

Dr Robinson: There is very good data in Western Australia on transport cycling in general. And that showed even more declines in cycling. Commuter cycling was one of the smaller effects. They had big declines in shopping and cycling to school.

Senator CANAVAN: Did you provide that? I think you might have mentioned it.

Dr Robinson: I have provided it. I am just trying to find the reference to it.

Senator CANAVAN: Okay. Maybe you could take that on notice. I think you have a reference to it here in your submission so we might have the link anyway. If you want to have a look at your submission in regard to that, there is an opportunity to provide further information to us. That would be useful.

Dr Robinson: Yes.

The requested information – on cycling trips for shopping and to school – is provided below:

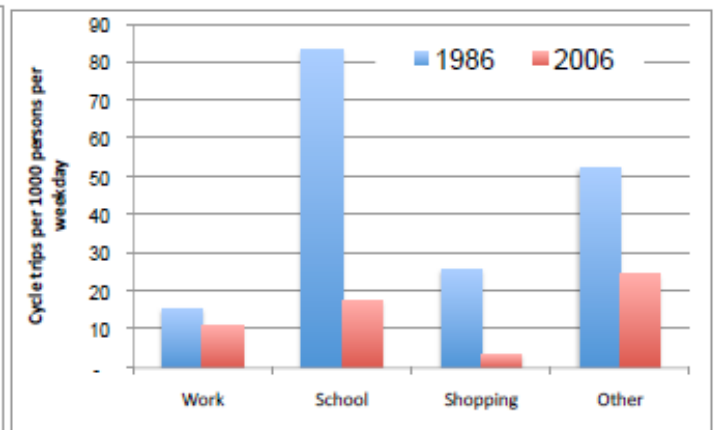
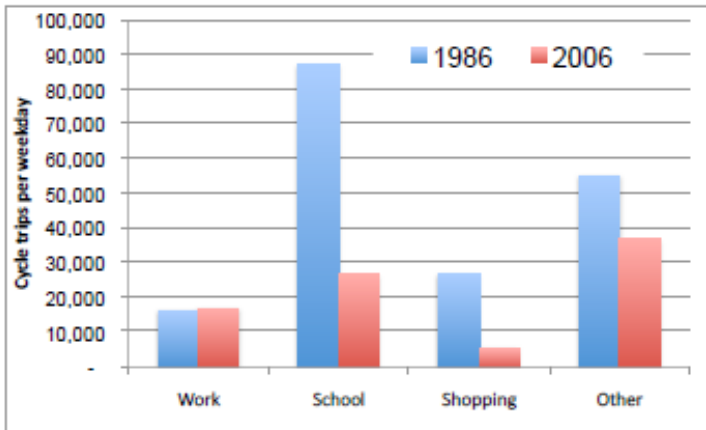
My submission noted that just before WA’s helmet law in 1991, an estimated 5.7% of trips in Perth were by bike¹ and that the Metropolitan Transport Strategy aimed to increase cycling to 8% of trips by 2010 and to 11.5% by 2029.²

Instead, cycling plummeted to 1.6% of trips (2003-2006).³

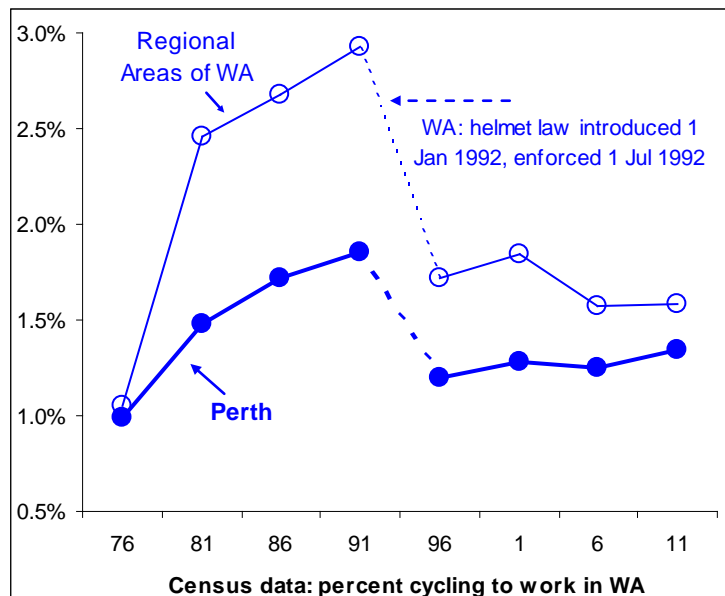
The reductions in transport trips by destination – work, school, shopping or other purposes – see graphs below – were reported in submission 121 by the Sustainable Transport Coalition of WA. Cycle trips to school, for shopping and other purposes had much greater reductions than trips to work.

