



## DISTRACTION-RELATED FATAL COLLISIONS, 2000-2015

*Traffic Injury Research Foundation, September 2018*

### Introduction

Distracted driving has increasingly become a top road safety priority in Canada in recent years. This is perhaps not surprising as some Canadian jurisdictions have reported that distracted driving fatalities have surpassed impaired driving fatalities, although some of this growth may be due to improvements in data collection (Robertson et al. 2017).

This fact sheet, sponsored by Desjardins Insurance, examines the magnitude and trends in the role of driver distraction in motor vehicle fatalities in Canada from 2000 to 2015. Data from TIRF's National Fatality Database were used to prepare this fact sheet which explores trends in the role of driver distraction among fatally injured victims, and the characteristics of fatally injured distracted drivers.<sup>1</sup> Other topics that are examined include collision characteristics of crashes resulting in distraction-related fatalities such as time of day, day of week, season, and the number of vehicle occupants.

Distraction-related fatalities are those in which at least one of the drivers, whether they survived the collision or not, are considered to be distracted on the basis of police-reported collision data or coroner/medical examiner narrative information. Fatally injured distracted drivers are those who die in a collision and were considered to have been distracted just prior to, or during the collision. It

should be noted that in this fact sheet, the role of distraction refers to its presence and does not suggest that distraction was the primary or sole cause of the collision.

Although distracted driving is often associated with phoning or texting, there are other behaviours or events that can distract persons from the driving task. These include being engaged with entertainment or communication devices, engaging with passengers in the vehicle, or eating, smoking or personal grooming while driving. It should also be noted that in some collision report forms, investigating officers may code the driver condition as 'distracted, inattentive,' meaning there was a general lack of attention exhibited by the driver but there was no specific source of distraction identified.

### Trends in the role of distracted driving among all fatally injured victims

Figure 1 shows the number of fatalities in Canada that were attributed to distracted drivers between 2000 and 2015, as well as the number of fatalities that were not related to distracted drivers. The number of distraction-related fatalities is represented by the vertical bars. The number of distraction-related fatalities was relatively consistent during this 16-year period. The number of distraction-related fatalities gradually decreased from 353 in 2000 to 282 in 2009, rose to 347 in 2012, fell to a low of 270 in 2014, before

rising again to 344 in 2015. Fatalities not related to distraction are represented by the solid black line. There were 1,814 non-distraction-related fatalities in 2000 compared to only 991 in 2015. Consequently, there has been a steady decrease in the number of non-distraction-related fatalities from 2000 to 2015.

