

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:

Verify Arrest
Initiate HP CPR
Attach cardiac defibrillator or AED
In suspected opioid overdose, administer **naloxone**, but do not delay chest compressions or shocks.

Check monitor for rhythm – If V-Fib or pulseless VT
CPR until ready to defibrillate
Defibrillate x 1 (200 J biphasic or 360 J monophasic)
Immediately continue CPR following defibrillation
Establish IV/IO access (do not stop CPR)
Check rhythm every 2 minutes of CPR

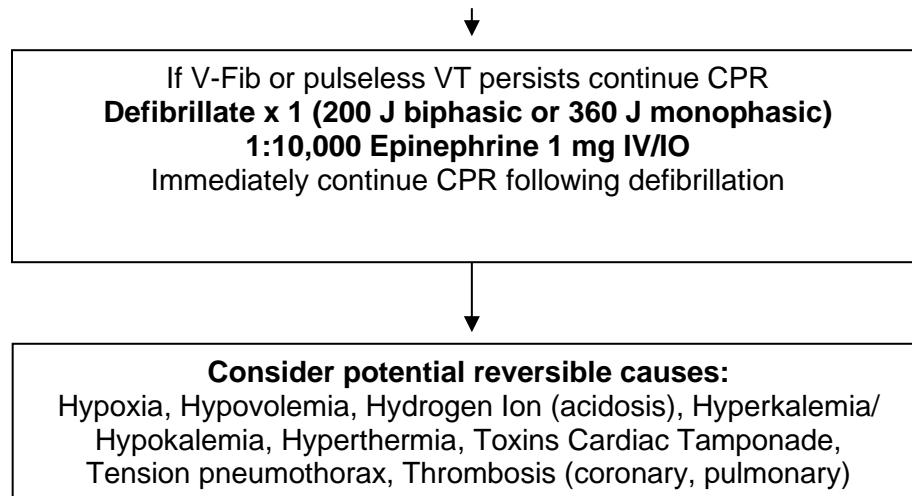
If V-Fib or pulseless VT persists continue CPR
Defibrillate x 1 (200 J biphasic or 360 J monophasic)
1:10,000 Epinephrine 1 mg IV/IO
Consider advanced or supraglottic airway with ETCO₂
Immediately continue CPR following defibrillation
Check rhythm after two minutes of CPR

If V-Fib or pulseless VT persists continue CPR
Defibrillate x 1 (200 J biphasic or 360 J monophasic)
Amiodarone 300 mg IV/IO or Lidocaine 1-1.5 mg/kg IV/IO
Immediately continue CPR following defibrillation
Establish alternative defib pad placement

If V-Fib or pulseless VT persists continue CPR
Reposition defib pads (anterior-posterior <-> anterior-lateral)
Defibrillate x 1 (200 J biphasic or 360 J monophasic)
1:10,000 Epinephrine 1 mg IV/IO
Immediately continue CPR following defibrillation

If V-Fib or pulseless VT persists continue CPR
Defibrillate x 1 (200 J biphasic or 360 J monophasic)
Amiodarone 150 mg IV/IO or Lidocaine 0.5-0.75 mg/kg IV/IO
Immediately continue CPR following defibrillation

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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. 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, inform SCMC-Bend ED via HEAR or phone.

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PEDIATRIC PATIENTS:

Follow adult algorithm flow. Obtain CBG.

Use the following dosing:

Defibrillation:

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

Drugs:

1. **Epinephrine** (1:10,000) – 0.01 mg/kg IV/IO
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.