

Chapter 2

Evidence in support of repealing bicycle helmet legislation

2.1 The view that the state should not intervene in a matter of personal choice was reflected in the evidence of a substantial number of individual submitters who argued that MHL had reduced their enjoyment of cycling or had stopped their cycling altogether for reasons of discomfort or inconvenience.¹

2.2 However, the arguments supporting repeal of MHL varied considerably and ranged from personal preference to consideration of the net societal benefits. These submitters suggested that the compulsory requirement discourages people from riding (thereby forgoing health benefits and contributing to obesity);² contributes to the image of cycling as a dangerous activity;³ and redirects focus away from unsafe infrastructure and poor driver attitudes.⁴ Some questioned the evidence that helmet legislation has achieved any meaningful reduction in the rate of brain or head injuries while others contended that there was a potential increase in the risk of brain trauma associated with helmets.⁵ These views are further explored in this chapter.

Efficacy of bicycle helmets

2.3 The Bicycle Transport Alliance argued that the introduction of the MHL was a 'political decision taken to create a good image, without any proper research or consideration of the consequences'.⁶ Further, the view was put to the committee that 25 years on, there is 'still a lack of international consensus on the effectiveness of a helmet *in the event of an accident*, with the protective effects frequently overstated'.⁷ Freestyle Cyclists Inc. continued:

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- 1 Reasons given included that: helmets cause hair to become messy and create a messed up appearance, especially in relation to cycling to work; the rider's head becomes sweaty; in hot climates, wearing a helmet is very hot and uncomfortable; helmets are inconvenient as cyclists have to carry a helmet with them at all times; a rider is unable to wear a hat underneath, exposing sun to the face and neck; and skin allergies and irritation. Ms Yvonne Poon, *Submission 218*, p. 2; Mr Paul Oborn, *Submission 128*, p. 1; Mr Chris Wright, *Submission 392*, p. 1; Mr Troy Parsons, *Submission 212*, p. 4; Mr Brian Davis, *Submission 269*, p. 1; Mr Edward Stratton-Smith, *Submission 14*; Mr Sam Arman, *Submission 24*.
 - 2 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 1; Professor Chris Rissel, *Submission 133*, p. 2; CycleSafe, *Submission 4*, p. [3]; Dr Andreas Schwander, *Submission 18*, p. 1; Mr Andrei Chalnev, *Submission 19*.
 - 3 Professor Chris Rissel, *Submission 133*, p. 2; Cyclists' Rights Action Group, *Submission 159*, pp 1–2; Mr Chris Gillham, private capacity, *Committee Hansard*, 16 November 2015, p. 9; Ms Eveliene Ward, *Submission 13*; Mr Richard Oddy, *Submission 22*.
 - 4 Professor Chris Rissel, *Submission 133*, p. 2.
 - 5 Professor Chris Rissel, *Submission 133*, p. 2; Cyclists' Rights Action Group, *Submission 159*, p. 3; Mr Chris Gillham, private capacity, *Committee Hansard*, 16 November 2015, p. 7.
 - 6 Bicycle Transport Alliance, *Submission 82*, p. [2].
 - 7 Freestyle Cyclists Inc., *Submission 95*, p. [1].

The positive effects of mandatory helmet legislation were assumed to be a reduction in the extent and severity of head injuries to cyclists, including mortality. Whilst there is some evidence that there is a benefit to wearing a helmet *in the event of an accident* (emphasis crucial), the effect on a whole population of mandating helmet wearing would appear to have been that it makes cycling, per unit distance travelled, slightly less safe overall, with no significant improvement in head injury rates or severity.⁸

2.4 Others questioned the efficacy of helmets in protecting cyclists.⁹ The key arguments in regard to efficacy included the view that:

- there was no substantive decline in head injury rates following the introduction of MHL;
- helmets only provide protection to the brain when the cyclist is travelling at slow speed; and that
- helmets may actually increase the risk of brain injury.

