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Study Guide for Final- Key

Chap 1

1. By design, the CQI process identifies areas of _____.

Rationale: B. The CQI process identifies areas of improvement. The medical director will decide if the identified areas should be addressed and in what manner.

2. Quality improvement programs are necessary to:

Rationale: D. Quality improvement programs are necessary to ensure public safety, to validate and confirm your level of care, and to identify areas needing improvement.

3. The most successful EMS quality assurance programs involve all members of the agency in processes of:

Rationale: D. The most successful EMS quality assurance programs involve all members of the agency in processes of development, implementation, and policy making.

4. The responsibility of a quality control program for an EMS service is with _____.

Chap 2

1. What is the best protection for *you* when transporting a patient with possible TB?

Rationale: B. A HEPA respirator should be placed on yourself and either a surgical mask or nonrebreather on the patient.

2. How is tuberculosis transmitted?

Rationale: D. TB is spread through the airborne route. Droplet nuclei are too small to be stopped by a surgical mask.

3. Tuberculosis patients who pose the highest contagious risk almost always have _____.

Rationale: C. Patients with a cough spray droplets into the air.

4. If you have an exposure, when should you notify your department's designated officer?

Rationale: D. If you experience an exposure, you must notify your department's designated officer as soon as possible and complete an incident report. The designated officer can contact the hospital, and the hospital must get back to the officer within 48 hours.

5. What is the most common type of personal protective equipment?

Rationale: C. Gloves are the most common type of PPE. Latex or vinyl gloves are considered medical waste and must be disposed of properly.

6. What is the preferred infection control concept for EMS and fire personnel?

Rationale: B. BSI (body substance isolation) differs from universal precautions in that it is designed to approach *all* body fluids as being potentially infectious.

Challenging Questions

7. Why do health care workers receive tuberculin skin tests on a regular basis even if no known exposure has occurred?

Rationale: Most tuberculosis transmissions occur silently, without the health care worker even knowing that an exposure has occurred. If the infection is found before the individual becomes ill, preventive therapy is almost 100% effective.

8. What is a carrier?

Rationale: A carrier is a person (or animal) in whom an infectious organism has taken up permanent residence though it may not be causing any active disease.

Chap 3

1. An emancipated minor is one who is:

Rationale: D. An emancipated minor is one who is married, pregnant, a member of the armed forces, or who is living independently and supporting himself or herself.

2. During a life-threatening emergency, minors or mentally incompetent adults are treated under what type of consent?

Rationale: B. If a true emergency exists and the parent or guardian is not available, the consent to treat is implied.

3. What should you do when a patient is in cardiac arrest and family members tell you there are DNR orders but cannot produce them?

Rationale: B. When you are in doubt or the written orders are not present, you have an obligation to resuscitate.

4. Which of the following is considered confidential information?

Rationale: D. If you disclose information regarding a patient's condition or treatment without the patient's consent, you may find yourself liable for breach of confidentiality.

5. _____ consent means that the risks, benefits, and alternatives to treatment have been explained.

Rationale: C. Informed consent means that the patient has been told of the potential risks, benefits, and alternatives to treatment and has agreed to the treatment. The patient must be of legal age and able to make a rational decision.

Challenging Questions

6. What is the proper procedure when a competent patient refuses treatment?

Rationale: Obtain the signature of the individual who is refusing care on the proper form, document any assessment findings and any care provided, and obtain the signature of a reliable witness.

7. What is the difference between an advance directive and a DNR order?

Rationale: DNR orders state that nothing is to be done for the patient in an arrest situation. An advance directive may be a DNR order but generally specifies what is to be done in certain situations.

Chap 4

1. Which of the following is considered the most powerful and safest way to lift?

Rationale: B. The power lift; lifting by extending the properly placed flexed legs is considered the most powerful and safest way to lift

2. Which of the following is considered proper body mechanics when using a body drag?

Rationale: D. When you use a body drag to move a patient, the same basic body mechanics and principles apply as when lifting and carrying.

3. When there is potential danger, which of the following methods should be used to move a patient before initial assessment and care are provided?

Rationale: B. An emergency move is used when you and the patient must move to a safe place to avoid serious

harm or death. The only other time is if you cannot properly assess the patient or provide immediate critical emergency care because of the patient's location or position.

4. When transporting a geriatric patient, one concern is brittle bones or _____.

Rationale: A. Osteoporosis = brittle bones, kyphosis and spondylosis = spinal curvatures

5. What branch of medicine is concerned with the management of obesity and associated diseases?

Rationale: B. Americans are becoming so large that a new field of medicine has been named for the care of the obese called bariatrics.

Challenging Questions

6. Lifting and moving are dynamic processes. What is meant by this?

Rationale: Dynamic means constantly changing. When lifting and moving a patient, you must constantly work together to keep the patient upright and to make sure the move is accomplished smoothly and efficiently and none of the rescuers is injured during the move.

7. What is the purpose of pulling a patient along the long axis of the body when you must perform an emergency move?

Rationale: It helps to keep the spinal column aligned as much as possible. It is impossible to remove a patient quickly from a vehicle while providing the spinal immobilization they would get by using an immobilization device, but by proceeding cautiously you can minimize further damage.

Chap 5

1. What is your first step in caring for this patient?

Rationale: B. As soon as a patient becomes unresponsive, he should be placed in a supine position so that his ABCs may be assessed and CPR initiated if needed.

2. Once you have lowered him to the floor, you hear gurgling from his airway. What should you do?

Rationale: C. Gurgling indicates fluid in the airway. To prevent aspiration and protect his airway, you must suction immediately.

3. What is the maximum time limit for suctioning this patient?

Rationale: C. The patient is an adult, so the maximum time limit for suctioning is 15 seconds. The maximum

limit for children is 10 seconds and 5 seconds for infants.

