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ACLS & PALS Packet 2025

Required Pre-Course Preparation:
ACLS: https://shopcpr.heart.org/acls-prework
PALS: https://shopcpr.heart.org/pals-precourse-self-assessment
Print completion with grade of at least 70% (or take a photo of it) and email to info@medcourse.org

eCards: Look for an email from cards@medcourse.org about American Heart Association eCards. If you **DO NOT** hear from us within 10 days, send us a message so we know we have your correct email. Once cards are issued, you can claim them directly at www.heart.org/cpr/mycards, with your First Name, Last Name, and Email Address.

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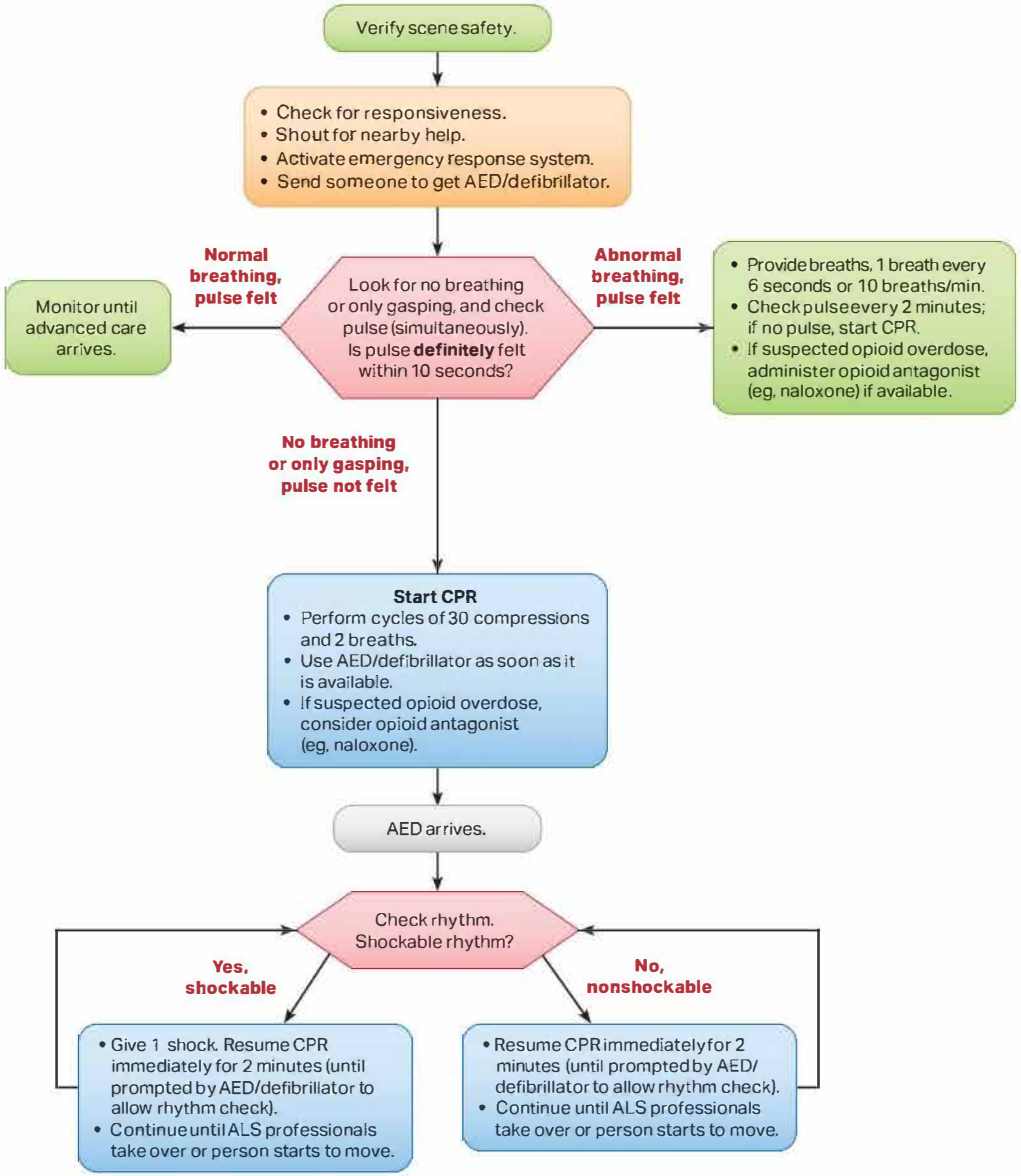
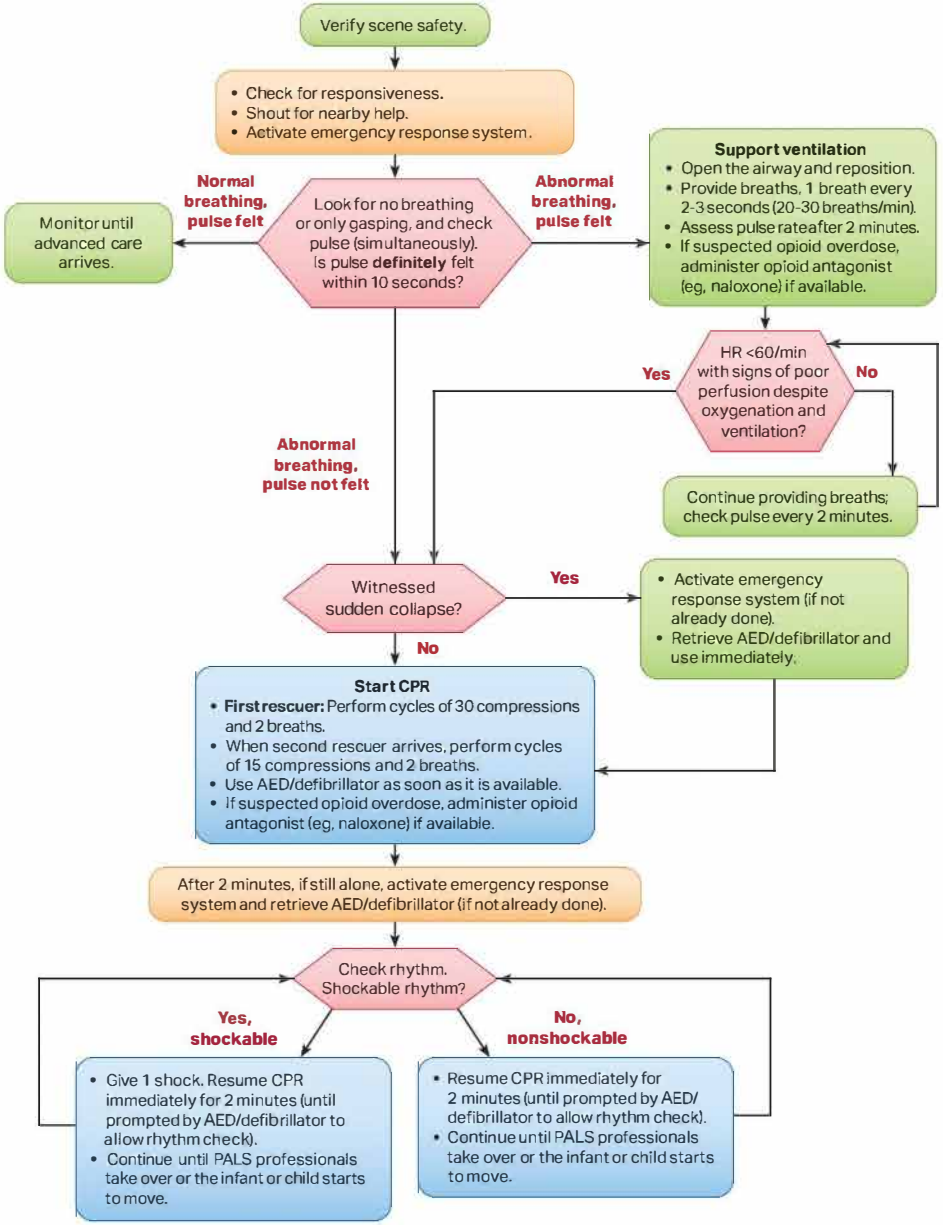
Adult Basic Life Support - Health Care Providers

