Our Vision of Better Health for All

We envision a community in which everyone has a chance to live a healthy life and has the same opportunities to reach their full health potential. The Better Health for All Series highlights a number of key findings about the status of our health. Our series highlights what actions are being taken to make this vision a reality and what more we can do to create better opportunities for all to achieve better health.

Better Health for All Series 7: Unintentional Injury

Unintentional injuries are injuries that are not caused on purpose or with an intention to harm. They include harms related to transportation such as motor vehicles, pedestrian, cycling and off-road injuries. They also include events such as falls, drowning, burns and poisonings. Unintentional injuries are often thought of as random events or “accidents” that could not have been prevented. In reality, many injuries are preventable and occur as a result of actions and circumstances largely determined by the physical, social and policy structures in place where we live, work and play. When we think about a person’s risk of being injured, we must consider the wider environment.

In addition to this report answering the question, “What types of injuries are occurring in our community?” we answer “What puts members of our community at risk for these injuries and how can we better prevent them?”

Why Should We Care About Injuries?

Preventable injuries are the leading cause of death for Canadians under age 45. The total economic burden of injuries is estimated at $27 billion per year in Canada and $1.1 billion per year in Saskatchewan. Our province has been particularly hurt by injuries, having the second highest per capita cost due to injuries compared to any other province. Further, over the past decade Saskatchewan has had the highest injury hospitalization rates in the country. While Saskatoon Health Region has fared better than the provincial average, we are consistently higher than national injury hospitalization rates.

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1 Parachute. The cost of injury in Canada. Toronto (ON); Parachute; 2015.
2 Canadian Institute for Health Information. Health Indicators Interactive Tool [Internet]. 2013; [cited 2016 Apr 10]; Available from: http://yourhealthsystem.cihi.ca/epub/search.jspa.
3 Past decade is from 2004 to 2013.
Many of our injuries occur in workplaces. Saskatchewan has the second highest time loss injury rate in Canada.4

Who is Affected by Unintentional Injuries?

Different types of unintentional injuries exhibit unique patterns in specific groups. For example, deaths and injuries associated with motor vehicle collisions are more common among teens and young adults5, while falls are more likely to have severe outcomes in older adults6. Further, lower socio-economic groups not only have a higher risk of experiencing several types of injuries, the outcomes tend to be more severe. This is why health equity should be considered when implementing policy to prevent unintentional injuries7.

In addition to reporting on the injuries that occur in the population, we examine the data in more depth to show how injury and risk differ according to gender, age, areas of more or less advantage, and geography within the Region.8

What Did We Find?9

Unintentional injury hospitalizations in the Region have decreased 21% between the fiscal years 2003/04 and 2012/13. While this is good news, it still means that over 1,300 hospitalizations are seen each year for residents of our Region. In addition, in the Region over 100 people die every year and over 15,700 people go to the Emergency Department from unintentional injuries.

Injuries-related to falls make up the majority of unintentional injury hospitalizations. About 60% of all unintentional injuries are due to falls. Falls hospitalization rates have decreased over time by about 17%. Falls are more common among those 65 years and older than any other age group. In 2014, residents of our Region had over 6,400 falls-related Emergency Department visits.10

Transportation injuries (motor vehicles, pedestrian, bicyclists, off-road) is the second largest category of unintentional injury and makes up about 20% of all unintentional injury hospitalizations. Injuries involving motor vehicle collisions make up the majority of transportation injuries. We found that rural residents had the highest motor vehicle injury rates. In 2014, the Region’s residents made almost 800 motor vehicle-related Emergency Department visits.

Pedestrian injury hospitalizations have been relatively stable, with 15 to 24 year olds and those 65 years and older having the highest rates. Each year residents of our Region make about 140 pedestrian-related Emergency Department visits.