4. What is the next step after suctioning and ensuring that the airway is clear?

Rationale: D. As soon as the airway is clear, assess breathing for rate, quality, and degree of distress.

5. You determine that the patient's rate of breathing is 16 times per minute and shallow. What type of oxygen does he need?

Rationale: D. The tidal volume for this patient is inadequate. Regardless of the rate, the patient should be ventilated with a bag-mask device attached to 100% oxygen to increase his tidal volume.

Challenging Questions

6. When ventilating a patient, it is important to use either an oral or nasal airway. What are the contraindications of each?

Rationale: Oral: Intact gag reflex

Nasal: Epistaxis

Signs of a basilar skull fracture

Nasal fracture

7. Since you were eating lunch and were not actually dispatched on the call, should you call for another unit to come to the scene and finish your lunch once the patient has been transported, or should you go ahead and transport the patient? Why?

Rationale: Even though you were not dispatched to the scene, you have a moral and legal responsibility to the patient. He should be transported immediately to the closest, most appropriate facility.

Chap 6

1. What is the first step in any patient assessment, regardless of the nature of the call?

Rationale: C. Personal protection is always first.

2. What is the first step in assessing circulation?

Rationale: C. The first goal in assessing circulation is to determine if the patient's pulse is present and adequate.

3. What are the functions of the skin?

Rationale: D. The skin helps maintain the water content of the body, acts as insulation and protection from infection, and also plays a role in regulating body temperature by changing the amount of blood circulating through the surface of the skin.

4. CRTs may be delayed by _____.

Rationale: B. Some causes of delayed CRTs include hypothermia, frostbite, vasoconstriction, injuries to bones and muscles of the extremities, and hypoperfusion.

5. A patient who reports pain after a fall needs what type of assessment?

Rationale: C. Any patient with a significant mechanism of injury, an altered mental status, or any problem with ABCs should have a rapid trauma assessment.

6. A patient with which of the following signs/symptoms is considered a priority patient?

Rationale: D. All of the above. In addition, patients who have difficulty breathing, altered mental status, severe chest pain, signs of poor perfusion, uncontrolled bleeding, inability to follow commands, and inability to move any part of the body are considered priority patients and should be transported immediately.

Challenging Questions

7. What is the most common airway obstruction in an unresponsive patient?

Rationale: The tongue is the most common airway obstruction in an unresponsive patient and generally results in snoring respirations until the airway is opened manually.

8. What are the steps for controlling external bleeding?

Rationale:

Direct pressure

Elevation

Pressure point

Constricting band

Chap 7

1. All radio operations in the United States are regulated by the _____.

Rationale: B. The Federal Communications Commission (FCC) has jurisdiction over interstate and international telephone and telegraph services and satellite communications.

2. What type of exchange helps to eliminate confusion and the possibility of poor patient care when communicating with medical control?

Rationale: D. Whether the physician gives an order for a medication or a specific treatment or denies a request for a particular treatment, you must repeat the order back word for word.

3. John Frances is a 52-year-old man with dyspnea. How should he be addressed?

Rationale: C. Use the patient's proper name when it is known, including a courtesy title.

4. A good prehospital care report documents _____.

Rationale: D. The information in the report also shows that you have provided proper care and in some instances, it also shows that you have properly handled unusual or uncommon situations.

5. What portion of the EMT's patient care interaction becomes part of the patient's permanent medical record?

Rationale: C. It serves many purposes, including demonstrating that the care delivered was appropriate and within your scope of practice and it ensures continuity of patient care.

6. EMS-related responsibilities of the FCC include:

Rationale: D. Other responsibilities include licensing base stations, assigning radio call signs, and monitoring radio operations.

Challenging Questions

7. When treating an older patient who appears to have an altered mental status, do not assume that this is normal behavior. What should you do in this situation?

Rationale: Talk to family members or friends who are on scene and can tell you what is "normal" for this patient. Also look for signs of hypoxia, CVA, hypovolemia, or other medical conditions that can contribute to an altered mental status.

Chap 8

1. An EMT-B can assist with all of the following medications EXCEPT:

Rationale: B. An EMT-B can assist with oral glucose if needed, but not insulin.

2. Before assisting with any medication, you should:

Rationale: D. The medication must be in date, prescribed for the patient, and you must have permission from medical control before assisting with it.

3. What side effects do you expect after assisting with the metered-dose inhaler?

Rationale: C. Albuterol is a beta drug; therefore, you should expect to see tachycardia and possibly an elevation in blood pressure.

4. What is the next step after assisting with any medication?

Rationale: D. Always monitor the patient for any changes. This includes the desired effect as well as any side effects.

5. What is the therapeutic effect of a medication?

Rationale: C. The therapeutic effect is the desired action on the body. For example, nitroglycerin relieves pain through vasodilation and increased oxygenation of cardiac cells.

6. What is the desired effect of albuterol?

Rationale: B. Albuterol is administered for its beta-2 effects: bronchodilation.

Challenging Question

7. Albuterol is a beta-2 selective sympathomimetic drug. What does this mean?

Rationale: Beta-2 drugs cause the same response in the lungs as stimulation of the sympathetic nervous system: bronchodilation. There are still some side effects associated with any beta drug (i.e., tachycardia), but the effects are minimal when the drug is beta-2 selective.

Chap 9

1. A focused assessment of the respiratory system includes:

Rationale: D. Ask the patient whether the treatment made any difference, look to see if the accessory muscles are being used to breathe, and listen to the patient's speech pattern for any signs of distress.

2. Signs of inadequate breathing include:

Rationale: D. All of the above are signs of inadequate breathing as well as a rate in adults that is slower than 12 breaths/min or faster than 20 breaths/min, unequal chest expansion, decreased breath sounds on one or both sides of the chest, muscle retractions, and pursed lips and nasal flaring.

