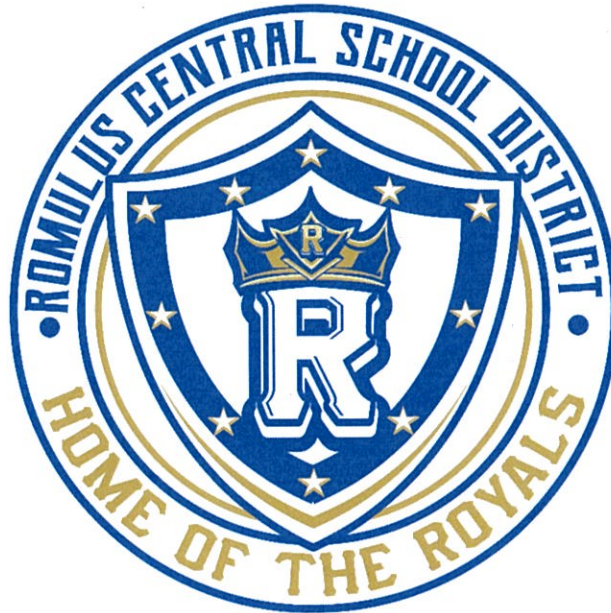


Romulus Central School District Concussion Management Plan



Return to Learn

Return to Play

September 2025

Concussion Management Team

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Concussion Management

The Board of Education recognizes that concussions and head injuries are the most commonly reported injuries in children and adolescents who participate in sports and recreational activities. The physical and mental well-being of District students is a primary concern. As such, the District supports the proper evaluation and management of concussion injuries.

A concussion is a mild traumatic brain injury (MTBI) that occurs when normal brain functioning is disrupted by a blow or jolt to the head or body that causes the head and brain to move rapidly back and forth. Recovery from concussion and its symptoms will vary. Avoiding re-injury and over-exertion until fully recovered are the cornerstones of proper concussion management. Concussions can impact a student's academics as well as their athletic pursuits.

Concussion Management Team (CMT)

Pursuant to Board Policy 7522, the District is authorized, at its discretion, to establish a Concussion Management Team (CMT) which may be composed of the athletic director, a School Nurse, the school physician, a coach of an interscholastic team, a certified athletic trainer or such other appropriate personnel as designated by the School District. The CMT will oversee and implement the School District's concussion policy and regulations. The CMT may establish and implement a program which provides information on MTBIs to parents, persons in parental relation and guardians throughout each school year.

The Concussion Management Team meets once per year in the spring and is responsible for developing policy and procedures for *Return to Learn* and *Return to Play*.

In addition, the CMT reviews district head injury data to determine if further training, alternative sports-related safety equipment or safety procedural changes are required.

Information to Parents/Guardians

Parents: Please refer to pages 16 and 18 for *Return to Learn* and *Return to Play*

The CMT also oversees and implements a program which provides information on mild traumatic brain injuries to students, and parents/guardians and persons in parental relation throughout each school year.

The District shall include the following information on MTBI/concussion in any permission or consent form or similar document that may be required from a parent/guardian for a student's participation in interscholastic sports. Similar information will be provided to all students when they sign up for participation in sports and/or through information provided in Physical Education, health or mental health classes.

Information will include:

- a) The definition of MTBI;
- b) Signs and symptoms of MTBI;
- c) How MTBIs may occur;
- d) Practices regarding prevention; and
- e) Guidelines for the return to school and school activities for a student who has suffered an MTBI, even if the injury occurred outside of school.
- f) How to obtain more information on MTBI/concussion from the New York State Education Department and the Department of Health websites.

Information to Students

STUDENTS: You need to report to the nurse daily to complete the symptom checklist.

The District shall provide information on MTBI/concussion to students. This will occur annually for all students in grades 6-12. Information will be reviewed periodically with student-athletes throughout each athletic season. The provided information will include:

- a) The definition of MTBI;
 - b) Signs and symptoms of MTBI;
 - c) How MTBIs may occur;
 - d) Possible long term effects resulting from MTBI/concussion
 - e) Importance of reporting symptoms to appropriate personnel
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Concussion Management Plan

The Romulus Central School District seeks the safe return to learning, physical activity and competitive sports for all injured students. Recent research in concussion management has increased awareness of the impact of mild traumatic head injuries, commonly known as concussions, in both the medical community and the general public. This valuable knowledge leads us to refine our approach to concussion recognition and management. The following recommendations, developed for the Romulus Central School District, are in part extracted from the National Athletic Trainers' Association Position Statement: Management of Sports- Related Concussion. In addition, this Concussion Management Plan was derived from materials developed by the CDC, NYSPHSAA, NYSED, as well as through consultation with the Certified Athletic Trainer and School Medical Director.

These recommendations provide guidelines for concussion recognition, management, and safe return to learning, sports, and activity for school personnel. Academic assistance, medical monitoring, and counseling may be necessary during the school day for a student with a mild traumatic brain injury. Appropriate school personnel, the student, parent/guardian(s), the school physician and the student's personal physician will contribute to developing the support plan for impacted students on a case by case basis.

This Concussion Management Plan will be reviewed annually by the District's Concussion Management Team with input from the School Medical Director.

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- I. Recognition of concussion**
- II. Immediate referral guidelines for all school personnel**
- 111. Guidelines for School Personnel**
- IV. Follow-up care during the school day**
- V. Return to Learn**
- VI. Return to Play (Interscholastic Sports)**

I Recognition of Concussion

An injury-related concussion usually involves a blow to the head either directly or indirectly. The following are common signs and symptoms of injury-related concussions:

1) Signs (observed by others):

- Loss of consciousness (any duration)
- Nausea or vomiting
- Dazed or stunned
- Confusion (about assignment, details, etc.)
- Forgets plays or have difficulty retaining new information (athletic plays, scripts, days of week, year, where they are, etc.)
- Unsure about activity, details
- Moves clumsily (altered coordination)
- Balance problems
- Personality/or behavior changes
- Responds slowly to questions
- Forgets events prior to injury
- Forgets events after injury
- Emotional/Irritable

2) Symptoms (reported by student):

- Headache
- Fatigue
- Nausea or vomiting
- Dizziness
- Double vision, blurry vision
- Sensitive to light or noise
- Feels sluggish or foggy
- Problems concentrating
- Problems remembering
- Difficulty sleeping
- Irritable/Emotional (more than usual)

Please note these signs and symptoms are indicative of probable concussion. Other causes for any of these signs/symptoms should also be considered.

