

Kevin's Review - 85 NCLEX Practice Questions

1. Most litigation in the hospital comes from the:

- A. Nurse abandoning the clients when going to lunch.
- B. Nurse following an order that is incomplete or incorrect.
- C. Nurse documenting blame on the physician when a mistake is made.
- D. Supervisor watching a new employee check his or her skills level.

Correct Answer: B. Nurse following an order that is incomplete or incorrect

The nurse is responsible for clarifying all orders that are illegible, unreasonable, unsafe, or incorrect. The failure of the nurse to question the physician about an order creates an area of liability on the nurse's part because this is perceived as a medical action and not the role of the nurse to write orders. Some RNs do have prescriptive privileges based upon advanced degrees and certification. Therefore the nurse who cannot correct the order must document that the physician was called and clarification or a new order was given to correct the unclear or illegible one that was currently on the chart. Contact of the staff's chain of command should also be specifically stated for the proof of the responsibilities being followed according to hospital policy.

- **Option A:** North Dakota Board of Nursing defines "abandonment" as accepting the client assignment and disengaging the nurse and client relationship without giving notice to a qualified person. Behavior that demonstrates professional misconduct includes abandoning a client who is in need of or receiving nursing care and may be grounds for disciplinary action.
- **Option C:** Phone calls, follow-up, and lack of follow-up by the physician should also be documented if there is a problem with getting the information in a timely manner. The nurse must show the sequence of events of a situation in a clear manner if there is any conflict or question about any orders or procedures that were not appropriate. Assessments and documentation of the client's status should also be included if there is a potential risk for harm present.
- **Option D:** The competence of new RN graduates, both at the point of joining the workforce on graduation and as they gain experience, is an important dimension of quality and safety. Thus each nursing school and prospective employer has a vested interest in ensuring that the initial skills and competency of the new graduate and the conditions for the transition and the ongoing development of the new graduate RN are optimized.

2. Because cervical effacement and dilation are not progressing in a patient in labor, the doctor orders I.V. administration of oxytocin (Pitocin). Why should the nurse monitor the patient's fluid intake and output closely during oxytocin administration?

- A. Oxytocin causes water intoxication.
- B. Oxytocin causes excessive thirst.
- C. Oxytocin is toxic to the kidneys.
- D. Oxytocin has a diuretic effect.

Correct Answer: A. Oxytocin causes water intoxication.

The nurse should monitor fluid intake and output because prolonged oxytocin infusion may cause severe water intoxication, leading to seizures, coma, and death. In addition, oxytocin may cause water intoxication via an antidiuretic hormone-like activity when administered in excessive doses with electrolyte-free solution.

- **Option B:** Excessive thirst results from the work of labor and limited oral fluid intake—not oxytocin.
- **Option C:** Oxytocin, when given in rapid bolus, produces marked but short-lived hypotension and tachycardia. Sometimes, this abrupt and severe hemodynamic depression may need to be distinguished from placental abruption, myocardial infarction, or a pulmonary embolism in patients undergoing delivery.
- **Option D:** Oxytocin is known to possess antidiuretic properties. It can function physiologically as an antidiuretic hormone, mimicking the short-term action of vasopressin on water permeability, albeit with somewhat lower potency.

3. A client is in diabetic ketoacidosis (DKA) secondary to infection. As the condition progresses, which of the following symptoms might the nurse see?

- A. Kussmaul's respirations and a fruity odor on the breath
- B. Shallow respirations and severe abdominal pain
- C. Decreased respiration and increased urine output
- D. Cheyne-stokes respirations and foul-smelling urine

Correct Answer: A. Kussmaul's respirations and a fruity odor on the breath

Coma and severe acidosis are ushered in with Kussmaul's respirations (very deep but not labored respirations) and a fruity odor on the breath. Kussmaul's breathing, which is labored, deep, and tachypneic, may occur. Some providers may appreciate a fruity scent to the patient's breath, indicative of the presence of acetone.

- **Option B:** The patient with diabetic ketoacidosis may present with a myriad of symptoms and physical exam findings. Patients may have symptoms of hyperglycemia like polyphagia, polyuria, or polydipsia. If there is a superimposed infection that triggered the episode of DKA, the patient may have other infectious symptoms like fever, cough, or other urinary symptoms.
- **Option C:** As patients become more volume-depleted, they may experience decreased urine output, dry mouth, or decreased sweating indicative of dehydration. They may complain of many other symptoms, including anorexia, nausea, vomiting, abdominal pain, and weight loss.
- **Option D:** On examination, vital signs typically reveal tachycardia and tachypnea. Due to the possibility of an infectious trigger for DKA, the patient may be febrile or hypothermic. Blood pressure may also vary, though hypotension is possible and indicative of a more severe disease process.

4. As soon as the placenta is delivered, the nurse must do which of the following actions?

- A. Inspect the placenta for completeness including the membranes.
- B. Place the placenta in a receptacle for disposal.
- C. Label the placenta properly.
- D. Leave the placenta in the kidney basin for the nursing aide to dispose properly.

Correct Answer: A. Inspect the placenta for completeness including the membranes.

The placenta must be inspected for completeness to include the membranes because an incomplete placenta could mean that there is retention of placental fragments which can lead to uterine atony. If the uterus does not contract adequately, hemorrhage can occur.

- **Option B:** During the examination, the size, shape, consistency and completeness of the placenta should be determined, and the presence of accessory lobes, placental infarcts, hemorrhage, tumors and nodules should be noted. Once deemed complete, it may be disposed of properly.
- **Option C:** The placenta is not necessarily labeled. For inspection, keep in mind that the maternal surface of the placenta should be dark maroon in color and should be divided into lobules or cotyledons. The structure should appear complete, with no missing cotyledons. The fetal surface of the placenta should be shiny, gray, and translucent enough that the color of the underlying maroon villous tissue may be seen.
- **Option D:** Before the proper disposal of the placenta, it should be assessed properly. Evaluating placental completeness is of critical, immediate importance in the delivery room. Retained placental tissue is associated with postpartum hemorrhage and infection.

5. Marie with acute lymphocytic leukemia suffers from nausea and headache. These clinical manifestations may indicate all of the following except:

- A. Effects of radiation
- B. Chemotherapy side effects
- C. Meningeal irritation
- D. Gastric distension

Correct Answer: D. Gastric distension

Acute Lymphocytic Leukemia (ALL) does not cause gastric distention. It does invade the central nervous system, and clients experience headaches and vomiting from meningeal irritation. The primary care provider and nurse practitioner may be responsible for follow up after treatment and report back to the interprofessional team. These patients need close monitoring as they are prone to infections, coagulation dyscrasias, and relapse.

- **Option A:** Some effects of radiation are nausea, vomiting, and headaches. The pharmacist should educate the patient on chemotherapy medications, their adverse effects, and benefits. The dietitian should encourage a healthy diet. To prevent infections, the nurse practitioner should encourage hand washing, washing of fruits and vegetables and maintaining good personal hygiene.
- **Option B:** Chemotherapy side effects include nausea, vomiting, and hair loss. Treatment options include prochlorperazine, haloperidol, metoclopramide, lorazepam, dexamethasone, ondansetron, granisetron, dolasetron, palonosetron, dronabinol, aprepitant, fosaprepitant, netupitant. palonosetron has a longer half-life, better efficacy, and higher binding affinity than granisetron.
- **Option C:** Clients may experience headaches and vomiting due to meningeal irritation. Meningitis can have a varied clinical presentation depending on age and immune status of the host. Symptoms typically include fever, neck pain/stiffness, and photophobia. More non-specific symptoms include headache, dizziness, confusion, delirium, irritability, and nausea/vomiting.

6. The placenta should be delivered normally within how many minutes after the delivery of the baby?

- A. 5 minutes
- B. 30 minutes
- C. 45 minutes
- D. 60 minutes

Correct Answer: B. 30 minutes

The placenta is delivered within 30 minutes from the delivery of the baby. If it takes longer, probably the placenta is abnormally adherent and there is a need to refer already to the obstetrician.

- **Option A:** The absolute time limit for delivery of the placenta, without evidence of significant bleeding, remains unclear. Periods ranging from 30-60 minutes have been suggested.
- **Option C:** Retained placenta can be defined as lack of expulsion of the placenta within 30 minutes of delivery of the infant. This is a reasonable definition in the third trimester when the third stage of labor is actively managed (ie, administration of a uterotonic agent before delivery of the placenta, controlled cord traction) because 98 percent of placentas are expelled by 30 minutes in this setting.
- **Option D:** Physiologic management of the third stage (ie, delivery of the placenta without the use of uterotonic agents or cord traction) increases the frequency of retained placenta: only 80 percent of placentas are expelled by 30 minutes and it takes approximately 60 minutes before 98 percent of placentas are expelled.

7. The most important long-term goal for a client with hypertension would be to:

- A. Learn how to avoid stress.
- B. Explore a job change or early retirement.
- C. Make a commitment to long-term therapy.
- D. Control high blood pressure.

Correct Answer: C. Make a commitment to long-term therapy

Compliance is the most critical element of hypertensive therapy. In most cases, hypertensive clients require lifelong treatment and their hypertension cannot be managed successfully without drug therapy. Stress management and weight management are important components of hypertension therapy, but the priority goal is related to compliance. Response to drug therapy (usually consisting of several drugs, including diuretics, angiotensin-converting enzyme [ACE] inhibitors, vascular smooth muscle relaxants, beta and calcium channel blockers) is dependent on both the individual as well as the synergistic effects of the drugs.

- **Option A:** Assist the patient to identify specific stressors and possible strategies for coping with them. Recognition of stressors is the first step in altering one's response to the stressor. Include the patient in the planning of care, and encourage maximum participation in the treatment plan.
- **Option B:** Assess the effectiveness of coping strategies by observing behaviors (ability to verbalize feelings and concerns, willingness to participate in the treatment plan). Adaptive mechanisms are necessary to appropriately alter one's lifestyle, deal with the chronicity of hypertension, and integrate prescribed therapies into daily living.
- **Option D:** Monitor response to medications to control blood pressure. Because of side effects, drug interactions, and the patient's motivation for taking antihypertensive medication, it is important to use the smallest number and lowest dosage of medications.

8. A nurse is suctioning fluids from a client via a tracheostomy tube. When suctioning, the nurse must limit the suctioning to a maximum of:

- A. 5 seconds
- B. 10 seconds
- C. 30 seconds
- D. 1 minute

Correct Answer: B. 10 seconds

Hypoxemia can be caused by prolonged suctioning, which stimulates the pacemaker cells within the heart. A vasovagal response may occur causing bradycardia. The nurse must preoxygenate the client before suctioning and limit the suctioning pass to 10 seconds. It is of particular importance for patients with mechanical ventilators, endotracheal tube (ET) intubations, tracheostomies, or other airway adjuncts. Clearance of airway secretions is a normal process and is critical to the prevention of respiratory infections, atelectasis, and preservation of airway patency.

- **Option A:** The catheter should be introduced to the desired depth, and then suctioning should be started. A brief, 10-second suction duration is usually recommended to avoid mucosal damage and prolonged hypoxia. Hypoxia can be profound from occlusion, interruption of oxygen supply, and prolonged suctioning.
- **Option C:** The adequacy of suctioning can be assessed by the clearance of secretions, improved breath sounds, improved air entry, good pulse oximetry readings, and improvement in respiratory distress in a patient. Complications from airway suctioning are relatively uncommon if performed with care and adequate pre-oxygenation.
- **Option D:** Preoxygenation with 100% oxygen should be initiated prior to suctioning. This is in preparation for the hypoxia that is precipitated by suctioning, both from mechanical interruption and cessation of oxygen flow briefly. Suctioning can stimulate the vagus nerve, predisposing the patient to bradycardia and hypoxia.

9. A 33-year-old patient with a history of seizures and medication compliance of phenytoin (Dilantin) and carbamazepine (Tegretol) is brought to the ED by the MS personnel for repetitive seizure activity that started 45 minutes prior to arrival. You anticipate that the physician will order which drug for status epilepticus?

- A. Phenytoin and Carbamazepine PO
- B. Carbamazepine (Tegretol) IV
- C. Magnesium sulfate IV
- D. Lorazepam (Ativan) IV

Correct Answer: D. Lorazepam (Ativan) IV.

IV Lorazepam (Ativan) is the drug of choice for status epilepticus. Benzodiazepines are the antiepileptic drug of choice for emergent control. Lorazepam is preferred because of its rapid onset of action and is dosed at 0.1 mg/kg IV. No more than 2 mg should be administered per minute.

- **Option A:** PO (per os) medications are inappropriate for this emergency situation. Intravenous administration is preferred, but benzodiazepines can be administered via the intramuscular, rectal,

nasal, or buccal route if vascular access is not available.

- **Option B:** Tegretol is used in the management of generalized tonic-clonic, absence or mixed type seizures, but it does not come in an IV form. Carbamazepine is used to manage and treat epilepsy, trigeminal neuralgia, and acute manic and mixed episodes in bipolar I disorder. Indications for epilepsy are specifically for partial seizures with complex symptomatology (psychomotor, temporal lobe), generalized tonic seizures (grand mal), and mixed seizure patterns.
- **Option C:** Magnesium sulfate is given to control seizures in toxemia of pregnancy. If eclampsia is suspected, intravenous magnesium sulfate is the antiepileptic drug of choice. Delivery of the fetus is the definitive treatment of eclampsia.

10. An 11-year-old girl with celiac disease was discharged from the hospital. An appropriate teaching was carried out by the nurse if the parents are aware of avoiding which of the following?

- A. Chicken
- B. Wheat
- C. Milk
- D. Rice

Correct Answer: B. Wheat

Children with celiac disease cannot tolerate or digest gluten. Therefore, because of its gluten content, wheat and wheat-containing products must be avoided. Celiac disease is an autoimmune condition that causes severe damage to the lining of the small intestine. Gluten — a protein found in wheat, barley, and rye — triggers its symptoms.

- **Option A:** All animal proteins, fruits, vegetables, nuts, seeds, legumes, herbs, and spices are naturally gluten-free. There are many naturally gluten-free grains and specialty products, too.
- **Option C:** All types of plain cow's milk are naturally free of gluten. However, some dairy products are not gluten-free. Once flavorings or other ingredients have been added to milk it may no longer be gluten-free, so it's important to read the label to see if the product contains gluten or not.
- **Option D:** Rice is generally gluten-free. This includes all varieties, such as white or brown, long or short grain, and fragranced or not fragranced. There are thousands of types of rice, but only about 100 kinds are sold around the world.

11. After receiving a dose of penicillin, a client develops dyspnea and hypotension. Nurse Celestina suspects the client is experiencing anaphylactic shock. What should the nurse do first?

- A. Page an anesthesiologist immediately and prepare to intubate the client.
- B. Administer epinephrine, as prescribed, and prepare to intubate the client if necessary.
- C. Administer the antidote for penicillin, as prescribed, and continue to monitor the client's vital signs.
- D. Insert an indwelling urinary catheter and begin to infuse I.V. fluids as ordered.

Correct Answer: B. Administer epinephrine, as prescribed, and prepare to intubate the client if necessary.

To reverse anaphylactic shock, the nurse first should administer epinephrine, a potent bronchodilator as prescribed.

