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

AT ANY TIME
Return of spontaneous circulation
Go to Post Resuscitation

Criteria for death/no resuscitation
Review DNR/POLST form

If arrest occurred in cold water or hypothermia is suspected, aggressively rewarm patient during resuscitation (see pearls)

Remove wet clothing and cover with warm dry sheets or blankets; apply heat packs to axilla and groin

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)

For suspected narcotic overdose, Naloxone

Mechanical Device Field Procedure if available

Obvious Death

Decomposition or rigor mortis
Do not begin resuscitation

No bystander CPR; and unwitnessed arrest; and asystole
Do not begin resuscitation

Suspected traumatic arrest?

Yes
Traumatic Arrest

No

ALS available?

Yes

No

Cardiac monitor
EtCO₂ monitoring

Shockable rhythm?

Yes

No

Continue CPR 2 minutes
Repeat and assess

Apply AED if available

Asystole/PEA
and Airway Field Procedure
if indicated

VF/VT and Airway Field Procedure
if indicated

Notify receiving facility. Consider Base Hospital for medical direction

Post Resuscitation

Return of spontaneous circulation?

Effective April 2024
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.

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 EtCO₂ and deliver ventilation with every 6th 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 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 EtCO₂ 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.