FOR DEBATE

Australia needs to follow New Zealand's lead on sports injuries

John W Orchard and Caroline F Finch

Sports injuries result in substantial costs to the Australian community and also act as a barrier to increased participation in physical activity. However, the Australian healthcare system has no coordinated approach for monitoring or preventing sports injuries. This is in contrast to New Zealand, which has a specific body responsible for managing sports injuries, in a similar way to work injuries and traffic accidents. (MJA 2002; 177: 38-39)

AS LACK OF EXERCISE is an established major risk factor for many chronic illnesses (particularly heart disease) and premature mortality, it is incumbent on government bodies to promote physical activity.¹ However, one in five adult Australians is prevented from being more physically active by injury or disability.² Thus, minimising injury associated with sports and physical exercise also needs to be a government priority.

Sports injuries in Australia are treated by a combination of medical and paramedical services, occasionally in public or private hospitals, but mainly in an outpatient setting. Although the Australian healthcare system provides universal "safety net" coverage for sports injuries at a relatively affordable cost, it has no plan for prevention of sports injuries. Perhaps this is because the government departments concerned with sport and health consider there is insufficient evidence to show that the burden of sports injuries is substantial and that many of these injuries could be prevented. But government bodies would be unwise to ignore the recent trend in Australia towards the regular occurrence of serious sports injuries that are leading to an increase in liability claims. The flow-on increases in insurance premiums are placing many community sports events, active recreation facilities and voluntary service providers under great financial pressure.

The burden of sports injuries

The cost of sports injuries in Australia was an estimated \$1 billion a year in 1990³ (we are not aware of any more recent published figure). Extrapolating from cost estimates made in a 1998 Victorian study,⁴ we estimate that sports injuries now directly cost the Australian community at least \$1.65 billion a year. Although this figure may be disputed, it is a circular argument to suggest that no resources should be devoted to accurately counting the costs of sports injuries in Australia because there is no hard proof that the costs are substantial. Both injury frequency and associated costs need

Sports Medicine Unit, University of New South Wales, Sydney, NSW.

John W Orchard, FACSP, PhD, Conjoint Senior Lecturer.

Trauma and Sports Injury Prevention Unit, Department of Epidemiology and Preventive Medicine, Monash University, Melbourne, VIC.

Caroline F Finch, PhD, Associate Professor. Reprints will not be available from the authors. Correspondence: Dr John W Orchard, South Sydney Sports Medicine, 111 Anzac Parade, Kensington, NSW 2033. johnorchard@msn.com.au to be counted to derive cost–benefit ratios for any countermeasures implemented.^{5,6} Moreover, injury surveillance is the first stage in any program of sports injury prevention.⁷

Various factors conspire to prevent the incidence and public health burden of sports injuries in Australia from being adequately monitored.⁶ The Burden of Illness and Injury estimates for Australia⁸ do not reflect the true burden of sports injuries because (a) such injuries are rarely fatal;⁹ (b) limitations of the International Classification of Diseases (ICD-9),¹⁰ upon which they are based, prevent adequate identification of sports injuries;¹¹ and (c) most sports injuries are not treated in hospital settings, where patient data would be retained centrally.¹¹ The Medicare system that operates outside hospitals does not collect information about diagnosis or associated factors for patient consultations. It also prevents any other body from providing rebates for outpatient doctor visits, so there is no other organisation that could easily collect information about the number and cost of sports injuries treated by doctors in private practice.

Moves towards national injury surveillance and prevention in Australia

The Australian Sports Injury Data Working Party was established in 1997 to draw up guidelines for sports injury surveillance, but, despite the release of a working data dictionary,¹² no national body has since been funded to implement an Australia-wide approach to sports injury surveillance.

In 1997, a Federal Government partnership led to the development of a national sports safety framework.¹³ However, since the late 1990s, there has been a notable lack of national leadership to implement this framework.

The Strategic Injury Prevention Partnership, a group set up in August 2000 that represents health departments in all jurisdictions, is responsible for implementing the *National injury prevention plan: priorities for 2001–2003*. However, the Plan does not list the prevention of sports injuries as a priority.¹⁴ One major reason for this is that considerably less is known about sports injuries and their risk factors than other injuries such as falls, drownings and road trauma.^{5,15}

New Zealand's sports injury compensation scheme

For a model of sports injury surveillance, Australia could look to New Zealand, which already has in place the infrastructure to monitor sports injuries. New Zealand's Accident Compensation Corporation (ACC) monitors sport, traffic and work injuries as a distinct segment of the healthcare system. The ACC can accurately determine the cost of treating sports injuries in New Zealand (eg, the cost was NZ\$100 million in 2000).¹⁶ Furthermore, ACC statistics have shown that the number of sports injuries in New Zealand has fallen over recent years.¹⁶ Perhaps this decline is partially due to the preventive efforts of the ACC. It is quite possible that, in relative terms, the cost of sports injuries in New Zealand is lower than the cost in Australia, as New Zealand's scheme focuses on *preventing* injuries.¹⁶

The New Zealand system also has the advantage of being a "no-fault" insurance scheme that prevents sporting participants taking common law action against either the doctors or administrators associated with sporting events. Similar restrictions to liability actions from sporting participants are needed in Australia to prevent the cost of running sports events from becoming prohibitive, and to remove the fear of lawsuits that is developing among volunteers (including doctors) who cover sporting events. Plaintiff advocate groups currently argue that common law actions should not be restricted because injured athletes in Australia have no form of redress other than through the courts.

