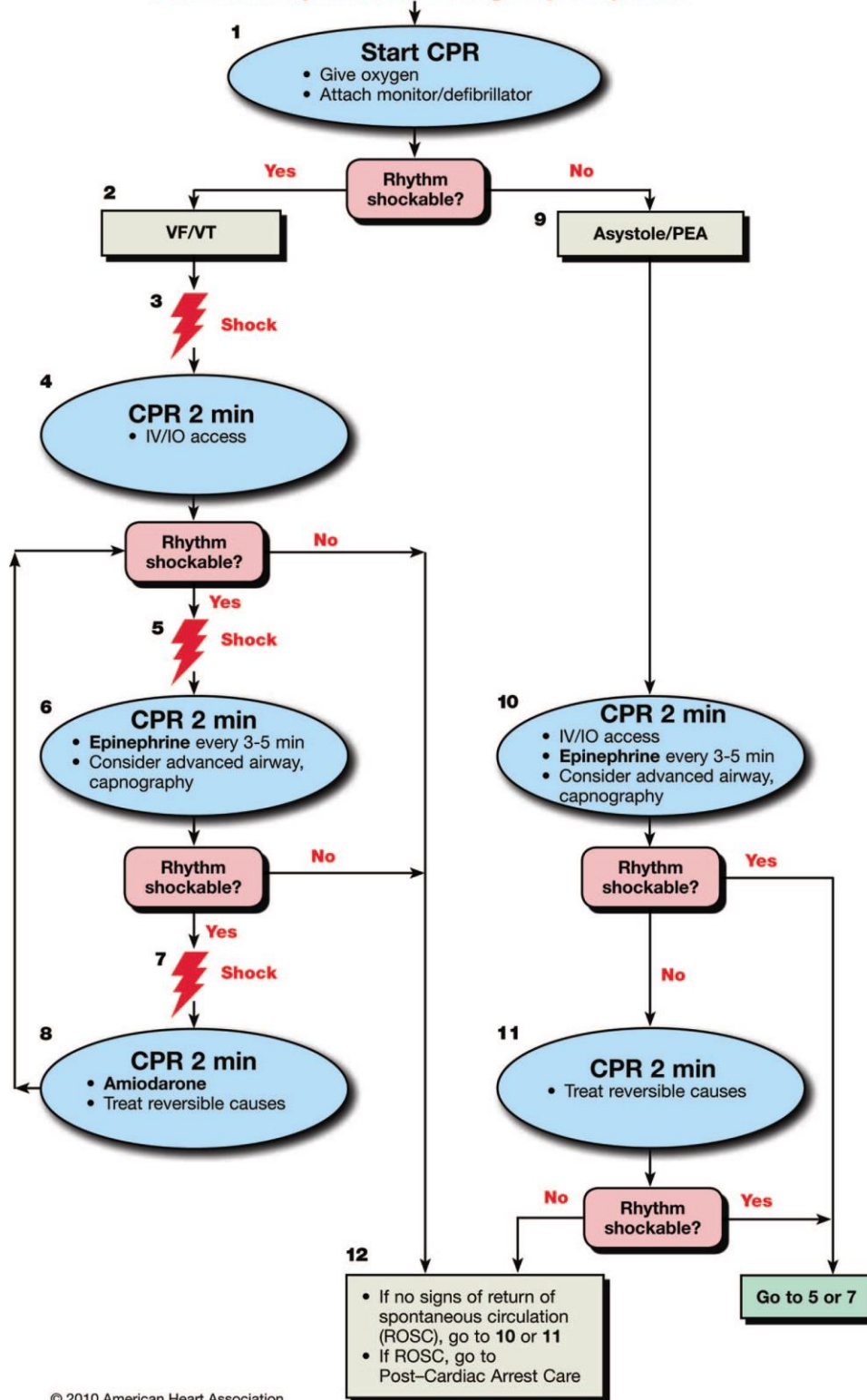


Adult Cardiac Arrest

Shout for Help/Activate Emergency Response



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CPR Quality

- Push hard (≥ 2 inches [5 cm]) and fast (≥ 100 /min) and allow complete chest recoil
- Minimize interruptions in compressions
- Avoid excessive ventilation
- Rotate compressor every 2 minutes
- If no advanced airway, 30:2 compression-ventilation ratio
- Quantitative waveform capnography
 - If $PETCO_2 < 10$ mm Hg, attempt to improve CPR quality
- Intra-arterial pressure
 - If relaxation phase (diastolic) pressure < 20 mm Hg, attempt to improve CPR quality

Return of Spontaneous Circulation (ROSC)

- Pulse and blood pressure
- Abrupt sustained increase in $PETCO_2$ (typically ≥ 40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Shock Energy

- **Biphasic:** Manufacturer recommendation (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
- **Vasopressin IV/IO Dose:** 40 units can replace first or second dose of epinephrine
- **Amiodarone IV/IO Dose:** First dose: 300 mg bolus. Second dose: 150 mg.

