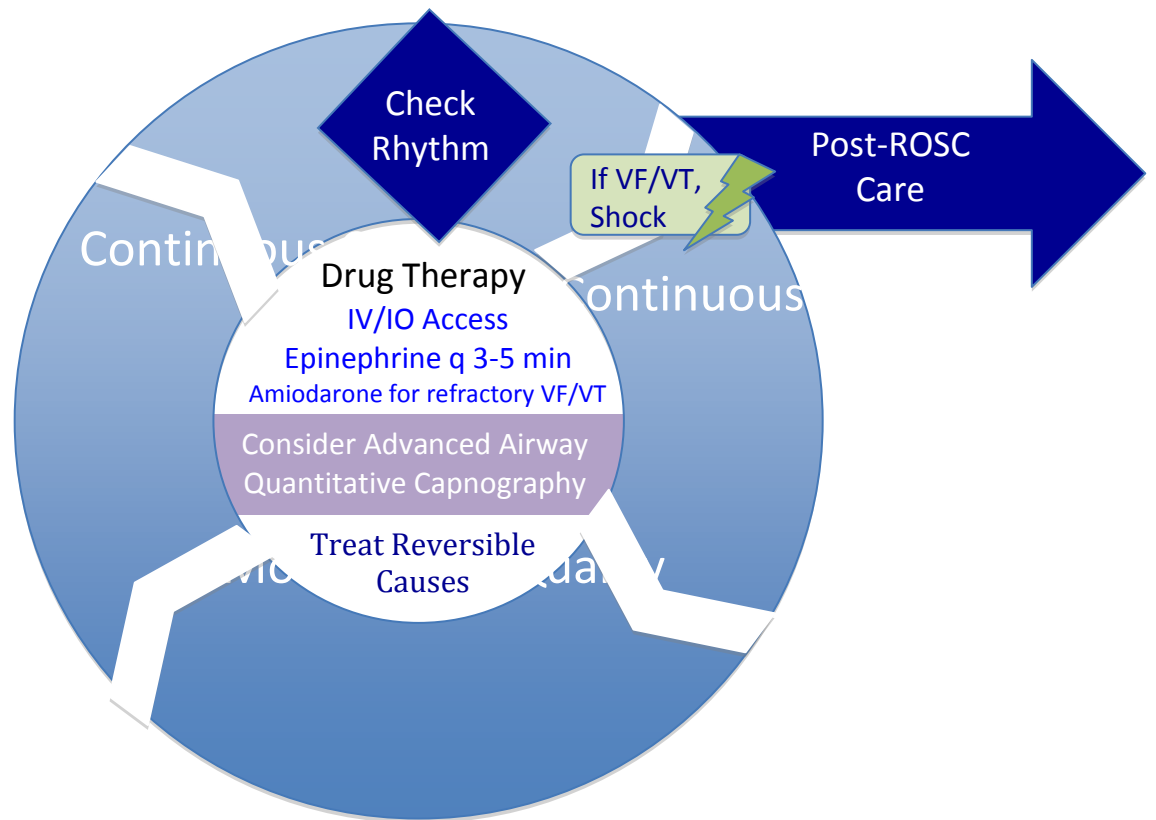


High Performance CPR (HP-CPR): The Basics



CPR Quality

- Push Hard (>2 in.) and Fast (≥ 100 /min) and allow complete chest recoil
- Minimize interruptions in compressions
- Avoid excessive ventilation
- Rotate compressor every 2 minutes
- Quantitative waveform capnography
- If $PETCO_2 < 10$ mmHg, attempt to improve CPR quality
- If relaxation phase (diastolic) pressure is < 20 mmHg, attempt to improve CPR quality

Advanced Airway

- Supraglottic advanced airway or endotracheal intubation
- Waveform capnography to confirm and monitor ET tube placement and quality of CPR
- 8-10 breaths per minute with continuous chest compressions
- $ETCO_2$ of 10-20 indicates quality HP-CPR

Reversible Causes

- | | |
|---------------------------|------------------------------|
| - Hypovolemia | - Tamponade, cardiac |
| - Hypoxia | - Tension pneumothorax |
| - Hydrogen Ion (acidosis) | - Toxins |
| - Hyper/Hypokalemia | - Thrombosis, pulmonary (PE) |
| - Hypothermia | - Thrombosis, cardiac (MI) |

