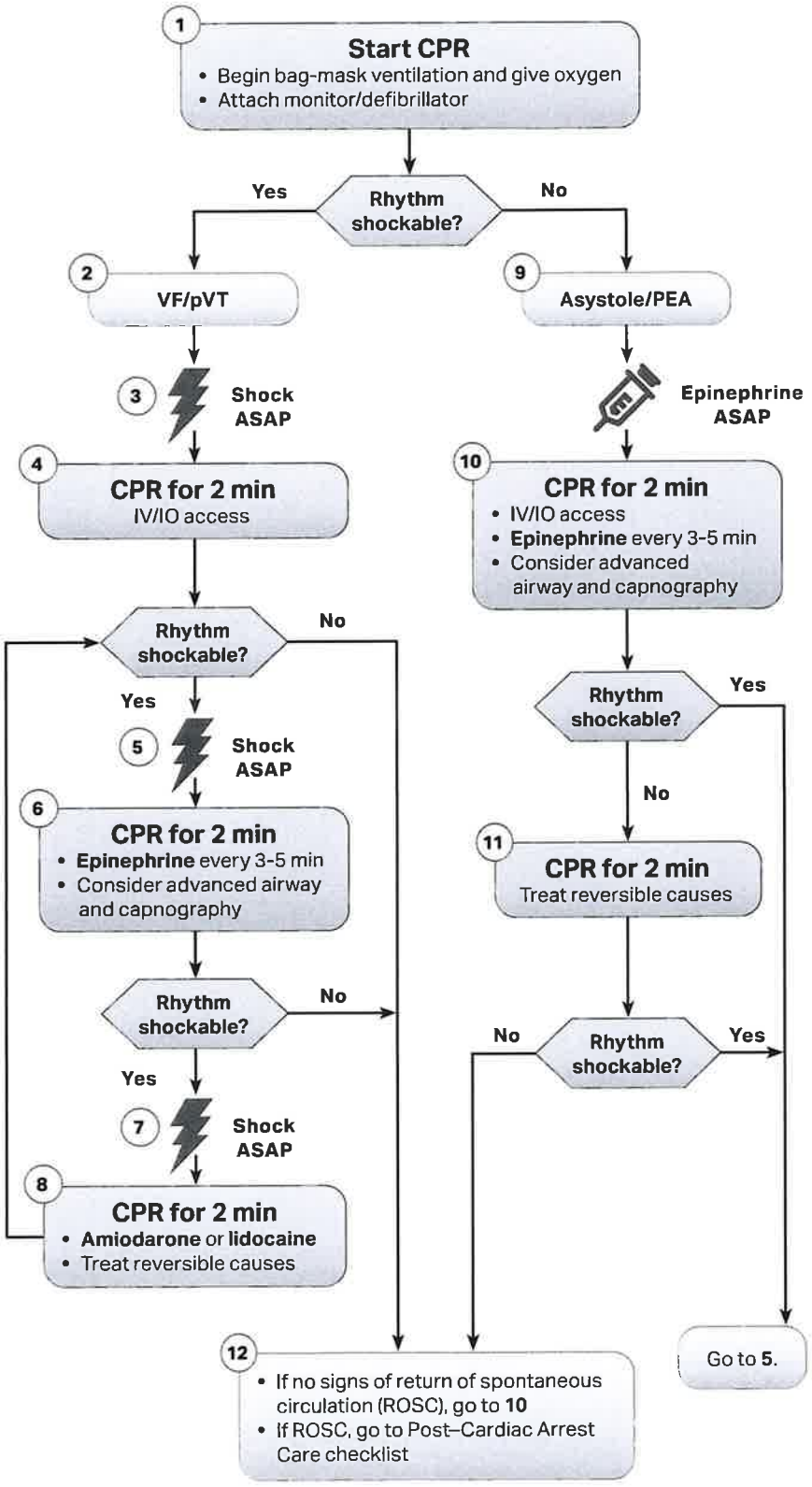
Pediatric Cardiac Arrest Algorithm



High Quality CPR

- Push hard (≥ 1/3 chest depth)
- Push fast: 100-120/min
- Allow full chest recoil
- Minimize interruptions in compressions
- Change compressor every 2 min, sooner if fatigued
- If no advanced airway, compression-ventilation ratio
  - 15:2 - 2 rescuers (pre-puberty)
  - 30:2 - 2 rescuers (post-puberty onset)
  - 30:2 - 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

