

We read with great interest the recent editorial on injury risk in youth rugby, given that our research group conducts a range of injury surveillance studies across the sport of Rugby Union (for full disclosure the majority of which are funded by the Rugby Football Union (RFU)).

At the outset we fully support and advocate for the need to quantify injury risk in youth rugby union in order to provide the evidence base for discussions around injury reduction strategies. There is clearly room for comprehensive large-scale injury surveillance systems to be implemented, particularly in relation to any serious injuries sustained by young athletes as a result of participation in any sports, including Rugby Union. However, it is important to point out that some contemporary evidence does exist and may be of interest to readers of BMJ.

We previously (2006-2008) studied injury risk in secondary schools and in professional academies in England (16-18 year olds). We studied time loss injuries as defined in the consensus statement on injury definitions for studies in rugby union<sup>1</sup>; that is, an injury that resulted in a player not being able to take a full part in training or match play for greater than 24 hours after midnight on the day of the injury. Using this definition, which includes many “minor” injuries in addition to those alluded to by Mr Carter, match injury incidence for school players equated to 0.7 injuries per match per team of 15 players. The incidence for academy players was 0.9 injuries per team per match<sup>2</sup>, approximately one half of the incidence of their senior counterparts. The nature of the injuries sustained (lower limb location and ligament sprains were most common) and the source of these injuries (approximately half of injuries arose from the tackle event) was very similar to the previous studies from senior rugby union. Our study in English schools and academies also considered injury risk from training activities<sup>3</sup>. The key messages from this analysis were indeed to encourage coaches of young players to carefully consider the extent to which full physical contact was required in training drills and also to ensure players acquired the individual technical skills (both for rugby and for weight training) before being asked to employ these skills in competitive contact situations. These key messages were emphasised in the ‘game wide’ report that was distributed to every single rugby-playing secondary school (~1200 schools) in England<sup>4</sup>. A total of 19 out of the 341 injuries included in the injury database for this study were recorded as requiring a visit to an Accident & Emergency department (equivalent to 1 injury every 18 matches for a given team), further reinforcing the notion that the majority of rugby injuries do not result in hospitalisation.

It is important to acknowledge that our study (and others internationally) are only the beginnings of an evidence base for establishing injury risk in youth rugby, but the lack of comprehensive injury statistics is a feature of almost all youth sports and we would contend that in some respect Rugby Union’s surveillance systems are ahead of many other sports.

Injury surveillance work in Rugby Union also currently includes the CRISP project referenced in Mr Carter’s editorial, which is acquiring data from approximately 10% of all community rugby clubs in England and therefore reasonably represents the risk at this level of the game<sup>5</sup>. Injury surveillance is also carried out in senior professional rugby (International and Premiership) as well as elite women’s rugby (International and Premiership). This allows the game’s stakeholders to develop a picture of injury risk across the various levels of the sport and to identify target areas for injury reduction. These data are published in the public domain annually via [englandrugby.com](http://englandrugby.com). On behalf of the RFU, we have also recently commenced a major 3-year study into schools rugby (14-18 year olds), in

which we will be adding to the evidence base of general injury risk in this population, but also assessing the efficacy of injury prevention interventions.

In addition to general injury surveillance programmes, Rugby Union does have a national data collection system specifically for catastrophic injuries (coordinated by the RFU) which feeds into an international database <sup>(6)</sup>; coordinated by World Rugby, the sport's international governing body) which is designed to uncover longer-term trends and risk factors for the most serious injuries sustained by rugby players. Rugby Union has also in recent times shown willingness to alter the Laws of the sport in response to research which suggests that modifications could improve short-term and longer-term player health, for example the recent amendments to the scrum laws <sup>7</sup> based on game-wide applied research on the mechanics of scrummaging <sup>8,9</sup>.

We would absolutely reinforce the important need for understanding the risk of injury from sports participation, particularly in relation to the risks of serious injury and particularly in relation to youth sport. On this topic we completely concur with Mr Carter regarding the need for systems to be established to collect large-scale national datasets of serious injuries from sports participation, possibly based on admissions to emergency departments (see <sup>10</sup> for an international perspective). Improved appreciation of the comparative injury risk of specific sports, like Rugby Union, in the context of other sports and other activities would be extremely valuable to a number of groups, including parents, the medical community, and sport governing bodies.

Yours sincerely,

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