

Idaho Child Mortality Review Team

Annual Report for Childhood Deaths 1998



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FORWARD

The Child Mortality Review Team Report is an important document that points out the numerous occurrences of unintentional injuries and deaths compromising Idaho's children. Our children are Idaho's most valued treasure. It is our responsibility as adults to love, nurture and protect them, particularly from nonsensical, preventable harm.

I applaud the work of the Child Mortality Review Team and stress the importance of taking this statistical report to heart. We must continue to educate parents, caregivers, teachers, decision-makers and the children themselves to be more aware of making healthy life-style choices that can protect and perhaps save a child's life.

Patricia Kempthorne
Idaho's First Lady

EXECUTIVE SUMMARY

The Idaho Child Mortality Review Team presents the second 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 1998. 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 year 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 future changes to reduce child deaths in Idaho.

Positive changes that resulted from our first year of review were:

- Changes in foster care rules to require:
 - Better home fire safety, including smoke detectors.
 - Safer storage of home firearms.
 - Better car restraint usage.
 - Closer review of immunization status.
- Funding assistance for autopsies of children who have died of unexplained causes.
- Support for, and planned participation in, training for coroners in death investigation.
- Public education on causes of child death in Idaho through release of the first report.

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 some records, especially coroner reports on SIDS deaths and other non-motor vehicle accidents.
- Lack of local review of cases, which would be more informative in many cases.

Summary of Findings and Recommendations

Of 215 deaths in 1998, 128 were considered to warrant further review and were presented to the CMRT.

Forty-three (43) Idaho children died in motor vehicle accidents in Idaho in 1998.

We recommend:

- Improving the use of seatbelts.
- Assuring that child safety seats are properly installed

- Increasing the use of seatbelts and safety seats by children through more stringent laws, such as
 - Amending Section 49-672, Idaho Code, regarding passenger safety for children, to increase the age of the child for mandatory restraint from “under the age of four (4) years” to “under the age of eighteen (18) years.” Eliminate the language allowing the child to be removed from a car safety seat for the purpose of nursing or attending to “immediate physiological needs.”
 - Amending Section 49-673, Idaho Code, regarding safety restraint use, to include a requirement that all back seat passengers must be restrained and raise the fine to increase compliance of all drivers and passengers.
- Increasing the focus of driver’s education programs on avoiding over-correction of turns and slides.
- Educating young drivers to pull off the road if they become sleepy, and avoid driving late at night.
- Changing state law to require testing the blood of all drivers involved in fatal accidents for alcohol and drugs.

Nineteen (19) Idaho children died of sudden infant death syndrome (SIDS) in Idaho in 1998.

We recommend:

- Use of a SIDS investigation protocol to promote further understanding of SIDS including a thorough case investigation, autopsy, review of clinical history and examination of the death scene for all children with a presumptive diagnosis of SIDS, such as that recommended by CDC.
- Continued emphasis of the importance and requirement of autopsies in children with a presumptive SIDS diagnosis.
- An increase in the number of infants placed on their back to sleep.
- Inclusion of post mortem metabolic screening in all SIDS investigations to rule out fatty acid oxidation disorders which according to research may comprise up to 5% of SIDS cases.
- Investigation of child deaths by law enforcement should be more comprehensive and should include a scene investigation, parental interview, access to medical history, and attendance at autopsy.

Fourteen (14) Idaho children died due to suicide in Idaho in 1998.

We recommend:

- Development of strategies that create greater public awareness of signs of suicidal tendency and knowledge of appropriate interventions

Twelve (12) Idaho children died due to drowning accidents in Idaho in 1998.

We recommend:

- Continuous adult supervision of children when in or around an open body of water.
- Public safety messages and education of children about river safety to raise awareness about the danger of rivers and other moving bodies of water, compared to lakes, pools, and ponds.
- Teaching children to swim, or stay away from all bodies of water if they are unable to swim.

Twenty-two (22) child death reviews were hampered by lack of access to complete records. In 13 of the cases records were so incomplete that preventability could not be determined. For an additional 9 cases, review was not even attempted, since insufficient information was available (in general, requested information was not sent to us, or was incomplete).

We recommend:

- Inclusion of a scene investigation, parental interview, and attendance at autopsy in the investigation of any child death by law enforcement.
- 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.
 - Protection of 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 injuries and deaths.

In response to this 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, multiagency 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, through voting on the preventability of the death and identification of prevention activities and target audiences. The Director of the Department of Health and Welfare appointed the following members to the team:

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

William Douglas, Prosecuting Attorney, Kootenai 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. Following are the assistants to the team:

Dia Gainor, Chief, Emergency Medical Services Bureau

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

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

Jane Smith, Chief, Bureau of Vital Records and Health Statistics

Jan Wick, Biostatistical Services Supervisor, 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.

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 under 18 years of age during 1998 were reviewed. The Bureau of Vital Records and Health Statistics identified deaths of these children occurring in Idaho. Deaths of children dying out of state were unable to be reviewed, since records surrounding circumstances of their deaths are unavailable for the team's use. Summary data regarding out of state deaths are included in Appendix B.

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 modifiable risk factors.

The death was then assessed to identify additional information necessary for a comprehensive review. Additional information was then requested from the appropriate agency. These 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.

After available records were collected, the assistants reviewed the information, and the cases were prepared for presentation before the Child Mortality Review Team (CMRT). Of 215 deaths in 1998, 128 were considered to warrant further review and were presented to the CMRT. The team, including the assistants, met quarterly. The chair presented available information/records on the child deaths, with additional input from the team members or assistants.

Of the 215 children who died in 1998, additional information was sought for 128 deaths. These included all accident, suicide, and homicide deaths, one firearm death of undetermined intent, and some of the deaths due to natural causes. 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 could 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 by identifying documented risk factors which would have likely contributed to the death and placed into categories as outlined in the following table:

<u>Preventable:</u>	
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.
Unsure/unable to agree	

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 128 cases presented to the CMRT, 13 records were reviewed, but were so incomplete that preventability could not be determined. The following table identifies the 13 deaths by manner.

SIDS	4
Natural –not SIDS	3
Trauma (Plane Crash)	3
Firearm/Weapon	2
Suffocation/Strangulation	1

For an additional 9 cases, review was not even attempted, since insufficient information was available (in general, requested information was not sent to us, or was incomplete). These 9 deaths were reported as due to SIDS (5 deaths), sudden arrhythmia death syndrome, pneumonia, cardiorespiratory arrest, and massive pulmonary embolism.

