

Questions on Notice from the Transport, Housing and Local Government Committee Inquiry into Cycling Issues from the 18 June 2013 departmental briefing

Question 1: Can the committee be given the ages of cyclist fatalities.

Response

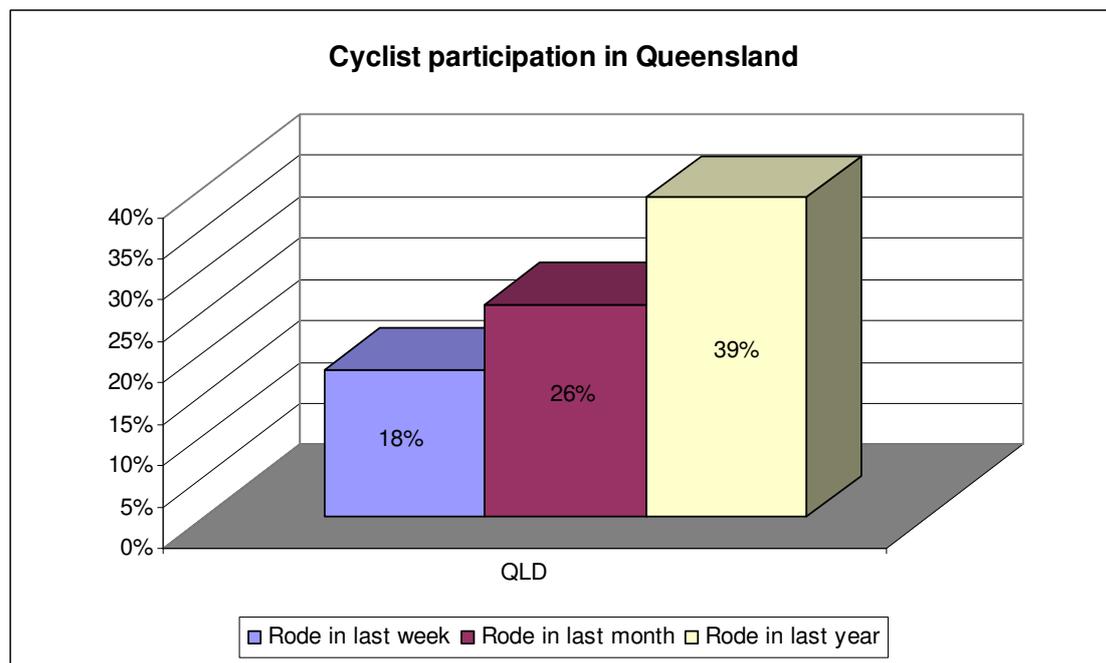
Answer previously provided to the Committee on 24 June 2013.

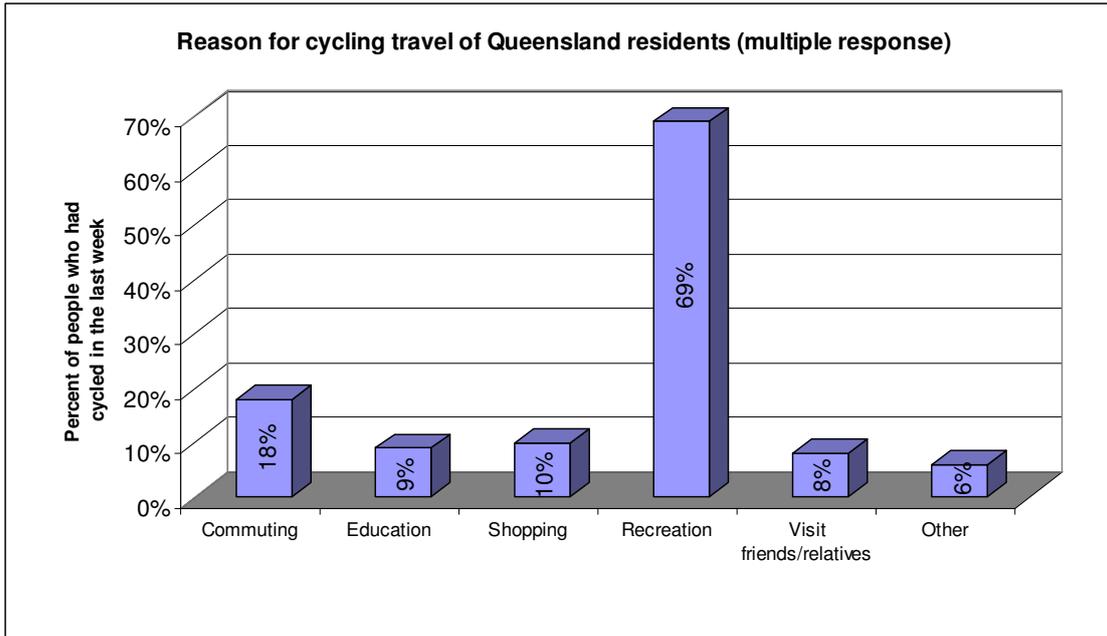
Question 2: Can the Department of Transport and Main Roads provide a breakdown of cycling participation numbers into those who commute, those who ride for recreation purposes, and age of riders?

