Aurora Health Care

**Revised** Protocol Review

This quiz is intended to be completed by all EMS providers, regardless of level of licensure. It is understood that some questions may ask about skills that you are not able to perform. We encourage all providers to be aware of skills allowed at other levels of licensure.

This protocol review is based off the 2019 Aurora Health Care South Pre-Hospital Patient Care Protocols with the i-Gel non-visualized airway protocol, the 2019 EMS Medication Shortage Policy, and the 2019 Sodium Bicarbonate Shortage Policy.

Questions 1-25 **MUST** be answered by all providers. Questions 26-35 **MUST** be answered by all AEMT's, Paramedics and RN's functioning at an ALS level. EMR's and EMT's may also answer them.

Completed quizzes should be emailed to [cathy.wagner@aah.org](mailto:cathy.wagner@aah.org)

1. The medication and dose recommended for wheezing in our protocols due to an Allergic or Anaphylactic reaction is:

a. Atrovent 0.5mg in 2.5ml

b. Benadryl 25mg

c. Albuterol 2.5mg in 3ml

d. Epinephrine 2.5mg

You are caring for an adult patient who has experienced unwitnessed cardiac arrest. CPR is being performed and an AED is arriving at the same time you are. Please answer the following five questions regarding the above cardiac arrest patient.

2. Patients experiencing cardiac arrest have the greatest chance of survival if basic level skills are administered as soon as possible. The AED should be applied:

a. immediately, the patient’s rhythm analyzed and defibrillation administered if appropriate.

b. after 2 minutes of high-quality chest compression.

c. after 6 minutes of high-quality chest compressions.

d. after ALS has arrived and begun providing ALS level care.

3. A non-visualized advanced airway should be inserted:

a. as soon as possible to adequately ventilate the patient.

b. after applying the AED and a shock is indicated.

c. after six (6) minutes of CPR have been performed.

d. never in this patient.

4. ALS may insert an Endotracheal tube (ETT):

a. as soon as possible.

b. when a non-visualized airway has NOT been successfully inserted and CPR is still continuing.

c. at any point while CPR is in progress and time allows.

d. when Return of Spontaneous Circulation (ROSC) has been obtained and maintained/sustained.

5. The patient should/may be transported to the hospital:

a. as soon as possible and while CPR is still in progress.

b. only after contacting medical control if CPR is still in progress.

c. when ROSC has been obtained and maintained/sustained.

d. b and c.

e. all of the above.

6. EMS may terminate resuscitation **without** contacting medical control if:

a. at least twenty (20) minutes of CPR have been performed.

b. the cardiac arrest was unwitnessed by EMS.

c. no shock was ever indicated or administered during resuscitation.

d. there has been no return of pulse an anytime during resuscitation.

e. **ONLY** if all of the above are true.

7. You are caring for a patient who is refusing to be transported to the hospital. In your

opinion, the patient is in need of services only available at the hospital. You choose to contact the Emergency Department and have the physician speak with the patient. Using the ED physician to speak with a patient has been shown to:

a. have no effect on the patient’s decision.

b. reduce refusal of care/transport by 50%.

c. reduce refusal of care/transport by about 1/3.

d. reduce refusal of care/transport by about 1/2.

8. EMS must obtain 12-leads from a patient suspected of suffering from Acute Coronary Syndrome (ACS). A 12-lead should be obtained:

a. within five (5) minutes of EMS arrival at patient.

b. again prior to transport if patient remains symptomatic.

c. again upon arrival to hospital if patient remains symptomatic.

d. any time there is an observed rhythm change OR chest pain worsens.

e. All of the above. Serial/multiple 12-leads are always appropriate when suspecting Acute Coronary Syndrome.

9. Your EMS crew is caring for a patient who has pulmonary edema you suspect is due to Congestive Heart Failure (CHF). The patient is in severe respiratory distress and you are considering CPAP. You are not sure if CPAP is appropriate for this patient so you need to review your protocol. While you are doing that, your partner is preparing to administer Nitroglycerine (NTG) to the patient. You have reviewed your CPAP protocol and realize that CPAP is appropriate for this patient as long as certain criteria are met.

a. True.

b. False.

