

**The Years Work** is a publication of the Insurance Institute for Highway Safety. It features articles on people saved by airbags, promising ways to reduce 16 year old's crashes, reaping the rewards of safer cars, the adverse effects of devices that help speeders, signal light timing, red light violators, the relationship between increased speed limits and crash deaths, and helping young drivers.

**Status Report** is the regular, monthly publication of the Insurance Institute for Highway Safety. In the August, 1995 report there is a report entitled 'European Union moves toward new safety standards with dynamic tests' and a summary of fatality facts for the US. One snippet of interest is that six states account for about half of all bicyclist deaths. Apart from these being among the most populous states, there may be other clues in this observation that will challenge epidemiologists.

The September issue focuses on whiplash injuries and, not surprisingly, notes that the best head restraints are found in Volvos. The bad news is that restraints in 117 of 164 cars were rated 'poor' based on geometric measures.

**Snapshots** is a quarterly newsletter from SAFE KIDS Canada. The third issue features 'exciting partnerships in the Quebec Region' (which includes a photo of your editor demonstrating the Montreal Children's Hospital's temporarily (I hope) defunct interactive safety display, as well as a more upbeat report by the new Director of Development, Jane Rogers, on fundraising.

**Building Bridges**, a publication of the Education Development Center (Vol II, No 3) is devoted to collaborations to prevent impaired driving, including a report on a special effort to develop a model program to reduce juvenile impaired driving. It also has a feature on National Organizations for Youth Safety and another describing Connecticut's moves toward zero tolerance.

**Prosafe News** is a new journal, funded by the European Commission to encourage liaison between enforcement officers in different states to foster consumer safety. It contains a wide range of news about consumer safety, personalities, and future proposals. For more information: *Prosafe News*, Trading Headquarters, Old Budbrooke Road, Warwick CV35 7DP, UK (fax +44 1926 414014).

## LETTERS TO THE EDITOR

### Limitations of NEISS child injury data

EDITOR,—As the Director of the National Electronic Injury Surveillance System (NEISS) at the Consumer Product Safety Commission (CPSC), I have read and discussed with Mr Weiss several drafts of his article. There are several statements made in the article that require further comment. First, he claims 'For trend analysis of product related injuries at the level of occurrence studied for baby walkers, NEISS suffers from poor sensitivity due to relatively large sampling error'. The NEISS sample was designed as a stratified probability sample of

all hospitals in the US and its territories having at least six beds and an emergency department open for business 24 hours a day. The sample design provides a balance between three factors most important to the CPSC (fixed costs, case finding, and minimum sampling errors).

There are a variety of statistical models and tests than can be applied to analyze trends in these data. Mr Weiss claims the system suffers from poor sensitivity because there can be relatively large differences between estimates for different years with overlapping confidence intervals around these estimates. However, there can still be statistically significant differences among estimates with overlapping confidence intervals. In the paper cited by Mr Weiss, a regression test is used to show a significant increase in the baby walker injury estimates for the period 1984–91. In a 1994 CPSC paper on baby walker injuries, a non-parametric rank test applied to the injury rates for an extended period also showed a significant increase.

Mr Weiss concludes that the NEISS data at the 'frequency' of baby walkers have 'poor sensitivity' because of the failure of a weak test on one set of data to show a significant difference. In fact, the 'poor sensitivity' is a function of the statistical test (requiring disjoint confidence intervals) rather than the sample design.

Second, Mr Weiss claims, 'NEISS . . . reflects a random geographic imbalance . . . because one north eastern state contributes both of the reporting children's hospitals'. As mentioned above, the NEISS sample is a probability sample designed to give unbiased estimates of the numbers of injuries treated in hospital emergency departments throughout the country. Hospitals in the sampling frame were stratified by size and geographic area. Sample hospital selections were made from each of the geographic substrata within each of four different size strata. Selection of multiple hospitals from large states such as Pennsylvania was a result of the large number of hospitals in these states and not a deficiency in the design.

Children's hospitals were included in the frame under the same conditions as any other hospital in the country. The current NEISS sample provides unbiased estimates because it represents a carefully drawn probability sample of all hospitals in the frame. Selection of two children's hospitals in Pennsylvania is a perfectly acceptable result of the random sampling process.

And third, Mr Weiss asserts, 'It was obvious that the number of child injuries from a certain size sample hospital serving only children must be considerably higher than a similar size non-children's hospital. Yet CPSC has not performed any special accounting in the NEISS . . .'. Children's hospitals in this country treat relatively few of the total number of children's emergency room visits. In 1995, the CPSC has been collecting injury reports from a total of 11 children's hospitals. Preliminary data from these hospitals indicate that children's hospitals treat less than 5% of the product related children's injuries treated in hospital emergency departments.

There will always be some uncertainty accompanying use of estimates from a probability sample and room for different interpretations of their value. I appreciate the opportunity to review Mr Weiss' article and to express my comments in the same issue of the journal.

