

Guidelines for Concussion Management in the School Setting



The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Office of Student Support Services
Albany, New York 12234
June 2012

Foreword

The Concussion Management and Awareness Act, specifically Chapter 496 of the Laws of 2011, requires the Commissioner of Education, in conjunction with the Commissioner of Health, to promulgate rules and regulations related to students who sustain a concussion, also known as a mild traumatic brain injury (MTBI), at school and at any district-sponsored event or related activity. These guidelines for return to school and certain school activities apply to all public school students who have sustained a concussion regardless of where the concussion occurred. The law also requires that school coaches, physical education teachers, nurses, and certified athletic trainers complete a New York State Education Department (NYSED) approved course on concussions and concussion management every two years. Finally, the law requires that students who sustained, or are suspected to have sustained, a concussion during athletic activities are to be immediately removed from such activities. Students may not return to athletic activities until they have been symptom-free for a minimum of 24 hours and have been evaluated by, and receive written and signed authorization to return to activities from a licensed physician. Private schools have the option of adopting such policies. Private schools participating in interschool athletics with public school districts should check with their governing athletic body (e.g., New York State Public High School Athletic Association, NYSPHAA; or Public School Athletic League, PSAL) to see if complying with the Concussion Management and Awareness Act is a condition of participation.

The purpose of this document is to provide school district personnel, parents/guardians, students, and private health providers with information on concussion management in school settings. It explains the purpose of a concussion management program in schools and provides guidance for developing an effective program including planning, implementation, and follow-up protocols. This will assist in identifying a student with a potential concussion, and insure that a student who has been diagnosed with a concussion receives the appropriate care and attention at school to aid in his/her recovery.

When developing concussion management plans, districts will promote an environment where reporting signs and symptoms of a concussion is required and important. Students should be seen by their primary medical provider for diagnosis, who then may choose to refer the student to a specialist as needed. If the student does not have a primary medical provider, district health personnel may assist families in finding one by providing information on local clinics and/or providers along with information on public health insurance. Additionally, districts should be cognizant of the various constraints that many students' families face. Although districts may assist parents/guardians with finding an appropriate medical provider, they should not require students to see a district-chosen provider for a fee in order to be cleared to return to athletic activities. Per this law, any evaluation and clearance authorizing a student to return to athletic activities must be performed, written, and signed by a licensed physician. Such written clearance must be sent to school for review by the district medical director and is to be kept in the student's cumulative health record.

Extra-class periods of physical education (PE) means those sessions organized for instruction and practice in skills, attitudes, and knowledge through participation in individual, group, and team activities organized on an intramural, extramural, or interschool athletic basis to supplement regular physical education class instruction [8NYCRR 135.1(h)]. In extra class activities, the district medical director is the final person to clear a student to return to such activities [8NYCRR 135.4(c)(7)(i)]. Education Law Section 902 requires all public school districts to have a director of school health services (commonly referred to as the medical director) who may be either a physician or nurse practitioner. In instances where a school district affiliates itself with a medical practice for its required health and welfare services, one physician or nurse practitioner within that medical practice is to be designated the medical director. The medical director should be consulted when developing district policies and protocols for health related matters such as concussion management.

Every attempt has been made to ensure that the information and resources contained in this document reflect best practice in the fields of medicine and nursing practice. Local educational agencies should review these guidelines with their counsel as necessary to incorporate the guidance with district policy.

THE UNIVERSITY OF THE STATE OF NEW YORK

Regents of The University

MERRYL H. TISCH, <i>Chancellor</i> , B.A., M.A., Ed.D.	New York
ANTHONY S. BOTTAR, <i>Vice Chancellor</i> , B.A., J.D.	Syracuse
ROBERT M. BENNETT, <i>Chancellor Emeritus</i> , B.A., M.S.	Tonawanda
JAMES C. DAWSON, A.A., B.A., M.S., Ph.D.	Plattsburgh
GERALDINE D. CHAPEY, B.A., M.A., Ed.D.	Belle Harbor
HARRY PHILLIPS, 3rd, B.A., M.S.F.S.	Hartsdale
JAMES R. TALLON, JR., B.A., M.A.	Binghamton
ROGER TILLES, B.A., J.D.	Great Neck
CHARLES R. BENDIT, B.A.	Manhattan
BETTY A. ROSA, B.A., M.S. in Ed., M.S. in Ed., M.Ed., Ed.D.	Bronx
LESTER W. YOUNG, JR., B.S., M.S., Ed. D.	Oakland
Gardens	
CHRISTINE D. CEA, B.A., M.A., Ph.D.	Staten Island
WADE S. NORWOOD, B.A.	Rochester
JAMES O. JACKSON, B.S., M.A., Ph.D.	Albany
KATHLEEN M. CASHIN, B.S., M.S., Ed.D.	Brooklyn
JAMES E. COTTRELL, B.S., M.D.	New York
T. ANDREW BROWN, B.A., J.D.	Rochester

Commissioner of Education

President of The University of the State of New York

JOHN B. KING, JR.

Executive Deputy Commissioner

VALERIE GREY

Deputy Commissioner of Education - P-12

KENNETH G. SLENTZ

Associate Commissioner, Office of Curriculum, Instruction and Field Services

ANITA MURPHY

The State Education Department does not discriminate on the basis of age, color, religion, creed, disability, marital status, veteran status, national origin, race, gender, genetic predisposition or carrier status, or sexual orientation in its educational programs, services and activities. Portions of this publication can be made available in a variety of formats, including braille, large print or audio tape, upon request. Inquiries concerning this policy of nondiscrimination should be directed to the Department's Office for Diversity, Ethics, and Access, Room 530, Education Building, Albany, NY 12234. **Requests for additional copies of this publication may be made by contacting the Publications Sales Desk, Room 319, Education Building, Albany, NY 12234.**

Acknowledgements

These guidelines were developed with the assistance of an advisory group consisting of the following participants:

