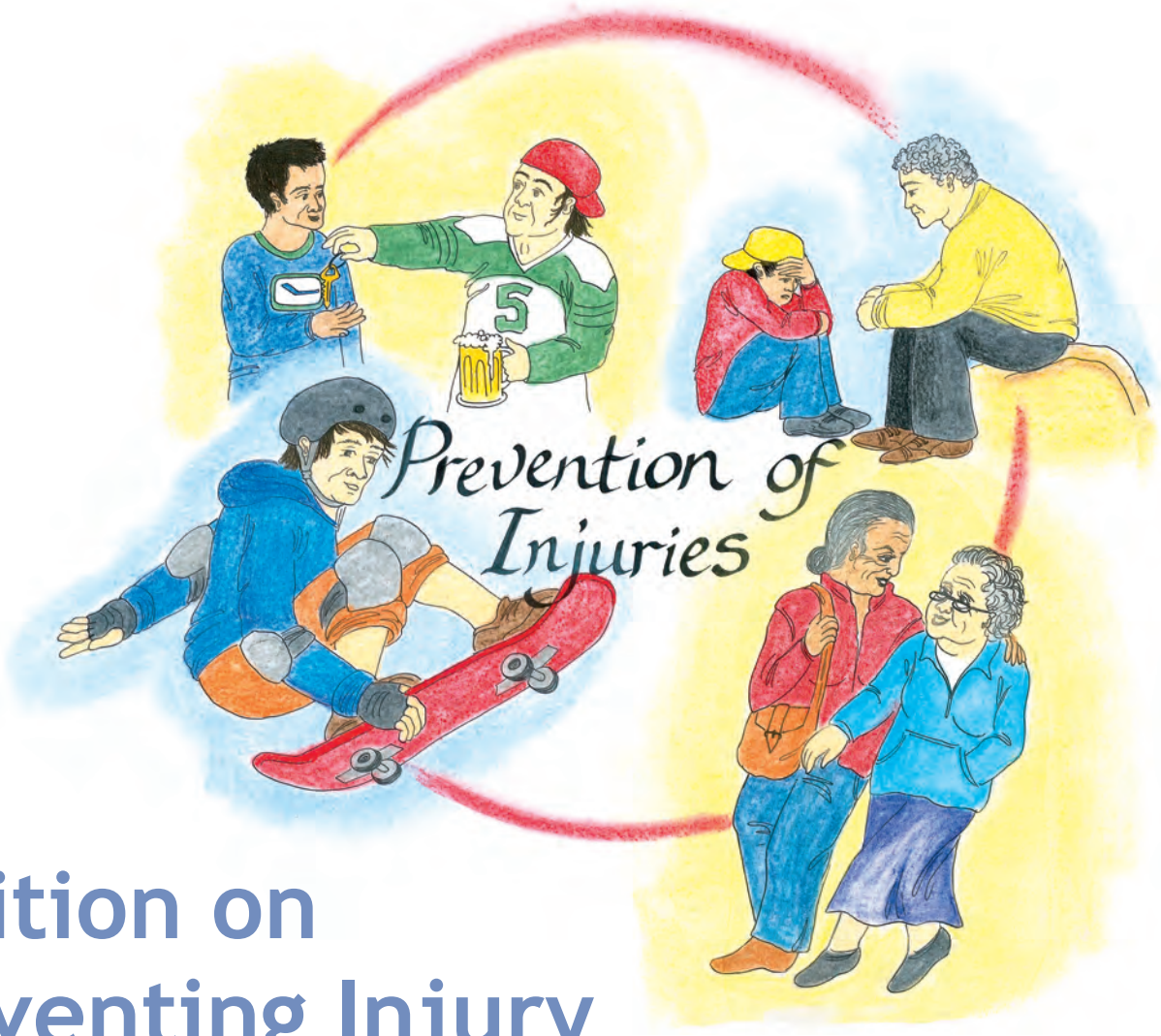

Position on Preventing Injury

An Integrated Population Health Approach

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northern health
the northern way of caring

"… Sometimes it feels like this. There I am standing by the shore of a swiftly flowing river, and I hear the cry of a drowning man. So I jump into the river, put my arms around him, pull him to shore and apply artificial respiration. Just when he begins to breathe, there is another cry for help. So I jump into the river, reach him, pull him to shore, apply artificial respiration, and then just as he begins to breathe, another cry for help. So back in the river again, reaching, pulling, applying, breathing and then another yell. Again and again, without end, goes the sequence. You know, I am so busy jumping in, pulling them to shore, applying artificial respiration, that I have no time to see who is upstream pushing them all in."

