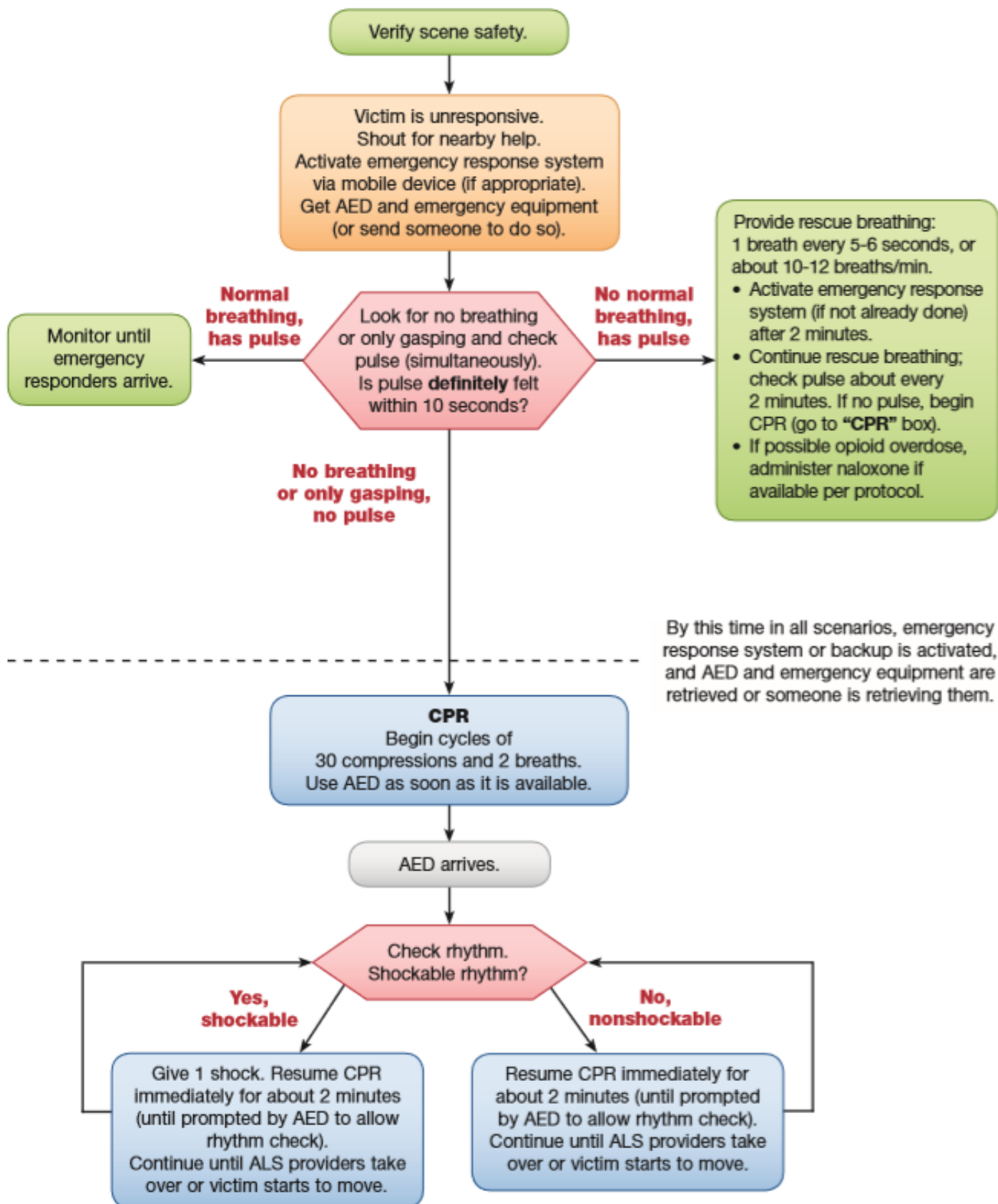
