

NWC EMSS – CE Post-Test Study-Questions – May 2012 – Cardiac Arrest & Therapeutic Hypothermia

Clarification - If after ROSC pt is hypotensive:

- 1. Run IVF wide open – while preparing dopamine.**
- 2. Once dopamine ready – begin dopamine (no matter how much IVF has been administered).**
- 3. Once dopamine started – establish 2nd vascular access site (preferably large IV) for cold IVF.**

Resources to use when answering the following questions: (1) NWC EMSS SOP's, (2) CE handout – May 2012, (3) video on YouTube – NWCEMS - cardiac arrest team resuscitation - <http://www.youtube.com/watch?v=CZWgUHDO1f4&feature=plcp>

1. What should be assessed & documented every 2 minutes during CPR? A O ₂ sat & ETCO ₂ B ECG rhythm & ETCO ₂ C Pulse & respiratory rate D Pulse, RR, ECG, O ₂ sat, & ETCO ₂	2. Why should ECG rhythm be assessed every 2 minutes during CPR? A Determine need for atropine B Determine need for intubation C Determine need for epinephrine D Determine need for defibrillation	3. During CPR when should the pulse be checked? A Every 2 minutes B After every defibrillation C When VF is seen on ECG monitor D When an organized rhythm is seen
4. What is the significance of a sudden, dramatic ETCO ₂ increase during CPR? A Pt needs to be hyperventilated B Pt is unlikely to be resuscitated C May signal of impending ROSC D Pt is in need of a dose of bicarbonate	5. Why should ETCO ₂ be assessed every 2 minutes during CPR? A Determine need for atropine B Determine need for intubation C Measure effectiveness of CPR D Determine need for defibrillation	6. What is the significance of ETCO ₂ that remains less than 10 for at least 20 minutes of CPR? A Pt is unlikely to be resuscitated B Tells you pt is being hyperventilated C May be a signal of impending ROSC D Pt is in need of a dose of bicarbonate
7. What best defines PEA? A IVR at any rate B IVR w/ rate less than 60 C Bradycardic rhythm w/ hypotension D Organized ECG rhythm, no pulse felt	8. How common is PEA? A Occurs in 22-60% of arrests B Incidence decreasing, rarely seen C Only occurs in pts who are hypothermic D Decreased incidence in pts taking cardiac meds	9. What is pseudo-PEA? A VF w/ a pulse B No pulse or myocardial contraction C Pulse palpable but no myocardial contraction D Pulse unable to be felt, yet myocardial contraction is present
10. What is the most common, treatable cause of PEA? A Acidosis B Hypovolemia C Hyperkalemia D Tension pneumothorax	11. How should an IVF bolus be given to a pt in PEA? A 200 mL over 10 minutes B 200 mL as rapidly as possible C 20 mL/kg over 30 minutes D 20 mL/kg as rapidly as possible	12. For a pt in PEA, what should be documented in the "pulse" section of the e-PCR? A 0 B "PEA" C rate of ECG rhythm D 999
13. What is the physiological significance of persistent VF? A Indicates poor quality CPR B Indicates higher pacemakers have failed C Indicates absence of coronary artery blood flow D Indicates heart muscle is receiving blood via coronary arteries	14. What is persistent/refractory VF? A VF that requires amiodarone to treat B VF that defibrillation does not abolish C VF that recurs despite successful defibrillation D VF that converts to asystole after defibrillation	15. What is meant by recurrent VF? A VF that requires amiodarone to treat B VF that defibrillation does not abolish C VF that recurs despite successful defibrillation D VF that converts to asystole after defibrillation
16. What can EMS providers do, <u>without an OLMC order</u> , to treat persistent / refractory VF? A Administer Lidocaine B Administer procainamide C Dual sequential defibrillation D Apply new set of defib pads in alternate position and defib using those pads	17. What is the purpose of defibrillation? A Stop all electrical activity B Stimulate SA & AV nodes to fire C Create artificial electrical impulse to stimulate ECG rhythm D Increase the amplitude of VF to make it more responsive to medication	18. What is standard placement for defib electrodes? A R of sternum, below clavicle and V6 position B R of sternum, below clavicle and V4 position C V4 position and below L scapula D V1-2 position and below L scapula

