

The Bicycle Helmet Legislation Curse or Cure?

This document contains the slides and notes of the presentation made at Cycling 2001, Christchurch, by Nigel Perry, University of Canterbury.

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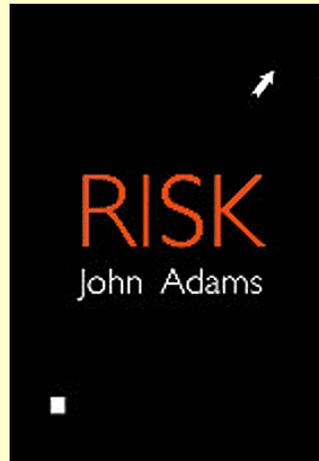
The Bicycle Helmet Legislation Curse or Cure?

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This is a very large and difficult topic to tackle and the bias in New Zealand towards not discussing the issues openly certainly does not help.

I could wade through pages of accident statistics, social studies, educational studies, risk analyses, etc. But that would take more than the time available. I will try instead to give a brief picture and show, whether you think in the end that the legislation is a curse or a cure, that it needs fixing either way. The status quo is simply wrong from any standpoint.

A Complex Issue



Injury analysis and prevention is a complex issue. Many, especially many bicycle helmet legislation promoters, would like to give the impression that *any* measure *claimed* to improve safety must be good. This of course does not make sense; the measure may not work, a “safety” device may not protect, etc. However in often the emotive area of safety, especially where children may be involved as in bicycling, it can be easy to mislead people; who will then vigorously defend a position based on little or no fact whatsoever. To illustrate this we quote from a review of the book “Risk”, by Prof John Adams (UK:

“**Fact** - when front seat belts were made compulsory in the UK, the number of driver deaths and serious injuries dropped - faster than the underlying trends. Great - proves the point doesn't it? The number of lives saved however was more than matched by an increase in the death rate amongst pedestrians and cyclists.

Fact - when seat belts were made compulsory for children, the number of deaths and serious injuries of children rose - against the historical trends.

Fact - when helmet use increased from nearly 0% to 30% between 1986 and 1996, there was virtually no difference between the trends for pedestrian and cycling fatalities and serious injuries.

Fact - mandatory cycle helmet introductions in New Zealand and Australia had no observable effect on cyclists head injuries when (in the case of Australia - a case conveniently ignored by helmet advocates) a drop in the total number of cyclists and cycling miles was factored in.”

Suddenly things look a little more complex than was first thought, or than many have been led to believe.

Is Bicycling Dangerous?

When over 50 times as many people are killed in cars or walking across the street, over 40 times as many commit suicide, over 30 times as many get murdered, over 15 times as many die from falling, over 9 times as many get poisoned, over 6 times as many die of burns, over 5 times as many drown, and over 25 times as many die of various and sundry causes, why is ***cycling*** perceived to be dangerous?

Ken Kifer, 'Is Cycling Dangerous?' (USA)

Though this quote comes from the USA the numbers are similar here. More pedestrians than bicyclists get killed by motorists every year.

Bicycling of course provides a positive health benefit, indeed in general if someone is using a bicycle as a mode of transport there is no better mode, in terms of health and safety, that they can use. Decrease bicycling and you in all probability decrease health.

So why is it perceived to be dangerous?

Simple: society has become more car-centric and there has been a long campaign to persuade people bicycling is dangerous - which is simply not true.

Unfortunately...

Unfortunately...

A lie told often enough becomes truth.

Vladimir Ilyich Lenin

...and so in New Zealand bicycling is falsely labeled as dangerous. In many other countries health authorities actively promote bicycling, and bicycle helmet legislation is either a non-issue or actively discouraged – the benefits are known to far outweigh any risks.

(Of course it is not only health interests which promote bicycling; traffic planners, city planners, educationists, social workers, etc. all promote it for the various benefits it provides over car-centric travel, while emphasising that cars too have a role too in the transport system.)

Is It Really A Lie?