10. EMS is allowed to remove barbs in a patient from a Conducted Electrical Weapon (TASER). EMS is **NOT** allowed to remove barbs if they are located in/near:

a. eyes, ears, mouth, or face.

b. genitals.

c. spine, hands, feet or a joint.

d. all of the above.

11. Your patient is experiencing an issue (e.g. STEMI) that indicates the patient should to go a hospital capable of providing a specific time-sensitive procedure (e.g. cath lab). The closest hospital does not provide that level of care. The patient insists on going to the closest hospital, contrary to your opinion. What do you do?

a. Transport the patient to the hospital capable of providing the procedure against the patient's wishes knowing it is the patient’s best interest.

b. Transport the patient to the closest hospital without having any discussion with the patient.

c. Attempt to educate the patient on the need to go to a hospital capable of providing the procedure but comply with the patient's wishes.

d. Refuse to transport the patient and turn them over to another EMS service.

12. Intraosseous (IO) insertion is appropriate standard of care for certain patients. IO placement in the following locations is acceptable for an adult patient.

a. Proximal humerus, sternum, distal femur, proximal tibia

b. Proximal humerus, proximal tibia, distal tibia

c. Proximal humerus, distal femur, distal tibia

d. Proximal humerus, proximal tibia

13. Contraindications to an IO include:

a. known or suspected fracture of the chose bone.

b. known or suspected infection at chosen insertion site.

c. known or suspected orthopedic procedure of the chosen bone.

d. all of the above.

14. Trauma patients may have C-spine omitted if certain conditions are met. Those

conditions/requirements include:

a. patient is conscious, cooperative and able to communicate.

b. patient has no midline back, neck pain or tenderness on palpation.

c. patient has no distracting injuries (e.g. fractures, significant pain)

d. patient has no evidence of intoxication (alcohol or drugs).

e. all of the above.

15. Oral glucose would be appropriate for a suspected hypoglycemia patient **ONLY** if:

a. the patient has a blood glucose less than 60 and is unconscious.

b. the patient has a blood glucose less than 100.

c. the patient is conscious.

d. the patient needs it.

16. Induced hypothermia is an appropriate therapy for certain patients who have suffered cardiac arrest and Return of Spontaneous Circulation (ROSC) has been obtained and maintained/sustained. The IV infusion of cold Normal Saline is **NO** longer part of our protocol. Cold packs applied to a patient’s neck, axillas and groin is the acceptable method of cooling. The following criteria must be met to consider cooling a patient.

a. age > 17, non-traumatic cause of cardiac arrest, unable to follow verbal

commands.

b. any age, traumatic or non-traumatic cause of cardiac arrest.

c. patient verbally communicating with EMS and able to follow commands.

d. all of the above.

17. The appropriate treatment for a chemical splash burn to an eye is:

a. bandage both eyes with dry sterile dressings.

b. apply pain medication drops to each eye and ask the patient to hold their eyes

shut.

c. irrigate both eyes with large amounts of saline solution (IV solution is

acceptable).

d. all of the above.

18. Syncopal episodes may occur as a result of an underlying cardiac issue such as a rate

change or other dysrhythmia. Knowing that, EMS should always acquire a 12-lead on a

patient who had a syncopal or near-syncopal episode.

a. True.

b. False.

19. Pediatric patients often present to EMS in respiratory distress. Children less than 2 years old may benefit from nebulized epinephrine. The following criteria must be met to use nebulized epinephrine.

a. Patient is less than 2 years old.

b. Patient has stridor or significant wheezing.

c. Patient has **no** prior diagnosis of asthma or bronchiolitis and is not regularly medicated with a beta-agonist for that diagnosis.

d. All of the above.

20. The procedure for administering nebulized epinephrine includes:

a. placing 1 ml of 1:1,000 epinephrine into a nebulizer and placing in front of patient's face and allow them to breathe the mist.

b. repeating the dose after 5-10 minute if non-effective.

c. placing 3 ml of 1:1,000 epinephrine into a nebulizer and placing in front of patient's face and allow them to breathe the mist.

d. the treatment may not be repeated.

