

The Inter-Association Task Force Document on Emergency Health and Safety: Best-Practice Recommendations for Youth Sports Leagues

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Recent data from the Sports & Fitness Industry Association¹ on youth sport participation suggest that 30 893 455 children ages 6 to 14 years participated at least once in 1 or more reported activities or sports during 2015. Many of these children participate in sport programs that are governed by organizations known as national governing bodies (NGBs) for youth sports. These entities strive to promote fair play, increase physical activity, and provide critical life lessons, values, and morals to their members, all in a safe environment. Although many NGBs meet these goals, the area of safety policies and best practices offers room for improvement.

Data from emergency department visits by children ages 6 to 18 years indicated that 39% of life-threatening injuries were sport related²; however, few to no data regarding sudden death during participation in youth sports are available. Unpublished data on 34 youth (<14 years of age) sport-related deaths from 2010 through 2014 collected by the Korey Stringer Institute³ at the University of Connecticut demonstrated that 24% of these deaths (n = 8) occurred during participation in youth sport leagues. Cardiac conditions, which are traditionally the most commonly identified cause of death at all levels of sport, were responsible for 47% (n = 16). From 2000 through 2014, baseball (n = 5), soccer (n = 4), football (n = 3), basketball (n = 2), and lacrosse (n = 1) accounted for all deaths in youth athletes <12 years of age. Given the large youth sport participation rates¹ and scarcity of published data other than emergency room–documented sudden deaths in youth sports,² it is imperative to improve sport safety policies and strive toward best practices. Catastrophic

injury is an obvious threat to this population. With increased awareness of the potential causes of death and implementation of preventive mechanisms, member organizations can improve the health and safety of these young athletes.

Each NGB functions independently; therefore, implementing best-practice health and safety policies at the youth sport level is challenging. Currently, no single entity oversees governance for all youth sports. As a result, uniformity in safety policies and procedures across organizations is lacking. Governing bodies often encounter difficulty enforcing current best-practice policies and may only be able to recommend or create guidelines rather than mandate change. Potential barriers NGBs encounter when attempting to mandate policy include high rates of participation, a wide range of age groups, budgetary restrictions, diverse geographic locations, and a lack of internal administration. These barriers were commonly expressed by youth sport NGB leaders during the 2015 and 2016 Youth Sport Safety Governing Bodies meetings held in New York, New York.⁴

In an effort to improve the emergency health and safety best practices and policies in youth sport, this document was developed to serve as a road map for policy and procedure recommendations. It addresses the most common conditions resulting in sudden death and outlines recommended policies and procedures designed to improve youth sport safety. It serves as a call to action for youth sport NGBs to provide support systems for member organizations and to educate league leaders and their members about the current best practices regarding emergency action plans

(EAPs),⁵⁻⁷ sudden cardiac arrest (SCA),⁷ exertional heat stroke (EHS),⁸⁻¹⁰ and brain and neck injury protocols.¹¹⁻¹³ The document also discusses preexisting medical conditions,^{14,15} environmental conditions,^{8,16} and emergency medical care,⁵ such as the use of athletic training services. These concerns were discussed at the January 21, 2016 Youth Sport Safety Governing Bodies Meeting in New York, New York,⁴ in an effort to promote positive change and assist with the strategic implementation and advancement of the best health and safety practices in youth sports.

Each organization is unique, and therefore each will need to address policy and procedure recommendations differently to ensure successful implementation of best practices. Furthermore, all best-practice policy and procedure recommendations may not be necessary for each sport (eg, a lightning policy for most indoor sports). Many deaths in youth sports are preventable. The goal of this document is to support youth sport NGBs and provide them with the structure and tools to prevent avoidable deaths.

RECOMMENDED YOUTH SPORT NGB SUPPORT SYSTEM FOR MEMBER ORGANIZATIONS

The organizations that were invited to and participated in the meetings and endorsed this document are listed in Appendix A. Those organizations that have officially endorsed the document are referred to throughout the document as the Task Force. Other definitions used in this document appear in the Table.

The Task Force recommends NGBs implement the following:

1. Each NGB should endorse the creation of EAPs to be put in place by all member organizations and provide templates for and assistance in the development of the EAPs.
2. If a strategy to direct its member organizations toward resources for appropriate emergency equipment and medical services is not already in place, each NGB should develop one.
3. Each NGB should develop a training structure to provide education related to emergency health and safety best practices for all members, including but not limited to member leaders, member coaches, and parents or guardians of member athletes (see the Table for role definitions).
4. Each NGB should make available to all members training modules or educational content on best practices related to the following:
 - a. Emergency action plans
 - b. Sudden cardiac arrest
 - c. Brain and neck injury
 - d. Exertional heat stroke
 - e. Preexisting medical conditions
 - f. Environmental conditions
 - g. Medical services
5. Each NGB should recommend the development of an educational training and certification reporting system for member organizations and member coaches related to the content areas listed in item 4.
6. Each NGB should recommend the development of a reporting structure or system to monitor noncompliance as each member organization moves toward the health and safety best-practice policies recommended in this document.
7. Each NGB should recommend that an educational plan be provided to train member organization leaders, who in turn

Table. Definitions

Term or Phrase	Definition
Youth sport NGB	An organization that has a regulatory or sanctioning function over youth sports and may be involved in the disciplinary action for rule infractions and rule changes in the sport it governs
Member organization or league	An entity to which groups of sports teams or individuals belong that operates under the authority and rules and regulations set forth by the NGB for the sport
Member leaders	Those individuals who are members of the NGB and are granted an official title of authority, such as <i>commissioner, event organizer, safety coach, or director</i> , by the NGB
Member coaches	Those individuals who are members of the NGB and are granted the title <i>coach</i> by the NGB; coaches may or may not receive training and certification per the guidelines set forth by the NGB
Members	Those individuals who join or participate in the NGB and are afforded membership benefits including but not limited to educational materials, trainings, certifications, and coaching resources and tools
NGB-sanctioned event	An event with authoritative permission or approval provided by the NGB, which accepts legal responsibility for those participants involved
NGB-sponsored event	An event that is financially supported by the NGB for the purpose of increasing awareness, building the brand, or generating a commercial return
Policy	A deliberate system of principles to guide decisions and achieve rational outcomes; a statement of intent that is implemented as a procedure or protocol
Procedure	An act or a manner of proceeding in any action or process; conduct; for the purposes of this document, a suggested process that describes how each policy will be put into action

Abbreviation: NGB, national governing body.

inform member coaches on how to organize and conduct EAP training.

