



Position Statement on Automated External Defibrillators and Cardiac Emergency Response Planning for Sudden Cardiac Arrest

Parent Heart Watch supports the placement of AEDs in all schools, playing fields, and sports arenas where youth gather and/or participate in physical activity along with the development of Public Access Defibrillation Programs with Cardiac Emergency Response Plans to prevent sudden cardiac death in youth.

Sudden Cardiac Arrest (SCA)

- SCA is the sudden onset of an abnormal and potentially lethal heart rhythm that causes the heart to beat ineffectively or not at all.
- SCA is the leading cause of death in the United States affecting over 356,000 individuals per year. The precise incidence of SCA in youth is presently unknown due to the lack of a mandatory and systematic national registry of SCA and sudden cardiac death (SCD) in youth. The American Heart Association reports that an estimated 9,500 youth are affected by what the National Heart, Lung and Blood Institute calls a critical public health issue.
- SCA is also the leading cause of sudden death in exercising young athletes.
- SCA can be effectively treated through prompt recognition, early cardiopulmonary resuscitation (CPR), and early use of a defibrillator (AED).

Automated External Defibrillators (AEDs)

- AEDs are portable devices that read and analyze the heart rhythm and provide an electric shock to restore the heart's normal rhythm.
- While training is helpful, AEDs come with simple instructions including voice and visual prompts and can be used by any lay responder whether trained or not.
- The placement of AEDs in schools increases survival from SCA to over 80% when applied within 3 minutes or less.

Cardiac Emergency Response Planning

- A written and well-practiced cardiac emergency response plan is recommended for every youth-serving organization (school, athletic league/club, camp) to ensure an efficient and structured response to SCA.
- Successful programs require an organized and practiced response, including drills, an established communication method to activate the emergency medical services (EMS) system, and rescuers trained and equipped to provide CPR and defibrillation (AED).

Recognition of SCA

- Prompt recognition of SCA is the first step to an efficient emergency response.

- Signs and symptoms of a SCA can include a sudden collapse or faint, absent pulse or respirations, agonal breaths or gasping (periodic chest or abdominal movements), and/or seizure-like activity.
- Teachers, coaches, school nurses and other school staff, sports medicine professionals, and other anticipated first responders, must maintain a high index of suspicion for SCA in any collapsed and unresponsive student or athlete.
- SCA should be assumed in any collapsed AND unresponsive young person, especially with no head trauma.
- Brief seizure-like activity or involuntary arm and leg movements occur in over 50% of youth with SCA.
- A seizure should be considered a SCA until proven otherwise.
- Agonal respirations with periodic chest/abdominal movements also should be considered SCA in an unresponsive individual until proven otherwise.

Management of SCA

- If a young person collapses and is unresponsive, follow the four critical steps of the “Cardiac Chain of Survival” to increase the chance of survival:
 - Early recognition of the emergency and activation of local EMS (call 911)
 - Early cardiopulmonary resuscitation (start chest compressions)
 - Rescue breaths, if possible, are still recommended for children who are pre-pubertal
 - Early defibrillation (retrieve and use AED)
 - Early advanced life support and cardiovascular care (Hospital)
- All efforts should be made to minimize interruptions in chest compressions both before and after defibrillation.
- An AED should be applied as soon as possible when an individual collapses and is unresponsive to verbal stimuli.

Installation of AEDs

Effective placement of AEDs will allow the rescuer to retrieve the AED and deliver a shock to a victim within 3 minutes of collapse. For athletic events and practices, have a portable AED on the sidelines!

- **Location:** Strategically installed in a publicly accessible area to be utilized by any trained or untrained lay responders within the facility and the general public.
- **Cabinet/Wall Rack/Bracket:** AEDs should never be placed in a locked cabinet or behind a locked door while the building is still open. Preferably place an AED inside unlocked and alarmed wall cabinet approved for such purpose that can be surface or recess mount. Bracket/wall rack supplied by the AED manufacturer and/or approved for such purpose is also acceptable. Regardless of which mount is chosen, AEDs shall be placed so that its readiness indicator faces outward.
- **Height:** Placed at an unobstructed height of 48 inches from the floor (it may be lower) to provide optimum accessibility in compliance with American Disabilities Act.

- **Wall Projection:** ADA Accessibility Guidelines (ADAAG) specify that objects such as AED wall cabinets shall not protrude more than 4 inches from the wall into walkways, corridors or aisles.
- **Signage:** Properly identified with a projecting (three-dimensional) AED sign which should be installed above the cabinet clearly marking the location of the AED.
- **Registration:** Notify your local Emergency Medical Services Office that an AED is onsite (requirements may vary).
- **Inspection:** Conduct regular maintenance of AED battery and pads per manufacturer recommendations; usually monthly. An on-site readiness check is recommended before hosting an event.

Prevention of Sudden Cardiac Death (SCD)

- Schools and other youth-serving organizations/programs should develop a Public Access Defibrillation Program that includes education on the recognition of SCA, maintenance of emergency equipment and supplies, appropriate CPR and AED training of personnel and staff, and the development of a cardiac emergency response plan.
- Youth should be taught effective bystander CPR and AED use in school health education programs.

This statement was developed and approved by the Medical Advisory Board of Parent Heart Watch, the national voice protecting youth from sudden cardiac arrest.