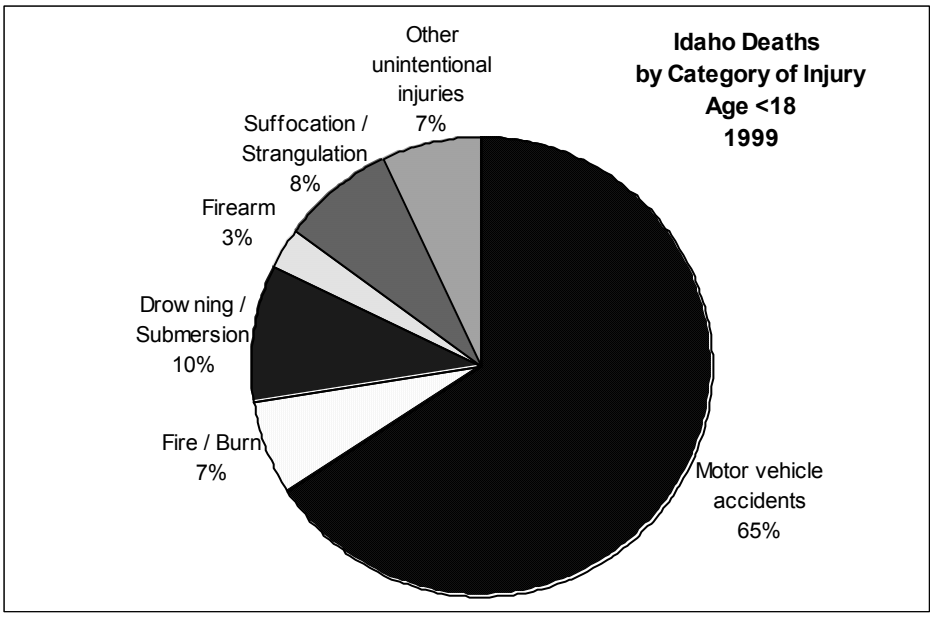
- Age
- Gender
- Developmental level: physical, mental, emotional
- Presence of injury opportunities such as all-terrain vehicles, backyard swimming pools, firearms, kerosene heaters, etc.
- Access to and use of bike helmets, seat belts, smoke detectors, etc.
- Lack of appropriate supervision

Several characteristics are common to most types of injuries. Nationally injury rates are greatest in:

- Low socioeconomic groups, especially urban African-American children and American Indians/Alaska Natives
- Males

Nationally the leading causes of fatal childhood unintentional injury are motor vehicle accidents, fires/burns, drowning, falls, and poisoning.

The leading causes of unintentional injury deaths in Idaho in 1999 were motor vehicle accidents, drowning, and suffocation.



The next 6 sections of this report summarize each type of unintentional injury.

MOTOR VEHICLE FATALITIES

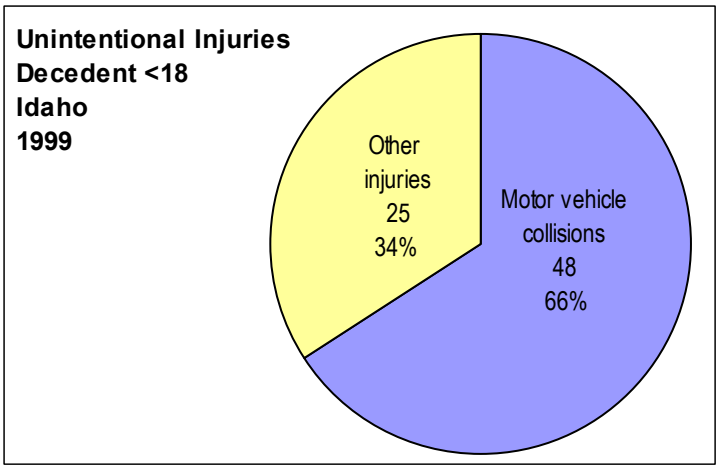
Motor vehicle *accidents (MVA) are classified into 2 categories, traffic and non-traffic. Traffic collisions are those occurring on a public roadway. Non-traffic collisions are those that occur on private property. In 1999 there were 48 MVA fatalities resulting from 46 separate collisions. Forty-four (44) of the fatalities and 42 accidents were classified as traffic. Four (4) fatalities and 4 accidents were classified as non-traffic. Statistics in this section use the number of fatalities (48) in the denominator unless otherwise noted.

Position in/on Vehicle	Traffic	Non-traffic	Total
Pedestrian/ Skateboard	4	1	**5**
Bicycle/Tricycle	3	1	**4**
Motorcycle	1		**1**
Car/Pickup/SUV*	36	1	**37**
Farm Vehicle		1	**1**
Total	**44**	**4**	**48**

*One fatality was in utero at the time of the accident and is not included in the safety restraint statistics

The rate of motor vehicle fatalities among Idaho's children is higher than the U.S. rate (see page 14).

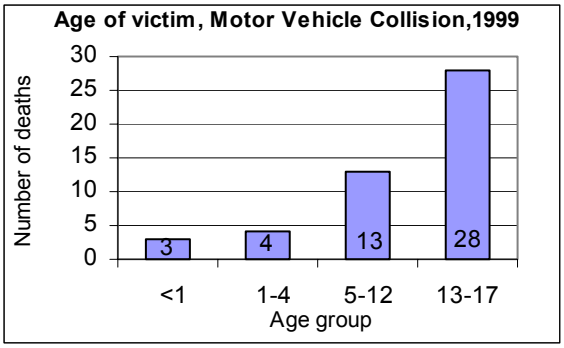
In Idaho in 1999 almost twice as many children died in motor vehicle collisions as all other unintentional injuries combined.



* The term accident and collision appear interchangeably in this document due to the combined resources and records used by the CMRT. "Accident" is the term used by Vital Records and "Collision" is used by the Office of Highway Safety.

Motor Vehicle Traffic and Non-traffic Accidents Combined

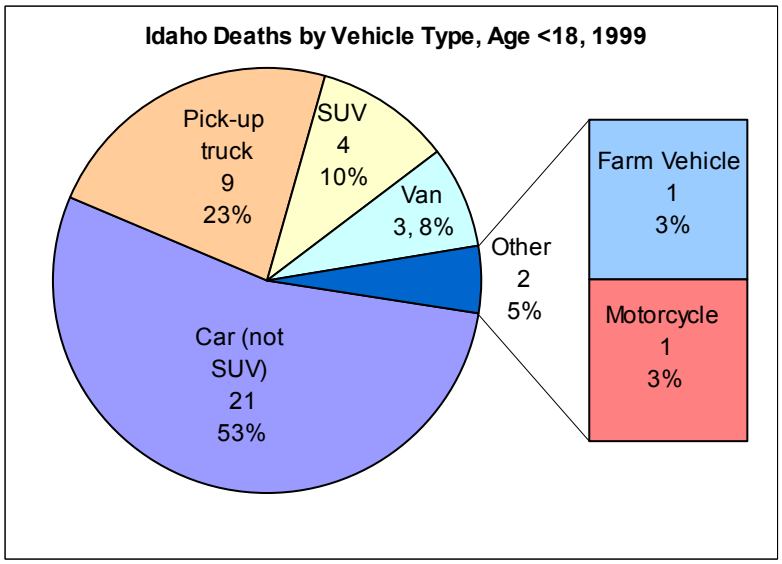
In Idaho in 1999 the majority of motor vehicle collision victims were teenagers.



