



Concussion Management and Recovery Policies and Procedures

Introduction

The purpose of the policy is to provide The Potomac School administration, faculty/staff, and coaches a schema from which to ensure appropriate expectations, effective communication, and proper care for a student who has suffered a concussion. A key concept to understand when handling concussion recovery is, ***every concussion is different!*** Therefore, each concussion needs to be treated on a case-by-case basis using the tools outlined in this protocol. Learning differences, such as ADHD and dyslexia, and mental health issues, such as anxiety and depression, may complicate recovery. The Concussion Management and Recovery Team, outlined below, will directly assist the student through the recovery process with academic accommodations and physical rehabilitation.

Tools Used to Develop the Concussion Management and Recovery Plan

The Potomac School incorporated the recommendations established by the Virginia Board of Education Guidelines For Policies on Concussions in Students, and uses the SCORE (Safe Concussion Outcome Recovery & Education) program from Children's National Health System. Additionally, documents within the SCORE program have been adopted in this protocol, including the STAMP (Symptom Targeted Academic plan), ACE Post-Concussion Gradual Return to School document, and Post-Concussion Inventory sheet. Recommendations from the ImPACT Athletic Trainer Certification Program by ImPACT Applications, Inc., were also incorporated in this policy/plan.

**Direct quotes have been inserted within this document from all sources listed above.*

Concussion Management and Recovery Team

Head & Assistant Athletic Trainers
Academic Dean(s) (*Academic Point Person*)
Learning Specialist(s)
School Counselor
Advisor(s)
School Nurse

Definitions

Concussions

According to Children's National Health System, the term "mild traumatic brain injury (MTBI)" is used interchangeably with the term "concussion." An MTBI or concussion is defined as a complex pathophysiologic process affecting the brain, induced by traumatic biomechanical forces secondary to direct or indirect forces to the head. This disturbance of brain function is typically associated with normal structural neuroimaging findings (i.e., CT scan, MRI). Duration of symptoms is highly variable.

Mechanisms of Injury/Symptom Information

As cited in *Virginia Board of Education Guidelines For Policies on Concussions in Students*, common features that incorporate clinical, pathologic, and biomechanical injury constructs and may be utilized in defining the nature of a concussive head injury include the following:

- Concussion may be caused either by a direct blow to the head, face, neck, or elsewhere on the body with an "impulsive" force transmitted to the head.
- Concussion typically results in the rapid onset of short-lived impairment of neurologic function that resolves spontaneously. However, in some cases, symptoms and signs may evolve over a number of minutes, hours, or days.
- Concussion may result in neuropathological changes, but the acute clinical symptoms largely reflect a functional disturbance rather than a structural injury, with no abnormality seen on standard structural neuroimaging studies.
- [Concussions result in a constellation of physical, cognitive, emotional and/or sleep-related symptoms and may or may not involve a loss of consciousness (LOC).]
Resolution of the clinical and cognitive symptoms typically follows a sequential course. It is important to note, however, that symptoms may be [prolonged and may last from several minutes to days, weeks, months, or even longer in some cases].

Terms within the Concussion Management and Recovery Plan

Appropriate licensed health care provider means a physician, physician assistant, osteopath, physician, or athletic trainer licensed by the Virginia Board of Medicine; a neuropsychologist licensed by the Board of Psychology; or a nurse practitioner licensed by the Virginia State Board of Nursing.

Cognitive rest means limiting cognitive exertion and careful management of neurometabolic demands on the brain during recovery.

Return-to-learn refers to instructional modifications that support a controlled, progressive increase in cognitive activities while the student recovers from a brain injury (i.e., concussion), allowing the student to participate in classroom activities and learn without worsening symptoms and potentially delaying healing.

Return-to-play means participate in a non-medically-supervised practice or athletic competition.

Concussion Signs and Symptoms

According to the *Heads Up: Facts for Physicians About Mild Traumatic Brain Injury* document created by Children’s National Health System, signs and symptoms of concussions generally fall into four categories – physical, cognitive, emotional, and sleep – and may include:

Physical	Cognitive	Emotional	Sleep
<ul style="list-style-type: none"> • Headache • Nausea • Vomiting • Balance problems • Dizziness • Visual problems • Fatigue • Sensitivity to light • Sensitivity to noise • Numbness/ Tingling • Dazed or stunned 	<ul style="list-style-type: none"> • Feeling mentally “foggy” • Feeling slowed down • Difficulty concentrating • Difficulty remembering • Forgetful of recent information or conversations • Confused about recent events • Answers questions slowly • Repeats questions 	<ul style="list-style-type: none"> • Irritability • Sadness • More emotional • Nervousness 	<ul style="list-style-type: none"> • Drowsiness • Sleeping less than usual • Sleeping more than usual • Trouble falling asleep