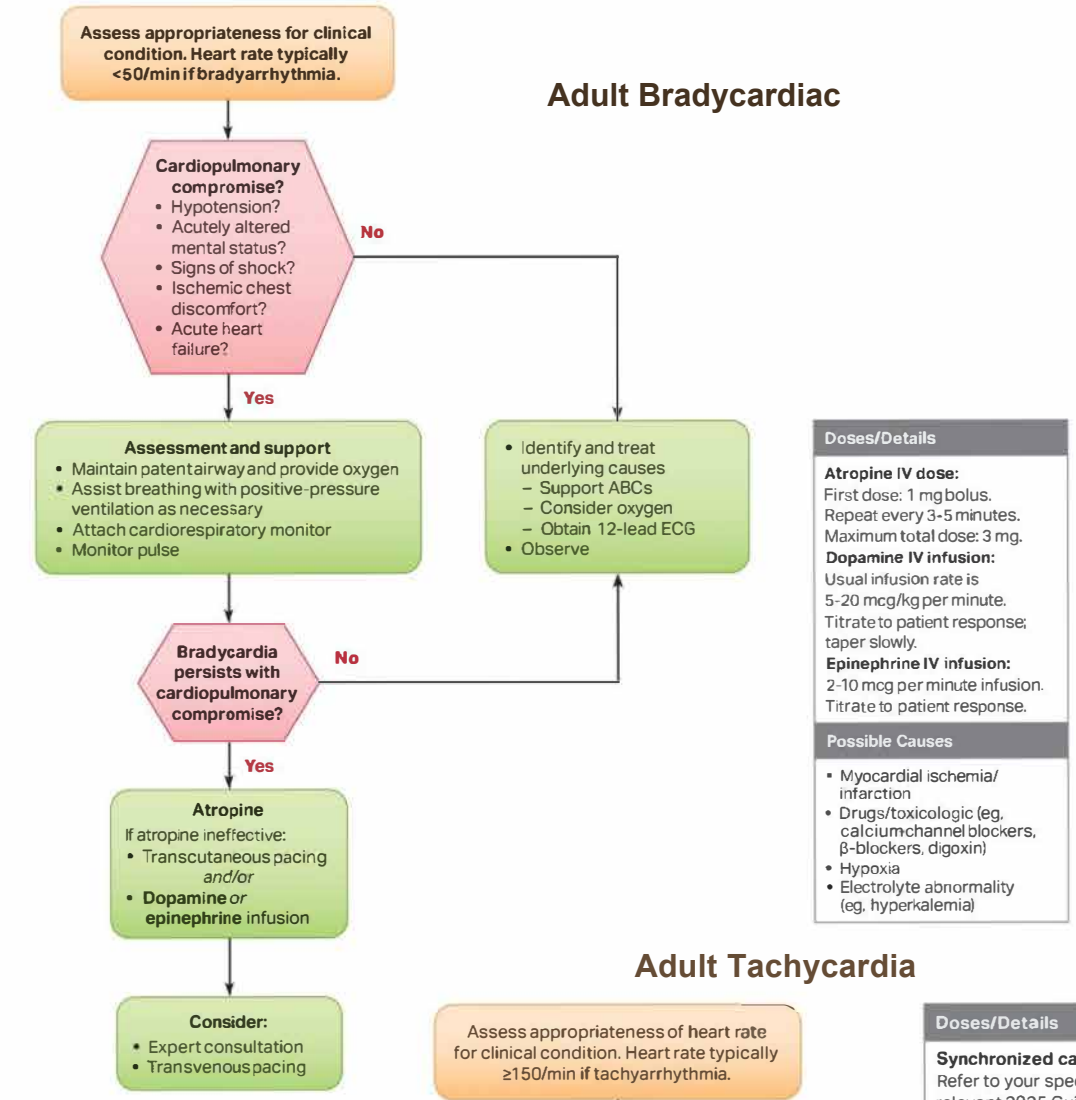


*If signs of puberty, treat as adult.