Advanced Airway

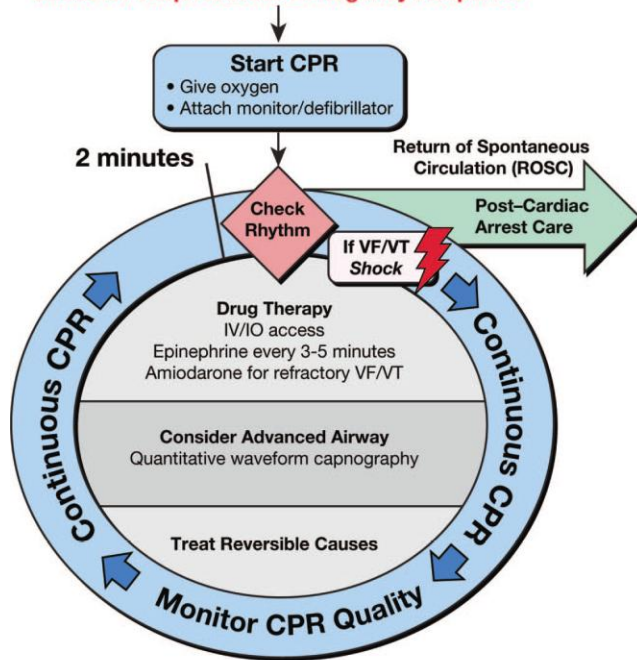
- Supraglottic advanced airway or endotracheal intubation
- Waveform capnography to confirm and monitor ET tube placement
- 8-10 breaths per minute with continuous chest compressions

Reversible Causes

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

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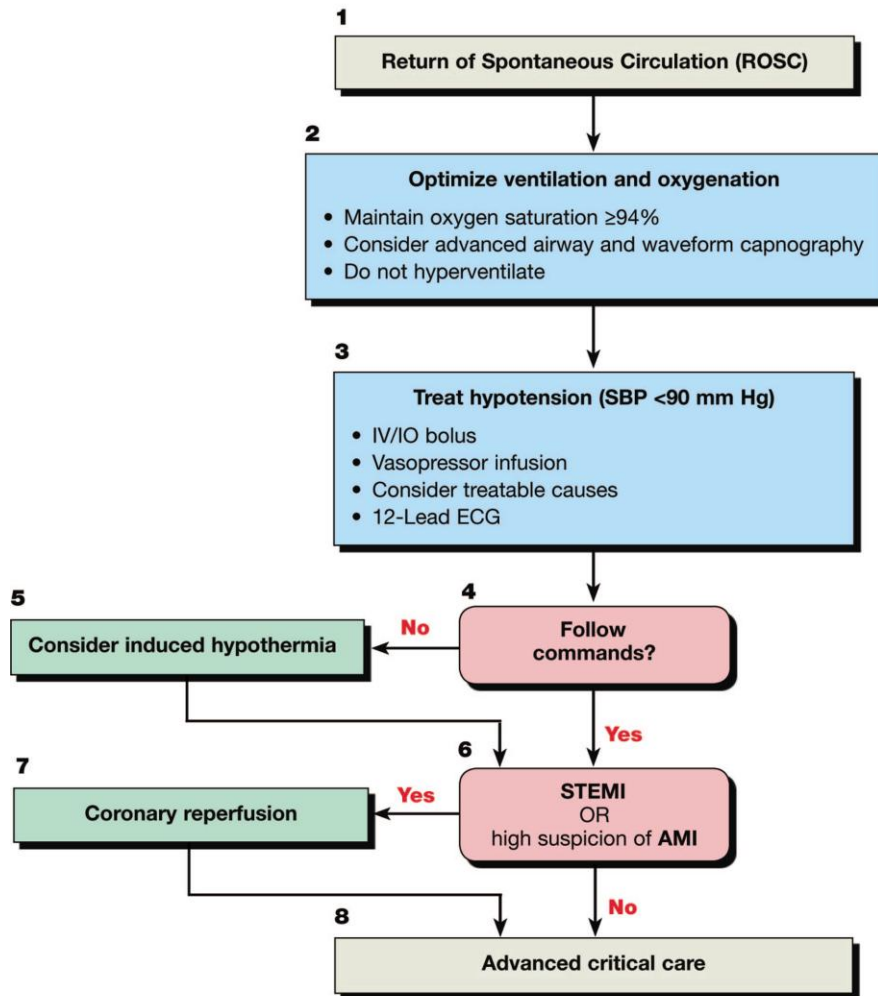
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Adult Immediate Post-Cardiac Arrest Care



Doses/Details

Ventilation/Oxygenation
 Avoid excessive ventilation. Start at 10-12 breaths/min and titrate to target PETCO₂ of 35-40 mm Hg. When feasible, titrate FIO₂ to minimum necessary to achieve SpO₂ $\geq 94\%$.

