RETURN TO LEARNING (RTL) FROM A CONCUSSION
Objectives

At the completion of this training you will:

1. Be able to recognize signs & symptoms associated with a concussion.
2. Be familiar with the process of reporting a concussion.
3. Be knowledgeable of Prince William County Public Schools concussion management process.
4. Understand how to seek proper medical treatment and referral guidelines for a person suspected of having a concussion.
5. Be mindful of the tools available to provide academic support during recovery.
What is a Concussion?

• A concussion is a traumatic brain injury that alters the way the normal brain functions.

• A concussion is caused by a bump or blow to the head or body that causes the brain to move rapidly inside the skull.
Effects of Concussive Forces

“Hardware”
- Structural integrity

“Software”
- Functional ability of brain
Facts about Concussions

• Symptoms may last for as short as several minutes and last as long as several days, weeks, months, or even longer in some cases.

• A concussion may or may not result in loss of consciousness (LOC).

• Since structural injury is not always present, CT scans are not always reliable sources in determining the presence of a concussion.
How Does a Concussion Affect a Student?

- This invisible injury disrupts the way the brain normally works by affecting mental stamina, as the brain must work longer and harder even to complete simple tasks.
The Four Concussion Symptoms Categories

1. Physical
2. Emotional
3. Cognitive
4. Sleep
The Four Categories of Concussion Symptoms

1. Physical
   • Headache
   • Fatigue
   • Dizziness
   • Sensitivity to light and/or noise
   • Nausea
   • Balance problems
The Four Categories of Concussion Symptoms

2. Emotional
   • Irritability
   • Sadness
   • Feeling more emotional
   • Nervousness
The Four Categories of Concussion Symptoms

3. Cognitive

- Difficulty remembering
- Difficulty concentrating
- Feeling slowed down
- Feeling mentally foggy
Four Categories of Concussion Symptoms

4. Sleep
   - Drowsiness
   - Sleeping less than usual
   - Sleeping more than usual
   - Trouble falling asleep
Which Students Can Receive a Concussion?

A. Student who participates in school sponsored athletic program
B. Student who does not participate in school sponsored athletic programs
C. All students

Correct Answer: C

• Concussions are often associated with student-athletes; however, students who do not participate in sports are just as well susceptible to injury.
Effects on Daily Life at Home

- Difficulty completing tasks
- Reduced play/activity
- Irritability with challenges
- Personality changes
- Fatigue
- Sleep
Effects on Daily Life at School

These changes can have a significant impact on classroom learning and school work!

A+ student may become C- student

- Inability to concentrate
- Difficulty remembering direction
- Difficulty completing assignments
- Falls behind, fails tests, reduction in grades
- Disorganized
- Fatigue
- Personality changes
How can a Teacher Help?

• Every concussion is different, and each student may need different assistance;
• Type and severity of symptoms should be used as a guide to identify the course of action to be taken;
• Understand common symptom triggers;
  ▪ Reading
  ▪ Computer use
  ▪ Prolonged concentration
• Triggers are variable and will differ from student to student.
Which phase a student starts is dependent on the severity of the concussion.

Phase One:
- No School - Rest
- Limited Activity

Phase Two:
- Half Day Attendance with Academic Adjustments

Phase Three:
- Full Day Attendance with Academic Adjustments

Phase Four:
- Full Day Attendance with Minimal Academic Adjustments

Phase Five:
- Full School and Extra-Curricular Involvement

Return-To-Learn Framework
Return-To-School Framework

Phase 1: No School

Symptoms may prevent the student from full or partial participation in school. Physical symptoms tend to be the most prominent and interfere with even basic tasks.

Recommendation:
- The student should rest the brain and body as much as possible.

