Augusta University
Policy Library

Concussion Management Protocol

Policy Owner: Department of Athletics

POLICY STATEMENT

In accordance with NCAA Bylaw 3.3.4.16, this document outlines procedures to assist in the management of concussions and the safe return-to-play and return-to-learn protocols for student-athletes at Augusta University.

AFFECTED STAKEHOLDERS

Indicate all entities and persons within the Enterprise that are affected by this policy:

☐ Alumni ☒ Faculty ☒ Graduate Students ☒ Health Professional Students
☒ Staff ☒ Undergraduate Students ☐ Vendors/Contractors ☐ Visitors
☐ Other:

DEFINITIONS

Concussion: A change in brain function following a force to the head, which may be accompanied by temporary loss of consciousness, but is identified in awake individuals with measures of neurologic and cognitive dysfunction.

Return-to-learn: Medical clearance given by a physician for a student-athlete to return to cognitive activity after sustaining injury or illness.

Return-to-play: Medical clearance given by a physician for a student-athlete to return to physical activity after sustaining injury or illness.

The Sport Concussion Assessment Tool 5th Edition (SCAT5): The most recent revision of a sport concussion evaluation tool for use by healthcare professionals in the acute evaluation of suspected concussion.

Student-athlete: Any student enrolled at Augusta University who is a member of an intercollegiate squad that is under the jurisdiction of the Department of Intercollegiate Athletics (Athletics).

PROCESS & PROCEDURES

A multifaceted approach to concussion management is suggested. As a result, the information provided by this protocol and the tools it references should be taken into consideration on a case-by-case basis with an emphasis on “the whole picture.” In certain cases, modifications to this protocol may be deemed appropriate by the athletic training or medical staff.

PRE-SEASON EDUCATION

Athletics will provide NCAA Concussion Fact Sheets for Student-Athletes and Coaches (Appendix 2 and Appendix 3) or other applicable materials annually to student-athletes, coaches, team physicians, athletic trainers, and the director of intercollegiate athletics.

Prior to beginning athletics participation, Athletics will require student-athletes to complete

the Augusta University Sports Medicine Student-Athlete Concussion Statement (Appendix 4). The signed statement affirms a student-athlete's responsibility for reporting his/her injuries and illnesses to the sports medicine staff, including signs and symptoms of a concussion.

PRE-PARTICIPATION ASSESSMENT

The university will require that each student-athlete receive a pre-participation baseline concussion assessment which addresses brain injury and concussion history, symptom evaluation, cognitive assessment, and balance evaluation. Student-athletes will receive a new baseline concussion assessment every other year. The team physician will determine pre-participation clearance and/or the need for additional consultation or testing.

The university shall record a baseline assessment[6,10,11,12] for each incoming student-athlete (first-years & transfers) in the following sports: baseball, men's and women's basketball, softball, volleyball, and any other student-athlete who reports a history of concussion.

The same baseline assessment tools should be used post-injury. At a minimum, the baseline assessment should include the use of (a) a symptoms checklist (Appendix 5), (b) a standardized balance assessment (Balance Error Scoring System (BESS)), (c) neuropsychological testing (ImPACT), and (d) a clinical history.

A Standardized Assessment of Concussion (SAC) may also be administered during baseline testing at the sports medicine staff's discretion. In the event a student-athlete does not have baseline scores, age- and gender-matched normative scores will be used for comparison to post-injury scores.

The neuropsychological testing program should be performed in consultation with a trained certified athletic trainer or physician. Post-injury neuropsychological test data will be interpreted by a trained physician prior to return-to-play.

Neuropsychological testing has proven to be an effective tool in assessing neurocognitive changes following concussion and can serve as an important component of an institution's concussion management plan. However, neuropsychological tests should not be used as a standalone measure to diagnose the presence or absence of a concussion as Augusta University uses a comprehensive assessment by its sports medicine staff. The ImPACT neuropsychological test battery has moderate to good sensitivity and specificity,[13,14,15] but poor to good reliability.[12,16,17] Despite the clinical limitations of the ImPACT test battery, the test battery remains within the standard of care. Likewise, clinical limitations of ImPACT will be taken into consideration when interpreting all baseline and post-injury scores.