IV Bolus
 1-2 L normal saline or lactated Ringer's. If inducing hypothermia, may use 4°C fluid.

Epinephrine IV Infusion:
 0.1-0.5 mcg/kg per minute (in 70-kg adult: 7-35 mcg per minute)

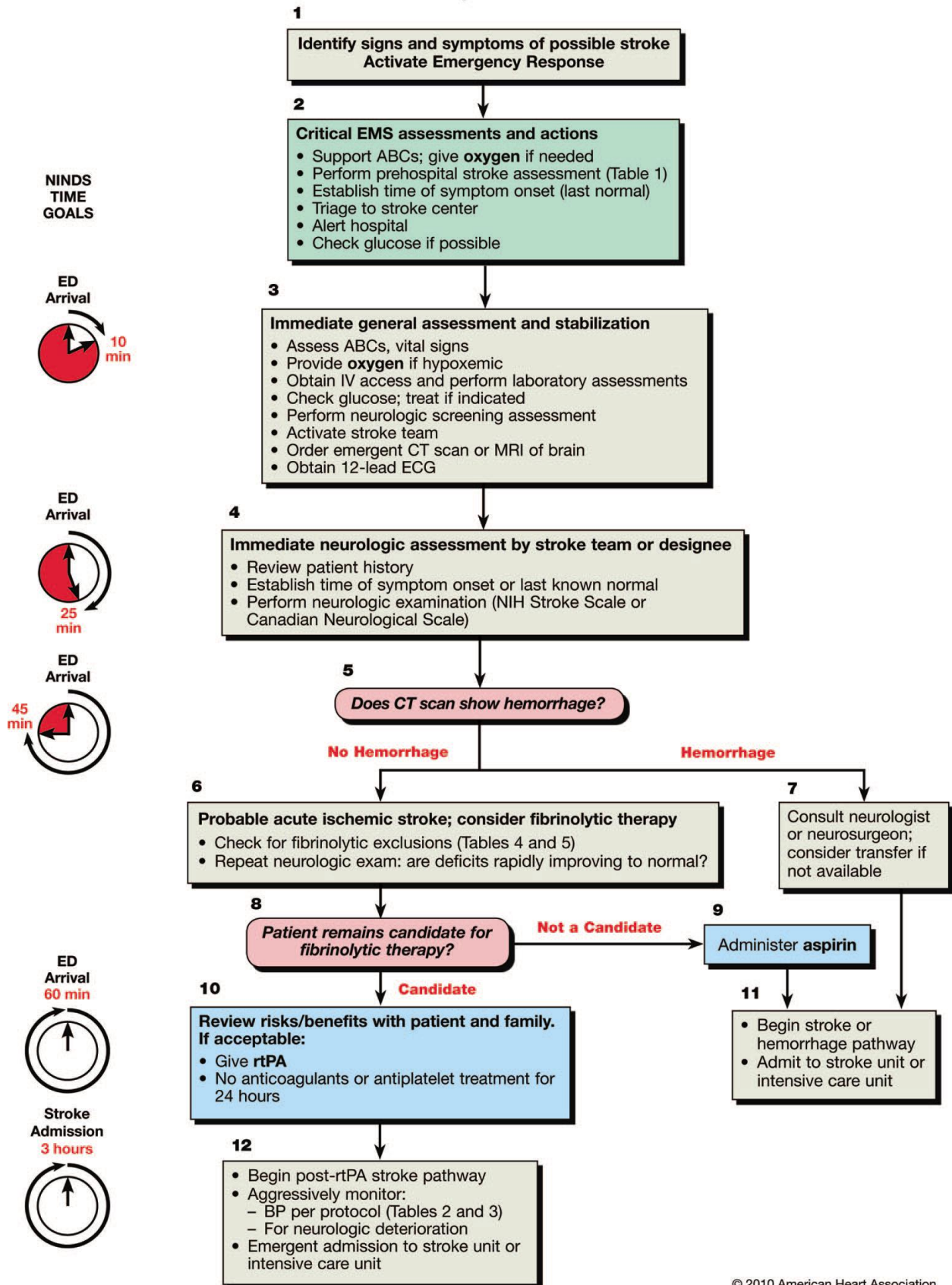
Dopamine IV Infusion:
 5-10 mcg/kg per minute

