San Mateo County Emergency Medical Services
Cardiac Arrest - Non-traumatic

History
- Code status (DNR or POLST)
- Events leading to arrest
- Estimated downtime
- History of current illness
- Past medical history
- Medications
- Existence of terminal illness

Signs and Symptoms
- Unresponsive
- Apneic
- Pulseless

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

Decomposition
Rigor mortis
Do not begin resuscitation
Follow Operations 10 – Determination of Death

Exit to Obvious Death

Criteria for death/no resuscitation
Review DNR/POLST form

begin continuous chest compressions
Push hard (> 2 inches) and fast (110/min)
Use metronome to ensure proper rate
Change compressors every 2 minutes
(Limit changes/pulse checks to < 5 seconds)

Mechanical Device Field Procedure if available

ALS available?

Apply AED if available

Shockable rhythm?

Yes

Cardiac monitor
EtCO₂ monitoring

Shockable rhythm?

Yes

Exit to Asystole/PEA and Airway Field Procedure if indicated

Within Mills-Peninsula catchment area

Exit to ECMO if indicated

No

Suspected traumatic arrest?

Yes

Exit to Traumatic Arrest

No

Continue CPR 2 minutes
Repeat and assess

Exit to Airway Field Procedure

Notify receiving facility.
Consider Base Hospital for medical direction

AT ANY TIME
Return of spontaneous circulation
Go to Post Resuscitation TP

Shockable rhythm?

Yes

Exit to Asystole/PEA and Airway Field Procedure if indicated

Within Mills-Peninsula catchment area

Exit to ECMO if indicated

No

Begin continuous chest compressions
Repeat and assess

Exit to Airway Field Procedure

Effective November 2018
Treatment Protocol CA01
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Effective March 2019
Within Mills-Peninsula catchment area
Pearls

- Move patient to floor in an area where a 5-person crew have adequate space, and begin compressions.
- Efforts should be directed at high quality and continuous chest compressions with limited interruptions. Consider early IO placement if available or direct IV access if anticipated.
- Use pediatric BVM with EtCO2 and deliver ventilation with every 10th 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.
- Do not delay chest compressions while applying any device or intervention.
- Use a metronome during chest compression to ensure proper rate.
- In cases of obvious traumatic arrest with PEA or asystole, epinephrine is not indicated. Epinephrine will not correct arrest caused by a tension pneumothorax, cardiac tamponade, or hemorrhagic shock. If there is any doubt as to the cause of arrest, treat as a non-traumatic arrest.
- Provide resuscitative efforts on scene for 30 minutes to maximize chance of ROSC.
- If resuscitative efforts do not attain ROSC, consider cessation of efforts per Operations 10 – Determination of Death and Procedure 27 – High Performance CPR.
- Do not interrupt chest compressions to place ETT.
- Airway preferred 1) Video Laryngoscopy, 2) Direct Laryngoscopy, 3) Continued BVM, 4) King Airway
- See Cardiac Arrest Management Utilizing High Performance CPR Triangle of Life Procedure for High Performance CPR outline. (Procedure 27)
- Resuscitation is based on proper planning and organized execution. Procedures require space and patient access. Make room to work. Utilize a team focused approach assigning responders to predetermined tasks.
- Reassess and document ETT placement and EtCO2 frequently, after every move, and at transfer of care.
- Maternal arrest: Treat mother per appropriate TP with immediate notification to the Base Hospital along with rapid transport. Manually displace fetus from inferior vena cava to ensure continued fetal blood circulation by pushing the uterus to the left. Defibrillation is safe at all energy levels.
- Defibrillation vests should be removed by EMS personnel before compressions, but do not cut vests. Once removed, disengage battery to prevent alarming.