

University of Louisville Concussion Management Plan

On April 29, 2010, the NCAA distributed a policy reinforcing their commitment to the prevention, identification, evaluation, and management of concussions. As part of that policy, institutions were to create a concussion management plan to utilize for any student-athlete that “exhibits signs, symptoms, or behaviors consistent with a concussion.”

The Sports Medicine staff at the University of Louisville proposes the following management plan. These are based on the most current recommendations from the NCAA, the CDC, and the International Conference on Concussion in Sport.

This policy represents a multi-faceted approach to treating concussion that includes educating the all student-athletes, coaching staff, and strength/conditioning personnel. It also delineates the role of the members of the Sports Medicine staff as well as baseline testing for those who participate in sports at risk for concussion.

These are adopted from both NCAA requirements as well as additional “best practice” recommendations.

Education & Pre-participation Planning:

- 1) All student-athletes are required to sign a waiver acknowledging they accept “responsibility for reporting their injuries to the medical staff, including signs and symptoms of a concussion.” During this process, student-athletes will be presented education material regarding the signs and symptoms of concussion and will acknowledge they have reviewed the material and have had the opportunity to have any questions answered. The information will be provided both within the waiver form as well as an NCAA-developed fact sheet.
- 2) All student-athletes will undergo pre-participation baseline screening. A thorough history including symptom evaluation, brain injury history, concussion injury history and cognitive assessment will be obtained at the pre-participation physical exam. The baseline testing will include, but is not limited to:
 - a. Paper-based cognitive testing (e.g. SAC)
 - b. Symptom evaluation (e.g. PCSS)
 - c. Balance evaluation (e.g. BESS)
 - d. Computerized Neurocognitive evaluation (e.g. Impact)

The NCAA has determined these to be “effective in the evaluation and management of concussion.” As our knowledge about the utility of these tests changes over time, we anticipate changes to our protocol in the future.

A Team Physician will determine pre-participation clearance and/or the need for additional consultation or testing.

3) All members of coaching, strength and conditioning, and athletic training staff, team physicians, sport administrators, and the athletic director will receive educational material to assist in identify the signs and symptoms of concussion. This training will also identify the steps to be taken once the injury has been recognized. Subsequent to the education session, a form will be signed acknowledging they have received and understand the information.

4) The University of Louisville will maintain an emergency action plan for each venue to respond to catastrophic injuries and illness. This will include, but not be limited to concussion and head injuries. The athletic training staff will receive education reviewing the signs and symptoms of concussion that warrant implementing the emergency action plan. See Attachment for Example of Emergency Action Plan for one of our facilities (e.g., Cardinal Stadium).

Concussion Management Plan:

1) Once the signs and/or symptoms of a concussion have been identified, the student-athlete will be removed from play and shall not return to athletics activity on that calendar day.

2) Initial evaluation of the concussed student-athlete will be performed by the athletic training staff or the on-site or on-call physician. The initial exam will include symptom assessment, physical and neurological exam, cognitive assessment, balance exam as well as clinical assessment for cervical spine trauma, skull fracture and intracranial bleed.

3) The Emergency Action Plan will be activated if the following are present during the initial evaluation of a student-athlete with a suspected head or neck injury: cervical spine injury/trauma, skull fracture, 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, or other spine injury. Example of Emergency Action Plan is attached to this document. Each Emergency Action Plan is specific to site or venue.

4) The University of Louisville will have a sports medicine-trained physician with experience in the management of concussion present and on-site for all NCAA Varsity Competition events in the contact/collision sports of basketball, field hockey, football, lacrosse, pole vault, and soccer. The physician may be from either team, or may be independently contracted for the competition.

5) The University of Louisville will have a sports medicine-trained physician with experience in the management of concussion on-call/available for all NCAA Varsity practices in the contact/collisions sports of basketball, field hockey, football, lacrosse, pole vault, and soccer.

At all times, a physician with experience in the management of concussions will be available for phone consultation, messaging, email or other immediate communication means. This access applies to all NCAA sports at the University of Louisville.

6) Subsequent to suffering a concussion, the student-athlete is to be monitored for deterioration in the ensuing hours. The on-site medical staff is to determine the appropriate steps after the injury and written instructions may be provided to help guide this supervision. Oral and/or written care given to both the student-athlete and another responsible adult will be documented.

