SMC has completed the requirements of and is hereby granted the rights and privileges of a Sports Medicine Concepts, Inc., designated

Certified Concussion Clinic™

SMC Concussion Policy and Procedures

Contents

Legal / Legislative

This document represents a written standard of care that may be used to define a legal standard of care to which Sports Medicine Concepts, Inc (SMC) may be held accountable to. In some instances, State concussion laws can be superseded by more stringent policies enacted by athletic organizations, school districts, or other overseeing bodies. This is the case in the State of Michigan, where the Michigan High School Athletic Association's (MHSAA) policies and procedures represent a high standard of care than is specifically required by Michigan State law.

State of Michigan Concussion Law at www.michigan.gov/sportsconcussion

Act No. 342
Public Acts of 2012
Approved by the Governor
October 23, 2012
Filed with the Secretary of State
October 23, 2012
EFFECTIVE DATE: 91st day after final adjournment of 2012 Regular Session

STATE OF MICHIGAN
96TH LEGISLATURE
REGULAR SESSION OF 2012

Introduced by SenatSMC Proos, Brandenburg, Marleau, Hansen and Jones

ENROLLED SENATE BILL No. 1122

AN ACT to amend 1978 PA 368, entitled "An act to protect and promote the public health; to codify, revise, consolidate, classify, and add to the laws relating to public health; to provide for the prevention and control of diseases and disabilities; to provide for the classification, administration, regulation, financing, and maintenance of personal, environmental, and other health services and activities; to create or continue, and prescribe the powers and duties of, departments, boards, commissions, councils, committees, task forces, and other agencies; to prescribe the powers and duties of governmental entities and officials; to regulate occupations, facilities, and agencies affecting the public health; to regulate health maintenance organizations and certain third party administratSMC and insurers; to provide for the imposition of a regulatory fee; to provide for the levy of taxes against certain health facilities or agencies; to promote the efficient and economical delivery of health care services, to provide for the appropriate utilization of health care facilities and services, and to provide for the closure of hospitals or consolidation of hospitals or services; to provide for the collection and use of data and information; to provide for the transfer of property; to provide certain immunity from liability; to regulate and prohibit the sale and offering for sale of drug paraphernalia under certain circumstances; to provide for the implementation of federal law; to provide for penalties and remedies; to provide for sanctions for violations of this act and local ordinances; to provide for an appropriation and supplements; to repeal certain acts and parts of acts; to repeal certain parts of this act; and to repeal certain parts of this act on specific dates," (MCL 333.1101 to 333.25211) by adding section 9155.

The People of the State of Michigan enact:

Sec. 9155. (1) Before the expiration of 90 days after the effective date of this section, the department shall develop, adopt, or approve educational materials on the nature and risk of concussions.

(2) Before the expiration of 90 days after the effective date of this section, the department shall develop, adopt, or approve a concussion awareness training program in an electronic format that includes all of the following:

(a) The nature and risk of concussions.

(b) The criteria for the removal of an athlete from physical participation in an athletic activity due to a suspected concussion and his or her return to that athletic activity.

(c) The risks to an athlete of not reporting a suspected concussion and continuing to physically participate in the athletic activity.

(3) As soon as they are available, the department shall make the educational materials and training program required under this section available to the public on the department's internet website. The department shall make the training program available to all individuals required to participate in the program under section 9156 and to any interested individual including school personnel, coaches, parents, students, and athletes.

(4) As used in this section and section 9156:

(a) "Appropriate health professional" means a health professional who is licensed or otherwise authorized to engage in a health profession under article 15 and whose scope of practice within that health profession includes the recognition, treatment, and management of concussions.

(b) "Athletic activity" means a program or event, including practice and competition, during which youth athletes participate or practice to participate in an organized athletic game or competition against another team, club, entity, or individual. Athletic activity includes participation in physical education classes that are part of a school curriculum.

(c) "Concussion" means a type of traumatic brain injury as recognized by the centers for disease control and prevention. A concussion may cause a change in a person's mental status at the time of the injury, including, but not limited to, feeling dazed, disoriented, or confused, and may or may not involve a loss of consciousness. A concussion may be caused by any type of accident or injury including, but not limited to, the following:

(*i*) A fall.

(*ii*) A blow, bump, or jolt to the head or body.

(*iii*) The shaking or spinning of the head or body.

(*iv*) The acceleration and deceleration of the head.

(d) "Organizing entity" means any of the following:

(*i*) A school.

(*ii*) A state or local parks and recreation department or commission or other state or local entity.

(*iii*) A nonprofit or for-profit entity.

(*iv*) A public or private entity.

(e) "School" means a nonpublic school, public school, or public school academy as those terms are defined in section 5
of the revised school code, 1976 PA 451, MCL 380.5.

(f) "Youth athlete" means an individual who participates in an athletic activity and who is under 18 years of age.

Enacting section 1. This amendatory act took effect on June 30, 2013 with House Bill No. 5697 of the 96th Legislature is enacted into law.

Michigan High School Athletic Association

Action Under Public Acts 342 and 343 (Concussion Law) requires all levels of schools and youth sports organizations to educate, train and collect forms for **non-MHSAA** activities including physical education classes, intra-mural and out-of-season camps or clinics. It should be understood that for MHSAA sports, the existing rules meeting completion requirement and concussion removal and return-to-play protocols, first begun in 2010, remain in effect. This includes that each school shall designate the person who shall evaluate suspected concussions. If a student is withheld from competition due to a suspected concussion, he or she may not return at all on that day and only on a subsequent day with the written clearance of **an MD or DO**. This is more stringent than the new law and must be followed for MHSAA competition and practices. Not adhering to this protocol results in ineligibility of the student and forfeiture of contests.

Compliance with other respects of the new concussion law is accomplished through a website of the Michigan Department of Community Health (MDCH) **michigan.gov/sportsconcussion**.

Below is a brief summary of what the new law is requiring youth sports organizations and schools to do for **non-MHSAA sport activities** such as physical education, intramurals and out-of-season or summer camps and clinics:

1. Adults (coaches and teachers) must complete a free online training course. There are two options on the MDCH website, one through the Centers for Disease Control (CDC.gov) and one through the National Federation of State High School Associations (NFHS.org). These courses are the only options to fulfill the adult training requirement unless attorneys for a school or organizing entity attest that their content has met the criteria of the law and accept liability. Schools should collect and file the certificate of completion for each adult. A school may hold a group meeting, show an approved online course, record and vouch for completion of the tests at the nod the course and then collect individual documentation that the course was completed.

2. Sponsoring organizations must provide educational training materials to students and parents and collect and maintain their signed statement of receipt of that information for the duration of the student's involvement with the organization, or age 18. The MDCH website's educational material is found under "Information for Parents & Athletes." The content of this material may not be altered, but it may be reformatted.

The website also links to an "Acknowledgement Form" (under Popular Documents and Links). This form can be used as the signed statement, or the sponsoring organization may create its own form provided the content is similar. Some schools are including concussion information and signed statements with school registration and handbook materials, at first for all students and in subsequent years for new students.

3. Sponsoring organizations must follow the same concussion protocols for non-MHSAA events as is currently done for MHSAA sports when a student is suspected of a concussion. Sit them out, find out and do not al-low them to return to practice or competition until cleared in writing.

The new law requires sponsoring organizations to maintain a copy of any written clearance until the student is 18 years of age.

This is not intended to be legal advice. Schools should review the website and contact their own attorneys if they so choose. This is a summary to assist schools this spring so they are in compliance.

MHSAA Protocol for Implementation of National Federation Sports Playing Rules for Concussion

"Any athlete who exhibits signs, symptoms, or behaves consistent with a concussion (such as loss of consciousness, headache, dizziness, confusion, or balance problems) shall be immediately removed from the contest and shall not return to play until cleared by an appropriate health care professional."

The language above, which appears in all National Federation sports rule books, reflects a strengthening of rules regarding the safety of athletes suspected of having a concussion. This language reflects an increasing focus on safety and acknowledges that the vast majority of concussions do not involve a loss of consciousness. This protocol is intended to provide the mechanics to follow during the course of contests when an athlete sustains an apparent concussion. 1. The officials will have no role in determining concussion other than the obvious one where a player is either unconscious or apparently unconscious. Officials will merely point out to a coach that a player is apparently injured and advise that the player should be examined by a health care professional for an exact determination of the extent of injury. 2. If it is confirmed by the school's designated health care professional that the student did not sustain a concussion, the head coach may so advise the officials during an appropriate stoppage of play and the athlete may reenter competition pursuant to the contest rules. 3. Otherwise, if competition continues while the athlete is withheld for an apparent concussion, that athlete may not be returned to competition that day but is subject to the return to play protocol. a. The clearance may not be on the same date on which the athlete was removed from play. b. Only an M.D., D.O., Physician's Assistant or Nurse Practitioner may clear the individual to return to activity. c. The clearance must be in writing and must be unconditional. It is not sufficient that the M.D., D.O., Physician's Assistant or Nurse Practitioner has approved the student to begin a return to-play progression. The medical examiner must approve the student's return to unrestricted activity. d. Individual school, districts and leagues may have more stringent requirements and protocols including but not limited to mandatory periods of inactivity, screening and post-concussion testing prior to the written clearance for return to activity. 4. Following the contest, an Officials Report shall be filed with a removed player's school and the MHSAA if the situation was brought to the officials' attention. 5. Member schools are required to complete and submit the forms designated by the MHSAA to record and track head injury events in all levels of all sports. 6. In cases where an assigned MHSAA tournament physician (MD/DO/PA/NP) is present, his or her decision to not allow an athlete to return to activity may not be overruled.

RETURN TO COMPETITION

This form is to be used after an athlete is removed from and not returned to competition after exhibiting concussion symptoms. MHSAA rules require unconditional written authorization from a physician (MD/DO/ Physician's Assistant/ Nurse Practitioner) before an athlete may return to activity after exhibiting concussion symptoms that caused that athlete to be removed for the duration of a contest.

In cases where an assigned MHSAA Tournament physician (MD/DO/PA/NP) is present, his or her decision to not allow a student to return to activity may not be overruled.

Athlete: _____School: _____
Event/Sport: _____Date of Injury: _____

REASON FOR ATHLETE'S INCAPACITY

_____
_____

Action of M.D., D.O., Physician's Asst. or Nurse Practitioner

• The clearance must be in writing and must be unconditional. It is not sufficient that the M.D., D.O. Physician's Assistant or Nurse Practitioner has approved the student to begin a return-to-play progression. The medical examiner must approve the student's return to unrestricted activity.
• Individual school, districts and leagues may have more stringent requirements and protocols including but not limited to mandatory periods of inactivity, screening and post-concussion testing prior to or after the written clearance for return to activity.
• A school or licensed health care professional may use a locally created form provided it complies with MHSAA regulations. (See MHSAA Concussion Protocol)

☐ I have examined the named student-athlete following this episode and determined the following: Permission is granted for the athlete to return to activity (may not return to practice or competition on the same day as the injury).

