



Bernard J. Sadusky, Ed.D.
Interim State Superintendent of Schools

200 West Baltimore Street • Baltimore, MD 21201 • 410-767-0100 • 410-333-6442 TTY/TDD • MarylandPublicSchools.org

TO: Members of the State Board of Education
FROM: Bernard J. Sadusky, Ed.D. *BJS.*
DATE: June 26, 2012
SUBJECT: Student Athletes: Concussion Education

PURPOSE:

The purpose of this communication is to provide an update on all of Maryland's efforts over the past few years on concussion recognition and treatment of high school athletes. A status of concussion legislation and implementation efforts will be provided to the State Board of Education.

HISTORICAL BACKGROUND:

In recent years much information has become available about concussions and the deleterious long term effects that can result to young adults. While the incidences of concussion in young people are a result of many different activities, a significant number occur though participation in interscholastic athletics.

To address these concerns, the Maryland Public Secondary Schools Athletic Association (MPSSAA) initiated an education campaign on the recognition and management of concussions. In conjunction with all 24 local school systems, the MPSSAA declared the first full week of the 2010-11 fall season as Concussion Awareness Week. During the week, 25,000 "Concussion Awareness" materials were provided to families of football, boys' soccer and girls' soccer players at respective sporting events. Additionally, thousands of concussion materials were distributed throughout the school year to parents of student athletes that participate in wrestling, boys' and girls' basketball and boys' and girls' lacrosse.

Fact sheets by the U.S. Department of Health and Human Services Centers for Disease Control and Prevention (CDC) appeared in the 2010 Fall State Tournament Bulletin, for athletes and parents and/or guardians. Announcements during games were also provided for all sporting events.

Prior to the passage of any legislation during the 2010-11 school year, all 9,000 coaches in MPSSAA member schools underwent concussion training. The online National Federation of State High School Association's concussion course which includes MPSSAA interpretations is required for 87 percent of the coaches by their local school systems while the remaining 13 percent received training through local medical affiliates.

Legislation was enacted during the 2011 Session that required the Maryland State Department of Education (MSDE) to disseminate and implement a program to provide awareness to coaches, school personnel, student-athletes as well as parents and guardians of student athletes (Attachment I). The program, which was developed by a multi-disciplinary committee of experts and practitioners (Attachment II), includes coach's education, mandatory notification and sign off of parents and athletes receiving concussion awareness information and a policy of removal and return to play.

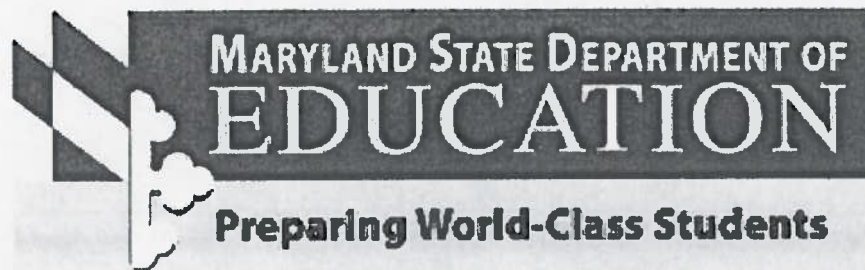
This policy was delivered to each school system in the summer of 2011 and posted on the MPSSAA website. The MPSSAA continues to provide printed publications, public address reminders, and officials clinics. We have been pleased to provide technical assistance to increase concussion awareness in all Maryland's public school systems.

EXECUTIVE SUMMARY:

As concussion information and research become more readily available, the need for greater injury management becomes more acute. The MPSSAA remains engaged in the ongoing education of coaches, parents and students on the long term effects of concussions. Through literature, websites, posters, stickers and other informative materials MSDE through the MPSSAA continues to remind each local school system of its obligation to the law. The goal of these efforts of MSDE, MPSSAA, and the legislation has been to lessen the risk of long term injuries to student athletes.

ACTION:

For information only.



**Policies and Programs on Concussions for
Public Schools and Youth Sport Programs**

Introduction

In accordance with SB 771 and HB858 which amended sections 7-432 and 14-501 of the Annotated Code of Maryland, the Maryland State Department of Education (MSDE) has developed policies and provided recommendations for the implementation of concussion awareness programs throughout the state of Maryland for student-athletes, their parents or guardians, and their coaches. The Department has also developed recommendations on the management and treatment of student-athletes suspected or diagnosed with having sustained a concussion. These recommendations, in addition to the accompanying recommended forms, provide guidance for both the student-athlete's exclusion from play as well as their return to the classroom. Finally, the Department addresses the concussion education and tracking requirements of non-school related athletic programs and provides guidance and suggestions for those programs.

The provisions of the policies and plan call for training of every public high school coach as well as providing awareness to all student-athletes and their parents or guardians on:

- The nature and risk of a concussion or head injury
- The criteria for removal from and return-to-play
- The risk of not reporting injury
- Appropriate academic accommodations

The provisions also mandate written verification of:

- The coach receiving concussion awareness training
- The student-athlete and parent or guardian acknowledging receipt of concussion awareness information

In addition, schools shall extend appropriate procedures for academic accommodations to student-athletes who have been diagnosed with a concussion.

Finally, non-school youth athletic activities conducted on school property must provide assurances that concussion information has been provided to all participants and their parents or guardians.

This document has been formulated in conjunction with the Maryland Department of Health and Mental Hygiene, Local County Departments of Education, Maryland Public Secondary Schools Athletic Association, Maryland Athletic-Trainers' Association, Brain Injury Association of Maryland and Health Care Providers who treat concussions.

Definitions

Concussion is a type of traumatic brain injury, or TBI, caused by a bump, blow, or jolt to the head that can change the way the brain normally works. Concussions can also occur from a blow to the body that causes the head to move rapidly back and forth. Even a "ding," or what seems to be a mild bump or blow to the head can result in a concussion.

Licensed health care provider means a licensed physician or physician assistant, a licensed psychologist with specialty training in neuropsychology (neuropsychologist); or a licensed nurse practitioner.

Return to play means participation in a non-medically supervised practice or athletic competition after a period of exclusion.

Student-athlete means a student participating in any try-out, practice or contest of a school team.

School personnel means those directly responsible for administering or coaching interscholastic athletic programs within a school or county and those employees of the school or school system with overall responsibility for student-athletes' academic performance and medical well-being.

Youth sports program means a program organized for recreational athletic competition or instruction for participants who are under the age of 19 years.

Coach's Education

The Maryland State Department of Education will alert each local school system of its responsibility to assure that each coach is trained in concussion risk and management. At a minimum, the coach's training shall include:

- The nature of the risk of a brain injury
- The risk of not reporting a brain injury
- Criteria for removal and return to play

One of the following programs is recommended to be used for coach's concussion awareness training:

The National Federation of State High School Associations' (NFHS) online coach education course, *Concussion in Sports-What You Need to Know*. This Center for Disease Control's (CDC)-endorsed program provides a guide to understanding,

recognizing and properly managing concussions in high school sports. It is available at www.nfhslearn.com.

