National Road Safety Forum 2014

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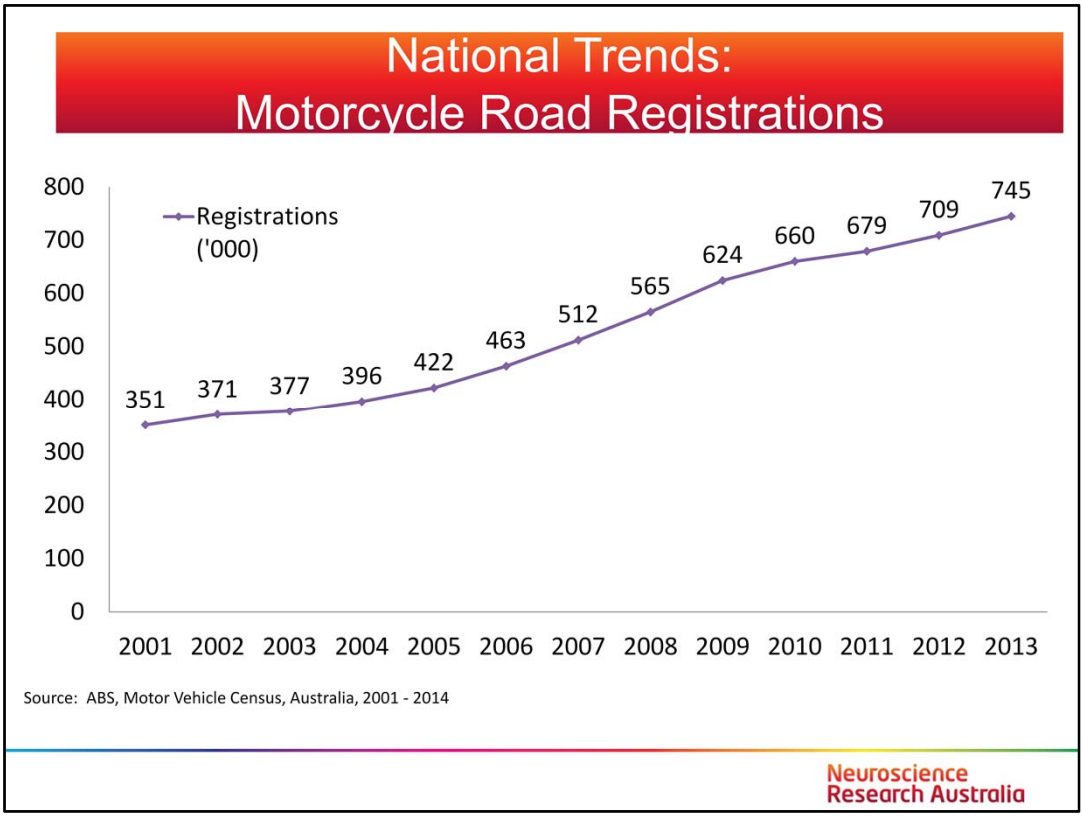
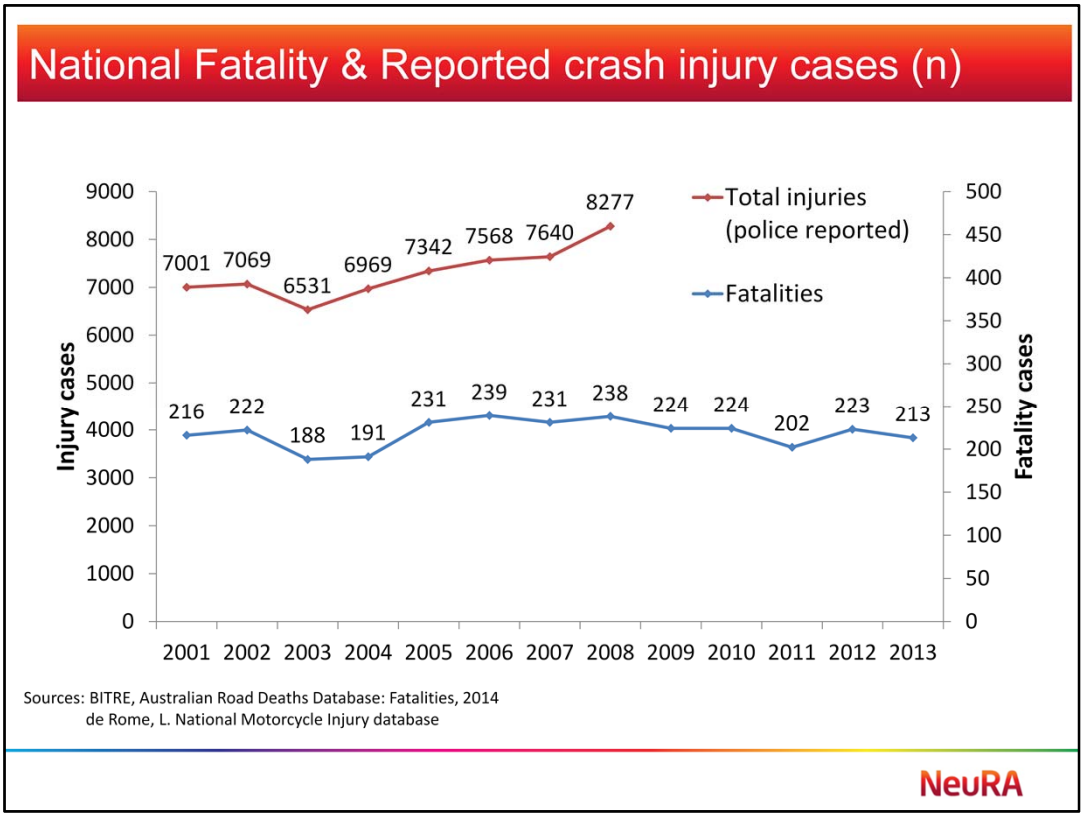


