

Written evidence submitted by the England and Wales Cricket Board

ENGLAND AND WALES CRICKET BOARD SUBMISSION TO THE DIGITAL, CULTURE, MEDIA AND SPORT SELECT COMMITTEE INQUIRY INTO CONCUSSION IN SPORT

March 2021

As the National Governing Body (NGB) for cricket in England and Wales (ECB), we are responsible for all aspects of the game from grassroots through to the elite level. We are a not-for-profit organisation, with all revenue generated being reinvested to sustain and grow cricket. We are the only NGB which oversees every aspect of our sport: international teams (men's, women's, and disabilities), professional clubs and the recreational game.

CONCUSSION/HEAD INJURY IN CRICKET

Injury surveillance shows that the risk of concussion in cricket is significantly lower than a number of the most popular sports. Nevertheless, it carries significant risk in that the cricket ball can be projected at a high velocity directly at someone's head within the laws of the game.

Approved protective headgear is mandatory for batting, wicketkeeping and all close fielding and is increasingly worn by umpires. However, it is not worn in all situations, and the design of helmets does not completely remove the potential for concussion. Improvements have seen the development of further BSI standards in neck protectors to further cover the occiput although mandating their use has been delayed by the impact of Covid on manufacturing. ECB injury surveillance indicates head injuries are still most common when wearing protective headgear whilst in the process of batting and in close fielding positions. Less common are injuries to bowlers and as a result of collisions in the act of fielding.

MANAGEMENT OF CONCUSSION IN CRICKET

ECB understands the importance of protecting the short term and long term welfare of players and staff. It has a dedicated Chief Medical Officer overseeing a unique Department: 'Duty of Care' (DoC) and a Safety in Cricket Committee (SICC) whose sole focus is the wellbeing and safety of all individuals in the game and reports directly to the ECB Executive, Board and Regulatory Board. Its budget is solely directed to prevention activities, research and evidence based decision making through audit and surveillance.

In relation to concussion, the ECB DoC and SICC has sought to mitigate these risks through the ECB Concussion Guidelines, in the event of a concussion within the professional and recreational game.

The ECB concussion and head injury guidelines are based on current evidence and will be updated after the Paris Consensus meeting in 2021. The current guidelines are based on the Berlin Consensus Statement published in the British Journal of Sports Medicine in November 2016, ongoing sports and indeed cricket related research and a number of recent multisport forums, consensus panels and direct consultation with world leaders and research centres in the field of concussion.

The ECB medical panel has looked at best practice across sports and consulted CMOS and guidelines from NFL, AFL, FIFA Concussion Guidelines, BHRA and World Rugby/RFU.

Implementation is then undertaken following a consultation processes that includes ECB Medical panel, First Class County Cricket Club Chief Medical Officers and Neurosurgical and Neurosciences concussion research team from NIHR Birmingham.

The ECB's Concussion guidelines have been developed around a consistent Return to Play (RTP) protocol: The 4 Rs, following the principles of Recognise symptoms, Remove individual from field of play, Recover (and reduce) exposure to brain activities such as video games and watching television if the individual is symptomatic, Return on a graded basis once the individual is symptom free.

Further tailored resources are available for Players, Coaches, Parents, Umpires and Healthcare professionals [here](#) including an education module, posters and training for professional and recreational game with attention given to ensuring match officials are fully briefed on their roles in this situation.

The ECB is dedicated to ensuring the game is safe for participants and support staff and that the continues to audit and engage with the research community supported by relationships with the Repetitive Concussion in Sport (RECOS) research groups and Universities and its continued sponsorship of the annual UK Sport Research Symposium, along with the FA, RFU, BHRA and the Drake Foundation.

The ECB mantra is simple. If in Doubt You're Out.

ECB PREVENTION OF CONCUSSION PROGRAMME

The ECB deploys the 5th edition of the Sport Concussion Assessment Tool (SCAT5 and Child SCAT5) Edition) for adults and children respectively. Annual preseason assessment is mandatory across all of the professional game including pathways.

In order for the true incidence, prevalence, pattern and nature of concussion to be best understood, all head injuries, concussions and 'near misses', mandatory recording using the ECB injury surveillance system is required, with reporting to the ECB Chief Medical Officer, a member of the ECB medical panel or National Lead for Physiotherapy. All completed SCAT5 forms are independently monitored and processed by the concussion coordinators / medical interns from Loughborough University. In addition, all video clips of injuries and helmet strikes are recorded through the ECB performance analysis teams that record all professional cricket. As a result of video analysis, the ECB's concussion guidelines and online education programmes, which are reviewed by the ECB's medical team on an annual basis, have developed cricket specific video recognition of signs, behaviours and severities of balls strikes, that uniquely can predict increased likelihood of concussion in game.

