

# Report on Proposed National Priorities for Injury Prevention and Control

This report was prepared by the Federal/Provincial/Territorial  
Sub-Committee on Injury Prevention and Control

It is distributed at this time for information purposes only. Further funding is needed to support the continuation of the next stage of the work which would be stakeholder consultation.

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## Acknowledgements

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## 1. Executive Summary

Injury, including unintentional and intentional, is a significant public health problem whose impact remains underrated. Thirty-five Canadians die every day from this largely preventable cause, many more are treated in hospital. For every Canadian who dies from injury, more than 300 will visit the emergency room and 21 will be admitted accounting for close to 2.2 million days in hospital each year. A much larger number of less serious injuries are treated by physicians in private practice. Many non-fatal injuries result in significant impairment and disability such as blindness, spinal cord injuries, and intellectual deficit due to brain injury. Injury is the leading cause of death for Canadians under the age of 45 and the largest single contributor to potential years of life lost. The economic burden of unintentional and intentional injury is estimated to be greater than \$14 billion per year. While injury accounts for 11% of the total economic burden of illness in Canada, it attracts a mere 1% of available research funds.

Many complex factors contribute to injury so efforts to either prevent injuries or reduce their severity must engage and involve as many sectors, disciplines and jurisdictions as possible in order to be effective. While engaging all the players involved to work together is necessary, it is also a challenging undertaking which cannot be achieved without strong national leadership and coordination, sustained effort and commitment and the necessary resources to do the job.

This paper makes three broad recommendations which will make a positive contribution to all types of injury: strong national leadership and coordination; a solid commitment to include and involve the many very knowledgeable stakeholders in Canada; and a long-term commitment from the Federal, Provincial and Territorial health sector to make a difference.

The paper also puts forth an initial set of priorities relating to specific types of injury. These include falls, motor vehicle collisions and suicide and suicidal behaviour. Within each of these three areas, two priority populations have been identified: falls among older adults and among children; motor vehicle collisions among young drivers, particularly males and among rural and northern communities; and suicide and suicidal behaviour among youth and among Aboriginal peoples.

The F/P/T Sub-Committee on Injury Prevention and Control has concluded its work. This paper will be circulated to stakeholders to inform them of the work that has been done by the Sub-Committee.

## **2. Background**

In June 1999, Deputy Ministers of Health from the Federal, Provincial and Territorial governments endorsed the recommendations contained in A National Injury Prevention and Control Strategy, a paper prepared by the Public Health Working Group (PHWG) and presented to Deputy Ministers by the Advisory Committee on Population Health (ACPH). Included in the report was a recommendation to develop a national framework for injury prevention and control for Canada and to establish a Sub-Committee for Injury Prevention and Control.

### **2.1. Mandate and Work of the Sub-Committee**

The role of the Sub-Committee has been to act as intergovernmental liaison on injury issues and to facilitate access to expertise in the multiple disciplines and sectors involved in both intentional and unintentional injuries in developing national priorities for FPT health action on injury prevention and control. Throughout this period, the Sub-Committee has been aided by Health Canada's Injury Prevention Secretariat and the injury prevention expertise within Health Canada and the Health Ministries of provincial and territorial governments.

The Sub-Committee proposes the following mission statement to govern all injury prevention and control efforts in Canada:

“To make Canada a safe place for all through the coordination of efforts that will promote safety and significantly reduce injuries and their consequences.”

The Sub-Committee used evidence and input from a wide range of sources and developed both quantitative and qualitative criteria to identify the priorities outlined in this report.

### **2.2. A Population Health Approach to Injury Prevention and Control**

A population health approach recognizes the wide variety of factors which influence individual health and well-being. These include income and social status, social support networks, education, employment and working conditions, physical environments, biology and genetic endowment, personal health practices and coping skills, healthy child development, health services, culture, gender and social environments.

A comprehensive strategy to reduce injuries is by definition composed of a wide variety of interventions and actions involving many sectors, addressing proximal determinants of health as well as more immediate risk factors and responses. It is helped, and its efforts multiplied, by the active supporting policies and actions in

areas such as mental health promotion, healthy social development, road and product safety, substance abuse prevention and healthy human development

### 2.3. Population Health

Portraying the determinants of health as underlying factors for injury prevention and control ensures that their influence on injury occurrence is considered, and expands possible points of intervention to include actions that intervene at this fundamental level. The determinants of health underlie the burden of injury as proximal factors influencing all aspects of injury prevention and control.

The following story further illustrates the role of health determinants by way of a scenario involving an injured child:

Why is Jason in the hospital?

Because he has a bad infection in his leg.

But why does he have an infection?

Because he has a cut on his leg and it got infected.

But why does he have a cut on his leg?

Because he was playing on a poorly maintained playground next to his apartment building and there was some sharp broken edges there that he fell on.

But why was he playing on a playground with old, broken equipment?

Because his neighbourhood is kind of run down. A lot of kids play there and there is no one to supervise them.

But why does he live in that neighbourhood?

Because his parents can't afford a nicer place to live.

But why can't his parents afford a nicer place to live?

Because his Dad is unemployed and his Mom is sick.

But why is his Dad unemployed?

Because he doesn't have much education and he can't find a job.

But why...?

Adapted from *Toward a Healthy Future, Second Report on the Health of Canadians, 1999.*

The successful reduction in injuries will come about not by any single factor or single approach but through understanding the complex interrelationships that influence injuries both at the individual and societal level.

## **2.4. Conceptual Framework**

In conceptualizing an approach to injury reduction, three key elements have been identified:

### 1. Injury causes

- describing how the injury occurred such as drowning or motor vehicle crash

### 2. Priority populations

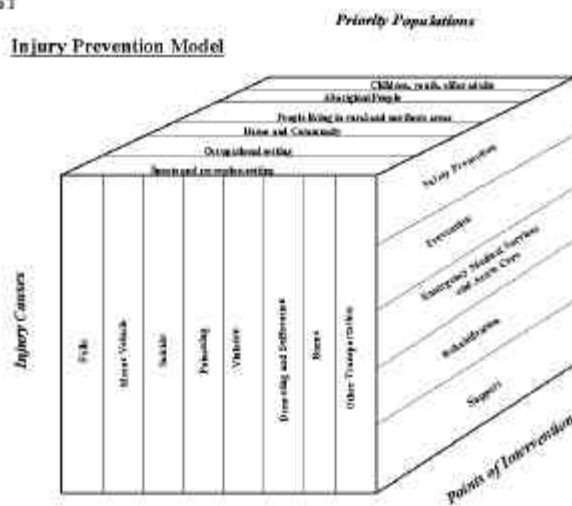
- describing any grouping of people (e.g. within geographies, settings, age groups etc) that experience a disproportionately high burden of injury

### 3. Points of intervention

- describing a continuum of possible points where injuries could be prevented or their impact modified

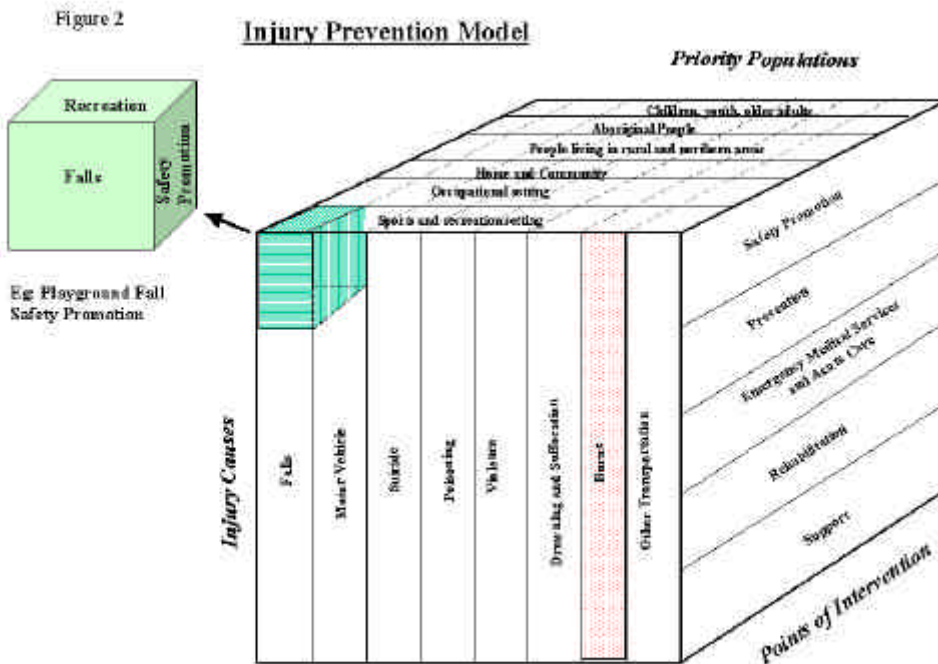
These key aspects of injury prevention and control are visually portrayed within a conceptual framework in Figure 1. A three dimensional cube shows the above elements on three faces of the cube. Major injury causes appear on the front face, samples of priority populations are shown at the top, and points of intervention, ranging from safety promotion to support for those affected by injury, appear along the side.