- **Option A:** The physician is likely to order additional medications, such as antihistamines and corticosteroids; if these medications don't relieve the respiratory compromise associated with anaphylaxis, the nurse should prepare to intubate the client.
- **Option C:** No antidote for penicillin exists; however, the nurse should continue to monitor the client's vital signs. A client who remains hypotensive may need fluid resuscitation and fluid intake and output monitoring; however, administering epinephrine is the first priority.
- **Option D:** An indwelling catheter is not needed in a client experiencing anaphylactic shock; however, IV fluids may be ordered by the physician after.

12. Which of the following conditions can cause a hiatal hernia?

- A. Increased intrathoracic pressure.
- B. Weakness of the esophageal muscle.
- C. Increased esophageal muscle pressure.
- D. Weakness of the diaphragmatic muscle.

Correct Answer: D. Weakness of the diaphragmatic muscle.

A hiatal hernia is caused by weakness of the diaphragmatic muscle and increased intra-abdominal—not intrathoracic—pressure. This weakness allows the stomach to slide into the esophagus. The esophageal supports weaken, but esophageal muscle weakness or increased esophageal muscle pressure isn't a factor in hiatal hernia. A hiatal hernia is a medical condition in which the upper part of the stomach or other internal organ bulges through an opening in the diaphragm.

- **Option A:** The diaphragm is a muscular structure that assists in respiration and has a small opening, a hiatus, through which the esophagus passes prior to connecting to the stomach. This is called the gastroesophageal junction (GEJ). In a hiatal hernia, the stomach pushes through that opening and into the chest and compromises the lower esophageal sphincter (LES).
- **Option B:** Hiatal hernias may be congenital or acquired. There is an increased prevalence in older people. It is believed that muscle weakness with loss of flexibility and elasticity with age predisposes to the development of a hiatal hernia. This may cause the upper part of the stomach to not return to its natural position below the diaphragm during swallowing.
- **Option C:** Other predisposing factors have been identified, such as elevated intra abdominal pressure. This typically is a result of obesity, pregnancy, chronic constipation, and chronic obstructive pulmonary disease (COPD). Trauma, age, previous surgeries, and genetics can also play a role in the development of a hiatal hernia.

13. A nurse is assigned to care for a client with a peripheral IV infusion. The nurse is providing hygiene care to the client and would avoid which of the following while changing the client's hospital gown? Select all that apply.

- A. Using a hospital gown with snaps at the sleeves
- B. Disconnecting the IV tubing from the catheter in the vein

- C. Checking the IV flow rate immediately after changing the hospital gown
- D. Putting the bag and tubing through the sleeve, followed by the client's arm
- E. Keeping splint soiled by blood or fluid leakage

Correct Answer: B & E.

Changing a patient's hospital gown is needed to maintain their cleanliness and the feeling of freshness.

- **Option A:** A kimono-inspired gown opens in the front and uses a system of ties and snaps at essential access points for easy treatment and monitoring. Top snaps offer upper back access. Wide sleeves and side snaps provide easy access for an I.V., and are MRI-compatible.
- **Option B:** The tubing should not be removed from the IV catheter. With each break in the system, there is an increased chance of introducing bacteria into the system, which can lead to infection.
- **Option C:** The flow rate should be checked immediately after changing the hospital gown, because the position of the roller clamp may have been affected during the change. Count the rate of flow of the infusion to make sure it is correct before leaving the bedside.
- **Option D:** Holding the container above the client's arm, slide the sleeve up over the container to remove the used gown. Place the clean gown sleeve for the arm with the infusion over the container as if it were an extension of the client's arm, from the inside of the gown to the sleeve cuff.
- **Option E:** IV board/splints are recommended to secure PIVC placed in or adjacent to areas of flexion. This will adequately immobilize the joint and minimize the risk of venous damage resulting from flexion. Splints should be inspected at least daily and change if soiled by blood or fluid leakage.

14. Following a generalized seizure, the nurse can expect the client to:

- A. Be unable to move the extremities
- B. Be drowsy and prone to sleep
- C. Remember events before the seizure
- D. Have a drop in blood pressure

Correct Answer: B. Be drowsy and prone to sleep

- Option B: When a generalized seizure ends, the client is experiencing the postictal phase, which is the recovery period following the seizure. The client in this phase shows symptoms of drowsiness, confusion, and sleepiness.
- Option A: The client is able to move the extremities.
- Option C: The client cannot remember events before the seizure.
- Option D: Blood pressure is elevated.

15. For questions #50-55: Situation: Ryan, a 14-year-old male was admitted to a medical ward due to bronchial asthma after learning that his mother was leaving soon for U.K. to work as a nurse. The client has which of the following developmental focus:

- A. Establishing a relationship with the opposite sex and career planning.
- B. Parental and societal responsibilities.
- C. Establishing one's sense of competence in school.
- D. Developing initial commitments and collaboration in work.

Correct Answer: A. Establishing relationship with the opposite sex and career planning.

The client belongs to the adolescent stage. The adolescent establishes his sense of identity by making decisions regarding familial, occupational, and social roles. The adolescent emancipates himself from the family and decides what career to pursue, what set of friends to have, and what value system to uphold. Our personal identity gives each of us an integrated and cohesive sense of self that endures through our lives. Our sense of personal identity is shaped by our experiences and interactions with others, and it is this identity that helps guide our actions, beliefs, and behaviors as we age.

- **Option B:** This refers to the middle adulthood stage concerned with transmitting his values to the next generation to ensure his immortality through the perpetuation of his culture. Adults need to create or nurture things that will outlast them, often by having children or creating a positive change that benefits other people. Success leads to feelings of usefulness and accomplishment, while failure results in shallow involvement in the world.
- **Option C:** This reflects school age which is concerned with the pursuit of knowledge and skills to deal with the environment both in the present and in the future. Successfully finding a balance at this stage of psychosocial development leads to the strength known as competence, in which children develop a belief in their abilities to handle the tasks set before them.
- **Option D:** The stage of young adulthood is concerned with the development of an intimate relationship with the opposite sex, the establishment of a safe and congenial family environment and building of one's lifework. Young adults need to form intimate, loving relationships with other people. Success leads to strong relationships, while failure results in loneliness and isolation. This stage covers the period of early adulthood when people are exploring personal relationships.

16. Which of the following clients is most likely to experience adverse effects from treatment with diuretics?

- A. A 21-year-old student
- B. A 40-year-old unmarried man
- C. A 60-year-old widower
- D. A 75-year-old man

Correct Answer: D. A 75-year-old man

Elderly clients are more sensitive to the effects of diuretics. Diuretics are drugs that pharmacologically tilt the renal fluid regulation in favor of excretion of water and electrolytes. Thus, diuretics are substances that increase the production and volume of urine.

- **Option A:** Diuretics, along with salt restriction, are also recommended as the first-line therapy in ascites due to liver cirrhosis. In cirrhotic ascites, spironolactone is the drug of choice for initial therapy (due to its antiandrogenic effect), although a loop diuretic may be added as an adjunct if the treatment fails or can be added at the outset in synergistic combination therapy.
- **Option B:** The most common adverse effect for any diuretic is mild hypovolemia, which can lead to transient dehydration and increased thirst. When there is an over-treatment with a diuretic, this

could lead to severe hypovolemia, causing hypotension, dizziness, and syncope.

- **Option C:** More generalized side-effects of diuretic agents include headache, urinary frequency, restlessness, weakness, fatigue, and lethargy. GI disturbances like nausea, vomiting, constipation, diarrhea, anorexia, and abdominal pain can occur with loop diuretics and PSDs than any other diuretic group.

17. What clinical manifestation indicates that an escharotomy is needed on a circumferential extremity burn?

- A. The burn is full thickness rather than partial thickness.
- B. The client is unable to fully pronate and supinate the extremity.
- C. Capillary refill is slow in the digits and the distal pulse is absent.
- D. The client cannot distinguish the sensation of sharp versus dull in the extremity.

Correct Answer: C. Capillary refill is slow in the digits and the distal pulse is absent.

Circumferential eschar can act as a tourniquet when edema forms from the fluid shift, increasing tissue pressure, and preventing blood flow to the distal extremities, and increasing the risk for tissue necrosis. This problem is an emergency and, without intervention, can lead to loss of the distal limb. This problem can be reduced or corrected with an escharotomy.

- **Option A:** The American Burn Association recommends burn center referrals for patients with full-thickness burns. Patients being transferred to burn centers do not need extensive debridement or topical antibiotics before transfer.
- **Option B:** Once established, burn contractures can be treated with serial splinting, release of contracting bands with Z-plasties, incision, and skin grafting or excision, and resurfacing with skin grafts or flaps, local rotation flaps, use of tissue expanders, or with free flap reconstruction.
- **Option D:** After a deep burn injury, cutaneous nerve regeneration will occur with the migration of new nerve fibers from the wound bed or from the collateral sprouting of nerve fibers from adjacent uninjured areas. This nerve regeneration process is imperfect. It was reported that 71% of extensively burned victims suffer from abnormal sensations and 36% from chronic pain. Recent studies on rats have shown that vagus nerve stimulation improved thermal injury-induced shock symptoms.

18. Nurse Amy is aware that the client is at highest risk for suicide?

- A. One who appears depressed frequently thinks of dying and gives away all personal possessions.
- B. One who plans a violent death and has the means readily available.
- C. One who tells others that he or she might do something if life doesn't get better soon.
- D. One who talks about wanting to die.

Correct Answer: B. One who plans a violent death and has the means readily available.

The client at highest risk for suicide is one who plans a violent death (for example, by gunshot, jumping off a bridge, or hanging), has a specific plan (for example, after the spouse leaves for work), and has the means readily available (for example, a rifle hidden in the garage). Several suicide-related demographic factors often occur in the same person. For example, if a male police officer with major depression and a significant problem with alcohol commits suicide using his service revolver (which,

unfortunately, happens not infrequently), 5 risk factors are involved: sex, occupation, depression, alcohol, and gun availability.

- **Option A:** A host of thoughts and behaviors are associated with self-destructive acts. Although many assume that people who talk about suicide will not follow through with it, the opposite is true; a threat of suicide can lead to the completed act, and suicidal ideation is highly correlated with suicidal behaviors.
- **Option C:** They are without hope and therefore cannot foresee things ever improving; they also view themselves as helpless in 2 ways: (1) they cannot help themselves, and all their efforts to liberate themselves from the sea of depression in which they are drowning are to no avail; and (2) no one else can help them.
- **Option D:** A client who talks about wanting to die or attempting suicide is considered at a lower risk for suicide because this behavior typically serves to alert others that the client is contemplating suicide and wishes to be helped. Determine whether the person has any thoughts of hurting him or herself. Suicidal ideation is highly linked to completed suicide. Some inexperienced clinicians have difficulty asking this question. They fear the inquiry may be too intrusive or that they may provide the person with an idea of suicide. In reality, patients appreciate the question as evidence of the clinician's concern. A positive response requires further inquiry.

19. Which sign indicates the second phase of acute renal failure?

- A. Daily doubling of urine output (4 to 5 L/day).
- B. Urine output less than 400 ml/day.
- C. Urine output less than 100 ml/day.
- D. Stabilization of renal function.

Correct Answer: A. Daily doubling of urine output (4 to 5 L/day).

Daily doubling of the urine output indicates that the nephrons are healing. This means the patient is passing into the second phase (diuresis) of acute renal failure. The GFR is stable albeit at a level determined by the severity of the initial event. This cellular repair and reorganization phase results in slowly improving cellular function and sets the stage for improvement in organ function.

- **Option B:** The initiation phase of ATN occurs when renal blood flow (RBF) decreases to a level resulting in severe cellular ATP depletion that in turn leads to acute cell injury and dysfunction. Renal tubular epithelial cell injury is a key feature of the Initiation Phase.
- **Option C:** The extension phase is ushered in by two major events: continued hypoxia following the initial ischemic event and an inflammatory response. It is during this phase that renal vascular endothelial cell damage likely plays a key role in the continued ischemia of the renal tubular epithelium, as well as, the inflammatory response observed with ischemic ARF. During this phase, cells continue to undergo injury and death with both necrosis and apoptosis being present predominantly in the outer medulla
- **Option D:** During the recovery phase cellular differentiation continues, epithelial polarity is reestablished and normal cellular and organ function returns. Thus, renal function can be directly related to the cycle of cell injury and recovery.

20. For a client who is taking aspirin, which laboratory value should be reported to the physician?

- A. Potassium 3.6 mEq/L
- B. Hematocrit 41%
- C. PT 14 seconds
- D. BUN 20 mg/dL

Correct Answer: C. PT 14 seconds

When a client takes aspirin, monitor for increases in PT (normal range 11.0-12.5 seconds in 85%-100%). Also, monitor for possible decreases in potassium (normal range 3.5-5.0 mEq/L). If bleeding signs are noted, hematocrit should be monitored (normal range male 42%-52%, female 37%-47%). An elevated BUN could be seen if the client is having chronic gastrointestinal bleeding (normal range 10-20 mg/dL).

- **Option A:** Severity is categorized as mild when the serum potassium level is 3 to 3.4 mmol/L, moderate when the serum potassium level is 2.5 to 3 mmol/L, and severe when the serum potassium level is less than 2.5 mmol/L. Values obtained from plasma and serum may differ.
- **Option B:** HCT calculation is by dividing the lengths of the packed RBC layer by the length of total cells and plasma. As it is a ratio, it doesn't have any unit. Multiplying the ratio by 100 gives the accurate value, which is the accepted reporting style for HCT. A normal adult male shows an HCT of 40% to 54% and female shows 36% to 48%.
- **Option D:** BUN and creatinine levels that are within the ranges established by the laboratory performing the test suggest that the kidneys are functioning as they should. Increased BUN and creatinine levels may mean that the kidneys are not working as they should. This healthcare practitioner will consider other factors, such as the medical history and physical exam, to determine what condition, if any, may be affecting the kidneys.

21. The primary complication of a central venous access device (CVAD) is:

- A. Thrombus formation in the vein.
- B. Pain and discomfort.
- C. Infection.
- D. Occlusion of the catheter as the result of an intra-lumen clot.

Correct Answer: C. Infection.

A foreign body in a blood vessel increases the risk of infection. Catheters that come outside the body have an even higher risk of infection. Most infections are caused by skin bacteria. Other infective organisms include yeasts and fungi. Infection is a serious delayed complication associated with central venous access that can lead to sepsis, shock, and death. Central line-associated bloodstream infections have a reported incidence between 80–189 episodes per 100,000 patient years, and the Centers for Disease Control and Prevention (CDC) estimates the additional cost per infection to be on average approximately \$16,550.[45] Mortality related to central line infection can occur in up to 25% of cases. Infections become established on the catheter through the production of biofilm. Staphylococcus aureus and Staphylococcus epidermidis are the two most common pathogens.

- **Option A:** Long-term catheters can also lead to venous thrombosis. Symptoms include ipsilateral extremity erythema, edema, and paresthesia. Additionally, thrombosis can lead to superior vena cava syndrome, which can present as head and neck swelling. The incidence of superior vena cava syndrome is estimated to be 1 in 1,000 cases. Subclavian central venous catheters have the lowest rate of thrombosis. Femoral lines have the highest rate of thrombosis. Cancer patients have

a higher risk of central line thrombosis of up to 41%. Primary thromboprophylaxis has no proven benefit in the oncologic or cancer-free population.

