# Injury Prevention Counseling by Pediatricians Saves Money

Each year, approximately 5,600[5] children aged 14 and younger die from unintentional injuries. Some 124,000 children suffer injuries that result in hospitalization,[6] and more than 13.5 million sustain injuries that required less intensive medical treatment.[7]

Research has shown that injury prevention counseling by pediatricians is very effective. Pediatricians have clout with parents. In one study, broad injury prevention counseling by pediatricians reduced childhood injuries by 15 percent. Other studies have found that injury rates from falls, highway crashes, and burns decline following counseling.

Unfortunately, one study found that although 68 percent of parents reported that their children had faced injury-threatening incidents in the past, 60 percent of parents reported never receiving any injury prevention counseling from their primary care clinicians.

The following summarizes a study of the costs saved as a result of The Injury Prevention Program (TIPP) developed by the American Academy of Pediatrics. TIPP suggests age-appropriate topics for pediatricians to cover during 11 well-care visits of children aged 0 to 4. The study focused on TIPP counseling about child passenger injuries, burns, and falls. These injuries generate half of all injury costs for children aged 0 to 4.

## COSTS SAVED

- For children aged 0 to 4, TIPP counseling costs $10 per child and saves approximately $86. These savings include $7 in medical costs; $16 in future earnings; and $63 in the prevention of pain, suffering, and lost quality of life. These savings equate to $946 per child over 11 TIPP counseling sessions.
- If the parents of all 19 million children aged 0 to 4 in the United States received TIPP counseling, annual injury costs would decline by more than $4.4 billion. These savings include $366 million in medical costs; $836 million in future earnings; and $3.3 billion in the prevention of pain, suffering, and lost quality of life.

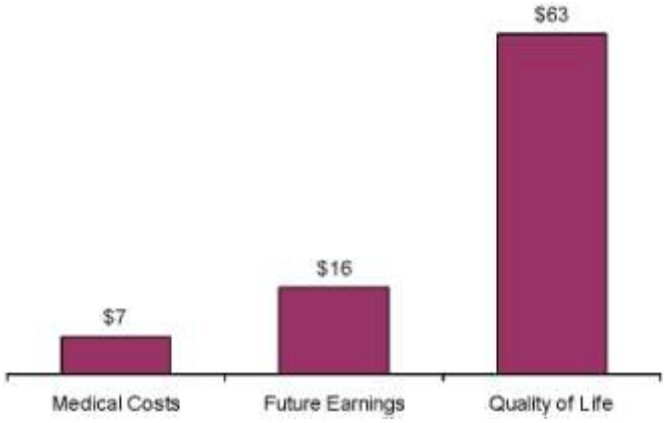


Figure 9. Every $10 spent on Parental American Academy of Pediatrics TIPP Sheet Counseling for Children Aged 0-4 Saves $86/per child (in 2004 dollars) (Note: All costs are in 2004 dollars and were computed using the methodology outlined by Miller, Romano, and Spicer [2000]. Numbers may not correspond to totals due to rounding.)

CSN (www.childrenssafetynetwork.org) is funded by the Health Resources and Services Administration's Maternal and Child Health Bureau (U.S. Department of Health and Human Services).

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## References


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# Definitions

## A. Data Types

- **Fatal:** Mortality data by multiple causes of death include all deaths occurring within the United States. Deaths of U.S. citizens and deaths of members of the Armed Forces occurring outside the United States are not included. Data are obtained from certificates filed for deaths occurring in each State.
- **Admitted:** Hospital patient discharges from short-stay noninstitutional hospitals and general and children's general hospitals regardless of length of stay located within the 50 States and the District of Columbia. Military and U.S. Department of Veteran Affairs hospitals are not included.
- **Nonadmitted:** Information on the health of the civilian, noninstitutionalized population of the United States compiled through the National Health Interview Survey that was designed to obtain accurate and current statistical information on the amount, distribution, and effects of illness and disability and the services rendered for or because of such conditions. Persons who did NOT report going to the hospital for their condition were included; counts related to poisonings were obtained from Toxic Exposure Surveillance System data maintained by the American Association of Poison Control Centers.