3. All of the following are signs of adequate breathing EXCEPT:

Rationale: C. Adequate signs of breathing include a normal rate and depth, a regular pattern of inhalation and exhalation, good audible breath sounds on both sides of the chest, a regular rise and fall movement on both sides of the chest, and pink, warm, dry skin.

4. _____ is heard as a patient tries to exhale through partially obstructed air passages.

Rationale: D. Asthma produces a characteristic wheezing as patients attempt to exhale through partially obstructed air passages. These same air passages open easily during inspiration.

5. Which of the following is considered a sign of hypoxia of the brain?

Rationale: C. If the brain is deprived of oxygen, the patient may not be alert enough to complain of shortness of breath. An altered mental status is a sign of hypoxia of the brain. Change in affect or level of consciousness is one of the early warning signs of respiratory inadequacy.

6. Inhaled beta-agonists work by _____.

Rationale: B. Some of the most common medications used for shortness of breath are called inhaled beta-agonists, which dilate breathing passages. Most of these medications relax the muscles that surround the bronchioles in the lungs, leading to enlargement (dilation) of the airways and easier passage of air.

Challenging Questions

7. Explain what is meant by chronic carbon dioxide retention.

Rationale: If, over a period of years, arterial carbon dioxide levels rise slowly to an abnormally high level and remain there, the respiratory center in the brain, which senses carbon dioxide levels and controls breathing, may work less efficiently. The failure of this center to respond normally to a rise in arterial levels of carbon dioxide is called chronic carbon dioxide retention.

8. Explain how the hypoxic drive works.

Rationale: The hypoxic drive is the backup system that detects low blood oxygen levels. When detected, the respiratory center responds and stimulates the person to breathe.

Chap 10

1. What is the main legal risk in using the AED?

Rationale: B. The main legal risk in using the AED is failing to deliver a shock when one was needed. The most common reason for this failure is that the battery did not work, usually because the unit was not properly maintained.

2. What is the first step for an unwitnessed cardiac arrest?

Rationale: D. For an unwitnessed adult cardiac arrest, perform CPR for 2 minutes (five cycles of 30 compressions to two ventilations) before using the AED.

3. What is the next step after determining a patient is apneic or has agonal respirations?

Rationale: C. If the patient is unresponsive and not breathing or has agonal respirations (slow, gasping breaths), give two ventilations using a bag-mask device or a pocket mask.

4. Once a patient has been defibrillated, when should the next analyze/shock be performed?

Rationale: D. Administer one shock and then provide CPR (starting with compressions) for 2 minutes before analyzing and shocking a second time.

5. When applying an AED, what should you do about medication patches on the patient's chest?

Rationale: C. Carefully remove any medication patches from the patient's chest and wipe the area with a dry towel before defibrillation to prevent ignition of the patch.

6. What is the advantage of using a biphasic AED?

Rationale: B. The advantage of a biphasic shock is that it produces a more efficient defibrillation and may require a lower energy setting. Recommended energy settings for AED units are now based on whether the AED unit delivers a monophasic or a biphasic shock.

Challenging Questions

7. What is the proper procedure for using an AED in a moving ambulance?

Rationale: You should not use the AED to analyze or shock a patient in a moving ambulance. Movement from the vehicle may cause false readings. Stop the ambulance and then proceed as directed by the AED manufacturer.

8. Why should you not use an AED on a patient who has a pulse?

Rationale: The AED is not capable of detecting a pulse, only the cardiac rhythm. The AED would indicate that a patient with a pulse who is in ventricular tachycardia needs defibrillation. The AED should only be applied to patients who are apneic and pulseless.

Chap 11

1. What type of seizures result from sudden high fevers?

Rationale: B. Seizures can result from sudden high fevers, particularly in children. Febrile seizures are usually very unnerving for parents to observe but are generally well tolerated by the child.

2. Seizures may be the result of _____.

Rationale: D. Seizures may be caused by tumors, an infection (brain abscess), or scar tissue from some type of injury.

3. Due to the buildup of acids in the bloodstream, what type of respirations is typically seen after a seizure?

Rationale: C. Once a seizure has stopped, the patient's muscles relax and the breathing becomes labored (fast and deep) in an attempt to compensate for the buildup of acids in the bloodstream.

4. What type of seizures is recurrent without an intervening period of consciousness?

Rationale: D. Seizures that continue every few minutes without the patient regaining consciousness or last longer than 30 minutes are referred to as status epilepticus.

5. What is the treatment of choice for a child who has experienced a febrile seizure?

Rationale: D. Attempt to lower the child's temperature by removing his or her clothing and cooling the child with tepid water, particularly about the head and neck, and then fanning moistened areas. Be careful not to make the patient shiver, which will increase temperature.

Challenging Questions

6. Why should you monitor glucose levels closely after a patient with diabetes mellitus has a seizure?

Rationale: In patients with diabetes mellitus, blood glucose values may drop because of the excessive muscular contraction of a seizure.

7. What causes the buildup of acids in the bloodstream during seizure activity?

Rationale: Because most seizures involve a vigorous twitching of the muscles, the muscles use a lot of oxygen. This excessive demand consumes oxygen being delivered by the circulation to the vital functions of the body. As a result, there is a buildup of acids in the bloodstream, and the patient may be cyanotic from the lack of oxygen.

Chap 12

1. In diabetes mellitus, the body cannot metabolize glucose usually because of a lack of _____.

Rationale: B. Diabetes mellitus is considered a metabolic disorder in which the body cannot metabolize glucose, usually because of a lack of insulin.

2. Diabetic coma may present with which of the following signs/symptoms?

Rationale: D. A diabetic coma may present with all of these as well as Kussmaul's respirations; a sweet, fruity odor on the breath; and varying degrees of unresponsiveness.

