

THE
ECONOMIC
BURDEN OF
UNINTENTIONAL
INJURY
IN CANADA

presented by

SMARTRISK™



SAUVE-QUI-PENSE^{MC}

A SUMMARY

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SAUVE-QUI-PENSE

in partnership with



Health Canada Santé
Canada Canada



Emergency Health Services Branch
Ministry of Health



Kingston, Frontenac and Lennox & Addington Health Unit

The Economic Burden of Unintentional Injury in Canada
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THE ECONOMIC BURDEN OF UNINTENTIONAL INJURY IN CANADA

INTRODUCTION

Canadians understand that injuries kill and disable people every day. Canadians also understand that injuries cost money. But do Canadians know how much money is spent on injuries? The purpose of *The Economic Burden of Unintentional Injury in Canada* is to determine what it costs to treat unintentional injuries. This category of preventable injury includes falls, motor vehicle crashes, railway and pedestrian injuries, drowning and suffocation, poisoning and fires, but does not include suicide or acts of violence.

The study determines what percentage of the total amount spent on unintentional injuries can be attributed to direct costs that cover

hospital care, physician services, prescription drugs and home modification or vocational rehabilitation. The study also establishes the indirect cost of injury to society incurred by the losses in productive lifetime earnings caused by death or disability. These overall costs are then broken down into specific causes of injury.

The results highlight a crucial issue. If these injuries are largely preventable, then how much money and how many lives could Canadians save by implementing strategic prevention programs? To demonstrate, the study offers examples of cost-cutting strategies showing the extent to which Canadians could save money and lives. Recommendations for a national prevention strategy are then outlined, with reference to the current state of injury prevention policy in Canada.

THE COST OF UNINTENTIONAL INJURIES

This study assesses the following injury and death figures* to determine overall annual costs.

Injury Deaths	Hospitalized Injuries	Non-Hospitalized Injuries	Total Injuries	Injuries Resulting in Partial Permanent Disability	Injuries Resulting in Total Permanent Disability	TOTAL ANNUAL COST
7,721	125,281	2,048,220	2,181,222	43,892	3,300	\$8.7 Billion

* The most recent available Vital Statistics data was for 1994. For this study, data were imputed based on the 1995 Canadian population base.

TOTAL COSTS

In 1995 preventable injuries cost Canadians \$8.7 billion or \$300 for every citizen. Falls accounted for \$3.6 billion or more than 40 per cent of the total amount. Motor vehicle crashes cost almost \$1.7 billion or 20 per cent of the \$8.7 billion. The remaining 40 per cent of total costs can be attributed to a combination of costs incurred by drowning, poisoning, fires, and a range of other injuries not specified by hospital classification systems. On average, each injury generates \$4,000 in direct and indirect costs.

DIRECT COSTS

Over 2 million injuries in 1995 accounted for more than \$4.2 billion in direct health care costs. The most costly injuries were falls, totalling almost \$2.4 billion or 57 per cent of total direct costs, and motor vehicle crashes at \$375 million or 9 per cent of direct costs. Canadians spent \$116.3 million treating patients for poisoning.

These three types of injury - falls, motor vehicle crashes and poisoning - made up almost 70 per cent of direct costs. Caring for the injured elderly cost over \$980 million or 41 per cent of the \$2.4 billion in direct costs spent on falls, with females representing more cases than males. Treating children and youth for falls cost \$575 million or 24 per cent of the total fall amount, with males representing slightly more cases than females.

Although only 6 per cent of patients injured ended up in hospital, the cost of hospitalization generated 23 per cent or nearly \$935 million of the \$4.2 billion spent on direct costs. However, 94 per cent of the injuries assessed were not hospitalized, accounting for 77 per cent or an estimated \$3.3 billion of the total direct costs.

INDIRECT COSTS

The 54,913 injuries that led to permanent disability or death amount to \$4.5 billion in indirect costs. Permanent disability caused the greatest losses in productivity, amounting to more than \$2.7 billion or 60 per cent of indirect costs. Injuries causing death accounted for \$1.8 billion of the \$4.5 billion total.