Response

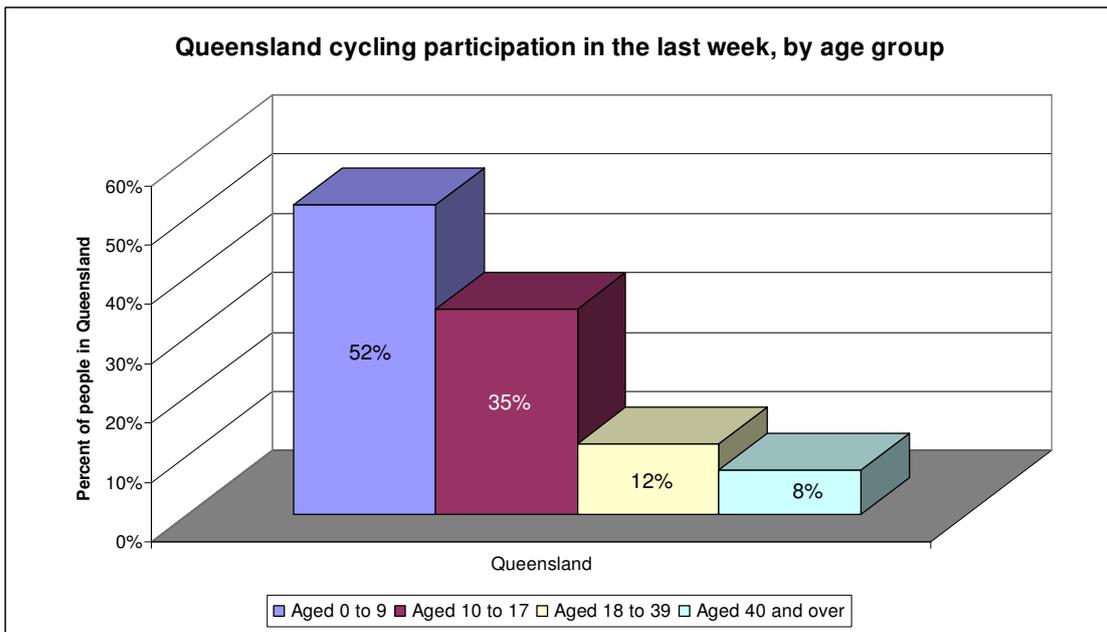
It is not possible to provide the absolute number of people cycling in Queensland, however, participation as the percentage of the population was recently measured in the 2011 National Cycling Participation Survey (NCPS). The following information has been sourced from the NCPS.

According to the survey 18 per cent of the Queensland population had cycled in the last week at the time of survey, this increased to 26 per cent and 39 per cent when the respondents were asked about cycling in the last month and the last year respectively.¹





In the survey, the main reason people in Queensland cycled in the last week was for recreation (69 per cent), this was followed by commuting (18 per cent).



In the survey, young people had the largest participation rates with 52 per cent of children aged 0 to 9 years and 35 per cent of young people aged 10 to 17 years cycling in the last week.

Question 3: Can the Department of Transport and Main Roads provide data on the nature of crashes for bicyclists and the ages of cyclist fatalities?

Response

Answer previously provided to the Committee on 24 June 2013.

Question 4: Can the Department provide statistics on the number of cyclists who ride as part of a club and the number of cyclists who ride as individuals?