- **Option B:** Once placed, these lines do not cause pain and discomfort. A central line is necessary when the client needs drugs given through the veins over a long period of time, or when the client needs kidney dialysis. In these cases, a central line is easier and less painful than having needles put in the veins each time the client needs therapy.
- **Option D:** An occlusion can result from the precipitation of calcium phosphate crystals when calcium and phosphorus are co-administered at inappropriate concentrations. If the pH of an infusion is too alkaline or acidic, precipitation can occur. Parenteral nutrition preparations can leave a lipid residue that can obstruct a CVC.

22. A female client who has a history of seizures went to a healthcare facility to ask the nurse regarding the use of birth control pills while on phenytoin therapy. The nurse correctly states to the client that:

- A. Taking phenytoin decreases the effectiveness of birth control pills.
- B. Pregnancy is not allowed while taking phenytoin.
- C. There is no known interaction between these medicines so there is nothing to worry about.
- D. To discontinue phenytoin and proceed with the oral contraceptive.

Correct Answer: A. Taking phenytoin decreases the effectiveness of birth control pills.

Clients taking oral contraceptives are known to suffer contraceptive failure while taking anticonvulsants such as phenobarbitone, phenytoin, and carbamazepine because they decrease the effectiveness of birth control pills.

- **Options B, C, & D:** These are inappropriate instructions.

23. Which of the following clients would least likely be at risk of developing skin breakdown?

- A. A client incontinent of urine feces.
- B. A client with chronic nutritional deficiencies.
- C. A client with decreased sensory perception.
- D. A client who is unable to move about and is confined to bed.

Correct Answer: C. A client with decreased sensory perception.

Bed or chair confinement, inability to move, loss of bowel or bladder control, poor nutrition, absent or inconsistent caregiving, and decreased sensory perception can contribute to the development of skin breakdown. The least likely risk, as presented in the options, is the decreased sensory perception. Options A, B, and D identify physiological conditions, which are the risk priorities.

- **Option A:** Assess for fecal/urinary incontinence. Stool may contain enzymes that cause skin breakdown. The urea in urine turns into ammonia within minutes and is caustic to the skin. Use of diapers and incontinence pads hastens skin breakdown.
- **Option B:** Usually, individuals change position off pressure areas every few minutes; these occur automatically even during sleep. Patients who are unaware of sensation tend to do nothing thus

results in prolonged pressure on skin capillaries and eventually in skin ischemia.

Option D: Specific areas where the skin is stretched tautly are at higher risk for breakdown because the possibility of ischemia to the skin is high as a result of compression of skin capillaries between a hard surface (e.g., mattress, chair, or table) and the bone. For lightly pigmented skin, pressure areas appear to be red. For darker skin tones, these areas appear to be red, blue, or purple hue spots.

24. Upon Sam's admission for acute psychiatric hospitalization, Nurse Jona documents the following: Client refuses to bathe or dress, remains in the room most of the day, speaks infrequently to peers or staff. Which nursing diagnosis would be the priority at this time?

- A. Anxiety
- B. Decisional conflict
- C. Self-care deficit
- D. Social isolation

Correct Answer: D. Social isolation

These behaviors indicate the client's withdrawal from others and possible fear or mistrust of relationships. If a client is found to be very paranoid, solitary or one-on-one activities that require concentration are appropriate. The client is free to choose his level of interaction; however, concentration can help minimize distressing paranoid thoughts or voices. If a client is unable to respond verbally or in a coherent manner, spend a frequent, short period with clients. An interested presence can provide a sense of being worthwhile.

- **Option A:** Keep the client in an environment as free of stimuli (loud noises, crowding) as possible. The client might respond to noises and crowding with agitation, anxiety, and increased inability to concentrate on outside events. Identify with client symptoms he experiences when he or she begins to feel anxious around others. Increased anxiety can intensify agitation, aggressiveness, and suspiciousness.
- **Option B:** There is no indication of a Decisional conflict in the information provided. Structure times each day to include planned times for brief interactions and activities with the client on a one-on-one basis; helps the client to develop a sense of safety in a non-threatening environment. If the client is very withdrawn, one-on-one activities with a "safe" person initially should be planned. Learn to feel safe with one person, then gradually might participate in a structured group activity.
- **Option C:** Although the client refuses to bathe or dress, Self-care deficit would not be the priority nursing diagnosis in this situation. Try to incorporate the strengths and interests the client had when not as impaired into the activities planned. Increase the likelihood of client's participation and enjoyment. Remember to give acknowledgment and recognition for positive steps the client takes in increasing social skills and appropriate interactions with others. Recognition and appreciation go a long way to sustaining and increasing a specific behavior.

25. Which statement made by the family member caring for the client with a percutaneous gastrostomy tube indicates an understanding of the nurse's teaching?

- A. "I must flush the tube with water after feedings and clamp the tube."

- B. "I must check placement four times per day."
- C. "I will report to the doctor any signs of indigestion."
- D. "If my father is unable to swallow, I will discontinue the feeding and call the clinic."

Correct Answer: A. "I must flush the tube with water after feedings and clamp the tube."

The client's family member should be taught to flush the tube after each feeding and clamp the tube. PEG stands for percutaneous endoscopic gastrostomy, a procedure in which a flexible feeding tube is placed through the abdominal wall and into the stomach. PEG allows nutrition, fluids and/or medications to be put directly into the stomach, bypassing the mouth and esophagus.

- **Option B:** A dressing will be placed on the PEG site following the procedure. This dressing is usually removed after one or two days. After that you should clean the site once a day with diluted soap and water and keep the site dry between cleansings. No special dressing or covering is needed.
- **Option C:** The placement should be checked before feedings, and indigestion can occur with the PEG tube, just as it can occur with any client. Complications can occur with the PEG placement. Possible complications include pain at the PEG site, leakage of stomach contents around the tube site, and dislodgement or malfunction of the tube. Possible complications include infection of the PEG site, aspiration (inhalation of gastric contents into the lungs), bleeding and perforation (an unwanted hole in the bowel wall).
- **Option D:** Medications can be ordered for indigestion, but it is not a reason for alarm. A percutaneous endoscopic gastrostomy tube is used for clients who have experienced difficulty swallowing. The tube is inserted directly into the stomach and does not require swallowing.

26. Kate, who has undergone mitral valve replacement, suddenly experiences continuous bleeding from the surgical incision during the postoperative period. Which of the following pharmaceutical agents should Nurse Aiza prepare to administer to Kate?

- A. Protamine Sulfate
- B. Quinidine Sulfate
- C. Vitamin C
- D. Coumadin

Correct Answer: A. Protamine Sulfate

Protamine Sulfate is used to prevent continuous bleeding in a client who has undergone open heart surgery. Protamine is a medication used to reverse and neutralize the anticoagulant effects of heparin. Protamine is the specific antagonist that neutralizes heparin-induced anticoagulation. Protamine is a strongly alkaline (nearly two-thirds of the amino acid composition is arginine) polycationic low-molecular-weight protein found in salmon sperm that is also currently available in a recombinant form.

- **Option B:** Quinidine sulfate is used to treat or prevent many types of irregular heartbeats such as atrial fibrillation. Quinidine can greatly improve the ability to perform normal activities by decreasing the number of irregular heartbeats. However, it may not stop all irregular heartbeats completely. It works by blocking abnormal heartbeat signals.

- **Option C:** Vitamin C, or ascorbic acid, has several important functions: helping to protect cells and keeping them healthy, maintaining healthy skin, blood vessels, bones, and cartilage, and helping with wound healing.
- **Option D:** Coumadin is used to treat blood clots and/or prevent new clots from forming in the body. Preventing harmful blood clots helps to reduce the risk of a stroke or heart attack. Conditions that increase the risk of developing blood clots include a certain type of irregular heart rhythm (atrial fibrillation), heart valve replacement, recent heart attack, and certain surgeries (such as hip/knee replacement).

27. A male client is brought to the psychiatric clinic by family members, who tell the admitting nurse that the client repeatedly drives while intoxicated despite their pleas to stop. During an interview with the nurse Linda, which statement by the client most strongly supports a diagnosis of psychoactive substance abuse?

- A. "I'm not addicted to alcohol. In fact, I can drink more than I used to without being affected."
- B. "I only spend half of my paycheck at the bar."
- C. "I just drink to relax after work."
- D. "I know I've been arrested three times for drinking and driving, but the police are just trying to hassle me."

Correct Answer: D. "I know I've been arrested three times for drinking and driving, but the police are just trying to hassle me."

According to the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, diagnostic criteria for psychoactive substance abuse include a maladaptive pattern of such use, indicated either by continued use despite knowledge of having a persistent or recurrent social, occupational, psychological, or physical problem caused or exacerbated by substance abuse or recurrent use in dangerous situations (for example, while driving).

For this client, psychoactive substance dependence must be ruled out; criteria for this disorder include a need for increasing amounts of the substance to achieve intoxication (option A), increased time and money spent on the substance (option B), inability to fulfill role obligations (option C), and typical withdrawal symptoms.

- **Option A:** A shortened version of the term used in the ICD-10 – Mental and behavioral disorders due to psychoactive substance use. The term encompasses acute intoxication, harmful use, dependence syndrome, withdrawal state, withdrawal state with delirium, psychotic disorder, and amnesic syndrome. For a particular substance, these conditions may be grouped together as, for example, alcohol disorders, cannabis use disorders, stimulant use disorders. Psychoactive substance use disorders are defined as being of clinical relevance; the term 'psychoactive substance use problems' is a broader one, which includes conditions and events not necessarily of clinical relevance.
- **Option B:** Production, distribution, sale, or non-medical use of many psychoactive drugs is either controlled or prohibited outside legally sanctioned channels by law. Psychoactive drugs have different degrees of restriction of availability, depending on their risks to health and therapeutic usefulness, and classified according to a hierarchy of schedules at both national and international levels. At the international level, there are international drug conventions concerned with the control of production and distribution of psychoactive drugs: the 1961 Single Convention on Narcotic Drugs, amended by a 1972 Protocol; the 1971 Convention on Psychotropic Substances; the 1988

Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.

- **Option C:** It is an essential characteristic of the dependence syndrome that either substance taking or a desire to take a particular substance should be present; the subjective awareness of compulsion to use drugs is most commonly seen during attempts to stop or control substance use. This diagnostic requirement would exclude, for instance, surgical patients given opiate drugs for the relief of pain and who may show signs of an opiate withdrawal state when drugs are not given, but who have no desire to continue taking drugs.

28. When giving intravenous (I.V.) phenytoin, which of the following methods should you use?

- A. Use an in-line filter.
- B. Withhold other anticonvulsants.
- C. Mix the drug with saline solution only.
- D. Flush the I.V. catheter with dextrose solution.

Correct Answer: C. Mix the drug with saline solution only.

Phenytoin is compatible only with saline solutions.

- **Options A and B:** You needn't withhold additional anticonvulsants or use an in-line filter.
- **Option D:** Dextrose causes an insoluble precipitate to form.

29. A client with an acute exacerbation of rheumatoid arthritis is admitted to the hospital for treatment. Which drug, used to treat clients with rheumatoid arthritis, has both an anti-inflammatory and immunosuppressive effect?

- A. Gold sodium thiomalate (Myochrysine)
- B. Azathioprine (Imuran)
- C. Prednisone (Deltasone)
- D. Naproxen (Naprosyn)

Correct Answer: C. Prednisone (Deltasone)

Prednisone is used to treat persons with acute exacerbations of rheumatoid arthritis. This medication is given for its anti-inflammatory and immunosuppressive effects. Prednisone is in a class of medications called corticosteroids. It works to treat patients with low levels of corticosteroids by replacing steroids that are normally produced naturally by the body. It works to treat other conditions by reducing swelling and redness and by changing the way the immune system works.

- **Option A:** Gold sodium thiomalate is usually used in combination with aspirin and nonsteroidal anti-inflammatory drugs to relieve pain. Gold has an immunosuppressive effect. Gold sodium thiomalate is a form of gold that affects the process of inflammation in the body. Gold sodium thiomalate is used to treat rheumatoid arthritis in adults and children.
- **Option B:** Azathioprine is used for clients with life-threatening rheumatoid arthritis for its immunosuppressive effects. Azathioprine is in a class of medications called immunosuppressants. It works by decreasing the activity of the body's immune system so it will not attack the transplanted organ or the joints.

- **Option D:** Naproxen is a nonsteroidal anti-inflammatory drug. Immunosuppression does not occur. Naproxen is a nonsteroidal anti-inflammatory drug (NSAID). It works by reducing hormones that cause inflammation and pain in the body. Naproxen is used to treat pain or inflammation caused by conditions such as arthritis, ankylosing spondylitis, tendinitis, bursitis, gout, or menstrual cramps. It can also be used to treat acute pain caused by other conditions not listed in this medication guide.

30. Isoniazid (INH) and rifampin (Rifadin) have been prescribed for a client with TB. A nurse reviews the medical record of the client. Which of the following, if noted in the client's history, would require physician notification?

- A. Heart disease
- B. Allergy to penicillin
- C. Hepatitis B
- D. Rheumatic fever

Correct Answer: C. Hepatitis B

Isoniazid and rifampin are contraindicated in clients with acute liver disease or a history of hepatic injury. In all adults preparing to begin isoniazid treatment, the clinician should order baseline measurements of aspartate aminotransferase (AST), alanine aminotransferase (ALT), bilirubin, alkaline phosphatase, serum creatinine, and platelet count.

- **Option A:** Regular monitoring of hepatic and renal function during treatment is not necessary unless the patient has abnormal baseline levels or is at increased risk for hepatotoxicity (alcohol abuse, hepatitis B or C infection, etc.). For those patients, serum transaminases should be measured again two to four weeks after treatment initiation.
- **Option B:** All first-line antitubercular medications, rifampin, isoniazid, pyrazinamide, and ethambutol can exert hepatotoxic effects. A continual rise in liver functions test should prompt discontinuation of treatment. Aminoglycoside-induced nephrotoxicity is reversible when stopping the medication.
- **Option D:** Renal toxicity depends on the patient if any underlying renal disease is present, and on the dose of the medication being administered. Renal insufficiency is avoidable in most patients. Liver function tests should be monitored routinely as rifampin, isoniazid, pyrazinamide, and ethambutol all may exert hepatotoxic effects.

31. For a patient in active labor, the nurse-midwife plans to use an internal electronic fetal monitoring (EFM) device. What must occur before the internal EFM can be applied?

- A. The membranes must rupture.
- B. The fetus must be at 0 station.
- C. The cervix must be dilated fully.
- D. The patient must receive anesthesia.

Correct Answer: A. The membranes must rupture.

Internal fetal heart rate monitoring uses an electronic transducer connected directly to the fetal skin. A wire electrode is attached to the fetal scalp or other body parts through the cervical opening and is

connected to the monitor. Internal EFM can be applied only after the patient's membranes have ruptured when the fetus is at least at the -1 station, and when the cervix is dilated at least 2 cm.