Shock Energy

Biphasic: 120-200 J, per manufacturer recommendations. If unknown, use maximum available

*Second and subsequent doses should be equivalent or higher

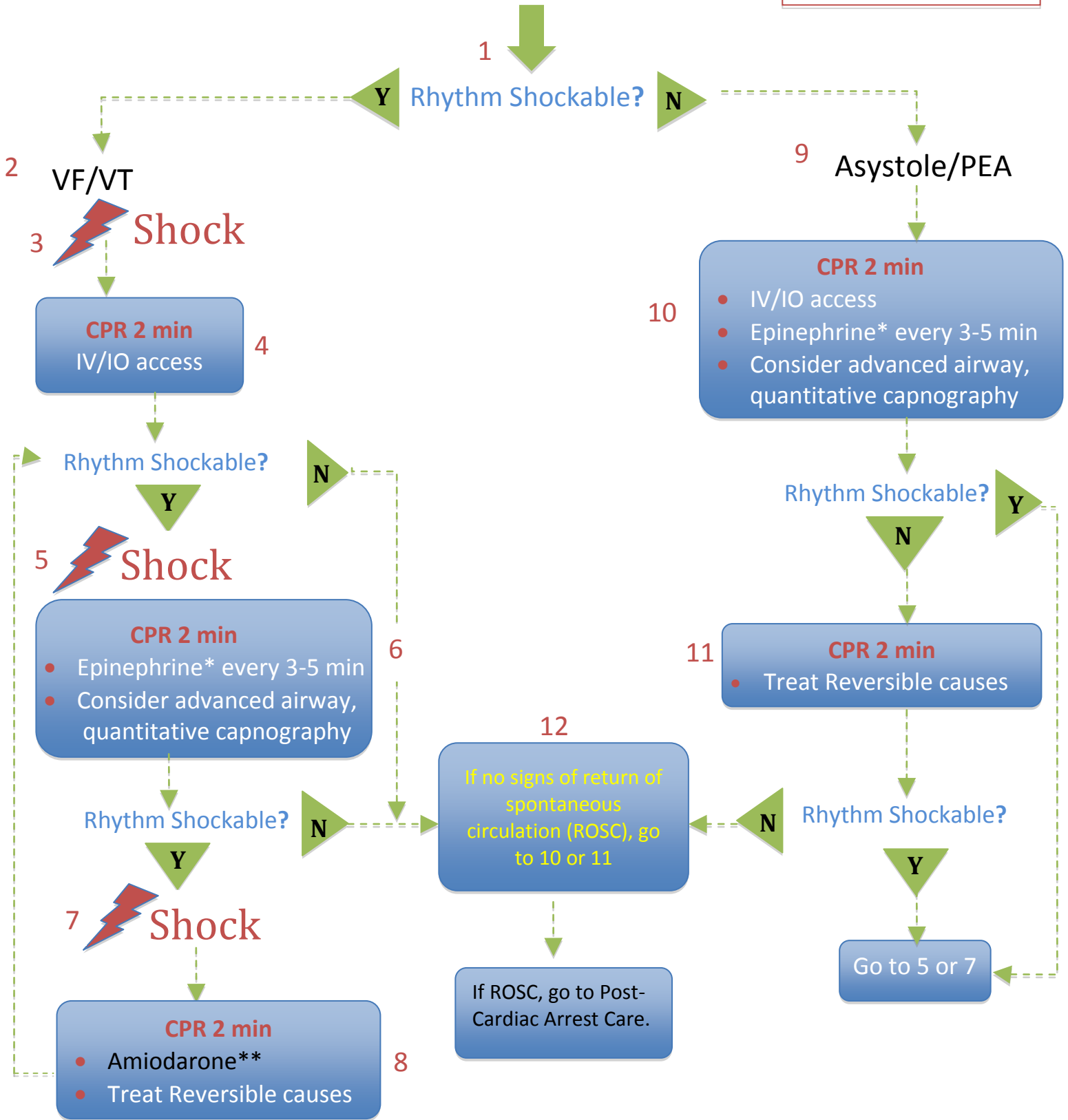
Cardiac Arrest Protocol: Grant County EMS High Performance CPR (HP-CPR)

Drug Therapy

Epinephrine IV/IO: 1 mg every 3-5 minutes
 *Vasopressin IV/IO: 40 units can replace 1st or 2nd dose of epinephrine
 Amiodarone IV/IO: 300 mg bolus 1st dose, 150 mg 2nd dose
 **Lidocaine IV/IO: 100 mg can be used in place of/in addition to amiodarone