Any student who is observed to, or is suspected of, suffering a significant blow to the head, has fallen from any height, or collides hard with another person or object, may have sustained a concussion. Such injuries can occur during athletic activities, recess, PE, other classes, or outside of school. Symptoms of a concussion may appear immediately, may become evidence in a few hours, or evolve and worsen over a few days. District staff members must therefore be aware of and adhere to the Immediate Referral Guidelines provided in the next section.

When a student sustains a concussion at a time other than when engaged in a school-sponsored activity, the District expects the parents/legal guardians to report the condition to the school and School Nurse so that the District can support the appropriate management of the concussion in school.

II Immediate Referral Guidelines for All Staff

1. A student with a witnessed loss of consciousness (LOC) of any duration should be spine boarded and transported immediately to the nearest emergency department via emergency vehicle.
2. A student who has symptoms of a concussion and is not stable (condition is rapidly deteriorating), according to the following signs, is to be transported immediately to the nearest emergency department via emergency vehicle:
 - deterioration of cognitive function
 - decreasing level of consciousness, including looking drowsy and/or cannot be wakened
 - loss of consciousness (example: seizure activity)
 - decrease or irregularity in respirations
 - unequal, dilated or unreactive pupils
 - any signs or symptoms of associated injuries, spine or skull fracture
 - fluid (clear or blood) from the eyes, ears, nose or mouth
 - mental status changes: lethargy, difficulty maintaining arousal, increasing confusion or agitation
 - Slurred speech
 - Weakness or numbing in arms or legs, facial drooping
 - Unsteady gait
3. A student who is symptomatic but stable (meaning not showing any of the unstable signs listed above), may be transported by the student's parent/guardian(s). The parent/guardian(s) will be advised by District staff to contact the student's Primary Care Physician or seek care at the nearest emergency department within 24 hours.
4. If the parent/guardian(s) are unavailable, the individual(s) listed as emergency contacts may be permitted to transport the student home if the individual(s) understands the home care instructions and is able to monitor the student. If the individual is unable/unwilling to assume responsibility for the student, the coach/Athletic Director or designee remains responsible for the student until the parent/guardian arrives or student is transported to nearest emergency department.
5. Parent/guardian(s) should always have the option of emergency transportation, even if it is not deemed necessary by District staff.
6. If the parent/guardian(s) refuses treatment and/or transportation to an emergency department, parent/guardian(s) must assume the responsibility of the student.

III Guidelines for School Personnel

1. Any student who exhibits signs or symptoms of a concussion shall be removed from play immediately and shall not be allowed to return to activity that day. School personnel should be familiar with the signs and symptoms of a concussion.
2. If a staff member suspects the student has sustained a concussion, the student shall be removed from activity until medically evaluated.
3. Refer the student for medical evaluation.
4. School personnel should report all head injuries to the School Nurse as soon as possible for medical assessment, management, home instructions and follow-up care.
5. The School Nurse or supervising staff member (if after-school activity) is responsible for notifying the student's parents/guardians of the injury and making a determination if the student is not stable and requires transportation to the nearest emergency department via emergency vehicle:
 - The staff member should contact the parents/guardians, inform them of the injury and whether the student requires the parents/guardians to pick up the student (if the student is stable) or if the student is being transported to the nearest emergency department via emergency vehicle (if the student is not stable). The staff member is to remain with the student until the parents/guardians arrive. A staff member is to accompany the student with the emergency vehicle to the nearest emergency department and remain with the student until the parents/guardians arrive.
 - The staff member should encourage the parents/guardians to follow up with the appropriate health care professional for students who are picked up by the parents/guardians.
 - The staff member should instruct the student to report directly to the School Nurse the day the student returns to school after the injury.
 - The staff member should alert the School Nurse so follow-up can be initiated.
6. In the event that a student's parent/guardian(s) cannot be reached and the student is able to be sent home (due to the student's condition being stable):
 - The staff member should ensure that the student will be with a person identified on the students' emergency contact form who is capable of monitoring the student and understands the home care instructions before allowing the student to go home.
 - The staff member is to remain with the student until the parents/guardians or emergency contacts arrive.
 - The staff member should continue efforts to reach the parent/guardian.

If there is any question about the status of the student, or if the student is not able to be monitored appropriately, the student should be referred to the emergency department for evaluation. A designated staff member/administrator should accompany the student and remain with the student until the parents/guardians arrive.

7. A Romulus Central School District "Student/Visitor Incident Report" form should be completed by the staff member who witnessed the incident and/or the symptoms that led to the recognition of a potential concussion, or who was responsible for the student at the time of the incident, and should be forwarded to the School Nurse as soon as possible (within 24 hours) after the injury.

STUDENT/VISITOR INCIDENT REPORT

School District: _____ School Name: _____

Student Name: _____ Date: __J__J__ Time: _____, am/pm)

Home Address/Telephone: _____ DOB ____/____/____
Street City, State, Zip

Description of Location: _____ Grade: _____

ALLEGED INCIDENT INFORMATION

Reported By: _____ Date: ____/____/____ Time am/pm: _____

Describe How the Alleged Incident Occurred: _____

Person Supervising Student: _____

Please Describe Alleged Injury (*Include part of body*) and Symptoms Presented: _____

Name/Address/Telephone of any witnesses (*Please indicate if none*): _____

Was first aid rendered? YES _____ NO _____ If Yes, by whom/date/time: _____

Did student remain in school remainder of day/activity? YES _____ NO _____ If Yes, what activity/date/time: _____

Did student receive medical attention by a doctor or hospital? YES _____ NO _____ If Yes, describe medical attention. If unknown, please state: _____

Name/Address/Telephone # of physician or hospital: _____

EMERGENCY CONTACT INFORMATION

Person Contacted/Relationship: _____

Address: _____ Telephone: _____

Contacted by: _____ Date: ____/____/____ Time (am/pm): _____

If Emergency Contact Was Not Contacted, Please State Reason: _____

Completed by Name: _____ Date ____/____/____ Title: _____

Reviewed by Name: _____ Date ____/____/____ Title: _____

IV. Follow-Up Care During the School Day

It is important for school leaders to identify a school staff member on the Concussion Management Team who will function as a case manager or Concussion Management Leader, such as a School Nurse, athletic trainer, School Counselor or other identified school professional. This person will have the role of advocating for the student's needs and serve as the primary point of contact for the student, family and all members of the Concussion Management Team. In most cases the Concussion Management Leader will be the School Nurse.