Strategies
- No school;
- No activities that aggravate symptoms, such as television, video games, computer use, texting or loud music;
- No physical activity.
Return-To-School Framework

Phase 2: Half-day Attendance - Academic Adjustments

Symptoms have decreased to manageable levels but may be aggravated by certain mental activities that are complex, difficult and/or have a long duration

Recommendation:

➢ Avoid tasks that produce, worsen or increase symptoms.
 Nigerian拼写 Avoid symptom triggers

Strategies:

✓ Part-day school attendance, with focus on the core subjects;
✓ Symptoms reported by student addressed with specific academic adjustments;
✓ Eliminate busy work or items not essential to learning priority material;
✓ No physical activity.
Phase 3: Full-day Attendance - Academic Adjustment

Symptoms have decreased in both number and severity. These symptoms may still be aggravated by certain activities. However short time spans with known symptom triggers do not have drastic effects on symptom levels.

Recommendation:

➢ As the student improves, gradually increase the brain’s activity by increasing the amount of work, length of time spent on the work, and the type or difficulty of work.

Strategies:

✓ Continue to prioritize in-class learning material; minimize workload and promote best effort on important tasks;
✓ Gradually increase amount of homework.
**Return-To-School Framework**

**Phase 4: Full-day Attendance - Minimal Academic Adjustments**

_In Phase 4, the student may not have any symptoms or may experience mild intermittent symptoms._

Recommendation:
- Gradual removal of academic adjustments through monitoring the student’s RTL progression.
- If the student is symptom free, they may begin the RETURN TO PLAY Progression

**Strategies:**
- Construct a plan to finish completing missed academic work and keep stress levels low.
- No physical activity until released by a healthcare professional (such as physician or athletic trainer).
Return-To-School Framework

Phase 5: Full School Including Extracurricular Involvement

In Phase 5, student returns to full school activities and may be already in the RETURN TO PLAY Progression.

Recommendation:

- No accommodations are needed.

Strategies:

- Before returning to gym class, weightlifting and/or sports, the student should complete the gradual return-to-play progression as indicated by the healthcare professional at the school.
How Do I Know How Much is Too Much for the Student?

The emphasis on the return-to-school framework is allowing the student to participate and learn without worsening symptoms (which may delay healing).

1. As the student improves, the teachers should modify school work to gradually increase demands on the brain. This may be accomplished by:
   - Increasing the amount of work;
   - Increasing the length of time spent on the work;
   - Altering the type of work;
   - Increasing the difficulty of work.

2. If symptoms do not worsen, demands may continue to be gradually increased.

3. If symptoms do worsen, the activity should be discontinued and the student allowed to rest.
How Do I Determine Which Symptoms Will Affect the Student in the Classroom?

- At the initial contact with the student after injury, an in-depth conversation should occur that will help the educator target major barriers to learning and achievement.

- To identify where the student may struggle, it is recommended that the educator ask specific, open-ended questions focusing on concussion symptoms which have the most impact on student learning.

  - How is your __________ today? (Insert a symptom, such as headache, dizziness, nausea, tiredness, etc.)
  - Are you having trouble focusing or concentrating?
  - What are you having the most trouble with in class?
  - Are lights and/or noise worsening your symptoms?
  - What things do you seem to forget?
Why is it Important for Teachers to be Understanding with a Concussed Student?

• Educators are used to hearing excuses for why classwork or homework is not finished, and therefore, may be skeptical by nature.

• Student needs to hear from educators that they understand.

• Reassurance that he or she will not fail classes because of missed school days and homework.

• The student should hear a consistent message from everyone involved, from parents or guardians to health care providers to teachers.

• This sympathy, understanding and consistency from all parties involved will help to decrease stress, and in turn, help with recovery.
Why is it Important to Prioritize Work?

- It is very easy for a student who is behind in academic work to become stressed, frustrated and emotional.