Since 2001, the number of registered motorcycles in Australia have increased by 112% - that is more than doubled.

In just the last 5 years, from 2008 to 2013, motor cycle registrations - including scooters - went up by over 30 percent , while cars only saw an increase of 10 per cent.



Our concern is for the numbers of riders killed and injured.

The numbers of fatalities have remained fairly stable (219 average). Since 2001, which is extraordinary when we consider the increased number of registrations.

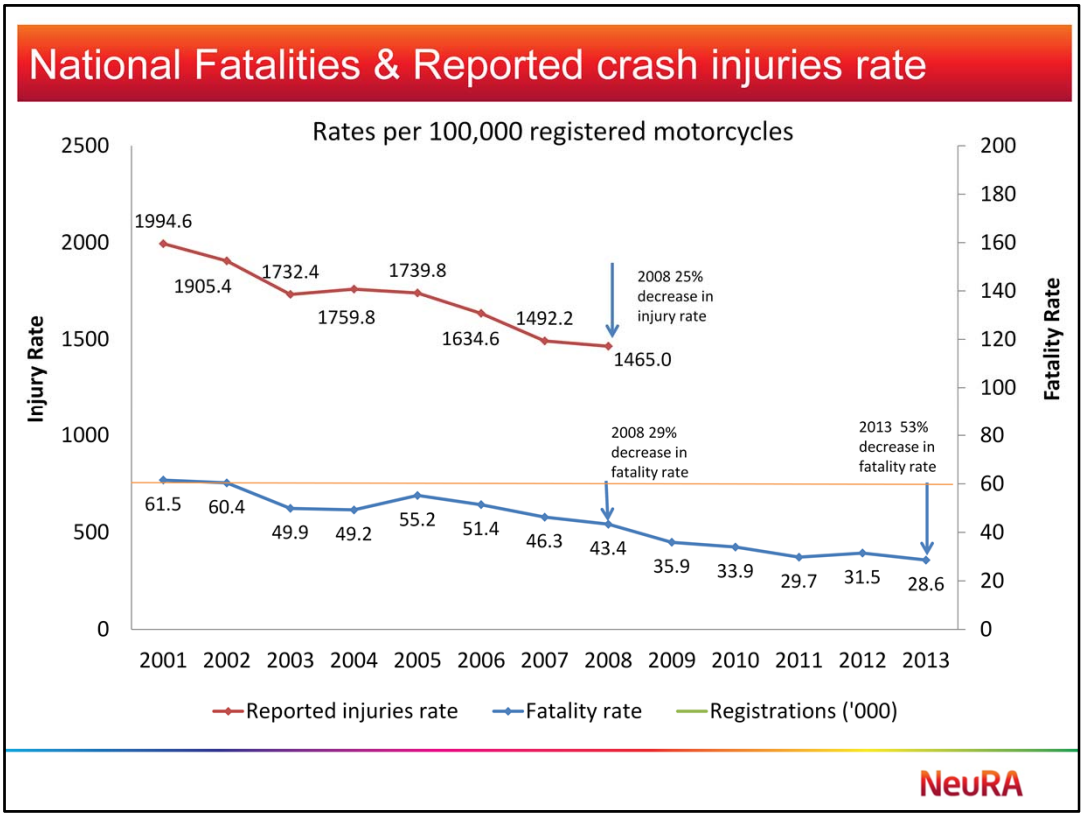
The numbers of fatalities are relatively small in statistical terms, we need to look at injury data to see actual trends.