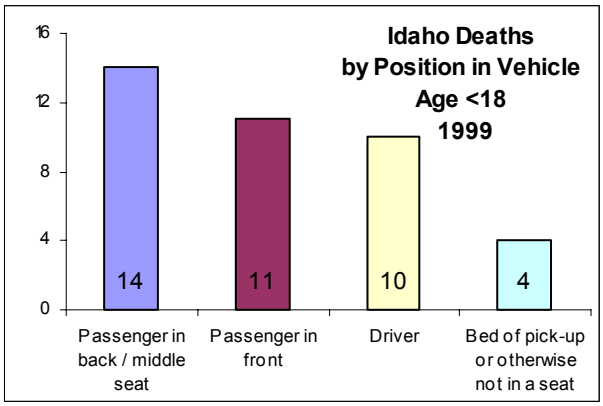
There were 9 fatalities in motor vehicle collisions who were not in a vehicle. Four (4) were pedestrians, 4 were cyclists, and 1 was riding a skateboard. One (1) of the pedestrians and 1 cyclist were non-traffic accidents that occurred on private property.

- Of the 3 pedestrians involved in traffic accidents, 1 was walking on the interstate in the dark, one was sitting in the roadway after dark, and one was crossing a highway and was under the influence of alcohol.
- Of the 3 cyclists that were involved in traffic accidents, 2 failed to stop at a stop sign, and 1 was riding on a highway at night without lights.
- The skateboarder was being pulled behind a car, fell, and was run over.

Of the 39 fatalities that involved occupants in vehicles, cars and pickups were the most common form of transport for the victim. Four (4) of the 9 children riding in a pickup were in the open bed of the pickup when the collision occurred.



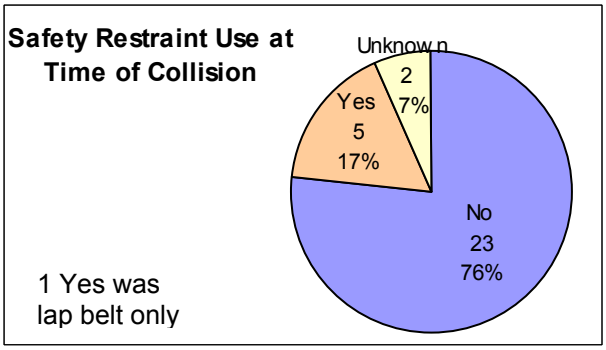
Of the motor vehicle fatalities that occurred in/on a vehicle, 10 were drivers, 25 were passengers inside a vehicle, and 4 were riding in the bed of a pickup.



Safety Devices in MVA deaths

Lack of correctly used safety restraints has been clearly linked to the risk of death while riding in a motor vehicle. Research shows children are more likely to be restrained in vehicles if adults use seat belts. The statistics about safety devices include only those fatalities occurring in traffic accidents.

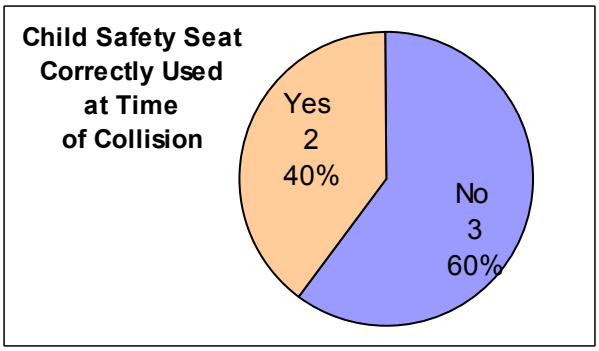
Twenty five (25) of the 30 fatally injured children and teens age 4 or over in vehicles were not restrained.



Idaho law requires children under the age of 4 years and 40 pounds to be properly restrained in a car safety seat unless:

- The car was manufactured before January 1, 1966,
- All seats are in use,
- The child is removed from the seat for nursing or to attend to immediate physiologic needs.

Only 2 of 5 children under the age of 4 were correctly restrained in a child safety seat at the time of the collision. Two (2) children were unrestrained and 1 was restrained in a safety seat that was not secured in the car.



According to the "Idaho Behavioral Risk Factors Surveillance System Report, 1999" random phone survey conducted by the Bureau of Vital Records and Health Statistics

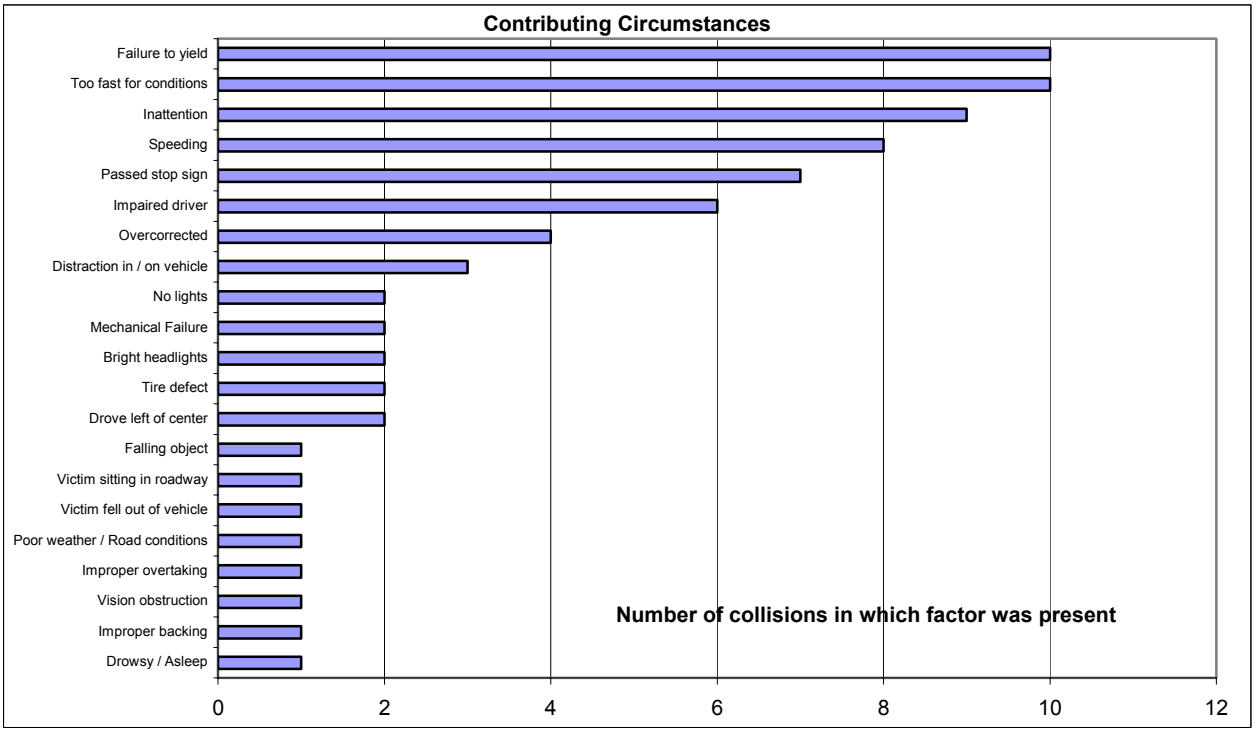
- Over nine of ten (92.1%) Idaho adult residents with children under the age of 5 in their household reported that the child **always** rides in a child safety seat in the car.
- Nearly nine out of ten (89.1%) Idaho adult residents with children between the ages of 5 and 16 reported that the child wears a seatbelt **always** or **nearly always** while riding in a car.

