



Dear Craig,

Thank you for inviting me to present my opinion on the topic of mandatory bicycle helmet law in Australia.

1/ My name is James Steward. I hold a bachelor degree in electrical engineering from Swinburne University.

2/ I do not believe it should be mandatory to wear a helmet to ride a bicycle, except to compete in an organised race.

The justification for a mandatory helmet law is tenuous at best.

3a/ Every activity we undertake results in some form of risk, whether it be getting out of bed, taking a shower or sky diving. The risk and exposure determine the probability of injury or death.

If I remember correctly, BN recently undertook a study to determine the risk of a crash while cycling. "New data into the causes of bike crashes has revealed that a person riding a bike has a 0.003% chance of being involved in a crash on any given day."

"Our report shows that the chance of being involved in a crash when you ride a bike is miniscule, just 0.003% on any day, and 0.99% in a year," said Mr Richards.

Scaling this up further, after 70 years of cycling every day, you have a 50/50 chance of having had a crash.

The result of this crash for most will be a little skin off. For a few it will result in broken bones. For fewer still a life threatening injury or death.

I don't know about you, but these are pretty good odds that someone can enjoy a lifetime of regular cycling and still end up dead from some other reason - like cancer for example, or falling off a ladder.

3b/ If you're going to justify a mandatory helmet law for cyclists, you can easily justify a mandatory helmet law for pedestrians and motorists on the same terms.

When pedestrians are hit by motor vehicles, the risk of a serious head injury is very high. Typically the legs are taken out and the head hits the windscreen. The police look for the point of impact of the head on the windscreen to estimate the speed of the vehicle at the time of impact. The higher up the windscreen, the faster the car was travelling. I have watched two pedestrians get hit by motor vehicles in my life, and second my wife and I witnessed only a few weeks ago (he later died in hospital). In both cases the pedestrian suffered traumatic head injuries. There can be no doubt that a bicycle helmet would have reduced the severity of the injuries.

Motoring crashes often result in head injuries, despite the oft heard claims from people like Raphael Grzebieta that because cars have airbags and such, that the occupants don't need to wear a helmet. MUARC researched the issue



<<https://www.monash.edu/muarc/research/our-publications/atsb160>> and found that "The total benefits associated with headwear in the form of a soft shell bicycle helmet were estimated to be \$380 million (assuming a fully airbag equipped fleet), or \$476 per car (\$626 for cars without airbags)." I.e. a significant reduction in injuries and cost from wearing a bicycle helmet in cars even with airbag equipped cars.

So one must ask, if pedestrians and motorists would benefit from the wearing of bicycle helmets, why is there only a law targeting cyclists? To me this is discrimination.

3c/ In the hierarchy of controls (HOC), personal protective equipment (helmets) are the least most effective method of injury prevention. If roads authorities were serious about reducing road trauma for Vulnerable Road Users, the roads would be designed to eliminate points of conflict, and where that cannot happen, minimise the likelihood of any injury, by lowering speed limits for example. We know that drivers are the cause of 80% of collisions, but the laws and penalties don't reflect the significance of their mistake. Car design is flawed. The modern wide A pillars and dark aftermarket window tints permitted, undoubtedly significantly increase the risk of a driver failing to see a cyclist (or pedestrian or motorcyclist), and subsequently fail to give way. We know intersections are the most hazardous place for cyclists. It is obvious why. There are engineering solutions to these failures. In lieu of these changes, drivers must be properly taught to look around visual obstructions. Mums and Dads doing the teaching just isn't good enough - no matter the hours of experience. Bad habits are too easily passed on.

The helmet law has provided an "out" for roads authorities to actually address the known road transport problems adequately. Chris Boardman in the UK knows this, and has said that helmets are not even in the top ten things keeping us safe, and that he won't discuss them as they are a distraction from measures that are much more effective.

3d/ Although statistical analysis of hospitalisations for cyclists wearing and not wearing helmets may show that the wearing of helmets reduces the severity and likelihood of head injuries, (we don't argue that helmets don't do that), the time trend analysis of cycling and pedestrian fatalities in Victoria shows that pedestrian fatalities dropped by a very similar percentage at precisely the same time as the mandatory helmet law was introduced.

TAC data was used to produce the graph attached.

We know that the number of cyclists dropped after the MHL was introduced (e.g. census data), so that can account for some of the cycling fatality reduction, but it is obvious that there were other road safety initiatives happening at the same time that contributed to a safety improvement for both pedestrians and cyclists. The effect of the MHL is likely minor.

3e/ You have recently visited Darwin I believe, where the gender split is most equal. Yes, sweat and helmet hair puts people off. The MHL is one of the reasons the bike share schemes in Australia continue to under perform, and why Brisbane Deputy Mayor Adrian Schinner and Gold Coast Mayor Tom Tate continue to lobby the QLD Government for a MHL exemption for hire bikes.



3f/ The MHL mostly affected utility and transport cycling. For those of us used to racing, wearing lycra, special shoes and a helmet is part of the uniform. Sadly, the people most affected were also already the cyclists at least risk. It has been shown that riding slowly on an upright bicycle is very safe. Those who continue to ride are those who are happy to dress for battle. They will always be the minority of people who could ride, and they will likely continue to wear a helmet even if the MHL was dropped.

3g/ It is obvious there is no silver bullet that will cause a major mode shift toward cycling. The oft trumpeted call for facilities, alone, won't work. One only has to look at Stevenage in the UK, where beautiful segregated cycling paths are built along side beautiful motoring roads, and people lazily decide to drive (in a place without a helmet law!). What is required is a multi faceted approach. No helmet law, subjectively safe roads and paths, convenience (bicycle parking and such), and disincentives to drive (driving helmet law?)

No one part of the puzzle will make a picture. It takes all the pieces to come together.

3h/ This #TowardZero mantra is a nice idea, but isn't practical. We must look for the greater good in our decisions. A MHL deters people from engaging in a healthy, low risk activity. The benefits of regular cycling outweigh the risks by as much as 20:1!

4/ I am happy for my submission to be made public.

Warm Regards,
James Steward.