RECOMMENDED POLICIES FOR EAPs

The Task Force agrees that member organizations should

1. Establish venue-specific EAPs.^{6,15,17} (*Strength of Recommendation [SOR] Taxonomy*¹⁸: C; *level of evidence [LOE]*: 3)
2. Provide access to emergency equipment at each athletic venue as soon as possible.^{17,19-21} (*SOR*: B; *LOE*: 2)
3. Recommend training for member leaders and member coaches in first aid and cardiopulmonary resuscitation (CPR), including the use of an automated external defibrillator (AED). Training of officials, parents, and athletes is also encouraged.²²⁻²⁴ (*SOR*: B; *LOE*: 2)
4. Educate member coaches in recognizing emergency situations and factors that increase the risk of catastrophic injury or sudden death.^{6,15,17} (*SOR*: B; *LOE*: 3)

5. Review the general EAP annually or as needed.^{5,7,15} (*SOR: C; LOE: 3*)

RECOMMENDATIONS FOR EAP PROCEDURE IMPLEMENTATION

The EAP should be implemented in concert with local emergency medical service (EMS) providers by the member leader (ie, league safety officer, commissioner, or director) within the youth sport organization who oversees safety responsibilities under the direction of the NGB.

1. Components of the EAP^{6,15,17}
 - a. Contact information for EMS and other pertinent emergency numbers
 - b. Facility address, locations or maps (or both), specific directions, global positioning system coordinates
 - c. Personnel names, contact information, and responsibilities
 - d. Emergency equipment needs, including the specific location of each item
 - e. Follow-up emergency documentation and reporting actions

Important note: These components should be presented in a clear and logical manner (ideally on 1 sheet of paper) with step-by-step directions for the individual(s) at the event or venue with the assistance of the local EMS.

2. Procedures to establish efficient and effective communication^{6,15,17}
 - a. Implement and routinely practice the EAP to be in concert with local EMS.
 - b. Provide all member coaches and EMS with copies of the general EAP.
 - c. Post the EAP at each venue in an easily visible location (if possible).
 - d. Activate the EAP quickly and at the first sign of distress.
 - e. Alert any on-site responders to the emergency and its location.
 - f. Alert other individuals on-site so they can assist in guiding EMS to the scene.
3. Emergency equipment location and maintenance^{6,7,15,17,19–21,25}
 - a. Develop a plan to locate the nearest accessible AED and other emergency equipment. Ideally, an AED is present on-site in a central location so that the device can be immediately retrieved and applied to the individual in need. However, the nearest AED may be located with EMS or in a nearby building. Use of the AED within 1 to 3 minutes of collapse results in the best chance of survival from a cardiac-related, shockable rhythm.^{19–21}
 - b. Recommend that member leaders and member coaches perform and document on-site readiness checks of equipment and maintenance of emergency equipment on a regular basis if applicable. This includes battery and lead replacement for AEDs according to manufacturer specifications.^{7,25}
 - c. Recommend that any AEDs be registered (according to local ordinances) with EMS so EMS is aware of the community-wide strategic placement, make, model, and type of pads needed before arriving on the scene.²⁰
4. Training and education for member leaders and member coaches^{23,26–29}

- a. Plan in-person or online training sessions to educate member coaches on how to recognize life-threatening situations. Ideally, these sessions should include scenario-based practice with health care professionals²² or a voice advisory manikin.^{23,26,27}
- b. Advise member leaders and member coaches to document their completed competencies and trainings and submit these to the appropriate personnel if required by the NGB.

RECOMMENDATIONS FOR SCA POLICIES

The Task Force agrees that member organizations should

1. Have in place a comprehensive cardiac emergency policy in accordance with the recommendations of the NGB.^{7,19,21,30} (*SOR: C; LOE: 2*)
2. Recommend that athletes undergo cardiovascular screening before participating in sport.^{14,20,30–34} (*SOR: B; LOE: 2*)
3. Recommend moving toward having an AED on-site and readily available within an appropriate amount of time for all organized events or developing a strategic plan to reduce the time to AED application.^{19–21,29} (*SOR: A; LOE: 2*)
4. Educate, on a biannual basis at minimum, member leaders and member coaches on the proper steps for managing SCA.^{15,19,20,24,29,30} (*SOR: B; LOE: 3*)

RECOMMENDATIONS FOR SCA PROCEDURE IMPLEMENTATION

1. Components of the comprehensive cardiac policy^{7,14,21,30,33,34}
 - a. Cardiac-screening procedures
 - b. Procedures to properly manage SCA
 - c. Emergency equipment (ie, AED) location and logistics
 - d. Education, training, and certification recommendations
 - e. Return-to-participation protocol
2. Screening procedure^{14,30–36}
3. Procedures for proper management of SCA^{7,17,19,20,25,28,29}

The Task Force supports recommendations from the American Academy of Family Physicians and American Academy of Pediatrics³³ and American Medical Society for Sport Medicine³⁰ as the minimum standards for screening using the comprehensive personal history, family history, and physical examination.

Note: Any youth athlete who has collapsed and is unresponsive should be assumed to be in SCA until proven otherwise or another cause of the collapse is identified.

- a. Prompt recognition of SCA (ie, collapse, brief seizure-like activity, difficulty breathing or gasps, chest pain)
- b. Early activation of EMS via the EAP (ie, call 911)
- c. Early CPR and retrieval and application of the AED (if shock is advised) for a witnessed collapse
 - i. If no shock is advised, continue CPR and life-support measures until either the athlete responds or EMS arrives.
 - ii. If others are available to assist, have them call 911 and retrieve the AED while CPR continues.

- iii. If only 1 person is present, he or she should call 911, retrieve the AED (if readily available on-site), and administer CPR.
- iv. If no AED is available, call 911 and administer CPR until help arrives.
- d. Transportation to a hospital with advanced life-support capability
- e. Emergency equipment location and logistics
 - i. On-site AED
 - a. Should be readily available (ideally within 1–3 minutes)
 - b. Should be in a central location for large-scale events, especially for NGB-sanctioned or -sponsored events. For events located more than 3 minutes from an AED, a separate AED should be available or a plan to obtain the nearest AED should be implemented.
 - ii. No AED on-site
 - a. Activate EMS and call 911.
 - b. Continue CPR and life-support measures until either the athlete responds or EMS arrives.
 - c. If others are available to assist, begin 2-person CPR and life-support measures.