<p>Judith Avner, Esq. Executive Director, Brain Injury Association of New York State.</p>	<p>Robert Duarte, MD Director of North Shore Long Island Jewish Health System Concussion Center Assistant Professor of Neurology at Hofstra, NSLIJ Medical School Director, Pain Institute, Cushing's Neuroscience Institute, NSLIJ Health System</p>
<p>Linda Bakst Deputy Director of Policy Services New York State School Boards Association</p>	<p>Helen Hines Farrell, MPA Grant Project Coordinator TBI Implementation Grant Health Resources and Services Administration New York State Department of Health</p>
<p>Jeffrey J. Bazarian, MD, MPH Associate Professor of Emergency Medicine University of Rochester School of Medicine and Dentistry</p>	<p>Maria Fletcher, RN, PhD, CNE President, NYS PTA Albany, NY</p>
<p>Kyle McCauley Belokopitsky, Esq. Assistant Director for Governmental Relations NYS Council of School Superintendents</p>	<p>Eileen M. Franko, MS, Dr.P.H. Director Bureau of Occupational Health New York State Department of Health</p>
<p>Brian J. Blyth, MD Assistant Professor Department of Emergency Medicine and Center for Neural Development and Disease University of Rochester Medical Center</p>	<p>Andrew Getzin, MD Cayuga Medical Center Sports Medicine and Athletic Performance</p>
<p>Karen Cofino, RN, BSN, NCSN NY State Association of School Nurses-President Mamaroneck UFSD-School Nurse</p>	<p>Karen Hollowood, RN, BSN, MSEd Associate in School Nursing Student Support Services New York State Education Department</p>
<p>Darryl Daily, MSEd Associate in School Health Education Interim Associate in Physical Education Student Support Services New York State Education Department</p>	<p>June Janssen, RN Southern Cayuga Central School District Past Treasurer NYSASN By-Laws/OG Chair NYSASN</p>
<p>Cynthia DiLaura Devore, MD, MA, MS, FAAP Chair, Committee on School Health and Sports Medicine, District II, American Academy of Pediatrics</p>	<p>Robert J. Jones, ATC, M. Ed. Certified Athletic Trainer/ Health Educator / Physical Education Teacher Queensbury Union Free School District</p>
<p>Anthony N. Donatelli Jr., MD, FAAFP, D-ABFM Private Practice, School Physician Section XI Athletic Safety Committee</p>	<p>Barry D. Jordan, MD, MPH Director, Brain Injury Program Burke Rehabilitation Hospital</p>
<p>Kathleen M. Doyle, Ph.D. Executive Secretary State Boards for Psychology, Massage Therapy, Clinical Laboratory Technology Psychoanalysis/Psychotherapy Review Unit Office of Professions New York State Education Department</p>	<p>Marilyn A. Kacica, MD, M.P.H., F.A.A.P Medical Director Division of Family Health New York State Department of Health</p>

<p>Linda Khalil, RN, BSN, MSED Director New York Statewide School Health Services Center</p>	<p>Martha Morrissey, RN, BS, MA Associate in School Nursing Student Support Services New York State Education Department</p>
<p>Christopher A. Kus, MD, MPH Associate Medical Director Division of Family Health NYS Department of Health</p>	<p>Todd Nelson Assistant Director New York State Public High School Athletic Association</p>
<p>Jennifer M. Kwon, MD Associate Professor, Neurology and Pediatrics Associate Director, Clinic for Inherited Metabolic Disorders Golisano Children's Hospital at Strong Memorial Hospital University of Rochester Medical Center</p>	<p>Paul Novak, MS, OTR Director, Neuro-Rehabilitation Institute Sunnyview Rehabilitation Hospital</p>
<p>Paul Lasinski, ATC, MA Certified Athletic Trainer / Health Educator Harborfields Central School District</p>	<p>Laurene O'Brien, MS, RN Interim Executive Secretary New York State Board for Nursing Office of Professions New York State Education Department</p>
<p>John Leddy, MD, FACSM, FACP Medical Director, University at Buffalo Concussion Management Clinic University Sports Medicine SUNY Buffalo School of Medicine and Biomedical Sciences</p>	<p>Walter Ramos, RN, J.D. Executive Secretary NYS Board for Medicine, Veterinary Medicine, Dietetics and Nutrition, Athletic Training and Medical Physics Office of Professions New York State Education Department</p>
<p>Joan P. Libby, BS PE, MA, CAS Director of PE, Health & Athletics Ballston Spa Central School District</p>	<p>Mary Schworm, RN, M.Ed School Nurse Monroe High School Rochester City School District</p>
<p>Erin Matoon Student</p>	<p>Linda Seaman, MSED Associate in Education Improvement Services Student Support Services New York State Education Department</p>
<p>Jason M Matuszak, MD, FAAFP Director, Sports Concussion Center Chief, Sports Medicine Excelsior Orthopaedics</p>	<p>Kenneth Shapiro, MD Medical Director, Brain Injury Program Sunnyview Rehabilitation Hospital</p>
<p>James McLaughlin Student</p>	<p>Nina Van Erk Executive Director New York State Public High School Athletic Association</p>
	<p>Gail Wold, RN, BSN Coordinator New York Statewide School Health Services Center</p>

Table of Contents

Concussion Overview	1
Policy and Protocol Development	2
Prevention and Safety	3
Identification	5
Diagnosis.....	7
Post-Concussion Management.....	9
Return to School Activities.....	11
Guidelines for the Concussion Management Team.....	12
<i>Student</i>	14
<i>Parent/Guardian</i>	15
<i>School Administrator/Pupil Personnel Staff</i>	16
<i>Medical Director</i>	17
<i>Private Medical Provider/ Specialists</i>	18
<i>School Nurse</i>	19
<i>Director of Physical Education and/or Athletic Director</i>	21
<i>Certified Athletic Trainer</i>	22
<i>Physical Education Teacher/ Coaches</i>	24
<i>Teacher</i>	25
Resources	27

Concussion Overview

Concussions, a type of traumatic brain injury (TBI), are injuries to the brain that occur as the result of a fall, motor vehicle accident, or any other activity that results in an impact to the head or body.

According to the Centers for Disease Control and Prevention (CDC), *Morbidity and Mortality Weekly Report (MMWR)* [October 7, 2011/ 60(39); 1337-1342]:

- An estimated 2,651,581 million people under age 19 sustain a head injury annually.

In New York State for 2009:

- Approximately 50,500 children under the age of 19 visited the emergency room for traumatic brain injury and of those, approximately 3,000 were hospitalized.