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

IDAHO AND USA—POPULATION AND TRENDS IN CHILD MORTALITY



Idaho Population

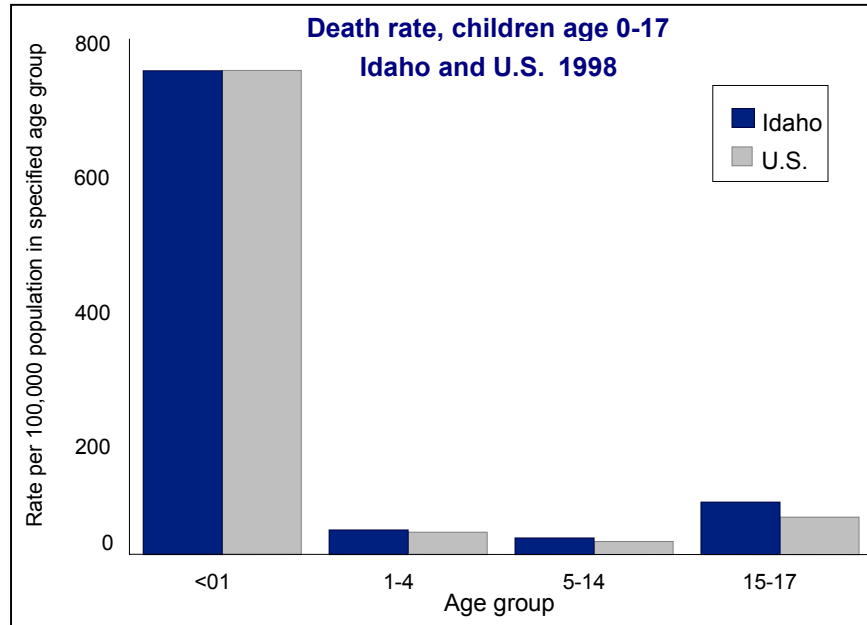
The population of Idaho in 1998 was estimated at 1,230,923. Children under the age of 18 comprised about 28.6% of the population. There were approximately 180,956 resident males under the age of 18, and approximately 171,091 resident females.

POPULATION*	NUMBER	PERCENT
Idaho Total	1,230,923	100.0
Idaho residents 0-17	352,047	28.6
SEX, RESIDENTS 0-17		
Males	180,956	51.4
Females	171,091	48.6
RACE, RESIDENTS 0-17		
White	339,657	96.5
Black	2,278	.6
American Indian	5,594	1.6
Asian / Pacific Islander	4,518	1.3
ETHNICITY, RESIDENTS 0-17		
Hispanic	37,099	10.5
Non-Hispanic	314,948	89.5

*Population estimates: U.S. Census Bureau, Internet release August 2000.

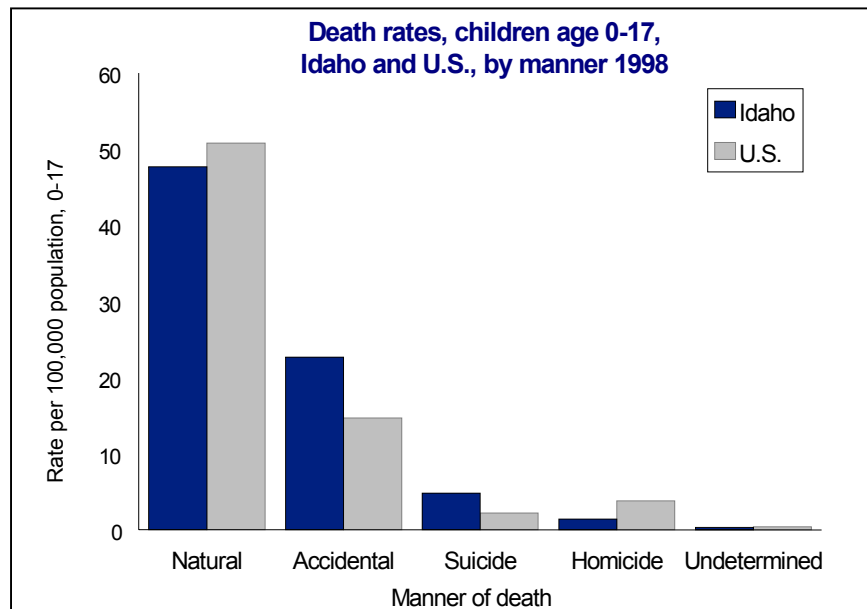
Idaho / U.S. Trends and Comparison Data:

Rates of death in children are presented below for 1998. Idaho's death rate in the 15-17 year age group was significantly higher than the U.S. rate.



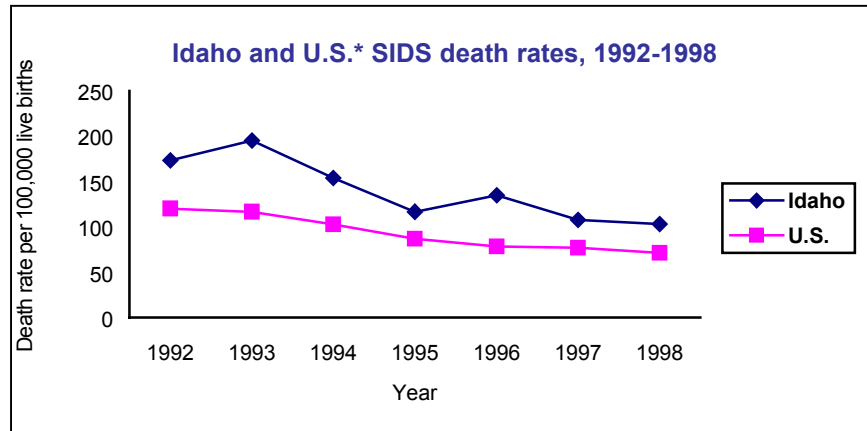
* U.S. rates are from: Murphy, SL.. "Deaths: Final Data for 1998." National Vital Statistics Reports; vol 48 no. 22. Hyattsville, Maryland: National Center for Health Statistics, 2000.

Deaths to Idaho residents and other U.S. residents under the age of 18 are presented below, by manner of death. Idaho's death rate for accidents and suicide are significantly higher than the national rate, and the homicide rate is significantly lower than the national rate.



Sudden Infant Death Syndrome

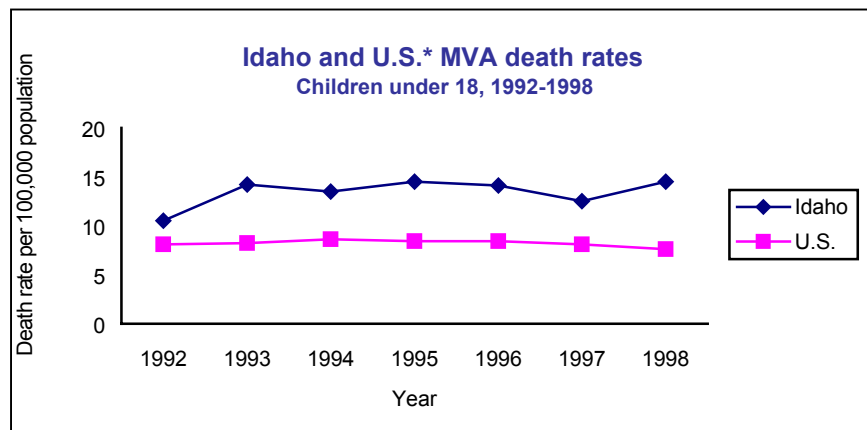
SIDS rates in Idaho and the U.S. are shown in the graph below. There has been a significant decline in SIDS rates in the U.S. since 1992. While Idaho rates are higher than the U.S. rate, the difference is not statistically significant.