McKinlay, J.; 1979

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1.0 Introduction

This report outlines the position of Northern Health regarding the prevention of injuries. Injuries are the fifth leading cause of death in Canada and BC,[i] and the third leading cause of death and disability across Northern Health.[ii] Using a population health approach, we will engage with communities and individuals to reduce the burden of injuries in Northern British Columbia. By promoting the prevention of injuries, we will work with community partners to improve the health, well-being and quality of life of those living, working, learning and playing in Northern BC.

2.0 Background

Injuries are not *accidents*; injuries occur in repetitive and predictable patterns and they can be prevented.[iii] Most injuries involve a number of factors that interact in complex ways. Many of these factors are environmental and are related to the physical settings where people live, work, learn and play. Physical settings are often impacted by the social determinants of health.[iv] To take action on the broad range of factors that lead to injuries, a population health approach addresses the complex interactions between risk factors and protective factors, day-to-day living conditions, social determinants and effective prevention approaches that focus on strategies based in education, engineering and enforcement.[v]

> ***The complicated, multilevel dynamic of injury means that a comprehensive, coordinated approach is required for effective injury prevention strategies.***
>
> -- Atlantic Collaborative on Injury Prevention, 2012

Injuries are the third leading cause of economic burden of illness in British Columbia[vi] and are a greater economic burden than cancer.[vii,viii] Preventable injuries place a tremendous burden on the well-being of individuals, families, communities, society and our health care system, with substantial and increasing financial costs. Because most injuries are preventable, much of the physical, emotional, societal and financial costs can also be prevented.[ix]

Further, injury is a very broad topic. An injury can range in severity from minor scrapes or bruises to more severe trauma, disability and even death. To better understand some of the complexity in injury and injury prevention, it is important to define some key terms.

- An **unintentional injury** occurs when a person is hurt through no intent to harm, either by the victim or anyone else. Examples include injuries resulting from motor vehicle crashes, drowning, falls and fire.[x]
- An **intentional injury** occurs when a person is hurt and intent to harm is present, either by the victim (self-inflicted injury) or by another person. Examples include injuries resulting from suicide, family violence, assault and homicide.[xi]

2.1 Rates

Reporting injuries can be challenging because measuring injuries is complex. Injuries are commonly measured by different agencies, in different data collection areas, with different data collection systems and in different timeframes. Varying metrics are used, including societal costs, hospitalizations, death, potential years life lost, absolute numbers, visits to the emergency room and overall health care system costs. Hospitalization rates reflect only more serious injuries that could not be treated at a physician's office, clinic or emergency room.

Challenges in the collection and reporting of injury data should not cloud the central message that injuries are a major concern for population health. While injury rates have been declining over recent decades, preventable injuries continue to place a significant burden on individuals, communities, society and the health care system. As upstream risk factors are considered, the prevention of injuries can ease societal and system burdens.[xii]

2.1.1 Canada

As a matter of concern to human health, injury ranks the highest in terms of total annual economic burden and potential years of life lost. Each year in Canada, injury results in:[xiii]

- More than 13,000 deaths, 200,000 hospital stays, 3 million visits to an emergency department and 60,000 permanent disabilities.[xiv]
- A total economic burden of more than $19.8 billion; $10 billion on health care costs alone.

Canada ranks 18th out of 23 Organisation for Economic Co-operation and Development countries in terms of injury mortality for children and youth.[xv] Despite the economic, societal and individual health impacts, compared to other health conditions, injury receives far fewer resources and strategic attention (Table 1).

To more effectively address injury at a national level, Canada's four national injury prevention organizations (Safe Communities Canada, Safe Kids Canada, SmartRisk and Think First) are collaborating to provide a more cohesive and strategic voice on injuries and injury prevention in Canada. The aim is for these organizations to be more strategic in messaging, fundraising, engaging stakeholders and brokering knowledge.[xvi]

Table 1: Cost of Illness and Societal Contribution, Selected Diseases

Disease	Economic Burden ($ Billions)	Societal Contribution ($ Millions)	Potential Years of Life Lost
Injury	19.8	6.6	370,000
Heart (Federation)	18.5	178.0	277,100
Cancer	14.2	203.5	460,000
Diabetes	1.6	78.0	25,000
Lung	8.5	33.1	60,000
Kidney	3.5	24.9	n/a
AIDS (HIV)	2.1	10.6	460
Liver (Hep C only)	0.5	6.1	n/a

Source: Safe Kids Canada, 2010.

