The Financial Costs, and Prevention Strategies of Unintentional Injuries

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It may be surprising to learn that the leading cause of death for young Canadians is not a disease but preventable injury. Injuries are the leading cause of death in Canada from ages one to 44. In 2007, the most recent year for which data are available, unintentional injuries alone were the fifth leading cause of death overall in the country, accounting for 4.2 percent of all deaths. In 2004, the annual burden of injury in Canada was revealed to be more than 13,000 lives lost, more than 200,000 overnight hospital stays, more than 3,000,000 emergency department visits, more than 60,000 permanent disabilities, more than 5,000 permanent total disabilities, and more than $19.8 billion in costs. This latter figure represents more than $10.7 billion in direct health care costs and more than $9.1 billion in indirect costs; productivity lost to our society due to premature death and disability.
Although these unintentional injuries are often considered unavoidable “acts of fate” and “accidents”, the vast majority of unintentional injuries are predictable and preventable. This misperception ignores the fact that the rates of unintentional injuries and the resulting economic and social consequences can be significantly alleviated through the adoption of effective and comprehensive strategies for prevention. Effective strategies for injury prevention have been shown to not only save lives, but also to save dollars.iii The return on investment for every $1 spent on prevention strategies shows that prevention is extremely cost effective. For example, $1 spent on bicycle helmets saves $29, on child safety seats saves $32, on road safety improvements saves $3, on prevention counseling by pediatricians saves $10, and on poison control services saves $7.

This article examines the significance of unintentional injuries on vulnerable populations in Canada, specifically children, youth and seniors. Research has shown that most injuries can be prevented through a public health approach focusing on the “Three Es” of education, engineering and enforcement. Public servants and policy makers have an opportunity to contribute to safety in Canada and prevention across the lifespan by adopting an injury prevention lens in their work. This includes an awareness of the burden of injury in Canada and attention to the comprehensive approaches to prevention that together may afford us the opportunity to prevent disability and premature death and add to the healthy life years experienced by the Canadian population.

I. CHILDREN AND YOUTH
Few are aware that unintentional injury is the leading cause of death for Canadian children and youth between the ages of one to 14. In Canada, injury kills more children and youth than all disease.v In overall child injury rates, Canada lags behind most OECD countries, as it ranks 18th out of 23 international OECD countries in terms of injury mortality rates.vi The top 15 causes of fatal injuries for Canadian children and youth are largely preventable. These include motor vehicle crashes, threats to breathing (suffocation, strangulation, and choking), drowning, pedestrian injuries, poisoning, falls and even toppling televisions in homes.

Although injuries are a concern for all ages, young children are at particular risk because their abilities and behaviours differ from those of adults, and they live in an environment built for adults. Children are also at risk because of their quickly changing development. Children’s physical and mental abilities, level of dependence, type of activities and risk-taking behaviour all change rapidly as they grow older. Children’s injuries are often closely related to their stage of development, the type of activity they are engaged in, and the environment they live or play in at a particular time.vi

When an injury to a child does occur, the magnitude of its impact is felt at all levels of society. Unintentional injuries cost Canada’s health care system approximately $4.2 billion in direct system costs annually, with an additional $4.5 billion in secondary costs. Another $4 billion in direct and indirect health care costs are specifically related to unintentional injuries in children and youth. On average, close to 300 children aged 14 and under are killed, and another 21,000 are hospitalized for serious injuries every year in Canada.vii Each day, nearly 60 children are admitted to a hospital for an injury.

The impact of injury on these children is often life-long. Head injuries alone account for substantial changes in learning ability, developmental delays, and behavioral challenges. Children with spinal cord injuries may have limitations in play and face challenges to their future employment opportunities. Traumatic brain and spinal injuries are among the most devastating – as many as half of fatal injuries are due to brain injuries.viii Bumps and scrapes may be a part of childhood, but serious injury, resulting in death or lifelong disability is something no child and no family should have to bear.

Injuries can be better prevented in youth through multi-faceted approaches. This can apply across the spectrum of injuries and relates to areas across jurisdictions and ministerial portfolios. For example, there are fewer broken necks in hockey as a result of a number of preventive measures including education and changes to rules.ix Health literacy including injury prevention can be encouraged in education throughout Canada. Public policy for a safer Canada can include actions such as comprehensive helmet legislation for wheeled activities, helmet regulation to high Canadian standards, playgrounds meeting national standards and restrictions on ATV use by children and youth under 16. The ripple effect an injury has on children and their family extends into Canadian society at large.