4. Education and training or certification^{5,7,15,30}

Member leaders and member coaches should be

- a. Educated at least biannually about the location, function, and use of AEDs.
 - b. Educated on prompt recognition of SCA, early activation of EMS, early CPR and defibrillation, and transport of the athlete to the hospital.
 - c. Informed of proper clearance and return-to-participation procedures for an athlete who has experienced or is experiencing a cardiac-related condition.
5. Recommended return-to-participation protocol^{17,19,30,34,37}
- a. Youth athletes who experience cardiac problems such as chest pain, fainting or near-fainting episodes, skipped heartbeats, shortness of breath, or excessive fatigue should be evaluated by a physician before return to participation is considered.
 - b. A physician should discuss clearance decisions with the appropriate consultants and the parents or guardians of youth athletes to make prudent decisions.
 - c. Clearance for youth athletes with cardiac disorders should be based on physician recommendations and should take into consideration the guidelines from the American Heart Association and American College of Cardiology Task Force.³⁴

RECOMMENDATIONS FOR BRAIN AND NECK INJURY POLICIES

The Task Force agrees that member organizations should

- 1. Have a comprehensive medical management plan and policy in accordance with state laws for athletes with a brain or neck injury, including concussion.^{11–13,15,38} (SOR: C; LOE: 3)
- 2. Educate member coaches, athletes, parents, and other pertinent members regarding the plan and policy on a regular basis.^{11,38–41} (SOR: C; LOE: 3)

- 3. Recommend the proper use, fit, and wear of protective equipment.^{11,38,41,42} (SOR: B; LOE: 2)
- 4. Advise that the management of any athletes with brain or neck injuries, including those who do not require emergency medical treatment, be directed by appropriate medical personnel.^{11,38,41,43} (SOR: B; LOE: 2)
- 5. Never permit member coaches to return an athlete to play who is suspected of having a brain or neck injury, including concussion.^{11,38,41,43} (SOR: B; LOE: 3)

RECOMMENDATIONS FOR BRAIN AND NECK INJURY PROCEDURE IMPLEMENTATION

- 1. Components of a comprehensive brain and neck injury policy^{11–13,15,38,41}
 - a. Procedures for management and care of patients with brain or neck injury
 - b. Educational information related to the prevention, recognition, treatment, and return-to-play procedures for athletes with brain or neck injuries, including concussion
 - c. Appropriate evaluation protocols for when medical personnel are and are not present
 - d. Protocols for return to play after brain or neck injury
- 2. Procedures for proper management and care of brain and neck injury^{11,13,38,41}
 - a. Activate the on-field care and management of the patient with a brain or neck injury.
 - b. The brain or neck injury plan should be implemented for an athlete who experienced, complains of, or was suspected of receiving a hit to the head or neck.
 - c. **If only nonmedical personnel (ie, coach, teammates, parents, game officials) are present, a patient with a suspected brain or neck injury should not be touched or moved by anyone and the EAP and EMS should be activated.** The only time an athlete with a head or neck injury should be moved is if he or she is not breathing or has no pulse and requires compression-only CPR, CPR and AED, or rescue breathing.
 - d. **If appropriate medical personnel (ie, physician, athletic trainer, health care provider trained in emergency evaluation of the brain and neck) are present, an athlete with a suspected brain or neck injury should be properly stabilized under the direction of the medical personnel.** When a brain or neck injury results in the patient’s loss of pulse or respiration, CPR should be initiated and an AED applied if appropriate. If the patient is face down, medical personnel should consider and determine the most appropriate mechanism for maintaining stabilization when rolling the patient to a supine position.
 - e. The EMS should be activated and transfer procedures consistent with local protocols should be implemented.
- 3. Educational information related to brain and neck injuries^{11–13,38,41,43}

Member leaders and member coaches should receive education focusing on the prevention, recognition, and management of athletes with brain or neck injury, such as

the Centers for Disease Control and Prevention’s “Brain Injury Safety Tips and Prevention” from “HEADS UP to Youth Sports”⁴⁴
 USA Football’s “Heads Up Football” program⁴⁵

USA Soccer’s “Recognize to Recover, Head and Brain Conditions” information⁴⁶

- a. Education should also include the following information:
 - i. The fact that helmets do not prevent concussions in helmeted sports
 - ii. The importance of enforcing the rules of the sport and instruction on the safest techniques for player-to-player contact
 - iii. How to ensure the safety of the playing surface and surroundings (ie, boards, nets, posts, fences)
 - iv. Proper fit, wear, and maintenance of protective equipment specific to the sport
 - v. Proper reconditioning and recertifying of equipment (when appropriate) based on manufacturer guidelines
 - b. Education should also cover each state’s laws related to concussion management and reporting.
4. Appropriate evaluation protocol for brain-related injury (specifically concussion)^{11,38,41}
- a. **If appropriate medical personnel (licensed or certified health care provider trained in the assessment and diagnosis of brain-related injury) are not on-site, the athlete should be removed from the activity and referred for medical evaluation.** An athlete with a suspected concussion or neck injury should be evaluated by an appropriate health care provider (not a member coach or parent unless medically qualified) and should not be returned to participation until medically cleared.
 - b. **If appropriate medical personnel are present, evaluation for concussion at the discretion of the medical provider should be conducted.** The athlete may return to play after evaluation only if the trained medical professional deems that the athlete does not have a concussion; however, the athlete may not return to play if the medical professional’s impression is that he or she has sustained a concussion.
 - c. Initial treatment recommendations for concussion, including educating the athlete and his or her parents on the need for cognitive and physical rest until follow-up assessment determines otherwise, should be provided.
 - d. Management of the concussion should be in accordance with state laws.
5. Recommended return-to-participation protocol after a brain or neck injury^{11,38,41}
- a. To prevent a premature return to participation and avoid placing the athlete at risk for a catastrophic injury, a graduated return-to-participation progression should be implemented and closely managed by an appropriate medical provider.
 - b. Athletes returning to participation after a brain or neck injury should be required to obtain written clearance from an appropriate medical provider specifically trained in the management of such injury.
 - c. Suggested return-to-play process (concussion only)^{11,38,41}

The return-to-play process may begin once symptoms have resolved (unless otherwise directed by a medical provider) and the athlete is cleared by appropriate medical personnel.

Step 1: No activity until complete symptom resolution for at least 24 hours

Step 2: Light aerobic exercise for 20 minutes

Step 3: Sport-specific exercise, which may include interval aerobic exercise and body-weight resistance exercise

Step 4: Noncontact training drills, which may include shuttle runs, plyometrics, and noncontact sport-specific drills (eg, kicking, ball handling)

Step 5: Limited, controlled, and gradual return to full-contact practice

Step 6: Return to full participation, including games and competitions

Note: As directed by an appropriate medical professional, the athlete should not advance to the next step unless he or she is symptom free at the current step (unless otherwise specified by appropriate medical personnel) and a minimum of 24 hours has elapsed between steps.

