

KEEPING KIDS ALIVE—WHAT'S KILLING KIDS IN OREGON?

WHAT'S THE LEADING CAUSE OF death for kids in Oregon? The leading cause of death among children after the age of one is injury. Once children survive their first year of life the potential for death due to natural causes decreases dramatically. The emerging threat in the lives of young children that increases as they age is unintentional and intentional injury. Oregon's Child Fatality Review system is a rich source of data on childhood deaths. This *CD Summary* issue presents findings from the *Keeping Kids Alive 1999 Oregon Child Fatality Review Team Annual Report*¹ produced by the State Technical Assistance Team, which documents risk factors for death and recommendations to prevent deaths among Oregon children. The data presented in this article illustrates the magnitude of the injury problem among children aged 1–17, examines how injury risk increases and changes as children grow older, and provides suggested topics for health-care providers guidance to parents. Health-care providers are encouraged to include anticipatory guidance on behaviors that improve safety practices at home, on the road, and at play. Because research has shown that specific advice on safety practices is more effective than general, resources for patient handouts and parental support are provided below.²

METHODOLOGY

Detailed data on all unexpected childhood deaths are collected from County Child Fatality Review teams by the State Technical Assistance Team at the Health Division. These data are compiled and analyzed at the state level in order to develop prevention recommendations for local community action and to influence public policy. There are three annual reports available on child death at: www.ohd.hr.state.or.us/ipe/stat/htm.

DATA OVERVIEW

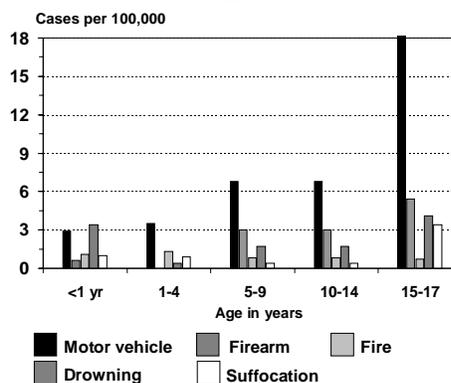
Preliminary death certificate data indicate that 490 children aged 0–17 died in Oregon in 1999. Fifty-six percent of death among children aged 0–17 occurred in infants. The vast majority (89%) of infant death was due to natural causes, 28 (10%) of them due to unexplained causes.

Patterns of death are much different among children after infancy. Most deaths among children aged 1–17 are due to injuries. The leading causes of injury death included motor vehicle crash, suffocation, drowning, firearm, and fire. The figure illustrates the death rates among children aged 1–17 by selected injury causes.

The remainder of this article discusses selected causes of death due to motor vehicles, firearms, fires and drowning and provides suggestions for topics for health care provider guidance to promote behaviors that prevent injuries.

Health-care provider guidance is an important means of addressing safety behaviors. Although safety behaviors may be thought to be common knowledge, poor engineering and product design, parental beliefs, and cost of safety equipment are common barriers to translating that knowledge into behaviors that will prevent injury among children.

Injury death rates by age group and selected causes, Oregon 1999



The area of child safety seat use is a good example. Ninety percent of child safety seats are observed to be used incorrectly in Oregon safety seat clinics.³ Researchers recommend health care providers include counseling on errors in safety seat misuse because of the high frequency of child safety seat misuse.⁴

Motor Vehicle Deaths

There were 58 children who died from motor vehicle incidents in 1999. Death rates were highest among youth aged 15–17. Several factors contributed to these deaths. Lack of appropriate restraint, such as child safety seat or seat belt use, occurred most frequently in 44% (19) deaths, and driver error in 44% (19) deaths, followed by speeding in 35% (15) deaths, recklessness in 35% (14) deaths, and driver inexperience in 23% (10) deaths. Among youth aged 10–17, 61% who died in crashes were not wearing seat belts. Twenty-three percent of the motor vehicle crash occupant deaths involved an inexperienced driver who had a license for less than six months.