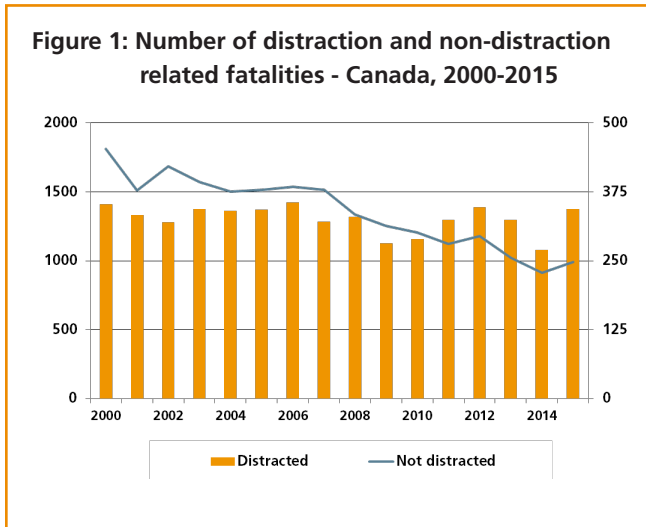
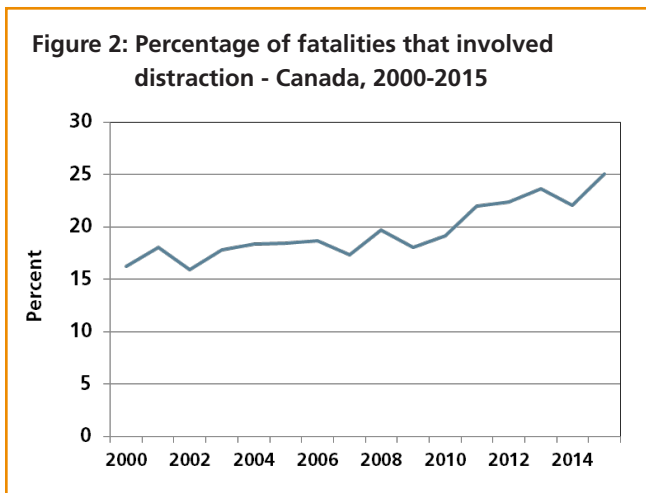
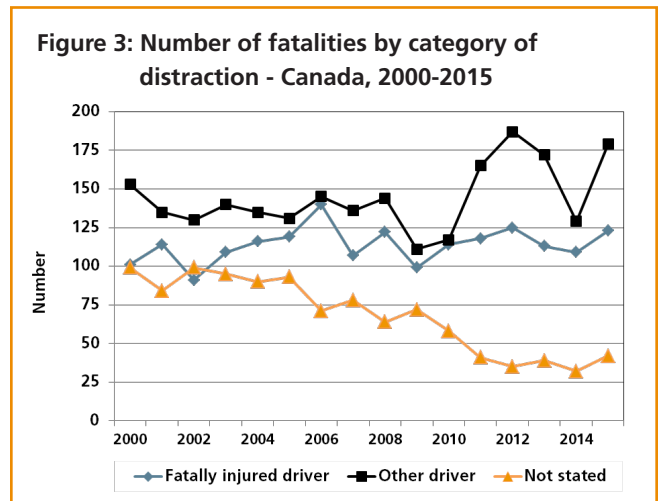


Figure 2 shows the percentage of all motor vehicle fatalities from 2000 to 2015 that involved a distorted driver, regardless of whether it was the distorted driver who died in the crash. In 2000, 16.3% of fatalities involved at least one distorted driver. This percentage peaked in 2015 where one-quarter (25.1%) of fatalities were distortion-related.



In Figure 3, the number of distortion-related fatalities from 2000 to 2015 is shown based upon three categories of distortion-related fatalities. These include cases where:

- > The fatally injured driver was distorted (“fatally injured driver”);
- > The victim died in a crash where they were not the surviving driver. These victims include non-distorted drivers colliding with a vehicle driven by a distorted driver, passengers dying in a crash where at least one of the drivers was distorted, or pedestrians who were struck by a distorted driver (“other driver”); or,
- > It cannot be determined which driver was distorted or which person in the vehicle was the distorted driver (“not stated”).

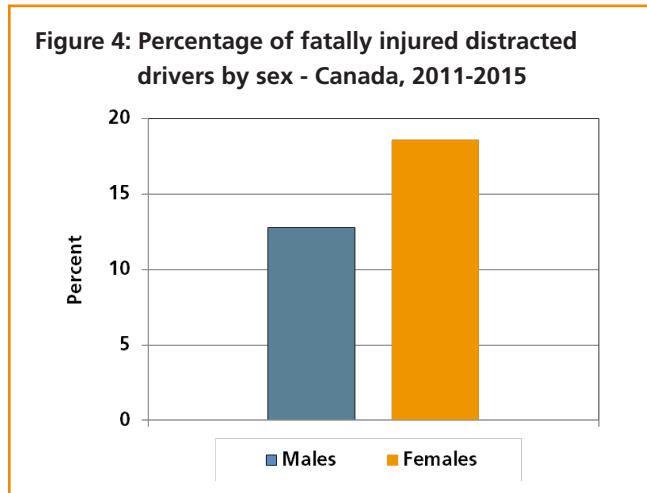


For almost the entire 16-year period, most fatalities involved distortion on the part of the other driver. In 2000, 153 distortion-related fatalities were due to the surviving distorted driver, peaking at 187 in 2012, and reaching 179 in 2015. The number of fatalities where the fatally injured driver was distorted rose from 101 in 2000 to a high of 140 in 2006 before stabilizing at 123 in 2015. The number of fatalities where it was not stated which driver was distorted generally decreased from 99 in 2000 to 42 in 2015. This could be due, in part, to more complete data that are available on the role of distortion by specific drivers in more recent years. Collectively, these data indicated that a larger number of victims that were killed in distortion-related collisions were not the distorted driver.

