

# National ECC Training Memo

**August 15, 2003**

**From:** Jo Haag, RN, MSN  
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**Subject:** Pediatric AED Module

**Purpose:**

To provide direction and support to both BLS and Heartsaver Instructors to include a training module on AED use with pediatric electrodes for children ages 1 to 8 years in BLS courses. The addition of this skill and information is optional for all BLS courses. The Heartsaver AED Course is under revision and will contain an updated course agenda and new training guidance when it is released in late 2003.

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, ie, it will not recommend delivery of a shock for nonshockable rhythms (Class IIb).

The intent is to provide the training network and course participants with useful information that will prepare a rescuer with the psychomotor skills to use an AED with pediatric electrodes on a child aged 1 to 8 years. The Pediatric AED Module must be taught with the Adult CPR, Adult AED, and Child CPR modules. Alternately, the student may show a current AHA card reflecting completion of Adult CPR, Adult AED, and Child CPR modules.

**Pediatric AED Section Content and Design:**

1. Conduct the BLS for Healthcare Providers, Heartsaver CPR (including Pediatric CPR) With AED, or the Heartsaver AED With Pediatric CPR courses according to the agendas in the *BLS Instructor Manual* and in training memos.
2. Add the new Pediatric AED Skills Module agenda to the Child CPR skill section of the course agenda.
3. After the students have completed all skills for the course, administer the current written examination for the core course (eg, Heartsaver CPR With AED, Heartsaver AED With Pediatric CPR, or BLS for Healthcare Providers).
4. Complete the course roster and *write in* Child AED after the course name.

Issue the card for the core course (eg, Heartsaver CPR or BLS for Healthcare Providers). At this time there are no cards reflecting Child AED as a completed skill.

# Pediatric AED Pad Skills Module

## Learning Objectives

Upon successful completion of this module, the student will be able to:

1. Perform Child CPR
2. Identify the correct age-appropriate electrode pad when given a patient care scenario
3. Describe and demonstrate the proper procedure for attaching the pediatric AED electrode pads in the correct positions on the victim's chest
4. Describe and demonstrate the proper actions to take when the AED signals "*no shock indicated*" (or "*no shock advised*").

## Instructions for using the student practice skill sheet.

You also have illustrated skill practice/evaluation sheets in this memo. These sheets cover Child CPR and AED. During the skill sessions these sheets can be placed next to the manikin and used as a guide for performing critical techniques. Briefly describe peer practice and the use of the illustrated skill practice sheets to the students. Explain that during peer practice, one participant will observe the other participants who are practicing skills. The observer provides corrective feedback. This approach will reinforce key skills knowledge for both the participant being critiqued and the observer.

## Basic Life Support Provider Courses With Pediatric AED Skill Module Agenda

**NOTE:** 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, ie, it will not recommend delivery of a shock for nonshockable rhythms (Class IIb).

Instructor conducts standard BLS provider course for Healthcare Providers or any Heartsaver CPR-AED combination course that includes pediatric (child) CPR
The child AED skills should follow Child CPR skills. Complete all skill and written testing as required. The standard AHA course must be completed.
Review the FYI “Call First vs. Call Fast” box on page 74 of the <i>Heartsaver CPR</i> text, or page 4 of the <i>Heartsaver Pediatric CPR</i> text (from the Heartsaver -AED With Pediatric CPR Course).
Demonstration of age appropriate pads
<ol style="list-style-type: none"><li>1. Instructor demonstrates correct placement of pediatric pads using a child manikin. Include the anterior-posterior placement when the child is so small that the pad edges are within 1 inch of each other.</li><li>2. Instructor demonstrates a single shock scenario on a child manikin.</li></ol>
Student practice
<ol style="list-style-type: none"><li>1. Practice correct placement of pads.</li><li>2. Practice Child CPR and a 1- to 3-shock scenario. See Pediatric AED Skills Module scenario.</li><li>3. <b>Note:</b> Pediatric AED practice sessions <b>may be combined</b> with standard Child CPR skill practice.</li></ol>
Skill Testing
Student tested on a single-shock scenario where Child CPR is performed for 1 minute before the AED is attached and a shock is administered.

