

Appendix 6: Supportive Tips and Best Practices for CERPS

Best Practice Considerations and Supplemental Information included here may be useful for CERT and/or all-staff education – The CERT Coordinator and team can consider what they feel should be included.

Some of this information is included in the CERP and/or CERP Protocol too but more detail is here:

There are some suggestions for general community entities but can often be considered for schools as well.

Definitions:

- **Cardiac Emergency Response Plan (CERP):** a document created to support the creation of a school policy and procedure for maintaining preparation to respond to cardiac emergencies. The CERP provides specific information about the response team, preparation elements, education and training details for all staff and others as needed, AED management, CERP Protocol (emergency action plan – EAP) details, conducting simulation drills, and other essential components. general response recommendations and best practices and should be customized for each school or adapted for other organizations such as sports facilities and community entities.
- **CERP Protocol** (also known as an ‘emergency action plan’ (EAP)) is designed explicitly for a specific facility and defines actions to be taken in a cardiac emergency. This should be shared with Cardiac Emergency Response Team members and all staff should be informed of CERP Protocol. Signs may be created to post by AEDs and throughout a building for reminders (see appendix for example sign). You can find sample protocols to customize by visiting www.projectadam.com/heartsafeschools.

This document is based on plans supported by the Project ADAM, American Heart Association, Parent Heart Watch, a national task force of experts in preparing for sudden cardiac arrest, members of the MI Alliances for Prevention of Sudden Cardiac Death in the you of the MI Department of Health and Human Services (MDHHS), and others. It is customized to include Michigan specifics based on MI HEARTSafe Schools (MHSS) Award Program of the MDHHS <https://migrc.org/patients-families/mi-heartsafe-schools/mi-heartsafe-school-award-program/> and Michigan legislation.

IMPORTANT: This is a resource document intended for use in formulating a plan for adoption by organizations, schools, school district, or sports facilities. Medical and legal counsel for the organization should review this Plan before implementation. It is the responsibility of the organization to ensure that the Cardiac Emergency Response Plan as adopted is consistent with local, state, and federal law.

Project ADAM affiliates provide the foundation for schools to plan and develop their program, including planning templates and one-on-one consultation on how to help prevent sudden cardiac death in the school setting. Project ADAM Michigan supports the MHSS Award Program to achieve heart safe school designation for schools who successfully implement the MHSS criteria involving a quality sudden cardiac arrest program of awareness, training and effective emergency response to promote a Heart Safe environment for students, visitors and staff and is consistent with elements as outlined within the Project ADAM Heart Safe School Checklist. Schools meeting criteria then submit their online application during the designated annual application open time-

period.

Purpose information: In the United States, it is estimated that annually 356,000 adults experience out-of-hospital cardiac arrest as well as 23,000 pediatric cardiac arrests (Mozaffarian, D, 2015; Okubo, M et al, 2020). Although approximately 90% of those people will not survive the event, the likelihood of survival increases with prompt intervention. According to the American Heart Association (AHA), early intervention that includes CPR and restoration of normal heart rhythm with the use of an AED increases the chance of survival.

Developing Cardiac Emergency Response Team (CERT)

Best Practice Considerations:

- a) Consider having the CERT comprised of at least 5 people or 10% of staff.
 - In recognition of periodic absences and overall staff turnover, a robust team of individual trained to be part of the CERT is essential to ensure uninterrupted response activities
- b) CERT members should be able to step away from their tasks to assist when CERP Protocol is activated or have a coverage their classrooms
- c) A list of these individuals and their CPR certifications should be maintained on-site in a readily accessible area.
- d) Plan for ongoing coverage following an emergency response in case a subsequent event occurs.

Training in Cardiopulmonary Resuscitation (CPR) and AED Use

Best Practice Considerations:

- a) It is recommended that as many staff members as possible are trained in hands-only CPR/AED.
- b) It is recommended that at least 10% of staff, 50% of coaches, and 50% of physical education staff in schools should have current CPR/AED certification.