The Center for Disease Control's (CDC) tools for youth and high school sports coaches, parents, athletes, and health care professionals provide important information on preventing, recognizing, and responding to a concussion, and are available at http://www.cdc.gov/concussion/HeadsUp/online_training.html. These include *Heads Up to Schools: Know Your Concussion ABCs*; *Heads Up: Concussion in Youth Sports*; and *Heads UP: Concussion in High School Sports*.

Funded by the National Institutes of Health, developed by leading researchers, and validated in a clinical trial, the Oregon Center for Applied Science (ORCAS) ACTIVE® course, provides an online training and certification program that gives sports coaches the tools and information to protect players from sports concussions. Information about the course is available at:

<http://www.orcasinc.com/wp-content/uploads/2011/03/concussion.pdf>.

If the above mentioned programs are not used, at a minimum, the concussion awareness training programs shall include the following components:

- Understanding Concussions
- Recognizing Concussions
- Signs & Symptoms
- Responses and Action Plan

Proof of Completion

Presentation of a certificate of completion from a coaches training course as a condition of coaching employment provides a simple and clear mechanism for local school systems to assure compliance. (Figure 1)

Best Practices

The following are a list of resources that should be at every practice or competition where a student-athlete could possibly sustain a concussion.

- On field quick reference guide kept in team medical kit or other accessible area
- A CDC clipboard or CDC clipboard sticker (http://www.cdc.gov/concussion/pdf/Clipboard_Sticker-a.pdf) or a clipboard sticker containing the same information
- Copies of the "MSDE Notification of Probable Head Injury" form

Concussion Awareness for Student-Athletes, Parents or Guardians and School Personnel

Each Maryland public school district shall develop policies that assure student-athletes, parents or guardians, and school personnel receive an informational sheet describing:

- The nature and risk of a concussion or head injury
- The criteria for removal from play and return to play
- The risks of not reporting injury and continuing to play
- Appropriate academic accommodations for diagnosed concussion victims

Informational materials used shall emanate from programs such as, but not limited to:

The Center for Disease Control's (CDC) tools for youth and high school sports coaches, parents, athletes, and health care professionals provide important information on preventing, recognizing, and responding to a concussion, and are available at http://www.cdc.gov/concussion/HeadsUp/online_training.html. These include *Heads Up to Schools: Know Your Concussion ABCs*; *Heads Up: Concussion in Youth Sports*; and *Heads UP: Concussion in High School Sports*.

The Maryland Public Secondary Schools Athletic Association (MPSSAA) has posted parent and student-athlete information sheets as well as other CDC material on its website: www.mpssaa.org. (Figures 2 and 3)

Best Practices

Suggested opportunities to provide concussion information include but are not limited to:

- In-service training
- Team meetings or practice segment
- Team pre-participation documents
- Student-athlete/Parent orientation
- Coach/Parent preseason meeting
- Athletic trainer tips
- Formal/informal seminars

Required Acknowledgement

Every student-athlete and at least one parent or guardian must verify in writing that they have received information on concussion and sign a statement acknowledging receipt of the information. A recommended verification sheet follows. (Figure 4)

Removal and Return-to Play

After an appropriate medical assessment, any student-athlete suspected of sustaining a concussion shall immediately be removed from practice or play. The student-athlete shall not return until cleared by a licensed health care provider authorized to provide sports physical examinations and trained in the evaluation and management of concussions.

To assist student-athletes, parents and school personnel the following sample forms are provided on the MPSSAA website: www.mpssaa.org.

- Notification of possible head injury (Figure 5)
- Medical clearance for gradual return to sports participation Following concussion (Figure 6)
- Graduated return to play protocols (Figures 7, 8, 9)

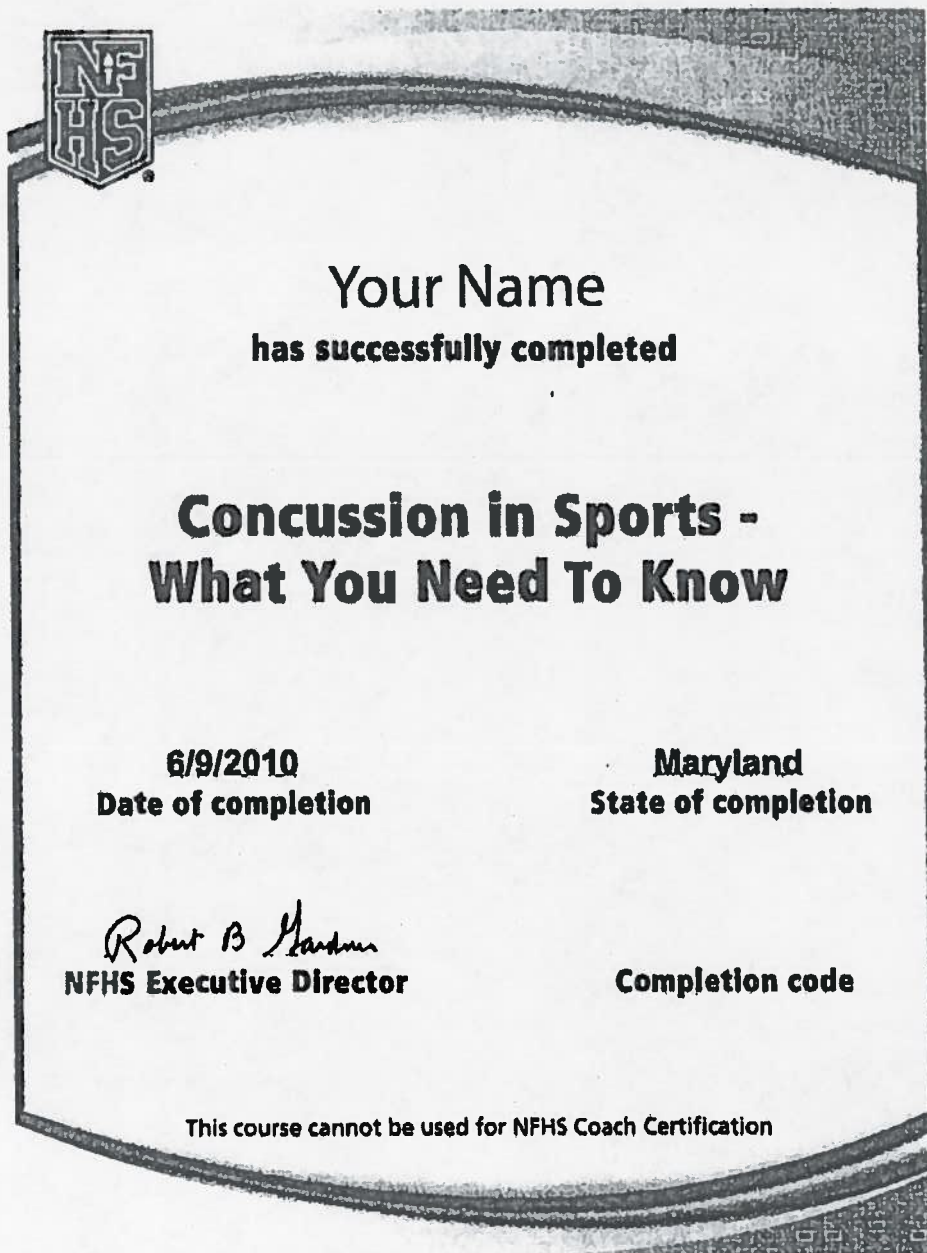
Note: As of this writing, there are no formally approved or licensed certifications of concussion management. As a result, and until such time as a certification exists, each medical professional authorizing return to play must determine whether they are aware of current medical guidelines on concussions evaluation and if concussion evaluation and management fall within their own scope of practice. Any medical professional's concussion education should include at least the following:

- 2010 AAP Sport Related Concussion in Children and Adolescents
<http://aappolicy.aappublications.org/cgi/reprint/pediatrics;126/3/597.pdf>
- 2008 Zurich Concussion in Sport Group Consensus
<http://sportconcussions.com/html/Zurich%20Statement.pdf>

Youth Sports Programs use of School Property

Youth sports programs seeking to use school facilities must verify distribution of concussion information to parents or guardians and receive verifiable acknowledgement of receipt. In addition, each youth sports program will annually affirm to the local school system of their intention to comply with the concussion information procedures. Materials for use for youth sports are available on the CDC website: [http:// www.cdc.gov](http://www.cdc.gov). (Figure 10)

Figure 1



HEADS+UP

CONCUSSION IN HIGH SCHOOL SPORTS

A FACT SHEET FOR **ATHLETES**

What is a concussion?

A concussion is a brain injury that:

- Is caused by a bump, blow, or jolt to the head or body.
- Can change the way your brain normally works.
- Can occur during practices or games in any sport or recreational activity.
- Can happen even if you haven't been knocked out.
- Can be serious even if you've just been "dinged" or "had your bell rung."

All concussions are serious. A concussion can affect your ability to do schoolwork and other activities (such as playing video games, working on a computer, studying, driving, or exercising). Most people with a concussion get better, but it is important to give your brain time to heal.

What are the symptoms of a concussion?

You can't see a concussion, but you might notice *one or more* of the symptoms listed below or that you "don't feel right" soon after, a few days after, or even weeks after the injury.

- Headache or "pressure" in head
- Nausea or vomiting
- Balance problems or dizziness
- Double or blurry vision
- Bothered by light or noise
- Feeling sluggish, hazy, foggy, or groggy
- Difficulty paying attention
- Memory problems
- Confusion

What should I do if I think I have a concussion?

- **Tell your coaches and your parents.** Never ignore a bump or blow to the head even if you feel fine. Also, tell your coach right away if you think you have a concussion or if one of your teammates might have a concussion.
- **Get a medical check-up.** A doctor or other health care professional can tell if you have a concussion and when it is OK to return to play.
- **Give yourself time to get better.** If you have a concussion, your brain needs time to heal. While your brain is still healing, you are much more likely to have another concussion. Repeat concussions can increase the time it takes for you to recover and may cause more damage to your brain. It is important to rest and not return to play until you get the OK from your health care professional that you are symptom-free.

How can I prevent a concussion?

Every sport is different, but there are steps you can take to protect yourself.

- Use the proper sports equipment, including personal protective equipment. In order for equipment to protect you, it must be:
 - The right equipment for the game, position, or activity
 - Worn correctly and the correct size and fit
 - Used every time you play or practice
- Follow your coach's rules for safety and the rules of the sport.
- Practice good sportsmanship at all times.

If you think you have a concussion:

Don't hide it. Report it. Take time to recover.

It's better to miss one game than the whole season.

For more information and to order additional materials *free-of-charge*, visit: www.cdc.gov/Concussion.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



HEADS+UP

CONCUSSION IN HIGH SCHOOL SPORTS

A FACT SHEET FOR PARENTS

What is a concussion?

A concussion is a brain injury. Concussions are caused by a bump, blow, or jolt to the head or body. Even a "ding," "getting your bell rung," or what seems to be a mild bump or blow to the head can be serious.

What are the signs and symptoms?

You can't see a concussion. Signs and symptoms of concussion can show up right after the injury or may not appear or be noticed until days after the injury. If your teen reports *one or more* symptoms of concussion listed below, or if you notice the symptoms yourself, keep your teen out of play and seek medical attention right away.

Signs Observed by Parents or Guardians	Symptoms Reported by Athlete
<ul style="list-style-type: none"> • Appears dazed or stunned • Is confused about assignment or position • Forgets an instruction • Is unsure of game, score, or opponent • Moves clumsily • Answers questions slowly • Loses consciousness (even briefly) • Shows mood, behavior, or personality changes • Can't recall events prior to hit or fall • Can't recall events after hit or fall 	<ul style="list-style-type: none"> • Headache or "pressure" in head • Nausea or vomiting • Balance problems or dizziness • Double or blurry vision • Sensitivity to light or noise • Feeling sluggish, hazy, foggy, or groggy • Concentration or memory problems • Confusion • Just not "feeling right" or is "feeling down"

How can you help your teen prevent a concussion?

Every sport is different, but there are steps your teens can take to protect themselves from concussion and other injuries.

- Make sure they wear the right protective equipment for their activity. It should fit properly, be well maintained, and be worn consistently and correctly.

- Ensure that they follow their coaches' rules for safety and the rules of the sport.
- Encourage them to practice good sportsmanship at all times.

What should you do if you think your teen has a concussion?

1. **Keep your teen out of play.** If your teen has a concussion, her/his brain needs time to heal. Don't let your teen return to play the day of the injury and until a health care professional, experienced in evaluating for concussion, says your teen is symptom-free and it's OK to return to play. A repeat concussion that occurs before the brain recovers from the first—usually within a short period of time (hours, days, or weeks)—can slow recovery or increase the likelihood of having long-term problems. In rare cases, repeat concussions can result in edema (brain swelling), permanent brain damage, and even death.
2. **Seek medical attention right away.** A health care professional experienced in evaluating for concussion will be able to decide how serious the concussion is and when it is safe for your teen to return to sports.
3. **Teach your teen that it's not smart to play with a concussion.** Rest is key after a concussion. Sometimes athletes wrongly believe that it shows strength and courage to play injured. Discourage others from pressuring injured athletes to play. Don't let your teen convince you that s/he's "just fine."
4. **Tell all of your teen's coaches and the student's school nurse about ANY concussion.** Coaches, school nurses, and other school staff should know if your teen has ever had a concussion. Your teen may need to limit activities while s/he is recovering from a concussion. Things such as studying, driving, working on a computer, playing video games, or exercising may cause concussion symptoms to reappear or get worse. Talk to your health care professional, as well as your teen's coaches, school nurse, and teachers. If needed, they can help adjust your teen's school activities during her/his recovery.