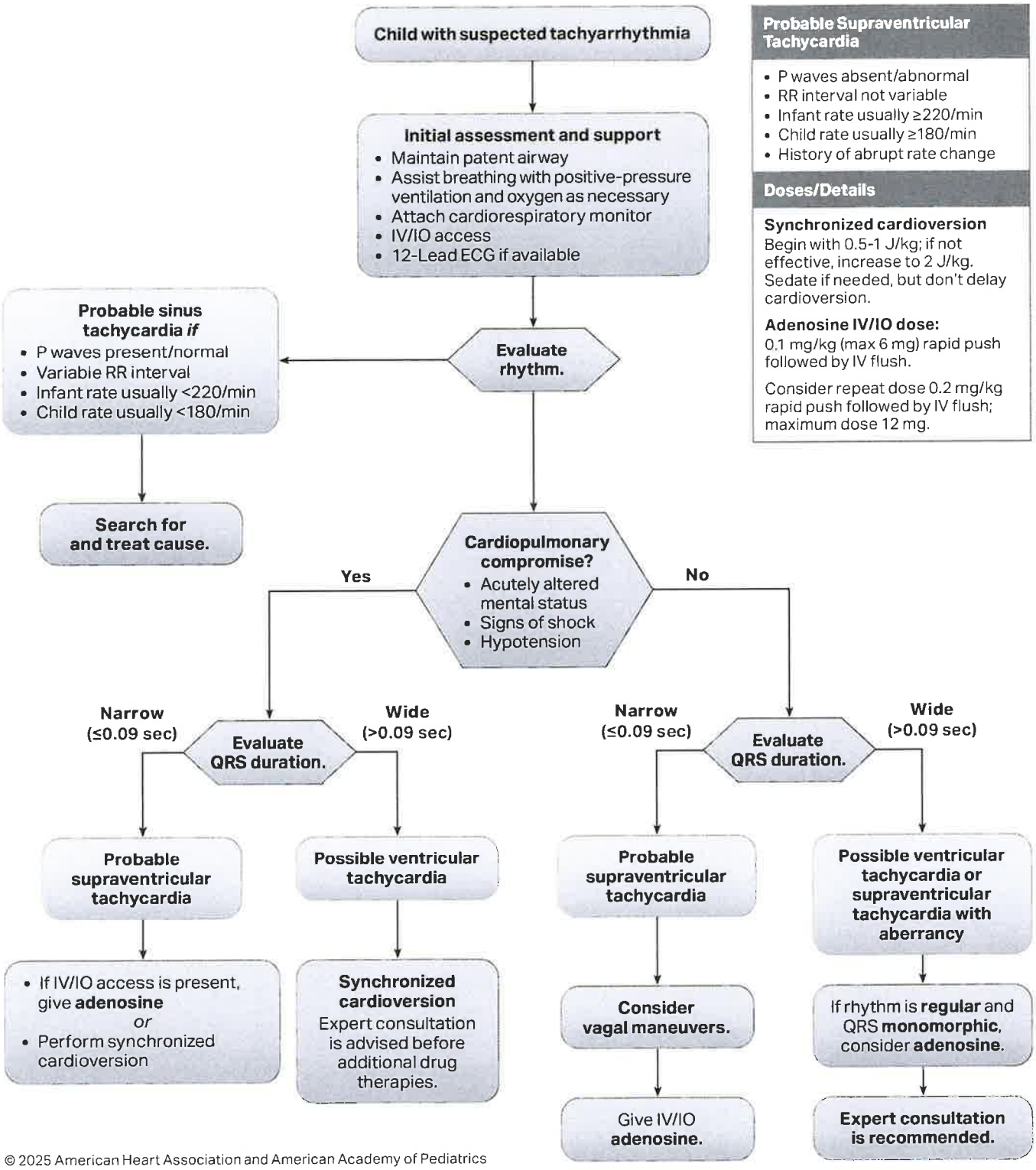
Advanced Airway

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

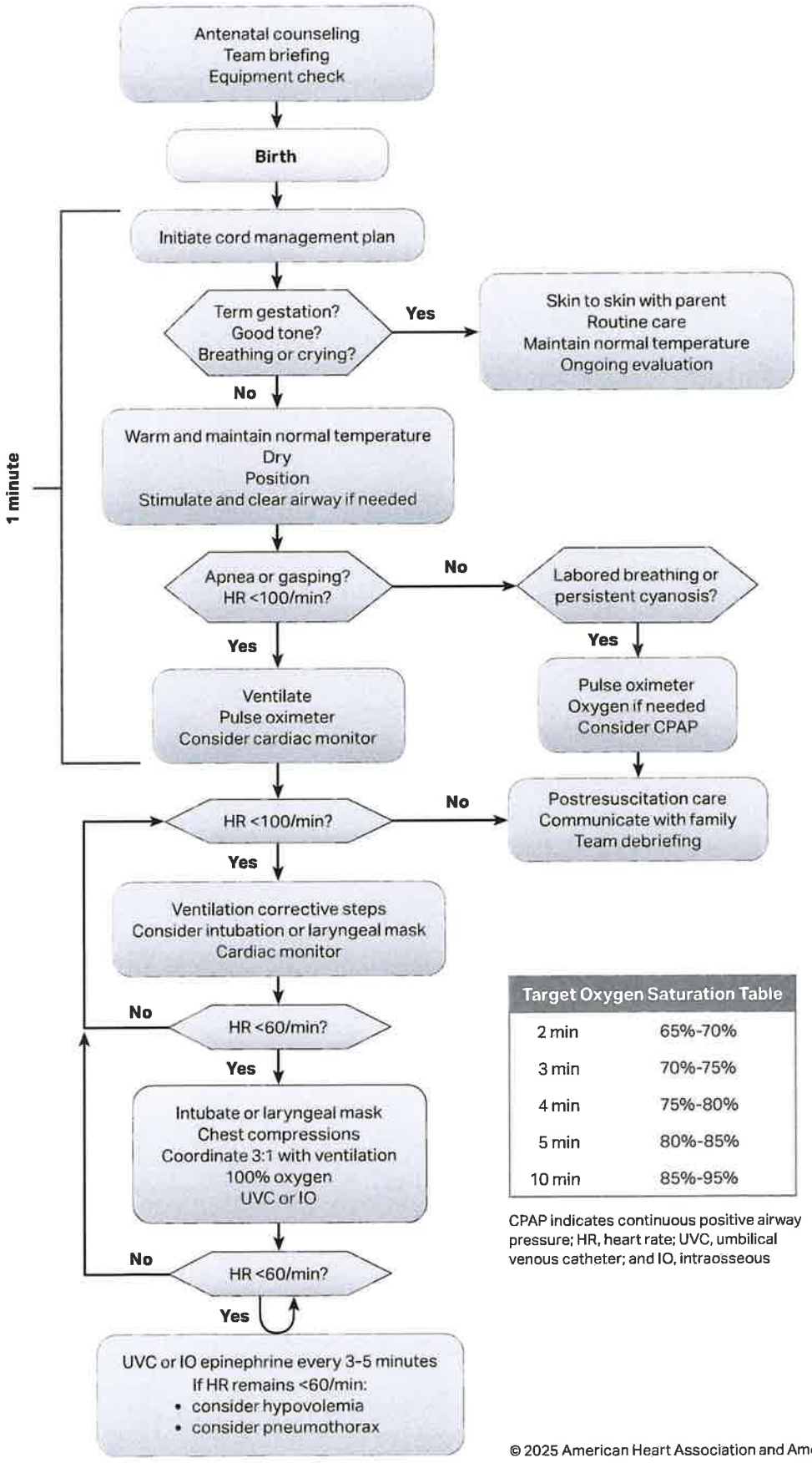
Reversible Causes

- **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