A concussion is a reaction by the brain to a jolt or force that can be transmitted to the head by an impact or blow occurring anywhere on the body. Essentially, a concussion results from the brain moving back and forth or twisting rapidly inside the skull. The symptoms of a concussion result from a temporary change in the brain's function. In most cases, the symptoms of a concussion generally resolve over a short period of time; however in some cases symptoms can last for weeks or longer. In a small number of cases, or in cases of re-injury during the recovery phase, permanent brain injury is possible. Children and adolescents are more susceptible to concussions and take longer than adults to fully recover. Therefore, it is imperative that any student who is suspected of having sustained a concussion be immediately removed from athletic activity (e.g., recess, PE class, sports) and remain out of athletic activities until evaluated **and** cleared to return to athletic activity by a physician.

Policy and Protocol Development

Local boards of education are strongly advised to develop a written concussion management policy. This policy should reference the district's protocols, written collaboratively with the district medical director to give direction to staff involved in the identification of a potential concussion. These policies and protocols assist a student who will return to school and need accommodations after being diagnosed with a concussion. Policies should provide clear protocols, but permit accommodations for individual student needs, as determined by the student's medical provider and/or district medical director.

The New York State Education Department (NYSED) and the New York State Department of Health (DOH) recommend the following be included in a district's policy on concussion management:

- A commitment to implement strategies that reduce the risk of head injuries in the school setting and during district sponsored events. A specific list of preventative strategies should be included in a guidance document appended to the board policy.
- A procedure and treatment plan developed by the district medical director and other licensed health professionals employed by the district, to be utilized by district staff who may respond to a person with a head injury. The procedure and treatment plan should be appended to the board policy.
- A procedure to ensure that school nurses, certified athletic trainers, physical education teachers, and coaches have completed the NYSED-approved, **required** training course (See *Guidelines for the Team* beginning on page 12 for each profession). Additionally, the policy should address the education needs of teachers and other appropriate staff, students, and parents/guardians, as needed.
- A procedure for a coordinated communication plan among appropriate staff to ensure that private provider orders for post-concussion management are implemented and followed.
- A procedure for periodic review of the concussion management policy.

Prevention and Safety

Protecting students from head injuries is one of the most important ways to prevent a concussion. Although the risk of a concussion may always be present with certain types of activities, in order to minimize the risk, districts should insure that (where appropriate) education, proper equipment, and supervision to minimize the risk is provided to district staff, students, and parents/guardians. Instruction should include signs and symptoms of concussions, how such injuries occur, and possible long term effects resulting from such injury. It is imperative that students know the symptoms of a concussion and to inform appropriate personnel, even if they believe they have sustained the mildest of concussions. This information should be reviewed periodically with student athletes throughout each season. Emphasis must be placed on the need for medical evaluation should such an injury occur to prevent persisting symptoms of a concussion, and following the guidelines for return to school and activities. Providing supporting written material is advisable. Additionally, the Concussion Management and Awareness Act requires that consent forms (required for participation in interscholastic athletics) contain information on concussions and/or reference how to obtain information on concussions from the NYSED and DOH websites. It is extremely important that all students be made aware of the importance of reporting any symptoms of a concussion to their parent/guardian and/or appropriate district staff. District staff members must follow district emergency protocols and procedures for any student reporting signs and symptoms of injury or illness.

Activities that present a higher than average risk for concussions include, but are not limited to: interscholastic athletics, extramural activities, physical education classes, and recess. Districts should evaluate the physical design of their facilities and their emergency safety plans to identify potential risks for falls or other injuries. Recess should include adult supervision, with all playground equipment in good repair, and play surfaces composed of approved child safety materials.

Physical education programs should include plans that emphasize safety practices. Lessons on the need for safety equipment should be taught, along with the correct use of such equipment. In addition, rules of play should be reviewed prior to taking part in the physical activity and enforced throughout the duration thereof.

Commissioner's regulation §135.4(c)(4) requires that each school district operating a high school employ a director of physical education who shall have certification in physical education and administrative and supervisory service. Such director shall provide leadership and supervision for the class instruction, intramural activities, and interschool athletic competition in the total physical education program. Where there are extenuating circumstances, a member of the physical education staff may be designated for such responsibilities, upon approval of the Commissioner. School districts may share the services of a director of physical education.

It is recommended that the physical education (PE) director and/or the athletic director (AD) of a school district insure that all interscholastic athletic competition rules

are followed, appropriate safety equipment is used, and rules of sportsmanship are enforced. PE directors should instruct and encourage PE teachers, coaches, and student athletes from initiating contact to another player with their head or to the head of another player. Players should be proactively instructed on sport-specific safe body alignment and encouraged to be aware of what is going on around them. These practices will reduce the number of unexpected body hits that may result in a concussion and/or neck injury. In addition, proper instruction should include the rules of the sport, defining unsportsmanlike like conduct, and enforcing penalties for deliberate violations.

Identification

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. Symptoms of a concussion may appear immediately, may become evident in a few hours, or evolve and worsen over a few days. Concussions may occur at places other than school. Therefore, district staff members who observe a student displaying signs and/or symptoms of a concussion, or learn of a head injury from the student, should have the student accompanied to the school nurse. If there isn't a school nurse, or he/she is unavailable, the school should contact the parent/guardian. In accordance with the Concussion Management and Awareness Act, any student suspected of having a concussion either based on the disclosure of a head injury, observed or reported symptoms, or by sustaining a significant blow to the head or body must be removed from athletic activity and/or physical activities (e.g., PE class, recess), and observed until an evaluation can be completed by a medical provider. Symptoms of a concussion include, but are not necessarily limited to:

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

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

- Headaches that worsen
- Seizures
- Looks drowsy and/or cannot be awakened
- Repeated vomiting
- Slurred speech
- Unable to recognize people or places
- Weakness or numbing in arms or legs, facial drooping
- Unsteady gait
- Dilated or pinpoint pupils, or change in pupil size of one eye
- Significant irritability

- Any loss of consciousness
- Suspicion of skull fracture: blood draining from ear, or clear fluid from nose

Districts may choose to allow school staff who are appropriate licensed health professionals, and credentialed to use validated neurocognitive computerized testing concussion assessment tools such as Impact (Immediate Post Concussion Assessment & Cognitive Testing), CogSport (also known as Axon), Headminders, and ANAM (Automated Neuropsychological Assessment Metrics); to obtain baseline and post-concussion performance data. Districts may also choose to allow trained staff to use sideline assessment tools such as SCAT-2 (Sport Concussion Assessment Tool 2), SAC (Standardized Assessment of Concussion), or BESS (Balance Error Scoring System). When choosing to use assessment tests and tools, it is important that districts are cognizant of credentialing requirements of assessors, required testing conditions, along with conditions and time intervals required for post-concussion testing. The school district should seek authorization from the parent/guardian prior to the testing. Additionally, parents/guardians should be given a copy of the results.

