

Northwest Community EMS System
August 2019 CE: Initial Trauma Care
Credit Questions

Name (Print):		EMS Agency:		
EMS Educator:				
Date submitted	Score:	<input type="checkbox"/> Acceptable <input type="checkbox"/> Not acceptable	<input type="checkbox"/> Incomplete <input type="checkbox"/> Incorrect answers	Date returned w/ feedback
Resubmission received:	Score:	<input type="checkbox"/> Acceptable <input type="checkbox"/> Not acceptable	<input type="checkbox"/> Incomplete <input type="checkbox"/> Incorrect answers	Date returned w/ feedback:
# CE Hours awarded:		Date		

This packet should take 2 hours to complete – which earns you the equivalent of the 2 hour live CE class.

Sources of information/answers

August CE Participant handout

SOPs: Initial trauma care / GCS / RTS; Triage & transport criteria; Shock

Procedures: Trauma Assessment (7/19) / GCS (7/19) / BP (7/19) [back of handout]; Suctioning; Hemorrhage control

Policies: A2 Aeromedical transport (back of handout); D3 Drug / Pharmacologic Management: Approval / Issuing / Storage / Exchange / Disposal/ Reporting (IV warming questions)

Video link to Dr. Jordan message: <https://youtu.be/s9ILpda8TK0> (Reinforcement cardiac arrest procedures)

Video link to revised GCS assessment: <https://www.glasgowcomascale.org/> (Type into your browser if link doesn't open)

Class slide deck handout – available from Provider EMS Coordinator

Scenario

1840: Dispatched to a residence for a person with seizures. Patient: male; 68 kg (150 lbs); 18 y/o.

The patient was found lying supine in the living room, alert and oriented X 3. Father reports that he had moved the pt to the living room, after he heard a “thud” and “gurgling” coming from the pt’s bedroom, and finding him face down, nose bleeding, on his bedroom floor. Last seen “normal” “one minute” prior to the event, sitting in a chair playing video games.

Paramedics noted that within a few minutes, the pt was oriented to self; he did not know where he was or how he got there. This change from initial assessment was noted and confirmed by the same paramedic that found the pt A&O X 3 initially. As minutes passed, the pt began responding to questions repeatedly with “blue” or “blue and gold”. He repeatedly asked where he was. When asked what was wrong, the pt stated he was unable to see. The quality and appropriateness of the pt’s responses were noted to deteriorate, and become briefer, throughout the call.

S: AMS; father reported seizure

A: None

M: Azithromycin; ondansetron; denies drug use

P: Strep and mono (currently being treated); ADHD

E: See above

OPQRST: O: sudden, rapid. P: NA. Q: NA. R: NA. S: NA. T: < 15 min.

Assessment:

Head: WNL

Face: Bloody nose

Eyes: Dilated / 8 mm bilaterally; reactive; reassessment unchanged; vision loss

Neck: No deformities

Chest: Lungs clear bilaterally

Abd: Soft nontender all 4 quadrants

Pelvis: Normal

Extremities: WNL

Back/spine: WNL

Skin: Warm, moist

Mental status: Oriented to person only; short-term memory loss; speech deteriorated to “words”

Neuro: Gross motor normal, symmetrical strength; cerebellar function normal

Vital Signs:

TIME	BP	Method	MAP	HR	Pulses	ECG	RR	Effort	SpO2	O2	ETCO ₂	GCS	Temp	Glu	Stroke
1849	128/60	Ausc	83	120	Strong	ST	22	Norm	98%	RA		14	36.6	108	
1854	132/64	Ausc	87	124	Strong	ST	22	Norm	98%	RA		14			Incl.
1900	138/66	Ausc	90	124	Strong	ST	22	Norm	98%	RA	34 sqr	14	36.8		
1906	128/60	Ausc	83	118	Strong	ST	24	Norm	97%	RA	38 sqr	14			

1. **What major clues in this patient's Hx and/or PE should be considered in determining an EMS impression?**

Post trauma: _____

Syncope _____

Big 4:Hs _____

Hyperdynamic state? _____

Neuro: _____

Intracranial event? _____

Hx strep and mono on antibiotic:

Suspected infection? _____

ETCO₂ 31 or less? _____

qSOFA: Quick Sequential [Sepsis-related] Organ Failure Assessment **criteria**

? AMS _____ **RR 22 or greater?** _____ **SBP ≤ 100 (adult)?** _____

≥ 2 criteria present? _____

See participant handout for outcomes

ITC SOP; select sections of the procedure manual

2. What supplied/equipment should be brought to all trauma patients?

3. If an unconscious, unresponsive adult has posterior head trauma, intubation is unsuccessful or not advised and paramedics cannot ventilate adequately with BLS airways and a BVM, what intervention is indicated next?