Initial Evaluation of Suspected Concussion

On-campus injury: A student suspected of sustaining a concussion or brain injury shall be removed from the activity at that time. Any student who is removed from play must immediately be evaluated by an athletic trainer or appropriate licensed healthcare provider. A sideline assessment by the athletic trainer or appropriate licensed healthcare provider will assess objective/subjective signs and symptoms, balance/coordination, memory/concentration, and any other health area of concern deemed appropriate. A decision to transport to an emergency facility will be made after the evaluation. If the health care provider decides that EMS is not necessary, but the student is in a concussive state and cannot return to play, the student must begin Potomac’s concussion recovery plan. The parent(s)/guardian(s) of the student suspected of sustaining a concussion will be notified. An email with concussion recovery information will be sent to the parent(s)/guardian(s), and the Concussion Management and Recovery Team.

Off-campus injury: In the event a student is suspected of sustaining a concussion from a non-athletic or athletic off-campus incident, the student should follow-up with an appropriate licensed healthcare provider for a diagnosis; such healthcare providers may include certified athletic trainers at The Potomac School. If the student is diagnosed with a concussion by an appropriate licensed health care provider outside of The Potomac School, the parent(s)/guardian(s) should contact either the athletic trainers or a member of The Potomac

administration to relay relevant information regarding the injury. The athletic trainer(s) will either guide the student through The Potomac Concussion Recovery program or serve as the liaison between the parent(s)/guardian(s)' and the chosen provider and The Potomac School Concussion Management and Recovery Team.

Home Care Instructions

As cited by Children's National Health System, **the first 24 to 48 hours are the most critical** for a student who is suspected of sustaining a concussion. It is important for the student and parent(s) to assess whether the student exhibits any signs or reports any symptoms that would indicate deteriorating neurological functioning. Patients should be carefully observed at home over the first 24 to 48 hours for the serious signs listed below. If any of these signs is reported, the patient should be referred to an emergency department for an immediate medical evaluation.

- Headaches that worsen
- Seizures
- Focal neurologic signs
- Looks very drowsy or can't be awakened
- Repeated vomiting
- Slurred speech
- Can't recognize people or places
- Increasing confusion or irritability
- Weakness or numbness in arms or legs
- Neck pain
- Unusual behavior change
- Significant irritability
- Any loss of consciousness greater than 30 seconds. (Brief loss of consciousness (under 30 seconds) should be taken seriously and the patient should be carefully monitored.)

Returning to School/Cognitive Challenge

In the event of a **suspected concussion**, a student is required to **stay home for at least 24 hours** and be monitored for any deteriorating neurological function.

In the event of a **diagnosed concussion**, a student is required to **stay home for at least 24 hours after the diagnosis**. A student may be required to stay home for at least 48 hours in the event of a diagnosed concussion.

The student should return to school once symptoms reduce or disappear with cognitive rest AND once the student can withstand the Cognitive Readiness Challenge.

It is recommended that the student use the Post-Concussion Symptom Inventory sheet as a guide to assess symptoms.

The Cognitive Readiness Challenge: The student and parent will gauge if a student is ready to return to school with or without academic modifications, based on the student's ability to concentrate or tolerate stimulation for up to 30 minutes. As symptoms improve, the student should try reading or math challenge tasks for 10 to 30 minutes. If the student can sustain concentration for 30 minutes before significant exacerbation, the student should return to school. Appropriate accommodations will be decided upon

based on the severity, type, and duration of symptoms present. If a student cannot withstand up to 30 minutes of mental stimulation from reading or math challenge tasks, the student should remain at home for an additional 24 hours.

Return-to-Learn/Return-to-Play

Before a student may return to athletic competition or withstand a full academic day, all aspects of *The Potomac School Concussion Management for Return-to-Learn Policy* AND *The Potomac School Concussion Management for Return-to Play Policy* must be met.

Education/Prevention

Preventative measures have been taken by The Potomac School to help educate the school's coaches and community. The head athletic trainer is a certified ImPACT-Trained Athletic Trainer and will provide ongoing updates to The Potomac School community on an as-needed basis. An opportunity to learn about concussions and a review of policy and procedures will be provided to all faculty, staff, and coaches each year. All students and parents will be provided a copy of The Potomac School Concussion Management and Recovery Policy and Procedures document in the *Parent and Student Handbook*. Parents are advised to review additional information regarding concussions on CampusNET.

All Potomac P.E. faculty and coaches are required to participate in the CDC's *HeadsUp: Concussion in Youth Sports Training for Coaches* program. This is a free online course available to coaches, parents, and others helping to keep students safe from concussion. Additionally, all coaches receive first aid and CPR training, as well as concussion-awareness lectures.