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<p>19. How common is re-arrest after ROSC?</p> <p>A Less than 10%</p> <p>B 38%</p> <p>C More than 90%</p> <p>D Occurs in 99% of pts</p>	<p>20. When is re-arrest most likely to occur?</p> <p>A Within a minute of ROSC</p> <p>B 2-6 minutes after ROSC</p> <p>C 20-30 minutes after ROSC</p> <p>D 60-120 minutes after ROSC</p>	<p>21. What is best method to detect re-arrest?</p> <p>A Watch ECG monitor</p> <p>B Set monitor HR alarms</p> <p>C Continuous palpation of pulse</p> <p>D Set auto-BP to every 15 minutes</p>
<p>22. What is the most common type of re-arrest?</p> <p>A Asystole</p> <p>B Pulseless VT</p> <p>C Recurrent VF</p> <p>D Development of PEA</p>	<p>23. What is pathophysiology for re-arrest?</p> <p>A Stunned myocardium</p> <p>B Increased coronary perfusion</p> <p>C Persistent effects of epinephrine</p> <p>D Persistent effects of vasopressin</p>	<p>24. What is pathophysiology for re-arrest?</p> <p>A Decreased coronary perfusion</p> <p>B Enhanced myocardial contractility</p> <p>C Persistent effects of epinephrine</p> <p>D Persistent effects of vasopressin</p>
<p>25. Post-ROSC which has the highest priority?</p> <p>A Hyperventilate</p> <p>B Treat hypotension</p> <p>C Begin therapeutic hypothermia</p> <p>D Administer bicarb to treat acidosis</p>	<p>26. If post ROSC a pt is hypotensive, what should be done FIRST?</p> <p>A Perform a 12L ECG</p> <p>B Administer IVF while preparing dopamine</p> <p>C Begin therapeutic hypothermia</p> <p>D Hyperventilate to assure oxygenation</p>	<p>27. If post ROSC a pt has an ETCO₂ >55, what should be done?</p> <p>A Decrease ventilation rate</p> <p>B Immediately hyperventilate</p> <p>C Administer sodium bicarbonate</p> <p>D Assess rate & volume of assisted vent</p>
<p>28. What should be done if an IO line is not flowing well?</p> <p>A Manually twist/wiggle IO needle</p> <p>B Remove & reestablish in another site</p> <p>C Give 10-20 mL NS flush using syringe</p> <p>D Remove & reinsert needle in same site</p>	<p>29. Why may it be a good idea to establish an IV site - during CPR?</p> <p>A Meds are less effective when given IO</p> <p>B To give PM's more practice starting IV's</p> <p>C Establishing IV during CPR is a bad idea</p> <p>D May be used to treat PEA and give cold IVF for therapeutic hypothermia</p>	<p>30. What should be done after the administration of all IV/IO meds – during cardiac arrest?</p> <p>A Defib within 10 seconds</p> <p>B Give 20-50 mL IVF bolus</p> <p>C Check pulse in 30-60 seconds</p> <p>D Immediately check ECG rhythm</p>
<p>31. What is a contraindication for therapeutic hypothermia?</p> <p>A Trauma</p> <p>B VF arrest</p> <p>C Asystole arrest</p> <p>D Patients greater than 75 years old</p>	<p>32. At what temperature should cold IVF be kept for therapeutic hypothermia?</p> <p>A 4° F</p> <p>B 19° F</p> <p>C 39° F</p> <p>D 53° F</p>	<p>33. For therapeutic hypothermia, where should cold packs be placed?</p> <p>A Head & feet</p> <p>B Chest & abdomen</p> <p>C Neck, axilla, groin</p> <p>D Around arms and legs</p>
<p>34. How much cold IVF should be given for therapeutic hypothermia?</p> <p>A 200 mL</p> <p>B 20 mL/kg – max 1500 mL</p> <p>C 30 mL/kg – max 2 L</p> <p>D 50 mL/kg</p>	<p>35. How much cold IVF should be given to a 190 lb pt for therapeutic hypothermia?</p> <p>A 1000 mL</p> <p>B 1500 mL</p> <p>C 2000 mL</p> <p>D 2500 mL</p>	<p>36. How fast should cold IVF be given for therapeutic hypothermia?</p> <p>A As fast as possible, goal < 30 min</p> <p>B Over 60 minutes</p> <p>C Over 1-2 hours</p> <p>D Over 2-4 hours</p>
<p>37. Where is shivering usually first seen?</p> <p>A Jaw</p> <p>B Legs</p> <p>C Hands</p> <p>D Eyelids</p>	<p>38. What should be done if pt is shivering?</p> <p>A Stop cooling the pt</p> <p>B Nothing, it is a desirable action</p> <p>C If SBP >90, administer midazolam</p> <p>D If SBP >90, administer Lidocaine for cerebral protection</p>	<p>39. Treating pt w/ therapeutic hypothermia, shivering is noted. BP 140/70, P 90, Hosp ETA ~7 min. What should be done?</p> <p>A Administer midazolam 2 mg</p> <p>B Administer midazolam 5 mg</p> <p>C Administer Lidocaine 1.5 mg/kg</p> <p>D Administer no meds due to hosp ETA</p>
<p>40. When using pit-crew approach to team resuscitation, what is the responsibility of the 1st team member to reach the pt?</p> <p>A Airway management</p> <p>B Turn on monitor & attach electrodes</p> <p>C Check pulse, begin chest compressions</p> <p>D Establish vascular access</p>	<p>41. When using pit-crew approach to team resuscitation, what is the responsibility of the 2nd team member to reach the pt?</p> <p>A Airway management</p> <p>B Turn on monitor & attach electrodes</p> <p>C Check pulse, begin chest compressions</p> <p>D Establish vascular access</p>	<p>42. When using pit-crew approach to team resuscitation, what is the responsibility of the 3rd team member to reach the pt?</p> <p>A Airway management</p> <p>B Turn on monitor & attach electrodes</p> <p>C Check pulse, begin chest compressions</p> <p>D Establish vascular access</p>