Norepinephrine IV Infusion:
 0.1-0.5 mcg/kg per minute (in 70-kg adult: 7-35 mcg per minute)

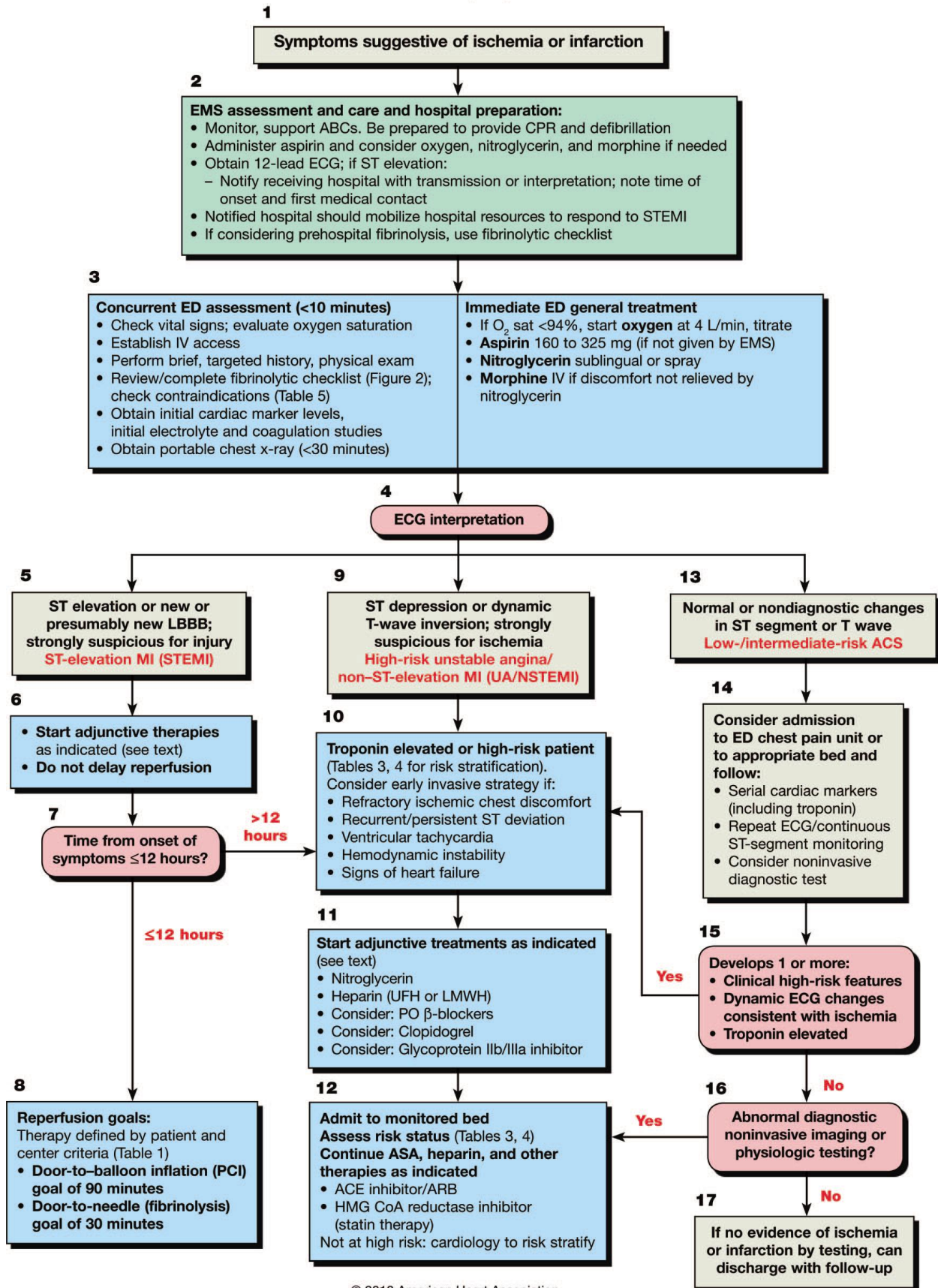
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- Tension