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I. INTRODUCTION

The NCAA Executive Committee has developed a consistent, association-wide approach to Concussion Management. It is the responsibility of all student-athletes to report injuries and illnesses to their Athletic Trainer. This includes, but is not limited to, signs and symptoms related to concussions.

The Clemson University Sports Medicine Department recognizes and acknowledges that concussions or traumatic brain injuries (TBI) need immediate attention. A concussion is defined as a generally short-lived impairment of neurological function brought on by a direct or indirect traumatic force applied to the head or body. Symptoms are usually rapid in onset, but of short duration and generally resolve spontaneously. It is usually a functional disturbance and not a structural one. Loss of consciousness may or may not be involved. Exact recovery periods from these types of head injuries are uncertain and will often vary.

Clemson University Sports Medicine adheres to the NCAA Concussion Policy and Legislation. In addition, Clemson University Sports Medicine abides by the Independent Medical Care Guidelines (APPENDIX A) and Football Practice Guidelines (APPENDIX B) as addressed by the Safety in College Football Summit.

All members of the Clemson University Sports Medicine staff will abide by the scope of their established professional practice. The Certified Athletic Trainers and Team Physicians of the Clemson University Sports Medicine staff are trained in the diagnosis, treatment and initial management of acute concussions. During NCAA competition of the following Clemson University sports; Football, Men and Women’s Basketball, Men and Women’s Soccer and Pole-vaulting, there will be a member of the Clemson University Sports Medicine staff on-site at the venue to manage any concussion related problems as it is written in our general protocol. In addition, as it pertains to the above listed sports, a member of the Clemson University Sports Medicine staff, at minimum, will be available during NCAA practices. Availability of staff is defined by being accessible at any time during these practices by means of telephone, messaging, email, beeper or any other immediate communication vehicle. A staff member will attend along with being available for the Clemson University practices of the previously listed sports. All of the concussion management progression lies exclusively with the Clemson University Sports Medicine Staff, and The Team Physician will make the final determination of return-to-play once asymptomatic and post-exertion assessments are within normal limits.

The entire concussion management process of the student-athlete from the baseline assessment, initial post-injury evaluation, and eventual return to full athletic and academic participation, including any diagnostic testing, shall be documented within their medical file.

II. BASELINE ASSESSMENT / EDUCATION

Prior to any athletic activity, every student-athlete will be required to sign a Student-Athlete Concussion Statement Acknowledgement (APPENDIX D) annually stating they receive, have read, and understand the information provided by the NCAA document Concussion: A Fact Sheet for Student-Athletes (APPENDIX C). This document on concussions includes the definition of a concussion, how to prevent a concussion, the symptoms of a concussion, and how to report any concerns for themselves, or a teammate regarding a concussion.

Before any athletic participation, every student-athlete will undergo baseline testing. Baseline testing includes a medical history, a Baseline Assessment Symptom Scale with a Balance Error Scoring System (BESS) (APPENDIX E), and a computerized neuropsychological test.

All Clemson University Coaches, Strength and Conditioning Staff, Athletic Trainers, Team Physicians, Vickery Hall Academic Staff, and the Director of Athletics will be required to sign an Athletic Staff Concussion Statement Acknowledgment (APPENDIX G) annually stating that they receive, have read, and understand the information provided by the NCAA document Concussion: A Fact Sheet for Coaches (APPENDIX F). This document includes facts and the definition of a concussion, signs and symptoms to be aware of, how to prevent concussions, and what to do if they suspect a concussion has occurred in a student-athlete.

In an attempt to educate student-athlete’s playing football, the Clemson University Football coaches go over drills to teach proper form prior to contact during fall and spring practice. These sessions are videoed and kept on file.
III. CONCUSSION

The Clemson University Sports Medicine team will determine whether or not a concussion has occurred, realizing that each concussion and each student-athlete are different and individual treatment plans are necessary.

Signs and Symptoms of a Possible Concussion (including but not limited to):

- Headache
- Nausea
- Balance Problems
- Dizziness
- Diplopia - Double Vision
- Confusion
- Photophobia – Light Sensitivity
- Difficulty Sleeping
- Misophonia – Noise Sensitivity
- Blurred Vision
- Feeling Sluggish or Groggy
- Memory Problems
- Difficulty Concentrating

When a student-athlete exhibits signs, symptoms, or behavior consistent with a possible concussion, they shall be removed from practice or competition and evaluated by the Certified Athletic Trainer and/or the Team Physician. The student-athlete will be evaluated and monitored for a minimum of 15 minutes to determine their status as it relates to being concussed. Once a student-athlete has been diagnosed with having a concussion, they shall be removed from physical activity for the remainder of that day, and not allowed to participate in academic activities. The student-athlete, or their parent, guardian, or roommate, will be provided instructions on further care and the Concussion Head Injury Information Take-Home Instructions (APPENDIX H) upon discharge.

The student-athlete will be monitored multiple times daily for progression of symptoms from rest, physical exertion, and mental exertion by the Clemson University Sports Medicine staff. The student-athlete will see a Team Physician every morning, and at other times throughout the day as deemed necessary, to determine their status as it pertains to their concussion symptoms, their athletic participation status, and their academic participation status. The Clemson University Sports Medicine Staff will use a Concussion Assessment Symptom Scale (APPENDIX I) and a Balance Error Scoring System (BESS) daily, along with other examinations deemed necessary during the evaluation of the concussed student-athlete until the symptoms have subsided and/or have been resolved. A computerized neuropsychological test will also be performed, however, computer neuropsychological tests should not be used as a standalone measure to diagnose the presence or absence of a concussion. All of these evaluations will be compared to the baseline values of the student-athlete and will aid in the Return-to-Play and Return-to-Learn progression. In the case of a prolonged recovery, the team physician will determine the need for further diagnostic imaging, testing, or outside consultation on a case-by-case basis.

With permission for release of information from the student-athlete, the Vickery Hall Academic Advisors and their Professors will be notified and updated on the condition of the student-athlete after they suffer from a concussion.

IV. EMERGENCY ACTION

Clemson University Sports Medicine personnel will execute the Clemson University Sports Medicine Emergency Action Plan (APPENDIX K) for further medical care and/or transportation as deemed necessary. This may include injury to the neck and/or spine, head trauma, and/or severe concussion signs and/or symptoms.

The following items will be used to determine the status of the student-athlete as it pertains to transportation to a medical facility and/or initiating the Emergency Action Plan:

1. A Glasgow Coma Scale that diminishes below a 13
2. Prolonged loss of consciousness as it relates to the concussion
3. A neurological exam deficit that may suggest intracranial trauma
4. Repetitive/Uncontrolled vomiting (Emesis)
5. A persistent decline of the student-athlete's mental status and/or neurological signs/symptoms
6. Significant spinal related trauma/injury

V. RETURN-TO-PLAY

The Athletic Trainer and the Team Physician will monitor the progression of the student-athlete and their return to athletic and academic activities. The Clemson University Sports Medicine Staff will use the Concussion Assessment Symptom Scale and a Balance Error Scoring System (BESS) daily, along with other examinations deemed necessary during the evaluation of the concussed student-athlete, to determine how quickly the Return-to-Play and progression is performed. The following stages are to be followed in the progression of athletic activity:
The athlete must be asymptomatic before progressing to the next stage, as follows:

Stage 1: At rest and daily living activities for ~24 hours.
Stage 2: Weight lifting and conditioning
Stage 3: Non-contact drill work
Stage 4: Contact drill work
Stage 5: Full contact practice and drill work
Stage 6: Full participation with the release of the Team Physician.

