

Kevin's Review - 100 NCLEX Practice Questions

1. *The lungs participate in acid-base balance by:*

- A. Reabsorbing bicarbonate.
- B. Splitting carbonic acid in two.
- C. Using CO₂ to regulate hydrogen ions.
- D. Sending hydrogen ions to the renal tubules.

Correct Answer: C. Using CO₂ to regulate hydrogen ions

The lungs use carbon dioxide to regulate hydrogen ion concentration. The carbon dioxide formed during cellular respiration combines with water to create carbonic acid. Carbonic acid then dissociates into bicarbonate and a hydrogen ion. This reaction is one of the many buffer systems in the human body; it resists dramatic changes in pH to allow a person to remain within the narrow physiological pH range.

- **Option A:** The renal system affects pH by reabsorbing bicarbonate and excreting fixed acids. Whether due to pathology or necessary compensation, the kidney excretes or reabsorbs these substances which affect pH. The nephron is the functional unit of the kidney. Blood vessels called glomeruli transport substances found in the blood to the renal tubules so that some can be filtered out while others are reabsorbed into the blood and recycled.
- **Option B:** This reaction can and does occur without an enzyme; however, carbonic anhydrase is an enzyme that assists with this process. It catalyzes the first reaction above to form carbonic acid which can then freely dissociate into bicarbonate and a hydrogen ion. Carbonic anhydrase is located in red blood cells, renal tubules, gastric mucosa, and pancreatic cells.
- **Option D:** If bicarbonate is reabsorbed and/or acid is secreted into the urine, the pH becomes more alkaline (increases). When bicarbonate is not reabsorbed or acid is not excreted into the urine, pH becomes more acidic (decreases). The metabolic compensation from the renal system takes longer to occur: days rather than minutes or hours.

2. *Mental health is defined as:*

- A. The ability to distinguish what is real from what is not.
- B. A state of well-being where a person can realize his own abilities can cope with normal stresses of life and work productively.
- C. Is the promotion of mental health, prevention of mental disorders, nursing care of patients during illness and rehabilitation.
- D. Absence of mental illness.

Correct Answer: B. A state of well-being where a person can realize his own abilities can cope with normal stresses of life and work productively.

Mental health is a state of emotional and psychosocial well-being. A mentally healthy individual is self-aware and self-directive, has the ability to solve problems, can cope with the crisis without assistance beyond the support of family and friends, fulfills the capacity to love and work, and sets goals and realistic limits. Mental health is an integral and essential component of health. The WHO constitution states: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." An important implication of this definition is that mental health is more than just the absence of mental disorders or disabilities.

- **Option A:** This describes the ego function reality testing. The reality principle forces us to consider the risks, requirements, and possible outcomes as we make decisions by temporarily halting the discharge of the id's energy until a suitable time and place. In other words, the ego doesn't try to block an urge, but instead, it works to make certain the desires of the id are met in ways that are safe, realistic, and appropriate. For example, rather than snatching that slice of pizza, the ego will force you to wait until you can buy your own slice, a delay achieved through what is known as the secondary process.
- **Option C:** This is the definition of Mental Health and Psychiatric Nursing. Mental health nursing, also known as psychiatric nursing, is a specialized field of nursing practice that involves the care of individuals with a mental health disorder to help them recover and improve their quality of life. Mental health nurses have advanced knowledge of the assessment, diagnosis, and treatment of psychiatric disorders that helps them provide specialized care. They typically work alongside other health professionals in a medical team with the aim of providing optimal clinical outcomes for the patient.
- **Option D:** Mental health is not just the absence of mental illness. Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood.

3. Which of the following medications usually is given to a client with leukemia as prophylaxis against *P. carinii* pneumonia?

- A. Vincristine (Oncovin)
- B. Prednisone (Deltasone)
- C. Oral nystatin suspension
- D. Sulfamethoxazole and trimethoprim (Bactrim)

Correct Answer: D. Sulfamethoxazole and trimethoprim (Bactrim)

- **Option D:** The most frequent cause of death from leukemia is an overwhelming infection. *P. carinii* infection is lethal to a child with leukemia. As prophylaxis against *P. carinii* pneumonia, continuous low doses of co-trimoxazole (Bactrim) are frequently prescribed.
- **Option A:** Vincristine, an antineoplastic agent is used in the treatment for leukemia but is not used as a prophylaxis against pneumonia.
- **Option B:** Prednisone isn't an antibiotic and increases susceptibility to infection.
- **Option C:** Oral nystatin suspension would be indicated for the treatment of thrush.

4. Some institutions will not infuse a fat emulsion, such as Intralipid, into central venous access devices (CVAD) because:

- A. Lipid residue may accumulate in the CVAD and occlude the catheter.
- B. If the catheter clogs, there is no treatment other than removal and replacement.
- C. Lipids are necessary only in the most extreme cases to prevent essential fatty acid (EFA) deficiency
- D. Fat emulsions are very caustic.

Correct Answer: A. Lipid residue may accumulate in the CVAD and occlude the catheter.

Occlusion occurs with slow infusion rates and concurrent administration of some medications. A deficiency can quickly develop. Daily essential fatty acids are necessary for constant prostaglandin production. The management of an occluded central line is challenging as the cause of the occlusion is often not known. Most blockages are caused by fibrin clots, therefore the installation of alteplase should be attempted first if the cause of the occlusion is unknown. A blocked line may be due to the precipitation of poorly soluble components in IV solutions such as calcium or certain drugs.

- **Option B:** Infusion of lipids (fat emulsion) especially with TPN, can result in blockage from a gradually thickening deposit of lipid in the line. In these cases, a 70% ethanol instillation may be helpful. Lipid occlusions may be treated with 70 percent ethanol or with 0.1 mmol/mL NaOH.
- **Option C:** Lipids provide essential fatty acids. It is recommended that approximately 4 percent of daily calories be EFAs. The infusion of lipid emulsions allows a high energy supply, facilitates the prevention of high glucose infusion rates, and is indispensable for the supply of essential fatty acids. The administration of lipid emulsions is recommended within 7 days after starting PN (parenteral nutrition) to avoid deficiency of essential fatty acids.
- **Option D:** Lipids are almost isotonic with blood. Since IV lipids are isotonic and calorically dense, they are a good source of calories for hypermetabolic patients or patients with volume or carbohydrate restrictions. Lipids can provide up to 60% of non-protein calories.

5. Thrombophlebitis typically develops in patients with which of the following conditions?

- A. Increases partial thromboplastin time
- B. Acute pulsus paradoxus
- C. An impaired or traumatized blood vessel wall
- D. Chronic Obstructive Pulmonary Disease (COPD)

Correct Answer: C. An impaired or traumatized blood vessel wall

The factors, known as Virchow's triad, collectively predispose a patient to thrombophlebitis; impaired venous return to the heart, blood hypercoagulability, and injury to a blood vessel wall. The three factors of Virchow's triad include intravascular vessel wall damage, stasis of flow, and the presence of a hypercoagulable state. Understanding the factors involved in the thrombus formation and subsequent thromboembolic events enables the clinician to stratify risk, direct clinical decision making regarding treatment, and establish preventative measures.

- **Option A:** Increased partial thromboplastin time indicates a prolonged bleeding time during fibrin clot formation, commonly the result of anticoagulant (heparin) therapy. A prolonged PTT may be due to: underlying conditions that cause low levels of clotting factors, such as: liver disease—most coagulation factors are produced by the liver, thus liver disease may cause prolonged PT and PTT. However, PT is more likely to be prolonged than PTT.
- **Option B:** Pulsus Paradoxus refers to an exaggerated fall in a patient's blood pressure during inspiration by greater than 10 mm Hg. Pulsus Paradoxus results from alterations in the mechanical forces imposed on the chambers of the heart and pulmonary vasculature often due to pericardial disease, particularly cardiac tamponade and to a lesser degree constrictive pericarditis. However, it is important to understand that pulsus paradoxus may be seen in non-pericardial cardiac diseases such as right ventricular myocardial infarction and restrictive cardiomyopathy.
- **Option D:** Chronic obstructive pulmonary disease (COPD) is estimated to affect 32 million persons in the United States and is the third leading cause of death in this country. Patients typically have symptoms of chronic bronchitis and emphysema, but the classic triad also includes asthma or a

combination of the above.

