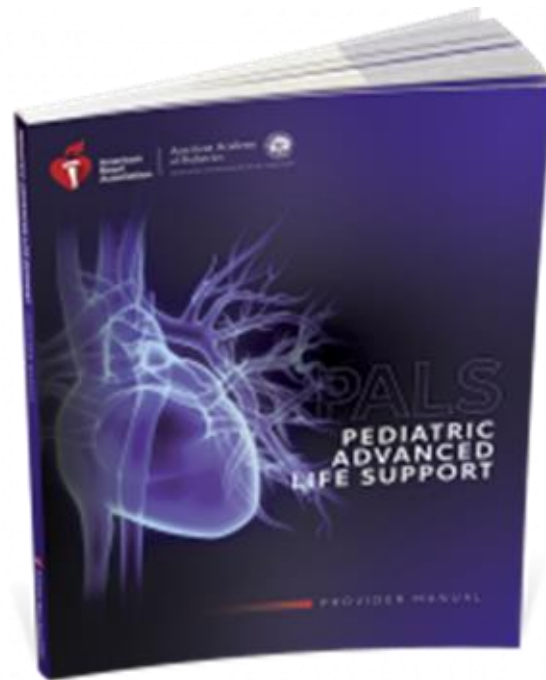


# PALS Study Guide



Welcome to LearnACLS a multi-regional and international American Heart Association Training Center, the home of “Stress Free Learning”.

Before attending your class, it is mandatory that you complete the precourse online assessment. The link is:

**Precourse Assessment** <https://elearning.heart.org/course/427>

This self-evaluation is designed to prepare you for your upcoming certification class, as well as assist the instructors in guiding the class meet your educational needs.

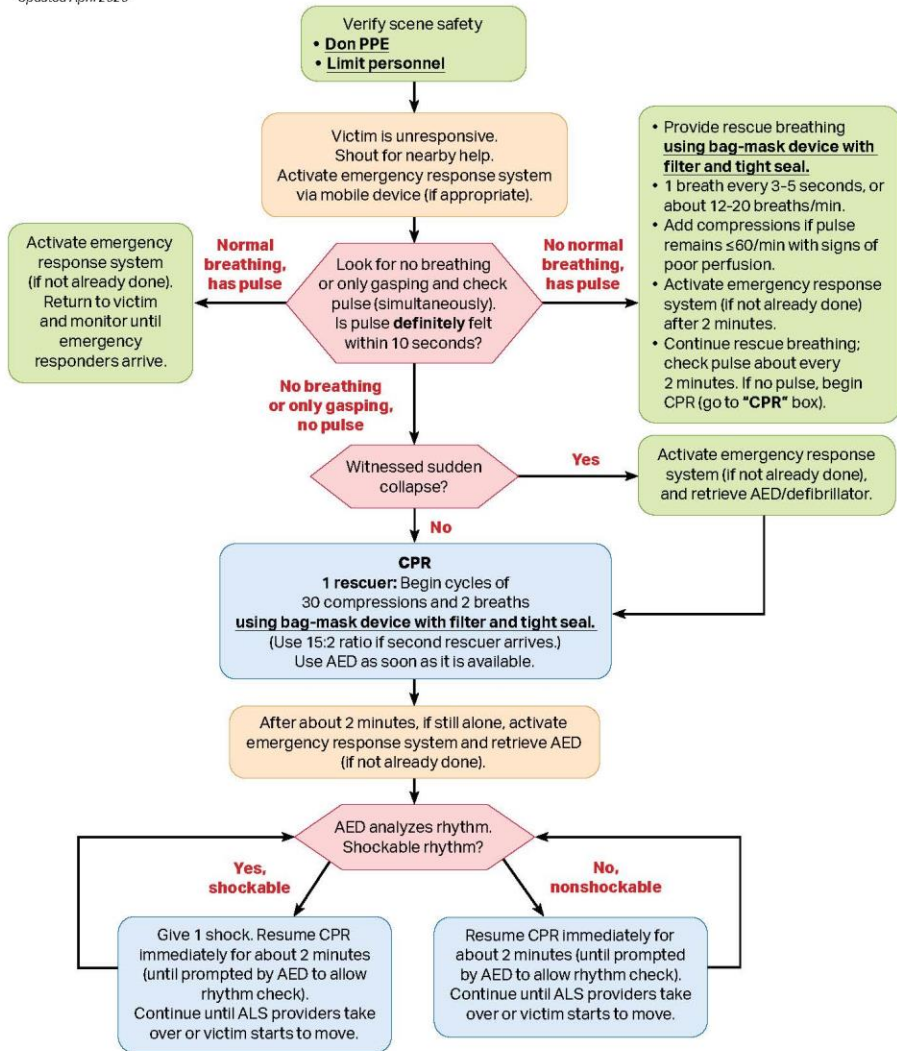
If you register and pay 10 days prior to the class, you may choose to receive your course materials shipped to you for an additional \$9.00. Please take the opportunity to review the materials prior to attending your course. Enclosed you will find a quick reference study guide which we have prepared to assist you in preparing for your course. This guide is not meant to replace your AHA materials but to facilitate your learning.

