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# Readin', Writin', Rhythmic' and Resuscitation: Teaching CPR in the Schools

Posted in [Issues In Safety & Rescue](#) by [Gerald M. Dworkin](#)

*Each year approximately one million people in the United States suffer from acute myocardial infarction (heart attack) of which approximately 700,000 die. About 350,000 of these fatalities occur outside the hospital, usually within two hours after the onset of symptoms of a heart disorder. In addition to these deaths, approximately 100,000 people die annually as a result of accidents such as drowning, suffocation, electrocution, drug overdose, automobile accidents, fires, and poisoning.*

by Gerald M. Dworkin

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Medical research, and practical experience confirm that a significant number of these fatalities, estimated at approximately 20%, could have been prevented if prompt and proper cardiopulmonary resuscitation (CPR) had been applied on the scene. It is a medical fact that irreversible brain damage will occur after approximately four minutes from the time a victim has gone into cardiac arrest, unless proper basic life support measures are initiated. Regardless of how sophisticated the community emergency medical service system is or how well trained its personnel (police, fire, ambulance, hospital) are, unless CPR is initiated by the bystander within four minutes, chances are the victim cannot be saved.

Cardiopulmonary resuscitation, more commonly known as CPR, is a basic life support procedure for people whose heart and lungs have ceased to function effectively, therefore being unable to sustain life. CPR is a combination of artificial respiration and artificial circulation (external cardiac compression), which should be started immediately as an emergency procedure when cardiac arrest occurs, by those properly trained to do so. It is intended to supply sufficient oxygen to the lungs and to maintain a minimum degree of blood circulation in order to maintain life until advanced life support measures can be applied.

In May 1973, a national conference on “Standards for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiac Care (ECC)” was held in Washington, D.C. and was cosponsored by the National Academy of Sciences National Research Council, and the American Heart Association. These standards were published on February 18, 1974, as a supplement to the Journal of the American Medical Association (JAMA), Volume 227, No. 7. The following quotations describe the conference recommendations to schools, in regard to teaching CPR to the general public:

All school children should be required to have annual training in artificial ventilation beginning in the fifth grade, and a major national effort should be mounted to achieve this objective in the shortest possible time.

The conference recommends that CPR training be given to all eighth grade pupils and that it be repeated each year throughout high school.

There has been much publicity about CPR since the publication of these standards. CPR education programs are on the rise and programs are being initiated nationally by the American Red Cross and the American Heart Association through courses in businesses and industry, emergency service agencies, hospitals, adult education programs, and community recreation programs. The public has been made aware of what CPR is through articles in such publications as Parade Magazine, Newsweek, Reader’s Digest, as well as many others. In addition, the press has given wide coverage to lifesaving events in which lives have been saved by rescue personnel or the public by applying CPR to victims of cardiac arrest. National television has also given much air time on this subject through many news stations as well as such shows as “60 Minutes,” “Good Morning America,” and the “Today” show. Chances are that the public will see CPR performed on any of the police or fire rescue television programs presently on the air. The results of an opinion poll about CPR among adults across the country were released in June 1977 by the George Gallup Organization. The following are excerpts from that survey:

- Nearly two Americans in three have heard about CPR
- 54 percent of them would like to take a CPR course

- 80 percent of them would require CPR training before graduation from high school.

From a teaching point of view, there is nowhere better to teach these skills, than the school system. Other institutions and organizations with teaching capabilities do not nearly cover the whole of the population. Schools also possess excellent teaching facilities and broad educational expertise, and enjoy a general confidence of the community.

From a learning point of view, there is no better age than school age to start learning basic life support skills. Young people are more easily motivated to learn these skills, and are generally easier to teach than adults. Also, they are more apt to retain psychomotor skills longer. Strategically, the pay-off of the educational investment is considerably higher with young learners, since they remain potential life savers many more years than do people who are taught CPR at a mature age.

### Developing and Implementing an Instructional System

In order to guarantee adherence to national training standards, and in some cases protection under the law, no school system should attempt to initiate a program without the cooperation, endorsement, and support of either the American Red Cross or the American Heart Association. Either of these organizations should be contacted during the early planning stages in order to plan the implementation of a nationally certified program of CPR instruction. Although the two organizations may have different educational methods of presenting the cognitive and didactic material, the content is virtually the same with both organizations strictly adhering to the "Standards for CPR and ECC" as developed by the National Academy of Sciences-National Research Council.

The school system is then faced with the budgetary task of obtaining the funds necessary to purchase the required training equipment and materials (i.e. adult and infant manikins, films, textbooks). The implementation of CPR training in the schools will require community interest and involvement. There are many service clubs and foundations as well as the local PTA which would most likely be interested in contributing money or equipment for this project, assuming the money is not available through normal funding sources. Major corporations may also be interested in contributing to this worthwhile program. In addition, local police, fire, or ambulance agencies, along with the Red Cross or Heart Association may have this equipment available for loan.

The equipment and material are reusable if properly maintained. It is estimated that approximately one adult and one infant manikin is required for each four students at one time. Therefore a normal class of approximately 24 students would require six adult and six infant manikins. The estimated cost of one instructional unit (one adult and one infant manikin) is approximately \$600.

Once the funds have been obtained, the school system must then select a cadre of teachers who would then be trained and certified by either the Red Cross or the Heart Association as CPR instructors. Once authorized as an instructor, the teacher will be able to teach CPR on behalf of that organization and to award certificates upon successful completion of the CPR courses.

The CPR basic course requires approximately nine hours for successful completion. Both organizations require an additional nine hours approximately, for the instructor training courses. Therefore, in order for the teacher to become authorized to teach CPR, he/she must first successfully complete the basic course and then the instructor training course. Total time required would be approximately 18 hours.

Based on my experience in Westchester County, New York, the physical education or health education faculties have been given the responsibility for implementing the CPR program. Our school programs were implemented during the 1977-78 school year in eight of our 30 school systems. During the 1978-79 school year, 13 school systems were involved in the program to the extent that attempts are being made to train entire grade levels within the high schools during the period of one school year. These programs are reported to have been met with a great deal of enthusiasm by the students, as well as the faculty, administration, parents, and the general community.

In order to assure quality instruction, both organizations require a teacher: student ratio of approximately 1:6. Our programs have been meeting this requirement using the team teaching approach, or by bringing in instructors from the community (parents, emergency service personnel, etc.). In some cases, schools have had seniors take the instructor training course in order to have them assist in the instructional course.

According to Jess Gorkin, editor of Parade Magazine, "To teach (CPR) high school health and physical education, teachers could take advantage of basic (and instructor) courses readily available from the American Red Cross, or the American Heart Association. The cost in dollars would be minimal, the gain in lives saved incalculable."

Many communities and some states have already adopted regulations making CPR instruction mandatory in the school curriculum. New Jersey, to cite an example, adopted a resolution by the State Board of Education on June 7, 1978 urging all New Jersey high schools to include CPR training in their physical education, health, and safety classes as soon as may be practicable.

Hopefully in the near future all communities, large and small, will include within their school curriculums the four R's instead of the traditional three: readin', 'ritin', 'rithmetic, and resuscitation!

Note: The American Heart Association is now advocating HANDS ONLY CPR for laypersons for the immediate response to victims of SUDDEN CARDIAC ARREST. However, this does not apply to victims who have suffered cardiac arrest as a result of hypoxia (i.e. drowning victims). Please see the article on this subject at: <https://lifesaving.com/issues/hands-only-cpr-simplifies-saving-lives-...> And, remember, "If DRY, COMPRESSIONS apply – If WET, give BREATHS and PRESS!"

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