CARDIAC EMERGENCY RESPONSE PLANS IN COMMUNITIES

Frequently Asked Questions

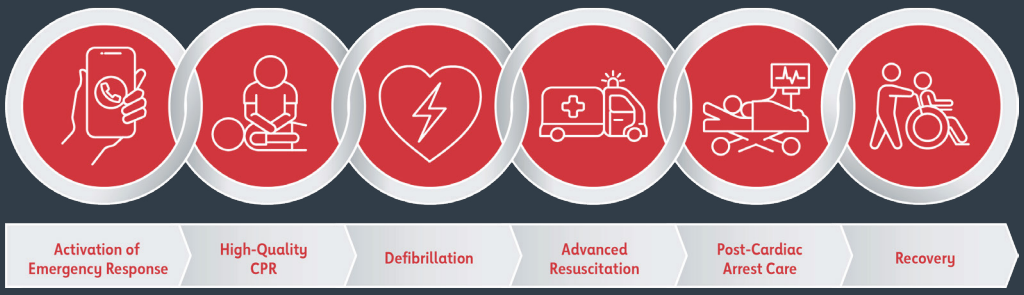
Definitions

CERP

Cardiac Emergency Response Plan - a written document that establishes specific steps to reduce death from cardiac arrest in community settings.

CHAIN OF SURVIVAL

A useful metaphor for the elements of the Emergency Cardiac Care systems concept:



EMS

Emergency Medical Services

AED

Automated External Defibrillator - A lightweight, portable device that delivers an electric shock through the chest to the heart. The shock can potentially stop an irregular heartbeat (arrhythmia) and allow a normal rhythm to resume following sudden cardiac arrest.

WHAT IS A CERP AND HOW IS IT USED?

A CERP is a written document that establishes specific steps to reduce death from cardiac arrest in community settings. It should be posted at key locations throughout the organization or venue and practiced regularly. It is also important to work directly with local emergency service providers to integrate the CERP into the community's EMS responder protocols.

WHY IS A CERP IMPORTANT?

The safety of staff and visitors can be enhanced when CERPs are in place and teams are trained and empowered to administer lifesaving care until emergency medical services arrive. More than 350,000 cardiac arrests occur outside of a hospital annually in the U.S.,[1] and nearly 90% of them are fatal.[2] An appropriate response to a cardiac event, as promoted by creating, implementing, and practicing a CERP, can double or triple the chance of survival by enabling a trained lay-responder team to take action.[3]

WHAT'S INCLUDED IN A CERP?

CERPs should include the following steps:

- Develop a cardiac emergency response team
- Activate the cardiac emergency response team during an identified cardiac emergency
- Place and maintain AEDs
- Communicating the plan throughout the campus
- Train in CPR and AED use
- Integrate local EMS with the school or athletic event/facility
- Review and evaluate the plan each year

AHA has developed three CERP checklists for general workplace and community organizations, schools, and sports facilities. Download the checklist that works best for your organization and establish the specific steps to reduce death from cardiac arrest in any setting.

WHY ARE CERPS PARTICULARLY IMPORTANT FOR SCHOOLS AND SPORTS FACILITIES/EVENTS?

A cardiac event can happen anywhere, and schools are a nucleus for a variety of events in all communities. Shared use agreements allow communities to access schools to vote, exercise, garden, cook, host community meetings, and more. In addition to shared use agreements, parents and community members are often at school facilities for school plays, concerts, and athletic events.

With about 49.5 million students enrolled in U.S. public schools in pre-K to grade 12,[4] about 3 million teachers in the public school system,[5] and numerous staff, it is important for school facilities to have a plan in place to address cardiac arrest. It is estimated that there are more than 23,000 children under the age of 18 who experience cardiac arrest outside of a hospital each year in the U.S.[6] Only 40% are sports related.[7] AHA recommends implementing emergency response plans for cardiac and other medical events in all schools. In schools with AEDs, approximately 70% of children survive cardiac arrest — seven times the overall survival rate for children.

