

EPIDEMIC LEVELS OF SPORTS CONCUSSIONS DEMANDS A MANAGEMENT RE-THINK

Author:
Jon Heshka

email:
jheshka@tru.ca

Co-authors:
Lines, Kris. Staffordshire University - Senior Lecturer.

University:
Thompson Rivers University

Faculty:
School of Law & Adventure Studies Department

Abstract

Sports concussions have reached epidemic levels. A recent study found that there are an estimated 136,000 sports-related concussions among US high school athletes annually and that football players account for 57% of the total figure. In the National Hockey League, there have been more than 80 incidents of players hurt by a hit to the head – including the world's best player (Sidney Crosby) who is still recovering three months later from a concussion sustained in a game on New Year's Day – and at least 97 cases of concussions and head-related injuries in Canada's major junior Western Hockey League. The National Football League's approach to concussions reached the tipping point last year after six players sustained head injuries after violent hits in games played on October 17, 2010 and responded with substantively increased fines and threats of suspensions.

International rugby and football has similarly struggled with head injuries, whether caused from aerial challenges or from repetitive trauma. Research suggests that that sports medical professionals and teams are still following outdated protocols for managing concussed players.

This presentation will examine the treatment of different sports with respect to their management of brain injuries (concussions). It will look at the equipment used in the sport to mitigate concussions, game rules governing inadvertent and intentional contact to the head, protocols used when a player is suspected of having sustained a concussion (which range from diagnosis from a trainer on the sidelines to a medical doctor isolated from the field of play), regulations which penalize players for hits to the head, statutory intervention in the form of laws passed to protect against such head shots, and instances in which there have been either civil lawsuits or criminal proceedings.

Differences in concussion management approaches between sports accounting for the gender and age of the

athletes are also examined. It is interesting that athletes competing in US college women's lacrosse do not wear helmets whereas their male counterparts do; recent studies suggest that female athletes are three times more likely than men to suffer a sports-related concussion. It will also contrast the treatment and management of young athletes, whose brains are still developing and therefore who may be more susceptible to the effects of a concussion, with that provided to adult players.

Lighter, harder and stronger personal protective equipment designed to safeguard athletes (i.e. shoulder and elbow pads in hockey) has paradoxically contributed to a rise in head injuries. The theory of risk homeostasis – which suggests that a control measure designed to mitigate the risk in one area (such as helmets or shoulder pads) is compensated by behavior such as hitting harder which serve to elevate the risk to its pre-existing level – is explored.

How a hit to the head is judged to be permissible or prohibited is also examined. Gridiron football, for example, essentially has a strict liability approach to head shots whereby it doesn't matter if the contact was accidental whereas contact must be intentional in hockey to warrant serious sanction.

The presentation will critically evaluate the approaches of sports governing bodies with respect to hockey and football in North American hockey along with that of rugby and football in Europe. It will also analyse how these approaches fit with the major medical consensus statements on this topic. The paper will then conclude with recommended best practices to employ in order to retain the integrity of the game and reasonably protect the health of its athletes in such fast and furious sports.

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