If you think your teen has a concussion:

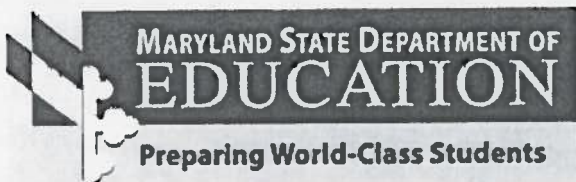
Don't assess it yourself. Take him/her out of play. Seek the advice of a health care professional.

It's better to miss one game than the whole season.

For more information and to order additional materials *free-of-charge*, visit: www.cdc.gov/Concussion.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION





For official use only:
Name of Athlete _____
Sport/season _____
Date Received _____

Concussion Awareness Parent/Student-Athlete Acknowledgement Statement

I _____, the parent/guardian of _____,
Parent/Guardian Name of Student-Athlete

acknowledge that I have received information on all of the following:

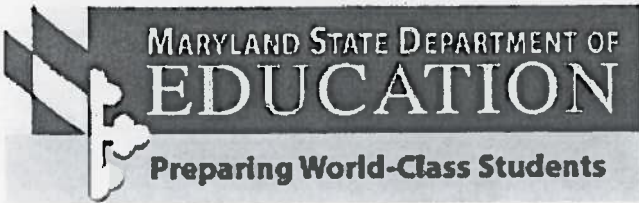
- The definition of a concussion
- The signs and symptoms of a concussion to observe for or that may be reported by my athlete
- How to help my athlete prevent a concussion
- What to do if I think my athlete has a concussion, specifically, to seek medical attention right away, keep my athlete out of play, tell the coach about a recent concussion, and report any concussion and/or symptoms to the school nurse.

Parent/Guardian _____ Parent/Guardian _____ Date _____
PRINT NAME SIGNATURE

Student Athlete _____ Student Athlete _____ Date _____
PRINT NAME SIGNATURE

It's better to miss one game than the whole season.

For more information visit: www.cdc.gov/Concussion.



Student-Athlete _____
 Date of injury _____
 Sport _____
 Parent/guardian name _____
 Home Phone _____

Notification of Probable Head Injury

Dear Parent:

Based on our observations and/or incident described below, we believe your son/daughter exhibited signs and symptoms of a concussion while participating in _____. Since your son/ daughter has not been evaluated by a physician at school, it is important that you seek a physician's care as soon as possible.

It is important to recognize that blows to the head can cause a variety of injuries other than concussions (e.g., neck injuries, more serious brain injuries). Please be sure to see your doctor as soon as possible for any other medical concerns.

Description of Incident/ Injury: _____

When to Seek Care Urgently. If you observe any of the following signs, call your doctor or go to your emergency department immediately.

Headaches that worsen	Very drowsy, can't be awakened	Can't recognize people or places
Seizures	Repeated vomiting	Increasing confusion
Neck pain	Slurred speech	Weakness/numbness in arms/legs
Unusual behavior change	Significant irritability	Less responsive than usual

Common Signs & Symptoms. It is common for a student with a concussion to have one or many symptoms.

Physical		Cognitive	Emotional	Sleep
Headache	Visual Problems	Feeling mentally foggy	Irritability	Drowsiness
Nausea/Vomiting	Fatigue/ Feeling tired	Feeling slowed down	Sadness	Sleeping less than usual
Dizziness	Sensitivity to light/ noise	Difficulty remembering	More emotional	Sleeping more than usual
Balance Problems	Numbness/Tingling	Difficulty concentrating	Nervousness	Trouble falling asleep

Please feel free to contact me if you have any questions. I can be reached at: _____

 Employee Name and Title

 Date

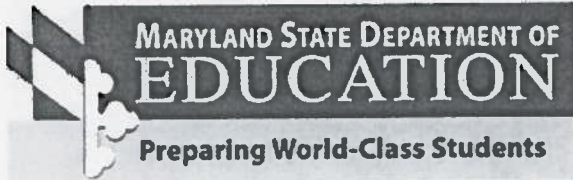
TO BE COMPLETED BY THE AUTHORIZED HEALTH CARE PROVIDER:

Name: _____ Signature _____ Date: _____

Diagnosis: _____

Please be advised that your son/daughter will not be allowed to return to play until they have no symptoms and have been cleared in writing by an authorized health care provider (physician, neuropsychologist, nurse practitioner, physician's assistant) for this type of injury.

Distribution: __Parent __AD __School Health Room



Student-Athlete _____
 Date of injury _____
 Today's Date _____
 Sport _____

**Medical Clearance for Gradual Return to Sports Participation
 Following Concussion**

To be completed by the Licensed Health Care Provider

The above-named student-athlete sustained a concussion. The purpose of this form is to provide initial medical clearance before starting the Gradual Return to Sports Participation.

Criteria for Medical Clearance for Gradual Return to Play (Check each)

The student-athlete must meet all of these criteria to receive medical clearance.

- 1. No symptoms at rest/ no medication use to manage symptoms (e.g., headaches)
- 2. No return of symptoms with typical physical and cognitive activities of daily living
- 3. Neurocognitive functioning at typical baseline
- 4. Normal balance and coordination
- 5. No other medical/ neurological complaints/ findings

Detailed Guidance

1. Symptom checklist: None of these symptoms should be present. Assessment of symptoms should be broader than athlete report alone. Also consider observational reports from parents, teachers, others.

