

**Pierce County EMS
Paramedic Airway Management Course**

PRE-TEST

[SEPT 2012 version]

Name: _____

Date: _____

Agency: _____

Pre-Test Score: _____

Please read each question carefully and circle the best answer.

1. The “gold standard” method for confirming correct ET tube placement is:
 - a. Direct visualization
 - b. Wave-form capnography
 - c. Bilateral chest rise
 - d. Use of an Esophageal Detection Device (EDD)

2. During transport to the Emergency Department, a three year old with suspected epiglottitis, becomes unresponsive. The patient presents with shallow, labored respirations at a rate of 8/min, while his heart rate has dropped to 50/min. The patient has no venous access. Your most appropriate initial step in managing the patient would be:
 - a. Bag-Valve Mask ventilation
 - b. Endotracheal intubation
 - c. Needle cricothyroidotomy
 - d. Start an IV for medication administration

3. “First-pass” intubation success improves the clinical outcomes of patients by decreasing:
 - a. Chances of hypoxia
 - b. Trauma to the airway
 - c. Risk of aspiration
 - d. All of the above

4. For children less than 10 years old, what additional medication is required in the RSI process that is not a standard requirement in adult RSI?
 - a. Epinephrine
 - b. Atropine
 - c. Albuterol
 - d. Lidocaine

5. A paramedic may suspect that a patient may have a “difficult airway” for intubation if he/she has all of the following conditions **EXCEPT**:
 - a. Morbid obesity
 - b. Small oral opening
 - c. Anterior larynx
 - d. Prominent chin

6. According to Pierce County EMS protocols, all of the following are true about Etomidate **EXCEPT**:
 - a. Etomidate can increase intracranial pressure
 - b. Etomidate is only used for initial sedation to facilitate intubation.
 - c. The recommended dose for Etomidate in RSI is 0.3 mg/kg
 - d. Base Station contact is required for use of Etomidate with pediatric patients.

7. Paramedics performing sedation-only assisted intubations, using Versed or Etomidate, have almost identical ET intubation success rates to those of patients receiving RSI with a paralytic.
 - a. True
 - b. False

Scenario 1: (questions 7 – 10)

A 28 year old female has overdosed on alcohol and Valium. Initially, the patient is obtunded and responds to noxious stimuli by opening her eyes, using incomprehensible speech, and localizes pain. She vomited at least once prior to your arrival. She has a BP of 114/88, HR of 92, RR of 20, clear with fair tidal volume, and SpO₂ of 97% on room air.

You moved the patient out to your Medic rig, and the patient is now unresponsive other than moaning and withdrawing from pain. The patient has snoring respirations with a NPA in place. Her vital signs are unchanged, other than her respiratory rate is now 10 to 12 per minute, and her SpO₂ is now 94% on a NRB mask at 15L/minute and her ETCO₂ is 48. You are 10 minutes from the closest hospital.

You elect to intubate this patient. She takes an OPA without response and your partner starts to BVM ventilate this patient.

8. Which of the following is true about BVM ventilation of this patient:
 - a. Ventilations should be delivered at a rate of 12 to 15 per minute
 - b. Ventilations should last one second each
 - c. Ventilations should be given with the head in a sniffing position and the jaw pulled up into the mask
 - d. All of the above are true

9. You elect to intubate this patient to protect her airway from aspiration. After assessing the patient's condition, you believe that RSI should be utilized to paralyze this patient.
 - a. True
 - b. False

10. Your first attempt to intubate fails when you are only able to visualize the epiglottis. With BVM ventilation you are able to maintain the patient's oxygen saturation at 98%. Your Plan B airway for this patient is:
 - a. Continue BVM ventilation of the patient and transport to the closest hospital ten minutes away
 - b. Use a Gum Boogie device for your second intubation attempt
 - c. Insert a supraglottic or "rescue" airway and transport
 - d. All of the above are acceptable

11. While examining the patient, in the scenario above, you discover a Medic Alert bracelet which indicates that the patient suffers from "Malignant Hyperthermia". With this information, which of the following drugs would be contraindicated for treatment of this patient?
 - a. Lidocaine
 - b. Etomidate
 - c. Succinylcholine
 - d. Vecuronium

12. Which of the following is true about the use of Succinylcholine :
 - a. Succinylcholine is a non-depolarizing neuromuscular blocking agent
 - b. Succinylcholine is contraindicated for patients with new burn injuries
 - c. Succinylcholine is contraindicated for use in patients with inherited myopathies such as muscular dystrophy which can lead to hyperkalemia
 - d. Succinylcholine is typically administered at a dose of 1 mg/kg IVP for adults

13. To place an adult patient in the "sniffing position" for intubation, place towels behind the head until the head is elevated to the point that the opening of the ear canal is level with the patient's sternal notch.
 - a. True
 - b. False

Scenario 2: (questions 14 – 18)

A 58 year old male bike rider was struck by a SUV and thrown 40 feet. The patient is unconscious, and exhibiting decorticate posturing, with a GCS of 4. He has a large hemotoma to his occipital skull, and is bleeding from his mouth. The patient has a BP of 198/92, HR of 64, and shallow, rapid respirations at 30/min. The patient's SpO₂ is 88%, with ETCO₂ at 50 mm Hg. He still has protective airway reflexes. The patient was immobilized to a backboard prior to your arrival. You decide to intubate this patient in the back of your rig using RSI. You estimate the pt. weighs 180 to 200 pounds.