Figure 1



This conceptual framework adopted by the Sub-Committee is deliberately very broad. In the field of injury prevention and control, where stakeholders from many disciplines are involved, it is particularly important to build a common understanding and vision for shared work. Some injury practitioners, such as health authorities, may envision the entire cube as their domain of practice. Others may define their work by a specific cause (such as motor vehicle or drowning) a specific population (such as children or Aboriginal people) or a specific point of intervention (such as support for injury victims). Some may have an even more specific focus, working at a particular point of intervention of a certain cause affecting a priority population (e.g. emergency transport of motor vehicle crash victims in remote communities).

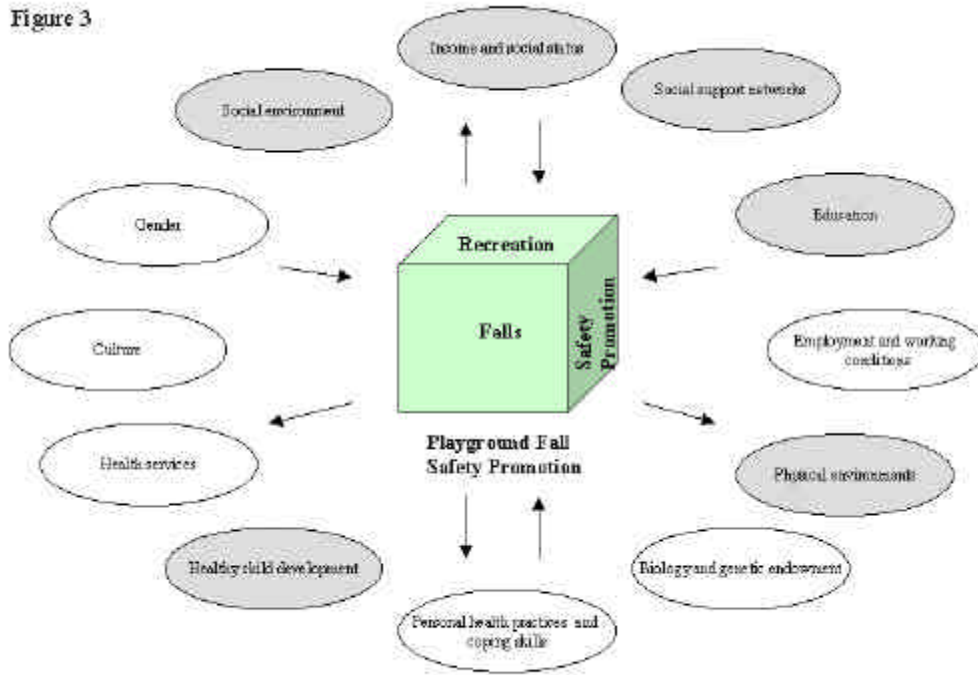
Figure 2 demonstrates how specific fields of interest can be visualized utilizing the conceptual framework. Burns is highlighted as a sample area of focus. If planning for a comprehensive approach to burns, all populations and the full range of interventions would be involved. A more focused example is the intersection of falls, sport and recreation and safety promotion. A local parks and recreation department may wish to undertake a safety promotion campaign focused on playground falls.



Any number of injury causes, populations or points of intervention (or various combinations of the three) may be the focus of injury prevention and control activities. Seemingly diverse activities (such as environmental modifications to prevent falls in seniors, enhancing a culture of safety in Northern communities, establishing support groups for brain injured children, or achieving excellence in trauma care) can be viewed within the shared context of the injury conceptual framework.

Figure 3 reinforces that even for very focused injury control issues, a population health approach is integral to any effective strategy. In the example of playground fall injuries, health determinants such as the physical and social environments, healthy child development, social support networks, education and income all play a role in determining conditions where injuries are more likely to occur. Effective actions to control the negative *health* outcome of a playground fall injury must come from beyond the *health* sector. Actions by municipalities, school boards, daycare operators, insurers, regulators and enforcement agencies, parents and caregivers are required to effectively address the problem. The actions taken are encompassed by the four “Es” of injury prevention and control: Education, Engineering, Enforcement and Evaluation.

Figure 3



### 2.4.1 Haddon’s Matrix

The above conceptual framework is not intended to replace the well-established injury control tool known as “Haddon’s Matrix”<sup>A</sup> but rather to compliment it. Haddon’s matrix has become a standard tool used by injury control practitioners to identify possible countermeasures for specific injury problems. Whereas the above conceptual framework allows us to envision the scope of injury control work, Haddon’s matrix can be used to identify what actions to take once the scope of an injury problem has been identified.

Haddon’s separation of the phases of injury into pre-event, event and post-event can be aligned to the model’s points of intervention, which simply describes the types of activities undertaken within these phases. A sample Haddon’s matrix for the issue of playground fall prevention is shown in Table 1.

Table 1 Sample Haddon’s Matrix for Playground Fall Prevention

Intervention/Phase		Host (Child)	Agent (Playground equipment and surfacing)	Physical and Social Environment
Safety Promotion  Prevention	Pre-event	Children are taught how to use equipment properly.  Children are supervised.  Appropriate footwear is worn.  Appropriate clothing worn (no draw strings).	Equipment complies with safety standards to minimize the chance of falling (e.g. protective barriers, spacing of equipment and minimizing the chance of collision with other children.)  Signage indicates the intended age of user.	Playground safety awareness campaigns are conducted. Safety standards are adopted and regulated. Sufficient resources are allocated to build and maintain playgrounds to safety standards. A process to identify and notify owners of fall hazards is in place. Policies to avoid overcrowding are in place in daycares and schools. No pushing rules are enforced.
	Event	Appropriate footwear cushions impact.  Appropriate clothing protects skin from abrasion.	Protective surface absorbs the impact of a fall to the ground. Equipment is rounded, smooth and without protrusions to minimize harm during a fall onto equipment.	Supervision is constant and immediately responsive during a mishap (e.g. caregiver able to catch the child or break the fall).
EMS and Acute Care  Rehabilitation  Support	Post-event	Children are taught how to respond when injured	A phone is present on site to access emergency care	Caregivers are trained in first aid. Effective EMS and emergency care is available. Rehabilitation programs are accessible and effective. Playgrounds are accessible to children with disabilities.

<sup>A</sup>Haddon W Jr. The changing approach to the epidemiology, prevention, and amelioration of trauma: the transition to approaches etiologically rather than descriptively based. American Journal of Public Health 1968;58:1431-8 – 11 (reprinted in Injury Prevention 1999 (Sept);5(3):231-5)

### **3. Policy Context for National Injury Prevention and Control**

There are five key points that act as the foundation for the recommendations put forward in this document. They are as follows:

- Most injuries are preventable;
- Injury, including unintentional and intentional, is a significant public health problem whose impact is underrated;
- The economic burden of injury is both immediate and substantial;
- Injuries are the result of many complex factors hence any effort to prevent and/or reduce the severity of injuries must involve many sectors, disciplines, jurisdictions and approaches;
- Current efforts to address the injury problem in Canada are fragmented and there is a real need for strong and continuing national leadership.

#### **3.1 Injuries are Preventable**

Injuries are the result of preventable factors rather than random “accidents.” Injuries follow predictable patterns associated with age, gender, injury mechanism, social characteristics and geography. Infants and toddlers need protection from injuries caused by drowning, poisoning, burns and scalds, falls and suffocation. For school-age children, traffic-related injuries and playground injuries predominate. Teens and young adults suffer more sports-related, traffic-related and workplace injuries and are more at risk of suicide. Older adults are more likely to sustain serious injuries due to falls. These patterns point to opportunities for targeting prevention and control measures to specific groups and settings as well as to specific sectors.