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### Injury prevention education at school

EDITOR,—In response to your recent question, 'Are you involved in injury prevention?', the answer is yes. I am a home economics teacher at a high school. I mentioned your publication to my S5-S6 class who have recently completed a Scotvec module entitled 'Safety in the Home' in conjunction with this. They also took a very active part in the 1994 Child Safety Week: (1) wrote 'a letter to parents' which was published in the local paper, *The Galloway Gazette*; (2) put up an extensive three window display in the middle of the town centre for six months; and (3) placed leaflets on firework safety in every village and town in school catchment area. They also completed the St John Ambulance Three Cross Award.

Here are some of their comments on injury in the young: 'I think every pupil should do a first aid course in school as part of their education — with exams and certificates at the end'. 'I have more confidence in myself because I know that I could react in an emergency'.

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## BOOK REVIEW

**Adolescent Injuries: Epidemiology and Prevention.** Edited by KK Christoffel and CW Runyan. (Pp 292; \$33 (in US), \$36 (outside US) hardback). Hanley and Belfus Inc, 1995. ISBN 1-56053-190-8. (Can be ordered directly from Hanley and Belfus Inc, 210 South 13th Street, Philadelphia, PA 19107, USA; fax for orders +1 215 790 9330.)

Adolescent injuries are a tremendously important problem. Intentional and unintentional trauma are far and away the leading cause of death in this age group in all countries of the world, industrialized or non-industrialized alike. In the US motor vehicle injuries alone are the single largest cause of all deaths during adolescence, not just injury deaths. Any effort to address the causes and suggest prevention strategies for these problems is both much needed and welcome.

This volume represents a helpful addition to the field. Edited by two respected injury investigators, KK Christoffel and CW Runyan, the 10 chapters contributed by 24 different individuals cover a broad range of topics. The format of the chapters, while not totally uniform, includes information on the magnitude of the problem, the descriptive epidemiology, and potential interventions. Some chapters offer a more comprehensive literature review than others, for example, the chapter on post-traumatic stress disorder by L Amaya-Jackson and JS March. All chapters offer something for both the scientist trying to discern new areas for investigation and the injury control practitioner deciding which interventions to implement in a community. For example, the chapter on injury prevention in primary care by J Paulson and C DiGuseppi offers helpful, hands-on suggestions for the primary care practitioner.

I was also impressed by the critical nature of the reviews of the literature in many chapters.

For example, R Wilson-Brewer, addressing school based, peer violence prevention programs does not accept the myriad interventions that have been suggested, such as conflict resolution programs, at face value. Instead she discusses the evidence (or mostly the lack thereof) for the effectiveness of these programs. This type of critical review of the literature and existing programs is often lacking in many reviews and the editors and authors are to be congratulated for stressing it.

The volume suffers from the usual American bias of focusing only on the US, or at best North America, and largely ignores other countries of the world. One exception is in the chapter on the epidemiology and prevention of homicide, but that is more to point out how terrible are the American statistics than to really shed any light on what is happening elsewhere. Some countries have dealt better with some of these problems than others; exploring data and programs from these success stories may have much to teach all of us about what works and why.

The chapter by staff from the National Center for Injury Prevention and Control on suicide was somewhat surprising for the scant attention given to the contribution of firearms and strategies for preventing firearm suicides. This chapter is focused largely on US data where firearms are responsible for the majority of suicide deaths. The data clearly point to a relationship between firearm availability and risk of teen and young adult suicide. No mention is given, for example, of promoting ways to keep guns away from the hands of teens at risk of suicide, the role of the primary care practitioner in counseling families, or strategies to be used in the community.

I also found the relative lack of attention given to the role of alcohol to be almost alarming. In our trauma center, and in many other centres in North America and Europe, alcohol is one of the most important, and potentially changeable, risk factors for adolescent injury. Many chapters give alcohol passing mention, but none discuss basic ways in which we might deal with the problem. No authors, for example, discuss the importance of testing adolescent trauma victims for alcohol intoxications, nor do any discuss screening these patients for chronic alcohol problems. This lack of attention to perhaps one of the most important risk factors for injury emphasizes the need for volumes such as these to deal with it realistically.

I would have also liked to see a chapter discussing how injuries in adolescents fit in with other risk taking behaviors, including early sexual activity, substance abuse, smoking, and delinquency. Many authors currently view each of these high risk behaviors as markers for adolescents at risk for one of the others. Comprehensive approaches considering risk taking behavior in general may offer as much to the injury field as do more specific approaches targeted on isolated injury problems.

The challenge of injury prevention in adolescents is one that many of us have been reluctant to take up because of its sheer difficulty. It's much easier to get a bike helmet on an 8 year old than a 15 year old. Yet, the size of the injury problem during adolescence demands that we repond in a thoughtful and meaningful way. This volume is a good start in the right direction to help us make a difference.

