Comments on the NATIONAL ROAD SAFETY STRATEGY, 2011–2020

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Summary

The aim of reducing deaths and serious injuries on Australian roads by at least 30 per cent over 10 years is commendable. Also commendable are the linkages and synergies – a more sustainable and active lifestyle, improved environmental outcomes that reduce energy consumption and greenhouse gas emissions, as well as reduced pressure on health and hospital systems.

Achieving these aims would improve the quality of life by reducing the risk of serious injury without discouraging healthy, active transport. We therefore commend the Strategy for recognising that making people afraid to walk on the streets is counter-productive. The cost in terms of reduced quality of life would be greater than the benefit in terms of reduced injuries.

Recent research shows that the best strategy to reduce injury rates and improve sustainability is to encouraging cycling and walking, by making these modes of transport more attractive and popular. There is increasing recognition that bicycle helmet laws discouraged cycling and increased the risk of serious injury per cycle km, presumably because of risk compensation and reduced Safety in Numbers.

Helmet laws also appear to have changed the nature of cycling, increasing the proportion of lycra-clad sports cyclists at the expense of low and moderate-speed transport cycling. Yet the discipline of regular cycling for transport instead of driving could perhaps have achieved the greatest health and environmental benefits.

Given the NSW RTA estimates that the benefits of cycling amount to more than $0.48 per km, the Strategy should recommend an urgent review of bicycle helmet legislation, to estimate the costs of risk compensation, reduced Safety in Numbers and the health and environmental costs of reduced cycling.

Motorcyclists, bicyclists and pedestrians represent 46% of serious casualties (Table 3). More effective research and guidelines are also needed to improve the safety of these road users.

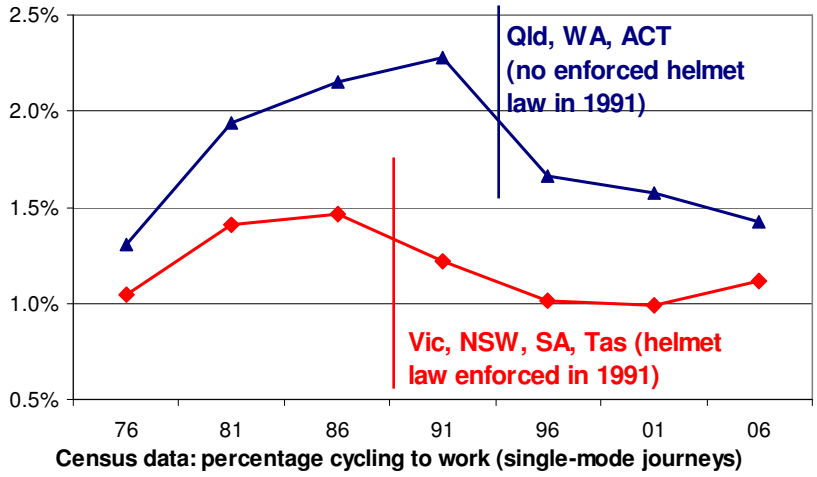
Specific Recommendations

1. Compare current cycling levels with the amount of cycling we might have had if helmet laws had not been introduced. For example, Alena Erke & Rune Elvik, Institute of Transport Economics, Norwegian Centre for Transport Research[1] concluded that the introduction of bicycle helmet laws in Australia and NZ led to a 22% reduction in cycle km.
2. Estimate the cost of helmet laws in terms of reduced cycling, reduced safety in numbers, risk compensation and the lost health and environmental benefits of cycling. For example Erke & Elvik estimated that helmet laws resulted in a 14% increase in injuries per cycle km. The overall increase in injuries per cycle km is likely to negate any benefits in terms of reduced proportions of crashes involving head injuries. Ensure that any changes in percent head injury from helmet laws are correctly estimated from comparison of trends comparing cyclists with other road users including pedestrians.
3. Provide detailed on-line advice, available to all interested parties, on possible road and intersection treatments (e.g. raised platforms at intersections) that benefit pedestrians and cyclists.
4. Provide detailed on-line advice on how to make roundabouts safer for cyclists, including how to slow entering motorists and encourage them to look out for circulating cyclists and motorcyclists. Provide advice on the increase in injuries (up to 7-fold)[2] to cyclists when roundabouts are constructed. Evaluate use of pavement bike markings to reduce the danger to cyclists at roundabouts.
5. Provide detailed on-line advice about the use of bike logos or other pavement markings such as “yellow bike symbols” or “sharrows” to encourage motorists to share the road and look out for cyclists and pedestrians. Evaluate the use of bike logos as an alternative to car parking/bike lanes that force cyclists into the path of opening car doors.
6. Provide detailed on-line advice about the increased risk to cyclists from “traffic calming” squeeze points, and suggest other road treatments (e.g. raised platforms at intersections) that will create a safer environment for pedestrians without endangering the lives of cyclists.
7. Evaluate whether 40 km/h speed limits can be introduced without expensive traffic calming measures than can create additional difficulties and dangers for cyclists.