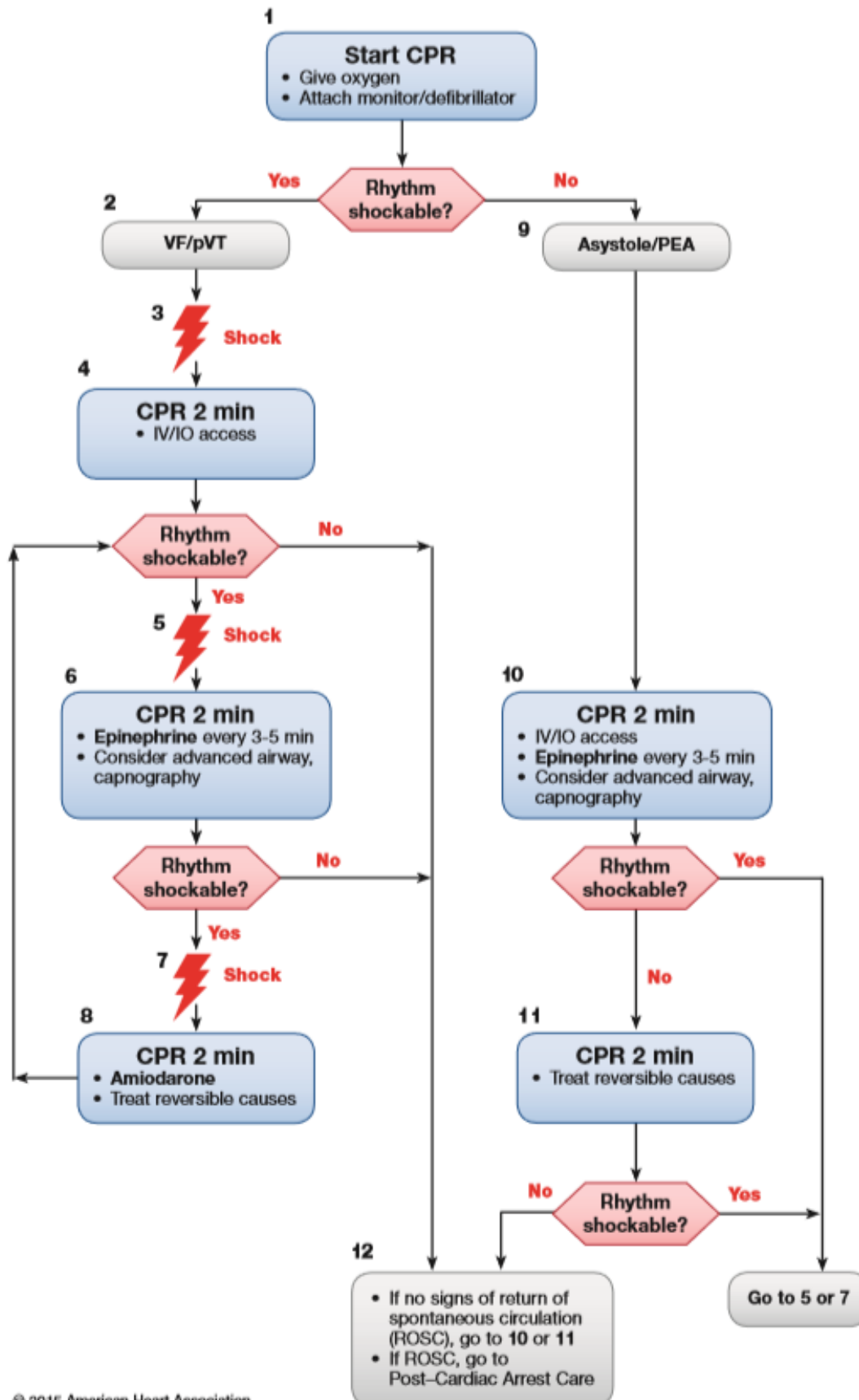


