

Young Driver Injuries in Ontario

Understanding the Issue

Young drivers account for almost 20% of ED visits for driver injuries in Ontario.

Yet, this age group (16-24 years old) makes up just 14% of Ontario's population who are of legal driving age. In 2015, there were over 7,000 emergency department (ED) visits for injuries to young drivers in Ontario. This figure averages to 20 young people seen in emergency each day.

This Ontario Injury Compass presents emergency visit data for motor vehicle collisions where the injured person was the driver of the vehicle and between the ages of 16 and 24. It also highlights prevention strategies targeting young and inexperienced drivers.

5-year Trend

Looking at counts and rates for ED visits over 5 years, the trend in young driver injuries has remained fairly stable, with a slight increase in 2015 (Figure 1). The number of annual ED visits within this time period ranges from 6,558 in 2011 to 7,105 in 2015. The lowest ED visit rate is seen in 2014 (397.1 per 100,000) and the highest in 2015 (428.4 per 100,000).

Risk Factors

Age

Considering all Ontarians of legal driving age, those under the age of 25 have a higher rate of visiting an ED with a driving-related injury. In 2015, the ED visit rate for 16-24 year olds was 428.4 per 100,000, compared to 305.3 per 100,000 for those aged 25 and up.

Within the 16-24 age group, the highest counts and rates in 2015 occurred among 22 year olds, followed by 20 year olds (Figure 2).

Sex

Among 16-24 year olds, males accounted for 52% of ED visits for driver injuries in 2015. The ED visit rate for males was 436.5 per 100,000 versus 419.9 per 100,000 for females.

Among 16 year olds there was a more marked difference between males and females. Males accounted for 61% of ED visits, with a rate of 166.0 per 100,000, while females made up 39% of visits and had a rate of 112.8 per 100,000.

Vehicle Type

82% of young driver injuries resulting in ED visits in 2015 were sustained while driving a car. 11% involved motorcycles and 5% involved a pickup truck or van (Figure 3).



Seatbelt Use

82% (5,162) of injured young drivers were wearing seatbelts, while 3% (205) were not (Figure 4). In 15% (912) of the cases, the driver's seatbelt use was unknown or was not specified in the record. Note that these numbers don't include drivers of vehicle types that don't have seatbelts, such as motorcycles and three-wheeled motor vehicles.

FIGURE 1. ED visits for driver injuries, counts and rates, ages 16-24, NACRS, Ontario, 2011 - 2015

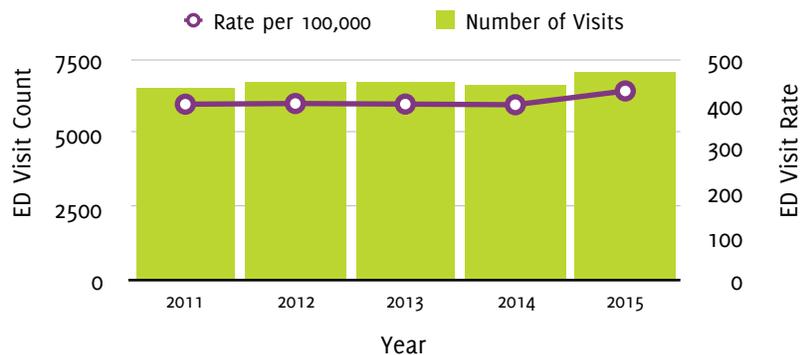
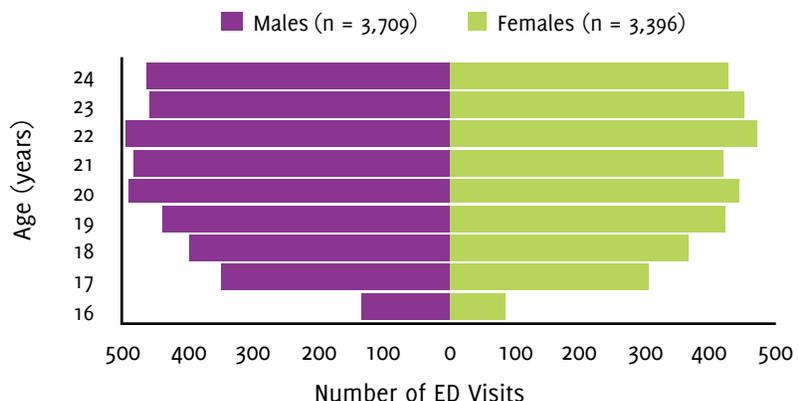


FIGURE 2. ED visits for driver injuries, by age and sex, ages 16-24, NACRS, Ontario, 2015



Prevention Strategies

A comprehensive road safety approach addresses multiple risk factors and includes education, engineering and enforcement. While there are a number of interventions to consider for the reduction of motor vehicle collisions, the strategies described below are a selection of those focused specifically on young and inexperienced drivers.