_____ DATE:_____
SIGNATURE (Must be MD/ DO/PA/NP)

Examiner's Name (Printed): _____

Copies to: Team Coach and Athletic Director (Duplicate as Needed)

In addition to this return to competition form, member schools are required to complete and submit a report on MHSAA.com to record and track concussion events in all levels of all sports.

Sanction for Non-Compliance

Following are the consequences for not complying with National Federation and MHSAA rules when players are removed from play because of a concussion:

• A concussed student is ineligible to return to any athletic meet or contest on the same day the concussion is sustained.

• A concussed student is ineligible to enter a meet or contest on a subsequent day without the written authorization of an M.D., D.O., Physician's Assistant or Nurse Practitioner.

These students are considered ineligible players and any meet or contest which they enter is forfeited. In addition, that program is placed on probation through that sport season of the following school year. For a second offense in that sport during the probationary period – that program is continued on probation through that sport season of the following school year and not permitted to participate in the MHSAA tournament in that sport during the original and extended probationary period.

State Practice Act Definitions

PUBLIC HEALTH CODE (EXCERPT)
Act 368 of 1978
PART 179.
ATHLETIC TRAINING

333.17901 Definitions.
Sec. 17901. (1) As used in this part:
(a) "Athletic trainer" means an individual engaged in the practice of athletic training.
(b) "Practice of athletic training" means the treatment of an individual for risk management and injury prevention, the clinical evaluation and assessment of an individual for an injury or illness, or both, the immediate care and treatment of an individual for an injury or illness, or both, and the rehabilitation and reconditioning of an individual's injury or illness, or both, as long as those activities are within the rules promulgated under section 17904 and performed under the direction and supervision of an individual licensed under part 170 or 175. The practice of athletic training does not include the practice of physical therapy, the practice of medicine, the practice of osteopathic medicine and surgery, the practice of chiropractic, or medical diagnosis or treatment.
(2) In addition to the definitions in this part, article 1 contains general definitions and principles of construction applicable to all articles in this code and part 161 contains definitions applicable to this part.

History: Add. 2006, Act 54, Eff. Dec. 1, 2006.
Compiler's note: Act 368

333.17902 Practice of athletic training; license required; use of titles; exceptions.
Sec. 17902. (1) Beginning on February 4, 2010, an individual shall not engage in the practice of athletic training unless licensed under this part or otherwise authorized to engage in the practice of athletic training under this section. An individual licensed under this part shall not provide, offer to provide, or represent that he or she is qualified to provide any services that he or she is not qualified to perform by

his or her education, training, or experience or that he or she is otherwise prohibited by law from performing.
(2) Subsection (1) does not prohibit an individual licensed under any other part or any other act from performing activities that are considered the practice of athletic training so long as those activities are within the individual's scope of practice and the individual does not use the titles protected under subsection (3).
(3) Except as otherwise provided in this section, beginning on February 4, 2010, an individual shall not use the titles "athletic trainer", "licensed athletic trainer", "certified athletic trainer", "athletic trainer certified", "a.t.", "a.t.l.", "c.a.t.", "a.t.c.", or similar words that indicate that the person is an athletic trainer unless the individual is licensed under this article as an athletic trainer.
(4) This part does not apply to a person who is present in this state for an event that uses the services of athletic trainers, who is present in this state for not more than 30 consecutive days, and who is a board of certification certified athletic trainer or is licensed as an athletic trainer in another state.

History: Add. 2006, Act 54, Eff. Dec. 1, 2006;Am. 2011, Act 26, Imd. Eff. May 16, 2011.
Compiler's note: Act 368

333.17903 Michigan athletic trainer board; creation; membership; terms.
Sec. 17903. (1) The Michigan athletic trainer board is created in the department and shall consist of the following members meeting the requirements of part 161:
(a) Until June 30, 2010, 4 athletic trainers. Beginning July 1, 2010, 6 athletic trainers.
(b) Until June 30, 2010, 1 public member. Beginning July 1, 2010, 3 public members.
(c) Two physicians licensed under part 170 or 175.
(2) The terms of office of individual members of the board created under this part, except those appointed to fill vacancies, expire 4 years after appointment on June 30 of the year in which the term expires.

History: Add. 2006, Act 54, Eff. Dec. 1, 2006;Am. 2006, Act 387, Imd. Eff. Sept. 27, 2006;Am. 2010, Act 79, Imd. Eff. May
20, 2010.
Compiler's note: Act 368

333.17904 Rules.
Sec. 17904. (1) The department shall promulgate rules establishing the minimum standards for licensure as an athletic trainer under this part and the minimum standards of care for the practice of athletic training.
(2) In promulgating the rules required under this section, the department may consult the professional standards issued by the national athletic trainer's association, by the national athletic trainer's association board of certification, or by another nationally recognized professional association. The department may incorporate by reference, in whole or in part, existing standards in the rules.
(3) As needed, the department may amend or supplement any standards by promulgation of a rule.

History: Add. 2006, Act 54, Eff. Dec. 1, 2006.
Compiler's note: Act 368

333.17905 License; requirements; continuing education rules.
Sec. 17905. (1) The department shall issue a license under this article as an athletic trainer to an individual who meets all of the following requirements:
(a) Applies to the department on a form provided by the department.
(b) Meets the requirements for licensure promulgated pursuant to section 17904.
(c) Pays the fees prescribed in section 16336.

(2) The department shall promulgate rules to provide for at least 80 clock hours of continuing education within each 3-year license cycle in subjects related to athletic training and approved by the department.

History: Add. 2006, Act 54, Eff. Dec. 1, 2006.

Compiler's note: Act 368

333.17906 License; duration; renewal.

Sec. 17906. (1) A license issued by the department under section 17905 shall be for a 3-year license cycle. The license is renewable upon payment of the prescribed license renewal fee and, beginning with the third year after the effective date of the rules promulgated under section 17905(2), submission to the department of proof of satisfactory completion of at least 80 clock hours of continuing education within the 3-year license cycle in subjects related to athletic training and approved by the department.

(2) In addition to the continuing education requirements of subsection (1), an athletic trainer shall submit along with his or her application for license renewal proof satisfactory to the department of both of the following:

(a) That he or she has successfully completed a course of training in first aid, cardiopulmonary resuscitation, and foreign body obstruction of the airway approved by the department and offered or approved by the American Red Cross, the American heart association, or a comparable organization, as determined by the department.

(b) That he or she holds, at the time of application for renewal and at all times during the previous license period, a valid certification in first aid and cardiopulmonary resuscitation issued by the organization offering the training.

History: Add. 2006, Act 54, Eff. Dec. 1, 2006.

Compiler's note: Act 368

333.17907 Third party reimbursement.

Sec. 17907. This part does not require new or additional third party reimbursement for services rendered by an individual licensed under this part.

History: Add. 2006, Act 54, Eff. Dec. 1, 2006.

Compiler's note: Act 368

Standing Orders Document

SMC shall maintain a Standing Orders (SO) document in accordance with all legal and best practice requirements. The SO document shall represent the overseeing physician's general instructions for care and management provided by SMC health care providers, including. The SO shall be reviewed annually and must be signed into effect annually.

Privacy Considerations

HIPPA

The Health Insurance Portability and Accountability Act of 1996 (HIPAA; Pub.L. 104–191, 110 Stat. 1936, enacted August 21, 1996) was enacted by the United States Congress and signed by President Bill Clinton in 1996. It has been known as the Kennedy–Kassebaum Act or Kassebaum-Kennedy Act after two of its leading sponsSMC.

Title II of HIPAA defines policies, procedures and guidelines for maintaining the privacy and security of individually identifiable health information as well as outlining numerous offenses relating to health care and sets civil and criminal penalties for violations. It also creates several programs to control fraud and abuse within the health care system.[10][11][12] However, the most significant provisions of Title II are its Administrative Simplification rules. Title II requires the Department of Health and Human Services (HHS) to draft rules aimed at increasing the efficiency of the health care system by creating standards for the use and dissemination of health care information.

These rules apply to "covered entities" as defined by HIPAA and the HHS. Covered entities include health plans, health care clearinghouses, such as billing services and community health information systems, and health care providers that transmit health care data in a way that is regulated by HIPAA.[13][14]

Per the requirements of Title II, the HHS has promulgated five rules regarding Administrative Simplification: the Privacy Rule, the Transactions and Code Sets Rule, the Security Rule, the Unique Identifiers Rule, and the Enforcement Rule.

Privacy Rules

The HIPAA Privacy Rule regulates the use and disclosure of Protected Health Information (PHI) held by "covered entities" (generally, health care clearinghouses, employer sponsored health plans, health insurers, and medical service providers that engage in certain transactions.)[15] By regulation, the Department of Health and Human Services extended the HIPAA privacy rule to independent contractSMC of covered entities who fit within the definition of "business associates".[16] PHI is any information held by a covered entity which concerns health status, provision of health care, or payment for health care that can be linked to an individual.[13] This is interpreted rather broadly and includes any part of an individual's medical record or payment history. Covered entities must disclose PHI to the individual within 30 days upon request.[17] They also must disclose PHI when required to do so by law such as reporting suspected child abuse to state child welfare agencies.[18]

Covered entities may disclose protected health information to law enforcement officials for law enforcement purposes as required by law (including court orders, court-ordered warrants, subpoenas) and administrative requests; or to identify or locate a suspect, fugitive, material witness, or missing person.[19]

A covered entity may disclose PHI (Protected Health Information) to facilitate treatment, payment, or health care operations without a patient's express written authorization.[20] Any other disclosures of PHI (Protected Health Information) require the covered entity to obtain written authorization from the individual for the disclosure.[21] However, when a covered entity discloses any PHI, it must make a reasonable effort to disclose only the minimum necessary information required to achieve its purpose.[22]

The Privacy Rule gives individuals the right to request that a covered entity correct any inaccurate PHI.[23] It also requires covered entities to take reasonable steps to ensure the confidentiality of communications with individuals.[24] For example, an individual can ask to be called at his or her work number instead of home or cell phone numbers.

