

## **Returning motorcycle rider refresher training in South Australia**

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### **Abstract**

On average around 15 motorcyclists die and 140 are seriously injured on South Australian roads each year. There were also 376 minor injury crashes involving a motorcycle on average per year over the 5 year period, 2010-2014. Motorcyclists have become a larger part of serious road casualties trending upwards from 11% in 2005 to 17% in 2014 whilst motorcycles have accounted for just above 3% of all registered vehicles during this time.

Older riders (aged 45+) are accounting for an increasing proportion of motorcyclist crashes. Analysis of motorcyclist serious casualty data was undertaken to determine who were likely to be returning riders. That is; riders aged 45 years or over at the time of the crash, who had held a motorcycle licence longer than 10 years and had returned to riding in the past 6 months, after not having a motorcycle registered to them for at least 5 years prior to the crash.

Data analysis indicates that around one rider fatality, 13 rider serious injuries and around 28 rider minor injuries on average per year may have been a returning/returned rider. It is possible that some of these casualty crashes could have been avoided if the riders involved had undertaken a riding skill refresher training course.

South Australia's Road Safety Action Plan 2013-2016 contains a priority to encourage returning riders to undertake a motorcycle skills refresher training course. The Rider Safe Returning Rider Course has been developed as a tailored program that will allow participants to practice the riding skills, knowledge and techniques to potentially reduce their road crash risk. The course is designed to teach / refresh riding skills, techniques and awareness for licensed riders and following a public communication campaign, and targeted mail out to returning riders, operational training courses are planned to commence in September 2015.

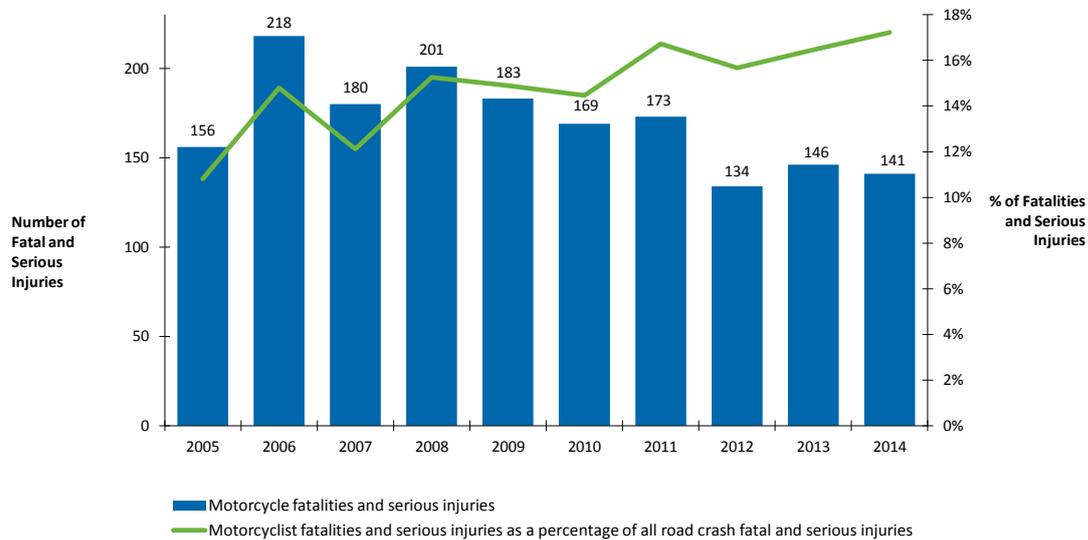
### **Introduction**

The use of motorcycles has been increasing in recent years and research has found that, per distance travelled, the Australian rate of motorcyclist deaths is approximately 30 times the rate for car occupants, while the serious injury rate for motorcyclists is 41 times the rate for car occupants (DITRDLG, 2008).

The incidence of motorcycle death and serious injury has increased in South Australia as a proportion of all road deaths, while other road user trauma has generally decreased. Figure 1 shows the number of motorcycle riders and pillion passengers killed or seriously injured on South Australian roads each year since 2005. It also shows the number of motorcyclists killed or seriously injured as a proportion of all serious road casualties. Even though the