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8 To show how we compare over time we use data from hospital discharges provided by Saskatchewan Ministry of Health along with urban Emergency Department visits. Data from other sources such as physician billing, self-reported injuries and “near misses” that could have caused injury are not included in this report.
9 See CommunityView Collaboration http://www.communityview.ca/pdfs/2016_srh_series7_aboutthedata.pdf for detailed definitions of these indicators.
10 Note that this total only includes emergency department visits seen in Saskatoon’s three urban hospitals. Rural emergency department coding was not available at the time of this release.
**Bicycling** injury hospitalizations have decreased over time by about 35%, which is good news. However, about two bicyclists are hospitalized per month due to a collision. In addition, almost one bicyclist per day goes to the Emergency Department because of an injury.

**Off-road** injury hospitalizations have been on the increase in the Region – by over 80% from 2003/04 to 2012/13. Off-road vehicles include snowmobiles and ATV’s. Injury rates are twice as high in rural areas of the Region compared to Saskatoon.

**Unintentional poisonings** is the third largest category of unintentional hospitalization injuries and includes poisonings by pharmaceutical and illegal drugs, as well as chemicals like gases and pesticides. People living in the least advantaged areas of Saskatoon had poisoning rates that were up to six times higher than for those living in the most advantaged areas.

**Sports-related** injuries make up about 5% of all unintentional injury hospitalizations and have decreased by over half since 2003/04. Most injury hospitalizations occur among 15 to 19 year olds. Sports-related injuries represent a large burden on Emergency Departments as over 2,400 visits in 2014 were caused by this category of injury.

**Fire and burn** injury hospitalizations have decreased over time by almost 60%. Children under five years old are the ones most affected in this category and most hospitalizations are as a result of hot liquid burns. People living in the least advantaged areas of Saskatoon had fire and burn rates that were five times higher than for those living in the most advantaged areas.

Finally, while only one or two drowning injury hospitalizations occur each year for Regional residents, these occur most prominently in children under five years old. Swimming pools were the locations most commonly related to a drowning hospitalization.

Looking at unintentional injuries through the life course, for those individuals under 65 years old, falls, motor vehicle collisions and poisonings show up most frequently. For those under five years old, fire and burns and poisonings are prominent injury types. For 5 to 14 year olds, sports-related injury is an important injury type. For those older than 65 years, falls-related injury is by far the most common type of unintentional injury (Figures 1 and 2).

**Figure 1: Leading Causes of Unintentional Injuries Ages 0 to 64 years, Saskatoon Health Region, 2003/04 to 2012/13 Combined**

![Figure 1](image-url)
Impacts of Injury Showcased

With this release we asked injury survivors to tell us about their experience of injury through photos. We wanted to know what happened, what their life after the injury has been like, and what they think could help prevent injuries in the future. The injury survivors spoke of the difficulties that their injury had on them, from diminishing their everyday abilities, to increased costs due to time lost from work. The importance of the built environment was also noted. Survivor stories are found at [www.communityview.ca/photovoice](http://www.communityview.ca/photovoice).

Health Inequalities and Inequities Persist

Previous reports in the [Better Health for All Series](http://www.communityview.ca/photovoice) highlight very large gaps in health between people living in the most and least advantaged areas of Saskatoon. In this report, we found that people living in the least advantaged areas had statistically significantly higher falls, motor vehicle, pedestrian, poisonings, and fire and burn injury hospitalization rates. Our analyses by sub-group showed that people living in rural areas had statistically significantly higher off-road and motor vehicle injury hospitalization rates.

What’s Being Done to Create Better Conditions and Better Outcomes?

Within Saskatoon Health Region, much is being done to prevent unintentional injuries (click [here](http://www.communityview.ca/photovoice) for one page fact sheets and [here](http://www.communityview.ca/photovoice) for injury activity summary sheet). Most of these efforts focus on creating awareness about causes of injury and providing injury prevention education and supports to specific groups. Examples include the work of the Saskatchewan Central Acquired Brain Injury Outreach team with initiatives that aim to educate children and adolescents on how to prevent brain injuries (e.g.