2.1.2 British Columbia

Every year in BC, 400,000 people are injured, resulting in the loss of 1,200 lives. These injuries cost the health care system $4.5 billion annually.[xvii] Every day, 1,100 people are injured seriously enough to require medical attention as a result of preventable injuries from falls, motor vehicle crashes, poisonings or drowning; of these people, an average of 90 will be hospitalized, 27 will be partially or totally disabled and 4 will die.[xviii]

2.1.3 Northern Health

Every month in Northern Health, more than 365 people are injured seriously enough to require medical attention; an average of 13 people die as the result of a preventable injury each month.[xix] Containing only 7% of the population of BC, Northern residents account for over one-third of the province's work place fatalities.[xx] It is important to note that these

statistics reflect only the rates that are reported. Not all injuries are reported (accurately) and we know that injury is under-reported.[xxi] As seen in Table 2, Northern Health's rates for unintentional injuries are generally higher than the Canadian and BC rates, but are consistent with or just below those from other comparable health regions. Regarding suicide and other self-inflicted injury deaths, Northern Health's rates are similar to Canadian and BC rates except the Northwest Health Service Delivery Area (HSDA), which is more consistent with those rates from other comparable health regions. The leading causes of injury-related death and hospitalization in Northern BC include: motor vehicle crashes, suicide and falls. These rates will be explained in the following sections.

Table 2: Injury Death Rates[1] in Selected Regions, 2011

Region	Unintentional Injury Deaths	Suicide and Self-inflicted Injury Deaths
Canada [xxii]	**25.1**	**10.2**
BC [xxiii]	**25.6**	**8.8**
Northern Health		
Northeast HSDA[2, xxiv]	42.6	8.6
Northern Interior HSDA [xxv]	35.9	10.4
Northwest HSDA [xxvi]	39.5	16.7
Comparable Health Regions[3]		
Peer Group E [xxvii]	40.2	14.0
Peer Group H [xxviii]	41.5	16.6

2.1.3.1 Motor Vehicle Crashes

Northern residents face significant challenges on roads and highways, such as longer distances to destinations, animals on the roads, altered road conditions because of weather and heavy commercial vehicle traffic. Research has shown that rural residents are less likely to use safety devices (such as seat belts) and that they engage in riskier behaviour.[xxix,xxx] With these factors in mind, motor vehicle crashes are a significant concern for individuals, families, communities as well as injury policy makers in Northern BC.

In Northern Health, motor vehicle crashes have been one of the top two leading causes of injury deaths and this trend has remained constant over the years. In 2007, 33% of injury deaths were caused by motor vehicle crashes.[xxxi] Between 1999 and 2009, there were 778 fatalities on Northern BC roads.[xxxii]

A review of the motor vehicle crash data indicates that men are at greater risk for injury death. In general, males are twice as likely to be killed in a motor vehicle crash as females. In particular, male motor vehicle occupants between the ages of 15-24 and 40-49 are at the greatest risk of dying in a motor vehicle crash.[xxxiii, xxxiv] But even across the North, the risk of motor vehicle crash is not equal (Table 3). For example, in the Northern Interior HSDA, men are more than twice as likely to be killed in a motor vehicle crash as women.

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1 Age standardized rates per 100,000.

2 HSDA: Health Service Delivery Area.

3 **Peer Group E** is comprised of the following health regions: Central Zone (AB), North Zone (AB), Northeast HSDA (BC), Northwest Territories, South Eastman Regional Health Authority (MB) and the Yukon. **Peer Group H** is comprised of the following health regions: Labrador-Grenfell Regional Integrated Health (NFLD and Labrador), Nor-Man Regional Health Authority (MB), Northern Interior HSDA (BC), Northwest HSDA (BC), Northwestern Health Unit (ON), Parkland Regional Health Authority (MB), Prairie North Regional Health Authority (SK), Prince Albert Parkland Regional Health Authority (SK), Region de la Cote-Nord (QC) and Region du Nord-du Quebec (QC).

Table 3: ASMR[4] Due to Motor Vehicle Crash in Selected Regions, Motor Vehicle Occupants, 2001-2009 (average)

	Total	Female	Male
Northern Health	**1.51**	**0.97**	**2.03**
Northern Interior HSDA	1.36	0.87	1.84
Northwest HSDA	1.32	1.00	1.62
Northeast HSDA	2.02	1.14	2.85
BC	**0.63**	**0.37**	**0.89**

Source: VISTA, BC Vital Statistics, 2001-2009.

2.1.3.2 Suicide

Suicide is a complex yet preventable public health concern. In the majority of cases, no single risk factor can be considered the sole contributor to a suicide death; rather, it is the presence and interaction of multiple factors at the individual, family, community and societal levels that need to be considered. In Northern BC, the picture of suicide is further complicated by the historical context of colonization and the large number of First Nations communities that have been impacted by the legacy of residential schools. Suicide causes considerable harm to families and communities. While a complete handling of this serious and multi-faceted matter is beyond the scope of this position statement, some facts and figures are provided to start to understand the impact of suicide in the North.