Determining the most effective course of action to prevent injuries requires not only an understanding of the factors that contribute to injury but also of the behaviours that contribute to compliance with injury prevention measures. A 54% decline between 1980 and 1997 in deaths from motor vehicle collisions<sup>1</sup> is compelling evidence that prevention efforts do work. This decline is attributable to a wide variety of concerted preventive measures such as public education, improved vehicle and roadway design, speed controls, random alcohol breath testing, decreasing public tolerance for drinking and driving, improved emergency response and trauma care, graduated licensing of new drivers and other legislative and enforcement measures.

The recent decline in deaths due to motor vehicle traffic collisions is one good news story but there is enormous potential for many more. Preventing injuries will save lives, reduce human suffering and result in substantial dollar savings to the health care system.

### **3.2 Injuries are an Important Public Health Problem**

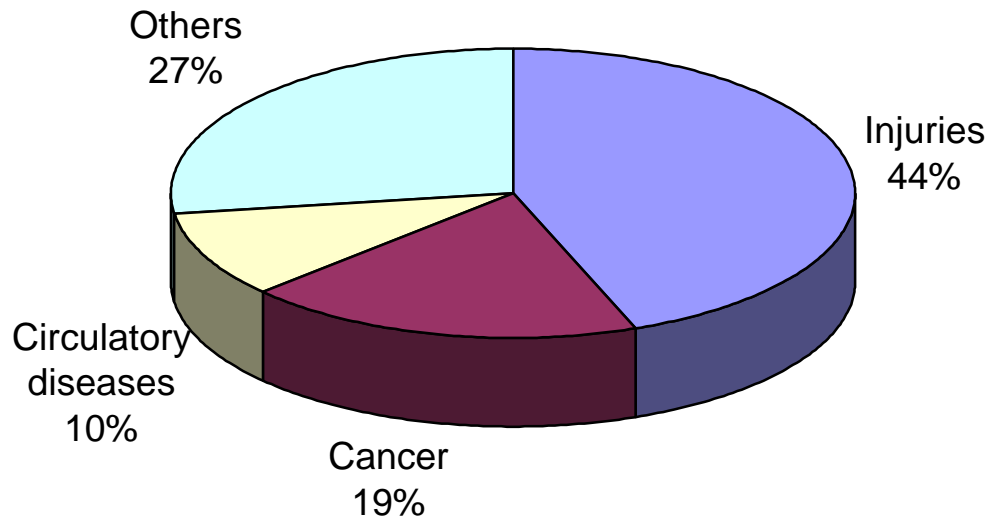
There were 12,791 injury deaths, or 35 deaths per day in Canada in 1997.<sup>ii</sup> About two-thirds of these deaths, 8,368, were due to unintentional injury (motor vehicle collisions, falls, drownings, burns and poisonings). Suicides accounted for 3,681 (90%) of the 4,112 deaths due to intentional injuries.<sup>iii</sup>

In addition to these injury deaths, in the one-year period spanning 1998-1999, more than 195,000 people were hospitalized as a result of injuries accounting for more than 1.756 million days in hospital and 7% of all hospitalisations.<sup>iv</sup> For every injury death, there are 21 hospital admissions and an estimated 321 visits to emergency departments.<sup>v</sup> Many non-fatal injuries result in long-term impairment or disability such as blindness, spinal cord injuries and intellectual deficit due to brain injury. Consider also the many less severe, but far more numerous injuries treated at clinics or by physicians in private practice, which also involve considerable health care resources.

Unintentional and intentional injury is the leading cause of death for Canadians aged 1 - 44,<sup>vi</sup> the leading cause of premature mortality in Canada and is the largest single contributor to potential years of life lost (PYLL) before the age of 65.<sup>vii</sup> A total of 261,015 potential life years were lost in this age group due to injury accounting for almost half (47%) of the total Canadian PYLL in 1996.<sup>viii</sup>

Across all age groups, injury ranks fourth among the leading causes of death. While the three leading causes of death overall (diseases of the circulatory system, cancer and respiratory diseases) predominate among older Canadians, injury is the leading cause of death among children, youth and young adults.

## Leading causes of death, 1997 ages 1-44



As an issue for the public, Canadians consider cancer, heart disease, HIV and infectious diseases to be the most serious threats to their health and well being<sup>ix</sup>, demonstrating a lack of awareness of both the seriousness and preventability of injuries. (Source: Health Canada)

In a recent study of injury rates among 11 developed countries, Canada ranked 7<sup>th</sup> highest for all injuries and 5<sup>th</sup> highest for suicide. The suicide rate for Canadian youth is the third highest in the industrialized world.<sup>x</sup>

### 3.3 Injuries are a Significant and Immediate Economic Burden

Injury is an important public health problem which carries an immediate and substantial cost burden. Direct costs related to treatment, care and rehabilitation are high as are indirect costs related to the high number of years of life lost due to premature death and long-term disability.

In terms of economic burden, injury ranks third highest after cardiovascular and musculoskeletal diseases and before cancer. One study conducted in 1986 estimated the cost of injury in Canada at \$14.3 billion annually.<sup>xi</sup> This cost includes unintentional and intentional injuries and reflects the direct and indirect costs of health care, lost productivity and premature death.

A more recent study estimated the cost of unintentional injury alone at \$8.7 billion annually, with \$4.2 billion in direct health care costs and \$4.5 billion in indirect

costs.<sup>xii</sup> While the two studies cannot be directly compared, both are considered to be conservative in their cost estimates.

Studies of workplace injury show considerable expenditures in the form of workers' compensation and health benefit claims, absenteeism, increases in turnover, lowered performance on the job and the cost of hiring and training replacement workers. Compensation paid to injured workers or their families is approximately \$4.7 billion each year in Canada. If indirect costs were to be included, this amount would double to \$9.3 billion.<sup>xiii</sup>

The economic burden of intentional injuries is also substantial. The estimated cost of a suicide death ranges from \$433,000 to \$4,131,000 per individual depending on potential years of life lost, income level and effects on survivors.<sup>xiv</sup> The estimated cost of attempted suicide ranges from \$33,000 to \$308,000 per individual depending on the hospital services and rehabilitation required, and the family disruption and support required following the attempt. Psychological distress and ongoing mental health problems may result in long term treatment and care both for the suicidal individual and for other family members.

While injury accounts for 11% of the total economic burden of all illness in Canada, it is estimated to attract a mere 1% of available research funds.<sup>xv</sup>

### **3.4 Preventing Injuries is Complex**

Injuries are caused by many factors so efforts to address the problem must involve many sectors. For example, the recent decline in injuries associated with motor vehicle collisions is attributable to a very broad multi-sectoral response including education, transportation, urban planning, automobile manufacturing, consumer and advocacy groups, all levels of government and action at the individual level.

Factors contributing to suicide and suicidal behaviours include sociological, economic and cultural factors, certain psychiatric conditions, neurobiological conditions, genetic and family background, life events and terminal illness.

The multi-factorial nature of the causes of unintentional and intentional injury translates into real challenges for effective responses at all levels.

### **3.5 National Leadership is Essential**

The fragmented nature of current injury prevention and control activities in Canada is often cited as one of the stumbling blocks to progress. Strong national leadership is needed to advance a coordinated and collective effort addressing this

significant public health problem. There have been a great many efforts over the past several decades but none that have been able to keep together a sustained and coordinated approach to this important issue.

Some injury prevention efforts, e.g., road safety, have been able to sustain national attention and momentum but across all injuries, all populations and all types of interventions, there is a large and widening void with no clear national leader nor infrastructure. Note that the term “national” used in this document goes well beyond the mandates of the collective federal, provincial and territorial health authorities and extends to all ministries, all levels of government, all sectors of society, individuals and communities.

For example, it is particularly sad to note that Canada has fallen from a key international leadership position in suicide prevention, which it held in the 1980's. The United Nations recognized Canadian expertise in this area when it invited a Canadian group to develop national strategy guidelines that have been used by nations around the world. Canada provided important funding for this international effort yet is one of the few developed nations with no national suicide prevention approach in place.