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11 Deprivation in Saskatoon was identified using an index of six socioeconomic variables (income, education, employment, marital status, single-parent families, and living alone). The index divides Saskatoon into five categories ranging from highest to lowest deprivation and each area contains approximately one fifth of the population. See [http://www.communityview.ca/pdfs/2014_shr_phase3_deprivationindexsummary.pdf](http://www.communityview.ca/pdfs/2014_shr_phase3_deprivationindexsummary.pdf) for more information.
P.A.R.T.Y program, Brain Walk etc.). The Regional Fall Prevention strategy was implemented in 2011. The Fall Reduction and Injury Prevention department provides staff and public education on falls and injury prevention, supports exercise programs for older adults in the community, such as Forever in Motion, and ensures falls prevention policies are established and sustained in the thirty long-term care homes in the Region. From an environmental perspective, Population and Public Health has been working with municipal partners to create healthy built environments. This work ensures that all road users can benefit from improvements planned for transportation infrastructure.

Municipally, the City of Saskatoon has created a Traffic Safety Action Plan, is planning to expand their pedestrian and cycling networks and is piloting new types of infrastructure such as protected bicycle lanes to increase bicycle safety. Safe Communities Humboldt and Area is one of only three accredited safe communities in the province and offers a range of injury prevention programming.

Provincially, in June 2014 legislative changes were made to traffic laws to help improve safety. The changes to the traffic laws included tougher consequences for impaired and distracted driving, increased fines for speeding, enhanced booster seat laws, and enhanced traffic safety awareness campaigns. The provincial government is a major funder of agencies like the Saskatchewan Prevention Institute, Safe Saskatchewan, and WorkSafe Saskatchewan, among others.

Nationally, the Canadian Institute for Health Information recently released a report highlighting income-related health inequalities. This report profiled falls among older adults, motor vehicle injuries, and initiatives and programs across Canada. For example, the Canadian Mortgage and Housing Corporation grants forgivable loans to low income older adults to implement renovations in their home such as handrails, grab bars and lever handles on doors. These initiatives can help reduce falls in this group. Lowering speed is a key factor in reducing transportation-related injury frequency and severity. In an effort to improve safety for all road users, Edmonton, Alberta, Westmount, Quebec and Duncan, British Columbia have reduced speed limits in residential neighbourhoods.

Reducing Unintentional Injuries – A Call to Action for Saskatoon Health Region and its Partners

We envision a community where:
• injuries are viewed as preventable;
• citizens feel empowered to demand legislative change;
• safe physical environments are provided;
• citizens educate one other about injury prevention;
• programs are implemented that result in meaningful reductions in injuries; and
• we achieve better outcomes for those who do get hurt.

Essentially, we imagine a society where fewer people are injured and those who are injured can recover and achieve a good quality of life in the long term.

Unintentional injury prevention can be achieved through addressing underlying causes and risk factors. Effective prevention saves lives, reduces disabilities and other health consequences and is increasingly being shown to be cost effective.

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With this in mind, Saskatoon Health Region should continue to work with its partners to:

1. **Address the Root Causes of Unintentional Injuries**

   Injury rates and health equity can only be improved with an array of injury prevention strategies.

   **Rationale:** The social determinants of health, including income, education, and employment, are linked to injuries. People living in areas of least advantage tend to have significantly higher unintentional injury rates than those living in areas of most advantage. This pattern holds true in our Region, especially for poisonings, fire/burns and pedestrian injuries. Initiatives outlined by the provincial Advisory Group on Poverty Reduction, such as a basic income, Housing First, and an early years action plan, among others, would help to reduce poverty in Saskatchewan and would likely help to alleviate the injury disparity seen in our Region.

   In addition to the broad based initiatives outlined above, targeted strategies are needed for the most vulnerable in society. Housing conditions, home safety equipment and parental education can improve poison prevention practices and fire safety. This is especially crucial as children are susceptible to pharmaceutical poisonings. New dangers of poisoning from liquid nicotine have also been noted.

2. **Continue to Build on the Successes Around Falls Reduction**

   **A)** Expand policies to provide older adults with support to implement safety equipment in their home. Access to falls prevention programs and home assessments are also needed.

   **Rationale:** The majority of falls that happen to older adults occur in the home. Low income older adults are particularly at risk. Modifying the home environment is one of the six falls prevention best practices identified for those living in the community. The Saskatchewan Aids to Independent Living program could be expanded to help alleviate older adult falls. In addition, when patients are discharged from hospital following an injury that occurred in the home, a home assessment would be an important consideration to ensure re-injury does not occur and to avoid hospital re-admission.

