PREVENTING ADOLESCENT INJURY:

The Role of Health Plans

Adolescent Injury: In the United States, unintentional injuries are the leading cause of death among adolescents and a leading cause of medical spending for adolescents aged 11 to 18 years old. Most injuries are preventable, however, and prevention often costs less than treating the effects of injuries. This brief describes why health plans would want to invest in injury prevention and how they can help prevent adolescent injury, thereby reducing injury-related mortality and health care spending for adolescents.

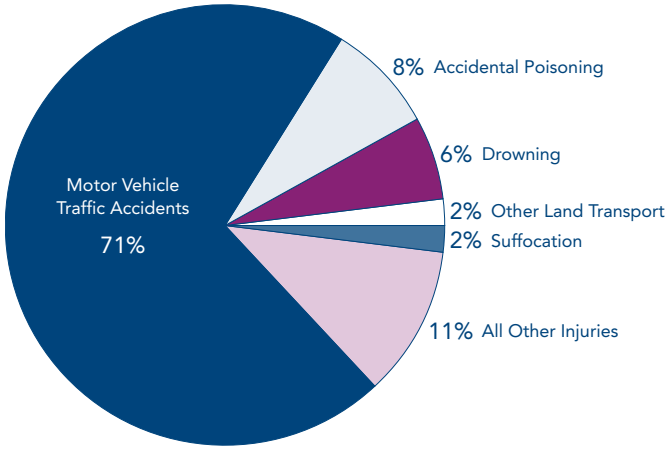
THE SIZE OF THE PROBLEM

- Over 80 percent of adolescent deaths are caused by injuries, and more than 60 percent of these deaths are caused by unintentional - often preventable - injuries.[1]
- Motor vehicle accidents account for seven of every ten deaths from unintentional injury among adolescents between the ages of 11 and 18 (Figure 1).
- Unintentional injuries accounted for close to 100,000 adolescent hospitalizations in 2005 and consistently rank among the top causes of non-fatal injuries treated in the inpatient setting (Figure 2). These inpatient treatment costs contribute significantly to the overall medical spending on injuries.
- The total lifetime medical cost for treating all non-fatal, unintentional injuries occurring in 2000 to people under age 25 was estimated at nearly $25 billion.[2] Despite a decrease in the number of adolescent injuries over the past decade, medical costs continue to soar; therefore this estimate is likely much higher today.

THE CONSEQUENCES AND COST OF INJURIES

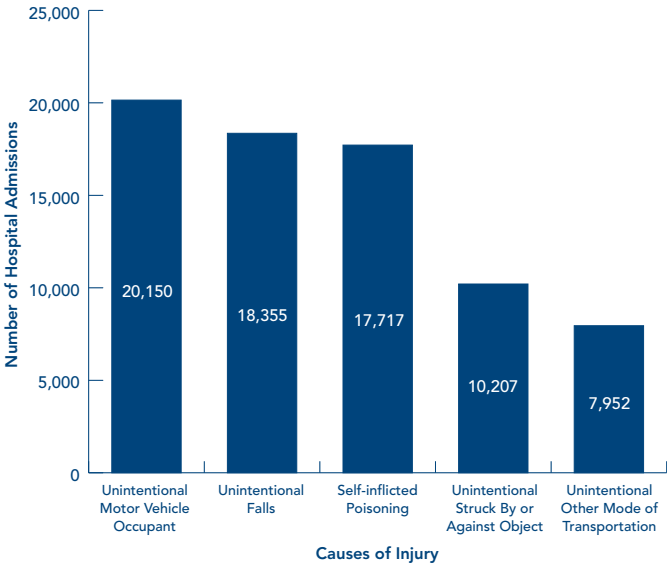
Injuries have physical, psychosocial, and financial consequences that extend well beyond the injury victim. Physical consequences affect the victim directly and can be short-term, such as broken bones or minor burns, or long-term, such as traumatic brain and spinal cord injuries and severe burns that result in permanent disabilities. Psychosocial consequences of injury include depression and post-traumatic stress disorder and can affect not only the injured adolescents but also their families and larger social circles.