pneumothorax
- Tamponade, cardiac
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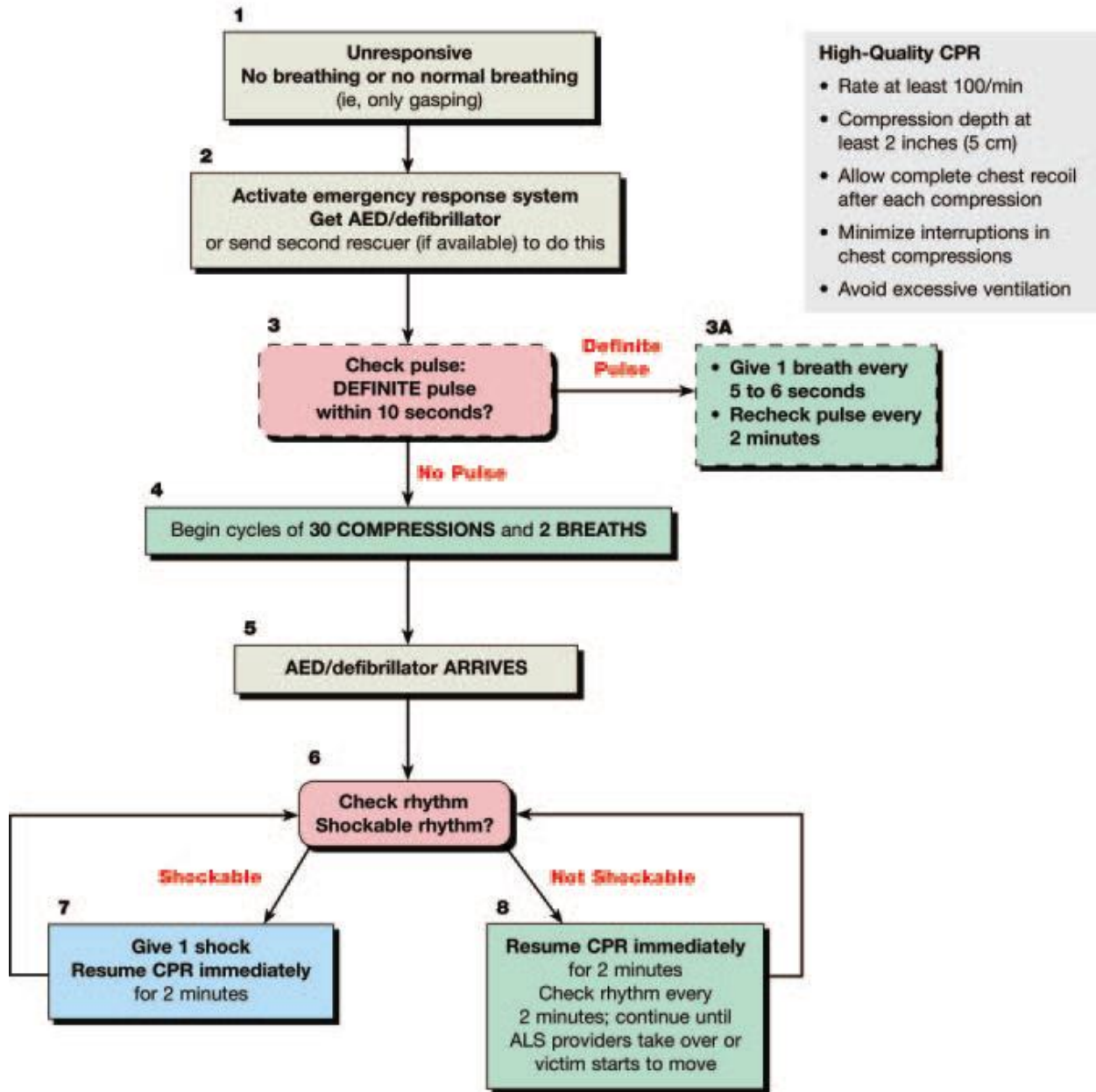
Adult Suspected Stroke