In the absence of an adequate support structure for the student-athlete, overnight hospitalization may be considered depending on the extent of the injury.

7) Student-athletes with prolonged symptoms may require additional diagnosis and best management options. These student-athletes may need additional referral for vestibular therapy, post-concussion syndrome, mood disorders, sleep deprivation, migraines or nutritional disorders. In such instances, team physicians will conduct follow-up evaluations to consider additional treatment and management options.

8) Subsequent to suffering a concussion, the student-athlete may necessitate some time away from class or additional time to complete assigned coursework. This is to be individualized and is dependent on the extent of the symptoms. The Athletic Trainer with the assigned sport will serve as the point person within athletics who will navigate return-to-learn with the student- athlete. The Athletic Trainer will serve as just one portion of the multi- disciplinary team that will navigate more complex cases of prolonged return- to-learn. The other members of this team may include, but are not limited to:

Team Physician, Psychologist/counselor, Neuropsychologist consultant, Faculty Athletics Representative, Athletic/Academic Counselor(s), Course instructor (s), College administrators, Disability Resource Center staff, coaches, as well as family and friends of the student-athlete. The “return to learn” includes these provisions:

- a. Academic advisors will be notified by the Sports Medicine staff promptly after a student-athlete has suffered a concussion.
- b. The student-athlete will not participate in academic activities (e.g. class, tutoring, “screen time,” etc.) on the same day as concussion.
- c. The academic environment allows for an individualized progression of more prolonged and sustained mental activity. This may include remaining at home/dorm if student-athlete cannot tolerate light cognitive activity and a gradual return to classroom/studying as tolerated.
- d. Compliance with ADA/AA
- e. Re-evaluation by team physician if concussion symptoms worsen with academic challenges.
- f. Re-evaluation by team physician and members of the multi- disciplinary team, as appropriate, for student-athlete with symptoms lasting longer than two weeks.
- g. Modification of schedule/academic accommodations, as indicated, with help from the sport’s Athletic Trainer and/or Academic counselor(s).

h. Engaging Learning Specialists for cases that cannot be managed through schedule modification/academic accommodations.

9) Following concussion diagnosis, the student-athlete's return-to-play stepwise progression is overseen by a health care provider with expertise in concussion. For a student-athlete to return-to-play, he or she must meet the following:

a. Be at or above his or her previous baseline testing;

b. Undergo an appropriate step-by-step return to activity plan and has tolerated a graded exertional protocol without symptoms returning, including the following:

i. Light aerobic exercise without resistance training

ii. Sport-specific exercise and activity without head impact

iii. Non-contact practice with progressive resistance training

iv. Unrestricted training

v. Return to competition

c. The final decision for return to play rests with the team physician and is unchallengeable.

The timetable for a return to play will be individualized and dependent on numerous factors.

As with all conditions, no one clinical factor can be used to either diagnose concussions or determine when return to activities is safe after concussion. Symptoms, clinical evaluation, diagnostic studies and testing such as neurocognitive tests all must be weighed in the decision. Clinical judgment makes the final determination.

10) The University of Louisville acknowledges the importance of emphasizing ways to reduce exposure to head trauma. Coaches and athletes will be responsible for taking a "safety first" approach to their sport and exercise proper technique. Specific to the sport of football, the Sports Medicine Staff will incorporate the NCAA Inter-Association Consensus: Year-Round Football Practice Contact Guidelines.

11) Medical specialists, including those from Neurology and Neuropsychology, which may assist in the care of an affected student-athlete have been identified. They are available for consultation when appropriate and their assistance has been called upon in the development of this policy.