1. Responsibilities of the School Nurse (Concussion Management Leader) after notification of student's diagnosed concussion.

The student will be instructed to report to the School Nurse upon his or her return to school. The School Nurse will:

- Re-evaluate the student utilizing a graded symptom checklist.
- Notify the student's teachers and School Counselor, administration and medical director of concussion symptoms.
- Have conversations and review student case to create individualized health care plan as needed including removal from physical activity in the classroom (e.g. brain breaks), and removal from loud or overstimulating settings (e.g., cafeteria, band, chorus).
- Notify the student's Physical Education teacher and Director of Health PE and Athletics immediately that the student is restricted from all physical activity until further notice.
- Weekly monitoring for concussion symptoms or change in neurological exam. Notify parent as needed.
- Clinical assessment before and after student returns to activity.

In addition to the Concussion Management Leader, the concussion case manager is responsible for ensuring all are informed and understand how to implement the student's accommodations. In the majority of cases, the concussion case manager will be the student's School Counselor.

2. Responsibilities of the students' School Counselor/teacher (Concussion Case Manager)
 - Maintain regular communication with the guardian(s) and the student.
 - Facilitate communication among teachers, nurse, student and administrator.
 - Schedule meetings as required. (Meetings may be virtual, by phone, etc.)
 - Distribute, collect Teacher Feedback Sheets.
 - Collect from nurse health care professionals recommendations.
 - Distribute health care professional's recommendations and teachers' feedback/observations to members of the Concussion Management Team.
 - Communicate teacher feedback to Concussion Management Team.
 - Develop the student's Concussion Management - Return to Learn Plan with input from teachers and the Concussion Management Team.
 - Distribute the plan to the student, teachers, parent/guardian(s).
 - Reconvene the team to revise the plan as required.

DAILY SCHOOL CHECKLIST OF CONCUSSION-RELATED SYMPTOMS

Student Name: _____ School: _____ Grade: _____ Date of Concussion: _____

"Cognitive rest" improves outcomes after concussion. Students may stay home the day after a concussion and try a half-day upon return. Teachers must provide accommodations (examples on www.ConcussionSmartMarin.org) based on physical, emotional, cognitive and sleep/energy ability. Teacher or School Nurse (based on teacher input) should record symptoms on this sheet during week(s) post-concussion. Share with: (i) School Nurse, (ii) student's licensed healthcare provider/doctor, (iii) parent. May share with athletic trainer [If multiple classes per day, may use multiple forms per day.] Also see Return to Play form for activity.

Date:	/ /	/ /	/ /	/ /	/ /
NO SYMPTOMS	☐	☐	☐	☐	☐
Headache or pressure					
Neck pain					
Nausea or vomiting					
Dizziness					
Balance problem					
Blurred vision					
Sensitivity to light					
Sensitivity to sound					
Slowed down; fatigue					
"In a fog"; Not "right"					
Difficulty concentrating					
Difficulty remembering					
Confused					
Drowsy					
More emotional					
Irritable/moody					
Sad					
Nervous or anxious					
Rest Periods Taken (number & duration)					
Accommodation provided (see pg. 2) : (e.g.: exams missed, shortened, given orally) scribe; earplugs, quiet place at lunch/recess, dim lights; sunglasses; hat; printed class notes; waived homework; modified school day; frequent snacks; water bottle; front row seating)					
OTHER/COMMENTS					
Name of staff member completing					

Identify Specific Factors That May Worsen the Student's Symptoms

this is for information/guidance.

- a. Do some classes, subjects, or tasks appear to pose greater difficulty than others (compared to pre-concussion performance)?
- b. For each class, is there a specific time frame after which the student begins to appear unfocused or fatigued (e.g., headaches worsen after 20 minutes)?
- c. Is the student's ability to concentrate, read or work at normal speed related to the time of day (e.g., the student has increasing difficulty concentrating as the day progresses)?
- d. Are there specific things in the school or classroom environment that seem to distract the student?
- e. Are any symptoms linked to a specific event, setting (bright lights in the cafeteria or loud noises in the hallway), task, or other activity?

Strategies for Addressing Concussion Symptoms at School

(Please note: these strategies will vary based on the student's age, level of understanding, and emotional status)

COGNITIVE

- a. Concentrate first on general cognitive skills, such as flexible thinking and organization, rather than academic content.
- b. Focus on what the student does well and expand the curriculum to more challenging content as concussion symptoms subside.
- c. Adjust the student's schedule as needed to avoid fatigue: shorten day, time most challenging classes with time when student is most alert, allow for rest breaks, reduced course load.
- d. Adjust the learning environment to reduce identified distractions or protect the student from irritations such as too-bright light or loud noises.
- e. Use self-paced, computer-assisted, or audio learning systems for the student having reading comprehension problems.
- f. Allow extra time for test/in-class assignment completion.

- g. Help the student create a list of tasks and/or daily organizer.
- h. Provide class notes for the student.
- i. Increase repetition in assignments to reinforce learning.
- j. Break assignments down into smaller chunks and offer recognition cues.
- k. Provide alternate methods for the student to demonstrate mastery, such as multiple-choice or allowing for spoken responses to questions rather than long essay responses.