Acute Coronary Syndromes

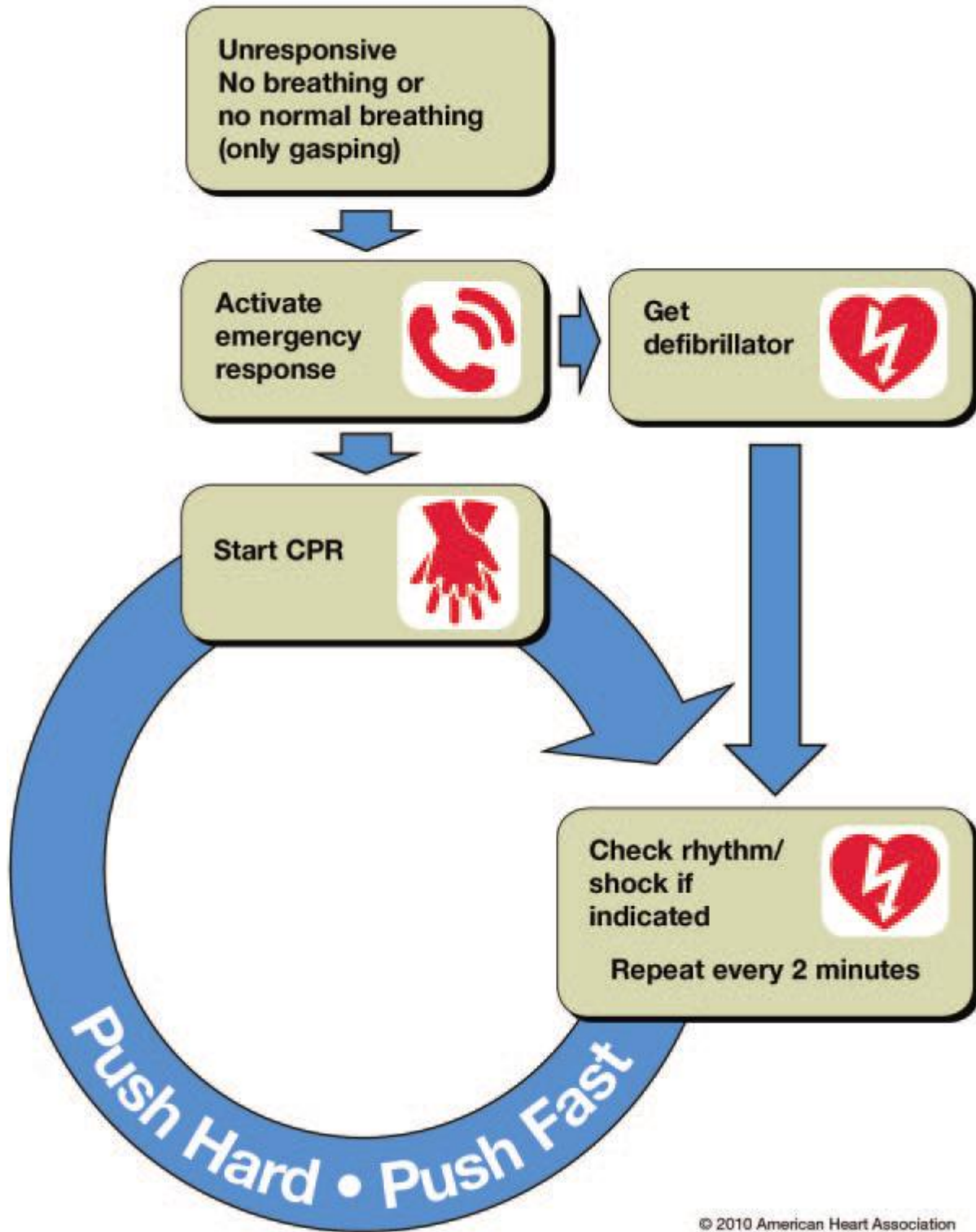


Adult BLS Healthcare Providers

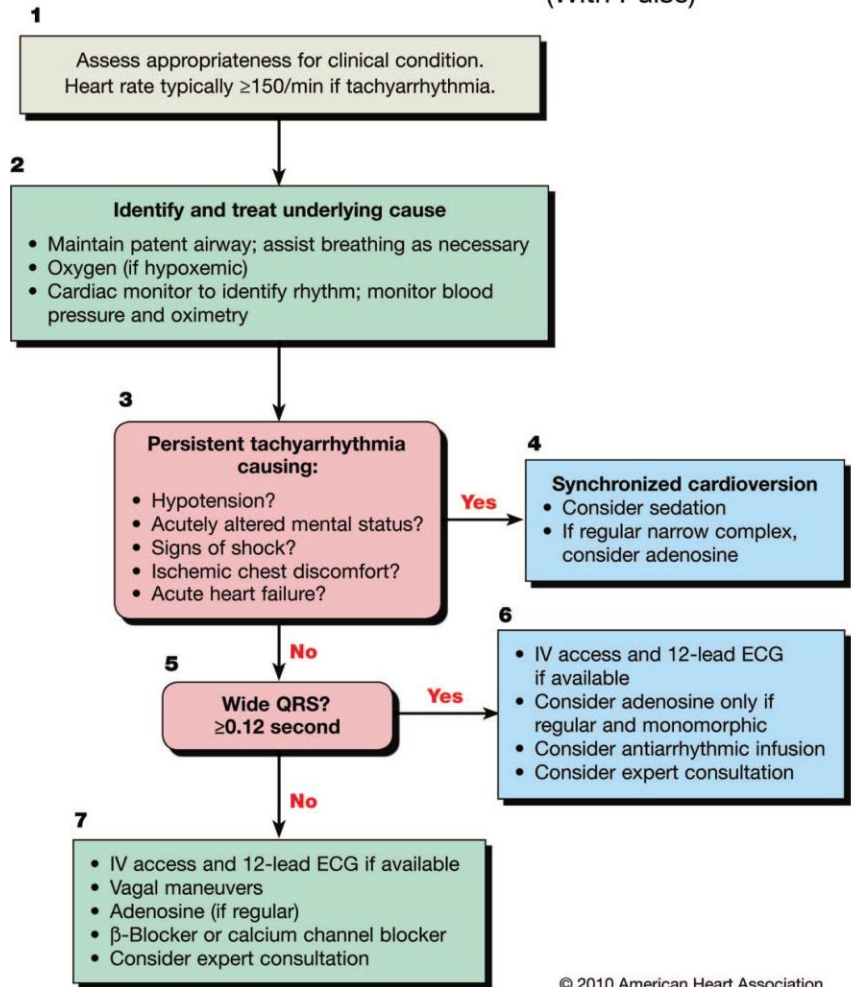


Note: The boxes bordered with dashed lines are performed by healthcare providers and not by lay rescuers

Simplified Adult BLS