VI. RETURN-TO-LEARN

The Clemson University Team Physicians, Sports Medicine Staff Athletic Trainers, and the Athletic Academic Success Center (a.k.a. Vickery Hall staff) will work together to determine the Return-to-Learn status of a post-concussed student-athlete. The Vickery Hall staff will be the point persons when dealing with a student-athletes’ professors and any accommodations that may be needed in their return to the classroom and activities that are associated with their full academic return. The Clemson University Team Physicians, Sports Medicine Staff Athletic Trainers, and Vickery Hall staff will work together to determine the daily status of the student-athlete.

When a student-athlete has been diagnosed with a concussion, they will be held from practice, competition, and class activities that same day. The Vickery Hall staff will be notified on the status of the student-athlete.

On subsequent days that follow a concussion, the student-athlete will be seen by the Team Physician each morning before classes begin. At that time, the decision will be made by the Clemson University Team Physician if the student-athletes’ symptoms have progressed to allow them to attempt to go to class, study hall, and tutoring sessions that day. The Vickery Hall staff will be alerted of the decision from the Clemson University Team Physician about the student-athlete’s progression for that day. The Vickery Hall staff will, in turn, convey the status of the student-athlete to their professors. The Clemson University Team Physician will initiate the Concussion Awareness Letter (APPENDIX J) so this can be delivered to the Vickery Hall staff, and then to the student-athletes’ professors. Regardless of returning to class that day or not, the student-athlete will be seen by the Clemson University Team Physician and Sports Medicine staff at the appointed time that afternoon. If the student-athlete is allowed to return to class, they will be evaluated that afternoon in order to complete an updated symptom checklist. This will aid in determining how their day of learning progressed.

The student-athlete will be required to complete a Concussion Assessment Symptom Scale each day post-concussion until they are symptom-free. This process will continue until the student-athlete has returned to full classroom activity.

Vickery Hall staff will play an important role in the day-to-day progression of the student-athlete in return to full classroom, study hall, and tutoring activities. They will also be the point persons in dealing with accommodations that the student-athlete may need while returning to full classroom activities. If there is a need to involve the Clemson University Disability Services Center to aid in compliance with the Americans with Disabilities Act Amendments Act (ADAAA), the Vickery Hall staff will handle this process.

In any concussion case when a student-athlete needs counseling, the Sports Medicine staff will aid in referring him/her to the Athletic Department’s Licensed Counselor, located at Redfern Student Health Center on campus.

PROLONGED / MULTIPLE CONCUSSION MANAGEMENT TEAM

In the event of a more complex case of symptomatic Return-to-Learn with a student-athlete, or in the event of multiple concussions, the following Concussion Management Team may need to meet and develop a personalized plan for the student-athlete. The Team Physician will enact and lead this team as he sees fit for prolonged recovery from a concussion. This team may or may not be enacted after 2 weeks. This will be determined by the Team Physician and the Vickery Hall Academic Counselor on an individual basis. This team will be responsible for assisting the student-athlete in engaging campus resources for those cases that cannot be managed through schedule modification. If necessary, the plan may involve having the student-athlete take a medical withdrawal from the University for the semester in which they are enrolled while recovering from their concussion.

TEAM MEMBERS:

- Clemson Team Physicians
- Director of Sports Medicine / Head Athletic Trainer
- Full-time Athletic Trainer with respective sport
- Clemson University Athletic Department Licensed Counselor
- Vickery Hall Staff Member(s) that are directly involved with the student-athlete

This policy is intended to guide patient care. Medical conditions and specific medical situations are often complex and require health care providers to make independent judgments. These policies may be modified by practitioners to achieve maximal patient outcomes.
INDEPENDENT MEDICAL CARE GUIDELINES

Independent Medical Care for College Student-Athletes Guidelines

Purpose:

The Safety in College Football Summit resulted in inter-association consensus guidelines for three paramount safety issues in collegiate athletics:

1. Independent medical care in the collegiate setting;
2. Concussion diagnosis and management; and
3. Football practice contact.

This document addresses independent medical care for college student-athletes in all sports.

Background:

Diagnosis, management, and return to play determinations for the college student-athlete are the responsibility of the institution’s athletic trainer (working under the supervision of a physician) and the team physician. Even though some have cited a potential tension between health and safety in athletics, collegiate athletics endeavor to conduct programs in a manner designed to address the physical well-being of college student-athletes (i.e., to balance health and performance). In the interest of the health and welfare of collegiate student-athletes, a student-athlete’s health care providers must have clear authority for student-athlete care. The foundational approach for independent medical care is to assume an “athlete-centered care” approach, which is similar to the more general “patient-centered care,” which refers to the delivery of health care services that are focused only on the individual patient’s needs and concerns. The following 10 guiding principles, listed in the Inter-Association Consensus Statement on Best Practices for Sports Medicine Management for Secondary Schools and Colleges, are paraphrased below to provide an example of policies that can be adopted that help to assure independent, objective medical care for college student-athletes:

1. The physical and psychosocial welfare of the individual student-athlete should always be the highest priority of the athletic trainer and the team physician.
2. Any program that delivers athletic training services to student-athletes should always have a designated medical director.
3. Sports medicine physicians and athletic trainers should always practice in a manner that integrates the best current research evidence within the preferences and values of each student-athlete.
4. The clinical responsibilities of an athletic trainer should always be performed in a manner that is consistent with the written or verbal instructions of a physician or standing orders and clinical management protocols that have been approved by a program’s designated medical director.
5. Decisions that affect the current or future health status of a student-athlete who has an injury or illness should only be made by a properly credentialed health professional (e.g., a physician or an athletic trainer who has a physician’s authorization to make the decision).
6. In every case that a physician has granted an athletic trainer the discretion to make decisions relating to an individual student-athlete’s injury management or sports participation status, all aspects of the care process and changes in the student-athlete’s disposition should be thoroughly documented.
7. Coaches must not be allowed to impose demands that are inconsistent with guidelines and recommendations established by sports medicine and athletic training professional organizations.
8. An athletic trainer’s role delineation and employment status should be determined through a formal administrative role for a physician who provides medical direction.
9. An athletic trainer’s professional qualifications and performance evaluations must not be primarily judged by administrative personnel who lack health care expertise, particularly in the context of hiring, promotion, and termination decisions.
10. Member institutions should adopt an administrative structure for delivery of integrated sports medicine and athletic training services to minimize the potential for any conflicts of interest that could adversely affect the health and well-being of student-athletes.
Team physician authority becomes the linchpin for independent medical care of student-athletes. Six preeminent sports physicians associations agree with respect to “... athletic trainers and other members of the athletic care network report to the team physician on medical issues.”6 Consensus aside, a medical-legal authority is a matter of law in 48 states that require athletic trainers to report to a physician in their medical practice. The NCAA Sports Medicine Handbook’s Guideline 1B opens with a charge to athletics and institutional leadership to “create an administrative system where athletics health care professionals – team physicians and athletic trainers – are able to make medical decisions with only the best interests of student-athletes at the forefront.”7 Multiple models exist for collegiate sports medicine. Athletic health care professionals commonly work for the athletics department, student health services, private medical practice, or a combination thereof. Irrespective of model, the answer for the college student-athlete is established independence for appointed athletics health care providers.8

**Guidelines:**

Institutional medical line of authority should be established independently of a coach, and in the sole interest of student-athlete health and welfare. Medical line of authority should be transparent and evident in athletics departments, and organizational structure should establish collaborative interactions with the medical director and primary athletics health care providers (defined as all institutional team physicians and athletic trainers) so that the safety, excellence and wellness of student-athletes are evident in all aspects of athletics and are student-athlete centered.

