CARDIAC ARREST ALGORITHM

01 START CPR
Give Oxygen
Attach monitor / Defibrillator

02 VF/pVT

03 SHOCK

04 CPR (2 Minutes)
Gain IV/IO Access

05 SHOCK

06 CPR (2 Minutes)
Epinephrine: 1mg every 3-5 Min
Decide: advanced airway, capnography

07 SHOCK

08 CPR (2 Minutes)
Amiodarone: 300mg
Look for and treat reversible causes

09 PEA / Asystole

10 CPR (2 Minutes)
Gain IV/IO access
Epinephrine: 1mg every 3-5 Min
Decide: advanced airway, capnography

11 CPR (2 Minutes)
Look for and treat reversible causes

12 If no signs of return of spontaneous circulation (ROSC), go to 10 or 11
If ROSC, go to Post Cardiac Arrest Care

GO TO 5 OR 7

This Algorithm is based on the latest (2015) American Heart Association standards and guidelines.

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DOSES & DETAILS

**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.
- Rotate compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
  - If PETCO₂ <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 (e.g., 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.

**ADVANCED AIRWAY**
- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or canometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10-12 breaths/min) with continuous chest compressions

**RETURN OF SPONTANEOUS CIRCULATION (ROSC)**
- Pulse and blood pressure
- Abrupt sustained increase in PETCO₂ (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

**REVERSIBLE CAUSES**
- **H's**
  - Hypovolemia
  - Hypoxia
  - Hydrogen ion (acidosis)
  - Hypo-/hyperkalemia
  - Hypothermia
- **T's**
  - Tension pneumothorax
  - Tamponade (cardiac)
  - Toxins
  - Thrombosis (pulmonary)
  - Thrombosis (coronary)