Concussion Policy: Niagara Falls City School District

Concussion Management policy for athletic training contracts with NFMMC

The following policy is for schools, organizations, and tournaments that are under contract for athletic training services with Niagara Falls Memorial Medical Center (NFMMC) and in partnership with UBMD Orthopaedics & Sports Medicine in Niagara. NFMMC employs certified athletic trainer(s) for contracted services at the school for sports medicine. This policy is based on the Summary and Agreement statement of the 6th International Conference on Concussion in Sport held in Amsterdam in 2022. As a result of this conference, it recommended the use of the SCAT6 concussion evaluation tool as well as the NFCSD implementing the use of the **Buffalo Concussion Treadmill Test (BCTT)** as a tool to determine initiation of the return to play protocol.

This concussion policy is for students and student athletes from the Niagara Falls City School District (NFCSD) in grades 7-12.

Definition of concussion:

A concussion is a mild traumatic brain injury. Concussions occur when normal brain functioning is disrupted by a blow or jolt to the head, face, neck or elsewhere on the body with an "impulsive" force transmitted to the head. Recovery from concussion will vary. Avoiding re-injury and over-exertion until fully recovered are the cornerstones of proper concussion management.

Defining the nature of a concussive head injury include:

1. A 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.
2. Concussions typically result in the rapid onset of short-lived impairment of neurologic function that resolves spontaneously.
3. A concussion may result in neuropathological changes, but the acute clinical symptoms largely reflect a functional disturbance rather than structural injury.
4. Concussions result in a graded set of clinical syndromes that may or may not involve loss of consciousness. Resolution of the clinical and cognitive symptoms typically follows a sequential course.
5. Concussions are typically associated with grossly normal structural neuro-imaging studies.

Pediatric Concussive injury:

Children, ages (5-18) years old should not return to play (RTP) or training until clinically completely symptom free. Because of the physiological response during childhood head trauma, a conservative return to play approach is recommended. ***It may be appropriate to extend the amount of time of asymptomatic rest and/or the length of the graded exertion in children and adolescents.*** It is not appropriate for a child or adolescent athlete with a concussion to RTP on the same day as the injury, regardless of the level of athletic performance. Concussion modifiers apply even more to this population than to adults and may mandate a more cautious RTP advice. In addition, the concept of "cognitive rest" was highlighted, with special reference to a child's need to limit exertion with activities of daily living and to limit scholastic and other cognitive stressors (eg, text messaging, video games, etc.) while symptomatic. School attendance and activities may also need to be modified to avoid provocation of symptoms.

Concussion Evaluation:

The diagnosis of an acute concussion usually involves the assessment of a range of domains, including clinical symptoms, physical signs, behavior, balance, sleep, and cognition. Also, a detailed concussion history is an important part of the evaluation, both in the injured athlete and when conducting a pre-participation examination.

The suspected diagnosis of concussion can include one or more of the following clinical domains:

a) Symptoms: somatic (eg, headache), cognitive (eg, feeling "like in a fog") and/or emotional symptoms (eg, lability)

b) Physical signs (eg, loss of consciousness, amnesia)

c) Behavioral changes (eg, irritability)

d) Cognitive impairment (eg, slowed reaction time)

e) Sleep disturbance (eg, drowsiness)

f) If any one or more of these components is present, a concussion should be suspected, and the appropriate management strategy instituted.

Grading concussions:

With a concussion, an athlete suffers an injury that progressively resolves without complication over 10-14 days. Concussions represent the most common form of this injury and can be appropriately managed by primary care physicians or by certified athletic trainers working under medical supervision. Concussion management ideally is rest until all symptoms resolve and then a graded program of exertion before return to sport. All concussions mandate evaluation by a medical doctor who is comfortable in managing concussion injuries.

CONCUSSION MANAGEMENT:

Post-injury testing:

NFCSD will implement a functional physiological test. We will do post-injury evaluations with the SCAT6 form and the BCTT as objective tools in the concussion management process to determine a safe RTP. The student athlete must receive clearance from their primary care physician and/or concussion specialist prior to seeing the district medical director. **Once the student athlete is cleared by the district medical director**, the student will complete the BCTT and then continue to complete the concussion RTP.

Functional physiological testing allows us to:

- Quantify the amount of aerobic exercise that is safe to perform
- Protect the athlete
- Help determine safe return to play
- Help prevent cumulative effects of multiple concussions
- Prevent lingering effects of concussion and potential catastrophic injury

Return to play protocol:

During the period of recovery, in the first few days (24-48 hours) following the injury, it is important to emphasize to the student athlete that physical AND cognitive rest is required. Activities that require concentration and attention may exacerbate the symptoms and as a result, delay recovery.

