Motorcycle safety

- Motorcyclists are vulnerable road users. Due to the exposed design of motorcycles, motorcyclists are much more likely to be injured in road crashes than the majority of other road users.
- In 2019, 1 in 5 road fatalities in Queensland were motorcyclists.
- In the event of a road crash, motorcycle riders in Australia are approximately 30 times more likely to be killed than car occupants.

THE FACTS

Injuries to motorcyclists can occur from crashes on-road or off-road. The information provided in this fact sheet relates to on-road crashes only, however CARRS-Q acknowledges the importance of protecting and ensuring the safety of off-road riders.

- Motorcycle riders and their pillion passengers represent a significant proportion of road fatalities, even though motorcycles make up only a small percentage (5.7%) of registered passenger vehicles.
- While motorcyclist fatalities have been trending slowly downwards over the decade (Figure 1), 2016 was a particularly bad year for fatal motorcycle crashes.

In Australia

- In 2019, 208 fatalities were motorcyclists.
- Motorcycles account for 5.7% of all Australian passenger vehicle registrations and 1.2% of passenger vehicle kilometres travelled. However, motorcycle riders and pillion passengers account for approximately 18% of all road crash deaths and an even higher proportion of serious injuries.
- Per distance travelled, the Australian rate of motorcyclist fatalities is approximately 30 times the rate for car occupants. The corresponding rate for a serious injury is approximately 41 times higher.
- The social cost of road crashes in Australia involving motorcycles is more than twice that for cars (including light commercial vehicles) on a vehicle kilometre travelled basis. This is a result not only of the higher level of fatalities and injuries suffered by this vulnerable road user group in the event of a crash, but also the higher involvement in crashes per vehicle kilometre travelled.
- Compared to similar OECD countries for 2015, Australian motorcyclist fatalities as a proportion of total road crash fatalities (16.7%), are higher than Canada and the USA, but are lower than the UK, Germany and France, and are slightly lower than the OECD average (17.3%).

In Queensland

- Motorcycle registrations increased by 33.6% between 2010-2019. In comparison, passenger vehicle registrations only increased by 19.5% over the same period.
- The rate of motorcyclist fatalities per registered motorcycle has been trending downward for the last decade (Figure 2). However, the increase seen during 2015-16 is concerning.
- During 2019 in Queensland
  - 43 fatalities were motorcyclists. This number has remained steady compared to the previous year, and is a 12.2% decrease on the previous five year average.
  - Motorcycles accounted for only 5.0% of Queensland vehicle registrations, yet motorcyclists accounted for 19.8% of the state road fatalities.

There have been two major changes that have contributed to the growth in motorcycling:

1. An increase in older (and often returning) riders. While older riders have a lower crash rate than younger riders, the huge growth in the numbers of older riders has increased the number of crashes involving this group.
2. Evidence suggests that increasing congestion, the availability of parking, and travel costs have encouraged the use of mopeds (up to 50cc) and scooters (over 50cc) for transport. There was a 15-fold increase in moped registrations in

Figure 1: Queensland and Australian Motorcycle/moped rider and pillion fatalities

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</table>
Queensland between 2001 and 2009.10

Who is crashing?

In Queensland between 2016 and 2018:

- Motorcycle riders and pillion passengers aged 40-49 years comprised 28% of motorcyclist fatalities and 19% of motorcyclist non-fatal injuries, while those aged 30-39 years comprised 19% of fatalities and 19% of non-fatal injuries. Those aged 50-59 years comprised 16% of fatalities and 18% of non-fatal injuries11,12.

- Pillion passengers accounted for 1.3% of the motorcyclist fatalities in the period and 4.9% of the motorcyclist non-fatal injuries.

- Males made up the vast majority of fatalities and non-fatal injuries (93.5% and 88.7% respectively).

How are they crashing?

- In Queensland between 2016 and 2018, 50.3% of fatal motorcycle crashes involved another vehicle.1

- In fatal multi-vehicle motorcycle crashes in Australia, the motorcyclist is deemed to be at fault in just over half (51%) these crashes.13. Another vehicle, other than the motorcyclist, is at fault in approximately one-third of these crashes, which commonly involves violations of the motorcycles right of way at an intersection. In 18% of these crashes both the motorcyclist and another vehicle were deemed to be at fault.

- Single vehicle motorcycle fatalities mainly result from collisions with fixed objects, such as trees, utility poles/posts and roadside barriers.12.

Why are motorcyclists crashing and being injured?

- Risk-taking has been identified as a contributing factor in approximately 50% of fatal motorcycle crashes and approximately 28% of non-fatal motorcycle crashes.11,12. This includes excessive speed, alcohol, drugs, and disobeying a traffic control law.

- The severity of injuries faced by motorcyclists is higher than for other road user groups. The most critical injuries to motorcyclists in fatal crashes are head and chest injuries.14.

TIPS FOR STAYING SAFE

Before you ride

- Check your motorcycle and your fitness to ride. Don’t ride if you are tired, emotional, under the influence of alcohol or drugs, or recovering from the night before.

During your ride

- Understand that drivers often fail to see motorcyclists. Maintain awareness at all times and anticipate the likely behaviour of surrounding motorists. Avoid riding in the blind spots of other vehicles.

- Don’t let others influence you to take risks. Enjoy your ride without being influenced to push your limits or ‘bend’ the road rules.

- Riding a motorcycle is more mentally and physically demanding than driving a car. Rest regularly on long rides.

After the ride

- Review your ride, thinking about what went well and what didn’t go so well, and reflect on what improvements and cautions you could consider for future rides.

CARRS-Q WORK IN THIS AREA

- APEC – Compendium of best practices on motorcycle and scooter safety.

- Using instrumented motorcycle data to study road factors influencing motorcycle crash risk.

- Risk taking attitudes and safety perceptions of motorcyclists in Queensland.

- Review of post-licence motorcycle rider training.

- Motorcyclists’ protective apparel observational studies.

REFERENCES


