San Mateo County Emergency Medical Services

Refractory V-Fib/Pulseless V-Tach
Mills Peninsula Pilot Program

**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

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**Enter from Cardiac Arrest**

**V-Fib or pulseless V-Tach**

**Defibrillation 200J**
- Resume high quality chest compressions every 2 minutes
- Change compressors every 2 minutes
- Establish IV/IO

**Defibrillation 300J**
- Resume high quality chest compressions every 2 minutes
- Change compressors every 2 minutes
- Epinephrine (1:10,000)

**Defibrillation 360J**
- Resume high quality chest compressions every 2 minutes
- Change compressors every 2 minutes
- Lifecore CPR device applied
- Continue ACLS (limit 3 mg Epi), defibrillation PRN in route

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**Consider Criteria for EMS Transport for Emergent ECMO:**
- 18 – 75 years of age
- Body morphology able to accommodate automatic CPR device
- Mills-Pen as receiving facility

**After Second Shock:**
- Notify on-call Shock Physician
- (650) 988-5500
- Mechanical CPR device applied
- Continue ACLS (limit 3 mg Epi), defibrillation PRN in route

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**INFORMATION FOR ON-CALL SHOCK CONTACT**

Witnessed or unwitnessed?
Bystander CPR or no bystander CPR?
Downtime?
Age?
ROSC at any time?
Trauma?
Co-morbidities?
Body size (ok for LUCAS device?)

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**Return of spontaneous circulation?**
- Yes
  - Persistent V. fib/V-tach
  - AND phone call made
  - Go to Post Resuscitation TP
  - Cardiac Arrest

- No
  - If in Mills-Peninsula catchment area, begin transport to Mills Peninsula Hospital (Go to Pg. 2)
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On-Call Shock Doc
- Receives call from field crew to activate SHOCK Team: Interventional Cardiologist, Cath Lab Team, IR Tech, Echo Tech, Perfusionist, Operator
- Operator Notifies: House Supervisor, Admitting for pre-registration

Patient arrival

Cath Lab ready?

Yes

Direct to Cardiac Cath Lab
- Arterial and venous access under US
- Measure ABG and serum lactate

Cath Lab Initial Assessment:
- Determine CCL resuscitation discontinuation criteria:
  - ET CO\(_2\) < 10 mmHg
  - PA O\(_2\) < 50 mmHg
  - Serum Lactate > 18 mmol/L

*If ≥ 1 criteria met and NO ROSC — declare patient dead

ROSC present?

No

- 21F Venous + 16F arterial cannulas in opposite groins
- Initiate ECMO

Yes

- Immediate coronary angiogram
- Hemodynamic support as needed