Upon successful course completion, including demonstration of skills competency in all learning stations and passing the CPR and AED skills test, bag-mask ventilation skills test, Megacode tests and a written test, students receive a PALS course completion card, valid for two years. Once again thank you for choosing LearnACLS for your American Heart Association training needs. We look forward to seeing you at your class.



## BLS Healthcare Provider Pediatric Cardiac Arrest Algorithm for the Single Rescuer for Suspected or Confirmed COVID-19 Patients

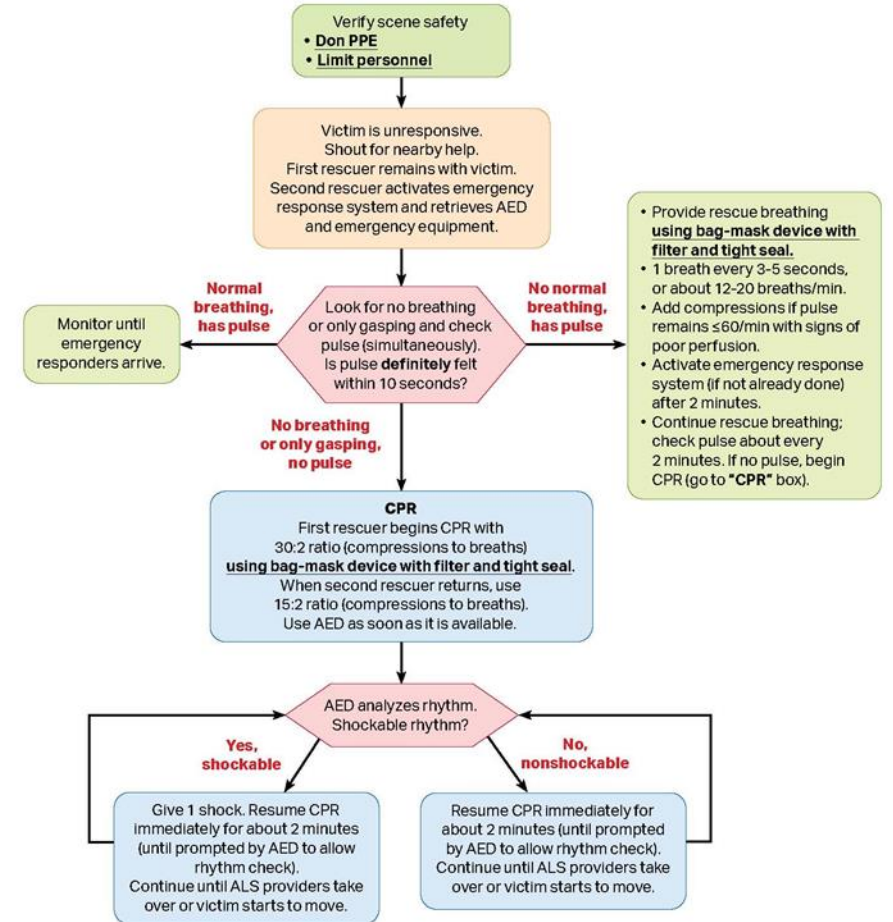
Updated April 2020



© 2020 American Heart Association

## BLS Healthcare Provider Pediatric Cardiac Arrest Algorithm for 2 or More Rescuers for Suspected or Confirmed COVID-19 Patients

