injury PREVENTION

Journal of the International Society for Child and Adolescent Injury Prevention

VOLUME 2 · 1996

BMJ PUBLISHING GROUP

The editor's health: corrigendum and update

My family insists I should never try to tell jokes because I always seem to forget the punch line or otherwise mess it up. In the September issue I told the tale of my fractured heel. It should have ended with the clever pun 'Time wounds all heels' but my careless proofreading resulted in the not so funny, perhaps mysterious, 'Time wounds all *heals*'. Read it again with the correct spelling and I hope you will at least chuckle.

Anyway, I trust readers will be reassured that since my last update I have experienced no further injuries. It is, however, striking, that most of my friends and casual acquaintances immediately assumed that because I now occasionally wear a cervical collar I have somehow injured myself. (I am certain there is a message in what assumption; I just haven't figured out that it is.) The collar is worn because of arthritis, brought on by wear and tear, also known as 'old age'. Could it be the result of having stuck my neck out too often over too many years?

IB PLESS
Editor

Children of the road

A small change in car policy could bring great new freedoms

When a black and white photograph of a 1950s street scene is juxtaposed with the same street now, the most striking difference is the absence of the motor car. Then the streets were alsmost always filled with children playing. Now the road belongs to the car. Even the pavements have been lost to children. A conference held by the National Children's Bureau yesterday sought ways to redress that balance.

The Automobile Association called for the Government to experiment with a 10 mph speed limit on some residential streets to see whether the threat of road accidents could be reduced. Steven Norris, the Transport Minister, seemed ready to take up the challenge: 'Certainly, if 20 mph can be made to work I would not be averse to looking and seeing whether lower speeds still will work', he told the Play in the Streets conference.

Road traffic has nearly doubled over the past two decades and is forecast to double again by the time that today's children are parents themselves. The British accident rate for child pedestrians is 31 per cent higher than the EU average. Yet the child death rate has fallen hugely since the car was first introduced to Britain. In 1922, twice as many children were killed on the roads than now, even though there were 25 times fewer cars. This does not, however, suggest that streets have become safer. Rather, children have been withdrawn by their parents from the threat of traffic.

The threat of abduction, or 'stranger danger', exists more in the minds of parents than in reality. There will always be the occasional tragic and widely reported case of children being abducted or murdered by perverts. But the chances of this happening are minuscule; which is why when it does, it receives such extensive media coverage.

Traffic is another matter. It has hugely circumscribed children's freedom and independence. Children are no longer allowed to roam their neighbourhoods, to visit friends, to discover a world of the imagination that can be acted out free from adult supervision. Their ability to deal confidently with the outside world is much diminished. Their health suffers too; not just because the extra exhaust pollution can trigger asthma attacks, but because being ferried around in a car instead of walking or cycling has made today's children probably the least fit generation ever.

Transport planners must start to recognise that the rights of motorists to reach their destination as quickly as possible should not have domain over 100 per cent of Britain's roads. Other users have a stake too, not least children, who do not wield a vote. Their lives and the lives of their parents would be much improved if local authorities were to design safe routes to schools so that children could walk or cycle unaccompanied, and to enforce very low speed limits in selected residential areas. A small change in policy could lead to an enormous boost to children's freedom.

skills. In reality, many riders learn some basis skills off-road before attending such schools. Given that some 15 year olds will exercise their legal rights as soon as they turn 15, it may be unwise to suggest that riding motorcycles off-road be prohibited for all younger persons. A preferred solution would be to allow driving by persons under 15 years only under the supervision of a registered instructor or in an event sanctioned by the NZACU.

Conclusion

Whatever is finally decided, policy should be influenced primarily by a recognition of the child mortality and morbidity associated with these vehicles, and the physical limitations of children, as drivers and as passengers. While consistent legislation represents a step in the right direction, it needs to be supported by enforcement and complemented by other strategies. Legislation relating to children using tractors has existed in New Zealand since 1960, but the work of Houghton and Wilson suggests that it continues to be ignored by a significant number of farmers.[5] A similar law in Great Britain has also apparently been widely disregarded.[9] This could be related to difficulties in monitoring, a lack of willingness to prosecute, or small fines. Although attention to such matters may assist in this and similar situations, experience in other areas (for example drunken driving) suggests that it will take more than enforcement to reverse existing attitudes and behaviour and that this is especially the case for farming where sociocultural aspects are considered to be of particular significance.[10 11] Although the examples given here relate to the New Zealand situation there is evidence that similar situations exist in other western countries.[12] Much of the debate elsewhere is based on inconsistencies in child labour law between farms and non-farms. Despite the fact that removal of such inconsistencies has the potential to reduce childhood injury and deaths on farms there are potentially greater gains to be made for developing consistency in child safety law irrespective of the environment and work relatedness.

JOHN D LANGLEY

Injury Prevention Research Unit,
Department of Preventive and Social Medicine,
University of Otago Medical School,
Dunedin, New Zealand

1 Clarke JA, Marshall SW, Langley JD, Cryer C. *Epidemiology of injuries occurring on New Zealand farms.* Occasional Report No 9. Dunedin: Injury Prevention Research Unit, 1995.
2 Langley JD, Marshall SW, Clarke JA, Begg DJ, Reeder AI. Motorcycle/ATV crashes on farms. *Journal of Occupational Health and Safety — Australia and New Zealand* 1995; **11:** 387–94.
3 Brown R. *All terrain vehicles (ATVs): a perspective on their use and associated hazardous incidents in the farming industry.* Invercargill: Occupational Safety and Health Service, Department of Labour, 1993.
4 Rodgers GB. All-terrain vehicle injury risks and the effects of regulation. *Accid Anal Prev* 1993; **25:** 335–46.
5 Houghton RM, Wilson AG. *The prevention of injury among farmers, farm workers, and their families: a programme for the development of interventions for rural communities: farm survey findings.* Dunedin: University of Otago Consulting Group, 1994.
6 Land Transport Safety Authority. *The road code.* Wellington: Land Transport Safety Authority, 1994.
7 New Zealand Auto-cycle Union. *General competition rules 1992/1993.* Wellington: NZACU, 1993.
8 Accident Prevention Committee, CPS. Two-, three- and four-wheel unlicensed off-road vehicles. *Can Med Assoc J* 1987; **136:** 119–20.
9 Cameron D, Bishop C, Sibert JR. Farm accidents in children. *BMJ* 1992; **305:** 23–6.
10 Clarke L, Wolfenden K. Community organisation to reduce injury on Australian farms. *Health Promotion Journal of Australia* 1991; **1:** 17–22.
11 Elkind PD. Correspondence between knowledge, attitudes, and behavior in farm health and safety practices. *J Safety Res* 1993; **24:** 171–9.
12 Rivara FP. Fatal and nonfatal farm injuries to children and adolescents in the United States. *Pediatrics* 1985; **76:** 567–73.

New rules of the road

A contributor to the CCSN BBS from the US writes: 'Foremost is the safety of bikers who must share the roads with automobiles. Just as disconcerting is the high incidence of accidents on paths restricted to use by pedestrians, skateboarders, and other bikers. Teaching riding etiquette and designating roads as multivehicle highways are inexpensive and practical and can alleviate the majority of hazards bikers face'.

