Return-to Learn Concussion Team Model for Ohio Schools

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Special thanks to: Dr. Susan Davies
Associate Professor
University of Dayton
Ohio’s Return-to-Play/ Concussion Law

Went into effect April 2013
Contains three tenets of model legislation

Education:
Coaches, officials, parents, student athletes

Removal from play if a concussion is reasonably suspected

Clearance by a licensed health care professional for return to play

More information available at: http://www.healthy.ohio.gov/concussion
Reasons for “Return to Learn”

• Many students who have sustained concussions, including non-athletic injuries, return to school requiring academic and environmental adjustments while the brain heals.

• School personnel are often not trained on the effects of concussions or ways to help these students transition back into learning.

• Implement Return to Learn strategies and a Concussion Team Model for Ohio schools to improve concussion recognition and response to support students.
Ohio’s Return-to-Learn/Concussion Team Model Initiative

In 2015-16, the Ohio Dept. of Health funded a pilot project
- 4 districts were trained in concussion recognition and response
- Districts implemented a concussion response team framework to process and plan for safely returning students who have sustained concussions to a learning environment
- Project manager provided ongoing assistance and consultation to these schools
- Interviews were conducted with participants
- Training materials were edited accordingly
- Results of the pilot project informed the development of a recommended model for all Ohio schools.
- Training videos, a manual, and handouts are available
Concussions

CONCUSSION = MTBI
MILD TRAUMATIC BRAIN INJURY

A concussion is caused by a direct blow or jolt to the head, face, or neck, or a blow to the body that causes the head and brain to shift rapidly back and forth.

Concussion Facts

→ It results in a short-term impairment of neurological function and a constellation of symptoms

→ Concussions are not visible on standard CT scans or MRIs

→ Accurate prevalence estimates are difficult because many do not seek medical attention

→ Nearly 33% of concussions in athletes still go unreported
Not only for Athletes…”

Causes of TBI

- Motor vehicle accidents (17.3%)
- Unknown (21%)
- Struck by/against objects (16.5%)
- Assault (10%)
- Falls (35.2%)

Effects of a Concussion: Visible Signs

Things a parent, coach, teacher, or peer might observe:

- Appears dazed or stunned
- Is confused about events
- Answers questions slowly
- Repeats questions
- Can’t recall events prior to and/or after the hit, bump, or fall
- May or may not lose consciousness (briefly)
- Shows behavior or personality changes
- Forgets class schedule or assignments

## Effects of a Concussion: Symptoms

<table>
<thead>
<tr>
<th>Cognitive (thinking)</th>
<th>Physical</th>
<th>Emotional/Mood</th>
<th>Sleep</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Feeling slowed down</td>
<td>- Headache</td>
<td>- Irritability</td>
<td>- Sleeping more than usual</td>
</tr>
<tr>
<td>- Difficulty concentrating</td>
<td>- Fuzzy or blurry vision</td>
<td>- Sadness</td>
<td>- Sleeping less than usual</td>
</tr>
<tr>
<td>- Difficulty remembering new information</td>
<td>- Nausea or vomiting (early on)</td>
<td>- More emotional</td>
<td>- Trouble falling asleep</td>
</tr>
<tr>
<td></td>
<td>- Sensitivity to noise or light</td>
<td>- Nervousness or anxiety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Balance problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Feeling tired/having no energy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Centers for Disease Control and Prevention. “Concussion.”
http://www.cdc.gov/concussion/signs_symptoms.html
Symptoms During Recovery

Symptoms flare when the brain is asked to do more than it can tolerate (trying to “tough it out” can make symptoms worse)

“Treatment” is physical and cognitive rest

However, prolonged full cognitive rest may slow recovery; need balance (Thomas et al., 2015)
Risk Factors for Prolonged Recovery

**Developmental history:**
Learning disabilities, ADHD, developmental disorders...

**Medical history:**
History of migraines/headaches

**Psychiatric history:**
Anxiety, depression, sleep disorders, other psychological disorders...

**Concussion history**
Once a student sustains a concussion, s/he may be at 3-6x higher risk for sustaining another concussion, sometimes with less force and often with more difficult recovery

(Guskiewicz, Weaver, Padua, & Garrett, 2000)
Because every concussion and every student is different, symptom clusters and recovery rates will vary.