## 4. Priorities for National Action

This report makes three broad recommendations, which the Sub-Committee on Injury Prevention and Control believes will make a very positive contribution to all types of injury. These three overarching priority recommendations can be described in the following broad terms:

- developing and strengthening national leadership and coordination in injury prevention and control and in strengthening national surveillance and research to guide policy and program responses in reducing injuries and the harm from injuries;
- consulting and involving multi-sectoral stakeholders and partners around the development of shared national action to support national priorities;
- securing a long-term commitment from the FPT health sector to reducing injuries in Canada.

The report puts forth an initial set of priorities relating to specific types of injury and within each of these three injury-specific priorities, two priority populations. These include:

- falls, among older adults and among children;
- motor vehicle collisions, among young drivers, particularly males, and in rural and northern communities;
- suicide and suicidal behaviour, among young people and among Aboriginal peoples.

In determining the injury-specific priorities, members of the Sub-Committee on Injury Prevention and Control examined the many mechanisms of injury, factors relating to the settings in which injuries occur and those relating to population subgroups which suffer a disproportionate number of injuries. There are clearly many injury problems worthy of attention. Using both quantitative and qualitative criteria, the Sub-Committee identified national priorities for attention based on the greatest burden of mortality and morbidity, solid evidence of effective interventions, various other measures and the potential for collaborative action in the Federal, Provincial and Territorial health sector. (See Appendix A for a description of the criteria used.)

### 4.1 A Commitment to Pan Canadian Leadership and Coordination

Injuries are caused by a wide variety of factors. Many of the factors which contribute to injuries are outside of the purview of the health sector, yet the health sector shoulders the burden of the majority of direct expenses related to injury (emergency medical services, trauma care, hospitalizations, rehabilitation and

support). Therefore the Sub-Committee considers the health sector to be the best catalyst for collective efforts in this area and to be one of the primary beneficiaries of reduced injuries. Effective responses to the injury problem will clearly need to engage and involve many different sectors and jurisdictions. There are many individuals and organizations in Canada who are clearly committed to the injury issue. There are also many initiatives to address injury by governments. The very multi-factorial nature of injury creates an added challenge. National leadership and coordination are needed to reduce fragmentation, increase cooperation and to begin building the necessary infrastructure and capacity to continue addressing injury in the longer term.

#### Recommended Strategies for FPT Health Sector:

1. Improve strategic collaboration and communication among sectors, jurisdictions, functions and stakeholders in the field of injury prevention and control;
4. Increase support for policy and program-relevant research related to national injury prevention priorities;
3. Increase support for national injury surveillance to address identified gaps in the systematic data collection, integration, analyses, interpretation, and dissemination especially around identified national injury priority areas;
4. Support investment in provincial/regional injury prevention centres to promote access to research, surveillance, programming, evaluation and training expertise to be able to identify and address local/regional needs and priorities;
5. Support the development of a complementary injury prevention and control strategy for Aboriginal peoples that harmonizes with the overall national priorities;
6. Build efficiencies through joint development and/or sharing of resources such as public education and social marketing related to national priorities and populations.

## **4.2 A Commitment to Include Stakeholders**

The collaboration and participation of all stakeholders are vital to the success of any injury prevention and control effort. This collaboration and participation need to occur at all levels: individuals, families, neighbourhoods, workplaces, communities, regions, provinces and territories and nationally. Stakeholder groups include the voluntary sector, professional, business, consumer and labour organizations, governments, Aboriginal people and various other population groups including all the target groups identified in these national priorities.

Because the causes of injury are multi-factorial, the most effective approaches to both preventing injury and minimizing its impact are those efforts that involve the various sectors and disciplines that come into play. These include housing, education, the physical environment, the work environment, psychosocial environments, recreation, manufacturing, transportation and justice.

#### Recommended Strategies for FPT Health Sector

7. Circulate this report for use by stakeholders, NGOs and others as a basis for continuing dialogue and policy development in support of injury prevention and control.
8. Target key government ministries and departments such as transportation, justice, industry, social services, education, seniors' services, children's services, Aboriginal affairs, rural initiatives and municipal services to engage in action related to these national priorities.

### **4.3 Long-Term Commitment from the F/P/T Health Sector to Injury Prevention and Control**

There are many competing priorities for attention in the health sector. Without a commitment to make a difference, to continue working together on this issue, to commit adequate resources, and to hold the health sector appropriately accountable, we will miss out on very important opportunities to demonstrate national leadership on this preventable and very costly health problem.

#### Recommended Strategies for FPT Health Sector

9. Review and assess national injury prevention needs and priorities at least every five years;
10. Establish national targets for injury reduction and dates for achievement <sup>B</sup>.
11. Develop, by 2005, the necessary local, provincial and national surveillance systems to report progress against national targets;
12. The Advisory Committee on Population Health to provide annual reports on progress regarding the identified national injury priorities and populations;
13. Increase health resources to this sector in accordance with the identified priorities for national action;

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<sup>B</sup> Transport Canada has recently released its Road Safety Targets to 2010 and these will need to be integrated into the national targets for injury reduction. Also, several provinces already have injury prevention targets and these will need to be integrated into a national perspective.

14. Identify injury prevention as a priority for early attention under the Health Promotion and Wellness section of the Health Agreement.

## 4.4 A Commitment to Six Shared National Injury Priorities

This document identifies specific, practical actions for the federal, provincial and territorial health sector to undertake within a five-year time span to reduce the impact of injury in three specific priority areas - falls, motor vehicle collisions (including snowmobiles) and suicide. Within each of the three areas, the Sub-Committee has identified two key priority populations for national attention. The Sub-Committee also recognizes the distinct injury prevention and control priorities of various regions, provinces and territories across Canada and applauds the continuing work of all involved to advance these particular needs.

### Proven and Promising Interventions

- Individual risk assessment
- Comprehensive strategies to address multiple risk factors

### 4.4.1 Falls in Older Adults

*Shirley is a 72 year-old widow who has recently stopped driving due to poor vision. She takes public transportation once a week to volunteer at the local hospital. She must walk down a steep hill to get to the crosswalk at the nearest intersection and one icy day, she falls. Shirley suffers no serious injuries but is very fearful of falling again and begins to spend more time at home.*

#### **Magnitude of the Problem**

Falls are the most common cause of injury among older adults and account for 65% of injuries to Canadian seniors every year. Studies indicate that one third of older Canadians fall every year. Falls, and the fear of falling, often have an extremely negative impact on seniors independence and quality of life. They account for 84% of injury- related admissions to hospital,<sup>xvi</sup> 40% of admissions to nursing homes<sup>xvii</sup> and a 10% increase in home care services.<sup>xviii</sup> These injury rates represent considerable costs in terms of human suffering and health care expenses. It is estimated that falls among seniors cost Canada's health system \$2.8 billion annually, of which one billion are direct health care costs. Falls are also the leading cause of fatal injury among Canadians over 65<sup>xix</sup>. In 1995, more than \$980 million was spent to cover the cost of direct medical care to treat these falls. As the Canadian population ages, the number of falls is expected to increase dramatically.

### Target Populations

- Older adults living in a variety of settings
- Caregivers, family and friends of older adults
- Health providers
- Emergency response services
- Municipalities, planners and builders

Most studies show that falls in older adults are often the result of a complex combination of personal factors (such as a history of prior falls, cognitive impairment, chronic disease, balance and gait impairment and personal health practices) operating alone or in conjunction with environmental hazards in the home or community. Studies also suggest that these falls are often preventable and that health promotion interventions can reduce or eliminate many of the risk factors which contribute to falls.

## Recommended Strategies for FPT Health Sector

15. Support multi-component interventions which address multiple personal and environmental risk factors (e.g., individual risk assessment, medication review, balance and strength-training programs, an active lifestyle, an adequate intake of Vitamin D and calcium, proper use of assistive devices as needed, and removal or repair of fall hazards);
16. Develop and disseminate a comprehensive resource of evidence-based best practice models and tools to reduce falls in older adults;<sup>C</sup>
17. Increase awareness of personal risk factors and environmental risk factors in the home and community, and promote preventive strategies among health services personnel, individuals and caregivers;
18. Promote policies to create safer environments and prevent falls in older adults (e.g., improved building codes to address universal safe design principles and municipal hotlines to identify falls hazards in the community).