Cycle trips per weekday

Cycle trips per 1000 persons per weekday



The main travel surveys in Perth were in 1976, 1986 and 2003-06. Their results are consistent with other information indicating that cycling in WA was surging in popularity, and becoming safer, until helmets were made compulsory. ABS data show that the number of regular cyclists increased from 220,000 in 1982 to 300,000 in 1986 and 400,000 in 1989.⁴ Over the same period, numbers of deaths and serious injuries per 10,000 regular cyclist fell from 5.6 in 1982 to 3.8 in 1989.⁵ Census data on cycling to work, available for Perth and regional areas of WA from 1976 to 2011 show an obvious trend of increasing cycling until the helmet law, then a sharp fall. Post-law percentages cycling to work remain well below what might have been expected if the helmet law had not been introduced.



Correction to my opening remarks: I said that in the first survey in Melbourne after the helmet law, only 30 more teenage cyclists were observed wearing helmets but there were 670 less teenage cyclists counted. I meant 623 less teenage cyclists (in fact, 670 teenagers were counted, a reduction of 623 from an identical survey the previous year).

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Additional Supplementary Information that I would like to table:

More injuries in WA, despite substantial decreases in transport cycling. Despite the very large decreases in transport cycling noted above, hospital admissions for cycling injuries in WA have *increased* by about 50% since the helmet law was introduced (see Figure 5.1 below.⁶) The high level of hospitalisations has continued, averaging 884 cyclist injuries per year from 2004-2008.⁷ Reduced cycling, but increased numbers of cyclists admitted to hospital, implies that the risk per cyclist (and also per million km cycled) has increased substantially. This is the opposite of the pre-law trends of increasing numbers of regular cyclists (from 222,000 in 1982 to 400,000 in 1989) and decreasing rates of deaths and serious injuries per 10,000 regular cyclists (from 5.6 in 1982 to 3.8 in 1989).

A letter published in the Australian and New Zealand Journal of Public Health commented on the large increases in the risk of injury for adult cyclists in WA. For males aged 25-44 years, hospitalisations due to bicycle-related injuries increased from 33.7 to 55.6 per 100,000 population ($p < 0.001$); for males aged 45-64 years, hospitalisations rose from 20.8 to 49.6 per 100,000 population ($p < 0.001$).⁸ For cyclists aged 25-64 years, only 15.2% of injuries (from 2000-2009) were attributed to collisions with a car, pick-up truck or van, adding to evidence that the rise in cyclist hospital admissions probably relates to changes from transport to sports cycling and mountain biking, as well as increased risk taking, rather than any increased danger on the roads. For all cyclists aged 25-64 years, non-collision accidents (55.5%; $n = 1395$) were the largest category, followed by other specified and unspecified external causes (19.4%; $n = 487$). Also noted were collisions with fixed or stationary object (5.4%) and collision with another pedal cycle (4.5%).