7. A nurse is developing a care plan for a client with an injury to the frontal lobe of the brain. Which nursing interventions should be included as part of the care plan? Select all that apply.

- A. Keep instructions simple and brief because the client will have difficulty concentrating.
- B. Speak clearly and slowly because the client will have difficulty hearing.
- C. Assist with bathing because the client will have vision disturbances.
- D. Orient the client to person, place, and time as needed because of memory problems.
- E. Assess vital signs frequently because vital bodily functions are affected.

Correct Answer: A & D.

Damage to the frontal lobe affects personality, memory, reasoning, concentration, and motor control of speech. The cortex of the frontal lobe is the largest of the four and in many ways the lobe which participates most in making us human.

- **Option A:** The prefrontal cortex is known to be the higher-order association center of the brain as it is responsible for decision making, reasoning, personality expression, maintaining social appropriateness, and other complex cognitive behaviors.
- **Option B:** Damage to the temporal lobe, not the frontal lobe, causes hearing and speech problems. Another study divides the temporal area into 4 major subregions: a) dorsal, mostly language and auditory/somatosensory networks b) ventromedial, mostly visual network c) medial, connected to paralimbic structures and d) anterolateral, associated with a default-semantic network. These areas have many important functions such as processing of language, social cues, and emotions, facial recognition (auditory and visual aspects), emotional processing of different stimuli (auditory, olfactory, and visual), and theory of mind.
- **Option C:** Damage to the occipital lobe causes vision disturbances. The occipital lobe is the visual processing area of the brain. It is associated with visuospatial processing, distance and depth perception, color determination, object and face recognition, and memory formation.
- **Option D:** Research has proven that the dominant (left) superior frontal gyrus is a key component in the neural network of working memory as well as spatial processing. Research has proven that the dominant (left) superior frontal gyrus is a key component in the neural network of working memory as well as spatial processing.
- **Option E:** Damage to the brain stem affects vital functions. The brainstem is the structure that connects the cerebrum of the brain to the spinal cord and cerebellum. It is composed of four sections in descending order: the diencephalon, midbrain, pons, and medulla oblongata. It is responsible for many vital functions of life, such as breathing, consciousness, blood pressure, heart rate, and sleep.

8. Varicose veins can cause changes in what component of Virchow's triad?

- A. Blood coagulability
- B. Vessel walls
- C. Blood flow

D. Blood viscosity

Correct Answer: C. Blood flow

Venous stasis is more likely to occur in patients with atrial fibrillation, valvular heart disease: prolonged immobility such as bedridden patients or prolonged travel, surgery, and trauma. Exposure to cell proteins triggers anticoagulant pathways on the surface of endothelial cells. The thinking is that as blood flow slows through vascular beds, flow reduces, and the natural anticoagulant properties from interaction with surface proteins are affected, resulting in thrombi production.

- **Option A:** Hypercoagulability can occur due to a variety of clinical statuses such as pregnancy, use of oral contraceptive medications, cancer, chemotherapy drugs, and inherited thrombophilias. Thrombophilias can include disease states such as protein C deficiency, protein S deficiency, antithrombin deficiency, hyperhomocysteinemia and homocystinuria, and antiphospholipid syndrome.
- **Option B:** Damage to the endothelial wall of a vessel alters the dynamics of blood flow. Endothelial disturbance can result from insults such as smoking, chronically elevated blood pressure, and atherosclerotic disease secondary to hyperlipidemia. When an insult to the wall occurs, flow disruption or “turbulence” occurs.
- **Option D:** Turbulent flow within a vessel occurs when the rate of blood flow becomes too rapid, or blood flow passes over an affected surface; this creates disordered flow and eddy currents, increasing the friction of flow within a vessel.

9. A client with diabetes visits the prenatal clinic at 28 weeks gestation. Which statement is true regarding insulin needs during pregnancy?

- A. Insulin requirements moderate as the pregnancy progresses.
- B. A decreased need for insulin occurs during the second trimester.
- C. Elevations in human chorionic gonadotropin decrease the need for insulin.
- D. Fetal development depends on adequate insulin regulation.

Correct Answer: D. Fetal development depends on adequate insulin regulation.

Fetal development depends on adequate nutrition and insulin regulation. Significant alterations in maternal metabolism during pregnancy ensure a continuous supply of nutrients to the fetus. Glucose is the primary energy source for the fetus. In early pregnancy, increases in maternal insulin sensitivity enable the storage of energy and nutrients.

- **Option A:** Insulin requirements do not moderate as the pregnancy progresses. To counteract insulin resistance and achieve adequate metabolic control in late pregnancy, the dose of insulin may need to be increased. Understanding insulin requirements in pregnant women with type 1 diabetes would help them to maintain tight glycemic control.
- **Option B:** Insulin needs to increase during the second and third trimesters. In late pregnancy, maternal insulin resistance develops due to increases in pregnancy-related hormones, such as progesterone, human placental lactogen and prolactin, as well as inflammatory cytokines, such as tumor necrosis factor-?. These changes facilitate the supply of glucose toward the fetus.
- **Option C:** Elevated human chorionic gonadotropin elevates insulin needs, not decreases them. Insulin dose prior to pregnancy was associated with pre-pregnancy body weight, BMI, and HbA1c levels before pregnancy and in the first trimester. Insulin dose prior to pregnancy was higher in patients with male infants than patients with female infants.

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

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

Correct Answer: C. 10 seconds

Hypoxemia can be caused by prolonged suctioning, which stimulates the pacemaker cells in 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:** 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.
- **Option B:** The catheter should be introduced to the desired depth, and then suctioning should be started. 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 D:** 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

11. Lydia undergoes a laryngectomy to treat laryngeal cancer. When teaching the client how to care for the neck stoma, the nurse should include which instruction?

- A. "Keep the stoma uncovered."
- B. "Keep the stoma dry."
- C. "Have a family member perform stoma care initially until you get used to the procedure."
- D. "Keep the stoma moist."

Correct Answer: D. "Keep the stoma moist."

The nurse should instruct the client to keep the stoma moist, such as by applying a thin layer of petroleum jelly around the edges, because a dry stoma may become irritated.

- **Option A:** The nurse should recommend placing a stoma bib over the stoma to filter and warm air before it enters the stoma.
- **Option B:** The stoma should be kept moist to avoid irritation.
- **Option C:** The client should begin performing stoma care without assistance as soon as possible to gain independence in self-care activities.

12. A 55-year-old client, who is a renowned pianist, is admitted to the neurology unit after a right-sided cerebrovascular accident (CVA) following a high-pressure concert performance. The client's family is anxious about the potential implications on his career. The nurse is performing a neurological assessment while considering the client's profession and the family's concerns. Amidst the assessment, which finding should prompt the nurse to take immediate action and possibly escalate care?

- A. Decrease in the level of consciousness
- B. Loss of bladder control
- C. Altered sensation to stimuli, especially in the fingers
- D. Emotional lability, with episodes of sudden crying
- E. Difficulty in coordinating finger movements
- F. Complaints of a persistent headache

Correct Answer: A. Decrease in the level of consciousness

A decrease in the level of consciousness is a critical sign that indicates potential deterioration in a client's neurological status, especially after a cerebrovascular accident (CVA). It can suggest increasing intracranial pressure, further brain injury, or other serious complications. Immediate action and escalation of care are essential when there's a decline in consciousness to prevent further complications and potentially life-threatening situations.