*U.S. SIDS trend data is based upon 100,000 live births; data from the Centers for Disease Control and Prevention at: www.wonder.cdc.gov.

Motor Vehicle Accidents (MVA)

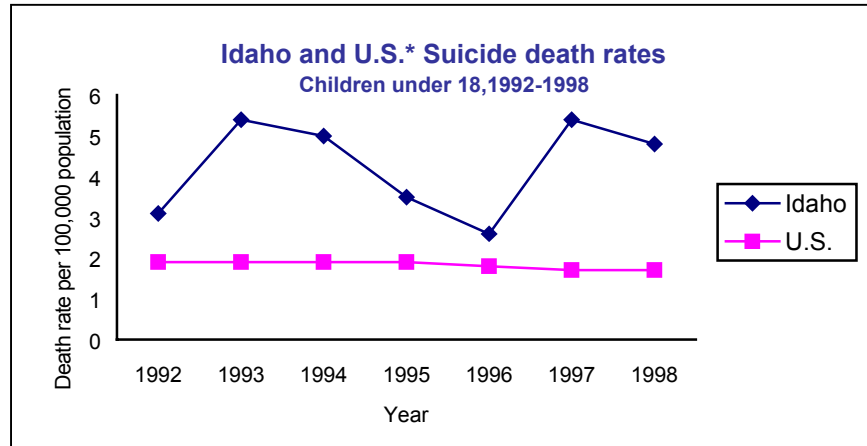
Death rates among children due to MVA are shown in the figure below. For the last six years, the Idaho MVA death rates have been significantly higher than the U.S. rates.



*U.S. trend data is from the Centers for Disease Control and Prevention at: www.cdc.gov/ncipc/wisqars/

Suicide

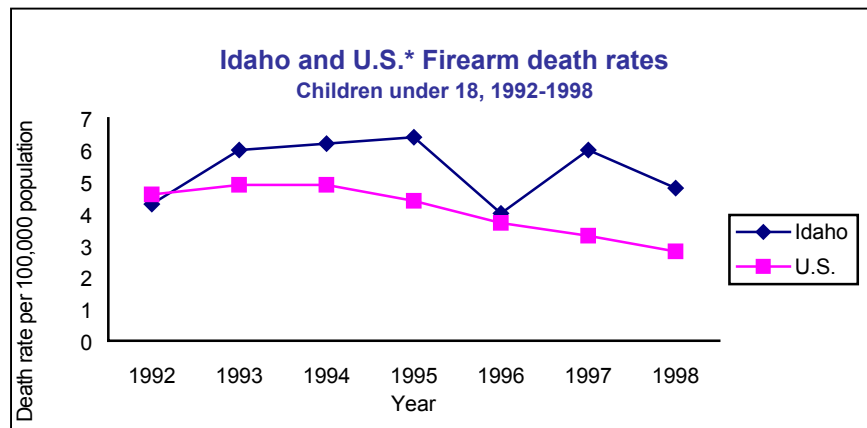
Suicide rates among children are shown in the graph below. The Idaho death rate for suicide was significantly higher than the U.S. rate for 1993, 1994, 1997 and 1998.



*U.S. trend data is from the Centers for Disease Control and Prevention at: www.cdc.gov/ncipc/wisqars/

Firearm

The rate of firearm deaths in Idaho children was not significantly different from the national rate for 6 out of 7 years. In 1997, the rate was significantly higher. There is great variation in Idaho rates since the numbers are small each year and thus tend to vary widely. Note this graph includes deaths due to homicide, suicide, accidents, and undetermined intent.



*U.S. trend data is from the Centers for Disease Control and Prevention at: www.cdc.gov/ncipc/wisqars/

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, by cause of death.

Autopsies performed: children under the age of 18, Idaho residents dying in Idaho, by cause of death:

CAUSE—1998	NUMBER OF CHILD DEATHS	NUMBER OF CHILDREN AUTOPSIED	PERCENT OF CHILDREN AUTOPSIED (%)
ALL CAUSES	215	58	27.0
Natural—not SIDS	109	28	25.7
Motor vehicle accidents	43	3	6.9
SIDS	19	16	84.2
Firearms	15	5	33.3
Drowning or submersion	12	1	8.3
Suffocation or strangulation	9	3	33.3
Trauma—other	6	1	16.7
Fire or burns	1	1	100.0
Injury of undetermined intent	1	0	0

OVERVIEW

Of 215 deaths in 1998, 128 were considered to warrant further review and were presented to the CMRT. Of the 128 reviewed deaths, 94 were considered to be preventable after the team review; 12 were considered not preventable. Twenty-two (22) were classified, as preventability not determined, due to lack of sufficient information, 13 records were reviewed, but were so incomplete that preventability could not be determined. The following table identifies the 13 deaths by manner.

SIDS	4
Natural –not SIDS	3
Trauma (Plane Crash)	3
Firearm/Weapon	2
Suffocation/Strangulation	1

For an additional 9 cases, review was not even attempted, since insufficient information was available (in general, requested information was not sent to us, or was incomplete). These 9 deaths were reported as due to SIDS (5 deaths), sudden arrhythmia death syndrome, pneumonia, cardiorespiratory arrest, and massive pulmonary embolism.

Characteristics of Idaho residents under the age of 18 dying in Idaho [1998 N=215]:

CHARACTERISTIC	NUMBER
Age Groups	
<1	104
1-4	22
5-14	37
15-17	52
Sex	
Male	127
Female	88
Race	
Asian / Pacific Islander	2
Black	2
Native American	5
White	206
Ethnicity	
Hispanic	41
Non-Hispanic	174

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 sudden infant death syndrome (SIDS). Natural causes of death quickly become less common as children grow older. Of the 128 deaths reviewed by the team, 41 were identified as natural. Of these, 13 were felt to be potentially preventable. SIDS accounted for 11 potentially preventable deaths (see next page). The other 2 preventable deaths are listed below.

Natural deaths—non-SIDS:

Two were found to be preventable.

A 20-month-old child died of complications of chickenpox infection. This death may have been preventable. Varicella vaccine is recommended for children age's 12-18 months; this vaccine, if given, may have prevented this death.

A 5-year old child died from a partially obstructed lung, which may have been surgically correctable. It was unclear whether the child had symptoms that should have alerted the caregivers earlier to her medical condition.

In addition, 3 children died from anencephaly and 2 from spina bifida. Neural tube defects have been found to be preventable with folate supplementation. Folate's potential to reduce the risk of neural tube defects is so important that the Food and Drug Administration requires food manufacturers to fortify enriched grain products with folic acid. The required supplementation of enriched grain products began January 1, 1998 in the U.S. In addition the evidence suggests that additional routine vitamin supplementation of fertile women could further decrease the rate of these birth defects. According to the Idaho Bureau of Vital Records and Health Statistics, "PRATS: Pregnancy Risk Assessment Tracking System, 1999 Survey" approximately 3 out of 4 Idaho resident adult mothers have heard or read that taking folic acid can help prevent some birth defects.