Institutions should, at a minimum, designate a licensed physician (M.D. or D.O.) to serve as medical director, and that medical director should oversee the medical tasks of all primary athletics health care providers. Institutions should consider a board certified physician, if available. The medical director may also serve as team physician. All athletic trainers should be directed and supervised for medical tasks by a team physician and/or the medical director. The medical director and primary athletics health care providers should be empowered with unchallengeable autonomous authority to determine medical management and return-to-play decisions of student-athletes.

**References:**

1. Matheson GO. Maintaining professionalism in the athletic environment. *Phys Sportsmed.* 2001 Feb;29(2)


3. NCAA Bylaw 3.2.4.17 (Div. I and Div. II; 3.2.4.16 (Div. III).


*This Consensus Best Practice, Independent Medical Care for College Student-Athletes, has been endorsed by:*

- American Academy of Neurology
- American College of Sports Medicine
- American Association of Neurological Surgeons
- American Medical Society for Sports Medicine
- American Orthopaedic Society for Sports Medicine
- American Osteopathic Academy for Sports Medicine
- College Athletic Trainers’ Society
- Congress of Neurological Surgeons
- National Athletic Trainers’ Association
- NCAA Concussion Task Force
- Sports Neuropsychological Society
FOOTBALL PRACTICE GUIDELINES

Year-Round Football Practice Contact Guidelines

Purpose:

The Safety in College Football Summit resulted in inter-association consensus guidelines for three paramount safety issues in collegiate athletics:

1. Independent medical care in the collegiate setting;
2. Concussion diagnosis and management; and
3. Football practice contact.

This document addresses year-round football practice contact.

Background:

Enhancing a culture of safety in collegiate sport is foundational. Football is an aggressive, rugged, contact sport, yet the rules clearly state that there is no place for maneuvers deliberately designed to inflict injury on another player. Historically, rules changes and behavior modification have reduced catastrophic injury and death. Enforcement of these rules is critical for improving player safety. Despite sound data on reducing catastrophic football injuries, there are limited data that provide a strong foothold for decreasing injury risk by reducing contact in football practice. Regardless of such scientific shortcomings, there is a growing consensus that we must analyze existing data in a consensus-based manner to develop guidelines that promote safety. “Safe” football means “good” football.

NCAA regulations currently do not address in season, full-contact practices. The Ivy League and Pac-12 Conference have limited in season, full-contact practices to two per week and have established policies for full-contact practices in spring and preseason practices through their Football Practice Standards and Football Practice Policy, respectively. Neither address full-pad practice that does not involve live contact practice, as defined below. Both conferences cite safety concerns as the primary rationale for reducing full-contact practices; neither conference has published or announced data analysis based on their new policies. In keeping with the intent of both conferences and other football organizations, the rationale for defining and reducing live contact practice is to improve safety, including possibly decreasing student-athlete exposure for concussion and sub-concussive impacts. Reduced frequency of live contact practice may also allow even more time for teaching of proper tackling technique.

The biomechanical threshold (acceleration/deceleration/rotation) at which sport-related concussion occurs is unknown. Likewise, there are no conclusive data for understanding the short- or long-term clinical impact of sub-concussive impacts. However, there are emerging data that football players are more frequently diagnosed with sport-related concussion on days with increased frequency and higher magnitude of head impact (greater than 100g linear acceleration).

Traditionally, the literature addressing differing levels of contact in football practice correlated with the protective equipment (uniform) worn. This means that full-pad practice correlated with full-contact and both half-pad (shell) and helmet-only practice correlated with less contact. However, coaches, administrators and athletics health care providers who helped to shape these guidelines have noted that contact during football practice is not determined primarily by the uniform, but rather by whether the intent of practice is centered on live contact versus teaching and conditioning. There are limited data that address this issue, and such data do not differentiate whether the intent of the practice is live tackling or teaching/conditioning. Within these limitations, non-published data from a single institution reveal the following:

- The total number of non-concussive head impacts sustained in helmets-only and full-pad practices is higher than those sustained in games/scrimmages.
- Mild- and moderate-intensity head impacts occur at an essentially equal rate during full-pad and half-pad practices when the intent of practice is not noted.
- Severe-intensity head impacts are much more likely to occur during a game, followed by full-pad practices and half-pad practices.
- There is a 14-fold increase in concussive impacts in full-pad practices when compared to half-pad or helmets-only practices.
- Offensive linemen and defensive linemen experience more head impacts during both full-pad and half-pad practices relative to all other positions.
The guidelines below are based on: expert consensus from the two day summit referenced above; comments and recommendations from a broad constituency of the organizations listed; and internal NCAA staff members. Importantly, the emphasis is on limiting contact, regardless of whether the student-athlete is in full-pad, half-pad, or is participating in a helmet-only practice. Equally importantly, the principles of sound and safe conditioning are an essential aspect of all practice and competition exposures.

These guidelines must be differentiated from legislation. For each section below that addresses a particular part of the football calendar, any legislation for that calendar period is referenced. As these guidelines are based on consensus and limited science, they are best viewed as a "living, breathing" document that will be updated, as we have with other health and safety guidelines, based on emerging science or sound observations that result from application of these guidelines. The intent is to reduce injury risk, but we must also be attentive to unintended consequences of shifting a practice paradigm based on consensus. For example, football preseason must prepare the student-athlete for the rigors of an aggressive, contact, rugged sport. Without adequate preparation, which includes live tackling, the student-athlete could be at risk of unforeseen injury during the in season because of inadequate preparation. We plan to reanalyze these football practice contact guidelines at least annually. Additionally, we recognize that NCAA input for these guidelines came primarily from Division I Football Bowl Subdivision schools. Although we believe the guidelines can also be utilized for football programs in all NCAA divisions, we will be more inclusive in the development of future football contact practice guidelines.

Definitions:

**Live contact practice:** Any practice that involves live tackling to the ground and/or full-speed blocking. Live contact practice may occur in full-pad or half-pad (also known as "shell," in which the player wears shoulder pads and shorts, with or without thigh pads). Live contact does not include: (1) "thud" sessions, or (2) drills that involve "wrapping up;" in these scenarios players are not taken to the ground and contact is not aggressive in nature. Live contact practices are to be conducted in a manner consistent with existing rules that prohibit targeting to the head or neck area with the helmet, forearm, elbow, or shoulder, or the initiation of contact with the helmet.