3. What is the problem in insulin shock?

Rationale: C. In insulin shock, the problem is hypoglycemia (low blood glucose level). When insulin levels remain high, glucose is rapidly taken out of the blood to fuel the cells.

4. Diabetes mellitus is considered what type of disease?

Rationale: D. Diabetes mellitus is a systemic disease affecting all tissues of the body, especially the kidneys, eyes, small arteries, and peripheral nerves.

5. Seizures may be caused by _____.

Rationale: C. Seizures, which may be brief or prolonged, are caused by fever, infections, poisoning, hypoglycemia, trauma, or decreased levels of oxygen. They can also be idiopathic in children.

6. Which of the following organs is the only one that does not require insulin to use glucose?

Rationale: B. Without glucose, or with very low levels, brain cells rapidly sustain permanent damage. With the exception of the brain, insulin is needed to allow glucose to enter individual body cells.

Challenging Questions

7. Explain the cause of the "3 Ps" associated with diabetic ketoacidosis.

Rationale: Once the blood glucose levels reach 200 mg/dL or more, or twice the usual amount, excess glucose is excreted by the kidney. This process requires a large amount of water. The loss of water in such large amounts

causes the classic symptoms of uncontrolled diabetes mellitus: polyuria, polydipsia, and polyphagia.

8. List the possible causes of insulin shock.

Rationale: Taking too much insulin

Taking a regular dose of insulin but not eating enough

Performing an unusual amount of vigorous exercise that uses up all available glucose

Chap 13

1. Two of the most common signs of anaphylaxis are wheezing and _____.

Rationale: B. Urticaria consists of small areas of generalized itching or burning that appear as multiple, small, raised areas on the skin.

2. Wheezing is the result of:

Rationale: D. Wheezing occurs because of narrowing of the air passages, which is mainly due to the contraction of muscles around the bronchioles in reaction to the allergen.

3. Assess the skin for signs of shock including _____.

Rationale: D. Watch the skin for signs of shock, including pallor and diaphoresis, as well as for flushing due to vascular collapse.

4. The dose of epinephrine in an adult EpiPen is how many milligrams?

Rationale: B. The adult system delivers 0.3 mg of epinephrine via an automatic needle and syringe system; the infant-child system delivers 0.15 mg.

5. Common allergens include _____.

Rationale: D. Five general categories of the most common allergens include insect bites and stings, medications, plants, food, and chemicals.

6. When treating a sting from a honeybee, you should:

Rationale: D. Because the stinger of the honeybee remains in the wound, it can continue to inject venom for up to 20 minutes. You should gently attempt to remove the stinger by scraping the skin with the edge of a sharp, stiff object. Gently wash the area with soap and water and remove any jewelry from the area before swelling

begins. Position the site below the level of the heart and apply ice or cold packs to help relieve pain and slow the absorption of the toxin.

Challenging Questions

7. Describe the procedure for using an AnaKit.

Rationale:

1. Prepare the injection site with antiseptic, and remove the needle cover.
2. Hold the syringe upright, and carefully use the plunger to remove air.
3. Turn the plunger one-quarter turn.
4. Quickly insert the needle into the muscle.
5. Hold the syringe steady, and push the plunger until it stops.
6. Have the patient chew and swallow the antihistamine tablets provided in the kit.
7. If available, apply a cold pack to the sting site.

Chap 14

1. Food poisoning is almost always caused by eating food that is contaminated with _____.

Rationale: B. Food poisoning is almost always caused by eating food that is contaminated by bacteria, often in leftovers.

2. A toxin is a poison produced by _____.

Rationale: D. A toxin is a poison or harmful substance produced by bacteria, animals, or plants.

3. A common vehicle for staphylococcal toxins is _____.

Rationale: C. Foods prepared with mayonnaise, when left unrefrigerated, are a common vehicle for the development of staphylococcal toxins.

4. Poisons may be introduced into the body by _____.

Rationale: D. A poison can be introduced into the body in one of four ways: ingestion, inhalation, injection, or absorption.

5. What is the most severe form of toxin ingestion?

Rationale: C. The most severe form of toxin ingestion is botulism, which can produce the first neurologic symptoms as late as 4 days after ingestion.

6. Severe gastrointestinal symptoms within 72 hours of ingestion, including nausea, vomiting, and diarrhea, are indicative of _____.

Rationale: B. Salmonellosis is characterized by severe gastrointestinal symptoms within 72 hours of ingestion, including nausea, vomiting, abdominal pain, and diarrhea. In addition, patients with salmonellosis may be systemically ill with fever and generalized weakness.

Challenging Questions

7. What is the proper treatment for possible dieffenbachia poisoning?

Rationale: Maintain an open airway, give oxygen, and transport the patient promptly to the hospital for respiratory support. Continue to assess the patient for airway difficulties throughout transport. If necessary, provide positive-pressure ventilations.

Chap 15

1. Cold emergencies can overwhelm temperature regulation mechanisms in which of the following populations?

Rationale: D. All of these individuals, along with young adults who exert themselves, are at a higher risk for exacerbation of problems due to a deficit in thermoregulation.

2. Most heatstroke cases occur when the temperature is _____.

Rationale: B. Most heatstroke cases occur when the temperature is 80°F and the humidity is 80%.

3. The effect of the wind is a good example of heat transfer by _____.

Rationale: B. Convection occurs when heat is transferred to circulating air, as when cool air moves across the body surface.

4. How many times should a hypothermic patient in ventricular fibrillation be defibrillated with an AED?

Rationale: A. In the hypothermic patient, the American Heart Association recommends only one shock until the patient can be warmed.

5. What is the most common serious illness caused by heat?

Rationale: B. Heat exhaustion is the most common serious heat illness and heatstroke is the least common but by far the most serious of the serious heat illnesses

Challenging Questions

6. Explain why shivering raises the body temperature.

Rationale: Increasing the rate of metabolism by moving around generates more heat as a by-product. When body temperature falls below 90°F, the body loses its ability to shiver and succumbs more easily to hypothermia.