- **Option B:** An electrode will be attached to the part of the infant's body that is closest to the cervical opening.
- **Option C:** Dilation of at least 2 cm is adequate enough to insert the electrode through the cervical opening.
- **Option D:** Although the patient may receive anesthesia, it is not required before application of an internal EFM device.

32. A nurse notices frequent artifacts on the ECG monitor for a client whose leads are connected by cable to a console at the bedside. The nurse examines the client to determine the cause. Which of the following items is unlikely to be responsible for the artifact?

- A. Frequent movement of the client.
- B. Tightly secured cable connections.
- C. Leads applied over hairy areas.
- D. Leads applied to the limbs.

Correct Answer: B. Tightly secured cable connections.

Motion artifact, or "noise," can be caused by frequent client movement, electrode placement on limbs, and insufficient adhesion to the skin, such as placing electrodes over hairy areas of the skin. Electrode placement over bony prominences also should be avoided. Signal interference can also occur with electrode removal and cable disconnection. The artifacts produced by alternating current cause a "darkened reinforcement" in the ECG baseline, often making an analysis of rhythm difficult. This is due to lack of filters for alternating current systems or a poor operation of the device.

- **Option A:** In Parkinson's disease and parkinsonian syndromes, continuous muscle twitching can be mistaken for atrial flutter (pseudoatrial flutter) due to gross and constant irregularities with a 300 bpm rate. In such cases, electrodes should be placed at the upper part of the arms and legs. To eliminate limb tremors due to Parkinson's disease, the electrodes should be placed at the roots of the limbs, which attenuates or abolishes the tremors and the myopotentials.
- **Option C:** Incorrect connections of electrodes during ECG recordings may resemble rhythm or conduction alterations, myocardial ischemia or infarction. They also cause shifts in P waves and the QRS axis, and they may mimic ectopic atrial rhythms, fascicular block or dextrocardia; the latter occurring with left arm/right arm reversal.
- **Option D:** A frequent mistake when performing an ECG is a positioning of the right precordial leads (V1, V2, V3); too high or too low, i.e., above the 4th intercostal space observed in 50% of tracings or inferior and left shift in 30%–50% of the cases in leads V4 through V6, which indicates that these lateral precordial leads are commonly placed outside their respective anatomical sites.

33. Conduction defects will most likely be an adverse associated with the use of:

- A. verapamil (Isoptin)

- B. nifedipine (Adalat CC)
- C. diltiazem (Cardizem)
- D. felodipine (Plendil)

Correct Answer: A. verapamil (Isoptin).

Verapamil (Isoptin) has the strongest chronotropic effect and will cause a delay in conduction at the SA and AV nodes. Verapamil also increases myocardial oxygen delivery, which helps patients with vasospastic angina. Verapamil correlates with negative chronotropic effects and a decrease in sympathetic nervous system activity.

- **Option B:** The reduced intracellular calcium, results in a reduction of peripheral arterial vascular resistance and dilatation of coronary arteries, leading to a reduction in systemic blood pressure and increased myocardial oxygen delivery. Nifedipine thus has hypotensive and antianginal properties.
- **Option C:** Diltiazem is a negative inotrope (decreased force) and negative chronotrope (decreased rate). The combination, along with coronary artery vasodilation, leads to decreased myocardial oxygen demand, decreased heart rate, and reduced blood pressure.
- **Option D:** Research shows that felodipine has a higher selectivity than other commonly used dihydropyridine calcium channel blockers like amlodipine and nifedipine for vascular tissue in comparison to cardiac tissue. Also, the clinical trials of felodipine have not shown any negative inotropic effect.

34. Nurse Jackson has recently taken on the role of Nurse Manager for a busy medical-surgical unit. She wants to implement an effective reward-feedback system to improve team performance and foster professional growth. During a team meeting, she discusses potential strategies for feedback. Which of these statements a team member makes best describes the characteristics of an effective reward-feedback system?

- A. "We should provide specific feedback immediately after a task is completed or observed."
- B. "Everyone should get feedback, both good and bad, in equal amounts regardless of individual performance."
- C. "Always begin with a compliment before providing any constructive criticism."
- D. "We should set performance expectations so high that only a few can reach them."

Correct Answer: A. "We should provide specific feedback immediately after a task is completed or observed."

Feedback is most useful when given immediately. Positive behavior is strengthened through immediate feedback, and it is easier to modify problem behaviors if the standards are clearly understood.

- **Option B:** While regular feedback is important, it must be tailored to individual performance to be most effective.
- **Option C:** While it can be helpful to frame feedback positively, this approach can sometimes dilute the message or come off as insincere.
- **Option D:** Every goal should always be attainable. Setting unattainably high expectations can demotivate staff and create a negative work environment.

35. A male client is scheduled for a renal clearance test. Nurse Sheldon should explain that this test is done to assess the kidneys' ability to remove a substance from the plasma in:

- A. 1 minute.
- B. 30 minutes.
- C. 1 hour.
- D. 24 hours.

Correct Answer: A. 1 minute.

The renal clearance test determines the kidneys' ability to remove a substance from the plasma in 1 minute. It doesn't measure the kidneys' ability to remove a substance over a longer period. The glomerular filtration rate (GFR) describes the flow rate of filtered fluid through the kidneys. The gold standard measurement of GFR involves the injection of inulin and its clearance by the kidneys.

- **Option B:** Creatinine clearance (CrCl) is the volume of blood plasma cleared of creatinine per unit time. It is a rapid and cost-effective method for the measurement of renal function. Both CrCl and GFR can be measured using the comparative values of creatinine in blood and urine.
- **Option C:** A physician may require a creatinine clearance test from patients when routine blood creatinine levels or the estimated GFR are not within normal ranges. Patients with signs and symptoms of deteriorating kidney function are candidates for CrCl test.
- **Option D:** Creatinine clearance is affected by sex and race. Women have less muscle mass and a lower rate of creatinine production in comparison to men. Latinos produce lower clearance values while blacks produce higher values, indicating greater muscle

36. A maternity nurse is preparing for the admission of a client in the 3rd trimester of pregnancy that is experiencing vaginal bleeding and has a suspected diagnosis of placenta previa. The nurse reviews the physician's orders and would question which order?

- A. Prepare the client for an ultrasound.
- B. Obtain equipment for external electronic fetal heart monitoring.
- C. Obtain equipment for a manual pelvic examination.
- D. Prepare to draw a Hgb and Hct blood sample.

Correct Answer: C. Obtain equipment for a manual pelvic examination.

Manual pelvic examinations are contraindicated when vaginal bleeding is apparent in the 3rd trimester until a diagnosis is made and placenta previa is ruled out. Digital examination of the cervix can lead to maternal and fetal hemorrhage.

- **Option A:** A diagnosis of placenta previa is made by ultrasound. A patient presenting with vaginal bleeding in the second or third trimester should receive a transabdominal sonogram before a digital examination. If there is a concern for placenta previa, then a transvaginal sonogram should be performed to confirm the location of the placenta. Transvaginal sonogram has been shown to be superior to a transabdominal sonogram and is safe.

- **Option B:** External fetal monitoring is crucial in evaluating the fetus that is at risk for severe hypoxia. Placental abruption presents with severe abdominal pain, vaginal bleeding, and electronic fetal monitoring may show tachysystole and a nonreassuring fetal heart tracing; this too can lead to high morbidity in mortality to the fetus and mother secondary to hemorrhage.
- **Option D:** The H/H levels are monitored, and external electronic fetal heart rate monitoring is initiated. A leading cause of third-trimester hemorrhage, placenta previa presents classically as painless bleeding. Bleeding is thought to occur in association with the development of the lower uterine segment in the third trimester. Placental attachment is disrupted as this area gradually thins in preparation for the onset of labor; this leads to bleeding at the implantation site, because the uterus is unable to contract adequately and stop the flow of blood from the open vessels.

37. Which neurotransmitter has been implicated in the development of Alzheimer's disease?

- A. Acetylcholine
- B. Dopamine
- C. Epinephrine
- D. Serotonin

Correct Answer: A. Acetylcholine

A relative deficiency of acetylcholine is associated with this disorder. The drugs used in the early stages of Alzheimer's disease will act to increase available acetylcholine in the brain. The remaining neurotransmitters have not been implicated in Alzheimer's disease. Cholinergic neurons located in the basal forebrain, including the neurons that form the nucleus basalis of Meynert, are severely lost in Alzheimer's disease (AD). AD is the most ordinary cause of dementia affecting 25 million people worldwide. The hallmarks of the disease are the accumulation of neurofibrillary tangles and amyloid plaques.

- **Option B:** Acetylcholine (ACh) was the first neurotransmitter to be identified. ACh is the neurotransmitter used by all cholinergic neurons, which has a very important role in the peripheral and central nervous systems. All pre- and postganglionic parasympathetic neurons and all preganglionic sympathetic neurons use ACh as a neurotransmitter. In addition, part of the postganglionic sympathetic neurons also uses ACh as a neurotransmitter.
- **Option C:** Given its widespread distribution in the brain, it is not surprising that cholinergic neurotransmission is responsible for modulating important neural functions. The cholinergic system is involved in critical physiological processes, such as attention, learning, memory, stress response, wakefulness and sleep, and sensory information.
- **Option D:** It has been demonstrated that the cholinergic system plays a role in the learning process. Moreover, published data indicate that ACh is involved in memory. Further studies have demonstrated that endogenous acetylcholine is important for modulation of acquisition, encoding, consolidation, reconsolidation, extinction, and retrieval of memory.

38. A male client was on warfarin (Coumadin) before admission and has been receiving heparin I.V. for 2 days. The partial thromboplastin time (PTT) is 68 seconds. What should Nurse Carla do?

- A. Stop the I.V. infusion of heparin and notify the physician.

- B. Continue treatment as ordered.
- C. Expect the warfarin to increase the PTT.
- D. Increase the dosage, because the level is lower than normal.

Correct Answer: B. Continue treatment as ordered.

The effects of heparin are monitored by the PTT is normally 30 to 45 seconds; the therapeutic level is 1.5 to 2 times the normal level.

- **Option A:** There is no need to stop the infusion since the PTT is at a therapeutic level. In patients receiving concomitant heparin and warfarin therapy, PTT reflects the combined effects of both drugs. Because of the marked effect of warfarin on the PTT, decreasing heparin dose in response to a high PTT frequently results in subtherapeutic heparin levels.
- **Option C:** The PTT is not used to monitor warfarin therapy, but PTT may be prolonged by warfarin at high doses.
- **Option D:** The level is correct; increasing the dosage is unnecessary. Warfarin markedly affects PTT, for each increase of 1.0 in the international normalized ratio, the PTT increases 16 seconds.

39. Drugs classified as centrally acting skeletal muscle relaxants are most effective in relieving:

- A. Spasm due to trauma or inflammation
- B. Chronic spasm due to old injury
- C. Pain from arthritis
- D. Surgical complications

Correct Answer: A. Spasm due to trauma or inflammation

Centrally acting skeletal muscle relaxants are most effective in relieving spasm due to trauma or inflammation. The centrally acting muscle relaxants are a group of drugs that act in the central nervous system (CNS) to mitigate tension and spasm of skeletal muscles. Drugs within this group are structurally heterogeneous and act at a variety of receptors in the CNS.

- **Option B:** In theory, involuntary muscle spasm may result from a protective reflex preventing movement that would otherwise cause injury. In some cases, muscle spasm itself may become painful and debilitating. This phenomenon, known as the “pain-spasm-pain cycle,” has not been confirmed in rigorous clinical and electrophysiologic studies.
- **Option C:** One proposed mechanism is anticholinergic inhibition of the midbrain reticular activating system resulting in depressed polysynaptic reflexes and decreased muscle tone. This is also described as an indirect inhibition of the interneuronal junction of the spinal cord.
- **Option D:** The onset of action of oral methocarbamol is 30 minutes. The drug is completely absorbed by the gastrointestinal tract and reaches peak plasma concentrations at two hours. It has a variable half-life of one to two hours and is metabolized in the liver by dealkylation, hydroxylation, and glucuronidation.

40. Which assessment data would the nurse expect as the chief complaint from a client who is experiencing an acute exacerbation of Ménière’s disease?

- A. Vertigo
- B. Dizziness
- C. Severe ear pain
- D. Sudden deafness

Correct Answer: A. Vertigo

Ménière's disease is characterized by sudden, severe episodes of vertigo during which the client has a sensation of spinning. If Meniere disease is suspected, the patient should be questioned about the character of vertigo, hearing loss, and earlier episodes. A full otologic history is part of the clinical investigation.

- **Option B:** Dizziness is not vertigo and must be distinguished from true rotational vertigo. Red flags for a central origin of vertigo, according to Harcourt et al., are neurological symptoms or signs, acute deafness, new type or onset of headache, or vertical/torsional/rotatory nystagmus.
- **Option C:** A feeling of pressure but not pain is also characteristic. If Meniere disease is suspected, one should perform a full otologic examination, facial nerve testing, and assessment of nystagmus with Frenzel goggles, Rinne, and Weber tests.
- **Option D:** Hearing loss is progressive, not sudden. Audiometric evaluation is mandatory in all patients with Meniere disease. Fluctuating low frequency unilateral sensorineural hearing loss is characteristic of the disease. The hearing loss can progress to all frequencies.

41. Which of the following nursing diagnoses might occur when administering large parenteral doses of amphotericin B with vancomycin (Vancocin)?

- A. Decreased cardiac output
- B. Ineffective airway clearance
- C. Ineffective breathing pattern
- D. Fluid volume excess

Correct Answer: D. Fluid volume excess

These two drugs are both nephrotoxic, so this nursing diagnosis may result from renal problems. Renal toxicity correlates with conventional amphotericin B use and can lead to renal failure and requirement for dialysis. But the azotemia often stabilizes with therapy and renal damage is reversible after discontinuation of amphotericin B. Avoiding concomitant use of other nephrotoxic agents, and appropriate hydration with normal saline may significantly decrease the likelihood and severity of azotemia associated with amphotericin B.

- **Option A:** Amphotericin exhibits infusion-related toxicity, which accounts for its extended administration times. Infuse slowly over 3 hours; rapid infusion can cause cardiotoxicity. Other potential uncommon side effects include demyelinating encephalopathy in patients with bone marrow transplants with total body irradiation or who are receiving cyclosporine.
- **Option B:** Monitoring is a recommendation to evaluate for the presence of side effects. Initially, a daily electrolyte panel, including potassium and magnesium concentrations until the dose increases to its therapeutic level, and after that, weekly electrolyte concentrations are sufficient.
- **Option C:** The monitoring of amphotericin B concentrations in the serum or CSF is of little value because the relationships between plasma and tissue concentrations and clinical efficacy or toxicity have not had adequate research performed.

42. A patient admitted to the hospital with myocardial infarction develops severe pulmonary edema. Which of the following symptoms should the nurse expect the patient to exhibit?

- A. Slow, deep respirations
- B. Stridor
- C. Bradycardia
- D. Air hunger

Correct Answer: D. Air hunger

Patients with pulmonary edema experience air hunger, anxiety, and agitation. Symptoms may also include coughing up blood or bloody froth; difficulty breathing when lying down (orthopnea); feeling of “air hunger” or “drowning” (this feeling is called “paroxysmal nocturnal dyspnea” if it causes you to wake up 1 to 2 hours after falling asleep and struggle to catch your breath).