However there is no national collection of the numbers of motorcycle injuries or injury crashes. Injury surveillance data is limited to serious injury, which is based on hospital admissions and excludes the majority (72%) of those injured but not admitted.

The injury data in this graph is taken from a data base stablished by collecting the crash injury numbers from each jurisdiction up until 2008 – by which point there had been an 18% increase in police reported motorcycle injuries nationally since 2001.

This underlines the importance of supporting a national crash-based injury database.

Data linking police and hospital data would be preferable, but even if we simply collate the crash injury reports from Police around the country, that would be an advance on what we have at present.



It is important to look at casualty rates as well as casualty numbers.

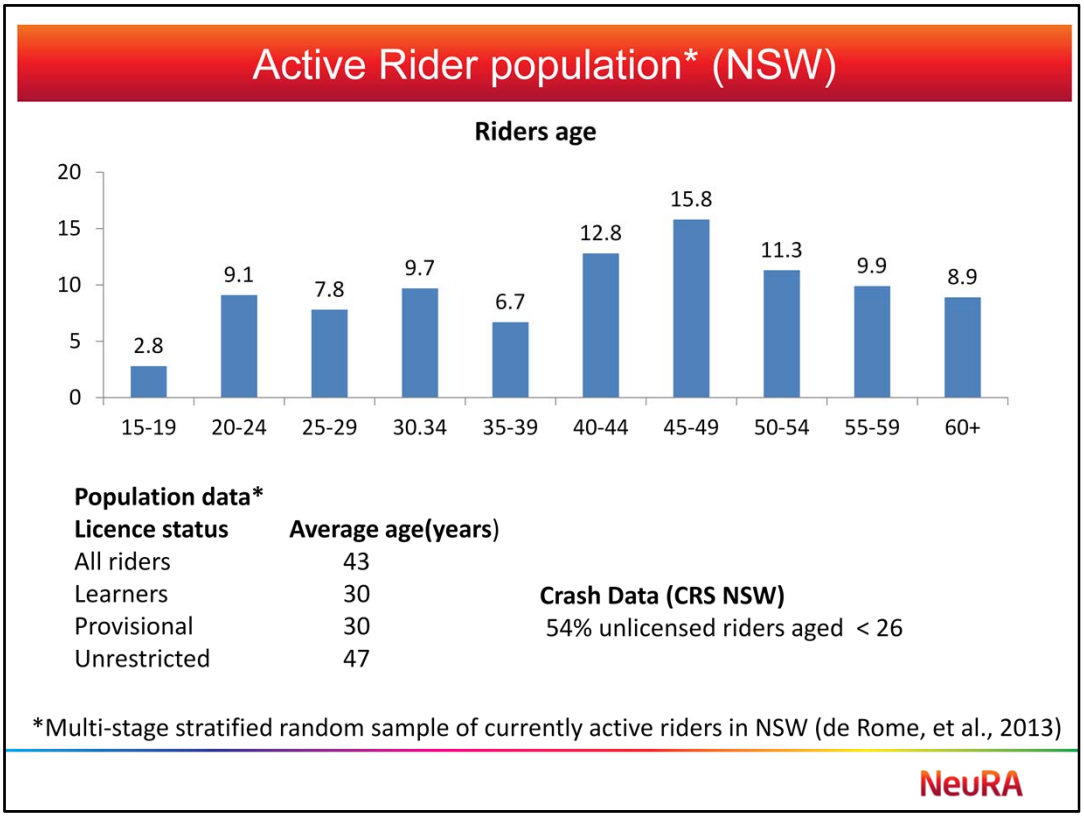
Numbers indicate the burden of injury represented by that road user group.
Rate are calculated as the number of fatalities/injuries per 100,000 of the population at risk and are the best metric for progress in road safety.