Return to Learn ➔ Return to Play

Students receiving academic adjustments do so because symptoms are present. Students who are symptomatic should not be resuming physical activity.
Recommended that a student athlete proceed through six steps to return to play
(proceed to the next level if asymptomatic at the current level for at least 24 hours):

1. No activity, complete physical and cognitive rest
2. Light aerobic activity
3. Sport-specific activities and training
4. Non-contact drills
5. Full-contact practice training after medical clearance
6. Game Play
Initially, it is important to rest the brain & get good sleep.

Limit physical, emotional, or cognitive activities to a level that is tolerable and does not exacerbate or cause re-emergence of symptoms.

Exertion (and rest) falls along a continuum:
- No activity/full rest
- Full activity/no rest
School-based Concussion Team
Ensures every student is monitored for return to activity

When a health issue affects a student’s learning, school teams must communicate effectively with one another, with medical personnel, and with the family.

Team members can listen, recognize fear and frustration, focus on solutions, work together toward common goals.
School-based Concussion Team

**Academic Team**
- Teacher
- School Psychologist
- School Counselor
- Administrator
- Speech Language Pathologist

**Medical Team**
- School Nurse
- Athletic Trainer
- Physician

**Student & Family**

**Athletic Team**
- Coach
- Athletic Director
- Physical Education Teacher

[Image of a flowchart diagram representing the School-based Concussion Team, with interconnections between the Academic, Medical, and Athletic Teams.]
Building an Academic Concussion Management Plan

- First, assign roles and responsibilities
  - Concussion Management Leader (CML)
  - Medical Leader (ML)
  - Academic Leader (AL)

- 2 Options:
  - One leader manages all and consults with a specialist in the medical and academic areas.
  - The ML and AL split responsibilities.
Concussion Team Leader

The concussion team leader (CTL) is the “central communicator” for all team members. Depending on roles and responsibilities, this might be the school nurse, school psychologist, school counselor, administrator, or someone else.

Oversees the return-to-learn process.

Get Release of Medical Information (ROI) signed for two-way communication between school and healthcare provider.

Must be organized, a good communicator, willing to learn, and in the school building most days.

*Suggestion: same person as the 504 or IAT coordinator*
Concussion Team Process

Basic Academic Concussion Management Process:

- **Step 1:** Concussion reported
  - Injury reported to CML as soon as possible

- **Step 2:** Contact student and family
  - Meet with student upon student’s return to school.

- **Step 3:** Assess medical needs
  - Has student see physician or athletic trainer? Documentation?
  - Assess symptoms and make attendance decision.

- **Step 4:** Assess academic needs
  - Specify general accommodations supplied by health care provider (if available).
  - Assess academic needs and create accommodations.

- **Step 5:** Distribute accommodations
  - Contact family with relevant updates on student’s needs and plan.
  - Update athletic trainer and coach (if applicable).

- **Step 6:** Determine Re-assessment
  - Gain feedback from each team.
  - Decide when to re-assess medical and academic needs.

CML = Concussion Management Leader

This person oversees the entire process of academic concussion management.

- Before the school year begins:
  - CML should be identified to teachers, coaches, parents, and administrators.
  - Anyone in the school community who suspects a concussion should contact the CML right away.

Adapted from: Nationwide Children’s Hospital. A School Administrator’s Guide to Academic Concussion Management
Step 1: Concussion Reported

Notification about student with concussion is made to the school (typically to attendance or clinic) and this is reported to CTL.

Concussion is reported to the ML and teachers as soon as possible.

GMS - Concussion Team Leader /Academic Lead - School Counselor

Medical Lead - School Nurse

Staff meeting at beginning of the year to share Concussion Team information - review with attendance office
STEP 2: Contact student and family and meet with the student upon return to school.

- CTL explains his/her role & provide contact information
- CTL explains the steps in the management process
- CTL explains the responsibilities of the student & family
  - Honest communication
  - Follow recommendations
  - Forward physician notes & other relevant documentation
- Explaining responsibilities helps to ensure good communication with, and compliance from, the student and family.

GMS - Contact is made with parents/student, ML notified, schedule and grades are printed, date for return to school, teachers notified
STEP 3: Assess medical needs

• Determine if the student has been evaluated by an athletic trainer or physician. Get any documentation from them concerning school/activity restrictions and adjustments.

• If no recommendations are available, the CTL or ML should assess symptoms to determine if the student will benefit from being in school or if attendance is likely to be counterproductive.
  