## B. Incidence-Based Versus Prevalence-Based Costs

- **Incidence-based costs** are the present value of the lifetime costs that may result from injuries that occur during a single year. For example, the incidence-based cost of head injuries in 2001 estimates total lifetime costs associated with all head injuries that occurred in 2001. Incidence-based costs measure the savings that prevention can yield.
- **Prevalence-based costs** measure all injury-related expenses during 1 year, regardless of when the injury occurred. For example, the prevalence-based cost of head injuries in 2001 measures the total health care spending on head injuries during 2001, including spending on victims injured many years earlier. Prevalence-based cost data are needed to project health care spending and evaluate cost controls.

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## C. Resource versus Productivity Costs

**Resource costs** are broken down into **medical costs** and **other resource costs**. **Productivity costs** include immediate and future work losses due to a childhood injury.

- **Medical costs** include emergency medical services, physician, hospital, rehabilitation, prescription drugs, and related treatment costs, as well as ancillary costs (i.e., crutches, physical therapy, etc.), funeral/coroner expenses for fatalities, and the administrative costs of processing medical payments to providers. For violence, this category also includes mental health treatment costs.
- **Other resource costs** include police and fire department costs, plus the travel delay for noninjured travelers resulting from transportation crashes and the injuries caused by the crashes. For violence, this category also includes social services and victim assistance costs. It excludes mental health services costs. Fact sheets that do not explicitly show other resource costs include paramedic, ambulance, and helicopter transport costs in medical costs.
- **Future earnings** include victims' lost wages and the value of lost household work, fringe benefits, and the administrative costs of processing compensation for lost earnings through litigation, insurance, or public welfare programs such as food stamps and Supplemental Security Income. Work losses by family and friends who care for injured children also are included. For violence, this category also includes earnings lost by family and friends caring for the injured and the value of school missed when children are temporarily disabled.
- **Quality of Life** places a dollar value on the pain, suffering, and lost quality of life those children and their families experience due to an injury.

### Calculation Methods

To value **quality of life lost to fatal injuries**, we start by estimating the value people place on survival. We measure the value of survival from the amounts people spend (in dollars or time) for safety. Fifty technically sound "willingness to pay" studies have estimated this value (Miller, 1990). They examine such things as markets for auto safety features and smoke detectors, extra wages paid to get workers to take risky jobs, and speed choice when driving.

The value of survival is essentially the combined value of future earnings and quality of life. By subtracting the lost future earnings, we get the quality of life costs per death.[131]

To value **quality of life lost to nonfatal injury,** we use two methods. In the first, physicians rate the typical effects of different injuries on six dimensions of functioning: mobility, cognitive, bending and grasping, pain, sensory, and cosmetic. We also collect data about a seventh dimension: the ability to work. Using surveys about the value people place on different dimensions of functioning, we combine the data to obtain a percentage of the value of survival lost to each injury.

Again, we subtract lost future earnings to get the quality of life costs per injury.

The second method uses jury verdicts to value victims' pain and suffering. This method is used in valuing the quality of life lost to violent crime and to drunk-driving crashes without physical injury. It provides our only estimate of the losses due to rape and to fear.

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Estimates from the two methods of valuing quality of life lost to nonfatal injury differ by less than 10 percent.

Since 1989, the U.S. Office of Management and Budget has required all Federal regulatory benefit-cost analyses to include quality of life costs if they place a dollar value on saving lives.

[5] Fatal injury incidence estimates are based upon data from the National Center for Health Statistics (NCHS), Multiple Cause-of-Death File 1999-2002.

[6] Nonfatal injury incidence estimates for admitted cases were based upon 2000 Nationwide Inpatient Sample data produced by the Health Care Utilization Project (HCUP).

[7] Nonfatal injury incidence estimates for nonadmitted cases were based upon data from the National Ambulatory Medical Care Survey (NAMCS, 1995-1996), the National Hospital Ambulatory Medical Care Survey (NHAMCS; 1992-1996), and the National Health Interview Survey (NHIS, 1987-1996). All three of these datasets were produced by NCHS.

[13] Estimating quality-adjusted life years (QALYs) is one way to value the good health lost to an individual who suffers a health problem, is disabled, or dies prematurely. A QALY is a measure based on individual preferences for states of health that assigns a value of "1" to a year of perfect health and "0" to death. QALY losses are affected by the duration and severity of a health problem. To estimate QALY losses, years of potential life lost to a fatal injury are added to the number of years spent with an injury-related disability multiplied by a "weighting factor" that represents the severity of the disability. Such weighting factors can be estimated by using rating scales or by using tradeoff methods that elicit individual preferences between death and various health states.

## References


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