Motorcycle registrations are generally accepted as the best estimate of the active rider population and therefore the population at risk. There have been substantial decreases in both motorcycle crash injury (at least til 2008) and fatality rates.

It is the injury rates that are the most important metric for motorcycle safety progress, because there are relatively few fatalities and because fatality crashes tend to represent extreme circumstances.

Identifying the population at risk is a key methodological problem with vulnerable road users . Particularly in relation to motorcycle and bicycle riders, who are a minority of the entire population but whose participation has increased exponentially in recent years.

We need national data on injury numbers for all vulnerable road users.



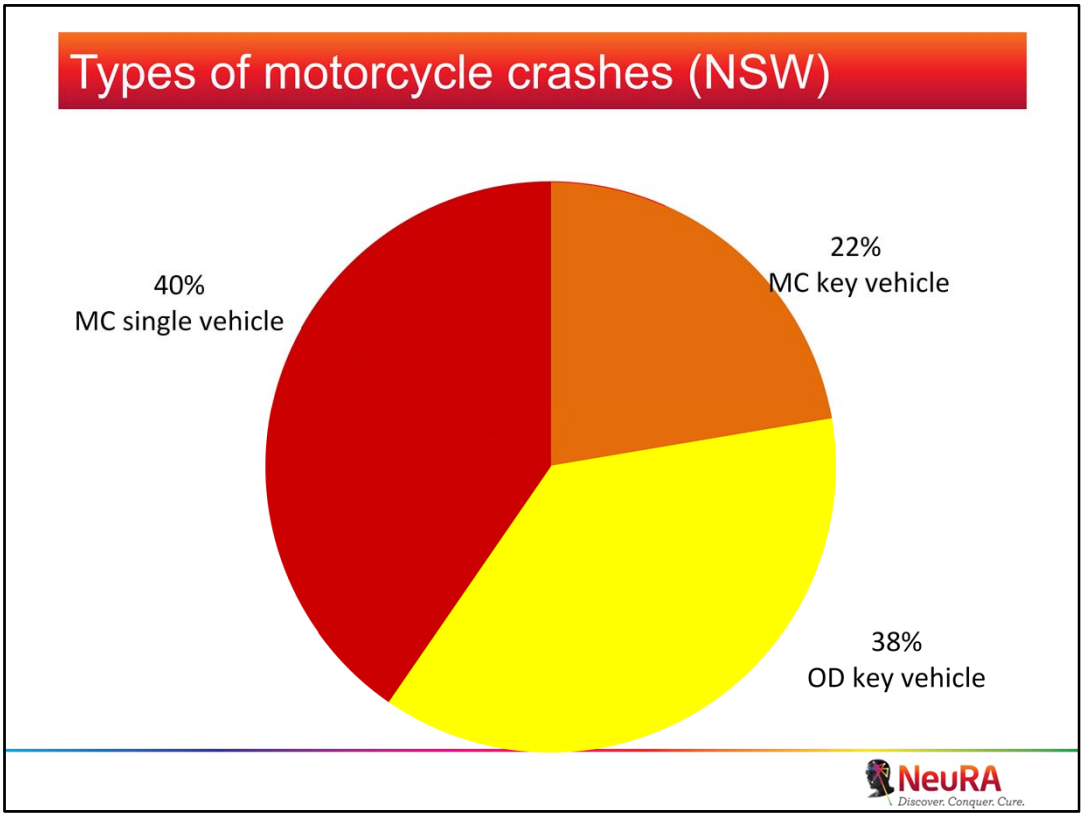
In order to develop more effective and better targeted interventions, we also need to know more about the population at risk.

This slide shows the age distribution of the active riding population in NSW in 2012. The data was obtained through a multi-stage stratified randomly sampled survey of riders in NSW, funded by the Centre for Road Safety. (de Rome et al, 2012, 2013)

The graph shows that 'young' riders that is aged under 25 years, are a small proportion (12%) of the riding population. However, we know from crash statistics that this age group represent 28% of all riders in crashes and 54% of unlicensed riders in crashes. Unlicensed drivers/riders are involved in 2% of car crashes but 8% of motorcycle crashes.

The survey also found that the average age of a rider in NSW was 43, but the average age of novice riders, including Learners and Provisional licensed riders was 30 years. We tend to use the terms 'Learner" and "Young" as if they were interchangeable, and for novice drivers that's true, but not novice riders. They are not teenagers, most are in their 30s and already have an unrestricted driver licence.