14. Your first steps in managing this airway should include all of the following **EXCEPT**:
 - a. Suctioning of the oral pharynx
 - b. Insertion of an OPA
 - c. A modified jaw thrust to open the airway
 - d. BVM ventilation at a rate of 10 breaths per minute

15. To help prevent desaturation of the patient's oxygenation levels during the ET intubation attempts, start apneic oxygenation on this patient as early as possible by:
 - a. Applying a nasal cannula at 5 liters per minute of oxygen
 - b. Applying a nasal cannula at 15 liters per minute of oxygen
 - c. Holding a BVM with high-flow oxygen flowing and provide "blow-by" oxygen
 - d. Holding a NRBM set at 15 liters per minute of oxygen and provide "blow-by" oxygen

16. To help improve intubating conditions, the front of the c-collar must be opened prior to intubation being attempted, and spinal immobilization should be maintained with manual stabilization.
 - a. True
 - b. False

17. The most appropriate RSI regimen listed below for treating this patient is:
 - a. Lidocaine 150 mg IVP, Etomidate 30 mg IVP, Succinylcholine 150 mg IVP
 - b. Lidocaine 150 mg IVP, Valium 5 mg IVP, Succinylcholine 100 mg IVP
 - c. Versed 10 mg IVP, Succinylcholine 100 mg IVP
 - d. Atropine 1 mg IVP, Lidocaine 70 mg IVP, Versed 10 mg IVP, Succinylcholine 100 mg IVP

18. Based upon the scenario above and Pierce County Treatment Protocols, once the bike rider is intubated, he should be ventilated to maintain an ETCO₂ level between 25 and 30 mm Hg.
 - a. True
 - b. False

19. The narrowest part of a small child's airway is:
 - a. At the cricoid ring
 - b. The laryngopharynx
 - c. The level of the vocal cords
 - d. Slightly above the level of the carina

20. A mouth opening of only two finger-widths means:
 - a. Visualization of the vocal cords will be impossible
 - b. Intubation should be easy
 - c. Laryngoscopy may be difficult
 - d. Nasal intubation may be your best option.

21. When using RSI to facilitate intubation of a patient, you should administer the paralytic agent first followed within 30 seconds by the sedative/induction agent.
 - a. True
 - b. False

22. An eight year old boy fell off the second-story roof of his house. He is found lying on the paved driveway, unconscious, responding to pain by withdrawing. He has a large hematoma to his right forehead. The patient is gurgling upon your arrival, and you direct first-responders to begin suctioning blood from the upper airway. With loading into your Medic unit, you are 20 minutes from the Pediatric Trauma Center. Which of the following is the best approach to managing his airway?
- Bag-Valve Mask ventilation with suctioning
 - Insertion of a Combitube while maintaining in-line stabilization
 - Endotracheal intubation with RSI while maintaining in-line spinal stabilization
 - Surgical cricothyrotomy
23. The keys to BVM mastery include all of the following **EXCEPT**:
- Proper positioning of the patient
 - Obtaining a good mask seal by pushing down on the face and using the "E-C" technique
 - Using two-person BVM technique whenever possible
 - Providing slow, low pressure ventilations for non-cardiac arrest patients
24. A 48 year old male construction worker has been pinned to the ground, from the waist down, for more than two hours by a large, ten-ton concrete slab. You decide to use RSI to facilitate ET intubation of this patient. Per protocol, which drug is your best choice as a paralyzing agent, and at what dose?
- Vecuronium at 0.1 mg/kg IVP
 - Etomidate at 0.3 mg/kg IVP
 - Succinylcholine at 1.5 mg/kg IVP
 - Midazolam at 0.1 mg/kg IVP
25. You have successfully intubated an adult trauma patient with RSI, using Etomidate and Succinylcholine. You have a 25 minute ETA to the Trauma Center. To keep the patient sedated and paralyzed until your arrival at the hospital, your best choice for managing this patient would be:
- Etomidate 0.1 mg/kg IVP q 10-15 min., and Succinylcholine 1.5 mg/kg IVP
 - Etomidate 0.1 mg/kg IVP q 10-15 min., and Vecuronium 0.1 mg/kg IVP
 - Versed 0.1 mg/kg IVP q 10-15 min., and Succinylcholine 1.5 mg/kg IVP
 - Versed 2 mg IVP slowly q 5 min., and Vecuronium 0.1 mg/kg IVP