Neurocognitive computerized tests and sideline assessments may assist district staff in determining the severity of a student's symptoms. **They are not a replacement for a medical evaluation to diagnose a concussion.** All students with a suspected concussion are to be seen as soon as possible by one of the following medical providers: a physician, nurse practitioner, or physician assistant. Results from assessment tools or tests completed at school should be provided to medical providers to aid in the diagnosis and treatment of students. Students removed from athletic activities at school for a suspected concussion must be evaluated by and receive written and signed authorization from a physician in order to return to *athletic activities* in school.

Diagnosis

In New York State, the diagnosis of a concussion remains within the scope of practice of the following medical providers: physicians, nurse practitioners, and physician assistants. As part of their licensure, these medical providers are encouraged to remain current on best practices in their fields. Medical providers who are not familiar with *current* best practice on concussion management are encouraged to seek out professional development updates. This section provides a general overview of current best practice to familiarize district health professionals, and should not be utilized as a replacement for professional development.

It cannot be emphasized enough that any student suspected of having a concussion – either based on the disclosure of a head injury, observed or reported symptoms, or by sustaining a significant blow to the head or body – **must** be removed from athletic activity and/or physical activities (e.g. PE class, recess), and observed until an evaluation can be completed by a medical provider. In accordance with the Concussion Management and Awareness Act, a student diagnosed with a concussion is not to be returned to athletic activities until at least 24 hours have passed without symptoms and the student has been assessed and cleared by a medical provider to begin a graduated return to activities. Per this statute, students removed from athletic activities at school for a suspected concussion must be evaluated by, and receive written and signed authorization from, a physician in order to return to *athletic activities* in school.

Evaluation by a medical provider of a student suspected of having a concussion should include a thorough health history and a detailed account of the injury. The Centers for Disease Control and Prevention (CDC) recommends that physicians, nurse practitioners, and physician assistants use the Acute Concussion Evaluation Form (ACE) to conduct an initial evaluation. <http://www.cdc.gov/concussion/headsup/pdf/ACE-a.pdf>

The CDC recommends evaluation of three areas:

- Characteristics of the injury
- Type and severity of cognitive and physical symptoms
- Risk factors that may prolong recovery

Injury Characteristics

The student, and/or the parent/guardian or district staff member who observed the injury, should be asked about the following as part of an initial evaluation:

- Description of the injury
- Cause of the injury
- Student’s memory before and after the injury
- If any loss of consciousness occurred
- Physical pains and/or soreness directly after injury

Symptoms

Students should be assessed for symptoms of a concussion including, but not limited to, those listed in the Identification Section on page 5.

Risk Factors to Recovery

According to the CDC's *Heads Up, Facts for Physicians About Mild Traumatic Brain Injury (MTBI)*, students with these conditions are at a higher risk for prolonged recovery from a concussion:

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

- History of concussion, especially if currently recovering from an earlier concussion
- Personal and/or family history of migraine headaches
- History of learning disabilities or developmental disorders
- History of depression, anxiety, or mood disorders

Students, whose symptoms worsen or generally show no reduction after 7-14 days, or sooner depending on symptom severity, should be considered for referral to a neuropsychologist, neurologist, physiatrist, or other medical specialist in traumatic brain injury.

Post- Concussion Management

Students who have been diagnosed with a concussion require both physical and cognitive rest. Delay in instituting medical provider orders for such rest may prolong recovery from a concussion. Private medical provider's orders for avoidance of cognitive and physical activity and graduated return to activity should be followed and monitored both at home and at school. Districts should consult their medical director if further discussion and/or clarification is needed regarding a private medical provider's orders, or in the absence of private medical provider orders. Additionally, children and adolescents are at increased risk of protracted recovery and severe, potential permanent disability (e.g. early dementia also known as chronic traumatic encephalopathy), or even death if they sustain another concussion before fully recovering from the first concussion. Therefore, it is imperative that a student is fully recovered before resuming activities that may result in another concussion. Best practice warrants that, whenever there is a question of safety, a medical professional err on the side of caution and hold the athlete out for a game, the remainder of the season, or even a full year.

Cognitive Rest

Cognitive rest requires that the student avoid participation in, or exposure to, activities that require concentration or mental stimulation including, but not limited to:

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

Parents/guardians, teachers, and other district staff should watch for signs of concussion symptoms such as fatigue, irritability, headaches, blurred vision, or dizziness; reappearing with any type of mental activity or stimulation. If any these signs and symptoms occur, the student should cease the activity. Return of symptoms should guide whether the student should participate in an activity. Initially a student with a concussion may only be able to attend school for a few hours per day and/or need rest periods during the day. Students may exhibit increased difficulties with focusing, memory, learning new information, and/or an increase in irritability or impulsivity. Districts should have policies and procedures in place related to transitioning students back to school and for making accommodations for missed tests and assignments. If the student's symptoms last longer than 7-14 days, a medical provider should consider referring the student for an evaluation by a neuropsychologist, neurologist, psychiatrist, or other medical specialist in traumatic brain injury.

Generally, school principals are permitted to authorize certain testing accommodations for students who incur an injury within 30 days prior to the test administration. Principals should refer to test manuals available at <http://www.p12.nysed.gov/apda/manuals/> for information on the procedures they must follow in authorizing such accommodations. These manuals also provide information on the provisions for a student to be medically excused from a State test, as well as opportunities for make ups.

In some situations, a 504 plan may be appropriate for students whose concussion symptoms are significant or last 6 months or longer. Section 504 is part of the Rehabilitation Act of 1973 and is designed to protect the rights of individuals with disabilities in programs and activities that receive Federal financial assistance from the U.S. Department of Education. Section 504 requires a school district to provide a "free appropriate public education" (FAPE) to each qualified student with a disability who is in the school district's jurisdiction, regardless of the nature or severity of the disability. Under Section 504, FAPE consists of the provision of regular or special education and related aids and services designed to meet the student's individual educational needs as adequately as the needs of nondisabled students are met.