- **Option A:** Physical findings in patients with pulmonary edema are notable for tachypnea and tachycardia. Patients may be sitting upright, they may demonstrate air hunger, and they may become agitated and confused. Patients usually appear anxious and diaphoretic.
- **Option B:** Auscultation of the lungs usually reveals fine, crepitant rales, but rhonchi or wheezes may also be present. Rales are usually heard at the bases first; as the condition worsens, they progress to the apices.
- **Option C:** Cardiovascular findings are usually notable for S3, accentuation of the pulmonic component of S2, and jugular venous distention. Auscultation of murmurs can help in the diagnosis of acute valvular disorders manifesting with pulmonary edema.

43. A 65 year old female is experiencing a flare-up of pruritus. Which of the client’s actions could aggravate the cause of flare-ups?

- A. Sleeping in cool and humidified environment
- B. Daily baths with fragrant soap
- C. Using clothes made from 100% cotton
- D. Increasing fluid intake

Correct Answer: B. Daily baths with fragrant soap

The use of fragrant soap is very drying to the skin hence causing pruritus. Avoid factors that may contribute to skin dryness such as overheating, hot baths, and soaps, shower and bath products. Use emollients for dry skin, including for washing, bathing, and showering.

- **Option A:** A cool and humidified environment could help moisten the skin. Dry skin could be very itchy. Lay a cool flannel that has been soaked in an emollient cream on the skin or apply a cooled emollient that has been kept in the refrigerator.
- **Option C:** Cotton is non-irritating and soft for the skin. Patting the skin instead of scratching and keeping nails short. Other interventions may include the use of behavior modification including habit reversal training, phototherapy, the use of systemic medications, which include antidepressants such as tricyclic and SSRIs, and anticonvulsants such as gabapentin and

pregabalin.

- **Option D:** Increasing fluid intake could make the skin supple and moist. Using anti-itch creams containing a moisturizer and additional ingredients such as crotamiton, lauromacrogols, menthol, and doxepin is possible. However, their use should be based on the classification as recent evidence does not support using these products for all types of pruritus.

44. Nurse Trinity administered neutral protamine Hagedorn (NPH) insulin to a diabetic client at 7 a.m. At what time would the nurse expect the client to be most at risk for a hypoglycemic reaction?

- A. 10:00 am
- B. Noon
- C. 4:00 pm
- D. 10:00 pm

Correct Answer: C. 4:00 pm

NPH is an intermediate-acting insulin that peaks 8 to 12 hours after administration. Because the nurse administered NPH insulin at 7 a.m., the client is at greatest risk for hypoglycemia from 3 p.m. to 7 p.m.

- **Option A:** At 10:00 am, the insulin given would not have reached its peak.
- **Option B:** During noontime, risk for hypoglycemia would still be low.
- **Option D:** 10:00 pm is already a late time for the peak action of insulin.

45. The nurse is monitoring a female client with a diagnosis of peptic ulcer. Which assessment findings would most likely indicate perforation of the ulcer?

- A. Bradycardia
- B. Numbness in the legs
- C. Nausea and vomiting
- D. A rigid, board-like abdomen

Correct Answer: D. A rigid, board-like abdomen

Perforation of an ulcer is a surgical emergency and is characterized by sudden, sharp, intolerable severe pain beginning in the mid epigastric area and spreading over the abdomen, which becomes rigid and board-like. Perforated peptic ulcer (PPU) is a serious complication of PUD and patients with PPU often present with an acute abdomen that carries a high risk for morbidity and mortality. The lifetime prevalence of perforation in patients with PUD is about 5%. PPU carries mortality ranging from 1.3% to 20%.

- **Option A:** Tachycardia may occur as hypovolemic shock develops. The classic triad of sudden onset of abdominal pain, tachycardia, and abdominal rigidity is the hallmark of perforated peptic ulcers. Early diagnosis, prompt resuscitation, and urgent surgical intervention are essential to improve outcomes.
- **Option B:** Numbness in the legs is not an associated finding. Symptoms of PUD include abdominal pain, upper abdominal discomfort, bloatedness, and feeling of fullness. When PUD worsens and

eventually perforates, gastric juice and gas enter the peritoneal cavity leading to chemical peritonitis.

- **Option C:** Nausea and vomiting may occur. Sudden onset of abdominal pain or acute deterioration of the ongoing abdominal pain is typical of PPU. Typically the pain never completely subsides despite usual premedical remedies and forces the patient to seek medical attention.

46. A client with burns covering 50% of their body was admitted 10 hours ago and now has a blood glucose level of 142 mg/dL. What should the nurse do first?

- A. Documents the finding
- B. Obtains a family history of diabetes
- C. Repeats the glucose measurement
- D. Stop IV fluids containing dextrose

Correct Answer: A. Documents the finding

Neural and hormonal compensation to the stress of the burn injury in the emergent phase increases liver glucose production and release. An acute rise in the blood glucose level is an expected client response and is helpful in the generation of energy needed for the increased metabolism that accompanies this trauma.

- **Option B:** A family history of diabetes could make her more of a risk for the disease, but this is not a priority at this time. The secondary assessment shouldn't begin until the primary assessment is complete; resuscitative efforts are underway; and lines, tubes, and catheters are placed.
- **Option C:** The glucose level is not high enough to warrant retesting. A variety of laboratory tests will be needed within the first 24 hours of a patient's admission (some during the initial resuscitative period and others after the patient is stabilized).
- **Option D:** The cause of her elevated blood glucose is not the IV fluid. Rapid and aggressive fluid resuscitation is needed to replace intravascular volume and maintain end-organ perfusion.

47. Nurse Channing is caring for four clients and is preparing to do his initial rounds. Which client should the nurse assess first?

- A. A client with diabetes being discharged today.
- B. A 35-year-old male with tracheostomy and copious secretions.
- C. A teenager scheduled for physical therapy this morning.
- D. A 78-year-old female client with a pressure ulcer that needs dressing change.

Correct Answer: B. A 35-year-old male with tracheostomy and copious secretions.

The patient with an airway problem should be given the highest priority. The ABCs identifies the airway, breathing and cardiovascular status of the patient as the highest of all priorities in that sequential order.

- **Option A:** The client who was discharged today is not a priority because he is stable enough to be sent home. Maslow's Hierarchy of Needs identifies the physiological or biological needs, including the ABCs, the safety/psychological/emotional needs, the need for love and belonging, the needs for self-esteem and the esteem by others and the self-actualization needs in that order of priority.

- **Option C:** The teenager who will undergo physical therapy is under Maslow's safety and physiological needs. The psychological or emotional, safety, and security needs include needs like low level stress and anxiety, emotional support, comfort, environmental and medical safety and emotional and physical security.
- **Option D:** The client needing a dressing change for her pressure ulcer belongs to Maslow's physical and biological needs. Some physical needs include the need for the ABCs of airway, breathing and cardiovascular function, nutrition, sleep, fluids, hygiene and elimination.

48. Which of the following conditions is the predominant cause of angina?

- A. Increased preload
- B. Decreased afterload
- C. Coronary artery spasm
- D. Inadequate oxygen supply to the myocardium.

Correct Answer: D. Inadequate oxygen supply to the myocardium.

Inadequate oxygen supply to the myocardium is responsible for the pain accompanying angina. The heart is dependent on adequate oxygen supply for energy production to support contractility. At the cellular level, ischemia causes an increase in anaerobic glycolysis. This increases the levels of hydrogen, potassium, and lactate in the venous return of the ischemic or affected area of the myocardium.

- **Option A:** Increased preload would be responsible for right-sided heart failure. Increases in preload, as demonstrated through an elevated PCW, are seen in several conditions such as heart failure, mitral stenosis, and mitral regurgitation. At higher preloads, the heart also has an increased oxygen demand, further debilitating the already diseased heart. In cases of heart failure, eventually, the heart cannot keep up with the increased load, and deleterious ventricular remodeling and loss of function ensue.
- **Option B:** Decreased afterload causes increased cardiac output. Afterload is the force against which the ventricles must act in order to eject blood, and is largely dependent on the arterial blood pressure and vascular tone. Similarly, reducing afterload can increase cardiac output, especially in conditions where contractility is impaired.
- **Option C:** Coronary artery spasm is responsible for variant angina. Coronary artery vasospasm (CAVS) is a constriction of the coronary arteries that can cause complete or near-complete occlusion of the vessel. In 1959, Dr. Myron Prinzmetal described a different entity of angina than the classic Heberden's angina which was originally described in 1772. This vasospastic disease can cause acute ischemia and present anywhere along the spectrum of angina from stable angina to acute coronary syndrome.

49. The client has an order for a trough to be drawn on the client receiving Vancomycin. The nurse is aware that the nurse should contact the lab for them to collect the blood:

- A. 15 minutes after the infusion
- B. 30 minutes before the infusion
- C. 1 hour after the infusion

D. 2 hours after the infusion

Correct Answer: B. 30 minutes before the infusion

A trough level should be drawn 30 minutes before the third or fourth dose. Draw trough specimens immediately before (?30 min) the next dose. Do not draw specimens until a steady state is achieved (ie, before the fourth dose). Draw peak specimens 1-2 hours after completion of intravenous dosage.

- **Option A:** Vancomycin is a glycopeptide antibiotic first isolated in 1953. It is a naturally occurring antimicrobial synthesized by soil bacterium *Amiclotopsis Orientalis*. Generic vancomycin became available and approved for use in 1958 and quickly became a common antibiotic in treating rapidly growing penicillin-resistant *Staphylococcus* species.
- **Option C:** The emergence of pseudomembranous enterocolitis, coupled with the spread of methicillin-resistant *Staphylococcus aureus* (MRSA), led to a resurgence in the use of vancomycin. It is used to treat serious, life-threatening infections by gram-positive bacteria that are resistant to less-toxic agents.
- **Option D:** General indications for measuring vancomycin trough levels include risk of nephrotoxicity and inadequate therapeutic response. Monitor at regular intervals. Specifically, trough levels should be measured in patients at risk for nephrotoxicity.

50. Which of the following statements is true about combination therapy for the treatment of HIV disease?

- A. It completely shuts off replication of HIV.
- B. Is the only FDA-approved treatment for HIV disease.
- C. It appears to cause a sustained benefit achieved by drug no. 1 preventing the emergence of resistance to drug no. 2 despite resistance to drug no. 1.
- D. It is only effective if used alternating with periods of monotherapy.

Correct Answer: C. It appears to cause a sustained benefit achieved by drug no. 1 preventing the emergence of resistance to drug no. 2 despite resistance to drug no. 1

Combination therapy is superior to monotherapy at this time for reasons described in this choice. This form of therapy is recommended for all patients with HIV by the Department of Health and Human Services (DHHS) and the World Health Organization (WHO). This daily treatment of multiple HIV medications is an HIV regimen.

- **Option A:** A typical initial HIV regimen includes three HIV medications from a minimum of two drug classes. Although this treatment is not curative, it can provide longer lives for patients and reduce HIV transmission. This reduction of transmission has become a popular use of antiretroviral therapy for individuals who are HIV-positive and are with an HIV-negative partner.
- **Option B:** The FDA does not approve of investigational HIV drugs. Investigational drugs include those used to treat or prevent HIV and vaccines to treat or prevent HIV. These drugs are only available in clinical trials. No vaccines exist yet; however, researchers are studying this possibility.
- **Option D:** The successes of antiretroviral therapy have reduced HIV to a chronic condition in many parts of the world as progression to AIDS has become rare. Studies have found that 3-drug therapy has led to a 60% to 80% decline in rates of AIDS, hospitalization, and death. By 2030 the CDC plans to implement a 90-90-90 plan (90% HIV diagnosed, 90% on therapy, and 90% suppressed).

51. Nerve deafness would most likely result from an injury or infection that damaged the:

- A. Vagus nerve
- B. Cochlear nerve
- C. Vestibular nerve
- D. Trigeminal nerve

Correct Answer: B. Cochlear nerve.

Because the organ of hearing is the organ of Corti, located in the cochlea, nerve deafness would most likely accompany damage to the cochlear nerve. The cochlear nerve is responsible for transmitting auditory signals from the inner ear to the cochlear nuclei, within the brainstem, and ultimately to the primary auditory cortex, within the temporal lobe.

- **Option A:** The vagus nerve (cranial nerve [CN] X) is the longest cranial nerve in the body, containing both motor and sensory functions in both the afferent and efferent regards. The nerve travels widely throughout the body affecting several organ systems and regions of the body, such as the tongue, pharynx, heart, and gastrointestinal system.
- **Option C:** The vestibular nerve relays information related to motion and position. The vestibular system involves coordinated communication between the vestibular apparatus (semicircular canals, saccule, and utricle), ocular muscles, postural muscles, brainstem, and cerebral cortex.
- **Option D:** The trigeminal nerve is the fifth cranial nerve (CN V). Its primary function is to provide sensory and motor innervation to the face. The trigeminal nerve consists of three branches on either side that extend to different territories of the face. These branches join at the trigeminal ganglia which are located within the Meckel cave of the cranial cavity.

52. Dr. Anderson is reviewing a biopsy from a patient with suspected dermatological pathology. The biopsy is from a region of skin where all five epidermal layers are present. In examining the sample, she uses a microscope to start her assessment from the deepest epidermal layer, progressing to the most superficial layer. This methodical sequence is essential to ensure accurate identification and diagnosis. In considering the layers of the epidermis, which of the following sequences correctly orders these layers from the deepest layer to the most superficial layer?

- A. Stratum spinosum, S.basale, S.lucidum, S.granulosum, S.corneum
- B. Stratum corneum, S.lucidum, S.basale, S.spinosum, S.granulosum
- C. Stratum basale, S.spinosum, S.granulosum, S.lucidum, S.corneum
- D. Stratum corneum, S.lucidum, S.granulosum, S.spinosum, S.basale

Correct Answer: C. Stratum basale, S.spinosum, S.granulosum, S.lucidum, S.corneum

The correct order of layers of the epidermis, from the deepest layer to the most superficial layer, follows a logical sequence reflecting the process of keratinocyte maturation. The stratum basale, the deepest layer, houses actively dividing cells responsible for skin regeneration. As cells migrate upward through the stratum spinosum and stratum granulosum, they undergo transformation, flattening, and keratin production, culminating in the stratum corneum, the outermost layer, which serves as a protective

barrier consisting of fully keratinized, flattened cells. This orderly progression ensures efficient skin regeneration and a resilient skin surface.

- **Option A:** This sequence begins with the stratum spinosum, which is not the deepest layer. Moreover, the order after that is incorrect.
- **Option B:** This sequence starts with the outermost layer and mixes up the order completely.
- **Option D:** This sequence also starts with the outermost layer and is not in the correct order.

53. Back Care is best described as:

- A. Caring for the back by means of massage.
- B. Washing of the back.
- C. Application of cold compress at the back.
- D. Application of hot compress at the back.

Correct Answer: A. Caring for the back by means of massage

Back care or massage is usually given in conjunction with the activities of bathing the client. It can also be done on other occasions when a client seems to have a risk of developing skin irritation due to bed rest. The goal when performing this procedure is to enhance relaxation, reduce muscle tension and stimulate circulation.

