

13 July 2017

To Chief Medical Officers (CMOs):

England	Professor Dame Sally Davies	<a href="mailto:CMOweb@dh.gsi.gov.uk">CMOweb@dh.gsi.gov.uk</a>
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Dear Professor Dame Sally Davies; Dr Catherine Calderwood; Dr Frank Atherton; Dr Michael McBride

**RE: Open Letter: Preventing injuries in children playing school rugby**

This letter is a response to your joint letter of 29<sup>th</sup> July 2016 and the report of your advisers. While we welcome your encouraging us to continue our research in this area we were nevertheless very disappointed to read your 'view' and were also dismayed that you should have come to your view without first giving us an opportunity to comment on the advice of the UK CMOs Physical Activity Expert Group (PAEG). We note that the PAEG have not provided any evidence in support of their advice in the form of data or references to published literature.

Our delay in responding is because in addition to writing the attached response to the PAEG's advice, we felt it necessary to write and publish a peer reviewed paper in response to the paper you cite as being in support of the conclusions of the PAEG, published in the British Journal of Sports Medicine (BJSM) and co-authored by Pollock AM, White AJ and Kirkwood G<sup>1</sup>. The paper by Tucker et al was co-authored by two employees of World Rugby and made a number of claims. Since its publication there has been extensive and extremely lengthy debate over the claims made by Tucker et al between ourselves and the many reviewers as well as the editors at the BJSM. We have updated the evidence and also conducted a fresh meta-analysis of rugby injury studies for narrower age bands. This analysis supports our previous conclusions that the risks of injury are high for all ages of school children.

We would like to draw your attention to the recent publication of seven new studies: two from the US (1, 2) and one each from Sweden (3), Ireland (4), England (5), New Zealand (6) and Australia (7); and three new systematic reviews and meta-analyses, two from Canada (8, 9) and one from China (10). The key findings are that: there are high rates of injury in the youth rugby union game with many injuries occurring during the tackle (4); youth rugby has a significantly

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<sup>1</sup> Pollock AM, White AJ, Kirkwood G. Evidence in support of the call to ban the tackle and harmful contact in school rugby: a response to World Rugby. British Journal of Sports Medicine. 2017; 51:1108-1113.

higher rate of concussion than any other contact or collision team sport (8); the tackle is responsible for three quarters of concussions in the adult community game (5); in the US, rugby injury emergency department attendances are increasing, in particular head and face injuries (2); girls take longer to recover from concussion than boys (1); head impacts in under 11 year olds playing rugby league are of a similar severity to those sustained by college American football players (6); a history of concussion negatively impacts on a person's life chances across a range of social and educational measures (3); there is evidence that concussion is predictive of violent behaviour and subsequent injury in the year following the concussion in 13-14 year old Australian school children (7); head injury is associated with an increased risk of dementia and Alzheimer's disease (10); and strong evidence exists from youth ice-hockey that rule changes disallowing collision have a dramatic effect in lowering concussion risk (9).

In our response to the PAEG, we have sought to identify potential areas where we agree on the evidence and areas which we require the PAEG to clarify. We have covered these areas by posing 36 questions in our response, and have also set out the questions in a stand-alone file which we also attach.

We respectfully request you to ask your advisers to revisit their advice in light of our responses, and to provide the clarifications requested and to offer their view on the areas of agreement and disagreement.

In our view, open discussion is the best way to progress this matter, and so we would also ask you to send us a copy of your advisers' response and to consider convening a meeting of interested parties so that any remaining differences of opinion in relation to the evidence can be identified and better understood.

In light of the accumulated evidence that the rate of injury including concussion in rugby is considerably higher than any other sport played in schools, and that the tackle is the main cause of these injuries, we continue to urge a cautionary approach and ask you having reappraised the evidence to advise the Ministers to withdraw the tackle and other forms of harmful contact, such as the scrum, ruck and maul, from school rugby, the main collision sport in the PE curriculum in the UK.

We look forward to hearing from you.

Yours sincerely,

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on behalf of the Sport Collision Injury Collective

1. Miller JH, Gill C, Kuhn EN, Rocque BG, Menendez JY, O'Neill JA, et al. Predictors of delayed recovery following pediatric sports-related concussion: a case-control study. *Journal of neurosurgery Pediatrics*. 2016;17(4):491-6.
2. Sabesan V, Steffes Z, Lombardo DJ, Petersen-Fitts GR, Jildeh TR. Epidemiology and location of rugby injuries treated in US emergency departments from 2004 to 2013. *Open Access Journal of Sports Medicine*. 2016;7:135-42.
3. Sariaslan A, Sharp DJ, D'Onofrio BM, Larsson H, Fazel S. Long-Term Outcomes Associated with Traumatic Brain Injury in Childhood and Adolescence: A Nationwide Swedish Cohort Study of a Wide Range of Medical and Social Outcomes. *PLoS medicine*. 2016;13(8):e1002103.
4. Archbold HA, Rankin AT, Webb M, Nicholas R, Eames NW, Wilson RK, et al. RISUS study: Rugby Injury Surveillance in Ulster Schools. *British journal of sports medicine*. 2015.
5. Roberts SP, Trewartha G, England M, Goodison W, Stokes KA. Concussions and Head Injuries in English Community Rugby Union Match Play. *American Journal of Sports Medicine*. 2016;Published Online October 17 2016. DOI: 10.1177/0363546516668296.
6. King D, Hume P, Gissane C, Clark T. Head impacts in a junior rugby league team measured with a wireless head impact sensor: an exploratory analysis. *Journal of neurosurgery Pediatrics*. 2016:1-11.
7. Buckley L, Chapman RL. Associations between self-reported concussion with later violence injury among Australian early adolescents. *J Public Health (Oxf)*. 2017;39(1):52-7.
8. Pfister T, Pfister K, Hagel B, Ghali WA, Ronksley PE. The incidence of concussion in youth sports: a systematic review and meta-analysis. *British journal of sports medicine*. 2016;50(5):292-7.
9. Emery CA, Black AM, Kolstad A, Martinez G, Nettel-Aguirre A, Engebretsen L, et al. What strategies can be used to effectively reduce the risk of concussion in sport? *British journal of sports medicine*. 2017.
10. Li Y, Li Y, Li X, Zhang S, Zhao J, Zhu X, et al. Head Injury as a Risk Factor for Dementia and Alzheimer's Disease: A Systematic Review and Meta-Analysis of 32 Observational Studies. *PloS one*. 2017;12(1):e0169650.