

# Schools Q & A Document

Revised March 8, 2012

## Response to Cardiac Arrest and Selected Life-Threatening Medical Emergencies:

*The Medical Emergency Response Plan for Schools*

### **1. What is the “Response to Cardiac Arrest and Selected Life-Threatening Medical Emergencies: The Medical Emergency Response Plan for Schools” and how should it be used?**

The American Heart Association (AHA) and several other organizations developed a scientific statement detailing how schools should prepare to manage life-threatening medical emergencies in the first minutes before the arrival of emergency medical services (EMS) personnel. The statement describes the components of an emergency response plan, the training of school personnel and students to respond to a life-threatening emergency, and the equipment required for this emergency response. It also discusses the causes of death and incidence of cardiac-related emergencies in school children. It will provide science-based information to help school personnel, policy-makers, and community leaders prioritize and prepare for medical emergencies occurring at schools and at school-sponsored events.

### **2. What are the recommended components of a school medical emergency response plan?**

- Effective and efficient communications
- Coordinated and practiced response plan
- Risk reduction
- Training and equipment for first aid and CPR
- Implementation of a lay rescuer AED program in schools with established need

### **3. Who developed the plan?** The plan was developed by a panel of experts, listed on the document’s first page, brought together by the American Heart Association. The lead author of the statement is Mary Fran Hazinski, RN, MSN, who is Senior Science Editor for the AHA’s Emergency Cardiovascular Care Programs.

### **4. What organizations have reviewed and endorsed the plan?**

A list of supporting organizations is included on the first page of the plan and includes the following:

- American Heart Association
- American Academy of Pediatrics
- American National Red Cross
- American College of Emergency Physicians
- National Association of School Nurses
- National Association of State EMS Directors
- National Association of EMS Physicians
- National Association of Emergency Medical Technicians
- National Athletic Trainers’ Association
- The Program for School Preparedness and Planning, National Center for Disaster Preparedness, Columbia University Mailman School of Public Health

The statement was also reviewed by the Centers for Disease Control Division of School and Adolescent Health.

- 5. When will the plan be released?** The Medical Emergency Response Plan for Schools statement was originally published online on January 5, 2004 (<http://circ.ahajournals.org/content/109/2/278>). The statement was published in the January 20, 2004 issue of the AHA journal *Circulation*.
- 6. How can I get a copy of the plan?** The American Heart Association will post the full medical response plan along with numerous additional resources on its website at <http://www.heart.org/cpr>. Go to the Community Training tab and click on General Information, then Free Resources. Copies of the plan and several additional resources may be downloaded and printed from the site.
- 7. Will print copies of the plan be available?** With online access to the plan being so accessible, there are no plans to print or issue a hardcopy upon request. Interested parties have 24/7 access to the site and may freely print any of the listed resources.
- 8. How should schools prepare to deal with injuries?** Part of a school medical emergency response plan should include training in basic first aid and CPR for teachers, school nurses, physicians and athletic trainers. Immediate first aid can help limit the potential for an injury to progress to the point of cardiac arrest. CPR, especially rescue breathing, may also be used to treat conditions such as severe asthma attacks.
- 9. Will the AHA come to my school and assist me in developing a School Medical Emergency Response Plan?**  
The AHA believes that the development of a specific school policy, regulation or plan is best left to the individual school. When used as a resource, the scientific paper includes the majority of information needed to develop a school medical emergency response plan. The AHA's training center network can also provide additional support to local efforts. These training centers are the primary source for CPR and AED training and many can also assist in the development of protocols for a response plan. For referrals to training centers that may be able to assist in plan development, contact your local AHA office or call our Customer Service Center at 877-AHA-4CPR (877-242-4277).
- 10. What local resources might a school tap into as they develop their plan?** Local resources include the local ambulance service, physician offices, Police Department, Fire Department, county and town health departments, etc. Schools should also examine their current emergency plans and materials that may be available from the school district's administrative office.
- 11. Does AHA have a template or sample plan for schools to use as a model?**The AHA website includes two model medical emergency response plans to use in the development of a school plan. Schools may use these as a starting point and include those aspects critical and unique to their own program's success. The model plans include topics relevant only to emergency care or first aid and not the routine administration of a student's prescription medication.

**12. How much will implementing a Medical Response Plan cost the schools? Is there funding available from the AHA?**

The costs of implementing a School Medical Emergency Response Plan will vary based upon the medical equipment available (such as an AED), the amount of training needed to provide coverage throughout the facility, and the materials needed to implement the program. Many schools already have a medical emergency response plan in place, but simply need to reevaluate or revise it with the release of the new statement. The AHA does not have funding available to assist schools in the development of their response plan.