FIGURE 1. CAUSES OF DEATH BY UNINTENTIONAL INJURY, AGES 11-18, 2006



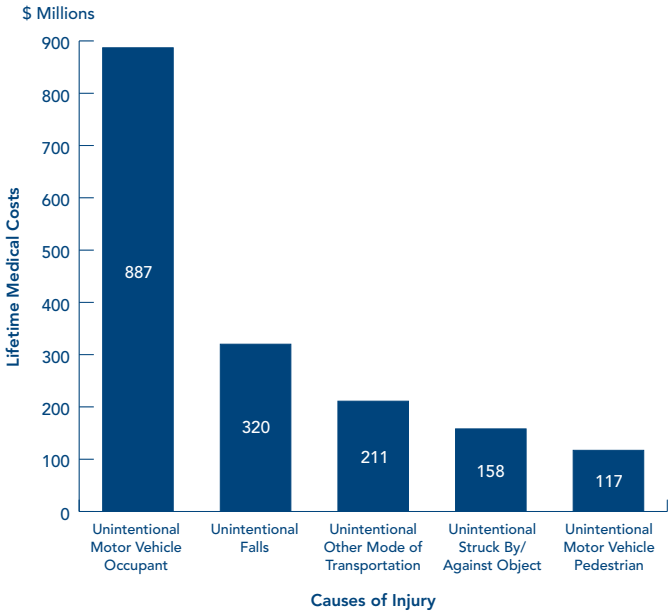
Source: Centers for Disease Control and Prevention, WISQARS™ (Web-based Injury Statistics Query and Reporting System), 2006 data.

FIGURE 2. TOP FIVE CAUSES OF NON-FATAL INJURIES TREATED IN THE INPATIENT SETTING, AGES 11-18, 2005



Source: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, National Inpatient Sample, 2005 data, compiled by: Children's Safety Network Economics and Data Analysis Resource Center.

FIGURE 3. NON-FATAL INJURIES TREATED IN INPATIENT SETTING WITH HIGHEST LIFETIME MEDICAL COSTS, AGES 11-18, 2005



Source: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, National Inpatient Sample, 2005 data, compiled by: Children's Safety Network Economics and Data Analysis Resource Center.

Financial consequences include the total lifetime medical costs of treating the injury and its aftermath, plus the costs associated with reduced work productivity and quality of life losses. These productivity losses reflect the value of lost household work of the adolescent as well as lost earnings of the adolescent, parents, or others who miss work because of the injury or caregiving duties. Quality of life costs estimate a dollar value for the pain, suffering and lost quality of life experienced by adolescents and their families as a result of the injury. Clearly, these costs affect virtually all segments of society – from the injury victims and their families to employers, private health insurers, the government and taxpayers.

Lifetime Medical Costs

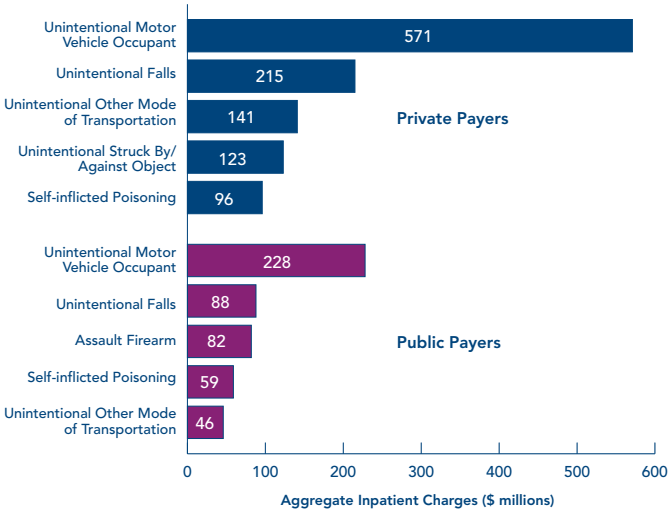
Total lifetime medical costs for all adolescents who were hospitalized in 2005 for non-fatal injuries were estimated to be $3.5 billion. Though substantial, this cost estimate reflects only non-fatal injuries that were serious enough to result in a hospital stay in that year. Medical costs for those who died from their injuries and for the many injured patients who did not need an inpatient stay would represent additional injury-related costs for payers and patients (through cost sharing). Figure 3 shows the estimated total lifetime medical costs for the five causes of injury hospitalizations with the highest costs for adolescents aged 11-18 years.

Unintentional motor vehicle injuries and unintentional falls account for the highest lifetime medical spending by both public and private payers. Injuries from firearm assaults are the third highest cause of injury-related costs for public payers, however, these injuries are not among the top five causes for private payers (Figure 4).

