



Bend Fire & Rescue

EMS Performance Standards

Synchronized Cardioversion – 3.4.2

Performance Objective

- To improve cardiac output and tissue perfusion through the termination of unstable tachycardia.

Equipment Needed

- PPE
- Cardiac Monitor / Defibrillator
- ECG Electrodes
- Defibrillation Pads (adult / peds)
- Sedative

Procedure

- Take or verbalize appropriate body substance isolation precautions.
 - Examples: gloves, goggles, mask, gown, etc.
- Evaluate airway / breathing / circulation and determine patient is hemodynamically unstable.
 - Altered mental status
 - Hypotension
 - Chest pain
- Place ECG leads on patient for cardiac monitoring and confirm tachycardia is present.
 - Heart rate greater than 150 in adults
 - Heart rate greater than 180 in children
 - Heart rate greater than 220 in infants
 - *Note: Confirm underlying causes of dysrhythmia have been considered and reversible causes treated.
- Prepare equipment for cardioversion and consider medications for treatment and/or sedation.
 - Do not delay cardioversion in an unstable patient presenting with signs / symptoms of poor perfusion.
- Locate appropriate anatomical location and apply defibrillator pads firmly on patient's skin.
- Place cardiac monitor / defibrillator in "DEFIB" mode and press "SYNC On/Off" button.
 - *Note: If delays in synchronization occur and clinical conditions are critical, go to immediate unsynchronized shocks (treat polymorphic V-Tach like V-Fib).
- Confirm monitor is synced with "R" wave, indicated by an arrow at top of screen matching each QRS.
- Select appropriate energy setting.
 - Adults**
 - 100J, 200J, 300J, 360J – monophasic
 - 100J, 120J, 150J – biphasic
 - Start with higher energy level when treating atrial fibrillation (120J).
 - PSVT and atrial flutter often respond to lower energy levels (50J).
 - Pediatrics**
 - 0.5-1 J/kg, 2 J/kg
- CLEAR** patient and press "SHOCK" button to deliver synchronized shock.
 - *Note: May need to hold "SHOCK" while monitor syncs.
- Immediately reassess patient.
 - *Note: Possible need to re-sync after each cardioversion.