

<b>Northwest Community EMS System July 2024 CE: Adult &amp; Peds Respiratory   Asthma &amp; Allergies Credit Questions</b>				
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 & NWCEMSS SOPs.

- Referencing IDPH Memo regarding Medetomidine (slide 6) name 2 concerns EMS may encounter with a patient OD of this adulterant?
  - \_\_\_\_\_
  - \_\_\_\_\_
- Per SOPs, what is the dose of naloxone by EMS? \_\_\_\_\_  
How often can EMS administer naloxone? \_\_\_\_\_  
What is the maximum dose of naloxone EMS can administer prior to contacting OLMC? \_\_\_\_\_
- List 3 pertinent facts relating to Asthma as published by the Allergy and Asthma Network (slide17)
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
- Fill in the blanks to the following statements:  
Of the estimated \_\_\_\_\_ pediatric EMS encounters in the US annual, and estimated \_\_\_\_\_ are due to \_\_\_\_\_ and \_\_\_\_\_.  
\_\_\_\_\_ is the most commonly administered \_\_\_\_\_ to children by EMS.
- The President’s Task Force on Environmental Health Risks and Safety Risks to Children Release the following 3 key points as it pertains to clinical guidance to protect children with asthma.
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_

6. What are the physiologic changes during an asthma attack?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_

7. List some triggers of an asthma attack

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

8. Watch the following video from minute 14:43 through 19:38. <https://www.stryker.com/us/en/training-and-education/medical-and-surgical-equipment--/emergency-care/emergency-care/video/cracking-complex-pediatric-airway-cases.html>

List 2 important points mentioned in the video (*examples of responses*)

1. \_\_\_\_\_
2. \_\_\_\_\_

9. List 2 pertinent facts relating to **Seasonal & Environmental** Allergies as published by the Allergy and Asthma Network (slide 28)

1. \_\_\_\_\_
2. \_\_\_\_\_

10. List 2 pertinent facts relating to **Severe or life-threatening** Allergies as published by the Allergy and Asthma Network (slide 28)

1. \_\_\_\_\_
2. \_\_\_\_\_

11. List some triggers of an allergic reaction

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

12. What are the physiologic changes during an allergic reaction?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

13. What are the physiologic changes during anaphylaxis?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_

Watch the following video [https://youtu.be/FI6HEcYXwRE?si=W\\_KYM61aWRXkTRym](https://youtu.be/FI6HEcYXwRE?si=W_KYM61aWRXkTRym)

**Start video at 4:30 Pause at 12:30 and answer:**

14. What are the priority treatments for this patient? \_\_\_\_\_  
\_\_\_\_\_

**Continue video Pause at 15:58 and answer:**

15. What is the max epi dose per NWCEMSS SOPs? \_\_\_\_\_

**Pause at 19:25 and answer:**

16. How would C-PAP help this patient? \_\_\_\_\_  
\_\_\_\_\_

**Pause at 31:30 and answer:**

17. IF this pt would have gone into cardiac arrest, what would be the epi dose? how frequent? \_\_\_\_\_

**Stop video at 35:30**

**For the remaining credit questions, please review each of the 4 case studies starting on the next page. Each case begins with the initial patient presentation and assessment from the crews documented PCR are provided. Identify the problems (i.e.: hypoxia, hypotension, etc.), the treatment plan in order of priority, and the expected outcome for each treatment. Answer any remaining questions.**

### Case Study One

*“EMS dispatched for a breathing problem. U/A pt found A+Ox4 sitting in tripod positioning having difficulty speaking but was able to state he is having an asthma attack. Pt states it awoke him from his sleep”.*

Primary Complaint	Difficulty breathing
Airway	Open
Breathing	RR 28 & Labored Lung sounds: Increased respiratory effort. Breath sounds decreased in all fields. RA SpO <sub>2</sub> 60%; EtCO <sub>2</sub> 60 sharkfin waveform
Circulation	Strong pulses; Pulse 110; BP unable d/t pt movement and anxiety/ lack of cooperation Skin diaphoretic ECG ST
LOC	Alert GCS 15
History	Asthma
Medications	Albuterol
Allergies	Amoxicillin
Age & Weight	38 y/o M; 349.9 lbs.

**18-20.**

**Problem #1 identified** \_\_\_\_\_

**Treatment plan** \_\_\_\_\_

**Expected outcome** \_\_\_\_\_

**Problem #2 identified** \_\_\_\_\_

**Treatment plan** \_\_\_\_\_

**Expected outcome** \_\_\_\_\_

**Problem #3 identified** \_\_\_\_\_

**Treatment plan** \_\_\_\_\_

**Expected outcome** \_\_\_\_\_

21. Why is pt being so uncooperative? \_\_\_\_\_

22. Is Epinephrine contraindicated d/t pts HR above 100? \_\_\_\_\_

23. How is magnesium given? \_\_\_\_\_

### Case Study Two

*“EMS was dispatched for difficulty breathing. Pt found sitting upright on stairway in apparent respiratory distress. He was alert but unable to verbally respond to crew due to distress level. Bystander states she was with pt this morning and he stated he had trouble breathing and experienced no relief after using his inhaler.”*

Primary Complaint	Difficulty breathing
Airway	Open
Breathing	RR 30 & shallow respirations Lung sounds: Wheezing in all fields. Decreased breath sounds on right and left. RA SpO <sub>2</sub> 77%; EtCO <sub>2</sub> 57 sharkfin waveform
Circulation	Strong pulses; Pulse 110; BP 160/100 (MAP 120) Skin diaphoretic ECG ST
LOC	Alert GCS 12
History	Asthma
Medications	Albuterol
Allergies	Unable to complete
Age & Weight	33 y/o M; <b>220 lbs.</b>

24-27.

