Briefing notes provided by Colin Clarke

Jersey States proposed cycle helmet law

In March 2010 after being provided with evidence from Deputy Green the States of Jersey agreed; "*to ensure that cyclists were required to wear a suitable safety helmet whilst cycling in the case of persons aged under the age of 18 years.*" In 2010 Deputy Green's evidence would have appeared to be reasonably strong, now 3 to 4 years later additional information raises serious doubts.

Deputy Green referred to;

3. Cycle helmet Laws in other jurisdictions;

(a) AUSTRALIA

Supporting evidence from Australia

(i) Evaluation of the Bicycle Helmet Wearing Law in Victoria During its First 12 Months: *M Cameron et al, Monash University Accident Research Centre, Report 32, 1992*

In the year following the introduction of a Law requiring all cyclists to wear helmets (1990), reductions ranging from 37% to 51% were recorded in the number of cyclists killed or admitted with head injuries to hospitals in Victoria. There were also substantial reductions (21% to 24%) in the number of severely injured cyclists who did not have head injuries.

Victoria implemented stricter drink drive and speed enforcement measures, resulting in the road fatality rate per 100000 population reducing from 17.9 in 1989 to 8.9 in 1992. The Transport Accident Commission (TAC) Victoria data shows for pedestrians from 1989 to 1992 head injury claimants reduced by 33% and for other injuries by 10%. Cycling levels reduced by 36% in Melbourne and indications from accident data suggest a higher reduction in the rest of the state. Road safety improved significantly and reductions occurred in killed or severely injured.

In 2013 Vic Roads reported on cycling head injuries stated;

'Two years after the legislation was introduced, there was a 16% reduction in head injuries in metropolitan Melbourne and 23% reduction in head injuries throughout Victoria.'

Refer

http://www.vicroads.vic.gov.au/Home/SafetyAndRules/SaferRiders/BikeRiders/WearingABicycleHelmet.htm

Vic Roads now refers to a smaller reductions in head injuries than were reported in 1992, a 16%/23% reduction compared with the claim of 37%-51%.

Robinson 1996 analysed children's accident data Victoria to investigate the effects of helmet legislation. **For Victoria, VISS data showed a 16% relative increase compared with the level of cycling activity**. The data behind this report was based on substantial surveys and hospital admissions and treatments. Refer Table 5

Robinson DL; Head injuries and bicycle helmet laws; Accident Analysis Prev, 28, 4: p 463-475, 1996

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

Details from New South Wales, Australia reported the number of injuries to children compared to the level of cycling activity, to provide estimates of the 'equivalent number of injuries for pre law numbers of cyclists', Table 2 in the report. The equivalent number of injuries for pre-law number of cyclists **increased** from 1310 (384 head + 926 other injuries) in 1991 to 2083 (488 head + 1595 other injuries) in 1993.

The long term data suggest that children's cycling levels are only a fraction of what they were before cycle helmet legislation was imposed. Census data also shows reduced cycling levels.

Other reports Deputy Green refers to have potentially serious weaknesses also.

Deputy Green referred to;
(b) NEW ZEALAND

Cycle helmet wearing became mandatory for all cyclists in 1994. In the 5 years after 1994, average annual injury totals were 707 – a reduction of 29%.

In 2012 the New Zealand Medical Journal published 'Evaluation of New Zealand's bicycle law'. This included national travel details showing a reduction of 40% in average hours cycled, from 11.4 to 6.9 hours, period 1989/90 to 97/98. The claimed of a 29% reduction in cycling accidents was in fact less than the 40% reduction in cycling. It is likely that the reduction in injuries was mainly due to reduced cycling.
Refer for details Table 1 in;
Clarke, CF, Evaluation of New Zealand's bicycle law, NZMJ 10 February 2012, Vol 125 No 1349
http://journal.nzma.org.nz/journal/125-1349/5046/ accessed 11.1.2014

The 'Summary' includes;

Cycling usage reduced by 51% (average hours cycled per person, % change from 89–90 to 06-09).
Cyclist's injury risk per hour increased by 20–32%.