Over time, suicide has been the second leading cause of injury death in Northern Health, representing 21% of all injury-related deaths.[xxxv] However, in 2008-09, suicide surpassed motor vehicle crashes, becoming the leading cause of injury death in Northern Health. Males account for 79% of all suicide deaths, whereas females account for 64% of all suicide hospitalizations.[xxxvi] These data highlight the fact that suicide is a considerable concern in Northern BC.

Within Northern Health, the Northwest HSDA has an overall higher rate of suicide (Table 4). Across all HSDAs, rates of suicides are consistently higher for males than for females. Some data suggest that certain age groups of men are demonstrating higher rates of suicide than others. In particular, men aged 25-29 and 75-79 demonstrated high rates of suicide in Northern Health between 2001 and 2007.[xxxvii] Further research suggests that in Northern BC, suicide among Aboriginal youth (see Section 3.4), men and seniors are only part of the complex and significant scope of the issue in our region.[xxxviii]

Table 4: ASMR Due to Suicide in Selected Regions, 2001-2009 (average)

	Total	Female	Male
Northern Health	**1.30**	**0.52**	**2.04**
Northern Interior HSDA	1.21	0.38	2.02
Northwest HSDA	1.77	0.97	2.56
Northeast HSDA	0.94	0.31	1.50
BC	**1.01**	**0.48**	**1.56**

Source: VISTA, BC Vital Statistics, 2001-2009.

[4] ASMR = Age Standardized Mortality Rates. This adjusts for differences in age distribution. Rates are per 10,000 people.

2.1.3.3 Falls

Falls account for most injury-related hospitalizations.[xxxix] Compared to provincial rates, residents of Northern BC are at increased risk for a fall that requires hospitalization; Northern Health has the highest rate of hospitalization for a fall of all health authorities in the province.[xl] In Northern Health in 2009/2010, there were: [xli]

- 222 fall-related hip fracture cases.
- 5,944 fall-related hospital days for acute and rehab care.
- 3,984 fall-related hospital days for alternate level of care.

Between 2001/2002 and 2009/2010, two measures of fall-related hospitalizations showed increased rates. [xlii]

- The average length of stay increased by 15%.
- Fall-related hospital days increased by nearly 35%.

Additionally, direct health care costs associated with these falls increased by nearly 20% over the last five years.[xliii] In 2005/06, costs were $7.5 million and in 2009/10, costs were $9 million. Of these costs, hip fractures account for 40% of the average annual hospital costs for fall-related hospitalizations among seniors.

Seniors are at increased risk of fall-related injury (see Section 3.2). Specifically among Northern seniors, falls account for 35% of injury-related hospitalizations and 40% of the annual hospital costs associated with those hospitalizations.[xliv] In Northern Health in 2009/2010, there were 555 fall-related hospitalizations for individuals over the age of 65.[xlv]

3.0 Populations at Risk

Some populations are at higher risk of injury, including children and youth, seniors, men and Aboriginal peoples. Evidence highlights that targeted strategies for populations at risk may be successful.[xlvi] Each of these populations is discussed in the following sections.

3.1 Children and Youth

Children and youth are at increased risk of unintentional injuries—from bumps and bruises to more severe injuries—with life-long health and social implications. With emphasis on injury prevention, the key is to reduce frequency and severity, particularly because of the longevity of potential social and economic costs.[xlvii] While there has been success in reducing the frequency and severity of injury to children and youth, injury is the leading cause of death among this cohort. According to the most recent data available: [xlviii]

- In Northern Health, the highest causes of injury-deaths to children and youth (age 1-19) are motor vehicle crashes (52%), suicide (19%) and drowning (10%).
- Northern Health has the highest child and youth injury death and hospitalization rates among all health authorities in the province.
    - Double the provincial rate for injury-deaths and 1.5 times the provincial rate for hospitalizations.
- Recent data shows that the North had the highest rate of *overall child mortality* (0-18 years) in BC (4.9/10,000 per population, compared to the provincial average of 3.6/10,000 population).[xlix]

- Recent data also shows that the North had the highest rate of *injury mortality* among BC children (0-18 years) (1.8/10,000 population, compared to the provincial average of 1.1/10,000 population).[l]

Injury prevention strategies are particularly effective when targeted for children and youth. The Ottawa Charter for Health Promotion presents a framework for such prevention strategies (see Section 6).