13. A female patient who speaks a little English has emergency gallbladder surgery, during discharge preparation, which nursing action would best help this patient understand wound care instruction?

- A. Asking frequently if the patient understands the instruction.
- B. Asking an interpreter to replay the instructions to the patient.
- C. Writing out the instructions and having a family member read them to the patient.
- D. Demonstrating the procedure and having the patient return the demonstration.

Correct Answer: D. Demonstrating the procedure and having the patient return the demonstration

Demonstrating by the nurse with a return demonstration by the patient ensures that the patient can perform wound care correctly. One of the leading causes of medical errors in the United States is miscommunication between patients and providers. When patients with limited English proficiency (LEP) cannot adequately communicate their needs, they are less likely to comply with medical instructions and receive vital services.

- **Option A:** Patients may claim to understand discharge instruction when they do not. In-person translation services are preferred when complex medical information or end-of-life decisions are to be discussed. Studies show in-person professional interpretation increases patient satisfaction and outcomes of care. Interpreters use visual cues to enhance communication. However, in-person interpreters can be costly and can limit the number of languages that can be adequately staffed.

- **Option B:** An interpreter of family members may communicate verbal or written instructions inaccurately. In some cases, patients prefer to use their family and friends as medical interpreters, but experts recommend against the practice because vital information may be lost.
- **Option C:** Internet-based apps for smartphones and tablets help medical professionals interpret information quickly so they can be used in emergency settings. Experts warn, however, that the one-sided nature of such applications can lead to missed or misconstrued information.

14. You are responsible for the care of a postoperative patient with a thoracotomy. The patient has been given a nursing diagnosis of Activity Intolerance. Which action should you delegate to the nursing assistant?

- A. Instructing the patient to alternate rest and activity periods
- B. Encouraging, monitoring, and recording nutritional intake
- C. Monitoring cardiorespiratory response to activity
- D. Planning activities for periods when the patient has the most energy

Correct Answer: B. Encouraging, monitoring, and recording nutritional intake

The nursing assistant's training includes how to monitor and record intake and output. After the nurse has taught the patient about the importance of adequate nutritional intake for energy, the nursing assistant can remind and encourage the patient to take-in adequate nutrition.

- **Option A:** Instructing patients requires more education and skill, and are appropriate to the RN's scope of practice. Discussing and teaching require additional education and training. These actions are within the scope of practice of the RN.
- **Option C:** Monitoring the patient's cardiovascular response to activity is a complex process requiring additional education, training, and skill, and falls within the RN's scope of practice.
- **Option D:** The scope of practice for the registered nurse will most likely include the legal ability of the registered professional nurse to perform all phases of the nursing process including assessment, nursing diagnosis, planning, implementation and evaluation.

15. When caring for a male patient who has just had a total laryngectomy, the nurse should plan to:

- A. Encourage oral feeding as soon as possible.
- B. Develop an alternative communication method.
- C. Keep the tracheostomy cuff fully inflated.
- D. Keep the patient flat in bed.

Correct Answer: B. Develop an alternative communication method.

A patient with a laryngectomy cannot speak, yet still needs to communicate. Therefore, the nurse should plan to develop an alternative communication method. Assess the effectiveness of nonverbal communication methods. The client may use hand signals, facial expressions, and changes in body posture to communicate with others. However, others may have difficulty in interpreting these nonverbal techniques. Each new method needs to be assessed for effectiveness and altered as necessary.

- **Option A:** After a laryngectomy, edema interferes with the ability to swallow and necessitates tube (enteral) feedings. Typically most patients wait a minimum of 7 days following total laryngectomy before oral feeding is started. 84% of 141 American surgeons reported that they waited until after the seventh postoperative day in a questionnaire survey by Boyce and Meyers in 1989. However, periods of up to three weeks were reported. The choice often depends on the surgeon's experience and preference and on the patient's comorbidities and tumor characteristics.
- **Option C:** To prevent injury to the tracheal mucosa, the nurse should deflate the tracheostomy cuff or use the minimal leak technique. Cuff should be deflated if the patient uses a speaking valve. Cuff should be inflated just enough to allow minimal air leak.
- **Option D:** To decrease edema, the nurse should place the patient in semi-Fowler's position. Early complications after total laryngectomy include bleeding, postoperative edema, and airway compromise. These, especially in the immediate postoperative, should be carefully monitored. Administration of corticosteroids is recommended to minimize postoperative edema and airway compromise.

16. Which of the following nursing interventions would be most helpful in making the respiratory effort of a client with metastatic lung cancer more efficient?

- Teaching the client diaphragmatic breathing techniques
- Administering cough suppressants as ordered
- Teaching and encouraging pursed-lip breathing
- Placing the client in a low semi-Fowlers position

Correct Answer: C. Teaching and encouraging pursed-lip breathing

- **Option C:** For clients with obstructive versus restrictive disorders, extending exhalation through pursed-lip breathing will make the respiratory effort more efficient. The usual position of choice for this client is the upright position, leaning slightly forward to allow greater lung expansion.
- **Option A:** Teaching diaphragmatic breathing techniques will be more helpful to the client with a restrictive disorder.
- **Option B:** Administering cough suppressants will not help the respiratory effort.
- **Option D:** A low semi-Fowler's position does not encourage lung expansion. Lung expansion is enhanced in the upright position.

17. The client asks the nurse to explain the action of infiltration anesthesia. The nurse's response is based on the knowledge that infiltration anesthesia:

- Is applied only to mucous membranes to provide local anesthesia.
- Blocks a specific group of nerves in tissues close to the operative area.
- Blocks sensation to an entire limb, or a large area of the face.
- Produces numbing to large, regional areas such as the lower abdomen and legs.

Correct Answer: B. Blocks a specific group of nerves in tissues close to the operative area.

Infiltration anesthesia blocks a specific group of nerves close to the operative area by diffusion of a drug into the tissues. It is used to anesthetize small areas. Lower concentrations of local anesthetics are typically used for infiltration anesthesia. Infiltration anesthesia is accomplished with the administration of the local anesthetic solution intradermally (ID), subcutaneously (SC), or submucosally across the nerve path that supplies the area of the body that requires anesthesia.

- **Option A:** Topical anesthetics are applied to mucous membranes. Topical anesthetics reversibly block nerve conduction near their site of administration, thereby producing temporary loss of sensation in a limited area. Nerve impulse conduction is blocked by decreasing nerve cell membrane permeability to sodium ions, possibly by competing with calcium-binding sites that control sodium permeability. This change in permeability results in decreased depolarization and an increased excitability threshold that, ultimately, prevents the nerve action potential from forming.
- **Option C:** Nerve blocks provide anesthesia to a large surface area. Peripheral nerve blocks are a type of regional anesthesia. The anesthetic is injected near a specific nerve or bundle of nerves to block sensations of pain from a specific area of the body. Nerve blocks usually last longer than local anesthesia.
- **Option D:** Spinal anesthesia affects large, regional areas. Spinal anesthesia is a neuraxial anesthesia technique in which local anesthetic is placed directly in the intrathecal space (subarachnoid space). The subarachnoid space houses sterile cerebrospinal fluid (CSF), the clear fluid that bathes the brain and spinal cord.

18. It is a brisk autumn morning at the urban community health clinic where you work as a pediatric nurse. Today, you are assigned to provide postnatal education to a young first-time mother who recently gave birth to a healthy newborn girl. The mother, Ms. Patterson, is eager to learn but expresses concerns about sudden infant death syndrome (SIDS) since her close friend experienced this tragedy last year. As part of the comprehensive education, you want to ensure Ms. Patterson understands the safest sleep positions for her newborn, especially after nursing. You present Ms. Patterson with the following positions, asking her to identify the safe positions to place the baby after nursing to prevent SIDS. Select all that apply.