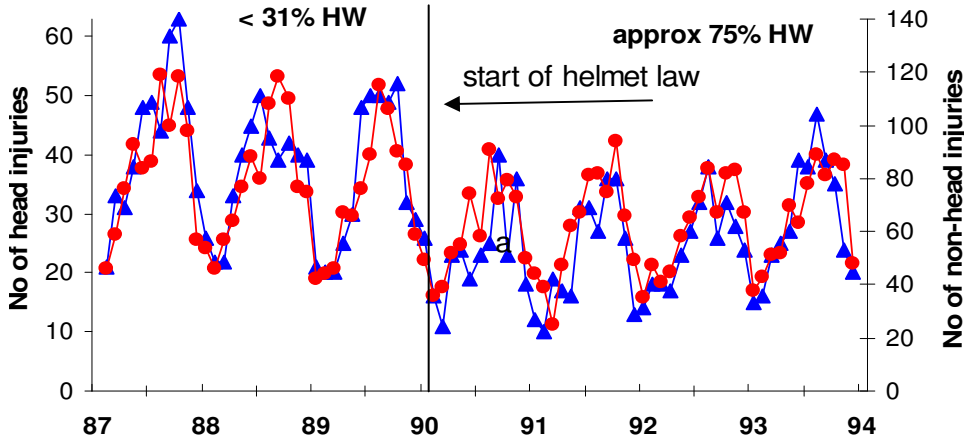
8. Provide an on-line database of all reported road crashes (without personal identifiers) so that communities can improve local road safety by developing an understanding what sort of crashes occur in their area, so that the most effective use can be made of available funds to improve road safety.
9. Consider a road safety hotline and on-line facility where people can report unsafe road conditions and unsafe behaviours and also seek advice on road safety issues.
10. Adopt appropriate overseas road safety laws, e.g. Dutch-style liability laws when motorists are involved in collisions with pedestrians or cyclists.
11. Also adopt overseas vehicle regulations aimed at improving road safety, e.g. the European Union has initiated a two phase process for to improve protection for pedestrians (2003/102/EG) hit by the front of a vehicle. Phase I (implemented in 2005) includes tests of the damage to legs hit by the bumper, and tests of the heads and bodies of adults and children against the bonnet. Phase II (2010) includes a test of the damage to the femur by the bonnet. The costs, benefits and practicalities of similar legislation in Australia should be considered, or the alternative of collapsible, soft bull-bars that can be replaced after a collision with people or wildlife.

Evidence that helmet laws discouraged cycling and reduce safety in numbers

1) ABS data on cycling to work



2) Numbers of cyclists admitted to hospital in Victoria with head and non-head injuries

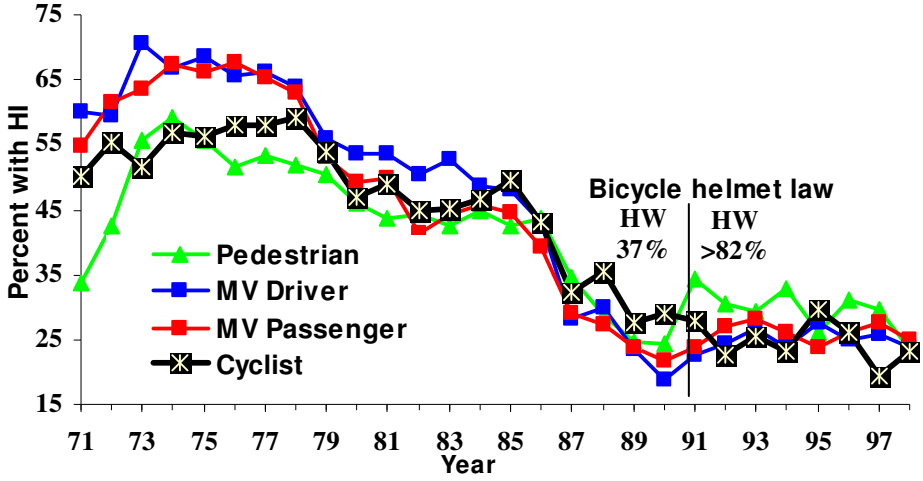


The evaluation of helmets laws must be based on long-term data series, e.g. census data on cycling to work. Helmet laws reversed a clear upward trend in cycling to work throughout the 1980s, which continued in the early 1990s in states without enforced helmet laws.