The Privacy Rule requires covered entities to notify individuals of uses of their PHI. Covered entities must also keep track of disclosures of PHI and document privacy policies and procedures.[25] They must appoint a Privacy Official and a contact person[26]responsible for receiving complaints and train all members of their workforce in procedures regarding PHI.[27]

An individual who believes that the Privacy Rule is not being upheld can file a complaint with the Department of Health and Human Services Office for Civil Rights (OCR).[28][29] However, according to the *Wall Street Journal*, the OCR has a long backlog and ignores most complaints. "Complaints of privacy violations have been piling up at the Department of Health and Human Services. Between April of 2003 and November 2006, the agency fielded 23,886 complaints related to medical-privacy rules, but it has not yet taken any enforcement actions against hospitals, doctSMC, insurers or anyone else for rule violations. A spokesman for the agency says it has closed three-quarters of the complaints, typically because it found no violation or after it provided informal guidance to the parties involved."[30] However, in July 2011, UCLA agreed to pay $865,500 in a settlement regarding potential HIPAA violations. An HHS Office for Civil Rights investigation showed that from 2005 to 2008 unauthorized employees repeatedly and without legitimate cause looked at the electronic protected health information of numerous UCLAHS patients.[31]

2013 Final Omnibus Rule Update

In January 2013, HIPAA was updated via the Final Omnibus Rule.[32] Included in changes were updates to the Security Rule and Breach Notification portions of the HITECH Act. The greatest changes relate to the expansion of requirements to include business associates, where only covered entities had originally been held to uphold these sections of the law.

Additionally, the definition of 'significant harm' to an individual in the analysis of a breach was updated to provide more scrutiny to covered entities with the intent of disclosing more breaches which had been previously gone unreported. Previously an organization needed proof that harm had occurred whereas now they must prove the counter, which harm had not occurred.

Protection of PHI was changed from indefinite to 50 years after death. More severe penalties for violation of PHI privacy requirements were also approved.

FERPA

FERPA gives parents access to their child's education records, an opportunity to seek to have the records amended, and some control over the disclosure of information from the records. With several exceptions, schools must have a student's consent prior to the disclosure of education records *after that student is 18 years old*. The law applies only to educational agencies and institutions that receive funding

under a program administered by the U.S. Department of Education. Other regulations under this act, effective starting January 3, 2012, allow for greater disclosures of personal and directory student identifying information and regulate student IDs and e-mail addresses.[2]

Examples of situations affected by FERPA include school employees divulging information to anyone other than the student about the student's grades or behavior, and school work posted on a bulletin board with a grade. Generally, schools must have written permission from the parent or eligible student in order to release any information from a student's education record.

This U.S. federal law also gave students 18 years of age or older, or students of any age if enrolled in any postsecondary educational institution, the right of privacy regarding grades, enrollment, and even billing information, unless the school has specific permission from the student to share that specific type of information.

The act is also referred to as the *Buckley Amendment*, for one of its proponents, Senator James L. Buckley of New York.

HIPPA, FERPA, and Athletic Training

Generally, provisions within FERPA allow an athletic trainer to share medical information pertaining to a student to school officials who would require the information to ensure the safety and welfare of the student-athlete (i.e., school nurse, counselSMC, and coaches). This would permit, for example, an athletic trainer to share information with a football coach regarding the nature of the athlete's health relative to a concussion. However, it may not permit discussions with out-of-season coaches, teammates, parents of friends, or spectatSMC who inquire about an injury they saw during a contest. Sharing information with anyone who is not specifically involved in providing for the care and wellbeing of a student-athlete would likely be a violation of both HIPPA and FERPA.

Sports-Related Concussion Management Policy

SMC is committed to the safety and well-being of all its student-athletes. The following represents an evidence-based best practice sports-related concussion (SRC) management policy adopted by **SMC**. This policy is based on seminal peer-reviewed literature, expert opinion, and practical knowledge. Appropriate documentation is provided in the reference section of this document.

Standing Orders

This SRC management policy has been developed based on a systematic review of current literature pertaining to sports-related concussion management, expert opinion, and practical knowledge. The policies and procedure detailed in this document will be followed by all **SMC** healthcare professionals, coaches, and school officials as a component of the supervising physician's standing orders.

The Concussion Management Team

SMC shall organize and maintain a multi-disciplined concussion management team that will conduct annual and on-going systematic review of SRC management policy and procedures to ensure that an evidence-based best practice SRC management policy and procedures are followed.

Members of the concussion management team may be comprised of the following members:

- supervising physician;
- athletic trainer;
- athletic director;
- school nurse;
- school counselor;
- school board official;
- school principal;
- appropriate coaches.

Medical and Personal Autonomy

SMC is aware of the autonomy of medical practice and personal choice. Therefore, **SMC** health care providers and officials will communicate all medical information pertaining to a concussed student, to the student's parents/guardians and primary care practitioner to facilitate the highest standard of care with respect to concussion management and return-to-play.

Communication and Sharing of Medical Information

Open communication between primary care physicians and **SMC** officials is imperative to ensure that primary care physicians have all the critical information required to make prudent decisions regarding SRC management and return-to-participation. All communications regarding the health and wellbeing of student-athletes will take place within the regulations set forth by federal law pertaining to HIPPA and FERPA.

To ensure compliance with HIPPA and FERPA regulations **SMC** shall require completion of a release of information statement providing written permission to share pertinent health information with

specifically identified individuals. Completion of the Release of Information Statement does not constitute a blanket permission statement to share all information; only that which is specifically related to the identified case as it relates to protecting the health and wellbeing of the student-athlete. When appropriate **SMC** health care will ensure that the proper school and medical professionals are identified on the Release of Information Statement to facilitate appropriate communication.

When a student presents a prescription from their primary care physician for an appropriate return-to-participate timeframe, then a step-wise return-to-participation process will be initiated. Information pertaining to the student's progress will be assessed, documented, and communicated to all appropriate **SMC** health care providers, school officials, and the primary care physician. Upon successful completion of the step-wise process and consideration of other factSMC, **SMC** health care providers and the primary care physician may release the student to participate.

In the event that proper communication cannot be established with an injured student's parents/guardians and primary care physician, then **SMC** health care providers and officials will initiate and follow its SRC management protocol and will adhere to the most conservative management practices, which may or may not result in extended delays in return-to-play. **If there is a discrepancy between an individual's physician medical release to play and the school's policy, the school physician's recommendation will be followed.**

Definition of Sports-Related Concussion

SRC is defined as a complex pathophysiological process affecting the brain, induced by traumatic biomechanical forces. The biomechanical forces associated with SRC may result from by focal, diffuse, or rotational head trauma. Focal trauma is generally caused by a low mass object traveling at a high rate of speed that results in force applied to a small concentrated area of the head. Injuries involving focal trauma should be injuries are more closely associated with more severe head injuries, including hematoma and skull fracture; and therefore, should be very carefully monitored for signs and symptoms consistent with hematoma and skull fracture. Examples of focal trauma would be being struck by a baseball, softball, hockey puck, lacrosse, or golf ball. Diffuse trauma is generally caused by a relatively high mass object traveling at a lower rate of speed. Diffuse trauma is more common in athletics, particularly in helmeted athletes. Examples of diffuse trauma include helmet to helmet collisions, head to ground collisions, and head to head collisions that results in injurious acceleration/deceleration forces. Rotational forces may also result from diffuse trauma and can cause widespread injury to the brain without any outwardly obvious mechanism of injury.

Defining the nature of a concussive head injury

1. SRC may be caused either by a direct blow to the head, face, neck, or elsewhere on the body with an impulse-like force transmitted to the head.
2. SRC typically results in the rapid onset of short-lived impairment of neurologic function that resolves spontaneously.
3. SRC may result in neuropathological changes, but the acute clinical symptoms largely reflect a functional disturbance rather than structural injury.

4. SRC results in a graded set of clinical syndromes that may or may not involve loss of consciousness. Resolution of the clinical and cognitive symptoms typically follows a sequential course.
5. SRC is typically associated with grossly normal structural neuroimaging studies.

Grading Sports-Related Concussions

Simple SRC

A simple SRC encompasses cases where athletes suffer an injury that progressively resolves without complication over 7-10 days. Simple concussions represent the most common form of this injury. Simple SRC can be appropriately managed by primary care physicians or by certified athletic trainers working under medical supervision. Management of a simple SRC includes rest until all symptoms resolve followed by a step-wise graded program of exertion before return to activity. All SRCs mandate evaluation by a medical doctor.

Complex SRC

A complex SRC encompasses cases where a student suffers persistent symptoms, including persistent symptom recurrence with exertion. A complex SRC typically will have characteristics such as concussive convulsions, prolonged loss of consciousness lasting longer than 1 minute or prolonged cognitive impairment following the injury. These injured students should be managed in a multidisciplinary manner by physicians with specific expertise in the management of concussive injury. Such experts may include a sports physician, sports neurologist, or neurosurgeon.

Sports-Related Concussion Constitutional Risk FactSMC

Certain risk factSMC have been associated with complicated recovery from SRC. Therefore, individuals with known constitutional risk factSMC may require a more conservative approach to SRC management because they are predisposed to protracted recovery, the development of post-concussion syndrome, onset of depression, learning disability, and/or other psychological conditions. For these individuals, it may be appropriate to extend the amount of asymptomatic rest and/or the length of the return to participate protocol. These populations include, but are not limited to:

- Children ages 5-18 years old;
- Females;
- Prior history of SRC or head trauma;
- Individuals who present with certain predisposing signs and symptom patterns;
- Certain prescription medicine;
- Certain medical conditions, including learning disabilities, ADD/ADHD.

Sports-Related Concussion Management

A student athlete shall not be permitted to return to play while symptomatic. When in doubt, sit them out. When an athlete presents with any SRC-like signs and symptoms the following steps shall be taken:

1. The athlete will not be permitted to return to play in the current game, practice, or activity;

2. The athlete will not be left alone and shall be continually monitored for deterioration of signs and symptoms;
3. Injured athletes that present with an increase in the number of or severity of SRC-like signs and symptoms shall be immediately transported to the nearest appropriate medical facility via EMS.
4. The injured athlete will be medically evaluated following the injury with the use of an evaluation form on the sideline, MD office, or athletic training room;
5. The athlete may not leave with or be transported home by anyone other than a parent or guardian;
6. The athletic trainer, coach, or supervisor shall review a head injury warning sheet with the injured athlete and parent or guardian before the athlete leaves to go home;
7. The athletic trainer, coach, or supervisor shall immediately complete required injury report forms and submit them in accordance with present injury reporting practices;
8. Return to school and participation shall follow a medically supervised step-wise protocol.

Medical Referral

Athletes presenting with SRC-like signs and symptoms shall be referred to their primary care physician for medical follow-up. Communication between the primary care physician and **SMC** health care providers shall be initiated to ensure a proper diagnosis and follow-up care.

Medically Supervise Return to School and Participation

During the initial period of recovery it is important to emphasize the need for both cognitive and physical rest. The neuropsychological and cognitive complications of SRC can be exacerbated academic as well as physical. Activities that require concentration and attention, or spatially conflicting environments may intensify the symptoms of SRC and delay recovery. As a result, concussed student-athletes who return to the classroom unsupervised may suffer protracted recovery and/or suffer academically. Therefore, **SMC** health care providers, including the athletic trainer, school psychologist, nurse, counselor or special educator will work with parents/guardians and the primary care physicians to help students in the classroom during the days or weeks of recovery.