- A. Prone
- B. Side-lying
- C. Supine
- D. Fowler's
- E. Semi-Fowler's
- F. Trendelenburg

Correct Answer: C. Supine

The supine position (placing the baby on their back) is the recommended position for reducing the risk of SIDS. This position keeps the airways open and reduces the risk of asphyxiation. The supine position is the safest and recommended sleep position to help prevent SIDS in infants. It's crucial to educate parents to always place their baby on their back to sleep, for naps and overnight, to provide the safest sleep environment.

- **Option A:** Placing the baby on the stomach (prone position) is not recommended as it significantly increases the risk of SIDS. The airway can become blocked or the baby could rebreathe expired

gases, leading to hypoxia.

- **Option B:** Side-lying position can also be risky as the infant could roll over onto their stomach. There's also the potential for rebreathing expired gases if the face is pressed against the bedding.
- **Option D:** Fowler's position, in which the infant is lying on their back with the upper body elevated at a 45-90 degree angle, isn't typically used for newborns during sleep as it requires adequate head control and could potentially cause the infant to slump forward, obstructing the airway.
- **Option E:** Like Fowler's position, the Semi-Fowler's position, where the upper body is elevated at a lesser angle (15-45 degrees), is not typically recommended for newborns during sleep for the same reasons mentioned.
- **Option F:** The Trendelenburg position, with the lower body elevated higher than the head, is not a safe sleep position for infants as it can cause respiratory distress.

19. A nurse is instructing a client regarding intranasal vasopressin (Pitressin). The nurse tells the client which of the following is a side effect specific to the medication?

- A. Rhinitis
- B. Headache
- C. Flushing
- D. Nausea

Correct Answer: A. Rhinitis

High doses of vasopressin administered via intranasal route may cause rhinitis and nasal congestion.

- **Options B, C, & D:** These are the side effects of the medication administered intravenously.

20. Your patient Maria takes NSAIDs for her degenerative joint disease, and has developed peptic ulcer disease. Which drug is useful in preventing NSAID-induced peptic ulcer disease?

- A. calcium carbonate (Tums)
- B. famotidine (Pepcid)
- C. misoprostol (Cytotec)
- D. sucralfate (Carafate)

Correct Answer: C. misoprostol (Cytotec)

Misoprostol restores prostaglandins that protect the stomach from NSAIDs, which diminish the prostaglandins. Currently, misoprostol is FDA-approved only for the prevention and treatment of NSAID-induced gastric ulcers in patients taking NSAIDs and at high risk for ulceration. It has an indication (but not FDA approved) in the short-term treatment of active duodenal or gastric ulcers with other etiologies.

- **Option A:** Calcium carbonate is an inorganic salt primarily used in the management and treatment of low calcium conditions, GERD, CKD, and a variety of other indicated conditions. It is classified as a calcium supplement, antacid, and as a phosphate binder.

- **Option B:** Famotidine is a competitive histamine H₂-receptor antagonist (H₂RA) that binds to the H₂-receptors located on the basolateral membrane of the parietal cell in the stomach, effectively blocking histamine actions. Its pharmacologic activity results in the inhibition of gastric secretion by suppressing acid concentration and volume of gastric secretion.
- **Option D:** Sucralfate is a medication used to treat duodenal ulcers, epithelial wounds, chemotherapy-induced mucositis, radiation proctitis, ulcers in Behcet disease, and burn wounds. Sucralfate exhibits its action by forming a protective layer, increasing bicarbonate production, exhibiting anti-peptic effects, promoting tissue growth, regeneration, and repair.

21. A male patient is admitted to the healthcare facility for treatment of chronic obstructive pulmonary disease. Which nursing diagnosis is most important for this patient?

- A. Activity intolerance related to fatigue.
- B. Anxiety related to actual threat to health status.
- C. Risk for infection related to retained secretions.
- D. Impaired gas exchange related to airflow obstruction.

Correct Answer: D. Impaired gas exchange related to airflow obstruction.

A patient airway and an adequate breathing pattern are the top priority for any patient, making “impaired gas exchange related to airflow obstruction” the most important nursing diagnosis. Monitor O₂ saturation and titrate oxygen to maintain SpO₂ between 88% to 92%. Pulse oximetry reading of 87% below may indicate the need for oxygen administration while a pulse oximetry reading of 92% or higher may require oxygen titration. The other options also may apply to this patient but less important.

- **Option A:** Patients with COPD experience progressive activity and exercise intolerance. Evaluation of the patient’s activity tolerance and limitations helps create strategies to promote independent ADLs. Assess the patient’s respiratory response to activity which includes monitoring of respiratory rate and depth, oxygen saturation, and use of accessory muscles for respiration.
- **Option B:** Ineffective Coping may be related to decreased socialization, depression, anxiety, and inability to work. Provide instructions for self-management of COPD. Assessment of the patient’s knowledge and including family members about the therapeutic regimen increases adherence to treatment regimen.
- **Option C:** Respiratory infections that are minor in nature may be threatening to people with COPD. Bronchopulmonary infections must be controlled or prevented to diminish inflammatory edema. Review the importance of breathing exercises, effective cough, frequent position changes, and adequate fluid intake.

22. A 10-year-old client contracted severe acute respiratory syndrome (SARS) when traveling abroad with her parents. The nurse knows she must put on personal protective equipment to protect herself while providing care. Based on the mode of SARS transmission, which personal protective equipment should the nurse wear?

- A. Gloves
- B. Gown and gloves

- C. Gown, gloves, and mask
- D. Gown, gloves, mask, and eye goggles or eye shield

Correct Answer: D. Gown, gloves, mask, and eye goggles or eye shield

The transmission of SARS isn't fully understood. Therefore, all modes of transmission must be considered possible, including airborne, droplet, and direct contact with the virus. For protection from contracting SARS, any health care worker providing care for a client with SARS should wear a gown, gloves, mask, and eye goggles or an eye shield.

- **Option A:** For level 1 or standard infection control precaution wherein there is no suspected or known infectious agent, disposable gloves and disposable apron may be used. If there is a danger or risk of spraying or splashing, eye and face protection should be considered.
- **Option B:** Level 2 or direct/indirect contact precautions require the use of a disposable gown (which is fluid-resistant) and disposable gloves. This is used when there is a suspected or confirmed infectious agent spread by direct or indirect contact.
- **Option C:** Level 2 droplet precautions occur when there is a suspected or confirmed infectious agent spread by droplet route/ Personal protective equipment should include a disposable gown which is fluid-resistant, disposable gloves, and fluid-resistant surgical face mask and goggles.

23. Estrogen is given in the management of all of the following conditions except:

- A. Dysfunctional uterine bleeding
- B. Primary hypogonadism
- C. Suppression of ovulation
- D. Endometrial carcinoma

Correct Answer: D. Endometrial carcinoma

Estrogen is given in the management of dysfunctional uterine bleeding, primary hypogonadism, and suppression of ovulation. The primary use of estrogen therapy lies in its treatment of menopausal symptoms. Although there is a reduction in the use of estrogen therapy as a preventative treatment, it is still routinely used to treat menopausal symptoms locally. Typically, drugs administered vaginally are used mainly for their local effects, but they can also have systemic effects. Choices A, B, and C are all indicators for estrogen treatment.