BASELINE TESTING

In order to continually assess and improves our Concussion guidelines, the ECB mandates all professional players undertake a baseline testing with a minimum being a SCAT5 assessment and bi-annual complex neurocognitive assessment. This forms part of the off-season player profiling screening and allows comparison to post-injury scores in both the diagnosis of a concussion and the RTP evaluation. As part of this analysis, an IMPACT / long term cognitive tracking baseline test must be undertaken every 2 years in the off-season or repeated annually in players who have had a helmet strike that season. Furthermore, the video uploads for all concussion and helmet strikes filmed in domestic and international cricket are mandatory with subsequent analysis by a dedicated Concussion / head injury researcher.

FURTHER DEVELOPMENTS

With the RTP protocols and follow up procedures now fully embedded throughout the recreational and professional game, the ECB's medical team over the past 5 years have undertaken the following to continue to evolve the game's understanding of, and mitigation against, concussion:

1. We are sponsoring a second PhD at Loughborough University Sports Technology Institute, dedicated to understanding cricket head injuries and development of safer helmets, with a view to further reducing concussions. The group's expertise is also looking at other sports head injury mechanisms.
2. The ECB instigated and chaired British Standard for helmets that effectively eradicated facial injury and potential skulls fractures.
3. The ECB initiated and chaired the development of British Standard (Amendment to Head Protection) now in place for Neck Protectors (trademark for Masuri is Stemguard). This was following the tragic death of Philip Hughes in 2014 in Australia.
4. We have developed unique 3D printed head-forms, with in-built accelerometers and neck attachment to use for testing for the effects of concussion from ball strikes. Using this technology we are further enhancing our ability to understand the effect of ball strikes in relation to brain movement and head, attached to neck movement. The ultimate intent is to further develop standards of helmets to protect lower grade concussions / minor traumatic brain injury.
5. The ECB co-sponsors the annual UK Concussion in Sport Research symposium, together with the Drake Foundation, the RFU and the FA.
6. We hold a bi-annual forum with helmet manufacturers to share best practice, developments and stimulate innovation.
7. We have sponsored additional research on Saliva testing for concussion in cricket with RFU and Birmingham Head Injury Unit to help improve on field diagnosis.
8. In 2018, following a review by the International Cricket Council (ICC), the ECB introduced concussion substitutes into all levels of professional cricket. The decision to use a concussion substitute is now made solely by medical professionals and is independent of any coaching decisions to reduce any perceived pressure to make an immediate diagnosis. We saw this protocol effectively deployed in the second test of 2019 Ashes series at Lord's Cricket Ground when Australian cricketer Steve Smith received a delayed concussion and was replaced by Marnus LaBuschagne.
9. The ECB established the Safety in Cricket Committee and Emergency Care Committee to maintain and improve standards across the game in relation to the risk and management and prevention of injury.
10. We are undertaking an injury surveillance programme with the University of Bath to gain a greater understanding of the effect of concussion in the recreational game.
11. The ECB has contracted a PHD student to track the long term wellbeing and mental health impact on players. The study will examine the relationship between non-concussive helmet strikes and performance with any impact on health.
12. Mandated Doctors with specific training in head injury management and trauma to be present at all T20 and The Hundred matches as well as mandatory paramedics and ALS training for support staff.
13. ECB with the MCC sponsored a competition for innovations in the development of PPE to protect bowlers, coaches and umpires. The ECB will be looking to support prototype development that is ongoing,

14. The ECB analyses patterns of bowling that may precede head injuries and reviews regulations and laws that could be improved to reduce the risk.
15. The ECB have approached The Oxbridge Universities and MIT to explore the possibility of a unique approach to make cricket balls safer, This is only theoretical at this stage.

RECOMMENDATIONS AND NEXT STEPS

1. As a result of the responsibility to better understand the levels of risk and potential needs for changes in the law, in January 2021, the Marylebone Cricket Club (MCC), who are the custodians of the laws of cricket, announced a consultation process to consider the short-pitched delivery and whether its permitted use should continue under its current guidelines. A longstanding feature of cricket, going back to the famous Bodyline Ashes series in 1932-33, the current laws permit bouncers up to head height, with anything above a no-ball. The number of bouncers permitted in an over is limited in all forms of international cricket and also in county matches. Further, Law 41 also allows for on-field intervention upon interpretation from the officials: 'The bowling of short-pitched deliveries is dangerous if the bowler's end umpire considers that, taking into consideration the skill of the striker, by their speed, length, height and direction they are likely to inflict physical injury on him/her. The fact that the striker is wearing protective equipment shall be disregarded.' The ECB shall be engaging with the consultation process to present the latest findings on the impact of the short-pitched delivery.
2. While the ECB's RTP guidelines are well embedded and understood in the professional and recreational game and indeed in education settings, more could be done to increase the awareness of the RTP protocols amongst General Practitioners in the primary sector and healthcare professionals in the secondary professionals when presented with a suspected concussion injury. Our medical team stands ready to work with the Department of Health and the NHS on what an information campaign could look like.
3. Finally, while there is already a great deal of inter-sport collaboration on the impact of concussion, this could be broadened to include more sports where ancillary concussions are a factor (i.e. through in field collisions or accidental contact) to further share best practice and combine research efforts into the longer term effects of concussion.

The ECB should be happy to address any further queries the Committee should have.