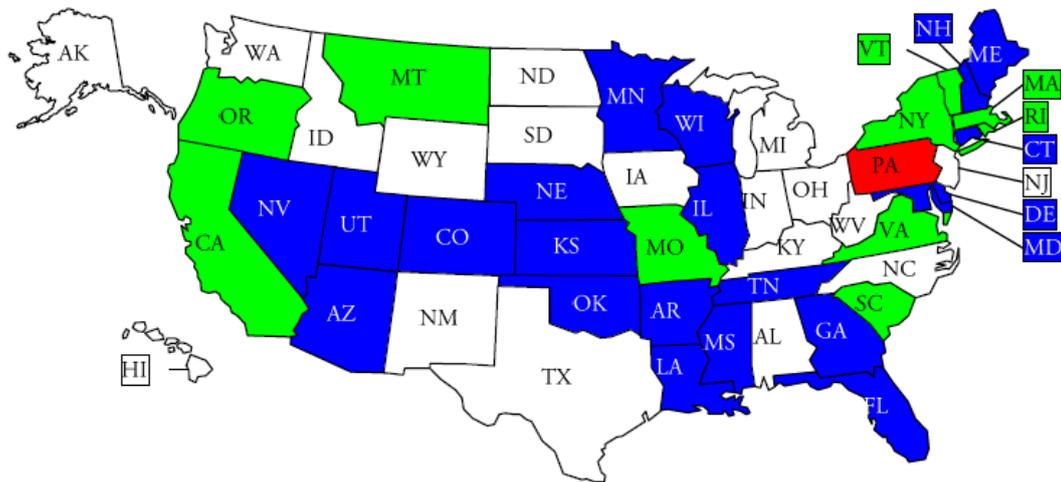
Response

Statistics on riding participation as part of a cycling club or at an individual level are not available.

Question 5: What has been learnt about the One Metre Rule (OMR) from the jurisdictions that have implemented it?

Response

Currently, in Australia the OMR has not been introduced as a law in any jurisdiction. The OMR has however been adopted by some international jurisdictions. International jurisdictions that are known to have implemented similar laws include Belgium and France (both 1 metre), while Spain has implemented a 1.5 metre rule. The OMR, which is called the three-foot law in America, has also been adopted by 21 American states, while Pennsylvania and Virginia have adopted four and two foot laws respectively².



Available: <http://www.ncsl.org/issues-research/transport/safely-passing-bicyclists.aspx>

The OMR requires motorists passing a bicycle travelling in the same direction to provide a minimum passing distance of one lateral metre between the vehicle and the cyclists.

An evaluation of this initiative was conducted for the New Jersey Department of Transportation and the Federal Highway Administration by the Edward J. Bloustein School of Planning and Public Policy of Rutgers University in 2012. It is important to note that the evaluation was conducted on qualitative research, involving cycling advocates in states where the OMR had been adopted. The evaluation found little published literature regarding the OMR that either evaluates its impact, or the suggested legislative strategies for its implementation, due to its relatively recent development as a road safety initiative.

The evaluation report states that by setting a specific passing distance, the OMR establishes a cyclists' right to space on roads, and this improves road user's

awareness of cyclists, further entrenching them as a legitimate road user. The author believes that with more cyclists using roads, motorists will become used to sharing the road with them which will further improve safety for cyclists.

The evaluation found an inherent problem with the OMR is the judgement of spatial distance between a motorist and a cyclist. This judgement issue can cause issues for both drivers and police. The report specifically mentions that there is an expectation of 'minimal enforcement' with the law due to these difficulties. Some study participants highlighted the OMR is more of an education tool that requires communication campaigns to build awareness rather than an instrument to punish drivers.

According to the evaluation, there is criticism of the OMR from cycle advocates that one metre (or three-feet) is not enough distance to pass safely under all circumstances, and this may encourage some drivers to pass too closely. The distance of one metre is the amount of space an average person needs to signal safely while operating a bicycle. Some American jurisdictions have integrated this information into their policies by removing any specific reference to distance. For example, the Oregon state traffic ordinance defines safe distance for passing bicyclists to be, "sufficient to prevent contact with the person operating the bicycle if the person were to fall into the driver's lane of traffic". A recommendation of the evaluation, which built off this criticism, is that the OMR should be integrated with a vulnerable user law. A vulnerable user law is where the person operating the heaviest vehicle has the responsibility to operate their vehicle in such a manner that they are ensuring the safety of the more vulnerable users with whom they are sharing the road.