- Selection of the classes a student will attend for a half-day allows a student to avoid possible “catch up” requirements that may increase student stress.
What About School Activities Beyond the Core Subjects

Consider levels of participation in the following activities, if symptoms are worse with participation:

- Band/choir;
- Activities requiring physical activity;
- Movies in school;
- Computer use in classes like keyboarding, drafting, animation and film;
- Cafeteria, dining halls and busy hallways;
- Driving or loud bus rides;
- Dances, pep rallies and assemblies;
- Classes with excessive noise, such as woodworking, auto mechanics, etc.;
- After school sponsored events.
What are the Symptom-Specific Academic Adjustments Can I Make?

• Cognitive Exertion (Thinking) and the added stimulation of the schools environment can significantly increase symptoms, even when the student has begun to recover.

• Not allowing for complete steady recuperation from symptoms will lengthen the recovery period.

• For further assistance see the tool provided.

(Appendix A) Return-to-Learning Instructional Strategies
Example Scenario

• One of your 9th grade students gets hit in the head during participation in physical education; he informed the physical education teacher and was seen by his pediatrician later in the day. The pediatrician recommends both cognitive and physical rest until most symptoms go away. The student returns to school two days after the incident but he remains complaining of light and noise sensitivity.

• As a teacher, what adjustments can you provide for the student?
What If the Student has Problems with Sensitivity to Light and/or Noise?

You Can....... 

1. Move the student away from windows or dim the lights in the room.
2. Allow the student to wear sunglasses and/or a hat.
3. Allow the student to avoid assemblies and to eat lunch in a location other than a loud cafeteria environment.
4. Encourage the student to avoid pep rallies, athletic events, school dances and other events where there may be loud noises and/or bright lights.

For more see Appendix A
What if the Student Seems to be Easily Distracted?

You Can.....

1. Break down assignments into small, manageable chunks that can be completed in a half hour or less. Then provide a break before moving onto the next task.

2. Issue short and concise written instructions or have the student write instructions down in a step-by-step sequence.

3. Allow the student to take tests in a separate, quiet room.

4. Move the student’s seat to the front of the room so that he or she may be better observed and less easily distracted.

5. Use color coding and/or highlighting to emphasize important information.

For more see Appendix A
What if the Student Complains of Memory Problems?

You Can...

1. Provide class notes to the student or allow the use of a tape recorder for lectures.
2. Allow the use of fact sheets on tests to reduce the demand on memory.
3. Use multiple-choice and open-book tests (rather than short answer or essay) to minimize demand on memory.
4. Help the student devise ways to rehearse information (mnemonic devices, association, etc.)

For more see Appendix A
How do I Know When a Student’s Symptoms are Worsening?

Carefully observe students for:
- Greater irritability
- Increased problems paying attention or concentrating
- Less ability to cope with emotions than normal
- Increased difficulty learning or remembering new information
- Increased forgetfulness
- Inappropriate or impulsive behaviors during class
- Repeating themselves
- Worsening of physical symptoms (Headaches, vomiting, etc.)

Some students may continue to have difficulties even when these management techniques are used.

★ If symptoms worsen, share information with parents and school nurse.
Moving Forward

“Our main goal is to ensure that PWCS students and student-athletes who sustain concussions are properly diagnosed, given adequate time to heal, and are comprehensively supported at home and school throughout the recovery of their injury.”
Who Can Help Me Manage a Student with a Concussion?

• Academic concussion management should be a collaborative approach.

• A concussion management team is recommended in each school to ensure continuity of care and support.

• The concussion management team may include:
  - Student’s Physician
  - Athletic Trainer
  - Guidance Counselor
  - Teachers
  - School Psychologist
  - School Nurse
  - Parents
  - Coaches

• A consistent message and good communication are key.

• If you are unsure how information is communicated about concussed students in your school, speak with your administrators.
Communication as a Team

• Development of Concussion Management Teams (CMTs) and a working chain of communication is our future goal.

• This initiative will allow for smooth transitioning of students suffering from concussion back to the classrooms.

• Concussion teams within the school will share common roles and responsibilities to assist other team members and the concussed student.
Communication is a MUST!

