

# ***Model Policy and Guidance for Pennsylvania Schools for Sports-Related Concussion/Mild Traumatic Brain Injury***

## **INTRODUCTION**

This document is designed to provide guidance to Pennsylvania school boards of education in the development, establishment, and implementation of policies, protocols and programs for the prevention, detection, and treatment of Sports Related Concussion/Mild Traumatic Brain Injury (mTBI).

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### **Part I BACKGROUND**

A concussion is a traumatic brain injury (TBI) caused by a direct or indirect blow to the head or body. The Center for Disease Control and Prevention estimates that as many as 3.8 million sports and recreation related concussions occur in the United States each year. In mid-November of 2011, Pennsylvania Governor Tom Corbett signed the Act of Nov. 9, 2011, P.L. 411, No.101, known as the Safety in Youth Sports Act, into law. This law makes certain requirements of Pennsylvania schools and the personnel who supervise the student athletes who represent these schools, as well as the medical personnel who support them when there is an injury.

In order to ensure the safety of student athletes, it is imperative that the governing body and administration of schools in Pennsylvania develop policy and procedures governing the processes to be utilized in their Local Education Agency (LEA) when it is suspected that a concussion has occurred. Clear and easily understood guidelines must be stipulated for returning the student athlete both to the field of competition and to the classroom. Allowing a student athlete to return to play or to return the classroom before recovering from a concussion increases the chance of continuing symptoms or predisposition for a more serious brain injury that can result in severe disability and/or death.

### **Part II GUIDANCE FOR POLICY DEVELOPMENT (BASED ON THE ACT OF NOV. 9, 2011, P.L. 411, NO. 101)**

#### Policy Context

The decisions made on the policy governing the care of student athletes who have sustained sports-related concussions and head injuries is dependent on the individual characteristics of each school district, charter, and non-public school. Each board of education, however, should develop a policy in regards to the care and treatment of a student athlete who is suspected of sustaining a sports-related concussion or head injury. This policy should not only cover the

## ***Model Policy and Guidance for Pennsylvania Schools for Sports-Related Concussion/Mild Traumatic Brain Injury***

return of the athlete to the field of competition and or practice, it should also define the appropriate return of the student to their academic pursuits.

### Requirements for Policy Contents

It is suggested that the policy contain, at a minimum, the following components:

- Once each school year, a coach shall complete the concussion management certification training course offered by the Centers for Disease Control and Prevention, the National Federation of State High School Associations or another provider approved by the Pennsylvania Department of Health. A coach shall not coach an athletic activity until the coach completes the training course required under this subsection.
- The school will hold an informational meeting, prior to the start of each athletic season, for all competitors regarding concussion management and how pre-season baseline assessments can aid in the evaluation, management and recovery process. These meetings may also include parents, guardians, coaches, physicians, neuropsychologists, athletic trainers and physical therapists.
- A student desiring to participate in any athletic activity and the student's parent or guardian shall, each school year, sign and return to the school an acknowledgement of their receipt and review of concussion and traumatic brain injury information.
- All medical personnel, authorized to make decisions on when the student athlete can return to play must complete, or have completed, training in the evaluation and management of concussion. Material for this training is available on-line through the Pennsylvania Departments of Education or Health ([www.state.pa.us](http://www.state.pa.us)) and through the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)).
- Authority is granted to game officials, the coach, athletic trainer, licensed physician, licensed physical therapist or other individual trained in the recognition of the signs and symptoms of a concussion and designated by the school, to determine that a student athlete exhibits signs or symptoms of a concussion or traumatic brain injury.
- Once the student athlete has exhibited signs or symptoms of a concussion/traumatic brain injury he/she must be removed by the coach from participation. The student athlete cannot return to practice or play until the student athlete is evaluated and cleared for return to participation in writing by an appropriate medical professional (as defined in the Safety in Youth Sports Act) with training in the evaluation and management of concussion.
- Any coach who violates this policy will be suspended from coaching any athletic activity for the remainder of that season. For a second violation the coach will be suspended from coaching any athletic activity for the remainder of that season and for the next season. For a third violation, the coach will be permanently suspended from coaching any athletic activity.