Questions – Youth is a known risk factor for car and motorcycle crashes, but why are such high proportions of young people riding and crashing unlicensed? What is it about our system that this happens?
What are the implications of these two issues for Graduated Rider Licensing schemes?



We have learned a lot from in-depth studies of motorcycle crashes about causes and some inherent differences between motorcycle & other vehicle crashes.

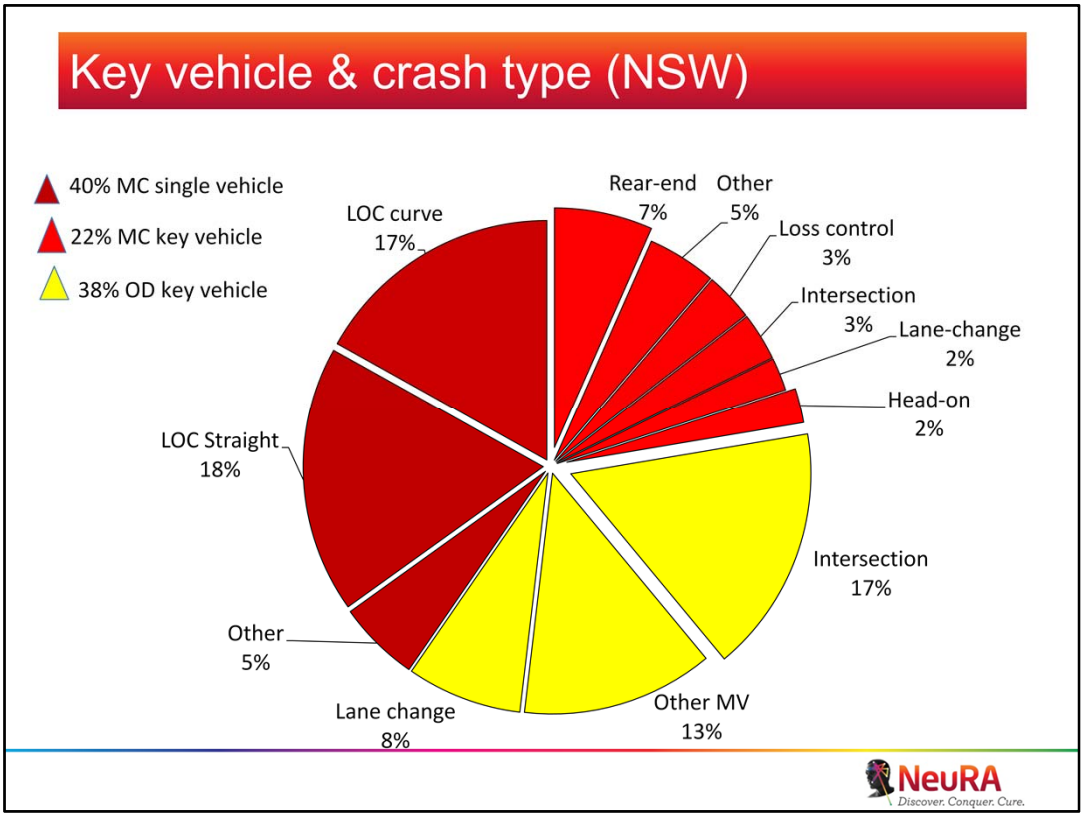
Despite this we tend not to apply this knowledge in the analysis of motorcycle crash data to the best effect.

A high proportion of motorcycle crashes are single vehicle crashes (40% vs 15% for cars).

Most motorcycle crashes involving other vehicles are due to the action of the other vehicle (38% vs 22%).

The 'key' vehicle, represented by the dark arrow in the RUM code diagrams, is generally that vehicle considered to have played the major role in the crash, and is generally recorded as vehicle '1' by the police on the crash report.

By treating these crash categories separately, it is easier to identify patterns of behaviour/errors and so devise and target appropriate interventions.



Single vehicle motorcycle crashes are predominantly Loss of Control (LOC) crashes which are equally likely to have occurred on curves (17%) and straight (18%) sections of road. More research is necessary to understand what happens in these crashes, particularly those on straight sections of road – apparently without the involvement of any other road users.