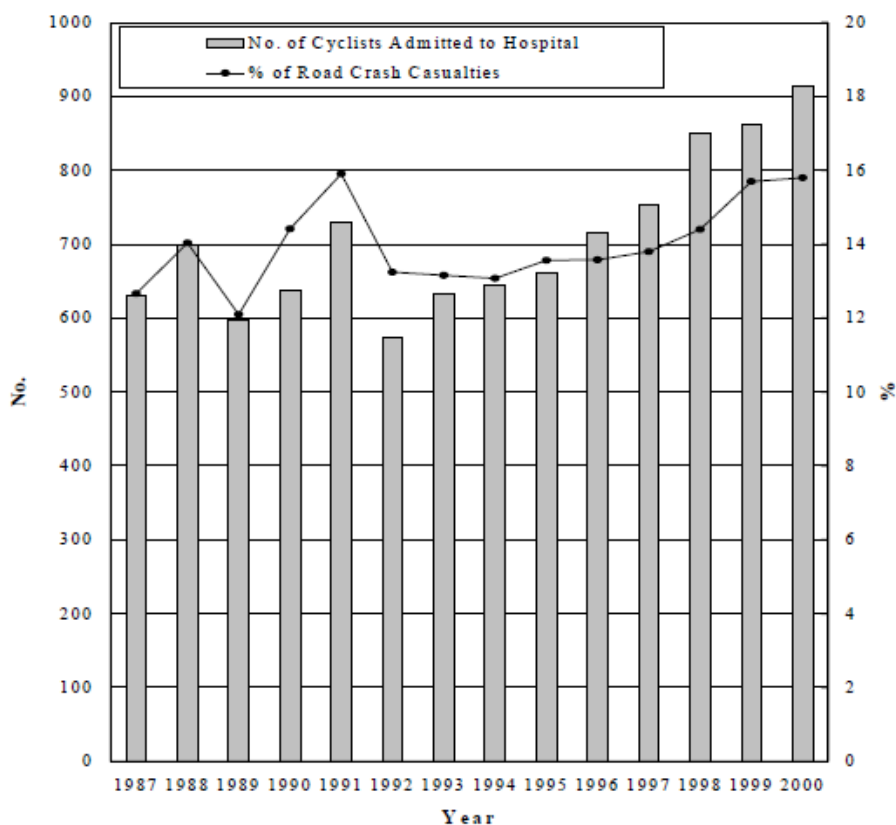


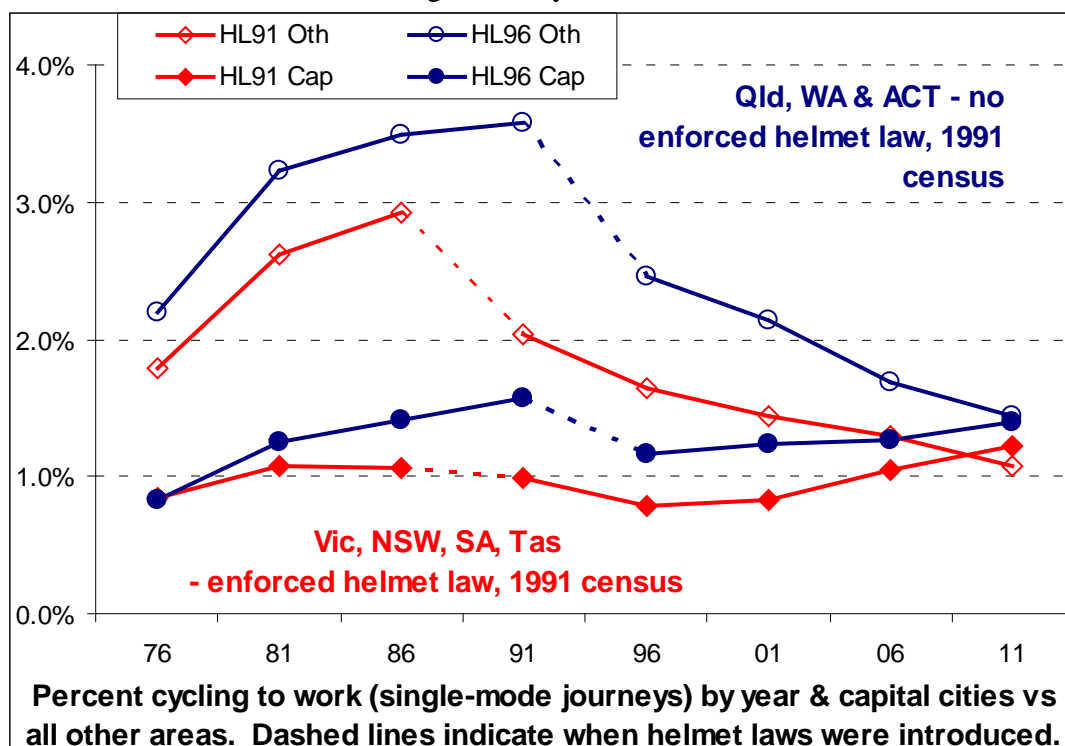
Figure 5.1 Hospital Admissions Data: Number and Percentage of Cyclists Admitted, WA, 1987-2000 (single years)

Misleading impressions given by Prof Olivier. Prof. Olivier stated at the hearing: “if you look at the proportion cycling to work in Australian cities, where most of the cycling is occurring, from 1986 to 1991 the proportions for cycling went from 1.14 per cent to 1.13 per cent”.

Combining data for cities with & without helmet laws is misleading. Although “Australian cities” implies the data are for all cities, Prof Oliver’s statistics are for just 7 cities: Melbourne, Sydney, Adelaide, Hobart, Canberra, Perth and Brisbane. *By referring to combined data for cities with and without legislation in 1991, Prof Olivier gives the false impression that legislation had a minimal effect, when in fact cycling increased in cities without enforced laws but decreased in the others.* The graph below is a more accurate portrayal – it

shows that cycling to work increased from 1986 to 1991 in the 3 cities without enforced helmet laws (from 1.40% to 1.57%) but declined in the 4 cities with enforced laws in 1991 (from 1.06% to 0.99%). By 1996, when all 7 cities had enforced laws, the proportion cycling to work had declined from 1.13% to 0.89%.