Data Gaps

Medical records are considered confidential information and are generally not available to the team, making it difficult to determine what sequence of events led to the deaths, and whether earlier medical intervention could have made a difference.

1998 Conclusions and recommendations

The team remains concerned about incomplete immunization of children for preventable childhood diseases.

We continue to strongly encourage parent and provider education about vaccine-preventable diseases and immunizations available for children, and fully support the current efforts to improve Idaho's immunization rate.

The team is concerned about insufficient parental education in the areas of health and well being of their children.

We strongly encourage parent education regarding the health and well-being of their children, including recognition of signs and symptoms of serious illness that require immediate medical care.

The team supports the FDA's recommendations for folate supplementation and recommends targeted education about folate to physicians and women of child bearing age.

- Folate is needed both before and in the first weeks of pregnancy and can help reduce the risk of certain serious and common birth defects called neural tube defects, which affect the brain and spinal cord. It is important for all women of childbearing age (15 to 45) to include folate in their daily diets. There are several ways to get sufficient folate:
- Eat fortified breads and other grain products, such as enriched pasta, rice, waffles and cereal bars.
- Eat fruits, dark-green leafy vegetables, dried beans and peas, and other foods that are natural sources of folate.
- Eat folic acid-fortified enriched cereal grain products and breakfast cereals.
- Take a vitamin supplement containing folic acid.

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.
- Protection of the team review documents from discoverability.

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 under 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.

In Idaho and the rest of the Northwest, SIDS rates have been historically higher than the national average. Rates in all areas, although still above the national average, have declined in recent years (Figure, page 14). Some of the decrease in SIDS rates is thought to be due to the recognition that SIDS risks decrease when infants are placed on their backs for sleep. According to the federal Centers for Disease Control and Prevention:

While we don't know what causes SIDS, we have identified four factors associated with increased risk of SIDS: (1) placing a baby on the stomach (prone position) to sleep; (2) being exposed to tobacco smoke during pregnancy and after birth; (3) using soft surfaces and objects that trap air or gases, such as pillows, in a baby's sleeping area; and (4) not breastfeeding a baby. However, risk factors alone do not cause SIDS. Most babies with one or more of the above risk factors do not succumb to SIDS. (<http://www.cdc.gov/ncidod/hip/abc/facts40.htm>)

According to the Idaho Bureau of Vital Records and Health Statistics, "PRATS: Pregnancy Risk Assessment Tracking System, 1999 Survey" Idaho resident mothers reported that 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 and 8.4% reported that they placed their baby on his/her stomach to sleep most of the time.

The team reviewed 19 SIDS deaths.

SIDS Deaths	NUMBER	PERCENT
Total	19	100.000
SEX		
Males	11	57.9
Females	8	42.1
RACE		
White	18	94.7
American Indian	1	5.3
ETHNICITY		
Hispanic	1	5.3
Non-Hispanic	18	94.7

Eleven (11) of the infants were noted to have had modifiable risk factors that may have increased the risk of SIDS. There was insufficient data on the other 8 cases to determine whether modifiable risk factors were present. Identified preventable risk factors were associated with 11 Idaho SIDS deaths.

RISK FACTOR	NUMBER
Sleep position other than back	7
Smoking in household	4
Soft surface/ air or gas trapping objects	2

A 5-month old child with a recent episode of respiratory illness was placed to sleep on their back on a sofa, with the mother sleeping nearby. The child was found dead in the morning somewhat wedged between the couch back and cushion. This death may have been preventable if the child had been placed on their back in an appropriate infant bed.

Data Gaps

Most SIDS deaths did not have a SIDS investigation form completed (see Appendix C), and much information was missing. For example, most reports received did not include information on sleep position, maternal smoking, or sleeping surface.

1998 Conclusions and recommendations

The team remains concerned about the incidence of preventable risk factors present in SIDS deaths.

We recommend public education campaigns to help decrease the incidence of SIDS, including this advice from the American Academy of Pediatrics web site (www.aap.org/family/infside.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.

The team is concerned about Idaho's lack of uniform criteria and inconsistent data collection for the determination of SIDS as the cause of death.

We recommend:

- Use of a SIDS investigation protocol to promote further understanding of SIDS, to include a thorough case investigation, autopsy, review of clinical history and examination of the death scene for all children with a presumptive diagnosis of SIDS, such as that recommended by CDC (Appendix C).
- Continued emphasis of the importance and requirement of autopsies in children with a presumptive SIDS diagnosis.

The team is concerned about the inconsistent use of available resources in making a definitive SIDS diagnosis.

We recommend post mortem metabolic screening in all SIDS investigations to rule out fatty acid oxidation disorders which according to research may comprise up to 5% of SIDS cases.

The team is concerned about the lack of consistent investigation of child deaths by law enforcement.

We recommend any child death include a scene investigation, parental interview, and attendance at autopsy.

UNINTENTIONAL INJURY

Injuries play a greater role in mortality as children grow older. Of the 128 deaths reviewed by the team, injuries claimed the lives of 87 children; the majority (70) of the deaths were unintentional.

Classification of injuries into two categories, unintentional and intentional, 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.

The team felt that all 70 deaths were preventable. Causes of death were similar to those children dying in 1997, except fewer fire/burn deaths were reported, more drownings occurred, and fewer deaths in the “other” unintentional injuries occurred. Unintentional injury deaths were due to the following causes:

CAUSE OF UNINTENTIONAL INJURY DEATH	NUMBER OF DEATHS	PERCENT OF UNINTENTIONAL INJURY DEATHS (%)
TOTAL	70	100
Motor vehicle accidents	43	62.3
Traffic*	39	56.5
Non-traffic	4	5.8
Drowning / Submersion	12	18.8
Other unintentional injuries	6	7.2
Firearm	4	5.8
Suffocation / Strangulation	4	4.3
Fire / Burn	1	1.5

*A traffic accident is any MVA occurring on a public highway or street; a nontraffic accident is any MVA which occurs entirely in any place other than a public highway or street.

The next 6 sections of this report deal with each type of unintentional injury listed above.