### Expected Short-term Results

- Increased awareness of risk factors for falls
- Increased awareness of fall prevention strategies
- Identification, dissemination and promotion of best practice models
- Collaboration among urban planners, the building industry and the health sector to address environmental risk factors

### Expected Long-term Results

Decreased incidence, severity, mortality and morbidity of falls for older adults in the community, in health facilities and in long-term care facilities

- Implementation of best practice models
- Policy and regulatory changes

## 4.4.2 Falls in Children

*11 month-old Cameron is a happy, healthy baby who loves to explore his environment. One morning, while cruising around the kitchen, he trips and falls down the ungated basement stairs, landing on a concrete floor. Cameron is taken to hospital where he is treated for concussion.*

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<sup>C</sup> FPT Ministers Responsible for Seniors have commissioned such a resource which is anticipated to be released in the Fall of 2001.

### ***Magnitude of the Problem***

While the rate of injury due to falls is particularly high among older adults, falls are also an important cause of injury among children and youth and are the leading cause of injury-related hospitalization for Canadians under the age of 20<sup>xx</sup>. Falls from playground equipment, falls on stairs, falls during sports activities, falls from furniture such as beds and falls from buildings account for 40% of hospitalizations for children's falls<sup>xxi</sup>. In 1993, there were close to 40,000 falls-related emergency room visits for children and youth under 20 which is almost half of all cases for this age group<sup>xxii</sup>.

#### **Target Populations**

- Parents and other caregivers
- Manufacturers of furniture and other equipment

Younger children are more apt to experience a fall in the home whereas older children tend to experience falls in educational, sports and recreation, and road environments.<sup>xxiii</sup> Childhood injuries occurring in the home are closely linked to the developmental stages of children. An infant is at greater risk of falling from beds, cribs, strollers or child seats.<sup>xxiv</sup> The increasingly curious toddler is also more vulnerable to falls because of immaturity, and limited strength and coordination. For school-aged children, one quarter of falls occur at school, either in the schoolyard or in the playground.<sup>xxv</sup> For teens, falls occur more frequently in road environments.<sup>xxvi</sup>

#### **Proven and Promising Interventions**

- Awareness of home hazards
- Developmentally appropriate interventions
- Safety standards

### **Recommended Strategies for FPT Health Sector**

19. Increase awareness of the consequences of childhood falls and prevention strategies (safer playspaces, correct use of baby gates, dangers of baby walkers, proper use of appropriate protective equipment (helmets, knee pads etc.));
20. Support efforts to meet recognized safety standards and guidelines for safe playgrounds and child equipment;
21. Develop and disseminate a comprehensive resource of evidence-based best practice models to reduce falls and their consequences in younger children.

#### **Expected Short-term Results**

- Increased awareness of falls among children and fall prevention strategies

- Increased awareness of best practice models
- Increased development and application of appropriate safety standards, regulations and policies ( i.e., playground equipment)

Expected Long-term Results

- Decreased incidence, severity, mortality and morbidity due to falls among children

**4.4.3 Motor Vehicle Collisions in Young Drivers**

*Jason is a relatively new driver who has borrowed his mother’s car to attend his high-school graduation ceremony. After the ceremony, he goes to a grad party, returning home in the dark. He loses control of the vehicle and seriously injures himself and his three passengers. All are taken to hospital and admitted where they are treated for fractures and internal injuries and remain for 12 days.*

**Magnitude of the Problem**

Motor vehicle collisions are the leading cause of death for Canada’s young people and a significant cause of serious injury. In a one-year period, an average of 20,598 young people aged 15-19 were hospitalized for the treatment of injuries from all causes. Motor vehicle collisions accounted for 23% of these hospitalizations.<sup>xxvii</sup> Young drivers sustain a disproportionate number of traffic injuries which are often associated with a lack of driving experience.<sup>xxviii</sup> Risk-taking related to drinking and driving and to speeding are also contributing factors.<sup>xxix</sup>

**Proven and Promising Interventions**

- Policies and regulatory measure relating to lower blood alcohol content, random breath testing and graduated licensing
- Comprehensive driver education and training including drug and alcohol education
- Public education and social marketing to counter lifestyle advertising which glorifies fast cars and alcohol consumption
- Proper use of appropriate vehicle restraints

The majority of young drivers who are killed or seriously injured in road crashes are 18 or 19 years of age<sup>xxx</sup>. Of the young drivers who are killed, 78% are males. Of those who are seriously injured 66% are males.<sup>xxxii</sup> Gender differences also relate to alcohol consumption. Young male drivers who were killed were almost twice as likely to have been drinking as were young females (44% vs. 24.6%) and more likely to have a blood alcohol content (BAC) over the legal limit (35% vs. 17.5%).<sup>xxxiii</sup> Similarly, seriously injured male drivers were more likely than females to have been drinking – 31.4% compared to 7.8%.<sup>xxxiii</sup>

#### Target Populations

- Young drivers and their families
- Transportation sector
- Justice sector

Young drivers aged 16-19 years of age, comprise only 5% of all licensed drivers but account for slightly more than 10% of drivers killed and almost 13% of those seriously injured.<sup>xxxiv</sup>

A recent study on unbelted drivers showed that almost 46% of young drivers who were killed and almost 22% of those who were seriously injured were not wearing seat belts. Furthermore, more than 18% of young drivers who were killed and approximately 8% of those who suffered serious injuries were both unbelted and had been drinking or were impaired.<sup>xxxv</sup> A disproportionate number of motor vehicle deaths and injuries involving young drivers occur on weekends. Approximately half of the fatalities and 64% of the injuries to young drivers occur at night – a time when young drivers actually drive less. This reinforces how risky night driving is for young people.<sup>xxxvi</sup>

Young drivers are over-represented in motor vehicle collisions for two primary reasons - inexperience and immaturity. Young drivers do not possess the same psychomotor, perceptual and cognitive skills as older, more experienced drivers.<sup>xxxvii</sup> Some young drivers intentionally increase their risk of collision as a result of thrill seeking, peer pressure or other lifestyle-related factors.<sup>xxxviii</sup> Currently, various forms of graduated licensing systems are in place in six provinces, encompassing 80% of the population. Preliminary evaluation studies show the programs to be very effective. While progress has been made in this area over the last two decades, motor vehicle collisions still account for more than one third of deaths and one fifth of the serious injuries to Canadian youth. Moreover, there will be an estimated 2.26 million 15-19 year olds in Canada by the year 2011, an increase of 12.2%. This forecast underlines the urgent need to implement effective programs and policies.

## Recommended Strategies for FPT Health Sector

22. Collaborate with key sectors and community groups to design and implement policies and other strategies to prevent motor vehicle injuries (e.g., policies to require lower blood alcohol content, random breath testing and graduated licensing);
23. Collaborate with the transportation sector to develop a comprehensive campaign to enhance awareness, increase public concern, improve knowledge and influence behaviour on the safe use of appropriate vehicle restraints for all drivers and passengers, back seating for children age 12 and under, air bag precautions and the risk of drinking and driving;
24. Encourage the development and sharing of information and skill development programs for targeted risk groups such as peer education programs for youth.

### Expected Short-term Results

- Comprehensive driver education and training programs for youth
- Increased awareness of issues and preventive strategies
- Increased implementation of graduated licensing systems

### Expected Long-term Results

- Decreased incidence, severity, mortality and morbidity due to motor vehicle collisions among youth.

#### **4.4.4 Motor Vehicle Collisions in Rural and Northern Communities**

*43 year-old Anne is travelling into town on a remote stretch of 2-lane highway when she pulls out to pass a transport truck. Her vehicle is struck by a dump truck entering the highway. After a lengthy delay, she is airlifted to the nearest hospital where she later dies of her injuries. She leaves behind her husband and two teenaged children.*

#### ***Magnitude of the Problem***

Although motor vehicle collisions are less frequent in rural areas, their consequences are often more serious because of higher speeds and less readily available emergency medical services. According to 1999 Canadian Motor Vehicle Traffic Collision Statistics, 27% of injuries related to motor vehicle collisions occur in rural areas but 65% of motor vehicle deaths occur in rural areas. There are four times as many motor vehicle collisions for First Nations people than for the general population. Almost 58% of motor vehicle occupants who are killed and 44% of those who are seriously injured suffered their injuries

on rural roads<sup>D</sup>. Non-use of seat belts, alcohol use and driving at excessive speeds, have been identified as safety-related issues in a large percentage of injuries particularly among victims of single vehicle crashes.<sup>xxxix</sup> Other noteworthy issues include the difficulty and expense police agencies encounter in enforcing traffic laws on low volume rural roads, as well as the increased response time required by emergency vehicles to attend to rural areas.

