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**

Legend		
	MR	
B	EMT	B
I	EMT- I	I
P	EMT- P	P
M	Medical Control	M

Cardiac Arrest Protocol

B — **Defibrillate X 1**
- If monophasic shock at 360 J
- Manual Biphasic typically 120 to 200 J

After defibrillation resume CPR without pulse check **B**

Airway protocol
Ventilations should be < 12/min

5 cycles of **CPR**

I — **IV Protocol** **I**

Check Rhythm and pulse

B — **Defibrillate X 1**
- If monophasic shock at 360 J
- Manual Biphasic typically 120 to 200 J

After defibrillation resume CPR without pulse check **B**

I — **Epinephrine** 1 mg IV/IO repeat every 3-5 minutes **I**

I — May give **Vasopressin** 40 U IV/IO to replace 1st or 2nd dose of **Epinephrine** **I**

After 5 cycles of CPR check rhythm and pulse

B — Repeat **Defibrillation** **B**

P — 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.

P

Continue **CPR**

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

No pulse

Criteria for Discontinuation?

No → **M** Notify Destination Or Contact MC **M** → (back to **B** Defibrillate X 1)

Yes → **Discontinue Resuscitation**

AT ANY TIME

Rhythm Changes to Nonshockable Rhythm

Go to appropriate protocol

AT ANY TIME

Return of Spontaneous Circulation

Go to Post Resuscitation Protocol

Medical Protocols

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/IO 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: uninterupted 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.

Any local EMS System changes to this document must follow the NC OEMS Protocol Change Policy and be approved by OEMS