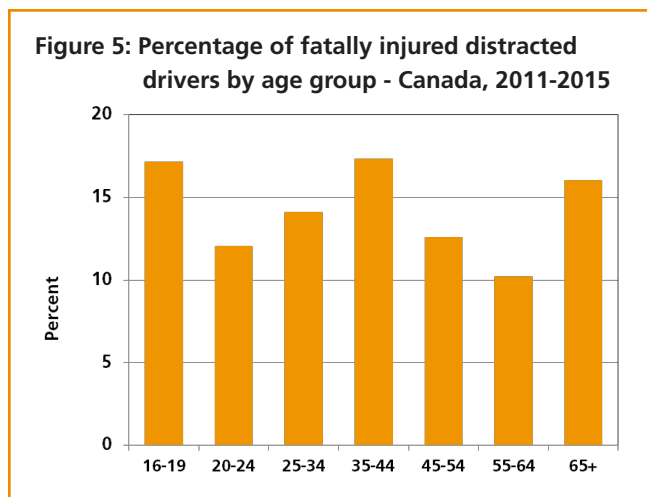
### Characteristics of fatally injured distorted drivers

This section examines the demographic characteristics of fatally injured drivers and explores any variations in terms of driver distortion based on driver sex, age group, and vehicle type. The data

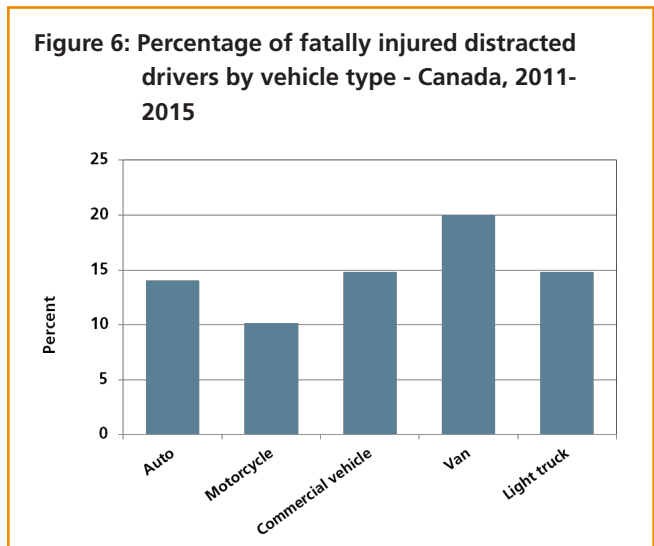
period covers five years (2011 to 2015) for fatally injured drivers in highway collisions. Figure 4 shows that 18.6% of fatally injured female drivers were distracted compared to 12.8% of fatally injured male drivers.



The percentage of fatally injured drivers in each age group who were distracted is shown in Figure 5. Drivers aged 35 to 44 (17.3%), 16 to 19 (17.1%), and 65 and older (16.0%) were the most likely to have been distracted. Conversely, 10.2% of fatally injured drivers aged 55 to 64 were distracted.