Nurse
Primary Care Physician
Parents
School Administrator
Counselor
Teacher
Athletic Trainer

Concussed Student
Sample Concussion Management Team

**AT-HOME CONCUSSION TEAM**
- STUDENT/ATHLETE
- PARENTS/GUARDIANS

**SCHOOL CONCUSSION TEAM**
- SCHOOL ADMINISTRATOR
- TEACHER
- SCHOOL COUNSELOR
- PHYSICAL EDUCATION TEACHER
- SCHOOL PSYCHOLOGIST

**MEDICAL CONCUSSION TEAM**
- NURSE
- CERTIFIED ATHLETIC TRAINER (ATC)
- PRIVATE MEDICAL PROVIDER

**ATHLETIC CONCUSSION TEAM**
- COACH
- SCHOOL ATHLETIC DIRECTOR (AD)
- TEAMMATES
## Sample Concussion Management Team Roles

<table>
<thead>
<tr>
<th>CONCUSSION MANAGEMENT TEAM MEMBER</th>
<th>ROLE</th>
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<tbody>
<tr>
<td>Student</td>
<td>Communicates any signs and symptoms of a concussion promptly to CMT staff and/or parents/guardians.</td>
</tr>
<tr>
<td>Parents/Guardians</td>
<td>Primary advocate of their child during the process of planning, and coordination of care for the health and safety of the student.</td>
</tr>
<tr>
<td>School Administrators</td>
<td>Supervises that PWCS’s protocol and policies on concussions are followed. (Education, Prevention, Management, etc.)</td>
</tr>
<tr>
<td>Primary Care Provider</td>
<td>Provides orders and medical guidance that determines when the student is able to begin transitioning back to school and activities.</td>
</tr>
<tr>
<td>Certified Athletic Trainer</td>
<td>Identifies a student with a potential concussion and evaluates the student diagnosed with concussion in progress of return to athletic activities based on private medical provider orders and/or district protocol.</td>
</tr>
<tr>
<td>Physical Education Teacher</td>
<td>Provides appropriate instruction and support for student’s transition back to school and during physical education class activities.</td>
</tr>
<tr>
<td>Coaches</td>
<td>Recognition of possible signs and symptoms as well as proper referral of student-athlete for evaluation.</td>
</tr>
<tr>
<td>Teachers</td>
<td>Ensures appropriate instruction and that academic support is provided for the student during the transition back to school.</td>
</tr>
<tr>
<td>School Nurse</td>
<td>Leader of the school health nursing team; may serve as a liaison between health care professionals and school-based CMT.</td>
</tr>
<tr>
<td>School Psychologist</td>
<td>Serves as a resource consultant for the school-based concussion management team.</td>
</tr>
<tr>
<td>Athletic Director</td>
<td>Provides leadership and supervision for PE class instruction, interscholastic athletics, and intramural activities within each school. Must educate PE teachers, Coaches, parents, and students about athletic policies.</td>
</tr>
<tr>
<td>School Counselor</td>
<td>Provide support to the student and family. Assist with academic adjustments as needed.</td>
</tr>
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# Appendix

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<th>Document</th>
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<td>A.3</td>
<td>RTL Emotional Instructional Strategies</td>
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<td>Return-to-School Chart</td>
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<td>C.1</td>
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# Appendix A.1