- **Option A:** Localized estrogen treatment often relieves these symptoms and significantly increases the quality of life, which includes life-changing improvements in sexuality, the incidence of urinary tract infections, and incontinence. The method of estrogen delivery is vital in assessing its benefits and uses. For example, the use of estrogen transdermally, in stark contrast to orally, has been linked to a lower risk of deep vein thrombosis, cholecystitis, osteoporosis, and stroke.
- **Option B:** Estrogen is a steroid hormone that plays a central role in the reproductive system by altering the transcription of genes in specific organs and tissues, primarily the uterus and vagina. The genes undergo alteration through the act of estrogen on certain receptors, known as nuclear transcription factors. These nuclear transcription factors, once bound by estrogen, are then able to bind to promoter regions in sequences of specific genes and are therefore able to regulate these genes
- **Option C:** Estrogen therapy (ET), a form of hormone replacement therapy (HRT), is a useful way of combating the uncomfortable symptoms that often accompany menopause. Roughly 1.5 million

women between the ages of 45 and 55 experience menopausal symptoms, which often involve hot flashes, flushing, and night sweats, also known as vasomotor symptoms.

24. Nurse Kenzo is teaching a client about sertraline (Zoloft), which has been prescribed for depression. A significant side effect is an interference with sexual arousal by inhibiting erectile function. How should Nurse Kenzo approach this topic?

- A. Nurse Kenzo should avoid mentioning the sexual side effects to prevent the client from having anxiety about potential erectile problems.
- B. Nurse Kenzo should advise the client to report any changes in sexual functioning in case medication adjustments are needed.
- C. Nurse Kenzo should explain that the client's sexual desire will probably decrease while on this medication.
- D. Nurse Kenzo should tell the client that sexual side effects are expected, but that they will decrease when his depression lifts.

Correct Answer: B. Nurse Kenzo should advise the client to report any changes in sexual functioning in case medication adjustments are needed.

Clients commonly discontinue medications to avoid or correct sexual side effects, but they are less likely to do that when health professionals offer assistance with sexual issues. Generally, clients avoid discussing sexual issues unless health professionals give permission by raising the issue first. Sexual dysfunction is a common side effect of antidepressants and can have a significant impact on the person's quality of life, relationships, mental health, and recovery. The reported incidence of sexual dysfunction associated with antidepressant medication varies considerably between studies, making it difficult to estimate the exact incidence or prevalence.

- **Option A:** Overall, 73% of the SSRI-treated clients reported adverse sexual side effects; in contrast, to 14% of clients treated with bupropion. The three SSRIs, to an equal degree, significantly decreased libido, arousal, duration of orgasm, and intensity of orgasm below levels experienced pre-morbidly. In comparison, bupropion-treated clients reported significant increases in libido, level of arousal, intensity of orgasm, and duration of orgasm beyond levels experienced pre-morbidly.
- **Option C:** The sexual problems reported range from decreased sexual desire, decreased sexual excitement, diminished or delayed orgasm, to erection or delayed ejaculation problems. There are a number of case reports of sexual side effects, such as priapism, painful ejaculation, penile anesthesia, loss of sensation in the vagina and nipples, persistent genital arousal, and nonpuerperal lactation in women.
- **Option D:** Because most antidepressants modulate serotonin concentration, it is generally thought that elevated serotonin levels diminish sexual function. Serotonergic nerve terminals target dopamine and norepinephrine pathways in the brain and inhibit their activity, both of these neurotransmitters having a role in the desire and arousal phases of the sexual response cycle. 80% of serotonin is localized in the periphery, where when elevated, it directly reduces sensation in the anatomical structures of the reproductive system as well as diminishing erection, vaginal lubrication, ejaculation, and orgasm.

25. A patient received 6 units of regular insulin three (3) hours ago. The nurse would be most concerned if which of the following was observed?

- A. Kussmaul respirations and diaphoresis
- B. Anorexia and lethargy
- C. Diaphoresis and trembling
- D. Headache and polyuria

Correct Answer: C. Diaphoresis and trembling

Diaphoresis and trembling indicate hypoglycemia and should be treated immediately. Neurogenic signs and symptoms can either be adrenergic (tremor, palpitations, anxiety) or cholinergic (hunger, diaphoresis, paresthesias). Identification of a hypoglycemic patient is critical due to potential adverse effects, including coma and/or death.

- **Option A:** 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. 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:** In patients with DM (mainly type 1 but can also be type 2) and on an insulin regimen, blood glucose should be monitored between meals to prevent hypoglycemia. Additionally, weight measurements are necessary due to insulin-associated weight gain.
- **Option D:** Neuroglycopenic signs and symptoms are signs and symptoms that result from direct central nervous system (CNS) deprivation of glucose. These include behavioral changes, confusion, fatigue, seizure, coma, and potential death if not immediately corrected.

26. A hospitalized patient who has received chemotherapy for leukemia develops neutropenia. Which observation by the RN caring for the patient indicates that the nurse should take action?

- A. The patient ambulates several times a day in the room
- B. The patient's visitors bring in some fresh peaches from home
- C. The patient uses soap and shampoo to shower every other day
- D. The patient cleans with a warm washcloth after having a stool

Correct Answer: B. The patient's visitors bring in some fresh peaches from home

- **Option B:** Fresh, thinned-skin peaches are not permitted in a neutropenic diet because of the risk of bacteria being present.
- **Option A:** The patient should ambulate in the room rather than the hospital hallway to avoid exposure to other patients or visitors.
- **Option C:** Because overuse of soap can dry the skin and increase infection risk, showering every other day is acceptable.
- **Option D:** Careful cleaning after having a bowel movement will help to prevent perineal skin breakdown and infection.

27. George Kent is a 54-year-old widower with a history of chronic obstructive pulmonary disease and was rushed to the emergency department with

increasing shortness of breath, pyrexia, and a productive cough with yellow-green sputum. He has difficulty communicating because of his inability to complete a sentence. One of his sons, Jacob, says he has been unwell for three days. Upon examination, crackles and wheezes can be heard in the lower lobes; he has tachycardia and a bounding pulse. Measurement of arterial blood gas shows pH 7.3, PaCO₂ 68 mm Hg, HCO₃ 28 mmol/L, and PaO₂ 60 mm Hg. How would you interpret this?

- A. Respiratory Acidosis, Uncompensated
- B. Respiratory Acidosis, Partially Compensated
- C. Metabolic Alkalosis, Uncompensated
- D. Metabolic Acidosis, Partially Compensated

Correct Answer: B. Respiratory Acidosis, Partially Compensated

The patient has respiratory acidosis (raised carbon dioxide) resulting from an acute exacerbation of chronic obstructive pulmonary disease, with partial compensation.

28. Kellan, a high school student is referred to the school nurse for suspected substance abuse. Following the nurse's assessment and interventions, what would be the most desirable outcome?

- A. The student discusses conflicts over drug use.
- B. The student accepts a referral to a substance abuse counselor.
- C. The student agrees to inform his parents of the problem.
- D. The student reports increased comfort with making choices.

Correct Answer: B. The student accepts a referral to a substance abuse counselor

All of the outcomes stated are desirable; however, the best outcome is that the student would agree to seek the assistance of a professional substance abuse counselor. The basic goal for a client in any substance abuse treatment setting is to reduce the risk of harm from continued use of substances. The greatest degree of harm reduction would obviously result from abstinence, however, the specific goal for each individual client is determined by his consumption pattern, the consequences of his use, and the setting in which the brief intervention is delivered.

- **Option A:** Primary care providers find many brief intervention techniques effective in addressing the substance abuse issues of clients who are unable or unwilling to access specialty care. Examples of brief interventions include asking clients to try nonuse to see if they can stop on their own, encouraging interventions directed toward attending a self-help group (e.g., Alcoholics Anonymous [AA] or Narcotics Anonymous [NA]), and engaging in brief, structured, time-limited efforts to help pregnant clients stop using.
- **Option C:** The clinician can use brief interventions to motivate particular behavioral changes at each stage of this process. For example, in the contemplation stage, a brief intervention could help the client weigh the costs and benefits of change. In the preparation stage, a similar brief intervention could address the costs and benefits of various change strategies (e.g., self-change, brief treatment, intensive treatment, self-help group attendance). In the action stage, brief interventions can help maintain motivation to continue on the course of change by reinforcing

personal decisions made at earlier stages.