7. Why do patients with heatstroke have hot, dry, flushed skin?

Rationale: The sweating mechanism is no longer working. However, early in the course of heatstroke, the skin may be moist or wet. Do not discount a possible heatstroke because of moist skin.

Chap 16

1. What is your first concern for this patient?

Rationale: B. ABCs are still the first priority for any patient after ensuring scene safety.

2. Other than the Alzheimer's, what else might cause his altered mental status?

Rationale: C. Any patient who has been exposed to cold temperatures may exhibit an altered mental status. It may range from lethargic to bizarre.

3. Under what type of consent is this patient treated?

Rationale: A. Any patient with an altered mental status, regardless of the cause, is treated under implied consent.

4. Treatment for this patient should include:

Rationale: D. Oxygen may improve his mental status by reversing hypoxia. Any exposed patient should be passively warmed as part of the standard treatment, and a medic alert bracelet or tag may give you more clues to the patient's history and normal mental status.

5. You should do all of the following EXCEPT:

Rationale: B. Starting an IV is outside of the scope of practice for EMT-Bs.

Challenging Questions

6. How should a hypothermic patient be treated?

Rationale: Very gently; avoid any excessive movement or stimulation. Remove wet clothing and cover with blankets. If he is alert enough to swallow, he may be given warm liquids by mouth.

7. What is the best source of information to determine the patient's *normal* mental status?

Rationale: A family member or the staff at the personal care home who have contact with him on a daily basis.

Chap 17

1. Following stimulation, begin resuscitation efforts if the baby does not begin to breathe after how many seconds?

Rationale: B. If a baby has not started breathing spontaneously within 15 to 20 seconds after birth, gently tap or flick the soles of the feet or rub the baby's back. If the baby does not breathe after 10 to 15 seconds, begin resuscitation efforts.

2. The "G" in APGAR stands for:

Rationale: C. Grimacing, crying, or withdrawing in response to stimuli is normal in a newborn and indicates the newborn is doing well.

3. When should the APGAR score be assessed?

Rationale: C. The APGAR score should be assessed at 1 minute and 5 minutes after delivery.

4. During resuscitation, if the heart rate is less than 60 beats/min and not increasing with ventilations, you should:

Rationale: D. If the heart rate is less than 60 beats/min and not increasing with ventilations, continue assisted ventilation and start cardiac compressions.

5. Some bleeding with delivery is normal; however, bleeding is considered excessive when it exceeds approximately how many milliliters?

Rationale: B. Although up to 500 mL of blood loss is tolerated, you should continue to massage the uterus after delivery to help control bleeding.

6. The most serious complications of abortion are bleeding and _____.

Rationale: B. Infection can result from perforation of the uterus or adjacent structures and from the use of nonsterile instruments.

Challenging Questions

7. Explain the procedure for caring for a prolapsed cord.

Rationale: A prolapsed cord should be kept moist. Cover with moist, sterile dressings if possible. Feel the cord for a pulse. If no pulse is present, place the mother in a Trendelenburg or knee-chest position for transport. Insert your gloved hand into the vagina to lift the presenting part off of the cord in order to regain a pulse. If a pulse is present, transport rapidly to the closest, most appropriate facility.

Chap 18

1. Which of the following may reduce deceleration injuries?

Rationale: B. Air bags provide the final capture point of the passengers and again decrease the severity of deceleration injuries by cushioning the occupant as he or she moves forward

2. The _____ is your concern for occult injuries.

Rationale: A. The index of suspicion is your concern for potentially serious underlying and unseen injuries.

3. The most significant factor in a fall is the _____.

Rationale: C. The injury potential of a fall is related to the height from which the patient fell. The greater the height of the fall, the greater the potential for injury

4. Whiplash injuries most often occur with what type of impacts?

Rationale: D. Rear-end impacts are known to cause whiplash-type injuries, particularly when the head and/or neck is not restrained by an appropriately placed headrest.

5. Aorta injuries are associated with what type of impact?

Rationale: C. Lateral impacts are probably now the number one cause of death associated with motor vehicle crashes. Approximately 25% of all severe injuries to the aorta that occur in motor vehicle crashes are a result of lateral collisions.

6. Pressure waves resulting from a projectile are known as _____.

Rationale: B. Because of its speed, pressure waves emanate from a bullet, causing damage remote from its path. The bullet disrupts not only the tissues that are directly in its path but also those in its wake.

Challenging Questions

7. Explain why rollover crashes have such a high potential for serious injuries.

Rationale: There are multiple points of impact with a rollover, resulting in injury patterns associated

with multiple crashes. Patients are also at greater risk for ejection or partial ejection when unrestrained. These crashes also provide multiple opportunities for second and third collision

Chap 19

1. Noncardiovascular causes of shock include respiratory insufficiency and _____.

Rationale: B. Cardiovascular causes of shock include heart attack, disease, and injury. Noncardiovascular causes include respiratory insufficiency and anaphylaxis.

2. Cardiogenic shock is caused by _____.

Rationale: D. Cardiogenic shock is caused by inadequate function of the heart or pump failure.

3. Hypovolemic shock may be caused by _____.

Rationale: D. Hypovolemic shock is often a result of fluid or blood loss. It also occurs with severe thermal burns.

4. Severe infections may result in what type of shock?

Rationale: C. In some patients who have severe infections, usually bacterial, toxins generated by the bacteria or by infected body tissues result in septic shock.

5. What type of shock results in syncope?

Rationale: C. A patient in psychogenic shock has had a sudden reaction of the nervous system that produces a temporary, generalized vascular dilation, resulting in fainting, or syncope.

