Ventricular Fibrillation
Pulseless Vent. Tachycardia

**History**
- Estimated down time
- Past medical history
- Medications
- Events leading to arrest
- Renal failure / dialysis
- DNR or living will

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

**Differential**
- Asystole
- Artifact / Device failure
- Cardiac
- Endocrine / Metabolic
- Drugs
- Pulmonary

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**Defibrillate X 1**
- If monophasic shock at 360 J
- Manual Biphasic typically 120 to 200 J
- After defibrillation resume CPR without pulse check

**Airway Protocol**
- Ventilations should be < 12/min

**5 cycles of CPR**

**Check Rhythm and pulse**

**Defibrillate X 1**
- If monophasic shock at 360 J
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- After defibrillation resume CPR without pulse check

**Epinephrine**
- 1 mg IV/OI repeat every 3-5 minutes
- May give Vasopressin 40 U IV/OI to replace 1st or 2nd dose of Epinephrine

**After 5 cycles of CPR check rhythm and pulse**

**Repeat Defibrillation**
- Consider Amiodarone or Lidocaine
- Amiodarone 1st dose is 300 mg and may be repeated once at 150 mg.
- First dose of Lidocaine is 1.5 mg/kg and may be repeated twice at 0.75.

**Continue CPR**
- After 5 cycles of CPR check rhythm and pulse

**Criteria for Discontinuation?**
- Yes → Discontinue Resuscitation
- No → Repeat Defibrillation

**Pearls**
- **Recommended Exam: Mental Status**
- If no IV, drugs that can be given down ET tube should have dose doubled and then flushed with 5 ml of Normal Saline. IV/OI is the preferred route when available.
- Reassess and document endotracheal tube placement and ETCO2 frequently, after every move, and at transfer of care.
- Calcium and sodium bicarbonate if hyperkalemia is suspected (renal failure, dialysis).
- Treatment priorities are: uninterrupted chest compressions, defibrillation, then IV access and airway control.
- Polymorphic V-Tach (Torsades de Pointes) may benefit from administration of magnesium sulfate if available.
- Do not stop CPR to check for placement of ET tube or to give medicines.
- If arrest not witnessed by EMS then 5 cycles of CPR prior to 1st defibrillation.
- Effective CPR and prompt defibrillation are the keys to successful resuscitation.
- If BVM is ventilating the patient successfully, intubation should be deferred until rhythm has changed or 4 or 5 defibrillation sequences have been completed.