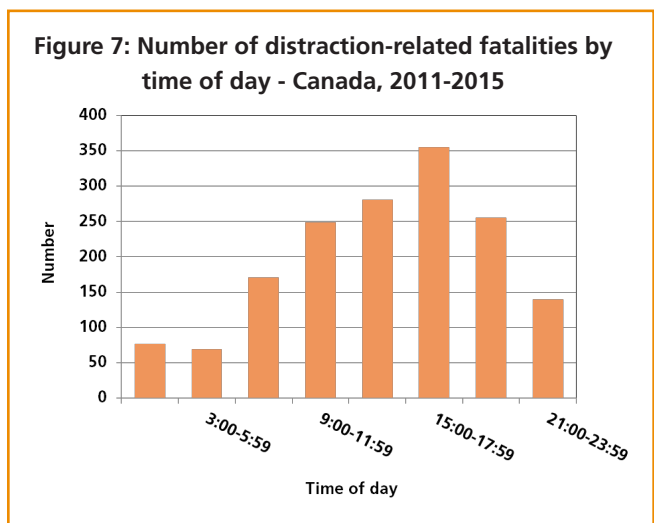
In Figure 6, the prevalence of distraction among fatally injured drivers is shown based upon the type of vehicle driven. Fatally injured van drivers (20.0%) were twice as likely to have been distracted as motorcyclists (10.2%). It should be noted that among fatally injured drivers of commercial vehicles (heavy trucks and tractor-trailers), 14.8% were distracted during this five-year period.



### Collision characteristics of distraction-related fatalities

This section examines the collision characteristics of crashes which resulted in distraction-related fatalities. These characteristics include time of day that the crash occurred, day of week, season, and number of vehicle occupants for fatal collisions during the past five years (2011 to 2015).

Figure 7 compares the number of distraction-related fatalities by time of day. The time of day for distraction-related fatalities has been re-grouped into three-hour increments (e.g., midnight to 2:59 am). A smaller number of distraction-related fatalities resulted from crashes which occur during the two time increments between midnight and 6 am. More distraction-related fatalities occurred throughout the day. The time period during which the largest number of persons died in distraction-related



collisions (355) was between 3 pm and 5:59 pm (15:00-17:59). There were fewer distraction-related fatalities later in the day.

Figure 8 shows the percentage of fatalities that were distraction-related according to the day of week the crash occurred. The percentage of fatalities that were distraction-related increased from 23.6% on Mondays to 27.1% on Wednesdays. There was a steady decrease until Sundays when 19.3% of fatalities were distraction-related.

**Figure 8: Percentage of distraction-related fatalities by day of week - Canada, 2011-2015**

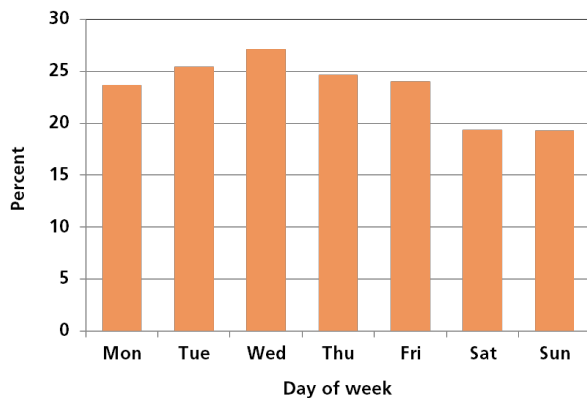


Figure 9 shows the percentage of fatalities that were distraction-related by season of crash. Seasons are grouped as spring (March-May), summer (June-August), autumn (September-November), and winter (December-February). The largest percentage of distraction-related fatalities occurred in the summer (24.7%), compared to 24.2% in the autumn, and 21.0% each in both the winter and the spring.

**Figure 9: Percentage of distraction-related fatalities by season of crash - Canada, 2011-2015**

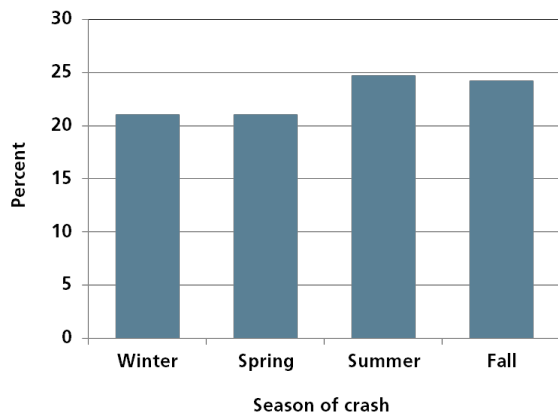
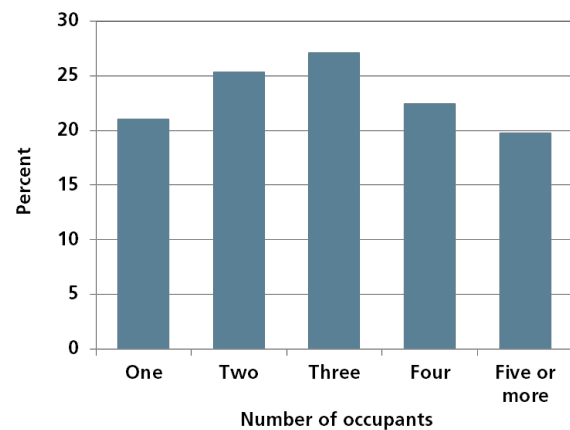


