ST. OLAF COLLEGE SPORTS MEDICINE

Concussion Management Plan

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Goal of the Concussion Management Plan

- The Concussion Management Plan will fulfill the NCAA requirement in addition to improving the prevention, recognition, evaluation, and management of concussions in student-athletes.
- This will best be accomplished using a team approach, involving the athlete, coach, administrator, Certified Athletic Trainers, Neuropsychologist, and Team Physician.
- Communication between the members of all involved is crucial.

Concussion Definition

Concussion is defined as a complex patho-physiological process affecting the brain, induced by traumatic biomechanical forces.

- Concussion may be caused by a direct blow to the head, face, neck or elsewhere with force transmitted to the head.
- Short-lived impairment of neurologic function typically resolves spontaneously.
- Concussion may result in neuro-pathological changes but the acute clinical symptoms largely reflect a functional disturbance rather than a structural injury.
- Concussion results in a graded set of clinical symptoms that may or may not involve loss of consciousness.
- Resolution typically follows a sequential course; however a small percentage of cases, have prolonged post–concussive symptoms.
- Concussions show no abnormality on standard structural neuroimaging (CT Scan, MRI). (McCrory et al. 2009)

Standard Assessment of Concussion

A. Preinjury Baseline

- All student-athletes will have an established ImPACT (Immediate Post-concussion Assessment and Cognitive Testing) baseline which includes a baseline symptom score for the concussion assessment tools.
- All student-athletes will have a baseline CSMi HUMAC balance score established.
- All student-athletes are REQUIRED to complete the baseline tests prior to the first practice.
- The baseline tests would then be used to help evaluate for concussion and aid in determining return to play after a concussion.
- Student-Athlete’s Signature for Reporting of symptoms.
  - Each student-athlete will sign a form to assure timely reporting of any injury; specifically any symptoms that could possibly be a concussion for them or their teammates will be reported.

Consideration for other injuries, including cervical spine should be considered and excluded prior to a formal sideline concussion assessment.

Emergent transport for appropriate assessment and imaging should be considered any time symptoms are worsening or a more severe brain/cervical spine injury is suspected.

B. If a concussion is suspected on-field assessment should be conducted by the Certified Athletic Trainer and/or Physician to evaluate symptoms and abnormal exam findings. SCAT3 (Standardized Assessment of Concussion) Test with BESS (Modified Balance Error Scoring System) exam will be used on the sideline for the assessment of concussed student-athlete. If a Certified Athletic Trainer or Team Physician is not available, then any athlete suspected of a possible concussion will be removed from play and appropriately referred for assessment.

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C. A complete SCAT3 will be used as the standard assessment when a concussion is suspected. Components of SCAT3 include:

- Sideline Assessment – Maddocks Score
- Physical Signs Score (Number/2)
- Glasgow Coma Score (Number/15)
- Symptom Evaluation Score (number/22)
- Cognitive Assessment – SAC (Number/30)
- Neck Examination
- Modified Balance Error Scoring System (BESS) (Number/30)
- Coordination Examination (Number/1)

D. Follow Up Assessment

- Urgent referral when indicated and will occur immediately as symptoms present.
- Certified Athletic Trainer and/or Team Physician reassessment within 24-72 hours.
- Repeat the SCAT3 and Neuropsychological Test (ImPACT). Generally, repeat ImPACT testing should occur when the student-athlete is asymptomatic. Earlier neuropsychological testing may be considered, or at 7 days post injury if symptoms still present. (McCrory et al. 2009, page 187)
- Timing and frequency of follow up will be determined on a case to case basis.
- When a student-athlete is diagnosed with a concussion, the certified athletic trainer involved will either review the case with one of the team physicians or have the patient seen by a physician prior to return to play.

E. Return to Play

- When a student-athlete shows any signs, symptoms or behaviors consistent with a concussion, the athlete shall be removed from practice or competition and evaluated by any athletic healthcare provider with experience in the evaluation and management of concussion. (From NCAA Memorandum April 29, 2010 5.d)
- A student-athlete suspected of, or diagnosed with concussion will be withheld from the competition or practice and not return to activity for the remainder of that day.
- Return to play decisions will be made on clinical judgment based on an individual case by case situation.
- Generally, any concussed student-athlete will have physical and cognitive rest until symptoms resolve, and then a graded program of exertion prior to medical clearance and return to play. Each level of exertion will be advanced approximately every 24 hours, as long as athlete is symptom free.
  - Asymptomatic at Rest
  - Asymptomatic with Light Aerobic Exercise (i.e. exercise bike)
  - Asymptomatic with Sport-specific Exercise (i.e. Agility Drills, Lifting Weights)
  - Asymptomatic with Non-contact Training Drills
  - Asymptomatic with Full Contact Practice
  - Asymptomatic with Normal Game play

- Ultimate and final authority for return-to-play will reside with the team physician or the physician’s designee.

F. Documentation of a concussion, including scores of SCAT3 and ImPACT, would be maintained in the athletic training office and/or their medical chart.

Every Athlete and Coach will be given a Concussion informational sheet providing basic information about concussions to help improve awareness, identification, appropriate assessment, and prevention of concussions

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