RECOMMENDATIONS FOR EHS POLICIES

The Task Force agrees that member organizations should

1. Have a heat-acclimatization program and how-to guide in place before training for sport when applicable (ie, preseason in hot environments, non-climate-controlled conditions, or new environments in unfamiliar regions).^{8,9,15,47} (SOR: B; LOE: 2)
2. Have a medical management plan for the care of athletes with EHS.^{8,15} (SOR: C; LOE: 2)
3. Provide education for member leaders, coaches, athletes, parents, and staff on a periodic basis.^{8-10,48} (SOR: C; LOE: 3)
4. Have a plan for assessing environmental conditions to prevent heat-related illnesses including EHS.^{8,9,15} (SOR: B; LOE: 2)
5. Have a return-to-play plan for athletes who have experienced EHS.⁴⁹⁻⁵² (SOR: C; LOE: 3)

RECOMMENDATIONS FOR EHS PROCEDURE IMPLEMENTATION

1. Components of a comprehensive EHS policy^{8,9,15}
 - a. Guidelines for environmental monitoring
 - b. Protocol for heat acclimatization
 - c. Procedures for proper emergency management of EHS
 - d. Emergency equipment and logistics
 - e. Education and training
 - f. Return-to-play protocol
2. Guidelines for reducing the risk of heat illness^{8,9,15}
 - a. Monitor the environment using a wet-bulb globe temperature device, prediction chart, heat index, or information from a local weather station to assess if it is safe to exercise, practice, or play in the heat.
 - b. The threshold for activity modification should be determined using an on-site environmental monitor and geographic region-specific guidelines. (See Grundstein et al⁵³ for region-specific guidelines, and see US Soccer heat guidelines.⁵⁴) Predicted wet-bulb globe temperature calculated from ambient temperature and humidity and the heat index can provide estimated values, but interpretation should be done with caution.
 - c. The methods and expectations for providing hydration should be established by member coaches with their athletes. Depending on the sport, event, and size, a sufficient quantity of water or sports drinks should be brought by the athlete, made available, or placed at various stations around the athletic venue. Member leaders and

- member coaches should ensure that athletes can hydrate quickly and freely but also take regular hydration breaks.
3. Suggested heat-acclimatization protocol^{8,9,15,55,56}

Specific guidelines outlining equipment use, intensity and duration of exercise, rest breaks, hydration, and total practice time, such as those outlined in the heat-acclimatization guidelines for secondary school athletics,⁵⁵ should be followed.

Procedures for proper management of EHS:

- a. Activate the on-field exertional heat-stroke care and management plan.
 - b. Athletes who demonstrate confusion, nausea, dizziness, altered consciousness, combativeness, other unusual behavior, or staggering during walking or running or collapse while exercising should be suspected of having a heat-related injury.
 - c. **The athlete with a suspected heat illness who has collapsed or is unresponsive but is breathing and has a heartbeat should be immediately cooled via cold-water immersion in a tub of ice water or the rotation of ice towels over the entire body while 911 is called.** (Activate EAP.)
 - d. Excess clothing and equipment should be removed from the athlete to help with the dissipation of heat. During cooling, the athlete should be moved from direct sunlight into shade if possible.
 - e. **If medical personnel are NOT on site, call 911 (activate EAP) while simultaneously pursuing rapid cooling** (see items c and d). Until medical personnel arrive, continue to cool and monitor the athlete.
 - f. **If medical personnel (physician, athletic trainer, or other medical personnel trained in heat illnesses) and equipment (ie, rectal thermometer, cold tub, plastic tarp, kiddie pool, shower, access to water and ice, towels) are on-site, “cool first, transport second”** should be implemented and cooling should continue uninterrupted until the athlete’s core body temperature is less than 102°F (38.9°C).
4. Equipment required for rapid cooling and body temperature assessment^{8,9,15,52}
- a. A large tub, plastic tarp, kiddie pool, or empty trash barrel are all options to hold ice and water for the athlete who needs rapid and immediate cooling.
 - b. A water source, extra water cooler(s), access to a locker room with shower, ice chest(s), and towels or sheets are recommended to assist in the rapid cooling of the athlete.
 - c. If a rectal thermometer is not available and EHS is suspected, rapid cooling should ensue. A rectal thermometer is required for the accurate assessment of core body temperature (for use by medical personnel only). All other on-field temperature assessment techniques (mouth, ear, forehead, armpit) are inaccurate and should be avoided.
5. Education and training recommendations for member leaders and member coaches^{8,9,15,56}
- a. Educate annually regarding the factors that place athletes at risk and strategies to prevent heat illness.
 - b. Educate on the prompt recognition of EHS, activation of EMS, importance of immediate cooling, and transport of the athlete to the hospital.

- c. Inform about proper clearance and return-to-participation procedures for an athlete who has experienced EHS.
6. Return to participation after EHS^{8,9,49,51,57}
- a. To prevent a premature return to participation after EHS, the athlete’s medical provider should implement a graduated return-to-participation progression tailored for the severity of the illness.
 - b. Athletes returning to participation after EHS should be required to obtain written clearance from an appropriate medical provider specifically trained in heat illness.

RECOMMENDATIONS FOR POTENTIALLY LIFE-THREATENING MEDICAL CONDITIONS POLICIES

The Task Force agrees that member organizations should

1. Consider the importance of education about disclosing potentially threatening medical conditions (eg, asthma, anaphylaxis, sickle cell trait, diabetes, epilepsy) to member coaches.^{14,15,58–62} (SOR: B; LOE: 3)
2. Encourage parents or guardians to disclose member athletes’ potentially life-threatening medical conditions.^{15,33,59–61,63–65} (SOR: B; LOE: 3)
3. Encourage parents or guardians of athletes with potentially life-threatening conditions to provide the players with appropriate self-administering medication (eg, inhaler, epinephrine injector) as indicated by each athlete’s physician.^{60,61,63,64,66} (SOR: A; LOE: 1)

RECOMMENDATIONS FOR POTENTIALLY LIFE-THREATENING MEDICAL CONDITIONS PROCEDURE IMPLEMENTATION

1. Components of a comprehensive life-threatening medical conditions plan^{14,15,58–62}
 - a. Educate others on the signs and symptoms related to these conditions.
 - b. Establish procedures for managing these conditions.
 - c. Communicate the plan to parents or guardians.
2. Procedures for the proper management of a potentially life-threatening asthma attack^{60,61}
 - a. If medical personnel are NOT on-site, retrieve the athlete’s medication (eg, inhaler) and provide it to the athlete for self-administration. Successful administration of the medication requires the athlete to remain calm and concentrate on breathing correctly. If requested by the athlete, other individuals may assist with administration of the inhaler. The athlete may administer up to 3 times before medical transport is required. If no improvement occurs after treatment or the condition becomes worse, activate EMS (activate EAP and call 911) immediately.
 - b. If medical personnel are on-site, retrieve the athlete’s medication and assist in the proper administration of the medication. The athlete should be monitored by a medical professional knowledgeable about asthma emergencies until breathing returns to normal, and follow-up or referral should be at the discretion of the medical provider.
3. Procedures for the proper management of a potentially life-threatening anaphylactic reaction^{61,66}
 - a. Personnel (medical or nonmedical) should simultaneously call 911 (and activate the EAP) while retrieving

the athlete's medication (eg, epinephrine injector) and providing it to the athlete for immediate self-administration in the thigh. The injector should be provided to EMS when they arrive. If medical personnel are present, they may assist the athlete with administration of the injection, especially if the athlete demonstrates signs of anaphylaxis and becomes unconscious; however, state laws pertaining to the administration of lifesaving medications and Good Samaritan laws should dictate proper procedures.