   **B)** Address community environments to decrease risk of injuries due to falls.

   **Rationale:** A large proportion of injuries due to falls are known to occur in community settings, including sidewalks and roads. Attention to features of the built environment in city planning and design can help to decrease these risks to pedestrians, especially for older adults. For example, sidewalk construction and clearing of snow and ice have a role in injury prevention, particularly in areas with high pedestrian volumes. Municipalities need to pay particular attention to pedestrian

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C) Balance the need for safety in playgrounds and indoor play parks with recognition that kids need to be active.

**Rationale:** Playgrounds are the most common site for falls leading to hospitalization among 1 to 9 year olds. Standards exist for playground structures that help reduce the incidence of injuries by taking into account the height of the structures, as well as playground surfaces. Attention to these standards in construction and maintenance helps reduce playground injuries.

We also recognize that allowing children to play in more natural outdoor environments helps increase physical activity. Playing in these settings allows children to learn about personal risk assessment and management, which is beneficial for healthy child development. When planning environments and programming for children’s play, communities should balance the benefits of challenging activities with known measures to prevent injury.

3. **Strengthen Road and Pedestrian Safety through Comprehensive Interventions**

A) Municipalities, including the City of Saskatoon, should adopt a “Vision Zero” goal for deaths and serious injuries among drivers, cyclists and pedestrians.

**Rationale:** Road injuries are preventable, and as a society we can choose to take action to reduce the burden of illness and costs related to serious injuries and deaths caused by motor vehicle collisions. Numerous cities in North America and worldwide, including Edmonton as the first in Canada, have adopted a “Vision Zero” approach to these injuries, endorsing in policy and action that there is no acceptable level of death and injury on their roads. In our region, the involvement of partners such as SGI, Saskatoon Health Region and others would support the success of such a strategy.

B) Encourage safer driver behaviour through a variety of measures addressing speed, impaired driving and distracted driving.

**Rationale:** Speed is a major cause of injury and death on our roads. With more speed comes more harm. Most studies point to a relationship of every 1% increase in speed being associated with a 4% increase in risk of death. Pedestrians struck by a car at 30 km/h have a 90% chance of survival compared to less than a 50% chance of survival if struck at 45 km/h. Excessive speeding contributes to 30% of all fatality risk. Ways to reduce vehicular speed include speed limit

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21 Parachute Canada. Vision zero [Internet]. Available from: http://parachutecanada.org/visionzero

22 City of Edmonton. Vision zero [Internet]; Available from: http://www.edmonton.ca/t/transportation/traffic_safety/vision-zero.aspx


reductions in both residential and school zone areas and traffic calming measures such as roundabouts, speed bumps and bicycle lanes. The City of Saskatoon Growth Plan to Half a Million (2016), Active Transportation Plan (2016), and Traffic Safety Action Plan (2014), all highlight the need to ensure safety of the most vulnerable road users.

Impaired driving is a factor in about 20% of all road fatalities (i.e. drivers had excess alcohol in their blood, above the legal limit). Saskatchewan has the highest rate of impairment-related traffic fatalities in Canada. Legislative changes to lower the blood alcohol limit for federal Criminal Code impaired driving offenses from .08 to .05 mg/ml would act as an enhanced deterrent and ensure consistency between criminal and administrative penalties. Furthermore, allowing police to conduct random breath tests would enable enforcement officers to screen drivers in areas where impaired driving may be more common. Random breath testing has been shown to reduce fatal and serious crashes by up to 48%. Finally, in the context of changes to regulations on use of marijuana, as well as the ubiquity of handheld devices and related risk of collisions, policies and enforcement procedures must adapt to the risk of impairment due to other substances (such as marijuana) and distracted driving.