Helmets save lives, just like seat belts do. According to research done at Harborview Medical Center Injury Prevention and Research Center at the University of Washington in Seattle, overall, helmets decrease the risk of head and brain injury by 85 to 88 percent and facial injury to the upper and mid face by 65 percent.

None of the 6 children who died while on bicycles, skateboards, or motorcycles were wearing helmets at the time of their injury.

Contributing Circumstances

For every vehicle involved in a traffic collision in Idaho, the investigating officer may indicate up to 3 circumstances contributing to the cause of the collision on the collision report. Failure to yield was the most common contributing circumstance in fatal collisions involving children. Too fast for conditions and inattention were the second and third most common circumstances identified on vehicle collision reports.



The CMRT reviews from 1997-1999 reveal consistency in the contributing circumstances associated with fatal collisions in children. The top 3 contributing circumstances over 3 years are:

- Inattention
- Driving too fast for conditions
- Speeding

Driving under the influence of drugs and/or alcohol is documented as Impaired Driver and is in the top 7 for all 3 years.

Drugs and Alcohol

There are 2 reasons making it difficult to link the impact of alcohol to fatal collisions involving children.

1. Idaho law requires only the blood of drivers and pedestrians dying in motor vehicle collisions to be tested for alcohol (Idaho Code 49-1314). At fault drivers who do not die may not be tested for alcohol/drugs.

2. Results from the tests that are performed are not always available. Of the 46 motor vehicle traffic collisions that resulted in 48 child fatalities, 28 of the drivers of vehicle(s) involved in the collisions were tested for drugs and / or alcohol. Of the 28 tested, 8 had positive results of substance(s) in the bloodstream, 8 of the results were unavailable at the time of review, and the other 13 had negative results.

In 1999 the review team was able to positively identify 7 collisions in which alcohol contributed to the collision:

- In 2 collisions the child who died was driving with a blood alcohol level at or above the legal limit.
- In 2 collisions the child was a passenger in a vehicle being driven by a driver under the influence of alcohol.
- In 1 bicycle/ car collision the driver of the vehicle was under the influence of alcohol.
- In 1 pedestrian collision the pedestrian was under the influence of alcohol

Young Drivers

According to the National Highway Traffic Safety Administration, on the basis of miles driven, teenagers are involved in three times as many fatal crashes as are all drivers. Why do young drivers have such poor driving performance? Three factors work together to make the teen years so deadly for young drivers:

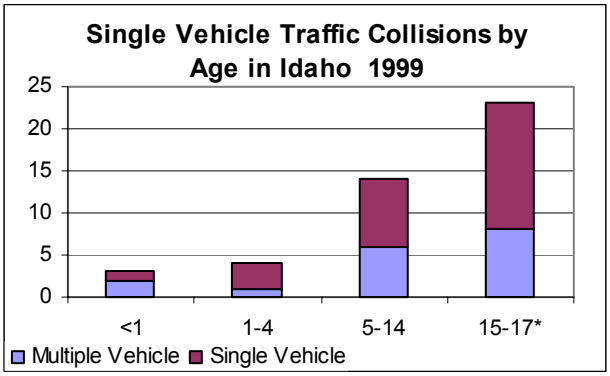
Inexperience: All young drivers start out with very little knowledge or understanding of the complexities of driving a motor vehicle. Like any other skill, learning to drive well takes a lot of time.

Risk-taking behavior and immaturity: Adolescent impulsiveness is a natural behavior, but it results in poor driving judgment and participation in high-risk behaviors such as speeding, inattention, drinking and driving, and not using a seat belt. Peer pressure also often encourages risk taking.

Greater risk exposure: Teen drivers are different from other drivers, and their crash experience is different. Compared to other drivers, a higher proportion of teenagers are responsible for their fatal crashes because of their own driving errors:

- A larger percentage of fatal crashes involving teenage drivers are single vehicle crashes. The vehicle usually leaves the road and overturns or hits a roadside object such as a tree or a pole.
- In general, a smaller percentage of teens wear their seat belts compared to other drivers.
- A larger proportion of teen fatal crashes involve speeding, or going too fast for road conditions, compared to other drivers.
- Two of three teens who die as passengers are in vehicles driven by other teenagers.

Older children were more likely to die in single vehicle accidents such as rollovers, although the number of multiple car accidents in this age group increased as well.



The following are examples of deaths that might have been prevented.

Victim in vehicle driven by underage driver who lost control on gravel road. Vehicle rolled. The victim, who was not wearing a seatbelt, was ejected. Driver and other passenger, who were wearing seatbelts, sustained injuries but survived.

Victim failed to yield to an oncoming semi-truck. Victim was not wearing a seatbelt. Passenger was wearing a seatbelt and sustained injuries but survived.

Motor Vehicle Non-traffic Accidents

Non-traffic accidents occur on private property so law enforcement does not complete a collision record thus there is less information available for review. The following case summaries illustrate the variety of non-traffic accidents that occur.

A child was backed over in the family driveway.

A child fell out of the back of a hay trailer.

A child fell out of the back of a flatbed truck and was run over.

A child riding a tricycle up and down the family driveway ran into a stock trailer passing by on the road.

1999 Conclusions and recommendations

The team recommends a standard (primary) seat belt law that covers all ages and all seating positions based on the following information from the National Highway Traffic Safety Administration.

Seat belts work. They are the most effective means of reducing fatalities and serious injuries when traffic crashes occur and are estimated to save 9,500 lives in America each year. Research has found that lap/shoulder belts, when used properly, reduce the risk of fatal injury to front seat passenger car occupants by 45 % and the risk of moderate-to-critical injury by 50 %. For light truck occupants, seat belts reduce the risk of fatal injury by 60 % and moderate-to-critical injury by 65 %. http://www.nhtsa.dot.gov/people/injury/airbags/presbelt/america_seatbelt.html

The team recommends child safety restraint education for parents based on the following information from the National Highway Traffic Safety Administration.

Child safety seats work. Children, especially those under the age of 5, are vulnerable in collisions because of the size and shape of their bodies. The child safety seat is designed to spread the forces of a crash over more of the body for front-facing toddlers, and cradle the fragile neck and back of the rear-facing infant.