**Full-pad practice:** Full-pad practice may or may not involve live contact. Full-pad practices that do not involve live contact are intended to provide preparation for a game that is played in a full uniform, with an emphasis on technique and conditioning versus impact.

Legislation versus guidelines:

There exists relevant NCAA legislation for the following:

1. **Preseason practice**
   a. DI FBS/FCS – NCAA Bylaws 17.9.2.3 and 17.9.2.4
   b. DII – NCAA Bylaws 17.9.2.2 and 17.9.2.3
   c. DIII – NCAA Bylaws 17.9.2.2 and 17.9.2.3

2. **In-season practice:** No current NCAA legislation addresses contact during in season practices.

3. **Postseason practice:** No current NCAA legislation addresses contact during postseason practices.

4. **Bowl practice:** No current NCAA legislation addresses contact during bowl practice.

5. **Spring practice:**
   a. DI FBS/FCS – NCAA Bylaw 17.9.6.4
   b. DII – NCAA Bylaw 17.9.8
   c. DIII – NCAA Bylaw 17.9.6 – not referenced to as spring practice, but allows five (5) week period outside playing season.

The guidelines that follow do not represent legislation or rules. As noted in the appendix, the intent of providing consensus guidelines in year one of the inaugural Safety in College Football Summit is to provide consensus-based guidance that will be evaluated "real-time" as a "living and breathing" document that will become solidified over time through evidence-based observations and experience.

Preseason practice guidelines:

For days in which institutions schedule a two-a-day practice, live contact practices are only allowed in one practice. A maximum four (4) live contact practices may occur in a given week, and a maximum of 12 total may occur in preseason. Only three practices (scrimmages) would allow for live contact in greater than 50 percent of the practice schedule.

In season practice guidelines:

In season is defined as the period between six (6) days prior to the first regular-season game and the final regular-season game or conference championship game (for participating institutions). There may be no more than two (2) live contact practices per week.

Postseason guidelines: (FCS/DII/DIII)

There may be no more than two (2) live contact practices per week.

Bowl practice guidelines: (FBS)

There may be no more than two (2) live contact practices per week.
Spring practice guidelines:

Of the 15 allowable sessions that may occur during the spring practice season, eight (8) practices may involve live contact; three (3) of these live contact practices may include greater than 50 percent live contact (scrimmages). Live contact practices are limited to two (2) in a given week and may not occur on consecutive days.

References:

10. Trulock S, Oliaro S. Practice contact. Safety in College Football Summit. Presented January 22, 2014, Atlanta, GA.

*This Inter-Association Consensus: Year-Round Football Practice Contact Guidelines, has been endorsed by:

- American Academy of Neurology
- American College of Sports Medicine
- American Association of Neurological Surgeons
- American Football Coaches Association
- American Medical Society for Sports Medicine
- American Orthopaedic Academy for Sports Medicine
- College Athletic Trainers’ Society
- Congress of Neurological Surgeons
- Football Championship Subdivision Executive Committee
- National Association of Collegiate Directors of Athletics
- National Athletic Trainers’ Association
- National Football Foundation
- NCAA Concussion Task Force
- Sports Neuropsychological Society
WHAT IS A CONCUSSION?
A concussion is a brain injury that:
• Is caused by a blow to the head or body.
  – From contact with another player, hitting a hard surface such as the ground, ice or floor, or being hit by a piece of equipment such as a bat, lacrosse stick or field hockey ball.
• Can change the way your brain normally works.
• Can range from mild to severe.
• Presents itself differently for each athlete.
• Can occur during practice or competition in ANY sport.
• Can happen even if you do not lose consciousness.

HOW CAN I PREVENT A CONCUSSION?
Basic steps you can take to protect yourself from concussion:
• Do not initiate contact with your head or helmet. You can still get a concussion if you are wearing a helmet.
• Avoid striking an opponent in the head. Undercutting, flying elbows, stepping on a head, checking an unprotected opponent, and sticks to the head all cause concussions.
• Follow your athletics department’s rules for safety and the rules of the sport.
• Practice good sportsmanship at all times.
• Practice and perfect the skills of the sport.

WHAT ARE THE SYMPTOMS OF A CONCUSSION?
You can’t see a concussion, but you might notice some of the symptoms right away. Other symptoms can show up hours or days after the injury. Concussion symptoms include:
• Amnesia.
• Confusion.
• Headache.
• Loss of consciousness.
• Balance problems or dizziness.
• Double or fuzzy vision.
• Sensitivity to light or noise.
• Nausea (feeling that you might vomit).
• Feeling sluggish, foggy or groggy.
• Feeling unusually irritable.
• Concentration or memory problems (forgetting game plays, facts, meeting times).
• Slowed reaction time.
Exercise or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games may cause concussion symptoms (such as headache or tiredness) to reappear or get worse.

WHAT SHOULD I DO IF I THINK I HAVE A CONCUSSION?
Don’t hide it. Tell your athletic trainer and coach. Never ignore a blow to the head. Also, tell your athletic trainer and coach if one of your teammates might have a concussion.
Sports have injury timeouts and player substitutions so that you can get checked out.
Report it. Do not return to participation in a game, practice or other activity with symptoms. The sooner you get checked out, the sooner you may be able to return to play.
Get checked out. Your team physician, athletic trainer, or health care professional can tell you if you have had a concussion and when you are cleared to return to play. A concussion can affect your ability to perform everyday activities, your reaction time, balance, sleep and classroom performance.
Take time to recover. If you have had a concussion, your brain needs time to heal. While your brain is still healing, you are much more likely to have a repeat concussion. In rare cases, repeat concussions can cause permanent brain damage, and even death. Severe brain injury can change your whole life.

IT’S BETTER TO MISS ONE GAME THAN THE WHOLE SEASON.
WHEN IN DOUBT, GET CHECKED OUT.
For more information and resources, visit www.NCAA.org/health-safety and www.CDC.gov/Concussion.
The NCAA Executive Committee has developed a consistent, association-wide approach to Concussion Management. It is the responsibility of all student-athletes to report injuries and illnesses to their Athletic Trainer. This includes, but is not limited to, signs and symptoms related to concussions.

The Clemson University Sports Medicine Department recognizes and acknowledges that concussions or traumatic brain injuries (TBI) need immediate attention. A concussion is defined as a generally short-lived impairment of neurological function brought on by a traumatic force applied to the head or body. Symptoms are usually rapid in onset, but of short duration and generally resolve spontaneously. It is usually a functional disturbance and not a structural one. Loss of consciousness may or may not be involved.

The Clemson Sports Medicine team will determine whether or not a concussion has occurred, realizing that each concussion and each student athlete is different, and individual treatment plans are necessary.