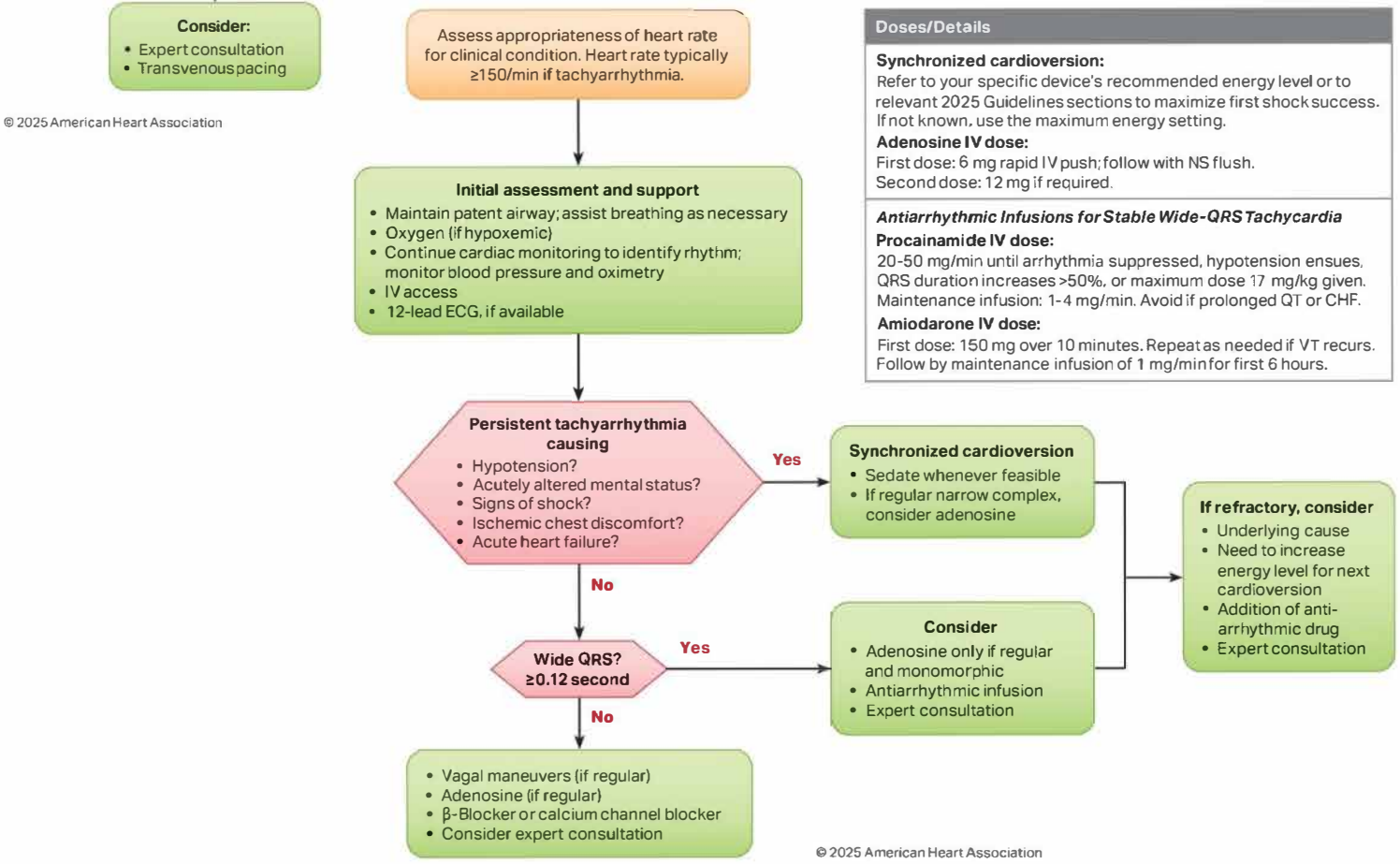
Pediatric BLS - HCP



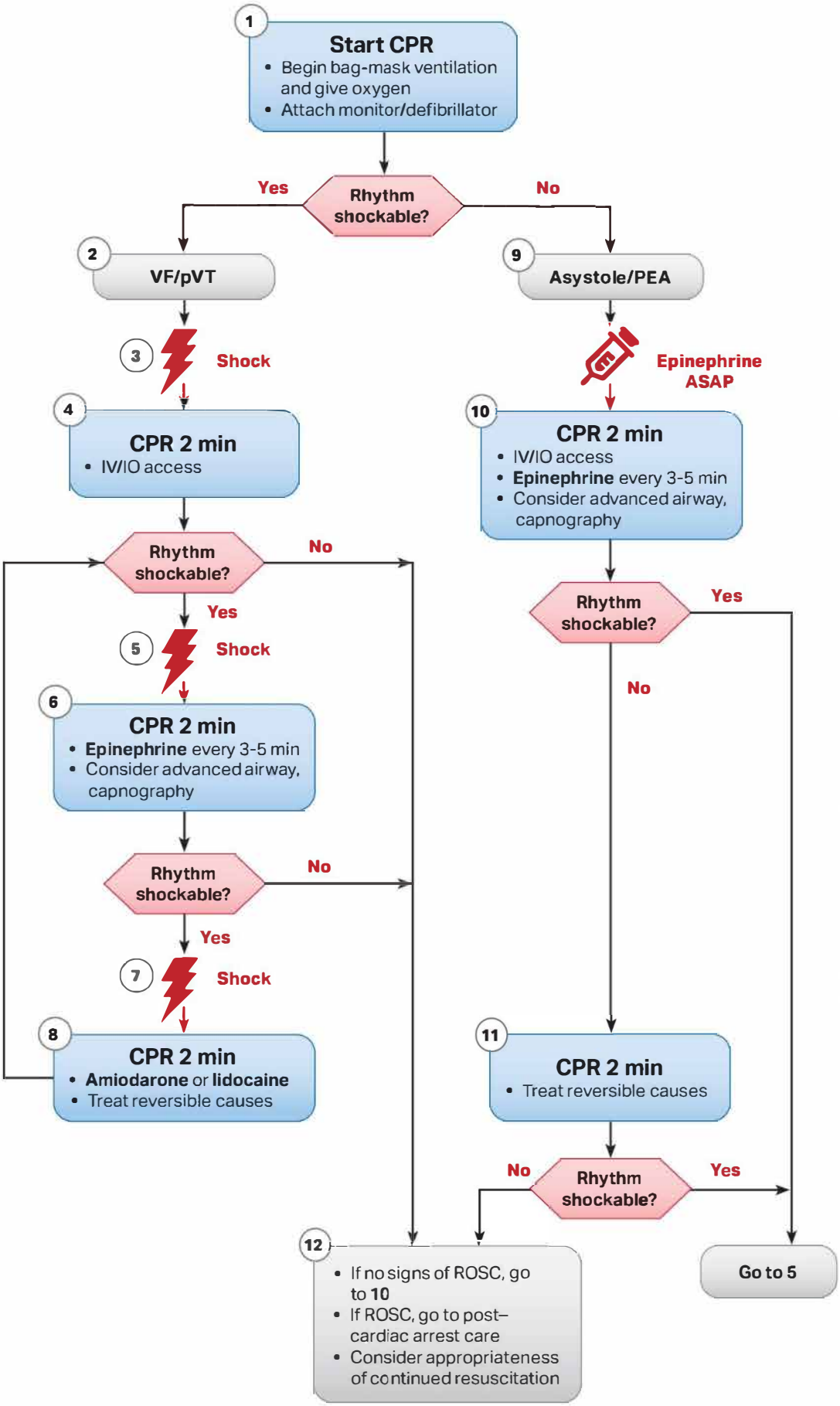
Adult Bradycardiac



Adult Tachycardia



Adult Cardiac Arrest



High-Quality CPR

- Push hard (at least 2 inches [5 cm]).
- Push fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Change compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, use 30:2 compression-ventilation ratio.
- If advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions.
- Continuous waveform capnography
  - If $ETCO_2$ is low or decreasing, reassess CPR quality.

