

Cardiac Emergencies

Prepare with Project ADAM

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Objectives

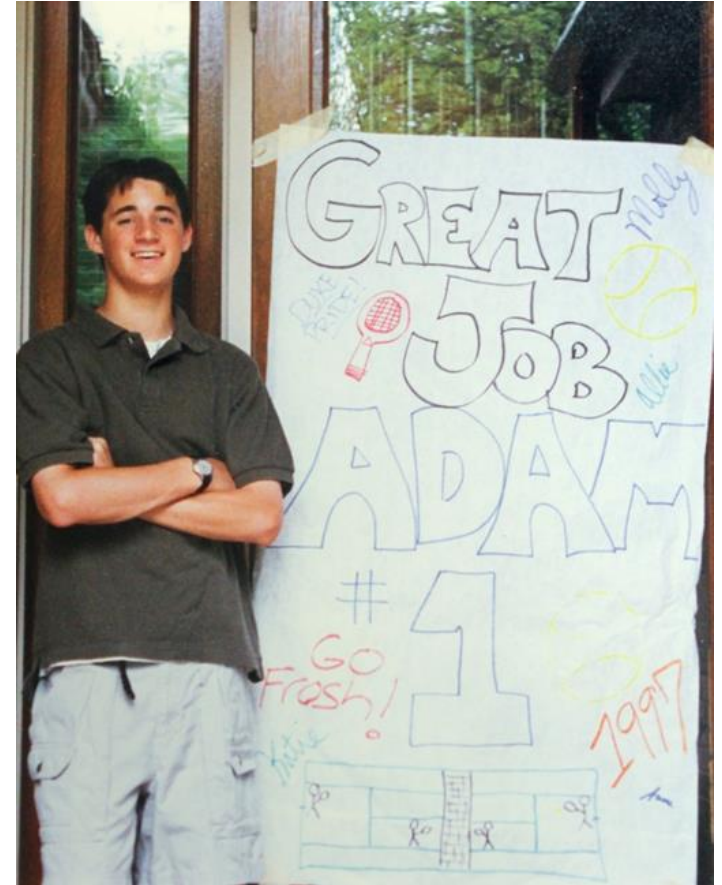
- To become familiar with Project ADAM
- To be able to recognize a Sudden Cardiac Arrest event
- To understand the significance to the community
- To learn the basics of the Heart Safe School Designation and how the program coordinators can help your school prepare



Adam

In 1999, 17-year-old athlete Adam Lemel collapsed while playing basketball. He was in Sudden Cardiac Arrest.

- CPR was initiated and 911 called
- No AED available within the school
- EMS arrived
- Adam passed away



The Birth of Project ADAM

Project ADAM

- Automated
- Defibrillators in
- Adam's
- Memory



49

ESTABLISHED PROGRAMS

33

STATES

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Mission & Vision

Mission:

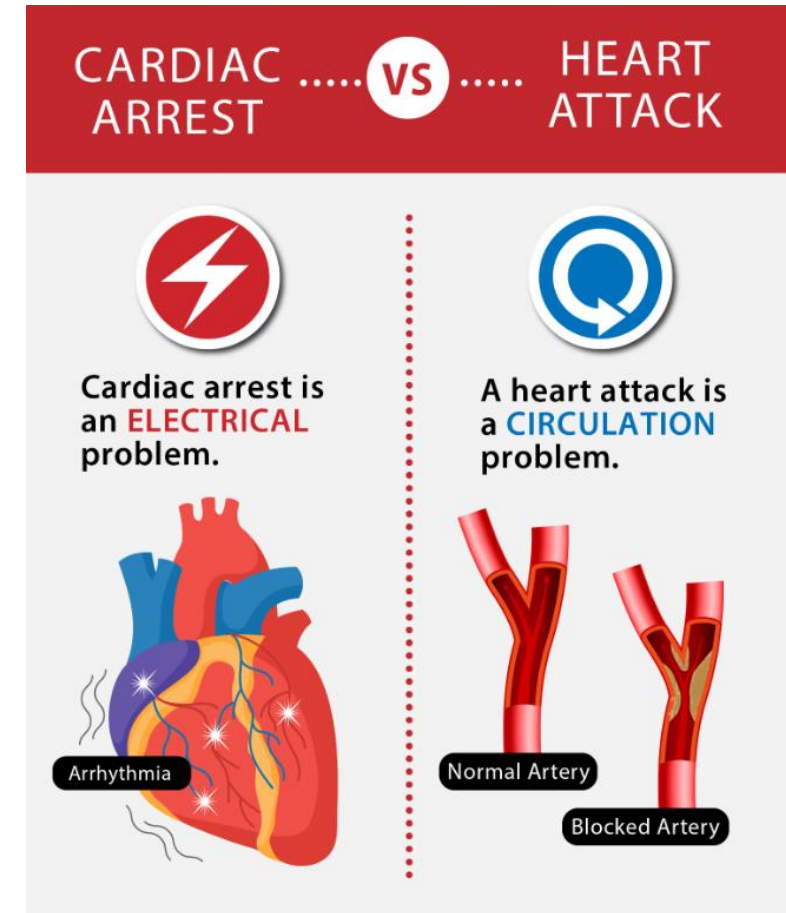
Project ADAM saves lives by empowering schools and communities to be prepared for a sudden cardiac arrest.