Updated April 2020



© 2020 American Heart Association

High quality CPR and early defibrillator is the core of PALS care in the cardiac arrest patient.

High quality CPR can be measured by, Partial End Tidal Carbon Dioxide (PETCO<sub>2</sub>). A reading greater than 10mmHg and less than 23mmHg indicates high quality CPR. The normal PETCO<sub>2</sub> is 35-45mm HG. Any reading less than 10mmHg indicates ineffectiveness CPR during resuscitation.

A sudden rise of PETCO towards normal is the first sign of return spontaneous circulation (ROSC).

If an AED does not analyze it is defective, do not attempt to troubleshoot.

Integration of the Rapid Response Team (RRT) or Medical Emergency Team (MET) facilitates early identification of clinical deterioration of patients and visitors in hospital and improves overall outcome.

Pulseless Electrical activity is finding of a rhythm that would normally profuse but is not.

The rate of chest compressions is 100 to 120 compressions. Child a depth of at least 2 inches (5cm). Infant a depth of at least 1.5inches (4cm)

Respiratory rate less than 10 or greater than 60 is an ominous sign of impending respiratory failure. Respiratory or cardiac arrest in pediatric is one (1) breath every 2-3 seconds (20-30/minute) with or without advanced airway.

Cuffed pediatric ET tube now recommended

20 mL/kg rapid infusion (< 20 min) isotonic crystalloid= NS or LR with up to 100mL over the first 4 hours

Categorize: Respiratory, Circulatory, Respiratory + Circulatory; Decide: What to do; Act: Begin appropriate actions

Classification of Cardiopulmonary Physiologic Status: Stable, Respiratory distress, Respiratory failure, Shock

(Compensated vs Decompensated), Cardiopulmonary failure

Shock: Early signs (Compensated) Increased heart rate, Poor systemic perfusion; Late signs (Decompensated) Weak central pulses, Altered mental status, Hypotension

Epi early in asystole & PEA [within 5minutes]

Targeted temperature management added to pediatric post-arrest



No Sellick Maneuver (cricoid pressure)

EEG for pediatric post arrest potential seizure

Typical Assessment Order: Observe mental status; Feel for heart rate, pulse quality, skin temperature, capillary refill;

Measure blood pressure early, measure urine output “later”

Cardiopulmonary failure produces signs of respiratory failure and shock: Agonal respirations, Bradycardia, Cyanosis and poor perfusion

Hypovolemic Shock- Decreased preload due to internal or external losses. Most common type. Etiologies: Dehydration (diarrhea, burns, nephrotic syndrome), hemorrhage

Distributive Shock- Decrease in SVR, with abnormal distribution of blood flow → functional hypovolemia, decreased preload. Typically, NL or ↑ CO. Etiologies: Sepsis (most common), anaphylaxis, CO/cyanid

Cardiogenic Shock- “Pump failure.” ↓ CO, systolic function. Etiologies: Cardiomyopathies, ischemia, dysrhythmias, CHD, Sepsis, pancreatitis, SIRS can cause myocardial depression → cardiogenic shock

Obstructive Shock- Outflow from left or right side of heart physically obstructed. Etiologies: Large PE, critical coarctation, tamponade, tension pneumothorax



Key changes in advanced cardiovascular life support, reflecting the *2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care*

Basic life support skills, including effective chest compressions monitored by a CPR Coach, use of a bag-mask device with a filter and use of an (AED). For infants, a single rescuer may use two thumbs or the heel of one hand for compressions.