Child safety seats are the most effective occupant protection devices used in motor vehicles today. If used correctly, they are 71 % effective in reducing fatalities in children under the age of 5 and 69 % effective in reducing the need for hospitalization. About 50 % of children under age 5 who died in crashes were

unrestrained. Of the remaining 50 %, 26 % were in an adult seat belt which does not provide effective protection for most children under age 5. Others were in a child restraint system, but had not been restrained properly. In studies conducted by NHTSA to observe child safety seat misuse, nearly 80 % of the child seats observed were misused in one or more ways. In some cases, the seat was not properly attached to the vehicle; in others, the child was not appropriately buckled into the seat. http://www.nhtsa.dot.gov/people/injury/airbags/presbelt/america_seatbelt.html

Proper Child Safety Seat Use Chart **Buckle Everyone. Children Age 12 and Under in Back!**			
	INFANTS	**TODDLER**	**YOUNG CHILDREN**
WEIGHT	Birth to 1 year at least 20-22 lbs.	Over 1 year and Over 20 lbs.-40 lbs.	Over 40 lbs. Ages 4-8, unless 4'9".
TYPE of SEAT	Infant only or rear-facing convertible	Convertible / Forward-facing	Belt positioning booster seat
SEAT POSITION	Rear-facing only	Forward-facing	Forward-facing
ALWAYS MAKE SURE:	Children to one year and at least 20 lbs. in rear-facing seats Harness straps at or below shoulder level	Harness straps should be at or above shoulders Most seats require top slot for forward-facing	Belt positioning booster seats must be used with both lap and shoulder belt. Make sure the lap belt fits low and tight across the lap/upper thigh area and the shoulder belt fits snug crossing the chest and shoulder to avoid abdominal injuries
WARNING	All children age 12 and under should ride in the back seat	All children age 12 and under should ride in the back seat	All children age 12 and under should ride in the back seat

www.nhtsa.dot.gov/people/injury/childps/

The team recommends public education on the danger of riding unrestrained in pickup truck beds.

"Kids Aren't Cargo" a public safety campaign from the National Highway Traffic Safety Administration tells of the dangers of riding in the open bed of a pickup and how those dangers can be prevented. The dangers include:

- Nationally children and teenagers account for more than half of the deaths of passengers riding in the bed of a truck.
- Ejection is the most significant cause of injury and death for pickup truck cargo area passengers in collisions. Even if no collision occurs, cargo area passengers can fall out during swerving, braking or on rough roads.
- One third of non-collision deaths occurred when victims are standing up, sitting on the tailgate or "horsing around." www.nhtsa.dot.gov/people/outreach/safesobr/18qp2/cpsw18.htm

The team supports the Department of Education proposed revised rules for driver's education.

The draft proposed rules include minimum course standards for the delivery of teen driver education and training. The standards for the teen driver education and training program are the same for public and commercial schools. While a majority of the commercial school owners support minimum standards for teen driver education and training, some commercial schools want licensing without regulations. The Idaho Department of Education must exercise a degree of administrative discretion, consistent with the intent of the governing rule or law, to carry out its duties. Teen driver education is a public safety and health issue and the proposed draft rules for minimum standards for teen driver education and training take this into consideration.

The team recommends that drivers education address at a minimum information on the dangers of:

- Failure to yield the right of way
- Running or rolling through stop signs
- Driving too fast for conditions (especially ice or snow)
- Exceeding the posted speed limit
- Following too close
- Running or pushing the red light
- Failing to use safety restraints

The team makes the following recommendations for improving bicycle safety in Idaho:

- Provide motorist education on sharing roadways safely.
- Develop bike lanes and paths to accommodate bicyclists.
- Provide access and linkage between bike paths and lanes.
- Provide safe bicycling routes around schools.
- Provide bicycle safety education to children and their parents including the importance of helmet use.
- Provide low cost bicycle helmets.
- Enforce existing bicycle-related regulations.

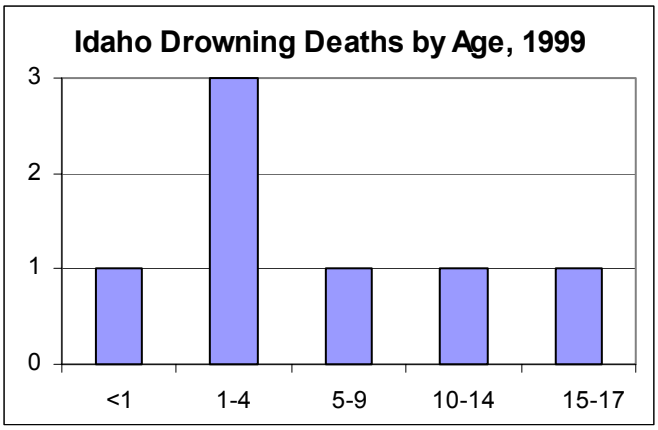
DROWNING AND SUBMERSION

Drowning is the second leading cause of injury-related death for children aged 1 through 14 years. Knowledge is a powerful tool for combating these tragedies. Knowing how and where children drown provides a basis for prevention.

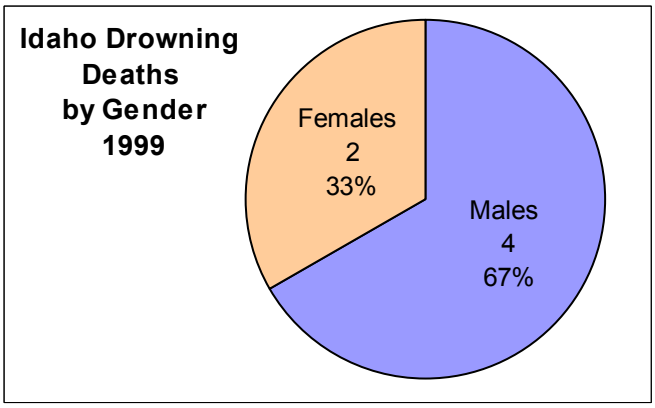
In Idaho in 1999, 7 deaths of children under the age of 18 were identified and presented to the team. All 7 were reviewed and all were determined to be definitely preventable.

Nationally, drowning rates are highest for children under 5 years of age and persons 15-24 years of age. Young children are irresistibly drawn to water. The majority of childhood drowning deaths occur in a matter of seconds, usually when a child is left unattended or during a brief lapse in supervision

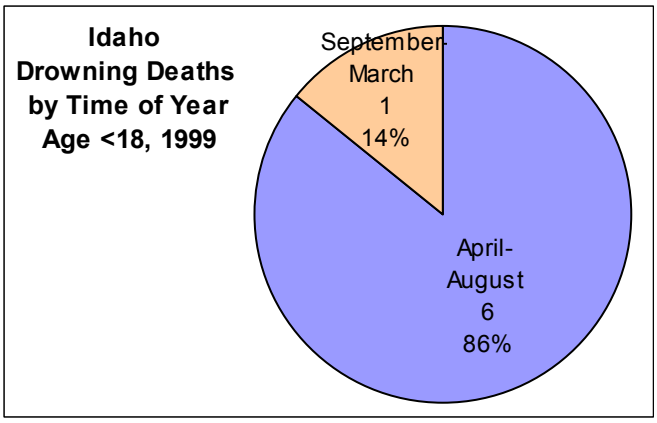
In Idaho in 1999, 4 drowning deaths were children under the age of 5.



Nationally in 1999, 70% of children between the ages of 1 and 17 who died from drowning were male. In Idaho in 1999, 67% of the drowning deaths for the same age group were male.



Nationally, most drowning deaths occur between the months of May and August. In Idaho 71% of the drowning deaths of children occurred between May and August.