Vision:

Eradicate sudden cardiac death through school and community prevention.

What is Sudden Cardiac Arrest?

- Sudden Cardiac Arrest (SCA) is an electrical event during which the heart suddenly stops beating.
- A Heart Attack is a circulation or “plumbing” issue where blood flow to an area of the heart muscle is blocked by plaque or clot.



Sudden Cardiac Arrest Recognition

<https://youtu.be/i-iN9o-cKu0?si=JYhRQiYWj4NmGQNY>



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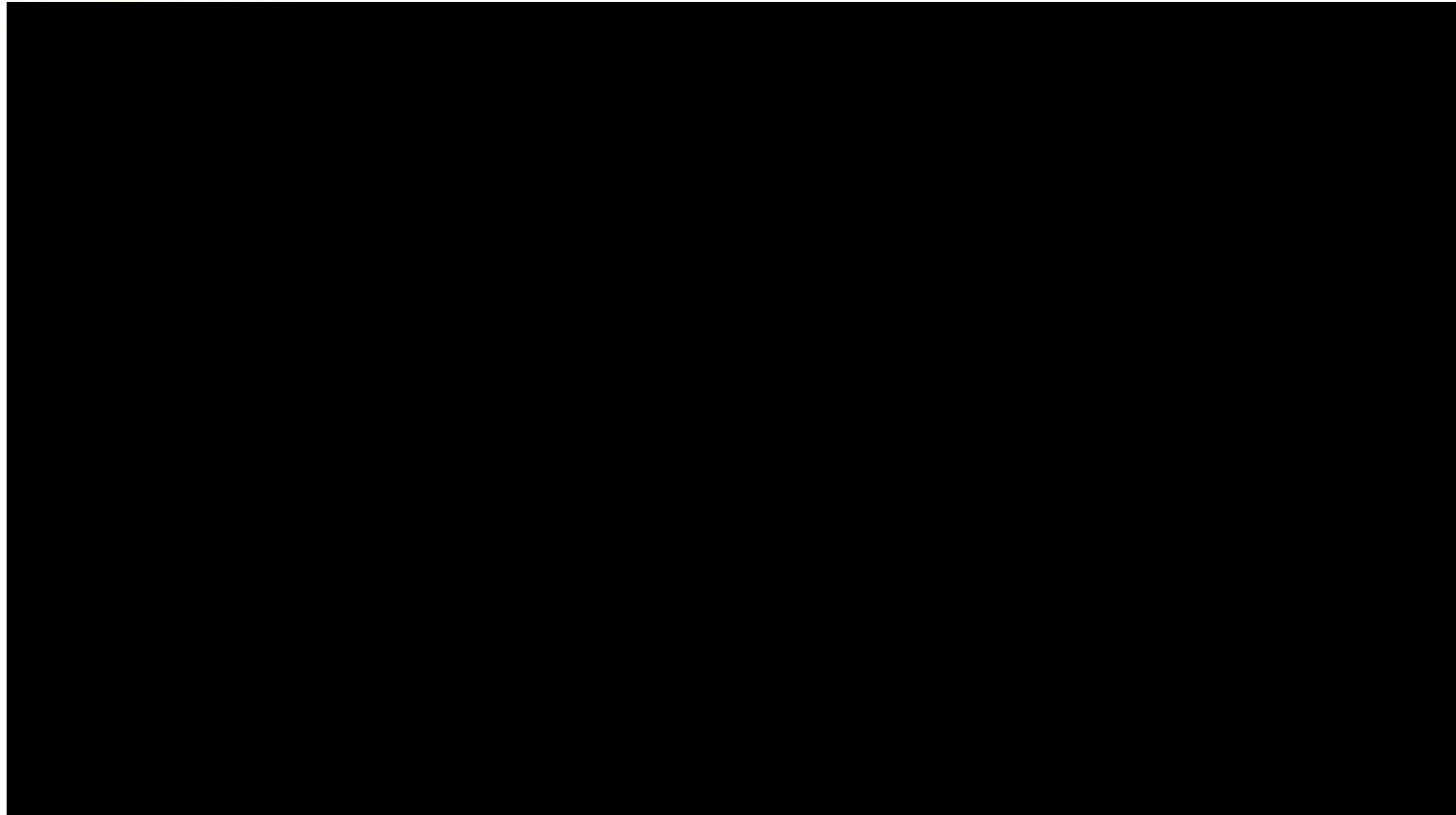
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Sudden Cardiac Arrest Recognition