If this option is unsuccessful, what airway intervention is indicated next? _____

4. If an adult has a minor injury with adequate RR and depth with an SpO₂ of 92-93% and minimal distress, oxygen should be given at _____ L/m via _____.

If an adult has adequate RR & depth, is in moderate to severe distress following trauma and has an SpO₂ of 91%, O₂ should be given at _____ L/min via _____.

If an adult has inadequate rate/depth following trauma, is in moderate to severe respiratory distress and has signs of hypoxemia, O₂ should be given at _____ L/m via _____.

5. List three immediate life threats due to chest trauma that must be found and resuscitated during the B (Breathing/Gas exchange) portion of the primary assessment in a trauma patient.

6. Which of these should be detected during the C: Circulatory phase of the primary assessment?
- A. Facial trauma with teeth and blood obstructing the airway
 - B. Weak, thready carotid pulse, JVD, and muffled heart tones
 - C. SpO₂ of 84%; ETCO₂ 30, and unilaterally absent breath sounds
 - D. AMS, dilated pupils and inability to move all extremities to command

7. Under what circumstances may the usual tachycardic response to volume loss be absent? (See shock SOP)

8. What 4 parameters must be assessed about bleeding?

9. Sequence the approved approaches to control hemorrhage

(See Hemorrhage control procedure for next 2 questions)

10. Where on a limb in relation to the wound **and** how tightly should a tourniquet be applied?

11. What should be assessed and documented after tourniquet application)? (Note more than 1 answer per line)

12. What is the preferred method to control internal bleeding after a pelvic fracture?

13. What three life threats must be found and resuscitated during the C: Circulatory phase of assessment?

14. An adult has been extricated from an MVC. The patient is awake and anxious (GCS 15), complaining of severe RUQ pain and intense thirst. VS: BP 110/78; P 110; R 24; SpO₂ 100% on 15 L of O₂/NRM; ETCO₂ 31. Skin is pale, cool, and moist. Which of these is indicated?

- A. Transport, start IV enroute
- B. Give the patient small sips of water
- C. Start large bore IV on scene, run WO up to 2 L
- D. Transport BLS to the nearest Level I trauma center

15. An adult presents following an MVC with blunt chest and abdominal injuries and a suspected fractured femur. No head injury is suspected. VS: BP 78/56; HR 120; RR 28; SpO₂ 90%; EtCO₂ 20. Which of these is indicated immediately?
- Warm NS WO up to 1 L to reach SBP 90 (MAP 60-65)
 - Two large bore IVs with warm NS on pressure infusers run wide open
 - Room temperature IV NS TKO due to need for permissive hypotension
 - Room temperature IV NS at 30 mL/kg (max 2 L) as rapidly as possible

16. What are the indications for vascular access in a trauma patient?

17. If IO access is required in a trauma patient, what is the preferred site for rapid fluid administration? (See Procedure manual - trauma assessment back of participant handout)

- Proximal humerus
- Anterior medial tibia

18. What is the lethal triad of trauma? (See Procedure manual - trauma assessment)

20. What are the dangers of exceeding BP targets and giving too much IV fluid to a pt with trauma?

21. What factors should be assessed under disability?

22. How should severe pain be treated in a patient with trauma who is hemodynamically stable?

Watch the video on the revised GCS assessment: <https://www.glasgowcomascale.org/> to answer the next 2 questions

23. What are the three approved options for applying a pressure stimulus to determine responsiveness?

24. An adult does not respond to any verbal stimuli. When deep pressure is applied, he briefly opens his eyes then closes them again, moans without words, and moves his hand above his clavicle to shove the examiner's hand away. What is the GCS?

Eye opening		Verbal		Motor	
Spontaneously	4	Oriented	5	Obeys commands	6
To sound	3	Confused	4	Localizes pressure	5
To pressure	2	Words	3	Normal flexion	4
None	1	Sounds	2	Abnormal flexion	3
Not testable		None	1	Extension	2
		Not testable		None	1

- 8
- 9
- 10
- 11

See the A2 policy (back of participant handout) to answer the next 3 questions

25. Where are the instructions about requesting and facilitating the scene response of an aeromedical helicopter located for the NWC EMSS? (See Policy Manual)

26. Who must approve use of an aeromedical service for a scene response in the NWC EMSS?

27. If a helicopter is approved for a scene response, what must be communicated to the aeromedical service?

Secondary assessment

See back of participant handout to answer the next 4 questions.