According to the Northern Ontario Injuries and Poisoning Profile Report, injury is an even greater public health problem in remote and rural areas for a number of reasons. Adverse environmental conditions may create situations that promote injuries. People living in the North have a greater risk of suffering motor vehicle or snowmobile collisions. This increased risk is due to the greater distances travelled for regular activities, commodities and services and frequent use of riskier vehicles such as ATV's and snowmobiles. Finally, Northern communities are more isolated from emergency facilities and health services are limited, resulting in treatment delays and poorer outcomes.<sup>xi</sup>

A study of deaths resulting from traumatic events illustrated that many patients in Northeastern Ontario were dying even though they had received a low Injury Severity Score, a standard system for the classification of injury severity often used for triage and the study of injury outcomes.<sup>xii</sup> The remoteness typical of Northern Ontario communities contributes to the increased response time for medical treatment following traumatic events which negatively impacts upon patient outcomes.

### ***Proven and Promising Interventions***

- Increased compliance with regulatory measures (proper use of appropriate restraints, posted speed limits, drinking and driving restrictions);
- Timely access to emergency medical services;
- Improved road safety;
- Volunteer-based enforcement for safe

### **Target Populations**

- Emergency response services;
- Police;
- Snowmobile associations and clubs;
- Aboriginal communities.

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<sup>D</sup> Rural roads include all undivided roadways with a posted speed limit of 80 km/h or 90 km/h. from emergency facilities and health services are limited, resulting in treatment delays and poorer outcomes.<sup>B</sup>

## Recommended Strategies for FPT Health Sector

25. Improve access to emergency medical services to treat injuries in rural and northern communities;
26. In collaboration with key sectors and community groups, improve seat belt compliance rates, improve compliance with posted speed limits and reduce drinking and driving;
27. Encourage improved road design, maintenance and safety, particularly in rural and northern communities.

### Short term outcomes

- Increased compliance in proper use of appropriate car restraints and back seating for children
- Increased compliance with posted speed limits
- Decreased tolerance for drinking and driving

### Projected long term outcomes

- Improved response times for emergency medical services
- Decrease in the incidence, severity, mortality and morbidity of motor vehicle collisions in rural and northern communities

## 4.4.5 Suicide and Suicidal Behaviour in Young People

*16 year-old Sarath has not had an easy time adjusting to his new life in Canada. The one good friend that he'd made at his new school moved away. As a result, Sarath has no one to talk to about the fact that he thinks he might be gay. He has considered asking for help, but doesn't know where to turn and is afraid of being labelled. More and more, his thoughts turn to suicide.*

### ***Magnitude of the Problem***

Suicide closely follows motor vehicle collisions as the most likely cause of death among Canadian youth aged 10-24<sup>xliii</sup> and results in one of the highest rates of potential years of life lost. For every completed suicide, an estimated 10 to 100 suicides are attempted.<sup>xliiii</sup>

Since the 1950s, Canada has been experiencing an increased trend in the rate of suicide among young persons, especially males in their late teens and early twenties.<sup>xliv</sup> Even more alarming is the increase in suicide rates for younger adolescents, aged 10-14.<sup>xlv</sup> Data from Statistics Canada reveals that during the period 1993-1997, 229 Canadian children aged 5-14 completed suicide, 2 of these

suicides were boys under 10, of the remaining 227 children, 155 were male and 72 were female. For both males and females, hanging and firearms accounted for over 90% of deaths.<sup>xlvi</sup>

Suicide completion rates are significantly higher for males but suicide attempt rates are higher for females. Females tend to use less lethal methods and are more likely to survive the attempt<sup>xlvii</sup> but these high attempt rates may also reflect a significant level of stress and mental health concerns among the female population which should not be ignored.

Approximately 3,500 Canadians, almost four times as many males as females, commit suicide annually<sup>xlviii</sup> accounting for almost 30% of injury related deaths or almost 11 per day.<sup>xlix</sup> Conservative estimates show that seven individuals are personally affected by every completed suicide and act of intentional self-harm. As a result, suicide and suicidal behaviours affect over 2.8 million Canadians every year.

Factors such as negative early family experiences, school failing, difficult transition to adolescence, peer difficulties, effects of low income and poverty, psychiatric disorders, and previous suicide attempts are some of the conditions which alone or interacting together pose the greatest risk for suicidal behaviour in youth.<sup>1</sup>

Suicidal behaviour in youth is complex and must be examined within a multi-dimensional framework that takes into account the individual, familial, social, economic and cultural contexts. It is a broad public health issue requiring a range of solutions using a collaborative and integrated approach across many sectors.

#### Recommended Strategies for FPT Health Sector

28. Develop and implement national efforts for the prevention of suicide and suicidal behaviours in accordance with United Nations guidelines<sup>li</sup>;
29. Support community-based initiatives to promote supportive school and other environments for young people that foster the development of self-esteem, resilience and life skills (e.g., problem solving, interpersonal communication, conflict resolution, coping with stress and distressing emotions) and provide social supports;

#### Proven and Promising Interventions

- Public awareness of risk indicators and interventions;
- Comprehensive mental health services;
- Gatekeeper training for students, community workers and school personnel;
- Early intervention.

#### Target Populations

- Parents, children and youth
- At-risk youth
- Health care professionals, teachers and other gatekeepers.

30. Raise awareness and promote education on the risk factors for suicide, early identification of suicide risk, preventive approaches and the acceptability of help-seeking behaviours;
31. Increase access to enhanced mental health preventive and treatment services (e.g., peer-approach group programs linked with back-up mental health services);
32. Support the development of gatekeeper<sup>E</sup> training for high-school teachers and administrators and others involved in providing human services to youth to facilitate early identification of risk;
33. Promote the adoption of policies to reduce access to the means of suicide;
34. Advocate for increased education for family physicians on the early identification, diagnosis and management of mental distress, depression and substance abuse.

#### Expected Short-term Results

- Policies to prevent suicide
- Greater awareness among the general public
- Training for school and community gatekeepers

#### Expected Long-term Results

- Decreased incidence of suicide and suicidal behaviours

#### 4.4.6 Suicide and Suicidal Behaviour in Aboriginal Peoples

*15 year-old Joe lives on a remote northern reserve where the unemployment rate is 80%. He comes from a troubled family, and lately there have been more quarrels than usual, some of them violent. He is also having serious problems at school. Joe began sniffing glue at an early age and has now moved on to alcohol. Shortly after his girlfriend breaks up with him, Joe goes home from a party and shoots himself with his family's hunting rifle.*

#### Proven and Promising Interventions

- Community-based suicide prevention strategies;
- Gatekeeper training;
- Community awareness;
- Mental health counseling.

<sup>E</sup> Gatekeepers are the many people besides health care professionals who encounter suicidal individuals in their daily work such as clergy, police, custodial personnel, school personnel and crisis-line volunteers

### ***Magnitude of the Problem***

The Task Force on Suicide in Canada reported in 1994 that Aboriginal communities often have significantly higher suicide rates than those in the general Canadian population. High rates tend to be associated with various community characteristics, including a higher number of occupants per household, more single parent families, fewer elders, lower average income and lower average education. Suicide accounts for almost one quarter of all injury deaths and rates are three to four times higher than the Canadian average. There are even greater differences in some geographic areas and at particular ages.

The highest suicide rates among Aboriginal peoples are between the ages of 15 and 24. Unlike rates for most unintentional injuries, suicide rates are not decreasing.

#### **Target Populations**

- Aboriginal leaders, youth and communities.

#### **Recommended Strategies for FPT Health Sector**

35. Support development of the complementary injury prevention and control strategy for First Nations and Inuit peoples currently underway and request that this strategy collaborate closely with stakeholder groups and mental health experts as it develops recommendations related to the issue of reducing suicide and suicidal behaviours for First Nation and Inuit peoples;
36. Collaborate with Aboriginal representatives and organizations to develop appropriate strategies for intervention, identify best practices in suicide prevention, and facilitate more widespread implementation of successful models;
37. Collaborate with Aboriginal representatives and organizations to provide appropriate training in suicide prevention and intervention for community workers and health care providers.