More information is available on Section 504 law at <http://www2.ed.gov/about/offices/list/ocr/index.html>

A Q&A on Section 504 including information on addressing temporary impairments such as concussions is available at <http://www2.ed.gov/about/offices/list/ocr/504faq.html>

Physical Rest

Physical rest includes getting adequate sleep, taking frequent rest periods or naps, and avoiding physical activity that requires exertion. Some activities that should be avoided include, but are not limited to:

- Ones that result in contact and collision and are high risk for re-injury
- High speed and/or intense exercise and/or sports
- Any activity that results in an increased heart rate or increased head pressure (e.g. straining or strength training)

Students may feel sad or angry about having to limit activities, or having difficulties keeping up in school. Students should be reassured that the situation is temporary, that the goal is to help the student get back to full activity as soon as it is safe, and to avoid activities which will delay their recovery. Students should be informed that the concussion will resolve more quickly when they follow their medical provider's orders as supported by various studies. Students will need encouragement and support at home and school until symptoms fully resolve.

Return to School Activities

Once a student diagnosed with a concussion has been symptom free at rest for at least 24 hours, a private medical provider may choose to clear the student to begin a graduated return to activities. If a district has concerns or questions about the private medical provider's orders, the district medical director should contact that provider to discuss and clarify. Additionally, the medical director has the final authority to clear students to participate in or return to extra-class physical activities in accordance with 8NYCRR 135.4(c)(7)(i).

Students should be monitored by district staff daily following each progressive challenge, physical or cognitive, for any return of signs and symptoms of concussion. Staff members should report any observed return of signs and symptoms to the school nurse, certified athletic trainer, or administration in accordance with district policy. A student should only move to the next level of activity if they remain symptom free at the current level. Return to activity should occur with the introduction of one new activity each 24 hours. If any post concussion symptoms return, the student should drop back to the previous level of activity, then re-attempt the new activity after another 24 hours have passed. A more gradual progression should be considered based on individual circumstances and a private medical provider's or other specialist's orders and recommendations.

The following is a recommended sample return to physical activity protocol based on the Zurich Progressive Exertion Protocol:

<http://sportconcussions.com/html/Zurich%20Statement.pdf>

Phase 1- low impact, non-strenuous, light aerobic activity such as walking or riding a stationary bike. If tolerated without return of symptoms over a 24 hour period proceed to;

Phase 2- higher impact, higher exertion, and moderate aerobic activity such as running or jumping rope. No resistance training. If tolerated without return of symptoms over a 24 hour period proceed to;

Phase 3- Sport specific non-contact activity. Low resistance weight training with a spotter. If tolerated without return of symptoms over a 24 hour period proceed to;

Phase 4- Sport specific activity, non-contact drills. Higher resistance weight training with a spotter. If tolerated without return of symptoms over a 24 hour period proceed to;

Phase 5- Full contact training drills and intense aerobic activity. If tolerated without return of symptoms over a 24 hour period proceed to;

Phase 6- Return to full activities without restrictions.

Guidelines for the Concussion Management Team

Concussion management requires a coordinated, collective effort among district personnel along with parent(s)/guardian(s) to monitor an individual student's progress. They should advocate for academic and physical accommodations as appropriate, to reduce delays in a student's ability to return to full activities. A school concussion management team can be a useful strategy to achieve these goals. At their discretion, school districts may form a concussion management team to oversee and implement the school district's concussion policies and protocols. Per the Concussion Management and Awareness Act, this team may include, but is not limited to: the medical director; school nurse(s); administration; physical education director and/ or athletic director; certified athletic trainer(s); physical education teacher(s); coaching staff; pupil personnel services staff such as school psychologists, guidance counselors, and social workers; and others as designated by the district.

Whether or not the district has a formal concussion management team, district staff in collaboration with the private medical provider, the student, and the student's family play a substantial role in assisting the student to recovery. The following section outlines the important role every member of the team contributes to ensuring students are healthy, safe, and achieving their maximum potential. The primary focus of all members should be the student's health and recovery.

Members of the team may include, but are not necessarily limited to:

- Student
- Parents/Guardians
- School Administration/ Pupil Personnel Services Staff
- Medical Director
- Private Medical Provider and other Specialists
- School Nurse
- Director of Physical Education and/or Athletic Director
- Certified athletic trainer
- Physical Education Teacher/Coaches
- Teacher

Education Law § 902 requires districts to employ a medical director who must be either a physician or nurse practitioner. In instances where a school district affiliates itself with a medical practice for its required health and welfare services, one physician or nurse practitioner within that medical practice is to be designated the medical director. Additionally Education Law § 902, allows districts to employ school nurses who are registered professional nurses (RN). If districts also choose to employ licensed practical nurses (LPN) they should be cognizant that LPNs are not independent practitioners and must work under the direction of the RN or medical director. LPNs' scope of practice does not permit them to assess or triage; therefore they cannot be the health professional assessing and triaging injured students, or assessing a student's progress in return to school activities.

(See <http://www.op.nysed.gov/prof/nurse/nurse-guide-april09.pdf> pp. 36-37)

Guidelines for the Concussion Management Team

The Commissioner's regulations at 8 NYCRR §135.4(c)(4)(iii) requires districts that operate a high school to employ a director of physical education. The director of physical education shall have certification in physical education and administrative and supervisory service. Such director shall provide leadership and supervision for the class instruction, intramural activities, and interschool athletic competition in the total physical education program. Where there are extenuating circumstances, a member of the physical education staff may be designated for such responsibilities, upon approval of the Commissioner. School districts may share the services of a director of physical education according to Commissioner's Regulation 135.4.

Districts may also employ certified athletic trainers at the secondary school level. Athletic trainers employed by secondary schools must be certified athletic trainers according to 8 NYCRR §135.4(7) and must be supervised by a physician according to Education Law § 8351. <http://www.op.nysed.gov/prof/at/>

Guidelines for the Concussion Management Team

Student

Students should be encouraged to communicate any symptoms promptly to district staff and/or parents/guardians, as a concussion is primarily diagnosed by reported and/or observed signs and symptoms. It is the information provided by the student about their signs and symptoms that guide the other members of the team in transitioning the student back to activities. The amount and type of feedback reported by the student will be dependent on age and other factors. Therefore it is recommended that students:

- Be educated about the prevention of head injuries.
- Be familiar with signs and symptoms that must be reported to the coach, certified athletic trainer, school nurse, parent/guardian, or other staff.
- Be made aware of the risk of concussion and be encouraged to tell their coach, parent/guardian, certified athletic trainer, school nurse or other staff members about injuries and symptoms they are experiencing.
- Be educated about the risk of severe injury, permanent disability, and even death that can occur with re-injury by resuming normal activities before recovering from a concussion.
- Follow instructions from their private medical provider.
- Be encouraged to ask for help and to inform teachers of difficulties they experience in class and when completing assignments.
- Encourage classmates and teammates to report injuries.
- Promote an environment where reporting signs and symptoms of a concussion is considered acceptable.