- The victim collapses
- Unresponsive
- Not breathing or distressed (Agonal) breathing
- Seizure activity may be present
- Eyes open and/or rolled back

Unconscious + Unresponsive + Pulseless = Dead

Sudden Cardiac Arrest



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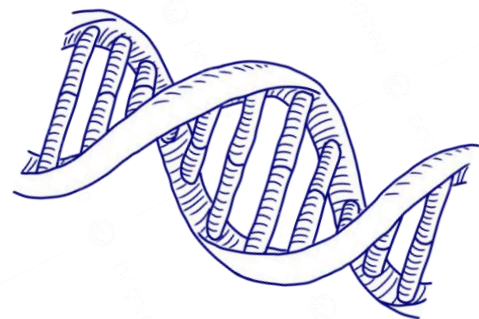
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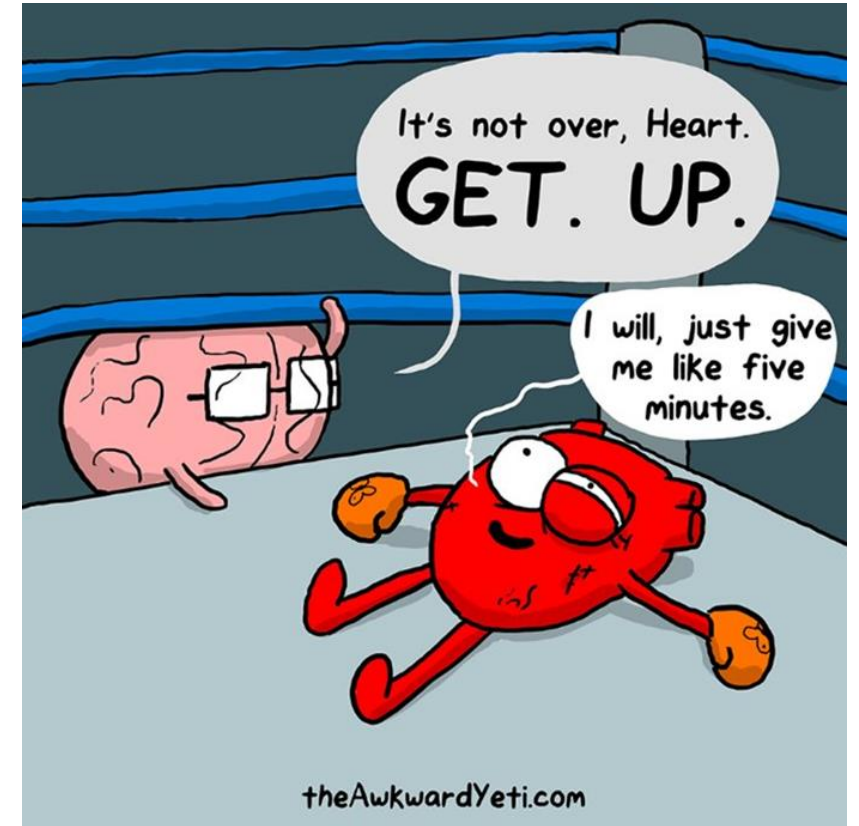
Causes of Sudden Cardiac Arrest