RECOGNITION AND DIAGNOSIS OF CONCUSSION

Any student-athlete with signs/symptoms/behaviors consistent with concussion must be removed from practice or competition. The student-athlete must be evaluated by a certified

athletic trainer or team physician with concussion experience and must be removed from practice/play for that calendar day if concussion is confirmed.

If removed by a coaching staff member, the coach will refer the student-athlete to the sports medicine staff for evaluation. During competition, on-the-field-of-play injuries will be under the purview of the official and playing rules of the sport. Augusta University staff will follow such rules and attend to medical situations as they arise. Visiting sport team members evaluated by Augusta University sports medicine staff will be managed in the same manner as Augusta University student-athletes.

INITIAL SUSPECTED CONCUSSION EVALUATION

Assessment of concussion will be completed by the medical staff on-site (athletic trainer, physician, and/or physician assistant if the physician is not immediately available).

If a concussion is suspected, the initial concussion evaluation will include the SCAT5 test (Appendix 1) and clinical assessment for cervical spine trauma, skull fracture, and intracranial bleed.

The student-athlete will receive serial monitoring for deterioration. The student-athlete will be provided written instructions for at-home care (Appendix 5) that they will sign upon discharge; another adult accompanying the student-athlete will also be provided a copy of the written instructions. The sports medicine staff will maintain close communication with the student-athlete following the concussion incident.

A student-athlete diagnosed with a concussion will be withheld from competition or practice and not return to activity for the remainder of that day. Student-athletes that sustain a concussion outside of their sport will be managed in the same manner as those sustained during sport activity.

POST-CONCUSSION MANAGEMENT

A student-athlete should be referred to a physician for evaluation within 24 hours of injury if not emergent; if emergent, the student-athlete should be transported to the closest emergency department.

The university will utilize an emergency action plan for head injuries (including transportation for further medical care) for any of the following:

- Glasgow Coma Scale < 13;
- Prolonged loss of consciousness;
- Focal neurological deficit suggesting intracranial trauma;
- Repetitive emesis;
- Persistently diminished/worsening mental status or other neurological signs/symptoms;

and/or
- Spine injury.

The student-athlete will be provided both oral and written instructions for at-home care; another adult accompanying the student-athlete will also be provided a copy of the written instructions.

The university will utilize the post-concussion management plan described below. Sports medicine staff will track progression using the symptom checklist (SCAT5, Appendix 1).

- **24-48 Hours Post-Injury:** The student-athlete will repeat the symptom checklist, balance exam, and neuropsychological exam, at a minimum (unless directed otherwise by a physician and/or a neuropsychologist).

- **Daily Concussion Management While Student-Athlete Symptomatic**: The student-athlete will be monitored for recurrence of symptoms through both physical and cognitive exertion activities. The student-athlete will be (a) held from all physical activity; (b) re-assessed daily by medical staff; and (c) administered the symptom checklist daily until completely asymptomatic. Sports medicine staff will notify the assistant athletic director of compliance of the student-athlete's medical status (for notification of faculty of recommended academic modifications/restrictions).

- **Concussion Management Once Student-Athlete Asymptomatic:** The student-athlete will repeat the symptom checklist, balance exam, and neuropsychological exam, at a minimum (unless directed otherwise by a physician and/or a neuropsychologist). The student-athlete's scores will be compared to both baseline and normative values.

    - **Test Results Return to Acceptable Clinical Ranges:** The student-athlete will complete exertional testing (Appendix 6) and will be re-evaluated by a physician for a return-to-play decision.

    - **Test Results <u>NOT</u> Returned to Acceptable Clinical Ranges:** When medically cleared by a physician, the student-athlete will repeat the test battery and will be considered for a neuropsychological consult that includes a more detailed test battery.

- **After Exertional Testing - Before Return-to-play:** The student-athlete will repeat the symptom checklist, balance exam, and neuropsychological exam, at a minimum (unless directed otherwise by a physician and/or aneuropsychologist).

    - **Test Results Remain at Acceptable Clinical Ranges:** A physician will

determine the return-to-play decision.