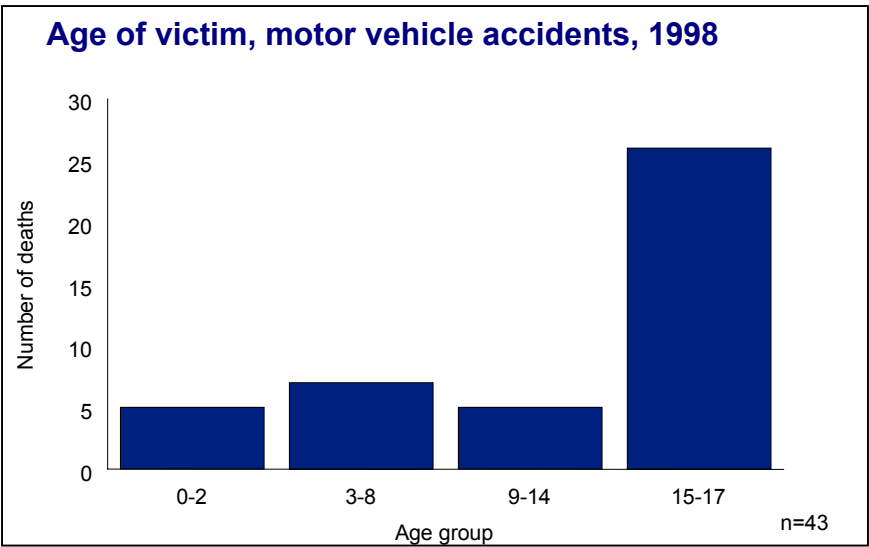
MOTOR VEHICLE FATALITIES

The rate of motor vehicle fatalities among Idaho's children is higher than the U.S. rate (Figure, page 14). Most Idaho children who die from accidental causes die in motor vehicle accidents (MVA). In 1998, there were 43 MVA fatalities among Idaho children, resulting from 40 separate incidents.

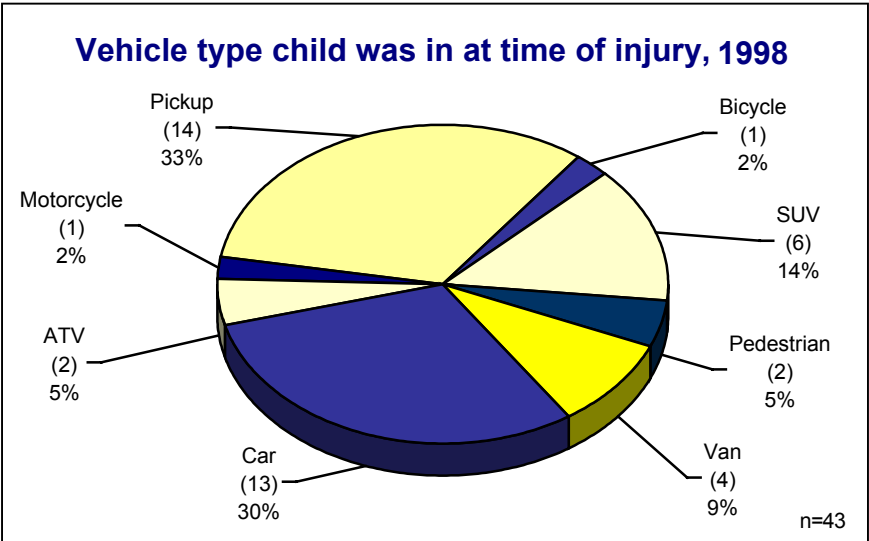
Motor Vehicle Traffic Accidents

Of the motor vehicle traffic fatalities, 17 were drivers, 21 were passengers inside or on a vehicle, 2 were riding in the bed of a pickup, 2 were pedestrians, and one was a cyclist.

The majority of victims were teenagers.

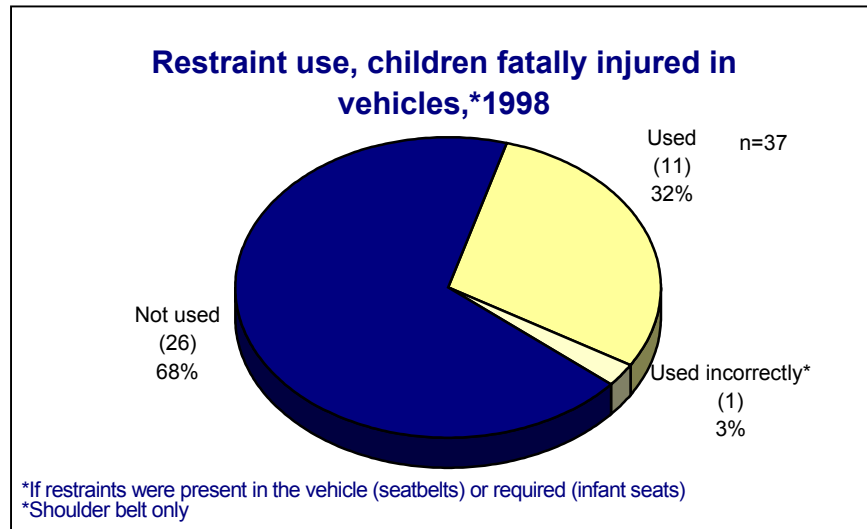


Cars and pickups were the most common form of transport for the victim; 2 of the 14 children riding in a pickup were in the open bed of the pickup when the accident occurred.



Safety Devices in MVA deaths

Sixty-eight (68) percent of children dying in motor vehicle accidents inside a vehicle were unrestrained. Lack of restraints such as child safety seats and lap belts used with shoulder belts 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.

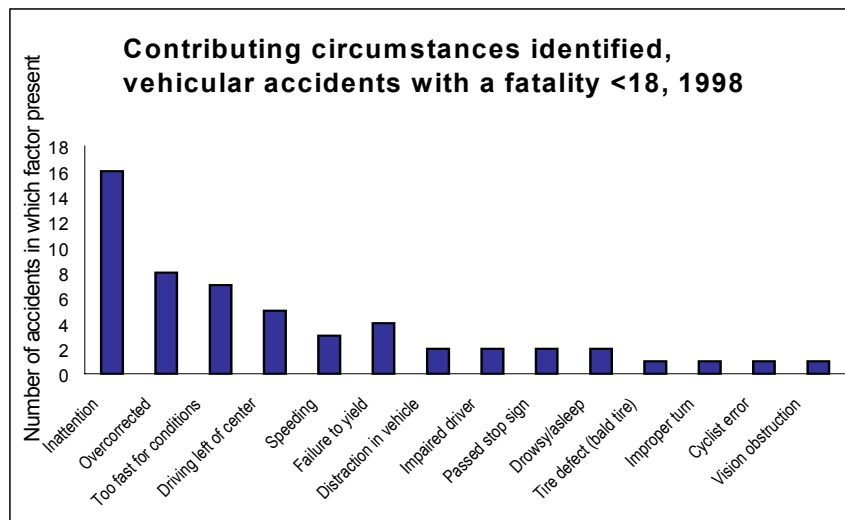


The “Idaho Behavioral Risk Factors, 1999” conducted by the Bureau of Vital Records and Health Statistics, shows over nine out of ten (92.1%) Idaho adult residents with children under the age of 5 in their household reported that the child **always** rides in a child safety seat in the car. Nearly nine 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** (71.7%) or **nearly always** (17.4%) while riding in a car.

Four (4) children died while on an ATV, bicycle, or motorcycle. Of these 4 children, 2 were not wearing helmets; for the other 2 children helmet use information was not received.