II. SENIORS
Canada’s growing population of citizens entering the last quarter of their lives has the potential to overwhelm our health care system. The numbers are instructive and sobering. For seniors the number one risk of injury and hospitalization is falls. Falls are also the cause of most hip fractures among seniors and 20 percent of those people die within a year of that fracture.x In 2004, adults aged 65 years and older accounted for about 13 percent of our population and direct health care costs for fall-related injuries were $2 billion. By 2031, it is projected that older adults will make up 24 percent of Canada’s entire population and approximately $4.4 billion will need to be spent on direct health care costs for fall-related injuries among this aging population.xi

To put a more human context to these numbers, in 2008-2009, 53,545 Canadians over the age of 65 years were hospitalized as a result of a fall.xii As the percentage of seniors in the population increases each year, so will these numbers and so does the challenge they pose to the health care system. In Ontario in the next two decades, for example, it is estimated that if current rates for falls are maintained, the province will need to build five additional 200-bed hospitals just to house those over the age of 65 who have fallen, during the acute phase of their treatment.
It is easy to see that falls amongst a growing seniors population in Canada present an enormous challenge to the country—a challenge that is being met across the nation by a range of programmes and initiatives designed to keep seniors active, healthy, and injury free. Provinces which have the most comprehensive falls prevention programmes, such British Columbia, Ontario, and Nova Scotia, also have significantly lower rates of hospitalization as a result of falls. Everyone involved in meeting this challenge across Canada agrees on some common themes. An effective response must be a multi-sectoral one in which all stakeholders—seniors, their care givers, their families, policy-makers and manufacturers—have key roles to play. As most serious falls occur within the home, paying attention to the built environment is key to an effective falls reduction intervention.

III. ROAD SAFETY: RESULTS OF A FOCUSED APPROACH

A case study analysis of the Canadian Council of Motor Transport Administrators’ Road Safety Vision, provides insight into the elements necessary to enable effective strategies that have the capability to reduce the rate and burden of unintentional injuries in Canada. Comprehensive and strategic action is needed that uses the Three Es approach. The significance of child injury in absolute and relative terms is not always widely appreciated and the possibilities of prevention are often underestimated. This lack of understanding inhibits the allocation of resources to prevention efforts and also the political and organizational will that are necessary for change.

Nevertheless, there are currently strategies in place that do recognize the possibilities of prevention and the necessity to engage multiple sectors in the prevention of injuries. One example of high-level political commitment that led to immediate and observable reductions in injury was in France, where in 2002, the president declared road safety a national priority. This led to the formation of an inter-ministerial committee and a national action plan. Between 2002 and 2004, a 34 percent reduction in road traffic deaths was reported, as a result of the coordinated implementation of a range of preventive measures, including: speed reduction, traffic calming, control of drinking and driving, and increased seat-belt use.

In Canada, a prime example of this crucial emerging trend in injury prevention is found in road safety. There is a national plan that has had the sustained and real support of federal, provincial, and territorial governments as well as involvement with NGOs and industry through the Canadian Council of Motor Transport Administrators (CCMTA). In collaboration with its affiliates in justice, policing, and the auto and insurance industries, the CCMTA created the Road Safety Vision in the mid-1990s. CCMTA’s Road Safety Vision 2010, a national effort at making Canada’s roads the safest in the world and its road safety targets were officially endorsed by all Ministers Responsible for Transportation and Highway Safety in the fall of 2000. The Vision provides Canada’s road safety community with benchmarks against which to develop new strategies and measure intervention efforts. The need for action was clear. In the 1970s, Canada’s rates for traffic deaths peaked at 28.3/100,000. Between that peak and 2002, in spite of a 40 percent increase in our population and an 80 percent increase in the number of vehicles on the road, the rates of traffic deaths had been cut in half and in 2004, it was 8.2/100,000.

CCMTA’s Road Safety Vision incorporates the Three Es of education, engineering and enforcement. The Vision comprises a broad range of initiatives that focuses on road users, roadways and motor vehicles and is specifically aimed to raise public awareness of road safety issues, improve communication, cooperation and collaboration among road safety agencies, enhance enforcement measures, and improve national road safety data quality and collection. Vision 2010 is supported by all levels of government, as well as by instrumental public and private sector stakeholders, including the enforcement community. To this end, the RCMP, CACP, and provincial and municipal police forces have incorporated Road Safety Vision 2010 targets into their business plans.

Even with this amazing decrease in fatality rates, far too many Canadians die each year as a result of injury from automobile crashes and much more work needs to be done to increase Canadians’ intolerance for inappropriate driving habits. But the lessons to be drawn from the initiative are clear. Effective intervention initiatives to address the injury challenges facing every Canadian, from children to seniors, must involve everyone who has a stake in the outcome and will require both the political and the institutional will of all levels of government—federal, provincial, territorial, and municipal. Injury must become an issue for concern and debate at all levels, not just at the global level, but at national and local levels as well. However, it is important to note that these challenges are being addressed on a multitude of fronts and by many stakeholders. The good news is that, increasingly, all those stakeholders, including inter-ministerial and external organizations, are seeing the benefit of collaboration and mutual support as they move forward.

To date, much of the development that has occurred in these areas has been led from outside government—through the dedication of various NGOs and provincial injury prevention organizations. We are still looking for national leadership and coordination on this issue, and a commitment to address this epidemic that is commensurate with the magnitude of the burden. This can be better achieved with funding at a level more appropriate for the burden of injury on society, and more in keeping with resources dedicated to other comparable health issues, including resources to sustain a ‘home’ to lead an evidence-informed pan-Canadian strategy for injury prevention. This strategy should include leadership in coordination and collaboration including in injury prevention research; taking on a knowledge broker role for injury in Canada; developing a strategy to engage potential stakeholders to encourage full investment and engagement; and increasing awareness of and attention to the injury problem in Canada.
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END NOTES

1 Public Health Agency of Canada, 2005.
8 CJNS in Nov. 2010.