'You want irony? Try this: in a city which sponsors three annual cycling events and supports the county's alternative transportation program, there is not a single bike lane. We need to think about doing something to reverse the current situation. And now that we have the name of a giant corporation [unspecified] back us, there's no reason to remain silent regarding the lack of bicycle and pedestrian facilities in our community.

'Although the city is drafting a transportation plan, There isn't one provision to accommodate bikers. Perhaps its an oversight. Or perhaps it's the lack of bikers in the city council. We can safely assume that the director of the planning organization doesn't bike (at least, not outdoors). So if it's someone with legislative pull we need, we can go straight to the governor's office and find a state bicycle coordinator. With some pressure she will work with local governments to apportion some road money to non-highway programs. But unless we speak up, we'll go unnoticed' (from CCSN BBS).

return them as functioning individuals to society. One aspect I think has been most neglected is that of rehabiliation. For children with brain injuries, burns and lower extremity fractures, rehabiliation appears to have much to offer in returning children to school and society. However, many children do not receive intensive rehabilitation treatment. Moreover, few rehabilitation interventions such as physical therapy and occupational therapy have been rigorously evaluated with randomized controlled trials to determine their effect on the natural history of the sequelae of trauma in children and adolescents. We should start by documenting who gets and who does not get rehabilitation services and why, as well as subjecting common interventions which have not been evaluated to rigorous testing.

I believe that, while descriptive epidemiology has and will continue to play an important part in injury control, we need to move beyond this level. We need to conduct rigorous epidemiological investigations of injury etiology and interventions; use these findings to guide our intervention programs; and insure that all children who do sustain injury are returned to their fullest potential in society. This is our challenge. It's also our opportunity.

FREDERICK P RIVARA
Chair, ISCAIP
Harborview Injury Prevention and Research Center,
Box 359960, 325 Ninth Avenue,
Seattle,
WA 98104, USA
(Phone: +1 206 521 1530, fax +1 206 521 1562, e-mail: fpr@u.washington.edu)

1 Rivara FP, Grossman DC. Prevention of traumatic deaths to children in the United States: how far have we come and where do we need to go? *Pediatrics* 1996 (in press).

Editorial Board Member: brief biography

FREDERICK P RIVARA

Frederick P Rivara, MD, MPH, is George Adkins Professor of Pediatrics and Adjunct Professor of Epidemiology at the University of Washington and Director of the Harborview Injury Prevention and Research Center. His career has been devoted to the study of the epidemiology and prevention of injuries. Areas of interest have included childhood injuries particularly bicycle and pedestrian injuries, motor vehicle injuries, alcohol related trauma, and more recently intentional injuries particularly those due to guns. His current interests are continuing to explore methods of injury prevention and the development of effective early childhood interventions for the prevention of greater violence.

The Harborview Injury Prevention and Research Center's most successful injury prevention program has been the promotion of bicycle helmets to prevent head injuries. Their studies demonstrated that helmets can prevent up to 85% of serious head injuries related to bicycling. Using this information, a community-wide initiative was developed for the promotion of bicycle helmets for school age children. This has resulted in an increase in helmet use from 3% to now 60%, and a 70% drop in head injuries related to bicycling. This program has formed the basis for many of the bicycle helmet promotion campaigns across the country.

strategy — one that can fail too often and too easily.

In considering this question we need to remember that there are different levels of supervision. The most intense is sitting with a child and assisting him or her directly, as when young children are cooking or cutting. Another is watching them continuously, as when a toddler is in the bath. Still another is being in the same room, but doing something else — fairly routine practise for preschool children. Finally, there is supervision from a distance — being in another room but keeping an ear open for screams, or, more ominously, silence. This is a common strategy with older children.

The first two scenarios can provide good protection, but only if the supervisor's concentration does not slip. Every accident and emergency doctor has heard the cry 'I only turned my back for a minute'. The latter two scenarios provide even more opportunities for mishap. The wrong level of supervision may be selected, as in a recent incident in the UK when a mother tried to supervise her toddler at play on a river bank by occasional glances out of a window; fortunately the child was rescued from near drowning some miles downstream. Clearly, supervision can fail to give the same protection that may be afforded by environmental change in some instances.

On the other hand, supervision could prove to be a good safety strategy. It is difficult to see how some home accidents, such as bath tub drownings, could be prevented in any other way. There is also positive scientific evidence of the value of supervision in other fields. For example, lifeguards may reduce drowning deaths in public swimming pools[1] or on beaches,[2 3] and accompanied child pedestrians may be at reduced risk.[4] Other authors have found an association between lack of supervision and injuries to young children in play settings[5] or in common domestic accidents.[6]

It is, however, unfortunately very difficult to obtain good data on supervision. The presence of adults in the house, let alone in the same room, at the time of a child's injury is rarely recorded. I am not aware of any intervention directly addressing the issue of supervision exclusively. Therefore, the potential for supervision to be effective is indicated, but not clearly demonstrated.

I suggest therefore that there are two topics that could be explored to better effect that the ideological or semantic issues that Roberts raises. Firstly, how effective is supervision as a safety strategy? Secondly, if children are safer with trained carers than with parents, why could structured programmes of parent education not improve the effectiveness of parents are carers?

1 Kemp A, Sibert J. Drowning and near drowning in the United Kingdom: lessons for prevention. *BMJ* 1992; **304:** 1143–6.
2 Patrick M, Bint M, Pearn J. Salt water drowning and near drowning accident involving children. *Med J Aust* 1979; **1:** 61–4.
3 Spyker D. Submersion injury. Epidemiology, prevention and management. *Pediatr Clin North Am* 1985; **32:** 113–25.
4 Roberts I. Adult accompaniment and the risk of pedestrian injury on the school-home journey. *Injury Prevention* 1995; **1:** 242–4.
5 King K, Ball D. *A holistic approach to accident and injury prevention in children's playgrounds.* London: LSS, 1989.
6 Alwash R, McCarthy M. How do child accidents happen? *Health Education Journal* 1987; **46:** 169–71.

Advice from an emergency medical technician

I am a firefighter/EMT-Basic but am also a Combat Medic for the US army (now in the US Army Reserves). In the army, I do the trauma skills of a paramedic. We have found that the pulse-blood pressure correlation is about 95% effective in trauma patients and about 85% effective in non-trauma patients. For us, this is called the 'field expedient method' of obtaining a systolic blood pressure. We often don't have time to take a patient's blood pressure while being fired upon and others are being injured as well. We need to know minimum pressures to decide what life saving procedures can be done as well as drug administration. This method has been very effective in determining the minimum pressure on trauma patients I have dealt with in the field, in air ambulance, and in the city. Certainly this method cannot replace the need for auscultated blood pressure; it is only to be used when no blood pressure cuff is available or when it is impossible to use it. This is the scale: if palpable radial pulse present, systolic blood pressure is at least 80 mmHg. If radial pulse is absent, palpate carotid pulse. If carotic pulse present, systolic blood pressure is at least 70 mmHg. If radial and carotid pulses are absent, palpate femoral pulse. If femoral pulse is present, systolic blood pressure is at least 60 mmHg. I'm certainly not a doctor but I do form my opinions from medical experience (Jason Johnson Polk, County Fire District #1) (CCSN BBS).

