TITLE: Management of the Cervical Spine Injured Athlete

Document of (Entity) Beacon Medical Group Orthopaedics & Sports Specialists & Memorial Athletic Trainers

POLICY:
The following policy on management of athletes suspected to have a cervical spine injury has been developed in accordance with the goal of the Beacon Medical Group Orthopaedics & Sports Specialists & Memorial athletic trainers to provide quality healthcare services and assure the well-being of each athlete treated by the athletic trainers employed by Memorial Hospital and Beacon Medical Group Orthopaedics & Sports Specialists.

PATIENT POPULATION: Any patient thought to have a cervical spine injury.

PURPOSE: Beacon Medical Group Orthopaedics & Sports Specialists & Memorial recognize that the relative incidence of catastrophic cervical spine injuries in sports is low compared to other injuries. However, cervical spine injuries necessitate delicate and precise management, often involving the combined efforts of a variety of health care providers. The outcome of a catastrophic cervical spine injury depends on the efficiency of this management process and the timeliness of transfer to a controlled environment for diagnosis and treatment.

DEFINITION of CERVICAL SPINE INJURY: Traumatic disruption of the spine, and possibly spinal cord as a result of vertebral fractures and dislocations, usually associated with car accidents, sports injuries, and other violent impacts. The degree of paralysis is directly related to the level and severity of the injury. Injuries below the first thoracic vertebra may produce paraplegia. Injuries above the first thoracic vertebra may cause quadriplegia.

PREVENTION:
- Certified athletic trainers should be familiar with sport-specific causes of cervical spine injury and understand the acute response of the spinal cord to the injury.
- Certified athletic trainers should be familiar with safety rules enacted for the prevention of cervical spine injuries and should take actions to ensure that these rules are followed.
- Certified athletic trainers should be familiar with the pertinent protective equipment manufacturers’ recommendations and specifications relative to fit and maintenance. Maintaining the equipment helps to minimize risk of injury. Educating athletes and coaches on equipment maintenance also helps minimize risk of injury.
- Certified athletic trainers should educate athletes and coaches about mechanism of catastrophic spine injuries. Such as, the dangers of head down contact in football and pertinent safety rules enacted for the prevention of cervical spine injuries.

MANAGEMENT:
In any circumstance where a cervical spine injury is suspected, the first priority is to check ABC’s and stabilize the athlete’s spine. Furthermore, if there is a concern of the mental state of clearing, the certified athletic trainer should err on the side of conservative assessment until the athlete can be examined by a physician.

The recommendations in this document for the management of cervical spine injuries are based on the review of medical literature including but not limited to, The

Unconscious and Not Breathing

- Check ABC’s.

  - Activate EMS (call 911)-always transport if loss of consciousness occurs.

  - If the athlete is prone, use the logroll (logroll-push technique if putting onto a spine board) to put them in a supine position as a “unit” (4 to 5 people positioned accordingly on both sides of the body):
    - Head - this person is the team leader or “Captain”. They are responsible for stabilizing the head and neck in its original position as found on the field no matter how distorted it may appear. Do not apply traction. Captain should not let go of the head until stabilized on the spine board.
    - Trunk
    - Hips and thighs
    - Lower legs

- Establish the airway. Remove the face mask first (if athlete is wearing equipment) as the Captain continues to stabilize the head and neck. Removal of helmet is recommended before packaging and transportation (need at least three rescuers to perform equipment removal). Certified athletic trainers should have necessary equipment to remove facemasks and helmets (trainers angels, electric screw driver, scissors...etc)

- Cut the shoulder pads strings (if athlete is wearing equipment) spreading the pads apart to allow access for CPR/AED. Removal of shoulder pads is recommended before packaging and transportation (need at least three rescuers).

- Perform CPR or rescue breathing, maintain the airway and stabilizing the head and neck. Utilize the jaw thrust technique. If you are unable to obtain adequate ventilation, then utilize head tilt-chin lift technique.

- Work with the EMT’s as they arrive and give them all information about the situation. You will assist each other in equipment removal (if not already done) and packaging the athlete. Captain should not let go of head until athlete is stabilized in a C collar and on the spine board (recommended method of 8-person lift to get athlete on the spine board).

*****Remember always treat the unconscious athlete as having a cervical spine injury. Always be prepared to calm the athlete if they wake up. Each emergency situation presents its own set of unique circumstances, so you may have to deviate from the policy to a certain degree.

Unconscious and Breathing

- Check ABC’s.

  - Activate EMS (call 911)
• Captain stabilizes head and neck until secured in C collar and secured on spine board.

• If the athlete is prone start to remove shoulder pads by cutting along jersey and cutting any laces on the back of the shoulder pads. Log-roll the athlete only if necessary from prone position to supine position making sure to stabilize the head and neck (if possible wait until spine board is available to use the log roll-push technique to place athlete onto board). Only log roll athlete without a spine board if absolutely necessary to monitor breathing.

• Remove the equipment if possible (face mask, helmet and shoulder pads). Must have at least three rescuers trained in equipment removal.

• Maintain airway until EMS arrives

• Assist EMT’s with securing the athlete on the spine board. Recommended technique for supine athlete is 8-person lift or scoop stretcher.

Conscious Athlete
• Check ABC’s.

• Calm the athlete.

• Take a history of the incident.

• Evaluate for cervical spine injury. If positive stabilize and activate EMS (call 911). If negative continue follow-up evaluation on the sideline.

***Remember if there is not enough properly trained staff to spine board or remove equipment, wait for EMS.

SUMMARY:
The Beacon Medical Group Orthopaedics & Sports Specialists & Memorial athletic trainers are proactive in the management of the cervical spine injured athlete in order to limit the risks of cervical spine injured athletes associated with athletics; as well as to limit the potential catastrophic and long term risks associated with cervical spine injures. Therefore the management and return to play decisions will remain in the realm of clinical judgment on the individualized bases by both the certified athletic trainer and the team physician.