

**REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Basic**

Procedure: Defibrillation

Overview: Defibrillation is the delivery of electrical current through the chest wall to terminate VF and pulseless VT. The shock is intended to stop the heart so that a normal rhythm may resume. The most frequent initial rhythm in sudden cardiac arrest is VF and the most effective management for VF is electrical defibrillation. The probability of successful defibrillation diminishes rapidly over time as VF tends to convert to asystole within a few minutes.

INFORMATION NEEDED

- Initial Assessment
- Type of AED used

OBJECTIVE FINDINGS

- Patient with no signs of circulation
- An AED giving a “shock indicated” prompt

PROCEDURE

- Place the patient in a safe environment, away from pooled water or metal surface under either patient or rescuer
- Assess patient for signs of circulation
- Remove any transdermal medication patches
- Attach AED
- Clear / analyze
- If AED advises to shock
- Call “Clear!” and visually confirms area is clear before delivering shock
- Shock 3 times as prompted by AED
- If defibrillation fails, continue with the management algorithm

Documentation of adherence to protocol:

- Time of each shock

Medical Control Contact Criteria

- Use of AED on patients under 1 year of age

PRECAUTIONS AND COMMENTS

- On Pediatric patients age 1 to 8 years of age an AED with pediatric pads are preferred. If this is not available adult pads may be used.

**REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Paramedic**

Procedure: Defibrillation

Overview: Defibrillation is the delivery of electrical current through the chest wall to terminate VF and pulseless VT. The shock is intended to depolarize a large mass of myocardial cells at once. If about 75% of these cells are in the resting state (depolarized) after the shock is delivered, a normal pacemaker may resume discharging. The most frequent initial rhythm in sudden cardiac arrest is VF and the most effective management for VF is electrical defibrillation. The probability of successful defibrillation diminishes rapidly over time as VF tends to convert to asystole within a few minutes.

INFORMATION NEEDED

- Initial Assessment
- Type of monitor / defibrillator used

OBJECTIVE FINDINGS

- Patient with no signs of circulation
- Rhythm of VF or VT

PROCEDURE

- Place the patient in a safe environment, away from pooled water or metal surface under either patient or rescuer
- Assess patient for signs of circulation
- Attach monitor
- Identifies VF or VT
- Remove any transdermal medication patches
- Apply appropriate conductive materials to hand-held paddles or use monitor-defibrillator pads
 - If hand-held paddle electrodes are used, apply firm pressure (25 pounds) on each
 - Be sure there is no smearing of coupling material between the paddles, or the current may preferentially follow this low-resistance pathway along the chest wall, “missing” the heart
- Calls “Clear!” and visually confirms area is clear before delivering shock
 - If ventilation via a bag-mask device or endotracheal tube is being performed, the rescuer should step back and momentarily release the bag
- Charge and shock at 200 J, 300 J, 360 J or equivalent biphasic, rechecking monitor for VF / VT before each shock. Progressive pediatric patient energy is 2 J / Kg; 4 J / Kg; 4 J / Kg
- If defibrillation fails, continue with the management algorithm

Documentation of adherence to protocol:

- Time of each shock
- Energy of each shock

PRECAUTIONS AND COMMENTS

- For equivalent biphasic energy check manufactures recommendations
- ECC artifact may look like VF
- An Intermediate or Paramedic using an AED, should follow AED prompts

7/04

Reviewed:

Revised:

EMS/ Region1 SMOs