  - **Test Results <u>NOT</u> Remain at Acceptable Clinical Ranges:** When medically cleared by a physician, the student-athlete will repeat the test battery and will be considered for a neuropsychological consult that includes a more detailed test battery.

- **Cases of Prolonged Recovery:** A physician will evaluate a student-athlete with prolonged recovery (typically considered a recovery lasting > 4 weeks) in order to consider additional diagnosis (i.e., post-concussion syndrome, sleep dysfunction, migraine or other headache disorders, mood disorders such as anxiety and depression, ocular or vestibular dysfunction) and best management options. At the discretion of the team physician, student-athletes that experience prolonged recoveries following concussion may be allowed to complete light, low-risk physical and cognitive activities that do not worsen symptoms.

- **Six-Month Follow-Up:** If feasible, the student-athlete will complete the symptom checklist, balance exam, and neuropsychological exam, at a minimum (unless directed otherwise by a physician and/or a neuropsychologist).

<u>RETURN-TO-LEARN</u>

Academic advisors and professors will be notified of a student-athlete's concussion. If necessary, appropriate academic accommodations will be made to help the student-athlete strike an optimum balance between rest and continued academic progress during recovery.[18]

The university will utilize a return-to-learn management plan that specifies:

- The sports medicine staff, in conjunction with the faculty athletics representative and assistant athletic director of compliance, will navigate return-to-learn with the student-athlete. In the event of more complex cases, a multi-disciplinary team, including, but not be limited to, the team physician, athletic trainer, psychologist/counselor, neuropsychologist consultant, faculty athletic representative, academic counselor, course instructor(s), college administrators, and coaching staff will navigate prolonged return-to-learn with the student-athlete.

- Student-athletes will not participate in classroom activity subsequently after a same-day concussion incident.

- An injured student-athlete will receive an initial plan of instruction based on his/her clinical presentation. The plan of instruction may include:

  - Remaining at home if the student-athlete cannot tolerate light cognitive activity.

  - Gradual return to classroom/studying, as tolerated.

- Student-athletes will be re-evaluated by their team physician if concussion symptoms worsen with academic challenges.

- Recommendation for modification of schedule and/or academic accommodations may be made for student-athletes for up to two weeks, as indicated, with help from the student-athlete's academic advisor and faculty. The faculty athletics representative and assistant athletic director of compliance will help the student-athlete facilitate the process.

- Student-athletes will be re-evaluated by their team physician and members of the multi-disciplinary team if symptoms persist longer than two weeks following injury.

- Campus resources such as the Dean of Student Affairs and Testing and Disability Services will be utilized for cases that cannot be managed through schedule modification and/or academic accommodation.

- Academic accommodations will be made in conformance with the Americans with Disabilities Act Amendments Act (ADAAA).

RETURN-TO-PLAY

Each student-athlete with concussion must undergo a supervised stepwise progression management plan (Exertional Testing Protocol Following Concussion, Appendix 6) by a health care provider with expertise in concussion.

When medically cleared by a physician, the student-athlete will repeat exertional testing and will be re-evaluated by a physician for a return-to-play decision.

Final determination of return-to-play is made by the team physician or medically qualified physician designee.

Equipment evaluation and refitting should be considered prior to full return-to-contact for an equipment laden sport.

REDUCING EXPOSURE TO HEAD TRAUMA

Athletics staff, student-athletes and officials will continue to emphasize that purposeful or flagrant head or neck contact in any sport is not be permitted.

All coaching staff receive first aid/CPR training which includes review of the concussion

and safety issues in sport.

An NCAA concussion education poster is posted in all locker rooms.

It is important to emphasize ways to minimize head trauma exposure. Examples of minimizing head trauma exposure include, but are not limited to:

- Adherence to Inter-Association Consensus: Independent Medical Care Guidelines
- Reducing gratuitous contact during practice
- Taking a “safety first” approach to sport
- Taking the head out of contact
- Coaching and student-athlete education regarding safe play and proper technique

ADMINISTRATIVE

University sports medicine staff shall have the exclusive empowerment to determine management and return-to-play of any ill or injured student-athlete, as he or she deems appropriate. Conflicts or concerns will be forwarded to the director of sports medicine and the head team physician for remediation.

