“Emergency Planning in Sports”

Sourav Poddar, M D
Director, Primary Care Sports Medicine
University of Colorado School of Medicine

Thanks to Ron Courson
Objectives

- to advocate the need for emergency planning in athletics
- to define appropriate emergency preparedness for SCA at athletic venues
- to provide guidelines in the development of emergency action plans
Although most injuries in athletics are relatively minor, life threatening injuries are unpredictable and can occur without warning. Due to relatively low incidence rate of catastrophic injuries, may develop false sense of security.
Sudden cardiac arrest (SCA) is the leading cause of death in young athletes. Healthy-appearing competitive athletes may harbor unsuspected cardiovascular disease with the potential to cause sudden death. Athletes are considered the healthiest members of our society. Unexpected death during training or competition is a catastrophic event with wide-spread implications.
Catastrophic injuries can occur during any physical activity and at any level of participation

- heightened public awareness associated with nature and management
- medical-legal interests may lead to questions re:
  - qualifications of personnel involved
  - preparedness of organization
  - actions taken
Proper management of SCA is critical
- should be handled by trained medical and allied health personnel
- preparation should include:
  - education and training
  - maintenance of emergency equipment and supplies
  - appropriate use of personnel
  - formation and implementation of EAP
Need for EAP

Emergencies are rarely predictable
  - rapid, controlled response

EAP should account for athletes, game officials, fans, sideline participants
  - include all necessary contingencies: “worst case scenario”
  - take lessons from past emergencies: “experience is a great teacher”
Many health-related organizations have guidelines for managing SCA during athletic practices and competitions.

- Guidelines have not directly linked emergency planning and SCA management in athletics.
- Recommendations from NATA Position Statement on Emergency Planning and Inter-Association Task Force are in agreement.
Athletes usually display no symptoms prior to event

Few athletes are identified as at risk prior to episode

Deaths are usually associated with intense physical activity
SCA in Athletics

- Athletic health care providers may be responsible for care of others in addition to athletes:
  - coaches
  - officials
  - spectators
NATA Position Statement

- All personnel involved with the organization or sponsorship of athletic activities share:
  - professional responsibility to provide for the emergency care of an injured person
  - legal duty to develop, implement, and evaluate an emergency plan for all sponsored athletic activities
Legal Need for EAP

- Legal duty as reasonable and prudent professionals to ensure high-quality care of participants
  - standard of care
  - EAP written document defines standard of care
  - absence of EAP frequently is basis for claim and suit based on negligence
  - concept of foreseeability
Legal Need for EAP

Kleinknecht v Gettysburg College
- most significant case bearing on need for EAP
- college owed duty to athletes at institution
- college must provide "prompt and adequate emergency services ...while engaged in a school sponsored activity"

Gathers v Loyola Marymount Univ.
- care was delayed
- defendants acted negligently and carelessly in not providing appropriate emergency response
Development of EAP

- need for EAP established
- duty to provide appropriate standards
- goal to provide highest possible quality health care to athlete
- EAP should be developed in consultation with local EMS personnel
EAP must be written document
- approved and signed by medical director

EAP should be distributed to:
- attending physicians
- athletic training students
- institutional and organizational safety personnel and administrators
- coaches
Implementation of EAP

- Education of all members of emergency team regarding EAP
- EAP procedures must be reviewed and rehearsed
Emergency plan for athletics
- identifies the personnel involved in carrying out the emergency plan
- outlines qualifications of those executing the plan
Goal of sports medicine team is delivery of highest possible quality of health care to athlete.

Likewise, sports medicine team must work together as efficient unit to accomplish goals:
- Share information, training, and skills between team members.
Personnel: Roles Within Emergency Team

- immediate care of the athlete
- emergency equipment retrieval
- activation of emergency medical system
- direction of EMS to scene
Emergency training should be required for all athletics personnel associated with practices, competition, skills instruction, S&C

- CPR
- first aid
- prevention of disease transmission: BBP
- emergency plan
Emergency Personnel

- Sports medicine staff
  - specialized in-servicing in required skill areas
  - document in-servicing
  - advanced training
    - CPR/first aid instructor
    - EMT
    - ACLS
  - Protocol development reviewed and approved by team physician
    - AED
    - oxygen
    - airway adjuncts
Emergency Equipment

- EAP should specify the equipment needed to carry out tasks required in event of emergency
  - outline location of equipment
  - equipment available should be appropriate to level of training of personnel involved
Every school or institution that sponsors athletic activities should have a written and structured EAP.