**SIGNS AND SYMPTOMS OF A POSSIBLE CONCUSSION (including but not limited to):**

- Headache
- Nausea
- Balance Problems
- Dizziness
- Diplopia - Double Vision
- Confusion
- Photophobia – Light Sensitivity
- Difficulty Sleeping
- Misophonia – Noise Sensitivity
- Blurred Vision
- Feeling Sluggish or Groggy
- Memory Problems
- Difficulty Concentrating

As a Clemson University Student-Athlete, I acknowledge that I am responsible for reading and understanding the following as it relates to my physical and mental well-being:

- A concussion is a brain injury.
- A concussion cannot be seen, but symptoms may be seen immediately. Other symptoms can show up hours or days after injury.
- If I suspect I have a concussion, it is my responsibility to promptly report it to the Sports Medicine staff.
- I will not be allowed to return to practice, play, or academic activities that same day if I have a blow to the head or body and/or exhibit signs or symptoms consistent with a concussion, and will not be allowed to return to play until cleared by the Clemson University Team Physician.
- I am responsible to report any suspected injuries or illness to the Sports Medicine staff, including signs or symptoms of a concussion.
- I will promptly notify the Clemson Sports Medicine staff if I suspect a teammate has a concussion.
- Following a concussion the brain needs time to heal. An individual is much more likely to sustain another concussion or more serious brain injury if they return to athletic activities before symptoms have resolved. Repeat concussions can lead to longer recovery time, All incoming student-athletes will participate in baseline testing.

**BY SIGNING BELOW, I ACKNOWLEDGE THAT I HAVE READ AND UNDERSTOOD THE INFORMATION REGARDING CONCUSSIONS AND THAT I HAVE RECEIVED THE NCAA CONCUSSION FACT SHEET.**

The NCAA Concussion Fact Sheet is also posted on the Clemson Sports Medicine Department at [www.ClemsonTigers.com](http://www.ClemsonTigers.com).

**SIGN AND RETURN THIS PAGE TO SPORTS MEDICINE. KEEP THE NCAA FACT SHEET.**

---

*May be requested to provide verification of representative status*
### SYMPTOM SCALE (Circle Appropriate Number for Each Symptom)

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th>NONE</th>
<th>MILD</th>
<th>MODERATE</th>
<th>SEVERE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEADACHE</td>
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<td>2</td>
<td>3</td>
</tr>
<tr>
<td>NAUSEA</td>
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<td>1</td>
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<td>3</td>
</tr>
<tr>
<td>VOMITING</td>
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<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>DIZZINESS</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>POOR BALANCE</td>
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<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>SENSITIVITY TO NOISE</td>
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<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>RINGING IN THE EARS</td>
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<td>2</td>
<td>3</td>
</tr>
<tr>
<td>SENSITIVITY TO LIGHT</td>
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<tr>
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<td>POOR CONCENTRATION</td>
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</tr>
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</tr>
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<td>IRRITABILITY</td>
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<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>NECK PAIN</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

### BALANCE ERROR SCORING SYSTEM (BEss)

The Balance Error Scoring System (BEss) is performed with eyes closed and hands on iliac crests. The BEss is calculated by adding one error point for each error during the 2-20-second tests.

#### STANCE

<table>
<thead>
<tr>
<th>STANCE</th>
<th>ERROR POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOUBLE LEG STANCE (FEET TOGETHER)</td>
<td></td>
</tr>
<tr>
<td>SINGLE LEG STANCE (NON-DOMINANT FOOT)</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
</tr>
</tbody>
</table>

**Balance Error Scoring System- Types of Errors**
- Hands lifted off iliac crest
- Opening eyes
- Step, stumble, or fall
- Moving hip into > 30° abduction
- Lifting forefoot or heel
- Remaining out of testing position > 5 seconds

The BEss is calculated by adding one error point for each error during the 2-20-second tests.
THE FACTS

- A concussion is a brain injury.
- All concussions are serious.
- Concussions can occur without loss of consciousness or other obvious signs.
- Concussions can occur from blows to the body as well as to the head.
- Recognition and proper response to concussions when they first occur can help prevent further injury or even death.
- Athletes may not report their symptoms for fear of losing playing time.
- Data from the NCAA Injury Surveillance System suggests that concussions represent 5 to 18 percent of all reported injuries, depending on the sport.

WHAT IS A CONCUSSION?

A concussion is a brain injury that may be caused by a blow to the head, face, neck or elsewhere on the body with an “impulsive” force transmitted to the head. Concussions can also result from hitting a hard surface such as the ground, ice or floor, from players colliding with each other or being hit by a piece of equipment such as a bat, lacrosse stick or field hockey ball.

RECOGNIZING A POSSIBLE CONCUSSION

To help recognize a concussion, watch for the following two events among your student-athletes during both games and practices:

1. A forceful blow to the head or body that results in rapid movement of the head;
2. Any change in the student-athlete’s behavior, thinking or physical functioning (see signs and symptoms).

SIGNS AND SYMPTOMS

**Signs Observed By Coaching Staff**

- Appears dazed or stunned.
- Is confused about assignment or position.
- Forgets plays.
- Is unsure of game, score or opponent.
- Moves clumsily.
- Answers questions slowly.
- Loses consciousness (even briefly).
- Shows behavior or personality changes.
- Can’t recall events before hit or fall.
- Can’t recall events after hit or fall.

**Symptoms Reported By Student-Athlete**

- Headache or “pressure” in head.
- Nausea or vomiting.
- Balance problems or dizziness.
- Double or blurry vision.
- Sensitivity to light.
- Sensitivity to noise.
- Feeling sluggish, hazy, foggy or groggy.
- Concentration or memory problems.
- Confusion.
- Does not “feel right.”
PREVENTION AND PREPARATION

As a coach, you play a key role in preventing concussions and responding to them properly when they occur. Here are some steps you can take to ensure the best outcome for your student-athletes:

- Educate student-athletes and coaching staff about concussion. Explain your concerns about concussion and your expectations of safe play to student-athletes, athletics staff and assistant coaches. Create an environment that supports reporting, access to proper evaluation and conservative return-to-play.
  - Review and practice your emergency action plan for your facility.
  - Know when you will have sideline medical care and when you will not, both at home and away.
  - Emphasize that protective equipment should fit properly, be well maintained, and be worn consistently and correctly.
  - Review the Concussion Fact Sheet for Student-Athletes with your team to help them recognize the signs of a concussion.
  - Review with your athletics staff the NCAA Sports Medicine Handbook guideline: Concussion or Mild Traumatic Brain Injury (mTBI) in the Athlete.
- Insist that safety comes first.
  - Teach student-athletes safe-play techniques and encourage them to follow the rules of play.
  - Encourage student-athletes to practice good sportsmanship at all times.
  - Encourage student-athletes to immediately report symptoms of concussion.
- Prevent long-term problems. A repeat concussion that occurs before the brain recovers from the previous one (hours, days or weeks) can slow recovery or increase the likelihood of having long-term problems. In rare cases, repeat concussions can result in brain swelling, permanent brain damage and even death.

IF YOU THINK YOUR STUDENT-ATHLETE HAS SUSTAINED A CONCUSSION:

Take him/her out of play immediately and allow adequate time for evaluation by a health care professional experienced in evaluating for concussion.

An athlete who exhibits signs, symptoms or behaviors consistent with a concussion, either at rest or during exertion, should be removed immediately from practice or competition and should not return to play until cleared by an appropriate health care professional. Sports have injury timeouts and player substitutions so that student-athletes can get checked out.