Pediatric Tachyarrhythmia With a Pulse Algorithm



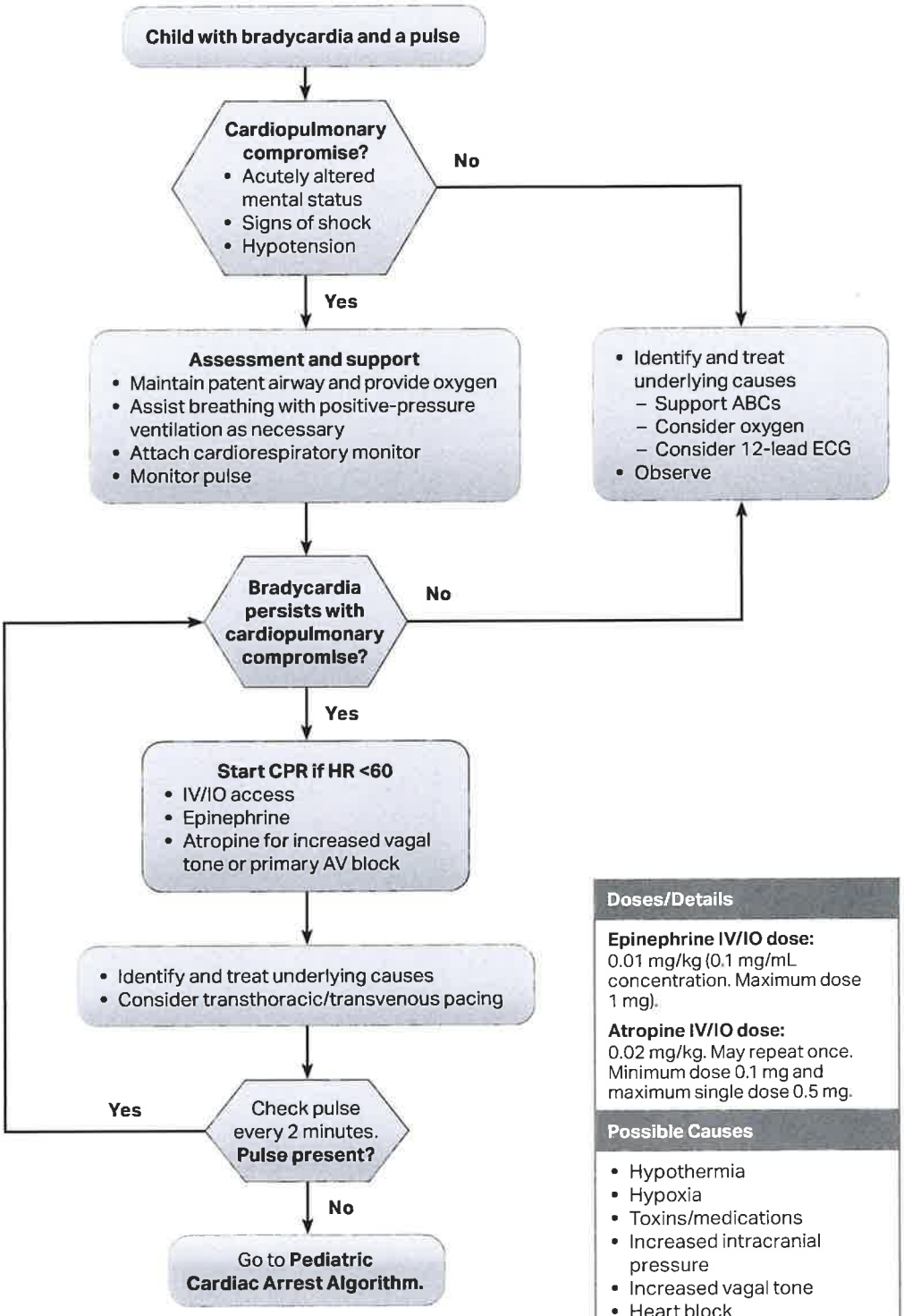
Neonatal Resuscitation Algorithm



Target Oxygen Saturation Table	
2 min	65%-70%
3 min	70%-75%
4 min	75%-80%
5 min	80%-85%
10 min	85%-95%

CPAP indicates continuous positive airway pressure; HR, heart rate; UVC, umbilical venous catheter; and IO, intraosseous

Pediatric Bradycardia With a Pulse Algorithm



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