

Written evidence submitted by the UK Acquired Brain Injury Forum

Sport-related Mild Traumatic Brain Injury

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Executive Summary

Concussion is a mild traumatic brain injury occurring at all levels of sport. Post-concussion syndrome and the damage caused by subconcussive injury is a growing concern. The Government's current position that "*National Governing Bodies (NGBs) are responsible for the regulation of their sport and for ensuring that appropriate measures are in place to protect participants from harm*" must change because the NGBs have not met this responsibility.

UKABIF's recommendations for change were presented in 2018 and remain unchanged.

Concussion is a public health issue. The government should take a leadership role in the management of concussion research, public health campaigns for concussion awareness and education, and should implement better pathways for concussion management in the NHS.

UKABIF Background

The UK Acquired Brain Injury Forum (UKABIF) aims to promote better understanding of all aspects of Acquired Brain Injury; to educate, inform and provide networking opportunities for professionals, service providers, planners and policy makers and to campaign for better services in the UK. UKABIF is a membership organisation and charity, established in 1998 by a coalition of organisations working in the field of Acquired Brain Injury.

Sport-related mild traumatic injury is a growing concern

Concussion is a mild traumatic brain injury (mTBI) occurring at all levels of sport. The commonly quoted figure of 1.4 million people reporting annually to UK A&E departments with head injury is mostly (80-95%) comprised of mTBI. This figure almost certainly underestimates the number of brain injuries occurring in the country as most mTBIs are not considered serious enough to necessitate a visit to A&E. Many people do not fully appreciate that concussion is a brain injury because it is on the lower end of the TBI spectrum, and the potential seriousness of mTBI is not fully understood within the sporting community, by the public, and by many clinical professionals.

Whilst the vast majority of mTBIs resolve without medical intervention within a couple weeks, between 10-25% of these people develop persistent concussion symptoms – a condition known as post-concussion syndrome (PCS). There is a dearth of data on PCS in the UK. Anecdotal reports from clinical professionals suggest that people with PCS far too often fall through the cracks in our health care system and do not receive proper advice and/or treatment for months. This occurs because mTBI is poorly understood by too many clinical professionals, and the NHS does not have a specific pathway for the condition. In some cases, this means children are delayed in school or adults are prevented from working. Because it is a hidden epidemic, we do not know the full extent of its socioeconomic cost. Better UK data would help us understand this cost.

Particular to contact sport, we now understand that repetitive subconcussive injury – such as heading a ball – is also a concern. A subconcussive injury follows the same mechanism as concussive injury whilst not resulting in overt concussion symptoms. The intensity of impact that causes damage is still unknown. Subconcussive impacts have been linked to cognitive decline and changes in both brain biochemistry and

structure. Numerous studies are now suggesting significant neurodegeneration including motor neurone disease and dementia can result from subconcussive injury.

Time for Change Report

In September 2018, the APPG for Brain Injury submitted the Time for Change Report [[link](#)]. A similar APPG report for Wales will be submitted soon, and the recommendations are mostly unchanged. The 2018 APPG report recommended the following:

- The Government should ensure that there is collaborative research to evaluate and improve practical assessment tools, develop objective diagnostic markers and gain a deeper understanding of the recovery process and long-term risks of sport-related concussion
- An enhanced education campaign should be implemented in schools to improve awareness and understanding of sport-related concussion with the support of government departments (i.e. Department for Education and Department of Health and Social Care, Public Health England)
- Sport, government and professional clinical bodies must work collaboratively to improve health professionals' knowledge of concussion management
- The National Health Service should develop better pipelines for the diagnosis and care of sport-related concussion

The Government's response to these recommendations has been mixed and the bulk of the responsibility has been left with individual sporting NGBs indeed, the government response to the APPG report specifically stated responsibility is with the individual sporting authorities. The response stated:

“National Governing Bodies (NGBs) are responsible for the regulation of their sport and for ensuring that appropriate measures are in place to protect participants from harm, including serious injuries. With that in mind, DCMS looks to individual sports to take responsibility for the safety of their participants”.