2.5 In relation to the first point, CycleSafe stated that if helmets had been successful, there would have been a large reduction in head injuries. Similarly, Dr Dorothy Robinson explained that:

[d]espite the large increases in the percentages of cyclists wearing helmets as a result of the mandatory helmet laws, the proportions of cyclists with head injuries admitted or treated at hospital declined by an average of only 13 [per cent].¹⁰

2.6 The point was made that if helmet legislation had been effective in preventing head injuries, there would be a fall in head injury incidents but no other injuries.¹¹ Yet, the committee was informed that a 1996 study in NSW and Victoria found that the decline in cycling was at least as substantial as the decline in head injuries.¹² Further, CycleSafe noted that the data on hospital admissions in Victoria revealed a clear fall in non-head injuries as well as in head injuries.¹³

2.7 Freestyle Cyclists Inc. suggested that the effectiveness of a helmet in the event of an accident has been overstated.¹⁴ It was put to the committee that a soft-shell bicycle helmet only provides brain protection at impact speeds of up to approximately 18 kilometres (km) per hour.¹⁵ At the same time, it was argued that helmets only

8 Freestyle Cyclists Inc., *Submission 95*, p. [1].

9 Professor Chris Rissel, *Submission 133*, p. 2.

10 D. L. Robinson, 'Head injuries and bicycle helmet laws', *Accident Analysis and Prevention Journal*, Vol. 28, no. 4, p. 473.

11 CycleSafe, *Submission 411*, p. [3].

12 Cyclists' Rights Action Group, *Submission 159*, p. 2.

13 CycleSafe, *Submission 411*, p. [3].

14 Freestyle Cyclists, *Submission 95*, p. [1].

15 Mr Chris Gillham, *Submission 60*, p. 7.

protect against 10 to 15 per cent of head injuries. According to Professor Chris Rissel, MHL have had little impact on head and brain injuries, because the actual risk of such injuries is very low per time or km exposure.¹⁶

2.8 It was suggested that the average person would not be likely to experience a serious head injury in a lifetime of cycling.¹⁷ Mr Colin Clarke put to the committee that a person cycling two hours per week for 50 years would cycle for a total of 5200 hours and, over that time, only have a one per cent risk of hospital admission for serious head injury.¹⁸

2.9 The view was also put that helmets may actually increase the risk of brain injury. Mr Bill Curnow, President of the Cyclists' Rights Action Group argued:

Protecting the brain from injury that results in death or chronic disablement provides the main motivation for wearing helmets. Their design has been driven by the development of synthetic polystyrene foams which can reduce the linear acceleration resulting from direct impact to the head, but scientific research shows that angular acceleration from oblique impulse is a more important cause of brain injury. Helmets are not tested for capacity to reduce it and, as Australian research first showed, they may increase it.¹⁹

2.10 Mr Curnow further suggested that the most serious brain injury is caused by rapid rotation of the head and not from a direct blow. As helmets have holes for ventilation, he argued that if any of those holes hit a rough surface, such as bitumen, they would grip and twist, with the twisting action causing serious brain injury.²⁰

Perceptions of risk

2.11 Some evidence to the committee suggested that MHL had in fact increased the total number of cyclist hospital admissions, rather than decrease them.²¹ Mr Chris Gillham stated that a primary cause of this was 'risk compensation', where cyclists ride faster or more dangerously because they believe their helmet will prevent serious injury.²² He drew on a recent UK study which found that people take more risks when they ride a bike with, rather than without, a helmet and that:

Cyclists as a proportion of all road crash injuries in Australia have increased by about 80 to 90 per cent over the past 20 years, and that surely indicates that something is wrong.²³

16 Professor Chris Rissel, *Submission 133*, p. 6.

17 Professor Chris Rissel, *Submission 133*, p. 6.

18 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 23.