  • If symptoms are significant or severe, the student may need to be sent home.
  
  • If symptoms are manageable and not becoming significantly worse by attending school, the student may continue to step 4.

• Document as required

GMS - Meet with student upon their return, documentation is collected and plan is shared with family and the team

• attendance/schedule adjustments
• assignments/tests
• daily breaks/clinic
• classroom symptom log
STEP 4: Assess academic needs

• If there are academic recommendations from the health care provider, the CTL or AL should specify those general recommendations.

• If no recommendations are available, the CTL or AL should assess the student’s academic needs.

• Document as required

COLLECT and REVIEW each day

GMS - packets are made for teachers
Cover page listing all teachers and decision making chart, physician recommendations, classroom assessment forms (5 days)
4. Student fills out classroom concussion assessment form each period to help provide teachers feedback - returns to CTL daily

Class/Period: **Ms. Carzoo**
Instructor: __________________

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**Classroom Concussion Assessment Form**

Name: ___________________________  Date: ________  Time: ________

**Instructions to the Student:**
Read the symptoms in the left-hand column. For each symptom, circle one answer in the center column. Be honest and do not skip any questions. Then, answer the question at the bottom of this page. Give the sheet to your educator once complete.

**Instructions to the Educator:**
Use the student’s responses to the following questions to devise in-class, symptom-based accommodations. Refer back to Concussions in the Classroom for more specific explanations of the accommodations.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Circle ONE in each row</th>
<th>Accommodations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>none  mild  moderate  severe</td>
<td>- Mild/moderate: Allow classroom participation</td>
</tr>
<tr>
<td>Dizziness/balance problems</td>
<td>none  mild  moderate  severe</td>
<td>- Avoid symptom triggers</td>
</tr>
<tr>
<td>Feeling sick to stomach (nausea)</td>
<td>none  mild  moderate  severe</td>
<td>- If severe, refer to nurse/parent</td>
</tr>
<tr>
<td>Tiredness/drowsiness</td>
<td>none  mild  moderate  severe</td>
<td></td>
</tr>
</tbody>
</table>

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*Courtney*  Nov. 2  9 AM
<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Circle ONE</th>
<th>Accommodations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity to light</td>
<td>no yes</td>
<td>- Move away from windows</td>
</tr>
<tr>
<td>Sensitivity to noise</td>
<td>no yes</td>
<td>- Dim lights/draw shades</td>
</tr>
<tr>
<td>Feeling mentally foggy</td>
<td>no yes</td>
<td>- Allow sunglasses/hat in class</td>
</tr>
<tr>
<td>Difficulty concentrating on</td>
<td>no yes</td>
<td>- Remove from loud environments</td>
</tr>
<tr>
<td>schoolwork</td>
<td></td>
<td>- Reduce classroom noise</td>
</tr>
<tr>
<td>Difficulty paying attention to</td>
<td>no yes</td>
<td>- Avoid headphones and loud music</td>
</tr>
<tr>
<td>teacher</td>
<td></td>
<td>- Give breaks between tasks</td>
</tr>
<tr>
<td>Difficulty remembering</td>
<td>no yes</td>
<td>- Simplify tasks</td>
</tr>
<tr>
<td>Difficulty staying organized</td>
<td>no yes</td>
<td>- Shorten task duration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Give breaks between tasks</td>
</tr>
</tbody>
</table>

What tasks in school are most difficult for you? Please write specific examples.

Looking at computer screen or TV
STEP 5: Distribute adjustments

- Give updates or changes in writing to teachers.
- Contact family (and, if applicable, coach and athletic trainer) with relevant academic/medical updates and plan, as needed.
- Document as required.

GMS - Maintain documentation from student, teachers, parents, physician, clinic, and attendance office - continue or adjust plan

- Meet weekly with student about progress in school, follow-up medical appointments, return to play progression (AT), change of symptoms, teacher/parent feedback
- Once physician follow-up appointments stop, RTP progression completed, there are no symptoms at school, and student is caught up with school work do bi-weekly checks for 1 month.
STEP 6: Identify appropriate time frame for re-assessment of needs.

Re-assess medical and/or academic needs at step 3 or 4 when…

New physician documentation arrives dictating a new course of action

Symptoms have changed (prior assessment needs to be altered)

Symptoms have resolved and are no longer a barrier to school participation or attendance

Teachers or parents identify problems in current plan that are not being adequately addressed

Once the re-assessment is complete, document as required, and return to step 5 (notify relevant parties of any changes to the plan), then continue to step 6 (identify appropriate timeframe for re-assessment).