How children drown tends to vary by age. For example, children under age 1 most often drown in bathtubs, buckets, and toilets. Children 1-4 most often drown in swimming pools, hot tubs, or spas. Children aged 5-14 typically drown in swimming pools or open water, such as lakes and rivers.

IDAHO DEATHS BY DROWNING 1999	
Age of Child	**Location of Drowning**
<1	Bathtub
1-4	Canal
1-4	Fish Pond
1-4	Swimming Pool
5-14	Swimming Pool
5-14	Canal
15-17	Reservoir

In Idaho in 1999 there was 1 drowning death in open water, unlike 1998 when 7 of the 12 drowning deaths under the age of 18 occurred in rivers.

Taking simple prevention measures and close supervision of children can help protect them from drowning. Six (6) of the 7 drowning deaths in Idaho in 1999 had lack of supervision as a contributing factor.

A child drowned in the family swimming pool in their back yard. The pool was fenced and locked with a picnic table against the fence. The adult supervisor was on the phone when the child was noticed to be missing. The child was found at the bottom of the pool.

A child was playing in the front yard. The adult supervisor went into a motor home for no more than 5 minutes. When the adult came back, the child was missing. The child was found in a canal near his home.

1999 Conclusions and recommendations

The team recommends that public education be provided on the following:

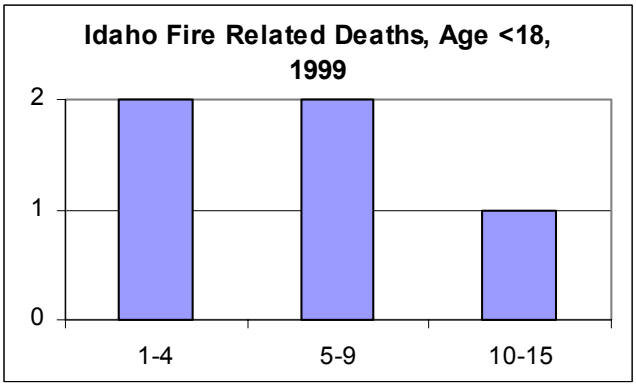
- Small children should NEVER be left unsupervised around any container of water large enough for the child to get their head in. This includes mop buckets, toilets, bathtubs, pools, spas and open bodies of water such as canals, rivers and reservoirs.
- Children should wear a U.S. Coast Guard-approved personal flotation device (PFD) when on boats, near open bodies of water, and when participating in water sports that do not require swimming. Water wings are not considered safety devices and are not substitutes for PFD.
- Parents should not rely on PFD or swimming lessons alone to protect children.
- Pools and spas should be fenced. Fences should be at least 5 feet tall, four-sided (to prevent access from the house), and have self-closing and self-latching gates. Items that could be used by children to provide access over fencing (such as tables and chairs) should not be pushed up against pool fences.
- Children under the age of 15 years should not operate personal watercraft.

FIRE AND BURNS

In Idaho in 1999, 5 children lost their lives in 2 separate fires. All 5 deaths were presented to the team; all were determined to be definitely preventable.

The national statistics and information presented in this section are reported by the National SAFEKIDS Campaign.

Children ages 5 and under are more than twice as likely to die in a fire as the rest of the population. In Idaho in 1999, 2 of the 5 children were under the age of 6.



Nationally, more than 70% of all fire-related deaths are from smoke inhalation caused by toxic gases produced as fires develop and spread. In Idaho in 1999 all 5 of the fire related deaths were due to smoke inhalation.

Children are often at risk due to their own curiosity. Studies indicate that an estimated 38 percent of children ages 6 to 14 have played with fire at least once. Child-play fires are the leading cause of fire-related death for children 5 and under. Nearly 80 percent of these are started with matches or lighters. Boys are nearly twice as likely as girls to play with fire. In Idaho in 1999, 2 of the children dying in 1 of the fires were thought to have been playing with matches.

Children are at grave risk of injury and death from residential fires because they have less control of their environment than adults and limited ability to react appropriately. More than 40 percent of residential fire-related deaths among children ages 9 and under occur when the child is attempting to escape, is unable to act, or is acting irrationally. Children in homes without working smoke alarms are at the greatest risk. Households without working smoke alarms are approximately two and a half times more likely to have a fire. In Idaho in 1999, 3 of the children dying in 1 of the fires were sleeping at the time of the fire and were found in an area of the residence that would suggest they were trying to get out. It is unknown if smoke alarms were present or working at the time of the fire.

Home fires and fire-related deaths are more likely to occur during the cold weather months, December through February, when there is a significant rise in the use of portable or area heating equipment such as fireplaces, space heaters and wood stoves.

Three (3) children died in 1 fire. The fire occurred during the cold weather months and was determined to be due to blocked vents on the heater.

1999 Conclusions and recommendations

The team supports the public education efforts of fire departments regarding smoke alarms and fire prevention including:

- Changing batteries in smoke alarms twice a year when daylight savings time changes.
- Replacing smoke alarms every 10 years.
- Providing a low or no cost source for smoke alarms.
- Providing education that combustible materials must be kept away from heaters and electrical connections.

FIREARMS [UNINTENTIONAL]

In Idaho in 1999 there were 2 unintentional firearm deaths. Both were reviewed by the team and determined to be definitely preventable.

All children are potentially at risk for unintentional firearm injury regardless of whether there are guns in the home or children know the rules about handling guns. Knowing how and why the injuries occur can substantially reduce the risk.

According to the National SAFEKIDS Campaign nearly all childhood unintentional shooting deaths occur in or around the home. Half occur in the home of the victim and nearly 40 percent occur at a friend or relative's house. Most of these deaths involve guns that have been kept loaded and accessible to children and occur when children play with the guns. In Idaho in 1999, 1 death occurred at home and 1 while hunting.

Rates of unintentional firearm-related injury are higher in rural areas, where people are more likely to own firearms. Shootings in rural areas are more likely to occur outdoors with a shotgun or rifle; in cities, most shootings occur indoors with a handgun. In Idaho in 1999 both unintentional shootings were with a rifle or shotgun. One occurred outdoors while hunting. The other occurred at the victim's home while loading and unloading rifles.

Boys are far more likely to be injured and die from firearm-related incidents than girls. Of children killed in unintentional shootings, nearly 80 percent are male. In Idaho in 1999 both unintentional firearm victims were male.

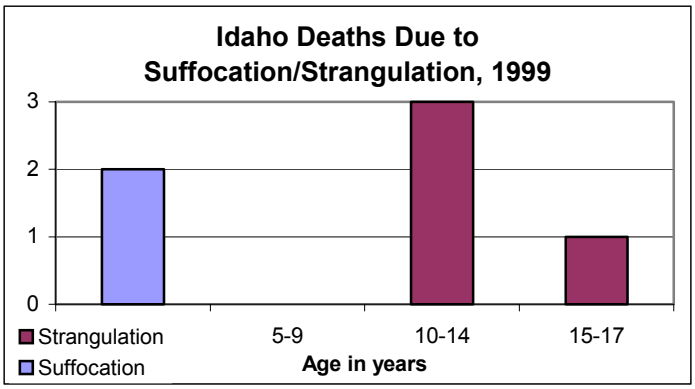
A teenager was hunting with 3 friends. Evidence and testing of the shotgun showed that the gun was probably dropped and it discharged.