Contributing Circumstances

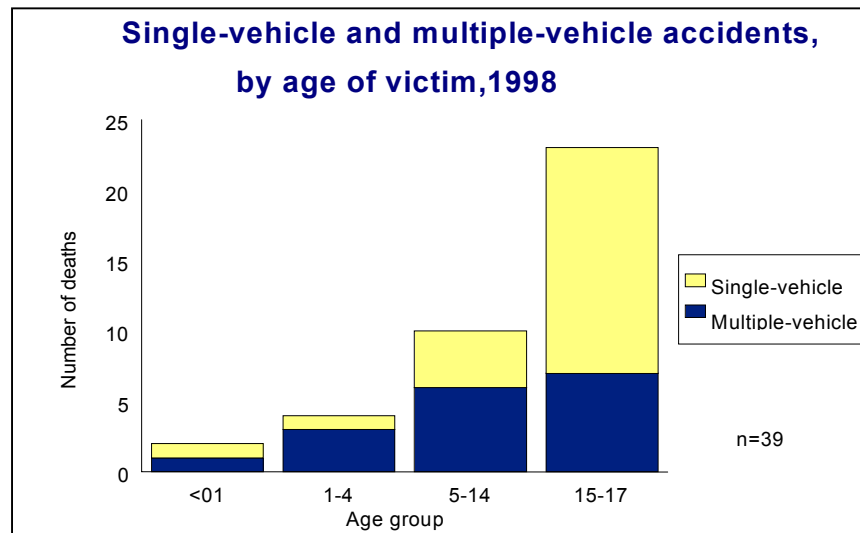
Inattentive driving was the most common contributing circumstance, with overcorrecting the second most common circumstance identified on vehicle collision reports.



Drugs and alcohol

The blood of drivers and pedestrians dying in motor vehicle accidents is required by state law to be tested for alcohol (Idaho Code 49-1314). The Office of Highway Safety records results in the "Idaho Vehicular Collision Report". Of the 43 deaths, only 10 had drug or alcohol test results reported to the Office of Highway Safety. Of these, 5 had positive results: 3 tested positive for marijuana, and two for alcohol, with blood levels of 0.02 and 0.10 blood alcohol concentration (BAC). Both children with positive alcohol tests were passengers at the time of the accident. In addition, in a rollover accident leading to the death of one young child, the driver was found to have 0.16 BAC, and was convicted of vehicular manslaughter.

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.



At-fault drivers

The at-fault driver of 64% of fatal accidents in which teenagers age 15-17 died was also a teenager -- either the victim or another teenager under 18 years of age was driving.

Two accidents involved drowsy drivers. Studies have shown that youthful drivers and shift workers are at higher risk of drowsy driving accidents.

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

A 9-year old was killed when the teenage driver of the vehicle fell asleep around midnight and rolled the vehicle. The driver had been driving about 3 hours at the time of the accident. This may have been preventable if the driver had recognized his fatigue and pulled over.

A 16-year old driver was killed after overcorrecting, and rolled into a ditch. The driver was not wearing a seat belt and was partially ejected and trapped under the vehicle. A 15-year old passenger who was wearing a seat belt received no evident injuries. Wearing a seatbelt may have prevented this death by preventing ejection from the vehicle.

Motor Vehicle Non-Traffic Accidents

There were 2 All Terrain Vehicle (ATV) accidents, one small child was backed over in her driveway, and one motorcycle/dirt bike off-road accident. All 4 of these deaths were felt to be preventable.

Data Gaps

Although the Office of Highway Safety collects excellent crash information, information on drug and alcohol test results on children fatally injured is severely lacking. In only 9 of 43 deaths (23%) were drug or alcohol test results reported to the Office of Highway Safety. Among 17 teenagers who died while driving, only 4 (23%) had drug or alcohol tests reported to the Office of Highway Safety.

1998 Conclusions and recommendations

The team is concerned that adults continue to allow children to ride in motor vehicles unrestrained or improperly restrained. Idaho's seat belt laws do not protect children over the age of four and over forty pounds riding in the back of a vehicle. Current law only requires seat belts in the front seats of vehicles.

We recommend:

- Improving the use of seatbelts
- Assuring that child safety seats are properly installed
- Increasing the use of seatbelts and passenger safety seats by children through more stringent laws such as:
 - Amending Section 49-672, Idaho Code, regarding passenger safety for children, to increase the age of the child for mandatory restraint from “under the age of four (4) years” to “under the age of eighteen (18) years.” Eliminate the language allowing the child to be removed from a car safety seat for the purpose of nursing or attending to “immediate physiological needs”.
 - Amending Section 49-673, Idaho Code, regarding safety restraint use, to include a requirement that all back seat passengers must be restrained and raise the fine to increase compliance of all drivers and passengers.

The team is concerned about the number of child deaths in which over-correction was identified as a contributing circumstance.

We recommend driver's education programs increase focus on avoiding over-correction of turns and slides, as this appears to be a major factor in fatal motor vehicle accidents in adolescents.

The team is concerned about the 2 fatal accidents involving a drowsy driver. Sleepiness impairs driving, decreases the driver's reaction time, vigilance, attention and information processing and can ultimately lead to falling asleep at the wheel. Driving late at night is a risk

for all drivers, but especially youthful drivers. Inattentive driving was the most common contributing circumstance in vehicular accidents with a fatality under the age of 18 in 1998.

We recommend increased attention to educating young drivers to pull off the road if they become sleepy, and avoid driving late at night if possible.

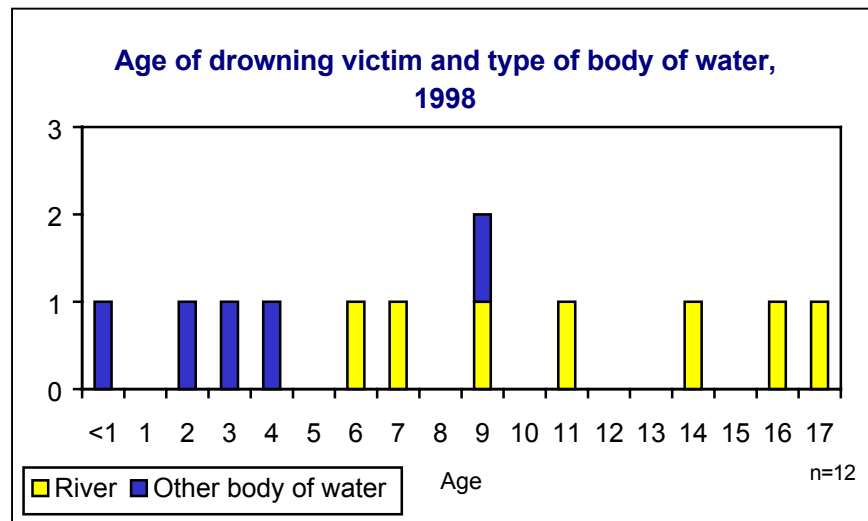
The team is concerned about the lack of information on Blood Alcohol Concentration levels in the drivers of all vehicles involved in a fatal motor vehicle collision.