### **PART III RECOMMENDED PROCEDURES**

***Model Policy and Guidance for Pennsylvania Schools for  
Sports-Related Concussion/Mild Traumatic Brain Injury***

**(BASED ON BEST PRACTICES FOR MANAGING CONCUSSION)**

- **Student athletes who are exhibiting any of the signs or symptoms of a sports-related concussion or other head injuries during practice or competition shall be immediately removed from play and may not return to play until he/she is evaluated and cleared for return to participation in writing by an appropriate medical professional. Some of the signs and symptoms are as follows:**

*Signs of Concussion:*

(Could be observed by Coaches, Athletic Trainer, School/Team Physician, School Nurse, Physical Therapist)

The signs of a concussion include:

1. Appears dazed, stunned, or disoriented, demonstrates decreased alertness
2. Forgets plays, or demonstrates short term memory difficulty
3. Slurs words
4. Exhibits difficulties with balance or coordination.
5. Answers questions slowly or inaccurately.
6. Exhibits seizures or vomiting
7. Changes in level of consciousness. (Estimates are that <10% of concussions result in the loss of consciousness)

*Symptoms of Concussion*

(Reported by the student athlete to Coaches, Athletic Trainer, School/ Team Physician, School Nurse, Parent/ Guardian, Physical Therapist)

The symptoms of a concussion include:

1. Headache
2. Nausea
3. Balance problems or dizziness
4. Double vision or changes in vision
5. Sensitivity to light or sound/noise
6. Feeling sluggish or foggy
7. Difficulty with concentration and short term memory
8. Sleep disturbance
9. Irritability or changes in personality and behavior

## ***Model Policy and Guidance for Pennsylvania Schools for Sports-Related Concussion/Mild Traumatic Brain Injury***

- **Once a student athlete has been removed from competition or practices because of signs or symptoms of a concussion, the following Concussion Management Protocol must be followed:**
  1. Emergency medical treatment should be pursued if there is a deterioration of symptoms including seizure, altered level of consciousness, vomiting, altered pupillary findings, or direct neck pain associated with the injury.
  2. All appropriate school officials should be notified of the event, including the school physician, Athletic Trainer, Physical Therapist, Athletic Director/Building Administrator school nurse, school psychologist, school counselor and all of the student's teachers.
  3. School officials must make contact with the student athlete's parent/guardian and inform him/her of the suspected sports-related concussion or head injury.
  4. School officials shall provide the student athlete and their parent or guardian with information on the continuing care of a person with concussion.. This material is available through the Pennsylvania Departments of Health or Education, or the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)).
  5. When appropriate, a referral should be made to the regional BrainSTEPS Team. This team will consult with school teams and families in the development and delivery of educational services for the student who has sustained a concussion.
  6. The student athlete must be evaluated by an appropriate medical professional who is trained in the evaluation and management of concussions.
  7. The student athlete must receive written clearance from an appropriate medical professional, trained in the evaluation and management of concussions that states the student athlete is asymptomatic at rest and may begin a graduated return-to-play protocol.
- **Complete physical, cognitive, emotional, and social rest is advised while the student athlete is experiencing symptoms and signs of a concussion/traumatic brain injury. Minimize mental exertion, limiting overstimulation, limit cell phone or computer usage, testing, video gaming, multi-tasking etc.**

### **Return to Play**

- **After written medical clearance is given by an appropriate medical professional the student athlete may begin a graduated individualized return-to-play protocol supervised by a athletic trainer or Licensed Physical Therapist, school/team physician or in cases where the afore mentioned are not available a physician or licensed health**

## ***Model Policy and Guidance for Pennsylvania Schools for Sports-Related Concussion/Mild Traumatic Brain Injury***

**care provider trained in the evaluation and management of sports-related concussions.**

**The following graduated return to play should be followed:**

1. Completion of a full day of normal cognitive activities (school day, studying for tests, watching practice, interacting with peers) without re-emergence of any signs or symptoms. If no return of symptoms, next day advance to:
  2. Light aerobic exercise, which includes walking, swimming, or stationary cycling, keeping the intensity < 70% maximum predicted heart rate: no resistance training. The objective of this step is increased heart rate. If no return of symptoms, next day advance to:
  3. Sport-specific exercise including skating, and/or running; no head impact activities. The objective of this step is to add movement and continue to increase heart rate. If no return of symptoms, next day advance to:
  4. Non-contact training drills (e.g., passing drills). The student athlete may initiate progressive resistance training. If no return of symptoms, next day advance to:
  5. Participation in normal training activities. The objective of this step is to restore confidence and to assess functional skills by the coaching staff. If no return of symptoms, next day advance to:
  6. Return to play involving normal exertion or game activity.
- **If concussion symptoms recur during the graduated return-to-play protocol, the student athlete will return, at a minimum, to the previous level of activity that caused no symptoms, and the attending physician should be notified.**
  - **Utilization of standardized tools such as symptom checklists, and comparison of post-injury performance to preseason baseline cognitive, and balance testing are suggested.**

### **Return to Classroom:**

- **Temporary learning support accommodations may be needed for student athletes with Sports-Related Head Injuries to return to the classroom**

Rest is the best “medicine” for healing concussions or other head injuries. The concussed brain is affected in many functional aspects as a result of the injury. Memory, attention span, concentration and speed of processing significantly impact learning. Further, exposing the concussed student athlete to the stimulating school environment may exacerbate symptoms and delay the resolution of symptoms needed for recovery. Accordingly, consideration of the cognitive effects in returning to the classroom is also an important part of the treatment of sports-related concussions and head injuries.

