

# Injury and Violence

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## Injury and Violence

The field of injury and violence prevention focuses on unintentional injuries and injuries resulting from intentional acts of violence. Injuries are the primary killer of children and young adults in Washington State and the United States.<sup>1</sup> Because injuries disproportionately affect the young, the life-years lost due to injuries exceed those that result from other preventable causes of death. But injuries are not a problem only for the young. Among people of all ages, unintentional injury is the fifth leading cause of death, and suicide is the eleventh leading cause of death in both Washington State and the United States. Millions of people in the United States live their lives affected by injuries and violence, either to themselves or to someone they love.

Injury can lead to pathological conditions and impaired physiological functioning that can have both short-term and long-term effects.<sup>2</sup> Victims of violence can experience physical injury, adverse mental health consequences such as depression and anxiety, and harmful physical health consequences including suicide attempts, cardiovascular disease, and substance abuse.<sup>2</sup>

More than 3,500 Washington residents died from injuries in 2005. Sixty-nine percent of these deaths were unintentional, 28% were intentional (homicide or suicide), 2% were of legal intervention, and <1% were undetermined intent. The leading cause of unintentional injury death was motor vehicle crashes (20%). Seventy-eight percent of the intentional injury deaths were suicides, and 22% were homicides.

Non-fatal injuries caused about 78,000 injury hospitalizations of Washington residents in 2005. Falls were the leading cause of injury-related hospitalization, and 68% of fall hospitalizations occurred among adults ages 65 and older. Falls in this age group accounted for four times more injury-related hospitalizations than the next leading cause, motor vehicle crashes to those of all ages.

The financial cost of injury is staggering. Nationally, injuries that occurred in 2000 will cost an estimated \$80 billion in lifetime medical care expenditures and an additional estimated \$326 billion in lost productivity.<sup>3</sup>

It often costs far less to prevent injuries than to treat them. The Pacific Institute for Research and Evaluation estimates that:

- Every child safety seat saves \$1,360 in direct medical costs and other costs.
- Every bicycle helmet saves \$395 in direct medical costs and other costs.
- Every smoke detector saves \$35 in direct medical costs and an additional \$865 in other costs.
- Every dollar spent on poison control centers saves \$6.50 in medical costs.<sup>4</sup>

The causes of injuries are complex. No one part of society, working alone, can do everything needed to reduce injuries. Reducing injuries requires the combined efforts of health, education, transportation, law enforcement, engineering, and social and safety sciences.

Injury and violence prevention activities must also cross the spectrum of prevention, consisting of the following six interrelated actions.<sup>5</sup>

- Strengthening individual knowledge and skills that lead to risk-reducing behavior change.
- Promoting community education to support individual behavior change.
- Educating providers to help their patients or clients understand injury risks and what they can do to reduce those risks.
- Fostering coalitions and networks that champion changes at the local level for safer communities.
- Changing organizational practices that reduce injury risks.
- Influencing policy and legislation to promote a safer society for everyone.

## Section Overview

This section addresses significant causes of unintentional and intentional injury. It includes chapters on

- [Motor Vehicle Crashes](#)
- [Traumatic Brain Injury](#)
- [Falls Among Older Adults](#)
- [Poisoning and Drug Overdose](#)

- [Drowning](#)
- [Suicide](#)
- [Homicide](#)
- [Youth Violence](#)
- [Domestic Violence](#)
- [Child Abuse and Neglect](#)

## Highlights and Discussion

Over-all injury death rates in Washington have decreased in the past 25 years. Reductions have occurred in drowning, motor vehicle-related deaths, homicide, traumatic brain injury, youth violence, and domestic violence. Emergency medical service responses and improved resuscitation and care at trauma centers have played a role in preventing some deaths.

Despite these improvements, injury is still a leading cause of death for our state across the age spectrum. Rates of some injuries, including falls among older adults and poisoning, are getting worse.

The risk for specific types of injury varies by age and gender. For example, women and children are more likely to be victims of both physical and sexual assaults, often perpetrated by people they know. Young men ages 15–24 have the highest rates of homicide and drowning, and men older than 75 have the highest rates of suicide. Falls are the leading cause of injury hospitalization, among older adults, and women have significantly higher rates than men do.

Alcohol and other drug use, inexperienced or poor parenting, and certain social and built environments contribute to many injuries. Alcohol contributes to motor vehicle crashes, drowning, fires, fall deaths, suicide, homicide, and other types of violence. Parenting and supervision are important factors in both unintentional and intentional childhood injuries. The risk of being injured is strongly associated with socioeconomic inequities. Modifications to the built environment, that which is constructed by humans, can prevent unintentional and intentional injury. For instance, walking and biking trails can separate motor vehicles from walkers, bicyclists, and joggers.

Many effective interventions can prevent injuries, although these are not uniformly used throughout Washington. These interventions include products such as seat belts, smoke alarms, and firearm storage boxes; environmental changes including speed bumps, pool fencing, and residential fire sprinklers; change in behavioral and

communication patterns such as those that can be achieved with multi-faceted senior falls prevention programs or parent training to prevent childhood injury; and policies or laws defining permissible blood alcohol levels or strongly enforcing current traffic and boating laws. Effective interventions to prevent some injuries, notably domestic violence, have not yet been identified.

## Disparities

In Washington and other states, people with lower incomes or education are more likely to die from motor vehicle crashes, poisoning, traumatic brain injury, drowning, homicide, and suicide than are people with higher incomes and higher levels of education.<sup>6</sup>

The risk of injury and violence also differs among people of different races or Hispanic origin. American Indians and Alaska Natives are at higher risk for injury death by motor vehicle crashes, poisoning, suicide, and traumatic brain injury. Blacks have the highest homicide rates.

## Summary

Injury and violence are commonly occurring public health problems that adversely affect the health and well-being of individuals and communities.

The public health approach to injury and violence prevention is multidisciplinary, encouraging experts and advocates from scientific disciplines, organizations, and communities to work together to find and effectively implement solutions to injury in our state and nation.

## Endnotes

<sup>1</sup> U.S. Centers for Disease Control and Prevention, National Centers for Injury Prevention and Control. (2007). *Web-based Injury Statistics Query and Reporting System (WISQARAS)*. Retrieved January 30, 2007 from [www.cdc.gov/ncipc/wisqars](http://www.cdc.gov/ncipc/wisqars).

<sup>2</sup> Sattin, R. W., & Corso, P. S. (2006). The epidemiology and costs of unintentional and violent injuries. In L. S. Doll, S. E. Bonzo, D. A. Sleet & J. A. Mercy. *Handbook of Injury and Violence Prevention* (pp. 3-19). New York, NY: Springer.

<sup>3</sup> Finkelstein, E. A., Corso, P. S., Miller, T. R., & Associates. (2006). *The incidence and economic burden of injuries in the United States*. New York, NY: Oxford University Press.

<sup>4</sup> Miller, T. R., Romano, E. O., & Spicer, R. S. (2000). The cost of childhood unintentional injuries and the value of prevention. *Future Child*, Spring-Summer, 10(1), 137-163.

<sup>5</sup> Cohen, L., & Swift, S. (1999). The spectrum of prevention: developing a comprehensive approach to injury prevention. *Injury Prevention*, 5(3), 203-207.

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<sup>6</sup> Washington State Department of Health. (2004). Injury and Violence Prevention Section, *The Health of Washington State 2004 Supplement*. Olympia, WA.