3.2 Seniors

Seniors are at increased risk of unintentional injury. This increased risk is partly due to reduced balance or a reduced ability to regain balance. It is also affected by environmental trip hazards and age-related physical, mental and other health challenges.[li] Research demonstrates that motor vehicle crash rates increase as drivers increase in age, as physical changes affect a senior's ability to drive safely.[lii]

According to the most recent data available for Northern Health:

- The leading causes of injury among seniors include falls, motor vehicle crashes and suicides.[liii]
- As the leading cause of injury, falls are particularly concerning because:
    - Falls may lead to hospitalization, long-term disability, chronic pain and death.
    - Falls cause approximately 95% of all hip fractures among those over the age of 65; 20% of those injured die within one year of the fracture[liv] and 50% never regain their pre-fracture function.[lv]

Through modest investments in injury prevention for seniors, there is opportunity to reduce morbidity and mortality and to gain in both financial savings and quality of life. Seniors are an important area for focus because, due to an aging population in the North, this cohort is expected to double by 2030.[lvi,lvii] Injury prevention strategies are particularly effective when they reflect a comprehensive approach, with tailored interventions targeted to address identified risk factors among seniors. The Ottawa Charter for Health Promotion presents a framework for such prevention strategies (see Section 6).

3.3 Men

Men face unique challenges related to their health, wellness and safety caused by risk-taking attitudes that are embedded in gender socialization. When compared to men in BC, men in the North have higher rates of alcohol and tobacco-related deaths, chronic disease and sleep-related disorders.[lviii] Men are also more likely than women to engage in risk-taking behaviours, putting them at greater risk for severe injury and death.[lix,lx] Motor vehicle crash fatalities, suicides and cardiovascular diseases involve men at much higher rates, contributing to an shorter average life expectancy than women.[lxi]

Some men in Northern BC have romanticized risk taking behaviours as part of male cultural identity which has led to higher incidents of motor vehicle crashes and other injuries. Additionally, some chronic conditions, such as diabetes, heart disease, arthritis, Parkinson's disease, Alzheimer's disease and dementia place drivers at greater risk for motor vehicle crashes. Further, problematic substance use or sleep disorders put men at an increased risk of at-fault crashes.[lxii] Another area of significant concern for men's injuries is that many of the more hazardous occupations, such as mining, forestry and agriculture are based in rural areas,[lxiii] and men account for over 94% of workplace fatalities and the vast majority of hospitalizations resulting from workplace injury.[lxiv] The Ottawa Charter for Health

Promotion presents a framework for prevention strategies to address these risks (see Section 6).

3.4 Aboriginal Peoples

Injuries are one of the leading causes of death, hospitalization and disability among Aboriginal peoples in BC.[lxv, lxvi] Since the Provincial Health Officer's first report on the Health and Well-being of Aboriginal People in BC in 2001, progress has been made to improve Aboriginal health status and health outcomes, including the decline in overall mortality and increasing life expectancy due to a decline in external causes of death (e.g., motor vehicle crashes, poisoning and deaths related to problematic substance use).[lxvii] However, based on 2006 data, rates for injuries among status First Nations[5] peoples in BC (all causes) are still two to four times higher than the rate for the general population. [lxviii]

It is important to note that there can be significant variability across Northern Health's HSDAs in comparative rates. For example, for the period 2002-2006:[lxix]

Alcohol-Related Deaths:

- In Northern Health, the age standardized mortality rate (ASMR) was over three times higher for status First Nations people compared to other residents (within the Northwest and Northeast HSDAs, the rate was approximately two and a half times higher; in the Northern Interior HSDA, the rate was almost five times higher).

Accidental Poisoning:

- In Northern Health, the ASMR was more than twice as high for status First Nations people compared to other residents (in the Northwest HSDA, the rate was lower; in the Northern Interior HSDA, the rate was over two and a half times higher; and in the Northeast HSDA, the rate was over three and a half times higher).

Motor Vehicle Crashes:

- In Northern Health, the ASMR was higher for status First Nations people compared to other residents (in the Northwest HSDA, the rate was lower; in the Northern Interior HSDA, the rate was almost twice as high; and in the Northeast HSDA, the rate was over three times higher).

Reasons for rate disparities between status First Nations people and other residents are complex. Isolated living conditions, overcrowded and dilapidated housing and poor social conditions may increase the risk of injury for Aboriginal peoples.[lxx] For example, many Aboriginal peoples live in rural and remote areas and must drive longer distances to carry out their daily activities.[lxxi] Although there are more motor vehicle crashes in urban areas than in rural areas, the ratio of fatalities to injuries demonstrates that rural crashes are more likely to be fatal. Reasons for increased fatality rates include: higher speeds on poorly maintained resource roads, longer emergency response times and distance to hospitals, multiple victims in a single crash and crashes involving wildlife. Inadequate vehicle maintenance can also be a factor and this can be due to poverty or to lack of repair services in remote communities.[lxxii]

[5] The term "Aboriginal" includes First Nations, Métis and Inuit people. The statistics in this section are based on data for status First Nations people identified by Statistics Canada as Status Indians, which formed the foundation of the Provincial Health Officer's 2007 Report referenced in this section.