- Underlying genetic conditions
- Commotio Cordis
- Illegal drugs or combinations of prescribed drugs.
- Myocardial Infarction “Heart Attack”

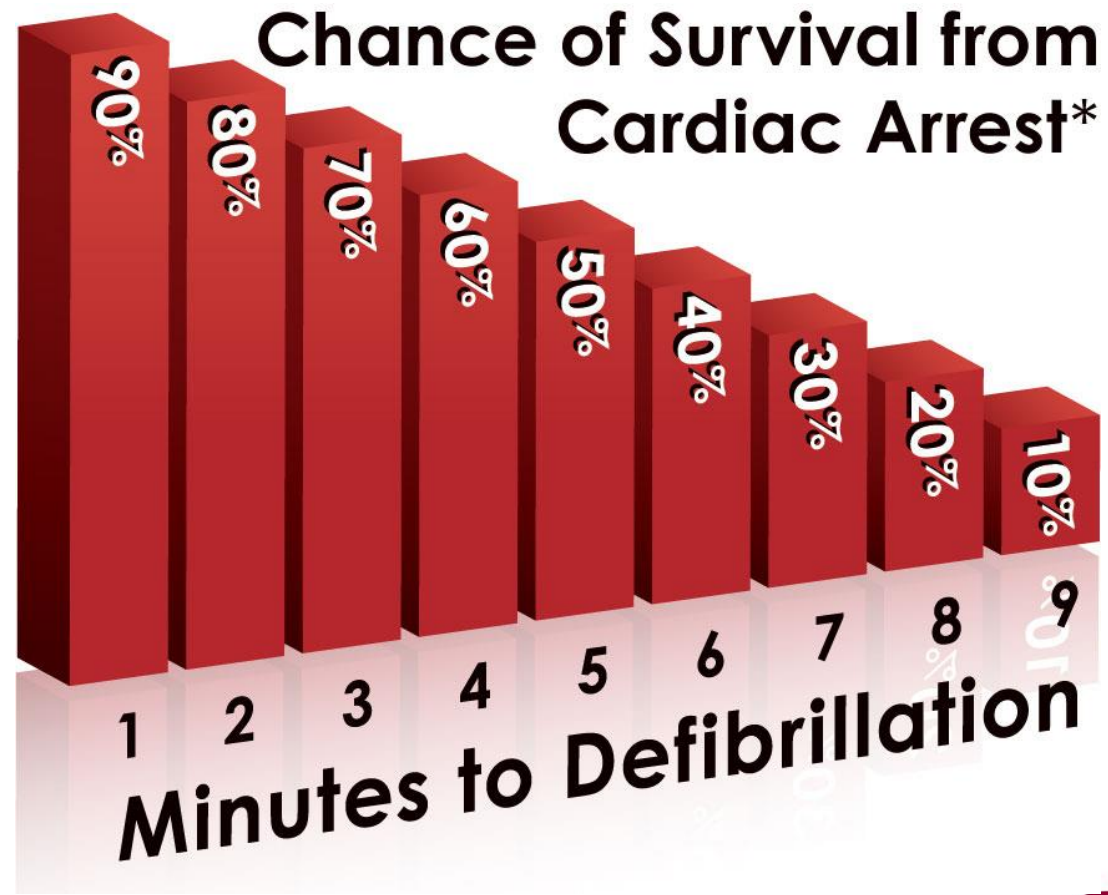


Why Prepare Your School For A Cardiac Emergency?

- Annually 350,000+ total.
23,000+ younger than 18 years old
- Average EMS response time is 8-10 minutes.
- Brain damage begins at 4 minutes without blood flow.



Why Prepare Your School For A Cardiac Emergency?



Every passing minute reduces the chances of survival by 7-10%²

Survival to hospital discharge for children
14.4% ages 1-12y
19.9% for ages 13-18y¹

Why Prepare Your School For A Cardiac Emergency?

- Mitigate PTSD experienced by students, staff, & community
- “On any given day, as much as 20% of the combined US adult and child population can be found in schools”³
- Building “A Nation of Life Savers” – American Heart Association



Pending AZ State Legislation

AZ State Senate Bill 1707

- Requires AEDs in each public high school that sponsors athletic events.
- Includes \$500k to fund AEDs, maintenance and training.