“The estimated [annual] benefit for protective headwear [for car occupants] (in the form of a [bicycle] helmet) is between A\$380 million (assuming a fully airbag equipped fleet) and A\$500 million (assuming no vehicles with airbags)”

“In the short term, it is recommended that [helmets] be promoted by means of demonstration programs to show the benefits likely to accrue to both individuals and the community at large.”

It will probably come as a surprise to most of you, but helmets have been recommended for use by car occupants by the same people who recommend their use by bicyclists. This is something pro-bicycle helmet promoters usually fail to admit, and those in NZ have been no exception. As the quote shows the potential for monetary savings, which occur due to reduced injuries and deaths, is substantial.

The benefits of helmets outweighs those of all other options, such as interior padding and airbags. Despite this...

[Source: “Prevention of Head Injuries to Car Occupants, An Investigation of Interior Padding Options,” AJ McLean et al., CR 160, August 1997, Australian Transport Safety Bureau (formerly FORS)]

The Government Seems To Prefer Airbags...

WARNING

DEATH or SERIOUS INJURY can occur.

- Children 12 and under can be killed by the air bag.
- The **BACK SEAT** is the **SAFEST** place for children.
- **NEVER** put a rear-facing child seat in the front.
- Sit as far back as possible from the air bag.
- **ALWAYS** use **SEAT BELTS** and **CHILD RESTRAINTS**.



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For car occupants our Government have always seemed to prefer a hypothetical future with airbags, rather than a now with helmets. They take this view even though the superiority of helmets for car occupants has been argued by some of the very same people the Government turn to support their case by bicyclists wearing helmets.

Put another way...

“17 Times More Lives Would Be Saved If Car Occupants Wore Helmets”



Or put another way, research has also quantified the benefit as seventeen times more lives would be saved if car occupants rather than bicyclists wore helmets.

These arguments and comparisons are taken very seriously by serious professionals. The picture (apologies for poor quality) shows Prof Jack McLean, Director of the Accident Research Unit at Adelaide, secretary Jodi Bock and librarian Alan Samagalski wearing bicycle-style helmets in a car.

Let's for a moment consider what science can tell us about injury risk and protection.

Science can tell us that: “injury risk is $x\%$ ”

It cannot say whether that risk requires protection

Science can tell us that: “the protective measure may reduce risk up to $y\%$ ”

It cannot say whether this protection is worth using

It is individuals and society who have to decide whether the risk level is too high, or the protection offered worthwhile. Individuals may choose to be inconsistent, they may avoid one activity due to the risk but undertake another of equal risk. Individuals are not always logical, rational, beings – and wouldn't the world be boring if we always were?

However for professionals it is different. In their professional capacity they are required to be logical and consistent. To illustrate this, for example, what standing would a professional witness in a trial have if they declared that a certain activity violated the tax laws, but then stated they did it themselves as they were above the law? The person would have no credibility.

The professionals in this photo have decided what level of risk is acceptable, and what protection is worthwhile, and they practice what they preach. We might disagree with their decision, and there are many professionals do, but they have credibility.

Practice What You Preach

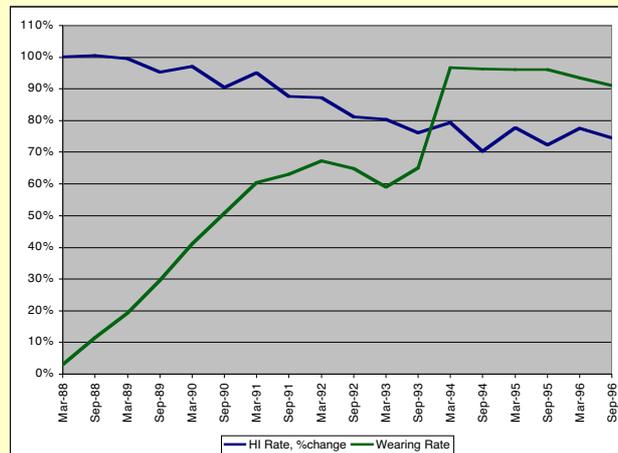
- It makes *at least as much* sense to wear a helmet in a car as on a bicycle.
- If you *believed* the risk and protection offered are sufficient...
- Would you not *choose* to wear one in your car?
- Yet which NZ helmet promoters do?
- Do they *really* believe what they say?

