Northwest Community EMS System
November 2021 CE Credit Questions: Shock Scenarios

Name:	Date submitted:
EMS Agency/hospital:	Credit awarded (date):
EMSC/Educator reviewer:	Returned for revisions:
	Revisions received:

This packet earns you the equivalent of the 2 hours of live or Zoom CE class.
Sources: Nov 2021 CE PPT; PCR handouts, SOPs; PM class shock handout; Policy.

1. What is the most common etiology of shock in trauma patients?
   A. Brain injury
   B. Hemorrhage
   C. Respiratory failure
   D. Cardiac insufficiency
2. Activation of the renin-angiotensin-aldosterone system (RAAS) causes blood vessels to:
   A. constrict.
   B. dilate.
3. Which of these occurs in all causes (etiologies) of shock?
   A. Loss of vascular fluid volume
   B. Dilated blood vessels from loss of vascular tone
   C. Cellular hypoxia due to a sustained perfusion deficit
   D. Cardiac pump dysfunction due to myocardial necrosis
4. The primary energy source for cells is:
   A. magnesium.
   B. epinephrine.
   C. glucose.
5. What physiological response explains why a patient might experience lightheadedness, CP or syncopal episode during hyperventilation syndrome?
   A. PCO2 dilates cerebral blood vessels
   B. PCO2 constricts cerebral blood vessels
   C. PCO2 activates the sympathetic nervous system
   D. PCO2 activates the parasympathetic nervous system
6. A patient with a recent history that suggests infection presents with an $ETCO_2$ of 30 and a qSOFA score ≥2. Which of these is a clinical presentation that differentiates sepsis from septic shock?
   A. RR > 22
   B. SBP < 90
   C. Skin mottling
   D. HR between 100-110

7. What should a paramedic suspect when the patient's MAP is <60 mmHg?
   A. Cerebral perfusion pressure is too high
   B. Coronary artery perfusion will be inadequate
   C. High aortic root pressures may cause a valve prolapse
   D. The patient's cardiac output will be optimal due to pressures WNL
8. Which of these is the earliest clinical sign that the body is *chemically* compensating for an increase in acid byproducts due to hypovolemic shock?
   A. Cyanosis
   B. Cool, pale extremities
   C. Narrowed pulse pressure
   D. Increased ventilatory rate and depth
9. A patient with recent history suggesting infection presents with an ETCO2 of 30 and qSOFA score ≥2. Which of these is a clinical presentation that differentiates sepsis from septic shock?
   A. RR > 22
   B. MAP < 65
   C. Skin mottling
   D. HR between 100-110
10. Which of these is indicated for a pt in cardiogenic shock with respiratory failure and crackles?
   A. Nitroglycerine 0.4 mg SL
   B. O2 / C-PAP at 5 cm PEEP
   C. 0.9% NS IVF in 200 mL increments
   D. Norepinephrine 8 mcg/min (2mL/min)
11. Which of these suggest a Class II hemorrhage with a volume loss of 15-30%?
   A. HR 110
   B. RR > 35
   C. BP 90/70
   D. Lethargy, coma
12. What should a paramedic suspect when the patient's MAP is <60 mmHg?
   A. Cerebral perfusion pressure is too high
   B. Coronary artery perfusion will be inadequate
   C. High aortic root pressures may cause a valve prolapse
   D. The patient's cardiac output will be optimal due to pressures WNL
13. Which of these signals the transition from compensated to decompensated shock?
   A. Dilated pupils
   B. Heart rate > 110
   C. Systolic BP less than 100
   D. C/O feeling cold and shivering

14. Which of these is the earliest clinical sign that the body is chemically compensating for an increase in acid byproducts due to hypovolemic shock?

    A. Cyanosis
    B. Cool, pale extremities
    C. Narrowed pulse pressure
    D. Increased ventilatory rate and depth

15. Which of these can cause obstructive shock?

    A LV hypertrophy
    B. Arteriosclerosis
    C. Cardiac tamponade
    D. Systemic histamine release

16. Which of these is accurate regarding elderly patients in shock and may be helpful when interpreting the severity of their clinical presentation?

    A. Medications may prevent expected tachycardia from volume losses
    B. Existing HTN will allow the BP to compensate as well as other healthy adults
    C. Estimate acuity on their mental status as all baseline VS will likely be abnormal
    D. Increased reserves in all systems allow them to compensate for a long time before crashing

17.-40. To further reinforce the patient presentation of multiple etiologies of shock and required treatments, in class we reviewed and discussed four actual patient care reports from our System. Please review each PCR in it's entirely and complete the questions on the corresponding PCR review sheet.

Patient Care Report #1

Instructions: Review the patient care report and answer the following questions below.

ABCD	• LOC: • Airway: open • Breathing: • Circulation: • Disability:
VS, ETCO2 value and waveform, EKG	• BP: • HR: • RR: • Temp: • SPO2: • ETCO2: • EKG:
Pertinent pt hx, meds, or allergies as it relates to the specific type of shock	• •
Any Other Potential Differential Diagnoses	•
EMS actions/ interventions	•

Questions specific to Cardiogenic Shock	
What value would you expect to see for the ETCO2 for this specific pt presentation of hypotension and increased RR?	•
What additional medication would be indicated for this patient once hypotension is corrected?	•
What is the appropriate fluid administration protocol and assessment (with frequency) required?	•
How often should the bp to be taken while administering norepi?	•

Patient Care Report #2

Instructions: Review the patient care report and answer the following questions below.

ABCD	• LOC: • Airway: • Breathing: • Circulation: • Disability:
VS, ETCO2 value and waveform, EKG	• BP: • HR: • RR: • Temp: • SPO2: • ETCO2: • EKG:
Pertinent pt hx, meds, or allergies as it relates to the specific type of shock	•
Any Other Potential Differential Diagnoses	•
EMS actions/ interventions	•

Questions specific to Anaphylactic Shock

What is the total dose per SOP for epinephrine?	•
What lung sounds would you suspect?	•
What additional treatment would you include if pt was wheezing?	•
Was epi 1mg/ 10mL warranted for this pt presentation?	•
Note: AMS is a significant indicator of alteration in perfusion status.	

Patient Care Report #3

Instructions: Review the patient care report and answer the following questions below.

ABCD	• LOC: • Airway: • Breathing: • Circulation: • Disability:
VS, ETCO2 value and waveform, EKG	• BP: • HR: • RR: • Temp: • SPO2: • ETCO2: • EKG:
Pertinent pt hx, meds, or allergies as it relates to the specific type of shock	• •
Any Other Potential Differential Diagnoses	•
EMS actions/ interventions	•

Questions specific to Septic Shock

What is the first thing to consider for a potential sepsis pt?	•
What is assessed next?	•
What are the qSOFA criteria (note if > <u>2</u> criteria)	• • •
Sepsis Risk Factors	• • • • •

Patient Care Report #4

Instructions: Review the patient care report and answer the following questions below.

ABCD	• LOC: • Airway: • Breathing: • Circulation: • Disability:
VS, ETCO2 value and waveform, EKG	• BP: • HR: • RR: • Temp: • SPO2: • ETCO2: • EKG:
Pertinent pt hx, meds, or allergies as it relates to the specific type of shock	• •
Any Other Potential Differ Dx	•
EMS actions/ interventions	•

Questions specific to Hypovolemic Shock

What was the pts ETCO2 suggestive of?	•
What are the 3 components of the lethal triad in trauma?	•
How can we combat the lethal triad?	•