



injury

PREVENTION

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Editorials

Editorial elaborations

In an effort to make the scientific findings more accessible to those involved in the delivery of prevention programs, in an earlier editorial I promised to try to tease out some of the main messages in papers appearing in each issue.

Beginning with what is perhaps the most arcane, the paper by Jarvis and his colleagues (p 46), is not an elaborate argument against viewing children as goldfish. This metaphor was chosen to remind the reader that techniques that may be valuable in one context do not necessarily work as well in another. The case at hand deals with a method often employed by epidemiologists when, as is so often the case, they have incomplete data yet wish to make reasonably precise estimates about the occurrence of an event. The mark/recapture technique has been advocated as one solution to this problem. It is based on a number of premises, and, in a nutshell, what Jarvis *et al* conclude is that when applied to injuries in general, and motor vehicle injuries in particular, it must be used with great caution, if at all. The reader should be advised that this might not be the last word on this topic because another paper dealing with the same issue is now under review. The message, however, is clear: when estimates are based on this procedure, be careful about accepting the results at face value.

On a quite different note, Scheidt *et al* (p 51) address a common issue that arises when grants are being reviewed by ethics committees (often referred to in North America as institutional review boards). Not surprisingly, and not infrequently I imagine, the objection is raised that interviews with parents about a child's injury may be offensive or even psychologically harmful. Thus, in the extreme, it is argued that such a study ought not be done. However, based on this remarkably large scale study, it is evident that only a small proportion of parents is troubled by such interviews. A second important lesson from this study is that there is far less anger if the interviews are delayed until two or more weeks after the injury.

Surveillance systems have been the subject of several papers in this journal. Although it is widely accepted that such systems are an essential component of any country's injury prevention effort, precisely how the systems should be designed remains debatable. Some have noted that systems that are based on hospital emergency departments alone may be insufficient.¹ In the report by Pickett *et al*

(p 9) one such system that has received considerable attention, the Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP)² is examined to determine how similar the results are when compared with those from a population based survey. In doing so, the ability of CHIRPP to provide results that can be generalized, at least with respect to the rankings of injuries, is established. The results provide convincing evidence that a system designed along these lines is better than might be expected for prevention planning purposes. As a bonus, the method used to validate the program is indeed, novel and practical.

Falls among the elderly are remarkably prevalent, equivalent in many countries to the frequency of injuries to preschoolers. They are somewhat more serious, often involving fractures of hips or arms. The report by Bulajic-Kopjar (p 16) affirms that such falls are much more likely to occur in countries like Norway with snowy and icy winter months. Although many readers may think this is all too obvious, not all studies agree that these slippery conditions are the main explanation for the commonly reported seasonal variations. In fact, the design of this study cannot rule out all competing findings, but the preventive message is clear: in countries where winter brings ice and snow, a variety of precautions are essential to minimize the risk of injury. Somewhat surprising, the preventive measures recommended do not include padded hip protectors, which I thought had been shown to be beneficial.

The paper by Ferguson *et al* (p 24) suggests that the cautionary messages regarding the dangers of placing infants in the front seats of cars with airbags has begun to sink in. In the US, it is mostly 7-12 year old children who sit in the front of cars, followed by those 3-6 years of age. Quite apart from the airbag issue, the observation that those in the front are often not restrained or improperly restrained, is important but not novel. The technology of effective, easy to use restraints for this age group, whether in the front or back, leaves much to be desired. In light of this, much more effort is needed to get these vulnerable children into the rear of cars. As in so many other such issues, achieving the goal may require legislation and its rigorous enforcement. Whether the same results can be achieved by education alone seems doubtful.

We see too few papers on drowning in spite of the fact that it is among the top three causes of unintentional injury fatalities in most countries. Lindholm and Steensberg (p 29) remind us that more than one third of “immersed” persons die and the fatality rate is much higher for adults than for children. In this situation, as in so many others, males of all ages are at much greater risk than females. In addition, the authors draw attention to a not previously reported increase in risk for foreigners, among whom the rates of drowning are three to four times that of native Danes. Whether more education for the high risk groups is the answer, or stricter control of alcohol for those engaging in water related activities, is still not established. Until this question is decided, the prevention of drowning must rely on both these approaches and many others.