EAP should be developed and coordinated in consultation with local EMS personnel, school public safety officials, on-site first responders, and school administrators.

EAP should be specific to each athletic venue and encompass emergency communication, personnel, equipment and transportation to appropriate emergency facilities.
Emergency Preparedness

- EAP should be reviewed and practiced at least annually with certified athletic trainers, team and attending physicians, athletic training students, school and institutional safety personnel, administrators and coaches.

- Targeted first responders should receive certified training in CPR and AED use.

- Access to early defibrillation is essential and a target goal of <3-5 minutes from time of collapse to first shock is strongly recommended.
• VF decays to asystole as heart becomes ischemic
• Most effective treatment defibrillation ASAP
  • survival rates as high 49 to 75% with CPR plus defibrillation within 3-5 minutes of collapse
• Survival rate decreases 7-10% each minute from arrest
Management of SCA

- High suspicion of SCA should be maintained for any collapsed and unresponsive athlete.
Management of SCA

- SCA in athletes can be mistaken for other causes of collapse
- Rescuers should be trained to recognize SCA in athletes with special focus on potential barriers including:
  - inaccurate rescuer assessment of pulse or respirations
  - agonal or occasional gasping
  - myoclonic or seizure-like activity
Management of SCA

- Young athletes who collapse shortly after being struck in the chest by a firm projectile or by contact with another player should be suspected of having SCA from commotio cordis until the athlete is clearly responsive.
Management of SCA

- Any collapsed and unresponsive athlete should be managed as SCA with application of an AED as soon as possible for rhythm analysis and defibrillation if needed.

- CPR should be provided while waiting for an AED.
establish a clear method of communication to appropriate emergency care service providers

- key to quick delivery of care
- with on-site EMS, direct communication prior to event
- pre-arranged access to phone, fixed or mobile, or other telecommunications device
- 911 availability
- back-up communication
Activating EMS System

Making the Call
- 911
- local telephone numbers

Providing Information
- name, address, telephone # of caller
- number of athletes
- condition of athlete(s)
- first aid treatment initiated
- specific directions
- other information as requested by dispatcher
SCA Case Study: Emergency Communication

- 47YOWM college professor with SCA playing recreational basketball in student recreation facility
- CPR administered by student worker; student sent to activate EMS
- 911 call: “someone passed out in gym”
- EMS arrives at scene with only jump bag; must return to unit for additional equipment
Transportation

- Identify mode of transportation for injured participant
- Emphasis placed at having ambulance on site at high risk sporting events
Emergency Care Facilities

- Access to emergency medical facility
- Selection consideration
  - location with respect to venue
  - level of capabilities (JCAHO)
- Review plan with facility/in-service
EAP Documentation

- Review and rehearse EAP annually
  - or more frequently if necessary
- Document results of reviews and rehearsals
  - emergency plan modified?
  - how plan changed?
Pocket Emergency Card

- carried by medical staff
  - emergency plan with written directions and highlighted map
  - pertinent medical conditions specific to sport
Catastrophic Incident Guidelines

- **Catastrophic incident**
  - sudden death of student-athlete, coach, or staff member
  - disability/quality of life altering injury

- **Catastrophic incident management team**

- **Chain of command responsibilities**
Critically important to properly prepare for athletic emergencies

Invest athletic department “ownership” in EAP by involving athletic administration and sport coaches as well as sports medicine personnel

Review EAP at least once a year with all athletic personnel, along with CPR and first aid refresher training

Development and implementation of EAP ensures that athletes will have best care provided when an emergency situation does arise

Conclusion