Guidelines for the Concussion Management Team

Parent/Guardian

Parent/guardians play an integral role in assisting their child and are the primary advocate for their child. When their child is diagnosed with a concussion, it is important that the parent/guardian communicates with both the medical provider and the school. Understandably this is a stressful time for the parent/guardian as they are concerned about their child's well-being. Therefore, it is recommended that parents/guardians:

- Be familiar with the signs and symptoms of concussions. This may be accomplished by reading pamphlets, Web based resources, and/or attending meetings prior to their child's involvement in interscholastic athletics.
- Be familiar with the Concussion Management and Awareness Act's requirement that any student believed to have suffered a concussion must immediately be removed from athletic activities.
- Be familiar with any concussion policies or protocols implemented by the school district. These policies are in the best interest of their child.
- Be made aware that concussion symptoms that are not addressed can prolong concussion recovery.
- Provide any forms and written orders from the medical provider to the school in a timely manner.
- Monitor their child's physical and mental health as they transition back to full activity after sustaining a concussion.
- Report concerns to their child's private medical provider and the school as necessary.
- Communicate with the school to assist in transitioning their child back to school after sustaining a concussion.
- Communicate with school staff if their child is experiencing significant fatigue or other symptoms at the end of the school day.
- Follow the private medical provider orders at home for return to activities.

Guidelines for the Concussion Management Team

School Administrator/ Pupil Personnel Services Staff (PPS)

The school administrator and/or their designee, such as PPS staff, should insure that the district's policies on concussion management are followed. The administrator may choose to designate a formal concussion management team to oversee that district policies are enforced and protocols are implemented. Therefore, administrators should:

- Review the district's concussion management policy with all staff.
- Arrange for professional development sessions regarding concussion management for staff and/or parent meetings.
- Provide emergency communication devices for school activities.
- Provide guidance to district staff on district wide policies and protocols for emergency care and transport of students suspected of sustaining a concussion.
- Develop plans to meet the needs of individual students diagnosed with a concussion after consultation with the medical director, school nurse, or certified athletic trainer.
- Enforce district concussion management policies and protocols.
- Assign a staff member as a liaison to the parent/guardian. The liaison should contact the parent/guardian on a regular basis with information about their child's progress at school.
- Encourage parent/guardian to communicate to appointed district staff if their child is experiencing significant fatigue or other symptoms at the end of the day.
- Invite parent/guardian participation in determining their child's needs at school.
- Encourage parent/guardian to communicate with the private medical provider on the status of their child and their progress with return to school activity.
- Where appropriate, ask a parent/guardian to sign FERPA (Family Educational Rights and Privacy Act) release in order for district staff to provide information regarding the student's progress to the private medical provider.

Guidelines for the Concussion Management Team

Medical Director

The district medical director, who is a physician or nurse practitioner, plays a very important role in setting policies and procedures related to identifying students who may have sustained a concussion, along with post concussion management in school. Therefore, the medical director should:

- Collaborate with district administration in developing concussion management policies and protocols.
- Assist district staff by acting as a liaison to the student's medical provider and contacting that provider as necessary to discuss or clarify orders and plan of care.
- Attend 504 and CSE meetings when requested by 504 or CSE director.
- Review all medical providers' written clearance for students to begin graduated physical activity unless the medical director chooses to delegate this to the school nurse or certified athletic trainer. If this task is delegated, the medical director should provide concise written protocols for the school nurse or certified athletic trainer to follow when accepting a private medical provider's clearance. Such protocols should specify the type of symptoms, medical history, and concussion severity etc. that the medical director will need to personally review. This protocol may include permitting the school nurse or certified athletic trainer to act as the medical director's delegate to inform appropriate district staff of the student's return to activity.
- Clear all students returning to extra-class athletic activities in accordance with Commissioner's regulations. This can be done at the discretion of the medical director either by reviewing a private medical provider's clearance, or personally assessing the student.
- Implement district policy on return to activities. Discuss any orders with the private medical provider as needed.
- Work with the Concussion Management Team to monitor the progress of individual students with protracted recovery, multiple concussions, and atypical recovery.
- Encourage school health personnel (medical director, school nurses, and certified athletic trainers) to collaborate and communicate with each other about any student who is suspected of having or is diagnosed with a concussion.
- Become educated in the use and interpretation of neurocognitive testing (e.g. IMPACT, Headminders, and ANAM), if such tests are utilized by the school district.
- Participate in professional development activities as needed to maintain a knowledge base and keep practice current.

Guidelines for the Concussion Management Team

Private Medical Providers/ Specialists

The private medical provider is vital to all of the other Concussion Management Team members by providing orders and guidance that determine when the student is able to begin transitioning back to school and activities.

Due to the different laws that govern confidentiality of information, private medical providers and other specialists need to be aware that while they are governed by HIPAA (Health Insurance Portability and Accountability Act), districts are governed by FERPA. In order to send information to the district regarding the student the provider will need parent/guardian consent.

Likewise, a district must require a parent/guardian consent in order to release information to the provider. Further information on how these laws interact is available at <http://www2.ed.gov/policy/gen/guid/fpco/doc/ferpa-hipaa-guidance.pdf>

Therefore, the provider should:

- Provide orders regarding restrictions and monitoring for specific symptoms that the provider should be made aware of by family and/or district staff members.
- Provide the district with a graduated return to activity schedule to follow, or approve use of the district's graduated return to activity schedule if deemed appropriate.
- Readily communicate with the school nurse, certified athletic trainer, or medical director to clarify orders.
- Provide written signed orders to the district within 48 hours of giving verbal orders to the school nurse and/or certified athletic trainer.
- Provide written clearance for return to full activities (in order for a student to return to athletic activities after he or she sustained a concussion during school athletic activities, an evaluation must be completed by, written, and signed by a licensed physician to meet the requirements of the Concussion Management and Awareness Act).

