

¹Definition: Flat-line ECG with or without QRS complexes at rate <10/min. Remember that victims presenting with asystole and estimated downtime before CPR started of at least 10 min can be considered obvious deaths

²IM epinephrine dose necessary only if access not already established

³Performed to terminate possible fine VF

⁴Consider dextrose if hypoglycemic, bicarb if hyperkalemia strongly suspected



¹Definition: Any non-fibrillatory electrical activity with rate >10/min without palpable pulse

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¹Associated with higher survival in large, observational studies: PMID 28629995 and 29310869

²Intubation has been associated with worse outcomes in several randomized trials when compared to supraglottic

placement during cardiac arrest: PMID 29486039 and 30167701 and 30167699

³May give breaths asynchronously after ETT placement

Pulse Checks Current Rhythm is Organized and End-Tidal $CO_2 > 20 \text{ mmHg}$ No Pulse Detected Perform Carotid Pulse Check Are spontaneous SpO₂ pulsations present? **Pulse Detected** Yes No Monitor Closely and Transport* Does ETCO₂ maintain or fall Falls during 20 sec CPR pause with Resume CPR *Watch for loss of rhythm or Maintains regular ventilations? drop of End-Tidal $CO_2 < 20$ mmHg

Peri-Shock Pauses

Post-shock Pause up to 5 sec unless Pulse Check is indicated



Field Transport for ECMO Criteria

- Non-traumatic arrest
- Not due to hypoxia (strangulation, drowning, opioid overdose)
- □ Age 18-75
- U Witnessed Arrest
- CPR within 10 min of collapse
- Pulseless after 10 min of scene efforts
- □ Can get to UMC within 40 min of collapse
- No known history of organ failure (on dialysis, cirrhosis, heart failure, dementia)

ROSC

<u>Push Dose Epi</u> can be used as a bridge until Epi Drip is set up.

1 mL (10 mcg) every 1 to 5 min as needed to maintain SBP>100

To Make: Epinephrine (1:10,000) discard 9 mL from Bristojet, then replace volume with NS 9 mL

Epinephrine Drip (1:1000) 2–10 mcg/min IV/IO infusion for hypoperfusion. Titrate to maintain a SBP >100 mmHg.

4 mg Epi 1:1000 in 1000 mL NS at 30 gtt./min = 2 mcg/min

Field Termination Criteria

May terminate if duration of field efforts has elapsed and <u>all</u> of the following are present:

- □ Arrest not witnessed by EMS
- No shocks delivered for VF (shocking asystole does not apply)
- □ <u>No ROSC</u> at any time
- The patient does not currently have a pulse as defined by Pulseless Determination Criteria

Care Standards

SLCFD Cardiac Arrest Care Standards		NVAKE /
Incident Number:		
Receiving Hospital:		IN THE REAL PROPERTY AND A DECEMBER OF A DEC
Date of Service:		
	Performed	Comments
Dispatch As	sisted CPR	
Was the need for DACPR identified?		
Time from call receipt to recognition		
Were DACPR instructions provided?		
If instructions not given, reason?		
Defibrillation		
VF/VT shocked within 2 minutes		
Asystole empirically shocked		
Organized rhythm not shocked		
<10 sec preshock pause		
CPR Quality		
Rate of 110/min		
Depth 2-2.4 in		
Compression Fraction >80%		
Pauses <10 seconds		
Airv	vay	
30:2 comp:vent ratio until advanced airway		
BVM only if age<14		
End-tidal CO2		
No hyperventilation (<10 breaths/min)		
ITD used on all invasive airways		
Special Circ	umstances	
Limit Scene Time for: ECMO, pregnancy, hypothermia		
Medica	ations	
Antiarrhythmic for recurrent/refractory VF >3 shocks		
Glucose if hypoglycemic		
Bicarbonate only if suspected hyperkalemia		
RO	SC	
12 Lead ECG		
Transport to STEMI receiving center		
Maintain ETCO2 of 35-45 mmHg		
Termir	nation	
All criteria met: Not witnessed by EMS, no shock		
delivered (for VF/VT), no ROSC		
Called UUMC to review termination algorithm		
Appropriate duration of resuscitation: Asystole 30 min	,	
otherwise 40 min		



These increase intracranial pressure. Don't use in cardiac arrest

Loose enough to slide a finger under strap



How Often to Defibrillate

- <u>As soon as VF recurs</u>, charge the defibrillator and countdown to deliver another shock
- If can't determine underlying rhythm, check if shock advised at most every 2 minutes

LUCAS Device Placement Criteria

- Limited personnel for manual CPR
- Prolonged on-scene resuscitation attempts
- Transport with ongoing CPR





Highlights

- IM Epi to minimize delay of administration only necessary when venous access is not already available.
- 3 additional doses of epinephrine after venous access obtained. First dose ASAP. Epinephrine drip if responsive.
- 30:2 compression to ventilation ratio throughout resuscitation until ETT placed
- Provider discretion to use asynchronous ventilations after ETT placement
- DSD for refractory VF/VT