BEHAVIORAL/SOCIAL/EMOTIONAL

- a. If the student is frustrated with failure in one area, redirect the student to other elements of the curriculum associated with success.
 - b. Provide reinforcement for positive behavior as well as for academic achievements.
 - c. Acknowledge and empathize with the student's sense of frustration, anger or emotional outburst: "I know it must be hard dealing with some things right now."
 - d. Provide structure and consistency; make sure all teachers are using the same strategies.
-
- e. Remove a student from a problem situation, but avoid characterizing it as a punishment and keep it as brief as possible.
 - f. Establish a cooperative relationship with the student, engaging him/her in any decisions regarding schedule changes or task priority setting.
 - g. Involve the family in the development of the concussion/symptom management plan.
 - h. Arrange preferential seating, such as moving the student away from the window or allow student to wear sunglasses (e.g. bright light).

V. *Return to Learn Plan*

Below are recommendations on academic adjustments or accommodations that might be anticipated as a result of documented medical and assessed educational need. Symptom severity may evolve or improve in an unpredictable fashion, and, therefore, flexibility and close communication among the appropriate health care professionals, the school, the family and the student are essential. The school and the family should monitor symptoms (See Section 3, Monitor Symptoms) as each stage of increased academic involvement advances and advise the appropriate health care professional of concerns. The Concussion Management Team, which includes the student and parents/guardians, should individualize each stage suggested below based on the student's assessed academic needs and tolerance for mental exertion and incorporate this into a *Return to Learn Plan* for the student. The Concussion Management Leader and Case Manager (typically the student's School Counselor and School Nurse) will facilitate communication among all parties. The Concussion Management Team will make academic adjustments, accommodations, or modifications accordingly.

The *Return to Learn* graduated steps begin when symptoms have abated. Unlike the *Return To Play* Protocol, the *Return to Learn* Protocol might start at any level and progress at a rate individualized to the student's needs and tolerance. Steps might be skipped as tolerated, though the ultimate decision on academic adjustments rests with the Concussion Management Team.

Points of Emphasis

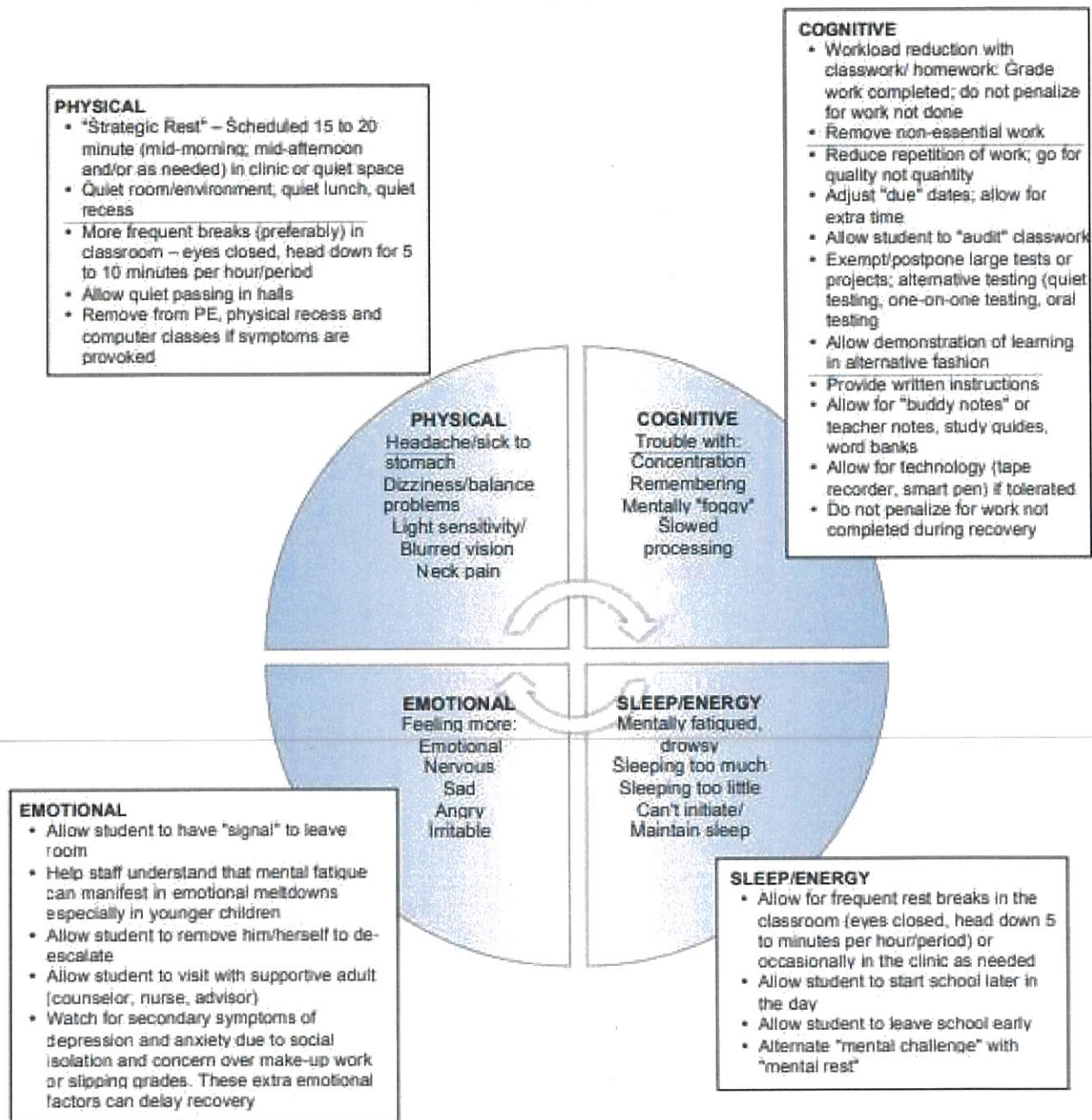
- To initiate the *Return to Learn* protocol, the student must be evaluated by the student's Licensed Physician, Nurse Practitioner, or Physician Assistant, or the School Physician or their designee and documentation must be provided to the school that the student may return to school, including completion of the Acute Concussion Evaluation ("ACE") form.
- The protocol emphasizes allowing the student to remain at home for adequate rest and then to participate in school in a modified fashion so as not to worsen symptoms. Determining "how much is too much" may be a trial and error process.
- As appropriate based on individual student need, the student should be granted alternate assignments, including assignments waived, as well as adequate time to complete prioritized missed academic work. The Return to Learn plan should identify whether the student should not be required to make up all missed assignments to avoid worsening of symptoms.
- The student should report to the Concussion Management Leader (nurse) and case manager (typically School Counselor or classroom teacher -elementary level) regularly in order to monitor symptoms and assess how the student is tolerating the accommodations as well as assess how staff is implementing the modified learning plan. These check-ins can be accomplished simultaneously by having both nurse and counselor meet with the student at the same time.
- As the student's recovery progresses through the outlined phases, teachers should be prepared to identify only essential academic work to reduce the student's anxiety related to missed assignments and to provide for appropriate cognitive rest.
- For an example of the process: A student is diagnosed with a concussion, the physician/family notifies the school. The School Nurse will send administration/counseling office and teachers/staff the "*Return To Learn - School Concussion Note*" with identified step marked so staff is made aware that the student has a diagnosed concussion. The School Counselor will then send the teachers/staff the "Daily Teacher Checklist" and teachers need to submit this form at least weekly to the School Counselor. The School Counselor will review and update the School Nurse as needed. If the student is not progressing or symptoms are getting worse the School Nurse will notify the physician. The physician will update the School Nurse using the "*Return to Learn - School Concussion Note*", and the nurse will then share that with school staff.

