



Parachute

PREVENTING INJURIES. SAVING LIVES.

Community Motor Vehicle Collision Priority Setting Toolkit

Part One

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Introduction

This toolkit has been developed by Parachute to facilitate priority setting for communities interested in tackling issues related to road safety and motor vehicle collisions (MVCs) in their region. This approach uses evidence informed practices as a guide, as well as available data related to the topic. This toolkit has been developed for use in Alberta, under the Devon-funded MVC initiative.

How to use this resource

This toolkit has been designed as an educational tool that covers information required to understand and articulate injury prevention issues in the community. Note that this is step one of the process. After a group identifies a priority issue, the next step involves the mobilization of community resources to implement a useful intervention.

For questions related to this toolkit or any of the details mentioned, please contact Parachute. We are committed to helping Canadians live long lives to the fullest.

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The Issue of Injury

General information

Injuries are the leading cause of death for Canadians between the ages of 1 to 44, while for Canadians aged 45 - 64, injuries are the third leading cause of death.¹ Moreover, injuries are among the top causes of hospitalizations for Canadians of all ages.

On average, over 10,000 Canadians are killed and another 200,000 are hospitalized for serious injuries every year in Canada.² In fact, every new day, 35 more Canadians will die because of an injury. Many of those who survive are left with disabilities, both physical and emotional. Within the next two hours, at least one more Canadian becomes a quadriplegic for life. Every nine minutes, another child's or senior's injury leads to a permanent, life-altering disability. The cost of injury and all the damage that attaches to it is astronomical. With a \$20 billion price tag, injury is a huge issue for all Canadians in societal and health care terms.³ The numbers around the cost of injury to our society on a personal and economic level are clear, yet the neglected epidemic of injury, redefined as a preventable disease, is still not well understood.

The three leading causes of unintentional injury-related deaths for Canadians are motor vehicle collisions, falls and poisonings.⁴ The three leading causes of unintentional injury-related hospitalizations for Canadians are falls, motor vehicle collisions and being struck by or against objects.⁵

Motor Vehicle Collisions

Motor vehicle collisions (MVCs) are a serious issue for Canadian citizens, recognized as a leading cause of unintentional injury. The issue is compounded by the complexity of risk factors drivers face, as well as passengers and other road users.

¹ Public Health Agency of Canada. (2013). *Table: Leading Causes of Death, Canada, 2008, males and females combined, counts (age-specific death rate per 100,000)*. Ottawa, ON.

² Public Health Agency of Canada. (2013). *Table: Leading Causes of Hospitalizations, Canada, 2008, males and females combined, counts (age-specific hospitalization rate per 100,000)*. Ottawa, ON.

³ SMARTRISK. *Economic Burden of Injury*. Toronto: 2009.

⁴ Public Health Agency of Canada. (2013). *Table: Leading Causes of Injury Death, Canada, 2008, counts (age-specific death rate per 100,000)*. Ottawa, ON.

⁵ Public Health Agency of Canada. (2013). *Table: Leading Causes of Injury Hospitalizations, Canada, 2008, counts (age-specific hospitalization rate per 100,000)*. Ottawa, ON.

Generally, the risk factors that relate to MVCs can be organized into three categories:

- Distracted, which includes distractions internal and external to the car
- Impaired, which can be due to alcohol, substances (both prescribed or not), fatigue
- Emotional, which can include both positive and negative emotions which can ultimately distract one from the task at hand

There are a number of other factors that contribute to MVCs, including driver experience, environmental conditions, engineering standards and legislation around the driving experience.

Given the complexities of MVCs and determinants related to them, it is crucial to have a comprehensive approach to identify an issue and develop an intervention to target it.

Note:

To access further information about injury and data referenced in this section, please visit the Parachute website (www.parachutecanada.org) and select “Injury Topics” and “About Injuries.”

Injury Prevention Action Plans

In order to initiate action, communities need to address important questions as a way of delivering effective action. The Public Health Approach is a widely used tool that establishes a critical path for health promotion activities, and is useful in organizing the development of action. The steps of the Public Health Approach are:

1. Defining the Problem
2. Identifying Risk Factors
3. Selecting an Intervention
4. Implementing the Program
5. Evaluating the Program

For this project, the focus has already been defined at a macro level– motor vehicle collisions in certain Alberta communities. However, there are a number of components to that focus that relate to the types of collisions that occur, and corresponding injuries or fatalities. Therefore, isolating a problem to focus on is one of the most important steps.

Defining the Problem

National Trends

Transport Canada's recent report, developed from the National Collision Database with the Canadian Council of Motor Transport Administrators, identifies that there are downward trends in injuries and fatalities on the road.⁶ However, youth are still injured and killed at disproportionately high rates, relative to the number of licensed youth drivers.⁷

Urban centers have a greater number of injuries, while rural incidents result in a higher number of fatal collisions on the road.⁸

Provincial Trends

Alberta Transportation's Office of Traffic Safety publishes a comprehensive report that covers traffic collision statistics for the province. Some of the trends that have been established in this report include:⁹

- Collisions were most frequently recorded in the months of June and September, with Friday recognized as the day of week with the greatest proportion of collisions.
- The time period between 3 p.m. and 6:59 p.m. had the accounted for the highest proportion of collisions.
- The Canada Day Long Weekend was the holiday with the highest number of fatalities, while the Christmas season had the greatest number of injuries on the road. The Christmas season also saw the greatest number of collisions on Alberta's roadways.
- Youth (identified as ages 15-24) had the highest casualty rates per 10,000 population, while children (under 14) had the lowest casualty rates.
- Traffic victims were predominantly drivers (62%) and vehicle passengers (23.5%), while motorcyclists (3.5%) and pedestrians (6.5%) made up smaller percentages.