Guidelines for the Concussion Management Team

School Nurse

The school nurse (RN) is often the person who communicates with the private medical provider, medical director, parent/guardian, and district staff. Often, he or she is the district staff member who collects written documentation and orders from the medical provider. The school nurse also plays an integral role in identifying a student with a potential concussion. Additionally, they assess the student's progress in returning to school activities based on private medical provider orders or district protocol. Therefore, the school nurse should:

- Perform baseline validated neurocognitive computerized tests if permitted by district policy, and credentialed in their use.
- Assess students who have suffered a significant fall or blow to the head or body for signs and symptoms of a concussion. Observe for late onset of signs and symptoms, and refer as appropriate.
- Assess the student to determine if any signs and symptoms of concussion warrant emergency transport to the nearest hospital emergency room per district policy.
- Refer parents/guardians of students believed to have sustained a concussion to their medical provider for evaluation.
- Provide parents/guardians with oral and/or written instructions (best practice is to provide both) on observing the student for concussive complications that warrant immediate emergency care.
- Assist in the implementation of the private medical provider's or other specialist's requests for accommodations.
- Use the private medical provider's or other specialist's orders to develop an emergency care plan for staff to follow.
- Monitor and assess the student's return to school activities, assessing the student's progress with each step and communicating with the private medical provider or other specialist, medical director, certified athletic trainer, parent/guardian, and appropriate district staff when necessary.
- Collaborate with the district concussion management team in creating accommodations as requested by the private medical provider or other specialist if it is determined that a 504 plan is necessary.
- Review a private medical provider's or other specialist's written statement to clear a student to return to activities (if the district's medical director has written a policy delegating this to the school nurse). Such protocols should specify the type of symptoms, medical history, and concussion severity etc. that the medical director will need to personally review. This protocol may include permitting the school nurse to act as the medical director's delegate to inform appropriate district staff of the student's return to activity.
- Perform post concussion assessments or use validated neurocognitive computerized tests or other assessment tools, if credentialed or trained in their use, and provide the results to the private medical provider and/or district medical director to aid him/her in determining the student's status.
- Educate students and staff in concussion management and prevention.

Guidelines for the Concussion Management Team

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

Licensed health professionals are encouraged, but not required, to seek out further professional development on concussions.

**Note: This is not a NYS specific training video, therefore the scope of practice of certified athletic trainers and school nurses in NYS may differ from what is described in the training. Registered professional nurses, licensed practical nurses, and certified athletic trainers practicing in NYS must follow NYS laws in regards to licensing and scope of practice.*

Guidelines for the Concussion Management Team

Director of Physical Education and/or Athletic Director

The director of physical education provides leadership and supervision for PE class instruction, intramural activities, and interscholastic athletic competition within a school district's total physical education program. In some districts there may be an athletic director solely in charge of the interscholastic athletic program. The director of physical education and/or the athletic director must be aware of district policies regarding concussion management. They should educate PE teachers, coaches, parents/guardians, and students about such policies. The director of PE and/or the athletic director often act as the liaison between district staff and coaches. Therefore, the director of PE and/or athletic director should:

- Ensure that pre-season consent forms include information from the NYSED Web site as required by the Concussion Management and Awareness Act, as well as information about the district's policies and protocols for concussion management.
- Offer educational programs to parents/guardians and student athletes that educate them about concussions.
- Inform the school nurse, certified athletic trainer, or medical director of any student who is suspected of having a concussion.
- Ensure that any student identified as potentially having a concussion is not permitted to participate in any athletic activities until written clearance is received from the district medical director.
- Ensure that game officials, coaches, PE teachers, or parent/guardian are not permitted to determine whether a student with a suspected head injury can continue to play.
- Educate coaches on the school district's policies on concussions and care of injured students during interscholastic athletics, including when to arrange for emergency medical transport.
- Ensure NYSPHAA (New York State Public High School Athletic Association), PSAL (Public School Athletic League), and other NYS athletic associations' policies are followed and enforced for interscholastic athletics.
- Support staff implementation of graduated return to athletics protocol.
- Enforce district policies on concussions including training requirements for coaches, PE teachers, and certified athletic trainers in accordance with Commissioner's Regulation 135.4.
- If the district medical director has authorized the school nurse or certified athletic trainer to review and accept a private provider's clearance, that written policy should be made readily available to the athletic director, PE teachers, and coaches.

Guidelines for the Concussion Management Team

Certified Athletic Trainer

A certified athletic trainer under the supervision of a qualified physician can assist the medical director and director of PE by identifying a student with a potential concussion. The certified athletic trainer can also evaluate the student diagnosed with a concussion in their progress in return to athletic activities based on private medical provider orders and/or district protocol. They also play an integral role in ensuring the student athlete receives appropriate post concussion care as directed by the student's medical provider. Therefore, certified athletic trainers should:

- Oversee student athletes taking baseline validated standardized computerized tests if permitted by district policy, and credentialed in their use.
- Evaluate student athletes who may have suffered a significant fall or blow to the head or body for signs and symptoms of a concussion when present at athletic events. Observe for late onset of signs and symptoms, and refer as appropriate.
- Evaluate the student to determine if any signs and symptoms of concussion warrant emergency transport to the nearest hospital emergency room per district policy.
- Refer parents/guardians of student athletes believed to have sustained a concussion to their medical provider for evaluation.
- Provide parents/guardians with oral and/or written instructions (best practice is to provide both) on observing the student for concussive complications that warrant immediate emergency care.
- Assist in implementation of the private medical provider's or other specialists' requests for accommodations.
- Monitor the student's return to school activities, evaluating the student's progress with each step, and communicating with the private medical provider or other specialist, medical director, school nurse, parent/guardian and appropriate district staff.
- Review a private physician's written statement to clear a student for return to activities (if the district's medical director has written a policy delegating this to the certified athletic trainer). Such protocols should specify the type of symptoms, medical history, and concussion severity etc. that the medical director will need to personally review. This protocol may include permitting the school nurse or certified athletic trainer to act as the medical director's delegate to inform appropriate district staff of the student's return to activity.
- May perform post concussion observations or oversee student athletes taking validated standardized computerized tests if credentialed or trained in their use, and provide the results to the private medical provider and/or district medical director to aid him/her in determining the student's status.
- Educate students and staff in concussion management and prevention.