BLS Healthcare Provider Adult Cardiac Arrest Algorithm—2015 Update

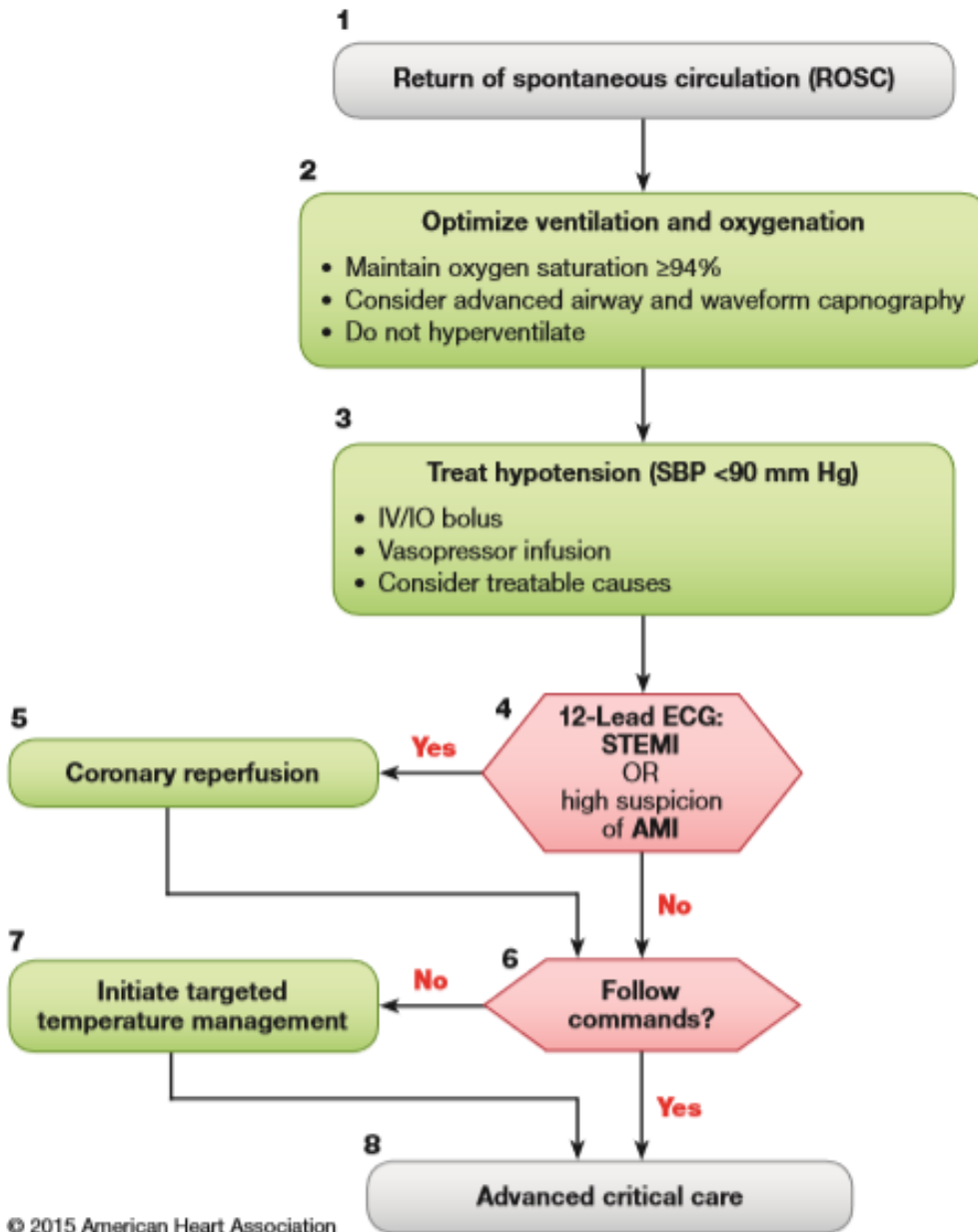


Adult Cardiac Arrest Algorithm—2015 Update



CPR Quality
<ul style="list-style-type: none"> • Push hard (at least 2 inches [5 cm]) 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, 30:2 compression-ventilation ratio. • Quantitative waveform capnography <ul style="list-style-type: none"> - If $PETCO_2 < 10$ mm Hg, attempt to improve CPR quality. • Intra-arterial pressure <ul style="list-style-type: none"> - If relaxation phase (diastolic) pressure < 20 mm Hg, attempt to improve CPR quality.
Shock Energy for Defibrillation
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • Epinephrine IV/IO dose: 1 mg every 3-5 minutes • Amiodarone IV/IO dose: First dose: 300 mg bolus. Second dose: 150 mg.
Advanced Airway
<ul style="list-style-type: none"> • Endotracheal intubation or supraglottic 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)
<ul style="list-style-type: none"> • Pulse and blood pressure • Abrupt sustained increase in $PETCO_2$ (typically ≥ 40 mm Hg) • Spontaneous arterial pressure waves with intra-arterial monitoring
Reversible Causes
<ul style="list-style-type: none"> • Hypovolemia • Hypoxia • Hydrogen ion (acidosis) • Hypo-/hyperkalemia • Hypothermia • Tension pneumothorax • Tamponade, cardiac • Toxins • Thrombosis, pulmonary • Thrombosis, coronary