**13. How many children die in schools per year? We can't be absolutely sure because there are no national, published data on the topic. However, data in this statement came from various sources including statewide surveys, registries of isolated problems and medical literature. This statement estimates that more than one third of schools may have an emergency that requires a call to EMS (usually by phoning 911).**

**14. What is the leading cause of death in school-aged children? Injuries cause more childhood deaths than all other causes combined. A study in Utah found that EMS was dispatched most often for injuries related to sports. Non-injury complaints included trouble breathing, seizures and illnesses.**

**15. The statement says that sudden cardiac arrest is not a leading cause of death in school-aged children. Is that true?**

Yes. In children, sudden cardiac arrest is typically attributed to congenital or inherited heart conditions or by medical problems that cause inflammation of the heart. Unfortunately, routine screenings will not pick up these conditions and vigorous exercise may trigger deadly abnormal heart rhythms for these children.

**16. Can Automated External Defibrillators (AEDs) save the life of a child who has a sudden cardiac arrest as a result of congenital heart disease or other pre-existing cardiac causes?**

Yes, if these children develop sudden cardiac arrest with a "shockable" abnormal rhythm (such as ventricular fibrillation or ventricular tachycardia). Children or adults who develop cardiac arrest caused by a slowing of the heart rate (bradycardia) or cardiac standstill (asystole) cannot be treated with an AED. These rhythms do not respond to electric shocks, so the AED will not allow a shock to be activated.

**17. What is an AED and why is it necessary in cases of sudden cardiac arrest? AED stands for automated external defibrillator, a computerized medical device that analyzes a heart rhythm to detect cardiac arrest and delivers an electric shock to the heart if necessary. If the AED determines defibrillation is needed, the device charges to the correct shock dose and prompts the rescuer to activate a shock. Audible and/or visual prompts guide the user through the process, making the device very easy to use. A shock from an AED is the most effective treatment for sudden cardiac arrest.**

**18. What happens to the heart when someone has a sudden cardiac arrest and how does the AED help?**

A person who suffers a sudden cardiac arrest will collapse, stop breathing normally and become completely unresponsive. This occurs because the heart develops an abnormal rhythm called ventricular fibrillation (VF) during which the heart quivers and does not pump blood. If an AED detects VF cardiac arrest, it can deliver an electric shock to the heart muscle, momentarily stunning the heart and stopping all activity. This gives the heart an opportunity to resume a normal rhythm and again pump blood.

**19. What does an AED cost and how will schools secure funding to implement AED programs?**

The cost of an AED ranges from \$1,200 to \$3,000. The price can vary depending on the number of units purchased and features included. Schools may budget for needed medical equipment and to purchase AEDs for their program or they may seek outside corporate funding from the local community. Many schools have found success in funding their AED equipment and training through donations from local community businesses.

**20. How many times have AEDs been used in schools this year?** There is no current database of the number of AEDs in schools or the number of times they have been used.

**21. Will schools implementing AED programs have increased liability?** AED programs are included under national Good Samaritan laws. In addition, the federal Cardiac Arrest Survival Act (CASA) provides additional Good Samaritan protection, including limited immunity for those who provide emergency treatment with an AED.

**22. Does the American Heart Association support AED programs in schools?** Yes, in schools with a high risk of sudden cardiac arrest. Schools that may benefit most are those with a large number of adult employees, volunteers and visitors, or those with large, sprawling campuses not quickly accessible by emergency medical services (EMS) personnel.

**23. Is the AHA saying that all schools should implement an AED program?** No. AHA recommends each school perform a risk analysis before incorporating an AED program into its medical response plan. Additional information about how schools can complete this risk analysis is available at <http://www.americanheart.org/cpr>.

**24. Does the American Heart Association feel that programs are valuable even if they save one student in hundreds of thousands?**

Yes. That's why the AHA recommends that schools implement comprehensive response plans that lead to children getting the help they need immediately after injuries, breathing difficulties, seizures, or sudden cardiac arrest.

**25. What is *Commotio Cordis*? How many cases are reported annually?** *Commotio Cordis* is a condition in which blunt chest blows cause sudden cardiac arrest. It is extremely rare—approximately 5 to 10 cases of confirmed *commotio cordis* in the U.S. annually.

**26. Where can I find more information about CPR and First Aid Training?** Contact your local American Heart Association (AHA) office or call 1-877-AHA-4CPR (877242-4277) for the location of AHA training centers that can provide instruction in CPR, AEDs, and/or First Aid. For group training needs, instruction can be conducted onsite at your school or complex.