DO ORGANIZATIONS NEED A CERP IF THEY HAVE AN AED?

Yes! Having an AED is an important part of an emergency response plan, but it is not enough by itself. A CERP ensures that the AED is regularly maintained and that responders are trained in emergency response, including CPR and how to use the AED. A CERP also ensures the plan is coordinated with local EMS and is reviewed and updated each year.

WHAT'S THE COST OF AN AED?

An AED can range in cost from $1,200 to $3,000 depending on the manufacturer. This cost is for the AED itself; the maintenance plan is an additional cost. A maintenance plan is recommended to help ensure the AED is ready for use in case of an emergency. There are ways to lower the cost – school districts can buy in bulk, or they can be donated. The AED has evolved and is continuing to evolve from its beginnings as a heavy, expensive piece of hospital equipment designed for medical professionals to a more portable, lower-cost, and user-friendly device intended for laypeople.

WHAT IS THE APPROPRIATE NUMBER OF AEDs?

An AED can save a life. The number of AEDs shall be sufficient to enable a person to retrieve an AED and deliver it to any location outside or inside the building, ideally within 3 minutes of being notified of a possible cardiac emergency.

WHO SHOULD BE TRAINED IN CPR AND AED USE?

All members of the Cardiac Emergency Response Team should be trained in first-aid and CPR and AED use.

Additionally, a sufficient number of staff or volunteers (in addition to the medical providers or safety coordinator) should receive training and certification in CPR and in the use of an AED. It is recommended that at a minimum, at least 10% of staff or volunteers (as applicable) should have current CPR and AED training with certification. The absolute minimum number of people trained is 3 to ensure that CPR is initiated and AED is retrieved.

HOW DO CERPS FIT WITHIN THE AHA NATION OF LIFESAVERS™ CAMPAIGN?

Establishing CERPs in all community organiztions, schools, and sports facilities and events aligns with AHA's Nation of Lifesavers™ movement to double survival rate from cardiac arrest by 2030. AHA is committed to turning a nation of bystanders into a Nation of Lifesavers™. The long-term goal is to ensure that in the face of a cardiac emergency, anyone, anywhere is prepared and empowered to perform CPR and become a vital link in the Chain of Survival.

Sources

1 Benjamin EJ, Virani SS, Callaway CW, Chamberlain AM, Chang AR, Cheng S, Chiuve SE, Cushman M, Delling FN, Deo R, de Ferranti SD. Heart disease and stroke statistics—2018 update: a report from the American Heart Association. Circulation. 2018 Mar 20;137(12):e67-492. Table 16-1.

2 Virani SS, Alonso A, Benjamin EJ, et al. Heart disease and stroke statistics—2020 update: a report from the American Heart Association. Circulation. 2020 Mar 3:E139-596.

3 Rose et al. Cardiac Emergency Response Planning for Schools: A Policy Statement. NASN School Nurse. 2016 31(5), 263-270. doi: 10.1177/1942602X16655839.

4 Enrollment in public elementary and secondary schools, by level, grade, and state or jurisdiction: Fall 2021. National Center for Educational Statistics. Table 203.40.

5 Public and private elementary and secondary teachers, enrollment, pupil/teacher ratios, and new teacher hires: Selected years, fall 1955 through fall 2031. National Center for Educational Statistics. Table 208.20.

6 Okubo, M., Chan, H. K., Callaway, C. W., Mann, N. C., & Wang, H. E. (2020). Characteristics of paediatric out-of-hospital cardiac arrest in the United States. Resuscitation, 153, 227–233. doi.org/10.1016/j.resuscitation.2020.04.023.

7 Jayaraman R, Reinier K, Nair S, Aro AL, Uy-Evanado A, Rusinaru C, Stecker EC, Gunson K, Jui J, Chugh SS. Risk factors of sudden cardiac death in the young: multiple-year community-wide assessment. Circulation. 2018; 137:1561–1570. doi: 10.1161/CIRCULATIONAHA.117.031262.

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