Adult Immediate Post-Cardiac Arrest Care Algorithm—2015 Update



Doses/Details	
Ventilation/oxygenation:	Avoid excessive ventilation. Start at 10 breaths/min and titrate to target PETCO ₂ of 35-40 mm Hg. When feasible, titrate FIO ₂ to minimum necessary to achieve SpO ₂ ≥94%.
IV bolus:	Approximately 1-2 L normal saline or lactated Ringer's
Epinephrine IV infusion:	0.1-0.5 mcg/kg per minute (in 70-kg adult: 7-35 mcg per minute)
Dopamine IV infusion:	5-10 mcg/kg per minute
Norepinephrine IV infusion:	0.1-0.5 mcg/kg per minute (in 70-kg adult: 7-35 mcg per minute)
Reversible Causes	
	<ul style="list-style-type: none"> • Hypovolemia • Hypoxia • Hydrogen ion (acidosis) • Hypo-/hyperkalemia • Hypothermia • Tension pneumothorax • Tamponade, cardiac • Toxins • Thrombosis, pulmonary • Thrombosis, coronary

A

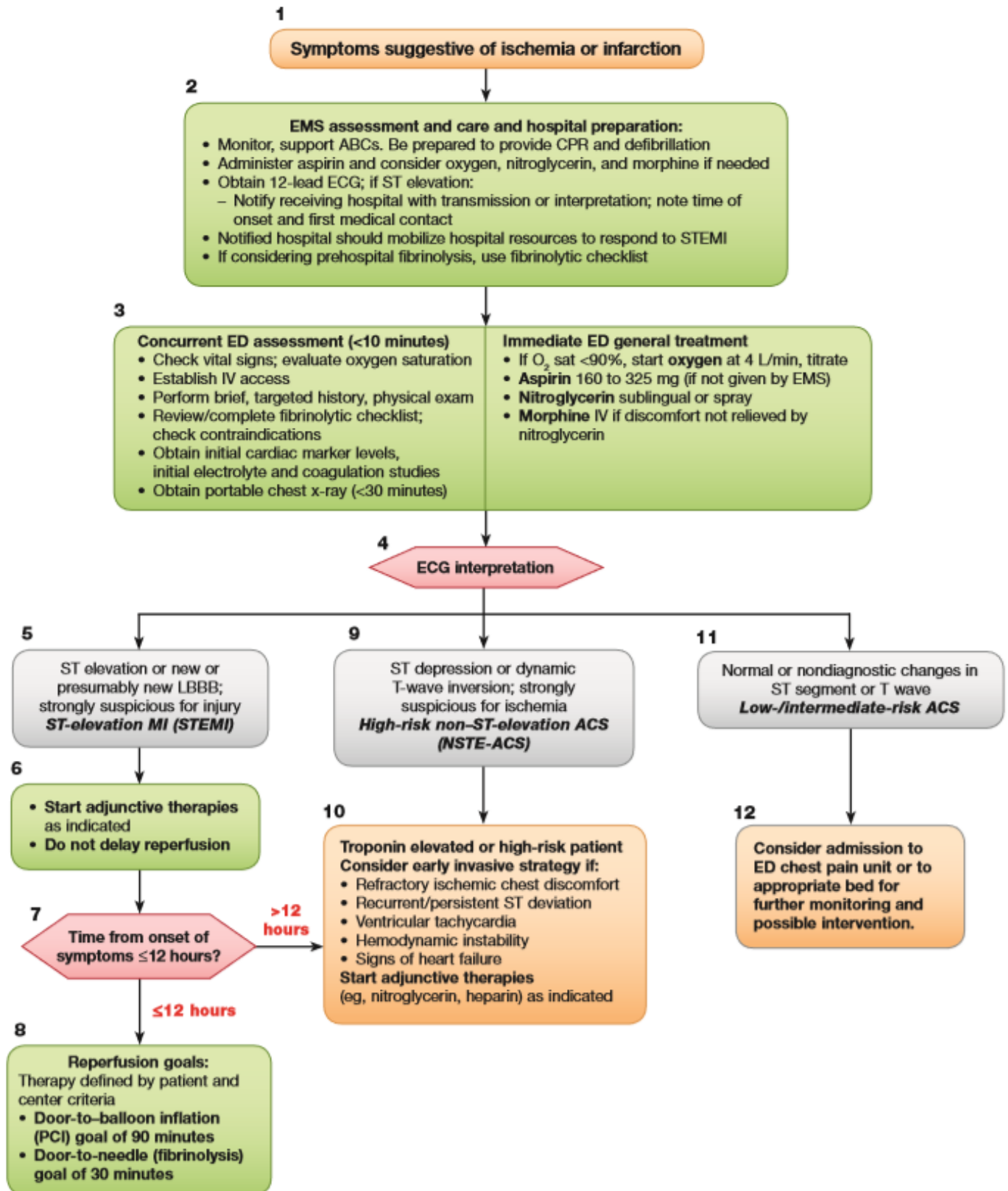


B

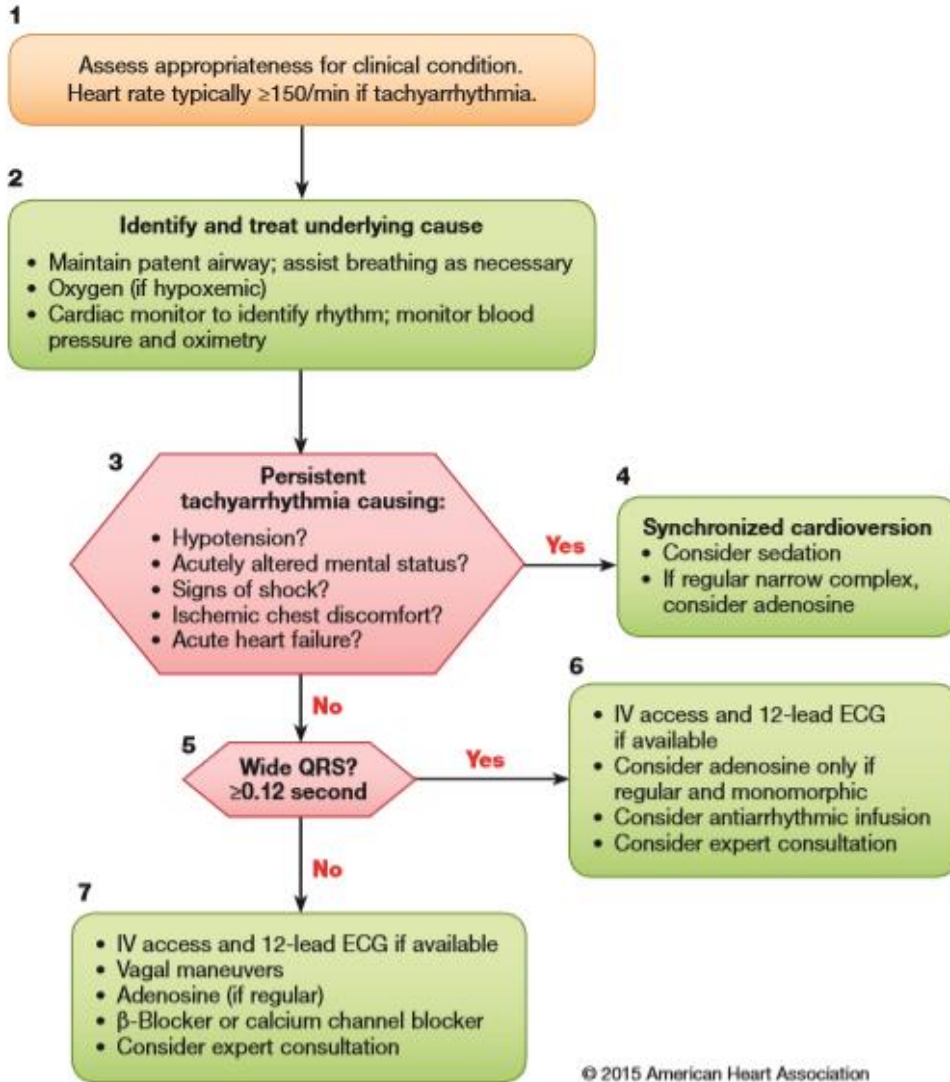


A, Manual LUD, performed with one-handed technique. B, Two-handed technique during resuscitation.

Acute Coronary Syndromes Algorithm—2015 Update



Adult Tachycardia With a Pulse Algorithm



Doses/Details

Synchronized cardioversion:

Initial recommended doses:

- Narrow regular: 50-100 J
- Narrow irregular: 120-200 J biphasic or 200 J monophasic
- Wide regular: 100 J
- Wide irregular: defibrillation dose (not synchronized)

Adenosine IV dose:

First dose: 6 mg rapid IV push; follow with NS flush.