Suggested topics for anticipatory guidance to prevent motor vehicle crash deaths include:

- Increase correct restraint use particularly among youth aged 10–17.
- Impress upon parents the need to provide young drivers with a minimum of 50 hours of supervised driving experience to improve driving skills. Refer parents to information to assist them regarding the Graduated Driver's Licensing law.
- Increase the use of child safety seats among children aged 0–4 and booster seats among children aged 5–9.

Firearm Deaths

A total of 16 children died from firearm injuries in 1999. Most firearm deaths occurred in the home using an adult family member's unlocked firearm. There were four *unintentional* firearm injury deaths. The victims ranged in age from 23 months



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to 16 years. None of the firearms were stored in a locked location, none had a trigger lock, and none were stored separately from the ammunition. There were eight suicides by firearm. One of the firearms was stored in a locked place with ammunition, and in five incidents the gun was stored unlocked with the ammunition. There were three homicides by firearm. Two of the victims were aged 10–14 and one victim was 15–17 years old. There was one undetermined firearm death.

Suggested topics for anticipatory guidance to prevent firearm deaths include:

- Keeping firearms in locked storage compartments, storing ammunition separately, and using trigger locks.
- Remove or lock up guns in homes where a youth at risk for suicide lives.

FIRE DEATHS

There were 10 deaths in eight fire events. Smoke alarms were known to be present in four of seven fatal residential fires. However, only one alarm was reported to be working. In all but one of these deaths, then, a working smoke alarm was not present in the dwelling.

Suggested topics for anticipatory guidance to prevent fire deaths include:

- Replace one-year battery smoke alarms with new smoke alarms that have a “silencing” feature to reduce disabling due to nuisance alarms and an extended life battery to reduce the incidence of dead batteries.
- Matches, lighters, candles, fireworks, flammable products and cigarettes pose fire and burn risks to the family.

Drowning Deaths

A total of 17 children drowned in Oregon in 1999. Thirty-five percent (6) drownings occurred among children aged 1–4, six occurred among children aged 15–17 years. Fifty-nine percent (10) drownings occurred in rivers and lakes. Strong currents and cold water temperatures in bodies of water fed by snow melt, even in the summer, played an important role in the deaths occurring in lakes and rivers. The table below illustrates the frequencies of death by age group and type of water.

Lack of appropriate supervision was identified as a factor in 29% (5) cases. Swimming ability was also frequently a factor in the drowning deaths. Of the 15 children for whom swimming ability was known, 67% (10) were known to be non-swimmers. Three children drowned in boating-related incidents. Oregon law requires all children 12 and under to wear a personal floatation device (PFD). All of the boating incident drowning victims were aged older than 12 years and none were wearing a PFD.

Suggested topics for anticipatory guidance to prevent drowning deaths include:

- Oregon’s rivers and lakes are cold and tend to have heavy currents that make them deadly to poorly prepared and unsupervised children and youth.

Place of drowning by age group, Oregon 1999 N=17

Place	<1	1-4	5-9	10-14	15-17	Total
lake				1		1
ocean			1			1
river		2		2	5	9
swimming pool		1				1
other		3		1	1	5
Total	0	6	1	4	6	17

- Always supervise children in and near water.
- Teach children to swim.
- Use PFDs for boating and non-boating uses in rivers and lakes.

CONCLUSION

Injury is the leading cause of death among Oregon’s children and youth. Changes in behavior can prevent many injury deaths. Health-care providers have an important role to play in assessing risk behavior and promoting behavior change. Guidance to prevent injuries should be focused and concrete. This can be supported with materials from the American Academy of Pediatrics “The Injury Prevention Program” (also known as TIPP); the Oregon and National SAFE KIDS program; the Alliance for Community Traffic Safety; and the Health Division’s Child Injury Prevention Program. Call the Health Division’s Child Injury Prevention Coordinator at 503-731-4241 or visit the web site: <http://www.ohd.hr.state.or.us/ipe/child.htm>.

REFERENCES

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