Misleading impression that “most cycling” was in capital cities. In 1986, there were 86,201 cycling trips to work by bike in Australia, of which 42,983 (49.9%) were outside the 7 capital cities listed above. Fewer people live in regional cities, but they are generally more conducive to cycling. Small cities have less traffic, less congestion, shorter distances (that are more easily cycled) and, in many cases, safe cycling on wide, quiet backstreets. This is the most likely explanation for the much higher percentages cycling to work in regional areas before helmet laws. The effect of the laws is demonstrated by the continued increase from 1986-91 in regional areas without enforced laws at the 1991 census, but obvious decreases in other regional areas. Note that there was a slight change in the date of the census. In 1986, it was on 30 June, compared to 6 August in 1991 and 1996, however the effect of this change is likely to be minimal.



Lower urban speed limits should have made cycling even safer in regional cities. In addition to shorter travel distances and wide, quiet streets with low traffic volumes, reductions in speed limits should have made cycling in regional areas even safer than just before helmet laws. In the early 1990s, most regional towns had urban speed limits of 60 km/hr. Nowadays the default for urban areas is usually 50 km/hr, often with lower limits in school zones and pedestrian priority areas. Although sports cyclists often ride fast on roads with speed limits of 100 km/hr, most transport cycling in regional areas is on roads with limits of 50 km/hr or less.

Misleading claim that the low bikeshare usage was due to poor setup or high charges. Prof. Olivier stated: “The Australian bike-sharing schemes have been set up very poorly. A lot of us were at the Gold Coast a month ago for a conference. My hotel was a bit away from the conference centre and had some bike share bikes. It would have cost me \$99 to use them over three days, or I could have spent \$5 a day and ridden the tram.”

The daily bike hire - \$2/day in Brisbane and \$2.90/day in Melbourne – is actually cheaper than Prof Olivier’s \$5 tram fare; it covers as many trips (lasting up to 30 minutes) as desired. The only limitation is that in Brisbane users have to wait for 2 to 5 minutes after returning a bike before they can take it out again. Prof Olivier’s \$99 cost is for a different setup (presumably aimed at day-long hires for tourists). His comment is therefore misleading, telling us nothing about Brisbane’s and Melbourne’s schemes, which attempted to replicate the successful bike share schemes of many cities around the world, including Paris, London, Dublin, Boston, New York and Miami Beach Bike. As noted in my submission to the Inquiry, the City of Sydney wanted to introduce a bicycle hire scheme, but the poor performance of Melbourne’s scheme, in which only 20,600 bikes were hired in the first four months, convinced the council to reconsider.

Evidence that Dutch cyclists who wear helmets are more likely to be injured than their non-helmeted counterparts “Although the Netherlands is probably the safest country in the world for cycling, helmet wearing among Dutch cyclists is rare. It has been estimated that only about 0.5 percent of cyclists in the

Netherlands are helmeted. However, according to Dutch Government data (Rijkswaterstaat, 2008), 13.3 percent of cyclists admitted to hospital were wearing helmets when they were injured.”

This suggests that Dutch cyclists who wear helmets participate in more extreme cycling, take more risks, and are much more likely to be injured than other cyclists in Holland. Source: *Why does wearing a helmet appear to increase the risk of being injured so substantially?...* <http://www.cyclehelmets.org/1261.html>

Leaders in road safety would examine unintended consequences of helmet laws – discouraging cycling, risk compensation and reduced safety in numbers. Prof Olivier commented “we do not have any idea how often people cycle—how much they cycle. In countries like the Netherlands they collect that data routinely. Australia does not.” This information is available for other countries. A new study of exposure-based cycling hospitalisation rates in Canada concluded that “helmet legislation was not associated with hospitalisation rates for brain, head, scalp, skull, face or neck injuries” but that “for traffic-related injury causes, higher cycling mode share was consistently associated with lower hospitalisation rates”.⁹ If Australia wants to take a leadership role in making cycling safer, we should follow the best available evidence and remove barriers such as helmet laws that have not been shown to improve safety, and instead concentrate on the findings of this important new study – that making cycling more popular is the best way to make it safer.

Sources of information

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7. Gillham, C. *Cyclist injury data before and after helmet law in Western Australia*. Available at: <http://www.cycle-helmets.com/results.html#morbidity-1970> (accessed Nov 2015). 2015.
8. Ballestas, T., C. Wilkinson, and T. Weeramanthri, *Rise in bicycle-related injury hospitalisation rates in middle-aged adults, 2000–09*. *Australian and New Zealand Journal of Public Health*, 2011. **35**(6): p. 580-581.
9. Teschke, K., et al., *Bicycling injury hospitalisation rates in Canadian jurisdictions: analyses examining associations with helmet legislation and mode share*. *BMJ open*, 2015. **5**(11): p. e008052.