Alcohol retail policies also play an important role in preventing impaired driving. Price policies are effective for reducing heavy consumption of alcohol at the population level, and minimum prices should be maintained and adjusted for inflation through taxation or other mechanisms. Raising the price of alcohol through taxation significantly reduces heavy alcohol use among people at all income levels and decreases motor vehicle collision rates. (In Saskatchewan, minimum pricing standards are in place at provincially owned and operated SLGA retail establishments. Off-sale and private liquor retailers use an open pricing system and can currently adjust their prices as they choose.) As well, regulation of the number of alcohol retail outlets in a given area, and the hours of availability can support low-risk drinking.

C) Encourage the use of bicycle helmets within Saskatoon Health Region.

Rationale: Bicycle helmets are designed to protect the brain in collisions. Studies have shown that bicycle helmets reduce head injuries and should therefore be worn by riders of all ages. To help offset the cost of bicycle helmets, programs for low income families should be considered. While helmet use can reduce the severity of bicycling-related injuries due to a collision or fall, changes in the built environment infrastructure for safe cycling are needed (as described in other recommendations in this report) to reduce the rate of bicycle-related collisions.

28 Macpherson A, Spinks A. Bicycle helmet legislation for the uptake of helmet use and prevention of head injuries [Internet]. Cochrane Database of Systematic Reviews. 2008; Issue 3.

Canada’s low risk drinking guidelines state no more than 10 drinks a week for women with no more than two drinks a day most days. For men it is no more than 15 drinks a week with no more than three drinks a day most days. Low risk drinking guidelines
D) Support people who are unable to drive by providing transportation options.

**Rationale:** Adults, especially those 80 years and older, have higher motor vehicle injury rates. Without accessible and effective transportation options, older adults and others with reduced mobility can suffer from social isolation and less ability to meet their day-to-day needs. Use of safe, active transportation, public transit services and private carriers (e.g. Saskatoon Co-op, Bus Buddy, for hire drivers) should be facilitated in order to decrease reliance on personal vehicular transportation for at-risk drivers. Elements of the City of Saskatoon Growth Plan to Half a Million and Active Transportation Plan that promote safe transportation for older adults should be supported with appropriate funding.

E) Enact minimum age restrictions governing ATV usage.

**Rationale:** Injury hospitalizations related to ATV usage are on the rise in Saskatoon Health Region and is especially common among those ages 10 to 19. There is currently no provincial legislation that restricts ATV usage for those under 16 years old. This recommendation is supported by the Canadian Pediatric Association.

4. **Continue to Strengthen Safety in Sports**

Improved protocols around potentially traumatic head injuries are needed for all sports.

**Rationale:** Sports-related injuries are most prominent in the early adolescence (ages 15 to 19) and are a burden on the health care system. Each year in the Region, over 2,400 emergency department visits result from sport and recreation activities. Head and neck injuries make up almost one quarter of all hospitalizations and major head injuries are a growing concern. Clear concussion protocols are needed for those sports that do not currently have them in place.

5. **Improve Fire and Burn Safety within the Region**

Safety equipment in the home can make a big difference in fire and burn injury rates.

**Rationale:** Most fire and burn injuries happen to members of vulnerable populations in our Region (those less than five years old and those living in the least advantaged areas). Smoke alarms have been shown to be effective in reducing fire injury rates. It is incumbent upon all homeowners and landlords of rental properties to ensure their properties have smoke alarms in working order and placed according to local and national fire codes. In addition, keeping a hot water heater temperature of 49 Celsius (120 Fahrenheit) can reduce burn injuries.

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30 Saskatoon Council on Aging, Bus Buddy Program [Internet]. 2016 [cited 2016 Apr 6]; Available from: [http://scoa.ca/busbuddy_project.html](http://scoa.ca/busbuddy_project.html)


6. **Enhance Awareness Around Drowning Incidents**

   Increased knowledge of water safety measures can make a difference.

   **Rationale:** The most common location for drownings in those under five years old is a swimming pool. For people with private swimming pools, adherence to local safety bylaws and parental supervision are crucial.\(^ {34, 35} \) For safety aboard boats and other small vessels, life jackets and personal flotation devices need to be worn in order to prevent drownings. Alcohol consumption while boating plays a major role in injuries: alcohol has been found as a factor in 40% of recreational boating fatalities.\(^ {36} \) Transport Canada has reported that a majority of Canadian boaters have consumed alcohol while boating. Avoidance of alcohol consumption while boating is an important factor in preventing drownings and other injuries.

