

## 2025 PALS Science Summary Table

This table compares topics from 2020 with 2025, providing a quick reference to what has changed and what is new in the science of pediatric advanced life support.

PALS topic	2020	2025
<b>Drug Administration During Cardiac Arrest</b>	For pediatric patients in any setting, it is reasonable to administer the initial dose of epinephrine within 5 min from the start of chest compressions.	For infants and children in cardiac arrest with initial nonshockable rhythm, it is reasonable to administer the initial dose of epinephrine as early as possible.
<b>Measuring CPR Physiology and Quality</b>	ETCO <sub>2</sub> monitoring may be considered to assess the quality of chest compressions, but specific values to guide therapy have not been established in children.	For infants and children with invasive airways in place during CPR, ETCO <sub>2</sub> monitoring may be considered to monitor CPR quality.
<b>Post-Cardiac Arrest Blood Pressure Management</b>	After ROSC, we recommend that parenteral fluids and/or vasoactive drugs be used to maintain a systolic blood pressure greater than the fifth percentile for age.	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.
<b>Multimodal Prognostication Following Cardiac Arrest</b>	It is reasonable for providers to consider multiple factors when predicting outcomes in infants and children who survive cardiac arrest.	It is recommended that health care professionals consider multiple modalities when predicting neurological outcomes (favorable or unfavorable) after resuscitation from cardiac arrest in infants and children.
<b>Post-Cardiac Arrest Recovery and Survivorship</b>	It is reasonable to refer pediatric cardiac arrest survivors for ongoing neurological evaluation for at least the first year after cardiac arrest.	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.
<b>Ventilation and Advanced Airway Strategies During CPR</b>	When performing CPR in infants and children with an advanced airway in place, it may be reasonable to target a respiratory rate range of 1 breath every 2-3 s (20-30 breaths/min), accounting for age and clinical condition. Rates exceeding these recommendations may compromise hemodynamics.	When performing CPR in infants and children with an advanced airway in place, it may be reasonable to target a ventilation rate range of 20-30 breaths/min (1 breath every 2-3 s), accounting for age and clinical characteristics. Hyperventilation may compromise hemodynamics.
<b>CPR Technique</b>	For infants, single rescuers (whether lay rescuers or health care providers) should compress the sternum with 2 fingers or 2 thumbs placed just below the intermammary line.	For infants, rescuers should compress the sternum with the heel-of-1-hand technique or 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-1-hand technique.
<b>Foreign-Body Airway Obstruction</b>	For children with severe FBAO, perform abdominal thrusts until the object is expelled or the victim becomes unresponsive.	For children with severe FBAO, repeated cycles of 5 back blows alternating 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 infants with severe FBAO, deliver repeated cycles of 5 back blows (slaps) followed by 5 chest compressions until the object is expelled or the victim becomes unresponsive.	For infants with severe FBAO, 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.
<b>Post-Cardiac Arrest Targeted Temperature Management</b>	For infants and children between 24 h and 18 y of age who remain comatose after IHCA or OHCA, it is reasonable to use either TTM of 32-34 °C followed by TTM of 36-37.5 °C or only TTM of 36-37.5 °C.	For infants and children between 24 h and 18 y of age who remain comatose after IHCA or OHCA, it is reasonable to use a 5-d course of TTM, either 32-34 °C followed by TTM of 36-37.5 °C, or only TTM of 36-37.5 °C.
<b>Chain of Survival</b>	The Chain of Survival for IHCA and OHCA each has 6 links; a Recovery and Survivorship link was added to the end of each chain.	The ICHA and OHCA Chains of Survival were combined into 1 universal Chain of Survival with 6 links for all forms of cardiac arrest.

PALS topic	2025
<b>Measuring CPR Physiology and Quality</b>	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 $\geq 25$ mm Hg in infants and $\geq 30$ mm Hg in children $\geq 1$ y of age.
	A specific ETCO <sub>2</sub> cutoff value alone should not be used as an indication to end resuscitative efforts in infants and children.
<b>Prognostication Using Clinical Examination Following Cardiac Arrest</b>	The usefulness of cough or gag reflexes or response to pain to support a favorable or unfavorable neurological prognosis at any time point after cardiac arrest in infants and children is not well established.
<b>Prognostication Using Electrophysiology Following Cardiac Arrest</b>	When interpreted in the context of other prognostic criteria, it is reasonable to use EEG up to 72 h after cardiac arrest in infants and children to support a favorable or unfavorable neurological prognosis.
<b>Adults and Children With Life-Threatening Opioid Overdose</b>	For lay and trained rescuers, opioid antagonist administration may be reasonable for children in cardiac arrest with suspected opioid overdose, provided that opioid antagonist (eg, naloxone) administration does not interfere with the delivery of standard resuscitation including high-quality compression-ventilation CPR.
<b>Post-Cardiac Arrest Targeted Temperature Management</b>	For infants and children who remain comatose following cardiac arrest, it is recommended to avoid central temperatures $>37.5$ °C.

Abbreviations: CPR, cardiopulmonary resuscitation; ETCO<sub>2</sub>, end-tidal carbon dioxide; FBAO, foreign-body airway obstruction; IHCA, in-hospital cardiac arrest; OHCA, out-of-hospital cardiac arrest; PALS, pediatric advanced life support; ROSC, return of spontaneous circulation; TTM, targeted temperature management.