Cardiac dysrhythmias in pediatric patients are uncommon and are usually due to non-cardiac problems, unless the patient is known to have congenital or acquired cardiac disease.

Cardiac arrest is usually the end result of hypoxemia and acidosis resulting from respiratory insufficiency or shock. Therefore, attention should be given initially to support of the respiratory system.

Pediatric dysrhythmias can be divided into three categories: slow rhythms, fast rhythms, or no rhythm.

The most common dysrhythmia is bradycardia, which is the result of hypoxia or acidosis.

Tachycardias can be a compensatory mechanism or a result of a reentry mechanism.

Ventricular fibrillation, although rare in pediatrics, is usually the result of hypoxia.

Asystole is a terminal event, following prolonged, untreated bradycardia.

“On the basis of the published evidence to date, the Pediatric Advanced Life Support (PALS) Task Force of the International Liaison Committee on Resuscitation (ILCOR) has made the following recommendation (July 2003):

Automated external defibrillators (AEDs) may be used for children 1 to 8 years of age who have no signs of circulation. Ideally the device should deliver a pediatric dose. The arrhythmia detection algorithm used in the device should demonstrate high specificity for pediatric shockable rhythms, i.e., it will not recommend delivery of a shock for nonshockable rhythms (Class IIb).”