## RTL Physical Instructional Strategies

<table>
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<tr>
<th>Symptoms</th>
<th>Instructional Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Fatigue/Headaches</td>
<td>Build strategic breaks into the student's schedule. Breaks should occur at regular intervals rather than as needed.</td>
</tr>
<tr>
<td></td>
<td>Allow time to visit school nurse to report issues and triggers that may exacerbate concussion symptoms.</td>
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<tr>
<td></td>
<td>Supervised rest should take place in a previously designated area. Ideally, the school nurse's office should be the primary location. Other locations may include the library, guidance counselor's office, or school's main office.</td>
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<tr>
<td></td>
<td>Initially require a half-day modified schedule in the morning or afternoon, dependent upon the level of fatigue. If the student has trouble in the morning, have him arrive to school late. If student is at norm in the morning and gets fatigued with cognitive exertion, then early release is a proper action.</td>
</tr>
<tr>
<td></td>
<td>The student may be able to attend school for core classes. (English, Math, History, and Science). This may be different with every student.</td>
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<tr>
<td></td>
<td>Shorten day, later start, or early dismissal, depending upon the student’s peak time of the day.</td>
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<td></td>
<td>When given the choice to increase academic adjustments or to decrease time at school, the recommendation would be to increase academic adjustments.</td>
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<tr>
<td></td>
<td>Breakdown assignments into small manageable amounts for students to complete without exacerbation of symptoms and frustration. This applies to both in-class work as well as home assignments.</td>
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<td></td>
<td>Reduce the number of exercise problems or vocabulary words to avoid constant repetition (i.e. From 30 - 10 math problems)</td>
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<td></td>
<td>Give the ability to listen to the lecture without producing the written work or notes.</td>
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<td></td>
<td>Allow the use of tape recorders for lectures. Students will be able to listen to old lectures to refresh their minds and further learn material.</td>
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<tr>
<td></td>
<td>Alleviate brain fatigue by using, checklists, task analysis lists, graphic organizers, use multiple-choice and open-book tests, word banks, and extra-time on assignments.</td>
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<td></td>
<td>Allow the student to use the elevator if one is available.</td>
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<td></td>
<td>Encourage walking with a peer who can help carrying the student's books.</td>
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<tr>
<td></td>
<td>Provide notes to prevent up and down shifting of the student’s eyes. (Eye tracking)</td>
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<tr>
<td></td>
<td>Take tests/quiz in a quiet room with few distractions.</td>
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<td></td>
<td>Discourage events where there may be loud noises and/or bright lights. (i.e. pep rallies, athletic events, school dances, assemblies, crowded halls, and loud cafeteria environments)</td>
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<tr>
<td></td>
<td>Encourage the use of ear plugs to lessen hearing issues.</td>
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<td></td>
<td>Avoid classes such as shop class, band, chorus, physical education, etc.</td>
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<td></td>
<td>Provide a warning before hand in the event of tornado and fire drills.</td>
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<tr>
<td></td>
<td>Preferred seating arrangements to stay away from talkative peers, school bells, open windows and school intercoms.</td>
</tr>
<tr>
<td></td>
<td>Allow student to leave class earlier to get to next class before the halls become busy and loud.</td>
</tr>
<tr>
<td></td>
<td>Place the student away from windows.</td>
</tr>
<tr>
<td></td>
<td>Dim lights in the classroom or draw shades down for less exposure to bright lighting.</td>
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<tr>
<td></td>
<td>Allow the student to wear sunglasses and/or a hat indoors.</td>
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<tr>
<td></td>
<td>Warn when lights will be turned off/on during lectures.</td>
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<tr>
<td></td>
<td>Avoid carrying heavy backpacks; limit unnecessary heavy lifting.</td>
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<tr>
<td>Light Sensitivity</td>
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<tr>
<td>Noise Sensitivity</td>
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<tr>
<td>Neck Pain</td>
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## Appendix A.2
### RTL Cognitive Instructional Strategies