5 Walsh S, Jarvis S. Measuring the frequency of 'severe' accidental injury in childhood. *J Epidemiol Community Health* 1992; **46:** 26–32.
6 Office of Population Censuses and Surveys. *Population estimates for district health authorities.* London: HMSO, 1990.
7 Baker S, O'Neill B, Haddon W. The injury severity score: a method for describing patients with multiple injuries and evaluating emergency care. *J Trauma* 1976; **14:** 187–96.
8 Champion H, Sallo W, Copes W. A revision of the trauma score. *J Trauma* 1989; **29:** 623–9.
9 World Health Organisation. *Manual of the international statistical classification of diseases, injuries, and causes of death (9th revision).* London: HMSO, 1977.
10 Townsend P, Phillimore P, Beattie A. *Health and deprivation: inequality and the north.* London: Croom Helm, 1987: 623–9.
11 SPSS Inc. *SPSSX users guide.* 3rd Ed. Chicago: SPSS Inc, 1988.
12 Gallagher S, Finison K, Guyer B. The incidence of injuries among 87 000 Massachusetts children and adolescents. *Am J Public Health* 1984; **74:** 1340–7.
13 Nathorst Westfelt J. Environmental factors in childhood accidents: a prospective study in Gothenburg, Sweden. *Acta Paediatr Scand (Suppl)* 1982; **29:** 1–75.
14 Nolan T, Penny M. Epidemiology of non-intentional injuries in an Australian urban region: results from injury surveillance. *J Paediatr Child Health* 1992; **28:** 27–35.
15 Sibert J. Accidents to children: the doctor's role. Education or environmental change? *Arch Dis Child* 1991; **66:** 890–3.
16 Vimpani G. Injury surveillance: a key to effective control of childhood injuries. *Aust Paediatr J* 1989; **25:** 890–3.
17 Stewart Brown S, Peters T, Golding J. Case definition in childhood accident studies: a vital factor in determining results. *Int J Epidemiol* 1986; **15:** 352–9.
18 MacKenzie EJ. Injury severity scales. *Am J Emerg Med* 1984; **2:** 537–49.
19 Wesson D, Spence L. Injury scoring systems in childhood. *Can J Surg* 1987; **30:** 398–400.
20 MacKenzie EJ, Shadiro S, Eastham JN. The abbreviated injury score and injury severity score. *Med Care* 1985; **23:** 823–35.
21 Zoltie N, deDombal FT. The hit and miss of ISS and TRISS. *BMJ* 1993; **307:** 906–9.
22 Alwash R, McCarthy M. Accidents in the home among children under 5: ethnic differences or social disadvantage? *BMJ* 1988; **296:** 1450–3.
23 McFarlane A, Fay J. Child deaths from accidents and violence. *Population Trends* 1978; **12:** 22–7.
24 Hill A. Trends in paediatric medical admissions. *BMJ* 1989; **298:** 1479–83.
25 Gustaffson L. Childhood accidents: three epidemiological studies on the etiology. *Scand J Sco Med* 1977; **5:** 5–13.
26 Division of Injury Control Centers for Disease Control. Childhood injuries in the United States. *Am J Dis Child* 1990; **144:** 627.
27 Pless IB. Accident prevention. *BMJ* 1991; **303:** 462–4.

Getting over an accident

Eight year old John was knocked down by a car when crossing a road. He was badly bruised and broke a leg, but he recovered well from his injuries. Unfortunately, this was not the end of an unpleasant experience for John. He started to have nightmares, dreaming about monsters coming to hurt him. He became very nervous in traffic and refused to cross roads. He found it difficult to concentrate in school and he shrank at the sound of loud noises.

Survivors of the Zeebrugge ferry disaster and recent coach or train crashes would immediately realise that John was suffering from post-traumatic stress. But unlike them, children who show distress after an accident are not always helped to overcome their fears and anxieties. Yet, each year in the UK about 700 children die, 120 000 are admitted to hospital and 2 000 000 attend accident and emergency departments as the result of an accident.

Provisions to help children and their families overcome the psychological effects of accident and injury are patchy and disconnected. The lessons learned from supporting the survivors of disasters have not been more widely applied. Nurses are often among the first people to get into contact with children and their families after an accident. Many will have developed ways of diminishing the distress, but they don't always benefit from those experienced in counselling and debriefing. Most importantly, the extent of support provided is unclear and it is uncertain which methods are the most effective.

The Child Accident Prevention Trust has recently started a project that aims at the nationwide collection of information about the provision of support for children and their families after an accident. The project will also gather information about the various methods of support used and their effectiveness. A report will be produced at the end of the study which will make recommendations as to how to ensure that children and their families receive adequate support after an accident. In order to gather as much information as possible, the trust would like to hear from anyone who has experience of providing support after an accident or who have views on ways in which support should be given. Please write to: Dr Ellen Heptinstall, Child Accident Prevention Trust, 18–20 Farringdon Lane, London EC1R 3AU, UK.

6 Preusser DF, Blomberg RD. Reducing child pedestrian accidents through public education. *J Safety Res* 1984; **15:** 47–56.
7 Rivara FP, Booth CL, Bergman AB, Rogers LW, Weiss J. Prevention of pedestrian injuries to children: effectiveness of a school training program. *Pediatrics* 1991; **88:** 770–5.
8 Malek M, Guyer B, Lescohier I. The epidemiology and prevention of child pedestrian injury. *Accid Anal Prev* 1990; **22:** 301–13.
9 Renaud L, Suissa S. Evaluation of the efficacy of simulation games in traffic safety education of kindergarten children. *Am J Public Health* 1989; **79:** 307–9.
10 Rothengatter JA. The influence of instructional variables on the effectiveness of traffic education. *Accid Anal Prev* 1981; **13:** 241–53.
11 McLoughlin E, Vince CJ, Lee AM, Crawford JD. Project burn prevention: outcome and implications. *Am J Public Health* 1982; **72:** 241–7.
12 Rosenbaum MS, Creedon DL, Drabman RS. Training preschool children to identify emergency situations and make emergency phone calls. *Behav Ther* 1981; **12:** 425–35.
13 Jones RT, Kazdin AE. Teaching children how and when to make emergency telephone calls. *Behav Ther* 1980; **11:** 509–21.
14 Maryland Department of Health and Mental Hygiene. *Maryland vital statistics, 1992.* Baltimore: Maryland Department of Health and Mental Hygiene, 1992.
15 Green LW, Kreuter MW. An educational and environmental approach. *Health promotion planning.* 2nd Ed. Mountain View, CA: Mayfield Publishers, 1991.
16 Sopp B. Teaching safety at Children's Village. *Maryland EMS News* 1994; **21**(3): 1–2 (Dec).
17 Ford C. An act of faith: 8-year old uses training to lead brothers out of fire. *Morning Herald* (Hagerstown, Maryland). May 5, 1995: A1.
18 Perry CL, Luepker RV, Murray DM, *et al.* Parent involvement with children's health promotion: the Minnesota home team. *Am J Public Health* 1988; **78:** 1156–60.