When appropriate and with clearance from the primary care or school physician, the district shall follow a step-wise return to participation protocol. Each step shall require a 24 hour interval during which time the athlete must remain free of SRC-like signs and symptoms.

Neuropsychological Testing

Neuropsychological testing is a useful means to evaluate and track the recovery of a concussed athlete by assessing cognitive memory, reaction time, and processing speed. Neuropsychological testing is most effective when post-injury testing is compared to base-line tests. Therefore, athletes shall be required to complete baseline testing. **SMC** health care providers and designated school officials shall be required to complete appropriate annual training to ensure proper test administration and interpretation.

Information collected using neuropsychological testing shall be kept in a confidential database to be utilized only if the athlete suffers a concussion.

Education and Awareness

Educational efforts are essential to successful implementation of **SMC**'s SRC management policy. Therefore, **SMC** will undertake educational endeavSMC aimed at informing coaches, athletes, parents, and local health care providers about **SMC**'s SRC management policy, and about proper SRC management practices.

Clinical Care for Post-Concussion Syndrome

A vast majority of athlete's suffering a SRC will recover without complication when they are properly managed from the outset. However, there are those who will suffer a protracted or complicated recovery, regardless. Post-concussion syndrome (PCS) is a condition that is not well defined, but that can generally be attributed to an individual who is experiencing a complicated or protracted recovery from a SRC. Individuals suffering from or predisposed to PCS may benefit from closer medical supervision and a medically supervised exercise program provided in a clinical setting. Therefore, **SMC** health care providers shall consider referral for clinical rehabilitation and care for athletes who may be suffering from or at risk of developing PCS.

Concussion Management Procedures

SMC is committed to the safety and well-being of all its student-athletes. The following represents an evidence-based best practice approach to sports-related concussion (SRC) management adopted by **SMC**. These procedures are based on seminal peer-reviewed literature, expert opinion, and practical knowledge. Appropriate documentation is provided in the reference section of this document.

The Concussion Management Team

The **SMC** concussion management team shall convene annually to provide a systematic review of the SRC management policies and procedures. The concussion management team shall also review all cases involving complicated or protracted recovery, and those involving procedural challenges. A member of the concussion management team shall be designated to document the minutes of each meeting. The minutes of each meeting of the concussion management team shall be filed with the current policy and procedural documents. Any changes or modifications to these procedures resulting from the annual systematic review shall be documented and distributed in writing to all **SMC** health care professionals, school officials, department staff, and all other appropriate school personnel at least two weeks prior to the start of the fall season. Changes or modifications to policy and procedures resulting from all other meetings shall be completed and distributed in writing to all **SMC** health care professionals, school officials, department staff, and all other appropriate school personnel within two weeks of acceptance of said changes.

Members

- Supervising Physician:
- Athletic Trainer:
- Athletic Director:
- School Nurse:
- School Counselor:
- School board member:
- Coach:

Meeting Schedule

The concussion management team shall convene each summer to provide a systematic review of the concussion management policy, all procedural documents, and to reaffirm the supervising physician's standing orders (Appendix A)**.** The systematic review shall ensure that the policy and procedural documents represent evidence based best practice standards pertaining to the care and management of sports-related concussion (SRC) management. The team shall meet in time to be able to complete a systematic review, complete all necessary changes, and provide written notice of all changes to all appropriate personnel two weeks prior to the start of the fall sports season. The concussion management team shall also be convened on a case by case basis to review injuries involving complicated or protracted recovery, and those involving challenges to the present policies and procedures.

Awareness

To help ensure the health and safety of young athletes, the CDC developed the HEADS-UP Concussion in Youth Sports Initiative to offer information about concussion to coaches, parents, and athletes involved in sports. The HEADS UP initiative provides information on preventing, recognizing, and responding to a concussion. **SMC** health care professionals shall use the CDC's HEAD UP Concussion resources to provide educational programming for school coaches, athletes, and parents; including, but not limited to:

- Review concussion resources for parents and athletes during pre-season parent meetings;
- Review of concussion resources for coaches and athletes during pre-season;
- Review of concussion management resources for coaches during annual CPR training;
- Review of appropriate concussion management resources during annual emergency action plan review and rehearsal.

Acute Care Protocol for Coaches

To recognize SRC, coaches should continually monitor for and ask others to report any forceful blow that results in rapid movement of the head, and any concussion-like signs and symptoms found on the ***CDC Head Up Concussion Fact Sheet For Coaches*** of the CDC's HEAD UP Concussion . If an athlete presents with any concussion-like signs and symptoms:

1. Immediately remove the athlete from participation and do not allow them to return;
2. Ensure that the athlete is evaluated by an appropriate health care professional;
3. If an appropriate health care professional is not available, ensure that the athlete is always in the presence of a school official who can continue to monitor concussion signs and symptoms at 5min intervals;
4. Inform the athlete's parents of guardians, and review with them the SMC Head Injury Warning Sheet (Appendix B);
5. Complete all required paperwork in accordance with school policy;

Immediate Ambulance Transport Criteria for Coaches

Immediately activate EMS to transport an injured athlete to an appropriate medical facility if:

1. the athlete experiences any loss of consciousness;
2. the athlete presents with neck pain;
3. the athlete presents with burning, numbness, or tingling;
4. the athlete experiences an increase in the number or intensity of concussion-like signs and symptoms;
5. the athlete cannot be evaluated by an appropriate health care professional or cannot be continuously monitored;
6. apprehensive about what to do.

Acute Care Guidelines for Athletic Trainers and Team Physicians

To recognize SRC athletic trainers and physicians shall carefully monitor the field of play, athletes, and individual reports for SRC mechanisms and the onset of concussion-like signs and symptoms. If an athlete present with concussion-like signs and symptoms:

1. The athlete shall be immediately removed from participation and evaluated using either the SCAT3 or Child SCAT3 form (Appendix C);
2. Athletes who do not present with a concussion may be considered for return to play;
3. Concussed athletes shall be removed from participation and continually monitored using the SMC Differential Diagnosis Trending Report (Appendix D);
4. Ensure that concussed athlete is continuously in the care of a **SMC** health care provider, coach, or school official until released to a parent or guardian;
5. Inform the athlete's parents guardians, and review with them the SMC Head Injury Warning Sheet (Appendix B);
6. Provide athlete and parent/guardian with appropriate home care and follow-up recommendations:
    a. SMC Physician Evaluation form (Appendix E);
    b. SMC Yellow Concussion Pass (Appendix F).
7. Complete all required injury reports in accordance with current procedures;
8. Arrange for injury report to be provided to primary care physician prior to appointment;
9. Athletes diagnosed with a SRC will be encouraged to initiate a full Shut-Down Phase of recovery, involving a full 72hrs of complete cognitive and physical rest.

Immediate Ambulance Transport Guidelines for Athletic Trainers and Physicians

Consider immediately activating EMS to transport an injured athlete to an appropriate medical facility if:

1. the athlete experiences loss of consciousness greater than 1min or on-going altered mental status;
2. athlete presents with mid-line cervical neck pain;
3. athlete presents with neurological signs and symptoms;
4. athlete or health care professional apprehension;
5. athlete experiences signs and symptoms of hematoma or rising intracranial pressure as indicated on the SMC Differential Diagnosis Report;
6. athlete experiences an increase in the number of signs and symptoms found on the SCAT3 or Child SCAT3;
7. athlete reports an increased Symptom Severity Score indicated on the SCAT3 or Child SCAT3

Medically Supervised Concussion Recovery Progression

The appropriateness of returning to school and play shall be medically supervised using the SMC Medically Supervised Concussion Recovery Progression (MSCRP) (Appendix G). Athletes who are diagnosed with a SRC may begin the MSCRP protocol when all of the following criteria have been met:

1. Completion of a Release of Medical Information form (Appendix H)

2. Completion of the Shut-Down Phase;
3. When symptom free at rest;
4. When cleared to do so by a physician.

SMC health care providers, in conjunction with the athlete's primary care physician and school officials shall consider the appropriate progression through the CRP.

Progression through the MSCRP is as follows:

1. The student-athlete must remain asymptomatic throughout the entire phase and for the proceeding 24hrs;
2. Upon completion of each phase a **SMC** health care provider, the school nurse, or other appropriate school official shall review with the student-athlete the signs and symptoms checklist;
3. If no signs and symptoms are reported, the **SMC** health care provider, the school nurse, or other appropriate school official will sign off at the bottom of the form that the athlete was asymptomatic upon conclusion of the phase;
4. 24hrs hours after completion of a given phase, the student-athlete will report to the designated health care provider or school official who will review the signs and symptoms checklist to ensure that the student-athlete has remained asymptomatic throughout the last 24 hours;
5. If the athlete has remained asymptomatic, the designated health care provider or school official shall sign the appropriate area of the protocol and allow the student-athlete to progress to the next phase. This procedure is repeated for each phase of the MSCRP until final release is provided.
6. If the student-athlete was not provided specific prior permission to return to play following successful completion of the SMC RTL/RTP protocol, physician follow-up must be scheduled to obtain a medical script indicating permission to return to full participation.

Educational Modules

Neuropsychological Testing

ImPACT™ Testing

Athletes participating in sports with a high incidence of concussion (i.e., football, basketball, soccer, wrestling, softball, baseball, hockey, volleyball, and competitive cheer) will be required to take a baseline ImPACT™ test every other year, beginning in their freshman year.

After an athlete suffers a concussion, the ImPACT™ test will be administered within 24-72 hours. The test can be re-administered at 3-5 day intervals until the results normalize and the athlete is asymptomatic. Retests may be spaced further apart if the athlete is still symptomatic.

Results of the ImPACT™ test will be assessed by the athletic trainer and communicated to all appropriate medical personnel and school officials, and in accordance with the release of medical information form.

Section 504

In accordance with Section 504 of the Rehabilitation Act of 1973, **SMC** health care providers will work with school officials in the development of an appropriate Sec 504 plan to aid students suffering protracted recovery from a SRC or who are suffering disabilities as a result of their injury.

Reconditioning Protocol

The SMC Medically Supervised Exercise Prescription Guide (Appendix I) shall be used to help recondition athletes who have recovered from their injury, but whom are not physically ready for the demands of their sport following due to a protracted or complicated recovery.

Request for Final Clearance

Clinical Assessment

Athletes who are not able to progress though the SMC Step-Wise Concussion Recovery Progression™ may be recommended for clinical rehabilitation. All new patients referred to **SMC** shall receive the New Patient Packet mailer prior to their first visit.

New Patient Mailer

The new patient mailer shall include:

1. Head Injury Warning Sheet (Appendix B);
2. Concussion Facts and Fallacies Appendix J);
3. What to Expect information (Appendix K).