Pharmacological therapy:

An important consideration in RTP is that concussed athletes should not only be symptom free, but also should not be taking any pharmacologic agents or medications that may mask or modify the symptoms of concussion. If antidepressant therapy may be commenced during the management of a concussion, the decision to RTP while still on such medication must be considered carefully by the treating clinician.

A player should never return to play while symptomatic.

“WHEN IN DOUBT, SIT THEM OUT!”

Niagara Falls City School District (NFCSD) Concussion Protocol

In-Season:

- In the event that an athlete suffers a mechanism of injury and/or signs and symptoms of concussion, a sideline evaluation is performed (SCAT6) to screen the student athlete.
- If it is determined that any athlete is positive for signs and symptoms of concussion, they are immediately removed from that day’s contest and/or practice.
    - Student athletes are ineligible to return on the same day of injury.

- Parents/guardian is immediately contacted regarding injury.

- Parent/guardian is given a head injury warning sheet of instructions to follow until seen by primary care physician/concussion specialist and/or emergency room based on severity of symptoms and parent choice.

- Injury report is completed and injury notification is sent to the school nurse, athletic office, and guidance counselor/principal. **The student is disqualified from sports and physical education participation when a concussion is suspected.**

Upon return to school/sports, a post injury BCTT is performed once the student athlete is asymptomatic and receives clearance from their PCP and/or Concussion Specialist as well as the district medical director.

Reports:

- Once the Concussion Injury report is completed, the NFCSD school medical director and guidance counselor/principal is informed of the injured student athlete.
- Student athletes MUST be evaluated by their primary care physician/concussion specialist, but the NFCSD school medical director is the one to release students for them to complete the BCTT/RTP protocol.
- The NFCSD medical director will approve or disapprove the BCTT and SCAT6 once completed for the student to be eligible to complete the RTP progression.
- Once the RTP progression is completed, the completed form is sent to the supervising physician of the district athletic trainers and then to the district medical director for approval and for the student to return to sport after ALL approvals have been obtained.

Return to Play:

- NFCSD follows the 2022 Amsterdam consensus statement policy for RTP. (see RTP progression protocol form and the 2022 Amsterdam guidelines). **The NFCSD medical director has the final say on RTP**.

The RTP following a concussion incorporates a step wise process:

1. No activity, complete rest. Once asymptomatic for 24 hours, proceed to levels using the following:
2. Light aerobic exercise such as walking or stationary cycling or BCTT, no resistance training.
3. Sport specific exercise (skating in hockey, running in soccer, etc.) progressive addition of resistance training at steps 3 or 4.
4. Non-contact training drills.
5. Full contact training and/or exertional testing after medical clearance.
6. Return to FULL game play.
7. **This progression should be over 5 days for RTP without return of symptoms.**

- If a student suffers any return of symptoms during the RTP protocol, they immediately stop the RTP protocol until they are once again symptom free.

- Once the athlete is symptom free for 24 hours, they can continue with the RTP process where they previously ended.
- When a student completes the RTP, they are eligible for full release to game activity.

Return to Learn:

This is determined by the Primary care physician/Concussion specialist if warranted based on evaluation and symptoms reported by the patient.

Stage 1-no activity: complete cognitive rest, no school attendance, no homework, reading, texting, video/computer games, or computer work for recovery of the injury.

Stage 2-gradual re-introduction of cognitive activity: short 5-15 minutes at a time then relax to the restrictions of stage one. This gradual control increases the sub-symptom threshold of cognitive activities.

Stage 3- catch up: the student can start to catch up on some school work by completing it at home in longer increments of 20-30 minutes at a time, the increase of cognitive endurance by repetition of short periods of self-paced cognitive activity.

Stage 4-limited re-entry to school: finally, re-entry to school for part of the day. This stage is initiated once 1-2 cumulative hours of homework has been achieved. The re-entry into school with accommodations to allow rest or a shortened day will assist in the controlled sub-symptom threshold and increased cognitive load.

Stage 5- full day: starts a gradual reintegration into school increasing to a full day of school and classes, accommodations decrease as cognitive endurance improves.

Stage 6- return to regular school activity: attendance of a full cognitive workload such as taking tests and exams that were missed or currently expected, catch up with missed essential work. This is full recovery into the academic day and at this point a RTP protocol may be initiated.

