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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 day 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

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