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Instructional Strategies</th>
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</thead>
<tbody>
<tr>
<td><strong>Easily Distracted</strong></td>
<td>Break down assignments into small, manageable amounts. Use short and concise written instructions for assignments to help student be efficient and prevent confusion. Allow the student to take tests in a designated quiet area or during after school hours. Move the student's seat to the front of the room. Use color coding to emphasize important information from daily lectures. Remove, do not just postpone, in-class work and homework. Be thoughtful about the material most important to impart during a concussion. Remove or exempt student from tests or large projects until progress has been accomplished and student is capable to sustain a much higher level of work. Focus on understanding the material rather than memorization of the facts.</td>
</tr>
<tr>
<td><strong>Difficulty with New Learning</strong></td>
<td>Allow student to complete assignments but do not hold the student responsible if information is not completely accurate. (Grade the assignment.) Use short and specific instruction and assignments. Use visual or verbal cues to redirect students' attention. Be alert when the student's attention drifts. Allow rest breaks if the student is having difficulty paying attention. Use color coding and underlining to focus attention on important points. Remove unnecessary distractions in the classroom. Use transitions from one topic or task to the next. Encourage front room or arranged seating.</td>
</tr>
<tr>
<td><strong>Difficulty with Attention/Concentration</strong></td>
<td>Cognitive</td>
</tr>
<tr>
<td><strong>Feeling mentally foggy</strong></td>
<td>Cognitive</td>
</tr>
<tr>
<td><strong>Slow processing speed</strong></td>
<td>Cognitive</td>
</tr>
<tr>
<td><strong>Difficulty remembering/memory</strong></td>
<td>Cognitive</td>
</tr>
</tbody>
</table>
# Appendix A.3
## RTL Emotional Instructional Strategies

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Instructional Strategies</th>
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</table>
| Sad, Angry, Frustrated, Emotional | Avoid putting the student on the spot of negative attention.  
Monitor the student for changes and transitions from their norm. Abrupt changes in social patterns and/or academic performance.  
Encourage the student to seek help when needed. Communicate with student that help is available from the school nurse, guidance.  
If the student is frustrated with failure in one area, redirect him/her to other elements of the curriculum associated with success.  
Provide reinforcement for positive behavior as well as for academic achievements.  
Acknowledge and empathize with the student’s sense of frustration, anger or emotional outburst. “I know it must be hard dealing with...”  
Provide structure and consistency; make sure all teachers are using the same strategies to prevent a feeling of inequality.  
Remove a student from a problem situations that may cause unnecessary stress.  
Establish a cooperative relationship with the student.  
Engage the student in any decisions regarding schedule changes or task priority setting. If the student feels in control, then he/she will...  
Leave the classroom and go to a pre-arranged location where he can rest quietly.  
Set reasonable expectations. (Short attainable goals and Long term goals) SMART Goals (Specific, Manageable, Attainable, Realistic, Involve the family in the development of a progression plan.  
Have a designated school employee (teacher, nurse, counselor) periodically ‘check in’ with the student to see how they are progressing.  
Allow student and teacher to have signal to report issues.  |
| Peer Relationship difficulties | Encourage other students to be a support system for the injured student. More importantly, if the student is involved in after school  
Educate the student body about situations regarding students with specialized instructional strategies.  
Share progress and difficulties with parents, school nurse, counselor, medical provider and athletic trainer. Daily progress reports  
Develop an emotional support plan for the student. School psychologist or counselor should assist student and parents with ways to...  |
## Appendix B.1
### Return-to-School Chart

<table>
<thead>
<tr>
<th>PROGRESSION STAGES</th>
<th>OBJECTIVE OF EACH STAGE</th>
<th>Symptom free?</th>
</tr>
</thead>
</table>
School work limited to only those areas that are essential for student academics (Core Subjects)  
Part-time allows students to rest overnight and gauge load of information.                                                                                                                                                                                                                 | YES NO       |
School work limited to only those areas that are essential for student academics (Core Subjects)  
Less accommodations and small increase in academic goals.                                                                                                                                                                                                                                  | YES NO       |
Return to full day activities with moderate to minimal accommodations for more intense assignments. (i.e. tests, quizzes, and projects)                                                                                                                                                                                                                     | YES NO       |
| 5. School – Full Time                           |  **(No Adjustments)**  
Pre-Injury academic performance (norm)                                                                                                                                                                                                                                                                                                                   | YES NO       |
Appendix C.1
Sample Concussion Flow Chart
Questions?