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<p>43. When using pit-crew team resuscitation, <u>prior to adv airway placement</u>, what is NOT the responsibility of airway mgmt team member?</p> <p>A Insert OP/NPA B Squeeze bag-valve device C Maintain tight face-mask seal D Connect capno & RQP/ITD to BVM</p>	<p>44. Prior to placement of an advanced airway, when is the pt ventilated?</p> <p>A After every 10 compressions, compressor pauses to give 1 breaths B After every 15 compressions, compressor pauses to give 2 breaths C After every 30 compressions, compressor pauses to give 2 breaths D 10/min; asynchronous w/ compressions</p>	<p>45. When using pit-crew team resuscitation, <u>prior to adv airway placement</u>, whose responsibility is it to ventilate the pt?</p> <p>A Team leader B Airway mgmt team member C PM obtaining vascular access D Person performing compressions</p>
<p>46. What is meant by “release completely” during CPR?</p> <p>A Do not touch pt during defibrillation B Do not squeeze BVM during compressions C Lift hand very slightly off chest wall between compressions D When ventilating w/ BVM, allow bag to fully reinflate</p>	<p>47. Why is releasing completely important?</p> <p>A Allows lung to fully deflate B It prevents too fast/deep compressions C Prevents rescuer injury during defibrillation D Allows venous return - heart to refill w/ blood</p>	<p>48. What should be done at the same time the ECG rhythm is checked?</p> <p>A Check pulse B Ventilate pt once C Ventilate pt twice D Rotate compressors</p>
<p>49. When defibrillating a pt, who should be the last to clear the pt?</p> <p>A Team leader B Person ventilating C Person giving medications D Person doing compressions</p>	<p>50. Should pt be ventilated right before defibrillation?</p> <p>A No, decreases defib effectiveness B Only if it is time to ventilate the patient C Yes, pause in compressions allows full ventilations D Yes, if more than 5 seconds have elapsed since last ventilation</p>	<p>51. What should be done immediately after defibrillating a pt?</p> <p>A Check pulse B Check ECG rhythm C Check ECG rhythm & pulse D Resume chest compressions</p>
<p>52. When during CPR should an advanced airway be placed?</p> <p>A As soon as possible B After first ECG rhythm check C Before beginning compressions D Not before 2nd ECG rhythm check</p>	<p>53. What is the most important factor to successful resuscitation?</p> <p>A Antidysrhythmic meds B Advanced airway placement C Frequent epinephrine administration D Minimizing interruptions in compressions</p>	<p>54. After placement of adv airway, how should compressions be performed?</p> <p>A Compressions should be continuous B Pause after every 10 compressions to give 1 breath C Pause after every 15 compressions to give 2 breaths D Pause after every 30 compressions to give 2 breaths</p>
<p>55. Why is it important to insert an OP/NPA prior to ventilating w/ a BVM?</p> <p>A It is not important. B Minimizes tongue obstruction C OP/NPA is only needed if unable to ventilate without placement D They are in place in case an advance airway can not be placed</p>	<p>56. For the RQP/ITD to function, when is it most important to have a tight face-mask seal?</p> <p>A During ventilations B During chest compressions C A tight face-mask seal is not important D RQP/ITD does not work w/ BVM ventilation, req placement of adv airway</p>	<p>57. Why is it important to insert an OP/NPA prior to ventilating w/ a BVM?</p> <p>A It is not important. B Helps prevent gastric distention C OP/NPA is only needed if unable to ventilate without placement D They are in place in case an advance airway can not be placed</p>
<p>58. Pt in VF given only epinephrine, what is the next drug that should be given?</p> <p>A Atropine B Vasopressin C Amiodarone D Repeat epinephrine</p>	<p>59. Pt in VF given only vasopressin, what is the next drug that should be given?</p> <p>A Atropine B Epinephrine C Amiodarone D Repeat vasopressin</p>	<p>60. Pt in VF given only epinephrine & amiodarone, what is the next drug that should be administered?</p> <p>A Atropine B Vasopressin C Epinephrine D Repeat amiodarone</p>