Recognition and early management of respiratory and cardiac arrest. Respiratory or cardiac arrest in pediatric is one (1) breath every 2-3 seconds (20-30/minute) with or without advanced airway

Recognition and early management of peri-arrest conditions such as symptomatic bradycardia

Airway management

Related pharmacology

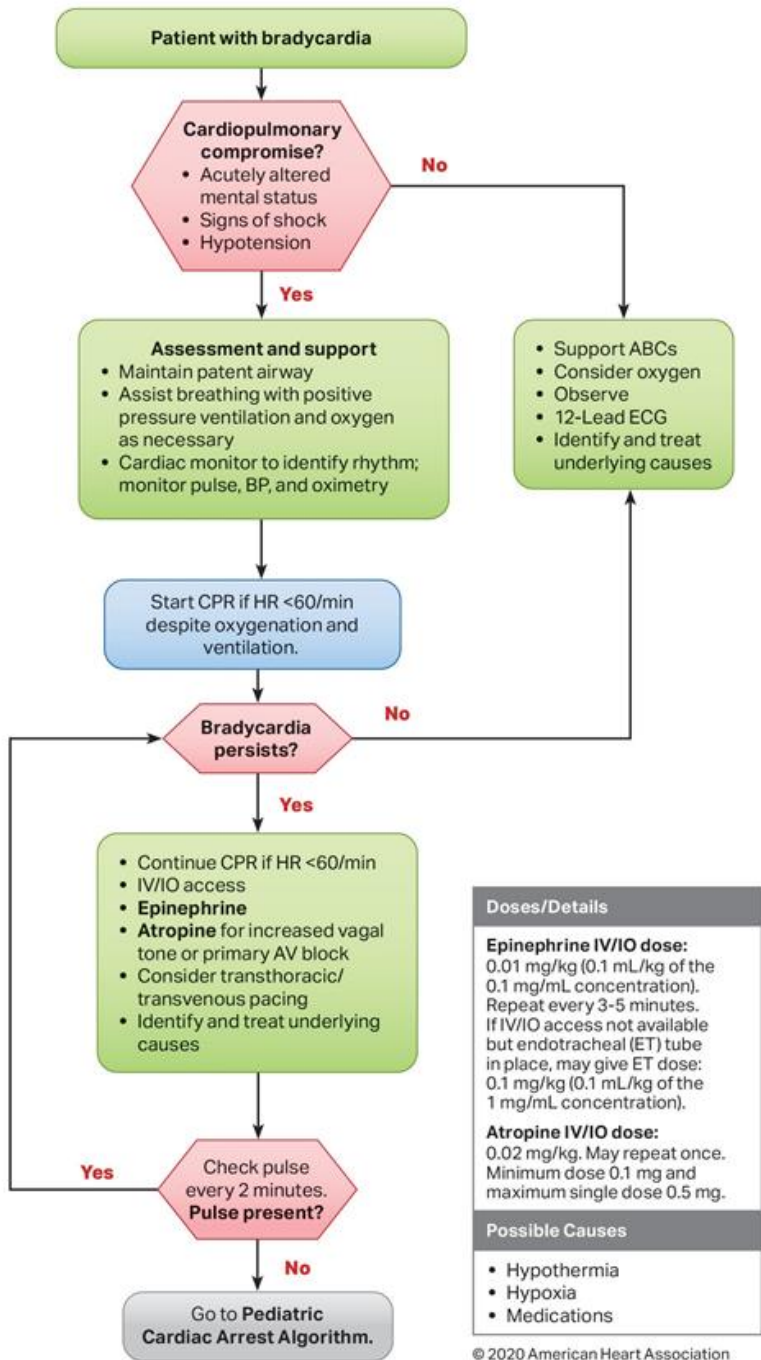
Management of acute coronary syndromes (ACS) and stroke

Effective communication as a member and leader of a resuscitation team

Effective Resuscitation Team Dynamics







## Pediatric Tachycardia With a Pulse Algorithm