Physical		Cognitive	Emotional	Sleep
Headaches	Sensitivity to light	Feeling mentally foggy	Irritability	Drowsiness
Nausea	Sensitivity to noise	Problems concentrating	Sadness	Sleeping more than usual
Fatigue	Numbness/ tingling	Problems remembering	Feeling more emotional	Sleeping less than usual
Visual problems	Vomiting	Feeling more slowed down	Nervousness	Trouble falling asleep
Balance Problems	Dizziness			

2. Exertional Assessment (Check): The student-athlete exhibits no evidence of return of symptoms with:
 ___ Cognitive activity: concentration on school tasks, home activities (e.g. TV, computer, pleasure reading)
 ___ Physical activity: walking, climbing stairs, activities of daily living, endurance across the day

3. Neurocognitive Functioning (Check): The student's cognitive functioning has been determined to have returned to its typical pre-injury level by one or more of the following:
 ___ Appropriate neurocognitive testing
 ___ Reports of appropriate school performance/ home functioning (concentration, memory, speed) in the absence of symptoms listed above

4. Balance & Coordination Assessment (Check): Student-athlete is able to successfully perform:
 ___ Romberg Test OR SCAT2 (Double leg, single leg, tandem stance, 20 secs, no deviations fr proper stance)
 ___ 5 successive Finger-to-Nose repetitions < 4 sec

I certify that: I am a Licensed Health Care Provider with training in concussion evaluation and management in accordance with current medical evidence (2010 AAP Sport-Related Concussion in Children and Adolescents, 2008 Zurich Concussion in Sport Group Consensus). The above-named student-athlete has met all the above criteria for medical clearance for his/her recent concussion, and as of this date is ready to return to a progressive Gradual Return to Sports Participation program (typically lasting minimum of 5 days).

Provider Name _____

Signature _____

Date: _____

Distribution: ___Parent ___AD ___School Health Room

Graduated Return to Play Protocol

With no symptoms, a gradual return to play program can be initiated. Follow these gradual progressive steps of the training sequence. There should be approximately 24 hours (or longer) in between each step. If any symptoms return at any time during these activities, stop the work out. Rest until symptom-free for 24 hours. Return to the previous asymptomatic step. If symptoms return or worsen, seek medical attention.

Step	Date	Activity	Tolerance/Comments
1. <u>Light</u> General Conditioning Exercises (Goal: Increase HR)		Begin with sport specific warm up. Do 15-20 minute workout: stationary bicycle, fast paced walking or light jog, rowing or freestyle swimming.	
2. <u>Moderate</u> General Conditioning and Sport Specific Skill Work; Individually (Goal: Add Movement, individual skill work)		Sport specific warm-up. Slowly increase intensity and duration of workout to 20-30 minutes. - Begin sport specific skill work within the workout. No spins, dives or jumps.	
3. <u>Heavy</u> General conditioning, skill work; individually and with teammate. NO CONTACT (Goal: Add Movement, teammate skill work)		Continue with general conditioning up to 60 minutes. Increase intensity and duration. Begin interval training. - Continue individual skill work. - Begin skill work with a partner but with no contact. Continue with individual skill work as per Step 2. - Begin beginner level spins, dives, jumps.	
4. <u>Heavy</u> General conditioning, skill work and team drills. No five scrimmages. VERY LIGHT CONTACT. (Goal: Team skill work, light static contact)		Resume regular conditioning and duration of practice. - Increase interval training and skill work as required. - Gradually increase skill level of spins, dives & jumps. - Review team plays with no contact. - Very light contact and low intensity on dummies.	
5. <u>Full</u> Team Practice with Body Contact		- Participate in a full practice. - if a full practice is completed with no symptoms, return to competition is appropriate. Discuss with the coach about getting back in the next game.	

Step 1: Light General Conditioning Exercises:

- Begin with a sport specific warm up.
- Do a (15-20 minute) workout which can include: stationary bicycle, fast paced walking or light jog, rowing or freestyle swimming

Step 2: General Conditioning and Sport Specific Skill Work: Individually:

- Continue with the sport specific warm-up.
- Slowly increase intensity and duration of workout (20-30 minutes).
- Begin sport specific skill work within the workout. No spins, dives, or jumps.

STEP 3: General conditioning, skill work; individually and with a team-mate:

- NO CONTACT
- Continue with general conditioning (up to 60 minutes). Increase intensity and duration. Begin interval training.
- Continue with individual skill work.
- May begin skill work with a partner.
- May start beginner level spins, dives and jumps.

STEP 4: General conditioning, skill work and team drills::

- Do not play live scrimmages. NO CONTACT
- Resume regular conditioning, duration of practice, and team drills.
- Increase interval training and skill work as required.
- Gradually increase skill level of spins, dives and jumps.
- Review team plays with no contact.

Step 5: Full Team Practice with Body Contact:

- Participate in a full practice. If it is completed with no symptoms, you are ready to return to competition. Discuss with the c in the game.

Name _____ Date of Injury _____ School/Sport _____ Date of AHCP RTP Clearance _____

Graduated Return to Football Protocol

With no symptoms, a gradual return to play program can be initiated. Follow these gradual progressive steps of the training sequence. There should be approximately 24 hours (or longer) in between each step. If any symptoms return at any time during these activities, stop the work out. Rest until symptom-free for 24 hours. Return to the previous asymptomatic step. If symptoms return or worsen, seek medical attention.

Step	Date	Activity	Tolerance/Comments
1. <u>Light</u> General Conditioning Exercises (Goal: Increase HR)		Begin with sport specific warm up. Do 15-20 minute workout: stationary bicycle, fast paced walking or light jog, rowing or freestyle swimming.	
2. <u>Moderate</u> General Conditioning and Sport Specific Skill Work; Individually (Goal: Add Movement, individual skill work)		Sport specific warm-up. Slowly increase intensity and duration of workout to 20-30 minutes. - Begin skill work within the workout. - Begin football drills, running drills, running patterns with cones and dummies. - Stationary throwing and catching a football.	
3. <u>Heavy</u> General conditioning, skill work; individually and with teammate. NO CONTACT (Goal: Add Movement, teammate skill work)		Continue with general conditioning up to 60 minutes. Increase intensity and duration. Begin interval training. - Begin drills with a partner but with no contact. Continue with individual skill work as per Step 2. - Begin dynamic throwing and catching, taking handoffs, one on one (receiver vs. defensive backs) with no contact. - Begin walk-throughs on offense and defense.	
4. <u>Heavy</u> General conditioning, skill work and team drills. No live scrimmages. VERY LIGHT CONTACT. (Goal: Team skill work, tight static contact)		Resume regular conditioning and duration of practice. - Practice passing shell drills (8 or 6) with no contact. - Continue with walk-throughs, skill work (patterns, dynamic catching and throwing, handoffs). Review blocking and tackling techniques, focus on skill. - Very light contact and low intensity on dummies.	
5. Full Team Practice with Body Contact		- Participate in a full practice. - If a full practice is completed with no symptoms, return to competition is appropriate. Discuss with the coach about getting back in the next game.	

Step 1: Light General Conditioning Exercises (Goal: Increase HR)

- Begin with a sport specific warm up.
- Do a (15-20 minute) workout which can include: stationary bicycle, fast paced walking or light jog, rowing or freestyle swimmin

Step 2: General Conditioning and Sport Specific Skill Work: Individually:

- Continue with the sport specific warm-up.
- Slowly increase intensity and duration of workout (20-30 minutes).
- Begin skill work within the workout.
- Begin football drills, running drills, running patterns with cones and dummies.
- Stationary throwing and catching a football.