START CPR

- Give Oxygen
- Attach Monitor/Defibrillator



Cardiac Arrest Protocol: Grant County EMS

ROSC Protocol/Post ROSC care

ROSC: Return of Spontaneous Circulation

1. **Palpable pulse** (carotid or femoral) and measurable blood pressure
2. **Organized cardiac rhythm**
3. **Sustained increase in PETCO₂** (typically >40 mm Hg)
 - a. Pearl: Don't try to "normalize" the ETCO₂ post-ROSC by hyperventilating (goal is 35-45)
 - b. High quality CPR will create ETCO₂ 10-20, this will increase to 35-45 mmHg once ROSC is achieved

Post ROSC Care

1. Spend 10 minutes on scene with repeat vitals every 2-5 minutes
2. Ensure adequate IV/IO access (consider two lines)
 - a. Consider 500-1000 mL NS IV bolus, or pressor support if hypotensive.
3. Consider definitive airway (ET tube or SGA)
4. **Obtain post ROSC 12-lead ECG**
5. Contact Medical Control to discuss case details and confirm appropriate transport



ROSC is confirmed after 10 minutes:

- Transport to most appropriate facility discussed with Medical Control
- If lost ROSC, begin HP-CPR at Step 1 again

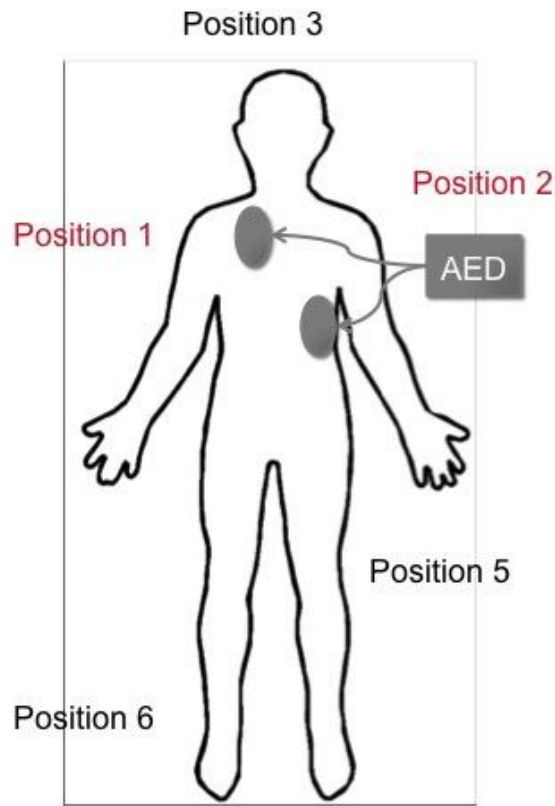


DOCUMENTATION:

1. Ensure your documentation of meds given, doses and timing are correct
2. Send patient NAME and DOB to Dr. Tekippe within 24 hours of the call, as well as run number and date of service for case follow up
 - a. Email: Jenarah.tekippe@confluencehealth.org (secure/encrypted)
 - b. OR call cell # 801-891-5715 and leave a message with the information

Pit Crew Positions:

Position 4



- **Position 1 (Chest Master)**

To patient's right side

Assess responsiveness/pulses and begin CPR immediately

Responsible for adequate and high quality compressions

- **Position 2 (AED Operator)**

Applies AED pads immediately

Operates AED after every 2 minute cycle of compressions

Keeps track of time

Attends to airway with 1 ventilation per 10 compressions if position 3 is not available

- **Position 3 (Airway Master)**

Assembles and applies all equipment for airway and ventilations

Applies BVM and/or places ETT or SGD

Responsible for ventilations 1 per every 10 compressions

Rotates with position 1 and 2

- **Position 4 (Code Commander)**

Outside of the "triangle of 1-3"

Team Leader Duties, oversees resuscitation and takes over timer duties

Makes decisions regarding medications and ongoing treatments

Contacts medical control as needed

- **Position 5 (Intervention Paramedic)**

Initiates IV/IO access

Administers medications called for by the code commander

Rotates in with positions 1,2 & 3 as needed

- **Position 6 (The Code Extra)**

Assist and rotate with positions 1, 2, 3 and 5