IF A CONCUSSION IS SUSPECTED:

1. Remove the student-athlete from play. Look for the signs and symptoms of concussion if your student-athlete has experienced a blow to the head. Do not allow the student-athlete to just “shake it off.” Each individual athlete will respond to concussions differently.

2. Ensure that the student-athlete is evaluated right away by an appropriate health care professional. Do not try to judge the severity of the injury yourself. Immediately refer the student-athlete to the appropriate athletics medical staff, such as a certified athletic trainer, team physician or health care professional experienced in concussion evaluation and management.

3. Allow the student-athlete to return to play only with permission from a health care professional with experience in evaluating for concussion. Allow athletics medical staff to rely on their clinical skills and protocols in evaluating the athlete to establish the appropriate time to return to play. A return-to-play progression should occur in an individualized, step-wise fashion with gradual increments in physical exertion and risk of contact.

4. Develop a game plan. Student-athletes should not return to play until all symptoms have resolved, both at rest and during exertion. Many times, that means they will be out for the remainder of that day. In fact, as concussion management continues to evolve with new science, the care is becoming more conservative and return-to-play time frames are getting longer. Coaches should have a game plan that accounts for this change.

IT’S BETTER THEY MISS ONE GAME THAN THE WHOLE SEASON.
WHEN IN DOUBT, SIT THEM OUT.

For more information and resources, visit www.NCAA.org/health-safety and www.CDC.gov/Concussion.

Reference to any commercial entity or product or service on this page should not be construed as an endorsement by the Government of the company or its products or services.
The NCAA Executive Committee has developed a consistent, association-wide approach to Concussion Management.

The Clemson University Sports Medicine Department recognizes and acknowledges that concussions or traumatic brain injuries (TBI) need immediate attention. A concussion is defined as a generally short-lived impairment of neurological function brought on by a traumatic force applied to the head or body. Symptoms are usually rapid in onset, but of short duration and generally resolve spontaneously. It is usually a functional disturbance and not a structural one. Loss of consciousness may or may not be involved.

The Clemson Sports Medicine team will determine whether or not a concussion has occurred, realizing that each concussion and each student-athlete is different and individual treatment plans are necessary.

**SIGNS AND SYMPTOMS OF A POSSIBLE CONCUSSION (including but not limited to):**

- Headache
- Nausea
- Balance Problems
- Dizziness
- Diplopia - Double Vision
- Confusion
- Photophobia – Light Sensitivity
- Difficulty Sleeping
- Misophonia – Noise Sensitivity
- Blurred Vision
- Feeling Sluggish or Groggy
- Memory Problems
- Difficulty Concentrating

As a Clemson University Athletic Staff member, I acknowledge that I am responsible for reading and understanding the following as it relates to the physical and mental well-being of all student-athletes:

- A concussion is a brain injury.
- A concussion cannot be seen, but symptoms may be seen immediately. Other symptoms can show up hours or days after injury.
- If I suspect a student-athlete has a concussion, it is my responsibility to promptly report it to the Sports Medicine staff.
- I will not allow any student-athlete to return to practice, play, or academic activities that same day if I suspect that he/she has received blow to the head or body and/or exhibit signs or symptoms consistent with a concussion, and will not be allowed to return to play until cleared by the Clemson University Team Physician.
- I will encourage all student-athletes to report any suspected injuries or illness to the Sports Medicine staff, including signs or symptoms of a concussion.
- Following a concussion the brain needs time to heal. A student-athlete is much more likely to sustain another concussion or more serious brain injury if they return to athletic activities before symptoms have resolved. Repeat concussions can lead to longer recovery time, and in rare cases, can cause permanent brain damage or even death.
- All incoming student-athletes will participate in baseline testing.

**BY SIGNING BELOW, I ACKNOWLEDGE THAT I HAVE READ AND UNDERSTOOD THE INFORMATION REGARDING CONCUSSIONS AND THAT I HAVE RECEIVED THE NCAA CONCUSSION FACT SHEET.**

**SIGN AND RETURN THIS PAGE TO COMPLIANCE, KEEP THE NCAA FACT SHEET.**

Print Full Name of Athletic Staff Member __________________________ Date ____________

Signature of Athletic Staff Member __________________________ Date ____________
You have received an injury to the head. No signs of serious complications have been found and a rapid recovery is expected. However, you will need further monitoring for a period of time by a responsible adult. The sports medicine staff will provide guidance for this.

If you notice any changes in behavior, vomiting, dizziness, worsening headache, double vision or excessive drowsiness, contact your Athletic Trainer or report to the Athletic Training Room immediately. If you are unable to reach the Sports Medicine staff and it is after Athletic Training Room hours, then you may activate emergency medical services by either having someone drive you to Oconee Memorial Hospital, or call (864) 656-2222 for an ambulance to Oconee Memorial Hospital. **DO NOT ignore any changes in the symptoms of your concussion.**

**OTHER IMPORTANT POINTS:**

- Rest and avoid strenuous activity for at least 24 hours
- **NO** alcohol
- **NO** drugs/painkillers that may alter awareness
- **NO** driving until cleared by sports medicine staff
- You may take Tylenol if instructed to do so by the Sports Medicine Staff
- **LIMIT** use of electronic devices (Cell Phone, Computer, TV, Etc.)

_**Report to the athletic training room at _____ am/pm, on _____/____/_____ to be re-evaluated prior to Team or Academic activity.**_

Phone Numbers:

________________________________________  ______________________________________
Athletic Trainer                             Team Physician

________________________________________
Signature of Student-Athlete  Date

________________________________________
Signature of Clemson University Athletic Trainer or M.D  Date

APPENDIX H
### CONCUSSION ASSESSMENT

<table>
<thead>
<tr>
<th>Student-Athlete’s Name (last, first, middle)</th>
<th>Today’s Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student-Athlete Signature</td>
<td>Injury Date</td>
</tr>
<tr>
<td>Athletic Trainer / Team Physician</td>
<td>Post-Injury Day</td>
</tr>
</tbody>
</table>

### POST-CONCUSSION SYMPTOM SCALE
(Circle Appropriate Number for Each Symptom)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>None</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEADACHE</td>
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<td>2</td>
<td>3</td>
</tr>
<tr>
<td>NAUSEA</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
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<td>0</td>
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<td>3</td>
</tr>
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<td>3</td>
</tr>
<tr>
<td>POOR BALANCE</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>SENSITIVITY TO NOISE</td>
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<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>RINGING IN THE EARS</td>
<td>0</td>
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<td>2</td>
<td>3</td>
</tr>
<tr>
<td>SENSITIVITY TO LIGHT</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>BLURRED VISION</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>POOR CONCENTRATION</td>
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<td>3</td>
</tr>
<tr>
<td>TROUBLE SLEEPING</td>
<td>0</td>
<td>1</td>
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<td>NECK PAIN</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
The Clemson University Sports Medicine Department would like to inform you that __________________________ sustained a concussion on ___ /___ /___. The student-athlete will undergo continued follow-up/testing with the Sports Medicine department. A concussion can cause a variety of physical, cognitive, and emotional symptoms. Concussions range in significance from minor to major, but they all share one common factor — temporary interference with the way the brain works. We would like to inform you that during the next few weeks this student-athlete may experience one or more of these signs and symptoms:

- Headache
- Nausea
- Balance Problems
- Dizziness
- Diplopia - Double Vision
- Confusion
- Photophobia – Light Sensitivity
- Difficulty Sleeping
- Phonophobia – Noise Sensitivity
- Blurred Vision
- Feeling Sluggish or Groggy
- Memory Problems
- Difficulty Concentrating

As a department, we wanted to make you aware of this injury and the related symptoms that the student-athlete may experience. Although the student may be attending class, please be aware that the side effects of the concussion may adversely impact his/her academic performance, including difficulties using electronic devices, including computer, cell phone, television, etc. Any consideration you may provide academically during this time would be greatly appreciated. We will continue to monitor the progress of this student-athlete and will be in constant communication with the Vickery Hall academic advisor regarding their academic progress and status. Should you have any questions or require further information, please do not hesitate to contact us or Vickery Hall.

