

Common Injuries in Children Ages 1-14 Years Montana, Spring, 2012

Unintentional injuries cause more than half of childhood deaths in Montana

Children face a variety of situations that put them at risk for injury. Awareness of age-specific risks are key to effective prevention. This report examines the specific causes of death and hospitalization for children in three age groups: 1 to 4 years old, 5 to 9 years old, and 10 to 14 years old. Injuries account for a much smaller fraction of death and hospitalizations among children younger than one year, so they are not included in this report.

Data for this report are from the Montana Office of Vital Statistics (OVS) for 2000-2010 using ICD-10.¹ Hospitalization data are from the Montana Hospital Discharge Data System (MHDDS) for 2009-2010 using ICD-9-CM;² external cause of injury coding (E-coding in MHDDS was incomplete before 2009). Injuries leading to deaths or hospitalization were classified by intent and mechanism according to the CDC Injury Matrices and the Safe Sates Alliance criteria.^{3,4}

Figure 1. Childhood deaths and hospitalizations due to unintentional injuries, Montana, OVS, 2000-2010, MHDDS, 2009-2010

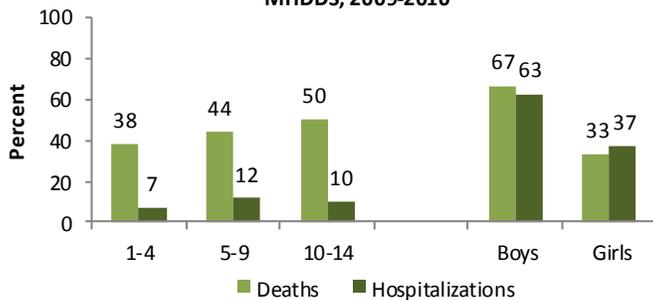


Figure 2. Number of unintentional injury deaths among children by mechanism, OVS, 2000-2010

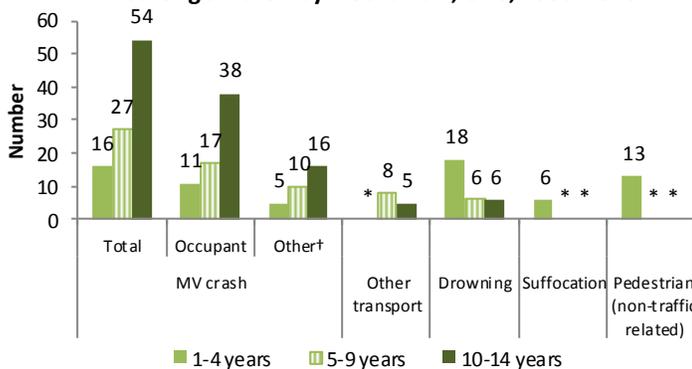
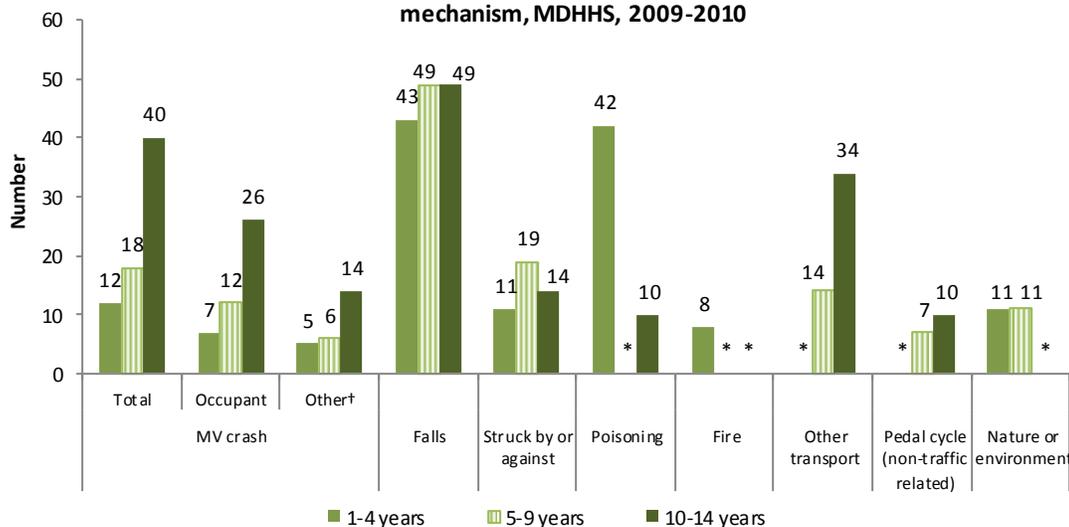


Figure 3. Number of unintentional injury hospitalizations among children by mechanism, MDHHS, 2009-2010



For figures 2 and 3,

* <5 deaths or hospitalizations

† Injured person was motorcyclist, pedal cyclist, pedestrian, or other person injured in traffic

