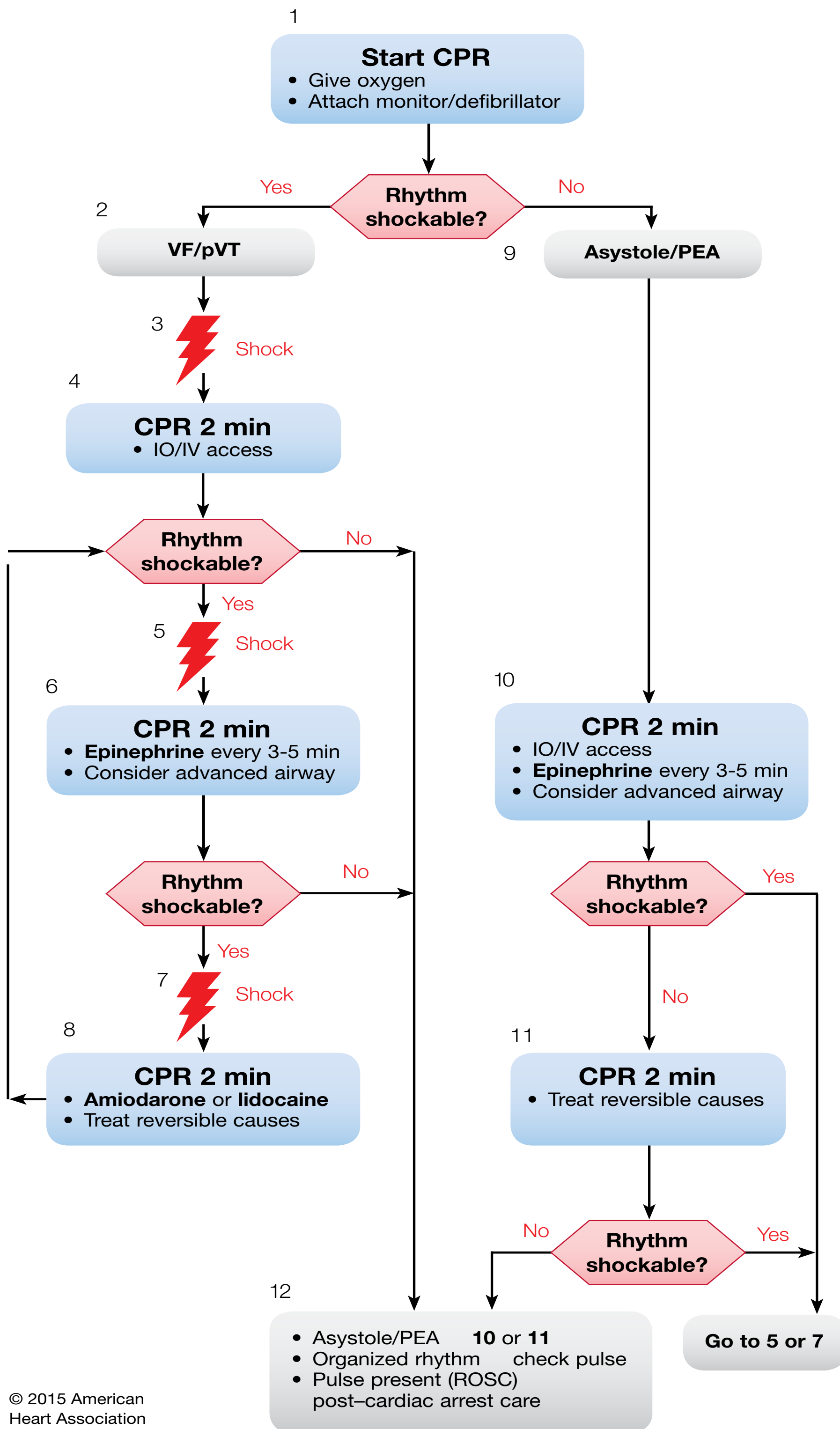


Pediatric Cardiac Arrest Algorithm

AHA 2015 Update



CPR QUALITY

- Push hard ($\geq \frac{1}{2}$ of anteroposterior diameter of chest) and fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Rotate compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 15:2 compression-ventilation ratio.

SHOCK ENERGY FOR DEFIBRILLATION

- First shock 2 J/kg
- Second shock 4 J/kg
- Subsequent shocks ≥ 4 J/kg, maximum 10 J/kg or adult dose

DRUG THERAPY

- **Epinephrine IO/IV dose:**
 - 0.01 mg/kg (0.1 mL/kg of 1:10 000 concentration). Repeat every 3-5 minutes.
 - If no IO/IV access, may give endotracheal dose: 0.1 mg/kg (0.1 mL/kg of 1:1000 concentration).
- **Amiodarone IO/IV dose:**
 - 5 mg/kg bolus during cardiac arrest. May repeat up to 2 times for refractory VF/pulseless VT.
- **Lidocaine IO/IV dose:**
 - Initial: 1 mg/kg loading dose.
 - Maintenance: 20-50 mcg/kg per minute infusion (repeat bolus dose if infusion initiated >15 minutes after initial bolus therapy).