19 Mr Bill Curnow, cited in Cyclists' Rights Action Group, *Submission 159*, Attachment 1, p. 1.

20 Mr Bill Curnow, Cyclists' Rights Action Group, *Committee Hansard*, 16 November 2015, p. 5.

21 Mr Chris Gillham, *Submission 60*, p. 7.

22 Mr Chris Gillham, *Submission 60*, p. 7.

23 Mr Chris Gillham, private capacity, *Committee Hansard*, 16 November 2015, p. 2.

2.12 Further, CycleSafe argued that helmet wearing can increase accidents by changing the attitudes of drivers, with drivers giving less room when overtaking helmeted cyclists.²⁴ Similarly, Mr Clarke argued that:

The actual risk of serious head injury when cycling is low and the risk of accident increases with helmet use. Also, the risk of impact to the helmet compared with a non-helmeted head increases. The personal perception of improved safety is likely to increase with more accidents and the impacts but in most cases, actual safety is decreasing with more accidents and impacts.²⁵

MHL and cycling participation rates

2.13 Mr Clarke drew on road traffic accident data to demonstrate that there had been a decline in cycling participation rates (including amongst children riding to school and adults cycling to work) since the introduction of helmet legislation in Australia.²⁶ Similarly, Professor Rissel argued that, based on census data, cycling to work levels had not recovered to the 1986 level, with cycling to work representing only 1.2 per cent of journeys in 2006. He made the point that there were fewer cycling trips in Australia in 2011 than in 1985, despite population increases.²⁷

2.14 Submitters cited evidence suggesting that helmet laws were associated with a:

- sustained reduction in cycling as a means of transport from 1986 to 2011, accounting for one per cent of all trips to work;²⁸
- decline by 36 per cent in the number of people cycling in Melbourne following the introduction of Victoria's helmet laws;²⁹
- decline from an upward trend in bicycle trips to work in regional Queensland, peaking at 3.2 per cent in 1991 (prior to the MHL) and which now stands at 1.1 per cent.³⁰
- drop of 90.6 per cent of female secondary students cycling in Sydney, down from 214 in 1991 to 20 in 1993;³¹ and
- reduction of cycling levels in regional areas of Victoria by 44.5 per cent in 1991-92 compared to 1988-89.³²

24 CycleSafe, *Submission 411*, p. [5].

25 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 23.

26 Mr Colin Clarke, *Submission 4*, Attachment 1, pp 8–11.

27 Professor Chris Rissel, *Submission 133*, p. 2.

28 Freestyle Cyclists Inc., *Submission 95*, p. [3].

29 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 6.

30 Freestyle Cyclists Inc., *Submission 95*, p. [3].

31 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 8.

32 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 7.

2.15 Many submitters held the view that the requirement to wear a helmet was consistently identified as a primary barrier to improving cycling rates in Australia.³³ They suggested that the removal of the mandatory requirement would lead to an increase in cycling participation and improve long-term public health as well as positively impact traffic congestion, road safety and pollution levels.³⁴

2.16 Submitters argued that the drop in cycling participation brought about by MHL negatively impacted the safety of cyclists because of the 'safety in numbers' effect. That is, the more people that walk or cycle, the safer it becomes to walk or cycle. By diluting the effect of safety in numbers, MHL have the perverse effect of increasing serious injury rates among those who continue to cycle.³⁵

2.17 Mr Clarke explained that when motorists expect to encounter cyclists, the risk of injury per cyclist declines.³⁶ Mr Aaron Ball stated that preventing crashes through a 'safety in numbers' approach is a more effective road strategy than ensuring people are wearing helmets if they do crash.³⁷

2.18 In addition, the point was made that mandating bicycle helmets has encouraged the perception that cycling is inherently dangerous. As a result, submitters argued that many Australians are discouraged from regular or occasional recreational cycling.³⁸

2.19 Attention was drawn to cycling rates in the NT where mandatory legislation was amended in 1994 to make it legal for a person over 17 years of age to ride on separated footpaths and cycle paths without a helmet.³⁹

2.20 According to the Australian Cyclists Party, the NT has the highest ridership of any state or territory as measured by the Australian Bureau of Statistics census.⁴⁰ Further, Professor Rissel submitted that cycling injury rates in the NT are commensurate with the national average.⁴¹ It was suggested, therefore, that the NT

33 According to Professor Chris Rissell, approximately one in six current cyclists (16.5 per cent) cite helmets as a reason for not cycling more. *Submission 133*, p. 2. See also Mr Colin Clarke, *Submission 4*, Attachment 1, p. 6; Mr Ben Triefus, *Submission 8*.

