V-Fib/Pulseless V-Tach
For non-traumatic cardiac arrest in which any resuscitation is initiated, NOT dead on arrival

History
• Events leading to arrest
• Estimated downtime
• Prior resuscitation attempts
• Past medical history
• Medications
• Known terminal illness

Signs and Symptoms
• Pulseless
• Apneic

Differential
• Medical vs. trauma
• VF vs. pulseless VT
• Asystole
• PEA
• Primary cardiac event vs. respiratory arrest or drug overdose

Enter from Cardiac Arrest

AT ANY TIME
Return of spontaneous circulation
Go to Post Resuscitation

Defibrillation 200J
Resume high quality chest compressions every 2 minutes (Limit changes/pulses checks < 5 seconds)
Establish IV/IO

Defibrillation 300J
Resume high quality chest compressions every 2 minutes (Limit changes/pulses checks < 5 seconds)
Epinephrine (1:10,000)

Defibrillation 360J
Resume high quality chest compressions every 2 minutes (Limit changes/pulses checks < 5 seconds)
If V-Fib/Pulseless V-Tach is refractory after 3 shocks
Continue high performance CPR and give medications during compressions
Lidocaine

Persistent V-Fib/V-Tach

ECMO

Cardiac Arrest

Notify receiving facility. Consider Base Hospital for medical direction

Yes

Return of spontaneous circulation?

No

Yes

Post Resuscitation

Consider early Base Hospital contact for transport decision for witnessed arrest with strong suspicion of pulmonary embolism or witnessed V. Fib arrest resistant to three (3) shocks – ECMO Trial? Within Mills-Peninsula catchment area? If so, then proceed.
Pearls

- For defibrillation or cardioversion, follow manufacturers recommendations.
- Efforts should be directed at high quality and continuous chest compressions with limited interruptions and early defibrillation when indicated. Consider early IO placement if available or direct IV access if anticipated.
- Assemble BVM with EtCO$_2$ and deliver ventilation with every 10$^{th}$ compression on the upstroke.
- Placement of an advanced airway should be deferred unless a provider is unable to ventilate the patient with a BLS airway and BVM.
- Use a metronome during chest compression to ensure proper rate.
- Provide resuscitative efforts on scene for 30 minutes to maximize chance of ROSC.
- Epinephrine in doses of greater than 3 mg has been shown to be detrimental to patient outcome.
- If resuscitative efforts do not attain ROSC, consider cessation of efforts per Operations 10 – Determination of Death.
- Do not interrupt chest compressions to place ETT.
- Consider breathing and airway management after second shock or two (2) rounds of chest compression (2 minutes each round).
- Effective chest compressions and prompt defibrillation are the keys to successful resuscitation.
- Reassess and document ETT placement and EtCO$_2$ frequently, after every move, and at transfer of care.
- Do not stop chest compressions to check for placement of ETT or to give medications.
- If the use of a BVM is ventilating the patient successfully, intubation should be deferred.
- In the setting of renal failure, dialysis, suspected DKA or hyperkalemia, calcium chloride followed by sodium bicarbonate shall be administered.