Initial Evaluation

Appendix L

SMC Medically Supervised Concussion Recovery Progression Activity Prescription Guide

Appendix M

Clinical Test Summary

Appendix N

Clinical Return to Play Criteria

Clinical return to participation will follow the SMC Step-wise Concussion Recovery Progression. Upon completion of the SMC Step-wise Concussion Recovery Progression and prior to return to competition, an athlete must present the MHSAA Return to Competition Form (Appendix O) completed by a MD, DO, PA, or NP giving specific and unconditional permission for the athlete to return to competition.

Appendices

All appendices contained in this document are the property of Sports Medicine Concepts, Inc., except where otherwise indicated. Sports Medicine Concepts, Inc., grants all SMC Certified Concussion Clinics the right to freely copy these documents in their current form for distribution to individuals, teams, groups and organizations. Any revision or any reproduction in a digital form requires approval of Sports Medicine Concepts, Inc., or the expressed owner.

NOTE: The diagnosis of a concussion is a clinical judgment, ideally made by a medical professional. The tools found within these appendices are intended for use by medical professionals only. The tools found within these appendices should not be used solely to make, or exclude, the diagnosis of concussion in the absence of clinical judgement. This tool is not intended as a stand-alone method for diagnosis, to measure recovery, or to make clinical decisions regarding the appropriateness of return to play. An athlete may have a concussion or more severe head injury even if their signs and symptoms as indicated on any or all of these tools appear “normal”.

Appendix A: Standing Orders

Standing orders should be reviewed, updated, and reaffirmed annually.

Orthopaedic Rehab Operating Protocol for Athletic Trainers

1. This protocol concerns the Certified Athletic Trainer(s) EMPLOYED BY Orthopaedic Rehab Specialists, and the _____ school district medical director employed by _____, also known as SMC and the _____ respectively.

2. This Protocol is only in effect for the students participating in interscholastic athletics in the District and visiting team student-athletes who sustain injury or illness while competing at District facilities.

3. The Certified Athletic Trainer(s) employed by SMC shall follow this Operating Protocol and all injury and/ or illness procedures and policies established by the District.

4. The Certified Athletic Trainer(s) shall perform all duties within the scope of practice defined by Michigan State Education Laws, and the Amendment to the Regulations of the Commissioner of Education, Certified Athletic Trainers.

5. The Certified Athletic Trainer(s) shall follow the principals of professional conduct and ethics as provided by the Nationals Athletic Trainer's Association's Code of Ethics and the NATA Board of Certification's Standards of Professional Practice for Athletic Trainers.

6. The Certified Athletic Trainer(s) will evaluate those injuries or illnesses presented to them by the SMC Concussion Management Team.

7. The Certified Athletic Trainer(s) will provide documentation of all services rendered. Proper maintenance and confidentiality of such records will be provided.

8. The Certified Athletic Trainer(s) may initiate and administer treatment and rehabilitation of injuries as per applicable Michigan State law and established District injury/ illness procedures and guidelines.

Standing Orders

As the designated Medical Director of concussions for Orthopaedic Rehab Specialists P.C., I authorize SMC certified and licensed Athletic Trainer(s) to provide athletic training services to the designated high schools and their student athletes. This is in accordance with the Operating Protocol and all injury or illness procedures and policies established by this company. This Standing Order expires on _____, 2015

_____	_____	_____
Physician Name	Physician Signature	Date

As the Certified Athletic Trainer(s) for Orthopaedic Rehab Specialists P.C., I (we) agree to provide athletic training services to the students of _____ in accordance with this Operating Protocol and all injury or illness procedures and policies established by the District. This Standing Order Expires on _____, 2015

_____	_____	_____
Athletic Trainer Name	Athletic Trainer Signature	Date

Appendix B: Sports Medicine Concepts' Head Injury Warning Sheet

The SMC Head Injury Warning Sheet is a tool is intended to help sports health care professionals communicate with coaches, parents/guardians, and athletes. The tool is designed to help coaches, parents/guardians, and athletes identify the typical signs and symptoms of concussion and to convey specific actions they should take in the event that specific patterns emerge while not under the direct supervision of a qualified medical professional.

NOTE: the diagnosis of a concussion is a clinical judgment, ideally made by a medical professional. The SMC Head Injury Warning Sheet should not be used solely to make, or exclude, the diagnosis of concussion in the absence of clinical judgement. An athlete may have a concussion or more severe head injury even if their signs and symptoms as indicated on the SMC Head Injury Warning Sheet appear "normal".

Head Injury Warning Sheet

_____ is exhibiting concussion-like symptoms resulting from an injury sustained on _____. The athlete should be seen by a physician prior to being allowed to return to participation.

Quite often the signs of head injury do not appear immediately after trauma, but hours after the injury itself. The purpose of this fact sheet is to alert you to the signs and symptoms of significant head injuries, symptoms that may occur several hours after you leave the athletic training room. An increase in the number of these signs and symptoms or in the severity of any one sign or symptom may indicate that you that you have sustained a significant head injury that *requires immediate medical attention*. ***If the number of, or severity of, any of these signs and symptoms increases prior to your scheduled follow-up, immediately call 911.***

Concussion Signs and Symptoms

	None	Mild		Mod		Severe	
Headache	0	1	2	3	4	5	6
Pressure in head	0	1	2	3	4	5	6
Neck pain	0	1	2	3	4	5	6
Nausea/vomiting	0	1	2	3	4	5	6
Dizziness	0	1	2	3	4	5	6
Visual changes	0	1	2	3	4	5	6
Unsteadiness	0	1	2	3	4	5	6
Light hurts eye	0	1	2	3	4	5	6
Sensitivity to noise	0	1	2	3	4	5	6
Feel slowed down	0	1	2	3	4	5	6
Feel like in a fog	0	1	2	3	4	5	6
Difficulty concentrating	0	1	2	3	4	5	6
Trouble remembering	0	1	2	3	4	5	6
Feel fatigued/tired	0	1	2	3	4	5	6
Confusion	0	1	2	3	4	5	6
Drowsiness	0	1	2	3	4	5	6
Trouble falling asleep	0	1	2	3	4	5	6
Trouble staying asleep	0	1	2	3	4	5	6
Over emotional	0	1	2	3	4	5	6
Irritable	0	1	2	3	4	5	6
Unusual sadness	0	1	2	3	4	5	6
Anxious	0	1	2	3	4	5	6
Just don't feel myself	0	1	2	3	4	5	6
Just don't feel right	0	1	2	3	4	5	6

Total number of symptoms:	**/24**
Symptom severity total out of possible 144	**/144**
Do symptoms wSMCen with physical activity?	**Y / N**
Do symptoms wSMCen with mental activity?	**Y / N**

	None	Mild		Mod		Severe	
Headache	0	1	2	3	4	5	6
Pressure in head	0	1	2	3	4	5	6
Neck pain	0	1	2	3	4	5	6
Nausea/vomiting	0	1	2	3	4	5	6
Dizziness	0	1	2	3	4	5	6
Visual changes	0	1	2	3	4	5	6
Unsteadiness	0	1	2	3	4	5	6
Light hurts eye	0	1	2	3	4	5	6
Sensitivity to noise	0	1	2	3	4	5	6
Feel slowed down	0	1	2	3	4	5	6
Feel like in a fog	0	1	2	3	4	5	6
Difficulty concentrating	0	1	2	3	4	5	6
Trouble remembering	0	1	2	3	4	5	6
Feel fatigued/tired	0	1	2	3	4	5	6
Confusion	0	1	2	3	4	5	6
Drowsiness	0	1	2	3	4	5	6
Trouble falling asleep	0	1	2	3	4	5	6
Trouble staying asleep	0	1	2	3	4	5	6
Over emotional	0	1	2	3	4	5	6
Irritable	0	1	2	3	4	5	6
Unusual sadness	0	1	2	3	4	5	6
Anxious	0	1	2	3	4	5	6
Just don't feel myself	0	1	2	3	4	5	6
Just don't feel right	0	1	2	3	4	5	6

Total number of symptoms:	**/24**
Symptom severity total out of possible 144	**/144**
Do symptoms wSMCen with physical activity?	**Y / N**
Do symptoms wSMCen with mental activity?	**Y / N**

What you should do:

- Avoid aspirin or ibuprofen;
- Use acetaminophen (Tylenol) for headaches. (Be careful not exceed maximum daily dosages when combining acetaminophen containing products, such as cold medicine);
- Use ice packs as needed on head or neck;
- Eat a light diet higher in carbohydrates;
- Sleep;
- Rest;
- Avoid drinking alcohol or taking other non-prescription drugs;

It is not necessary to:

- Check eyes with flashlight;
- Wake up every hour;
- Test reflexes;
- Stay in bed.

REMEMBER: There is no such thing as a mild head injury. Head injuries can present signs and symptoms that are often found humorous and/or taken too lightly. Your health may depend on the recognition of these symptoms and your decision to take them seriously!

Appendix C: Sport Concussion Assessment Tool - 3rd Edition (SCAT3™) and Child-SCAT3™

The SCAT3 and Child-SCAT3 are standardized tools for evaluating injured athletes for concussion. The SCAT3 should be used in athletes aged from 13 years and older while the Child-SCAT3 should be used for persons ages 12 and under. The SCAt3 is designed for use by medical professionals. Pre-season baseline testing with the SCAt3 can be helpful for interpreting post-injury test scores. Specific instructions for use of the SCAT3 are provided on page 3 of the tool. If you are not familiar with the SCAt3, please read through these instructions carefully.

The SCAT3 and Child-SCAT3 tool may be freely copied in their current form for distribution to individuals, teams, groups and organizations. Any revision or any reproduction in a digital form requires approval by the Concussion in Sport Group.

NOTE: the diagnosis of a concussion is a clinical judgment, ideally made by a medical professional. the SCAt3 should not be used solely to make, or exclude, the diagnosis of concussion in the absence of clinical judgement. An athlete may have a concussion even if their SCAt3 is “normal”.

Appendix D: Differential Diagnosis

The Sports Medicine Concepts' Mild Traumatic Brain Injury Differential Diagnosis Trending Report (MTBiDD) is a tool designed to help athletic trainers recognize the subtle acute signs and symptoms that may differentiate concussion from other more potentially life-threatening brain injury, such as hematoma or cerebral swelling. The MTBiDD is designed for use by medical professionals. Specific instructions for use of the MTBiDD are provided on this tool. If you are not familiar with the Mild Traumatic Brain Injury Differential Diagnosis Trending Report, please read through these instructions carefully.