Australian initiatives

Anterior cruciate ligament (ACL) injuries to the knee, which occur primarily during sporting activities, provide a concrete example of the way that preventive measures could result in huge cost savings to the community. The Australian Football League (AFL), which monitors the number and circumstances of ACL injuries, has estimated that these injuries cost the AFL well over \$1 million a year.¹⁷ The AFL has found that ACL injuries are twice as likely to occur in the more northern States of Australia as in Victoria.^{17,18} Research into the reason for this difference is helping to develop ways to prevent these injuries among professional footballers.¹⁸ By the same token, any differential patterns of injury observed in the general population would become an important public health issue. However, because of the lack of national injury surveillance, it is not known whether there are significant regional or other differences in injury patterns at the community level.

One Australian State government has established a body specifically for compensating serious sports injuries, the New South Wales Sporting Injuries Insurance Scheme. This is a successful, non-compulsory, non-profit government insurer for catastrophic sports injuries (ie, those involving more than 35% permanent loss of use of a body part). The Scheme is cost-neutral and provides an incentive to actively prevent injury through promotion of safe sport practice and funding of injury prevention research. It is possible that the existence of the Scheme has lowered the risk of catastrophic injury in New South Wales relative to other States, but, once again, comparisons are not possible with incomplete data the NSW Scheme is not compulsory for all sports and no other State has good records of catastrophic sports injuries. The Federal Government body devoted to sport, the Australian Sports Commission (ASC), has been extremely successful in promoting and developing Australian sport at the elite level. However, it does not consider itself responsible, in any major way, for the promotion of safe sport at the

community level, and devotes most of its resources to the

areas for which it is accountable, such as Australia's performance in elite sporting events.

■ The approach to road trauma in Australia is a good example of how the healthcare system could better manage sports injuries. Traffic accidents are managed entirely outside the Medicare system, through bodies such as the Transport Accident Commission in Victoria. These bodies provide an infrastructure to support and develop preventive measures and actively engage in data collection to monitor injury trends. That Australian roads are much safer today than they were 20–30 years ago is testament to the success and extent of this preventive approach.

Conclusion

The New Zealand approach to managing the problem of sports injuries may not be perfect, but it is surely better than the Australian approach of having no overall plan. Australian government bodies concerned with health and sport need to establish a body with national responsibility for sports safety and injury surveillance, exploring options such as a New Zealand-style national sports injury insurance scheme. It is only with an established infrastructure for monitoring sports injuries that significant advances will be made towards preventing sports injuries and ensuring safe, lifelong participation in physical activity for all Australians.

References

- 1. Bauman A, Owen N. Physical activity of adult Australians: epidemiological evidence and potential strategies for health gain. *J Sci Med Sport* 1999; 2(1): 30-41.
- Finch C, Owen N, Price R. Current injury or disability as a barrier to being more physically active. Med Sci Sports Exerc 2000; 33: 778-782.
- Egger G. Sports injuries in Australia: causes, costs and prevention. Sydney: National Better Health Program, 1990.
- Watson W, Ozanne-Smith J. The cost of injury in Victoria. Melbourne: Monash University Accident Research Centre, 1998.
- National Injury Prevention Advisory Council. Directions in injury prevention. Report 1. Research needs. Canberra: Commonwealth Department of Health and Aged Care, 1999.
- Finch C, Owen N. Injury prevention and promotion of physical activity: what is the nexus? J Sci Med Sport 2001; 4(1): 77-87.
- van Mechelen W, Hlobil H, Kemper H. Incidence, severity, aetiology and prevention of sports injuries: a review of concepts. *Sports Med* 1992; 14(2): 82-99.
- Mathers C, Vos E, Stevenson C, Begg S. The Australian burden of disease study: measuring loss of health from diseases, injuries and risk factors. *Med J Aust* 2000; 172: 592-596.
- Woolf A, Akesson K. Understanding the burden of musculoskeletal conditions. BMJ 2001; 322: 1079-1080.
- World Health Organization. International Classification of Diseases. 9th revision. (ICD-9). Geneva: WHO, 1979.
- Finch C, Ozanne-Smith J, Williams F. The feasibility of improved data collection methodologies for sports injuries. Melbourne: Monash University Accident Research Centre, 1995.
- 12. Australian Sports Injury Data Working Party. Australian sports injury data dictionary: guidelines for injury data collection and classification for the prevention and control of injury in sport and recreation. Canberra: SportSafe Australia (Australian Sports Commission) and Sports Medicine Australia, 1997.
- Finch C, McGrath A. SportSafe Australia: a national sports safety framework. A report prepared for the Australian Sports Injury Prevention Taskforce. Canberra: Australian Sports Commission, 1997.
- Strategic Injury Prevention Partnership. National injury prevention plan: priorities for 2001–2003. Canberra: Department of Health and Aged Care, 2001.
 National Health and Medical Research Council. Paradigm shift. Injury: from
- problem to solution. New research directions. Canberra: AGPS, 1999.
- A national tragedy. Happening every day. Accident Compensation Corporation, 2001. Available at: http://www.acc.co.nz/acc-publications/pdfs/national-tragedy.pdf). Accessed 21 May 2002.
- Orchard J, Seward H, McGivern J, Hood S. Rainfall, evaporation and the risk of non-contact anterior cruciate ligament injury in the Australian Football League. *Med J Aust* 1999; 170: 304-306.
- Orchard J. The AFL penetrometer study: work in progress. J Sci Med Sport 2001; 4(2): 220-232.

(Received 12 Dec 2001, accepted 28 Mar 2002)