- **Option D:** To consider change, clients at the precontemplation stage must have their awareness raised. To resolve their ambivalence, clients in the contemplation stage must be helped to choose positive change over their current circumstances. Clients in the preparation stage need help in identifying potential change strategies and choosing the most appropriate ones. Clients in the action stage need help to carry out and comply with the change strategies.

29. The nurse is to administer digoxin elixir to a 6-month-old with a congenital heart defect. The nurse auscultates an apical pulse rate of 100 beats per minute. The nurse should:

- A. Record the heart rate and call the physician
- B. Record the heart rate and administer the medication
- C. Administer the medication and recheck the heart rate in 15 minutes
- D. Hold the medication and recheck the heart rate in 30 minutes

Correct Answer: B. Record the heart rate and administer the medication

- Option B: The infant's apical heart rate is within the accepted range for administering the medication.
- Options A, C, and D: The apical heart rate is suitable for giving the medication.

30. Which action will you take to most effectively reduce the incidence of hospital-associated urinary tract infections?

- A. Ensure that clients have enough adequate fluid intake
- B. Teach assistive personnel how to provide good perineal hygiene
- C. Perform dipstick urinalysis for clients with risk factors for UTI
- D. Limit the use of indwelling foley catheter (IFC)

Correct Answer: D. Limit the use of indwelling foley catheter (IFC)

The most effective way to reduce the incidence of UTIs in the hospital setting is to avoid using retention catheters. Among UTIs acquired in the hospital, approximately 75% are associated with a urinary catheter, which is a tube inserted into the bladder through the urethra to drain urine. Between 15-25% of hospitalized patients receive urinary catheters during their hospital stay. The most important risk factor for developing a catheter-associated UTI (CAUTI) is prolonged use of the urinary catheter.

- **Option A:** Adequate fluid intake may improve the symptoms of UTI, however, it can help mildly with the prevention of hospital-acquired UTI. The DRInK-Up study provides preliminary evidence suggesting that increasing daily fluid intake by small amounts may have a potentially positive effect on the number of UTIs experienced. However, further research is still needed.
- **Option B:** Routine hygiene of the urethral meatus surface should be performed during daily bathing or showering. Urethral cleaning with povidone-iodine solution or soap and water has not been shown to prevent CA-UTIs. However, there is evidence that frequent urethral cleaning can lead to mucosal irritation and breakdown that may increase the risk of infection.

- **Option C:** Avoid breaking the collecting system to obtain urine specimens for analysis and bacterial culture. To obtain urine specimens, the sampling port for the urine collection must be used. If this is not available, urine can be aspirated with a sterile needle and syringe from the distal end of the catheter using an aseptic technique.

31. A pediatric orthopedic surgeon is explaining the different bone formation processes to the parents of a 2-year-old boy born with a cranial bone defect. The surgeon describes a specific type of bone formation that occurs directly within connective tissue membranes, particularly seen in flat bones like the skull. He asks the parents: “Which term best describes the process where osteoblasts begin to form bone directly in connective tissue membranes?”

- A. Endochondral ossification
- B. Bone growth
- C. Intramembranous ossification
- D. Bone remodeling

Correct Answer: C. Intramembranous ossification

Intramembranous ossification is a process of bone formation in which bone tissue forms directly within a connective tissue membrane. It occurs primarily in the development of flat bones, such as the skull and clavicles, where mesenchymal cells differentiate into osteoblasts and deposit bone matrix, resulting in the formation of flat bones without the involvement of cartilage as in endochondral ossification.

- **Option A:** Endochondral ossification is the formation of long bones and other bones which include a hyaline cartilage precursor.
- **Option B:** Bone growth occurs by the deposition of new bone lamellae onto existing bone or other connective tissue.
- **Option D:** Bone remodeling involves the removal of existing bone by osteoclasts and the deposition of new bone by osteoblasts.

32. The nurse acts as a patient advocate when she does one of the following:

- A. She encourages the client to express her feelings regarding her experience.
- B. She assesses the client for injuries.
- C. She postpones the physical assessment until the client is calm.
- D. Explains to the client that her reactions are normal.

Correct Answer: C. She postpones the physical assessment until the client is calm

The nurse acts as a patient advocate as she protects the client from psychological harm. Nurse advocates support the patient’s best interests while respecting the family’s important role. Advocates become facilitators when patients and family members need to discuss uncomfortable information or explore its implications. Nurses may sometimes need to advocate for patients against their families.

- **Option A:** The nurse acts as a counselor. A need for counseling is a clinical judgment made by the nurse, and his/her response will be immediate situational counseling, continuing counseling sessions, or referral. Types of counseling situations that the nursing professional may encounter are outlined, including four escapes utilized by students, such as substance abuse, suicide, fear of

AIDS, and anorexia/bulimia. Since students do utilize health services, the nurse counselor with a holistic view of nursing care, which includes health education and counseling, has an opportunity and a responsibility to act upon this knowledge.

- **Option B:** The nurse acts as a technician. Nurse technicians are medical care providers who give basic medical care to patients. A nurse tech generally works under the supervision of a Registered Nurse. Also known as nursing attendants or nursing aides, they provide important services to help the registered nurses complete their tasks.
- **Option D:** This exemplifies the role of a teacher. Nurse educators are registered nurses with advanced education who are also teachers. Most work for several, if not many, years before deciding to turn to a career teaching future nurses. Most nurse educators have extensive clinical experience, and many continue caring for patients after becoming educators.

33. Which organization's standards require that all patients be assessed specifically for pain?

- A. American Nurses Association (ANA)
- B. State nurse practice acts
- C. National Council of State Boards of Nursing (NCSBN)
- D. The Joint Commission

Correct Answer: D. The Joint Commission

The Joint Commission has developed assessment standards, including that all clients be assessed for pain.

- **Option A:** The ANA has developed standards for clinical practice, including those for assessment, but not specifically for pain. The American Nurses Association (ANA) is the premier organization representing the interests of the nation's 4 million registered nurses. ANA is at the forefront of improving the quality of health care for all. Founded in 1896, and with members in all 50 states and U.S. territories, ANA is the strongest voice for the profession.
- **Option B:** State nurse practice acts regulate nursing practice in individual states. An NPA is enacted by state legislation and its purpose is to govern and guide nursing practice within that state. An NPA is actually a law and must be adhered to as law. Each state has a Board of Nursing (BON) that interprets and enforces the rules of the NPA.
- **Option C:** The NCSBN asserts that the scope of nursing includes a comprehensive assessment but does not specifically include pain. National Council of State Boards of Nursing (NCSBN) is an independent, not-for-profit organization through which nursing regulatory bodies act and counsel together on matters of common interest and concern affecting public health, safety, and welfare, including the development of nursing licensure examinations.

34. The outcome that is unrelated to a crisis state is:

- A. Learning more constructive coping skills.
- B. Decompensation to a lower level of functioning.
- C. Adaptation and a return to a prior level of functioning.
- D. A higher level of anxiety continuing for more than 3 months.

Correct Answer: D. A higher level of anxiety continuing for more than 3 months.

This is not an expected outcome of a crisis because by definition a crisis would be resolved in 6 weeks. A crisis is defined as an overwhelming event, which can include divorce, violence, the passing of a loved one, or the discovery of a serious illness. A successful intervention involves obtaining background information on the patient, establishing a positive relationship, discussing the events, and providing emotional support.

