

Learning Series - #23



Understanding driving risk

Driving our cars remains the single most dangerous activity we perform during the day. When underwriting, determining those most at risk for a fatal accident allows appropriate pricing or avoidance of that risk. The major causative factors associated with motor vehicle fatalities are speeding, running red lights, distracted driving, fatigue, and impaired driving. The purpose of this infographic is to provide an understanding of these risks and present underwriting tools used to assess the motor vehicle risk.

Driving risk key contributing factors are:

1- Novice drivers

New drivers are the most dangerous drivers.

- A novice driver may be a young driver or a new driver under a graduated licensing system designed to provide new drivers with sufficient time to practice and gain driving experience over time.
- Novice drivers face serious penalties under escalating sanctions including licence suspension and possible licence cancellation for repeat offenders.
- The first year after a teen obtains a driver's license is the most dangerous and are responsible for the highest rate of traffic accidents. That's why many states/provinces have adopted a graduated driver's license program, where teens are gradually given more and more freedoms as they gain experience.
- The first year of driving is going to be dangerous no matter what age.



2- Excessive speeding & other risky driving

Speeding is a major factor in traffic deaths and injuries.

For more than two decades, speeding has been involved in approximately one-third of all motor vehicle fatalities. In 2019, speeding was a contributing factor in 26% of all traffic fatalities.

Aggressive driving includes speeding, running red lights, tailgating, weaving in and out of traffic, and failing to yield right of way, among other behaviours. Certain terms that fall under the category of Traffic Violations: reckless/ dangerous driving and careless driving, are somewhat similar and many people use the terms interchangeably. Both are traffic violations, and both are summaries that carry fines. **However, careless driving is a less serious offense than reckless driving.** The main difference between the two is **intent**.

- The penalties for dangerous driving are much more severe than careless driving, the former leading to a criminal record if convicted.
- Careless driving is an offence under the Highway Traffic Act, while dangerous driving is found under the Criminal Code of Canada.



3- Impaired driving

The second-leading criminal cause of death

- The majority of impaired drivers are men and young adults.
- Young drivers aged 20 to 34 had the highest rates of drug-impaired driving.
- Since 2019 impaired driving, especially drug related impaired driving has been increasing after a 30-year decline. The rate of police-reported incidents of impaired driving was up 19% from the previous year. More precisely, alcohol-impaired driving increased by 15% while drug-impaired driving increased 43%.
- The rate of drug-impaired driving increased in all age groups, with the largest increases observed among drivers aged 35 to 44 (+281%) and 55 to 64 (+292%).

The legal view

Impaired driving over the legal limit (0.8) is an infraction of section 253 of the Criminal Code of Canada. Impairment, however, can commence at a blood alcohol level (BAC) as low as .02

Penalties:

- 1st offence \$1000 fine and 12-month prohibition
- 2nd offence: 30-day jail sentence and 24-month prohibition.
- 3rd offence: 120-day jail sentence and 36-month prohibition.



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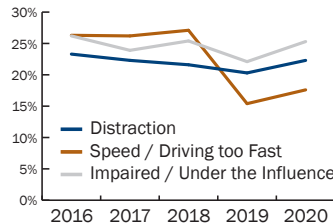
Understanding driving risk (cont'd)

4- Distracted driving

Driver distraction and inattention is one of the leading contributing factors to fatal and serious injury collisions across Canada

- 25% of the distracted drivers involved in fatal crashes were young adults aged 20–29.
- Drivers aged 15-19 were more likely to be distracted than drivers aged 20 and older, among drivers in crashes where someone died.

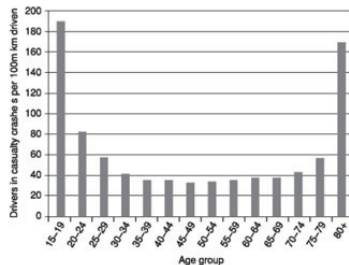
- 9% of all teens who died in motor vehicle crashes were killed in crashes that involved distracted driving.



Gender, age, medications and occupation

- Across all age groups, males have substantially higher death rates than females.
- Drivers aged 70+ have higher crash death rates per mile driven than middle-aged drivers (aged 35-54). Higher crash death rates among this age group are primarily due to increased vulnerability (Frailty) to injury in a crash.
- Drivers with OSA and other sleep disorder have an increased crash risk of 2-3-fold, with risk factors being: elevated BMI, AHI and hypoxemia severity.
- Certain prescriptions have an affect on the ability to maintain focus (cause drowsiness). These could be sedatives (anxiety), pain relievers (analgesics), antiarrhythmics (dizziness) and even antihypertensives.
- When some of the above factors are grouped with a higher risk occupation there is a synergistic risk for example: commercial driving, courier, and shift staff (hospital or police).

An example of the traditional **U-shaped mortality graph** for drivers per age and kilometres driven.



Repeat offenders

Repeat offenders are at increased risk of fatal traffic accidents in addition to lengthy suspensions for driving offences, court sanctions can quickly escalate and include fines in the tens of thousands of dollars, reinstatement fees, licence restrictions, lifetime bans and even jail time.

Underwriting considerations

- Does the client have an underlying alcohol use disorder or other psychiatric disorder? (Some reinsurers now apply a permanent rating depending on history)
- Does occupation and hours driven affect your view of the client. Salespersons or couriers may drive many more miles and have more moving violations? (Long haul drivers have a life expectancy of 60 in Canada, both due to lifestyle considerations and driving specific accidents)
- Does the type of violation for an elderly driver provide a measure of reduced ability?
- Are underlying medical conditions placing your client at increased risk especially when taking into consideration occupation (e.g. sleep apnea)?
- Ultimately the MVR helps to influence our overall assessment of ability and behaviour looking at driving history as the measure. It is a low-cost mortality snapshot of a prospect's driving history, accidents, convictions, moving violations, and suspensions. It can be used to determine if an increased risk is likely to be present. These factors, when taken together, create a profile on the potential client, which can be used to determine the appropriate risk class. In addition, there are also numerous medical conditions that can make driving difficult or dangerous, ranging from vision problems, dementia, and epilepsy which often restrict driving privileges.

Underwriting tools:

- Application driving questions
- Inspection Report
- MVR
- Attending physician's Statement
- Senior Supplement
- Blood profile: LFTs and alcohol markers (e.g. CDT)

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