STEP 3: General conditioning, skill work; individually and with a team-mate:

- **NO CONTACT**
- Continue with general conditioning (up to 60 minutes). Increase intensity and duration. Begin interval training.
- Begin drills with a partner but with no contact. Continue with individual skill work as per Step 2.
- Begin dynamic throwing and catching, taking handoffs, one on one (receiver vs. defensive backs) with no contact.
- Begin walk-throughs on offense and defense.

STEP 4: General conditioning, skill work and team drills:::

- Do not play live scrimmages. **NO CONTACT**
- Resume regular conditioning and duration of practice.
- Practice passing shell drills (8 or 6) with no contact.
- Continue with walk-throughs, skill work (patterns, dynamic catching and throwing, handoffs). Review blocking and tackling techniques, focus on skill, very light contact and low intensity on dummies.

Step 5: Full Team Practice with Body Contact:

- Join team in a full practice to get yourself back in the lineup. If a full practice is completed with no symptoms, you are read
Discuss with the coach about getting back in the next game.

Name _____ Date of Injury _____ School/Sport _____ Date of AHCP RTP Clearance _____

Graduated Return to Soccer Protocol

With no symptoms, a gradual return to play program can be initiated. Follow these gradual progressive steps of the training sequence. There should be approximately 24 hours (or longer) in between each step. If any symptoms return at any time during these activities, stop the work out. Rest until symptom-free for 24 hours. Return to the previous asymptomatic step. If symptoms return or worsen, seek medical attention.

Step	Date	Activity	Tolerance/Comments
1. Light General Conditioning Exercises (Goal: Increase HR)		Begin with sport specific warm up. Do 15-20 minute workout: stationary bicycle, fast paced walking or light jog, rowing or freestyle swimming.	
2. Moderate General Conditioning and Sport Specific Skill Work; Individually (Goal: Add Movement, individual skill work)		Sport specific warm-up. Slowly increase intensity and duration of workout to 20-30 minutes. - Begin skill work within the workout. - Begin running drills, static and dynamic foot dribbling, use cones, individual kicking.	
3. Heavy General conditioning, skill work; individually and with teammate. NO CONTACT (Goal: Add Movement, teammate skill work)		Continue with general conditioning up to 60 minutes. Increase intensity and duration. Begin interval training. - Begin drills with a partner but with no contact. Continue with individual skill work as per Step 2. - Begin partner passing and kicking on goalie drills. - Begin walk-throughs on offense and defense.	
4. Heavy General conditioning, skill work and team drills. No live scrimmages. VERY LIGHT CONTACT. (Goal: Team skill work, light static contact)		Resume regular conditioning and duration of practice. - Practice passing shell drills (8 or 6) with no contact. - Practice team passing and kicking drills, practice offensive, defensive and counter attack tactical schemes with no contact to the player. - Review heading the ball techniques. Do a few reps of low intensity with limited height and distance.	
5. Full Team Practice with Body Contact		- Participate in a full practice. - If a full practice is completed with no symptoms, return to competition is appropriate. Discuss with the coach about getting back in the next game.	

Step 1: Light General Conditioning Exercises:

- Begin with a sport specific warm up.
- Do a (15-20 minute) workout which can include: stationary bicycle, fast paced walking or light jog, rowing or freestyle swimmin

Step 2: General Conditioning and Sport Specific Skill Work; Individually:

- Continue with the sport specific warm-up.
- Slowly increase intensity and duration of workout (20-30 minutes).
- Begin skill work within the workout.
- Begin running drills, static and dynamic foot dribbling, use cones, individual kicking.

STEP 3: General conditioning, skill work; individually and with a team-mate:

- NO CONTACT
- Continue with general conditioning (up to 60 minutes). Increase intensity and duration. Begin interval training.
- Begin drills with a partner but with no contact. Continue with individual skill work as per Step 2.
- Begin partner passing and kicking on goalie drills.
- Begin walk-throughs on offense and defense.

STEP 4: General conditioning, skill work and team drills::

- Do not play live scrimmages. NO CONTACT
- Resume regular conditioning and duration of practice.
- Practice team passing and kicking drills, practice offensive, defensive and counter attack tactical schemes with no contact to
- Review heading the ball techniques. Do a few reps of low intensity with limited height and distance.

Step 5: Full Team Practice with Body Contact:

- Join team in a full practice to get yourself back in the lineup. If a full practice is completed with no symptoms, you are read
Discuss with the coach about getting back in the next game.

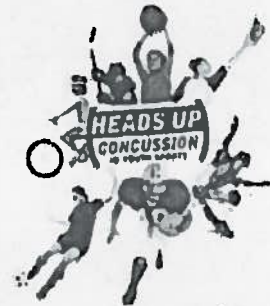


Heads Up: Concussion in Youth Sports

[Spanish version \(/concussion/HeadsUp/spanish/youth.html\)](/concussion/HeadsUp/spanish/youth.html)

It's Better to Miss One Game Than the Whole Season

To help ensure the health and safety of young athletes, CDC developed the *Heads Up: Concussion in Youth Sports* initiative to offer information about concussions to coaches, parents, and athletes involved in youth sports. The *Heads Up* initiative provides important information on preventing, recognizing, and responding to a concussion.



Heads Up Tool Kit for Youth Sports

- [Activity Report](#) [PDF 2MG] (</concussion/pdf/Heads Up Activity Report Final-a.pdf>)
- See also [Heads Up: Concussion in High School Sports](#) (/concussion/headsup/high_school.html).

For additional resources (videos, promotional materials, etc.) and to order free materials, [click here \(/concussion/sports/resources.html\)](/concussion/sports/resources.html)

Information for Coaches

- [Online Training Course for Youth Sports \(/concussion/HeadsUp/online_training.html\)](/concussion/HeadsUp/online_training.html)
- [Fact Sheet](#) [PDF 206KB] (/concussion/pdf/coaches_Engl.pdf)
- [Clipboard](#) [PDF 202KB] (/concussion/pdf/clipboard_Eng.pdf)
- [Poster](#) [PDF 328KB] (/concussion/pdf/poster_Eng.pdf)
- [Quiz](#) [PDF 170KB] (/concussion/pdf/quiz_Eng.pdf)

Information for Athletes

- [Fact Sheet](#) [PDF 201KB] (/concussion/pdf/athletes_Eng.pdf)
- [Poster](#) [PDF 328KB] (/concussion/pdf/poster_Eng.pdf)
- [Quiz](#) [PDF 170KB] (/concussion/pdf/quiz_Eng.pdf)

Information for Parents

- [Fact Sheet](#) [PDF 250KB] (/concussion/pdf/parents_Eng.pdf)
- [Magnet](#) [PDF 106KB] (/concussion/pdf/magnet_Eng.pdf)
- [Quiz](#) [PDF 170KB] (/concussion/pdf/quiz_Eng.pdf)

If you think your athlete has sustained a concussion...don't assess it yourself.