Thank you in advance for your time and understanding.

Sincerely,

Douglas A. Reeves, Jr. MD
Team Physician
(864) 656-1952
reeves@clemson.edu
INTRODUCTION

Emergency situations may arise at any time during athletic events. Expedient action must be taken in order to provide the best possible care to the athletes experiencing emergency and/or life threatening conditions. The development and implementation of an emergency plan will help ensure that the best care will be provided.

Athletic organizations have a duty to develop an emergency plan that may be implemented immediately when necessary and to provide appropriate standards of health care to all sports participants. As athletic injuries may occur at any time and during any activity, the sports medicine team must be prepared. This preparation involved formulation of an emergency plan, proper coverage of events, maintenance of appropriate emergency equipment and supplies, utilization of appropriate emergency medical personnel, and continuing education in the area of emergency medicine. Hopefully, through careful pre-participation physical screenings, adequate medical coverage, safe practice and training techniques and other safety avenues, some potential emergencies may be averted. However, accidents and injuries are inherent with sports participant, and proper preparation on the part of the sports medicine team will enable each emergency situation to be managed appropriately.

COMPONENTS OF THE EMERGENCY PLAN

There are three basic components of this plan:
1. Emergency personnel
2. Emergency communication
3. Emergency equipment

EMERGENCY PLAN PERSONNEL

With athletic practice and competition, the first responder to an emergency situation is typically a member of the sports medicine staff, most commonly a certified athletic trainer. A team physician may not always be present at every organized practice or competition. The type and degree of sports medicine coverage for an athletic event may vary widely, based on such factors as the sport or activity, the setting, and the type of training or competition. The first responder in some instances may be a coach or other institutional personnel. Certification in cardiopulmonary resuscitation (CPR), first aid, prevention of disease transmission, and emergency plan review is required for all athletics personnel associated with practices, competitions, skills instruction, and strength and conditioning.

The development of an emergency plan cannot be complete without the formation of an emergency team. The emergency team may consist of a number of healthcare providers including managers; and, possibly, bystanders. Roles of these individuals within the emergency team may vary depending on various factors such as the number of members on the team, the athletic venue itself, or the preference of the head athletic trainer. There are four basic roles within the emergency team. The first and most important role is immediate care of the athlete. The most qualified individual on the scene should provide acute care in an emergency situation. Individuals with lower credentials should yield to those with more appropriate training. The second role, equipment retrieval, may be done by anyone on the emergency team who is familiar with the types and location of the specific equipment needed. Student athletic trainers, managers, strength coaches and coaches are good choices for this role. The third role, EMS activation, may be necessary in situations where emergency transportation is not already present at the sporting event. This should be done as soon as the situation is deemed an emergency or a life-threatening event. Time is the most critical factor under emergency conditions. Activating the EMS system may be done by anyone on the team. However, the person chosen for this duty should be someone who is calm under pressure and who communicates well over the telephone. This person should also be familiar with the location and address of the sporting event. After EMS has been activated, the fourth role within the emergency team should be performed. That consists of directing EMS to the scene. One member of the team should be responsible for meeting emergency medical personnel as they arrive at the site of the contest. Depending on ease of access, this person should have keys to any locked gates or doors that may slow the arrival of medical personnel. A student athletic trainer, manager, strength coach, or coach may be appropriate for this role.
ROLES WITH IN THE EMERGENCY TEAM

- Immediate care of the athlete
- Emergency equipment retrieval
- Activation of the Emergency Medical System
- Direction of EMS to scene
- Call Athletic Training Room to alert Team Physician of situation

ACTIVATING THE EMS SYSTEM

Making the Call:
- 911 (if available)
- Telephone numbers for local police, fire department, and ambulance service

Providing Information:
- Name, address, telephone number of caller
- Number of athletes
- Condition of athlete(s)
- First aid treatment initiated by first responder
- Specific directions as needed to locate the emergency scene (i.e. come to south entrance of coliseum)
- Other information as requested by dispatcher

When forming the emergency team, it is important to adapt the team to each situation or sport. It may also be advantageous to have more than one individual assigned to each role. This allows the emergency team to function even though certain members may not always be present.

EMERGENCY COMMUNICATION

Communication is the key to quick delivery of emergency care in athletic trauma situations. Athletic trainers and emergency medical personnel must work together to provide the best possible care to injured athletes. Communication prior to the event is a good way to establish boundaries and to build rapport between both groups of professionals. If emergency medical transportation is not available on site during a particular sporting event then direct communication with the emergency medical system at the time of injury or illness is necessary.

Access to a working telephone or other telecommunications device, whether fixed or mobile, should be assured. The communications system should be checked prior to each practice or competition to ensure proper working order. A back-up communication plan should be in effect should there be failure of the primary communication system. The most common method of communication is a public telephone. However, a cellular phone is preferred if available. At any athletic venue, whether home or away, it is important to know the location of a workable telephone. Pre-arranged access to the phone should be established if it is not easily accessible.

EMERGENCY EQUIPMENT

All necessary emergency equipment should be at the site and be quickly accessible. Personnel should be familiar with the function and operation of each type of emergency equipment. Equipment should be in good operating condition, and personnel must be trained in advance to use it properly. Emergency equipment should be checked on a regular basis and use rehearsed by emergency personnel. The emergency equipment available should be appropriate for the level of training for the emergency medical providers.

It is important to know the proper way to care for and store the equipment as well. Equipment should be stored in a clean and environmentally controlled area. It should be readily available when emergency situations arise.

TRANSPORTATION

Emphasis is placed at having an ambulance on site at high risk sporting events. EMS response time is additionally factored in when determining on site ambulance coverage. The Clemson University Athletic Department and Sports Medicine coordinate on site ambulances for competition in football, and men and women’s basketball. Ambulances may be coordinated on site for other special events/sports, such as major tournaments or ACC/NCAA regional or championship events. Consideration is given to the capabilities of transportation service available (i.e., Basic Life Support or Advanced Life Support) and the equipment and level of trained personnel on board the ambulance. In the event that the ambulance is on site, there should be a designated location with rapid access to the site and a cleared route for entering/exiting the venue.
In the emergency evaluation, the primary survey assists the emergency care provider in identifying emergencies requiring critical intervention and in determining transport decisions. In an emergency situation, the athlete should be transported by ambulance. Care must be taken to ensure that the activity areas are supervised should the emergency care provider leave the site in transporting the athlete.