Shock Energy for Defibrillation

- **Biphasic**: Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- **Monophasic**: 360 J

Drug Therapy

- **Epinephrine IV/IO dose:** 1 mg every 3-5 minutes
- **Amiodarone IV/IO dose:** First dose: 300 mg bolus Second dose: 150 mg *or* **Lidocaine IV/IO dose:** First dose: 1-1.5 mg/kg Second dose: 0.5-0.75 mg/kg

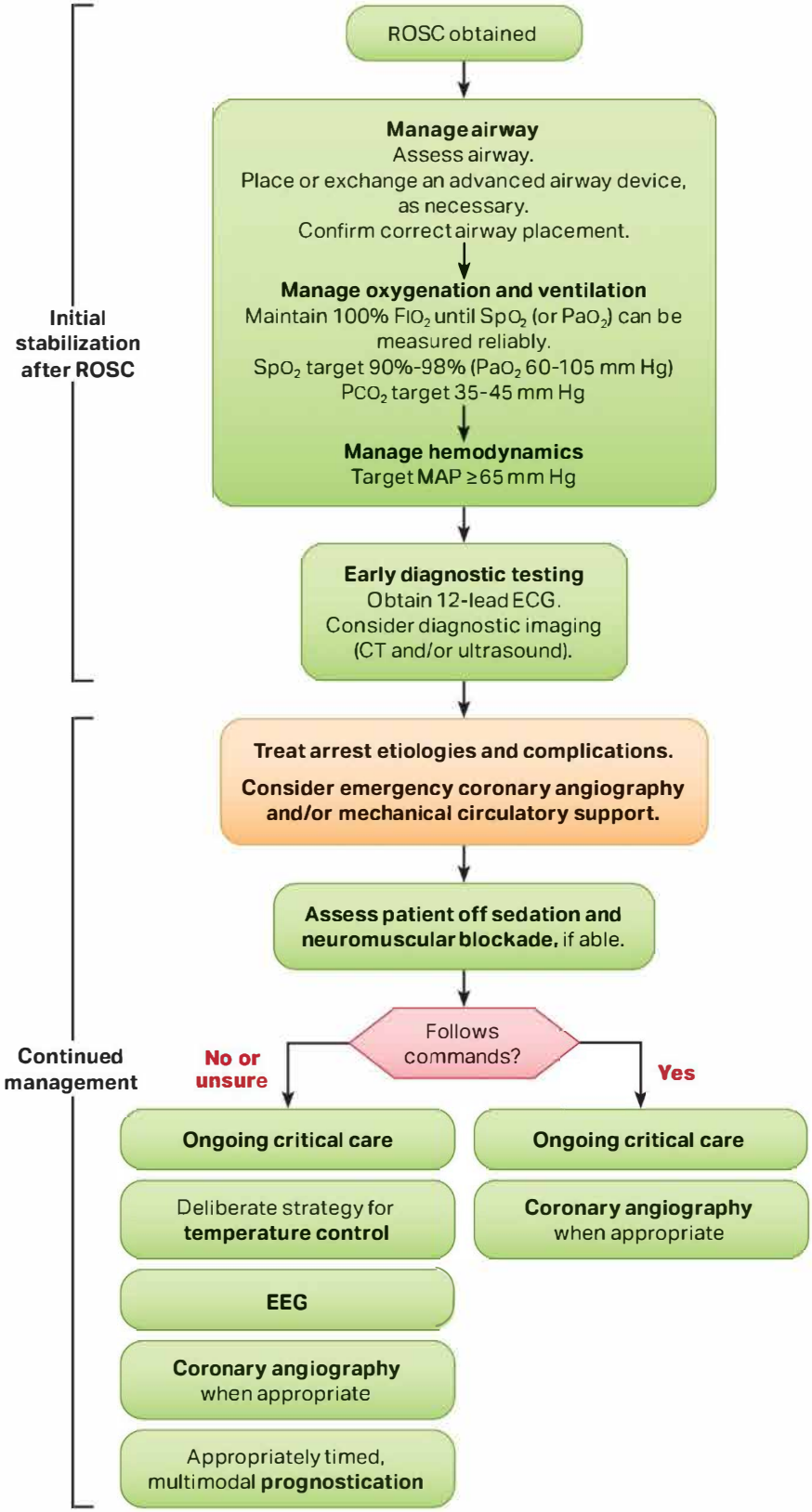
Advanced Airway

- ET intubation or supraglottic advanced airway
- Continuous waveform capnography or capnometry to confirm and monitor ET tube placement

Reversible Causes

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

Post Cardiac Arrest Care



Initial Stabilization After ROSC

Resuscitation is ongoing during the post-ROSC phase, and many of these activities can occur concurrently.

Manage airway: Assess and consider placement or exchange of an advanced airway device (usually endotracheal tube or supraglottic device). Confirm correct placement of an advanced airway. This generally includes the use of waveform capnography or capnometry.

Manage oxygenation and ventilation: Titrate FIO_2 for SpO_2 90%-98% (or PaO_2 60-105 mm Hg). Adjust minute ventilation to target PCO_2 35-45 mm Hg in the absence of severe acidemia.

