

## **Cycle helmets for children – The Balanced Public Health View**

### About the Transport & Health Study Group

The Transport and Health Study Group is an independent society of public health and transport practitioners and researchers committed to understanding and addressing the links between transport policies and health and promoting a healthy transport system.

We were founded in the late 1980s by Dr. Stephen Morton. Although predominantly a UK body, we are at an early stage of expanding into a European Group.

We administer a Transport Special Interest Group for the UK Public Health Association and we have issued a Joint Policy Statement on Transport & Health with the Faculty of Public Health.

The current Chair of THSG is Dr Steve Watkins, Director of Public Health for Stockport. The Vice-Chairs are Professor Linda Jones, School of Health & Social Welfare, Open University and Dr Jenny Mindell, Clinical Senior Lecturer, Dept of Epidemiology and Public Health, University College, London.

Our 1991 publication "Health on the Move" was the first definitive account of the relationship between transport and health. We later contributed to "Road Transport and Health" by the British Medical Association.

Following this we became the public health voice of a campaign for better transport policies. We established a network of transport and health contacts in health authorities and produced guidance on health impact assessment of transport schemes.

A major revision of "Health on the Move" has been in preparation over the last 18 months. "Health on the Move 2" (HotM2) is intended primarily for transport and public health professionals and other policy- and decision-makers working at national, regional or local levels in the public, private or voluntary sectors. The full report is expected to be released late in 2010. Three stand alone-chapters have been made public in advance; on walking, cycling, and the cycling & public transport combination. These may be downloaded from:

[http://www.healthandtransportgroup.co.uk/research/research20\\_july2010.php](http://www.healthandtransportgroup.co.uk/research/research20_july2010.php)

The promotion of active travel, including walking and cycling, is a major public health issue. The BMA has calculated that replacing short car journeys with walking and cycling could do as much for coronary heart disease prevention as all other heart disease prevention programmes put together. Imagine a drug were invented tomorrow which reduced the incidence of anxiety and depression, helped prevent heart disease, treated obesity, was more effective than existing drugs in preventing progression from impaired glucose tolerance to diabetes, and helped prevent osteoporosis. Imagine the clamour for it. Imagine the opposition to anything which obstructed its provision. Physical activity does all those things. Active travel is the easiest way to build physical activity into everyday life.

## Helmet Promotion and Legislation.

In HotM2, we conclude that the wearing of cycle helmets should not be made compulsory for any age group, for these reasons:

- The most important is that it has been shown in a number of different jurisdictions that compulsory (and enforced) helmet-wearing reduces cycle use and therefore has a negative effect on the population's health; the health benefits of previously inactive people taking up cycling are actually greater than giving up cigarette smoking and far exceed the risk of cycling without a helmet;
- The risk which is being averted is sufficiently small that compulsion is disproportionate; the case for a cyclist to wear a helmet is no greater than that for a driver or pedestrian and certainly less than that for a footballer or rugby player; please see "Low risks of cycling" text box below;
- It is known that risk in cycling is strongly influenced by the number of cyclists; increase cycling and the risk per cyclist goes down; deter cycling with a helmet law and the risk per cyclist will tend to go up;
- Mass helmet use has not reduced serious head injuries to a noticeable degree relative to general improvements in road safety seen for other road users (i.e. secular trends)
- Mass helmet use has not reduced serious head injuries to any greater extent than it has reduced lower limb injuries suggesting that the impact is not due to a protective effect but rather to its impact on reducing cycling levels. Since the risks of cycling are outweighed for the individual by the health benefit and for society by the reduced risk to third parties reduction in cycling is not a good thing.
- There is one study which suggests that drivers regard cyclists wearing helmets as less vulnerable and give them less room – although this is only a single study it does provide a potential explanation for why mass helmet use hasn't worked..

Our view on mass helmet use conflicts with case-control studies - notably the Cochrane Review - often cited in support of helmet use. Our analysis reveals flaws in the Cochrane Review of bicycle helmets.

The first of these is that it does not adequately adjust for other factors. Helmet use by children is a function of parental income. The risk of severe head injury is also influenced by many other aspects of deprivation - the environments of local neighbourhoods and the amount of training received to name but two. Emergency Room staff observe that children without helmets tend to have the worst head injuries, yet despite this, mass helmet use has no noticeable benefit for whole populations of cyclists. We would infer that ER staff are actually seeing the consequences of social disadvantage, for which no-helmet use is a marker. The Cochrane Review papers did not take account of socio-economic factors.

The second is that the Cochrane Review compares children injured whilst wearing helmets with children injured whilst not wearing helmets. It does not take account of the possibility that those wearing helmets might have been exposed to a greater risk of injury. It is plausible that children might be more likely to wear helmets whilst engaged in more hazardous forms of recreational cycling than when engaged in cycling for ordinary transport. It is plausible that helmet wearing leads to risk compensation with cyclists feeling less vulnerable and therefore taking more risks. There is some evidence, as mentioned, that cyclists wearing helmets get less space from other road users. For all of these reasons children admitted with an injury whilst wearing a helmet might, as a group, have been exposed to greater risks than children admitted after an injury whilst not wearing a helmet.

