

Intelligent Pediatric capability

1. Full-Rescue AED
 - Supports Airway
 - Voice, text and pictures
2. Recognizes pediatric rescue
 - Voice – “pediatric pads” or “adult pads”
 - Different software algorithms
 - VT 200 bpm
3. Reduced energy originates inside the Plus
 - Does not rely on a resistor
 - No risk of waveform distortion
4. Energy levels are user configurable 50j-70j-85j



FDA 510(k)
clearance pending



ZOLL
It's about time.

Although the likelihood of a child requiring CPR and defibrillation is substantially lower than that for adults, the ZOLL AED Plus has addressed this concern with the addition of Intelligent Pediatric Capability, pending 510k clearance from the FDA. This capability will allow ZOLL's AED PLUS to incorporate treatment for children up to 8 years of age. No one's pediatric pads are FDA approved at this time for infants less than one year of age.

Research focusing on pediatric defibrillation indicates that a school is twice as likely to call for an ambulance because a child is experiencing respiratory arrest as opposed to sudden cardiac arrest.¹ Because ZOLL's AED Plus is a **Full-Rescue AED**, it **supports clearing and maintaining the airway** with voice and visual prompts to walk the rescuers through proper CPR (clearing the airway, checking the breathing, performing chest compressions). Other AED's do not address respiratory issues. The AED Plus coaches the infrequent rescuer through each step of the complete Chain of Survival. Don't forget that CPR is the most effective treatment until advanced care is received.

A child's heart beats at a faster heart rate than that of an adult heart. Originally designed for adults, AED's have now been shown to accurately diagnose a child's heart rhythm. Analyzing an established rate of 200 bpm or higher, indicating the presence of ventricular tachycardia (VT), the AED Plus recommends defibrillation treatment for a child. This is important to highlight as many AED's consider a child's heart rate of 120 bpm to present a possible instance of VT.

Given that a child's heart is also smaller in size than that of an adult's, less energy is required during defibrillation to reduce and prevent the amount of permanent damage to their heart. The AED Plus Pediatric capability controls the delivery of the shock – it originates and is controlled within the base of the AED. The AED Plus does not rely on resistors or hardware in the wires to reduce energy delivered. Adult energy is never sent down the wire, which guarantees that the chances of administering adult levels of energy remains at zero.

The AED Plus is equipped with (3) escalating charges for children: 50joules – 70 joules – 85 joules (as compared to 120j – 150j – 200j for adults). These 6 levels of energy within the AED Plus are configurable. The AED Plus Pediatric Pad consists of distinctively labeled electrode sets identifying their use for infants and children. An illustration on the packaging highlights the proper pad positioning in the middle of the child's chest and back. With the AED Plus Pediatric plug connected and the power turned on, the AED Plus performs a self-test announcing that pediatric pads are attached. The electrical value returned from the pad indicates the presence of the *pedi-pads* and follows the software pathway for a pediatric rescue. No defects in the construction of the pads and wires can possibly lead to a shock level that is inappropriate for a child.

In relaying this to your customers - "Will you ever have to use this Pediatric capability? We certainly hope not. However, in the event that this capability is required, you will have the appropriate equipment on hand to properly manage the rescue of a child and increase their chance of survival."

It's important to understand that right now (April 2004) while ZOLL's Intelligent Pediatric capability is still pending FDA 510K clearance, the AHA statement from 7/1/2003 says "even an AED without pediatric electrode pads can be used on children 1 and older".

All AED Plus can be upgraded to Intelligent Pediatric capability (software version 5.1 or higher) at no charge.

Price of Pads ~ \$89

Shelf life = 2 years

¹Knight, S Vernon DD, Fines, RJ, Dean, JM. Prehospital Emergency Care for Children at School and Nonschool Locations. Pediatrics 1999; 103:6, 81-86