AZ 36-2263 “Good Samaritan” Law

The following persons and entities are not subject to civil liability for any personal injury that results from any act or omission that does not amount to willful misconduct or gross negligence:

- 2. A person or entity that provides training in cardiopulmonary resuscitation and use of an automated external defibrillator.
- 3. A person or entity that acquires an automated external defibrillator pursuant to this article.
- 7. A Good Samaritan. For the purposes of this paragraph, "Good Samaritan" means a person who uses an automated external defibrillator to render emergency care or assistance in good faith and without compensation at the scene of any accident, fire or other life-threatening emergency.
- 8. A trained user.



Where do I start?

The Heart Safe School Checklist!

- Initial self assessment of your school.
- Then a “to do list” and guide for where we can help.



The image shows a 'Project ADAM Heart Safe School Designation Checklist'. The form is titled 'Project ADAM' with 'SINCE 2013' below it. The subtitle is 'A comprehensive school program for prevention of sudden cardiac death.' Below this, it states: 'This tool will serve as a roadmap through the Heart Safe School designation process. Program quality criteria reflect recommendations outlined in the Cardiac Emergency Response Planning for Schools Policy Statement.' The 'Instructions' section includes: 1) 'Please fill out one checklist per school as an initial assessment of your school's cardiac emergency preparedness.' 2) 'Collaborate with your local Project ADAM program site and utilize our customizable resources: www.projectadam.org/HeartSafeSchools.' 3) 'Once all criteria are met, submit one checklist per school to your local Project ADAM representative to attain designation. Retain a copy in your school files.' The form includes fields for 'Today's date', 'Name of school', 'Name of person completing this form', 'Grade level' (Preschool, Elementary, Middle, High School, Private, Other), 'CPR-AED site coordinator or contact person', 'Email', and 'Main school phone'. There are two tables with columns for 'YES', 'NO', 'NEED HELP', and 'COMMENTS'. The first table is for 'AUTOMATED EXTERNAL DEBRILLATORS (AEDs)' with items: 1. 'The presence of the AED(s) makes it accessible from any part of the building or campus within 2-3 minutes.', 2. 'AED(s) have clear signage.', 3. 'The AED(s) is checked for performance readiness at least monthly, or per manufacturer's directions and documented each time.', 4. 'We keep a first responder kit close or attached to the AED which includes: CPR barrier device, scissors, gloves, roller.' The second table is for 'CARDIAC EMERGENCY RESPONSE TEAM' with items: 5. 'A CPR-AED site coordinator is identified, who oversees the CPR-AED program activities and training.', 6. 'There is a designated cardiac emergency response team composed of at least five of staff in 5-10 minutes.'

The Checklist

14 checkpoints based upon best practices in school-based cardiac emergency preparedness.

Broken down to 5 main categories:

- AEDs
- Response team
- Response plan
- Staff training/education
- AED Drills



The image shows a 'Project ADAM Heart Safe School Designation Checklist' form. The form is titled 'Project ADAM Heart Safe School Designation Checklist. A comprehensive school program for prevention of sudden cardiac death.' It includes instructions for use, such as 'Please fill out one checklist per school as an initial assessment of your school's cardiac emergency preparedness.' and 'Once all criteria are met, submit one checklist per school to your local Project ADAM representative to attain designation. Retain a copy in your school files.' The form contains several sections for data entry, including 'School's name', 'Name of person completing this form', 'Name of district', 'CPE-AED site coordinator or contact person', 'Email', 'Phone', and 'Main school phone'. There are two tables for 'AUTOMATED EXTERNAL DEFIBRILLATORS (AED)' and 'CARDIAC EMERGENCY RESPONSE TEAM'. Each table has columns for 'YES', 'NO', 'NEED HELP', and 'COMMENTS'. The 'AED' table has 4 rows, and the 'RESPONSE TEAM' table has 2 rows.

AEDs on campus

Standards for Heart Safe Designation:

- AED equipment at the emergency site with pads on the victim within 2-3 minutes
- Unlocked with clear signage
- Maintenance
- First responder kit



Cardiac Emergency Response Team

Does your school already have an emergency response team?