Certified athletic trainers in secondary schools must complete the Department-approved course* for school nurses and certified athletic trainers every two (2) years.

Guidelines for the Concussion Management Team

NYSED has approved the course *Heads Up to Clinicians* for these professions, which is a free web-based course that has been developed by the CDC. It is available at <http://preventingconcussions.org/>.

Licensed health professionals are encouraged, but not required, to seek out further professional development on concussions.

**Note: This is not a NYS specific training video, therefore the scope of practice of certified athletic trainers and school nurses in NYS may differ from what is described in the training. Registered professional nurses, licensed practical nurses, and certified athletic trainers practicing in NYS must follow NYS laws in regards to licensing and scope of practice.*

Guidelines for the Concussion Management Team

Physical Education Teacher/ Coaches

Concussions often occur during athletic activities. Coaches are typically the only district staff at all interscholastic athletic practices and competitions. It is essential that coaches and physical education (PE) teachers are familiar with possible causes of concussions along with the signs and symptoms. Coaches and physical education teachers should always put the safety of the student first. Therefore, PE teachers and coaches should:

- Remove any student who has taken a significant blow to head or body, or presents with signs and symptoms of a head injury immediately from play because the Concussion Awareness Management Act requires immediate removal of any student believed to have sustained a concussion.
- Contact the school nurse or certified athletic trainer (if available) for assistance with any student injury.
- Send any student exhibiting signs and symptoms of a more significant concussion (see page 5) to the nearest hospital emergency room via emergency medical services (EMS) or as per district policy.
- Inform the parent/guardian of the need for evaluation by their medical provider. The coach should provide the parent/guardian with written educational materials on concussions along with the district's concussion management policy.
- Inform the PE director, certified athletic trainer, the school nurse and/or medical director of the student's potential concussion. This is necessary to ensure that the student does not engage in activities at school that may complicate the student's condition prior to having written clearance by a medical provider.
- Ensure that students diagnosed with a concussion do not participate in any athletic activities until, in conjunction with the student's physician, the PE teacher/coach has received written authorization from the medical director or their designee that the student has been cleared to participate.
- Ensure that students diagnosed with a concussion do not substitute mental activities for physical activities unless medical provider clears the student to do so (e.g. Due to the need for cognitive rest, a student should not be required to write a report if they are not permitted to participate in PE class by their medical provider).

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

District athletic personnel are encouraged, but not required, to seek out further professional development on concussions.

Guidelines for the Concussion Management Team

Teacher

Teachers can assist students in their recovery from a concussion by making accommodations that minimize aggravating symptoms so that the student has sufficient cognitive rest. Teachers should refer to district protocols and private medical provider orders in determining academic accommodations. Section 504 plans may need to be considered for some students with severe symptoms requiring an extended time frame for accommodations (see p. 10).

Teachers should be aware of the processing issues a student with a concussion may experience. A student who has a concussion will sometimes have short term problems with attention and concentration, speech and language, learning and memory, reasoning, planning, and problem solving.

More information on classroom accommodations can be found at:

<http://www.upstate.edu/pmr/healthcare/programs/concussion/classroom.php>

<http://www.nationwidechildrens.org/concussions-in-the-classroom>

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

The table below provides some of the areas of difficulties along with suggested accommodations.

Problem Area	Problem Description	Accommodations
Expression	<p>Word Retrieval: May have trouble thinking of specific words (word finding problems) or expressing the specifics of their symptoms or functional difficulties</p>	<ul style="list-style-type: none"> • Allow students time to express themselves • Ask questions about specific symptoms and problems (i.e., are you having headaches?)
Comprehension	<p>Spoken:</p> <ul style="list-style-type: none"> • May become confused if too much information is presented at once or too quickly • May need extra time processing information to understand what others are saying • May have trouble following complex multi-step directions • May take longer than expected to respond to a question <p>Written:</p> <ul style="list-style-type: none"> • May read slowly • May have trouble reading material in complex formats or with small print • May have trouble filling out forms 	<ul style="list-style-type: none"> • Speak slowly and clearly • Use short sentences • Repeat complex sentences when necessary <ul style="list-style-type: none"> • Allow time for students to process and comprehend • Provide both spoken and written instructions and directions • Allow students extra time to read and complete forms • Provide written material in simple formats and large print when possible • Have someone read the items and fill out the forms for students who are having trouble • Provide word prompts • Use of multiple choice responses need to be distinctly different.

Adapted from the Center for Disease Control and Prevention, [Heads Up Facts for Physicians About Mild Traumatic Brain Injury](#).

Guidelines for the Concussion Management Team

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

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

Resources

American Association of Neurological Surgeons

<http://www.aans.org/Patient%20Information/Conditions%20and%20Treatments/Concussion.aspx>

accessed 4/25/12

Brain Injury Association of New York State

<http://www.bianys.org>

accessed 4/25/12

Centers for Disease Control and Prevention

<http://www.cdc.gov/concussion/index.html>

accessed 4/25/12

Child Health Plus

http://www.health.ny.gov/health_care/managed_care/consumer_guides/about_child_health_plus.htm

accessed 4/25/12

Consensus Statement on Concussion in Sport – The 3rd International Conference on Concussion in Sport, held in Zurich, November 2008

<http://sportconcussions.com/html/Zurich%20Statement.pdf>

accessed 4/25/12

ESPN Video- *Life Changed by Concussion*

<http://espn.go.com/video/clip?id=7525526&categoryId=5595394>

accessed 4/25/12

Local Departments of Social Services- New York State Department of Health

http://www.health.ny.gov/health_care/medicaid/ldss.htm

accessed 4/25/12

Nationwide Children’s Hospital- *An Educator’s Guide to Concussions in the Classroom*

<http://www.nationwidechildrens.org/concussions-in-the-classroom>

accessed 4/25/12

New York State Department of Health

http://www.health.ny.gov/prevention/injury_prevention/concussion.htm

accessed 4/25/12

New York State Public High School Athletic Association, *Safety and Research*

<http://www.nysphsaa.org/safety/>

accessed 4/25/12

SportsConcussions.org

<http://www.sportsconcussions.org/ibaseline/>

accessed 4/25/12

Upstate University Hospital- *Concussion in the Classroom*

<http://www.upstate.edu/pmr/healthcare/programs/concussion/classroom.php>

accessed 4/25/12