Adult Tachycardia (With Pulse)



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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.

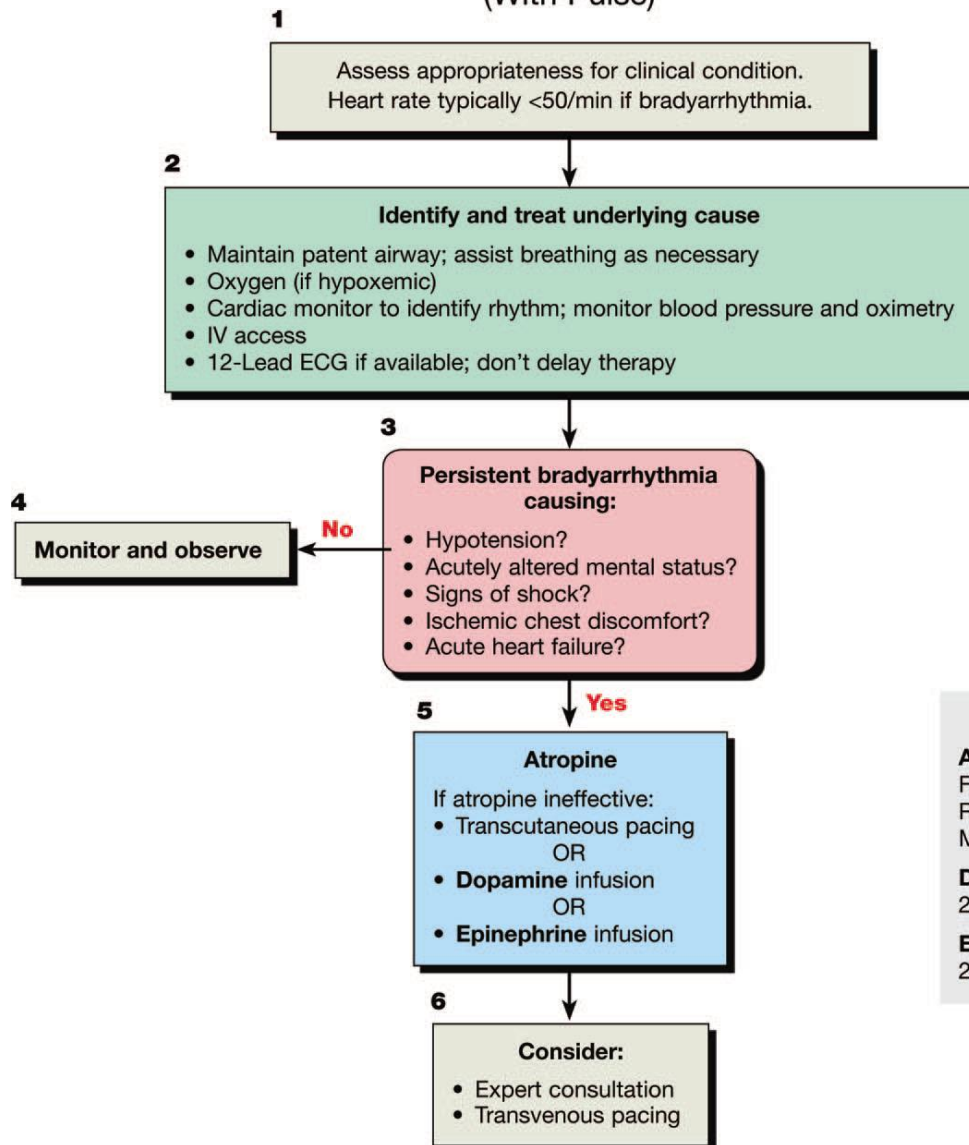
Amiodarone IV Dose:

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.