The evaluation finds that the OMR provides little in terms of evidence of actual safety benefits for bicyclists due to the issues with judging the distance, ability to enforce the rule and that one metre is not enough space to pass a cyclist safely in all circumstances. To be more effective, the authors suggest undertaking an integrated approach that uses funding to conduct awareness and education campaigns to promote the OMR, while also ensuring legislation takes into account the shortcomings of the OMR rule through either non specific reference to the distance to be given to cyclists or through vulnerable user law.³

Question 6: Can the Department provide the participation rates of riding in Queensland for the past 20 years?

Response

In addition to the national cycling participation survey at Question 2, cycling participation figures are available in south east Queensland from 1992 from Department of Transport and Main Roads Household Transport Surveys (TMR). This data identifies cycling mode share, by looking at what modes of transport are used for trips. The Household Transport Survey (2009)⁴ shows that between 1992 and 2009, cycling consistently made up 2 per cent of the total transport used for trips in south east Queensland. The survey has not been conducted since 2009.

This is supported by Australian Bureau of Statistics Census data which shows that in 2001 cycling made up 1.6 per cent⁵ of travel to work by respondents aged 15 and over who travelled to work in Queensland on Census day. There was a slight decrease in this percentage in the 2006 Census to 1.3 per cent⁶, and this remained steady in 2011 (1.3 per cent⁷).

The NCPS data was first conducted in 2011 so is not available for a 20 year period. It is important to note that the data for the NCPS is collected for cycling in the last week, month and year for all people; whereas the Census measures trips to work on one day of the year for people aged over 15. This could explain the significant difference in the participation rates reported by each survey.

Question 7: Does the Department still have a Cycling Infrastructure policy? Is there a continuing investment in cycling facilities as new road works are undertaken?

Response

Answer previously provided to the Committee on 24 June 2013.

Question 8: Can the Department provide international fatality data for those countries that are referred to in the participation slide?

Response

Cycling fatality data can be provided for the countries referred to in the presentation apart from Austria and Switzerland. This data has been updated with 2010 figures⁸ which were the most recent available.

2010			
Country	Fatalities**	Population	Fatality rate
Australia***	38	22,300,000	0.170
Belgium	70	10,839,905	0.646
Canada	60	34,108,800	0.176
Czech	80	10,506,813	0.761
Denmark	26	5,534,738	0.470
France	147	64,658,856	0.227
Germany	381	81,802,257	0.466
Great Britain	111	62,026,962	0.179
Ireland	5	4,467,854	0.112
Italy	263	60,340,328	0.436
Netherlands*	138	16,485,787	0.837
Sweden	20	9,340,682	0.214
USA	623	308,745,538	0.202

See end note 8 for *, ** and ***.

Question 9: Is there any link between participation rates and fatality rates internationally? In particular, what are the injury and fatality rates where there are no mandatory helmet wearing laws?

Response

There have been a number of academic studies which have investigated links between cycling participation rates and fatality rates for international jurisdictions. The results of these studies have been mixed, with some studies establishing links such as Jacobsen (2003)⁹, who examined the relationship between the number of people bicycling and walking, and the frequency of collisions between both groups and motorists based on analysis of five data sets from America and Europe. The study proposed that “a motorist is less likely to collide with a person walking and bicycling if more people walk or bicycle”, and established a ‘safety in numbers theory’. This finding has been supported in more recent studies by Geyer et al.(2006) and Elvik (2009), as cited in Bhatia and Wier (2010)¹⁰.

However, in a 2012 study Wegman et. al.¹¹ concluded “that when the number of cyclists increases, the number of fatalities may increase, but will not necessarily do so, and the outcome is dependent on specific conditions. There is strong evidence that well-designed bicycle facilities (physically separated networks) reduce risks for cyclists, and therefore have an impact on the net safety result”. Bhatia and Wier (2010) also claimed the ‘safety in numbers’ theory, established by Jacobsen (2003), was a causal inference which has not been subject to a thorough and critical examination.

International fatality data for cyclists, as shown in the table above, shows that the Australian rate is significantly less than countries where there are no mandatory helmet wearing laws. In comparison to the Netherlands for example, Australia’s fatality rate per 100,000 people is nearly five times lower. In New Zealand, who have similar mandatory bicycle helmet laws to Australia, there were 10 bicycle fatalities in 2010¹². Based on population figures¹³, New Zealand’s fatality rate per 100,000 people was 0.229 in 2010.

Question 10: What are types of injury sustained by cyclists?

Response

In 2005, the Queensland Injury Surveillance Unit issued a bulletin on “Bicycle Injury in Queensland”¹⁴ which analysed bicycle related injuries which were presented to emergency departments between 1998 to mid 2004 (n=9,510).