- **Option B:** Help the patient to turn on his abdomen or on his side with his back toward the nurse and his body near the edge of the bed so that he is as near the operator as possible. If the supine position is used and the patient is a woman, a pillow under the abdomen removes pressure from the breasts and favors relaxation. Apply to back rubbing lotion or talcum powder to reduce friction. In rubbing the back use firm long strokes and kneading motions. The amount of pressure to exert depends upon the patient's condition. Begin from the neck and shoulders then proceed over the entire back.
- **Option C:** Massage with both hands working with a strong stroke. In upward then in downward motions. Give particular attention to pressure areas in rubbing (Alcohol 25%) to 50% is generally used for its refreshing effect, but rubbing lotion may be used. Powder again the area at the completion of the rubbing process which should consume from 3-5 minutes.
- **Option D:** Effleurage (stroking) is a long sweeping movement with the palm of hand conforming to the contour of the surface-treated, over a small surface (on the neck) the thumb and fingers are used. Strokes should be slow, rhythmical, and gentle with pressure constant and in the direction of the venous stream. Kneading is performed with the ulnar side palm resting on the surface and the fingers, and thumb grasping the skin and subcutaneous tissues which move with the hand of the operator.

54. Shane tells the nurse that she wants to begin toilet training her 22-month-old child. The most important factor for the nurse to stress to the mother is:

- A. Developmental level of the child's peers
- B. Consistency in approach
- C. The mother's positive attitude
- D. Developmental readiness of the child

Correct Answer: D. Developmental readiness of the child

There is no right age to toilet train a child. Readiness to begin toilet training depends on the individual child. If the child isn't developmentally ready, the child and parent will become frustrated. Signs of potty training readiness include pulling at a wet or dirty diaper, awakening dry from a nap, hiding to go or going to an area to pee or poop, and having predictable bowel movements.

- **Option A:** Developmental levels of children are individualized and comparison to peers isn't useful. In general, starting before age 2 (24 months) is not recommended. The readiness skills and physical development the child needs occur between age 18 months and 2.5 years.
- **Option B:** Consistency is important once toilet training has already started. Each child has his or her own style of behavior, which is called temperament. In planning your approach to toilet training, it is important to consider your child's temperament.
- **Option C:** The mother's positive attitude is important when the child is ready. The parents should try not to feel pressured to toilet train the child. If the parents are feeling pressured to train the child because of caregiver considerations or family members' views, their anxiety about toilet training can create anxiety in the child.

55. Nurse Oliver should expect a client with hypothyroidism to report which health concerns?

- A. Increased appetite and weight loss
- B. Puffiness of the face and hands
- C. Nervousness and tremors
- D. Thyroid gland swelling

Correct Answer: B. Puffiness of the face and hands

Hypothyroidism (myxedema) causes facial puffiness, extremity edema, and weight gain. Signs and symptoms of hyperthyroidism (Graves' disease) include an increased appetite, weight loss, nervousness, tremors, and thyroid gland enlargement (goiter). Hypothyroidism results from low levels of thyroid hormone with varied etiology and manifestations. Untreated hypothyroidism increases morbidity and mortality.

- **Option A:** Inquire about dry skin, voice changes, hair loss, constipation, fatigue, muscle cramps, cold intolerance, sleep disturbances, menstrual cycle abnormalities, weight gain, and galactorrhea. Also obtain a complete medical, surgical, medication, and family history.
- **Option C:** It is important to maintain a high index of suspicion for hypothyroidism since the signs and symptoms can be mild and nonspecific and different symptoms may be present in different patients. Typical features such as cold intolerance, puffiness, decreased sweating and skin changes may not be present always.
- **Option D:** Autoimmune thyroiditis causes an increase in the turnover of iodine and impaired organification. Chronic inflammation of the parenchyma leads to predominant T-cell lymphocytic infiltration. If this persists, the initial lymphocytic hyperplasia and vacuoles are replaced by dense fibrosis and atrophic thyroid follicles.

56. Mr. Patel, a 55-year-old chef renowned for his spicy seafood dishes, is in the clinic for a follow-up appointment related to his chronic gout. His physician has decided to prescribe probenecid as part of his management plan, considering

the recurring nature of his gout attacks and uric acid levels. When educating Mr. Patel about his new medication, which crucial instruction should the nurse emphasize to ensure his safety and optimal response to the drug?

- A. "Increase your fluid intake to prevent kidney stone formation."
- B. "Take the medication on an empty stomach for optimal absorption."
- C. "Avoid consuming alcohol while taking this medication."
- D. "Expect an immediate reduction in pain and swelling."

Correct Answer: A. "Increase your fluid intake to prevent kidney stone formation."

Probenecid works by increasing the excretion of uric acid in the urine. Increasing fluid intake can help facilitate this excretion and reduce the risk of kidney stone formation, a potential complication of the drug.

- **Option B:** While some medications require an empty stomach for best absorption, probenecid does not have this specific requirement. Additionally, taking it with food can help reduce stomach upset, a potential side effect.
- **Option C:** Alcohol can increase uric acid production and exacerbate gout symptoms. While it's generally a good idea for patients with gout to limit alcohol, this isn't specific to probenecid. The primary concern with probenecid is ensuring adequate fluid intake to assist with uric acid excretion and prevent kidney stones.
- **Option D:** Probenecid is a uricosuric agent, meaning it helps with the excretion of uric acid. It does not directly address the symptoms of an acute gout attack (like pain and swelling). Instead, its primary role is in the long-term management of gout to prevent recurrent attacks by lowering uric acid levels. Immediate symptom relief is not expected with this medication.

57. External-beam radiation is planned for a patient with endometrial cancer. The nurse teaches the patient that an important measure to prevent complications from the effects of the radiation is to

- A. Test all stools for the presence of blood
- B. Inspect the mouth and throat daily for the appearance of thrush
- C. Perform perianal care with sitz baths and meticulous cleaning
- D. Maintain a high-residue, high-fat diet

Correct Answer: C. Perform perianal care with sitz baths and meticulous cleaning

- **Option C:** Radiation to the abdomen will affect organs in the radiation path, such as the bowel, and cause frequent diarrhea.
- **Options A and B:** Stools are likely to have occult blood from the inflammation associated with radiation, so routine testing of stools for blood is not indicated. Radiation to the abdomen will not cause stomatitis.
- **Option D:** A low-residue diet is recommended to avoid irritation of the bowel when patients receive abdominal radiation.

58. Nurse John is aware that a serious effect of inhaling cocaine is?

- A. Deterioration of nasal septum.
- B. Acute fluid and electrolyte imbalances.
- C. Extrapyrarnidal tract symptoms.
- D. Esophageal varices.

Correct Answer: A. Deterioration of nasal septum

Cocaine is a chemical that when inhaled, causes destruction of the mucous membranes of the nose. Despite the fast delivery and more powerful effects that come with snorting drugs, the nose simply wasn't meant to inhale powders. Even a single use can cause swelling of the inner linings of the nose, lung infections, nasal blockages, and compromised respiratory tracts. These damaging outcomes are usually not the result of the drug being snorted, but of all the other things that might have been added to the powder to stretch it or that otherwise contaminate it.

- **Option B:** Other clinical findings may include hyperreflexia, headache, mydriasis, and abdominal pain. Cocaine-induced central sympathetic stimulation and direct cardiac effects may lead to tachycardia, hypertension, and coronary or cerebral artery vasoconstriction leading to myocardial infarction and stroke.
- **Option C:** CNS reactions may be excitatory then depressant. In its mild form, the patient may display anxiety, restlessness, and excitement. Full-body tonic-clonic seizures may result from moderate to severe CNS stimulation. These seizures are often followed by CNS depression, with death resulting from respiratory failure and/or asphyxiation if concomitant emesis is present.
- **Option D:** Patients receiving topical cocaine should have cardiac monitoring in case of dysrhythmia, and frequent vital signs are necessary to check for cocaine-induced hypertension and tachycardia. Clinicians should use the lowest dosage that results in effective anesthesia to avoid high plasma levels from mucosal absorption and potential adverse effects.

59. The nurse is assessing a male client admitted with second-and third-degree burns on the face, arms, and chest. Which finding indicates a potential problem?

- A. Partial pressure of arterial oxygen (PaO₂) value of 80 mm Hg
- B. Urine output of 20 ml/hour
- C. White pulmonary secretions
- D. Rectal temperature of 100.6° F (38° C)

Correct Answer: B. Urine output of 20 ml/hour

A urine output of less than 40 ml/hour in a client with burns indicates a fluid volume deficit.

- **Option A:** This client's PaO₂ value falls within the normal range (80 to 100 mm Hg).
- **Option C:** White pulmonary secretions also are normal.
- **Option D:** The client's rectal temperature isn't significantly elevated and probably results from the fluid volume deficit.

60. What clinical manifestation should alert the nurse to possible carbon monoxide poisoning in a client who experienced a burn injury during a house

fire?

- A. Pulse oximetry reading of 80%
- B. Expiratory stridor and nasal flaring
- C. Cherry red color to the mucous membranes
- D. Presence of carbonaceous particles in the sputum

Correct Answer: C. Cherry red color to the mucous membranes

The saturation of hemoglobin molecules with carbon monoxide and the subsequent vasodilation induces a “cherry red” color of the mucous membranes in these clients. Cherry-red skin color associated with severe carbon monoxide poisoning is seen in only 2-3% of symptomatic cases. Skin may develop erythematous lesions and bulla, especially over bony prominences.

- **Option A:** Carbon monoxide quickly binds with hemoglobin with an affinity greater than that of oxygen to form COHb. The resulting decrease in arterial oxygen content and shift of the oxyhemoglobin dissociation curve to the left explains the acute hypoxic symptoms (primarily neurologic and cardiac) seen in patients with acute poisoning.
- **Option B:** Patients suffering from smoke inhalation may have symptoms of burning sensation in the nose or throat (which is often caused by an irritant chemical toxin), a cough with increased sputum production, stridor, and dyspnea with rhonchi or wheezing.
- **Option D:** The other manifestations are associated with inhalation injury, but not specifically carbon monoxide poisoning. Physical examination should include looking for facial burns, such as loss of facial and intranasal hair as well as carbonaceous material or soot in the mouth or sputum.

61. Which of the following diagnostic tools is most commonly used to determine the location of myocardial damage?

- A. Cardiac catheterization
- B. Cardiac enzymes
- C. Echocardiogram
- D. Electrocardiogram (ECG)

Correct Answer: D. Electrocardiogram (ECG)

The ECG is the quickest, most accurate, and most widely used tool to determine the location of myocardial infarction. ECG is an effective tool to distinguish between acute MI and the myocardial ischemia that usually precedes it, as not all patients with myocardial ischemia will develop MI. Transitioning from ischemia to infarction results in precise sequential electrical abnormalities captured on ECG.

- **Option A:** Cardiac catheterization is an invasive study for determining coronary artery disease and may also indicate the location of myocardial damage, but the study may not be performed immediately. Cardiac catheterization is performed for both diagnostic and therapeutic purposes. Despite significant advancement in non-invasive cardiac imaging, it remains the standard for the measurement of cardiac hemodynamics.
- **Option B:** Cardiac enzymes are used to diagnose MI but can't determine the location. Cardiac troponins are specific and sensitive biomarkers of cardiac ischemia, and they are the preferred blood test in the evaluation of patients suspected to have acute MI. There are sensitive and highly

sensitive assays to detect cardiac troponin levels in the blood.

- **Option C:** An echocardiogram is used most widely to view myocardial wall function after an MI has been diagnosed. Echocardiography is one of the most commonly used, non-invasive methods for looking at cardiac anatomy. Echocardiography is used to provide thin cross-sections of cardiac structures, this includes; left and right

62. The mother of a 2-month-old is concerned that she may be spoiling her baby by picking her up when she cries. Which of the following would be the nurse's best response?

- A. "Let her cry for a while before picking her up, so you don't spoil her."
- B. "Babies need to be held and cuddled; you won't spoil her this way."
- C. "Crying at this age means the baby is hungry; give her a bottle."
- D. "If you leave her alone she will learn how to cry herself to sleep."

Correct Answer: B. "Babies need to be held and cuddled; you won't spoil her this way."

Infants need to have their security needs met by being held and cuddled. At 2 months of age, they are unable to make the connection between crying and attention. This association does not occur until late infancy or early toddlerhood.

- **Option A:** Letting the infant cry for a time before picking up the infant or leaving the infant alone to cry herself to sleep interferes with meeting the infant's need for security at this very young age.
- **Option C:** Infants cry for many reasons. Assuming that the child is hungry may cause overfeeding problems such as obesity.
- **Option D:** If the care the infant receives is consistent, predictable, and reliable, they will develop a sense of trust which will carry with them to other relationships, and they will be able to feel secure even when threatened.

63. Drugs can cause adverse events in a patient. Bone marrow toxicity is one of the most frequent types of drug-induced toxicity. The most serious form of bone marrow toxicity is:

- A. Aplastic anemia.
- B. Thrombocytosis.
- C. Leukocytosis.
- D. Granulocytosis.

Correct Answer: A. Aplastic anemia.

Aplastic anemia is the result of a hypersensitivity reaction and is often irreversible. It leads to pancytopenia, a severe decrease in all cell types: red blood cells, white blood cells, and platelets. A reduced number of red blood cells causes hemoglobin to drop. A reduced number of white blood cells make the patient susceptible to infection. And, a reduced number of platelets cause the blood not to clot as easily. Treatment for mild cases is supportive. Transfusions may be necessary. Severe cases require a bone marrow transplant.

- **Option B:** Thrombocytosis is a condition in which there is an excessive number of platelets in the blood. Platelets are blood cells in plasma that stop bleeding by sticking together to form a clot. Too many platelets can lead to certain conditions, including stroke, heart attack, or a clot in the blood vessels.
- **Option C:** Leukocytosis refers to an increase in the total number of white blood cells (WBCs) due to any cause. From a practical standpoint, leukocytosis is traditionally classified according to the component of white cells that contribute to an increase in the total number of WBCs. Therefore, leukocytosis may be caused by an increase in (1) neutrophil count (ie, neutrophilia), (2) lymphocyte count (ie, lymphocytosis), (3) monocyte count (ie, monocytosis), (4) eosinophilic granulocyte count (ie, eosinophilia), (5) basophilic granulocyte count (ie, basophilia), or (6) immature cells (eg, blasts). A combination of any of the above may be involved.
- **Option D:** Granulocytosis occurs when there are too many granulocytes in the blood. It's a condition that's closely related to chronic myelogenous leukemia (CML) and other bone marrow disorders. Granulocytes are white blood cells that have small granules or particles.

64. The physician orders heparin, 7,500 units, to be administered subcutaneously every 6 hours. The vial reads 10,000 units per milliliter. The nurse should anticipate giving how much heparin for each dose?

