

# **Optimising concussion care in the United Kingdom: A rethink in the management strategy for sports concussion**

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Concussion is arguably the number one medical issue taxing modern contact sport; a consequence of increasing anxieties over immediate and long term concussion-related health outcomes, and fuelled by seemingly endless news stories featuring concussion in the press [1]. In the United Kingdom (UK), heightened concerns over concussion management and outcomes have led to a variety of initiatives from multiple sports organisations and agencies to raise awareness of concussion and promote best practice management of the injury, particularly at grass roots level [2]. Consequently as parents, players, teachers and coaches become better equipped to identify concussion, recognition of the injury will improve and, inevitably, recorded injury rates will rise.

Whilst this increased concussion awareness and recognition is an admirable goal, there are very real concerns emerging of the implications this may have on already pressurised healthcare settings, such as the National Health Service (NHS), if every individual from every sport with a suspected concussion was sent for assessment. The result would be an unfeasible spike in hospital and primary care attendances, and would render the current guidance and recommendations for health professional management of recovery and return to play difficult to achieve (if not impossible). The “one size fits all” approach of medical review for every individual with a suspected concussion in the UK is impractical, and traditionally has resulted in extended periods of absolute rest which are also suggested to be unnecessary for all [3]. To better handle this situation a more sophisticated management strategy is needed.

One approach is to empower other individuals to remove the pressure from doctors in the NHS. The burden of management of sports concussion management has traditionally has

fallen upon medical doctors, however the example of Athletic Trainers in the United States of America [4] shows that other healthcare professionals in the UK may be able to carve a role in concussion management. At present there are no compulsory concussion management modules for undergraduate physiotherapy students in the UK, whilst first aid training for teachers and sport referees (who may often be the first responders to pitch-side injuries in youth sport) does not provide sufficient information to give them confidence in their handling of this injury. Improving the knowledge base of those individuals working in sport is paramount and will generate a substantial pool of individuals who are competent to educate their athletes, screen for concussion signs and symptoms, and better placed to ascertain which individuals do need onward referral for more detailed medical assessment.

Technology should also play a part in streamlining and enhancing concussion management in the UK. Innovative means such as prognostic blood markers have been investigated [5], and objective methods such as these have the potential to greatly facilitate assessment and management. The parallel here can be drawn with patients having chest pain; not all patients arriving with chest pain are assumed to have had an myocardial infarction, and years of research and investigation resulted in the use of troponin testing [6]. The increased and regulated use of multimedia technologies should be considered as an adjunct to existing care; smartphone apps are available to assist the layperson with concussion management [7], and social media could constitute a valuable means of educating clinicians and athletes alike [8]. Concussion-related research in the UK currently lags behind many other countries, and a greater focus on this from private and public institutions will help to facilitate all aspects of concussion knowledge. In conjunction with this, major UK sporting federations must be open to collaboration between themselves and academic institutions, both to

facilitate concussion education and awareness programmes and to help their research processes and goals flourish.

The UK delivers a fantastic public health service via the NHS, and also provides a world-class sporting environment for both professional and recreational sport; it therefore has a duty to provide a world-class concussion management service to individuals playing these sports.

Given that the NHS is already close to capacity at present, policy makers and sporting organisations need to better consider how to meet the demands of concussion management in the UK. Utilising evidence-based and credible innovations which assist with concussion management and identification will help this process, and hopefully help the UK to serve as an example for other countries to follow.

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