Regarding suicide rates, the ASMR for status First Nations people has decreased in recent years, but a gap still exists between this population and other residents. For example, for the period 2002-2006:[lxxiii]

Suicide:

- In Northern Health, the ASMR was higher for status First Nations people compared to other residents (in the Northwest HSDA, the rate was almost three times as high; in the Northern Interior HSDA, the rate was almost one and a half times higher; and in the Northeast HSDA, the rate was lower).

Suicide rates and patterns are not the same for all First Nations communities in BC. In the period from 1992-2006, youth suicides (age 15-24) were reported in 77 bands and adult suicides were reported in 135 bands. More than 60% of bands reported no youth suicide and this demonstrates that youth suicide is not inherently an Aboriginal risk. [lxxiv] Six factors are identified as protective factors in First Nations communities that have resulted in fewer suicides, including: self-government, land claims, education, health care, cultural services and control over police and fire protection. [lxxv] The Ottawa Charter for Health Promotion presents a framework for prevention strategies that can lead to further improvement (see Section 6).

4.0 Current State of Injury Prevention

National, provincial and regional initiatives are already underway to raise awareness of injuries and injury prevention. Specific initiatives relevant to Northern Health are outlined in this section.

4.1 British Columbia

British Columbia has a history of approaching the prevention of injuries through a strategic, integrated and collaborative approach. It is important to be aware of this work to prevent duplication of efforts. Identifying the work already done is an important first step toward building on existing strengths. Some of the key initiatives include:

- BC Ministry of Health 2007 Model Core Program Paper: Prevention of Unintentional Injury[lxxvi]
- BC Injury Research and Prevention Unit (BCIRPU)
  - A leader in the production and transfer of injury prevention knowledge and the integration of evidence-based injury prevention practices.
  - Act as an injury prevention hub.
  - Partners with federal, provincial and regional organizations in an integrated approach to policy, research and practice.
- BC Injury Prevention and Leadership Action Network (BCIPLAN)
  - An independent strategic alliance of organizations involved in injury prevention. Identifies injury prevention priorities and coordinates activities that address significant injury issues affecting all age groups in BC.
- Community Against Preventable Injury (Preventable.ca)
- BC Falls and Injury Prevention Coalition (BCFIPC)
  - A recognized leader in ongoing collaborative approach to translating evidence into practice.

- Centre of Excellence on Mobility, Fall Prevention and Injury in Aging (CEMFIA)
    - A collaborative of stakeholders that generates, translates and promotes uptake of best practice evidence for the enhancement of mobility and the reduction of the incidence and severity of falls and fall-related injuries among older persons in B.C.
- The Provincial Health Officer's 2004 report: Prevention of Falls and Injuries Among the Elderly[lxxvii]
- BC Sport and Recreation Injury Prevention Advisory Committee
    - A forum for agencies, organizations and individuals involved in sport and recreation injury awareness and prevention.

4.2 Northern BC

As in other jurisdictions, no single sector or department in Northern BC *owns* injury prevention. Rather, a range of programs provide prevention initiatives. Again, to reduce duplication, some of the key work is listed here:

- Road Health Coalition
    - A range of experts, community and provincially-based stakeholders to address injury and death from motor vehicle crashes.
- Northern Health Medical Health Officer's 2005 report: CrossRoads (updated in 2007 and 2009)[lxxviii]
- Baseline Report on Injuries 2005: Northern Health[lxxix]
- Child and Youth Injury Prevention Project (Northwest HSDA)
- Emergency Department Injury Surveillance System
- Seniors Falls Prevention Initiative (Northern Health and Health Canada)
- SAIL (Strategies and Actions for Independent Living) Initiative
- A Million Messages Public Health Childhood Injury Prevention Initiative
- Elders' Council Falls Prevention Acute Care Setting Initiative
- IMAGINE community grants for injury prevention
- Northern Health Regional Trauma Program
- PARTY program
- Other regional and local prevention coalitions

5.0 Northern Health Position

Northern Health wants to improve quality of life by promoting the prevention of injuries among all Northern residents. This will be achieved by working with individuals and community partners to support and promote:

- A shared understanding that injuries are preventable.
- A shared commitment to protecting the right of all to live, work and play injury-free.
- Joint efforts to develop environments, programs and policies that support the prevention of injuries across the ages.
- Joint efforts to address injuries and injury-prevention for those populations at higher-risk, including children and youth, seniors, men and Aboriginal peoples.