Adapted from: Nationwide Children’s Hospital. A School Administrator’s Guide to Academic Concussion Management
Progress Monitoring

Concussion Symptom Log

As symptoms improve, gradually increase *either* the:

- Amount of work
- Length of time spent on work
- Type or difficulty of work
A Note on Student Privacy

• Any information about a student’s health status and/or academic career is protected information under HIPAA and FERPA, respectively.
• Discuss only what is necessary.
• Discuss only in situations where you cannot be overheard.
• E-mail is appropriate if it is secure.
• **Follow your school’s guidelines** about appropriate communication.

(hhs.gov/ocr/privacy/hipaa/understanding/index.html)
(www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html)
• **Educate ALL school staff** about concussions and how they affect academic learning.

• **Emphasize the reason** this is necessary: no child should suffer permanent academic damage because of a concussion!

• **Provide more specific training** to management team members:
  – Written guide identifying roles and responsibilities of team members.
  – Emphasize importance of all team members roles.
## Return to Academics Progression

<table>
<thead>
<tr>
<th>Steps</th>
<th>Progression</th>
</tr>
</thead>
</table>
| 1     | No School—Cognitive and Physical Rest  
Family should receive guidance from health care professional regarding student’s readiness to return to school (based on number, type, and severity of symptoms) |
| 2     | Partial Day Attendance with Adjustments  
Maximum accommodations  
Shortened day/schedule; breaks |
| 3     | School—Full day with adjustments |
| 4     | School—Full day without adjustments  
No physical activity until released by a healthcare professional |
| 5     | School—Full day with extracurricular involvement |
Allow participation to an extent that does not worsen symptoms.

- **Symptoms increase or worsen**: Discontinue activity. Complete cognitive rest for 20 minutes.
  - **Symptoms improve with 20 minutes of rest**: Re-start activity at or below the same level that produced symptoms.
  - **Symptoms do not improve with 20 minutes of rest**: Discontinue activity and resume when symptoms have lessened (such as next day).
- **Symptoms do not change**: Continue gradually increasing cognitive demands.
- **Increase cognitive demand**:
  - **Symptoms increase or worsen**
  - **No change in symptoms**
Determine how to modify work load

(Heintz, 2012)

Excused assignments
- not to be made up -

Accountable assignments
- responsible for content, not process -

Responsible assignments
- must be completed by student and will be graded -

Front-load academic adjustments

Map adjustments onto symptoms
see following slides for details ...
General
Cognitive/Thinking
Fatigue/Physical
Emotional
Adjust class schedule (alternate days, shortened day, abbreviated class, late start day).

No PE classes until cleared by a healthcare professional. No physical play at recess.

Allow students to audit class (i.e., participate without producing or grades).

Avoid noisy and over-stimulating environments (i.e., band/lunch room) if symptoms increase.

Allow students to drop high level or elective classes without penalty if adjustments go on for a long period of time.

Remove or limit testing and/or high-stakes projects.

Alternate periods of mental exertion with periods of mental rest.
Academic Adjustments: Cognitive/Thinking

Reduce class assignments and homework to critical tasks only. Exempt non-essential written class work or homework. Base grades on adjusted homework.

Provide extended time to complete assignments/tests. Adjust due dates.

Once key learning objective has been presented, reduce repetition to maximize cognitive stamina (e.g., assign 5 of 30 math problems).

Allow student to demonstrate understanding orally instead of writing.

Provide written instructions for work that is deemed essential.

Provide class notes by teacher or peer. Allow use of computer, smart phone, tape recorder.

Allow use of notes for test taking.
<table>
<thead>
<tr>
<th>Academic Adjustments: Fatigue/Physical</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Allow time to visit school nurse/counselor for headaches and other symptoms</strong></td>
</tr>
<tr>
<td><strong>Allow strategic rest breaks (e.g., 5-10 minutes every 30-45 minutes) during the day.</strong></td>
</tr>
<tr>
<td><strong>Allow hall passing time before or after crowds have cleared.</strong></td>
</tr>
<tr>
<td><strong>Allow student to wear sunglasses indoors. Control for light sensitivity (e.g., draw blinds, sit away from window, hat with brim).</strong></td>
</tr>
<tr>
<td><strong>Allow student to study or work in a quiet space away from visual and noise stimulation.</strong></td>
</tr>
<tr>
<td><strong>Allow student to spend lunch/recess in a quiet space for rest and control for noise sensitivity.</strong></td>
</tr>
<tr>
<td><strong>Provide a quiet environment to take tests.</strong></td>
</tr>
</tbody>
</table>
Academic Adjustments: Emotional

- Develop a plan so student can discreetly leave class as needed for rest.
- Keep student engaged in extra-curricular activities. Allow student to attend but not fully participate in sports practice.
- Provide quiet place to allow for de-stimulation.