- A. ¼ ml
- B. ½ ml
- C. ¾ ml
- D. 1 ¼ ml

Correct Answer: C. ¾ ml

The nurse solves the problem as follows:

$$10,000 \text{ units} / 7,500 \text{ units} = 1 \text{ ml} / X$$

$$10,000 X = 7,500$$

$$X = 7,500 / 10,000 \text{ or } \frac{3}{4} \text{ ml}$$

- **Option A:** There are 3 primary methods for the calculation of medication dosages, as referenced above. These include Desired Over Have Method or Formula, Dimensional Analysis and Ratio and Proportion.
- **Option B:** Desired over Have or Formula Method is a formula or equation to solve for an unknown quantity (x) much like ratio proportion. Drug calculations require the use of conversion factors, such as when converting from pounds to kilograms or liters to milliliters. Simplistic in design, this method allows us to work with various units of measurement, converting factors to find our answer. Useful in checking the accuracy of the other methods of calculation as above mentioned, thus acting as a double or triple check.
- **Option D:** The Ratio and Proportion Method has been around for years and is one of the oldest methods utilized in drug calculations (as cited in Boyer, 2002)[Lindow, 2004]. Addition principals is a problem-solving technique that has no bearing on this relationship, only multiplication, and division are used to navigate through a ratio and proportion problem, not adding.

65. A 2-year-old is admitted for repair of a fractured femur and is placed in Bryant's traction. Which finding by the nurse indicates that the traction is working properly?

- A. The infant no longer complains of pain.
- B. The buttocks are 15° off the bed.
- C. The legs are suspended in the traction.
- D. The pins are secured within the pulley.

Correct Answer: B. The buttocks are 15° off the bed.

The infant's hips should be off the bed approximately 15° in Bryant's traction. Bryant's traction is a form of orthopedic traction. It is mainly used in young children who have fractures of the femur or congenital abnormalities of the hip. Both the patient's limbs are suspended in the air vertically at a ninety-degree angle from the hips and knees slightly flexed. Over a period of days, the hips are gradually moved outward from the body using a pulley system. The patient's body provides the counter-traction.

- **Option A:** Absence of pain is not an indication that the traction is working properly. The child's toes and feet should be warm and pink and the toes should move when touched. Check for these signs of good circulation every four hours the first few days, every four hours after rewrapping the legs, and then whenever the child is fed, changed, or played with.
- **Option C:** The child's body and the weights are used as tension to keep the end of the femur in the hip socket. The legs are wrapped in adhesive tape attached to a gauze adhesive elastic bandage, then connected to ropes and weights.
- **Option D:** Bryant's traction is a skin traction, not a skeletal traction. Take the ace wraps (the outer elastic bandage) off the legs. Inspect any skin for redness or irritation. Rewrap the legs with the ace bandages. Start at the feet. Overlap each loop of the wrap halfway. Do not stretch it tight. Stretch with mild tension only (1/3 tight).

66. A client has signs of increased ICP. Which of the following is an early indicator of deterioration in the client's condition?

- A. Widening pulse pressure
- B. Decrease in the pulse rate
- C. Dilated, fixed pupil
- D. Decrease in LOC

Correct Answer: D. Decrease in LOC

A decrease in the client's LOC is an early indicator of deterioration of the client's neurological status. Changes in LOC, such as restlessness and irritability, may be subtle. Clinical suspicion for intracranial hypertension should be raised if a patient presents with the following signs and symptoms: headaches, vomiting, and altered mental status varying from drowsiness to coma.

- **Option A:** Cerebral perfusion pressure (CPP) is the pressure gradient between mean arterial pressure (MAP) and intracranial pressure (CPP = MAP – ICP). CPP = MAP – CVP if central venous pressure is higher than intracranial pressure. CPP target for adults following severe traumatic brain injury is recommended at greater than 60 to 70 mm Hg, and a minimum CPP greater than 40 mm Hg is recommended for infants, with very limited data on normal CPP targets for children in between.
- **Option B:** High blood pressure causes reflex bradycardia and brain stem compromise affecting respiration. Ultimately the contents of the cranium are displaced downwards due to the high ICP, causing a phenomenon known as herniation which can be potentially fatal.

- **Option C:** Dilated, fixed pupils occur later if the increased ICP is not treated. A funduscopic exam can reveal papilledema which is a tell-tale sign of raised ICP as the cerebrospinal fluid is in continuity with the fluid around the optic nerve.

67. A 79-year-old man with a known history of osteoporosis is admitted to the orthopedic ward after a fall in his garden, which led to a hip fracture. The interdisciplinary team convenes to discuss his immediate care plan. Recognizing the acute nature of his injury and the associated discomfort, the nurse contemplates which intervention should take precedence to ensure optimal patient comfort and recovery. Which of the following nursing actions should be given top priority for this patient?

- A. Promptly administering analgesic medications as prescribed by the physician.
 - B. Initiating gentle range of motion exercises for the affected limb.
 - C. Applying cold compresses to the fractured area to mitigate swelling.
 - D. Coordinating an early consultation with the physical therapy department.
- **Option B:** While range-of-motion exercises can be beneficial in the recovery phase, they are not the immediate priority following a fresh fracture. Starting them too early can exacerbate pain and potentially disrupt the healing process.
 - **Option C:** Applying ice packs may not be appropriate immediately after surgery or in the presence of open wounds.
 - **Option D:** Physical therapy is essential for rehabilitation after a fracture, but it's not the immediate priority. Initial focus should be on pain management and stabilization of the fracture.

68. A 50-year-old widower is admitted to the hospital with a diagnosis of diabetes mellitus and complaints of rapid-onset weight loss, elevated blood glucose levels, and polyphagia. The gerontology nurse should anticipate which of the following secondary medical diagnoses?

- A. Impaired glucose tolerance
- B. Gestational diabetes mellitus
- C. Pituitary tumor
- D. Pancreatic tumor

Correct Answer: D. Pancreatic tumor

The onset of hyperglycemia in older adults can occur more slowly. When the older adult reports rapid-onset weight loss, elevated blood glucose levels, and polyphagia, the healthcare provider should consider pancreatic tumors. Weight loss occurs in about 90% of patients. Approximately 90% of all cases of pancreatic cancer are among people over 55 years of age.

- **Option A:** These patients are usually asymptomatic since they have prediabetes. The family history of diabetes and any previous history of gestational diabetes mellitus should be obtained. If they are diabetic, they will present with polyuria, polydipsia, infections, and neuropathy.

- **Option B:** The clinical features of gestational diabetes mellitus can be varied. The disproportionate weight gain, obesity, and elevated BMI can be suggestive features. The diagnosis is established by the laboratory screening method at the 24 to 28 weeks of pregnancy.
- **Option C:** Pituitary microadenoma is usually an incidental finding on MRI head. Patients are asymptomatic unless the tumor is hormonally active. Pituitary macroadenoma presents with mass effects and potentially hormonal deficiency or hormonal excess.

69. The nurse can expect a 60-year old patient with ischemic bowel to report a history of:

- A. Diabetes mellitus
- B. Asthma
- C. Addison's Disease
- D. Cancer of the bowel

Correct Answer: A. Diabetes mellitus

Ischemic bowel occurs in patients over 50 with a history of diabetes mellitus. Diabetes mellitus is the most common endocrine disorder affecting multiple organs including the gastrointestinal (GI) tract where manifestations and/or complications relate to disordered gut motility possibly as a result of autonomic neuropathy.

- **Option B:** Asthma is not related to an ischemic bowel. An increased prevalence of GI symptoms or complications has been documented in diabetic patients compared with nondiabetic control subjects including symptoms from both the upper and lower GI tract such as gastroparesis, anorexia, vomiting, early satiety, intestinal enteropathy, diarrhea, constipation, or fecal incontinence.
- **Option C:** Addison disease is an acquired primary adrenal insufficiency. A primary adrenal insufficiency is termed Addison disease when an autoimmune process causes the condition. It is a rare but potentially life-threatening emergency condition. It results from bilateral adrenal cortex destruction leading to decreased adrenocortical hormones, which may include cortisol, aldosterone, and androgens.
- **Option D:** Approximately 5% of patients with ischemic colitis have an obstructing lesion, usually in the distal colon. Half of these patients have colon cancer while the remainder has strictures caused by disorders such as diverticulitis, radiation, and previous surgery.

70. Dr. Shrunk orders intravenous (IV) insulin for Rita, a client with a blood sugar of 563. Nurse AJ administers insulin lispro (Humalog) intravenously (IV). What does the best evaluation of the nurse reveal? Select all that apply.

- A. The nurse could have given the insulin subcutaneously.
- B. The nurse should have contacted the physician.
- C. The nurse should have used regular insulin (Humulin R).
- D. The nurse used the correct insulin.
- E. The nurse could have given the insulin intramuscularly.

Correct Answer: B & C.

Insulin lispro is an insulin analog that is FDA-approved for the treatment of patients with diabetes mellitus types 1 and 2 to control hyperglycemia. Regular insulin, short-acting human insulin, is a synthetic protein hormone, which, just as the naturally occurring endogenous insulin, exerts a wide range of physiologic effects.

- **Option A:** The nurse cannot give the insulin subcutaneously when it is ordered to be given intravenously (IV). Insulin, regular when administered subcutaneously, should be injected 30 to 40 minutes before each meal.
- **Option B:** Contact the provider to clarify the order, regular insulin is the only insulin that can be given intravenously (IV). When administered intravenously, U-100 administration should be with close monitoring of serum potassium and blood glucose. Do not use it if the solution is viscous or cloudy; administration should only occur if it is colorless and clear.
- **Option C:** Regular insulin is the only insulin that can be given intravenously (IV). The nurse did not use correct insulin as it was not regular insulin. Incorrect administration of insulin (e.g., too little, too much, or at wrong times) can result in transient and serious hypo- and hyperglycemia, wide glycemc excursions, and diabetic ketoacidosis.
- **Option D:** The insulin ordered by the physician was an intravenous infusion. For intravenous infusions, to minimize insulin adsorption to plastic IV tubing, flush the intravenous tube with a priming infusion of 20 mL from a 100 mL-polyvinyl chloride bag insulin every time a new intravenous tubing is added to the insulin infusion container.
- **Option E:** Insulin may be injected into the subcutaneous tissue of the upper arm and the anterior and lateral aspects of the thigh, buttocks, and abdomen (with the exception of a circle with a 2-inch radius around the navel). Intramuscular injection is not recommended for routine injections.

71. Sickle cell disease (SCD) primarily affects:

- A. children of African descent and Hispanics of Caribbean ancestry.
- B. children of Middle-Eastern and Indian descent.
- C. children of Asian descent.
- D. both African descent and Hispanics of Caribbean ancestry and Middle-Eastern and Indian descent.

Correct Answer: D. Both African descent and Hispanics of Caribbean ancestry and Middle-Eastern and Indian descent.

Sickle cell disease primarily affects children of African descent and Hispanics of Caribbean ancestry. It also occurs in children of Middle-Eastern and Indian descent. Sickle cell anemia is the most common monogenic disorder. Prevalence of the disease is high among the people of Sub-Saharan Africa, South Asia, the Middle East, and the Mediterranean.

- **Option A:** Sickle cell disease (SCD) is a multisystem disorder and the most common genetic disease in the United States, affecting 1 in 500 African Americans. About 1 in 12 African Americans carry the autosomal recessive mutation, and approximately 300,000 infants are born with sickle cell anemia annually.
- **Option B:** Sickle cell disease (SCD) affects millions of people throughout the world and is particularly common among those whose ancestors came from sub-Saharan Africa; Spanish-speaking regions in the Western Hemisphere (South America, the Caribbean, and Central America); Saudi Arabia; India; and Mediterranean countries such as Turkey, Greece, and Italy.

- **Option C:** In Europe and Africa, when there is a high frequency of the malaria parasite, there is a high frequency of the sickle-cell allele. In Asia, the frequency of the sickle cell allele is very low, regardless of the frequency of malaria parasites present.

72. Nurse Adams is reviewing the patient’s medical history. The patient, a 70-year-old female with osteoporosis, has been admitted due to a recent hip fracture. As part of the patient’s health teaching, Nurse Adams decides to discuss the importance of the skeletal system. During their conversation, Nurse Adams poses the following question to test the patient’s understanding: “Given your condition, understanding the skeletal system is essential. Can you tell me which of the following is NOT considered a primary function of the skeletal system?”

- A. Support and protects body structures
- B. Storage of minerals
- C. Blood cell formation
- D. Synthesize Vitamin D

Correct Answer: D. Synthesize Vitamin D

This is a function of the integumentary system. The system synthesizes vitamin D3 which converts to calcitriol, for normal metabolism of calcium.

- **Option A:** Bone is the major supporting tissue of the body and protects internal organs (e.g., ribcage protects the heart, lungs, and other internal organs).
- **Option B:** Some minerals in the blood are taken into bone and stored. The principal minerals stored are calcium and phosphorus.
- **Option C:** Many bones contain cavities filled with bone marrow that gives rise to blood cells.

73. The client admitted 2 days earlier that a lung resection accidentally pulls out the chest tube. Which action by the nurse indicates understanding of the management of chest tubes?

- A. Order a chest x-ray
- B. Reinsert the tube
- C. Cover the insertion site with a Vaseline gauze
- D. Call the doctor

Correct Answer: C. Cover the insertion site with a Vaseline gauze

If the client pulls the chest tube out of the chest, the nurse’s first action should be to cover the insertion site with an occlusive dressing. Afterward, the nurse should call the doctor, who will order a chest x-ray and possibly reinsert the tube. A chest tube may be inserted at the bedside, in the procedure room, or in the surgical suite. Health care providers often assist physicians in the insertion and removal of a closed chest tube drainage system.

- **Option A:** A chest tube falling out is an emergency. Immediately apply pressure to the chest tube insertion site and apply sterile gauze or place a sterile Jelonet gauze and dry dressing over the

insertion site and ensure tight seal. Apply dressing when the patient exhales. If a patient goes into respiratory distress, call a code. Notify primary health care providers to reinsert new chest tube drainage systems.

- **Option B:** A chest tube drainage system disconnecting from the chest tube inside the patient is an emergency. Immediately clamp the tube and place the end of the chest tube in sterile water or NS. The two ends will need to be swabbed with alcohol and reconnected.
- **Option D:** After initial insertion of a chest tube drainage system, assess the patient every 15 minutes to 1 hour. Once the patient is stable, and depending on the condition of the patient and the amount of drainage, monitoring may be less frequent. If the patient is stable (vital signs within normal limits; drainage amount, colour, or consistency is within normal limits; the patient is not experiencing any respiratory distress or pain), assessment may be completed every 4 hours. Always follow hospital policy for frequency of monitoring a patient with a chest tube.

74. Nurse Brian is developing a plan of care for marrow suppression, the major dose-limiting adverse reaction to floxuridine (FUDR). How long after drug administration does bone marrow suppression become noticeable?

- A. 24 hours
- B. 2 to 4 days
- C. 7 to 14 days
- D. 21 to 28 days

Correct Answer: C. 7 to 14 days

- Bone marrow suppression becomes noticeable 7 to 14 days after floxuridine administration. Bone marrow recovery occurs in 21 to 28 days.

75. In planning pain reduction interventions, which pain theory provides information most useful to nurses?

- A. Specificity theory
- B. Pattern theory
- C. Gate-control theory
- D. Central-control theory

Correct Answer: D. Central-control theory

No one theory explains all the factors underlying the pain experience, but the central-control theory discusses brain opiates with analgesic properties and how their release can be affected by actions initiated by the client and caregivers. In central-control theory, the master control mechanism directs the muscle movement based on linguistic goals. The gate-control, specificity, and pattern theories do not address pain control to the depth included in the central-control theory.