- b. After the anaphylactic reaction is treated with epinephrine injection, transport to the hospital for observation is recommended, as the athlete may have a rebound reaction. The EMS protocols will include this direction.
4. Education recommendations^{60,61}
 - a. Member leaders and member coaches should be educated on the major signs and symptoms of asthma, such as shortness of breath, wheezing, chest tightness, and recurrent coughing. In an athlete with asthma, these symptoms likely represent an asthma exacerbation (attack). In severe cases of asthma, the athlete may become less responsive or lose consciousness.
 - b. Member leaders and member coaches should be educated on the major signs and symptoms of anaphylaxis, such as quickly developing rash, hives, swollen lips or tongue, shortness of breath, wheezing, reduced blood pressure, and fainting or collapsing after being exposed to a likely or known allergen.
5. Communication plan

The parents or guardians of all member athletes should be encouraged to complete a form that discloses all known medical conditions. This form should also include a treatment plan for these individuals, consisting of the medications used as well as who will be responsible for ensuring these medications are present during practices and competitions. Furthermore, member organizations should educate parents and guardians on the dangers of not disclosing such conditions.

RECOMMENDATIONS FOR LIGHTNING POLICIES

The Task Force agrees that member organizations should

1. Create and enforce a comprehensive lightning safety policy.^{16,67-71} (SOR: B; LOE: 3)
2. Enforce the slogans supported by the National Weather Service⁷²:
 - a. "When thunder roars, go indoors."
 - b. "No place outside is safe when thunderstorms are in the area."
 - c. "Half an hour since thunder roars, now it's safe to go outdoors!"
3. Stop practice or competition immediately and find a safer location when thunder is heard.^{16,67,73} (SOR: B; LOE: 2)
4. Identify the nearest appropriate and safe secure structure in the EAP.^{16,67,73} (SOR: B; LOE: 2)

RECOMMENDATIONS FOR LIGHTNING PROCEDURE IMPLEMENTATION^{16,67-75}

1. Components of a comprehensive lightning safety policy^{16,67,69,74,75}
 - a. Guidelines for weather monitoring

- b. Protocol for lightning-strike prevention
- c. Proper emergency management of a lightning strike
- d. Education and training recommendations
- e. Criteria for cancellation and resumption of activity
2. Guidelines for successful weather monitoring^{67,73,75}
 - a. Instill and promote awareness about lightning and changing or unstable weather conditions and determine a reliable weather source.
 - b. Establish a chain of command and identify the person(s) responsible for suspending activity.
 - c. When appropriate, cancel or postpone activity before the event begins and prevent athletes or spectators from entering the venue.
3. Protocol for lightning-strike prevention¹⁶
 - a. Promote lightning safety slogans such as "When thunder roars, go indoors."
 - b. Identify safe locations. A safe location is a fully enclosed building with wiring and plumbing or a fully enclosed vehicle, such as a school bus, car, or van.
 - c. Identify and avoid unsafe locations, such as picnic or park shelters, tents, dugouts, press boxes, porches, open garages, and storage sheds. Tall objects such as trees, poles, towers, or other elevated areas are potential lightning targets and should also be avoided. Being inside a building with plumbing or wiring in close proximity to showers, sinks, locker rooms, indoor pool, appliances, and electronics connected to a power source can be unsafe.
4. Procedures for proper emergency management of a lightning strike^{16,71,72,75}
 - a. If an athlete or multiple athletes are struck by lightning, ensure your personal safety before assisting others.
 - b. Carefully move the injured athlete(s) to a safer location, call 911 (activate EAP), and provide appropriate care within the scope of training, which may include CPR, AED use, and rescue breathing.
 - c. Depending on the severity and number of athletes involved, provide care to those with the most life-threatening injuries while waiting for EMS to arrive.
5. Education recommendations^{16,73,75}
 - a. Member leaders and member coaches should be educated on proper prevention strategies and safe locations to use when lightning is in the area.
 - b. Member leaders and member coaches should be educated on managing an athlete who is struck by lightning.
 - c. Member leaders and member coaches should be educated as to when the event should be postponed because of lightning and when it is safe to resume activity.
6. Criteria for cancellation or resumption of activity^{16,67,73}
 - a. Postpone or suspend activities if a thunderstorm is expected before or during the event.
 - b. Activities should be suspended until 30 minutes after the last strike of lightning is seen and the last sound of thunder is heard.
 - c. The 30-minute clock restarts for each lightning flash within 6 miles (9.7 km) and each time thunder is heard.

RECOMMENDATIONS FOR MEDICAL SERVICES POLICIES

The Task Force agrees that member organizations should

1. Establish a plan to provide access to appropriate medical

services such as athletic trainers or other emergency services for NGB-sponsored or -sanctioned events and events at which NGB staff are present.^{6,15,55,76,77}

2. Implement a plan to access appropriate and adequate medical services, such as athletic trainers or other emergency services, for activities including practices, competitions, and large-scale events (eg, tournaments).^{6,15,78,79}

SUMMARY

This document is intended to serve as a call to action for all youth sport NGBs to provide support systems for member organizations through the education of league leaders and their members on the current policy and procedure best practices regarding EAPs, SCA, brain and neck injury, EHS, and other potentially threatening medical conditions (Appendix B). This document also discusses preexisting medical conditions, environmental conditions, and emergency medical care, such as athletic training services. The Task Force recognizes that each organization is unique and, therefore, will need to address policy and procedure recommendations differently to ensure the implementation of best practices. Furthermore, the Task Force recognizes that all best-practice policy and procedure recommendations may not be necessary for each sport (eg, lightning policy for indoor sports). Many of the deaths in youth sports are preventable, and it is the goal of the Task Force to support youth sport NGBs in this mission of prevention.

DISCLAIMER

The National Athletic Trainers' Association (NATA) and this Inter-Association Task Force advise individuals, national youth sport governing bodies, staff, organization member leaders, member coaches, and member players to carefully and independently consider each of the recommendations. The information contained in these recommendations is neither exhaustive nor inclusive of all circumstances or individuals. Variables such as institutional human resource guidelines, state or federal statutes, rules, or regulations, as well as regional environmental conditions, may affect the relevance and implementation of these recommendations. The NATA and the Inter-Association Task Force advise their members and others to carefully and independently consider each of the recommendations (including the applicability of some to any particular circumstance or individual). The foregoing statement should not be relied upon as an independent basis for management and care but rather as a resource available to NATA members, national youth sport governing body members, and others. Moreover, no opinion is expressed herein regarding the quality of care that adheres to or differs from NATA's position statements. The NATA and the Inter-Association Task Force reserve the right to rescind or modify their position statements at any time.