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### Required Equipment:

- 1 child manikin per 3 students
- 1 AED trainer per 3 students
- 1 set of infant-child (pediatric) AED training electrodes per AED trainer

# Pediatric AED Skills Module Scenario Card

**Purpose:** Management of a pediatric cardiac arrest in a child victim requiring the use of an AED equipped with pediatric/child electrodes.

**Setup:** Assign 1 participant as a CPR/AED rescuer, and 1 as a 911\* caller and retriever of the AED (or observer). The remaining participants are assigned to the peer practice group.

Scenario	Scenario Assignments/Discussion	Assessment Findings	Expected Rescuer Actions
<p><b>Child CPR and pediatric pads with AED</b></p> <ul style="list-style-type: none"> <li>▪ Cardiac arrest</li> <li>▪ Rescuer sends colleague to phone 911* and get the AED (as appropriate)</li> <li>▪ <i>“Shock advised”</i> for up to 3 shocks, circulation returns</li> </ul>	<ul style="list-style-type: none"> <li>▪ You are a first grade teacher. You have been notified that you have a student who was recently diagnosed with a congenital heart defect. During class this student collapses at her desk. She is approximately 6 years old and was not a victim of any recent injury. Another teacher is in the classroom with you. An AED is in the main office.</li> <li>▪ You are a physician/nurse/respiratory therapist/nurse's aide working in a clinic. A preschooler in the waiting room suddenly becomes limp and collapses. The AED station is in the medication room.</li> <li>▪ You are a first responder trained and equipped with an AED. You are called to a nearby park. When you arrive, a 5-year-old boy is lying next to a picnic table. He is cyanotic and unresponsive. Bystanders report he suddenly became limp and unresponsive. There are no injuries to the child.</li> </ul> <p>*911 Call            Teacher = 911            Clinic = 911            First Responder = no call needed, responder dispatched by 911.</p>	<ul style="list-style-type: none"> <li>▪ Unresponsive</li> <li>▪ No trauma present</li> <li>▪ Not breathing</li> <li>▪ No signs of circulation</li> <li>▪ AED Arrives</li> <li>▪ <i>“Shock advised”</i> for first 1-3 shocks</li> <li>▪ After 1-3 shocks, <i>“no shock indicated”</i></li> <li>▪ Signs of circulation and breathing return</li> </ul>	<ul style="list-style-type: none"> <li>• Check response (none)</li> <li>• Direct bystander to phone 911* and get the AED</li> <li>• CPR/AED Rescuer: Open airway, assess breathing (none)</li> <li>• Provide rescue breaths that cause chest to rise</li> <li>• Check for signs of circulation (none)</li> <li>• Perform chest compressions for 1 minute</li> <li>• CPR/AED Rescuer: Begin use of AED (POWER ON, <u>Select pediatric pads</u>, begin to apply pads)</li> <li>• CPR/AED Rescuer: <i>“Clear,”</i> analyze – <i>“shock advised”</i> – <i>“clear,”</i> shock up to 3 times as prompted. Then <i>“clear”</i> and analyze: <i>“no shock indicated”</i></li> <li>• Check for signs of circulation (present)</li> <li>• Check for adequate breathing (present)</li> </ul>

# CHILD AED Student Practice Sheet

Performance Guidelines	
<p><b>Check for response</b>            Shout for help            Send someone to phone 911            and get the AED</p>	
<p><b>Open the airway</b>            Head tilt-chin lift *</p> <p><b>Check for normal breathing</b>            Look, listen, and feel.</p> <p><b>Give 2 slow breaths</b>            Make chest rise</p> <p>* Your instructor may also ask you to practice the jaw thrust.</p>	<div style="display: flex; justify-content: space-around;"> <div>  </div> <div>  </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <p>Open Airway, Check Breathing</p> <p>Give Breaths</p> </div>
<p><b>Check for signs of circulation</b>            Normal breathing, coughing, or            movement</p>	
<p><b>Begin cycles:</b>  <b>5 compressions</b>            Rate of 100 per minute  <b>1 slow breath</b></p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div>  <p>5</p> </div> <div>  <p>1</p> </div> </div>
<p>After 1 minute, check for            signs of circulation</p> <p>If alone, phone 911 and get            the AED</p>	

**Put AED next to the victim and follow commands:**

**TURN ON the AED**



**Attach Child pads**



**“Clear” and analyze**



**“Clear” and shock if needed**

