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Heads Up: Using Your Brain When Tackling Concussions

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Introduction:
A concussion is a type of traumatic brain injury (TBI) typically caused by biomechanical forces inflicted on the head that change the way the brain works. Concussions can also result from a blow elsewhere in the body causing an impulsive force transmitted to the head. These types of injuries often involve a sudden onset of neurologic function impairment such as confusion, amnesia, or loss of consciousness that quickly dissipates and is generally not life-threatening. Unfortunately, these seemingly "mild" symptoms have led numerous primary care providers to underemphasize its potential risks, often leading to inadequate evaluation, premature return to play, and poor psychological management. Complications of severe or repeated concussions include migraines, depression & mood changes, sleep disorders, convulsions, coma, and in some instances even death. The goals of our study were to evaluate public awareness and knowledge of concussion, identify common misconceptions, assess barriers to proper management, and propose uniform guidelines for education, prevention, diagnosis, and treatment to be used in the Vermont school system.

Methods:
Survey Design: A 14-question survey was designed in order to assess community member’s knowledge and attitudes about concussion and the treatment of concussions in Middle School and High School athletes. Our target population included parents, coaches, athletic trainers, teachers, school nurses, and health care providers who are associated with students in the Chittenden East Supervisory Union (CESU) district.

Data was collected using an online-based survey website called Survey Monkey, and also by administering a paper form of the survey to parents and coaches who attend a Concussion Meeting that took place at Mount Mansfield Union High School. The online survey was sent to coaches and parents via an e-mail which contained a link to the survey. In order to include physicians and other health care practitioners in the survey, we called, faxed and emailed 11 local pediatricians and family medicine offices to encourage them to take part in our survey.
The paper surveys that were filled out at the Concussion Meeting and via fax by Physicians were entered into Survey Monkey in order complete all of the results into one database.

"It needs to be out there in all media to become part of our normal information system. People understand broken bones, head injuries need to be as clear to us as that." - Anonymous Survey Participant

Discussion/Conclusion:
There are many states within the US that have passed laws relating to concussions in high school athletics. The results of our survey highlight some very important points about sport-related concussions in the Chittenden East Supervisory Union:

• 67% of those surveyed strongly agreed, or agreed that there should be a uniform guideline for the management of sport-related concussions in the CESU.

• More education is needed about the use of helmets and the risk of concussions.

• There is a wide range of knowledge on how to detect a concussion based on the early and late symptoms.

• 67% would like more information on the detection/management of concussions.

From the results of our survey, nearly all respondents in the CESU support a standardized approach to the management of sport-related concussions. From our research, we recommended this guideline include specific instructions pertaining to:

1. Coach and Student Athlete (and possibly parent) education about concussion prior to the start of the sport season.

2. What to do if a player is suspected of receiving a concussion.

3. When a player is allowed to return to play after being diagnosed with concussion.

With the implementation of such a protocol, there will be no ambiguity about when and how to take action if a player receives a head injury. The hope is that this will prevent further head impact to those already injured, and allow the injured player to get back into the game as soon as he/she is healthy and ready. We recommend using evidence based guidelines, such as the ones recommended by Fletcher Allen Health Care. It is important to remember the most crucial rule when managing concussions: "When in doubt, leave them out."

References:


Ashley, C., Davies, M., Diamond, S., Gilligan, L., Gutierrez, A., Karr, L., Pedro, C., Wise, C., Carney, J.

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