Second dose: 12 mg if required.

Antiarrhythmic Infusions for Stable Wide-QRS Tachycardia

Procainamide IV dose:

20-50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases $>50\%$, or maximum dose 17 mg/kg given. Maintenance infusion: 1-4 mg/min. Avoid if prolonged QT or CHF.

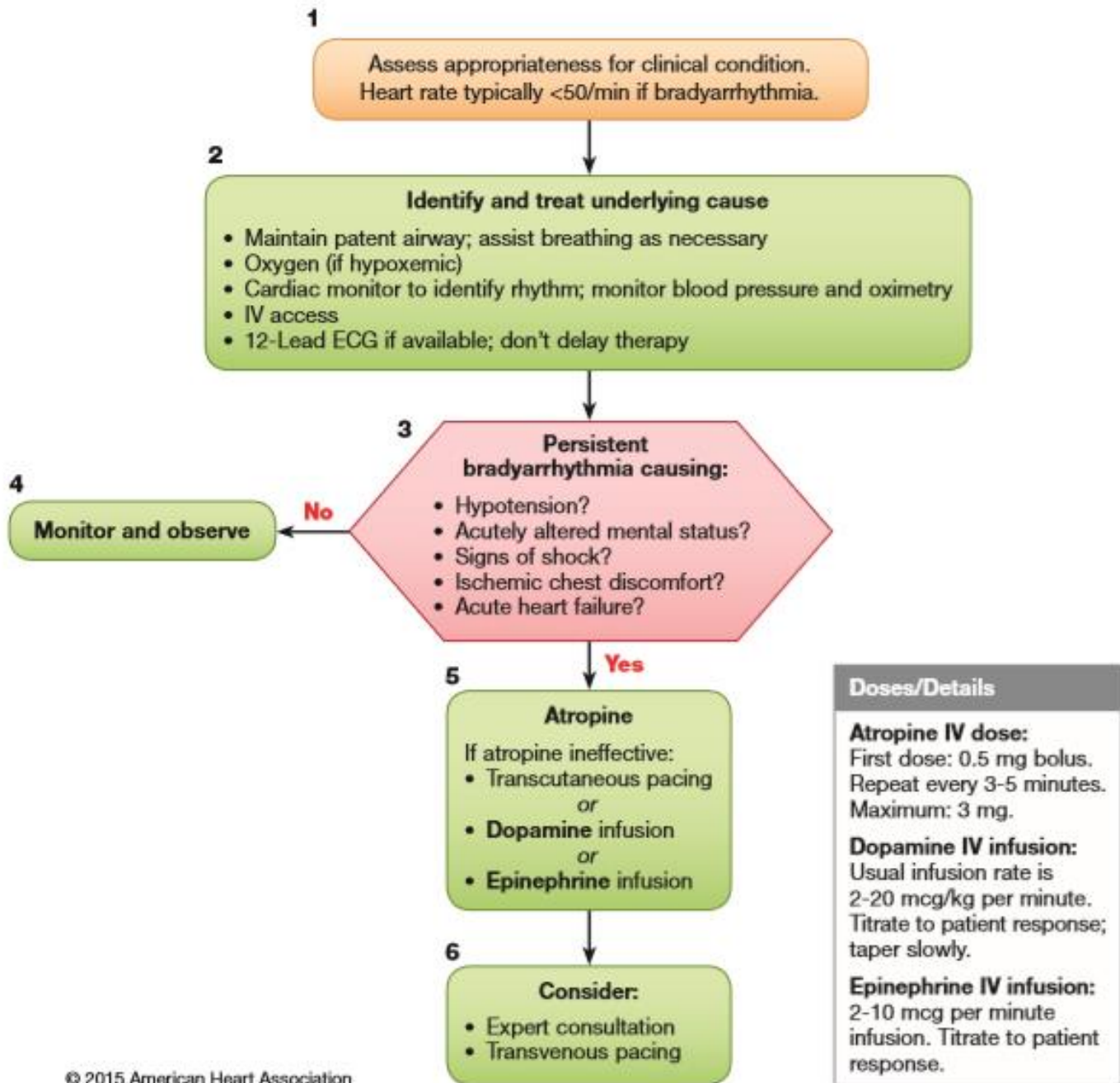
Amiodarone IV dose:

First dose: 150 mg over 10 minutes. Repeat as needed if VT recurs. Follow by maintenance infusion of 1 mg/min for first 6 hours.