As a rule, a purely descriptive report is unlikely to be recommended for publication by our reviewers. In this issue, two papers appear that may, at first glance, seem to fall into this category. But closer scrutiny shows that each offers a special insight that helped it pass muster. The first is by Chan *et al* and focuses on childhood injuries in Hong Kong (p 20). What make it special is that the authors had the wisdom to compare their findings for Hong Kong with what has been reported for other countries. Such comparisons are always difficult to do well, as Bergman points out in his editorial (p 4). Although Chan and his colleagues have gone to exceptional lengths to overcome these limitations, the findings are far from conclusive. Their sophisticated analyses suggest but have not proved that in contrast to the other countries, there may well be some distinctive patterns of childhood injury in crowded Hong Kong. Whether this truly enhances the opportunities for prevention by permitting the targeting of those at highest risk, remains to be established.

The second descriptive paper, that by Ellsäßer and Berfenstam (p 41), follows similar lines insofar as it attempts to understand the pattern of injuries in Germany by comparing the rates with those in four other countries. The same cautions about such studies apply, but in this instance, the main feature is the attempt to relate the reported rates with the prevention programs in each country. From a purely scientific viewpoint, to establish causal relationships of this kind is extremely difficult. But at a less rigorous level, there are many insights to be gained. The comments of Bergman, in his editorial, identify the essential features of Sweden’s extraordinary success, including, above all, the remarkable leadership of the coauthor of this paper, Ragnar Berfenstam.

It is always difficult to disentangle risk factors that are closely related. The paper by Mullin and her coworkers (p 32) tackles this problem with respect to motorcycle injuries in attempt to separate the contribution of age and experience. Obviously, older drivers usually are more experienced than younger drivers. But there are younger drivers (of all vehicles) who may have equivalent or greater experience. The findings once again highlight the much greater risk of drivers in their late teens, and equally, but not entirely unexpectedly, the risk of having less than two years’ riding experience. The critical finding is that age far outweighs experience. Hence, the recommendation that licensing should be restricted to older riders; a recommendation that might be mitigated by experience with a specific motorcycle. The research method used in this study—the case-control design—is increasingly common and readers

not familiar with its advantages (and limitations) are reminded that in brief, cases (those injured) are matched with controls (not injured) as closely as possible, and their respective exposures to the postulated risk factor compared, with the results expressed as odds ratios—roughly equivalent to relative risks.

Researchers almost always favour randomized trials whenever this is feasible. In a sharp departure from the usual sort of study reported in this journal, Warburton and Shepherd (p 36) describe a randomized trial of different types of beer glasses. The unit of randomization was bars (pubs) and the results show that “toughened” glassware produces more injuries. The authors conclude that impact resistance standards should favour annealed glasses. As is so often true, a fairly simple engineering solution is all that is needed to achieve greater safety. Not only is this an unusual topic, but the challenging logistics of conducting a trial of this kind successfully, although formidable, were well overcome. This should inspire others to be more venture-some when facing similar problems for which a randomized trial might, at first, seem impossible.

Frisbee and Hennes call attention to the hazards of adult worn baby carriers (p 56). These slings are increasingly popular and few would have thought that they might be dangerous. Yet, in what may be a “first”, the authors have discovered that, although far from numerous, injuries, often requiring hospitalization, do occur with the use of this product. They suggest that the design, condition, and method of use need further attention to enhance the safety of these parent and baby friendly inventions. The lesson from this paper is that we cannot take for granted that any product is inherently safe, no matter how widespread it is used.

The preceding is a “brief report” (a format we encourage, see below). Another, by Sorli, (p 59) focuses attention on the dangers of horse riding. Although a rough rule for judging the importance of an injury prevention issue is to consider the frequency of the event alongside the usual severity of the injury, an important third factor is how preventable the most serious outcomes usually are. Sorli notes that for horse riders head injuries are relatively common. More importantly, they should, in theory, be easily preventable by the use of helmets. However, the adequacy of helmets for riders has not been formally tested, so far as I am aware. It is likely that more attention is needed to ensure that the standards are sufficiently rigorous.