Do professionals in NZ who promote bicycle helmet legislation deserve any credibility?

This isn't something as minor as claiming you are above the law on, say, a tax issue; this is a question of your very life – or so they would have us believe. Any yet do they choose protect their own lives? No. Hypocrisy is certainly not the basis for a good safety policy.

The stance taken by professionals in NZ discredits their arguments, they do not practice what they preach.

Has The Law Worked?



Time for a few statistics. This graph is based on data used by a recent research report from Otago's IPRU, a report quoted by the Government in defense of the bicycle helmet legislation.

This graph shows the %age drop in head injuries (HI) compared to all injuries (ALL) and the bicycle helmet wearing rate. That is 100% represents the HI:ALL ratio at the start of sample period, a figure of 50% would mean the number of head injuries had dropped proportionally by a half, while a figure over 100% would mean they had increased – which it did slightly at the start. The argument is that if helmets have an effect, then regardless of other factors which may change the overall injury numbers or rates, the HI:ALL ratio would drop.

The graph will be familiar to anybody who has read the research papers.

Can you tell when the Bicycle Helmet Legislation was introduced?

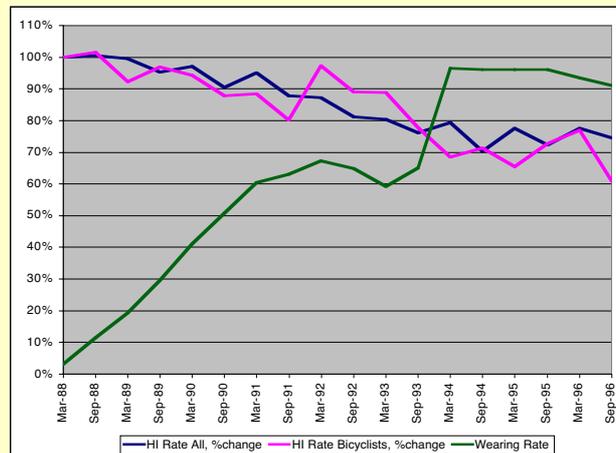
Did the helmet legislation have any effect?

Among other things the graph shows the HI rate going up at the same time as the wearing rate, and down while the wearing rate was going down - these are the “wrong” way if helmets reduce injury rates.

But I've mislead a little, though the graph may look familiar it is not the one you're normally shown. The downward trend in HI's shown is for ALL HI's; including motorists, pedestrians and even ladder climbers.

Bicyclist HI's are only a small percentage of the overall HI's, so how come the wearing of helmets by bicyclists has reduced all the other HI rates?

Has The Law Worked?



This is the same graph with the bicyclist HI rate of change added.

Note the similarity between the two plots. There is a fall when the law was introduced, but the bicyclist HI rate had previously risen above the overall HI one, and the fall is soon followed by an increase. The bicyclist HI rate does appear to fluctuate a little more wildly than the overall rate.

All that can readily be concluded from these results is that a lot of bicycle helmets were sold.

This result is not surprising. Wherever bicycle helmet legislation has been introduced its success has always been rather questionable, as shown by one of the quotes at the start of this presentation. Once other health factors are taken into account the whole approach is thrown into doubt.

Note: As stated above the graph is based on the same data used by the Otago IPRU. General road safety measures should benefit both motorists and bicyclists, we generously assume the bicycle helmets only effect bicyclists (they could also effect others, e.g. motorists might take less care now bicyclists are “protected” – see quote later), while other factors could cause the overall HI rate to change and this would obfuscate the effect of the legislation. We use this data only because it is that used by the research the Government uses to support its claims of “success”. We agree with Otago that bicyclist exposure data would be a better guide...

Has The Law Worked?

- The latest research claims a 20% reduction in bicyclist HI's over the 6 years post law.
- However Household Travel Survey shows a 34% reduction in cycling hours over 9 years.
- Which is a 22% reduction in exposure risk over 6 years.
- So what did the law achieve?

So let's look at exposure data... The Government has recently been quoting the research report upon which the previous graphs were based, which claims a 20% reduction in bicyclist HI's post-law.