34 Mr Chris Gillham, *Submission 60*, p. 1; Australian Cyclists Party, *Submission 222*, p. 1.

35 Professor Chris Rissel, *Submission 133*, p. 6; Mr Edward Re, *Submission 6*; Mr Ben Triefus, *Submission 8*.

36 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 30.

37 Mr Aaron Ball, *Submission 100*, p. 5.

38 Mr Chris Gillham, *Submission 60*, p. 7; CycleSafe, *Submission 411*, p. [2].

39 Professor Chris Rissel, *Submission 133*, p. 2; Northern Territory Government, Cycling Safety, http://www.transport.nt.gov.au/_data/assets/pdf_file/0003/25635/cyclingsafety.pdf (accessed 25 November 2015)

40 Australian Cyclists Party, *Submission 222*, p. [2].

41 Professor Chris Rissel, *Submission 133*, p. 2.

exemption demonstrated the point that a relaxation of helmet laws improves cycling participation rates without any corresponding increase in injury rates.⁴²

International perspective and the bike share experience

2.21 It was pointed out that while MHL continue to be upheld in Australia, the rest of the world has not been persuaded to follow Australia's example.⁴³ Further, it was argued that MHL were responsible for the low participation rates in Australia's two public bike share schemes, which have the lowest usage rates in the world.⁴⁴

2.22 There are more than 400 cities operating bike share programs worldwide including London, Paris, Dublin, New York and Barcelona.⁴⁵ It was suggested that such schemes serve as a significant part of an integrated transport system and their safety record was excellent.⁴⁶

2.23 Bike share schemes were introduced in Melbourne (*Melbourne Bike Share*) and Brisbane (*CityCycle*) in 2010 with approximately 600 and 1800 bicycles respectively. Reports suggest that Sydney is contemplating the introduction of its own bike share scheme.⁴⁷

2.24 Both operational schemes have experienced low ridership in comparison to schemes operated around the world.⁴⁸ As of May 2011, users made about 13,000 trips each month under the Melbourne scheme, which was short of the target of 25,000 trips per month.⁴⁹ In comparison:

- the Dublin bike hire scheme—approximately the same size as Melbourne's scheme—has had ten times the daily use with no serious injuries.⁵⁰
- a recently introduced New York bike share system attracted more trips in the first month of operation than the combined total in Melbourne and Brisbane throughout their existence.⁵¹

42 Australian Cyclists Party, *Submission 222*, p. [2].

43 Freestyle Cyclists, *Submission 95*, p. [1].

44 Luke Turner, 'Australia's helmet law disaster', *IPA Review*, Volume 64, p. 98.

45 Freestyle Cyclists Inc., *Submission 95*, p. [3].

46 Freestyle Cyclists Inc., *Submission 95*, p. [3].

47 Tim Dick, 'Avoid the mistakes of Melbourne and Brisbane and bike-sharing in Sydney can work', *Sydney Morning Herald*, 18 October 2015, <http://www.smh.com.au/comment/avoid-the-mistakes-of-melbourne-and-brisbane-and-bikesharing-in-sydney-can-work-20151018-gkbude.html> (accessed 10 November 2015).

48 Elliot Fishman, 2014, *Bikeshare: barriers, facilitators and impacts on care use*, PhD Thesis, Queensland University of Technology, Abstract, http://eprints.qut.edu.au/78009/4/Elliot_Fishman_Thesis.pdf (accessed 11 November 2015).

49 Benjamin Preiss, 'Bike share scheme disappointing', *The Age*, 31 May 2011, <http://www.theage.com.au/victoria/bike-share-scheme-disappointing-20110531-1fdto.html> (accessed 10 November 2015).