Time: Status Post-Injury

Signs and Symptoms	10min S/P	15min S/P	20min S/P	25min S/P	30min S/P
Total number of SCAT symptoms					
SCAT Symptom severity score					
AMS					
Cranial Nerves					
Heart Rate					
Blood Pressure					
SpO2					
Pulse-Pressure					
Temperature					

INSTRUCTIONS

This clinical battery is designed to help athletic trainers recognize the subtle acute signs and symptoms that differentiate concussion from other more potentially life-threatening brain injury such as hematoma or cerebral swelling. The Sports Medicine Concepts' Mild Traumatic Brain Injury Differential Diagnosis Trending Report is not intended as a stand-alone method for differential diagnosis, to measure recovery, or to make clinical decisions regarding the appropriateness of return to play.

Beginning 10 minutes post-exercise, record each of the listed MTBi signs and symptoms at 5 minute intervals. Clinical signs and symptoms that fail to normalize following the 30 trending period or that wSMCen significantly during any interval throughout the trending period may be indicative of rising intracranial pressure secondary to hematoma or cerebral swelling; requiring the athlete to be transported by EMS to the nearest Level 1 trauma center using appropriate head and neck injury precautions.

Total Number of SCAT Symptoms and Symptom Severity Score

Using the SCAT Symptom Evaluation chart calculate the total number of concussion-like symptoms and the corresponding Symptom Severity Score. A significant increase in the number of concussion-like symptoms or the symptom severity score may be indicate the need to transport the athlete to the nearest Level 1 trauma center.

Altered Mental Status

Assess the athlete for any variations in level of consciousness or the presence of a lucid interval. Use "N" to indicate normal or "AB" to indicate abnormal findings.

Cranial Nerves

Using the Sports Medicine Concepts, Inc., Cranial Nerve Assessment Guide record the number of abnormal clinical findings (out of a possible 12). An increase in the number of abnormal clinical findings during any interval or remaining abnormal findings following the 30 minute trending period may be indicative of the need to transport the athlete from the field to the nearest Level 1 trauma center.

Heart Rate, Blood Pressure, and Pulse-Pressure

Use an appropriate heart rate / blood pressure monitor to record the athlete's heart rate, blood pressure, and pulse pressure (Systolic-Diastolic) readings. Persistent heart elevation above 100bpm, hypotension, hypertension, and pulse-pressures above 100 could be indicative of rising intra-cranial pressure, and the need to transport the athlete by EMS to the nearest Level 1 trauma center.

Blood Oxygen Saturation

Using a pulse-oximeter take serial measures of the athlete's blood oxygen levels. Abnormal blood oxygen levels may be indicative of the need to transport the athlete by EMS to the nearest Level 1 trauma center.

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Appendix E: Physician Evaluation Form

RETURN TO COMPETITION

This form is to be used after an athlete is removed from and not returned to competition after exhibiting concussion symptoms. MHSAA rules require unconditional written authorization from a physician (MD/DO/ Physician's Assistant/ Nurse Practitioner) before an athlete may return to activity after exhibiting concussion symptoms that caused that athlete to be removed for the duration of a contest.

In cases where an assigned MHSAA Tournament physician (MD/DO/PA/NP) is present, his or her decision to not allow a student to return to activity may not be overruled.

Athlete: _____School: _____
Event/Sport: _____Date of Injury: _____

REASON FOR ATHLETE'S INCAPACITY

_____
_____

Action of M.D., D.O., Physician's Asst. or Nurse Practitioner

• The clearance must be in writing and must be unconditional. It is not sufficient that the M.D., D.O. Physician's Assistant or Nurse Practitioner has approved the student to begin a return-to-play progression. The medical examiner must approve the student's return to unrestricted activity.
• Individual school, districts and leagues may have more stringent requirements and protocols including but not limited to mandatory periods of inactivity, screening and post-concussion testing prior to or after the written clearance for return to activity.
• A school or licensed health care professional may use a locally created form provided it complies with MHSAA regulations. (See MHSAA Concussion Protocol)

☐ I have examined the named student-athlete following this episode and determined the following: Permission is granted for the athlete to return to activity (may not return to practice or competition on the same day as the injury).

_____ DATE:_____
SIGNATURE (Must be MD/ DO/PA/NP)

Examiner's Name (Printed): _____

Copies to: Team Coach and Athletic Director (Duplicate as Needed)

In addition to this return to competition form, member schools are required to complete and submit a report on MHSAA.com to record and track concussion events in all levels of all sports.

Appendix F: Concussion Pass

Concussion Pass

Athlete: _____School: _____
Event/Sport: _____Date of Injury: _____

The above athlete has been examined by an SMC Concussion Management Specialist and was removed from competition after exhibiting concussion-like signs and symptoms. It is imperative that the athlete be permitted to rest, both cognitively and physically for the next 72hrs to facilitate recovery and prevent a protracted or complicated recovery. A follow-up assessment has been scheduled for _____.

_____DATE:_____
SIGNATURE (Must be MD/ DO/PA/NP)

Examiner's Name (Printed): _____

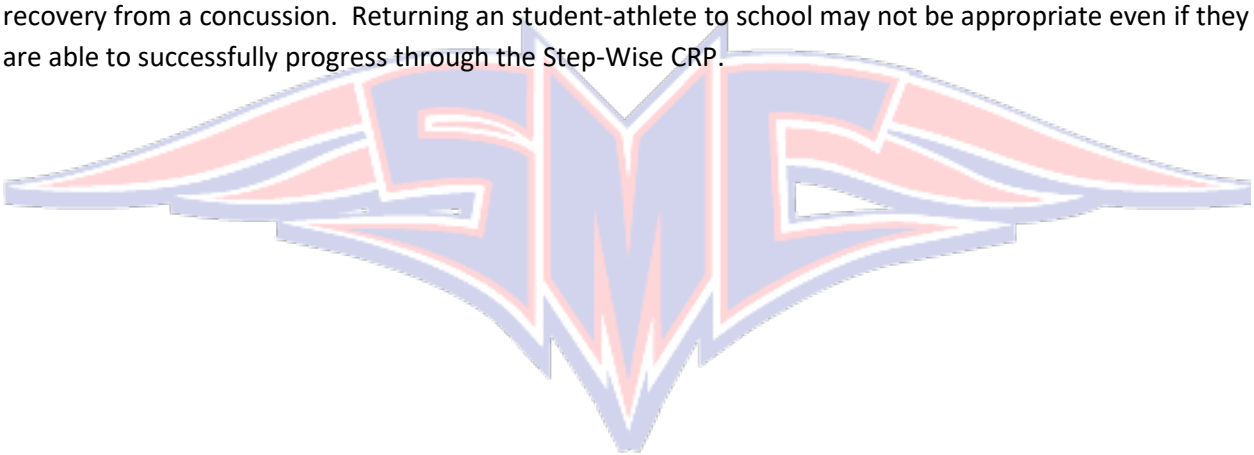
If there are any questions, please contact the examiner at:

Appendix G: Sports Medicine Concepts' Medically Supervised Concussion Recovery Progression

The Step-Wise CRP is a standardized tool for evaluating the appropriateness of returning student-athletes to school and participation following a sports-related concussion. The Step-Wise CRP is a medically supervised progression. If you are not a qualified health care provider, please seek the advice of a qualified health care provider before administering the Step-Wise CRP.

Specific instructions for use of the Step-Wise CRP are provided here. If you are not familiar with the appropriate use of the Step-Wise CRP, please read these instructions carefully and refer to the SMC Medically Supervised Concussion Recovery Progression Activity Guidelines.

Disclaimer: The diagnosis of a concussion is a clinical judgement made by a qualified medical professional. The Step-Wise CRP is intended for use as one tool within a comprehensive concussion management policy. The Step-Wise CRP should not be used alone to decide the appropriateness of recovery from a concussion. Returning an student-athlete to school may not be appropriate even if they are able to successfully progress through the Step-Wise CRP.



Appendix H: Release of Medical Information Form

RELEASE OF MEDICAL INFORMATION
TO OTHERS INVOLVED IN YOUR HEALTHCARE

As stated in our Notice of Privacy Practices, we may disclose to a member of your family, a relative, a close friend or any other person you identify, your protected health information that directly relates to that persons' involvement in your health care. We request that you designate the individuals with whom we may discuss your protected health information.

I, _____ give **SMC** and its authorized representatives permission to discuss my protected health information with the following persons:

Name	**Phone Number**
_____	_____
_____	_____
_____	_____
_____	_____

_____ _____
Patient Signature Date

_____ _____
Witness Signature Date

I understand that I may rescind or modify this permission at any time. Such change must be in writing to SMC.

Appendix I: Sports Medicine Concepts' Medically Supervised Exercise Prescription Guide

SIMPLE RETURN TO PLAY CONSIDERATIONS		STEP-WISE PROGRESSION	SUGGESTED ACTIVITIES		PCS/RECONDITIONING CONSIDERATIONS
Athlete must be symptom free and cleared by MD to begin RTP progression	Symptom Free for 24 Hours	**STEP 1: SHUT-DOWN** 72hrs of full physical and cognitive rest with s/s monitoring. Treatment centers on proper rest including sleep, nutrition, and proper hydration. Avoid busy, noisy, and visually conflicting activities/environments.	Out of school, no homework or instruction, limited exposure to busy / conflicting environments, such as mall, crowds, supermarkets, staircases, heights. No electronic devices, limit exposure to bright or excessive light.	Sub-Symptom Progression	
Athlete is asymptomatic at rest, throughout exertion, and 24hrs S/P before progressing Educational Session I: • 10min video segment		**Step 2: Initiation** **Target HR: 30-40%*** **X-Cise Rx:** 10min light aerobic exercise in a quiet area, including stretching; Sub-max isometric and isotonic strengthening, and basic balance / vestibular activities. Restrict activities involving impact, head movement/positional changes. **Cognitive Rx:** Progress from Step 1 as appropriate. Begin integrating home instruction with limited reading and higher-level concepts at 10min sub-symptom threshold intervals in a quiet environment. Carefully monitor for signs and symptoms of depression.	Recumbent or stationary bike, UBE, Treadmill PNF stretching for cervical, upper back, hamstring, calf, quads, and hips; Co-contractions, Contract/relax PNF stretching, Upper/lower body PNF exercises, Leg raises, hand weights, tubing/band exercises. Simple puzzles with large pieces, simple board games, auditory learning, limited homework, extended assignment deadlines, limited reading and math. Have athlete count reps and time exercises.		**Athlete's completing PCS rehabilitation/reconditioning should work at a sub-symptom exertional level within each step. Athletes should progress to the next step when they are able to complete the exertional demands of a given step without acute symptom onset and they remain symptom free for 24hrs post-exertion.**
Educational Session II • 10min video segment • 10min reading material		**Step 3: Light Intensity** **Target HR: 50-60%*** Integrate various cognitive activities, exercise equipment and activities in athletic/team environment while restricting exposure to contact/collision. **X-Cise Rx:** 20min light aerobic exercise. Initiate activities involving positional changes, head movement, and low-level concentration. Stretching; Light PREs; Light plyometric exercises; Intermediate balance/vestibular exercises **Cognitive Rx:** Progress Step 1- 2 activities with limited return to school.	Stationary bike, treadmill, rowing, elliptical, UBE Step 1 activities, active lunges, side to side groin, walking hamstring stretching, high-knees; Nautilus circuit training, wall squats, tubing/band exercises, step-ups; Front-back / side to side line jumps, Romberg series, ball exercises, BESS activities; VOR; walking with eyes fixed to target with head turns. No PE, band or chorus		

