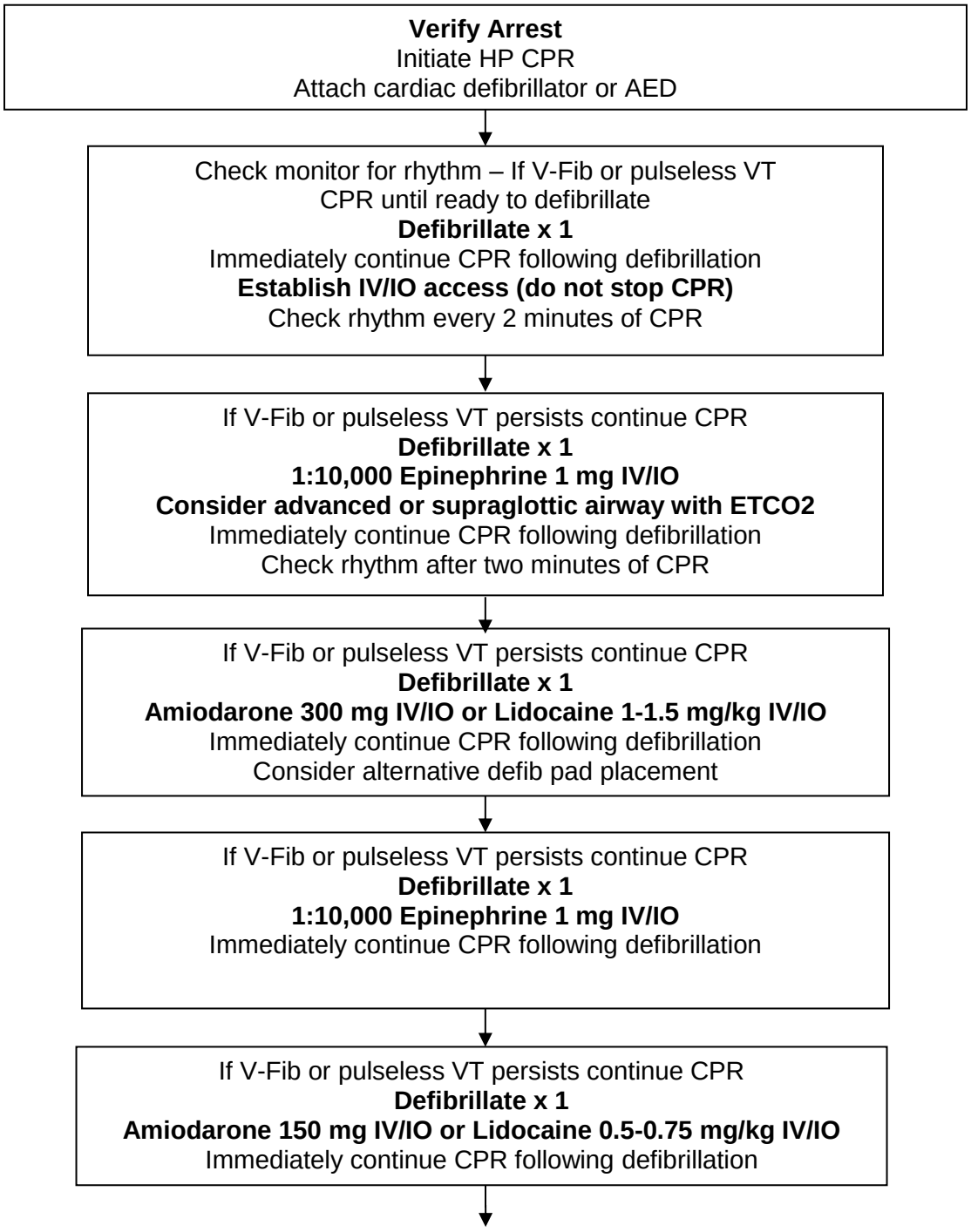
# Cardiac Arrest (V-Fib / Pulseless VT) – 10.053

**TREATMENT:**
Flow of algorithm presumes that the initial rhythm is continuing. If a rhythm change occurs begin the appropriate algorithm. Interruptions to CPR should be avoided. When necessary they should be less than 10 seconds. Follow manufacturer's recommendations for defibrillation settings:



# Cardiac Arrest (V-Fib / Pulseless VT) – 10.053

If V-Fib or pulseless VT persists continue CPR
**Defibrillate x 1**
**1:10,000 Epinephrine 1 mg IV/IO**
Immediately continue CPR following defibrillation

**Consider potential reversible causes:**
Hypoxia, Hypovolemia, Hydrogen Ion (acidosis), Hyperkalemia/ Hypokalemia, Hyperthermia, Toxins Cardiac Tamponade, Tension pneumothorax, Thrombosis (coronary, pulmonary)

**NOTES & PRECAUTIONS:**

A. If the initial rhythm is Torsades de Pointes, give **Magnesium Sulfate 1-2 grams IV/IO**.
B. After successful resuscitation, antiarrhythmic therapy should be administered only as needed to treat ongoing arrhythmias.
    1. If administering Amiodarone as an antiarrhythmic, be cautious with any of the following:
        a. Systolic BP is less than 90 mmHg
        b. Heart rate is less than 50 beats per minute
        c. Periods of sinus arrest are present
        d. Any AV block is present
    2. May consider Lidocaine infusion during EMS transport.
C. Sodium Bicarbonate is not recommended for the routine cardiac arrest sequence, but should be used early in cardiac arrest of known cyclic antidepressant overdose or in patients with hyperkalemia. It may also be considered after prolonged arrest. If used, administer **Sodium Bicarb 1 mEq/kg IV/IO**. It can be repeated at 0.5 mEq/kg every 10 minutes.
D. Continued Epinephrine use after 3 rounds of Epi administration should have a prolonged administration interval (8-10 minute interval instead of 3-5 minutes).
E. Studies have shown no superiority of ET vs Supraglottic airways for survival rates.
F. Transport all post ROSC patients of suspected cardiac nature to SCMC-Bend unless patient needs to be stabilized immediately or not enough resources are available. If post ROSC 12-lead shows STEMI, **DO NOT** activate HEART 1; inform SCMC-Bend ED via HEAR or phone.
G. *Upon agency specific supervising physician approval AND appropriate training, agencies may consider changing pad placement to the AP location and/or utilize double sequential defibrillation for persistent VF refractory to standard defibrillation attempts.

PEDIATRIC PATIENTS:
Follow adult algorithm flow. Use the following dosing:

Defibrillation:

1. First shock 2 j/kg.
2. Second shock 4 j/kg, subsequent doses ≥ 4 j/kg up to maximum of 10j/kg or adult dose.

Drugs:

1. **Epinephrine**
   a) 1:10,000 – 0.01 mg/kg IV/IO
   b) 1:1,000 – 0.1 mg/kg ET in 4 cc Normal Saline. (ET Epinephrine in pediatric patients should be considered a last resort after attempts at IV/IO have failed)
2. **Amiodarone** – 5 mg/kg IV/IO. May repeat twice prn. OR
3. **Lidocaine** – 1 mg/kg IV/IO. May repeat once. Post ROSC, may consider prophylactic infusion at 20-50 mcg/kg/min during EMS transport.