2025 Interim Training Materials:
PALS Provider Manual Changes

Purpose

These instructions will help update the current Heart & Stroke *Pediatric Advanced Life Support (PALS) Provider Manual* with science from the *guidelines and interim updates released by Heart & Stroke since the 2020 Guidelines for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care.*

Instructors should print these materials and provide copies to students when teaching the new 2025 Guidelines courses while using Heart & Stroke 2020 Guidelines PALS provider materials until Heart & Stroke 2025 Guidelines PALS materials become available.

Provider Manual Changes

1. Pediatric Chain of Survival

2025 Changes

- A single Chain of Survival is intended to be applicable to adult and pediatric in- and out-of-hospital cardiac arrest. In creating this singular chain, it is acknowledged that, before cardiac arrest, prevention and preparedness can both avoid and optimize resuscitation.
  - The systems of care guidelines follow the unified cardiac arrest Chain of Survival, beginning with prevention and preparedness to resuscitate, proceeding with early identification of cardiac arrest, and then progressing to effective resuscitation through to post–cardiac arrest care, recovery, and survivorship. The unified cardiac arrest Chain of Survival includes the following links:
    - Recognition and Emergency Activation
    - High-Quality CPR
    - Defibrillation
    - Advanced Resuscitation
    - Post–Cardiac Arrest Care
    - Recovery and Survivorship

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- Part 1: Course Overview
  - Section: The Chain of Survival

2. Infant Compressions

2025 Changes

- For infants, rescuers should compress the sternum with the heel of one hand or using the 2 thumb–encircling hands technique. If the rescuer cannot physically encircle the chest, it is recommended to compress the chest with the heel of one hand.
  - For infants, single rescuers (whether lay rescuers or health care professionals) should compress the sternum with 2 thumbs placed just below the nipple line.
  - For infants, if the rescuer is unable to achieve guideline-recommended depths (at least one third the diameter of the chest), it may be reasonable to use the heel of one hand.
  - The 2-finger technique for infant CPR is no longer recommended.

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- Part 2: Review of BLS and AED for Infants and Children
  - Section: BLS for Infants and Children
- Appendix
  - Section: BLS Skills Testing Checklist
    - Infant CPR Skills Testing Checklist

3. Foreign-Body Airway Obstruction

2025 Changes

- For children with severe foreign-body airway obstruction, repeated cycles of 5 back blows alternated with 5 abdominal thrusts should be performed until the object is expelled or the child becomes unresponsive. Rescuers should activate the emergency response system.
  - For children, perform 5 back blows by using the heel of your hand to forcefully strike the person's back in between their shoulder blades. If back blows do not relieve choking, perform 5 abdominal thrusts. Make a fist with one hand, grab it with your other hand, and press your fist into the person's abdomen with a quick, forceful upward thrust. Give each new thrust with a separate, distinct movement. Continue alternating 5 back blows followed by 5 abdominal thrusts until the object is dislodged or the person becomes unresponsive.
- For infants with severe foreign-body airway obstruction, repeated cycles of 5 back blows alternating with 5 chest thrusts should be performed until the object is expelled or the infant becomes unresponsive. Rescuers should activate the emergency response system.
  - To perform chest thrusts for infants, hold the infant faceup, with your forearm resting on your thigh. Keep the infant's head lower than their trunk. Provide 5 quick downward chest thrusts with the heel of one hand in the middle of the chest, over the lower half of the sternum. Deliver chest thrusts at a rate of about 1 per second, each with enough force to dislodge the object. Repeat the sequence of up to 5 back blows and up to 5 chest thrusts until your actions have removed the object or the infant becomes unresponsive.

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- Part 4: Systematic Approach to the Seriously Ill or Injured Child

  - Section: Primary Assessment
- Part 8: Managing Respiratory Distress and Failure
  - Section: Managing Upper Airway Obstruction
  - Table 33: Managing Foreign-Body Airway Obstruction

4. Drug Administration During Cardiac Arrest

2025 Change

- For infants and children in cardiac arrest with an initial nonshockable rhythm, it is reasonable to administer the initial dose of epinephrine as early as possible.

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- Part 1: Course Overview
  - Section: Science Update
- Part 5: Recognizing and Managing of Cardiac Arrest
  - Section: Managing Cardiac Arrest

5. Measuring Physiology During CPR

2025 Changes

- For infants and children with invasive airways in place during CPR, end-tidal carbon dioxide ($ETCO_2$) monitoring may be considered to monitor CPR quality.
- A specific $ETCO_2$ cutoff value alone should not be used as an indication to end resuscitative efforts in infants and children.
- For infants and children with continuous invasive arterial blood pressure monitoring in place during CPR, it may be reasonable for health care professionals to target a diastolic blood pressure of 25 mm Hg or greater in infants and 30 mm Hg or greater in children 1 year of age or older.

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- Part 5: Recognizing and Managing Cardiac Arrest
  - Section: Managing Cardiac Arrest
    - Monitoring for CPR Quality
    - Advanced Airway Management

6. Post–Cardiac Arrest Management

2025 Changes

- After cardiac arrest in infants and children, it is recommended to maintain systolic and mean arterial blood pressure greater than the 10th percentile for age.

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- PALS Pocket Reference Card
- PALS Introductory Algorithms/Checklists

  - Section: Components of Post-Cardiac Arrest Care
- Part 13: Post–Cardiac Arrest Care
  - Figure 52: Post-Cardiac Arrest Care Checklist
  - Section: Cardiovascular System

7. Prognostication Following Cardiac Arrest

2025 Changes

- Neuroprognostication after cardiac arrest in infants and children requires multiple modalities at different time points throughout the postarrest period; single tests should not be utilized because of concerns for inaccurate prediction of neurologic outcomes.

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- Part 13: Post–Cardiac Arrest Care
  - Figure 52: Post-Cardiac Arrest Care Checklist
  - Section: Neurologic System

8. Post–Cardiac Arrest Recovery and Survivorship

2025 Changes

- It is reasonable that infants and children who survive cardiac arrest be evaluated for physical, cognitive, and emotional needs to guide follow-up care within the first year following cardiac arrest.

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- Part 13: Post–Cardiac Arrest Care