Educational Session III • 10min video • 10min reading material • 10 question quiz Equipment fitting		**Step 4: Moderate Intensity** **Target HR 60-80%*** Moderate intensity conditioning exercise in athletic/team environment while restricting exposure to contact/collision. Integrate PREs, impact conditioning activities, balance/proprioception exercises. **X-Cise Rx:** Stretching; PREs; Intermediate plyometric exercises; Dynamic proprioceptive/balance training that emphasize positional changes **Cognitive Rx:** Restricted Full Return to School	Treadmill jogging, bike, elliptical, Rowing, UBE As in Stages 1-2 Resistive training using free-weights, ball squats, dynamic strength training Agility drills, small box drills, hopping drills, ball/stick handling drills, mini-tramp, balance ball Ball toss on mini tramp, wobble board, BOSU ball squats and lunges No PE, band, or chorus	
Educational Session IV: • Technique training drills and exercises Post-injury neuropsychological assessment		**Step 5: High Intensity** **Target HR 70-80%*** Integrate aggressive sports performance training activities in athletic/team environment without risk or contact/collision. **X-Cise Rx:** Non-contact sport/positional-specific training; Stretching; Advanced PREs; Advanced plyometric and balance activities **Cognitive Rx:** Unrestricted Academic Return	Graded exercise testing, if appropriate. Sport/position specific drills to be individually designed Interval training. No PE. Complete post-injury neuropsychological assessment.	Technique training drills and exercises
		Step 6: Full Exertion **Target HR 80% with bouts of 90-100%*** Integrate sport-specific contact/collision activities **X-Cise Rx:** Contact sport/position-specific training; High intensity stretching, PREs, impact activities **Cognitive Rx:** Full Return to School		
Concussion Management Team Consensus		**Final Unrestricted academic and physical release**		

Appendix J: Concussion Facts and Fallacies

Concussion Facts and Fallacies

If I buy and wear a more expensive helmet, I am less likely to get a concussion.
False. There is no "concussion prevention helmet" in any sport. All helmet manufacturers claim that their helmets prevent concussions over their competitSMC, but there is no scientific evidence that demonstrates that any helmet is better than any other. To get the most protection from your helmet keep your head out of contact and choose a helmet that is most comfortable when properly fitted to you. Be sure to properly maintain your helmet and frequently check for proper fit.

If I wear a mouth guard when I play sports, I am less likely to get a concussion.
False. Although mouth guards are very effective in preventing dental injuries there is no scientific evidence that suggests that mouth guards have any concussion prevention properties. This is true for expensive custom made and over-the-counter boil and bite style mouth guards.

There are medications that will speed up my recovery from a concussion.
Maybe. There is some encouraging research that demonstrates that Omega-3 supplementation following a concussion may decrease the damage done to nerve cells in the brain and may help injured nerve cells recover. This research is not definitive, but it is encouraging enough that some will recommend Omega-3 supplementation in conjunction with a proper rehabilitation and recovery program. Dosages and potential drug interactions must be discussed with your health care provider before taking Omega-3.

A special diet will speed up my recovery from a concussion.
Maybe. There is some evidence that providing calories immediately after a concussion reduces some of the acute signs and symptoms of concussion. There is also some evidence that suggests a diet high in protein may mitigate the effects of a concussion and help with recovery. However, this evidence is far from conclusive. Other complications from a concussion, such as nausea and dizziness, may be more of a determining factor dictating your diet. Generally, it is recommended to eat a light balanced diet, avoiding fatty and or spicy foods.

I don't have a concussion if my CAT scan and/or MRI came back normal?
False. CAT scan and MRI are excellent tools to diagnose potential bleeding within the brain, but they are not useful in diagnosing concussions.

If I only have a little headache that goes away when I take Tylenol or other pain medicine, it is OK for me to return to play.
False. It is ***never*** safe for you to return to play when you are experiencing ***ANY*** signs and symptoms resulting from your concussion; even if they resolve with medication. Returning to play too early or when experiencing signs and symptoms significantly increases your risk of more severe debilitating head injury, including Second Impact Syndrome (SIS) and Post-Concussion Syndrome (PCS).

I feel fine. Why can't I return to play as soon as I feel better?
Biochemical changes within your brain resulting from trauma take time to resolve. You may ***FEEL*** better long before your brain has fully recovered. Returning too soon significantly increases your risk of suffering more severe debilitating head injury, including Second Impact Syndrome (SIS) and Post-Concussion Syndrome (PCS).

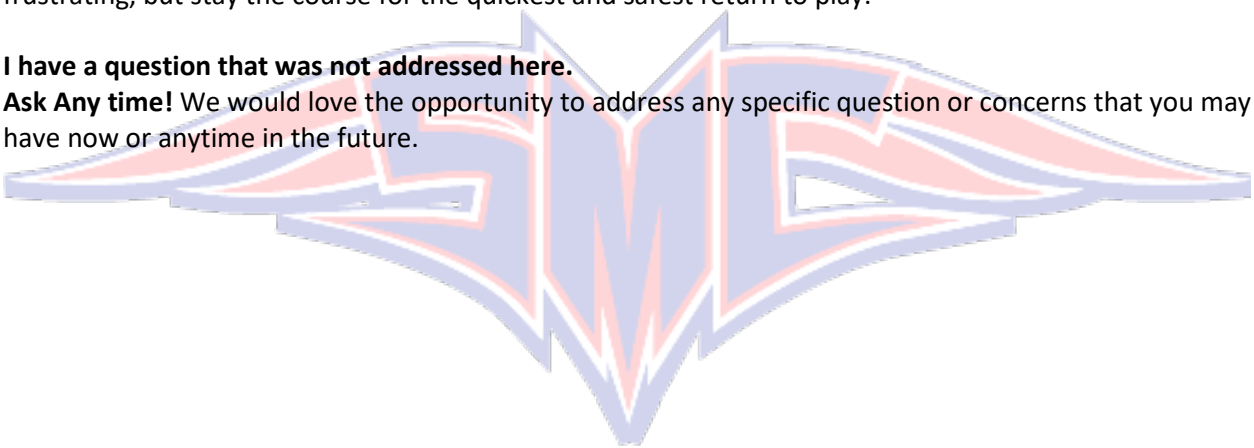
Should I be attending school while I have signs and symptoms of concussion?

Yes. Your academic activities may be initially restricted for some time or you may be required to stay home for a time, but afterward it is fine to attend school. Your rehabilitation and recovery will involve your teachers to ensure that you progress both physically and academically.

Is it safe for me to watch TV, read books, and play video games?
In some instances these activities may be restricted for some concussion patients. However, these activities area often incorporated into the rehabilitation and recovery program. Your health care providers will be working together to determine when these activities are appropriate.

I have been out the customary 7-10 days and I feel fine. Why can't I return to play?
Bottom line. It takes time to recover from a concussion and nobody knows how much time. The 7-10 days often reported as the timeline for recovery is just a very vague average of how long it seems to take for signs and symptoms of concussion to resolve. However, it may take more time or it may take less time. Each individual is different. Your health care provider has more sensitive tools to more accurately track your recovery and safely progress you return to play. We understand that it can be frustrating, but stay the course for the quickest and safest return to play.

I have a question that was not addressed here.
Ask Any time! We would love the opportunity to address any specific question or concerns that you may have now or anytime in the future.



Appendix K: What to Expect During Visits

What You Can Expect During Your Visits

Our goal is to spend as little time inside the clinic as possible. We want you to be back to your game as soon as it is safely possible. Although many of your initial appointments will be held within the clinic expect sessions later in your recovery to include more sport-specific activities conducted at your team's practice facilities.

During your sessions expect that our facility, staff, and resources will be solely dedicated to your recovery. When you come to the Concussion Rehab and Prevention clinic, the clinic is yours for that time. There will not be any other patients completing rehabilitation during your sessions. We do have changing and restroom facilities, but there are no shower facilities.

Communications
The Concussion Rehabilitation and Prevention Group will ensure that your care is a coordinated effort between the many health care providers that you may be under the care of during your recovery. We will be in constant contact with your referring physician to ensure an efficient line of communication is maintained throughout your care. We will monitor your signs and symptoms and well as your progression so that we can communicate important aspects of your recovery to your physician. An open line of communication and a coordinated effort are keys to ensuring a safe and efficient recovery and return to play.

Education
Education is a cornerstone of our concussion rehabilitation process. It is imperative for a parent or guardians of patients who are minSMC to accompany their child for the duration of all rehabilitation sessions, particularly during the educational components. We encourage all family members to attend the educational sessions to learn how to keep their athlete's safe from concussion injuries. For our more seasoned patients, we highly recommend that sessions, particularly the educational portions, be attended by a spouse or family member. Completion of the educational components is a requirement of completion of our rehabilitation and return to play protocol.

Your First Visit
Your first visit will be comprised of activities related to initial evaluation and educational activities. In some cases a graded exercise test and/or computer-based neuropsychological test may be included in your first visit. Please come dressed for activity with sneakers and exercise attire. Expect your first visit to last about 1-2 hours.

Home Care
Your rehabilitation and recovery will be a joint effort between the Concussion Rehab and Prevention Group, your primary care physician, and you. As you progress through our rehab protocol toward your way to return to play we will be giving you instructions for what to do on your own at home. Your home care instructions will change periodically as you progress toward recovery. Be sure to complete your home care sheet and bring it with you to your next visit.

After Your First Visit
All right. Now it is time to get to the business of getting you better. Depending on the nature and severity of your concussion, and the activities we have planned, you may bring in your favorite music,

DVDs, or game tapes to listen to or watch while working out! Your athletic trainer will give you lots of direction regarding how your next sessions will progress and what is appropriate to bring with you.

Payment

Sports Medicine Concepts' Concussion Rehab and Prevention Group is a fee-based service. Some insurance are accepted. However, many of the rehabilitation activities, computer-based tests, and return to play activities are not yet covered by insurance. We will explain all costs associated with your rehabilitation program prior to each session. Payment is appreciated following completion of each session. Please feel free to call for a complete listing of services and associated fees.

YOU ARE NOW ON YOUR WAY BACK TO YOUR GAME!