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Appendix A. The 2016 Youth Sport Safety Governing Bodies Meeting: Invitees, Participants, and Statement Endorsers

Invitees	Participants	Statement Endorsers
Korey Stringer Institute	Korey Stringer Institute	Korey Stringer Institute
National Athletic Trainers’ Association	National Athletic Trainers’ Association	National Athletic Trainers’ Association
Safe Kids Worldwide	Safe Kids Worldwide	Safe Kids Worldwide
USA Wrestling	USA Wrestling	USA Wrestling
American Academy of Pediatrics	American Academy of Pediatrics	
American Medical Society for Sports Medicine	American Medical Society for Sports Medicine	
US Lacrosse	US Lacrosse	
US Soccer Federation	US Soccer Federation	
USA Football	USA Football	
USA Gymnastics	USA Gymnastics	
USA Hockey	USA Hockey	
US Tennis Association	US Tennis Association	
USA Track and Field	USA Track and Field	
Amateur Athletic Union Basketball		
Little League		
USA Softball		
US Olympic Committee		
USA Field Hockey		

Part 1. Overall Implementation Recommendations Checklist For National Governing Bodies
5,9,11,13–16,32,40,57,61,62,79

- Provide assistance with the creation and development of EAPs
- Provide resources for appropriate emergency equipment and medical services
- Develop a training structure to provide education related to emergency health and safety best practices for all members, including but not limited to member leaders, member coaches, and parents or guardians of member athletes

Provide training modules or educational content on best practices for all members related to

- EAPs
- Sudden cardiac arrest
- Exertional heat stroke
- Brain and neck injury
- Preexisting medical conditions
- Environmental conditions
- Medical services

Develop educational training and certification reporting system for member organizations and member coaches related to

- EAPs
- Sudden cardiac arrest
- Exertional heat stroke
- Brain and neck injury
- Preexisting medical conditions
- Environmental conditions
- Medical services
- Development of a reporting structure or system to monitor noncompliance
- Educational plan should be provided to train member organization leaders who, in turn, inform member coaches on how to organize and conduct EAP training

Appendix B. Emergency health and safety recommendations for national governing bodies. Part 1, Overall. Part 2, Emergency action plan. Part 3, Sudden cardiac arrest. Part 4, Brain and neck injury. Part 5, Exertional heat stroke. Part 6, Potentially life-threatening medical conditions. Part 7, Lightning. Abbreviations: AED, automated external defibrillator; CPR, cardiopulmonary resuscitation; EAP, emergency action plan; EMS, emergency medical services; SCA, sudden cardiac arrest.

Part 2. Emergency Action Plan Policy Recommendations Checklist ^{5,7,15,19,57}	
<input type="checkbox"/>	Establish venue-specific EAPs
<input type="checkbox"/>	Provide access to emergency equipment at each athletic venue as soon as possible
<input type="checkbox"/>	Educate member coaches in recognizing emergency situations and factors that increase the risk for catastrophic injury or sudden death
<input type="checkbox"/>	Review the general EAP annually or as needed
<i>Recommend training for member leaders and member coaches in</i>	
<input type="checkbox"/>	First aid and CPR
<input type="checkbox"/>	Use of an AED
Emergency Action Plan Procedure Checklist	
<i>Components of the EAP</i>	
<input type="checkbox"/>	Contact information for EMS and other pertinent emergency numbers
<input type="checkbox"/>	Facility address, locations or maps (or both), specific directions, global positioning system coordinates
<input type="checkbox"/>	Personnel names, contact information, and responsibilities
<input type="checkbox"/>	Emergency equipment needs, including the specific location of each item
<input type="checkbox"/>	Follow-up emergency documentation and reporting actions
<input type="checkbox"/>	Components should be presented in a clear and logical manner with step-by-step directions for the individual(s) at the event or venue (ideally on 1 sheet of paper) with the assistance of the local EMS
<i>Outline the following in the procedures</i>	
<input type="checkbox"/>	How to establish efficient and effective communication
<input type="checkbox"/>	Practice of EAP in concert with local EMS
<input type="checkbox"/>	How to provide all member coaches and EMS with copies of the general EAP
<input type="checkbox"/>	Posting of the EAP at each venue in an easily visible location (if possible)
<input type="checkbox"/>	Activation of the EAP quickly and at the first sign of distress
<input type="checkbox"/>	Alert of responders to the emergency and its location
<input type="checkbox"/>	Alert of other individuals on-site to assist in guiding EMS to the scene
<input type="checkbox"/>	Emergency equipment location and maintenance
<input type="checkbox"/>	Location or plan to locate the nearest accessible AED and other emergency equipment
<input type="checkbox"/>	On-site readiness checks of equipment and maintenance of emergency equipment on a regular basis (if applicable)
<input type="checkbox"/>	Registration of the AED(s) according to local ordinances with local EMS
<input type="checkbox"/>	Training and education for member leaders and member coaches on EAP
<input type="checkbox"/>	Training sessions to educate member coaches on how to recognize life-threatening situations
<input type="checkbox"/>	Documentation and submission of completed competencies and trainings (if required)

Appendix B. Continued from previous page.

Part 3. Sudden Cardiac Arrest Policy Recommendations Checklist ^{7,14,15,30,32,39,57}	
<input type="checkbox"/>	Develop a comprehensive cardiac emergency policy
<input type="checkbox"/>	Recommend that athletes undergo cardiovascular screening before participating in sport
<input type="checkbox"/>	An AED should be on-site and readily available
<input type="checkbox"/>	Educate member leaders and member coaches on the proper steps for managing SCA
Sudden Cardiac Procedure Checklist	
<i>Components of the cardiac policy</i>	
<input type="checkbox"/>	Cardiac-screening procedures (American Academy of Family Physicians and the American Academy of Pediatrics minimum standard)
<input type="checkbox"/>	Procedures to properly manage SCA
<input type="checkbox"/>	Emergency equipment (ie, AED) location and logistics
<input type="checkbox"/>	Education, training, and/or certification recommendations
<input type="checkbox"/>	Return-to-participation protocol
<i>Procedures for proper management</i>	
<input type="checkbox"/>	Prompt recognition of SCA
<input type="checkbox"/>	Early activation of EMS via the EAP (ie, call 911)
<input type="checkbox"/>	Early CPR and retrieval and application of the AED (if shock is advised) for a witnessed collapse
<input type="checkbox"/>	Transportation to a hospital with advanced life-support capability
<input type="checkbox"/>	Emergency equipment location and logistics
If AED is on-site	
<input type="checkbox"/>	Apply AED (ideally within 1–3 minutes)
<input type="checkbox"/>	AED is in a central location for large-scale events, especially for national governing board-sanctioned or -sponsored events
<input type="checkbox"/>	For events located more than 3 minutes from an AED, a separate AED is available or a plan to obtain the nearest AED is identified
No AED on-site	
<input type="checkbox"/>	Continue CPR and life-support measures until either the athlete responds or EMS arrives
<input type="checkbox"/>	If others are available to assist, begin 2-person CPR and life support
<i>Equipment required for rapid treatment</i>	
<input type="checkbox"/>	AED(s) (ideally within 1–3 minutes)
<i>Education and training information for member leaders and member coaches</i>	
<input type="checkbox"/>	Educate at least biannually about the location, function, and use of AEDs
<input type="checkbox"/>	Educate on prompt recognition of SCA, early activation of EMS, early CPR and defibrillation, and transport of the athlete to the hospital
<input type="checkbox"/>	Inform of proper clearance and return-to-participation procedures for an athlete who has experienced or is suffering from a cardiac-related condition
<i>Return-to-participation protocol</i>	
<input type="checkbox"/>	Youth athletes who experience cardiac problems should be evaluated by a physician before return-to-participation is considered
<input type="checkbox"/>	A physician should discuss clearance decisions with the appropriate consultants and the parents or guardians to make prudent decisions
<input type="checkbox"/>	Clearance for youth athletes with cardiac disorders should be based on physician recommendations

