Pediatric Cardiac Arrest

If no advanced airway present:

Give compressions & ventilations
Single rescuer = 30:2 ratio

If advanced airway present:

Provide continuous compressions and give one breath every 2-3 sec

Confirm patient is pulseless or HR <60 if <8yo
Begin **CPR** @ 100-120 compressions/min
with ventilation via BVM started ASAP

[1]AHA 2020 guidelines recommend administering Epinephrine ASAP after initiating CPR
(i.e. do not wait 5 min)

- Apply cardiac monitor and defibrillator pads
- Assess cardiac rhythm

Ventricular Fibrillation/ Pulseless VT

Defibrillate at 2J/kg once
(max = adult dose)
Resume **CPR** immediately

- Establish IV/IO access
- **Epinephrine 0.1mg/ml (1:10,000)**[1]
  0.01mg/kg IV/IO q3-5min (max = 1mg/dose)
  MAX 3 DOSES
- Insert advanced airway (ETT or SGA)
- Initiate continuous $EtCO_2$ monitoring
- Apply Impedance Threshold Device (ITD), if available, for patient ≥ 12 years old

If VF/pVT persists after 2 min:

Defibrillate at 4J/kg
Resume CPR immediately for an additional 2 minutes

If VF/pVT persists after an additional 2 min:

Defibrillate → **CPR** → Rhythm Check
q2min until ROSC, asystole, or PEA

Defib dose = 4J/kg (consider escalating dose to 10J/kg)

After 3rd shock: **Amiodarone** 5mg/kg IV/IO
may repeat bolus x2 prn
(max 300 mg total)

If torsade de pointes: **Magnesium Sulfate** 50mg/kg IV/IO
(max 2 g)

Search and treat reversible causes

Asystole/PEA

- Establish IV/IO access
- **Epinephrine 0.1mg/ml (1:10,000)**[1]
  0.01mg/kg IV/IO q3-5min (max = 1mg/dose)
- Insert advanced airway (ETT or SGA)
- Initiate continuous $EtCO_2$ monitoring
- Consider **Atropine 0.1 mg/kg** if CODE being worked as result of HR < 60 bpm
- Apply Impedance Threshold Device (ITD), if available, for patient ≥ 12 years old

Search and treat reversible causes

Continue **CPR** with rhythm/pulse check q2min until ROSC or Termination of Resucitation

Patients must be worked on-scene for a minimum of 30 minutes. CPR may be performed in back of ambulance to facilitate scene safety.

Reversible Causes of Cardiac Arrest (Hs & Ts)

Hypovolemia - 20mlg/kg NaCl bolus (max 60ml/kg)
Hydrogen ion(acidosis) –Sodium Bicarbonate 1mEq/kg IV/IO
Hypoglycemia – Dextrose 10% or Dextrose 25%
Hyperkalemia – Calcium Chloride 20mg/kg IV/IO (max 1g)
Hypokalemia – (*treat in hospital)*
Hypothermia – rewarming (ex. blankets, hot packs)
Hypoxia – supplemental Oxygen

Toxins – Naloxone 0.1mg/kg for opiates
Tension pneumothorax – 1.5 inch (not 2 in) 14/16G needle
Trauma - 20ml/kg NaCl bolus (max 60ml/kg) **Tamponade** (cardiac)
Thrombosis, pulmonary (i.e. PE)
Thrombosis, coronary (i.e. STEMI)