Concussions: A general approach to management for coaches

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Concussions:  
A general approach to management for coaches  
Berlin, VT

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Concussions: What’s the Impact?

- 1.6-3.8 million concussions occur annually
- 53% of high school athletes have experienced a concussion before beginning high school sports
  - The impact of concussions in athletes under high school age is not well studied
- Concussion symptoms last longer in younger athletes
  - Younger athletes are at greater risk for returning to play too soon while they are still mildly cognitively impaired
  - This can put them at greater risk of suffering another concussion
- Each successive concussion increases the risk for another concussion occurring
  - The length of recovery also increases with each concussion
  - This can create difficulties with keeping up in school
- Severe negative long term consequences exist
  - Including post-concussion syndrome and chronic traumatic encephalopathy
  - Athletes are at risk of second impact syndrome if they return to play with a concussion
Lack of Concussion Education in the Berlin Area

- Youth sports (such as Little League) are mostly coached by parents and while concussion training is suggested, it often does not occur
  - Athletes don’t receive information regarding concussions
  - Concussion symptoms are much more likely to go unrecognized which can be dangerous
  - These coaches are working with younger athletes in whom proper recovery time has been shown to be more important

- In Contrast...
  - High school coaches are required to undergo concussion training
  - Athletic trainers (at U-32) are available to evaluate middle school and high school athletes for concussions and help with rehabilitation
What’s the Cost?

- Healthcare costs for the 3 months post mild traumatic brain injuries (TBIs) were $695 million.

- Costs for pediatric TBIs that did not require hospitalization were $77.9 million per year.

- Impaired school performance. High school athletes with recent concussions often miss days of school and have been shown to have decreased attention and ability to concentrate.
  - According to Caitlin Roberts (U-32 Athletic Trainer), the vast majority of athletes she works with miss 2 full days of school at minimum while recovering from a concussion.
Community Perspective

Jamie Duggan (Central Vermont Little League coach)
- He has been involved in Little League for many years and has seen concussions occur every season (baseballs to heads, collisions at home plate)
- He feels that it is a coaches job to help keep their athletes safe and therefore being informed about concussions is important
- He wants coaches to have the knowledge and resources to make the right decisions after a head injury if the situation arises

Caitlin Roberts (Athletic Trainer at U-32 Middle and High School)
- She feels that U-32 is very successful at providing concussion training/resources to coaches and athletes but notes this education does not extend into youth sports
- Communication between everyone involved regarding an athlete’s return to the classroom and to play can be very difficult. She is the main liaison between the athlete and the school
- She feels that taking the time to be knowledgeable about concussions is worthwhile for coaches as education is necessary to be comfortable evaluating a head injury in the moment
Intervention and Methodology

- **Intervention**: provide education to Central Vermont Little League coaches regarding the impact of concussions, and the associated symptoms and management
  - The goal was to ensure an understanding of common mechanisms of concussions, and for coaches to gain the ability to recognize concussive symptoms and understand the steps required for management

- This was accomplished through a presentation given to Little League coaches

- A handout was also created after the presentation to be distributed to coaches and included in their league informational packets in order for it to be accessible during games
  - The handout focused on information coaches requested, specifically suggestions for quickly deciding on the sideline if an athlete needs to be removed from play
Responses

- Immediately following the presentation I received positive feedback from coaches that the session was useful to them.

- Jamie Duggan stated that even though he had previously completed concussion trainings, he felt new information was included that enhanced his understanding of concussions and their management.

- I also received the feedback that some coaches wanted more specific information regarding how to know in the moment if an athlete should keep playing or not.
  - To address this, I created the handout that responded to their concerns.
  - Feedback from this was also positive.
Effectiveness and Limitations

- Qualitatively, Little League coaches reported that the concussion presentation enhanced their understanding of identifying concussion symptoms.
- Further evaluation of the effectiveness at this point is difficult because the Little League season is just beginning.
  - Understanding the effectiveness of the presentation will be easier once coaches have had opportunities to manage athletic head injuries.
  - Evaluation of coaches confidence or knowledge at the midpoint of or after the season could be useful to determine whether the presentation was effective.
- The limitations of this project include the fact that my presentation did not include information from the perspective of schools or doctors.
  - I provided general guidelines regarding return to school and return to play from a concussion but did not have any information regarding how the specific schools or physicians in Berlin handle these situations.
  - Also, one presentation is likely not enough for coaches to develop a thorough understanding of all that they need to know about concussions.
For the Future

- Survey Little League coaches regarding the effectiveness of preseason concussion education
  - Investigate their confidence in their ability to educate athletes about concussion at an age-appropriate level
  - Assess coaches’ confidence with evaluating the seriousness of head injuries, as well comfort level with helping manage the return to play
- For continued education, it could be useful to connect youth sports coaches with high school coaches concussion training sessions
- The creation of a flyer targeted at youth sports athletes could be useful as most concussion material targets older athletes
References