LETTER TO THE EDITOR

Children and bicycles

EDITOR,—May I offer congratulations to the authors of the paper on children and bicycles in your June issue.1 This can justifiably be described as a valuable piece of classical descriptive epidemiology which sets the problem in perspective, brings out all the issues, and offers some possible solutions most notably the need for children to wear helmets at all times while cycling.

The paper highlights beyond any doubt the great incidence of head injuries to child cyclists (83.7%) of the fatalities, 31.3% (as head or face) of the injuries presenting to hospital emergency departments). It also brings out very well the fact that nearly all of the fatalities (86.7%) involved a vehicle on the road while only 50.4%, of the injuries presenting to emergency departments occurred on the road (of those where the site was known).

There are a few questions that I feel have not been answered and which may possibly give even greater emphasis to the importance of head and face protection (compulsory or otherwise). The questions are:

1) What is the percentage of all deaths due to unintentional injury in 0–14 year old children which are due to cycle injury (5, 10, 15%)?
2) What is the rank order of cycling as a cause of death compared with other causes of unintentional injury (3rd after drowning, pedestrians)?
3) What is the percentage of deaths due to unintentional injury in 0–14 year old children which are due to head injury (50, 60, 70%)?
4) What is the (percentage and rank order) of cyclists in the deaths due to head injury?

These same questions could also be asked of the non-fatal injuries where the proportion of cyclists involved will no doubt be smaller adding even more evidence to the case for helmets.

I have to admit that I am not at all keen to go down the road of American football type head protection for cyclists nor for that matter to advocate full face helmets. Some of the modern designs of conventional cycle helmet are really very comfortable but any additions would be very restrictive in what is after all a physically demanding activity. Nevertheless the paper does present a strong case for face protection.

Finally, the paper has not made any comment on exposure — probably because of the usual difficulties in measuring it. There is at least one study that shows that when this is taken into account girls have nearly similar injury rates to boys.2

The epidemiological case for helmet wearing is now really so strong that cyclists are defying logic by not wearing them.3

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Dr Nixon and coauthors comment: We have addressed the points made by Dr Avery and thank him for his letter. The purpose of this paper was to highlight bicycle related trauma rather than to place them in the broad perspective of all injuries. However, we have available preliminary data from a postmortem study of injury deaths of child 14 years of age and less in Queensland, which answers the questions of Dr Avery. Bicycle related deaths comprise 7.6% of all child injury deaths. This ranks below deaths by drowning (25%), motor vehicle passengers (20%), and pedestrians (15%). Drownings could be further subdivided at sites other than swimming pools, (14%) and drowning in swimming pools (11.6%), in which case cyclist deaths would rank fifth. Head injury accounted for 55% of deaths in Queensland children. Motor vehicle passengers account for 35% of all head injury deaths, pedestrians for 29%, and bicycle related deaths 13%. If a child is fatally injured as a motor vehicle passenger, a pedestrian or a cyclist, he or she has between 80% and 90% chance of death being due to a head injury.

Definitive studies of the protective effect of cycle helmet wearing have not yet been undertaken. Case-control studies are highly suggestive that helmets offer some degree of protection. There is no question that child cyclists need head protection. As more detailed data become available and managed care, it may be that helmets need to be modified to offer greater protection to heads or faces. Your reluctance to go down the 'American football type head protection road' is understandable but any move in that direction should be based on data and firm understanding of the degree of protection expected of a cycle helmet.

CALENDAR AND NOTICES

A conference on Managed Care: Impact on Injury Control, will be held 14–16 September 1995, at the Charleston Marriott Hotel, Charleston, West Virginia. The goal is to examine current issues in injury control, prevention and managed care, and the interdependency. Part of the rationale is the high cost of injury and the need for improved data collection and interpretation. The general objective is to promote alliance among injury control disciplines and to enhance professional skills in injury prevention . . . . The invited feature speaker is Mark Rosenberg, MD, MPH, Director, National Center for Injury Prevention and Control Centers for Disease Control and Prevention.

The Annual Conference of the Association for the Advancement of Automotive Medicine will be held in Chicago, IL, 16–18 October 1995.