The university will document all concussion-related incidences including the evaluation, continued management, and clearance of injured student-athletes. Aggregate concussion numbers per sport will be reported to the director of athletics and team physicians annually.

University sports medicine staff and other athletics health care providers will practice within the standards as established for their professional practice (e.g., team physician,[7] certified athletic trainer,[8] physical therapist, nurse practitioner, physician assistant, neurologist,[9] neuropsychologist[10]).

The university will have on file an emergency action plan for each athletics venue in order to respond to student-athlete catastrophic injuries and illnesses such as concussions, heat illness, spine injury, cardiac arrest, respiratory distress (e.g., asthma), and sickle cell trait collapses. The plan will be updated annually. All athletics healthcare providers and coaches shall review and practice the plan prior to the start of each academic year.

REFERENCES & SUPPORTING DOCUMENTS

1. NCAA and CDC Educational Material on Concussion in Sport. Available online at http://www.ncaa.org/health-and-safety

2. *NCAA Sports Medicine Handbook*. 2014-15. Available online at https://www.ncaa.org/sport-science-institute/concussion-educational-resources

3. National Athletic Trainers' Association Position Statement: Emergency Planning in Athletics. *Journal of Athletic Training,* 2002; 37(1):99–104.

4. *Sideline Preparedness for the Team Physician*: A Consensus Statement. 2000. Publication by six sports medicine organizations: AAFP, AAOS, ACSM, AMSSM, AOSSM, and AOASM.

5. *Recommendations and Guidelines for Appropriate Medical Coverage of Intercollegiate Athletics*. National Athletic Trainer's Association. 2000. Revised 2003, 2007, 2010.

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8. National Athletic Trainers' Association Position Statement: Management of Sport-Related Concussion. *Journal of Athletic Training* (Allen Press). 2014;49:245-265.

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11. Who should conduct and interpret the neuropsychological assessment in sports-related concussion? Echemendia RJ, Herring S, Bailes J. *British Journal of Sports Medicine*, 2009; 43:i32-i35.

12. Test-retest reliability of computerized concussion assessment programs. Broglio SP, Ferrara MS, Macciocchi SN, Baumgartner TA, Elliott R *Journal of Athletic Training*, 2007; 42(4):509-514.

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15. The "Value added" Of neurocognitive testing after sports-related concussion. Van Kampen DA, Lovell MR, Pardini JE, Collins MW, Fu FH. *Am J Sports Med.* 2006;34(10):1630-1635.

16. One-year test-retest reliability of the online version of impact in high school athletes. Elbin RJ, Schatz P, Covassin T. *Am J Sports Med.* 2011;39(11):2319-2324.

17. Long-Term Test-Retest Reliability of Baseline Cognitive Assessments Using ImPACT. Schatz P. *Am J Sports Med.* 2010; 38(1): 47-53.

18. Supporting the Student-Athlete's return to classroom after a sport-related concussion. McGrath N. *Journal of Athletic Training*, 2010; 45(5):492-498.

19. 2002. Publication by six sports medicine organizations: AAFP, AAOS, ACSM, AMSSM, AOSSM, and AOASM.

Appendix 1
Sport Concussion Assessment Tool – 5th Edition (SCAT5), available at
http://bjsm.bmj.com/content/51/11/851

Appendix 2
NCAA Concussion Information Fact Sheet for Student-Athletes, available at
https://www.ncaa.org/sport-science-institute/concussion-educational-resources

Appendix 3
NCAA Concussion Information Fact Sheet for Coaches, available at
https://www.ncaa.org/sport-science-institute/concussion-educational-resources

Appendix 4
Augusta University Sports Medicine Student-Athlete Concussion Statement, available at
http://www.augustajags.com/information/ConcussionMgmtProtocol.Appendices.2018.pdf

Appendix 5
Augusta University Sports Medicine Concussion Patient Information Sheet, available at
http://www.augustajags.com/information/ConcussionMgmtProtocol.Appendices.2018.pdf

Appendix 6
Exertional Testing Protocol Following Concussion, available at
http://www.augustajags.com/information/ConcussionMgmtProtocol.Appendices.2018.pdf

RELATED POLICIES
https://web3.ncaa.org/lsdbi/

APPROVED BY:

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