



## COMMENTARY

### Health on the move 2

#### Polices for health-promoting transport

Mindell JS, Watkins SJ, Cohen JM (Eds). Stockport: Transport and Health Study Group, 2011.

Original paper: THSG, 2011

#### Foreword from Health on the move 2

Public health needs ideas, it needs inspiration, it needs champions. Such are the scale and complexity of the challenges that must be addressed.

The causes of ill health, the solutions to some of our major health problems and the sustainability of our environment are intricately interwoven with the way that we move from place to place both locally and across the globe. The scope of any analysis in this area of public health also needs to encompass the way that goods and services are accessed and the ways that groups of people gather. For example, what a family chooses to eat, where they buy their food, where the food is sourced and how they acquire it may seem simple and routine. A few minutes reflection though and it is clear that the implications of millions of families' choices and habits can have profound implications for the health of our country and the planet.

*Health on the Move 2* is a clear and comprehensive account of what would constitute a healthy transport system.

The report is unusual in that it blends evidence, authoritative opinion from experts in their field as well as creativity. It is not only an educational tool and a series of recommendations for policy-makers, it is a powerful basis for advocacy. No-one should underestimate the scale of changes required to realise the vision for the future set out in this ground-breaking report.

If just a small number of towns and cities in the country would act on the ideas and evidence in it then we would begin to see the shape of a new future in which every move is a healthy move.

*Sir Liam Donaldson, Chief Medical Officer for England (1998 – 2010)*

#### Overview

*Health on the Move 2* (HotM2) is a guide to unlocking the health-generating potential of daily travel.

In its 356 pages, HotM2 is clearly set out, from a vision of a healthy transport system, through the rapidly growing scientific understanding of the links between how we travel on the one hand, and obesity, chronic illness, injury, air quality and climate change on the other. It clearly aims to reach three, often separate audiences; public health professionals, local authority specialist transport and spatial planners and policy-makers who set the longer term framework within which the others work.

Sections cover community severance; the way transport choices by some can inhibit the movements of others, and other ways in which transport impacts on health inequality. There are chapters on public transport, walking, cycling, sustainability, congestion, rethinking streets and much more.



This Commentary relates primarily to HotM2's references to cycling safety and helmets. However, the whole work is recommended to give context to the helmet debate and as an important contribution to a wider understanding about health and transport.

## **Trends in cycling**

After the first oil crisis in 1973, there was a revival of cycling in Britain. Unfortunately it was not greeted sympathetically by governments of the day and by the mid 1980's growth had ceased and decline returned.. The trend is long-established, although it is slower now than in the period 1985-2000.

Since the mid 1970s, cyclist fatality rates have fallen by slightly more than motorist fatality rates. As to serious injuries, it is often assumed that these are greatly under-recorded. The confusion arises because of the different ways that cycling and pedestrian injuries are recorded in hospital data; in brief, cycling falls are classified as transport injuries while pedestrian falls are not. Fair comparisons show that serious cycling injuries are not much under-recorded but pedestrian injuries are and that risks in cycling are of the same order as risks when motoring.

Children have a poor safety record in the UK, but risk per km travelled is about the same when cycling as when walking when the dominance of boys in cycling is accounted for.

## **Risk**

Lifetime risk of fatality when cycling is about the same as for the average European motorist. Differences are that the cyclist would almost certainly not kill anyone else and the cyclist would expect to live a longer, healthier life.

On average for a UK cyclist a serious injury corresponds to about 2 million km of cycling, or less than one in 1,000 annually. Cycling does not incur risks that are unusual by the standards of daily life. Cycling in a city where the bicycle is popular is safer still, due to 'safety in numbers' (Jacobsen, 2003).

Overall, it is likely that the risks of cycling are within the range of risks faced by motorists.

## **Promotion of cycling**

HotM2 recommends strongly the promotion of cycling as a 'normal' everyday activity which has huge potential for improving public health. Images should acknowledge the diversity among cyclists and support factual evidence regarding the low risk in cycling. Riders should be depicted wearing normal everyday clothes and include a mixture of riders, with and without helmets, to reflect neutrality and individual choice.

## **Cycle helmets**

HotM2 devotes several pages to a concise, but comprehensive, review of the outcomes of cycle helmet use. They are also discussed at some length in the later section on the promotion of cycling.

The authors note that research for the Department for Transport (Hynd, Cuerden, Reid and Adams, 2009) found that it is not possible to quantify the benefit from cycle helmets. The wider literature is considered, together with helmet standards and the mechanisms involved in head injury. Also considered is risk compensation (Wiki, 3) by cyclists and motorists and the effect of helmet promotion and laws on levels of cycle use.

With regard to the evidence, HotM2 considers that:

- There is a disturbing discrepancy between engineering or clinical evidence of the effectiveness of helmet wearing (which suggest them to be effective) and population studies (which suggest that they are not).
- Plausible explanations of this discrepancy include cyclists taking greater risks because they think their helmet makes them safe or drivers taking less care of helmeted cyclists because they see them as less vulnerable. A single study has examined this and its findings support the latter of these possibilities. (Walker, 2007)



- There are also other possible explanations based on postulated unknown hazards of cycle helmets. HotM2 considers these explanations to be much less likely than the behavioural explanations given above.
- It is now well established that legislation mandating cycle helmet use causes a reduction in the levels of cycling and thereby does more harm than good.
- It is unclear whether this is because many people find cycle helmets troublesome, because many people find them unfashionable and odd or because people consider the mandation of helmet use as evidence that cycling is dangerous.
- If the last of these explanations is true then not only legislation but also any vigorous promotion of voluntary helmet use are likely to be harmful.
- The one study in which cycle helmet legislation did not reduce cycle use (Macpherson, Parkin and To, 2001) is highly unusual both because of the high levels of voluntary helmet use before the legislation and the fact that the law was not enforced. This makes it difficult to draw clear conclusions from it. It certainly cannot be regarded as annulling the considerable volume of evidence that cycle helmet legislation is harmful.