Problem #1 identified \_\_\_\_\_

Treatment plan \_\_\_\_\_

Expected outcome \_\_\_\_\_

Problem #2 identified \_\_\_\_\_

Treatment plan \_\_\_\_\_

Expected outcome \_\_\_\_\_

Problem #3 identified \_\_\_\_\_

Treatment plan \_\_\_\_\_

Expected outcome \_\_\_\_\_

Problem #4 identified \_\_\_\_\_

Treatment plan \_\_\_\_\_

Expected outcome \_\_\_\_\_

28. This pts GCS was 12 d/t incomprehensible sounds. Would CPAP have been contraindicated? \_\_\_\_\_  
\_\_\_\_\_
29. Are there any concerns/ risks of too much PEEP for this pt? \_\_\_\_\_  
\_\_\_\_\_

### Case Study Three

*“EMS is dispatched to the elementary school for a 9 y/o F having an allergic reaction. Upon arrival pt was in the nurse’s office after eating a gold chocolate coin. Nurse informed crew pt had swelling of the tongue and throat and was given pt prescribed epinephrine IM (Epi pen) 5 minutes prior. She is showing improved since then.”*

Primary Complaint	Minor swelling remaining & chest tightness
Airway	Open
Breathing	RR 16-18 & Normal effort Lung sounds: normal. RA SpO <sub>2</sub> 100%; EtCO <sub>2</sub> 35 square waveform
Circulation	Strong pulses; Pulse 110-90; BP 128/84 (MAP 98) Skin normal ECG SR
LOC	Alert and oriented; GCS 15
History	Denies PMH
Medications	Epinephrine
Allergies	Pine nuts & sesame seeds.
Age & Weight	9 y/o F; 82 lbs.

30.  
**Problem #1 identified** \_\_\_\_\_  
**Treatment plan** \_\_\_\_\_  
**Expected outcome** \_\_\_\_\_

- Problem #2 identified (if applicable)** \_\_\_\_\_  
**Treatment plan** \_\_\_\_\_  
**Expected outcome** \_\_\_\_\_

31. If Diphenhydramine were to be given IV, at what rate should the medication be given? \_\_\_\_\_
32. Can a pt with a history of asthma receive Diphenhydramine & explain (refer to drug appendix)? \_\_\_\_\_  
\_\_\_\_\_
33. If this child were to show signs of anaphylaxis, what is the IM dose/ concentration you would administer prior to having an IV established? \_\_\_\_\_  
What would the dose/ concentration be for IV Epinephrine administration for this child? \_\_\_\_\_  
How often can you repeat? \_\_\_\_\_

34. What is the max total dose of all routes for Epinephrine to a child? \_\_\_\_\_

### Case Study Four

*“EMS dispatched for an allergic reaction. U/A 38 y/o M was sitting in front passenger seat of car unresponsive. Pt lifted onto stretcher and taken into ambulance. Wife states pt was stung twice about 10 minutes prior to going unresponsive. Wife did not believe pt had a bee allergy.”*

Primary Complaint	Unresponsive w/ swelling in multiple areas of body.
Airway	Open
Breathing	RR 24 & Labored Lung sounds: clear bilaterally RA SpO <sub>2</sub> 98%; EtCO <sub>2</sub> 23 waveform unknown
Circulation	Very weak pulses; Pulse 120; BP 80/Palp Skin diaphoretic; swelling around eyes & Left knee ECG ST
LOC	Unresponsive; GCS (localizes pain, no verbal, Opens eyes to pain) 8
History	Denies
Medications	Denies
Allergies	NKDA (later confirmed bee allergy)
Age & Weight	38 y/o M; 225 lbs.

35-37.

Problem #1 identified \_\_\_\_\_

Treatment plan \_\_\_\_\_

Expected outcome \_\_\_\_\_

Problem #2 identified \_\_\_\_\_

Treatment plan \_\_\_\_\_

Expected outcome \_\_\_\_\_

Problem #3 identified \_\_\_\_\_

Treatment plan \_\_\_\_\_

Expected outcome \_\_\_\_\_

38. What if the pt was taking Metoprolol and was not responding to Epinephrine? \_\_\_\_\_

39. If pt would have arrested, what dose and how often would Epinephrine be given? \_\_\_\_\_

40. What additional fluid will pt need if in cardiac arrest? \_\_\_\_\_