- **Option A:** Specificity theory is one of the first modern theories for pain. It holds that specific pain receptors transmit signals to a “pain center” in the brain that produces the perception of pain. Von Frey (1895) argued that the body has a separate sensory system for perceiving pain—just as it does for hearing and vision.

- **Option B:** This theory ignored findings of specialized nerve endings and many of the observations supporting the specificity and/or intensive theories of pain. The theory stated that any somesthetic sensation occurred by a specific and particular pattern of neural firing and that the spatial and temporal profile of firing of the peripheral nerves encoded the stimulus type and intensity.
- **Option C:** According to his theory, pain stimulation is carried by small, slow fibers that enter the dorsal horn of the spinal cord; then other cells transmit the impulses from the spinal cord up to the brain. These fibers are called T-cells. The T-cells can be located in a specific area of the spinal cord, known as the substantia gelatinosa. These fibers can have an impact on the smaller fibers that carry the pain stimulation.

76. Nurse Vincent is teaching the parents of a school-age child. Which teaching topic should take priority?

- A. Explaining normalcy of fears about body integrity
- B. Keeping a night light on to allay fears
- C. Prevent accidents
- D. Encouraging the child to dress without help

Correct Answer: C. Prevent accidents

Accidents are the major cause of death and disability during the school-age years. Therefore, accident prevention should take priority when teaching parents of school-age children. In 2016, there were 20,360 deaths among children and adolescents in the United States. More than 60% resulted from injury-related causes, which included 6 of the 10 leading causes of death.

- **Option A:** Preschool (not school-age) children have fears concerning body integrity. Help prepare children for situations they may find frightening. Read a story about going to the dentist, or ask a firefighter to visit the school and allow children to handle the equipment while you stand nearby for reassurance.
- **Option B:** Preschool (not school-age) children are afraid of the dark. At about 3 ½, children often develop a variety of insecurities and physical ways of showing them. Fear of the dark and nightmares are common and may last quite a while. There is so much going on in the world of a 3-year-old-so much mastery, so many things they've already become familiar with. At the same time, however, children this age may be disturbed by characteristics they find unfamiliar.
- **Option D:** Preschool (not school-age) children should be encouraged to dress without help (with the exception of tying shoes). Preschoolers revel in their newfound independence. Being able to make such choices is a natural part of growing up, and gives threes and fours an exciting sense of themselves as powerful people.

77. Which finding is the best indication that a client with ineffective airway clearance needs suctioning?

- A. Oxygen saturation
- B. Respiratory rate
- C. Breath sounds
- D. Arterial blood gases

Correct Answer: C. Breath sounds

- Option C: Changes in breath sounds such as crackles are the best indication of the need for suctioning in the client with ineffective airway clearance.
- Options A, B, and D: They can be altered by other conditions.

78. After receiving a change-of-shift report at 7:00 AM, which of these patients will you assess first?

- A. A 23-year-old with a migraine headache who is complaining of severe nausea associated with retching.
- B. A 45-year-old who is scheduled for a craniotomy in 30 minutes and needs preoperative teaching.
- C. A 59-year-old with Parkinson's disease who will need a swallowing assessment before breakfast.
- D. A 63-year-old with multiple sclerosis who has an oral temperature of 101.80 F and flank pain.

Correct Answer: D. A 63-year-old with multiple sclerosis who has an oral temperature of 101.80 F and flank pain.

Urinary tract infections are a frequent complication in patients with multiple sclerosis because of the effect on bladder function. The elevated temperature and decreased breath sounds suggest that this patient may have pyelonephritis. The physician should be notified immediately so that antibiotic therapy can be started quickly.

- **Option A:** This patient needs further assessment, but does not require immediate attention. A migraine can cause severe throbbing pain or a pulsing sensation, usually on one side of the head. It's often accompanied by nausea, vomiting, and extreme sensitivity to light and sound. Migraine attacks can last for hours to days, and the pain can be so severe that it interferes with daily activities.
- **Option B:** Preoperative teaching must be done but it is not the nurse's priority. A craniotomy is the surgical removal of part of the bone from the skull to expose the brain. Specialized tools are used to remove the section of bone called the bone flap. The bone flap is temporarily removed, then replaced after the brain surgery has been done.
- **Option C:** The patient should be assessed soon, but does not have an urgent need. In MS, the immune system attacks the protective sheath (myelin) that covers nerve fibers and causes communication problems between your brain and the rest of your body. Eventually, the disease can cause permanent damage or deterioration of the nerves.

79. A 3-year old boy with vesicoureteral reflux is scheduled for ureteral reimplantation. His father plans to go home during the surgery to get his favorite toy. When the father left, the boy asked the nurse when will his father be back? The nurse's best response is:

- A. "Your daddy will be back later this afternoon"
- B. "Your daddy will be back at 11 am"
- C. "Your daddy will be back after you wake up"
- D. "Your daddy will be back within 2 ½ hours"

Correct Answer: C. “Your daddy will be back after you wake up.”

A preschool child understands the concept of time through events and symbols. Following and being involved with a familiar sequence of routines and schedules enhances their time awareness of the present, past, and future. Preschoolers also need to build on these experiences, because time is such an abstract concept for young children. For them, it is rather intangible.

- **Option A:** Between ages 4-5, a child begins to have an understanding of time but it is still vague. Before and after are time concepts understood by preschoolers. Although 3- and 4-year-olds have the ability to describe events that happen in the past and know specific words that describe past events (“last week” or “a few days ago”), they may not always get the duration of the time exactly right.
- **Option B:** Between ages 6 to 8 years old, children learn the concept of minutes in an hour, number of hours in a day, and can compare time. Of course, recognizing the parts of the day is the most basic way children become aware of the passage of time. Their capacity to learn about time increases as they become aware of how events reoccur at specific times during the day.
- **Option D:** Kindergartners want to know what time it is and are beginning to understand that certain things (like the start and end of school) happen at a defined time each day. Make a photographic timeline for the day at school, marking each event with a picture of the clock at that time and the time written numerically.

80. An elderly client with pneumonia may appear with which of the following symptoms first?

- A. Altered mental status and dehydration
- B. Fever and chills
- C. Hemoptysis and dyspnea
- D. Pleuritic chest pain and cough

Correct Answer: A. Altered mental status and dehydration

Fever, chills, hemoptysis, dyspnea, cough, and pleuritic chest pain are common symptoms of pneumonia, but elderly clients may first appear with only an altered mental status and dehydration due to a blunted immune response. A small fraction of patients may have an altered mental status, abdominal pain, chest pain, and other systemic findings.

- **Option B:** Historically, the chief complaints in case of pneumonia include systemic signs like fever with chills, malaise, loss of appetite, and myalgias. These findings are more common in viral pneumonia as compared to bacterial pneumonia.
- **Option C:** Pulmonary findings include cough with or without sputum production. Bacterial pneumonia is associated with purulent or rarely blood-tinged sputum. Viral pneumonia is associated with watery or occasionally mucopurulent sputum production.
- **Option D:** There may be an associated pleuritic chest pain with the concomitant involvement of the pleura. Dyspnea and a diffuse heaviness of the chest are also seen occasionally. The cough may be either nonproductive or productive with mucoid, purulent, or blood-tinged sputum.

81. Which of the following nursing interventions should be included in the client’s care plan during dialysis therapy?

- A. Limit the client's visitors.
- B. Monitor the client's blood pressure.
- C. Pad the side rails of the bed.
- D. Keep the client NPO.

Correct Answer: B. Monitor the client's blood pressure.

Because hypotension is a complication of peritoneal dialysis, the nurse records intake, and output, monitors VS, and observes the client's behavior. Monitor BP (lying and sitting) and pulse. Note level of jugular pulsation. Decreased BP, postural hypotension, and tachycardia are early signs of hypovolemia

- **Option A:** The nurse also encourages visiting and other diversional activities. Encourage use of relaxation techniques. Redirects attention and promotes a sense of control. Elevate head of bed at intervals. Turn the patient from side to side. Provide back care and tissue massage. Position changes and gentle massage may relieve abdominal and general muscle discomfort.
- **Option C:** A client on PD does not need to be placed in bed with padded side rails. Anchor catheter and tubing with tape. Stress the importance of the patient avoiding pulling or pushing on the catheter. Restrain hands if indicated. Reduces risk of trauma by manipulation of the catheter.
- **Option D:** A client on PD does not need to be kept NPO. Maintain nutritional status. Provide a high-calorie, low-protein, low-sodium, and low-potassium diet, with vitamin supplements to balance nutritional intake.

82. A client with myocardial infarction is receiving tissue plasminogen activator, alteplase (Activase, tPA). While on the therapy, the nurse plans to prioritize which of the following?

- A. Observe for neurological changes
- B. Monitor for any signs of renal failure
- C. Check the food diary
- D. Observe for signs of bleeding

Correct Answer: D. Observe for signs of bleeding

Bleeding is the priority concern for a client taking thrombolytic medication. The primary mechanism of all thrombolytics is the conversion of plasminogen to the active form, plasmin, which then degrades fibrin. This proteolysis can occur with fibrin-bound plasminogen on the surface of thrombi and the unbound form within the plasma. The unbound plasmin generated degrades fibrin but also fibrinogen, factor V, and factor VIII.

- **Option A:** During therapy, perform a neurologic assessment every 15 minutes during the 1-hour infusion. After therapy, check every 15 minutes for the first hours after cessation of infusion, then every 30 minutes for the next 6 hours.
- **Option B:** Although current guidelines do not include renal dysfunction as a contraindication to tPA therapy, some clinicians hesitate to administer tPA because of a tendency of bleeding in these patients.
- **Option C:** Having a food diary is not related to the use of medication. Thrombolytic therapy is indicated in patients with evidence of ST-segment elevation MI (STEMI) or presumably new left bundle-branch block (LBBB) presenting within 12 hours of the onset of symptoms if there are no contraindications to fibrinolysis.

83. The charge nurse is making assignments for the next shift. Which patient should be assigned to the fairly new nurse (6 months experience) pulled from the surgical unit to the medical unit?

- A. A 58-year old on airborne precautions for tuberculosis (TB).
- B. A 68-year old just returned from bronchoscopy and biopsy.
- C. A 72-year old who needs teaching about the use of incentive spirometry.
- D. A 69-year old with COPD who is ventilator dependent.

Correct Answer: C. A 72-year old who needs teaching about the use of incentive spirometry

Many surgical patients are taught about coughing, deep breathing, and the use of incentive spirometry preoperatively. The needs of the client must be competently met with the knowledge, skills and abilities of the staff to meet these needs. In other words, the nurse who delegates aspects of care to other members of the nursing team must balance the needs of the client with the abilities of those to which the nurse is delegating tasks and aspects of care.

- **Option A:** To care for the patient with TB in isolation, the nurse must be fitted for a high-efficiency particulate air (HEPA) respirator mask. All healthcare facilities and agencies must assess and validate competency before total care or any aspect of care is performed by an individual without the direct supervision of another, regardless of their years of experience.
- **Option B:** The bronchoscopy patient needs a specialized procedure. The staff members' levels of education, knowledge, past experiences, skills, abilities, and competencies are also evaluated and matched with the needs of all of the patients in the group of patients that will be cared for.
- **Option D:** The ventilator-dependent patient needs a nurse who is familiar with ventilator care. Some patients require high levels of professional judgment and skill; and other patient needs are somewhat routine and without the need for high levels of professional judgment and skill.

84. Which of the following individuals are communicating a message? Select all that apply.

- A. A mother spanking her son for playing with matches
- B. A teenage boy isolating himself and playing loud music
- C. A biker sporting an eagle tattoo on his biceps
- D. A teenage girl writing, "No one understands me."
- E. A father checking for new e-mail on a regular basis

Correct Answer: A, B, C, and D.

The nurse should determine that spanking, isolating, getting tattoos, and writing are all ways in which people communicate messages to others. It is estimated that about 70% to 90% of communication is nonverbal. It is the act of conveying meanings from one body or group to another through the use of mutually understood signs, symbols, and semiotic rules.

- **Option A:** Nonverbal communication involves the transmission of messages without the use of words. It involves facial expression, posture, touch, gestures, physical appearance, eye contact, and other body movements. These are considered more accurate expressions of true feelings.

Gestures impart meanings that are more powerful than words.

- **Option B:** Listening is the ability to accurately receive and interpret messages in the communication process. (e.g., radio, audio conferencing). Various modes or mediums to transmit and receive the information are referred to as “communication channels.”
- **Option C:** Sight is the process, power, or function of seeing (e.g., the sights of the newly-built hospital). Physical appearance or artifacts involves items in the client’s environment such as grooming or the use of clothing and jewelry. They may convey nonverbal messages that might enhance or hinder the real message of the spoken words.
- **Option D:** Reading refers to the complex cognitive process of decoding symbols involving word recognition, comprehension, fluency, and motivation (e.g., written letters, memos, chats, and messaging).
- **Option E:** Communication is the process of sharing information or the process of generating and transmitting meanings. The father checking for new emails on a regular basis lacks some of the elements of communication, such as the stimulus, receiver, and channel.

85. Dr. Kennedy prescribes glipizide (Glucotrol), an oral antidiabetic agent, for a male client with type 2 diabetes mellitus who has been having trouble controlling the blood glucose level through diet and exercise. Which medication instruction should the nurse provide?

- A. “Be sure to take glipizide 30 minutes before meals.”
- B. “Glipizide may cause a low serum sodium level, so make sure you have your sodium level checked monthly.”
- C. “You won’t need to check your blood glucose level after you start taking glipizide.”
- D. “Take glipizide after a meal to prevent heartburn.”

Correct Answer: A. “Be sure to take glipizide 30 minutes before meals.”

The client should take glipizide twice a day, 30 minutes before a meal, because food decreases its absorption. The immediate release dosage form should be administered 30 minutes before meals to achieve the most significant reduction in postprandial hyperglycemia. Administration of the extended-release dosage form should be with breakfast or the first meal of the day. Practitioners should instruct patients to swallow the tablets whole and not to chew, split, or crush the tablets.

- **Option B:** The drug doesn’t cause hyponatremia and therefore doesn’t necessitate monthly serum sodium measurement. The primary adverse effects of glipizide include hypoglycemia and weight gain. The most common adverse reactions are gastrointestinal and include nausea and diarrhea. In rare cases, cholestatic jaundice may result from glipizide therapy, and this requires immediate discontinuation of the medication.
- **Option C:** The client must continue to monitor the blood glucose level during glipizide therapy. Monitor fasting plasma glucose and A1c at three months in patients taking glipizide. Some experts recommend monitoring liver enzymes and renal function in patients who are prescribed glipizide for more than two months.
- **Option D:** Glipizide is a second-generation sulfonylurea that is FDA-approved for the treatment of adults with diabetes mellitus type 2. Its use is as an adjunct to diet and exercise. It is usable in combination with metformin, a biguanide, to reach goal HbA1c in patients with not adequate metabolic control in 3 months, despite compliance with diet, exercise, and medication.