**Ventricular Fibrillation**

**Pulseless Ventricular Tachycardia**

**History**
- Estimated down time
- Past Medical History
- Medications
- Events leading to arrest
- Renal failure / Dialysis
- DNR or MOST form

**Signs and Symptoms**
- Unresponsive, apneic, pulseless
- Ventricular fibrillation or ventricular tachycardia on EKG

**Differential**
- Asystole
- Artifact / Device Failure
- Cardiac
- Endocrine / Medicine
- Drugs
- Pulmonary

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**Cardiac Arrest Protocol**

- Defibrillate 200 J

**Cardiac Arrest Protocol**

- Begin Continuous CPR Compressions
  - Push Hard (≥ 2 inches) Push Fast (≥ 100 / min)
  - Change Compressors every 2 minutes
  - (Limit changes / pulses checks ≤ 10 seconds)

**Airway Protocol(s)**
- OPA/BVM, King Airway, ETCO2, ResQPod

**IV Procedure**
- Epinephrine (1:10,000) 1 mg IV / IO
  - Repeat every 3 to 5 minutes
  - Or
  - Vasopressin 40 units IV / IO
  - May replace first or second dose of epinephrine

- Defibrillate 200 J

**IV Procedure**
- Amiodarone 1 mg/min IV / IO
  - if rhythm converts

**IO Procedure**
- Amiodarone 300 mg IV / IO
  - May repeat at 150 mg IV / IO
  - if no response
  - Defibrillate 200 J

**IO Procedure**
- Lidocaine 1.5 mg/kg IV / IO
  - May repeat ½ initial dose in no response
  - Defibrillate 200 J

**Return of Spontaneous Circulation**
- Consider Discontinuation of Resuscitation Policy

**Notify Destination or Contact Medical Control**

**Dialysis / Renal Failure Protocol if indicated**

**Tosades de points**
- Low Magnesium States
  - (Malnourished / alcoholic)
- Suspected Digitalis Toxicity

**Consider**
- Magnesium Sulfate 2g IV / IO
  - over 2 minutes

**Intra-Arrest Hypothermia**

**Exit to Post Resuscitation Protocol**

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**Protocol 16**

This protocol has been altered from the original 2012 NCCEP Protocol by the Johnston County EMS System Medical Director
Pearls

- **Recommended Exam: Mental Status**
- Efforts should be directed at high quality and continuous compressions with limited interruptions and early defibrillation when indicated. Consider early IO placement if available and difficult IV anticipated.
- **DO NOT HYPERVENTILATE:** If no advanced airway (BIAD, ETT) compressions to ventilations are 30:2. If advanced airway in place ventilate 8 – 10 breaths per minute with continuous, uninterrupted compressions.
- Do not interrupt compressions to place endotracheal tube. Consider BIAD first to limit interruptions.
- Breathing / Airway management after second shock and / or 2 rounds of compressions (2 minutes each round.)
- Avoid Procainamide in CHF or prolonged QT.
- Effective CPR and prompt defibrillation are the keys to successful resuscitation.
- If no IV / IO, drugs that can be given down ET tube should have dose doubled and then flushed with 5 ml of Normal Saline followed by 5 quick ventilations. IV / IO is the preferred route when available.
- Reassess and document endotracheal tube placement and EtCO2 frequently, after every move, and at transfer of care.
- Do not stop CPR to check for placement of ET tube or to give medications.
- If BVM is ventilating the patient successfully, intubation should be deferred until rhythm has changed or 4 or 5 defibrillation sequences have been completed.
- Return of spontaneous circulation: Heart rate should be > 60 when initiating anti-arrhythmic infusions.
- Sodium bicarbonate no longer recommended. Consider in the dialysis / renal patient, known hyperkalemia or tricyclic overdose at 50 mEq total IV / IO.
- Follow manufacture’s recommendations concerning defibrillation / cardioversion energy when specified.