- **Option A:** Crisis intervention is a short-term management technique designed to reduce potential permanent damage to an individual affected by a crisis. SAFER-R is a common intervention model used, which consists of stabilization, acknowledgment, facilitate understanding, encouragement, recovery, and referral. SAFER-R helps patients return to their mental baseline following a crisis. The use of humor, emotional support, planning, and acceptance also correlate with superior mental health outcomes compared to substance abuse and denial. Positive coping mechanisms, such as the ones listed above, are reported to be effective in crisis management, and with crisis intervention services in place, people will be better equipped to handle unexpected events.
- **Option B:** SAFER-R can be used in conjunction with the Assessment Crisis Intervention Trauma Treatment (ACT), which is a seven-stage crisis intervention model. It consists of assessing the affected person, establishing a relationship, understanding the problem, confronting emotions, exploring coping strategies, implementing a plan, and following up. If left unmanaged, a person with a severe crisis can undergo a significant amount of psychological stress, which carries links to major depressive disorder and other mental health conditions. Not only is crisis intervention effective in preventing the development of mental illness, but it can also be used in a clinical setting to treat patients currently suffering from one.
- **Option C:** Psychological crisis intervention is necessary to prevent traumatized victims from developing illnesses. It also alleviates stress upon healthcare workers so that they can continue helping others. Another major concern is what coping strategies are most effective. Social support and problem-solving planning are effective coping mechanisms that are frequently used by school staff following a crisis.

35. In a dermatology seminar, Dr. Rivera presented a case of a patient with a rare genetic disorder affecting the skin's structural integrity. The patient's stratum corneum lacks the typical strength and resilience observed in healthy individuals. Drawing upon this case, Dr. Rivera quizzes the participants about the structural component responsible for providing the stratum corneum with its exceptional structural strength within the epidermis. Which of the following is the correct component?

- A. Melanocytes
- B. Merkel cells
- C. Keratinocytes
- D. Langerhans cells

Correct Answer: C. Keratinocytes

Keratinocytes produce keratin, a type of protein that provides strength and protection to the epidermis. As keratinocytes move up from the lower layers of the epidermis to the stratum corneum, they become filled with keratin, die, and form a tough, protective layer, giving the stratum corneum its structural strength.

- **Option A:** Melanocytes are primarily responsible for producing melanin, the pigment that gives color to the skin, hair, and eyes. Melanin also plays a protective role against UV radiation, but it does not contribute to the structural strength of the stratum corneum.
- **Option B:** Merkel cells are tactile cells primarily found in the stratum basale of the epidermis. They are associated with nerve endings and play a role in the sensation of touch, but they are not involved in providing structural strength to the stratum corneum.
- **Option D:** Langerhans cells are immune cells found in the epidermis. They play a crucial role in the skin's immune response by capturing foreign substances and presenting them to T-cells in the immune system. While important for the immune function of the skin, they don't contribute to the structural strength of the stratum corneum.

36. The type of fluid used to manipulate fluid shifts among compartments states is:

- A. Whole blood
- B. TPN
- C. Albumin
- D. Ensure

Correct Answer: C. Albumin

Albumin is a colloid that is used to manipulate fluid shifts among compartments. Albumin is also a colloid fluid administered to patients in need of fluid resuscitation, especially in the setting of trauma (i.e. hypovolemic shock) or in the setting of large-volume paracentesis. Strength albumin has over crystalloids is that it leads to an increase in intravascular oncotic pressure. There are some situations in which a patient needs improved oncotic pressure, and this characteristic can be advantageous.

- **Option A:** Whole blood is used to replace blood volume. Whole Blood is the simplest, most common type of blood donation. It's also the most flexible because it can be transfused in its original form, or used to help multiple people when separated into its specific components of red cells, plasma, and platelets.
- **Option B:** TPN is used for patients who are unable to take in food or fluid. Total parenteral nutrition (TPN) supplies all daily nutritional requirements. TPN can be used in the hospital or at home. Because TPN solutions are concentrated and can cause thrombosis of peripheral veins, a central venous catheter is usually required.
- **Option D:** Ensure is a high-calorie nutritional supplement; it is not used to manipulate fluid shifts. It contains well-balanced proportions of macronutrients that conform to guidelines for Dietary Reference Intake and the latest American Heart Association Guidelines for healthy diets.

37. On admission to the emergency department the burned client's blood pressure is 90/60, with an apical pulse rate of 122. These findings are an expected result of what thermal injury-related response?

- A. Fluid shift
- B. Intense pain
- C. Hemorrhage

D. Carbon monoxide poisoning

Correct Answer: A. Fluid shift

The physiologic effect of histamine release in injured tissues is a loss of vascular volume to the interstitial space, with a resulting decrease in blood pressure. After a burn, fluid shifts from vascular to interstitial and intracellular spaces because of increased capillary pressure, increased capillary and venular permeability, decreased interstitial hydrostatic pressure, chemical inflammatory mediators, and increased interstitial protein retention.

- **Option B:** Intense pain and carbon monoxide poisoning increase blood pressure. Superficial dermal burns are initially the most painful. Even the slightest change in the air currents moving past the exposed superficial dermis causes a patient to experience excruciating pain. Without the protective covering of the epidermis, nerve endings are sensitized and exposed to stimulation.
- **Option C:** Hemorrhage is unusual in a burn injury. The difference with a burn is the heat actually stops the blood from flowing. A small bit of blood may ooze out at first, but it won't actually bleed much.
- **Option D:** Most commonly, patients with carbon monoxide poisoning will present with headache (more than 90%), dizziness, weakness, and nausea. Patients may be tachycardic and tachypneic. They may exhibit hypotension. Mental status changes such as confusion, altered level of consciousness, disorientation, and memory loss may occur.

38. Flumazenil (Romazicon) has been ordered for a male client who has overdosed on oxazepam (Serax). Before administering the medication, nurse Gina should be prepared for which common adverse effect?

- A. Seizures
- B. Shivering
- C. Anxiety
- D. Chest pain

Correct Answer: A. Seizures

Seizures are the most common serious adverse effect of using flumazenil to reverse benzodiazepine overdose. The effect is magnified if the client has a combined tricyclic antidepressant and benzodiazepine overdose. Benzodiazepine reversal has correlations with seizures. Seizures may happen more frequently in patients who have been on benzodiazepines for long-term sedation or in patients who are showing signs of severe tricyclic antidepressant overdose. The required dosage of Flumazenil should be measured and prepared by the practitioners to manage seizures. Flumazenil use requires caution in patients relying on a benzodiazepine for seizure control.

- **Option B:** Shivering is not an adverse effect of flumazenil. Monitor the patient for the possible return of sedation, mostly in those who are tolerant of benzodiazepines. Patients should have monitoring for respiratory depression, benzodiazepine withdrawal, and other residual effects of benzodiazepines for at least 2 hours.
- **Option C:** Anxiety is a rare adverse effect for people using flumazenil. Flumazenil has some associations with precipitation of seizures in patients with benzodiazepine dependence with a history of seizures. Flumazenil overdose is extremely rare. There is no precise antidote for flumazenil toxicity. In mild to severe toxicity, symptomatic and supportive treatment should be a consideration.

- **Option D:** An overdose of flumazenil in a patient who is not a chronic benzodiazepine user would not be expected. Chronic benzodiazepines users may experience withdrawal with abrupt discontinuation of the drug. Administration of benzodiazepines or barbiturates may be necessary for seizure control.

39. Nurse Vic is monitoring the fluid intake and output of a female client recovering from an exploratory laparotomy. Which nursing intervention would help the client avoid a urinary tract infection (UTI)?

- A. Maintaining a closed indwelling urinary catheter system and securing the catheter to the leg.
- B. Limiting fluid intake to 1 L/day.
- C. Encouraging the client to use a feminine deodorant after bathing.
- D. Encouraging the client to douche once a day after removal of the indwelling urinary catheter.

Correct Answer: A. Maintaining a closed indwelling urinary catheter system and securing the catheter to the leg.

Maintaining a closed indwelling urinary catheter system helps prevent introduction of bacteria; securing the catheter to the client's leg also decreases the risk of infection by helping to prevent urethral trauma.

