## Cardiac Arrest - Non-traumatic

For non-traumatic cardiac arrest in which any resuscitation is initiated, NOT dead on arrival

## History Signs and Symptoms Differential · Code status (DNR or POLST) • Unresponsive Medical vs. trauma · Events leading to arrest Apneic VF vs. pulseless VT · Estimated downtime Pulseless Asystole · History of current illness PFA · Past medical history • Primary cardiac event vs. respiratory arrest or drug • Medications Existence of terminal illness Criteria for death/no resuscitation **AT ANY TIME** Decomposition or rigor mortis Yes Review DNR/POLST form Do not begin resuscitation **Return of spontaneous** No circulation No bystander CPR; and unwitnessed arrest; and If arrest occurred in cold water or asystole hypothermia is suspected, aggressively rewarm patient Go to Post Resuscitation Do not begin resuscitation during resuscitation (see pearls) Remove wet clothing and cover with warm dry Approved sheets or blankets; apply heat packs to axilla **STEMI Receiving Centers** and groin Obvious Death Begin continuous chest compressions **Stanford Health Care** Push hard (> 2 inches) and fast (110/min) **Kaiser Redwood City** No Use metronome to ensure proper rate Seguoia Medical Center Change compressors every 2 minutes Mills-Peninsula Medical Center (Limit changes/pulse checks to < 5 seconds) Seton Medical Center Suspected traumatic arrest? For suspected narcotic overdose. Naloxone Yes **Mechanical Device Field Traumatic Arrest** Procedure if available ALS available? Yes No Apply AED if available Cardiac monitor EtCO2 monitoring Shockable rhythm? Shockable rhythm? No No Continue CPR Automated defibrillation 2 minutes Repeat and assess Asystole/PEA VF/VT and Continue CPR and Airway Field **Airway Field** 2 minutes Repeat and assess **Procedure Procedure** Νo if indicated if indicated **Airway Field Procedure** Return of spontaneous circulation? Notify receiving facility. Yes **Consider Base Hospital** for medical direction Post Resuscitation



Treatment Protocol CA01

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## **Pearls**

- COLD WATER DEFINITION: Any open body of water or unheated swimming pool/spa.
- If arrest occurred in cold water or hypothermia is suspected, check for pulselessness for 30-45 seconds to avoid unnecessary chest compressions. Defer ACLS medications until patient is warmed.
- Hypothermic cardiac arrest patients who do not meet obvious death criteria listed in CA05 Obvious Death may
  have good neurologic outcomes despite lengthy resuscitation. Transport should be initiated early and resuscitative
  efforts should continue until patient is warmed. Place hot packs on groin and in axilla bilaterally, apply blankets, and
  activate heater in the patient compartment of the ambulance.
- If cardiac arrest occurs during transport, divert to the nearest approved STEMI Receiving Center.
- 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 minimal interruptions.
- IV access, including EJ, must be attempted. If unsuccessful, then attempt IO.
- Use pediatric BVM with EtCO<sub>2</sub> and ventilate at a rate of 10 ventilations per minute delivered on compression 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 Policy 507 Determination of Death.
- Do not interrupt chest compressions to place advanced airway.
- Advanced airway preference: 1) Video Laryngoscopy, 2) Direct Laryngoscopy, 3) i-gel.
- 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 EtCO<sub>2</sub> frequently, after every move, and at transfer of care.
- Maternal arrest: Treat mother per appropriate protocol 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.