Appendix B. Continued from previous page.

Part 4. Brain and Neck Injury Policy Recommendations Checklist

- Develop a comprehensive medical-management policy
- Educate on the brain and neck injury plan and policy
- Recommend the proper use, fit, and wear of protective equipment
- Advise that appropriate medical personnel direct the management of any athletes with head or neck injuries, including those who do not require emergency medical treatment
- Never permit member coaches to return an athlete to play who is suspected of having a head or neck injury, including concussion

Brain and Neck Injury Procedure Checklist

Components of the brain and neck injury policy

- Procedures for management and care of patients with brain or neck injury
- Educational information related to the prevention, recognition, treatment, and return-to-play procedures for athletes with brain or neck injuries, including concussion
- Appropriate evaluation protocols for when medical personnel are and are not present
- Return-to-participation protocol

Procedures for proper management

- Activation of on-field care and management of the patient with a brain or neck injury
- The brain or neck injury plan should be implemented for an athlete who has collapsed after a witnessed or suspected hit to the head or neck

Nonmedical personnel (eg, teammates, parents, game officials) on-site

- Patient with a suspected brain or neck injury should not be touched or moved, and the EAP and EMS should be activated

Appropriate medical personnel (ie, physician, athletic trainer, health care provider trained in brain and neck injuries) on-site

- Patient with a suspected brain or neck injury should be properly stabilized under the direction of the medical personnel
- EMS should be activated and transfer procedures implemented
- If the brain or neck injury results in the patient's loss of pulse or respiration, CPR should be initiated and an AED applied if appropriate

Educational and training information for member leaders and member coaches

- Prevention, recognition, and management of athletes with brain or neck injury
- The fact that helmets do not prevent concussions (only for helmeted sports)
- The importance of enforcing the rules of the sport and instruction on the safest techniques for player-to-player contact
- How to ensure the safety of the playing surface and surroundings (eg, boards, nets, posts, fences)
- Proper fit, wear, and maintenance of protective equipment specific to the sport
- Proper reconditioning and recertifying of equipment (when appropriate) based on manufacturer's guidelines
- Education covering state laws related to concussion management and reporting

Appropriate evaluation protocol (specifically concussions)

Appropriate medical personnel (licensed or certified health care provider trained in the assessment and diagnosis of brain-related injury) NOT on-site

- The athlete should be removed from the activity and referred for medical evaluation
- An athlete with a suspected concussion or neck injury should be evaluated by an appropriate health care provider (not a member coach or parent unless medically qualified) and should not be returned to participation until medically cleared

Appropriate medical personnel on-site

- Evaluation for concussion at the discretion of the medical provider should be conducted
- The athlete may return to play after evaluation only if the trained medical professional deems it appropriate and clears the athlete
- Treatment recommendations for concussion should be provided, including educating the athlete and his/her parents on the need for cognitive and physical rest

Return-to-participation protocol

- Graduated return-to-participation progression
- An athlete returning to participation after a brain or neck injury is required to obtain written clearance from an appropriate medical provider
- Athlete should not advance to the next step unless he or she is symptom free at the current step and a minimum of 24 hours has elapsed between steps

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Part 5. Exertional Heat Stroke Policy Recommendations Checklist^{14,32,35,61,62,64}

- Procedures for a heat-acclimatization program and “how-to” guide in place before training for sport when applicable (eg, preseason in hot environments, non–climate-controlled conditions, or new environments in unfamiliar regions)
- Develop a medical management plan for the care of athletes with heat stroke
- Provide education for member leaders, coaches, athletes, parents, and staff on a periodic basis
- Develop a plan for assessing environmental conditions to prevent heat-related illnesses including heat stroke
- Return-to-play protocol

Exertional Heat Stroke Procedure Checklist

Components of the exertional heat stroke policy

- Guidelines for environmental monitoring
- Protocol for heat acclimatization
- Procedures for proper emergency management of exertional heat stroke
- Emergency equipment and logistics
- Return-to-play protocol

Procedures for proper environmental monitoring

- Monitor the environment using a wet-bulb globe temperature device, prediction chart, heat index, or information from a local weather station to assess if it is safe to exercise, practice, or play in the heat
- The threshold for activity modification should be determined using an on-site environmental monitor and geographic-specific guidelines

Procedures for proper management of exertional heat stroke

- Activate the on-field exertional heat-stroke care and management plan
- Athletes who demonstrate confusion, nausea, dizziness, altered consciousness, or combativeness; other unusual behavior; or stagger during walking or running or collapse while exercising should be suspected of having a heat-related injury

For the athlete who has collapsed or is unresponsive but is breathing and has a heartbeat

- Immediate cooling via cold-water immersion in a tub of ice water or the rotation of ice towels over the entire body should be implemented while calling 911
- Excess clothing and equipment should be removed from the athlete to help with the dissipation of heat
- During cooling, the athlete should be moved from direct sunlight into shade if possible

Appropriate medical personnel NOT on-site

- Call 911 (activate EAP) while simultaneously pursuing rapid cooling
- Until medical personnel arrive, continue to cool and monitor the athlete

Appropriate medical personnel (physician, athletic trainer, or other medical personnel trained in heat illnesses) and equipment (eg, rectal thermometer, cold tub, tarp, kiddie pool, shower, access to water and ice, towels) are on-site

- “Cool first, transport second” should be implemented
- Cooling should continue uninterrupted until the athlete’s core body temperature is less than 102°F (38.9°C)