Manage hemodynamics: Initiate or adjust vasopressors and/or fluid resuscitation as necessary for goal MAP ≥65 mm Hg.

Early diagnostic testing: Obtain 12-lead ECG to assess for ischemia or arrhythmia. Consider CT head, chest, abdomen, and/or pelvis to determine cause of arrest or assess for injuries sustained during resuscitation. Point-of-care ultrasound or echocardiography may be reasonable to identify clinically significant diagnoses requiring intervention.

Continued Management

Treat arrest etiologies and complications.

Consider emergency cardiac intervention:

- Persistent ST-segment elevation present
- Cardiogenic shock
- Recurrent or refractory ventricular arrhythmias
- Severe myocardial ischemia

Temperature control: If patient is not following commands off sedation and neuromuscular blockade or is unable to assess, initiate a deliberate strategy of temperature control with goal 32 °C-37.5 °C as soon as possible.

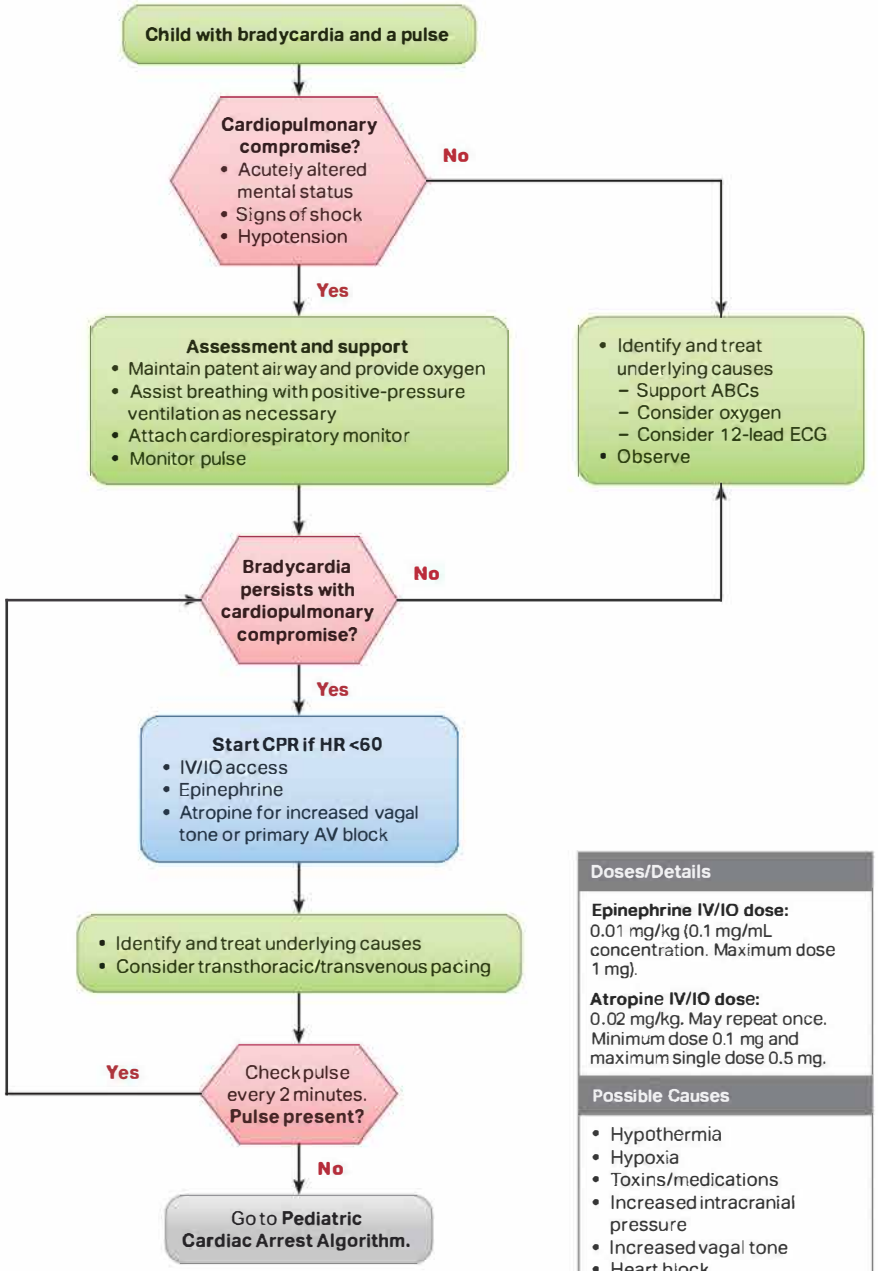
Evaluate for seizure: Evaluate for clinical seizure and obtain EEG to evaluate for seizure in patients not following commands.

Prognostication: Multimodal approach with delayed impressions (≥72 hours from ROSC or achieving normothermia).

Ongoing critical care includes the following:

- Target PaO_2 60-105 mm Hg, PCO_2 35-45 mm Hg (unless severe acidemia); avoid hypoglycemia (glucose <70 mg/dL) and hyperglycemia (glucose >180 mg/dL); target MAP ≥65 mm Hg.
- Consider antibiotics.