Take him/her out of play, and seek the advice of a health care professional.

MPSSAA Concussion Review Committee

Joyce Dantzler	Deputy Director, MD Dept. of Health & Mental Hygiene
Dr. Cheryl DePinto	Medical Director, MD Dept. of Health & Mental Hygiene
Dr. Gary Dix	Neurosurgeon, Anne Arundel County
Dr. Gerry Gioia, PhD	Chief, Division of Pediatric Neuropsychology at Children's National Medical Center
Greg LeGrand	Coordinator of Athletics, Anne Arundel County Schools
John Lopez	Maryland Athletic Trainers Association (MATA)
Donna Mazyck	Section Chief, School Health Issues, MSDE
Wendell McKay	Pediatrician, Howard County
T.J. Morgan	Athletic Trainer, President of the MATA
Mary Nasuta	Nurse Coordinator, Harford County Public Schools
Bryan Thomas Pugh	Executive Director, Brain Injury Association of MD
Gaby von Nordheim	Athletics Specialist, Montgomery County Schools
Michael Williams	Coordinator of Athletics, Howard County Schools

May 22, 2012
Maryland State Board of Education
Public Comment Testimony of Tom Hearn
Regarding Concussions in High School Football and other Sports

Good morning, Members of the Maryland State Board of Education and Acting Superintendent Sadusky. I am Tom Hearn and I am a parent of a student at Walt Whitman High School in Montgomery County, Maryland.

I wanted to talk with you about concussions in high school football and other sports. As discussed further below, I am requesting that the State Board take three actions to improve the safety of Maryland high school sports athletes:

1. Adopt regulations similar to those adopted by the Massachusetts Department of Health for youth sports concussions; in Massachusetts, the Department of Health has gone through extensive notice and comment rulemaking procedures to develop workable policies and procedures to manage the risk to student athletes of sustaining sports concussions. The result is a set of state-of-the-art best practices that are a suitable starting point for the State Board to align with those practices.
2. Impose limits on full contact practices per week in high school football given that the NFL and Ivy League have adopted similar limits in light of emerging medical research; and
3. Reorganize responsibility for sports concussion safety away from the Maryland Public Secondary School Athletic Association, which currently has the lead, to a new department within the Department staffed by a lead public health professional or sports safety professional, such as a certified athletic trainer with experience managing sports health in a large school system, who reports directly to the State Board.

Background

It may not be highlighted in the job description, but collectively you are the senior safety officers for public high school sports in Maryland, and this may be the most important position that you play.

In sports vernacular, collectively you are the Blind Side left tackle for the 15,500 students who play public high school football and the 100,000 or so other high school athletes.

No one ever died from a bad academic education, but high school student athletes die or get serious brain injuries each year from football and other sports. On a practical level, the concussion itself interferes with a student's ability to participate in academic education, and the student's recovery depends on following a regimen of cognitive rest, which includes reduced school work.

So concussions can really be a drag on AYP and put roadblocks in the Race to the Top. But I know that the serious risk of a brain injuries and death to students in a school-sponsored activity will be your primary concern going forward.

Concussions do not respect status or social position. Two years ago, the son of a sitting member of the board of education in Prince William County, Virginia hung himself two days after sustaining a concussion in high school football. He had no previous history of depression or mental illness; sadly, the cascade of biochemical changes that a concussion inflicts on a brain sometimes results in the student athlete taking his own life. In response, the Prince William County, Virginia Board of Education fast-tracked a Board-level concussion policy.

Sports Concussions are More Common Than Many People Think

One of the lessons that need to be taught is that sports concussions happen more often than most people think. A lot depends on how the concussion question is asked. When a high school athlete is asked about the number of concussions he has sustained, the reply can be low, partly because of a perception that a concussion is something that involves a dramatic loss of consciousness and/or serious amnesia.

In fact, those symptoms are not common, and what is more common is reports of headaches, nausea, dizziness. Sometimes the student athlete reports these symptoms hours or days after a concussion has occurred.

So if student athletes are asked whether they have ever had a blow to the head playing high school sports that resulted in a headache, nausea, dizziness, the affirmative replies are higher than if they are asked if they have ever had a concussion. The Massachusetts Department of Health has included such questions in their 2009 Youth Health Surveys of high school students and found that 18 percent answered yes to questions posed about "blows to the head" with concussion-like symptoms.

When the 2009 Youth Health Survey responses are disaggregated by gender, it showed that 21 percent of the males responded "yes." For the middle school survey, 23 percent of the male student athletes responded "yes." (I am attaching the Massachusetts Dept of Health report, 2009 Health and Risk Behaviors of Massachusetts Youth, (see p. 13) and a MDH powerpoint (see. p. 13). The Massachusetts Department of Health included similar questions in its 2011 Youth Risk Surveys and the results are expected to be published next month.)

(See Attachments 1-9)

The Maryland State Board of Education's Attention to Sports Concussions

A review of the minutes of meetings of the Maryland State Board of Education over the last four years does not appear to reflect any discussion or vote regarding concussions in

high school sports. Responsibility for sports concussions have been left to the Maryland Public Secondary School Athletic Association and the Maryland Department of Education employee who serves as the Athletic Association's executive director.

Given the significant public safety issue that concussions pose to student athletes, and the way that the injury and recovery from it compromises academic learning—the State Board's primary mission—it is critical that, from this point forward, you supervise concussion safety closely at the Board level.

Petition for Three Actions by August 11, 2012

I respectfully request that the State Board take three actions by August 11 when the Fall sports season starts. Because of the seriousness, I respectfully request that the department take these actions on an emergency basis, pursuant to section 10-___ of the Maryland State Government Code, so that they are in effect before the Fall season for football and other Fall sports begins on August 11, 2012.

Adopt Concussion Safety Regulations Based on Those Adopted by the Massachusetts Department of Health

First, I petition, pursuant to section 10-123 of the Maryland State Government Code, that the State Board adopt regulations, based on regulations adopted by the Massachusetts Department of Health, addressing concussion issues at public high school sports.

Attachments 10 reflects the Maryland Public Secondary School Athletic Association's August 2011 guidelines on managing concussions in sports. Attachments 11 reflects the Massachusetts Department of Health's regulations on sports concussions and Attachments 12 through 18 reflect the extensive effort of the Massachusetts Health Department's Medical Director, Lauren Smith, MD and Carlene Pavlos, the Director of the Division of Violence and Injury Prevention on this issue.

Dr. Walks, as you are a public health professional, I hope that you can convey to your fellow members of the State Board the significance of what the Massachusetts' Health Department has achieved and why the Maryland State Board should follow the Bay State's lead.