Equipment required for rapid cooling and body temperature assessment

- Large tub, plastic tarp, kiddie pool, or empty trash barrel are options for holding ice and water for the athlete who needs rapid and immediate cooling
- Water source, extra water cooler(s), access to a locker room with shower, ice chest(s), and towels or sheets are recommended to assist in the rapid cooling of the athlete
- Rectal thermometer (for use by medical personnel only); all other on-field temperature-assessment techniques (mouth, ear, forehead, armpit) are inaccurate

Education information for member leaders and member coaches

- Educate regarding the factors that place athletes at risk and strategies to prevent heat illness
- Educate on the prompt recognition of exertional heat stroke, activation of EMS, importance of immediate cooling, and transport of the athlete to the hospital
- Inform about proper clearance of and return-to-participation procedures for an athlete who has experienced exertional heat stroke

Return to participation

- Graduated return-to-participation progression tailored for the severity of the heat-related illness by an appropriate medical provider
- Required to obtain written clearance from an appropriate medical provider specifically trained in heat illness

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Part 6. Potentially Life-Threatening Medical Conditions Policy Recommendations Checklist
<input type="checkbox"/> Education on disclosing potentially life-threatening medical conditions (eg, asthma, anaphylaxis, sickle cell trait, diabetes, epilepsy) to member coaches <input type="checkbox"/> Encourage parents or guardians to disclose member athletes' potentially life-threatening medical conditions <input type="checkbox"/> Parents should provide the child with appropriate self-administering medication (eg, inhaler, epinephrine injector) as indicated by the child's physician
Potentially Life-Threatening Medical Conditions Procedure Checklist
<i>Components of the life-threatening medical conditions policy</i>
<input type="checkbox"/> Procedures for proper management of these potential medical conditions <input type="checkbox"/> Educational information related to the prevention, recognition, treatment, and return-to-play procedures <input type="checkbox"/> Communications plan
<i>Procedures for proper management of a potentially life-threatening asthma attack</i>
Medication NOT on-site
<input type="checkbox"/> Activate EMS (activate EAP and call 911) immediately
Appropriate medical personnel NOT on-site
<input type="checkbox"/> Retrieve the athlete's medication (eg, inhaler) and provide to the athlete for self-administration
<input type="checkbox"/> Successful administration of the medication requires the athlete to remain calm and concentrate on breathing correctly
<input type="checkbox"/> If requested by the athlete, other individuals may assist with administration of the inhaler
<input type="checkbox"/> If no improvement occurs in 5 minutes, activate EMS (activate EAP and call 911) immediately
Appropriate medical personnel on-site
<input type="checkbox"/> Retrieve the athlete's medication and assist in the proper administration of the medication.
<input type="checkbox"/> The athlete should be monitored by a medical professional knowledgeable in asthma emergencies until breathing returns to normal, and follow-up or referral should be at the discretion of the medical provider
<i>Procedures for proper management of a potentially life-threatening anaphylactic reaction</i>
Medication NOT on-site
<input type="checkbox"/> Activate EMS (activate EAP and call 911) immediately
Personnel (medical or nonmedical)
<input type="checkbox"/> Simultaneously call 911 (and activate the EAP) while retrieving the athlete's medication (eg, epinephrine injector)
<input type="checkbox"/> Provide the medication to the athlete for immediate self-administration in the thigh
<input type="checkbox"/> Give the injector to EMS when they arrive
<input type="checkbox"/> Follow state laws pertaining to administration of life-saving medications and Good Samaritan laws
<input type="checkbox"/> After the anaphylactic reaction is treated with epinephrine injection, transport to the hospital
<i>Education information for member leaders and member coaches</i>
<input type="checkbox"/> Educate on the major signs and symptoms of asthma, such as shortness of breath, wheezing, chest tightness, and recurrent coughing
<input type="checkbox"/> Educate on the major signs and symptoms of anaphylaxis, such as quickly developing rash, hives, swollen lips or tongue, shortness of breath, wheezing, reduced blood pressure, and fainting or collapsing after being exposed to a likely or known allergen for the athlete
<i>Communication plan</i>
<input type="checkbox"/> Complete form to disclose all known medical conditions that includes a treatment plan, medications used, and who is responsible for ensuring medication are present during practices and competitions
<input type="checkbox"/> Education of parents and guardians of dangers of not disclosing life-threatening conditions

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Part 7. Lightning Policy Recommendations Checklist
<input type="checkbox"/> Create and enforce a comprehensive lightning safety policy <input type="checkbox"/> Enforce “when thunder roars, go indoors” <input type="checkbox"/> Identify the nearest appropriate and safe shelters in the EAP
Lightning Procedure Checklist
<i>Components of the lightning policy</i>
<input type="checkbox"/> Communication guidelines for weather monitoring <input type="checkbox"/> Protocol for lightning-strike prevention <input type="checkbox"/> Procedures for proper emergency management of lightning strike <input type="checkbox"/> Education and training <input type="checkbox"/> Criteria for resumption of activity
<i>Communication guidelines for weather monitoring</i>
<input type="checkbox"/> Establish a chain of command and identify the person(s) responsible for suspending activity <input type="checkbox"/> Instill and promote awareness about lightning and changing or unstable weather conditions and determine a reliable weather source <input type="checkbox"/> When appropriate, cancel or postpone activity before the event begins and prevent athletes or spectators from entering the venue
<i>Procedures for lightning strike prevention</i>
<input type="checkbox"/> Promote lightning safety slogans, such as “when thunder roars, go indoors” <input type="checkbox"/> Identify safe locations <input type="checkbox"/> Identify and avoid unsafe locations
<i>Procedures for lightning strike management</i>
<input type="checkbox"/> If an athlete or multiple athletes are struck by lightning, ensure your personal safety before assisting others <input type="checkbox"/> Carefully move the injured athlete(s) to a safer location, and call 911 (activate EAP) <input type="checkbox"/> Provide appropriate care within the scope of training, which may include CPR and AED use and rescue breathing <input type="checkbox"/> Depending on the number of athletes involved and the severity of injury, provide care to those with the most life-threatening injuries while waiting for EMS to arrive
<i>Education information for member leaders and member coaches</i>
<input type="checkbox"/> Educate on proper prevention strategies and safe locations when lightning is in the area <input type="checkbox"/> Educate on managing an athlete who is struck by lightning <input type="checkbox"/> Educate as to when the event should be postponed due to lightning and when it is safe to resume activity
<i>Criteria for cancellation or resumption of activity</i>
<input type="checkbox"/> Postpone or suspend activities if a thunderstorm is expected before or during the event <input type="checkbox"/> Activities should be suspended until 30 minutes after the last strike of lightning is seen and the last sound of thunder is heard <input type="checkbox"/> The 30-minute clock restarts for each lightning flash within 6 miles (9.7 km) and each time thunder is heard

Appendix B. Continued from previous page.