6. What is the primary treatment for anaphylactic shock?

Rationale: B. Effective treatment for a severe, acute allergic reaction is to administer epinephrine.

Challenging Questions

7. What is the cause of pulmonary edema for a patient in cardiogenic shock?

Rationale: After a heart attack, there may be too much damage to the heart muscle and it will no longer function well. Because the heart is no longer pumping efficiently, blood will back up into the lungs. The resulting buildup of fluid within the pulmonary tissue is called pulmonary edema.

Chap 20

1. The part of the nervous system that controls voluntary activities is known as the _____.

Rationale: B. The part of the nervous system that regulates or controls our voluntary activities, including almost all coordinated muscular activities, is called the somatic or voluntary nervous system.

2. The components of Cushing's triad include:

Rationale: D. Effects of cerebral edema and increased intracranial pressure may be increased blood pressure, decreased pulse rate, and irregular respirations.

3. _____ is a common response to head injuries.

Rationale: C. A common response to head injuries, even among children with only very slight head injuries, is vomiting. This is sometimes the result of increased intracranial pressure.

4. The outer layer of the meninges is the _____.

Rationale: A. The outer layer of the meninges, the dura mater, is a tough, fibrous layer that closely resembles leather. This layer forms a sac to contain the CNS, with small openings through which the peripheral nerves exit.

5. The most reliable sign of a head injury is _____.

Rationale: C. Decreased level of consciousness is the most reliable sign of a head injury. Monitor the patient for changes in level of consciousness, including signs of confusion, disorientation, or a decreasing mental status.

6. What is the proper method for controlling bleeding from the scalp?

Rationale: B. Use a dry, sterile dressing, folding any torn skin flaps back down onto the skin bed before applying pressure. If you suspect a skull fracture, do not apply excessive pressure to the open wound.

Challenging Questions

7. What is the most fundamental part of the central nervous system and what does it control?

Rationale: The brain stem is the most fundamental part of the CNS. It controls virtually all the functions that are necessary for life, including the cardiac and respiratory systems. It is also the best protected part of the CNS.

Chap 21

1. Respiratory burns may be indicated by _____.

Rationale: B. Be alert to signs that the patient has inhaled hot gases or vapors, such as singed facial hair or soot present in or around the airway. Copious secretions, hoarseness, and frequent coughing may also indicate a respiratory burn.

2. Documentation of a burn patient should include:

Rationale: D. Your report and documentation should include the extent of the burns. This should include the amount of body surface area involved, the depth of the burn, and the location.

3. A sunburn is an example of what degree of burn?

Rationale: A. Superficial (first-degree) burns involve only the top layer of skin (epidermis). The skin turns red but does not blister or actually burn through.

4. Potential sources of burns include _____.

Rationale: D. A burn occurs when the body, or a body part, receives more radiant energy than it can absorb without injury. Potential sources of this energy include heat, toxic chemicals, and electricity.

5. What is the correct procedure for treating a patient who has been burned by a dry chemical?

Rationale: C. A dry chemical that is activated by contact with water may damage the skin more when it is wet than when it is dry. Therefore, always brush dry chemicals off the skin and clothing before flushing the patient with water.

6. Critical areas of the body include the face, hands, feet, and _____?

Rationale: B. The severity of a burn may influence the choice of a treatment facility. Critical areas (face, upper airway, hands, feet, genitalia) are one factor that helps determine the severity of a burn.

Challenging Questions

7. Explain the Palmer Method.

Rationale: The Palmer Method, also known as the *Rule of Palms* is used for small irregularly shaped burns to estimate the affected body surface area. One quick way to estimate the surface area is to compare it to the size of the patient's palm, which is roughly equal to 1% of the patient's total body surface area.

Chap 22

1. A weak area on the surface of the lungs is known as a(n)_____.

Rationale: B. Some people are born with or develop weak areas on the surface of the lungs. This weakened area

of the lung is called a bleb.

2. Signs and symptoms of a tension pneumothorax include(s):

Rationale: D. The common signs and symptoms of a tension pneumothorax include increasing respiratory distress, distended neck veins, deviation of the trachea, tachycardia, low blood pressure, cyanosis, and decreased breath sounds on the side of the pneumothorax.

3. What occurs during ventilation?

Rationale: C. On inhalation, the intercostal muscles between the ribs contract, elevating the rib cage. At the same time, the diaphragm contracts and pushes the contents of the abdomen down. The pressure inside the chest decreases, and air enters the lungs through the nose and mouth.

4. Internal organs protruding through a wound is known as a(n) _____.

Rationale: D. Severe lacerations of the abdominal wall may result in an evisceration, in which internal organs or fat protrude through the wound.

5. _____ is a potentially fatal condition in which fluid builds up in the fibrous sac around the heart.

Rationale: C. Pericardial tamponade is a potentially fatal condition in which fluid builds up within the pericardial sac, causing compression of the heart's chamber and dramatically impairing its ability to pump blood to the body.

6. Two or more ribs fractured in two or more places is the definition of _____.

Rationale: B. A flail chest is when two or more ribs are fractured in two or more places or the sternum is fractured along with several ribs and a segment of chest wall is detached from the rest of the thoracic cage.

Challenging Question

7. What is the treatment for a flail segment?

Rationale: Maintain ABCs, ventilating as needed. Tape a bulky pad or dressing against that segment of the chest. You can also immobilize a flail chest by splinting the chest with the patient's arm, placing a sling and swathe on the arm, and securing it to the chest wall snugly.

Chap 23

1. At which stage of development does a child develop stranger anxiety?

Rationale: B. Stranger anxiety develops early in the toddler period. Toddlers may resist separation from

caregivers and be afraid to let others come near them, making treatment difficult.

2. Child abuse may be defined as _____.

Rationale: D. The term child abuse means any improper or excessive action that injures or otherwise harms a child or infant. Child abuse includes physical abuse, sexual abuse, neglect, and emotional abuse.