SYMPTOM WHEEL

Return to Learn After a Concussion

Classroom Interventions: Based on Student Symptoms

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McAvoy, Karen PsyD; **The REAP Project, Reduce Educate Accommodate Pace**; Rocky Mountain Youth Sports Medicine Institute; 2011;
McAvoy K, Brown BE. **Get Schooled on Concussions**; "Symptom Wheel" Issue #6: Jan. 2015 www.GetSchooledOnConcussions.com

RETURN TO LEARN CONCUSSION SCHOOL NOTE

Form completed by Physician/Nurse Practitioner or PA, then shared with School Nurse, the School Nurse then shares with administration/Counseling Office/teachers/coaches

Student Name: _____ Today's Date: _____
School: _____ Date of Birth: _____
Sport: _____ Date of Injury: _____
Diagnosis: D Concussion D Other _____
Date Medical Professional Initiated RTL/RTP: _____

COGNITIVE AND PHYSICAL REST

D Step 1- _____ - Brain rest, NO SCHOOL/NO SPORTS [rest at home]

- D Lots of cognitive and physical rest.
- D No classwork, no homework, no tests, assignments or tutoring or outside work or jobs.
- D ALLOW AS MUCH SLEEP AS POSSIBLE, no need to wake routinely.
- D NO SCREEN TIME, NO TV/video games/smart phone/texting or reading.
- D Additional comments or modifications: _____

RETURN TO LEARN

D Step 2- _____ - Getting Ready to Return- Still no school or work [modified rest at home]

- D Early to bed. Lots of rest.
- D Begin gentle activities (e.g., walking, reading, 15 minutes of screen time)
- D No PE/ SPORTS/ BAND or Music
- D No Assignments, homework, projects, tests or quizzes
- D If unable to tolerate gentle activities, stay on this step (Can move to next step when symptom free)
- D Additional comments or modifications: _____

D Step 3- _____ - Back to Modified School

- D Early to bed. Lots of rest. Start with less stressful classes.
- D May start partial/shortened days/shortened classes, progress to full days as tolerated.
- D NO TEST/QUIZZES, NO major projects, prioritize classwork and curriculum.
- D Lessen overall homework. (Max length of nightly homework and screen time: 15-30 min)
- D Reduce overall assignments and allow extra time to complete coursework and/or assignments.
- D Rest breaks during the day as needed (Utilize study hall, or nurse's office).
- D Allow extra time between classes. Avoid cafeteria and loud hallways. May wear sunglasses.
- D No PE/ No SPORTS/ No BAND-Chorus/ No loud Music/ No physical activity at school (recess)
- D Additional comments or modifications: _____

D Step 4- _____ - Back to Nearly Normal School Days

- D Back to school full days if possible, may have occasional shortened days when needed.
- D Homework as tolerated stop assignment if producing symptoms
- D May require tutoring or continued assistance in subjects.
- D No major tests/Projects (Max of 1 test or quiz a week if tolerated)
- D Still No PE/ No SPORTS/ No Band / No Chorus.
- D May start light aerobic exercise at home/PE class for 10 minutes at a time with rest. Start with walking.
- D Additional comments or modifications: _____

D Step 5- _____ - Full School

- D Full attendance. Full homework. Normal Tests/Quizzes (allow time for catch up)
- D May return to band stop if any symptoms develop.
- D May start light aerobic exercise at home and PE class for < 10 minutes at a time with rest.
- D Still No sports
- D Additional comments or modifications: _____

D Step 6- _____ - Neurocognitive Testing if available - Must be symptom free for 24hrs and on full school days.

- D Review results of Post Injury Impact Test and compare to baseline if applicable. **Date of Retest:** ____
- D Cleared from Return to Learn progress to Return to Play and PE

VI Return to Play

The District shall require the immediate removal from all athletic activities of any student who has sustained, or is believed to have sustained, a mild traumatic brain injury (MTBI) or concussion. Any student demonstrating signs, symptoms or behaviors consistent with a concussion while participating in a class, extracurricular activity, or interscholastic athletic activity shall be removed from the class, contest or activity and must be evaluated as soon as possible by an appropriate health care professional. Such removal must occur based on display of symptoms regardless of whether such injury occurred inside or outside of school. If there is any doubt as to whether the student has sustained a concussion, it shall be presumed that the student has been injured until proven otherwise. The District shall notify the student's parents or guardians and recommend appropriate evaluation and monitoring. A student who has symptoms of a concussion and is not stable (condition is rapidly deteriorating) is to be transported immediately to the nearest emergency department via emergency vehicle pursuant to the requirements set forth above in "Guidelines for School Personnel."

The student will not return to physical activity (including athletics, PE class, and recess) until they have been symptom-free for at least 24 hours, and has been evaluated and received written authorization from a Licensed Physician, Nurse Practitioner, or Physician Assistant. The District's Medical Director will give final clearance on a return to activity for interscholastic athletics. The standards for return to athletic activity will also apply to injuries that occur outside of school.