Pediatric Bradycardia



Doses/Details

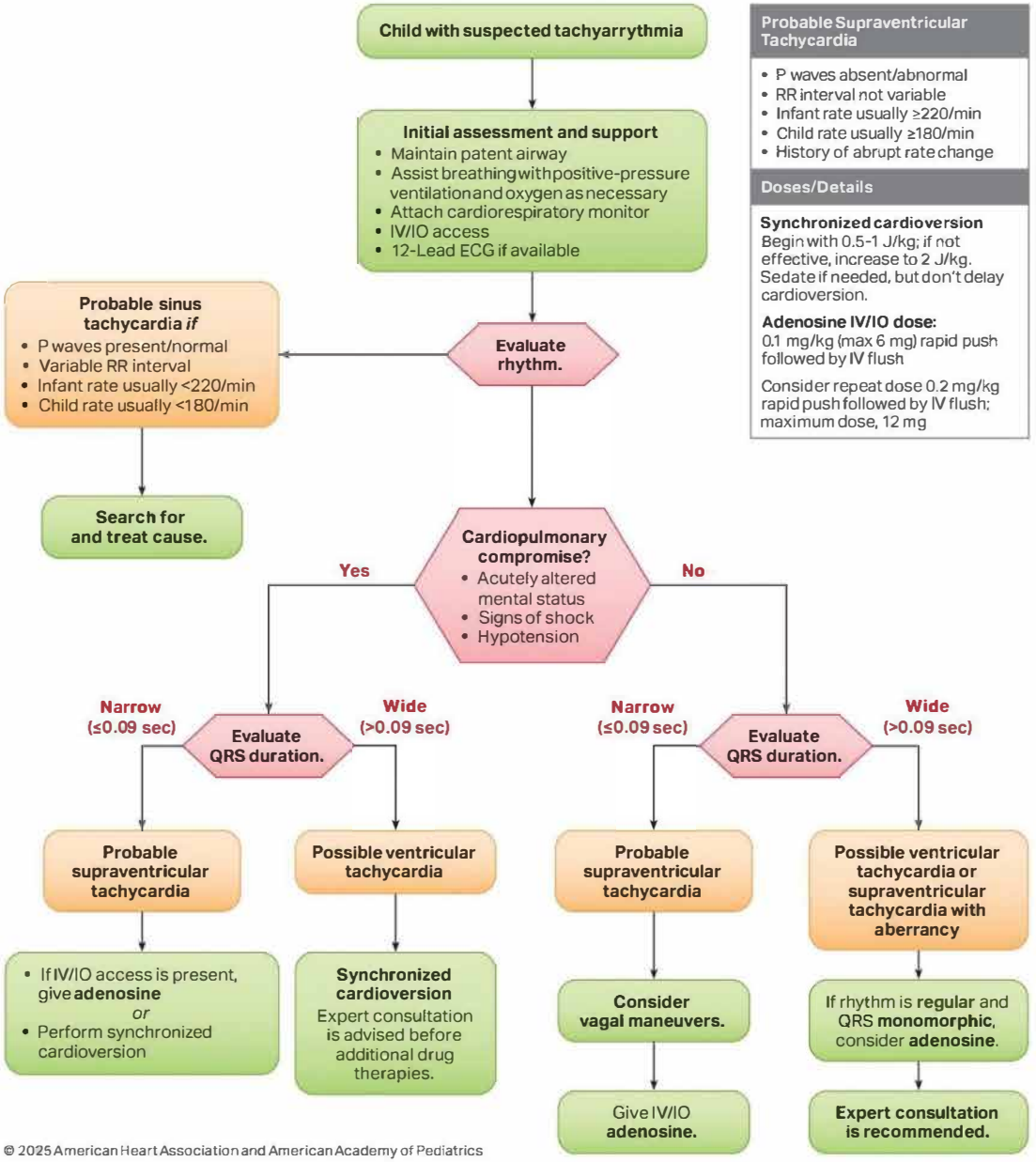
Epinephrine IV/IO dose:
0.01 mg/kg (0.1 mg/mL concentration. Maximum dose 1 mg).

Atropine IV/IO dose:
0.02 mg/kg. May repeat once. Minimum dose 0.1 mg and maximum single dose 0.5 mg.

Possible Causes

- Hypothermia
- Hypoxia
- Toxins/medications
- Increased intracranial pressure
- Increased vagal tone
- Heart block
- Physiologic/appropriate

Pediatric Tachycardia



Probable Supraventricular Tachycardia

- P waves absent/abnormal
- RR interval not variable
- Infant rate usually ≥220/min
- Child rate usually ≥180/min
- History of abrupt rate change