Sotalol IV Dose:

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

Adult Bradycardia (With Pulse)



Doses/Details

Atropine IV Dose:

First dose: 0.5 mg bolus
Repeat every 3-5 minutes
Maximum: 3 mg

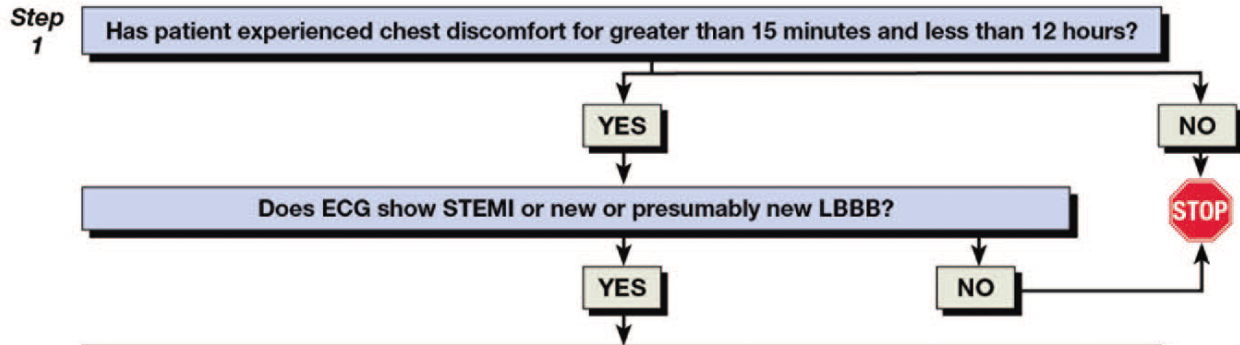
Dopamine IV Infusion:

2-10 mcg/kg per minute

Epinephrine IV Infusion:

2-10 mcg per minute

Prehospital Fibrinolytic Checklist



Step 2

Are there contraindications to fibrinolysis?
If **ANY** one of the following is checked **YES**, fibrinolysis **MAY** be contraindicated.

- | | | |
|--|----------------------------------|--------------------------|
| Systolic BP >180 to 200 mm Hg or diastolic BP >100 to 110 mm Hg | <input type="radio"/> YES | <input type="radio"/> NO |
| Right vs left arm systolic BP difference >15 mm Hg | <input type="radio"/> YES | <input type="radio"/> NO |
| History of structural central nervous system disease | <input type="radio"/> YES | <input type="radio"/> NO |
| Significant closed head/facial trauma within the previous 3 weeks | <input type="radio"/> YES | <input type="radio"/> NO |
| Stroke >3 hours or <3 months | <input type="radio"/> YES | <input type="radio"/> NO |
| Recent (within 2-4 weeks) major trauma, surgery (including laser eye surgery), GI/GU bleed | <input type="radio"/> YES | <input type="radio"/> NO |
| Any history of intracranial hemorrhage | <input type="radio"/> YES | <input type="radio"/> NO |
| Bleeding, clotting problem, or blood thinners | <input type="radio"/> YES | <input type="radio"/> NO |
| Pregnant female | <input type="radio"/> YES | <input type="radio"/> NO |
| Serious systemic disease (eg, advanced cancer, severe liver or kidney disease) | <input type="radio"/> YES | <input type="radio"/> NO |

Step 3

Is patient at high risk?
If **ANY** one of the following is checked **YES**, consider transfer to PCI facility.

- | | | |
|--|-----------------------------------|--------------------------|
| Heart rate \geq 100/min AND systolic BP <100 mm Hg | <input type="radio"/> YES | <input type="radio"/> NO |
| Pulmonary edema (rales) | <input type="radio"/> YES | <input type="radio"/> NO |
| Signs of shock (cool, clammy) | <input type="radio"/> YES | <input type="radio"/> NO |
| Contraindications to fibrinolytic therapy | <input type="radio"/> YES† | <input type="radio"/> NO |
| Required CPR | <input type="radio"/> YES | <input type="radio"/> NO |

†Consider transport to primary PCI facility as destination hospital.