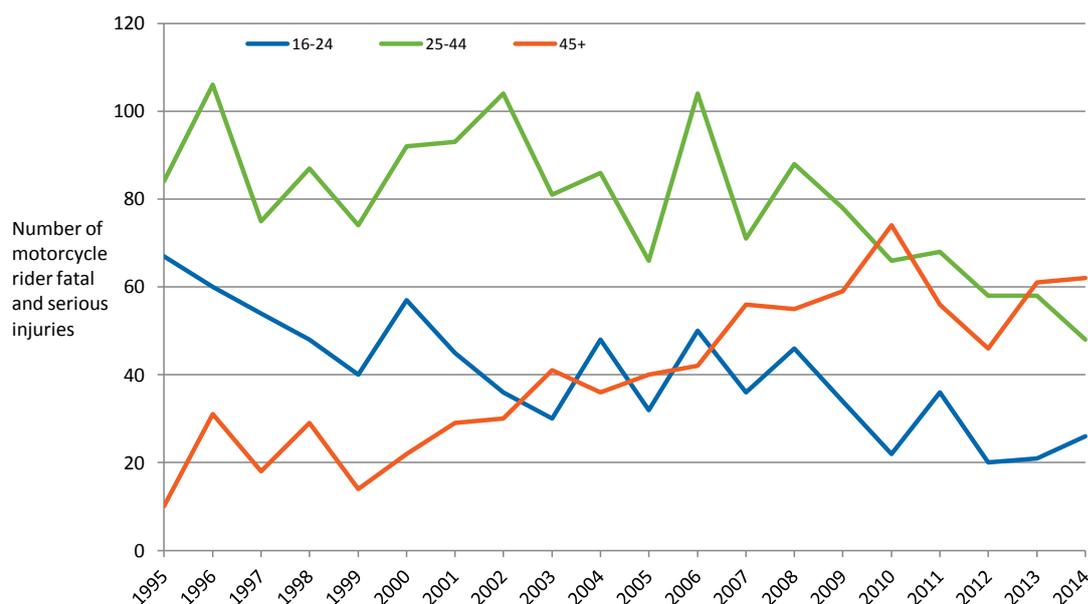
number of motorcyclist serious casualties has shown a downward trend, each year motorcyclists have become a larger part of road serious casualties trending upwards from around 11% in 2005 of all serious casualties to 17% in 2014.

**Figure 1** –Motorcycle and pillion passenger fatalities and serious injuries as a percentage of all road crash fatal and serious injuries, South Australia, 2005-2014



In 2014, 45% (62 out of 138) of South Australian motorcycle rider serious casualties were aged 45 years or over as indicated in Figure 2.

**Figure 2:** Motorcycle rider serious casualties by age, South Australia, 1995-2014



The increasing trend in motorcycle serious casualties for riders aged 45+ in South Australia is in contrast to the decreasing trend in motorcycle serious casualties for younger motorcyclist age groups during this time. This is likely to be a result of both an increase in the general population of people aged 45 years and above and an increase in the usage of motorcycle in this age group (CASR, 2010).

A report on motorcycle crash trends over time by the Centre for Automotive Safety Research (CASR, 2010) outlines the findings from an analysis of 15,370 motorcycle crashes in South Australia for the period from 1990 to 2009. The CASR study found an increase in crash frequency for the older age group (40+ years) for all types of crashes during this period whilst the number of crashes involving younger riders had generally shown a decreasing trend. The CASR analysis found a much higher frequency in high speed non-metropolitan, and single vehicle crashes for the older age group which is indicative of a tendency toward more recreational riding and may also be attributed to an increase in returning riders.

## Discussion

For the ten years from 1995 to 2004, there were on average 26 motorcycle riders aged 45+ killed or seriously injured. This number more than doubled in the ten years from 2005 to 2014 when there were on average 55 motorcycle rider serious casualties per year aged 45+. This represents an 85 per cent increase. Over this same 10 year period South Australian motorcycle registrations have increased by around 50 per cent so older rider serious casualties have increased by around 35 per cent more than motorcycle registrations during this time. It is likely that some of these serious casualties involving people aged 45+ were returning riders.

There are approximately 51,000 registered motorcycles and around 170,000 motorcycle licence holders in South Australia. People aged 45+ account for around 50% of registered motorcycles (25,000) and 41% of motorcycle rider serious casualties. Table 1 indicates that over the past 5 years, the number of registered motorcycles in South Australia has increased by approximately 10% from 2010 to 2014, whilst the number of motorcycle rider casualties has been relatively constant.

**Table 1:** Registered motorcycles and motorcycle rider casualties, SA, 2010 - 2014

Year	Motorcycles registered	Motorcycle rider fatalities	Motorcycle rider serious injuries	Motorcycle rider minor injuries
<b>2010</b>	47,000	16	146	388
<b>2011</b>	48,000	20	143	361
<b>2012</b>	49,000	13	113	339
<b>2013</b>	50,000	12	129	369
<b>2014</b>	51,000	11	127	417

**Table 2:** Motorcycle riders killed or injured aged 45 and over and the proportion of all motorcycle riders killed or injured, South Australia, 2010-2014

Year	Number and per cent of Motorcycle rider fatalities aged 45+	Number and per cent of Motorcycle rider serious injuries aged 45+	Number and per cent of Motorcycle rider minor injuries aged 45+
<b>2010</b>	10 (63%)	64 (44%)	127 (33%)
<b>2011</b>	4 (20%)	52 (36%)	110 (30%)
<b>2012</b>	7 (54%)	39 (35%)	99 (29%)
<b>2013</b>	5 (42%)	56 (43%)	134 (36%)
<b>2014</b>	4 (36%)	58 (46%)	154 (37%)
<b>Total</b>	<b>30 (42%)</b>	<b>269 (41%)</b>	<b>624 (33%)</b>

Table 2 indicates that for the 5 years (2010-2014) more than 40% of motorcycle riders killed or seriously injured were aged 45 years or older and 33% with a minor injury were aged 45 or over.