Total Costs

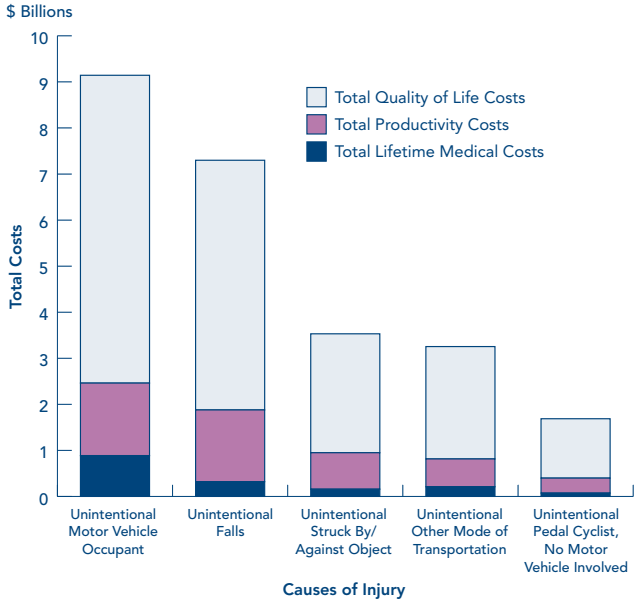
Even these staggering lifetime medical costs are dwarfed by the costs of lost productivity and quality of life. For example, the average adolescent who is hospitalized for a non-fatal motor vehicle injury can expect to incur almost $78,000 in lost work productivity for himself and his caregivers and over $345,000 in costs associ-

FIGURE 4. TOP CAUSES OF LIFETIME MEDICAL SPENDING FOR NON-FATAL INJURIES TREATED IN INPATIENT SETTING BY PAYER, AGES 11-18, 2005



Source: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, National Inpatient Sample, 2005 data, compiled by: Children's Safety Network Economics and Data Analysis Resource Center.

FIGURE 5. NON-FATAL INJURIES TREATED IN INPATIENT SETTING WITH HIGHEST TOTAL COSTS, AGES 11-18, 2005



Source: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, National Inpatient Sample, 2005 data, compiled by: Children's Safety Network Economics and Data Analysis Resource Center.

ated with reduced quality of life. When added to the $44,000 in expected lifetime medical costs, total costs of the injury exceed $467,000 per person – or more than $9 billion across all such injuries occurring in 2005 (Figure 5). Productivity and quality of life costs are estimated to be similarly large for other expensive and frequent causes of injury.

RISK FACTORS

Many risky behaviors begin during adolescence, and these behaviors, rather than infectious or chronic diseases, are the leading cause of morbidity among adolescents. Risky behaviors that can lead to unintentional injury include not using seat belts, driving after drinking alcohol, carrying weapons, not wearing protective gear during sports, and engaging in physical fights.

A broad range of socioeconomic factors have been associated with injury risk, including family income, maternal education, family structure (single parent household and number of children), and accommodation (type of housing, level of overcrowding). Reflecting the confluence of many of these factors, unintentional injuries disproportionately affect children and adolescents living in low-income households.

Being male is also an increased risk factor for injuries. The injury death rate for males is almost two times the rate for females and is highest among males 15 to 19 years old. Non-fatal injury rates are also generally higher among males. Many theories have been proposed for these gender differences in injury levels, including that males engage in more risk-taking behaviors, have higher activity levels, and behave more impulsively.

CHALLENGES

Preventing injuries can be especially challenging for some of the very populations at higher risk for injury, including adolescents who live in low-income households, are uninsured, or are male. These circumstances

generally mean that there are fewer opportunities to reach these populations with education and other resources on injury prevention. In particular, their lower likelihood of having an annual primary care visit is a real lost opportunity, since this visit is a prime time to provide injury prevention counseling.

INJURY PREVENTION DOES SAVE MONEY

Effective reductions in risky behaviors and prevention of injuries decreases health care utilization among adolescents, resulting in lower health care spending, which ultimately benefits private and public health plans, employers and individuals. In fact, there are documented cost savings associated with specific injury prevention activities and behavior modification interventions. Providing safety helmets and offering substance abuse prevention programs for adolescents are two examples of prevention initiatives that have been shown to save significantly more money than the programs cost. On average, a $10 bicycle helmet saves $570 in medical costs. A variety of youth substance abuse prevention programs cost less than $200 per person but save between $500 and $4,700 per person in medical costs.[8] Health plans can be influential in supporting these and other prevention activities.