With regard to public policy, HotM2 concludes:

- 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.
- It may be a rational decision for a driver, cyclist, or pedestrian to wear a helmet, but on the other hand individuals must keep a sense of perspective about how much effort they invest in avoiding small risks.
- In the case of cycle helmets there is an added problem, which potential users should be made aware of, that there is scientific evidence suggestive of a possible adverse effect which may even outweigh the benefits, although the nature and extent of that effect is ill understood and the evidence is not conclusive.
- The wearing of cycle helmets should not be made compulsory, for three 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. Secondly, the risk which is being averted is sufficiently small that compulsion is disproportionate. Thirdly 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).
- It is a plausible argument that vigorous promotion of cycle helmet wearing does more harm than good by presenting cycling, wrongly, as a dangerous activity.
- As the level of risk involved in not using a helmet falls within the range of everyday risks contributory negligence claims against cyclists based on not wearing a helmet should not be permitted. The same is true of reflective clothing - it is common sense for both pedestrians and cyclists to wear such clothing in unlit streets at night if they can but only in an unreasonably risk averse society would it be thought to be "negligent" not to. Since the Highway Code is a legal instrument which can be used in court cases on the issue of liability Highway Code Rule 59 should be amended to remove reference to cycle helmets and reflective clothing, unless it is legally possible to replace them with more balanced statements drafted in such a way that they would not be usable in court.

HotM2 says that discouraging healthy travel is much like cigarette advertising in the harm it inflicts. Public health professionals must recognise the hazard of unintended consequences from well meaning helmet campaigners, and be prepared to speak out against exaggerations of risk and distortions of data. "Myth shall prevail if the wise remain silent." This should in no way be intended to undermine the principle that individuals may choose for themselves to use helmets, following realistic advice about the protective value, as is also the case with helmets for drivers and pedestrians.

It may seem strange for public health professionals to express reservations about safety campaigns, but public health is always concerned with priorities. A risk-averse society is different from a safe society. In a safe society, those who climb mountains take the right equipment, check the weather, ensure that people know their route and expected time of return, know their limitations, and contribute to the funding of mountain rescue teams. In a risk-averse society, people do not climb mountains. Ultimately, a risk-averse society is an unsafe society because people lose the capacity to handle risk sensibly.

HotM2 cites Hedlund, 2000:



"Don't over-predict benefits. Many injury prevention measures promise more benefits than they deliver, due to bad science, political pressures, or failure to consider risk compensation or system effects. While calm and realistic benefit estimates are difficult to produce, unduly optimistic predictions will hamper injury prevention efforts in the long run".

## References

### Hedlund, 2000

Hedlund J, 2000. [Risky business: safety regulations, risks compensation, and individual behavior](#). Injury Prevention 2000 Jun;6(2):82-90. **External Link**  
<http://ip.bmjournals.com/cgi/content/full/6/2/82>

### Hynd, Cuerden, Reid and Adams, 2009

Hynd D, Cuerden R, Reid S, Adams S, 2009. [The potential for cycle helmets to prevent injury - a review of the evidence](#). Transport Research Laboratory PPR446. **Link includes commentary**  
<http://www.cyclehelmets.org/1230.html>

### Jacobsen, 2003

Jacobsen PL, 2003. [Safety in numbers: more walkers and bicyclists, safer walking and bicycling](#). Injury Prevention 2003;9:205-209.  
<http://www.cyclehelmets.org/1186.html>

### Macpherson, Parkin and To, 2001

Macpherson AK, Parkin PC, To TM, 2001. [Mandatory helmet legislation and children's exposure to cycling](#). Injury Prevention Inj Prev 2001;7:228-230. **Link includes commentary**  
<http://www.cyclehelmets.org/1105.html>

### THSG, 2011

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[http://www.transportandhealth.org.uk/?page\\_id=17](http://www.transportandhealth.org.uk/?page_id=17)

### Walker, 2007

Walker I, 2007. [Drivers overtaking bicyclists: Objective data on the effects of riding position, helmet use, vehicle type and apparent gender](#). Accident Analysis & Prevention 2007 Mar;39(2):417-25. **External Link**  
<http://dx.doi.org/10.1016/j.aap.2006.08.010>

### Wiki, 3

[Risk compensation](#). An explanation of the mechanism whereby safety equipment can sometimes lead to people acting less safely. **External Link**  
[http://en.wikipedia.org/wiki/Risk\\_compensation](http://en.wikipedia.org/wiki/Risk_compensation)

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The Bicycle Helmet Research Foundation (BHRF), an incorporated body with an international membership, exists to undertake, encourage and spread the scientific study of the use of bicycle helmets. Also to consider the effect of the promotion and use of helmets on the perception of cycling in terms of risk and the achievement of wider public health and societal goals.



BHRF strives to provide a resource of best-available factual information to assist the understanding of a complex subject, and one where some of the reasoning may conflict with received opinion. In particular BHRF seeks to provide access to a wider range of information than is commonly made available by those that take a strong helmet promotion stance. It is hoped that this will assist informed judgements about the pros and cons of cycle helmets.

For more information, please visit [www.cyclehelmets.org](http://www.cyclehelmets.org).

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