

# Australia urgently needs a federal government body dedicated to monitoring and preventing sports injuries

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*Financial motivation can encourage greater sports injury prevention efforts*

A landmark study published recently in the *BMJ* has shown that the rate of catastrophic spinal injury in rugby union in New Zealand has halved.<sup>1</sup> For the period 2001–2005, the rate was 1.3 spinal injuries per 100 000 players per year, compared with 2.7 per 100 000 players per year in the period 1996–2000, which was typical of the previous 25 years.<sup>1</sup> This drop coincided with the introduction of “RugbySmart” (<http://www.rugbysmart.co.nz>), a 10-point annual injury prevention program that was made compulsory from 2001 for all coaches and referees in New Zealand.<sup>1,2</sup> While the observational study does not claim that the drop in catastrophic spinal injuries can be unequivocally attributed to RugbySmart, an accompanying editorial in the *BMJ* stated: “The beauty of the RugbySmart programme is that it can do no harm, and according to the results of this study may do great good”.<sup>3</sup>

What is the current state of play with respect to catastrophic spinal injuries in rugby in Australia? Although comparisons of spinal injury rates between New Zealand and Australia are difficult,<sup>1</sup> recently published rates in Australia are substantially higher (between 3.2<sup>4</sup> and 6.8<sup>5</sup> injuries per 100 000 players per year). New Zealand is in a much better position to accurately determine incidence rates because compensation for all injuries (both sporting and from other causes) is available through a universal, government-funded scheme operated by the Accident Compensation Corporation (ACC).<sup>6</sup>

From 2005, the Australian Rugby Union (ARU) instituted a similar (but less extensive) program called “SmartRugby” for its referees and coaches. Tests of its effectiveness have not been reported, but it should be noted that the ARU does not have nearly the same financial motivation as the ACC to make it successful. In

New Zealand, the ACC compensates for all catastrophic spinal injuries with lifetime medical care and annual replacement of 80% of wages, which can be up to NZ\$14 million per case.<sup>2</sup> In Australia in 2005, the maximum compensation paid to a rugby player rendered quadriplegic was A\$300 000, accurately described by Carmody et al as “grossly inadequate”.<sup>4</sup> This is particularly so when compared with a median payout of A\$7.6 million for quadriplegia in recent negligence cases in Australia.<sup>7</sup>

Orchard and Finch argued in 2002 that, from a public health viewpoint, New Zealand’s system of maintaining a government body that monitors, compensates and seeks to prevent sports injuries is superior to Australia’s lack of any comparable system.<sup>6</sup> Noakes and Draper suggested that New Zealand’s drop in spinal injuries “would not have been possible if the New Zealand government did not provide a national insurance policy that also covers sports injuries”.<sup>3</sup> The ACC can also claim other successes in preventing sports injuries that we have not yet achieved in Australia. Mouthguard use in rugby in New Zealand has increased from 67% to 93%, reducing rugby-related dental claims to the ACC by 43%.<sup>8</sup> A similar analogy can be used — in Australia there is no organised body paying dental claims, so there is no strong financial motivation to encourage increased mouthguard usage.

The ACC is already in the position where it is evaluating New Zealand’s national sports injury prevention programs (in many sports) for cost-effectiveness, in terms of reducing injuries and claim payments.<sup>9</sup> By comparison, in Australia there is generally no monitoring of sports injury rates, let alone well coordinated national sports injury prevention programs in place. If a national body was created in Australia to take on this role, even if it was not

fully funded out of general revenue like the ACC, at the very least it could insist that federal government funding for sports be tied to minimum standards of monitoring injury rates and instituting injury prevention programs.

Reducing work-related and traffic accidents have been listed as two of the top 10 public health achievements of the 20th century.<sup>10</sup> These achievements would not have been possible without major bodies having responsibility for monitoring injury rates and instituting preventive measures. New Zealand is already showing that this model works equally well for sports injuries, so why should it not be applied in Australia? A new federal government body would cost money to establish and maintain, but the New Zealand experience suggests that subsequent savings may soon cover the costs of establishment and operation.<sup>2</sup>

In conclusion, the following matters deserve our urgent attention in Australia:

- The creation of a federal government body either primarily responsible for monitoring and preventing sports injuries or, at the very least, delegating these responsibilities to sporting bodies in a coordinated fashion.
- This body should compensate for injury, either (1) totally, as is the case in New Zealand; or (2) partially, in conjunction with sporting bodies, private insurers, public hospitals and Medicare.
- The minimum compensation for complete quadriplegia occurring in sport in Australia should be increased at least tenfold, both (1) to bring compensation for sporting quadriplegia more into line with compensation for quadriplegia arising from other causes; and (2) to give compensating and sporting bodies a much stronger financial motivation for prevention, as is the case in New Zealand.

## Competing interests

John Orchard is a board member of the New South Wales Sporting Injuries Committee (NSWSIC), but the views expressed here are his own and not reflective of the NSWSIC.

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## References

- 1 Quarrie KL, Gianotti SM, Hopkins WG, Hume PA. Effect of nationwide injury prevention programme on serious spinal injuries in New Zealand rugby union: ecological study. *BMJ* 2007; 334: 1150-1153.
- 2 Gianotti S, Quarrie K, Hopkins W. RugbySmart — the prevention of serious injuries in rugby union. In: Proceedings of the New Zealand Sports Medicine and Science Conference; 2006 Nov 16-18; Wellington, New Zealand. Wellington: Sports Medicine New Zealand; 2006. p. 47.
- 3 Noakes TD, Draper CE. Preventing spinal cord injuries in rugby union [editorial]. *BMJ* 2007; 334: 1122-1123.
- 4 Carmody DJ, Taylor TK, Parker DA, et al. Spinal cord injuries in Australian footballers 1997–2002. *Med J Aust* 2005; 182: 561-564.
- 5 Berry JG, Harrison JE, Yeo JD, et al. Cervical spinal cord injury in rugby union and rugby league: are incidence rates declining in NSW? *Aust N Z J Public Health* 2006; 30: 268-274.
- 6 Orchard JW, Finch CF. Australia needs to follow New Zealand's lead on sports injuries. *Med J Aust* 2002; 177: 38-39.
- 7 Coates J, Orchard J. Is 'reasonable' compensation for quadriplegia in sport affordable? In: Proceedings of the Fifth National Sports Injury Prevention Conference; 2007 Oct 14-16; Adelaide, Australia. Canberra: Sports Medicine Australia; 2007. In press.
- 8 Quarrie KL, Gianotti SM, Chalmers DJ, Hopkins WG. An evaluation of mouthguard requirements and dental injuries in New Zealand rugby union. *Br J Sports Med* 2005; 39: 650-651.
- 9 Gianotti S, Hume PA. A cost-outcome approach to pre and post-implementation of national sports injury prevention programmes. *J Sci Med Sport* 2007 Mar 10 [Epub ahead of print]. doi: 10.1016/j.jsams.2006.10.006.
- 10 Centers for Disease Control and Prevention (CDC). Ten great public health achievements — United States, 1900–1999. *MMWR Morb Mortal Wkly Rep* 1999; 48: 241-243. □