21. EMS frequently encounter patients experiencing and complaining of nausea with or without vomiting. Non-ALS providers have minimal tools to manage these issues. ALS is

frequently utilized to administer medications for these patients. One therapy now

allowed and incorporated into our protocols involve using alcohol prep pad(s). The

procedure is:

a. have the patient hold one or more alcohol prep pads under their nose and inhale during the entire EMS contact.

b. have the patient place an alcohol prep pad under their nose within 1 " (2.5 cm)

and inhale deeply for up to 60 seconds.

c. have the patient place one or two alcohol prep pads into their mouth and chew

slowly without swallowing.

d. have the patient insert (if tolerated) one alcohol prep pad into each nare and

inhale slowly.

22. Cardiac arrest caused by traumatic injury is typically considered to be non-

resuscitatable. There are exceptions to this but when the following conditions are met with a significant mechanism of injury present, resuscitation should **not** be initiated.

a. Patient is pulseless, apneic and without other signs of life, or:

b. Patient is asystolic, or:

c. Patient has injury that is incompatible with life.

d. All of the above.

e. None of the above. All traumatic arrests should include resuscitation attempts.

23. The use of hemostatic agents and external skin clamps for hemorrhage control is

allowed at all levels of licensure in Wisconsin as long as the user has been trained and

it's used approved for the service.

a. True

b. False

24. Hemorrhagic shock in an adult can be categorized into one of four classes, I, II, III or IV. Class II, II and IV almost always involve internal or external bleeding and require definitive treatment. Signs and symptoms of class II, III or IV include:

a. sustained respiratory rate ≥ 20; sustained pulse ≥100 (unless elderly or on beta blockers or digitalis); cool, moist, pale skin; narrowed pulse pressure, and/or a falling BP.

b. sustained respiratory rate 12-20; sustained pulse < 100; warm, dry skin; falling

BP.

c. increasing respiratory rate; decreasing pulse rate; cool, moist, pale skin; widening pulse pressure; stable BP.

d. decreasing respiratory rate; increasing pulse rate; warm, dry skin; normal pulse

pressure; falling BP.

25. There continues to be an ever increasing number of incidents involving mass casualty

incidents involving aggressive acts. Tactical EMS (TEMS) and the concept of the Rescue Task Force (RTF) have demonstrated a specific need. Local EMS may or may not be involved in incidents involving TEMS. TEMS members often function in hostile environments and function in one of three zones. Types of care provided in those zones differ based on the threat level. Those zones are known as:

a. Zone 1, 2 or 3

b. Zone A, B or C

c. Hot, warm or cold

d. Red, yellow or green

26. You are preparing to administer 0.9% Sodium Chloride to your patient but notice that the medication has expired. You check the other packages of 0.9% Sodium Chloride but they are also outdated.

1. Give the medication anyway but make sure to throw out the container before arriving to the hospital.
2. Use the medication if there is no discoloration, no precipitate noted, and the expiration date is no more than 8 years past.
3. Use the medication if there is no discoloration, no precipitate noted, and the expiration date is no more than 3 years past.
4. Use the medication if there is no discoloration, no precipitate noted, and the expiration date is no more than 1 years past.
5. Do not give the medication as it is expired.

27. You are dispatched to a residence within the city limits and on arrival find a 27-year-old male lying unresponsive on the floor with depressed respirations. You notice a tourniquet on the left arm and an empty syringe lying next to the patient. You are preparing to administer naloxone intranasally and go through the five rights of medication administration. They are:

1. Right patient, right drug, right dose, right route, and right time
2. Right patient, right drug, right to refuse, right route, and right time
3. Right patient, right drug, right patient education, right route, and right time
4. Right patient, right drug, right documentation, right route, and right time

You are dispatched to a local department store for an unresponsive male, possible overdose. On arrival you are directed back to the women’s clothing department and find a 16-month-old male unresponsive on the floor next to a purse with some open prescription bottles in it. One bottle is labeled metoprolol, another is labeled tramadol, while a third is labeled omeprazole. Please answer the following three questions:

28. Which two medications are most concerning to you regarding possible overdose.

1. Metoprolol and tramadol
2. Metoprolol and omeprazole
3. Tramadol and omeprazole

29. The patient has a respiratory rate of 12. What is the most appropriate course of action?

1. Continue to monitor respirations as this is within normal limits
2. Administer Glucagon 0.5 mg IV
3. Administer Narcan 0.5 mg IN
4. Administer Glucagon 0.5 mg IN

30. Who is the best resource for poly drug ingestion?

1. On-line medical control
2. Receiving hospital
3. Inpatient Pharmacy
4. Poison control

The following questions are required for all AEMT's, Intermediates (ALS), Paramedics and Registered Nurses operating at the ALS level. All others (EMR's and EMT's) may complete if desired. Review of all protocols is encouraged by all providers.