The above policy will be followed by the healthcare professionals (school medical director, AT supervising physician, school nurses, athletic trainer, coaches, and Athletic Director) that manage the RTP of student athletes at local high schools and colleges that are under contract for athletic training services with NFMMC. **This concussion management/RTP protocol will be followed despite the athlete presenting a prescription note to return to play sooner from their primary care physician and/or emergency room**. If an athlete presents a prescription from their primary care physician to their school nurse for the appropriate time frame in regards to RTP. The exertional progressive steps will be followed by the athletic trainer when given approval to start from the NFCSD medical director using the RTP protocol from the SCAT6 form protocol as well as successful completion of the BCTT. **The student athlete MUST see the school district medical director after the injury** has occurred and RTP progression which MUST be initiated and approved by the district medical director prior to beginning (see attached SCAT6 form). The NFCSD school medical director MUST approve initiation of RTP protocol completed by the school district's athletic trainer. The completed RTP protocol form (See attached form) MUST be approved upon completion by the AT supervising physician as well as the NFCSD school medical director.

Concussion Management Team (CMT):

This section summarizes the responsibilities of each profession of the CMT along with the student and student-athlete as well as the parent/guardian of that student. These responsibilities are explained in detail in the NYS Concussion Management and Awareness Act that was enacted on July 1, 2012. These components are to be installed by each profession within the CMT and reviewed on an annual basis.

Student – Review Concussion Information Sheet. Athletes must sign a signature sheet within code of conduct handbook provided by the Athletic Department.

Parent/Guardian - Review district's Concussion Information Sheet. If the child is an athlete, the concussion signature sheet must be signed. – parent & athlete must receive and sign concussion information in order for athlete to participate

Medical Director – Review and complete CDC's *Heads Up, Facts for Physicians About Mild Traumatic Brain Injury (MTBI*, students with these conditions are at a higher risk for prolonged recovery from a concussion:

http://www.cdc.gov/concussion/headsup/pdf/Facts_for_Physicians_booklet-a.pdf

If the school chooses to use the BCTT – the school medical director must be able to understand and interpret the test.

Athletic Trainer Supervising Physician- Review and complete CDC's *Heads Up, Facts for Physicians About Mild Traumatic Brain Injury (MTBI*, students with these conditions are at a higher risk for prolonged recovery from a concussion:

http://www.cdc.gov/concussion/headsup/pdf/Facts_for_Physicians_booklet-a.pdf

The role of the AT supervising physician is to medical supervision of the acting athletic trainers for the NFCSD and to consult and approve as needed in regards to concussion management as well as approval for completed Return to Play protocols for the district.

Private Medical Provider/Specialists (Primary Care Physician) – If possible, review and complete CDC's *Heads Up, Facts for Physicians About Mild Traumatic Brain Injury (MTBI*, students with these conditions are at a higher risk for prolonged recovery from a concussion:

http://www.cdc.gov/concussion/headsup/pdf/Facts_for_Physicians_booklet-a.pdf

- We ask that notes from private medical providers that clear athletes from concussions include:
    - Clearance for RTP & an exercise progression.

School Nurse – Must be knowledgeable on how to evaluate concussions – ie. SCAT6, must complete the department-approved course for school nurses and athletic trainers every two (2) years. NYSED has approved the course *Heads Up to Clinicians* for these professions, which is a free web-based course developed by the CDC. It is available at http://preventingconcussions.org/.

Director of Physical Education &/Or Athletic Director – Must implement/enforce concussion management program/team. (Make sure everyone on this sports med list has done these).

Athletic Trainer -

- Must complete the department-approved course for school nurses and athletic trainers every two (2) years. NYSED has approved the course *Heads Up to Clinicians* for these professions, which is a free web-based course developed by the CDC. It is available at http://preventingconcussions.org/.

Physical Education/Coach -

Responsible:

Remove any student who has taken a significant blow to the head or body, or presents with signs and symptoms of a head injury immediately from play because the Concussion Awareness Management Act requires immediate removal of any student believed to have sustained a concussion.

Contact the school nurse or certified athletic trainer (if available) for assistance with any student concussion injury.

Send any student exhibiting signs and symptoms of a more significant concussion to the nearest hospital emergency room via emergency medical services (EMS) or as per district policy.

Symptoms of a concussion include, but are not necessarily limited to:

- Amnesia (e.g. decreased or absent memory of events prior to or immediately after the injury, or difficulty retaining new information)
- Confusion or appearing dazed
- Headache or head pressure
- Loss of consciousness
- Balance difficulty or dizziness, or clumsy movements
- Double or blurry vision
- Sensitivity to light and/or sound
- Nausea, vomiting, and/or loss of appetite
- Irritability, sadness, or other changes in personality
- Feeling sluggish, foggy, groggy, or lightheaded
- Concentration or focusing problems
- Slowed reaction times, drowsiness
- Fatigue and/or sleep issues (e.g. sleeping more or less than usual)

*Students who develop any of the following signs, or if the above listed symptoms worsen, must be seen and evaluated immediately at the nearest hospital emergency room:

- Headaches that worsen
- Seizures
- Looks drowsy and/or cannot be awakened
- Repeated vomiting
- Slurred speech

- Unable to recognize people or places
- Weakness or numbness in arms or legs, facial drooping
- Unsteady gait
- Dilated or pinpoint pupils, or change in pupil size of one eye
- Significant irritability
- Any loss of consciousness

Suspicion of skull fracture: blood draining from ear, or clear fluid from nose

Inform the parent/guardian of the need for evaluation by their medical provider. The coach should provide the parent/guardian with written educational materials on concussions along with the district's concussion management policy.