We recommend the blood of all drivers involved in fatal accidents be required by state law to be tested for alcohol and drugs.

DROWNING AND SUBMERSION

In 1998, 12 children died by drowning or submersion. Seven (7) of the 12 children died in rivers. All were felt to be probably or definitely preventable. Notably, children dying in rivers tended to be older than children dying in other bodies of water, such as canals, ponds and pools. Of 3 teenagers, all died in rivers. All 4 of the drowning deaths of children under the age of 5 occurred at or around the home.

Lack of supervision and lack of flotation devices were the most commonly identified circumstances that may have contributed to death. In 3 cases, the child was unable to swim.



At the time of the drowning, 2 of the children were swimming, and 6 were playing in or near the water.

An 11-year old drowned in a river while playing with friends in the water. The child apparently stepped off a ledge or rock went under, did not know how to swim, and did not have a life vest on. This death may have been prevented if the child knew how to swim and/or had a personal flotation device on.

Data Gaps

Information on safety devices and whether the child was able to swim were lacking from some of the investigation reports.

1998 Conclusions and recommendations

The team is concerned about the lack of adult supervision of children when the potential for injury exists, especially near open bodies of water.

We recommend adults supervise children at all times when in or around an open body of water.

The team is concerned about the incidence of drowning in rivers for 1998.

We recommend public safety messages about river safety to raise the awareness of the danger of rivers and other moving bodies of water, compared to lakes, pools, and ponds.

The team is concerned about the children who drowned that were unable to swim.

We recommend children be taught to swim, or stay away from all bodies of water if unable to swim.

FIRE AND BURNS

One child lost his life in a fire in 1998.

A 17-year-old child apparently fell asleep in a woodstove-heated outbuilding. The woodstove caused sparks, which ignited the roof. This may have been prevented if the woodstove was correctly installed, serviced and maintained.

Data Gaps

The team had difficulty locating national or state guidelines that would be helpful to a consumer regarding woodstove safety.

1998 Conclusions and recommendations

The team is concerned about the lack of readily available information for consumers about the safe location and operation of woodstoves.

We recommend:

- Development of public safety information about safe woodstove placement and operation for homeowners.
- A smoke detector and fire extinguisher be present and working in every structure where a wood stove is located.

FIREARMS (UNINTENTIONAL)

In Idaho in 1998, there were 4 unintentional firearm deaths. Two (2) had insufficient information for review. The other 2 were felt to be preventable.

A 15-year old died of an accidental self-inflicted gunshot wound while playing with a gun.

A friend shot a 15-year old while they were looking at a gun.

Both of these deaths may have prevented if the guns and ammunition had been stored separately and safely so that they were inaccessible.

Data Gaps

Two investigation reports were not sent to the team despite request. Investigations of firearm deaths frequently fail to mention the ownership of the firearm, and how the weapon was stored and accessed prior to the accident.

1998 Conclusions and recommendations

The team remains concerned about gun safety and storage.

We recommend safe storage of firearms including:

- Storing firearms unloaded.
- Storing firearms securely locked using cable locks for trigger guard areas, trigger locks, handgun safes, or free standing/full size safes.

SUFFOCATION AND STRANGULATION

In 1998, 4 children died as a result of suffocation or strangulation. Of these deaths, 2 were reviewed, both of which were felt to be preventable. Two (2) were not reviewed since the conclusions of legal investigations are pending.

At day care a 10-month-old child was routinely placed in a child "car seat" for naps. The child was not secured with straps due to the small size of the seat. The child died when the "car seat" flipped over, causing airway obstruction from a strap. Placing the child to nap in a crib may have prevented this.

1998 Conclusions and recommendations

The team is concerned that caregivers are not always aware of how to provide a safe sleeping environment for children.

We recommend:

- Parents and caregivers be instructed about the proper and intended use of child safety seats.
- Children are under adult supervision at all times while in a child safety seat.

OTHER UNINTENTIONAL INJURIES

There were 6 deaths that occurred from other unintentional injuries. The causes are outlined below:

Three (3) died in the same plane crash. The FAA report was not received within the review period for this report, so a review was not performed.

One (1) drowning sustained while riding a bicycle along a canal bank near home (considered a bicycle accident by Bureau of Vital Statistics and is not listed in the drowning section).

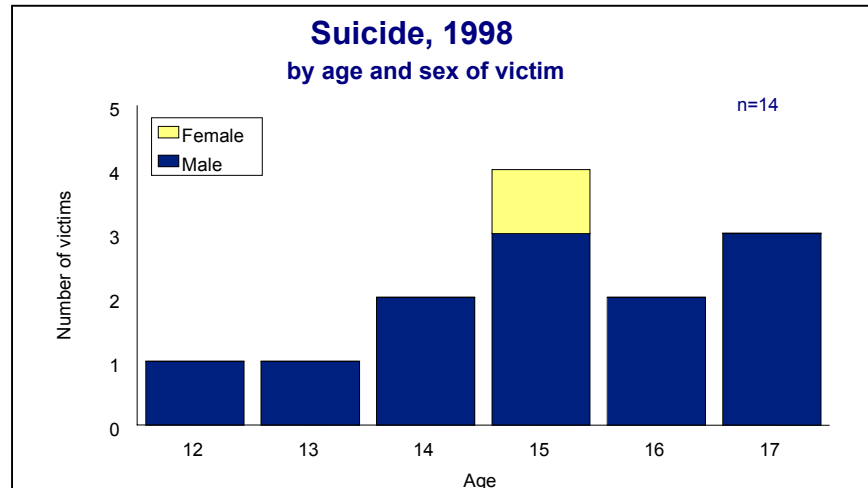
One (1) child fell while playing in an abandoned grain silo.

One (1) child fell while climbing rocks during a hiking trip.

SUICIDE

Suicide was the second leading cause of death among those 15-24 years of age in Idaho. The rate of suicide among Idaho's children under 18 years of age is above the national rate (Figure, page 14).

Of the 14 suicides that occurred in 1998, 5 deaths were by hanging, and 9 were by firearms (3 handguns, 1 shotgun, 4 rifles, and 1 unknown type). All were felt to be potentially preventable.



A 17-year old died of a self-inflicted gunshot wound to the head after arguing with a parent. The gun was obtained from the father's bedroom nightstand after he left for work. This may have been prevented if the gun and ammunition had been stored separately and safely preventing the child from accessing it.

Data Gaps

Suicide investigations are frequently lacking information on the victim's state of mind, the ownership of the firearm (if used), and how the firearm was accessed.

1998 Conclusions and recommendations

The team remains concerned about the high number of suicides in children.

We recommend development of strategies that create greater public awareness of signs of suicidal tendencies and knowledge appropriate interventions. Examples include:

- Change in eating and sleeping habits
- Withdrawal from friends, family, and regular activities
- Violent or rebellious behavior, or running away
- Drug and alcohol abuse
- Unusual neglect of personal appearance
- Radical personality change
- Persistent boredom, difficulty concentrating, or a decline in the quality of school work

Frequent complaints about physical symptoms often related to emotions, such as stomachache or headache, fatigue.