Editorial Board Member: brief biography

MICHAEL HAYES

After graduating in physics at the University of Birmingham, Michael Hayes joined the University's Accident Research Unit. He was awarded his PhD following a study of traffic conflicts. Subsequently, as a member of the unit's staff, he was involved in an at-scene study that researched the relationship between vehicle design and pedestrian injuries. He then joined a team examining the crash performance of cars in real accidents, in the context of safety standards.

In the early 1980s Dr Hayes was the researcher responsible for the collection of data for a major project which evaluated the effects on injuries of the seat belt law in the UK.

Currently, Dr Hayes is the Projects Director of the UK's leading charity involved solely in preventing accidents and injuries to children, the Child Accident Prevention Trust. His work includes the development and management of the trust's programme and information service.

His interest in traffic safety continues through his involvement in the British Standards Institution's technical committees for child restraints and cycle helmets. He is also a member of the UK delegation to the European standards committee that is writing the cycle helmet standard.

Dr Hayes is a founding member and treasurer of the International Society for Child and Adolescent Injury Prevention, and a member of the group advising on the scientific programme for the Third World Conference on Injury Prevention and Control.

Finally, Dr Hayes is a member of the UK government's Health of the Nation Accident Task Force, and its information and research subgroups. His longstanding interest in injury and accident data collection systems lead to his being invited to chair the committee that evaluated the Canadian Hospitals Injury Research and Prevention Programme (CHIRPP) for Health and Welfare Canada.

Table 3 Frequency, percentage, and χ^2 analysis of clear recognition of safety hazards by age and by picture

	3 years		4 years		5 years			
Picture No	%	No	%	No	%	No	χ^2	p Value
1	13·2	10	18·0	14	30·4	24	19·43	0·003
2	10·5	8	19·2	15	41·8	33	42·52	0·001
3	13·2	10	23·1	18	45·6	37	31·68	0·001
4	2·6	2	9·0	7	25·3	20	23·07	0·001
5	4·0	3	16·7	13	29·1	23	31·90	0·001
6	7·9	6	10·3	8	27·9	22	17·82	0·007
7	11·8	9	19·2	15	40·5	32	37·25	0·001
8	10·5	8	23·1	18	51·9	41	53·07	0·001
9	11·8	9	20·5	16	50·6	40	41·23	0·001
10	22·4	17	34·6	27	62·0	49	30·66	0·001

under communist rule, both parents worked. Child care was provided by the government, and structured educational and cultural programs were provided during the child's stay in day care. It is also possible that when both parents are working, children develop more independence and are more able to take care of themselves, including being aware of the environment around them.

IMPLICATIONS FOR PREVENTION

Based on these findings it is reasonable to suggest that local communities in each of the countries must target preventive interventions to the community, caregiver, and child.[8] Child injury prevention programs should teach parents about the leading causes of injuries. As much as possible, community programs should also provide parents and children with strategies to avoid and prevent injuries.

Injury prevention programs should also be directed at caregivers who can help children gain knowledge about hazards. If travel is provided with the child care, younger children can be placed in child safety seats. As they get older, a child can be shown how to properly buckle up. In the end, however, our findings suggest that injury prevention programs must target children directly. They should address the full range of situations presented in this study, and provide opportunities to practice injury prevention skills.

1 National Safety Council. *Accidents facts.* Itasca, IL: National Safety Council, 1995.
2 Guyer B, Gallagher SS, Chang B, Azzara CV, Cupples LA, Colton T. Prevention of childhood injuries: evaluation of the statewide childhood injury prevention program (SCIPP). *Am J Public Health* 1989; **79:** 1521–7.
3 Waller AE, Baker SP, Szocka A. Childhood injury deaths: national analysis and geographic variations. *Am J Public Health* 1989; **79:** 310–5.
4 Finn-Stevenson M, Stevenson JJ. Child care as a site for injury prevention. *Children Today* 1990; March–April: 17–20, 32.
5 Rivara FP, Mueller BA. The epidemiology and causes of childhood injuries. *Journal of Social Issues* 1987; **43:** 13–31.
6 Heinsohn S, Ginsbug HJ, Sanchez YB, Mendez R, Arocena M, Adams EV. Childhood injury prevention media: past problems and new directions. *International Journal of Instructional Media* 1992; **19:** 1–5.
7 Roberts MC, Fanurik D, Layfield DA. Behavioral approaches to prevention of chldhood injuries. *Journal of Social Issues* 1987; **43:** 105–18.
8 Garvarino J. Preventing childhood injury: developmental and mental health issues. *Am J Orthopsychiatry* 1988; **58:** 25–45.
9 Race KEH. Evaluating pedestrian safety education materials for children ages five to nine. *J Sch Health* 1988; **58:** 277–81.

A fable: epidemiology and statistics

There was once a group of biostatisticians and a group of epidemiologists riding together on a train to joint meetings. All the epidemiologists had tickets, but the biostatisticians only had one ticket between them. Inquisitive by nature, the epidemiologists asked the biostatisticians how they were going to get away with such a small sample of tickets when the conductor came through. The biostatisticians said, 'Easy. We have methods for dealing with that'.

Later, when the conductor came to punch tickets, all the biostatisticians slipped quietly into the bathroom. When the conductor knocked on the door, the head biostatistician slipped their one ticket under the door thoroughly fooling the layman conductor.

After the joint meetings were over, the biostatisticians and the epidemiologists again found themselves on the same train. Always quick to catch on, the epidemiologists had purchased one ticket between them. The biostatisticians (always on the cutting edge) had purchased *No* tickets for the trip home. Confused, the epidemiologist asked the biostatisticians 'We understand how your methods worked when you had one ticket but how can you possibly get away with no tickets?' 'Easy', replied that biostatisticians smugly, 'We have different methods for dealing with that situation'.

Later, when the conductor was in the next car, all the epidemiologists trotted off to the bathroom with their one ticket and all the biostatisticians packed into the other bathroom. Shortly, the head biostatistician crept over to where the epidemiologists were hiding and knocked authoritatively on the door. As they had been instructed, the epidemiologists slipped their one ticket under the door. The head biostatistician took the epidemiologists' one and only ticket and returned triumphantly to the biostatistician group. Of course, the epidemiologists were subsequently discovered and publicly humiliated.

Moral of the story. Do not use statistical methods unless you understand the principles behind them (Marion Nadel, Epidemiology L Listserver).

staff, we have obtained an almost threefold increase in the capture rate since the completion of this study in early 1995 (figure). Further improvement is likely to depend on our success in securing additional administrative resources.

We conclude that CHIRPP offers UK hospitals, public health departments, and government agencies a promising and relatively inexpensive tool for the planning, implementation, and evaluation of injury prevention measures at local, regional, and national levels.

We are grateful to the Greater Glasgow Health Board for their financial support of this pilot study, to the management of the Yorkhill NHS Trust for agreeing to host and support the study, and to the clerical staff, nurses, and physicians of the accident and emergency department of the Royal Hospital for Sick Children, Glasgow. We are especially indebted to Professor IB Pless and Dr G Sherman of Canada for their encouragement and support, and to the Laboratory Centre for Disease Control, Health Canada, for providing us with the CHIRPP software. Finally, we are deeply grateful to the children and parents who participated in the data collection as without them the study would not have been possible.