⁶ Transport Canada. (2013). Canadian Motor Vehicle Traffic Collision Statistics 2011. Ottawa, ON.

⁷ Ibid

⁸ Ibid

⁹ Alberta Transportation (2013). Alberta Traffic Collision Statistics 2012. Accessed online at <http://www.transportation.alberta.ca/Content/docType47/Production/AR2012.pdf>.

- Young men, aged 18 to 19 years old, were most likely to be involved in a casualty collision, compared to any other group. This was followed by young men aged 16-17 years old.
- Driver behaviour that contributed to the most frequent casualty collisions was identified as following too closely, running off the road and left turns across path.
- Most collisions occurred on dry roads (which is defined as an absence of environmental conditions such as slush, snow or ice).
- Alcohol consumption potentially resulted in a greater proportion of fatal collisions compared to crashes that resulted in injury, with young men (aged 18 to 21) were most likely to be the ones behind the wheel, inebriated, prior to a crash.
- Victims in crashes who were not using restraint devices were more likely to have a higher injury rate than those who used restraints. Restraint use decreased the likelihood and severity of injuries sustained.

Regional Reality

Within every community, there are local contexts and determinants that help to complete the picture of MVC issues. Working with local groups can help to identify attributes unique to communities that support national and provincial trends, or to prioritize other areas for which an intervention is crucial and time-sensitive.

In order to gain an appreciation for the community and its current road safety state of affairs, a community lead must identify a relevant cross section of individuals who can shed light, through their expertise, on the issue. These individuals can include:

- Emergency services workers (fire, ambulance)
- Medical professionals (emergency room doctors, nurses)
- Enforcement officers (police)
- School administrators or teachers (principals, superintendents, teachers, counsellors)
- Industry professionals (driving instructors, municipal or locally orientated provincial transportation officers, insurance companies)
- Local businesses
- Parents
- Youth

Using the regional and provincial trends as a starting point, draw up a list of questions that will help you to understand MVCs and what is happening in your community related to this issue. Sample questions could include:

- Who is getting injured due to MVCs?
- How are they getting hurt?
- What are their injuries, how were the fatalities caused?
- Where and when do these incidents occur most often?
- What are the most prevalent MVC issues in our community (remember, this includes issues that involve drivers, passengers, pedestrians and other road users)?
- Are there behaviours you have seen that could lead to injury?
- Are there specific areas in the community that lend themselves to potential injuries, such as back roads, un-patrolled areas?
- Are there specific groups that concern you with respect to MVC risks?
- What improvements would you like to see in the community to make the roads safer?

These questions can be posed in a face-to-face meeting, or through email. It is important to reach beyond personal networks and connect with people who will have true insight into the issue. It is also key to have a diverse population answer your questions. For example, asking questions only to emergency service workers may not give you answers about dangerous driving behaviours that do not result in injury, but have potential to. Parents may have different concerns and priorities than their children.

Additionally, when you are working with different groups, it is also important to remember that they may want to be involved with the project and could lend valuable insight to the design and implementation of an intervention. Perhaps they are already working in this arena as well. It is important to cover this in your conversations as well. Sample questions could include:

- Are you currently working on any projects to address issues of road safety and MVCs in our community?
- Do you know of any projects currently operating that are focusing on these issues?
- Is there anyone in your network who you think I should talk to for a better understanding or different opinions on the issues?
- Are you interested in receiving more information about the initiatives that we will be focusing on, as well as helping in the future?

Working with Information

The data collected through these informal interviews is important to understand the local picture of MVC issues and associated risk factors. It is important to capture it in a single place, such as a spreadsheet, so that everyone's answers can be recorded. This is where asking consistent questions to all individuals will be important. Ensure that you

record the individual's name, position and contact information associated with the answers, allowing you to follow up for clarity, if necessary.

Once you have all the information collected, start to review it and identify where trends are apparent. If the information is without a focus, consider expanding your interviews to include more individuals. It is important to be understand a problem and its associated risk factors in order to develop an appropriate intervention. Additionally, it is important to have an idea of the top concerns around MVCs. Other constraints, such as time, feasibility and availability of evidence based solutions may dictate which issue to focus on from the list of top concerns.

Injury Prevention Initiatives

Injury prevention initiatives focus on taking action to remedy or reduce the severity of an injury issue and its related risk factors. Prevention strategies can be varied, ranging from passive interventions (such as a poster display) to multifaceted campaigns (roadside blitzes combined with public service announcements and educational opportunities). Action can vary, but can include:

- Community task forces
- Legislation review
- Advocacy campaigns
- Town hall meetings
- Presentations

Injury prevention can often focus on at least one of three areas for interventions. These are education, enforcement and engineering. Thoughtful consideration of a problem and related determinants will guide groups towards the appropriate area for intervention, as it relates to a solution, most often behaviour change.

These intervention components will be covered in part two of the toolkit, but it is important to consider these elements to ensure there is enough information to satisfy the Public Health Approach and to develop a comprehensive solution.