Concussion Diagnosis

Post-Concussion Evaluation

After the student completes the 24- to 48-hour symptom observance period, an athletic trainer will continue the evaluation process, which may include ImPACT testing, the BESS (Balance Error Scoring System), and VOMS (Vestibular-Ocular Motor Screening) to clinically diagnose the concussion or refute the suspicion of concussion.

ImPACT Testing

The ImPACT test is an FDA-cleared medical device used to assess and manage concussions. The Potomac School uses the ImPACT test as a tool to help determine if the student is within normal cognitive and physical limits. Please note that this test is used as a tool and is not a stand-alone assessment used to diagnose whether a student is suffering from a concussion.

As a part of the ImPACT Concussion Recovery Program, students in grades 7 through 12 will participate in pre-concussion baseline testing every other year to assess key functions that could be affected by a concussion. If a student is diagnosed with a concussion, the student is to be tested every 7 days following a diagnosed concussion unless current symptoms are too great to withstand testing.

Post-Concussion Symptom Inventory
Ages 13-18 (PCSI-SR13)
 Pre/Post Version

Patient Name: _____

Today's date: _____

Birthdate: _____

Age: _____

Instructions: We would like to know if you had any of these symptoms before your injury. Next, we would like to know if these symptoms have changed after your injury. Please rate the symptom at two points in time- **Before the Injury/Pre-Injury** and **Current Symptoms/ Yesterday and Today**.

Please answer all the items the best that you can. Do not skip any items. Circle the number to tell us how much of a problem this symptom has been for you.

0 = Not a problem 3 = Moderate problem 6 = Severe problem

		Before the Injury/ Pre-Injury	Current Symptoms/ Yesterday and Today
1	Headache	0 1 2 3 4 5 6	0 1 2 3 4 5 6
2	Nausea	0 1 2 3 4 5 6	0 1 2 3 4 5 6
3	Balance problems	0 1 2 3 4 5 6	0 1 2 3 4 5 6
4	Dizziness	0 1 2 3 4 5 6	0 1 2 3 4 5 6
5	Visual problems (double vision, blurring)	0 1 2 3 4 5 6	0 1 2 3 4 5 6
6	Move in a clumsy manner	0 1 2 3 4 5 6	0 1 2 3 4 5 6
7	Sensitivity to light	0 1 2 3 4 5 6	0 1 2 3 4 5 6
8	Sensitivity to noise	0 1 2 3 4 5 6	0 1 2 3 4 5 6
	[Office Use Only] Physical	Total Pre=	Total Post=
9	Irritability	0 1 2 3 4 5 6	0 1 2 3 4 5 6
10	Sadness	0 1 2 3 4 5 6	0 1 2 3 4 5 6
11	Nervousness	0 1 2 3 4 5 6	0 1 2 3 4 5 6
12	Feeling more emotional	0 1 2 3 4 5 6	0 1 2 3 4 5 6
	[Office Use Only] Emotional	Total Pre=	Total Post=
13	Feeling mentally "foggy"	0 1 2 3 4 5 6	0 1 2 3 4 5 6
14	Difficulty concentrating	0 1 2 3 4 5 6	0 1 2 3 4 5 6
15	Difficulty remembering	0 1 2 3 4 5 6	0 1 2 3 4 5 6
16	Get confused with directions or tasks	0 1 2 3 4 5 6	0 1 2 3 4 5 6
17	Answer questions more slowly <u>than usual</u>	0 1 2 3 4 5 6	0 1 2 3 4 5 6
18	Feeling slowed down	0 1 2 3 4 5 6	0 1 2 3 4 5 6
	[Office Use Only] Cognitive	Total Pre=	Total Post=
19	Fatigue	0 1 2 3 4 5 6	0 1 2 3 4 5 6
20	Drowsiness	0 1 2 3 4 5 6	0 1 2 3 4 5 6
21	Sleep more than usual	0 1 2 3 4 5 6	0 1 2 3 4 5 6
	[Office Use Only] Sleep/ Fatigue	Total Pre=	Total Post=
22	In general, to what degree do you feel "differently" than before the injury (not feeling like yourself)?	No Difference 0 1 2 3 4 Major Difference <i>Circle your rating with "0" indicating "Normal" (No Difference) and "4" indicating "Very Different" (Major Difference)</i>	
PCSI Total Symptom Score		Pre (sum 4 domains) =	Post (sum 4 domains) =
[Office Use Only]		PCSI Total Adjusted Symptom Score (Post-Pre) =	



Authored / Developed by: Gioia, Janusz, Vaughan & Sady. 2011-2014.
 Please do not modify without permission from the authors. V05/17