Graduated Driver Licensing

Evaluations of Graduated Driver Licensing (GDL) systems show these programs can reduce road crashes by up to 30%.¹ Elements of the GDL system, specifically the rules and regulations placed on young and inexperienced drivers, can be included in education and awareness-raising efforts by practitioners and parents/adult leaders.² Examples include zero tolerance for alcohol and other drugs, limiting the number of passengers, and supervision with an experienced driver in the front seat.

Road Safety Campaigns

Evidence shows that, in general, road safety campaigns have measurable effects on:

- reducing road incidents;
- reducing speeding;
- increasing seatbelt use;
- increasing yielding behaviour; and,
- increasing risk comprehension.^{3,4}

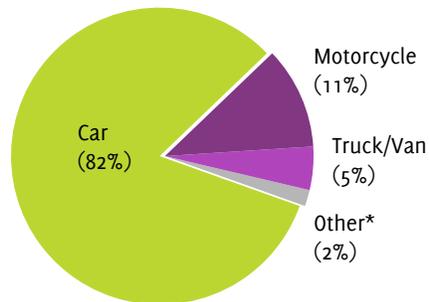
Effective campaigns have included some of these features in their content and delivery:

- Duration is short (<1 month)
- Message combines emotional and rational elements
- Personal communication
- Delivery is at the roadside, includes roadside media, or is close in time and space to the targeted behaviour
- Campaign is complemented by enforcement
- Campaign is combined with mass media^{4,5}

Engaging Parents and Adult Leaders

Parents and other adults have an important role in young driver training

FIGURE 3. ED visits for driver injuries, by vehicle type, ages 16-24, NACRS, Ontario, 2015



*Other includes heavy transport vehicles, special use vehicles (e.g. construction, agricultural), and three-wheeled motor vehicles.

and in controlling a young person's access to a vehicle and time spent in the driver's seat.² These adults and their role should be included in initiatives targeting young driver behaviour.

Results from a TIRF survey of teen drivers in Ontario showed most had talked with their parents about impaired driving, distracted driving, traffic safety, and the rules of the road. The survey report suggests parental communication as a method of getting important information to young drivers, and that providing resources to parents may have an impact on young driver safety.⁶

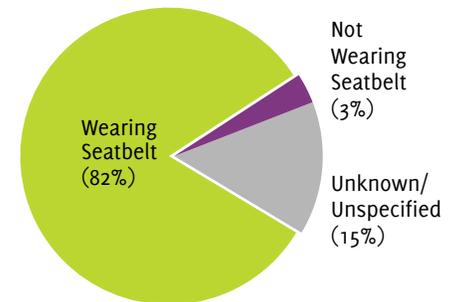
National Teen Driver Safety Week

Parachute's National Teen Driver Safety Week (NTDSW) is designed to raise public awareness of teen driver safety issues and encourages community and youth involvement as part of the solution. NTDSW runs each year during the third full week in October.

Learn more and access resources at parachute.ca.

Suggested citation: Cowle, S. (2016). Young Driver Injuries in Ontario. *Ontario Injury Compass*, Issue 13, September 2016. Toronto: Parachute.

FIGURE 4. ED visits for driver injuries, by seatbelt use, ages 16-24, NACRS, Ontario, 2015*



*Excludes cases where the vehicle type does not have a seatbelt (i.e. motorcycles and three-wheeled motor vehicles).

Methodology

ED visit data were obtained from the National Ambulatory Care Reporting System (NACRS) at CIHI. Data are from calendar year 2015 (January 1, 2015 - December 31, 2015). These data, as well as population estimates for calculating rates, were accessed using IntelliHEALTH ONTARIO through the Ministry of Health and Long-Term Care. ICD-10 coding was used to isolate motor vehicle collisions where the injured person was identified as the driver of the vehicle.

References

1. Transport Canada. (2011). *Road Safety in Canada*. Ottawa: Government of Canada.
2. Ontario Injury Prevention Resource Centre. (2014). *Evidence-Informed Practice Recommendations*. Toronto: Parachute.
3. Phillips, R.O., Ulleberg, P., & Vaa, T. (2009). Do road safety campaigns work? A meta-analysis of road safety campaign effects. In S. Forward & A. Kazemi (Eds.), *A Theoretical Approach to Assess Road Safety Campaigns* (pp. 25-45). Brussels: Belgian Road Safety Institute.
4. Robertson, R.D., & Pashley, C.R. (2015). *Road Safety Campaigns: What the Research Tells Us*. In *Community-Based Toolkit for Road Safety Campaigns*. Ottawa: TIRF.
5. Phillips, R.O., Ulleberg, P., & Vaa, T. (2011). Meta-analysis of the effect of road safety campaigns on accidents. *Accident Analysis and Prevention*, 43, 1204-1218.
6. Vanlaar, W., Pashley, C., Mayhew, D., Robertson, R., & Mainegra Hing, M. (2014). *Understanding Young Drivers in Ontario: Final Report*. Ottawa: TIRF.