Another important dataset includes hospital admissions for head and non-head injury in Victoria. The effect of the law is clear for both head and non-head injuries, suggesting that the main effect of the law was to discourage cycling. If the law had been effective in preventing head injuries without discouraging cycling, there should have been an obvious fall in head injuries, but not other injuries. The fact that this did not happen shows that the main effect of the law was to discourage cycling, rather than prevent serious head injuries.

Data showing why the evaluation of helmet laws must account for head injury trends for all road users

The graph below, of percentages with head injury, road users admitted to hospitals in Western Australia, clearly shows that head injury percentages follow a similar trend for all road users, with little or no obvious benefit of a law that increased helmet wearing from 37% to about 82% of all cyclists.



Helmet laws will have an even greater effect on future cycling by reducing the popularity and viability of city bike schemes

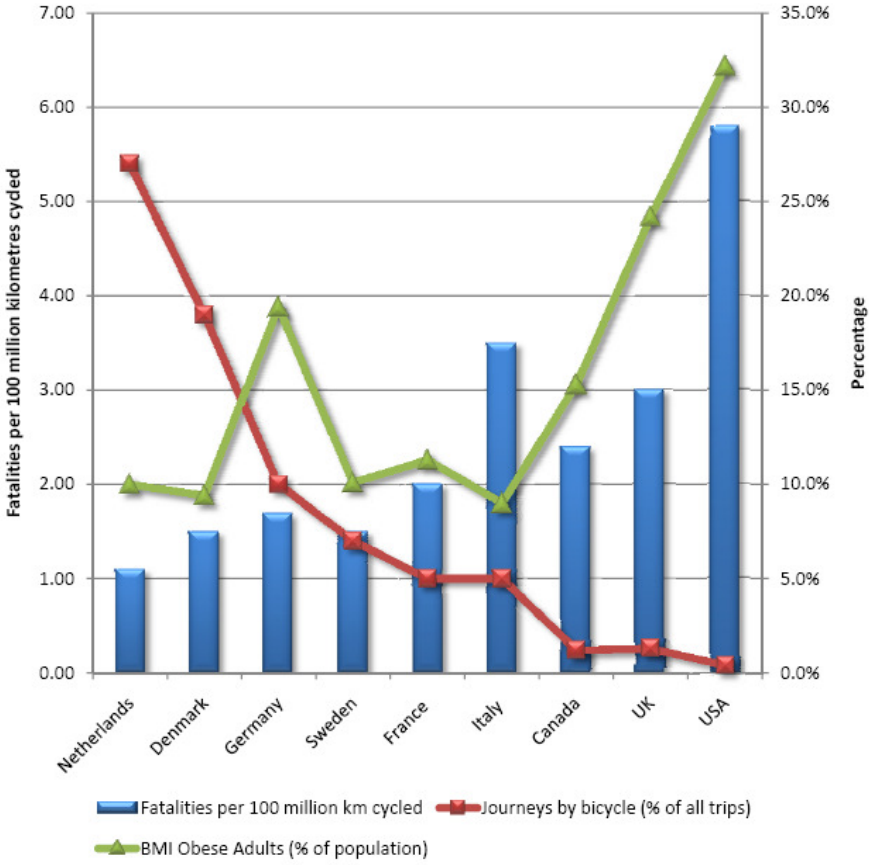
Australia's bicycle helmet laws became newsworthy because Melbourne's bike hire has been crippled by the helmet law - see the Herald Sun article at http://www.heraldsun.com.au/opinion/let-our-cyclists-bare-all-if-thats-what-they-want/story-e6frfhqf-1225911314577

The scheme is costing taxpayers $5.5 million over four years … Melburnians are taking 140 rides a day on the 600 bikes http://m.theage.com.au/victoria/a-new-helmet-to-bring-riders-into-the-fold-20100828-13wxk.html

Compare this with Dublin's 450 bikes - used about 2720 times per day - http://www.irishtimes.com/newspaper/ireland/2010/0809/1224276416971.html

Countries with the lowest helmet wearing rates have more cyclists and the least fatalities per cycle km – see graph below from 'Cycling Infrastructure for Australian Cities'

Figure 7: Cycling fatalities decrease as daily travel distances increase[29]



References and further information

1. Erke, A. and R. Elvik (2007). Making Vision Zero real: Preventing pedestrian accidents and making them less severe, TOI, Norway.
2. Robinson, D. L. (1998). "Accidents at roundabouts in NSW." Road and Transport Research 7: 3-12.
3. Robinson, D. L. (2006). "No clear evidence from countries that have enforced the wearing of helmets." BMJ 332: 722-725. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1410838