Northern Health will promote injury prevention through the following actions:

- Based on current data, Northern Health will support a comprehensive, whole-of-society approach to collaboratively develop evidence-based injury prevention strategies to reduce the number of deaths and hospitalizations from: motor vehicle crashes, suicide and self-harm attempts, falls and childhood injuries.
- Using a population health approach, Northern Health will support further investigation to determine risk and protective factors and appropriate prevention strategies to address injuries in Northern Health. This should involve comprehensive reporting of annual injury data and trends, consider contextual information and variations by HSDA, identify priority areas and best practices and make recommendations for partnerships. In supporting BC's Aboriginal population, it will be important to consider the environmental and cultural contexts that impact Northern BC's Aboriginal people and communities.
- As an organization, Northern Health will lead to mobilize multi-level action on all injuries in the form of a regional injury prevention coalition. This coalition will use data and other evidence to mobilize action and respond in the short, medium and long-term to changing injury prevention priorities. This coalition will be proactive and multi-sectoral, taking a systematic approach. Similar to the federal collaboration for injury prevention, such a collaborative can provide strategic and consistent messaging and direction.
- Develop a comprehensive strategy to address injury prevention in Northern BC with internal and community-based partners across the region and following the Ottawa Charter approach; develop partnerships identified above and expand to include sectors that may not already be identified.

6.0 Strategies to Achieve this Position

The Ottawa Charter for Health Promotion is an international resolution of the World Health Organization. Signed in Ottawa, Canada in 1986, this global agreement calls for action towards health promotion through five strategic areas; build healthy public policy, create supportive environments, strengthen community action, develop personal skills and reorient health services. In concert, these strategies can create a comprehensive approach to preventing injuries.

This section presents examples that support the five strategic action areas of the Ottawa Charter to achieve the goals outlined in this position paper. Examples are evidence-based and come from an environmental scan of strategies proven to be effective in other places.

6.1 Build Healthy Public Policy

A broad range of local, regional, provincial and federal organizations have a role in building healthy public policies that promote injury prevention. Some examples include:

- Develop policy to specifically target those groups that are identified to be at higher risk (e.g., Swedish policies to address unintentional injuries in children and youth)
- Legislate actions that are known to prevent injuries (e.g., helmet legislation for cycling)
- Develop regulations for safer settings (e.g., safe playgrounds)
- Advocate for and support alcohol policy (e.g., pricing measures, oppose privatising of liquor sales and distribution)

- Support legislative changes or regulations to enhance safety measures for targeted populations (e.g., Canadian Paediatric Society Position Statement recommendations for preventing injuries from all-terrain vehicles; Accreditation Canada's Required Operating Practices for falls prevention in health service settings such as hospitals, residential care and assisted living)
- Support legislation to restrict activities correlated with injuries (e.g., decreasing speed limits in residential areas from 50kph to 30kph to prevent child pedestrian injuries)

6.2 Create Supportive Environments

People interact daily with a variety of settings where they live, work, learn and play. These settings should be carefully considered when seeking to create supportive environments. Within each of these environments, there is opportunity to prevent injury using examples such as:

6.2.1 Home

- Childhood injury prevention education/home-visiting programs can be effective in improving safety behaviour in families (e.g., review on Home Safety Education and Provision of Safety Equipment for Injury Prevention)
- Seniors falls prevention (e.g., SAIL – a provincial fall risk reduction program integrated into home support services)
- Prevention of falls and fall-related injuries among residents of assisted living residences (e.g., Promoting Active Living)

6.2.2 Work

- Comprehensive workplace wellness that addresses on- and off-site injuries (e.g., Safe Saskatchewan)
- Partnerships between injury prevention organizations and integration of injury prevention messaging into public education (e.g., WorkSafeBC curriculum in high school)

6.2.3 School

- Programming that promotes healthy relationships and the prevention of abuse, bullying and violence (e.g., RespectED by the Canadian Red Cross, BC's Safe, Caring and Orderly Schools)
- Building awareness of brain and spine health and injury in the development of children and youth programs (e.g., ThinkFirst)
- Raising awareness of injury through school events (e.g., SmartRisk)