Loss of interest in pleasurable activities

Not tolerating praise or rewards

A teen who is planning suicide may also:

Complain of being "rotten inside."

Put affairs in order, give away favorite possessions, clean room, throw things away

Become suddenly cheerful after a period of depression

Give verbal hints with statements such as

"I won't be a problem for you much longer."

"Nothing matters."

"It's no use."

"I won't see you again."

We support development and promotion of the National Suicide Prevention Strategy, from the virtual office of the Surgeon General at: <http://www.mentalhealth.org/suicideprevention/>

Awareness

Promote awareness that suicide is a public health problem that is preventable.

Develop broad-based support for suicide prevention.

Develop and implement strategies to reduce the stigma associated with being a consumer of mental health, substance abuse, and suicide prevention services.

Intervention

Develop and implement suicide prevention programs.

Promote efforts to reduce access to lethal means and methods of self-harm.

Implement training for recognition of at-risk behavior and delivery of effective treatment.

Develop and promote effective clinical practices.

Increase access to and community linkages with behavioral health services.

Improve reporting and portrayals of suicidal behavior, mental illness, and substance abuse in the entertainment and news media.

Methodology

Promote and Support Research on Suicide and Suicide prevention

Improve and Expand Surveillance Systems

The team is aware of the powerful impact media has on the public perception of suicide.

We recommend the media follow the “Reporting on Suicide: Recommendations for the Media” developed in collaboration with: *Office of the Surgeon General • Centers for Disease Control and Prevention • National Institute of Mental Health • Substance Abuse and Mental Health Services Administration • World Health Organization • National Swedish Centre for Suicide Research • New Zealand Youth Suicide Prevention Strategy.*

The guide can be found at <http://www.asc.upenn.edu/test/suicide/web/>

HOMICIDE

Homicide in younger children is often due to child abuse. As children get older homicide deaths tend to be caused by interpersonal violence.

The deaths of 2 children in 1998 were classified as homicide. An adult was convicted of first-degree murder of the 16-year old victim. An adult babysitter plead guilty to felony injury to a child in the death of the 8-month old.

An 8-month old child died of abuse, while under the care of family friends. This might have been prevented if care had been taken in selecting the caregivers for this child.

1998 Conclusions and recommendations

The team is concerned about the abuse of children at the hands of caregivers.

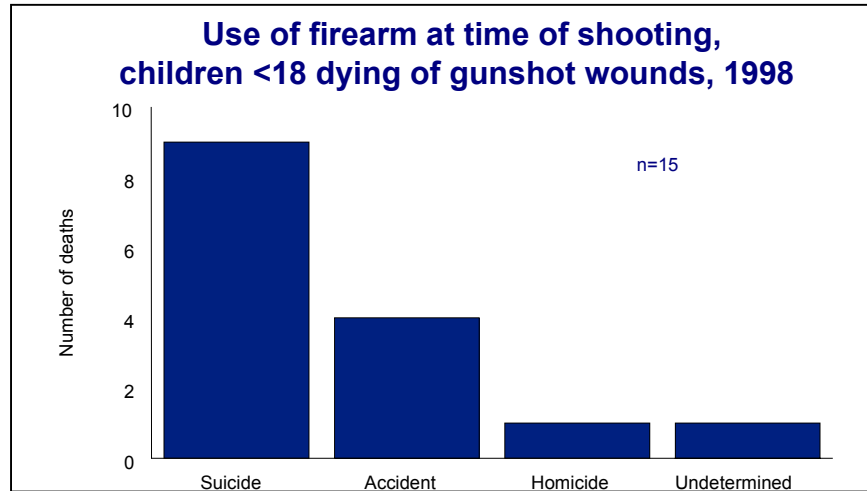
We recommend that parents, prior to placing their child(ren) with friends, relatives, or other alternate care givers, assess and take into consideration the discipline and anger management practices of the alternate caregiver.

SUMMARY: USE OF A FIREARM IN INJURY DEATHS

This is aggregate data and includes unintentional, suicide and homicide deaths, and one death of undetermined intent. A total of 15 firearm deaths occurred to Idaho resident children in Idaho. The rate of firearm deaths is not significantly different than the rest of the U.S. (Figure, page 15).

Firearms are involved in about 5% of childhood and adolescent mortality. Even more worrisome is that according to the Centers for Disease Control and Prevention, among adolescents 15-19 years old, one in every four deaths is caused by a firearm.

The vast majority of firearm deaths in Idaho children are due to suicide or self-inflicted accidental shootings. In 13 out of the 15 deaths (86.6 percent) in 1998, the victim was the handler of the firearm. This included 9 suicides, 3 of the 4 accidental shootings, and one death of undetermined intent (it was unclear if it was a suicide or accidental shooting).



Seven (7) of the firearm injuries were inflicted with a handgun, 5 with a hunting rifle, 1 with a shotgun, and 1 with an unknown weapon type.

Only 1 of the 15 firearms involved in the death of a child in 1998 was reported as locked prior to the handling of the weapon. Of the 15 firearms involved in the death of a child, four were reported as loaded prior to the handling of the weapon. Access, when known, was reported as:

- Open gun cabinet
- Night stand in parent's room
- Locked gun cabinet
- Gun rack
- Stolen from relative's home

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

- Almost 2 out of 3 (63.3%) of 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.

APPENDIX A: EXECUTIVE ORDER

THE OFFICE OF THE GOVERNOR
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

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.

Deaths among Idaho children, including children dying out-of-state, 1998

Manner of Death	<i>Idaho Resident Children, dying in Idaho*</i>	Idaho Resident Children, dying outside Idaho	TOTAL: Idaho Resident Children Deaths
Natural	128	40	168
Accidents	70	10	80
Suicide	14	3	17
Homicide	2	3	5
Injury of Unknown Intent	1	0	1
TOTAL	215	56	271

**Figures in this table for child deaths other than Idaho resident children dying in Idaho are for informational and comparison purposes only. The reader should keep in mind while reviewing this report that findings are based on the population, Idaho Resident Children, dying in Idaho*

Manner of Death	Non-Resident Children dying in Idaho
Natural	7
Accidents	11
Suicide	1
Homicide	1
Injury of Unknown Intent	0
TOTAL	20

APPENDIX C: GUIDELINES FOR DEATH SCENE INVESTIGATION

The “Sudden Unexplained Infant Death Investigation Report Form” beginning on the next page is taken from:

Guidelines for Death Scene Investigation of Sudden, Unexplained Infant Deaths: Recommendations of the Interagency Panel on Sudden Infant Death Syndrome. *MMWR* June 21, 1996; Vol. 45 (No. RR-10)

Full text of Guidelines is available at: www.cdc.gov/epo/dphsi/mecisp/forms.htm.