The average age of motorcycle licence holders in South Australia is 52 years whilst the average age of registered motorcycle owners is 49 years. With 70% of motorcycle licence holders (120,000) in the 45+ age bracket it is possible that the demand for returning rider training could increase in future if dormant riders decide to return to riding.

### *Returning/Returned riders*

Returning (or returned riders) are people who rode in the past, and after an extended period of not riding, decide to take up riding again. This cohort may face increased crash risks as a result of not maintaining safe riding skills and if they are riding a more powerful or different style motorcycle than the one they used to ride in the past.

Research by the Monash University Accident Research Centre (MUARC, 2002) found that compared to other riders, returned riders:

- ride less frequently and less distance, and
- are less likely to use a motorcycle for commuting and general transport.

The 2002 MUARC “Motorcycling after 30” report also found that compared to continuing riders, returned riders are:

- more likely to nominate a car as their main means of transport
- less likely to have commuted in the past and more likely to have stopped commuting
- more likely to have started touring
- less likely to have ridden on a farm in the past
- less likely to have ridden for general transport in the past
- less likely to have owned motorcycles with engine capacity greater than 750 cc in the past.

MUARC research identified that returned riders as more commonly weekend, fair-weather, recreational riders who are more likely to ride in rural areas and for whom motorcycling is more of a discretionary activity than for people who ride as a primary form of transport. The 2002 MUARC report concluded that the promotion of refresher training courses for licence holders returning to riding may be of benefit to improve skills and remind potential riders that their skills may not be up to scratch.

Austroroads project SS1708: *Development of a National Graduated Licensing Scheme for Motorcycle Riders*, also identified that returned riders have a higher risk of crashing and outlined a number of options to identify and improve road safety for ‘returning riders’. Options included interventions directed toward specific age groups and their motivation for riding including targeted education and training for older and returning riders.

Research helped in the development of South Australia's Road Safety Action Plan 2013-2016 priority to encourage returning riders to undertake a motorcycle skills refresher training course.

### *Identifying returned riders*

Data analysis was undertaken to identify:

1. How many casualty crashes potentially involve returning riders. This analysis was time consuming and involved checking individual licence and registration records, due to the time constraints the fatality number was used to estimate the number of serious and minor injuries potentially involving returning riders.
2. How many returned riders there are likely to be in South Australia.

Motorcyclist serious casualty crash data in the Traffic Accident Reporting System (TARS) for the period from 2007-2012 was analysed by DPTI Statisticians. For each motorcycle rider fatality, the rider licence number was checked on the Transport Regulation User Management Processing System (TRUMPS) vehicle registration and licensing database to determine if the rider was 45 years or over at the time of the crash. The riders were identified as a possible returning rider if they were aged 45 years or older, had held a motorcycle licence longer than 10 years and had a motorcycle registered to them for less than 6 months & did not have a motorcycle registered to them for period no less than 5 years prior to the one they were riding when they crashed.

The data analysis indicates that over the period from 2007 - 2012 nine motorcycle riders killed were potentially returning riders. Applying this analysis to the rider casualty data it is estimated that 13 motorcycle rider serious injuries and 28 minor injuries per year could also potentially be returning riders. It is possible that some of these casualty crashes may have been avoided if these riders had undertaken a riding skill refresher training course.

Rider Safe database records were also analysed to determine how many of motorcycle riders killed, who were identified as possible returned riders, had previously undertaken the rider safe training course. Only 25% of the people identified as possible returning riders had undertaken the rider safe training program.

To identify how many returned riders there were likely to be in South Australia at any one time, TRUMPS database was analysed to identify clients who:

1. have a current R or R-Date (restricted) class licence
2. are aged over 45 years
3. have held their motorcycle licence endorsement for 10+years
4. have currently a motorcycle registered to them for less than 6 months

5. did not have a motorcycle registered to them(as an individual or as part of a group) for period no less than 5 years prior to the motorcycle they have now.

A TRUMPS database query was conducted in December 2014 and this identified that there were 250 clients who met the returning rider criteria.