Since this report was produced, we note the following:

- Research
 - Government has not taken an active role ensuring collaborative research.
 - Government invested substantially in major trauma, but there has been no specific investment or research call for mTBI specifically.
 - Funding in this area has been very limited. It is arguable that association football NGBs have contributed more funding to research than any other sport; and it is notable that FA/PFA funding in the area over the last ten years combined is less than the average annual salary of the of a typical premier league player from a team at the bottom of the table.
 - The limited NGB research in the field is largely reactive and driven by negative media. They are under no obligation to engage with other relevant stakeholders.
 - Decision making processes for NGB funding is not required to be transparent or independent.
 - The oversight for funded studies does not have the same oversight as that for studies funded by UK Research and Innovation, and there is no requirement for accountability.
- Campaigning/Awareness
 - The government has acknowledged that mTBI awareness is low.
 - Education campaigns are not conducted by the government (in contrast to other countries including Australia, Canada and Scotland).
 - Schools do not provide standardised written information to students or parents following mTBI.
 - Physical education teachers are not required to have first aid training and generally do not have any concussion awareness training.
- National Health Service

- The NHS does not adequately address return to sport/study/work following mTBI – current NICE guidelines refer the reader to charities for further information.
- The NHS does not have mTBI management protocols in place to monitor patients despite clear guidelines in sport medicine community for this necessity. Better management / follow up will allow people to return to sport/study/work safely and prevent prolonged PCS.
- Clinical professionals typically do not receive formal training in mTBI management that would include return to play/learn/work. As a result, frontline professionals, including ambulance staff and GPs, do not have standard protocols or training. A recent survey from the University of Edinburgh highlighted that clinical year medical students had key gaps in concussion knowledge and management and a desire for this education in their curriculum (personal communication, Dr Stephanie Adams).
- There is a large variation in the content and quality of discharge information given to patients following attendance at A&E or assessment by ambulance staff following a head injury. This information is mostly focused on ‘red flag’ symptoms indicative of more serious injury [Helen Hall, Mild Traumatic Brain Injury Provision in the East of England, Concussion Action Programme, University of East Anglia Health and Social Care Partners, 2021].
- mTBI is under-reported because injury coding system allows for people presenting with mTBI to be coded as a musculoskeletal or facial injury. There is not a specific category for sport-related mTBI.
- 25% of the head injuries attended by Ambulance Service do not go to A&E, and there is no specific pathway for follow up.
- Many people with mTBI do not seek medical advice or support and manage their return to sport/study/work on their own without adequate information.

UKABIF Recommendations

The government response to the APPG recommendations puts the responsibility on the sporting NGBs. We believe the oral testimony given to the DCMS committee demonstrates very clearly that the NGBs have not met their responsibility and have a conflict of interest where player welfare is at odds with the business of the game. NGBs have no obligation to conduct research for the public good or to conduct awareness campaigns for the public. Sport-related brain injury is a public health issue – we urge the government to take a significant leadership role in the following areas:

Research

- Funding for concussion research should be independent, transparent and involve all stakeholders.
- Funding should be led by the government, potentially under the auspices of UK Research and Innovation bodies (e.g. BBSRC, MRC, etc), Public Health England/Scotland/Wales, NIHR, or Sport England/Scotland/Wales. Financial contribution to research should be encouraged by NGBs. Specific funding calls reflecting the interest of NGBs and public health could be co-funded.
- This is a public health issue – Public Health England/Scotland/Wales and Sport England/Scotland/Wales should be stakeholders in this research and contribute to it financially.

Campaigning/Awareness

- Government should be providing leadership – it is insufficient to leave this to NGBs who do not have a public health remit.
- This should be an approach led by Department for Education and Department of Health and Social Care, Public Health England/Scotland/Wales rather than individual sporting bodies.

Consistent Diagnosis and Care

- Specific Continuing Professional Development (CPD) in sport-related mTBI should be required for frontline health care workers.

- A better management system that follows known return to play/learn/work guidelines should be implemented.
- Following a concussion diagnosis, patients should not return to full-time sport/study/work until cleared by a medical professional with appropriate CPD training.
- First aid training and concussion awareness training should be mandatory for physical education teachers. For new teachers, this could be implemented during the university training. Education should be followed up with regular CPD in concussion.