50 Professor Chris Rissel, *Submission 133*, p. 2.

- one million bikes were hired in the first two weeks of the London scheme and one million in the first four months in Montreal compared to 20,600 bikes in the first four months of the Melbourne scheme.⁵²

2.25 Freestyle Cyclists Inc. argued that the low uptake of the bike share schemes in Australia was 'almost wholly attributable to mandatory helmet requirements'.⁵³ In fact, Professor Rissel informed the committee that 61 per cent of respondents in a 2014 survey identified helmet issues as the main barrier to bike share participation in Australia.⁵⁴

Health and social costs of MHL

We can think of no comparable example from the fields of health or safety, where healthy behaviour (riding a bicycle) is banned in the absence of a safety intervention of so little demonstrated worth. We can think of no worse example of the stubborn intransigence of government in refusing to acknowledge the widespread collateral harm caused by a well intentioned though misguided invention.⁵⁵

2.26 Professor Rissel and a number of other submitters argued that the health and social benefits of cycling far outweigh the health risks from traffic injuries.⁵⁶ They suggested that, for this reason, MHL serve as a net public health loss.⁵⁷ In this regard, Mr Gillham stated that:

Data published over the past 25 years has consistently shown a substantial and permanent decline in the proportion of Australians cycling, with consequent damage to public health.

The data show tens and probably hundreds of thousands of Australians are discouraged from regular or occasional recreational exercise and instead mostly use their cars for transport, increasing traffic congestion and the likelihood of road trauma.⁵⁸

2.27 According to CycleSafe, most evaluations suggest that the cost of discouraging a healthy and environmentally friendly form of transport is much greater than any reductions in injuries from increased helmet wearing.⁵⁹

51 Freestyle Cyclists Inc., *Submission 95*, p. [4].

52 CycleSafe, *Submission 411*, p. [3].

53 Freestyle Cyclists Inc., *Submission 95*, p. [4].

54 Professor Chris Rissel, private capacity, *Committee Hansard*, 16 November 2015, p. 10.

55 Freestyle Cyclists Inc., *Submission 95*, p. [4].

56 Professor Chris Rissel, *Submission 133*, p. 2; Mr Colin Clarke, *Submission 4*, Attachment 1, p. 1; Mr Chris Gillham, private capacity, *Committee Hansard*, 16 November 2015, pp. 2–3; Dr Dorothy Robinson, CycleSafe, *Committee Hansard*, 16 November 2015, p. 13; Professor Piet de Jong, Macquarie University, *Committee Hansard*, 16 November 2015, p. 14.

57 Professor Chris Rissel, private capacity, *Committee Hansard*, 16 November 2015, p. 7.

58 Mr Chris Gillham, *Submission 60*, p. 7.

59 CycleSafe, *Submission 411*, p. [1].

2.28 Mr Clarke went further, citing a UK study which calculated that the life years gained from cycling outweighed the life years lost in accidents by 20 times.⁶⁰ Therefore, helmet laws have not delivered a net societal health benefit, with a calculated cost benefit ratio of 109 to 1.⁶¹

2.29 A similar point was made by Professor Piet de Jong, Professor of Actuarial Studies at Macquarie University who compared the possible beneficial effect of a helmet in an accident involving the head with that of the impact of helmet laws in reducing cycling rates. He continued:

If you set off those two effects, then the net health impacts of a mandatory helmet law appears to be, under almost every scenario, negative. That is not to say that individuals should not wear helmets nor that parents should not require their kids to wear helmets. It just says that there is a large unintended consequence of mandatory helmet laws that tends to swamp the possibly good effects of people wearing helmets.⁶²

2.30 Many individual submitters stated that they would cycle more often, and particularly for short journeys, if there were not required to wear a helmet.⁶³ Dr Dorothy Robinson, a Researcher with CycleSafe, described these cyclists as the 'safest cyclists' as they are often the most risk adverse. Yet, she noted that it was amongst these safer cyclists, many of whom are in regional areas, that the most substantial decline in cycling rates have occurred.⁶⁴

2.31 Further, the point was made that cycling plays a key role in preventing illnesses. According to Mr Clarke, about 80,000 deaths a year are related to obesity and cardiovascular disease compared to 50 deaths a year from cycling. He suggested that cycling gives a level of fitness equivalent of being ten years younger and a life expectancy two years above the average.⁶⁵

Law enforcement

2.32 Another related concern was that MHL send the wrong signal, as they penalise cyclists for engaging in an activity that provides positive health benefits.⁶⁶

2.33 Evidence to the committee suggested that the introduction of MHL led to a 90 per cent increase in traffic infringement notices issued to cyclists and that, currently, failure to wear a helmet accounts for over two-thirds of infringement notices issued to cyclists.⁶⁷

60 Dr Mayer Hillman cited in Mr Colin Clarke, *Submission 4*, Attachment 1, p. 1.

61 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 1.