A teenager was at home with a friend. They were handling 2 rifles, loading and unloading them. One of the rifles was dropped and it fired.

SUFFOCATION AND STRANGULATION

In 1999, 6 children died from unintentional suffocation or strangulation. All of these deaths were reviewed. Five (5) of the 6 were determined to be definitely preventable and the preventability of 1 was unable to be determined.

In Idaho in 1999, 4 children died due to strangulation and 2 children died due to airway obstruction/aspiration.



1999 Conclusions and recommendations

The team recommends public education to increase awareness of:

- The problem of choking.
- Items that can present a choking hazard.
- Ages at which children are at highest risk for choking by various items.
- The importance of adult supervision when young children are eating and playing.

The team acknowledges that complete removal of all choking hazards is unlikely and recommends that all parents be trained in infant and child foreign body airway obstruction.

- Instruction on choking intervention should be incorporated into all lay-person CPR and first aid courses.
- Health-care providers should provide parents and caregivers instruction in how to treat infant and child foreign body obstruction.

OTHER UNINTENTIONAL INJURIES

There were 5 deaths that occurred from other unintentional injuries. All 5 were determined to be definitely preventable.

Following are summaries of the 5 cases.

Two children died while making a makeshift tunnel at a landfill. The walls collapsed and the children died of crushing injuries.

One child died when crushed by a bale of hay being unloaded with a forklift.

One child died after a homemade cannon exploded.

One child died from a pulmonary hemorrhage. Pathologists concluded it was caused by gastric contents or possibly some kind of inhalant.

1999 Conclusions and recommendations

The team recommends parent education on how to determine which farm-related tasks are appropriate at given ages.

Guidelines can be found at:
www.extension.umn.edu/distribution/youthdevelopment/DA6188.html.

The team recommends adult supervision during hay unloading operations.

Guidelines for enssuring children are ready and able to be involved in hay unloading operations can be found at:

www.nagcat.org/poster/hay/loadhay.htm

INTENTIONAL SELF-HARM (SUICIDE)

According to the Centers for Disease Control and Prevention in 1999 suicide was the third leading cause of death for young people 10-17 years in the United States and the second leading cause of death for the same age group in Idaho. Idaho was ranked 4th in the nation in 1999 for the rate of suicide injury deaths of children aged 10 to 17 years.

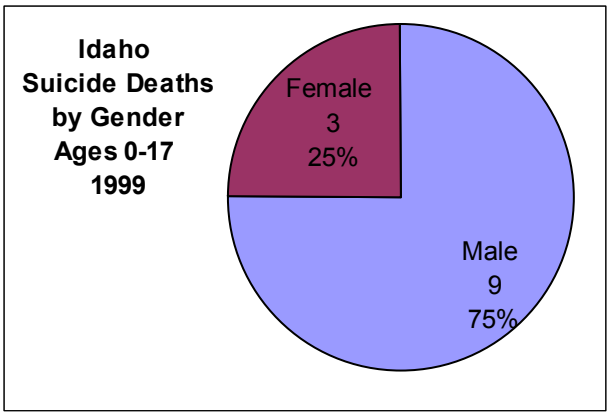
Twelve (12) suicides occurred in Idaho in 1999. All 12 cases were reviewed by the team and were determined to be definitely preventable.

Ten (10) of those who died from suicide were ages 15-17. Two (2) of the victims were under the age of 15. Although suicide among children ages 10-14 is considered a rare event, Idaho had 4 deaths in both 1997 and 1998 in the 10-14 age group.

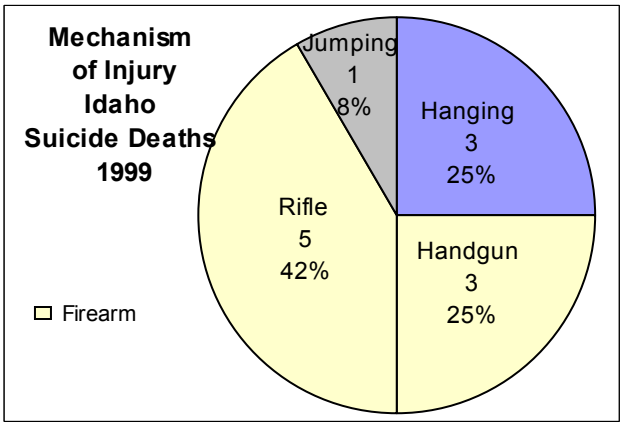
IDAHO RESIDENTS DYING IN IDAHO DECEDENT LESS THAN 18 YEARS SUICIDE DEATHS, AGE AND SEX, 1999

AGE	MALE	FEMALE
13	1	0
14	0	1
15	1	1
16	2	1
17	5	0
TOTAL	***9***	***3***

The risk for suicide among young people is greatest for males. In Idaho in 1999, 75% of the victims were males.



Each year more suicides occur by firearms in the United States than all other methods combined. In Idaho in 1999, 67% of the suicides occurred by firearms.



A teenager committed suicide by hanging. The teenager reportedly had below average grades, interpersonal problems with friends, and had been grounded and was unable to attend a family function.

A teenager committed suicide by shooting. The teenager had a history of depression and alcohol/drug use and had made prior suicide attempts.

Data Gaps

The team was challenged by the lack of a consistent investigation of suicide deaths and the lack of information regarding the medical, social, and psychological history of the victim.

1999 Conclusions and recommendations

The team supports the Department of Health and Welfare and their public and private partners in the development of a statewide suicide prevention plan. We would like to see the following issues addressed in the plan:

- Promote public awareness that adolescent suicide is a problem that can be prevented.
- Work with the media to ensure news coverage of suicides is not sensationalized.
- Work with staff at schools having had a student suicide to ensure that response to the suicide is not sensationalized and to support peers in an effort to prevent future suicides.
- Provide training to primary care providers and natural community helpers on recognizing and responding to adolescents showing signs of suicide risk. Include information on referral resources.
- Provide information to parents of children who are at risk for suicide on recognizing and responding to signs of potential attempts. Provide information on referral resources.
- Provide information to parents of adolescents at risk for suicide on the necessity of securing guns and ammunition.
- Provide professional education to improve suicide investigations by thorough collection of medical histories, improved scene investigations, enhanced systems for conducting psychological autopsies, and toxicological exams.

ASSUALT (HOMICIDE)

The rate of homicide in Idaho is lower than the United States. There were 7 deaths due to homicide in Idaho in 1999. All 7 were presented to the team.

Six (6) cases were reviewed. Of the 6 reviewed cases, all were determined to be definitely preventable. The 1 death that was not reviewed was originally diagnosed as SIDS and the investigation was still pending at the time of review. This death was later determined to be homicide after a confession and a subsequent conviction. This death is included in the following statistics although preventability was not determined by the team.

The United States Bureau of Justice Statistics reported in 1999 that the killing of children under the age of 5 years increased in the last 2 decades but has recently been on the decline.

In Idaho in 1999, 6 of the 7 (85.7%) victims of homicide were less than 5 years old.

According to the Bureau of Justice Statistics, a parent, including stepparents, is the perpetrator in most homicides of children under age 5.

Five (5) of the 7 (71.4%) homicide death victims in Idaho in 1999 were killed by a parent (2 by fathers, 3 by mothers). Two (2) children died as the result of a double homicide followed by suicide of the father.