The District has implemented a program of neurocognitive computerized testing administered by a credentialed District staff as a concussion assessment tool to obtain baseline every two years in grades 6-12 (unless otherwise specified) and post-concussion performance data as needed. These tools are not a replacement for a medical evaluation to diagnose and treat a concussion.

Return to School Activities and Athletics

The student shall not return to physical activity (including interscholastic athletics, intramurals, Physical Education class, recess, and field trips requiring physical exertion or risk, e.g., amusement parks, hikes, etc.) until the student has been evaluated and received written authorization from the school physician or the student's licensed physician, nurse practitioner, or physician assistant. All "Return to Learn" procedures and forms, in addition to the "Return to Play" procedures and forms, must be completed for a student to Return to Play.

In accordance with Commissioner's Regulations, the School District's Medical Director will give final clearance on a return to play for 7-12 grade interscholastic student athletes. All such authorizations shall be kept on file in the student's permanent health record.

The standards for return to athletic activity will also apply to injuries that occur outside of school. Schoolstaff should be aware that students may exhibit concussion symptoms caused by injuries from outside activities and that these visible symptoms also indicate a removal from play.

The District shall follow any directives issued by the student's treating physician with regard to limitations and restrictions on school and athletic activities for the student. The School District's Medical Director/School Physician may also formulate a treatment protocol for students with concussions. The School Physician's recommendations will be final. The chart below is used for guidance during the concussion management process.

Table 1- Diagnosis and Clearance of Concussions

Where injury occurred	Who can diagnose	Who can clear to return to school activities	Who has final clearance for student to return to athletic activities	Additional Information
School Athletic Activities (interscholastic sports)	Physician Per Concussion Management and Awareness Act	Physician Per Concussion Management and Awareness Act	District Medical Director* Per Commissioner's Regulation part 136.5(d)(2)	Must be symptom free for 24 hours prior to return to Athletic Activities (interscholastic sports) Per Concussion Management and Awareness Act
School during non-Athletic Activities (interscholastic sports)	Physician Nurse Practitioner Physician Assistant Per Title VIII of Education Law	Physician Nurse Practitioner Physician Assistant Or Designee (e.g. Neuropsychologist) Per Title VIII of Education Law	District Medical Director* Per Commissioner's Regulation part 136.5(d)(2)	School must follow private health care provider orders Per Concussion Management and Awareness Act
Outside of school	Physician Nurse Practitioner Physician Assistant Per Title VIII of Education Law	Physician Nurse Practitioner Physician Assistant or Designee (e.g. Neuropsychologist) Per Title VIII of Education Law	District Medical Director* Per Commissioner's Regulation part 136.5(d)(2)	School must follow private health care provider orders Per Concussion Management and Awareness Act

***The district medical director is the final person to clear a student to return to athletic activities (interscholastic sports). It is at the discretion of the district medical director to accept a private health care provider clearance or to require the student to complete a gradual return to play protocol prior to permitting the student to return to participation in interscholastic athletics.**

Post-Concussion RETURN TO PLAY PROTOCOL for Interscholastic Athletes
Form completed by: Coach, Athletic Trainer or PE teacher

Student Name: _____

Date of Injury: _____

☐ **PHASE 1 _____ - Light low-impact aerobic activity**

- Low impact no-strenuous activity for short intervals: i.e., walking, swimming, stationary bike, etc., at a slow to medium pace in three ten-minute intervals
- Up to 50% of maximum heart rate (max HR is 220-age)
- No resistance training.
- May move to next step if symptom-free.
- Additional comments: _____

Coach/AT/PE Teacher: _____ **Date:** _____

☐ **PHASE 2 _____ - Aerobic activity/resistance training**

- Higher impact, higher exertion: i.e, jogging/running, stair-stepper at two, 15 min intervals.
- Up to 75-80% of maximum heart rate (max HR is 220-age)
- May move to next step if symptom-free.
- Additional comments: _____

Coach/AT/PE Teacher: _____ **Date:** _____

☐ **PHASE 3 _____ - Light sports specific (non-contact) activity: Simple drills, etc.**

- Running or skating drills
- May do body weight exercises (i.e., pushups, sit ups, lunges, weight room, stairs, etc.)
- Adding more movement, up to 45mins of aerobic exercise
- May move to next step if symptom-free.
- Additional comments: _____

Coach/AT/PE Teacher: _____ **Date:** _____

☐ **PHASE 4 _____ - Sports specific non-contact training drills: Complex drills, etc.**

- Harder training drills, more complex passing drills
- No head impact activities
- May move to next step if symptom-free.
- Additional comments: _____

Coach/AT/PE Teacher: _____ **Date:** _____

☐ **PHASE 5 _____ - Full contact practice**

- Reproduce exercise that the athlete may encounter during sports, games, etc.
- Participation in normal training activities
- Additional comments: _____

Coach/AT/PE Teacher: _____ **Date:** _____

☐ **PHASE 6 _____ - Return to sport and games**

Coach/AT/PE Teacher: _____ **Date:** _____

Date Case Reviewed/Cleared by Medical Director: _____

**There should be at least 24 hours (or longer) for each step of the progression. If any symptoms worsen during exercise, the athlete should go back to the previous step.