### *Training course development*

The Rider Safe program in South Australia commenced in 1987 to ensure that novice motorcycle riders complete both the basic and advanced levels of the training course and have the skills required to be licensed to ride a motorcycle on public roads. Prior to 1987 there was no requirement to undertake any formal motorcycle rider training program as part of the licensing process, and as such, motorcycle licence holders born before 1971 (people aged 45+) may not have undertaken rider safe training.

It was decided that returning rider training would be conducted by Rider Safe because it was established in terms of existing purpose built off road training ranges, experienced expert instructors, booking program services, motorcycles and support facilities. Rider Safe is also well known and generally recognised as a comprehensive, research based rider education and training system.

In 2014, the Rider Safe training program curriculum was analysed to identify which skill areas should be covered by a returning rider training course. The underlying objective of the skills training course is to improve returned rider safety on the road. Rider Safe training facilities cater for groups of up to ten riders at a time and the decision was made that a half day training course would be developed for delivery at the Rider Safe training ranges throughout the State on a demand basis based on people booking into the course.

A draft returning rider course manual was developed by the Rider Safe Coordinator that covered a wide range of motorcycle handling skills such as braking, stopping quickly, turning and cornering, weaving, swerving, limited space manoeuvres, crossing over obstacles and gap selection. The returning rider training program would involve a series of class room briefing sessions and discussions followed by practical range riding skill practice sessions where participant's techniques could be checked and feedback provided. In late 2014 the Rider Safe training instructors ran internal pilot tests of the course to check content, materials and to ensure that flow and delivery could be achieved in a 3.5 hour time allocation.

Refinements to the course were made based on the pilot test experience and it was decided that a formal testing of the proposed course would be conducted early in 2015 involving experienced rider representatives from the Ulysses Motorcycle Club as well as a sample of returning riders. A news article about the training was posted on the DPTI intranet seeking dormant riders who were willing to volunteer to participate in the returning rider training course.

On 10 April 2015 the returning rider training course was further tested at the St Agnes training range in Adelaide with the group of volunteer motorcycle licence holders including several people who had not ridden a motorcycle for over ten years. Course participants were asked to provide comments in response to questions on a feedback form. Feedback from the course participants indicated unanimous support for the program and that the course content covered all the necessary skills to help a returning rider stay safe on the road. The feedback also enabled minor changes to be made to further develop and refine the course content ready for implementation.

Course participants who hadn't ridden for many years noted how physically tiring motorcycle riding was due to the use muscles that were not used for car driving. The skills required for exercises such as weaving through cones, coming to a quick stop, obstacle swerving, and cornering manoeuvring, reminded motorcycle licence holders of the challenges involved in developing a safe riding technique.

The Motorcycle Reference Group, comprising key road safety stakeholders and motorcycle industry representatives were consulted and have been involved in the development of the returning rider training course. It was acknowledged that even though a returning rider's experience is likely to vary greatly the training course should be aimed at the least experienced least confident riders although any holder of a South Australian motorcycle licence will be eligible to attend.

A September 2015 implementation date has been identified as the warmer weather following winter is traditionally a time when people choose to return to riding. The cost to undertake the training will be determined on user pays basis to cover the marginal cost associated with conducting returning rider training courses. The Ulysses Club has indicated that it will subsidise its member's attendance at the course on a 50:50 cost sharing basis. At the time of writing this paper the subsidised fee that would be charged for participating in the returning rider training course was yet to be finalised.

Plans have been made to send letters from the Registrar of Motor Vehicles to licence holders identified as returned riders about motorcyclist road safety along with a brochure about the returning rider training course, including details about how to enrol in the returning rider course.

A public awareness / communications campaign is also planned to be undertaken to notify motorcycle licence holders about the training course and encouraging returning riders to undertake the training.

## Conclusion

Implementing a returning rider training course and encouraging returning riders to undertake a motorcycle skills refresher training is one of several motorcycling road safety initiatives in South Australia's Road Safety Action Plan. Other motorcycling road safety priorities include:

- Investing in motorcycle safety infrastructure improvements and other possible enhancements,
- Developing 'sharing the road' education campaigns to raise drivers' awareness of safe behaviours in the presence of motorcyclists,
- Reducing the risk for motorcycle riders by enhancing the motorcycle licensing scheme and consider options to increase the uptake of motorcycles fitted with antilock braking system,
- Developing strategies to encourage the take up of motorcycles fitted with antilock braking systems and stability control systems, and
- Promoting the benefits of wearing protective motorcycle clothing.

The motorcycle skills refresher training course for returning riders will be evaluated to determine whether riders who undertake the refresher training are involved in fewer crashes than other returning riders. Motorcycle casualty crash data for riders aged 45+ will continue to be monitored and analysed to identify what other innovative motorcycling road safety education, training, engineering and enforcement initiatives can be implemented to reduce motorcyclist road trauma.

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