31. You are caring for an adult patient who is complaining of severe abdominal pain. The patient reports he has experienced severe diarrhea and vomiting. The patient does have signs indicative of dehydration. What is the maximum amount of intravenous fluid that may be administered to that patient?

a. 500 ml

b. 2000 ml

c. 3000 ml

d. There is no specific maximum. Additional fluid can be administered beyond 2000 ml as long as the patient does not display signs of fluid overload.

32. Your EMS crew is caring for a patient who has pulmonary edema you suspect is due to Congestive Heart Failure (CHF). The patient is in severe respiratory distress and you are considering CPAP. You are not sure if CPAP is appropriate for this patient so you need to review your protocol. While you are doing that, your partner has decided to administer Nitroglycerine (NTG) to the patient and his current blood pressure is 210/140. The correct dose of NTG is:

a. 0.4 mg SL (1 tablet) repeated every 3 minutes until symptoms improve or BP drops to < 100mm Hg

b. 0.8 mg SL (2 tablets) repeated every 3 minutes until symptoms improve or BP drops to < 160 mm Hg.

c. 1.2 mg SL (3 tablets) repeated every 3 minutes until symptoms improve or BP drops to < 200 mm Hg.

d. None of the above. NTG is NOT indicated for this patient.

33. Patients occasionally suffer from a cardiac dysrhythmia known as Supraventricular Tachycardia (SVT). This dysrhythmia results in a very rapid heart rate that may be converted to a normal rate by manual maneuvers (Valsalva), medication (Adenosine) or by electrical means (Synchronized Cardioversion). A modified form of the standard Valsalva maneuver is now allowed and is known as the Leg Lift Valsalva. It's use is limited to EMT-Intermediates (ALS) and paramedics. The correct procedure includes:

a. Standardized strain by blowing into an empty syringe and attempting to move

the plunger.

b. Patient lying prone and raising legs upward to 45 degrees and holding them elevated for 15 seconds.

c. Patient lying supine and EMS raising patient’s legs upward to 45 degrees and holding them 15 seconds.

d. a and b.

e. a and c.

34. Sedation may be used for several issues including anxiety. Before sedating a patient, the

underlying cause, if identified or known, should always be treated before considering and administering sedation. Benzodiazepines (Versed, Valium, Ativan) are used for

sedation. A relative contraindication to the use of one of these drugs is:

a. patient is tachycardic.

b. patient is hypertensive.

c. patient is seizing.

d. patient is in active labor.

35. Intravenous fluids are often required for infants and pediatric patients. The allowable

amount of IV fluid for a patient up to and including 12 years of age is:

a. 20ml/kg repeated once to a maximum of 40ml/kg.

b. 20ml/kg repeated twice to a maximum of 60ml/kg.

c. 20ml/kg repeated three times to maximum of 80ml/kg.

d. there is no maximum.

36. Dextrose (25 grams in 50ml) is appropriate for a symptomatic hypoglycemic patient who

has an altered level of consciousness or is unconscious. Only enough medication necessary to resolve the signs/symptoms should be administered. That medication should be titrated to the **desired effect** of resolving signs of hypoglycemia. That may not require an entire ampoule of Dextrose. The Dextrose may be administered via IV push via the ampoule or by IV drip by injecting the Dextrose into a bag of IV solution. Infusion in the following concentrations is acceptable to achieve the desired effect.

a. D50

b. D25

c. D10

d. All of the above.

37. Double sequential defibrillation (DSED) is an intervention that requires two defibrillators, both of which must be connected to the patient. One set of defibrillator pads is applied in the normal anterior/lateral positions and the other set of pads are applied in the anterior/posterior positions. The skill is only allowed by an ALS licensed provider (EMT-Intermediate (ALS) or paramedic. DSED can be used:

a. for persistent and continuous ventricular defibrillation.

b. only after three standard defibrillation shocks have been administered.

c. repeated as needed.

d. all of the above.