However not so much noise has been made over the recent Household Travel Survey from the LTSA which shows a 34% reduction in cycling hours over 9 years, which equates to around 22% over 6 years.

These two figures are about the same and if bicycling dropped we would also expect HI's to drop by a similar amount.

So what has the law achieved? Apart from profits from helmet sales that is. Apparently little, it certainly hasn't stopped a decline in cycling, which has a huge negative health benefit.

In short, the legislation has **failed**.

Could It Ever Work?

“You would be well advised to wear a helmet *provided* you could persuade yourself it is of little use”

Dr. M. Hillman (quoted in New York Times, 2001)

Could the bicycle helmet legislation ever work?

Unfortunately the answer is probably no. It is unlikely that in New Zealand; as a result of the total over-selling of helmets and the legislation, which combine to endow the humble helmet with a protective status it does not deserve; that a realistic view of bicycle helmets can ever be achieved, unless either the law is abolished or extended to cover motorists.

There Are Better Ways

Dutch and Danish cycling authorities place little emphasis on either helmet wearing or conspicuity. Cyclists in both countries face much lower risks than faced by New Zealand cyclists.

‘Bicycle Crashes in New Zealand’, Kerry Wood

The previous graphs and figures suggest that the bicycle helmet legislation has failed to improve bicyclist’s safety. But they don’t really show it has damaged it.

Unfortunately as this quote shows, through **inaction** in other areas while being preoccupied with helmets New Zealand bicyclists have been **denied** real safety improvements which are possible if the problem is really tackled.

This has to change!

The Law Has Failed: What Next?

- Cure: It needs *fixing*
- Curse: It needs *abolishing*
- The status quo should be unacceptable to everybody
 - Unless of course whether bicyclist health and safety improved was never of real interest in the first place...
 - But believing that would surely be *too* cynical, wouldn't it?

You have a choice, by any reasonable definition the law has failed. However as the first attempts to measure the law's "success" amounted to nothing more than counting helmets, being reasonable isn't a forgone conclusion.

But back to your choice: fix it or abolish it; depending on your belief. Leaving the status quo should be unacceptable to everyone.

Cure: Fix It!

- First we must stop denying motorists the protection of the law.
 - A first step must be to get helmets onto Ministers, MoT, LTSA, ACC, Police...
 - And then onto all motorists.
 - This would reduce the “dangerisation” of bicycling.
- Then we must seek and address the remaining issues which have caused its failure.

Cure: Fix It!

The idea that the lack of legislation is denying motorists protection may seem a little odd, but it is chosen as it is the argument helmetists have in the past used when more enlightened Governments have rejected bicycle helmet legislation. However the refusal by the Government to acknowledge the benefits that helmets would have for motorists gives the inevitable impression to motorists that helmets would not help them, so they are being denied knowledge which could save their lives.

Once helmets are universally and consistently worn and legislated for the current dangerisation of bicycling will be minimised - if you have to wear a helmet in your car then you won't think bicycling is dangerous because helmets are required.

This is of course only a starting point. There are plenty of other issues that need to be addressed to make the legislation/helmets work; including work on the fit of helmets (most bicycle helmets don't fit properly, reducing their already minimal protection; many people simply can't purchase a bicycle helmet which does fit properly as they are not available in sufficient sizes), proper replacement advice (they are “use once” at best), etc.

Yes it's a lot of hard work, but if you believe in the benefits, it is not worth it?

Curse: Abolish It!

- Wrong approach
 - Detracts from positive safety measures
- Low protection, over sold
 - Risk compensation problems
- “Dangerises” bicycling
 - Yet it’s the healthiest way to travel!
- To leave it is to build on sand.
- It probably violates the Human Rights Act

Curse: Abolish it!

Promoting helmets as a solution to the “problem” is the completely wrong approach, as countries which have rejected helmets in favour of other safety measures and bicycle promotion have shown.

Helmets cannot be designed to protect against the major source of risk, vehicle impact. Yet the message of the helmet law is the opposite, wear a helmet to protect yourself on the road.

The whole approach “dangerises” bicycling - it needs to in order to persuade people to adopt helmets. But this is creating a false danger so that a false cure can be presented.