#### **Expected Short-term Results**

- Continued collaborative work on national injury priorities and actions to address them
- Identification of best practices in suicide prevention and increased implementation of models
- Increased number of community workers and health care providers with training in suicide prevention

#### **Expected Long-term Results**

- Decreased incidence of suicide and suicidal behaviours among Aboriginal peoples.

## **5. Next Steps**

Following the decision of the F/P/T Deputy Ministers of Health in June 2001, the work of the Sub-Committee was concluded. This paper will be circulated to relevant stakeholders to inform them of the work which was done by the Sub-Committee, and as a basis for continuing dialogue and policy development in support of injury prevention and control.

## Appendix A

### Criteria and Process used in selection of National Priorities

The Sub-Committee recognized that establishing injury priorities is a challenge at all levels including the national, provincial and local levels. The criteria and process used by the committee is briefly described here to facilitate an open dialogue about injury prioritization.

The quantitative and qualitative criteria that were utilized are listed below. The quantitative criteria were based on standard injury indicators describing the burden of injury in terms of deaths, hospitalizations and cost (where available). Data on injury deaths and hospitalizations used the International Classification of Disease - ninth revision (ICD-9). These data provide information relating to the cause, or mechanism of injuries, but not the setting in which those injuries take place (i.e., home, community, workplace). Ten qualitative criteria were articulated through committee discussion to reflect general readiness, potential and capacity to effect change.

Quantitative Criteria Considered	Qualitative Criteria Considered
<ul style="list-style-type: none"> <li>• Potential years of life lost before the age of 65</li> <li>• Deaths</li> <li>• Number of hospitalizations</li> <li>• Total bed days (as a proxy for severity of injury)</li> <li>• Economic burden (direct and indirect cost of injury problem where available)</li> </ul>	<ul style="list-style-type: none"> <li>• Population subgroups experience a disproportionate burden</li> <li>• Effective interventions are known and available</li> <li>• Extent to which there is an “opportunity gap” (between available intervention and implementation)</li> <li>• Potential for cost saving</li> <li>• Trend(s) – likelihood of problem becoming worse</li> <li>• Ability to make an impact is within the mandate of the health sector</li> <li>• Ability of the health sector to influence other sectors</li> <li>• Lack of readiness, momentum in other sectors</li> <li>• Readiness of the public to address the issue</li> <li>• Readiness of political systems to address the issue</li> </ul>

Both quantitative and qualitative criteria were applied to the top eight most common injury causes. For the quantitative assessment, each cause was ranked from 1 to 8 on the basis of national data rank ordering. One reflected the highest burden and eight the lowest. While cost was considered, it could not be ranked since data was not available for all causes. A total rank sum score was obtained for each cause by adding the rank scores for each criterion. The lowest score reflected the highest priority from a quantitative perspective, i.e. from a “data” perspective. See [Table 1](#) for the results of the quantitative assessment.

Each of the causes was then assigned a score for each qualitative criterion where 3 reflected strong agreement and 1 reflected weak agreement arrived at by consensus during committee debate. A composite qualitative score for each cause was obtained by summing the score of each cause, with the highest overall score representing the highest priority from a qualitative assessment. This qualitative assessment attempted to describe the level of general readiness and capacity of stakeholders to adopt and effect change. [Table 2](#) shows the results of the qualitative assessment.

The quantitative prioritization process identified suicide and motor vehicle, followed closely by falls as the top three injury cause priorities. The qualitative process identified falls, followed by suicide and motor vehicle as the top three. Thus, there was concordance in arriving at the top three overall injury cause priorities.

Once the process above was completed, the results were discussed and validated on the basis of the collective experience and perspectives of committee members. For the injury causes with the highest overall priority ratings, further assessment was undertaken to identify specific priority populations within each, considering both

populations experiencing a disproportionate burden as well as populations where effective measures are available, and not yet optimally implemented.

This process was adapted and expanded from an approach undertaken during injury strategic planning at the Winnipeg Regional Health Authority. It is described here to offer an approach to prioritization that can be considered, attempted and refined by injury partners and stakeholders.

**Table 1: Quantitative Criteria Results**

QUANTITATIVE CRITERIA	All Injury <sup>1</sup>	Undeter Intent	Intentional			Unintentional						
			Homicide or assault	Suicide or self-inflict.	Other Viol.		Motor Vehicle Traffic <sup>3</sup>	Other Uninten	Poison	Drown/Suff.	Fire/Burn <sup>4</sup>	Other Transport <sup>5</sup>
Potential Years of Life Lost total PYLL, all causes: 1,153,922 % of PYLL for deaths from all causes <sup>6</sup>	25.9	0.7	1.3 <b>5</b>	8.8 <b>1</b>	<0.1	0.7 <b>7</b>	7.7 <b>2</b>	6.5	1.7 <b>3.5</b>	1.7 <b>3.5</b>	0.6 <b>8</b>	0.9 <b>6</b>
Death <sup>7</sup> Count % of injury deaths all causes: 215,640 Rank	12,791 100.0	302 2.4	431 3.4 <b>6</b>	3,681 28.8 <b>1</b>	9 <0.1	2,621 20.5 <b>3</b>	2,867 22.4 <b>2</b>	2,880 22.5	703 5.5 <b>5</b>	759 5.9 <b>4</b>	295 2.3 <b>8</b>	319 2.5 <b>7</b>
Hospitalization <sup>8</sup> Count % of injury hosps. all cause: 2,656,502 Rank	254,047 100.0	3,718 1.5	9,797 3.9 <b>5</b>	25,060 9.9 <b>3</b>	102 <0.1	114,624 45.1 <b>1</b>	26,810 10.6 <b>2</b>	73,936 29.1	6,822 2.7 <b>6</b>	1,629 0.6 <b>8</b>	3,340 1.3 <b>7</b>	10,874 4.3 <b>4</b>
Hospital Bed Days Count <sup>9</sup> % of injury bed days all cause: 26,188,694 Rank	3,137,836 100.0	21,925 0.7	61,048 1.9 <b>5</b>	185,368 5.9 <b>3</b>	840 <0.1	1,840,831 58.7 <b>1</b>	288,862 9.2 <b>2</b>	738,962 23.6	35,838 1.1 <b>7</b>	19,935 0.6 <b>8</b>	47,725 1.5 <b>6</b>	63,228 2.0 <b>4</b>
Direct cost of unintentional <sup>10</sup> injuries (\$millions) total direct costs: \$4.2 billion						2,399.7	375.0		116.0	11.0	15.0	101.0
Indirect cost of unintentional <sup>10</sup> injuries (\$millions) total indirect costs: \$4.5 billion						1,205.2	1,295.7		284.0	148.0	128.0	944.0
<b>Rank sums</b> <b>Quantitative Priority Ranking</b>			21 <b>3</b>	8 <b>1</b>		12 <b>2</b>	8 <b>1</b>		21.5 <b>4</b>	23.5 <b>5</b>	29 <b>6</b>	21 <b>3</b>

\* E-codes used are those defined in:

- (i) Centers for Disease Control and Prevention. Recommended framework for presenting injury mortality data. MMWR 1997; 46 (No. RR-14):1-30
- (ii) Health Canada. Canadian Injury Data: Mortality - 1997 and Hospitalizations - 1996-97; 1999

† Direct costs include medical and paramedical services as well as costs for medical and rehabilitation services provided by physicians, occupational therapists, physiotherapists, etc. Physician costs occur in the emergency department of hospitals, in hospitals following admission and outside hospitals. Costs also include the total hospital days associated with the injuries, the average cost of professional fees for those stays, as well as any other operating and capital costs related to the injury visit.

‡ Indirect costs related to losses in productivity.