38. Hypertension remains a major health risk affecting a large percentage of our population.

EMS occasionally encounter patients experiencing a hypertensive crisis. These can be either stable or unstable. As a matter of routine, treating a hypertensive crisis is allowed when the patient is unstable as evidenced by:

a. SBP > 220 or DBP > 120 with neurological deficits

b. SBP < 220 or DBP < 120 with no deficits.

c. SBP > 180 or DPB < 150 with neurological deficits

d. SBP > 220 or DBP > 120 with chest pain and/or pulmonary edema.

e. a and c

f. a and d

39. You are caring for a patient who is complaining of sub-sternal chest pain and dyspnea. You have acquired a 12-lead and your monitor has indicated "inferior infarct-acute". You observe what you believe to be ST-elevation in several leads. Your patient appears "shocky" and has a blood pressure of 78/50. You believe the patient do be in cardiogenic shock. Treatment includes:

a. CPAP.

b. IV with fluid bolus in 500ml increments.

c. NTG 0.4mg repeated every 3-5 minutes until chest pain resolved

d. All of the above.

40. You are caring for a 4 1/2 year old child who reportedly had a seizure prior to your arrival. The child remains postictal and has begun to seize again. The child weighs an estimated 40 pounds. You have chosen to administer medication and you have not yet established an IV. The correct medication, dose and route is:

a. Versed 0.2mg/kg IN/IM

b. Versed 5mg IN/IM

c. Ativan 0.1mg/kg IN/IM

d. Diazepam 5-10mg IN

You are dispatched to a local department store for an unresponsive male, possible overdose. On arrival you are directed back to the women’s clothing department and find a 16-month-old male unresponsive on the floor next to a purse with some open prescription bottles in it. One bottle is labeled metoprolol, another is labeled tramadol, while a third is labeled omeprazole. Please answer the following three questions:

41. Metoprolol is a medication...

1. Prescribed to treat gastroesophageal acid reflux
2. Classified as a beta blocker
3. Prescribed to treat hypertension
4. Classified as a proton pump inhibitor
5. Both A and D
6. Both B and C

42. Tramadol is a medication…

1. Prescribed to treat moderate pain
2. Classified as a beta blocker
3. Prescribed to treat hypertension
4. Classified as an opiate analgesic
5. Both A and D
6. Both B and C

43. The patient was given two doses of glucagon 0.5 mg IV and the heart rate remains at 56 bpm. The next course of action is…

1. Administer Glucagon 1 mg IV
2. 0.9% Sodium Chloride 20 ml/kg bolus
3. Calcium Chloride 20 mg/kg IV
4. Dopamine infusion initiated at 5 mcg/kg/min IV

You are dispatched to a daycare center at 0957 hours for the report of an unresponsive 10-month-old female. Upon arrival a frantic caregiver meets you and reports the infant had been put down for a nap approximately five minutes prior to calling 911. The caregiver reports the infant has an Atrial Septal Defect and underwent surgery a few months ago to correct type C Esophageal Atresia. Initial vital signs are heart rate of 124 bpm with a respiratory rate of 24 bpm. The infant is pink, warm, and dry to the touch. Please answer the following four questions:

44. The presenting vital signs are indicative of the following etiology:

1. Opiate Overdose
2. ETOH Ingestion
3. Sepsis
4. Seizure Disorder
5. None of the above

45. The next course of action is:

1. Provide oxygen via non-rebreather at 15 LPM while preparing for intubation
2. Establish IV and administer 0.9% Sodium Chloride 20 ml/kg bolus
3. Obtain a blood glucose reading

46. You repeat the vital signs and find a heart rate of 128 bpm and regular with a respiratory rate of 24 bpm. Blood glucose is 58. The infant is pink, warm, and dry to the touch. Your next course of action is:

1. Intubate the patient
2. Administer another 0.9% Sodium Chloride 20 ml/kg bolus
3. Administer D10% 10 ml/kg
4. The patient is stable, monitor and transport to the closest facility.

47. A recheck of the blood glucose is 45. You go to administer D10% 10 ml/kg but discover all you have is D50%. Your next action is:

1. Continue to monitor, the blood glucose is appropriate for their age
2. Administer Glucagon 1 mg IM
3. Administer D50% 20 ml mixed with 0.9% Sodium Chloride 80 ml
4. Administer D50% 20 ml mixed with 0.9% Sodium Chloride 20 ml
5. None of the above