The two most significant types of injury causing permanent disability were falls and motor vehicle crashes. Falls accounted for \$1.1 billion of indirect costs generated by permanent disability. Motor vehicle crashes cost \$329 million or 12 per cent of the \$2.7 billion.

THE COST OF A SILENT EPIDEMIC

The staggering costs determined by this study prove that Canada is suffering from an injury epidemic. But it is a silent epidemic because Canadians do not see the risk in their everyday lives. If they do not see the risk, they cannot take measures to navigate that risk in order to prevent potential injury. Why can't Canadians see the risk in their lives?

The problem stems from a universal misunderstanding and misuse of the word 'accident.' Injuries sustained by falls or motor vehicle crashes are not seen as the result of predictable events but rather to be the result of 'accidents' or 'acts of fate'. Yet when someone suffers from heart disease or cancer, high cholesterol and smoking are identified as possible predictable causes. It is time to acknowledge that injuries are predictable and preventable. Injuries are not accidents, and investing in injury prevention can save money and lives. Canadians do not need to spend \$8.7 billion to treat nearly 2 million injuries that could have been largely prevented in the first place.

INJURY PREVENTION CUTS COSTS

How much money could injury prevention programs save Canadians? The following cost-cutting strategies illustrate how targeting the most costly causes of injury combined with the most vulnerable population groups can generate real savings to Canadians.

Falls among the elderly

This study has shown that over \$980 million of the \$2.4 billion in direct costs spent on falls was devoted to treating falls among the elderly. It is estimated that about 40 per cent of falls leading to hospitalization are the result of hip fractures, and that the number of hip fractures will increase dramatically from 23,375 in 1993 to over 88,000 cases by the year 2041 as the Canadian population ages.

These are falls that can be prevented by recognizing risk factors such as a history of falls, impairment related to cognition, balance and gait, low body mass index, the misuse of medications and hazards in the home. By targeting these risk factors through prevention programs, setting a hospitalization reduction target of 20 per cent could lead to 7,500 fewer hospital stays and 1,800 fewer Canadians permanently disabled. The overall savings could amount to over \$138 million annually.

Childhood falls

Injuries from childhood falls cost Canadians \$630 million every year. These are falls that can be prevented by redesigning the structure of playgrounds, targeting hazards in the home and by simply teaching children how to fall.

If these types of prevention strategies reduce the incidence of falls by 20 per cent for children aged 0-9, there would be 1,500 fewer hospitalizations, 13,000 less non-hospitalized injuries, and 54 fewer injuries leading to permanent disability. The net savings could total over \$126 million every year.

Preventing motor vehicle crashes

Wearing seat belts and installing air bags can reduce motor vehicle injuries by 61 per cent. Drinking and driving is responsible for about 40 per cent of all fatal motor vehicle crashes. It is estimated that mortality can be reduced by 20 per cent through a reduction in drunk driving. Reducing speed limits by 10 km an hour could lead to a 15 per cent decrease in mortality, with the number of deaths lowered and severity of injury reduced.

With a 10 per cent reduction in crashes caused by poor road design and maintenance, and based on the assumption that 20 per cent of those injured end up in hospital, there would be 1,100 fewer deaths each year. By implementing a prevention strategy based on buckling up, driving sober, slowing down and looking first on the roads, there would also be 2,800 fewer hospitalizations, 19,000 fewer injuries treated outside a hospital setting and over 750 fewer injuries leading to permanent disability. The net savings to Canadians amount to over \$500 million annually.

PUTTING A PRICE TAG ON PREVENTION

Preventing injuries saves money and lives. The goal of reducing costs can be reached by investing in a national injury prevention strategy. But Canada has not investigated the cost of such a national initiative. As a benchmark, it is useful to examine the strategy of a successful and recent national initiative - HIV/AIDS prevention. A recent study estimating the economic dimensions of HIV/AIDS showed that Canadians invest about \$83 million every year to sustain a national prevention strategy. But are the economic dimensions of HIV/AIDS comparable to preventable injuries?

