

**Northwest Community EMS System
September 2017: Head and Chest Trauma
Credit Questions**

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

This packet should take 2 hours to complete – which earns you the equivalent of the 2 hour live CE class.
Sources of information: Sept CE handout; SOPs;

Head Trauma
1. Identify 3 situations that can occur in the body when the brain is injured. a. b. c.
2. What is meant on the slide when the statement is made regarding “prime real estate” with the discussion of head trauma (PP) ?
3. Utilizing Cushing’s triad, how can EMS differentiate VS that indicate a head injury vs. spinal injury vs. hypovolemia?
4. What are the two phases on injury with head trauma and which phase can EMS treat to affect pt outcome? a. b.
5. Which of these is most likely to occur as a result of severe deceleration forces to the midline chest? A. Crush and dissection of the descending abdominal aorta B. Shearing of the thoracic aorta at the ligamentum arteriosum C. Spasm of the aorta creating chest pain similar to that of an AMI D. Avulsion of the ascending aorta at the point of fixation with the pulmonic valve

Signs of increased ICP

6. Identify 4 signs of increased ICP and list the first alteration that is noted in pts with head trauma.
- A.
 - B.
 - C.
 - D.

Transportation Decision

7. Identify the three physiologic criteria for transporting a pt to a level one trauma center.
- A.
 - B.
 - C.

Airway Management

8. An unrestrained front seat passenger is involved in a head on collision causing them to star the windshield. Upon EMS arrival, the pt has a GCS 7 and with BLS adjuncts and BVM at 10 BPM the pulse oximetry reading is 96% and the capnography is 36. How should EMS address the management of this patient's airway?
- A. Intubate the patient for maintenance of definitive airway
 - B. Increase ventilatory rate to 20 based on pulse oximetry and capnography readings
 - C. Decrease ventilatory rate to 6-8 based on pulse oximetry and capnography readings
 - D. Maintain ventilatory rate at 10 as the pulse oximetry and capnography readings are adequate.

Airway Intervention

9. According to the Brain Trauma Foundation, what three things occur when a patient is hyperventilated?
- 1.
 - 2.
 - 3.

10. List 4 important facts about a patient with suspected head trauma that should be relayed to the L1TC for proper continuum of care?
- 1.
 - 2.
 - 3.
 - 4.

11. How should the airway ideally be maintained in a patient with a head injury and why?

12. Why is hypoxia and hypotension harmful for patients with head injury?

13. Why is hyperventilation often thought of as “bad” for the patient with a head injury?

14. When a patient w/ a head injury is hypoxic, in what situation is it permissible in NWC EMSS to hyperventilate a patient?

15. Although EMS cannot diagnose a concussion in the field, what signs and symptoms can be associated with it?

16. What element of the Glasgow Coma Score is least affected by trauma (PP) ?

Chest Trauma

17. What is understood as the reason why chest trauma carries a high degree of mortality and morbidity?

18. What is the “mechanism of death” for a patient sustaining chest trauma leading to suspicion of a tension pneumothorax?

19. What signs and symptoms are associated with a patient sustaining a tension pneumothorax?

20. What landmarks are needed in order to perform a PND for a patient with a suspected tension PTx?

21. Which condition should cause EMS that a patient has a tension pneumothorax requiring pleural needle decompression (PND)?

- A. Difficulty bagging with BVM
- B. SBP < 90 with MAP < 65
- C. Unilateral absence of BS
- D. JVD

22. What is another name for a sucking chest wound and what is the intervention needed (what equipment can be used) for such an injury?

23. Once an open pneumothorax is converted to closed, what is the risk of such and then what additional interventions may need to be done?

24. Why can a patient with an open pneumothorax have absent breath sounds on both sides of the chest?

25. What potential treatments are available to EMS if a patient presents with a flail chest in accordance to SOP?

26. In accordance with SOP, if a patient is suspected of having an inconsistency within the chest wall cavity, where should the patient be transported?

27. What two entities affect cardiac output and explain the relationship when a patient becomes hypovolmenic?

- A.
- B.

28. List three clinical signs of progressive fatigue and deterioration that should prompt intubation and mechanical ventilation in a patient with a flail chest.

- 1.
- 2.
- 3.

29. What initial assessment finding will dictate a change of focus on the SOPs of A=Airway, B=Breathing, C= Circulation?

30. Paradoxical movement of the chest wall in a pt with a flail chest can cause what additional injury?

31. What EMS treatment is imperative for a pt who sustains a flail chest to prevent hypoventilation and atelectasis provided that the SBP is normotensive?

32. Define a pericardial tamponade?

33. If a pt is suspected of having pericardial tamponade, what is the EMS treatment modality in the NWC EMSS?

34. Define Commotio Cordis.

35. Explain the theory of “permissive hypotension.”

36. When attempting volume resuscitation for a pt with hypotension, what is of concern when rendering treatment?

37. What is the goal of blunt, penetrating, and head trauma when replacing fluids through an IV?

Hemostatic Agent: Celox Rapid

38. Our system has adopted the Celox Rapid. What three things set the Celox Rapid apart from Celox or Quik Clot?

1.

2.

3.

39. When opening Celox, EMS will notice that the format of packaging is different. In what way does it come packaged and for what purpose?

40. Describe in your own words how to use Celox to pack an open wound.