3. The medical practice devoted to the young people is known as _____.

Rationale: C. Pediatrics is the specialized medical practice devoted to the care of young people.

4. Why are head injuries common in children?

Rationale: D. Head injuries are common in children because the size of the child's head, in relation to the body, is larger than that of an adult.

5. The _____ dictates the amount of air inspired for children.

Rationale: C. Because intercostal muscles are not well developed in children, movement of the diaphragm, their major muscle of respiration, dictates the amount of air that they inspire. Anything that puts pressure on the abdomen of a young child can block the movement of the diaphragm and cause respiratory compromise.

6. _____ results from disorganized electrical activity in the brain.

Rationale: B. A seizure is the result of disorganized electrical activity in the brain. Most pediatric seizures are due to fever alone and are called febrile seizures.

Challenging Questions

7. Explain the anatomic differences between a child and an adult that affect pediatric airway-management techniques.

Rationale:

- A larger, rounder occiput, which requires more careful positioning of the airway
- A proportionately larger tongue relative to the size of the mouth and a more anterior location in the mouth. The child's tongue is also larger relative to the small mandible and can easily block the airway.
- A floppy, U-shaped epiglottis that is larger than an adult's relative to the size of the airway
- Less well-developed rings of cartilage in the trachea that may easily collapse if the neck is flexed or hyperextended

- A narrower, lower airway

Chap 24

1. A child in respiratory distress needs oxygen by _____.

Rationale: B. A child or infant in respiratory distress or possible respiratory failure needs supplemental oxygen. Remember, anxiety, agitation, or crying may increase the effort or work of breathing, so use the method that seems least upsetting to the child.

2. Seizure activity can appear as _____.

Rationale: D. Seizures in children may appear in several different ways, including shaking of the whole body or movement in just a single arm or leg. Seizures can also appear as lip smacking, eye blinking, or staring off into space.

3. Which of the following is a contraindication for the use of a nasopharyngeal airway?

Rationale: C. A nasopharyngeal airway should not be used in patients with head trauma because this adjunct could increase intracranial pressure.

4. In which artery should you check for a pulse in an infant?

Rationale: D. Check for a carotid artery in an older child and the brachial or femoral artery in young children and infants.

5. _____ helps to keep the alveoli inflated at the end of expiration.

Rationale: C. Grunting respirations are the body's attempts to keep the alveoli expanded at the end of expiration.

6. The most likely injury to cause death in a pediatric patient is a _____ injury.

Rationale: B. The head is injured most often and is the most likely injury to cause death. The child's head is large in comparison with the body, and most multisystem trauma will involve the head.

Challenging Questions

7. What determines whether a child should be removed from a car seat and immobilized in another manner?

Rationale: If the child has stable vital signs, minimal injury, and the car seat is visibly undamaged, the child can be left in the seat and secured within it for transportation. If the child is in unstable condition, has injuries, or the car seat is visibly damaged, the child must be removed from the car seat for you to properly assess, treat,

immobilize, and transport.

Chap 25

1. _____ causes hardening of the arteries.

Rationale: B. Arteriosclerosis is a disease that causes the arteries to thicken, harden, and calcify, making stroke, heart disease, hypertension, and bowel infarction more likely.

2. The “M” of the GEMS diamond stands for medical assessment. This includes evaluating _____.

Rationale: D. Older patients tend to have a variety of medical problems and may be taking numerous prescription, over-the-counter, and herbal medications. Obtaining a thorough medical history is essential.

3. A _____ is designed to drain excess cerebrospinal fluid.

Rationale: C. A ventricular shunt (also called a CSF shunt) is a tube that extends from the ventricles of the brain to the chest or abdomen and is designed to drain excess cerebrospinal fluid.

4. _____ is commonly marked by acute onset.

Rationale: D. Delirium is commonly marked by acute or recent onset and is an indicator of a new health problem.

5. As many as _____ of older patients have “silent” heart attacks.

Rationale: C. As many as one third of older patients have silent heart attacks, in which the usual chest pain is not present.

6. A _____ is a surgical opening for breathing.

Rationale: B. A tracheostomy is a surgical opening created to aid in breathing.

Challenging Questions

7. Explain the difference between an advance directive and a DNR.

Rationale: An advance directive provides written documentation that specifies medical treatment for a competent patient should the patient become unable to make decisions. It is also called a living will. An advance directive may include a DNR order, but usually only outlines desired care.

A DNR is an order that states nothing is to be done in the event of a cardiac arrest.

Chap 26

1. _____ fractures are the most common spine fractures in geriatrics.

Rationale: B. Compression fractures often result from minimal trauma. This fracture type is by far the most common type of spine fracture in the older patient population.

2. Common complaints associated with a myocardial infarction include:

Rationale: D. Common complaints associated with myocardial infarction in older patients include difficulty breathing, toothache, arm pain, or back pain, which can make cardiac emergencies more difficult to detect.

3. Most sudden changes in mental status are _____.

Rationale: C. Most sudden changes are caused by a reversible condition. Evaluate and treat for hypoxia or hypoglycemia, if present.

4. Which of the following can affect brain function?

Rationale: D. Infection, hypoglycemia, hypoxia, hypotension, cerebrovascular accident, trauma, seizures, medication interactions, electrolyte imbalances, and psychotic episodes can affect brain function.

5. The “E” of the GEMS diamond is assessed during the _____.

Rationale: A. The “E” of the GEMS diamond is for environment. When you arrive at a patient’s residence, you should look for important clues to determine not only your own safety, but also that of the occupant. The environment can provide a great deal of information.

