

Training Athletes and School Personnel in Automated External Defibrillator Application and Cardiopulmonary Resuscitation



To the Editor:

We read with great interest the paper recently published in the *Journal* by DeFroda et al¹ entitled “Sudden Cardiac Death in the Adolescent Athlete: History, Diagnosis, and Prevention,” demonstrating that community outreach to ensure that automated external defibrillators (AEDs) are present at athletic events, as well as cardiopulmonary resuscitation (CPR) training for coaches, could potentially save lives. We completely agree with their landmark conclusions. Their study can provide valuable lessons for the public access defibrillation program in China.

Out-of-hospital cardiac arrest is frequently associated with an initial cardiac rhythm that is potentially treatable by using an AED. Optimal conditions for defibrillation are present for only 1-2 minutes, with success rates decreasing thereafter by at least 10% per minute of delay.² The quicker an AED is attached to a patient in cardiac arrest, the quicker a shock can be given (if indicated) to treat the arrhythmia causing the cardiac arrest. Some studies demonstrated that a combination of public-access AED application and bystander-initiated CPR in the school campus increased the chance of survival by approximately fourfold.³

In addition to students, a substantial number of adults, such as teachers, parents, school personnel, and visitors, can be found on school grounds. Thus, schools are a potential setting for out-of-hospital cardiac arrest. The prompt receipt of AED application and CPR probably had a considerable influence on the improved outcome. Given the importance of reducing to a minimum the time taken to administer a shock, we believe that training for proper AED use for athletes and school personnel could improve survival in out-of-hospital cardiac arrests. Herein, we advocate for increased life support (AED application and CPR) training of athletes and school personnel in schools. We should

support including life support training for athletes as part of the curriculum in schools. Providing life support training to all athletes and school personnel, which are relatively small investments, may yield significant improvement in survival after out-of-hospital cardiac arrest in schools.

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