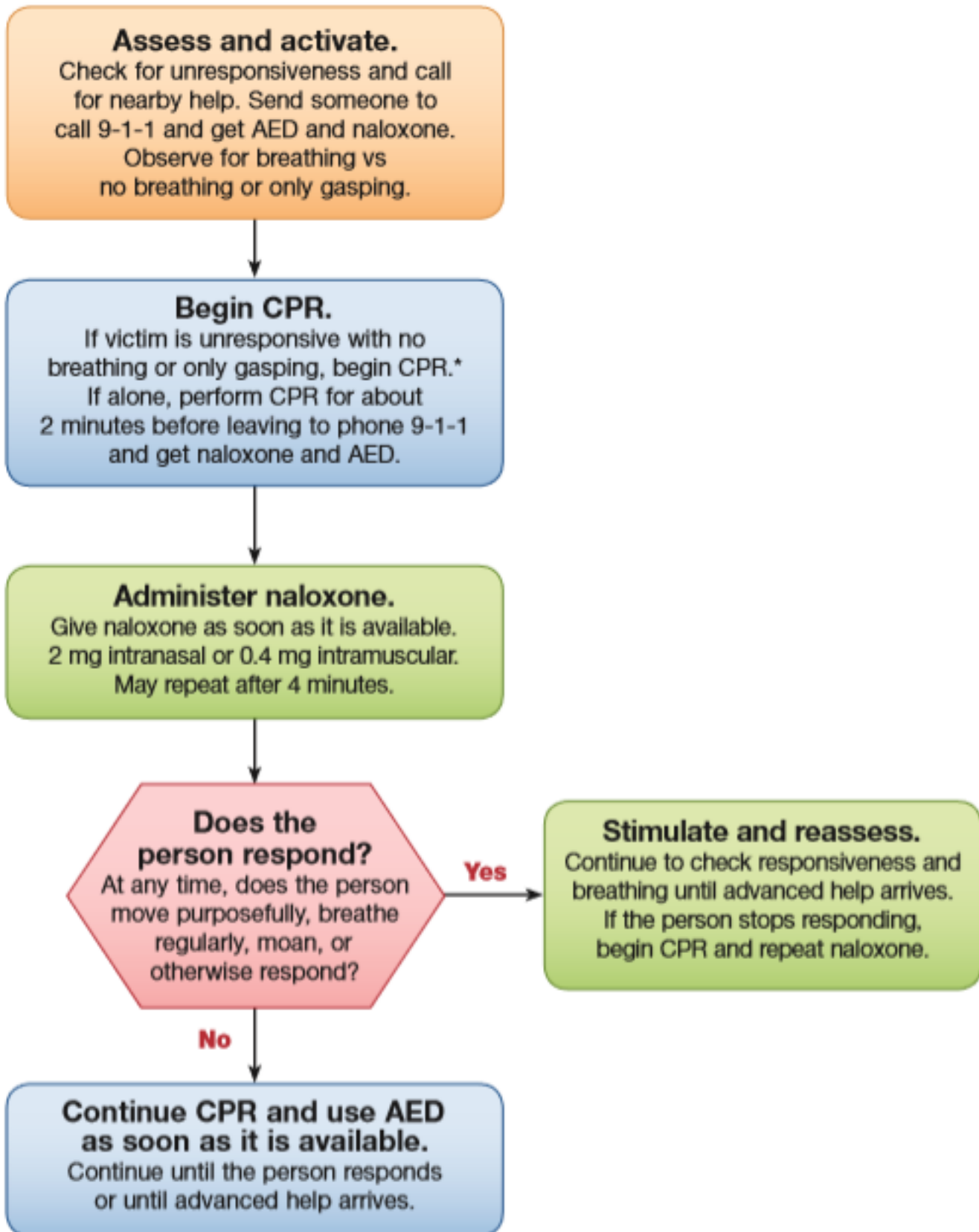
Sotalolol IV dose:

100 mg (1.5 mg/kg) over 5 minutes. Avoid if prolonged QT.

Adult Bradycardia With a Pulse Algorithm



Opioid-Associated Life-Threatening Emergency (Adult) Algorithm – New 2015



*CPR technique based on rescuer's level of training.