1. Includes all conditions classified to ICD-9 chapter on external causes of injuries except: E870-E876 (midadventures to patients during medical and surgical care); E878-E879 (surgical and medical procedures as the cause of abnormal reaction of patient or later complication, without mention of misadventure at time of procedure); E930-E949 (drugs, medicinal and biological substances causing adverse effects in therapeutic use).
2. ICD definition
3. Includes pedal cyclists injured in collisions with motor vehicles.
4. Unintentional Fire/Burn includes E890-E899, E924
5. Other Transport is not the same as the Recommended Framework. Here it includes all transport other than MVTC, includes pedal cyclist not involved in MVTC and other pedal cyclist as well as the matrix/framework “other transport” category.
6. PYLL calculated from age 0. Child Injury Division (Bureau of Reproductive & Child Health, CHHD, PPHB, Health Canada) analysis of Statistics Canada 1997 mortality data. Therefore, these figures are different from those in the Second Report on the Health of Canadians.
7. Child Injury Division (Bureau of Reproductive & Child Health, CHHD, PPHB, Health Canada) analysis of Statistics Canada 1997 mortality data.
8. Child Injury Division (Bureau of Reproductive & Child Health, CHHD, PPHB, Health Canada) analysis of Canadian Institute for Health Information hospitalization data for fiscal year 1997/98.
9. Child Injury Division (Bureau of Reproductive & Child Health, CHHD, PPHB, Health Canada) analysis of Canadian Institute for Health Information hospitalization data for fiscal year 1997/98.
10. Angus DE, Cloutier E, Albert T, et al. The economic burden of unintentional injury in Canada. SMARTRISK, 1998.

**Table 2: Qualitative Criteria Results**

<b>Qualitative criteria</b>	<b>Homicide Assault</b>	<b>Suicide or Self-inflicted</b>	<b>Falls</b>	<b>Motor Vehicle</b>	<b>Poisoning</b>	<b>Drowning Suffocation</b>	<b>Fire/ Burns</b>	<b>Other Transport</b>
Population subgroups experience a disproportionate burden	3	3	3	3	3	3	3	3
Effective interventions are known and available	1	2	3	3	2	3	3	2
Extent to which an opportunity gap exists (between available intervention and implementation)	1	2	3	3	2	2	3	2
Potential for cost savings (health and other govt.)	2	2	3	3	2	2	2	2
Trend(s) (likelihood of issue worsening)	2	2	3	1	2	1	1	3
Ability to make an impact is within the mandate of health	3	3	2	1	2	1	1	1
Ability of health to influence others	3	3	3	3	3	3	3	3
Lack of readiness, leadership and momentum in other sectors	1	3	2	1	3	1	1	2
Readiness of the public to address the issue	3	2	2	2	2	2	2	2
Readiness of political systems to address the issue	2	1	2	3	1	1	1	2
Sum Score	21	23	26	23	22	19	20	22
<b>Qualitative Priority Ranking</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>5</b>	<b>3</b>

## **Appendix B**

### **Summary of Recommendations**

#### **I. A Commitment to National Leadership and Coordination**

1. Improve strategic collaboration and communication among sectors, jurisdictions, functions and stakeholders in the field of injury
2. Increase support for policy and program-relevant research related to national injury priorities;
3. Increase support for national injury surveillance to address identified gaps in the systematic data collection, integration, analysis, interpretation, and dissemination especially around identified national injury priority areas;
4. Support investment in provincial/regional injury prevention centres to promote access to research, surveillance, programming, evaluation and training expertise to be able to identify and address local/regional needs and priorities;
5. Support the development of a complementary injury prevention and control strategy for Aboriginal peoples that harmonizes with the overall national priorities;
6. Build efficiencies through joint development and/or sharing of resources such as public education and social marketing related to national priorities and populations

#### **II. A Commitment to Include Stakeholders**

7. Approve the release of this discussion paper to stimulate national dialogue with concerned stakeholders on injury prevention and control as the basis for further development of a comprehensive national action involving all sectors;
8. Target key government ministries and departments such as transportation, justice, industry, social services, education, seniors services, child services, Aboriginal affairs, rural initiatives and municipal services to engage in action related to these national priorities.

#### **III. A Long-Term Commitment**

9. Review and assess national injury prevention needs and priorities at least every five years;
10. Establish national targets for injury reduction by 2001 that could be shared internationally at the Sixth World Conference on Injury Prevention and Control being held in Montreal in May 2002;
11. Develop, by 2005, the necessary local, provincial and national surveillance and monitoring systems to report progress against these targets;
12. Direct the Advisory Committee on Population Health to provide annual reports on progress regarding the identified national injury priorities and populations;
13. Increase health resources to this sector in accordance with the identified priorities for national action;

14. Identify injury prevention as a priority for early attention under the Health Promotion and Wellness section of the Health Agreement.

#### **IV. Falls in Older Adults**

15. Support multi-component interventions which address multiple personal and environmental risk factors (e.g., individual risk assessment, medication review, balance and strength-training programs, an active lifestyle, an adequate intake of Vitamin D and calcium, proper use of assistive devices as needed, and removal or repair of fall hazards);

16. Develop and disseminate a comprehensive resource of evidence-based best practice models and tools to reduce falls in older adults;<sup>F</sup>

17. Increase awareness of personal risk factors and environmental risk factors in the home and community, and promote preventive

18. Promote policies to create safer environments and prevent falls in older adults (e.g., improved building codes to address universal safe design principles and municipal hotlines to identify falls hazards in the community).

#### **V. Falls in Young Children**

19. Increase awareness of the consequences of childhood falls and prevention strategies (safer playspaces, correct use of baby gates, dangers of baby walkers, proper use of appropriate protective equipment (helmets, knee pads etc.);

20. Support efforts to meet recognized safety standards and guidelines for safe playgrounds and child equipment;

21. Develop and disseminate a comprehensive resource of evidence-based best practice models to reduce falls and their consequences in younger children.

#### **VI. Motor Vehicle Collisions – Young Drivers**

22. Collaborate with key sectors and community groups to design and implement policies and other strategies to prevent motor vehicle injuries (e.g., policies to require lower blood alcohol content, random breath testing and graduated licensing);

23. Collaborate with the transportation sector to develop a comprehensive campaign to enhance awareness, increase public concern, improve knowledge and influence behaviour on the safe use of appropriate vehicle restraints for all drivers and passengers, back seating for children age 12 and under, air bag precautions and the risk of drinking and driving;

24. Encourage the development and sharing of information and skill development programs for targeted risk groups such as peer education programs for youth.

<sup>F</sup> FPT Ministers Responsible for Seniors have commissioned such a resource which is anticipated to be released in the Fall of 2001.

## **VII. Motor Vehicle Collisions – Rural and Northern Communities**

25. Improve access to emergency medical services to treat injuries in rural and northern communities;
26. In collaboration with key sectors and community groups, improve seat belt compliance rates, improve compliance with posted speed limits and reduce drinking and driving;
27. Encourage improved road design, maintenance and safety, particularly in rural and northern communities

## **VIII. Suicide in Young People**

28. Develop and implement national efforts for the prevention of suicide and suicidal behaviours in accordance with United Nations guidelines;
29. Support community-based initiatives to promote supportive school and other environments for young people that foster the development of self-esteem, resilience and life skills (e.g., problem solving, interpersonal communication, conflict resolution, coping with stress and distressing emotions) and provide social supports;
30. Raise awareness and promote education on the risk factors for suicide, early identification of suicide risk, preventive approaches and the acceptability of help-seeking behaviours;
31. Increase access to enhanced mental health preventive and treatment services (e.g., peer-approach group programs linked with back-up mental health services);
32. Support the development of gatekeeper training for high-school teachers and administrators and others involved in providing human services to youth to facilitate early identification of risk;
33. Promote the adoption of policies to reduce access to the means of suicide;
34. Advocate for increased education for family physicians on the early identification, diagnosis and management of mental distress, depression and of substance abuse.

## **IX. Suicide in Aboriginal People**

35. Support development of the complementary injury prevention and control strategy for First Nations and Inuit peoples currently underway and request that this strategy collaborate closely with stakeholder groups and mental health experts as it develops recommendations related to the issue of reducing suicide and suicidal behaviours for First Nation and Inuit peoples;
36. Collaborate with Aboriginal representatives and organizations to develop appropriate strategies for intervention, identify best practices in suicide prevention, and facilitate more widespread implementation of successful models;
37. Collaborate with Aboriginal representatives and organizations to provide appropriate training in suicide prevention and intervention for community workers and health care providers.

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### Endnotes

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