Students who return to school after a concussion may need to:

## ***Model Policy and Guidance for Pennsylvania Schools for Sports-Related Concussion/Mild Traumatic Brain Injury***

1. Take rest breaks as needed
2. Spend fewer hours at school (have a shortened school day)
3. Be given more time to take tests or complete assignments. (All courses should be considered)
4. Receive help with schoolwork (e.g. pre-teaching, outlines, note taker).
5. Reduce time spent on the computer, reading, and writing.
6. Be granted early dismissal from each class to avoid crowded hallways.
7. No standardized testing (e.g. PSSA, SAT) during the initial recovery window of 2-4 weeks.

In Pennsylvania, BrainSTEPS teams are available to virtually any secondary school in the Commonwealth. These teams have been developed by the Brain Injury Association of Pennsylvania with funding from the Pennsylvania Department of Health and the Department of Education. BrainSTEPS teams are designed to support the staff, student, parents or guardians in a return to school after a brain injury. These teams work with all parties to identify and implement appropriate accommodations and modifications to manage the student's symptoms and to support their learning needs throughout their secondary school career

The school (e.g. teachers, school counselors, school nurse) and family should monitor the performance of the student closely for 2 weeks after the return to school. If the return to the classroom causes concussion symptoms to re-occur or if the student demonstrates uncharacteristic performance (e.g. reduced attention span, inability to take tests, acting out in class). The school should initiate a formal referral to the local BrainSTEPS team ([www.brainsteps.net](http://www.brainsteps.net))

It has been widely established that baseline neurocognitive testing is a valuable tool in assisting trained sports medicine clinicians in making return to play decisions. It is recommended that schools utilize this testing.

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### **Part IV Use of the Model Policy and Guidance**

This document is presented as a guide and model by the Brain Injury Association of Pennsylvania. District boards of education, boards of trustees, and non-public schools may add additional provisions or protocols to address local issues and priorities, and may use formats that are consistent with the board of education's approved policies and procedures.

# ***Model Policy and Guidance for Pennsylvania Schools for Sports-Related Concussion/Mild Traumatic Brain Injury***

## **Part V**

### **Resources on Interscholastic Sports Related Concussions and Head Injuries**

#### **Internet Resources**

Centers for Disease Control and Prevention – Concussion Toolkit

[http://www.cdc.gov/concussion/HeadsUp/physicians\\_tool\\_kit.html](http://www.cdc.gov/concussion/HeadsUp/physicians_tool_kit.html)

<http://www.cdc.gov/concussion/headsup/pdf/ACE-a.pdf>

[http://www.cdc.gov/concussion/headsup/pdf/ACE\\_care\\_plan\\_school\\_version\\_a.pdf](http://www.cdc.gov/concussion/headsup/pdf/ACE_care_plan_school_version_a.pdf)

[http://www.cdc.gov/concussion/headsup/pdf/Concussion\\_in\\_Sports\\_palm\\_card-a.pdf](http://www.cdc.gov/concussion/headsup/pdf/Concussion_in_Sports_palm_card-a.pdf)

National Federation of State High Schools Association- Online “Concussion in Sports” training program.

[www.nfhs.org](http://www.nfhs.org)

Brain Injury Association of Pennsylvania (BIAPA)

[www.biapa.org](http://www.biapa.org)

Pennsylvania Athletic Trainers Society (PATS)

[www.gopats.org](http://www.gopats.org)

National Collegiate Athletic Association (NCAA)

[www.NCAA.org/health-safety](http://www.NCAA.org/health-safety)

Pennsylvania Interscholastic Athletic Association (PIAA)

[www.piaa.org](http://www.piaa.org)

Pennsylvania Physical Therapy Association (PPTA)

[www.ppta.org](http://www.ppta.org)

#### **Articles**

“Consensus Statement on Concussion in Sport: 3<sup>rd</sup> International Conference on Concussion in Sport held in Zurich, November 2008”. Clinical Journal of Sports Medicine, Volume 19, May 2009, pp.185-200

Halstead ME, Walter, KD and the Council on Sports Medicine and Fitness, “Clinical Report: Sport-related Concussion in Children and Adolescents” Pediatrics Volume 126, September 2010, pp.597-615.

***Model Policy and Guidance for Pennsylvania Schools for  
Sports-Related Concussion/Mild Traumatic Brain Injury***

McGrath, N. Supporting the Student/athlete's return to the classroom after a sport-related concussion, *Journal of Athletic Training*. 2010;45(5): 492-498

Kutcher, J. & Eckner, J. (2010). At-risk population in sports-related concussion. *Current Sports Medicine Reports*, 9(1), 16-20

Grady, M. (2010). Concussion in the Adolescent athlete. *Current Problems in Pediatric And Adolescent Health Care*. 40(7), 154-169