According to the study, examination of nature and body location of injury data revealed that almost a third of injuries involved the upper limb (30 per cent) while approximately one quarter involved injury to the head, neck or face (23 per cent). Bicycle related head injuries accounted for 11 per cent of presentations in 5 to 16 year old children. Furthermore, one in four injuries resulted in a ‘fracture’ and an ‘open wound’, followed by ‘superficial injury’ (19 per cent), ‘sprain or strain’ (14 per cent) and ‘intracranial injury’ (7 per cent). Almost 30 per cent of analysed injuries involved the elbow, forearm, wrist or hand. 23 per cent involved injury to the head, neck or face, and 22 per cent involved injury to the knee, lower leg, ankle or foot.

Question 11: Where are the crashes involving cyclists occurring?

Response

Answer previously provided to the Committee on 24 June 2013.

Question 12: What are the other States/Territories in Australia doing to reduce crashes involving cyclists?

Response

The following information gives a high level overview from publically available information which has been gathered from online sources regarding other states and territories activities. Consultation with each jurisdiction would be necessary to further explore the extent of planned activities.

New South Wales

The New South Wales Bike Plan was released in May 2010. The Plan focuses on a number of key areas, one of which is "Making bike-riding safe for all". The emphasis of the actions is on skills training for bike riders and "share the road" road safety campaigns.

A campaign was recently announced in conjunction with the Amy Gillett foundation to promote cycling safety. Key messages will be 'a metre matters' and 'stop on red'. New South Wales government has also announced it will soon develop a Cyclist Safety Strategy.

Expenditure on cycling infrastructure in New South Wales includes the following:

- \$80 million over ten years to build the missing links in the Metro Sydney Bike Network
- \$78 million over ten years to fast track subregional bike networks for Parramatta, Liverpool and Penrith
- At least \$5 million every year for regional cities and local councils across NSW to be spent on neighbourhood cycleway networks

Victoria

The Victorian Cycling Strategy, "Cycling into the future", was released in December 2012. One of the six key 'Strategic Directions' in the Strategy is to "reduce safety risks". The emphasis of actions is on increasing the awareness of road rules and regulations, bike handling skills, and public education campaigns. Committed expenditure on cycling infrastructure in Victoria during 2012-13 was \$30 million.

TMR has no knowledge of any specific cycling safety campaigns. Comprehensive information is available on the government website about helmets, share the roads, learning to ride, road rules and visibility.

South Australia

'Be safe be seen' campaign focusing on clothing, equipment and sharing the road. Information is available on government website about cycling facts, grants to encourage cycling, bicycle lanes, bicycle education and road rules.

Western Australia

The draft Western Australian Bicycle Network Plan was released in 2012. This Plan focuses on network planning, design and construction. There are no actions specifically related to safety in the Plan. No information is available on the departmental website regarding cycling campaigns. There is information available on the Office of Road Safety website about helmets, sharing paths, maps and road rules.

Northern Territory

Bicycle Northern Territory campaign is currently on air to increase awareness of cyclists. Information is also available on Department of Transport website about being aware of cyclists on the road, and relevant offences and fines.

Tasmania

In April 2013, the Tasmanian government released the Safer Roads Vulnerable Road User Program. This initiative is funded for \$1.5 million for two years through the Tasmanian Road Safety Levy. The focus of the program is on implementing infrastructure treatments in areas where there is current or potential risk of conflict between vulnerable road users and motor vehicles (including urban and non-urban areas).

Australian Capital Territory

The Ten Year Master Plan for Trunk Cycling & Walking Path Infrastructure 2004 – 2014 is currently active. A network of main routes was developed as part of a review and this was used as the base network to identify deficiencies and missing links. The works necessary to address the identified deficiencies are prioritised into a program

of works to form a ten year master plan for the ongoing development of trunk cycling and pedestrian infrastructure in the ACT.

Safety campaign 'Lights, helmet, action' focussing on being seen at night and wearing a helmet.

Question 13: Are there any countries that have implemented an increasing distance matched to speed zones?

Response

It is understood that there has been speculation about some initiatives implementing an increasing OMR which is matched to speed zones. However, to date TMR has not been able to locate any official evidence regarding implementation of the initiative in this way.

¹ Australian Bicycle Council. (2012) . National Cycling Participation Survey 2011. Sydney, NSW.