The report mentions the findings of Sandra Tin Tin et al;
'Of particular concern are children and adolescents who have experienced the greatest increase in the risk of cycling injuries despite a substantial decline in the amount of cycling over the past two decades'

The ECF (European Cycling Federation[i]) stated
"the evidence from Australia and New Zealand suggests that the wearing of helmets might even make cycling more dangerous",
indicating that there are serious safety concerns.
Refer; European Cycling Federation; Improving bicycle safety without making helmet use compulsory; Brussels, Belgium. 1998.
http://www.ecf.com/wpcontent/uploads/2011/09/060131_ECF_Helmet_brochure_13.pdf

Deputy Green referred to;
(c) USA
Details were provided of 22 states that had introduced child helmet laws.

In 2004, there were a total of 42,636 traffic fatalities in the United States (population about 300 million). The 14 and under age group accounted for 5 percent (2,157) of those traffic fatalities.

Cycle helmet legislation was introduced in a number of states for children. The general road fatality rate tended to lower for states that introduced cycle helmet legislation. The 130 pedal cyclist fatalities in 2004 for the 14 and under age group represent a decrease of 53 percent from the 276 killed in 1994. From 1994 to 2004, the number of pedestrian fatalities in this age group decreased by 52 percent.
Refer http://www-nrd.nhtsa.dot.gov/Pubs/809906.PDF

The 52% and 53% reductions for pedestrian and cyclist could mainly be due to general road safety improvements and changes in hours walked or cycled. Child cycling reduced from 1998 to 2007 by between 16.9% and 29.9%.
Refer
http://www.nsga.org/files/public/2006YouthParticipationInSelectedSportsWithComparisons.pdf

Bicycle Helmet Safety Institute: *http://www.helmets.org/mandator.htm* is referred twice, this group has no full time staff and their published information is not subject to peer review

The supporting four reports listed are now more than 10 years old and refer to data in some cases more than 20 years old. None of the reports listed provides a risk value per hour cycled for helmeted v non-helmeted.

Deputy Green referred to;
(d) CANADA
Providing 'Supporting evidence from Canada'
He refers to Canada's provincial and local cycle helmet laws and supporting reports.
In 2013 the British Medical Journal reported;
'Benefit of cycle helmet laws to reduce head injuries still uncertain'
They conclude: "While helmets reduce the risk of head injuries and we encourage their use, in the Canadian context of existing safety campaigns, improvements to the cycling infrastructure, and the passive uptake of helmets, the incremental contribution of provincial helmet legislation to reduce hospital admissions for head injuries seems to have been minimal."

Data for Alberta reported;

'Surveys in Edmonton in 2000 (pre-law) and 2004 (post-law) suggest that cycling by children and teenagers has been significantly reduced compared with adults (59% children, 41% teenagers) (Hagel et al, 2006). Later surveys across several Albertan cities showed that child cycling had gone down by 56% and teenage cycling by 27% (BHRF, 1250; Karkhaneh, 2011)'.

http://www.cyclehelmets.org/1032.html

and

'Surprising stats suggest bike-accident head injuries have increased since Alberta passed a mandatory helmet law.'

http://www.cyclehelmets.org/1055.html

Deputy Green referred to;

(e) SWEDEN

'In 2005, Sweden introduced a law stating all cyclists under the age of 15 must wear helmets. The Swedish Embassy in London has reported that the law has been so successful to date that consideration is being given to extending the law to include adults.'

Accident data for 1998 to 2011, i.e. 7 years before legislation 1998 – 2004 and 7 years after 2005-2011 for the age group 0-14 years shows a reduction of 13.3% for cyclists and in comparison a reduction of 35.6% for pedestrians. Road safety in general improved leading to fewer injuries and fatalities.

Refer http://trafa.se/PageDocuments/Vaegtrafikskadade_i_sjukvaarden_2011.pdf

The rates of minor injuries, severe (including head) and fatality change in relation to impact speed. Accident data shows that head injuries have reduced for both cyclists and pedestrians as speed reduction measures have occurred. Experimental data from impacting cyclist and pedestrian dummies have shown major reductions in head acceleration and smaller reductions in other bodily parts. Refer page 466 and 467 http://www.cycle-helmets.com/robinson-head-injuries.pdf

The evidence provided in 2010 relating to several countries now appears to be very weak and insufficient to support introducing a legal requirement to wear them.