



Advocating for Life Support Training of Children, Parents, Caregivers, School Personnel, and the Public

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Out-of-hospital cardiac arrest occurs frequently among people of all ages, including more than 6000 children annually. Pediatric cardiac arrest in the out-of-hospital setting is a stressful event for family, friends, caregivers, classmates, school personnel, and witnesses. Immediate bystander cardiopulmonary resuscitation and the use of automated external defibrillators are associated with improved survival in adults. There is some evidence in which improved survival in children who receive immediate bystander cardiopulmonary resuscitation is shown. Pediatricians, in their role as advocates to improve the health of all children, are uniquely positioned to strongly encourage the training of children, parents, caregivers, school personnel, and the lay public in the provision of basic life support, including pediatric basic life support, as well as the appropriate use of automated external defibrillators.

INTRODUCTION

Each year, more than 300 000 adults and 6000 children experience out-of-hospital cardiac arrest (OHCA).¹ Although survival rates in OHCA in both adults and children are low, the provision of bystander cardiopulmonary resuscitation (CPR) has been shown to increase the rate of survival, with favorable neurologic outcome in OHCA victims of all ages.² Schools are a potential setting for OHCA in children, adolescents, and adults. OHCA is frequently associated with an initial cardiac rhythm that is potentially treatable by using an automated external defibrillator (AED) in adults (ie, a “shockable rhythm”). Shockable rhythms, although less common in children, do occur with an increasing prevalence in older children and adolescents. The American Heart Association recommends the use of AEDs in children of all ages who have experienced OHCA until a manual defibrillator is available. Researchers have shown that the presence of AEDs in the community, training of lay people in their use, and their use during OHCA is associated with increased survival among

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adults with OHCA.³⁻⁵ Training of the public is associated with increased rates of bystander CPR when OHCA occurs. Children can be taught from a young age how to seek assistance for victims of OHCA, and older children and adolescents can be taught CPR and how to use AEDs effectively.⁶⁻⁸ More than 30 states currently require CPR training as a prerequisite for high school graduation. Although funding is a potential obstacle to more widespread implementation of CPR training in schools and AED installation, many innovative solutions to this have been used to overcome this barrier. Relatively small investments may yield significant improvement in survival after OHCA. Pediatricians are recognized as advocates for the health of all children and are in a unique position to advocate for increased life support training of children, parents, caregivers, school personnel, and the public, including the use of AEDs, and to be sources of such training and role models for its implementation.

RECOMMENDATIONS

1. Pediatricians should stay up-to-date on recommendations for CPR performance and pediatric basic and advanced life support, including recommendations for bystander CPR and AED use in out-of-hospital settings;
2. Pediatricians should support and advocate for:
 - Including age-appropriate life support training for children (eg, teaching young children how to seek assistance for victims of OHCA, teaching CPR to older children, and teaching CPR and AED use to adolescents) as part

of the curriculum in schools beginning in the primary grades;

- Providing life support training to all school personnel;
 - Programs that provide life support training for parents, caregivers, and the public that could be taught in schools, hospitals, and other health care organizations and by community groups;
 - Placement of an AED appropriate for the treatment of adults and children in every school in the community as well as training for proper AED use for school personnel and older children. AED should be placed in high schools first, and if funding is available, this could be expanded to other schools;
 - Placement of an AED appropriate for the treatment of adults and children near every school athletic facility and training for proper AED use for school personnel and older children; and
 - Funding to promote the above; and
3. Pediatricians should work with parents and legislators to mandate CPR training and AED placement in all public and private schools if those laws do not already exist in their state.

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ABBREVIATIONS

AED: automated external defibrillator
CPR: cardiopulmonary resuscitation
OHCA: out-of-hospital cardiac arrest

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