

January 24, 2020

Chief Administrative Officers
City of Peterborough
County of Peterborough
Lower-Tier Municipalities
Sent via e-mail

Dear Chief Administrative Officer:

Re: Off Road Vehicles

Peterborough Public Health (PPH) is mandated by the Ontario Public Health Standards and the Health Promotion and Protection Act to deliver public health programs and services that promote and protect the health of Peterborough City and County residents.¹ One of our stated goals is to reduce the burden of preventable injuries, where road safety is an important factor. Given the Provincial government's recent passing of Bill 107, which includes provisions to change legislation to permit Off-Road Vehicles (ORVs) on municipal roads, we know many local municipal Councils will be considering new by-laws or changing current by-laws. As a result, we wanted to provide you with a summary of recent evidence and local ORV-related death and injury statistics for your consideration. For the purpose of this letter, the term ORV is inclusive of all-terrain vehicles (ATVs), side-by-side ATVs, utility-terrain vehicles, and off-road motorcycles (i.e. dirt bikes), and does not include snowmobiles.

The popularity of ORVs has greatly increased over the last 30 years and with increased use, ORV-related injuries and deaths have also risen.^{2,3} In 2010 there were 435 ORV users seriously injured and 103 ORV-related fatalities in Canada. This compares to 149 seriously injured users in 1995, and 45 fatalities in 1990.² These statistics are based on police reported data and medical examiner files.

Hospital records are another source of data where Emergency Department (ED) visits, more serious hospitalizations, and deaths are identified to be caused by an ORV injury. In 2015 to 2016 in Ontario, there were over 11,000 ORV-related ED visits and over 1,000 ORV-related hospitalizations.⁴ There have been between 29 and 52 fatalities each year relating to ORV or snowmobile use from 2005 to 2012.⁴ Children and youth aged 0-15 made up approximately 20% of ED visits,⁴ and 17% of the hospitalizations and deaths related to ORV use.^{2,4} However, the most affected demographic group has been males aged 16-25.^{2,4} Rollovers, falling off the vehicle, and ejection are the most commonly cited mechanisms for ORV injury.⁴ The most common cause of death is due to head and neck injuries.⁴

Locally, statistics show that from 2003 to 2018 there were 1,862 ED visits among Peterborough (City and County) residents resulting from an ORV injury, which is an average of 116 visits per year. During this same time period, there were 172 hospitalizations as a result of ORV injuries, which is an average

of 11 per year. When assessing death statistics, from 2001 to 2015 there were 20 deaths as a result of an ORV incident among Peterborough residents. It is concerning that there seems to be an increasing trend of ORV-related fatalities. From 2011 to 2015 there were 9 deaths, which is elevated from the previous five-year periods: 6 deaths during 2006 to 2010, and 5 deaths during 2001 to 2005. Across ED visits, hospitalizations and deaths, males make up a large proportion of these incidents, and those aged ten to 29 are highly represented in the statistics. See the Appendix for more information and data sources.

ORV-related incidents are classified according to whether they occur on roadways (“traffic”)* or off-roadways (“non-traffic”). Research indicates that there are higher rates of fatalities and serious injuries for ORV riders on roadways compared to off-roadways.^{5,6,7} Being on roadways increases the risk of collisions with other motor vehicles.^{5,8,9} Also, certain design characteristics of these vehicles, particularly ATVs, make them unsafe on roadways.^{5,10} In Peterborough, ORV incidents on roadways contributed to only 7.7% of ORV-related ED visits, but 14.0% of ORV hospitalizations and 40.0% of ORV-related deaths. These local statistics demonstrate that ORV injuries as a result of traffic incidents have a much higher fatality rate when compared to non-traffic incidents. Some of the associated risk factors related to ORVs used in Ontario include alcohol and drug use, riding at night, lack of helmet use, and excessive speed.^{4,11} It has been found that the majority of ORV-related ED visits occur on the weekend (Friday to Sunday), and almost all are related to recreational use of ORVs.⁴

With these factors in mind, in consideration of developing or revising an ORV by-law, we recommend the following:

- Specify the roads that will permit or prohibit ORV use
 - Assess the safety conditions for ORVs to travel along all municipal roads. Consideration of traffic volume and road shoulder characteristics may lead to decisions to prohibit ORV use on certain municipal roads.
- Specify speed limits
 - As per O. Reg. 316/03 (2018), set maximum speed limits of 20 kilometres per hour, if the roads speed limit is not greater than 50 kilometres per hour, and 50 kilometres per hour, if the roads speed limit is greater than 50 kilometres per hour.
- Specify restrictions to time of use
 - Prohibit night-time riding. Language that references “dusk to dawn” may address seasonality of night-time. Restricting access to roads during certain months of the year may also be considered.
- Emphasize provincial regulations relating to minimum age and safety requirements, such as requirement to wear an approved helmet.

Finally, we encourage your municipality to determine ways that they can educate users about ORV road-use laws and the risks of riding on the roads.

In summary, ORV-related accidents continue to be a significant cause of injury, with on roadway accidents resulting in higher proportions of severe injury (hospitalization) and fatalities than off roadway accidents. We appreciate your consideration of the health implications of ORVs as you consider developing or revising your current by-law. Please feel free to use the local statistics we have provided you, which are summarized in the Appendix for ease of reference.

If you have any questions or would like additional information about our comments, please contact Deanna Leahy, Health Promoter, at 705-743-1000 ext. 354, dleahy@peterboroughpublichealth.ca.

Sincerely,



Rosana Salvaterra, MD, MSc, CCFP, FRCPC
Medical Officer of Health

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References

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Appendix: Off-Road Vehicle (ORV) Injuries in Peterborough City and County

Emergency Department Visits resulting from an ORV Injury

Data source: Ambulatory Emergency External Cause (Chapter 20), MOHLTC, IntelliHEALTH ONTARIO, extracted Wednesday August 14, 2019.

Between 2003 and 2018 (16 years), there were:

- 1,862 Emergency Department (ED) visits among Peterborough residents resulting from an ORV injury, which is an average of 116 visits per year;
- Males accounted for 78.1% of these ED visits;
- 144 (7.7%) of these visits were a result of a traffic accident;*
- The majority of visits occurred among those aged ten through 29 (53.8%). For traffic accidents specifically, this age group makes up a similar proportion (49.3%) of visits.

Hospitalizations as a result of ORV injury

Data source: Ambulatory Emergency External Cause (Chapter 20), MOHLTC, IntelliHEALTH ONTARIO, extracted Wednesday August 14, 2019.

Between 2003 and 2018 (16 years), there were:

- 172 hospitalizations among Peterborough residents as a result of ORV injuries which is an average of 11 per year;
- Males accounted for 87.2% of these hospitalizations;
- 24 (14.0%) of these hospitalizations were a result of a traffic accident;
- 36.7% hospitalizations occurred among those aged ten through 29. There were smaller but noticeable peaks in admissions of patients aged between 40 and 45 and between 53 and 56 as well, contributing to another 25% of hospitalizations collectively.

Deaths as a result of ORV injury

Data source: Ambulatory Emergency External Cause (Chapter 20), MOHLTC, IntelliHEALTH ONTARIO, extracted Wednesday August 14, 2019.

Between 2001 and 2015 (15 years) there were:

- 20 deaths as a result of an ORV among Peterborough residents;
 - 9 from 2011 to 2015, rate: 6.6 deaths per 100,000 over 5 years, averaging 1.32 per 100,000 each year.
 - 6 from 2006 to 2010, rate: 4.5 deaths per 100,000 over 5 years, averaging 0.90 per 100,000 each year.
 - 5 from 2001 to 2005, rate: 3.9 deaths per 100,000 over 5 years, averaging 0.77 per 100,000 each year.
- Males accounted for the large majority (over 80%) of deaths;
- Deaths occurred among persons aged 14 through 71 (median: 40, mean: 37); and eight deaths (40.0%) were a result of a traffic accident.

Definition

**Traffic accident (incident)* - is any vehicle accident occurring on the public highway (i.e. originating on, terminating on, or involving a vehicle partially on the highway).

Retrieved from: <http://apps.who.int/classifications/icd10/browse/2016/en#/V80-V89>

ICD-10 Codes included: V86, excluding snowmobiles.