1 Department of Health. *The health of the nation — a strategy for health in England.* (Cm 1986.) London: Department of Health, 1992.
2 Scottish Office. *Scotland's health — a challenge to us all.* Edinburgh: HMSO, 1992.
3 Towner E, Dowswell T, Jarvis S. *Reducing childhood accidents. The effectiveness of health promotion interventions: a literature review.* London: Health Education Authority, 1993.
4 Deane M. Child accident data: accessible and available? *J Public Health Med* 1993; **15:** 226–8.
5 Schelp L. Community intervention and changes in accident pattern in a rural Swedish municipality. *Health Promotion* 1987; **2:** 109–25.
6 Vimpani G. Injury surveillance: a key to effective control of childhood injuries. *Australian Paediatric Journal* 1989; **25:** 10–3.
7 Guyer B, Gallagher S, Chang B, Azzara C, Cupples L, Colton T. Prevention of childhood injuries: evaluation of the Statewide Childhood Injury Prevention Programme (SCIPP). *Am J Public Health* 1989; **79:** 1521–7.
8 Ozanne-Smith J, Nolan T, eds. *Hazard.* (Volume 1, editions 1–10, 1988–92, Injury Data and Prevention.) Melbourne: Victorian Injury Surveillance System, 1993.
9 Canadian Hospitals Injury Reporting and Prevention Program. *CHIRPP news.* Issue 2. Ottawa: Bureau of Chronic Disease Epidemiology (Health Canada), July 1994.
10 Consumer Safety Unit, DTI. *Home and leisure accident research.* London: Department of Trade and Industry, 1992.
11 Department of Health. *The health of the nation key area handbook — accidents.* London: Department of Health, 1993.

Boy 5, takes sister, 3, for ride in family's van

A 5 year old boy and his 3 year old sister went for a drive in their father's van — with the boy at the wheel. 'I had my seatbelt on, and so did by sister', the boy told nonplussed police after the outing, which miraculously ended without mishap, 'I'm not going to go to jail'.

The incident, reported by a local newspaper, occurred when the boy decided to take his sister out for breakfast early on a Sunday morning. Their parents were still asleep and the keys to the family van were on the buffet. The boy took the keys and drove nearly a kilometre on a normally busy artery, before stopping near a gas station. The 18 year old cashier at the gas station, recalls seeing a van 'that seemed to be moving itself, without a driver: I couldn't see anyone's head'. She watched as two children, clad in pyjamas, climbed out and walked toward the convenience store next door. The boy, she says, told her it was his truck, that they were on their way to McDonald's and that he was driving the van with his father's permission.

After interviewing the boy, police said they were told he drove by alternately standing up so he could see and lying down so he could reach the pedals, Police, when they first arrived at the scene thought the call was a prank. The boy's parents were stunned, police said (Canadian Press).

A quadriplegic warns: don't take dumb risks

The following is a letter to the editor of a Toronto newspaper, reprinted in its entirety:

Tragedy strikes again, but this time to someone who gets the front page of the *Toronto Star* (Deputy Premier Ernie Eve's son dies in crash, Oct 9). But let's not disguise the incident with the word "accident". Justin Eves and his friend crossed the stupid line. They took dumb risks instead of smart ones. Eves was not driving sober, and was not buckled up.

This was not an accident, defined as "an irreversible act of fate". This was carelessness at its best. I know. I'm a quadriplegic for doing the same thing eight years ago. Now I dedicate some of my time speaking to teenagers on how to take smart risks and prevent such tragic and unnecessary events.

I hope Justin's friends got on their knees in sorrow for letting their friend drive, and to thank God for sparing them'. Adrian M Dieleman, Richmond Hill (*Toronto Star*, 18 October 1995).

3. Development of inferences explaining the variations in exposure and susceptibility in terms of other environmental or host factors, which may then be considered to play a part in the causation of the disease.

At any step, the substitution of direct observation for inference or the confirmation of inference by direct measurement greatly enhances the strength of the chain. It was this process which Frost described so well in the introduction to the Delta Omega publication of John Snow's work on cholera:[5]

> Epidemiology at any given time is something more than the total of its established facts. It includes their orderly arrangements into chains of inference which extend more or less beyond the bounds of direct observation. Such of these chains as are well and truly laid guide investigation to the facts of the future; those that are ill made fetter progress.

This concept, that disease is not randomly distributed, that the aggregations of disease are attributable to variations in exposure and susceptibility, and these, in turn, are related to measurable differences in the characteristics of people and in the human environment, provides a theoretic framework of quite general applicability to epidemiology. It serves as a guide to the design and conduct of epidemiologic investigations, stimulates the presentation of epidemiologic findings in precise, quantitative terms, and encourages study of the relation between findings and their arrangement in ordered arrays.

From such general theoretic considerations should come imaginatively designed and carefully conducted studies, and from these we may expect useful specific formulations of the causes of home accidents to emerge, together with new insights into the nature and interrelations of those personal and environmental factors which modify an individual's risk of exposure to those causes and his degree of suceptibiliy to injury following exposure. This, we may hope, will permit the development of programs for prevention that are scientifically sound, administratively feasible, and capable of evaluation.

1 Suchman EA, Scherzer AL. *Current research in childhood accidents*. New York: Association for the Aid of Crippled Children, 1960.
2 Suchman EA, Scherzer AL. *Uniform definitions of home accidents*. Washington, DC: US Department of Health, Education, and Welfare, Public Health Service, 1958.
3 Stallones RA, Corsa L Jr. Epidemiology of childhood accidents in two California counties. *Public Health Rep* 1961; **76:** 25–36.
4 MacMahon B, Pugh TF, Ipsen J. *Epidemiologic methods*. Boston: Little, Brown and Co, 1960.
5 Snow J. *Snow on cholera*. New York: The Commonwealth Fund, 1936: ix.

You be the judge — preventable or 'freak accidents'?

'Freak accidents' can happen at a time or place when you least expect them. Here are some examples to educate parents of hidden dangers.

- A 2·5 year old boy was drinking from a straw when he tripped over a cat. The straw sliced open the back of his throat, requiring surgery.
- A 1 year old girl sitting in a high chair with the seatbelt secured slid down in the chair, strangling her to death on the seatbelt. The chair was not equipped with a T-strap (the strap which goes between the child's legs and secures to the seatbelt).
- A 2 year old girl was trying to step over a velvet rope divider at a bank. She stepped on it instead, causing the metal supporting pole to tip over and strike the child on the forehead. The child required several stitches.
- A teenager was pushing shut a door by the glass. When the door shut, her hand went through the glass. The glass just missed slitting her artery, and required 30 stitches.
- A 3 year old boy was shutting a corral gate and caught his thumb in it. The thumb was severed; however, it was able to be surgically reattached.
- A teenager was sitting on her bike, waiting to cross the street. A tractor trailer attempted a narrow right hand turn, causing the trailer to jump the curb. The trailer pinned the girl against a telephone pole, killing her instantly.
- A toddler was brushing his teeth, and somehow managed to swallow his toothbrush. A long procedure was required to extract the toothbrush.
- A 6 year old boy playing on the beach was digging a pit in the sand. When the pit reached approximately 5 feet deep, he jumped in it. The pit collapsed, suffocating the child before rescuers could reach him (from CCSN BBS).