Building on sand: An unhelmeted Police Officer ticketing an unhelmeted bicyclist is just diverting resources from real safety work, while setting a rather bad example: “Do as I say, not as I do!”. As long as the legislation exists it will undermine the status of bicyclists, after all they are using a dangerous mode of travel, unlike the motorists!

Building on sand: As the legislation discriminates based on transport mode choice, and perversely against those choosing the healthy option, it may well violate the Human Rights Act...

There Is Despair...

You should wear a helmet. If you wore a helmet, I wouldn't **NEED** to drive more safely.

Driver to cyclist, after being told to “drive more safely”

OK, so it was an American driver, but it could so easily have been a New Zealand politician, or a “safety” educator in a school...

And There Is Hope

First they ignore you,
then they laugh at you,
then they fight you,
then you win.

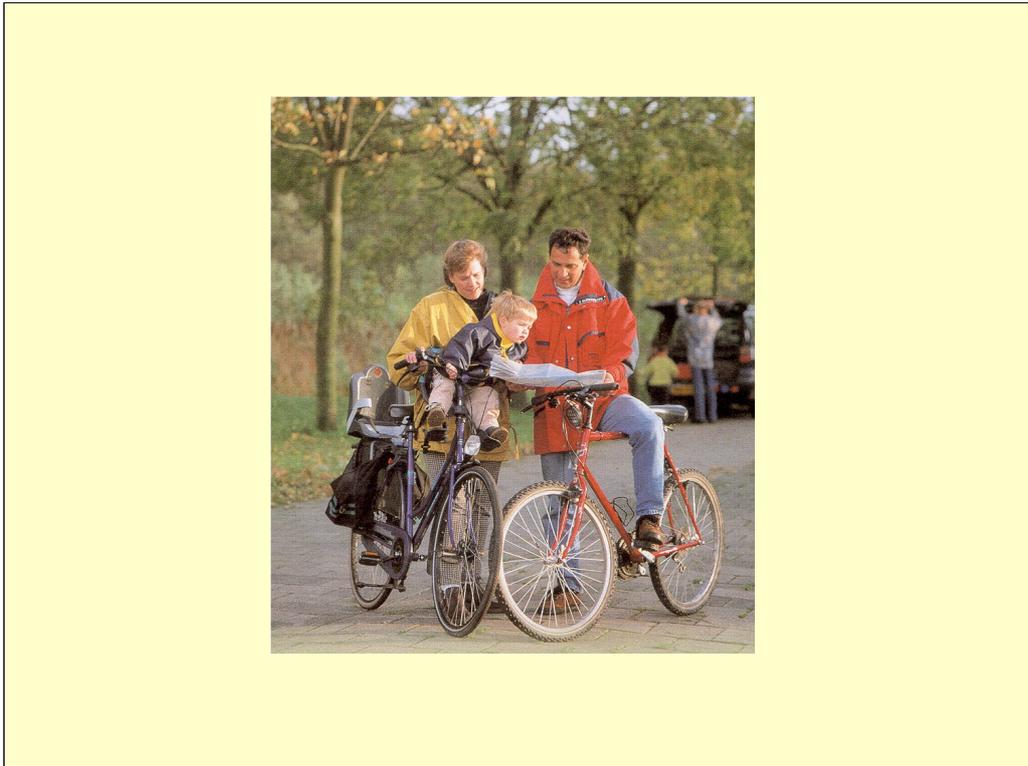
Gandhi

Ignore: cars first, last, and all points in between

Laugh: can't you afford a car?

Fight: helmet promotion (remember "knuckleheads"?), helmet legislation, discrimination

Win... one day!



This picture was added to honour the Keynote speaker at the conference, Karel de Roy from Utrecht, Netherlands; and the success the Dutch have had at making traveling safe and healthy. The picture is taken from the cover of the Utrecht area road map, produced by the ANWB, the Dutch equivalent of the NZ AA.

In most of the rest of the world this picture shows a healthy family outing.

In New Zealand, according to our Government's stance, it shows two knuckleheads abusing a child.

How did we get it so wrong?