OPPORTUNITIES FOR HEALTH PLANS TO MAKE A DIFFERENCE

Health plans are well-suited to provide injury prevention activities for their members and for the broader community. Below are some examples of how health plans are supporting adolescent injury prevention.

Promote Injury Prevention Among Primary Care Physicians

- Health plans require counseling on injury prevention as part of adolescent well-care visits. However, injury prevention counseling occurs at only 15 percent of these visits.[9] Health plans have an opportunity to improve physician adherence to counseling requirements and national recommendations for adolescent health care, such as those contained in the American Academy of Pediatrics Bright Futures Guidelines.

> ***"If a disease were killing our children in the proportions that injuries are, people would be outraged and demand that this killer be stopped."***
>
> **C. Everett Koop, M.D., Former Surgeon General**

- Health plans support and promote appropriate screening by primary care physicians for depression, bullying and substance abuse – three risk factors for adolescent injury. These physicians are often the first and only health care professional to come into contact with adolescents, and well-care visits and other visits provide screening opportunities.

- Health plans encourage and support primary care physicians to provide counseling to adolescents who are taking prescribed medications on the dangers of pharmaceutical abuse and poisoning. Such counseling is particularly critical for adolescents diagnosed with mental health disorders or those taking prescribed medications for mental health disorders.

Offer Incentives or Subsidies for Buying and Using Safety Devices

- Safety helmets are a simple and cost-effective way to practice prevention from injuries caused by bicycles, motorcycles, in-line skating, all-terrain vehicles and other sports-related accidents. Many health plans, including Blue Cross Blue Shield of Massachusetts, endorse the use of and offer discounts on safety helmets for their members.

Support Community Activities to Prevent Injury

- Health plans and health plan foundations fund local organizations or initiatives that support injury prevention. For example, one of Wellmark Foundation's priority funding areas is community-based wellness and prevention, including injury prevention. Wellmark has awarded a $50,000 grant to Catholic Social Services in Rapid City, South Dakota, to support a wellness and prevention curriculum for elementary students living on the Pine Ridge and Rosebud

Reservations in South Dakota. The culturally-specific curriculum will teach 800 to 1000 elementary students how to live a healthy lifestyle based on their Lakota tradition. Of direct relevance to injury prevention, the program will offer knowledge and resources on how to resist peer pressure, abstain from substance abuse and avoid violence.

Advocate for Policies to Prevent Injury

- Health plans have a strong voice in their communities and are using this voice to advocate for new safety laws, policies and regulations in their state or for the enforcement of existing laws. For example, health plans can have an impact on reducing motor vehicle accidents by joining coalitions working to promote graduated driver licensing systems. These systems include requirements for supervised driving and restrictions for nighttime driving and passengers. Studies have found that states adopting elements of graduated licensing had reductions in crashes of 10 to 30 percent among young drivers.[10]

- Health plans are also advocating for policies that will reduce access to prescription medication by youth, such as the prescription drug monitoring programs that are currently used in 33 states to deter and identify prescription forgery, indiscriminate prescribing and "doctor shopping."

Educate Children and Families on Safe Practices

- Health plans play a key role as leaders in their state and in their local communities and often partner with government or other stakeholders to provide educational materials for their members or the broader community. Health plans are partnering with the state or local health department, safety coalitions or physician groups to work on injury prevention activities or educational campaigns geared to adolescents or physicians. Health plans are also developing their own campaigns to reduce injuries. The Anthem Foundation partnered with the American College of Emergency Physicians to develop "Healthy Habits for Safe Kids," an educational guide that empowers families with accurate, useful information to prevent injuries and keep children out of the emergency room.

RESOURCES

- Children's Safety Network National Injury and Violence Prevention Resource Center
  www.childrenssafetynetwork.org/

- Centers for Disease Control and Prevention's National Center for Injury Control Prevention
  www.cdc.gov/ncipc/

- American Association of Poison Control Centers
  www.aapcc.org/

- State and Territorial Injury Prevention Directors Association
  www.stipda.org/

ENDNOTES

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ABOUT THE NIHCM FOUNDATION

The National Institute for Health Care Management (NIHCM) Research and Educational Foundation is a non-profit organization whose mission is to promote improvement in health care access, management and quality.

ABOUT THE CHILDREN'S SAFETY NETWORK

The Children's Safety Network National Injury and Violence Prevention Resource Center works with a broad range of partners to create healthy, safe and injury free communities for children and families.

ABOUT THIS BRIEF

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