(*Editor's note*: it seems to me all of these are preventable in one way or another. But others may disagree. If you do, do write and say why.)

5 US Consumer Product Safety Commission. *News from CPSC-1995, March* [Online]. Available Gopher: gopher://cpsc.gov:70/11/Pre_Rel/Pre_Rel/95_Pre (18 April 1995).
6 US Consumer Product Safety Commission. *Proposed rules.* [Online]. Available Gopher: gopher://cpsc.gov:70/11/Fed_Reg/94_FedReg/Prop_Rules (18 April 1995).
7 Reider M, Schwartz C, Newman J. Patterns of walker use and walker injury. *Pediatrics* 1986; **78:** 488–93.
8 Coury D, Kasten E, Shepherd L, and the Columbus PROBE Group. Infant walker use in private practice populations. *Am J Dis Child* 1992; **146:** A507.
9 Eskind A. Bringing up baby. *Wall Street Journal*, 13 April 1993.
10 Marcella S, McDonald B. The infant walker: an unappreciated household hazard. *Conn Med* 1990; **54:** 127–9.
11 American Medical Association Board of Trustees. Use of infant walkers. *Am J Dis Child* 1991; **145:** 933–4.
12 US Consumer Product Safety Commission. Stair steps and baby walkers don't mix. *Consumer Product SAFETY ALERT* (No 009207) Washington, DC: US CPSC, 1992.
13 Partington M, Swanson J, Meyer F. Head injury and the use of baby walkers: A continuing problem. *Ann Emerg Med* 1991; **20:** 52–4.
14 Gaudreault P, McCormick M, Lacouture P, Lovejoy F. Poisoning exposures and use of syrup of ipecac in children less than 1 year old. *Ann Emerg Med* 1986; **15:** 808–10.
15 GRACO Children's Products. *Comments opposing the petition of the Consumer Federation of America et al, to ban baby walkers.* (Address to the commission.) (Written testimony submitted to the Consumer Product Safety Commission). Washington, DC: US CPSC, 4 December 1992.
16 US Consumer Product Safety Commission. *Baby walker petition, HP 92-2.* (Briefing package) Washington, DC: US CPSC, Released March, 1993.
17 US Consumer Product Safety Commission, National Injury Information Clearinghouse. *List of NEISS hospitals.* Washington, DC: US CPSC, April 1995.
18 US Consumer Product Safety Commission. *NEISS coding manual.* Washington, DC: US CPSC, 1987.
19 US Consumer Product Safety Commission. *Memo from Leonard Schachter to Terrance R Karels regarding petition requesting a ban of baby walkers (HP 92–2).* Washington, DC: US CPSC, 10 December 1992: 4,5. (Part of baby walker petition briefing package HP 92–2.)
20 US Consumer Product Safety Commission. *The NEISS sample (design and implementation).* Washington, DC: CPSC Division of Hazard and Injury Data Systems, February, 1994.

Canadian daredevil seeks tightrope record

From Reuters, Hong Kong: 'a man who dubs himself Canada's "prince of the air" will attempt the longest and highest tightrope walk in history tomorrow above the torrents of China's awesome Three Gorges on the Yangtze River. With no margin for error, Jay Cochrane admits to fear.

Only a balancing pole and determination will keep him on the wire. On either side of about 600 metres of wire stretched across the narrowest point of the gorge is a sheer rock face dropping 400 metres. "Of course I'm afraid," he said yesterday. Speaking by telephone from China, Cochrane said: "I have a healthy respect and fear of what I'm about to attempt".

The 54 year old Cochrane . . . has performed death defying stunts for 40 years. He holds the Guinness Book of Records title for living on a wire for 21 days and nights. And, if successful tomorrow, Cochrane will shatter the current 500-metre tightrope walking record. "I'm not a stuntman", he said "I'm taking a calculated risk".' (*Editor's note*: but are such calculated risks good examples for children?)

Along the same lines: in-line skating role models?

A contributor to CCSN's BBS writes: 'As an in-line instructor, one of the toughest parts of my job is trying to get skaters, be they adults or children, to wear protective gear. While on vacation in BC I had an opportunity to meet Ani, a professional in-line skater who has appeared in aggressive movies and magazines. When Ani skates he wears only a knee brace. He told me that he comes to in-line through skateboarding and skateboarders generally skate without gear.

Ani does have cat-like grace even when he falls; after watching him skate I can attest to that. However, in my opinion, this is what is wrong with my sport. The pro skaters either don't realize or forget that once they grace the pages of a magazine or appear in a movie they become more than a skater — they become role models. Ani is an adult and realizes the risks he takes. What worries me are the kids who buy the magazines, who live for the movies, but who are neither lucky nor born with Ani's skills.

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 that 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.

FREDERICK P RIVARA
Harborview Injury Prevention and Research Center, Seattle, USA

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 hgarriso@p-cmb.com.

JOURNAL CITATIONS

Editors note: these citations have been culled from the following databases: Medline, Current Contents, Psych Abstracts, Social Science Citation Index, and Health. Your comments are welcome, as well as suggestions about other databases of interest.

Methods

Kendrick D, West J, Wright S, Presbury M. Does routine child health surveillance reach children most at risk of accidental injury? *J Public Health Med* 1995; **17**: 39–45.

Pless CE, Pless IB. How well they remember — the accuracy of parent reports. *Arch Pediatr Adolesc Med* 1995; **149**: 553–8.

Schuster M, Cohen BB, Rodgers CG. Overview of causes and costs of injuries in Massachusetts: a methodology for analysis of state data. *Public Health Rep* 1995; **110**: 246–50.

Treno AJ, Cooper K, Roeper P. Estimating alcohol involvement in trauma patients: search for a surrogate. *Alcohol Clin Exp Res* 1994; **18**: 1306–11.

General

Ag el Mouchtahide M. [Eye injuries in children aged 0 to 15 years. Apropos of 63 clinical reports.] [French.] *J Fr Ophtalmol* 1994; **17**: 750–4.

Anderson PJ. Fractures of the facial skeleton in children. *Injury* 1995; **26**: 47–50.

Berger G, Finkelstein Y, Harell M. Non-explosive blast injury of the ear. *J Laryngol Otol* 1994; **108**: 395–8.

Cascairo MA, Mazow ML, Prager TC. Pediatric ocular trauma: a retrospective survey. *J Pediatr Ophthalmol Strabismus* 1994; **31**: 312–7.

Cherpitel CJ. Alcohol and casualties: comparison of county-wide emergency room data with the county general population. *Addiction* 1995; **90**: 343–50.

Cherpitel CJ. Alcohol and injury in the general population: data from two household samples. *J Stud Alcohol* 1995; **56**: 83–9.

Cherpitel CJ. Alcohol consumption and injury in the general population: from a national sample. *Drug Alcohol Depend* 1994; **34**: 217–24.