28. What is the range for a normal pulse pressure in mmHg? _____

29. What is the range for a normal mean arterial pressure? _____

What is the usual target MAP in an adult? _____

30. What are orthostatic changes to the vital signs and what do they suggest with respect to the patient's status?

Positive if: _____

May indicate: _____

31. List 7 common problems that account for inaccurate BP readings.

32. In addition to DCAP, BLS and TIC, what is included in the secondary assessment? (See Procedure)

HEAD, FACE, EARS, NOSE, MOUTH: _____

What elements should be assessed and reported when examining the **eyes**? (See trauma assessment procedure)

NECK: _____

CHEST: _____

What two problems should a paramedic suspect if there is a unilateral absence of breath sounds over one side of the chest in a trauma patient?

ABDOMEN: _____

PELVIS/GU: _____

EXTREMITIES: _____

BACK/flank: _____

Neuro: _____

SKIN/SOFT TISSUE: _____

33. What elements must be documented to calculate a revised trauma score?

34. Which Level I trauma centers are accessible within 30 minutes by ground for NWC EMSS members?

35. Which System hospitals have Level II trauma center designation?

36. In order to bypass a Level II TC to take a patient with hemodynamic instability due to trauma to a Level I Trauma Center, the total transport time may not exceed _____ minutes.

37. What is meant by the term, hemodynamic instability?

38. Where should a pt with an amputation proximal to the wrist or ankle be transported in Region 9?

39. Where should a trauma pt in cardiac arrest who is a candidate for resuscitation be transported?

40. An adult is found on the sidewalk with a small abrasion to his chin. The patient's eyes are open, he answers questions appropriately but slurs the words, and has a strong radial pulse with a SBP of 120. He asks for something to cover his chin and reaches for the gauze when pulled from the trauma bag. There is a strong odor of alcohol to the patient's breath. Does he meet the criteria to bypass a Level II TC for transport to a Level I trauma center?

A. No B. Yes

41. If an adult has a head injury with a GCS of 12, where should they be transported?

I _____

42. If the patient has had a needle pleural decompression following a suspected tension pneumothorax, where should he or she be transported?
-
43. An adult sustained a stab wound to the RUQ of the abdomen. Initial VS: BP 122/74, P 100, R 18. After 5 minutes, the mental status begins to deteriorate. VS now: BP 96/78, P 128, R 24. LGH is the nearest Level I and they can be reached in 15 min; the nearest Level II can be reached in 5 min. Which of these actions is appropriate?
- A. Contact the nearest Level II for OLMC and establish an IV prior to transport
 - B. Begin transport ASAP to LGH, contact LGH for OLMC, initiate ITC while enroute
 - C. Complete IMC, contact nearest Level II for OLMC, Rx on scene as long as patient is stable
 - D. Complete assessment, get 2nd set of VS, cover wound w/ occlusive dressing; transport to Level II
44. A conscious & alert restrained driver presents following a high speed frontal impact crash with over 2 ft of metal deformity. The airbag deployed and the pt has superficial abrasions to the hand and wrists and is c/o some neck stiffness but no pain. Lung sounds are clear bilaterally, radial pulses are full with a generally normal rate, and the pt moves all four extremities. Where should this patient be transported?
- A. Nearest Level I trauma center
 - B. Nearest trauma center; level I or II
 - C. Nearest hospital; pt does not require a trauma center

How are we doing according to the PBPI trauma transport data? (See back of participant handout)

45. How often (expressed in the % of compliant transports) are pts with TBI who meet Level I criteria being transported directly to the right hospital?
-
46. How often are patients with persistent hypotension being transported directly to the right hospital?
-
47. In your opinion – why are trauma patients not being transported by EMS to the appropriate hospital in compliance with the Trauma Triage guideline SOPs?
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-
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WATCH DR. JORDAN'S VIDEO for August (Link at top of handout)

48. What is the current approach (in sequence) to end tidal CO₂ assessment and troubleshooting in a cardiac arrest?
-
-
-
49. The SOP advises no consistent bagging until the _____ minute mark.
An advanced airway should not be attempted until all of the below are done:
-
-
-
50. Do most cardiac arrest patients from non-trauma causes need a pressure bag over the IV and a liter of fluid infused? Why or why not according to Dr. J?
-
-
-