

# Injuries and violence: How big is the problem?

## **The Pediatric Injury Prevention, Education and Research (PIPER) program**

The PIPER program is a collaborative initiative of the Colorado School of Public Health, the University of Colorado School of Medicine and Children's Hospital Colorado

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Injuries – including violence – are a huge health problem in the United States. More than 180,000 people die each year from injuries and over 31 million visit the emergency department for injuries. The costs are enormous – with the injuries in just one year accounting for more than \$465 billion dollars in medical care and lost productivity.

Because injuries are the leading cause of death for young people, ages 1-44, they are responsible for more years of total life lost than heart disease and cancer combined. The types of injury problems vary by age as well as by geography and social circumstances.

What is considered an injury? Injury can be classified in different ways – whether unintentional (e.g., fall or drowning) or intentional (e.g., child abuse, suicide, assault) or by where they occur (e.g., at home, at work, at play, at school, or on the roadway) or by the types of outcomes that result (e.g., brain injury, broken bones, poisoning)

**Nearly all injuries  
are preventable.**

An estimated 1 in 4 U.S. adults seek medical treatment for an injury each year.

### **Leading causes of injury-death by age group in the United States:**

The three types of injury causing the most deaths in the United States are prescription drug overdose, motor vehicle crashes, and suicide. However, falls and interpersonal violence (including child abuse, sexual assault, and domestic violence) are responsible for more visits to medical care than other types of injury.

### **Injuries in the Rocky Mountain West Region**

- ◆ Injury rates are higher in the Mountain West region compared to the rest of the United States.
- ◆ In Colorado alone, more than 300 children and adolescents under age 21 died as a result of injuries in 2011. Of these, the largest share of fatalities was from unintentional injury, 81 were suicides, and 46 were the result of homicide.
- ◆ Deaths are just the tip of the iceberg. Nonfatal injuries in children under 21 resulted in about 4,000 hospitalizations, more than 20,000 calls for emergency medical services, and an estimated over 160,000 outpatient visits in Colorado.
- ◆ Motor vehicle crashes, suicide and homicide are the leading causes of death among Colorado youth ages 21 and under.
- ◆ Not only do these injuries add to our nation's skyrocketing health care costs, but they can also lead to long-term disability.

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### **Proven Injury Prevention Programs Save Lives**

Many efforts to prevent injuries have been very successful. Often those most successful rely on changing environmental conditions (e.g., making roads safer) coupled with improved enforcement of policies and community-based education. For example:

- ◆ Seat belts have saved over 255,000 lives between 1975-2008.
- ◆ Bike helmets are proven effective in reducing head injuries from bicycle crashes by 69-85%.
- ◆ Working smoke detector in the home reduced the risk of death from a house fire by as much as 71%.
- ◆ Nurse home visiting programs led to a 39% reduction in child abuse and neglect in high risk families.

### **...and Save Money**

- ◆ Each dollar spent on a poison control center saves approximately \$7 to \$15 in unnecessary health care expenses.
- ◆ For only \$14 dollars per helmet, a bike helmet on a child saves society \$580.
- ◆ Battery-operated smoke alarms yield an estimated cost savings of \$770 for a cost of only \$46 per smoke alarm.
- ◆ Treatment foster care yields an estimated cost savings of \$181,000 for a cost of only \$2,800 per child.

### **PIPER's Role**

The Pediatric Injury Prevention, Education and Research (PIPER) Program, housed within the Colorado School of Public Health and working collaboratively with the University of Colorado School of Medicine and Children's Hospital Colorado has a mission of improving safety through the translation of sound science to practice.

We have a multifaceted approach:

- Advancing the science of injury control
- Using strong science to guide policy and programs
- Developing a strong workforce using the best approaches to prevent injuries

We do this by joining forces with multiple groups, representing a diverse array of disciplines and organizations, including:

- 70+ investigators in Denver area
- Regular work-in-progress meetings / communication / mentoring
- Monthly seminar series