

Dear Senate Committee

Supplementary Part 1, Cycle helmet legislation issue, additional information with regards to misleading claims.

I note that two submissions make similar misleading claims.

No 112 AMA includes;

While some States observed an immediate decrease in the number of cyclists, in a short time the number of cyclists quickly returned to pre legislation numbers.

No 203 ARRB includes;

An early report from Monash University found that, although cycling numbers in Victoria reduced immediately after the introduction of helmet laws, within two years cyclist numbers had returned to the same level as prior to the legislation.

Neither submission provides a precise reference to the sentences. Both project the idea that cycling levels had recovered. Both groups appear to have had a long history of involvement in supporting helmet legislation.

I have concerns that both claims are misleading and not supported by good evidence. Data published by Robinson (1996 paper) provides details of counts of cyclists in Victoria (actually in Melbourne), 3121 in 1990, 2011 in 1991 and 2478 in 1992, a reduction of 20.6%. See Table 4 copied below,

Robinson DL; Head injuries and bicycle helmet laws; *Accid Anal Prev*, 28, 4: p 463-475, 1996

<http://www.cycle-helmets.com/robinson-head-injuries.pdf>

Table 4. Counts of cyclists in Victoria before and during the first two years of the bicycle helmet law (from Finch et al. 1993)

Year	1990 (Pre law)		1991 (1st law year)		1992 (2nd law year)	
	Total counted	No. helmeted	Total counted	No. helmeted	Total counted	No. helmeted
Children up to 11 years	261	170	235	183	281	216
<i>Change from 1990</i>			-26	13	20	46
Children 12-17 years	1293	272	670	302	713	421
<i>Change from 1990</i>			-623	30	-580	149
Adult cyclists	1567	564	1106	818	1484	1247
<i>Change from 1990</i>			-461	254	-83	683
All cyclists	3121	1006	2011	1303	2478	1884
<i>Change from 1990</i>			-1110	297	-643	878

In my submission No 4, pages 6, 7 and 40 provide additional information. On page 40 it states;

'Details provided in 2006 explain that the 1992 survey count was inflated by a cycle rally passing through one site and excluding this site reveals a 27% reduction from 1990 to 1992 205'.

205 Robinson DL, Do enforced bicycle helmet laws improve public health? *BMJ* 2006
<http://www.cycle-helmets.com/robinson-bmj.pdf>

In my 2007 paper extra information was provided, based on weekday counts of Melbourne cyclists. See page 2, details copied below.

http://www.ta.org.br/site/Banco/7manuais/colin_clarke_cycle_helmet.pdf

Weekend weather conditions suggest 1992 had the driest survey periods, followed by 1990 and 1991. The distribution of cyclists by the time of week and percentage on weekdays were: 1990 - 61%, 1991 - 71%, 1992 - 51%. From the total survey counts of 3121 in 1990, 2011 in 1991 and 2478 in 1992, the number of cyclists counted on weekdays can be calculated as:

Year ---- weekday calculated -- percentage drop

1990 ---- 1904

1991 ---- 1428 --- 25%

1992 ---- 1264 --- 34%

By the second year the number counted on weekdays was 34% below the pre law count and 9% below the 1991 level. Although adult and child bicyclists in 1992 were claimed to be only slightly less than pre-law numbers, weekend counts were inflated by a bicycle rally passing through one site (Robinson 2006:14). Despite this, counts of teenagers were still down by over 40%. The calculations for weekdays show that the decline in cycling continued into 1992 and that adult numbers had still not recovered.

Based on weekday counts, excluding the weekend rally data, the reduction for Melbourne calculates to be 34%. In Regional locations accident data suggests more of a reduction than in Melbourne.

It appears that the ARRB has selected misleading information in regards to Victoria.

The AMA claim also appears to be misleading.

For Western Australia Robinson 2006 provides some details for Perth;

'Automatic counters in Perth averaged 16 326 cycle movements a week in October-December 1991 (before helmet legislation). Movements per week after legislation for the same months were 13 067 in 1992, 12 470 in 1993, and 10 701 in 1994, reductions of 20%, 24%, and 35%. Counts on fine weather Sundays (used to assess recreational use) fell by 38% from 1662 during October=December 1991 to 1026 for the same period in 1992.'

Data for NSW from Smith and Milnthorpe 1993 report details riders observed from survey sites across the state, 13617 in 1991, 10419 in 1992 and 10720 in 1993. From 1991 to 1993 a reduction of 21.3% occurred.

In my submission (No 4 page 10), it mentions;

Details from adult recreational surveys were not compatible due to different instructions being given to observers in different years (see Note 1, Table 9 in 1991 report), with no information for 1990. In 1991, generally the 16-19 year olds were counted and over 20 year olds not. Recreational site selection was largely based on monitoring children's cycling activity. The 1993 report (page 26) advises against attaching too much significance to the much higher overall counts from recreational sites.

See Table 3.1 copied below. Please note 'CHANGE %' is from 1992 to 1993.

Table 3.1 Riders Observed in 1991, 1992 and 1993

SITE TYPE	AREA	NUMBER OF SITES	RIDERS 1991	RIDERS 1992	RIDERS 1993	CHANGE %
ADULTS						
Road Intersections	Sydney	25	3332	2796	2591	-7%
	Rural	14	2146	1933	1436	-26%
	Albury	1	256	-	224	
Recreation	Sydney	12	-	911	1345	48%
	Rural	10	-	545	1293	137%
	Albury 1993	1	-	-	33	
	Miscellaneous		1095	-	-	
	Totals (Adults)	63	6829	6185	6922	8% on sample in common
CHILDREN						
Road Intersections	Sydney	25	1073	633	488	-23%
	Rural	14	668	555	393	-29%
	Albury	1	41	-	64	
Recreation	Sydney	12	1024	785	749	-5%
	Rural	11	718	451	435	-4%
	Albury	1	157	-	21	
Primary Schools	Sydney	16	238	179	120	-33%
	Rural	12	627	392	462	18%
High Schools	Sydney	20	904	428	294	-31%
	Rural	12	1338	781	772	-1%
	Totals (Children)	123	6788	4234	3798	-12% on sample in common
ALL	TOTAL ALL	123	13617	10419	10720	-0.4% on sample in common

Smith NC, Milnthorpe FW. An observational survey of law compliance and helmet wearing by bicyclists in NSW. Roads and Traffic Authority of NSW. 1993
http://www.bicycleinfo.nsw.gov.au/downloads/cycle_research/smith_milthorpe_1993_survey.pdf

From Table 3.1 above, a 44% reduction in children counted occurred, from 6788 to 3798.

In Table 3.10 from the 1993 report, it details the count of adults at road sites in NSW, 5734 in 1991, 4729 in 1992 and 4251 in 1993, a reduction of 26%.

The initial relative low level of enforcement in NSW and different weather conditions for surveys are added complications.

The AMA claim; '*in a short time the number of cyclists quickly returned to pre legislation number*' is clearly misleading.