Local Emergency Medical Services (EMS) Integration with the School Plan

Best Practice Considerations:

- a) When possible, invite local EMS and first responders to the Cardiac Emergency Response Drills. They can give meaningful feedback and provide information about realistic situations.
- b) Speak with your local EMS team to see if training supplies are available for education and to use for the CERP drill.

Conduct Practice Drills

Best Practice Considerations:

- a) Consider utilizing a checklist outlining response steps to ensure all actions are being completed. An observer can time the event and check off steps as they

occur.

- b) Save time after the drill to debrief with staff about how the response can be improved, if the CERP needs to be edited, and that the team feels confident in a real response.
- c) Students and parents could be considered to participate in drills. For students this would be with age-appropriate roles in the drills and potential credit for volunteering could be considered.

Annual Review and Evaluation of the Plan **Best Practices** -

- 1) Conduct an annual internal review of the Cardiac Emergency Response Plan (CERP) for schools. The annual review should focus on ways to improve the response process, to include:
 - a) A *post-event review* following an event. This includes review of existing documentation for any identified cardiac emergency that occurred at the location or at any sanctioned function. There should be a designated person responsible for establishing the documentation process.
- 2) Post-event documentation and action shall include the following:
 - a) A contact list of individuals to be notified in case of a cardiac emergency.
 - b) Determine the procedures for the release of information regarding cardiac emergencies.
 - c) Date, time, and location of the cardiac emergency and the steps taken to respond to the cardiac emergency.
 - d) The identification of the person(s) who responded to the emergency.
 - e) The outcome of the cardiac emergency. This shall include but not be limited to a summary of the presumed medical condition of the person who experienced the cardiac emergency to the extent that the information is publicly available.
Personal identifiers should not be collected unless the information is publicly available.
 - f) An evaluation of whether the CERP and CERP Protocol was sufficient to enable an appropriate response to the specific cardiac emergency. The review shall include recommendations for improvements to the CERP and CERP Protocol and in its implementation if the plan was not optimally suited for the specific incident. The post-event review may include discussions with medical personnel (ideally through the school's medical counsel) to help in the debriefing process and to address any concerns regarding on-site medical management and coordination.
 - g) An evaluation of the debriefing process for responders and post-event support. This shall include the identification of aftercare services

including crisis counselors and/or other local resources.

- h) A review of the documentation for all Cardiac Emergency Response Drills performed during the year. Consider pre-established Drill report forms to be completed by all responders.
- i) A determination, at least annually, as to whether additions, changes or modifications to the Plan are needed. Reasons for a change in the Plan may result from a change in established guidelines, an internal review following an actual cardiac emergency, or from changes in facilities, equipment, processes, technology, administration, or personnel.
- j) After an actual emergency event occurs, you may need assistance in downloading and storing information from the AED to aid in the patient's continued medical care.
- k) If the AED is taken with the patient or is removed from its cabinet, please place a sign about where the next closest one is located until there is an AED put back in the cabinet. Consider having a process or checklist for AEDs that have been used to verify all parts have been checked and replaced.
- l) Consider activities after normal operating hours, such as before or after school events.

Activation of Cardiac Emergency Response Team During an Identified Cardiac Emergency

Best Practice Considerations:

- a) All Cardiac Emergency Response Team members should be able to step away from their tasks without risking harm to students or others.
- b) All members should be alerted uniformly via overhead page, radio, text, or phone.

CERT considerations for school, community, or workplace venues

- a.) Consider having the Cardiac Emergency Response Team comprised of at least 5 people or 10% of staff.
 - a. In recognition of periodic absences and overall staff turnover, a robust team of individuals trained to be part of the CERT is essential to ensure uninterrupted response activities.
- b.) CERT members should be able to step away from their tasks to assist when CERP is activated or have coverage for their classrooms.
- c.) A list of these individuals and their CPR certifications should be maintained on-site in a readily accessible area.
- d.) Plan for ongoing coverage following an emergency response in case a subsequent event occurs.
- e.) Consider including individuals that are most often at the facility as members of the CERT.
- f.) Consider including your organizational leadership as members of the CERT or trained in CPR and AED use.

- g.) Include shared use partners and their leadership if the building or location is shared.