Causes of unintentional injuries

- Injury deaths were more common among older children than among younger children, but hospitalizations were more evenly distributed by age group (Figure 1).
- About two thirds of unintentional injury deaths and hospitalizations were among boys (Figure 1).
- The most common cause of unintentional injury death for children age 1-4 years was a motor vehicle (MV) crash, with the majority of events involving a vehicle occupant. The second most common cause was drowning (Figure 2).
- The most common cause of unintentional injury death for children age 5-9 and 10-14 was a MV crash as an occupant. Drowning, and other transport crashes including ATVs and snowmobiles were the next most common causes (Figure 2).
- The most common cause of injury hospitalization for all childhood age groups was a fall, accounting for one quarter or more of all injury hospitalizations in each age group (Figure 3).
- The second most common cause of injury hospitalization was poisoning for children age 1-4 years, other transport crashes (ATV, snowmobile, etc.) for children age 5-9 years and MV crashes for children age 10-14 years (Figure 3).

Prevention Opportunities⁵

Because risk-taking is normal during a child's life, it is very important to keep a child's environment free from hazards and to provide supervision. Below is a list of common injury hazards and ways to prevent them.

MV crash: Proper restraint is crucial to protect a child in the event of a crash. Montana law requires children aged less than 6 years or weighing less than 60 pounds to be in a safety seat or booster seat, which should be checked by a certified installation technician. However, it is recommended that children ride in booster seats until the lap and shoulder belt can fit correctly, usually when a child is 4'9" or taller. Montana law requires every vehicle occupant to be age-appropriately restrained.

Falls: Children are prone to falls and severe injuries, including serious head injuries, can be associated with a fall. Install safety gates at the top and bottom of staircases and make sure stairs are clear of objects. Install safety guards on windows or keep windows locked. Strap children into high chairs and swings, and do not leave small children unattended on beds or changing tables. Supervise children on playgrounds.⁶

Drowning: Children can drown in small quantities of water. Constant supervision around water, including bathtubs and toilets, and using a fence to surround a backyard pool can help prevent drowning. Wear a personal flotation device (PFD) when swimming or boating. Swimming lessons are an important step to prevent drowning.

Suffocation: Small children can become stuck in positions that compromise their breathing and they may not have the strength or coordination to free themselves. Adults can smother children in bed if sleeping together. Provide a safe sleeping space for children and do not sleep with a small child. Eliminate hanging hazards like curtain cords and warn older children about the dangers of 'choking games' and simulating hanging.

Poisoning: The most common potential poisoning exposures for children are personal care products and cosmetics, cleaning materials, medications, and plants. Children are also at risk for lead poisoning, particularly from leaded paint in older housing. Make sure that hazardous products are out of reach of small children or locked up and have your child tested for lead.⁷

Other transport: Protective equipment should be used while riding all-terrain vehicles (ATVs), snowmobiles, and horses. Also, proper education and use of only age-appropriate size of vehicle can help reduce injuries. Children younger than 18 years old are required to wear a helmet in Montana when riding motorized vehicles on public roads .

Pedestrian: Toddlers are at particular risk for pedestrian injuries in driveways while a car is backing up. Older children have a higher frequency of pedestrian injury at high traffic areas and intersections. Do not let children play near cars or cross the street unsupervised. Check carefully around a vehicle before backing out of a driveway.⁸

Fire/burn: The majority of fire deaths occur in the home. Ensure that smoke detectors are present in the home on every floor and that they are properly installed and functioning. To prevent scalding, keep the water temperature below 120 degrees Fahrenheit and supervise children carefully while in the kitchen.

For more information on injury prevention among children in Montana see the Montana Injury Prevention Program's website at www.dphhs.mt.gov/ems/prevention/prevention_menu.html or contact the Montana Injury Prevention program at: bperkins@mt.gov, 406-444-4126.

Methods and Limitations

Data on deaths in this report were made available by the Vital Statistics Analysis Unit of the Montana Department of Public Health and Human Services (DPHHS). Data on hospitalizations were supplied by the Montana Hospital Discharge Data System (MHDDS) of the Montana DPHHS. The hospitalization data are made available through a Memorandum of Agreement with the Montana Hospital Association (MHA) and are the property of the MHA. The authors of this document are responsible for all analyses and conclusions reported.

References:

1. <http://apps.who.int/classifications/icd10/browse/2010/en>
2. <http://icd9cm.chrisendres.com/index.php?action=contents>
3. http://www.cdc.gov/nchs/injury/injury_matrices.htm
4. Injury Surveillance Workgroup. Consensus recommendations for using hospital discharge data for injury surveillance. Marietta, GA: Safe States Alliance; 2003.
5. Liller, K.D. Unintentional Injuries in Children. Medscape Education. Available at: <http://www.medscape.org/viewarticle/553273>
6. Safe Kids, USA. Preventing injuries: at home, at plan, and on the way. Available at: <http://www.safekids.org>
7. Centers for Disease Control and Prevention. Screening young children for lead poisoning: guidance for state and local public health officials. Available at: <http://www.cdc.gov/nceh/lead/publications/screening.htm>
8. Schieber RA, Vegega ME, ed. Reducing childhood pedestrian injuries. 2002. *Injury Prevention*. 8(Suppl 1):i3-i8.