## The Low Risks of Cycling

Although statistics have been produced suggesting that cycling is more dangerous than driving these statistics rarely compare like with like. Accidents in cycling sports are often treated as cycling accidents whilst motor racing is not counted as driving. The motoring statistics include the very safe driving on motorways for which there is no cycling equivalent and the statistics are not age-standardised. Comparing cyclists with drivers of the same age and considering local journeys only it is not clear whether cycling is any more dangerous than driving. If it is the differences are small – equivalent to choosing to drive rather than to take a train, or to drive on an all purpose road rather than a motorway or to drive in France rather than in Britain.

These differences are outweighed, very considerably, for the individual by the health benefits and for society by the much lower risk to third parties.

### The low risks of cycling (data from PSNI, DHSSPS or DoH):

During the last five years, only 6.5% (357/5,601) of all Under-17's head injury admissions in NI were due to any kind of cycling accident; that is, only 1 in 15 admissions.

Most of these admissions were due to falling off bikes; less than 1% of Under-17's head injury admissions nationally were the result of a child cyclist in a road accident.

During the last six years, of 64 road fatalities of NI Under-17's, only 4 were cyclists. There have been no child cyclist deaths in NI in the last four years.

There is evidence that many people do not cycle because they have an exaggerated perception of its danger. This perception is hardly going to be dispelled by legislation which compels a safety precaution that is otherwise only enforced on motor cyclists and construction workers.

## The Situation of Children

The proposed legislation relates to children specifically. We do not support the compulsory use of cycle helmets by children, for reasons already mentioned above and in addition:

- It is recognised that those who cycle as children are much more likely to be adult cyclists. A law that deterred child cyclists would be expected to have the knock-on long term effect of harming cycling programmes for all ages.
- It is not widely understood that young people face higher risks as drivers than as cyclists. There is a serious risk that a child helmet law would motivate more young people to drive as early as possible. This would increase road deaths of young people and of those struck by young drivers.
- Exposure data produced by the National Travel Survey shows that cycling is not a more dangerous mode of transport for children than walking.
- There is evidence that drivers tend to pass closer to cyclists wearing helmets.
- It is irrational, and gives a wholly misleading image of cycling safety, to compel helmet wearing for cyclists and not for drivers, rugby players and footballers.

## Cycle helmet legislation and the British Medical Association

The BMA is a major public health organisation with a strong record of work on road safety and on transport & health. We have worked closely with it on a number of issues. We have a great deal of respect for the BMA. We are sorry that on this issue we find ourselves in disagreement with it and have to say, quite simply, that the BMA has got it wrong.

Given the respect that the BMA has on public health issues we feel it is important to point out that no other major public health organisation shares its view on cycle helmets.

The BMA began to investigate cycle helmets the late 1980's. It was clear from this research that the health benefits of cycling were much greater than the risks. Because of this, the BMA supported helmet promotion but opposed compulsion. A further thorough inquiry in the late 1990's confirmed this position. This decision was detailed in the 1999 BMA report "Cycle Helmets".

However, in 2004, the BMA Science and Education Committee initiated a change of stance, on the basis of a single paper that claimed helmet legislation no longer suppressed cycling. This paper was based on a cycle helmet law in Ontario. This change of stance was carried by a vote in 2005 after a very short debate with only one speaker on each side. The paper in question is against the general weight of evidence and it subsequently transpired that it was an obfuscation, since it omitted to mention that the law (for children in Ontario) was never enforced and helmet use soon returned to pre-law levels. There is no documented case of an enforced helmet law not suppressing cycling levels. It should be noted that child helmet laws are not usually enforced, and very rarely are they enforced with vigour. Cycling levels in New Zealand – which probably has the most strongly enforced law - have collapsed by 55% in the last 20 years. It is not plausible that such a large fall would have happened anyway, as nothing like it has been seen elsewhere.

The BMA Public Health Medicine Committee never supported the BMA policy. They had sought to speak against it at the meeting where it was adopted but due to the short debate were not called. Following subsequent scientific representations by that Committee to the BMA Board of Science the BMA adopted an important caveat; that to avoid harm to public health by reductions in cycling any helmet law must not be introduced until levels of voluntary helmet wearing are already high.

There has been a subsequent debate on the BMA policy on which an attempt to rescind it failed by only a small majority

## Conclusion.

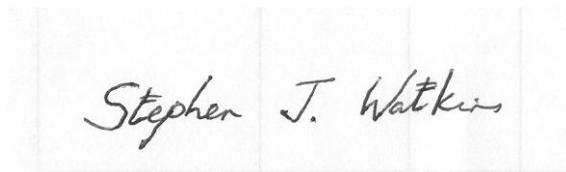
Cycle helmet laws have been the subject of intense debate for at least the last 25 years. This reflects conflicts of the science, which in our view are now resolved, and misperception of the risks of cycling, and again, in our view this issue is now resolved. Nevertheless, there is a lingering plethora of statistics in the debate, many of which appear impressive until set in context. A recent report by the Department for Transport claimed that 10-16% of fatalities could have been prevented by helmets, yet close reading shows this was only an assumption, presented as evidence.

We have now studied a considerable volume of research on the health and safety of cyclists, and we cannot find a balance of arguments in favour of helmet legislation for any age group.

We would be happy to consider any scientific criticism of our analysis and conclusions. Please send any such comments to

[mary.brooks@stockport-pct.nhs.uk](mailto:mary.brooks@stockport-pct.nhs.uk)

We would urge members of the Assembly to vote against legislation to make cycle helmet wearing compulsory.

A photograph of a handwritten signature in black ink on a light-colored, lined background. The signature reads "Stephen J. Watkins" in a cursive script.

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Chair, Transport and Health Study Group.