AED Best Practice Considerations for school, community, or workplace venues

- a) It is recommended that each AED has a spare set of pads.
- b) Be sure pads are sealed and have not reached expiration date
- c) Backup AEDs: If resources allow, obtaining a back-up AED may be used for off-site travel or if another AED is out of service for maintenance.
- d) AEDs to be installed using a cabinet or bracket/wall rack approved for such purpose and be surface mount or wall recessed. Proper cabinets for the climate need to be considered for outdoor storage.
 - i. Regardless of which mount is chosen, AEDs shall be placed so that the AED's readiness indicator faces outward.
 - ii. During installation, it is important to make sure that screws, bolts and wall anchors will not penetrate electrical wires or pipes inside wall.
 - iii. Installation Height: Placed at an unobstructed height of forty-eight (48) inches from the floor. It may be lower to provide optimum accessibility in compliance with American Disabilities Act (ADA). ADA Accessibility Guidelines (ADAAG) specify that objects such as automated external defibrillator wall cabinets shall not protrude more than 4 inches from the wall into walks, corridors, passageways, or aisles.
- e) Keep copies of event documentation with AED and first responder kits.
- f) CERT coordinators should register their AED with the manufacturer and supplier to receive notifications of potential recalls or alerts.
- g) Best practice is for all organizations that serve children and schools, regardless of grade levels served, to have an AED that can serve all ages. If AED has pads, apply pads based on manufacture recommendations. Make sure pads do not touch.
- h) **If pediatric pads are not available, adult AED pads should be used:** The small pads or child key/switch will deliver a shock with a lower energy dose than the larger pads will. But if there aren't any smaller child pads, or if there isn't a child key or switch, use the larger adult pads. When you put the pads on the chest, make sure they don't touch each other. If a child is very small, you may need to put one pad on the child's chest and the other on the child's back.
- i) Consider having an AED readily available during activities outside of normal operating hours, such as on the sidelines of sporting events and practices.
- j) Consider posting the American Heart Association *Act Now. Save a Life.* (Simplified Adult Basic Life Support) diagram near AED cabinet (see appendix).
- k) Consider revising the current organizational funding priorities or plan for future funding to acquire the appropriate number of AEDs.
- l) Regardless of the number of AEDs in place, educate as many people as possible in Hands-Only CPR (see Training in Cardiopulmonary Resuscitation (CPR) and AED Use section of this document).

CERP Protocol (EAP) Best Practices and Supplemental Information – some of this is in CERP Protocol template

1. More detailed wording for CERP Protocol if desired: Follow these steps in responding to a suspected cardiac emergency during school hours:
 - a.) Assume Sudden Cardiac Arrest - If victim is unresponsive, not breathing normally, not moving or having seizure-like movements

- b.) As soon as a sudden cardiac arrest is suspected, the teacher/staff/witness closest to victim alerts front office of “Code AED” in room _____. If victim is unresponsive, begin CPR.
- a. First bystander to respond:
 - i. Call for help – activate emergency response team
 - ii. Start CPR
 - iii. Request retrieval of AED and turn it on, apply pads and follow verbal instructions – no shock will happen if unnecessary.
 - iv. Continue CPR as uninterrupted as possible until victim is conscious, EMS takes over, or EMS advises to stop.
 - b. Other responder roles during an emergency
 - i. Assign someone to remain at the main entrance or appropriate entrance to guide emergency medical services to the victim.
 - ii. Secure a safe scene - clear people from the area
 - iii. Students must return to or remain in classrooms/gym/other school space – away from the scene – until “all clear” announcement.
 - iv. Communication between office and victim’s family
 - c. Try to maintain normalcy in the classroom – debrief students after the event recognizing the emotional situation
 - d. Front office announces alert: “Code AED in Mr./Mrs. _____ classroom, room #____, gym, football field, cafeteria, etc. AED team report to (location) immediately. All staff should contain their students in current classroom until further notice.” Front office also calls 9-1-1, providing the school address and patient condition. Front office staff will facilitate access to the victim for arriving EMS personnel by specifying which door to enter, sending someone to go to door to wait for EMS arrival, and escorting them to the exact location of the victim.
 - e. In the event that classroom teachers are members of the cardiac emergency response team, they will need a pre-established backup plan to cover their classrooms.
 - f. It is assumed that teachers will have means to communicate, either by intercom, cell phone or walkie talkie, no matter where on the school grounds they may be.
 - g. All team members will report immediately to victim. The team member closest to the AED should retrieve the AED en route to the scene, leaving the AED cabinet door open; the alarm typically signals other team members that the AED has been retrieved – but if the alarm is problematic the door can be closed.
 - h. If CPR has not been initiated, then the closest CPR certified person begins CPR. If no one is present that has been trained, perform Hands Only CPR by pushing hard and fast in center of chest. Goal is 100 compressions per minute.
 - i. When the AED is brought to victim’s location, press the power-on button, attach the pads to the victim as shown in the diagram on the pads and follow the AEDs visual and audible prompts. If shock is needed, the AED will deliver one or more shocks. Continue CPR until the patient is responsive or EMS arrives and takes over.
 - j. One responder brings walkie-talkie to communicate with office and documents events. It should be noted the time event occurred, when CPR

