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

Check monitor for rhythm – If V-Fib or pulseless VT CPR until ready to defibrillate

Defibrillate x 1

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

1:10,000 Epinephrine 1 mg IV/IO

Consider advanced airway or i-Gel with ETCO2

Immediately continue CPR following defibrillation

If V-Fib or pulseless VT persists continue $\ensuremath{\mathsf{CPR}}$

Defibrillate x 1

Amiodarone 300 mg IV/IO or Lidocaine 1-1.5 mg/kg IV/IO

Immediately continue CPR following defibrillation Consider alternative defib pad placement

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

If V-Fib or pulseless VT persists continue CPR

Defibrillate x 1

Amiodarone 150 mg IV/IO or Lidocaine 0.5-.75mg/kg every 5-10 minutes up to 3mg/kg Immediately continue CPR following defibrillation

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 in 10 ml NS IV/IO over 1-2 minutes.
- B. After successful resuscitation, antiarrhythmic therapy (Lidocaine/Amiodarone) 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
- 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. 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, <u>DO NOT</u> activate HEART 1; inform SCMC-Bend ED via HEAR or phone.
- F. *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.

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

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 \geq 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 once with 2.5 mg/kg IV/IO.
- 3. **Lidocaine** Follow adult dosing.