1999 Conclusions and recommendations

The team recommends that public education take place to raise awareness that all citizens become aware of signs of child abuse and that citizens be educated on the signs that indicate that a parent or caretaker is too stressed to care for a child.

An abused or neglected child is one whose physical or psychological health or development is harmed by the parents' (or caretaker's) behavior. Child abuse includes physical abuse, physical neglect, sexual abuse and emotional abuse of a child under 18 years of age by a parent- or by another family member or caretaker.

Types of Abuse	What does that mean?	How do I recognize It?
Physical Abuse	A non-accidental injury to a child by a parent or caretaker.	You may see frequent and unexplained bruises, burns, cuts, injuries; the child may be overly afraid of the parent's reaction to misbehavior.
Physical Neglect	A parent or caretaker's failure to give the child food, clothing, hygiene, medical care and supervision.	You may see a very young child routinely left alone at home. You may know that a severe illness or injury is not being medically treated. A neighbor child may frequently turn up at your door--inadequately dressed for the weather--saying their parent told them to stay away. Physical neglect can be hard to judge; sometimes what you see is poor judgment, but not neglect. Sometimes what you see is the result of poverty, not parental neglect.
Sexual Abuse	Ranges from offenses such as promoting prostitution, to fondling, intercourse, or using the child for pornographic materials.	You may observe sexual behavior way beyond what is expected for the child's age; a young child might have sudden, unusual difficulty with toilet habits; there may be pain or itching, bruises or bleeding in the genital area. The child might tell you.

MANNER UNDETERMINED

For 3 deaths to children in 1999 the manner could not be determined, even after autopsy.

A child died from asphyxiation.

A young child died from herniation of the brainstem.

A young child died from a skull fracture.

FIREARMS IN INJURY DEATHS

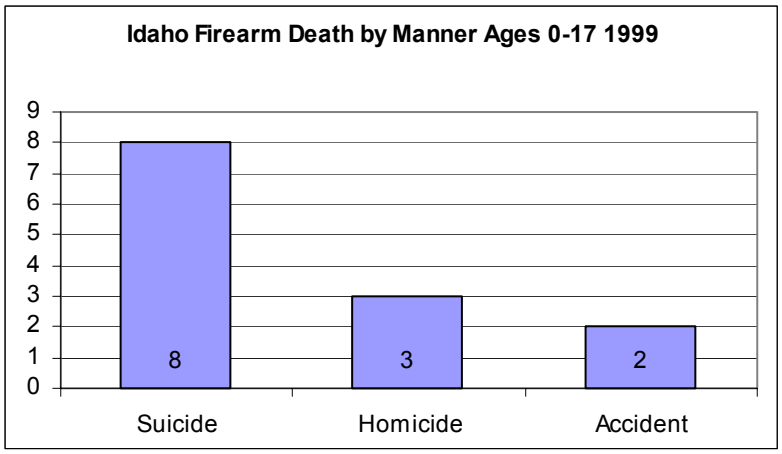
This section contains aggregate data and includes unintentional injury, intentional injury, and deaths with undetermined intent.

There were 13 firearm deaths of children in Idaho in 1999. Firearms were the second leading cause of injury death in Idaho in 1999. Only motor vehicle accidents claimed more young lives.

The majority of firearm deaths were due to suicide.

In 11 cases the weapon was used to intentionally harm (suicide and homicide).

In 2 cases a loaded weapon was dropped.



Nearly two-thirds (62.5 %) of suicides by firearm were committed with a rifle.

Handguns were used in all assault (homicide) deaths and over one-third (37.5%) of suicide deaths.

Shotguns were used in only 7.7% of the firearm deaths.

IDAHO RESIDENTS DYING IN IDAHO
DECEDENT LESS THAN 18 YEARS
FIREARM DEATHS, MANNER BY WEAPON TYPE, 1999

MANNER	HANDGUN	RIFLE	SHOTGUN
Accident	0 *0.0%*	1 *16.7%*	1 *100.0%*
Homicide	3 *50.0%*	0 *0.0%*	0 *0.0%*
Suicide	3 *50.0%*	5 *66.7%*	0 *0.0%*
Total	6 *100.0%*	6 *100.0%*	1 *100.0%*

percents may not add to 100 due to rounding.

According to the Bureau of Vital Records and Health Statistics "Idaho Behavioral Risk Factors" Surveillance System Report, 1999 :

- Almost 2 of 3 (63.3%) Idaho adults with children less than 18 years of age have a gun present in their home or vehicle.
- Almost 1 in 9 (11.6%) adults with children less than 18 years of age has a loaded gun in the home.
- Approximately 1 in 24 (4.2%) adults with children less than 18 years of age has a loaded gun in his/her vehicle.

Nearly half (46.2%) of the firearms used in child deaths in Idaho in 1999 belonged to an adult member of the victim's family.

1999 Conclusions and recommendations

The team recommends public education on firearm storage including the following messages:

- Firearms should be stored unloaded and locked out of children's reach.
- Ammunition should be stored in a separate, locked location from firearms.
- Gun storage keys and lock combinations should be hidden in separate locations.
- Gun locks and load indicators could prevent more than 30 percent of all unintentional firearms deaths. (www.safekids.org)
- Low cost gun locks should be made available.
- Children should be taught the following by their caregivers:
    - Guns are dangerous.
    - Never touch or play with guns.
    - To tell an adult if they find a gun, or to call 911 if they find a gun when an adult is not present.
    - Gun violence on TV and in the movies is not real.
- Caregivers should check with neighbors, friends, relatives, or other adults in other homes where children visit to ensure they are following safe storage practices if firearms are in the home.

APPENDIX A

T H E O F F I C E O F T H E G O V E R N O R
EXECUTIVE DEPARTMENT
STATE OF IDAHO
BOISE
EXECUTIVE ORDER NO. 98-10
CHILD MORTALITY REVIEW TEAM

WHEREAS, the health and safety of Idaho children are of primary importance; and

WHEREAS, the child death rate in Idaho exceeds that of the nation; and

WHEREAS, some child deaths are due to preventable causes; and

WHEREAS, records of children's deaths and circumstances leading to their death are kept by multiple agencies but not coordinated, on-going effort is being made to evaluate these records; and

WHEREAS, expertise exists within the state to evaluate these records and identify circumstances leading to or contributing to the deaths of children; and

WHEREAS, the identification of risk producing circumstances and recommendations to remediate them may reduce child death rates;

NOW THEREFORE, I, PHILIP E. BATT, Governor of the State of Idaho, by virtue of the authority vested in me under the Constitution and laws of this state, do hereby establish the Child Mortality Review Team.

The duties of the Team shall include reviewing data on selected cases of child death and developing recommendations for systems improvement which lead to reduced mortality.

The Director of the Department of Health and Welfare shall appoint the members of the Team. The Team shall establish the terms of appointment, chairmanship, and other operating guidelines in bylaws. Membership shall include:

- a pediatrician,
- an emergency medicine physician,
- a pathologist,
- a coroner,
- a prosecutor,
- a law enforcement representative,

- a Children at Risk Task Force member,

- the state epidemiologist, and

- a representative of the public.

An annual report with the Team's findings and recommendations shall be presented to the Governor and to the Chairs of the Senate and House Health and Welfare Teams.