was started, when and if the AED delivered a shock(s), when EMS arrived and victim's condition when EMS arrived.

- k. Do not turn off or remove AED from patient. Ask EMS if they have a method to download information of event from AED or consider sending AED with EMS to nearest hospital so that record of event is available for emergency room physicians.
 - l. Crowd control is maintained by staff not directly involved in resuscitation.
 - m. Front office staff should
 - i. contact parent/guardian
 - ii. if available, a copy of the victim's emergency card should be sent with EMS
 - iii. contact school district administration and other appropriate departments per school district's policy
 - iv. Upon transport of victim by EMS, front office should announce "Code AED all clear. Staff may resume normal schedules."
- c.) The CERP protocol should be distributed to:
- a. All staff and administrators at the start of each year (or school year), with updates distributed as made. In workplace and recreation centers, the CERP protocol should be made available annually and when updates are made.
 - b. All staff should be educated on the CERP protocol in their school yearly.
 - c. All staff should be educated on recognizing the signs of a cardiac emergency that is or may become a SCA, how to activate a response, location of AEDs, and ideally have an introduction to at least hands-only CPR and AED use.
 - d. New staff members should receive the CERP protocol in their orientation materials.

CERP Protocol Best Practice Considerations:
Best Practice Considerations:

- a) Consider having a plan in place for after-hour events or off-site field trips. Consider a modified CERP protocol which takes into consideration the nature and extent of the use and shall meet the spirit and intent of the CERP Protocol to ensure that preparations are made to enable a quick and effective response to a cardiac emergency on-site after standard business hours.

Communication of CERP Protocol – from AHA and Project ADAM

Best Practice Considerations:

- a) A copy of the CERP protocol should be provided to any organization using the school, building, or location. The organization using the building or location should then adapt the CERP protocol to the needs of their group/organization.
- b) Consider having a plan in place for after-hour events or off-site field trips.
- c) Consider a modified CERP protocol which takes into consideration the nature and extent of the use and shall meet the spirit and intent of the CERP Protocol to ensure that preparations are made to enable a quick and effective response to a cardiac emergency on-site after standard business hours.
- d) A facility user or renter should have their own plan, especially those using facility after normal operating hours. This should include location of the AEDs and knowledge of hands-only CPR and AED use. Visit Parent Heart Watch for a sample [Communication to Facility User or Renter](#).

References:

- MI HEARTSafe Schools – MDHHS: <https://migrc.org/patients-families/mi-heartsafe-schools/mi-heartsafe-school-award-program/>
- Project ADAM: <https://projectadam.com/Heart-safe-schools>
- Mozaffarian, D., Benjamin, E. J., Go, A. S., Arnett, D. K., Blaha, M. J., Cushman, M., ... & Turner, M. B. (2015). Heart disease and stroke statistics—2015 update: a report from the American Heart Association. *Circulation*, 131(4), e29-e322.
- Okubo, M., Chan, H. K., Callaway, C. W., Mann, N. C., & Wang, H. E. (2020). Characteristics of pediatric out-of-hospital cardiac arrest in the United States. *Resuscitation*, 153, 227-23