Clemson University Sports Medicine personnel will execute the Clemson University Sports Medicine Emergency Action Plan for further medical care and/or transportation as deemed necessary. This may include injury to the neck and/or spine, head trauma, and/or severe concussion signs and/or symptoms.

The following items may be used to determine the status of the student-athlete as it pertains to transportation to a medical facility and/or initiating the Emergency Action Plan:

1. A Glasgow Coma Scale that diminishes below a 13
2. Prolonged loss of consciousness as it relates to the concussion
3. A neurological exam deficit that may suggest intracranial trauma
4. Repetitive/Uncontrolled vomiting (Emesis)
5. A persistent decline of the student-athlete's mental status and/or neurological signs/symptoms
6. Significant spinal related trauma/injury

Normally in the afternoons, when most practices are occurring, the Team Physician is in the Athletic Training Room. A special parking place has been provided for the Team Physician at Jervey, which allows for quick access to all athletic venues. Therefore the Athletic Training Room should be notified immediately in an emergency situation so the Team Physician can respond appropriately.

CONCLUSION

The importance of being properly prepared when athletic emergencies arise cannot be stressed enough. An athlete’s survival may hinge on the training and preparedness of athletic healthcare providers. It is prudent to invest athletic department “ownership” in the emergency plan by involving the athletic administration and sport coaches, as well as sports medicine personnel. The emergency plan should be reviewed at least once a year with all athletic personnel, along with CPR refresher training. Through development and implementation of the emergency plan, the athletic association helps ensure that the athlete will have the best care provided when an emergency situation does arise.
Concussion Safety Protocol Checklist

Below is a checklist that can be used as a resource when evaluating institutional concussion management plans. The NCAA Sport Science Institute staff will offer guidance and education to member schools requesting assistance and that guidance will be based on this checklist and other Sport Science Institute resources. Concussion management plans should be consistent with the Inter-Association Consensus: Diagnosis and Management of Sport-Related Concussion Guidelines; these guidelines, and the two guidelines referenced under “Reducing Head Trauma Exposure Management Plan,” can be found at: http://www.ncaa.org/about/resources/media-center/news/new-guidelines-aim-improve-student-athlete-safety.

Pre-Season Education:

Education management plan that specifies (Appendix C, F):

☐ Institutions have provided NCAA concussion fact sheets (NCAA will make material available) or other applicable material annually to the following parties:

☐ Student-athletes.

☐ Coaches.

☐ Team physicians.

☐ ATCs.

☐ Directors of athletics.

☐ Each party provides a signed acknowledgement of having read and understood the concussion material (Appendix D, G).
Concussion Safety Protocol Checklist

Pre-Participation Assessment:

Pre-participation management plan that specifies (Section II, Paragraph 2):

☐ Documentation that each varsity student-athlete has received at least one pre-participation baseline concussion assessment, that addresses:

☐ Brain injury and concussion history.

☐ Symptom evaluation.

☐ Cognitive assessment.

☐ Balance evaluation.

☐ Team Physician determines pre-participation clearance and/or the need for additional consultation or testing.*

*Consider a new baseline concussion assessment six months or beyond for any varsity student-athlete with a documented concussion, especially those with complicated or multiple concussion history.

Recognition and Diagnosis of Concussion:

Recognition and diagnosis of concussion management plan that specifies (Section III, Paragraph 3):

☐ Any student-athlete with signs/symptoms/behaviors consistent with concussion:

☐ Must be removed from practice or competition.

☐ Must be evaluated by ATC or team physician with concussion experience.

☐ Must be removed from practice/play for that calendar day if concussion is confirmed.
Concussion Safety Protocol Checklist

Initial suspected concussion evaluation management plan that specifies (Section III, Appendix E, I):

☐ Symptom assessment.

☐ Physical and neurological exam.

☐ Cognitive assessment

☐ Balance exam.

☐ Clinical assessment for cervical spine trauma, skull fracture and intracranial bleed.

Post-Concussion Management:

Post-concussion management plan that specifies:

☐ Emergency action plan, including transportation for further medical care, for any of the following (Section IV, Appendix K):

☐ 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.

☐ Spine injury.

☐ Mechanism for serial evaluation and monitoring following injury (Section III, Paragraph 4).

☐ Documentation of oral and/or written care to both student-athlete and another responsible adult (Section IV, Paragraph 3, Appendix H).*

*May be parent or roommate.
Concussion Safety Protocol Checklist

☐ Evaluation by a physician for student-athlete with prolonged recovery in order to consider additional diagnosis* and best management options (Section V, VI).

*Additional diagnoses include, but are not limited to:

- Post-concussion syndrome.
- Sleep dysfunction.
- Migraine or other headache disorders.
- Mood disorders such as anxiety and depression.
- Ocular or vestibular dysfunction.

Return to Play:

Return-to-Play management plan that specifies (Section V):

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

☐ Each student-athlete with concussion must undergo a supervised stepwise progression management plan by a health care provider with expertise in concussion that specifies:

☐ Student-athlete has limited physical and cognitive activity until he/she has returned to baseline, then progresses with each step below without worsening or new symptoms:

☐ Light aerobic exercise without resistance training.
☐ Sport-specific exercise and activity without head impact.
☐ Non-contact practice with progressive resistance training.
☐ Unrestricted training.
☐ Return-to-competition.
Concussion Safety Protocol Checklist

Return-to-Learn:

Return-to-learn management plan that specifies *(Section VI, Appendix J)*:

☐ Identification of a point person within athletics who will navigate return-to-learn with the student-athlete.

☐ Identification of a multi-disciplinary team* that will navigate more complex cases of prolonged return-to-learn:

*Multi-disciplinary team may include, but not be limited to:

- Team physician.
- Athletic trainer.
- Psychologist/counselor.
- Neuropsychologist consultant.
- Faculty athletic representative.
- Academic counselor.
- Course instructor(s).
- College administrators.
- Office of disability services representatives.
- Coaches.

☐ Compliance with ADAAA.

☐ No classroom activity on same day as concussion.

☐ Individualized initial plan that includes:

☐ Remaining at home/dorm if student-athlete cannot tolerate light cognitive activity.

☐ Gradual return to classroom/studying as tolerated.

☐ Re-evaluation by team physician if concussion symptoms worsen with academic challenges.
Concussion Safety Protocol Checklist

☐ Modification of schedule/academic accommodations for up to two weeks, as indicated, with help from the identified point-person.

☐ Re-evaluation by team physician and members of the multi-disciplinary team, as appropriate, for student-athlete with symptoms > two weeks.

☐ Engaging campus resources for cases that cannot be managed through schedule modification/academic accommodations.

☐ Such campus resources must be consistent with ADAAA, and include at least one of the following:

☐ Learning specialists.

☐ Office of disability services.

☐ ADAAA office.

Reducing Exposure to Head Trauma:

☐ Reducing head trauma exposure management plan (Section I, Paragraph 3, Appendix A, B).*

*While ‘reducing’ may be difficult to quantify, 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: Year-Round Football Practice Contact Guidelines.

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.