² National Conference of Legislative Assembly. (2013). Safety Passing Bicycles 2012. Denver, Colorado. Retrieved 10 July, 2013, from <http://www.ncsl.org/issues-research/transport/safely-passing-bicyclists.aspx>

³ Voorhees, A.M., (2012). The 3 ft. Law: Lessons learned from a national analysis of state policies and expert interviews. New Brunswick, NJ.

⁴ Travel in south-east Queensland. (2012). Department of Transport and Main Roads. Brisbane, Queensland.

⁵ Australian Bureau of Statistics [ABS] (2001). Australian Census - Method of Travel to Work 2001. ABS, Canberra, ACT.

⁶ ABS (2006). Australian Census - Method of Travel to Work 2006. ABS, Canberra, ACT.

⁷ ABS (2011). Australian Census - Method of Travel to Work 2011. ABS, Canberra, ACT.

⁸ * 2009 Fatality data

** Includes pillions except for USA and Canada

*** 2011 Australian Cycling Participation Survey data used

Europe fatalities retrieved 11 July, 2013

http://ec.europa.eu/transport/road_safety/pdf/statistics/2010_transport_mode.pdf.

Canadian fatalities retrieved 11 July, 2013 from <http://www.tc.gc.ca/eng/roadsafety/tp-1317.htm#4b>.

American fatalities retrieved 11 July, 2013 from <http://www-fars.nhtsa.dot.gov/Main/index.aspx>.

Europe population retrieved 11 July, 2013

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&language=en&pcode=tps00001&tableSelectio n=1&footnotes=yes&labeling=labels&plugin=1>

American population retrieved 11 July, 2013 from <http://www.census.gov/2010census/data/>

Canada population retrieved 11 July, 2013 from <http://www.statcan.gc.ca/daily-quotidien/100929/dq100929b-eng.htm>

Australian population retrieved 11 July, 2013 from

<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1370.0.55.001~2011~Main%20Featur es~Population~3>

Europe participation retrieved 11 July, 2013 from http://ec.europa.eu/public_opinion/flash/fl_312_en.pdf

American participation - Pucher. J., Buehler. R., (2009). Analysis of Bicycling Trends and Policies in Large North American Cities: Lessons for New York. Alexandria, VA. Retrieved 11 July, 2013 from www.utrc2.org/sites/default/files/pubs/analysis-bike-final_0.pdf

Canadian participation retrieved 11 July, 2013 from

http://publications.gc.ca/collections/collection_2013/pc-ch/CH24-1-2012-eng.pdf

⁹ Jacobsen, P., (2003). Safety in numbers: more walkers and bicyclists, safer walking and bicycling. *Journal of Injury Prevention* 2003;9:205-209 doi:10.1136/ip.9.3.205. Retrieved 16 July, 2013 from www.injuryprevention.bmj.com/content/9/3/205.full

¹⁰ Bhatia, R., Wier, M., (2010). "Safety in Numbers" re-examined: Can we make valid or practical inferences from available evidence? *Accident Analysis & Prevention* Volume 43, Issue 1, January 2011, Pages 235–240. Retrieved 16 July, 2013 from

<http://www.sciencedirect.com/science/article/pii/S0001457510002484#>

¹¹ Wegman, F., Zhang, F., Dijkstra, A., (2012). How to make more cycling good for road safety? *Accident Analysis & Prevention*, Volume 44, Issue 1, January 2012, Pages 19–29, Safety and Mobility of Vulnerable Road Users: Pedestrians, Bicyclists, and Motorcyclists. Retrieved 16 July, 2013 from <http://www.sciencedirect.com/science/article/pii/S0001457510003416#>

¹² Ministry of Transport (New Zealand) Crash statistics for the year ended 31 December 2011. Wellington, NZ. Retrieved 23 July, 2013 from <http://www.transport.govt.nz/research/Documents/Cyclist-Crash-facts-2012.pdf>.

¹³ Statistics New Zealand (2010). National Population Estimates March 2010 Quarter. Wellington, NZ. Retrieved 23 July, 2013 from http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/NationalPopulationEstimates_HOTPMar10qtr/Commentary.aspx.

¹⁴ Scott, D., R. Hockey, R. Barker, and R. Pitt. (2005). Bicycle Injury in Queensland. Injury Bulletin No. 86, Queensland Injury Surveillance Unit. Brisbane, QLD. Retrieved on 11 July, 2013, from <http://fulltext.ausport.gov.au/fulltext/2005/qld/qisuissue86.pdf>