Maintain social connection to friends

- Encourage student to explore alternative activities of non-physical nature.
- Develop an emotional support plan for the student (e.g., identify adult to talk with if feeling overwhelmed).
When Symptoms Do Not Resolve

If managed appropriately, symptoms should resolve in a few weeks.

If problems persist, academic accommodations and student support may be provided through a health plan, a 504 plan, or - in very rare cases - an IEP.

A student may exaggerate or feign symptoms in order to escape work, continue receiving academic adjustments, or avoid resuming sports. In such cases, the concussion team should meet to collaboratively determine next steps.
What Do I Do Now?

Designate a concussion team leader (CTL)

Create a culture that encourages reporting of known and suspected concussions

Provide information to all students, parents, and school staff about how concussions can affect learning and effective concussion management

Ensure that all concussion team members understand responsibilities and expectations and have written procedures

http://brain101.orcasinc.com/5000/
Take Home Messages

• No two concussions are exactly the same!
  Individualized treatment and academic accommodations may be necessary.

• EDUCATION!
  Educators still need to be educated about how to manage concussions in the classroom.

• COMMUNICATION!

• RESOURCES!!
  • www.healthy.ohio.gov
Return to Learn - A Concussion Team Model

Many students who have sustained concussions return to school requiring academic and environmental adjustments while the brain heals. School personnel are often not trained on the effects of concussions or ways to help these students transition back to school. Dr. Susan Davies, University of Dayton, in conjunction with the Ohio Department of Health, developed the "Ohio Return to Learn: Concussion Team Model" to provide strategies for Ohio school districts to use when implementing strategies to assist school personnel in this transition. The Concussion Team Model involves collaboration between administration, educators, healthcare providers, parents and the student to safely return the student to the learning environment.

Click on the boxes below to find out more about the Concussion Team Model!

http://www.healthy.ohio.gov/concussion
The Concussion Toolkit

- Guides for Athletes, Coaches, Parents, Teachers, and School Administrators at www.NationwideChildrens.org/Concussions
What if the student has not yet seen a physician, but needs academic help now?

- The school can put their own academic management plan in place.
- The school is treating a LEARNING issue that is caused by a medical problem.
- Waiting to implement a plan could compromise the student’s education and recovery.
- Daily symptom logs are a great resource
- Involve school nurse/athletic trainer
How do we know if the student is lying or trying to “work the system?”

– Communication amongst team members will help to identify inconsistencies in a student’s day to day activities and symptoms.
– If a concern is noted, a meeting should be called with the appropriate parties involved (perhaps including the student and/or parents) to discuss the appropriate plan of action.
– Direct communication between the school and the treating physician may be very helpful. (release documents)
How do Individualized Education Programs (IEPs) and 504 plans fit into academic concussion management?

- IEP and 504 plans are legal documents.
- Help ensure that student’s needs are being met by the school.
- Not usually necessary for concussion symptoms lasting less than 6 weeks (medical follow-ups would usually be involving additional testing beyond the 8-10 week mark)
- May take significant time and documentation to implement, so are not useful immediately post injury.
- Use will be unique to each school system.
How can we differentiate concussion issues from other health conditions?

- Special considerations may be needed for:
  - Migraine sufferers
  - Previous concussion/traumatic brain injury
  - Emotional disorders (anxiety, depression, etc.)
  - Existing IEP/504 plan(s)
  - Learning disabilities (ADD, ADHD, etc.)

- Diagnosis and management in these students may be more challenging.

- If possible, direct collaboration between the school and the treating physician is highly useful.
3 Case studies

Peter - tripped on hula hoop and bumped head on the wall in PE class

Shelly (IEP)- bike accident with no helmet (skull fracture)

Henry (athlete) - football player hit his head on the ground during a tackle
References


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References