6.2.4 Leisure

- Promote the prevention of concussion in sport, recreation and leisure (e.g., ThinkFirst)
- Municipal charter on safety in sport, recreation and leisure (e.g., Vancouver Charter on Skiing Safety)
- Regulation of training for the operation of motorized vehicles (e.g., National Pleasure Craft Operator Competency Program)
- Backyard pool fencing regulations (e.g., Prevent Drowning in Manitoba)

6.3 Strengthen Community Action

Successful actions to promote injury prevention are planned and implemented through partnerships and collaborations. Public, private and non-governmental organizations may be involved at local, regional, provincial and federal levels. Examples of partnerships that foster community capacity and support the promotion of injury prevention include:

- Support communities to develop capacity to address injury challenges (e.g., Safe Communities Canada, a WHO affiliate)
- Promote annual safety campaigns (e.g., Safe Kids Week)
- Promote suicide prevention through local, regional and provincial initiatives addressing suicide across the lifespan (e.g., BC's Suicide PIP Initiative)

6.4 Develop Personal Skills

A variety of resources and systems are available to support individuals and families to improve health outcomes through awareness, engagement, education and capacity building. Stakeholders should focus on the various levels of behaviour change and construct programs accordingly. Examples of programs and campaigns that may encourage the development of personal skills towards injury prevention include:

- Online information to empower seniors to develop personal skills in preventing falls (e.g., Finding Balance Alberta)
- Promotion of water safety and drowning prevention (e.g., Canadian Red Cross)
- Raising awareness to preventable injuries (e.g., Preventable.ca and the use of social marketing)

6.5 Reorient Health Services

A broad range of people are available to assist with a reorientation of health services. For example, health professionals, local government, community planners, sport and recreation professionals, general practitioners, allied health professionals and volunteer groups can all influence injury prevention. The BC Model Core Program Paper: Prevention of Unintentional Injury illustrates strategies that promote the shared responsibility of preventing injuries at the local community, regional, provincial and national level. Examples of these strategic approaches could include:

- Strategic planning and priority setting (e.g., Safe Communities Canada, BC's Healthy Minds, Healthy People Plan to address mental health and problematic substance use)
- Advocacy and Public Policy (e.g., Ontario Public Health Association Injury Prevention Working Group)
- Community development and capacity building
    - Canadian Injury Prevention and Control Curriculum
    - Canadian Falls Prevention Curriculum
    - IMAGINE Community-based Injury Prevention Grants
- Knowledge transfer and public education (e.g., BC Primary Care Fall Prevention Training Package)
- Enforcement (e.g., Ensuring safety in residential facilities and child day care facilities through Licensing)
- Surveillance, data collection and evaluation (e.g., CIHR Team Child and Youth Injury Prevention)

7.0 Conclusion

Northern Health is adopting a position on injury prevention as a primary modifiable risk factor to improve the quality of life of Northerners. The burden of preventable injuries negatively impacts our health care system and the overall health of our Northern population. The regional message is consistent with provincial and national messages, strategies and initiatives. This paper presents evidence-based strategies that have been implemented and proven to support injury prevention initiatives in other places. These strategies support the comprehensive framework presented by the Ottawa Charter for Health Promotion and support Northern Health's position.

8.0 Other Resources

International

World Health Organization: Violence and Injury Prevention
United States' Centers for Disease Control and Prevention: Injury and Violence Prevention and Control

Canada

Canadian Red Cross
Canadian Paediatric Society: Caring for Kids
Health Canada: Healthy Canadians
Public Health Agency of Canada: Injury Prevention and Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP)
Safe Communities Canada
The Hospital for Sick Children's national injury prevention program, SafeKids Canada
SmartRisk
ThinkFirst, a national organization with a focus on the prevention of brain and spinal cord injuries
Transport Canada

British Columbia

BC Injury Research and Prevention Unit: Publications and Reports
Preventable.ca
SeniorsBC
BC Ministry of Health: Injury Prevention, Initiatives, and Resources
BC Ministry of Health: Provincial Health Officer's Annual Reports and Special Reports
BC Ministry of Justice, Coroners Service: Child Death Review Unit

Key Documents

The Economic Burden of Injury in Canada[lxxx]
A Public Health Approach to Fall Prevention Among Older Persons in Canada[lxxxi]
The Social Determinants of Injury[lxxxii]
Reaching for the Top[lxxxiii]
Child Safety Good Practice Guide[lxxxiv]
A Journey to the Teachings: A community approach to injury prevention[lxxxv]
Model Core Program Paper: Unintentional Injury Prevention[lxxxvi]
Pathways to Health and Healing: Second report on the Health and Well-being of Aboriginal People in British Columbia[lxxxvii]
One Voice Safer Canada[lxxxviii]
Ottawa Charter for Health Promotion[lxxxix]
Northern Health Strategic Plan[xc]

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