Cohen HA, Nussinovitch M, Straussberg R. Embedded earrings. *Cutis* 1994; **53**: 82.

Cole J. Preventing injuries from bar glasses. Lobby the government for a safety standard [letter; comment]. *BMJ* 1994; **308**: 1237.

Connon AF, Chan A. Accidental deaths of babies in the postneonatal period, South Australia 1987–1992 [letter]. *Med J Aust* 1994; **161**: 397.

Duhaime AC, Eppley M, Margulies S, Heher KL, Bartlett SP. Crush injuries to the head in children. *Neurosurgery* 1995; **37**: 401–6.

Finkel KC, Kinkel KC. No such thing as nonaccidental injury [letter]. *Can Med Assoc J* 1994; **151**: 913–4.

Giddins GE. Sellotape ischaemic injury to the fingertip. *J Hand Surg [Br]* 1994; **19**: 604–6.

Holmer P, Sondergaard L, Konradsen L, Nielsen PT, Jorgensen LN. Epidemiology of sprains in the lateral ankle and foot. *Foot Ankle Int* 1994; **15**: 72–4.

Hovgaard C, Angermann P, Hovgaard D. The social and economic consequences of finger amputations. *Acta Orthop Scand* 1994; **65**: 347–8.

Jenkins SR, Osterholm MT. Epidemiologists and public health veterinarians issue statement on ferrets. Council of State and Territorial Epidemiologists and the National Association of State Public Health Veterinarians [letter]. *J Am Vet Med Assoc* 1994; **205**: 534–5.

Jordaan G, Schwellnus MP. The incidence of overuse injuries in military recruits during basic military training. *Mil Med* 1994; **159**: 421–6.

Kennedy BL, Feldmann TB. Self-inflicted eye injuries: case presentations and a literature review [review]. *Hosp Community Psychiatry* 1994; **45**: 470–4.

Martin V, Langley B, Coffman S. Patterns of injury in pediatric patients in one Florida community and implications for prevention programs. *J Emerg Nurs* 1995; **21**: 12–6.

Matteucci RM, Holbrook TL, Hoyt DB. Trauma among Hispanic children: a population-based study in a regionalised system of trauma care. *Am J Public Health* 1995; **85**: 1005–8.

Milgrom C, Finestone A, Shlamkovitch N, *et al*. Youth is a risk factor for stress fracture. A study of 783 infantry recruits. *J Bone Joint Surg Br* 1994; **76**: 20–2.

Miller TR, Galbraith M. Injury prevention counseling by pediatricians: a benefit-cost comparison. *Pediatrics* 1995; **96**: 1–4.

Nishioka SA, Handa ST, Nunes RS. Pig bite in Brazil: a case series from a teaching hospital. *Rev Soc Bras Med Trop* 1994; **27**: 15–8.

O'Brien E. The land mine crisis: a growing epidemic of mutilation. *Lancet* 1994; **344**: 1522.

Olds D, Henderson CR, Jr, Kitzman H, Cole R. Effects of prenatal and infancy nurse home visitation on surveillance of child maltreatment. *Pediatrics* 1995; **95**: 365–72.

Pillay R, Peter JC. Extradural haematomas in children. *S Afr Med J* 1995; **85**: 672–4.

Ralston DR, Hall PN, Davies JC, Manning DP. Analysis of 100 upper limb injuries using the Merseyside accident information model. *J Hand Surg [Br]* 1994; **19**: 154–7.

Roberts I, Pless IB. For debate — social policy as a cause of childhood accidents — the children of lone mothers. *BMJ* 1995; **311**: 925–8.

Rosenfield AL, McQueen DA, Lucas GL. Orthopedic injuries from the Andover, Kansas, tornado. *J Trauma* 1994; **36**: 676–9.

Sacks JJ, Addiss DG. The perceived needs of child care center directors in preventing injuries and infectious disease [letter; comment]. *Am J Public Health* 1995; **85**: 266–7.

Samuels RH, Jones ML. Orthodontic facebow injuries and safety equipment. *Eur J Orthod* 1994; **16**: 385–94.

Sanchezcruz JJ, Martinez J, Perea E. A population survey of childhood accidents in Andalusia (Spain). *Eur J Epidemiol* 1995; **11**: 297–303.

Schandler SL. Cohen MJ, Vulpe M, Frank SER. Incidence and characteristics of spinal cord injured patients with a family history of alcoholism. *J Stud Alcohol* 1995; **56**: 522–527.

Scheidt PC, Harel Y, Trumble AC. The epidemiology of nonfatal injuries among US children and youth. *Am J Public Health* 1995; **85**: 932–8.

Shwayhat AF, Linenger JM, Hofherr LK, Slymen DJ, Johnson CW. Profiles of exercise history and overuse injuries among United States Navy Sea, Air, and Land (SEAL) recruits. *Am J Sports Med* 1994; **22**: 835–40.

Taylor KS. Scared straight? *Hosp Health Netw* 1995; **69**: 54.

Taylor MT, Banerjee B, Alpar EK. The epidemiology of fractured femurs and the effect of these factors on outcome. *Injury* 1994; **25**: 641–4.

Taylor MT, Banerjee B, Alpar EK. Injuries associated with a fractured shaft of the femur. *Injury* 1994; **25**: 185–7.

Vineis P. Environmental risks — scientific concepts and social perception. *Theor Med* 1995; **16**: 153–69.

Wang YC, P'eng FK, Yang DY, *et al*. Epidemiological study of head injuries in central Taiwan. *Chung Hua I Hsueh Tsa Chih (Taipei)* 1995; **55**: 50–7.

Wieder L. PARTY on, Alberta. *J Emerg Nurs* 1994; **20**: 165–7.

Yanko L, Neumark Y, Hemo Y, *et al*. The Israeli, ocular injuries study — incidence of legal blindness from ocular trauma. *Isr J Med Sci* 1995; **31**: 423–8.

Traffic

Agran PF, Winn DG, Anderson CL. Who carries passengers in the back of pickup trucks? *Accid Anal Prev* 1995; **27**: 125–30.

Davidson LL, Durkin MS, Kuhn L, *et al*. 'What does a decline in child pedestrian injury rates mean?': response. *Am J Public Health* 1995; **85**: 268–9.

de Rio MD, Javier Alvarez F. Illegal drug taking and driving: patterns of drug taking among Spanish drivers. *Drug Alcohol Depend* 1995; **37**: 83–6.

Freedman EL, Safran MR, Meals RA. Automotive airbag-related upper extremity injuries: a report of three cases. *J Trauma* 1995; **38**: 577–81.

Hatziandreu EJ, Sacks JJ, Brown R, Taylor WR, Rosenberg ML, Graham JD. The cost effectiveness of three programs to increase use of bicycle helmets among children. *Public Health Rep* 1995; **110**: 251–9.

Li G, Baker SP, Fowler C, DiScala C. Factors related to the presence of head injury in bicycle-related pediatric trauma patients. *J Trauma* 1995; **38**: 871–5.

Liller KD, Smorynski A, McDermott RJ, Crane NB, Weibley RE. The more health bicycle safety project. *J Sch Health* 1995; **65**: 87–90.