Figure 10 shows the percentage of distraction-related driver and passenger fatalities by the number of vehicle occupants. Fatally injured victims in a vehicle with three occupants (27.1%) were the most likely to be involved in a distraction-related crash. Among fatally injured victims who were the sole occupants, 21.0% died in a distraction-related crash. The lowest incidence for distraction-related crashes was for fatally injured victims in a vehicle with five or more occupants (19.8%).

**Figure 10: Number of distraction-related fatalities by number of occupants - Canada, 2011-2015**



## Conclusions

Although the number of distraction-related fatalities has not increased substantially from 2000 to 2015, the percentage of all fatalities in which distraction was a contributing factor has increased. This is largely attributable to a decrease in non-distraction-related fatalities which has not been reflected in the number of distraction-related fatalities. Throughout this 16-year period, there were more distraction-related fatalities resulting from the surviving driver being distracted than there were for cases in which the fatally injured driver was distracted.

Among fatally injured drivers, a larger percentage of females were distracted than males over a five-year period (2011 to 2015). Since more fatally injured male drivers than female drivers tested positive for alcohol, distraction may not have been coded as a contributing factor in crashes where alcohol impairment was already present (Robertson et al 2017). It would be expected that drivers aged 16 to 19 may be more prone to distraction due to a lack of driving experience and that drivers aged 65

and over may be more prone to cognitive-related distractions. Although distraction was higher than average among fatally injured drivers aged 16 to 19 and 65 and older, drivers aged 35 to 44 had the largest percentage of distraction. This age group would be expected to be less overwhelmed by the driving task than either the youngest or older drivers. A possible explanation is that drivers aged 35 to 44 face greater exposure to distraction-related collisions since they drive more often than younger and older drivers. Further monitoring is needed to see whether this age group remains over-represented among fatally injured distracted drivers. Similarly, additional scrutiny is needed to explore whether van drivers continue to be over-represented among fatally injured drivers and to determine why.

A greater number of distraction-related fatalities occurred during the late afternoon than other times of day and weekdays have more distraction-related fatalities than weekends. There may be a greater potential for drivers to be distracted by other priorities during working hours than at other times. Alternatively, since there are more alcohol-related crashes at night and on weekends, distraction may be cited as a contributing factor in fatal crashes that occur at other times.

It appears that distracted driving collisions exhibit specific patterns that are different from other types of collisions. For example, they do not occur at the same time of day or day of week as alcohol-related collisions. Also, the demographic characteristics of distracted drivers and drinking drivers do not necessarily correspond with one another. Accordingly, enforcement activities and education initiatives to combat distracted driving ought to be tailored to the target audience based on these patterns.

## References

Robertson, R.D., Bowman, K., Brown, S.W. (2017). Distracted Driving: A National Action Plan. Ottawa, ON.: Traffic Injury Research Foundation; and Drop It And Drive®.

<sup>1</sup> Fatality data from British Columbia from 2011 to 2015 were not available at the time that this fact sheet was prepared. As a result, Canadian data presented have been re-calculated to exclude this jurisdiction and make equitable comparisons.

## Traffic Injury Research Foundation

The mission of the Traffic Injury Research Foundation (TIRF) is to reduce traffic-related deaths and injuries. TIRF is a national, independent, charitable road safety institute. Since its inception in 1964, TIRF has become internationally recognized for its accomplishments in a wide range of subject areas related to identifying the causes of road crashes and developing programs and policies to address them effectively.

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