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## CALENDAR AND NOTICES

### Preventing Pelvic and Lower Extremity Injuries

The US National Highway Traffic Safety Administration held a conference December 4-6 in Washington addressing the prevention of pelvic and lower extremity injuries. It included sessions on the socioeconomic and epidemiologic aspects of these injuries, as well as the medical and engineering issues associated with them. A final session addressed 'offset testing options'. An interesting aspect of this conference was the inclusion of speakers from France and Italy, as well as others from both Ford and General Motors. Several luminaries are included: Ellen MacKenzie, Adrian Lund, Ted Miller. Regrettably, so far as I could tell, none of the papers dealt specifically with this problem as it affects children or adolescents.

### Short Course on Injury Epidemiology and Prevention

By the time this issue is available, this intensive five day course, organized by the WHO collaborating centre for Research and Training in Safety Technology, the Indian Institute of Technology in Delhi, and the Monash University Accident Research Unit, will have been held in Melbourne as part of the Third International Conference on Injury Prevention and Control. Speakers scheduled include: Professor Dinesh Mohan, Head, WHO Collaborating Centre, Indian Institute of Technology, Delhi, Professor Peter Vulcan, Director, Monash University Accident Research Centre, Melbourne, Dr Geetam Tiwari, Indian Institute of Technology, Delhi, Dr Matthew Varghese, St Stephen's Hospital, Delhi, Dr Joan Ozanne-Smith, Monash University Accident Research Centre, Melbourne, and Professor Jess Kraus, School of Public Health, University of California, Los Angeles.

The aim of the course is to improve the injury prevention knowledge, research, and implementation skills of practising professionals and graduate students working in injury related areas in both industrialised and non-industrialized countries.

The Monash University Accident Research Centre was established in 1987 as a multidisciplinary research organization concerned with the causes and prevention of injury in the community. The centre's research programs encompass injury surveillance and epidemiology, road safety, consumer product safety, sports, rural, occupational, child and elderly injury, and the evaluation of interventions. The Indian Institute of Technology has been involved in injury control research for over a decade. The institute was recognised as a WHO Collaborating Centre for Research and Training in Safety Technology in 1991. The faculty associated with the centre has expertise in epidemiology, safety biomechanics, traffic planning and safety, agricultural injuries, care of the injured and rehabilitation technology.

### International Conference on Bicycle Helmet Initiatives

Also scheduled in conjunction with the conference in Melbourne is a conference on bicycle helmet initiatives. This is billed as a satellite conference of the Third International Conference on Injury Prevention and

Control and is sponsored by the State and Territorial Injury Prevention Directors Association and Monash University Accident Research Centre, and co-sponsored by CDC Traffic Safety and Prevention, the National Highway Traffic Safety Administration and the WHO Bicycle Helmet Initiative.

**National Violence Prevention Conference** 'Bridging Science and Program' was held in Des Moines, Iowa, 22-25 October 1995.

### Playground Safety — An International Conference

Held at University Park, Pennsylvania State University, October 1995.

### 2nd National Conference on Children and Violence

This meeting was held at the University of Houston, Texas, 9-11 November 1995.

### Teenage Accidents and Injuries

A conference on teenage accidents and injuries was held on 26 January in West Glamorgan, Wales. The programme included the antecedents of teenage accidents; European approach; a nationwide approach (UK and Wales); local initiatives; effective interventions. We hope to have a report on this meeting in the June issue.

### A Training Course on Injury Prevention for Indigenous People

This was held in Fitzroy, Victoria, 16-17 February 1996. Information: Richard J Smith III, Indian Health Service, tel: +1 301 443 1054.

### The 10th Annual California Childhood Injury Prevention Conference

Site: San Diego, CA (site of one of the best zoos in the US). This conference is sponsored by the California Center for Childhood Injury Prevention and is tentatively scheduled for 15-19 September 1996.

### 15th International Technical Conference on the Enhanced Safety of Vehicles

To take place 13-17 May 1996 in Melbourne.

### 4th International Cochrane Colloquium

Will be held 19-23 October 1996 in Adelaide. (*Editor's note:* ISCAIP is currently seeking funds to permit it to join the Cochrane initiative with a focus on injury prevention in children and adolescents.)

### Job opportunity

The Eastern Carolina Injury Prevention Program (ECIPP) is conducting a search for a research coordinator. This member of the ECIPP core staff will be responsible for identifying funding opportunities for ECIPP research projects and coordinating responses to them. Strong writing, facilitating, and analytical skills are a must. Experience in injury control research is desirable.

The ECIPP is a joint effort of Pitt County Memorial Hospital and the East Carolina University School of Medicine. We are located in Greenville, North Carolina which is 90 minutes from the Atlantic Ocean and the Research Triangle Park. At the moment, the temperature is a comfortable 65 degrees and the sky is clear blue.

If you are interested or know a potential candidate, please call Herb Garrison at +1 919 816 8688 or send an electronic message to hgarrison@p-cmb.com.



## Adolescent Injuries: Epidemiology and Prevention

Frederick P Rivara

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Updated information and services can be found at:  
<http://injuryprevention.bmj.com/content/2/1/77.3.citation>

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