ACUTE CONCUSSION EVALUATION (ACE)

Physician/Clinician Office Version

Gerard Gioia, PhD¹ & Micky Collins, PhD²

¹Children's National Medical Center
²University of Pittsburgh Medical Center

Patient Name _____
DOB: _____ Age: _____
Date: _____ ID/MR# _____

A. Injury Characteristics Date/Time of Injury _____ Reporter: ___ Patient ___ Parent ___ Spouse ___ Other _____

1. Injury Description

- 1a. Is there evidence of a forcible blow to the head (direct or indirect)? ___ Yes ___ No ___ Unknown
1b. Is there evidence of intracranial injury or skull fracture? ___ Yes ___ No ___ Unknown
1c. Location of Impact: ___ Frontal ___ Lft Temporal ___ Rt Temporal ___ Lft Parietal ___ Rt Parietal ___ Occipital ___ Neck ___ Indirect Force
2. **Cause:** ___ MVC ___ Pedestrian-MVC ___ Fall ___ Assault ___ Sports (specify) _____ Other _____
3. **Amnesia Before (Retrograde)** Are there any events just BEFORE the injury that you/ person has no memory of (even brief)? ___ Yes ___ No Duration _____
4. **Amnesia After (Anterograde)** Are there any events just AFTER the injury that you/ person has no memory of (even brief)? ___ Yes ___ No Duration _____
5. **Loss of Consciousness:** Did you/ person lose consciousness? ___ Yes ___ No Duration _____
6. **EARLY SIGNS:** ___ Appears dazed or stunned ___ Is confused about events ___ Answers questions slowly ___ Repeats Questions ___ Forgetful (recent info) ___
7. **Seizures:** Were seizures observed? No ___ Yes ___ Detail _____

B. Symptom Check List* Since the injury, has the person experienced any of these symptoms any more than usual today or in the past day?

Indicate presence of each symptom (0=No, 1=Yes).

*Lovell & Collins, 1998 JHTR

PHYSICAL (10)		COGNITIVE (4)		SLEEP (4)	
Headache	0 1	Feeling mentally foggy	0 1	Drowsiness	0 1
Nausea	0 1	Feeling slowed down	0 1	Sleeping less than usual	0 1 N/A
Vomiting	0 1	Difficulty concentrating	0 1	Sleeping more than usual	0 1 N/A
Balance problems	0 1	Difficulty remembering	0 1	Trouble falling asleep	0 1 N/A
Dizziness	0 1	COGNITIVE Total (0-4) _____		SLEEP Total (0-4) _____	
Visual problems	0 1	EMOTIONAL (4)		Exertion: Do these symptoms <u>worsen</u> with: Physical Activity ___ Yes ___ No ___ N/A Cognitive Activity ___ Yes ___ No ___ N/A Overall Rating: How <u>different</u> is the person acting compared to his/her usual self? (circle) Normal 0 1 2 3 4 5 6 Very Different	
Fatigue	0 1	Irritability	0 1		
Sensitivity to light	0 1	Sadness	0 1		
Sensitivity to noise	0 1	More emotional	0 1		
Numbness/Tingling	0 1	Nervousness	0 1		
PHYSICAL Total (0-10) _____		EMOTIONAL Total (0-4) _____			
(Add Physical, Cognitive, Emotion, Sleep totals)		Total Symptom Score (0-22) _____			

C. Risk Factors for Prolonged Recovery (check all that apply)

Concussion History? Y N	✓	Headache History? Y N	✓	Developmental History	✓	Psychiatric History
Previous # 1 2 3 4 5		Prior treatment for headache		Learning disabilities		Anxiety
Longest symptom duration Days ___ Weeks ___ Months ___ Years ___		History of migraine headache ___ Personal ___ Family _____		Attention-Deficit/ Hyperactivity		Depression
If multiple concussions, less force caused reinjury? Yes No				Other developmental disorder _____		Sleep disorder
						Other psychiatric disorder

List other comorbid medical disorders or medication usage (e.g., hypothyroid, seizures) _____

D. RED FLAGS for acute emergency management: Refer to the emergency department with sudden onset of any of the following:

- * Headaches that worsen
- * Looks very drowsy/ can't be awakened
- * Can't recognize people or places
- * Neck pain
- * Seizures
- * Repeated vomiting
- * Increasing confusion or irritability
- * Unusual behavioral change
- * Focal neurologic signs
- * Slurred speech
- * Weakness or numbness in arms/legs
- * Change in state of consciousness

E. Diagnosis (ICD-10): ___ Concussion w/o LOC S06.0X0A ___ Concussion w/ LOC S06.0X1A ___ Concussion (Unspecified) S06.0X9A ___ Other-(854)
___ No diagnosis

F. Follow-Up Action Plan Complete ACE Care Plan and provide copy to patient/family.

- ___ No Follow-Up Needed
___ Physician/ Clinician Office Monitoring: Date of next follow-up _____
___ Referral:
___ Neuropsychological Testing
___ Physician: Neurosurgery ___ Neurology ___ Sports Medicine ___ Psychiatrist ___ Other _____
___ Emergency Department

ACE Completed by: _____ MD RN NP PhD ATC

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A concussion (or mild traumatic brain injury (MTBI)) is a complex pathophysiologic process affecting the brain, induced by traumatic biomechanical forces secondary to direct or indirect forces to the head. Disturbance of brain function is related to neurometabolic dysfunction, rather than structural injury, and is typically associated with normal structural neuroimaging findings (i.e., CT scan, MRI). Concussion may or may not involve a loss of consciousness (LOC). Concussion results in a constellation of physical, cognitive, emotional and sleep-related symptoms. Symptoms may last from several minutes to days, weeks, months or even longer in some cases.

ACE Instructions

The ACE is intended to provide an evidence-based clinical protocol to conduct an initial evaluation and diagnosis of patients (both children and adults) with known or suspected MTBI. The research evidence documenting the importance of these components in the evaluation of an MTBI is provided in the reference list.

A. Injury Characteristics:

1. Obtain **description of the injury** - how injury occurred, type of force, location on the head or body if force transmitted to head. Different biomechanics of injury may result in differential symptom patterns (e.g., occipital blow may result in visual changes, balance difficulties).
2. Indicate the **cause of injury**. Greater forces associated with the trauma are likely to result in more severe presentation of symptoms.
- 3/ 4. **Amnesia**: Amnesia is defined as the failure to form new memories. Determine whether amnesia has occurred and attempt to determine length of time of memory dysfunction – **before** (retrograde) and **after** (anterograde) injury. Even seconds to minutes of memory loss can be predictive of outcome. Recent research has indicated that amnesia may be up to 4-10 times more predictive of symptoms and cognitive deficits following concussion than is LOC (less than 1 minute).¹
5. **Loss of consciousness (LOC)** - If occurs, determine length of LOC.
6. **Early signs**. If present, ask the individuals who know the patient (parent, spouse, friend, etc) about specific signs of the concussion/ MTBI that may have been observed. These signs are typically observed early after the injury.
7. Inquire whether **seizures** were observed or not.

