

Northwest Community EMS System
July 2022 CE: Pharmacology: Routes & Dosing
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 the equivalent of the 2 hour live CE class.

Sources of information/answers

July CE Participant slide deck handout, System Memos #405 & 406 (can be found on our system website), and NWCEMSS SOPs

1. What are the meeting requirements/ expectations during continuing education classes? (System Memo #405)

2. POLST forms no longer require witness signatures.

True False

3. EMS may honor POLST forms with or without signature forms?

True False

4. List (in sequential order) the latest tower of power recommendations starting at from the ET tube to the BVM? (Refer to Cardiac Arrest SOP)

5. During ApOx the patient is not being oxygenated.

True False

6. During a cardiac arrest, rescuers are required to wear a gown. (Refer to System Memo #406)

True False

7. POLST forms no longer require witness signatures.

True False

8. How much IV fluid is indicated for a pt who goes into cardiac arrest d/t anaphylaxis? Pt weighs 120 kg.

9. Midazolam is the preferred drug for post invasive airway sedation and analgesia.

True False

10. What vitals shall be continuously monitored post sedative/ pain analgesia administration? What three physiologic elements are needed to maintain adequate perfusion?

11. What is the minimum acceptable MAP for a patient using CPAP? _____

12. When is CPAP contraindicated?

13. A patient presents with dizziness and chest pain for the past hour. He also reports bloody stools for the past 2 days. Should ASA be included in your IMC? _____

14. What is the action of MRA's prescribed for heart failure prevention and/or treatment?

15. What is the action of sodium-glucose cotransporter 2 inhibitors prescribed for heart failure prevention and/or treatment?

16. What are the indications for IV acetaminophen?

17. What are the contraindications for acetaminophen?

18. Per the pain management SOP, what are the available medications EMS can give?

19. For the following scenario state below whether you would recommend the pain medications listed below and why.

EMS was called for a pregnant female who fell outside of a grocery store. Pt A&Ox4 c/o pain to her L wrist. Upon physical assessment you note deformity to the distal extremity. SMV's intact. Vitals WNL. Pt rates pain 8/10 and is requesting pain medication and available options.

Acetaminophen: _____

Fentanyl: _____

Ketamine: _____

Nitrous Oxide: _____

20. For the following scenario, what additional questions would EMS need to ask prior to offering pain medication?

EMS was called for a 24 year old male c/o non-traumatic lower back pain which began last night before bed while playing video games. Pain is sharp/ non-radiating, rated 9/10. Vitals are slightly elevated. Pt Hx includes L shoulder repair 2 months prior. Pt denies allergies and takes pain meds on occasion. Pt is requesting pain medication.

21. What medications can EMS administer via IV pump?

Scenario 1: EMS responds to a 6yr. old child at school having an allergic reaction. The child is awake, anxious, and appears tired with labored breathing. You note hives and facial edema. An Epi Jr pen was administered PTA. Child weighs **36 lb. / 16kg**.

Pulse is noted to be weak, fast; skin is cool to touch. Lung sounds diminished in all lung fields. Pulse ox is 85% on room air.

22. What is the minimum acceptable SBP for this child? _____

This patients SBP is 76

23. What is the first medication that should be given? *Specify drug, dose, volume, and route.*
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24. What medication should be given as soon as venous access is obtained? *Specify drug, dose, volume, and route.*
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25. What is the max total dose for this patient? _____
26. What is the max **single** dose for first administration? _____
27. How long would it take (in minutes) to give the complete dose for this patient? _____
28. Pt begins to vomit a moderate amount of liquid and is suctioned. What medication may help to prevent repeat vomiting and risk of airway contamination/obstruction? *Specify drug, dose, volume, route and rate of administration.*
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29. Lung sounds reveal wheezing. What medication(s) should this patient receive? *Specify drug, dose, volume, route and max dose.*
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30. What remaining medication will EMS administer per SOP.? *Specify drug, dose, volume, route, max, and rate of administration.*
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Scenario 2: EMS responds to a park district gym for a child having an asthma attack. The 10 y/o pt is sitting on the bleachers, in obvious resp distress, tripod position, able to speak only 2-3 words at a time, with retractions. Pts inhaler was empty when he attempted to use.

Exam: HR 136 w/ strong pulses, RR 32, SpO₂ 88% on RA, ETCO₂ 27 and shark fin waveform. Lung sounds diminished to absent bilaterally. The patient gasps “please hurry – I’m getting really tired”. His weight is **95 lb. (43 kg)**.

31. What level of severity is this patient in at this time? _____
32. How much oxygen, and by what device, would you provide initially? _____
33. What is the **first medication** that should be given? *Specify drug, dose, volume, route, and max.*
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34. What med(s) is given immediately after Epi is administered?
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The patient becomes fatigued and is now struggling to breathe. SpO₂ 89%, ETCO₂ is 25, HR 140. Patient eye opening to pressure. No change in his breath sounds. And EMS begins assisting ventilations and prepares for advanced airway.

35. What medication is needed immediately? *Specify drug, dose, volume, route, and max.*
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36. Patient becomes difficult to ventilate w/ BVM. SpO₂ 90% and EtCO₂ 27. HR is bradycardic. While preparing for an advanced airway the patient moans attempts to pull away from the BVM mask. An IV is in place. What is sedative is indicated prior to advanced airway? *Specify drug, dose, volume, route and max dose.*
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Scenario 3: EMS responds to a home for a 3 yr. old with a fever. Upon entry to child's bedroom, responders note generalized tonic-clonic seizure activity. Mom states pt has had a fever, sore throat, and cough for 2 days. Pt was seen by pediatrician one day prior, with instructions to administer Tylenol for fever and encourage fluids. Child has no PMH, meds or allergies. Tylenol was last given 3 hrs. ago for temp 100.4 °F. Weight was **30 lb. (14 kg)**.

37. What medication should be given at this time? *Specify drug, dose, route, volume and max single dose.* No IV access is established yet.

38. Seizure activity stops. Patient is unconscious (GCS 3): pt is pale, and breathing is shallow and slow. Bronchial breath sounds are noted on the left, clear on the right. EMS begins manual ventilation via BVM with good compliance. SpO₂ 90%, ETCO₂ 25. Mottling noted on her extremities. Pulses are weak at 154, cap refill 4-5 sec. SBP is 68. IO is in place. What is indicated next?

39. Transport is begun and a sepsis alert is called. If SBP does not rise to minimum target from IVF, what is indicated?

Scenario 4: EMS responds to a multifamily residence for a child not breathing. Scene cleared by PD. Residence is cluttered and dirty; EMS notes drug paraphernalia on end table. Mother is crying and reports child was found on the floor unresponsive when mother woke up from a nap. A "neighbor" is attempting CPR. Patient is 2 ½ year old, unresponsive with agonal breathing 4/min, with a slow, weak pulse. Mom denies recent trauma or illness. No allergies. Weight per Broselow is **20 lb. / 9 kg**.

EMS begins O₂ 15L/BVM. The patient is easy to ventilate. Initial RA SpO₂ is 84% and ETCO₂ is 70 with a square waveform. Lungs are clear. Initial ECG showed sinus bradycardia, 48-50. Pupils are 1-2 mm, round and equal. Glucose is 98.

40. What do you suspect, and what intervention is indicated?