- 10% Staff but at least 5-10 people
- Keep up CPR/AED Training & participate in AED drills
- Respond to the scene in a sudden emergency/collapse
- Site Coordinator



Cardiac Emergency Response Plan



Do you already have a response plan for medical emergencies?

1. A full plan that is reviewed annually **(CERP)**
2. What do the team members and staff do if a 'code' is called? **(abbreviated plan)**

Abbreviated Response Plan



- The first person to recognize SCA activates the Emergency Response – Call the code.
- That person then provides hands only CPR.
- Other team members call 911 and bring the AED.
- Turn on the AED as soon as it arrives and follow prompts.
- Continue CPR and AED use until EMS arrives or the victim regains consciousness.



Staff Training & Education

Recommendations for all staff:

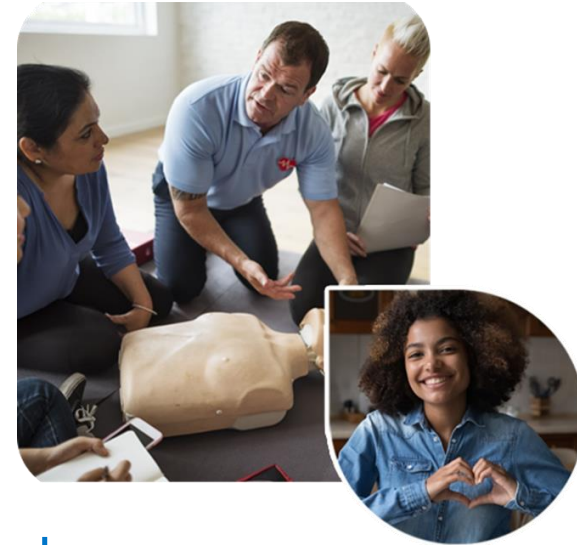
- Trained in Hands Only CPR.
- Educated on the abbreviated cardiac emergency response plan.

Recommendations for CERT members:

- Trained in Hands Only CPR and AED use.
- Educated on full cardiac emergency response plan.
- Participate in drills 1-2 times a year.

CPR Training

Training can be as simple as watching videos but can include hands on demonstration with mannequins.



YouTube Videos by Action First Aid:

[CPR in Action | A 3D look inside the body](#)

[AED in Action | A 3D Look Inside the Body](#)

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Successful Drills



- Teamwork and effective communication
- Practice to build team member confidence
- 1-2 drills per year
- Shock delivered in ≤ 3 mins
- Debrief

Training & Education / AED Drills

Staff / Team Training	Example	Time / Cost
All Staff Training on SCA recognition, abbreviated CERP and Hands only CPR	 	5 - 20 minutes annually No cost
CERT Team CPR/AED Training Videos AED Drill		5 – 30 minutes 1-2 times annually No cost
CPR/AED Certification American Red Cross American Heart Association		2 - 4 hours every 2 years \$30 – 75/person

Heart Safe School Designation



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Heart Safe Designation Experience

Take aways from a Heart Safe School Designation by Isabel Vasquez, RN:

“My experience with Casa Blanca Community School and the Project Adam Heart Safe School program was both impactful and rewarding!”

“[The Checklist is] a simple but powerful tool to keep everything on track.”

“Once [the CERP] was in place, it became the foundation for everything else to run smoothly.”



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A Local Story



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Next steps

1. Start working with your school administration to complete the self assessment using the checklist, ASAP.
2. Utilize our website resources and information from the presentation to support your case.
3. Contact our Project ADAM team for further support.



**“To achieve great things,
*two things are needed;
a plan, and not quite
enough time.*”**

- Leonard Bernstein



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References

1. CARES 2016 data.
2. Larsen, M., Eisenberg, M., Cummins, R., & Hallstrom, A. (1993). Predicting survival from out-of-hospital cardiac arrest: A graphic model. *Annals of Emergency Medicine.*, 22(11), 1652-1658.
3. Hazinski MF, Markenson D, Neish S, et al. Response to cardiac arrest and selected life-threatening medical emergencies. *Circulation.* 2004; **109**(2): 278-291. <https://doi.org/10.1161/01.cir.0000109486.455>

THANK YOU

...for ALL you do to keep our schools and communities safe! You are true heroes!

National Project ADAM website: <https://projectadam.com>

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