Appendix L: Initial Evaluation From

Initial Evaluation Form

Date of Eval: _____

Name: _____ M / F Date:_____

Address: _____

DOB: _____ Age: _____ Grade: _____ Referring MD:_____

Date of Concussion:_____ Sport played, practice or game: _____

MOI: ___ head-head ___ Head-ground ___ Head-body part ___ Other:

Location of Impact: ___R/L Front, ___R/L Temp, ___R/L Parietal, ___R/L Occip

Injury description:

_____
_____
_____
_____
_____
_____
_____
_____
_____

Returned to play? Y / N

_____
_____

Hospital? Y / N CT Y / N Pos / Neg When? _____

Where? _____

Constitutional Risk FactSMC for Complicated/Protracted Recovery

Age: _____ Hx of Migraine? Y N Learning Disability? Y N Gender: M / F Dizziness / Vestibular? Y N

Prior history? Y N Date of prior:_____

Signs / Symptoms during last concussion:

_____

Duration of signs and symptoms: _____ hrs _____ days _____ wks

Vital Signs

Resting HR: _____ Resting BP: _____ / _____

Max HR: 220-age = _____ 30 - 40% _____ 60% _____ 80% _____

Blood Pressure Category	Systolic / Diastolic	Resting Heart Rate	Respiration
Normal Adult	< 120 / < 80	60-100	12-16
**6-12yrs	100-120 / 60-75	70-120	18-30
Prehypertension	120 – 139 / 80 - 90		
Hypertensive	140 – 159 / 90 - 99		
Hypertensive Crisis	>180 / > 110		

*American Heart Association, 2013; ** Rosen's Emergency Medicine: Concepts and Clinical Practice, 5th Edition*

Constitutional ICP Risk FactSMC

____ Bradycardia (youth!) ____ Hyperventilation _____ Sluggish dilated pupils _____ Widened Pulse pressure

____ Dec LOC _____ Cushing's Triad (inc systolic pressure, widened pulse pressure, and bradycardia, with abnormal respirations)

Medical / Prescription Drug History

Other Medical Conditions	**Medications –** List all medications and dosages

Vital Signs

Resting HR: _____ Resting BP: _____ / _____

Max HR: 220-age = _____ 30 - 40% _____ 60% _____ 80% _____

Blood Pressure Category	Systolic / Diastolic	Resting Heart Rate	Respiration
Normal Adult	< 120 / < 80	60-100	12-16
**6-12yrs	100-120 / 60-75	70-120	18-30
Prehypertension	120 – 139 / 80 - 90		
Hypertensive	140 – 159 / 90 - 99		
Hypertensive Crisis	>180 / > 110		

- American Heart Association, 2013
- ** Rosen's Emergency Medicine: Concepts and Clinical Practice, 5th Edition

Constitutional ICP Risk FactSMC

____ Bradycardia (youth!) ____ Hyperventilation _____ Sluggish dilated pupils _____ Widened Pulse pressure

____ Dec LOC _____ Cushing's Triad (inc systolic pressure, widened pulse pressure, and bradycardia, with abnormal respirations)

Vestibular Screening Examination

Physical Exam:				
1. Ocular Motor/Vestibular-Ocular				
a. Abnormal Pursuits? ----------	NO	YES	N/A	*Possibility of central vestibular disorder, particularly if a, b, or c abnormal.*
b. Abnormal Saccades? ----------	NO	YES	N/A	
c. Abnormal Convergence (<6 cm)? ----------	NO	YES	N/A	
d. Any observable nystagmus? ----------	NO	YES	N/A	
e. Blurring/dizziness with VOR? ----------	NO	YES	N/A	
2. Balance Screen:				
a. Romberg Eyes Open <30 sec or unsteady----------	NO	YES	N/A	*Abnormality on any item suggests a balance disorder.*
b. Romberg Eyes Closed <30 sec or unsteady ----------	NO	YES	N/A	
c. Tandem Romberg Eyes Open <30 sec or unsteady --------	NO	YES	N/A	
d. Tandem Romberg Eyes Closed <30 sec or unsteady -------	NO	YES	N/A	
e. Compliant Foam Eyes Open <30 sec or unsteady ----------	NO	YES	N/A	
f. Compliant Foam Eyes Closed <30 sec or unsteady ----------	NO	YES	N/A	
g. Tandem Gait unsteady ----------	NO		N/A	
3. Balance Error Score (BESS)	Hard	Foam		*Abnormality suggests a balance disorder.*
a. Double-leg Stance ----------	____	____	N/A	
b. Single-Leg Stance ----------	____	____	N/A	
c. Tandem-Leg Stance ----------	____	____	N/A	
d. Double-leg Compliant Foam ----------	____	____	N/A	
e. Single-leg Compliant Foam ----------	____	____	N/A	
f. Tandem Compliant Foam ----------	____	____	N/A	
Foot tested (non-dominant): □ Left □ Right				

Immediate Symptoms				Present Symptoms		
Domain	**Yes**	**No**	**Duration/Description**	**Yes**	**No**	**Description**
LOC						
Neuropsychiatric						
Emotionality						
Irritability						
Sadness						
Nervousness						
Migraine (physical)						
Nausea						
Disorientation						
Headache ___/10			Top RF LF RT LT RO LO Gen	___/10		Top RF LF RT LT RO LO Gen
			Throb/press/dull WSMCe in AM / PM WSMCe w/ Cog / Phys Exert			Throb/press/dull WSMCe in AM / PM WSMCe w/ Cog / Phys Exert
Vomiting						
Dizziness						
Balance problems						
Motor problems						
Numbness/Tingling						
Vision changes						
Sensitivity to noise						
Sensitivity to light						
Ringing in ears						
Neck pain						
Cognitive						
RGA						
AGA						
Fogginess						
Attn/Concentration						
Short-term memory						
Slowed down						
Sleep Disturbance						
Hyposomnia						
Hypersomnia						
Drowsiness						
Other:						

Cranial Nerve Assessment

Nerve	Name	Function	Test for	Result	
				Normal	Abnormal
I	Olfactory	Smell	Have the athlete identify odSMC w/ each nostril(sports cream, antiseptic, etc)		
II	Optic	Visual acuity	Have the athlete identify number of fingers		
		Visual field	Approach the athlete's eyes from the side using your finger or light pen		
III	Oculomotor	Pupilary reaction	Shine pen light in each eye and note pupilary reaction		
IV	Trochlear	Eye movements	Have the athlete follow your pen light without moving his/her head		
V	Trigeminal	Facial sensation	Have the athlete identify areas of face being touched		
		Motor	Have the athlete hold mouth open against resistance		
VI	Abducens	Motor	Check athlete's lateral eye movements		
VII	Facial	Motor	Have the athlete smile, wrinkle forehead, frown, puff cheeks, and wink each eye		
		Sensory	Have the athlete identify familiar tastes (Gatorade)		
VIII	Acoustic	Hearing	Have athlete identify sounds in both ears (tuning fork)		
		Balance	Check athlete's balance (Romberg sign)		
IX	Glossopharyngeal	Swallowing	Have the athlete say "ah" and swallow hard		
X	Vagus	Gag reflex	Test the gag reflex (tongue depressor)		
XI	Spinal	Neck strength	Have athlete complete full AROM, shoulder shrugs against resistance		
XII	Hypoglossal	Tongue movement and strength	Have the athlete stick out his/her tongue and move it around. Apply resistance with tongue depressor.		

Appendix M: Sports Medicine Concepts' Concussion Recovery Progression Clinical Test Summary Progress Report

Sports Medicine Concepts' Concussion Recovery Progression Clinical Test Summary Progress Report

Tool	Test Domain	Scores			
	Date tested	**Baseline Date:**	**Post-Injury 1 Date:**	**Δ**	**Ideal**
	Days post injury		___ Days		
SCAT3	Total Reported Symptoms		__ (out of possible 22)	-	0
	Physical signs score		__ (out of a possible 2)	-	0
	Balance exam score error points		__	-	0
	Coordination score		__ (out of possible 1)	-	0
	Subtotal		**___**	-	**0**
SAC	Orientation score		__ (out of possible 5)		0
	Immediate memory score		__ (out of possible 15)	-	0
	Concentration score		__ (out of possible 5)	-	0
	Delayed recall score		__ (out of possible 5)	-	0
	SAC subtotal		**__**	-	**0**
Total Score			**___**	-	**30**
Symptom severity score			**__ (out of possible 132)**	-	**0**
Neuropsych test					
Cranial Nerves (# abnormal / 12)		__ (out of possible 12)		-	**0**
Vestibular Screen Exam		**__(out of possible 5)**		-	0

Appendix O: MHSAA Return to Competition Form

RETURN TO COMPETITION

This form is to be used after an athlete is removed from and not returned to competition after exhibiting concussion symptoms. MHSAA rules require unconditional written authorization from a physician (MD/DO/ Physician's Assistant/ Nurse Practitioner) before an athlete may return to activity after exhibiting concussion symptoms that caused that athlete to be removed for the duration of a contest.

In cases where an assigned MHSAA Tournament physician (MD/DO/PA/NP) is present, his or her decision to not allow a student to return to activity may not be overruled.

Athlete: _____School: _____
Event/Sport: _____Date of Injury: _____

REASON FOR ATHLETE'S INCAPACITY

_____
_____

Action of M.D., D.O., Physician's Asst. or Nurse Practitioner

• The clearance must be in writing and must be unconditional. It is not sufficient that the M.D., D.O. Physician's Assistant or Nurse Practitioner has approved the student to begin a return-to-play progression. The medical examiner must approve the student's return to unrestricted activity.
• Individual school, districts and leagues may have more stringent requirements and protocols including but not limited to mandatory periods of inactivity, screening and post-concussion testing prior to or after the written clearance for return to activity.
• A school or licensed health care professional may use a locally created form provided it complies with MHSAA regulations. (See MHSAA Concussion Protocol)

☐ I have examined the named student-athlete following this episode and determined the following: Permission is granted for the athlete to return to activity (may not return to practice or competition on the same day as the injury).

_____ DATE:_____
SIGNATURE (Must be MD/ DO/PA/NP)

Examiner's Name (Printed): _____

Copies to: Team Coach and Athletic Director (Duplicate as Needed)

In addition to this return to competition form, member schools are required to complete and submit a report on MHSAA.com to record and track concussion events in all levels of all sports.

Sports Medicine Concepts

Be it known that

Orthopedic Rehabilitation Specialists, PC

Having satisfied in full all the requirements for the status of a Sports Medicine Concepts, Inc.,

Certified Concussion Clinic

Has been admitted to that designation with all
the rights, privileges and honSMC pertaining thereto

In witness of this action the seal of Sports Medicine Concepts, Inc.,
and the authorizing signature affixed below

Given on the _____ day of _____
In the year two thousand fifteen
For the term of three years hence.

Official Seal of
Sports Medicine Concepts, Inc.

Michael J. Tendoma
President