This Executive Order shall cease to be effective four years after its entry into force.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Idaho at Boise the Capitol, the 16th day of July, in the year of our Lord nineteen hundred ninety-eight, and of the Independence of the United States of America the two hundred twenty-third and of the Statehood of Idaho the one hundred ninth.

PHILIP E. BATT

GOVERNOR

PETE T. CENARRUSA

SECRETARY OF STATE

APPENDIX B

TECHNICAL NOTES REGARDING SIGNIFICANCE TESTING

For significant testing of all rates contained in this report: p=.05. Three statistical tests were performed for each cause, area, or year. If the test outcomes did not match, the more frequent outcome was reported.

For causes, areas, or years in which the rate is based on 100 or more events, the following tests were performed:

1) Evaluate overlapping confidence intervals at p=.05. If the confidence intervals of the rates do not overlap, the rates are significantly different.
2) Evaluate the test statistic. If the z statistic is greater than or equal to the test statistic (1.96), the rates are significantly different.
3) If the confidence interval for the ratio of rates does not contain the value of 1, the rates are significantly different.

For causes, areas, or years in which the rate is based on less than 100 events, the following tests were performed:

1) Evaluate overlapping confidence intervals at p=.05. If the confidence intervals of the rates do not overlap, the rates are significantly different.
2) Evaluate the test statistic. If the Difference of Rates is greater than or equal to the z statistic, the rates are significantly different.
3) If the confidence interval of the Difference in Rates does not contain the value of 0, the rates are significantly different.

TECHNICAL NOTES REGARDING THE ICD-9 / ICD-10 CONVERSION

Cause-of-Death Classification

Mortality statistics are compiled in accordance with the World Health Organization (WHO) regulations, which specify that member nations, including the United States, classify and code causes of death in accordance with the International Statistical Classification of Diseases and Related Health Problems. The tenth revision of the International Classification of Diseases (ICD-10) was implemented in the United States beginning with deaths occurring in 1999 and replaces the ninth revision of the ICD (ICD-9), which was used from 1979 through 1998. Some changes from ICD-9 to ICD-10 include:

1. ICD-10 is far more detailed than ICD-9, with about 8,000 categories compared to 4,000 categories.
2. ICD-10 uses 4-digit alphanumeric codes, compared to 4-digit numeric codes in ICD-9.
3. Some cause-of-death titles have been changed, and conditions have been regrouped.
4. Some cause-of-death coding rules have been changed.

Comparability Ratio
The change from ICD-9 to ICD-10 may result in discontinuities in cause-of-death trends. These discontinuities are measured using comparability ratios. The National Center for Health Statistics (NCHS) developed comparability ratios to measure the level of agreement between classification systems for causes of death.
The comparability ratio is the result of a study completed by the NCHS in which a sample of the U.S. mortality data file was coded by both the new (ICD-10) and the old revision (ICD-9) codes.
Comparability ratio:

$$\frac{\text{Number of deaths for a cause of death based on ICD-10 code(s)}}{\text{Number of deaths for a cause based on the most comparable ICD-9 code(s)}}$$

A comparability ratio of 1.00 indicates that the same number of deaths were assigned to a particular cause whether ICD-9 or ICD-10 was used. A comparability ratio of less than 1.00 indicates fewer deaths occurred in 1999 compared with 1976-1998, solely because of the revision of the ICD. For example, a ratio of 0.98 (MVA deaths) indicates there were 2% fewer deaths (1.00-0.98) for this cause because of the code revision. A comparability ratio of more than 1.00 indicates more deaths occurred from this cause in 1999 compared with 1976-1998, only because of the implementation of ICD-10. A ratio of 1.04 (SIDS deaths) indicates 4% more deaths (absolute difference of 1.04-1.00) were attributed to the cause using ICD-10 than would have been using ICD-9.

Comparability ratios for select causes of death have been revised since preliminary comparability ratios were released. NCHS revised ratios for motor vehicle accidents. The comparability ratio for motor vehicle accidents was updated after a change in the classification of motor vehicle accidents. Originally, for a death to be classified as a motor vehicle accident in ICD-10, it must be explicit that the injury involved a “motor” vehicle, even if the injury occurred on a highway or road. In ICD-9, the absence of the term “motor” or when a vehicle accident was reported as occurring on a highway or road, the assumption was to classify the accident as involving a motor vehicle. ICD-10 did not allow for this assumption and such accidents are categorized as "Other" land transport accidents. *Since the implementation of ICD-10, however, for U.S. data, it has been decided that, if an accident occurred on a highway or road, classification to motor vehicle accident is appropriate. Idaho data published prior to this report may not reflect this change. Since this update was implemented, Idaho deaths due to motor vehicle accidents have been revised and are comparable to U.S. data.* Revised data are available upon request.

To show trends in data, NCHS has instructed states to treat ICD-10 as the standard and adjust statistics prior to 1999 using comparability ratios. Therefore, mortality statistics provided in this report are NOT comparable to previously published mortality statistics based on ICD-9 codes.

For example, in 1999 there were 21 Idaho resident deaths from SIDS based on ICD-10 codes. In 1998, there were 20 deaths from SIDS, based on the ICD-9 codes. At first glance, one would conclude the number of SIDS deaths increased by 5% from 1998 to 1999. However, because of changes in coding rules for ICD, these two counts are not comparable. Beginning in 1999 a change in Rule A affects the coding of SIDS deaths. In ICD-9 SIDS was treated as an ill-defined condition and ignored in the presence of other better-defined conditions listed on the death certificate. In ICD-10, SIDS is not considered to be ill-defined. Thus, in ICD-10, SIDS may be selected as the underlying cause of death even when other conditions are listed on the death certificate. Thus, deaths classified as SIDS in ICD-10 may have been classified to other causes using ICD-9.

The ICD-10 to ICD-9 comparability ratio for SIDS is 1.04. In other words, the counts and rates for SIDS were expected to increase 4% beginning in 1999 only because of the introduction of ICD-10. To compare the number of SIDS deaths in 1998 with the number of deaths in 1999 multiply 1998 data by the comparability ratio.

Number of deaths in 1998 (not comparable with 1999 data)	X	Comparability Ratio	=	Number of deaths in 1998, comparable with number of deaths in 1999 (rounded)	Number of deaths in 1999
20		1.04		21	21

In this report, trend data are presented for SIDS, Motor Vehicle Accidents, Suicide, and Firearm deaths. The following table shows the ICD-9 and ICD-10 codes and the comparability ratio for each of these causes of death.

CAUSE	ICD-9 CODES	ICD-10 CODES	COMPARABILITY RATIO
SIDS	798.0	R95	1.04
Motor Vehicle Accidents	810-825	V02-04,V09.0,V09.2,V12-V14,V19.0-V19.2,V19.4-V19.6,V20-V79,V80.3-V80.5,V81.0,V81.1,V82.0-V82.1,V83-V86,V87.0-V87.8,V88.0V88.8,V89.0, V89.2	0.98
Suicide	950-959	X60-X84,Y87.0	1.00
Firearms	922,955.0955.4,965.0-965.4,970,985.0-985.4	W32-W34,X72-X74,X93-X95,Y22-Y24,Y35.0	

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