In 1996 there were an estimated 3,940 new HIV infections. The lifetime direct and indirect costs were \$750,000 per case, accounting for up to \$3 billion annually. Canadians responded to the results of this study by investing \$83 million or \$2.65 per

capita in HIV/AIDS prevention that same year. Over 67 per cent of this investment came from the Provinces with the Federal Government investing 24 per cent, the private sector 5 per cent and municipal funding making up the remaining 4 per cent.

In *The Economic Burden of Unintentional Injury in Canada*, the total lifetime costs of all preventable injuries amounted to \$8.7 billion – almost three times the annual HIV costs. Using the same ratio, Canadians could therefore invest up to \$240 million or \$8 per capita in the fight to prevent this silent injury epidemic.

Canadians responded quickly and effectively to the HIV/AIDS epidemic by investing in a national prevention strategy. The findings of this study prove that Canadians must now respond to this silent epidemic by investing in a national injury prevention strategy. Today, no such strategy exists.

THE POLICY CONTEXT

Progress towards developing a national injury prevention strategy has been made in the past. But it has not moved forward. For example, strategists working in 1991 on a project entitled *A Safer Canada: Year 2000 Injury Control Objectives* developed a series of prevention objectives. They recommended that the Government of Canada recognize injuries as a major cause of death and disability that requires a national prevention strategy. They encouraged the development of national injury control objectives for the purpose of stimulating projects across the country. They also called for the establishment of a national injury surveillance system.

None of the recommendations have been fully realized. The results of *The Economic Burden of Unintentional Injury in Canada* demonstrate that a national injury prevention strategy is not only essential, it is integral to the fight against Canada's silent epidemic.

RECOMMENDING A NATIONAL INJURY PREVENTION STRATEGY

It is time for Canadians to see the risk, reduce the risk, and ultimately manage the risk in their lives. Preventable injuries harm and end the lives of Canadians and exact a heavy toll on the nation's limited health and financial resources. SMARTRISK, along with the partners of this study, therefore call for a National Injury Prevention Strategy.

This strategy must be guided by strong leadership and supported by varied collaborative efforts across injury prevention groups. Collaboration will guarantee the establishment of priorities and will ensure diverse and innovative approaches to prevention. The National Injury Prevention Strategy will incorporate three main components:

1. Comprehensive Programming

- Innovative communications strategies designed to show Canadians the risks in their everyday lives, and ultimately enabling them to take smart risks.
- Community mobilization and outreach programs that will distribute the message and reduce the risks.
- Engineering strategies designed to reduce the likelihood of injury.
- The development of age-specific educational initiatives.
- An extension of injury prevention networks and coalitions.
- The design and implementation of programming initiatives that will put injury prevention at the top of the nation's public policy agenda.
- Legislative and regulatory initiatives at all government levels.

2. National Injury Surveillance System

Data is the lifeline of the proposed National Injury Prevention Strategy. SMARTRISK and the study partners therefore also recommend the implementation of a comprehensive national injury surveillance system. In order to prevent an injury, members of the national strategy coalition must know who is getting injured. They also need to know how they are getting injured and what happens to them after they are hurt. They must know the age, sex, and the socio-economic status of the injured person. These variables will influence specific injury prevention strategies targeting high-risk population groups as well as the most common and costly causes of injury.

3. Research

Finally, this study points to the urgent need for further research into all aspects of preventing injuries including the epidemiology of preventable injury as well as ongoing evaluation of prevention initiatives. Cost-benefit projections for proposed cost-cutting prevention strategies need to be developed as well as cost-benefit evaluation for programs already in place.

The National Injury Prevention Strategy will provide leadership harnessed by strong collaboration, supported by excellent data surveillance systems, and kept alive by sophisticated research and evaluation programs. By investing in this National Injury Prevention Strategy, Canadians will no longer be able to call the injury epidemic 'silent'. People will begin to see the risks in their lives. They will begin to understand how to take smart risks, ultimately saving both money and lives.

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