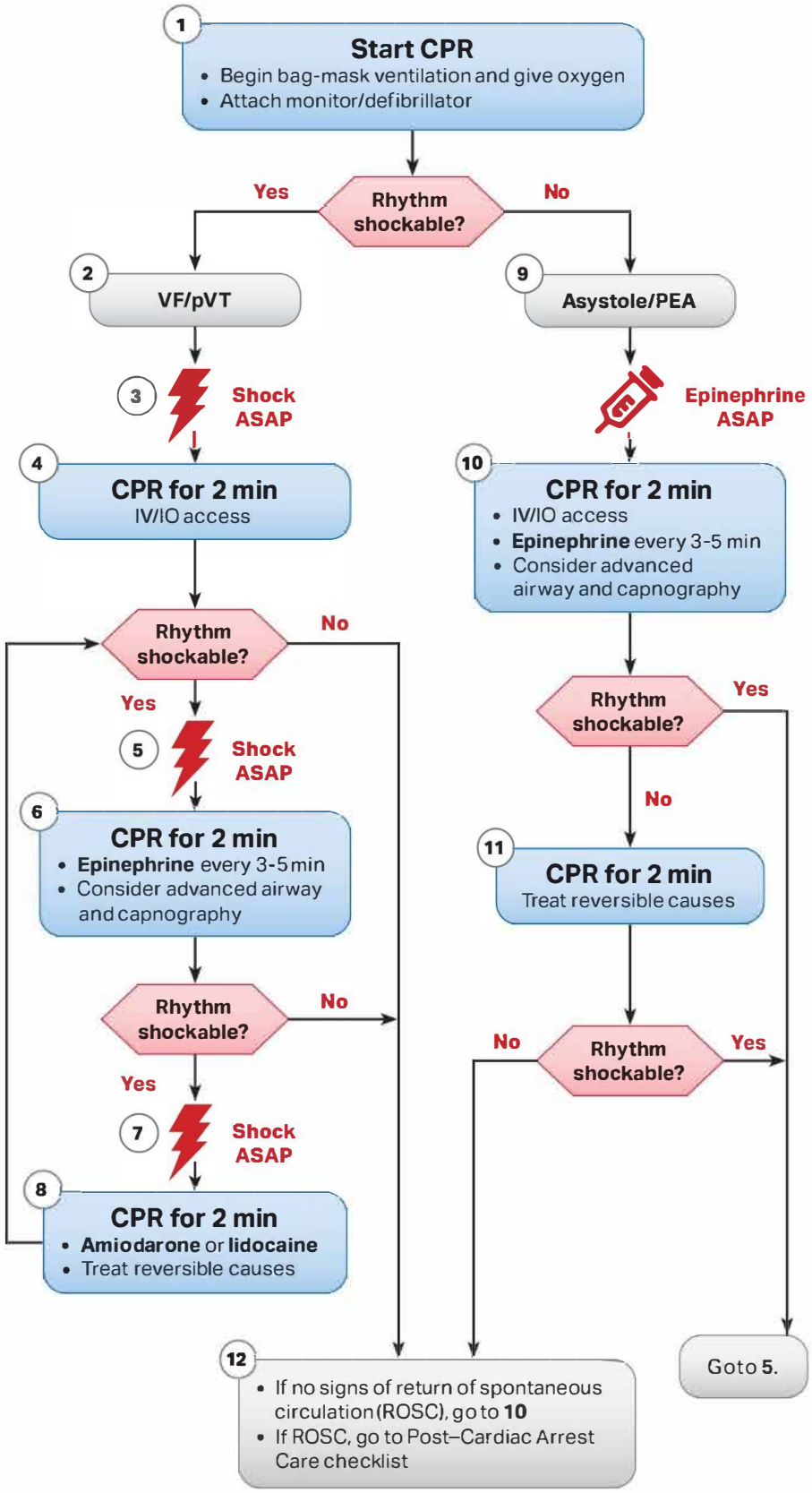
Doses/Details

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.

Adenosine IV/IO dose:
0.1 mg/kg (max 6 mg) rapid push followed by IV flush

Consider repeat dose 0.2 mg/kg rapid push followed by IV flush; maximum dose, 12 mg

Pediatric Cardiac Arrest



High-Quality CPR

- Push hard (≥⅓ AP diameter of the chest)
- Push fast: 100-120/min
- Allow complete chest recoil
- Minimize interruptions in compressions
- Change compressor every 2 min, sooner if fatigued
- If no advanced airway, use compression-ventilation ratio of
  - 15:2 if 2 rescuers (prepuberty)
  - 30:2 if 2 rescuers (postpuberty onset)
  - 30:2 if 1 rescuer (any age)
- If advanced airway, provide continuous compressions and give a breath every 2-3 seconds
- Monitor $ETCO_2$ and, when available, invasive diastolic BP

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 IV/IO dose:** 0.01 mg/kg (0.1 mg/mL concentration). Max dose 1 mg.
- **Amiodarone IV/IO dose:** 5 mg/kg bolus (max 300 mg). May repeat up to 3 doses (max 150 mg subsequent doses).
  or
  Lidocaine IV/IO dose: 1 mg/kg

Advanced Airway

- ET intubation or supraglottic airway
- $ETCO_2$ to confirm and monitor ET tube placement

Reversible Causes

- **H**ypovolemia
- **H**ypoxia
- **H**ydrogen ion (acidosis)
- **H**ypoglycemia
- **H**ypo-/hyperkalemia
- **H**ypothermia
- **T**ension pneumothorax
- **T**amponade, cardiac
- **T**oxins
- **T**hrombosis, pulmonary
- **T**hrombosis, coronary