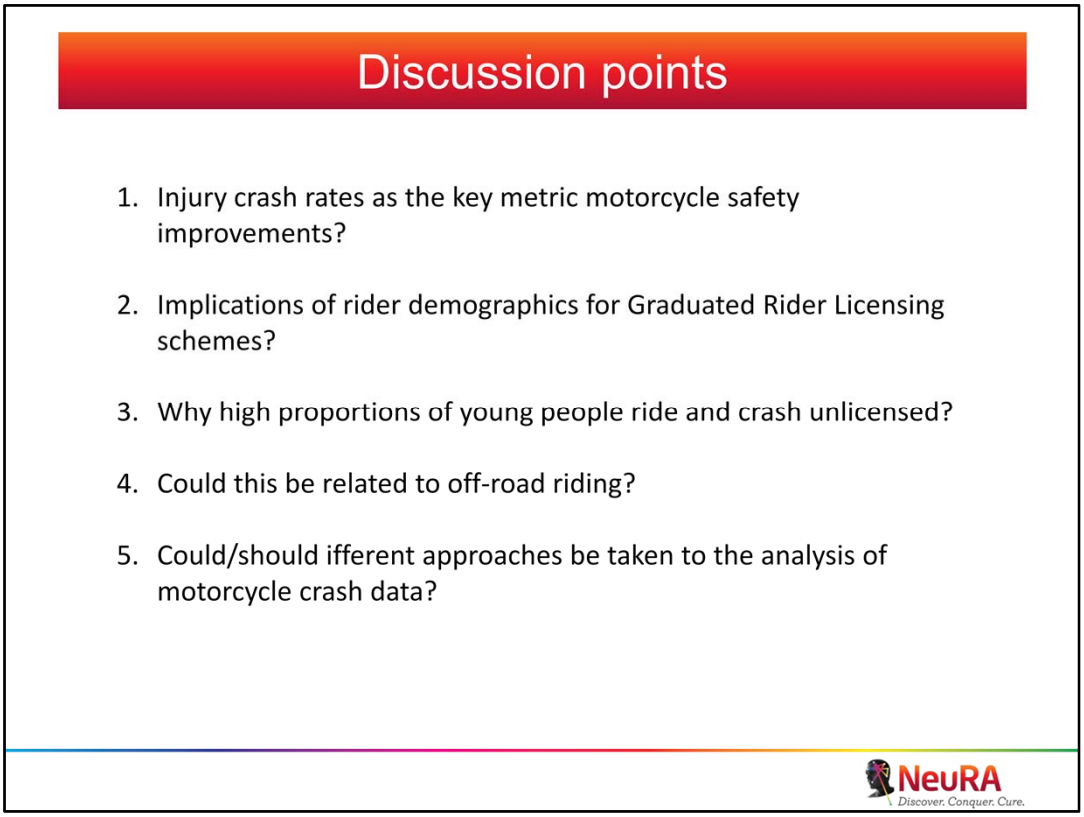
Crashes involving another road user where the motorcycle rider was the key vehicle represent only a minority of crashes but include the majority of head-on and rear-end motorcycle crashes.

Motorcycle head-on crashes are rarely due to overtaking, but most commonly are due to positioning errors when cornering such that the motorcycle or rider's body crosses or leans over the centre line into what is called the "head on zone" .

Rear end motorcycle crashes most commonly involve the motorcycle into the back of another vehicle and are due to lack of appropriate following space and/or braking.

The majority of motorcycle multi-vehicle crashes are due to the actions of the other driver who fails to see or give way to the motorcycle. The majority occur at intersection or while changing lane s or involving manouvring such as u-turns or emerging from driveways or parking.

By understanding more about why these specific errors occur we are better placed to determine appropriate target groups for specific interventions .



The importance of establishing a national crash-based injury database. cannot be overestimated as the key metric for determining our progress in road safety , particularly for vulnerable road users.

Improving post crash treatment has reduced the proportions of fatalities and enhanced the impression that we are doing better than in reality.

Data linking police and hospital data is the most desirable option. However while such a system is set up, if we simply collate the crash injury reports from Police/ Road Authorities around the country, that would be an advance on what we have at present.

Need to recognise the aging demographic of novice riders in the development of graduated licensing schemes to ensure participation and acceptance of safety benefits of such regimes.

Need to investigate the youth bias in unlicensed riding and possible association with features/ sanctions of the training/licensing systems in addition to exposure to factors such off-road riding.

Investigate the benefits of treating crash data sets differently for different road user groups – particularly for vulnerable road users.