Loeb PD. The effectiveness of seat-belt legislation in reducing injury rates in Texas. *Am Econ Rev* 1995; **85**: 81–4.

Papadopoulos M, McCurrach F, Carlisle I. Orbital impalement by steering wheel lock. *Aust N Z J Ophthalmol* 1994; **22**: 278–9.

Parker D, West R, Stradling S, Manstead AS. Behavioural characteristics and involvement in different types of traffic accident. *Accid Anal Prev* 1995; **27**: 571–81.

Williams AF, Lancaster KA. The prospects of daytime running lights for reducing vehicle crashes in the United States. *Public Health Rep* 1995; **110**: 233–9.

Yu J, Williford WR. Drunk-driving recidivism: predicting factors from arrest context and case disposition. *J Stud Alcohol* 1995; **56**: 60–6.

Zylke JW. Strategies proposed so cars won't harm kids. *JAMA* 1995; **273**: 1560–1.

Home

Anonymous. Injuries associated with infant walkers. American Academy of Pediatrics Committee on Injury and Poison Prevention. *Pediatrics* 1995; **95:** 778–80.

Gielen AC, Wilson ME, Faden RR, Wissow L, Harvilchuck JD. In-home injury prevention practices for infants and toddlers: the role of parental beliefs, barriers, and housing quality. *Health Educ Q* 1995; **22:** 85–95.

Hammarstrom A, Janlert U. Epidemiology of school injuries in the northern part of Sweden. *Scand J Soc Med* 1994; **22:** 120–6.

Katsivo MN, Mwaura LW, Muniu E, Amuyunzu M. Accidents involving adults in the home environment in Nairobi, Kenya. *East Afr Med J* 1994; **71:** 350–3.

Leland NL, Garrard J, Smith DK. Comparison of injuries to children with and without disabilities in a day-care center. *J Dev Behav Pediatr* 1994; **15:** 402–8.

Petridou E, Kouri N, Trichopoulos D, Revinthi K, Skalkidis Y, Tong D. School injuries in Athens: socioeconomic and family risk factors. *J Epidemiol Community Health* 1994; **48:** 490–1.

Ramphele MA, Heap M, Trollip DK. A survey of the physical health status of pupils aged 10–14 years in standards 3–5 at three schools in New Crossroads, near Cape Town in the Western Cape. *S Afr Med J* 1995; **85:** 1007–12.

Vosburgh CL, Gruel CR, Herndon WA, Sullivan JA. Lawn mower injuries of the pediatric foot and ankle — observations on prevention and management. *J Pediatr Orthop* 1995; **15:** 504–9.

Woringer V. [School accidents.] [French.] *Rev Med Suisse Romande* 1995; **115:** 153–6.

Burns and scalds

Tarantino MD, Nugent DJ. Severe electrical burns in a hemophiliac wearing a medical alert neck chain [letter]. *Clin Pediatr (Phila)* 1994; **33:** 382–3.

Verity PA. Burn injuries in children. The emotional and psychological effects on child and family. *Aust Fam Physician* 1995; **24:** 176–8.

Drowning

Bross MH, Clark JL. Near-drowning. *Am Fam Physician* 1995; **51:** 1545–51.

Smith GS, Brenner RA. The changing risks of drowning for adolescents in the US and effective control strategies. *Adolescent Medicine: State of the Art Reviews* 1995; **6:** 153–69.

Recreation

Allen SK, Johnson RR. A study of hazards associated with playgrounds. *J Environ Health* 1995; **57:** 23–6.

Anonymous. Skateboard injuries. American Academy of Pediatrics Committee on Injury and Poison Prevention. *Pediatrics* 1995; **95:** 611–2.

Bruggers JHA, Mulder S. Epidemiology, causes and prevention of bicycle wheel entanglements. *Safety Science* 1995; **19:** 87–98.

Kim PCW, Haddock G, Bohn D, Wesson D. Tobogganing injuries in children. *J Pediatr Surg* 1995; **30:** 1135–1137.

Price C, Mallonee S. Hunting-related spinal cord injuries among Oklahoma residents. *J Okla State Med Assoc* 1994; **87:** 270–3.

Occupational

Castillo DN, Jenkins EL. Industries and occupations at high risk for work-related homicide. *J Occup Med* 1994; **36:** 125–32.

Dawson DA. Heavy drinking and the risk of occupational injury. *Accid Anal Prev* 1994; **26:** 655–65.

de la Hunty D, Sprivulis P. Safety goggles should be worn by Australian workers. *Aust N Z J Ophthalmol* 1994; **22:** 49–52.

Kingma J. Causes of occupational injuries. *Percept Mot Skills* 1994; **79:** 1025–6.

Kisner SM, Fosbroke DE. Injury hazards in the construction industry. *J Occup Med* 1994; **36:** 137–43.

Lifschultz BD, Donoghue ER. Deaths due to forklift truck accidents. *Forensic Sci Int* 1994; **65:** 121–34.

Marshall SW, Kawachi I, Cryer PC, Wright D, Slappendel C, Laird I. The epidemiology of forestry work-related injuries in New Zealand, 1975–88: fatalities and hospitalisations. *N Z Med J* 1994; **107:** 434–7.

Pickett W, Brison RJ, Niezgoda H, Chipman ML. Nonfatal farm injuries in Ontario — a population-based survey. *Accid Anal Prev* 1995; **27:** 425–33.

Salminen S, Klen T. Accident locus of control and risk taking among forestry and construction workers. *Percept Mot Skills* 1994; **78:** 852–4.

Wong TW. Occupational injuries among construction workers in Hong Kong. *Occup Med (Oxf)* 1994; **44:** 247–52.

Violence and suicide

Dannenberg AL, Carter DM, Lawson HW, Ashton DM, Dorfman SF, Graham EH. Homicide and other injuries as causes of maternal death in New York City, 1987 through 1991. *Am J Obstet Gynecol* 1995; **172:** 1557–64.

Goldberg BW, von Borstel ER, Dennis LK, Wall E. Firearm injury risk among primary care patients. *J Fam Pract* 1995; **41:** 158–62.

Kjelsberg E, Winther M, Dahl AA. Overdose deaths in young substance abusers — accidents or hidden suicides. *Acta Psychiatr Scand* 1995; **91:** 236–42.

Marzuk PM, Tardiff K, Leon AC. Fatal injuries after cocaine use as a leading cause of death among young adults in New York City. *N Engl J Med* 1995; **332:** 1753–7.

McNeill AM, Annest JL. The ongoing hazard of BB and pellet gun-related injuries in the United States. *Ann Emerg Med* 1995; **26:** 187–94.

Ord RA, Benian RM. Baseball bat injuries to the maxillofacial region caused by assault. *J Oral Maxillofac Surg* 1995; **53:** 514–7.

Ordog GJ, Dornhoffer P, Ackroyd G, *et al.* Spent bullets and their injuries: the result of firing weapons into the sky. *J Trauma* 1994; **37:** 1003–6.

Ordog GJ, Wasserberger J, Ordog C, Ackroyd G, Atluri S. Weapon carriage among major trauma victims in the emergency department. *Acad Emerg Med* 1995; **2:** 109–13.