62 Professor Piet de Jong, Macquarie University, *Committee Hansard*, 16 November 2015, p. 17.

63 Mr Chris Younger, *Submission 371*, p. 1.

64 Dr Dorothy Robinson, CycleSafe, *Committee Hansard*, 16 November 2015, p. 17.

65 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 27.

66 Professor Chris Rissel, *Submission 133*, p. 2.

67 Freestyle Cyclists Inc., *Submission 95*, p. [3].

2.34 In Victoria, as an example, 200,000 fines have been issued for not wearing helmets.⁶⁸ At the same time, the respective penalty rose from \$15 in 1990 (when MHL were introduced in Victoria) to \$176 in 2014 and to \$185 in 2015.⁶⁹

2.35 As well as increased penalties for not wearing bicycle helmets, submitters argued that the courts have become overloaded with the prosecution of those who have not paid their fines.⁷⁰ Further, Ms Katy Francis described to the committee how she had been arrested and held for 24 hours for unpaid bicycle helmet fines:

Ms Francis: I was taken to the local lockup and strip-searched, is that what you are referring to?

CHAIR: Yes.

Ms Francis: I did not put that in my submission.

CHAIR: Somebody advised me about it. What was the outcome of that? Did you lodge a complaint? Were you convicted?

Ms Francis: I believed it was what they did to everyone who was arrested, that it was part of the punishment for being a criminal.

CHAIR: Were you a criminal?

Ms Francis: I had not paid my fines.

CHAIR: Does not paying fines make you a criminal?

Senator CANAVAN: But you were not convicted of anything. You had been arrested.

Ms Francis: No, I had not been to court. I was arrested for not paying my fines.

CHAIR: Were they on-the-spot fines?

Ms Francis: Yes.

CHAIR: So you had never been to a court?

Ms Francis: No.

CHAIR: For not paying on the spot fines?

Ms Francis: Yes.

CHAIR: You were arrested?

Ms Francis: I was arrested without warning as well.

CHAIR: You were arrested without warning, and you were strip-searched in a police station. Were you held for long?

68 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 29.

69 Ms Robyn Seymour, Director Vehicle and Road Use Policy, VicRoads, *Committee Hansard*, 16 November 2015, p. 55.

70 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 29; Ms Kathy Francis, *Submission 52*, p. 5.

Ms Francis: I was transferred from Kyneton to Keilor, because the Kyneton jail was not adequate. I was pregnant at the time, and it was not safe enough, so I was transferred to Keilor. I spent 24 hours in Keilor, and I was then released on a community service order. I should add that I was supposed to serve the community service order from the start, but there was confusion over what they were going to do with me, and that never happened. That is why I accidentally ended up in jail.⁷¹

2.36 Concern was expressed by submitters that issuing 'excessive' fines to persuade or coerce people to wear helmets, discouraged cycling and served no social benefit.⁷² The point was argued that an activity that benefits the individual and society had been criminalised by MHL.⁷³

2.37 Furthermore, Freestyle Cyclists Inc. suggested that:

It has been estimated that per unit distance travelled, failure to wear a bicycle helmet is the most heavily enforced of any traffic regulation in Australia. With this focus on one minor behavioural issue, police are failing to focus on the matters that really put cyclists' lives at risk – driver behaviour. It also represents a ludicrous over policing of a choice which is left to individual adult discretion everywhere in the world except Australia, New Zealand and the United Arab Emirates.⁷⁴

71 Ms Kathy Francis, private capacity, *Committee Hansard*, 16 November 2015, pp 22–23.

72 Mr Colin Clarke, *Submission 4*, Attachment 1, p. 29.

73 Ms Kathy Francis, private capacity, *Committee Hansard*, 16 November 2015, p. 23.

74 Freestyle Cyclists Inc., *Submission 95*, p. [3].