Finally, the “classic” in this issue is so unusual and so important, that I invited Flaura Winston, who is qualified in engineering as well as medicine, to write about it. The paper by Hugh de Haven, published in a long since defunct journal, *War Medicine*, is an extraordinary example of how much can be learned by simple observation (p 62). These case reports form the basis for the fundamental principles around which the most successful injury prevention strategies are constructed. I urge that when you read it you keep in mind how long ago it was written. I say that not to excuse any shortcomings, but for precisely the opposite reason: de Haven’s messages are timeless.

Editor’s note: Readers comments on this “experiment” in “elaborations” are genuinely invited.

- 1 Stone DH, Morrison A, Smith GS. Emergency department surveillance systems: the best use of limited resources? *Inj Prev* 1999;5:166–7.
- 2 Mackenzie SG, Pless IB. CHIRPP: Canada’s principal injury surveillance program. *Inj Prev* 1999;5:208–13.

Venting spleen: helmet legislation

One of the huge advantages of being an editor is being able to bypass the peer review process in some instances. Earlier this year the *BMJ* declined to publish a letter to the editor I wrote. It questioned the decision of the BMA Board of Education and Science not to recommend bike helmet legislation. The *BMJ* refused on the grounds of insufficient space. (Although I don't subscribe to every conspiracy theory floating around, it seems possible there were other reasons for saying no to this letter.) I believe the questions raised in that letter are of great importance to all involved in this debate. Accordingly, with a tincture of hesitation, I am about to make journalistic history by publishing my own letter! I look forward to your comments. This journal will ensure that there is always space for reasonably short letters, especially those that criticize the editor.

My letter follows:

Douglas Carnall's report describing the BMA Board of Education and Science's position on the merits of bike helmet legislation, is remarkable.¹ It suggests that the board fails to practice what the *BMJ* so assiduously preaches about the need for evidence based decisions. I may be wrong, so let me ask the board some questions and trust that in their desire to enlighten us, they will reply fully.

1. If "international evidence" implies more than the single study cited (from Australia), what other countries have provided similar evidence?

2. Is the board really saying that a decline of deaths and head injuries of between 37% and 51% is less important than a postulated decline in fitness?

3. Did the board seek to ascertain if the decline in cycling after the law changed in Victoria was sustained, and, if so, for how long and by how many?

4. Did the board determine whether those who quit cycling were previously riding sufficiently fast and for long enough to enhance their fitness, or, indeed, whether the quitters chose other fitness enhancing activities?

5. What is the empirical evidence that the proportion of helmet wearers "would have to be increased by promotional campaigns before legislation could hope to be effective"? If there is such evidence, what is the magical number to be achieved? What were levels of seat belt use in Britain before legislation was introduced and how successful were the pre-law promotional campaigns in increasing use rates?

6. Did the board conclude that Britain would take the same measures to reduce car speeds and separate cyclists as did the Netherlands and Denmark? If not, why is this relevant to their conclusion?

7. Does not the term "prohibitive" apply more aptly to the costs of care for a moderate or severe head injury than to the £12 cost of a helmet?

8. What evidence enabled the board to imply that collisions with "fast moving traffic" are a more frequent cause of head injury to a cyclist than a fall? Does the board accept that helmets are designed to offer protection against falls and such, not crashes?

I assume other readers will be as interested as I to learn who sits on this board, how they are appointed, and in what manner they review the evidence on which they base this and other critically important recommendations.

1 Carnall D. Cycle helmets should not be compulsory. *BMJ* 1999;318:1505.

A gentle but firm reminder for new contributors: word limits

An old childrearing adage is that new lessons must be repeated thrice before they are accepted. Several issues back a 3000 word limit for original articles was announced and this now appears on our web site and in "instructions to authors". Nevertheless, we continue to receive many papers that far exceed that limit. This usually results in much extra work for everyone, including our devoted reviewers, and often in considerable delays in processing papers. Contributors are urged to adhere to this stipulation, and to note that for brief reports the limit is 1500 words. All of this is part of our attempt to be able to

publish a higher proportion of the worthy papers submitted. In the last year, the number we have received has nearly doubled and the rate continues to increase each week. On another note, we request that contributors submit papers by e-mail if possible. A copy on disk or by e-mail will always be required for papers that are being published, but having an e-mail copy from the outset may shorten the review process . . . and save on postage!

I B PLESS
Editor