Inform the PE director, certified athletic trainer, the school nurse, and/or medical director of the student's potential concussion. This is necessary to ensure that the student does not engage in activities at school that may complicate the student's condition prior to having written clearance by a medical provider.

Ensure that students diagnosed with a concussion do not participate in any athletic activities until, in conjunction with the student's physician, the PE teacher/coach has received written authorization from the medical director or their designee that the student has been cleared to participate.

Ensure that students diagnosed with a concussion do not substitute mental activities for physical activities unless medical provider clears the student to do so (e.g. due to the need for cognitive rest, a student should not be required to write a report if they are not permitted to participate in PE class by their medical provider).

Complete the Department-approved course for coaches and PE teachers every two years. NYSED has approved the course *Heads Up, Concussion in Youth Sports* for these professions, which is a free web-based course that has been developed by the CDC. It is available at http://www.cdc.gov/concussion/HeadsUp/online_training.html.

Teacher – Must review information listed below in this section.

Students who have been diagnosed with a concussion require both physical and cognitive rest. Cognitive rest requires that the student avoid participation in, or exposure to, activities that require concentration or mental stimulation including, but not limited to:

- Computers and video games
- Television viewing
- Texting
- Reading or writing
- Studying or homework
- Taking a test or completing significant projects
- Loud music
- Bright lights

Students transitioning into school after a concussion might need academic accommodations to allow for sufficient cognitive rest. These include, but are not necessarily limited to:

- Shorter school day
- Rest periods
- Extended time for tests and assignments
- Copies of notes
- Alternative assignments
- Minimizing distractions
- Permitting student to audiotape classes
- Peer note takers
- Provide assignments in writing
- Refocus student with verbal and nonverbal cues

More information on classroom accommodations can be found at:
http://www.upstate.edu/pmr/healthcare/programs/concussion/classroom.php
http://www.nationwidechildrens.org/concussions-in-the-classroom

http://www.cdc.gov/concussion/pdf/TBI_Returning_to_School-a.pdf

<u>Guidance Counselor/School Psychologist</u> – Same as Teacher section (above)

Policy written by Tony Surace, M.Ed., ATC: Date: 5/29/08

Revised: 1/7/2010

Revised: 4/17/2012

Revised: 7/29/2012

Revised: 6/17/2013

Revised: 9/19/2017

Revised: 6/11/2020

Revised: 6/1/2022

Revised: 1/22/24 (Reviewed by Sara Minton, MS, ATC, Anthony V. Surace (Intern), Tony Surace, M.Ed., ATC)

Director of Sports Medicine at NFMMC in partnership with UBMD Orthopaedics & Sports Medicine in Niagara.

Niagara Falls City School District: Section VI Concussion Management Team 2024

Concussion Management Return to Play Protocol

Athlete_____ DOB_____ Phone_____ Grade____
PCP_____

Coach_____ School_____ Sport Mod/JV/V_____

MOI_____

Functional exercise at each Stage of Rehabilitation

Date of Concussion Injury: _____

Date Athlete became asymptomatic: _____

Check box when each phase is completed and if no return of symptoms

□ No activity (Complete physical and cognitive rest (Recovery) **# of days _____**
Date:_____

□ Day 1: Light aerobic exercise for 20 minutes (Walking, swimming, or stationary cycling, keeping intensity to < 70% of maximum predicted heart rate; no resistance training) (Increase heart rate) **Date started:_____ (Activity done:_____)**

□ Day 2: Sport specific exercise for 30 minutes (Skating drills in ice hockey, running drills in soccer, no head impact activities (Add movement) **Date: _____ (Activity done:_____)**

□ Day 3: Non-contact training drills for 40 minutes (Progression to more complex training drills, ie. passing drills in football and ice hockey; may start progressive resistance training) (Exercise, coordination, and cognitive load)

Date: _____ (Activity done:_____)

□ Day 4: Full contact practice for full length of practice (Following medical clearance, participate in normal training activities) (Restore athlete's confidence; coaching staff assesses functional skills)

Date: _____ (Activity done:_____)

□ Day 5: Return to play (Normal game play) **Date Ended: _____**

Comments:_____
_____
_____

AT : _____ Print Name: _____Date:_____

AT Supervising Physician: _____ Print Name: _____Date:_____

NFCSD Medical Director: _____ PrintName:_____Date:_____