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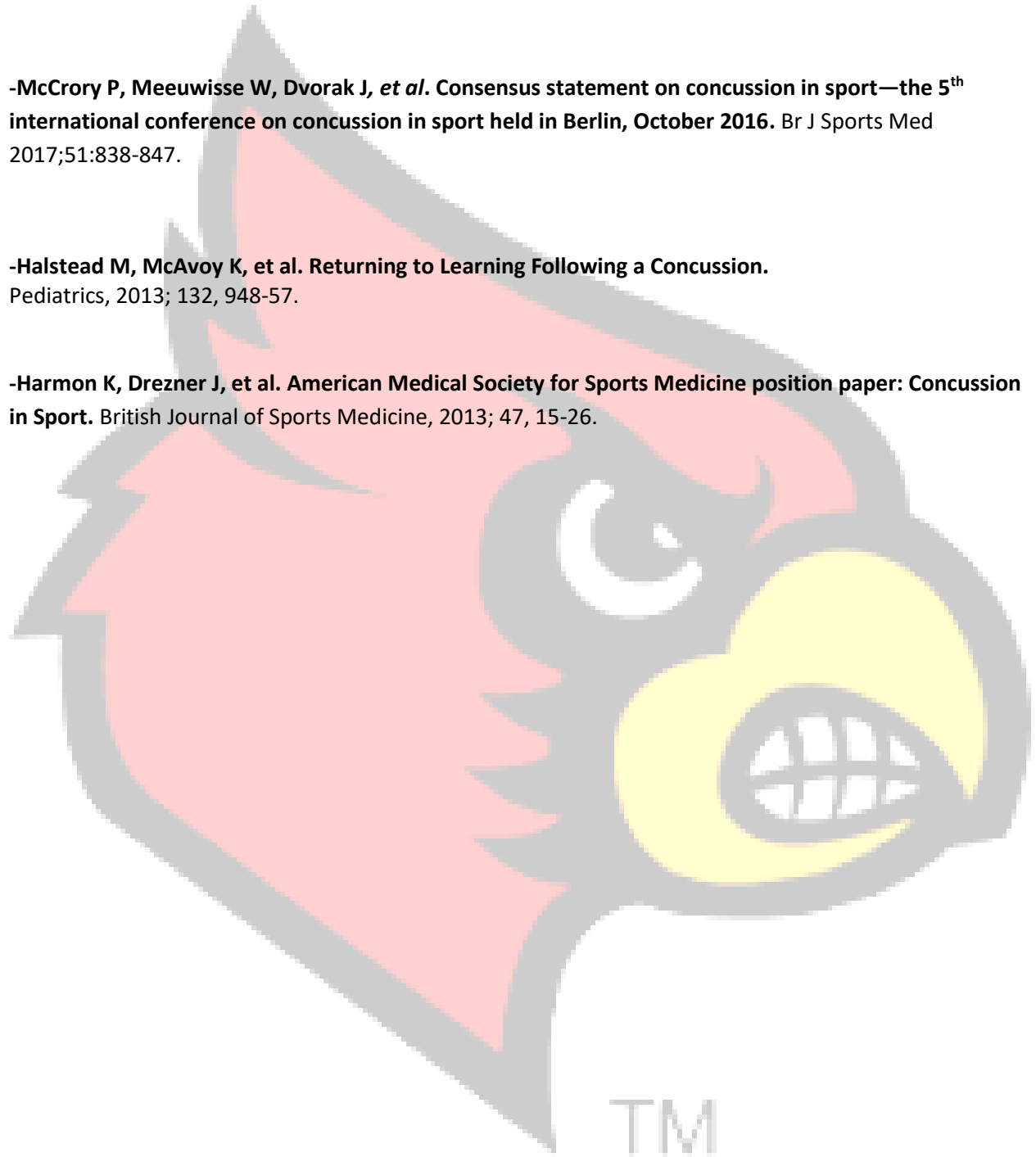
Resources

-**Interassociation Consensus: Diagnosis and Management of Sport-Related Concussion Best Practices. 2016.** Available at: http://www.ncaa.org/sites/default/files/SSI_ConcussionBestPractices_20170616.pdf.

-**McCrary P, Meeuwisse W, Dvorak J, et al. Consensus statement on concussion in sport—the 5th international conference on concussion in sport held in Berlin, October 2016.** Br J Sports Med 2017;51:838-847.

-**Halstead M, McAvoy K, et al. Returning to Learning Following a Concussion.** Pediatrics, 2013; 132, 948-57.

-**Harmon K, Drezner J, et al. American Medical Society for Sports Medicine position paper: Concussion in Sport.** British Journal of Sports Medicine, 2013; 47, 15-26.



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University of Louisville's Certification of Compliance with NCAA Division I Bylaws 3.2.4.17 (concussion management plan) and 3.2.4 17.1 (concussion safety protocol).