



Medical Advisory

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Defibrillation of patients less than 8 years old or under 25 kg

For: Paramedics certified by the RPPEO

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Key message

Manual defibrillation at prescribed doses or defibrillation by a dose attenuated* AED is preferred for patients less than 8 years old or under 25 kg.

Where only a non-attenuated semi-automatic AED is available for patients less than 8 years old or under 25 kg:

1. Place adult defibrillation pads in the anterior-posterior position.
2. Ensure that the pads do not contact each other and are completely stuck to the skin.
3. If the patient is so small that the adult pads either make contact with each other or cannot be completely stuck to the skin of the chest and back, then pediatric defibrillation pads should be used.

*Attenuation is the reduction of the electrical current delivered by the electrodes to adjust for smaller body size of children, infants and small adults.

Background

These are elements of the American Heart Association (AHA)'s 2020 position on pad size and defibrillation energy in pediatric patients less than 25 kg or under 8-years:

- It is acceptable to place pads anterior-posterior to accommodate the pads.
- It is preferable to use an AED with pediatric pads and an attenuator.
- If no attenuator and no manual defibrillation is available, then AED is still acceptable.
- Defibrillation is the only effective treatment for VF and is, therefore, potentially lifesaving even at higher doses.

From the LP15 Operations Manual and in correspondence with Stryker, the distributor of PhysioControl products we learned the following:

- Delivery of recommended adult energies through the relatively smaller pediatric defib pad surface increases the possibility of skin burns.
- The statement in the Operations Manual that AED should not be used below 8 years is countered by a 2012 letter from PhysioControl, manufacturers of the LP15.
- Pediatric pads are capable of handling 360 J and there is no evidence that there is an increased risk of arcing.

References

AHA, 2020. Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. <https://www.ahajournals.org/doi/10.1161/CIR.0000000000000901>

PhysioControl 2010. LIFEPAK 15 Monitor/Defibrillator Operating Instructions. https://www.physio-control.com/uploadedFiles/Physio85/Contents/Emergency_Medical_Care/Products/Operating_Instructions/LIFEPAK15_OperatingInstructions_3306222-002.pdf

Lank, P., July 2012. Letter on AED use in pediatrics less than 8 years. PhysioControl.

Dust, D., 16 March 2022. Email: LP15 Pedi pads question. Stryker via Frontenac Paramedic Services.



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