Cardiac Arrest Management

	Applies to:
E	EMT
P	Paramedic

Clinical Indications:

Each and every out-of-hospital adult cardiac arrest (OHCA) which results in the activation of the EMS System shall be managed using CPR-Highly Defined (CPR-HD). CPR-HD is the expected standard of care for cardiac arrest in Contra Costa County.

Purpose:

The purpose of CPR-HD is to provide a structured, standardized and choreographed approach to cardiac arrest management. The CPR-HD 'Script' is time driven and serves as the 'CODE' leader.

Principles:

1. 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.
2. The unit first on scene shall establish and follow the CPR-HD Script. Efforts should be dispensed to ensure adequate timekeeping occurs throughout the resuscitation.
3. Cardiac arrest management efforts should be directed at high quality and continuous chest compressions with limited interruptions. Our goal is to provide two (2) minutes of straight continuous compressions with a less than ten (<10) second pause.
4. In cardiac arrest, drugs are of limited usefulness. High quality compressions and defibrillation are far more important.
5. Conduct resuscitation with goal of preserving cerebral function through meticulous attention to procedure.
6. Passive ventilation for the first three cycles (6 minutes) of CPR. After that time, the patient should be ventilated using a BLS airway and BVM at a rate of 6 ventilations/minute (1:10 seconds) with continuous CPR. Placement of an advanced airway should be deferred unless a provider is unable to ventilate the patient with a BLS airway and BVM.
7. Once transport is deemed appropriate and the patient has experienced a return of spontaneous circulation (ROSC) at any time throughout the resuscitation; transport to a STEMI receiving Center.

Contra Costa County Emergency Medical Services

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Provider #1 (paramedic)	Time (mins)	Provider #2
Stopwatch/Full code Start high quality compressions	0-2	Apply pads Insert OPA with O_2 via NRB setup IV/IO supplies @1:45 charge defibrillator/AED
Shockable rhythm? DEFIBRILLATION		
NRB Establish IV/IO access @3:45 charge defibrillator/AED	2-4	Compressions
Shockable rhythm? DEFIBRILLATION		
Compressions	4-6	NRB @5:45 charge defibrillator/AED
Shockable rhythm? DEFIBRILLATION		
Epinephrine Begin PPV + $EtCO_2$ @ 6/min Consider Hs and Ts (hx/rx) Amiodarone 300mg* @7:45 charge defibrillator/AED	6-8	Compressions
Shockable rhythm? DEFIBRILLATION		
Compressions	8-10	PPV + $EtCO_2$ @ 6/min @9:45 charge defibrillator/AED
Shockable rhythm? DEFIBRILLATION***		
Epinephrine PPV + $EtCO_2$ @ 6/min Amiodarone 150mg* @11:45 charge defibrillator/AED	10-12	Compressions
Shockable rhythm? DEFIBRILLATION		
Compressions	12-14	PPV + $EtCO_2$ @ 6/min @13:45 charge defibrillator/AED

Do NOT place advanced airway unless unable to ventilate effectively with BVM

*Amiodarone is only indicated in shockable rhythms refractory to three (3) shocks

***Early transport to a SRC is indicated under the following circumstances:

- Witnessed arrest with suspicion of pulmonary embolism; or
- V-Fib arrest resistant to four (4) shocks (refractory V-Fib).

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Shockable rhythm? DEFIBRILLATION		
Epinephrine PPV + $EtCO_2$ @ 6/min @15:45 charge defibrillator/AED	14-16	Compressions
Shockable rhythm? DEFIBRILLATION		
Compressions	16-18	PPV + $EtCO_2$ @ 6/min @17:45 charge defibrillator/AED
Shockable rhythm? DEFIBRILLATION		
Epinephrine PPV + $EtCO_2$ @ 6/min @19:45 charge defibrillator/AED	18-20	Compressions
Shockable rhythm? DEFIBRILLATION		
Compressions	20-22	PPV + $EtCO_2$ @ 6/min @21:45 charge defibrillator/AED
Shockable rhythm? DEFIBRILLATION		
Epinephrine PPV + $EtCO_2$ @ 6/min @23:45 charge defibrillator/AED	22-24	Compressions
Shockable rhythm? DEFIBRILLATION* **		
Compressions	24-26	PPV + $EtCO_2$ @ 6/min @25:45 charge defibrillator/AED
Shockable rhythm? DEFIBRILLATION		
Epinephrine PPV + $EtCO_2$ @ 6/min @27:45 charge defibrillator/AED	26-28	Compressions
Shockable rhythm? DEFIBRILLATION* **		
Compressions	28-30	PPV + $EtCO_2$ @ 6/min @29:45 charge defibrillator/AED
Shockable rhythm? DEFIBRILLATION		
Termination of efforts: If non-shockable rhythm persists for 30 minutes despite resuscitative efforts, consider discontinuation of CPR	30	• Naloxone for suspected OD only • Sodium Bicarb or Calcium Chloride for renal failure or suspected hyperkalemia only

If indicated, contact the Base Hospital for order to terminate efforts

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