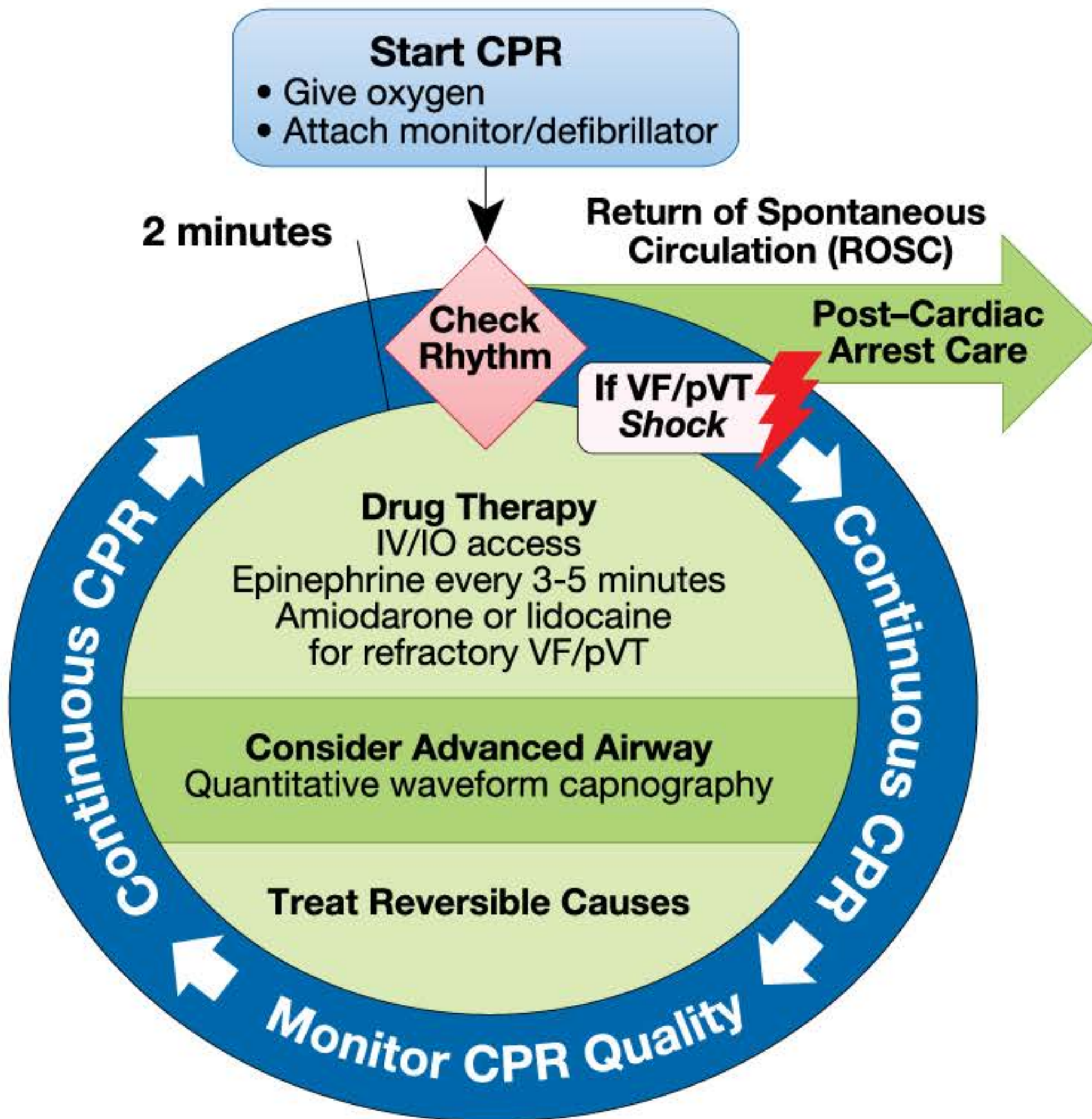


# Adult Cardiac Arrest Circular Algorithm— 2018 Update



## CPR Quality

- 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.
- Change compressor every 2 minutes, or sooner if fatigued.
- 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.

## 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

- 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)

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

## Reversible Causes

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