(See Attachments 10-18)

Limit on the Number of Football Contact Practice Per Week. Prohibit Two-A-Days

Football accounts for over half of the concussions in high school sports. Emerging research, however, shows that subconcussive blows to the head also pose a serious risk to the human brain. Studies have shown that high school football players sustain an average of 650 subconcussive blows to the head in a season.

Among student athletes playing the offense or defensive line, the number of subconcussive hits per season can be as high as 2,200. (Please see the attached "Hit Count" Proposal by Dr. Robert Cantu of the Sports Legacy Institute and Boston University.)

Doctors believe that over time, these subconcussive blows can lead to an Alzheimer's-like brain disease called chronic traumatic encephalopathy or CTE. CTE has been confirmed in several deceased NFL players and is suspected in NFL great Junior Seau's suicide last week. Seau's family has donated Seau's brain so that it can be autopsied to confirm the CTE diagnosis.

In light of this and similar research, what has been done? In 2011, NFL players negotiated that teams are permitted no more than one full-contact practice per week.

The NCAA still permits 5 full-contact practices per week and two-a-day practices. Last July (2011), however, the Ivy League imposed a 2 full-contact practice limit per week in football. The Ivy League also banned all two-a-day full padded football practices.

The Ivy League took this action based on the leadership of two of their university presidents who are medical doctors. The Ivy League too this action on their own because their presidents felt that getting a consensus on such limits from the NCAA could take years and they thought it was too urgent to wait. That's what smart people do when faced with imperfect data about a serious health issue.

As far as I know, Maryland and MCPS still have no limit on the number of full contact high school football practices per week. Maryland and MCPS also continue to allow two-a-day full padded football practices.

Duke Beattie heads MCPS Athletics and for the last two years has been the President of the Maryland Public Secondary School Athletic Association (MPSSAA). In the attached email from last week, I asked Duke whether the Maryland State Athletic Association has discussed the Ivy League and NFL actions. I am looking forward to his answer and so should you.

Between now and the start of the football season in August, you need to consider why you shouldn't at least adopt NFL or Ivy League limit for Maryland high school football.

This recommendation would involve no unfunded mandate. While it would be budget neutral for local boards, it would not be brain neutral for Maryland high school football players.

(See Attachments 19-21)

Reorganize Sports Safety to a New Office that Reports Directly to the State Board

Finally, I respectfully request that the State Board reorganize the Maryland Department of Education's management of sports concussions. Currently the Maryland Public Secondary School Athletic Association manages sports concussions and other sports issues. Managing concussions and other sports injuries requires a skills set that is different than those needed to promote high school athletics, organize tournament in 25 sports, and promote sportsmanship.

Because of this skill set differential, the Athletic Association's executive director, in the name of the Maryland Department of Education, opposed the 2010 Maryland removal from play legislation. (Attachment 22.) While testifying that the MPSSAA had already adopted similar requirements, he testified:

The bill requires schools to remove from play students exhibiting signs or symptoms of [a] concussion. Conversely, schools would need to facilitate students return to play. As a result, implementation of the bill would require schools to secure the services of a licenced health care provider trained in the evaluation and management of concussions in order to certify resumption of activities. If such a provider could not be secured, programs would need to be discontinued. (Attachment 22)

When the bill was reintroduced in 2011, the Athletic Association's executive director supported it, but opposed the portion that would require academic accommodations for concussed student athletes. He recommended:

Delete the accommodation requirement. Singling out concussed students for special academic accommodations becomes problematic for teachers, school counselors, and special education departments. (Attachment 25)

The executive director took these positions but there is no evidence in the minutes of the State Board meetings, that reflect briefings on pending State legislation or else where, that these positions were being taken in the name of the Department.

It is hard to imagine that, given the caliber of the State Board members, including a public health professional like Dr. Walk, and the State Board members demonstrated history of being proactive on other public health issues facing students, e.g., harsh discipline policies, gang activities, that they would have sat by silently if asked to vote to endorse the positions taken by the Athletic Department's executive director.

After the Concussion legislation was adopted in April 2011, the Athletic Association announced the signing with the State Superintendent and the Superintendent of Maryland's 24 school districts a Master Agreement that would govern sports activity for the next 20 years. The Master Agreement is silent on the issue of concussions in high school football and other sports or any mention of player safety or the Athletic Association's role as the lead in this issue. And again, there is not indication in the minutes of the State Board of Education that the Master Agreement was ever discussed by the State Board.

Finally, in the MPSSAA's 2012 guidelines on sports concussion contains a serious flaw on the critical issue of removal of play. The guidelines provide:

After an appropriate medical assessment, any student-athlete suspected of sustaining a concussion shall immediately be removed from play. The student-athlete shall not return until cleared by a licensed health care provider authorized to provide sports physical examinations and trained in the evaluation and management of concussions. (Attachment 10, p. 5) (emphasis added)

No serious sports safety person would qualify the removal requirement on first having an appropriate medical assessment. This guidelines could lead a coach or assistant coach to think that the assessment has to be performed by a medical doctor and if none is available, play can continue.

(See Attachments 22-27)

Derek Sheely Foundation

I just want to say that, sadly, we can't talk about concussions in Maryland without talking about the tragic death of Derek Sheely last summer. Dr. Finan, as a member of the Frostburg State community, you no doubt are familiar with Derek's story.

Derek graduated from Northwest High School in Montgomery County in 2007. Last August, Derek died from a brain injury he sustained during football practice at Frostburg State University.

Derek's parents have started The Derek Sheely Foundation to honor Derek's memory by raising awareness and funding research in concussion and traumatic brain injuries. The Foundation has several upcoming fundraising events, including a June 2 four-mile run (and 1 mile walk) at Northwest High School.

So before you go to bed tonight, please visit the website, www.TheDerekSheelyFoundation.org. You will not be the same person after you do. And you won't feel the same way about football concussions.

Conclusion

I have great optimism that the State Board can do what needs to be done by August 11. You are fortunate to have among you Dr. Ivan Walks, the former Director of Public Health for the District of Columbia. Dr. Walks extensive experience as a public health professional will allow him to translate the public health aspects. But each of you bring life experiences that will be of great value.

And I have great hopes for Dr. Lillian Lowery, who will begin her tenure as State Superintendent on July 1. In a prior life, Dr. Lowery served as assistant superintendent in the public school system in Fairfax County, Virginia.

Fairfax County has been a long-standing model for sports safety, staffing each of its 25 high schools with two certified athletic trainers. At least one trainer is on the sidelines for each football practice and game. Coming out of this culture, I have great hope that Dr. Lowery will work to help local school boards develop the policies and procedures that they need to keep student athletes safe.

Thank you for listening to me today and I would be happy to answer any questions you may have.

Contact Information:

240-535-4376

thearn@mac.com

ConcussionChangeMCPS@verizon.net