7. **Work with Health Care Practitioners to Help Reduce Unintentional Poisonings**

   Health care providers should follow evidence-informed guidelines around opioid painkiller prescribing.

   **Rationale:** Recommendations around the prescribing of opioid painkillers for chronic pain exist.\(^ {37, 38} \) Overdoses of opioid painkillers have been on the increase in recent years and health care providers need to ensure they are following appropriate prescribing guidelines.

8. **Need for an Overarching Injury Agency for the Province with Supports at the Regional Level**

   A provincial injury prevention plan is needed.

   **Rationale:** While there are provincial agencies that have an injury mandate (e.g. Safe Saskatchewan, Saskatchewan Prevention Institute, and Saskatchewan Safety Council,) none has the resources to perform both a coordination role and provide needed injury surveillance information. With no provincial agency in place it is difficult to enact a provincial injury plan. A coordinated plan would lay out the interventions, at policy, organizational and individual levels, that would be needed to make meaningful reductions in injury rates. The Health Region should strengthen its commitment to injury prevention. The Region should be commended for its participation in Mission Zero\(^ {39} \) and being a signatory to the provincial Health and Safety Leadership Charter.\(^ {40} \) However, as is shown in this report, more work is needed to reduce injuries in the

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\(^ {34} \) City of Saskatoon. The private swimming pools bylaw [Internet], 2000 [cited 2016 Apr 6]; Available from: https://www.saskatoon.ca/sites/default/files/documents/city-clerk/bylaws/7981.pdf

\(^ {35} \) Parachute. Backyard pool safety [Internet]. Available from: http://www.parachute canada.org/injury-topics/item/backyard-pool


\(^ {37} \) Centers for Disease Control. CDC guideline for prescribing opioids for chronic pain [Internet]. 2016 [cited 2016 Apr 6]; Available from: http://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm


\(^ {40} \) Workplace Saskatchewan. Mission zero: the charter [Internet]. 2008 [cited 2016 Apr 6]; Available from: http://safesask.com/the-charter/
community. At the Regional level, aside from falls prevention, few dedicated resources are assigned to injury prevention. This needs to change given the burden of injury.

9. Improve the Collection and Use of Injury Data

The opportunity to be a part of the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) has never been better.

**Rationale:** CHIRPP collects data on adult and children’s injuries from 17 hospitals across Canada. To date, no hospitals in Saskatchewan participate in CHIRPP. CHIRPP data has been used by injury prevention workers, as well as in numerous reports and over 100 peer reviewed publications. Given some of the data gaps in causes of injury and location of the actual incident, Saskatoon Health Region, Emergency Department should be commended for obtaining pilot funding for participation in CHIRPP starting in 2016.

Learn More about the Better Health for All Series

We invite you to consider the information that we have presented in this message and through CommunityView. It is our hope that you will use the Better Health for All series to inform the decisions you make towards advancing the vision of a community in which everyone has the opportunity to live healthy lives. Available reports include:

- **Series 1, March 26, 2014**
  Our Population – A high level look at who lives in our Region.

- **Series 2, May 21, 2014**
  Immunization – Examines a selected set of immunization indicators to report on progress and gaps in coverage rates. Proposes further action to ensure equal opportunities for access to immunization.

- **Series 3, June 23, 2014**
  Advancing Health Equity in Health Care – Examines a range of health inequalities and proposes health care system action to create equal opportunities for all to achieve better health.

- **Series 4, July 28, 2014**
  Bloodborne and Sexually Transmitted Infections – Focuses on communicable disease such as human immunodeficiency virus (HIV), and sexually transmitted infections (STIs).

- **Series 5, Sept 19, 2014**
  HIV – Focuses on HIV in particular and the role of the health sector in reducing its occurrence.

- **Series 6, March 25, 2015**
  Health Behaviours and Risk Conditions – Focuses on the foods we eat, physical activity levels, tobacco and alcohol use, stress and mental health and the role of the health sector in creating environments that aim to support everyone in achieving their full health potential.

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