6. When communicating with an older person who has difficulty hearing, you should _____.

Rationale: D. Patients who have difficulty hearing will often look for clues in the speaker’s facial expressions to assist in understanding the subject matter. Turn on a light if you are in a dimly lit room. Turn off televisions and radios. Use a normal tone of voice, especially if the patient is wearing a hearing aid. A loud tone may cause sound distortion in the hearing aid and make communication worse.

Challenging Questions

7. To assess geriatric patients with shortness of breath, you must look at the entire picture. How should the patient be assessed?

Rationale: Complete the SAMPLE history and physical exam. Assess the patient’s work of breathing, including lung sounds, retractions, tripod positioning, and cyanosis. Ask about any provoking or palliating factors and how many pillows the patient sleeps on. Any patient experiencing dyspnea should receive oxygen.

8. What are the signs and symptoms of septicemia?

Rationale: Think of septicemia when you see a hot, flushed patient who also has tachycardia and an increased respiratory rate. Symptoms of infection may be present, such as fever, chills, cough, or burning with urination. Often the infection will cause altered mental status.

Chap 27

1. The _____ is located just below the Adam's apple.

Rationale: B. The cricoid cartilage, located just below the thyroid cartilage (Adam's apple), is a rigid, ring-shaped structure that completely encircles the larynx at the top of the trachea.

2 A nasogastric tube is contraindicated in a patient with major trauma to the _____.

Rationale: D. A nasogastric tube is contraindicated in a patient with major facial, head, or spinal trauma.

3. The _____ is the space between the base of the tongue and the epiglottis.

Rationale: C. The curved blade is inserted into the vallecula, the space between the base of the tongue and the epiglottis, allowing you to see the glottic opening and vocal cords.

4. A _____ adds rigidity to an endotracheal tube.

Rationale: D. A plastic-coated wire called a stylet may be inserted into the ET tube to add rigidity and shape to the tube.

5. A _____ is an advanced airway that provides a channel directly into the patient's stomach.

Rationale: C. A gastric tube is an advanced airway adjunct that provides a channel directly into a patient's stomach, allowing for removal of gas, blood, and toxins or to instill medications and nutrition.

6. An LMA should not be used in which situation(s)?

Rationale: D. When positive pressure ventilation with high-airway pressures is required (as in a patient with asthma or COPD), the mask may leak. Active vomiting may dislodge the device. Large esophageal tumors may prevent effectiveness of the LMA.

Challenging Questions

7. What are the contraindications for the use of the combitube?

Rationale:

- Gag reflex
- Younger than 16 years
- Less than 5' tall, over 7' tall
- Ingestion of a caustic substance
- Known esophageal disease

Chap 28

1. The escape of fluid into surrounding tissue is known as a(n) _____.

Rationale: B. Infiltration is the escape of fluid into the surrounding tissue. This escape of fluid can cause a localized area of edema or simply swelling.

2. Possible complications of IV therapy include _____.

Rationale: D. The problems associated with IV administration can be categorized as local (like infiltration or phlebitis) or systemic (like allergic reactions and circulatory overload) reactions.

3. An accumulation of blood in the tissue is known as a(n):

Rationale: C. A hematoma is an accumulation of blood in the tissues surrounding an IV site. Hematomas result from vein perforation or improper catheter removal, which allows blood to accumulate in the surrounding tissues.

4. _____ needles are used for emergency venous access in pediatric patients.

Rationale: D. Intraosseous (IO) needles are used for emergency venous access in pediatric patients when immediate IV access is difficult or impossible. The IO needles are inserted in the proximal tibia with a rigid, boring, IV catheter.

5. What is the maximum amount of air introduced into the circulatory system that a healthy adult can tolerate?

Rationale: C. Healthy adults can tolerate as much as 200 mL of air introduced into the circulatory system, but patients who are already ill or injured can be affected if any air is introduced.

6. Urticaria is a sign of:

Rationale: B. Common signs and symptoms of an allergic reaction include itching, edema of the face and hands, wheezing, shortness of breath, and urticaria.

Challenging Questions

7. What are the signs and symptoms of an air embolus and what is the treatment?

Rationale: Signs and symptoms include respiratory distress, cyanosis, signs and symptoms of shock, loss of consciousness, and respiratory arrest.

Treat a patient with suspected air embolus by placing the patient on the left side with the head down. Ventilate as needed.

Chap 29

1. The intrinsic rate of the SA node is _____.

Rationale: A. When the SA node functions as pacemaker, it paces at a rate of 60 to 100 beats/min, with an average of 70 beats/min.

2. Which of the following is correct for placement of ECG leads?

Rationale: D. The electrodes are placed with the white lead on the patient's right shoulder, the black lead on the patient's left shoulder, and the red lead on the left side of the patient's abdomen. When you are using a different number of leads, follow instructions for that cardiac monitor.

3. The heart's main pacemaker is the _____.

Rationale: C. The sinoatrial (SA) node is the heart's main pacemaker. It is located in the wall of the right atrium, where it meets the superior vena cava.

4. A _____ rhythm is one in which the SA node acts as pacemaker.

Rationale: D. A sinus rhythm is a rhythm in which the SA node acts as the pacemaker. A normal rate is from 60 to 100 beats/min.

5. _____ is a chaotic rhythm with no discernible P, QRS, or T waves.

Rationale: C. Ventricular fibrillation is a rapid, completely disorganized ventricular rhythm with chaotic characteristics. The electrocardiographic characteristics of this arrhythmia are undulations of varying shapes and sizes with no specific pattern and no discernible P, QRS, or T waves.

6. _____ is the amount of blood ejected with each beat.

Rationale: B. The stroke volume is the amount of blood ejected by the heart during each mechanical contraction. Stroke volume depends on the mechanical filling of the heart.

Challenging Question

7. Trace the flow of electricity through the conduction system of the heart.

Rationale:

- SA node
- Internodal pathways
- AV node
- Bundle of His
- Right and left bundle branches
- Purkinje fibers