ADVANCED AIRWAY

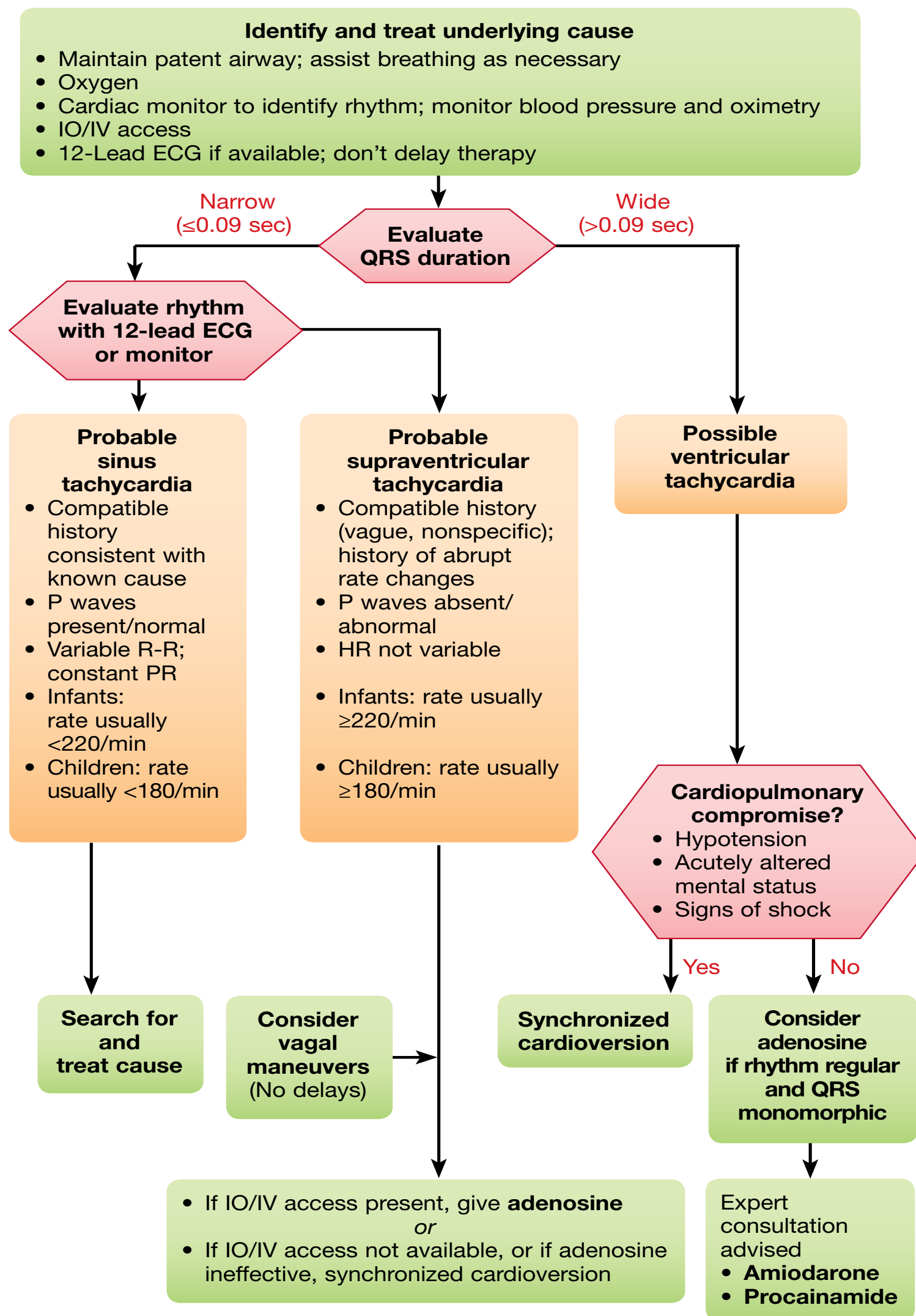
- Endotracheal intubation or supra-glottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

RETURN OF SPONTANEOUS CIRCULATION (ROSC)

- Pulse and blood pressure
- Spontaneous arterial pressure waves with intra-arterial monitoring

REVERSIBLE CAUSES

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary



SYNCHRONIZED CARDIOVERSION

- Begin with 0.5-1 J/kg;
- if not effective, increase to 2 J/kg.
- Sedate if needed, but don't delay cardioversion.

DRUG THERAPY

- **Adenosine IO/IV dose:**
 - First dose: 1.1 mg/kg rapid bolus (maximum: 6 mg).
 - Second dose: 1.2 mg/kg rapid bolus (maximum second dose: 12 mg).
- **Amiodarone IO/IV dose:**
 - 5 mg/kg over 20-60 minutes or
- **Procainamide IO/IV dose:**
 - 15 mg/kg over 30-60 minutes
 - Do not routinely administer amiodarone and procainamide together.