B. Symptom Checklist: ²

1. Ask patient (and/ or parent, if child) to report presence of the four categories of symptoms since injury. It is important to assess all listed symptoms as different parts of the brain control different functions. One or all symptoms may be present depending upon mechanisms of injury.³ Record 1 for Yes or 0 for No for their presence or absence, respectively.
2. For all symptoms, indicate presence of symptoms as experienced within the past 24 hours. Since symptoms can be present preinjury/at baseline (e.g., inattention, headaches, sleep, sadness), it is important to assess **change** from their typical presentation.
3. **Scoring**: Sum total **number** of symptoms present per area, and sum all four areas into Total Symptom Score (score range 0-22). (Note: most sleep symptoms are only applicable after a night has passed since the injury. Drowsiness may be present on the day of injury.) If symptoms are new and present, there is no lower limit symptom score. Any **score > 0** indicates **positive symptom** history.
4. **Exertion**: Inquire whether any symptoms worsen with physical (e.g., running, climbing stairs, bike riding) and/or cognitive (e.g., academic studies, multi-tasking at work, reading or other tasks requiring focused concentration) exertion. Clinicians should be aware that symptoms will typically worsen or re-emerge with exertion, indicating incomplete recovery. Over-exertion may protract recovery.
5. **Overall Rating**: Determine how different the person is acting from their usual self. Circle 0 (Normal) to 6 (Very Different).

C. Risk Factors for Protracted Recovery: Assess the following risk factors as possible complicating factors in the recovery process.

1. **Concussion history**: Assess the number and date(s) of prior concussions, the duration of symptoms for each injury, and whether less biomechanical force resulted in re-injury. Recent research indicates that cognitive and symptom effects of concussion may be cumulative, especially if there is minimal duration of time between injuries and less biomechanical force results in subsequent concussion (which may indicate incomplete recovery from initial trauma).⁴⁻⁵
2. **Headache history**: Assess personal and/or family history of diagnosis/treatment for headaches. Recent research indicates headache (migraine in particular) can result in protracted recovery from concussion.⁸⁻¹¹
3. **Developmental history**: Assess history of learning disabilities, Attention-Deficit/Hyperactivity Disorder or other developmental disorders. Recent studies indicate the possibility of a longer period of recovery with these conditions.¹²
4. **Psychiatric history**: Assess for history of depression/mood disorder, anxiety, and/or sleep disorder. ¹³⁻¹⁶

D. Red Flags: The patient should be carefully observed over the first 24-48 hours for these serious signs. Red flags are to be assessed as possible signs of deteriorating neurological functioning. Any positive report should prompt strong consideration of referral for emergency medical evaluation (e.g. CT Scan to rule out intracranial bleed or other structural pathology).¹⁷

E. Diagnosis: The following ICD-10 diagnostic codes may be applicable.

S06.0X0A (Concussion, with no loss of consciousness) – Positive injury description with evidence of forcible direct/ indirect blow to the head (A1a); plus evidence of active symptoms (B) of any type and number related to the trauma (Total Symptom Score >0); no evidence of LOC (A5), skull fracture or intracranial injury (A1b).

S06.0X1A (Concussion, with brief loss of consciousness < 30 minutes) - Positive injury description with evidence of forcible direct/ indirect blow to the head (A1a); plus evidence of active symptoms (B) of any type and number related to the trauma (Total Symptom Score >0); positive evidence of LOC (A5), skull fracture or intracranial injury (A1b).

S06.0X9A (Concussion, unspecified) - Positive injury description with evidence of forcible direct/ indirect blow to the head (A1a); plus evidence of active symptoms (B) of any type and number related to the trauma (Total Symptom Score >0); unclear/unknown injury details; unclear evidence of LOC(A5), no skull fracture or intracranial injury.

Other Diagnoses – If the patient presents with a positive injury description and associated symptoms, but additional evidence of intracranial injury (A1b) such as from neuroimaging, a moderate TBI and the diagnostic category of **S06.890A (Intracranial injury)** should be considered.

F. Follow-Up Action Plan: Develop a follow-up plan of action for symptomatic patients. The physician/clinician may decide to (1) monitor the patient in the office or (2) refer them to a specialist. Serial evaluation of the concussion is critical as symptoms may resolve, worsen, or ebb and flow depending upon many factors (e.g., cognitive/ physical exertion, comorbidities). Referral to a specialist can be particularly valuable to help manage certain aspects of the patient's condition. (Physician/clinician should also complete the ACE Care Plan included in this tool kit.)

1. **Physician/clinician serial monitoring**- Particularly appropriate if number and severity of symptoms are steadily decreasing over time and/or fully resolve within 3-5 days. If steady reduction is not evident, referral to a specialist is warranted.
2. **Referral to a specialist** – Appropriate if symptom reduction is not evident in 3-5 days, or sooner if symptom profile is concerning in type/severity.
 - **Neuropsychological Testing** can provide valuable information to help assess a patient's brain function and impairment and assist with treatment planning, such as return to play decisions.
 - **Physician Evaluation** is particularly relevant for medical evaluation and management of concussion. It is also critical for evaluating and managing focal neurologic, sensory, vestibular, and motor concerns. It may be useful for medication management (e.g., headaches, sleep disturbance, depression) if post-concussive problems persist.

Student/Patient Name: _____

Date:_____

Vestibular Ocular Motor Screening EXAM
For Concussion

VRM Test:	Number of Rotations Completed	Headache (0-10)	Dizziness (0-10)	Eye pain (0-10)	Other
Convergence (in cm) from tip of nose					
Smooth Pursuits					
Saccades- Horizontal					
Saccades- Vertical					
VOR-Horizontal					
VOR-Vertical					
Balance Rotation					

Concussion Management Team Protocol

Romulus School

Team	Principal, Athletic Director or PE Teacher, School Counselor/Social Worker, Nurse, Teaching Team, Parent
Communication Vehicle	Email, Face-to-Face Mtg. W/ Teaching Team, Phone, Virtual Meeting
Case Manager	School Counselor/Social Worker
Concussion Management Leader/Family Liaison	School Nurse
Health Care Professional Liaison	School Nurse