- **Option B:** To flush bacteria from the urinary tract, the nurse should encourage the client to drink at least 10 glasses of fluid daily, if possible. Encouraged increased oral fluid intake (2 to 3 liters a day if no contraindication). Fluid intake facilitates urine production and flushes bacteria from the urinary tract.
- **Option C:** Encouraged the client to void often every 2 to 3 hours a day and completely empty the bladder. This will prevent bladder distention, facilitate flushing of the bacteria and avoid reinfection. Feminine deodorants may irritate the urinary tract.
- **Option D:** Douching may irritate the urinary tract and should be discouraged. Suggest drinking cranberry juice (four to six 8 ounce glasses per day). Cranberry juice has been shown to reduce adherence of bacteria to the uroepithelial cells in the urinary tract.

40. A complete blood count is commonly performed before Joe goes into surgery. What does this test seek to identify?

- A. Potential hepatic dysfunction indicated by decreased blood urea nitrogen (BUN) and creatinine levels.
- B. Low levels of urine constituents normally excreted in the urine.
- C. Abnormally low hematocrit (HCT) and hemoglobin (Hb) levels.
- D. Electrolyte imbalance that could affect the blood's ability to coagulate properly.

Correct Answer: C. Abnormally low hematocrit (HCT) and hemoglobin (Hb) levels.

Low preoperative HCT and Hb levels indicate the client may require a blood transfusion before surgery. If the HCT and Hb levels decrease during surgery because of blood loss, the potential need for a transfusion increases.

- **Option A:** Possible renal failure is indicated by elevated BUN or creatinine levels.
- **Option B:** Urine constituents aren't found in the blood. They are found in urine specimens.

- **Option D:** Coagulation is determined by the presence of appropriate clotting factors, not electrolytes.

41. A nurse is developing a plan of care for a client experiencing dystocia and includes several nursing interventions in the plan of care. The nurse prioritizes the plan of care and selects which of the following nursing interventions as the highest priority?

- A. Keeping the significant other informed of the progress of the labor.
- B. Providing comfort measures.
- C. Monitoring fetal heart rate.
- D. Changing the client's position frequently.

Correct Answer: C. Monitoring fetal heart rate.

The priority is to monitor the fetal heart rate. The continuous monitoring of the external fetal heart rate provides insight into fetal well-being. The assessment of the fetal heart rate could be performed utilizing external or internal fetal heart rate monitoring. An alternative is fetal heart rate auscultation every 15 minutes in the first stage of labor and after each contraction during the second stage of labor. In the interpretation of the fetal heart rate strip millimeters considered are baseline viability, basal heart rate, cardiac accelerations or decelerations, endocrine activity. Strip abnormalities are characterized based on consideration of the above parameters.

- **Option A:** At admission to labor and delivery, prenatal records and obstetric history should be reviewed because these optimally inform the provider to the best intrapartum obstetric care. This care includes the determination of the static gestational age.
- **Option B:** Most labor and delivery units will have an established protocol for administration of oxytocin that entails the administration of the proper medication and dosage, as well as criteria for an incremental increase as clinically warranted. The protocols also include monitoring maternal and fetal vital signs, as well as the atria, for discontinuation of the medication in the event of concern for tachycardia systole all fetal well-being.
- **Option D:** The uterine activity is assessed by external tocometry and targeted at 3 to 5 contractions in the 10-minute window. The contractions should last 30 to 40 seconds to be effective. Internal intrauterine pressure assessment using a catheter could be utilized, in which case marked medial units are used and targeted at more than 200 Montevideo units in a 10-minute window. The monitoring of uterine contractions should be continuous during labor.

42. For a client taking drugs to treat peripheral vascular disease, it is important to provide health education about:

- A. Smoking cessation.
- B. Developing a proper balance between rest and activity.
- C. Proper foot care.
- D. All of the above.

Correct Answer: D. All of the above.

Peripheral vascular disease (PAD) is a chronic progressive atherosclerotic disease leading to partial or total peripheral vascular occlusion. PAD typically affects the abdominal aorta, iliac arteries, lower limbs, and occasionally the upper extremities. An important component in the treatment of peripheral vascular disease is health education on preventing further injury to ischemic tissues. Medication therapy is only one aspect.

- **Option A:** Aggressive risk factors modification is essential to lowering cardiovascular risk. Smoking cessation reduces the risk of PAD progression, cardiovascular events including myocardial infarction and stroke, and critical limb ischemia. Patient education, along with the use of behavioral therapy, nicotine replacement therapy, or pharmacological therapy, can be used to reduce smoking and improve cardiovascular outcomes.
- **Option B:** Randomized trials have shown supervised exercise therapy programs to have significant improvement in claudication symptoms. A meta-analysis of 27 studies found exercise significantly improved pain-free walking distance by 269 feet and total walking distance by nearly 400 feet. Exercise programs typically consist of 30- to 45-minute length sessions conducted 4 to 5 times a week over the course of 12 weeks. A meta-analysis of five trials found no improvement in mortality with exercise therapy programs.
- **Option C:** Indications for intervention include individuals with incapacitating claudication interfering with daily activity and limb salvage in patients with critical limb ischemia manifested by ischemic pain at rest, ulceration, and gangrene.

43. A patient's urine is cloudy, is amber, and has an unpleasant odor. What problem may this information indicate that requires the nurse to make a focused assessment?

- A. Urinary retention
- B. Urinary tract infection
- C. Ketone bodies in the urine
- D. High urinary calcium level

Correct Answer: B. Urinary tract infection

The urine appears concentrated (amber) and cloudy because of the presence of bacteria, white blood cells, and red blood cells. The unpleasant odor is caused by pus in the urine (pyuria). Uncomplicated urinary tract infection (UTI) is a bacterial infection of the bladder and associated structures. These are patients with no structural abnormality and no comorbidities, such as diabetes, immunocompromised, or pregnancy. Uncomplicated UTI is also known as cystitis or lower UTI.

- **Option A:** These clinical manifestations do not reflect urinary retention. Urinary retention is evidenced by supra pubic distention and lack of voiding or small, frequent voiding (overflow incontinence). The mechanisms of acute urinary retention can include outflow obstruction, which can be mechanical such as from physical narrowing of the urethral channel. The other dynamic is from an increase in the muscle tone within and around the urethra as in benign prostatic hypertrophy and hyperplasia.
- **Option C:** These clinical manifestations do not reflect ketone bodies in the urine. A reagent strip dipped in urine will measure the presence of Ketone bodies. If the cells don't get enough glucose, the body burns fat for energy instead. This produces a substance called ketones, which can show up in the blood and urine.

- **Option D:** These clinical manifestations do not reflect excessive calcium in the urine. Urine calcium levels are measured by assessing a 24-hour urine specimen. If urine calcium levels are too high or too low, it may mean that the client has a medical condition, such as kidney disease or kidney stones. Kidney stones are hard, pebble-like substances that can form in one or both kidneys when calcium or other minerals build up in the urine. Most kidney stones are formed from calcium.

44. Which of the following diagnostic tests should be performed annually over age 50 to screen for colon cancer?

- A. Abdominal CT scan
- B. Abdominal x-ray
- C. Colonoscopy
- D. Fecal occult blood test

Correct Answer: D. Fecal occult blood test

Surface blood vessels of polyps and cancers are fragile and often bleed with the passage of stools. A fecal occult blood test is used to find blood in the feces, or stool, which can be a sign of polyps or cancer. A positive test, meaning that blood is found in the feces, can be from causes other than a colon polyp or cancer, including bleeding in the stomach or upper GI tract and even eating rare meat or other foods. There are 2 types of tests: guaiac (FOBT) and immunochemical (FIT). Polyps and cancers do not bleed continually, so FOBT must be done on several stool samples each year and should be repeated every year. Even then, this screening test provides a fairly small reduction in deaths from colorectal cancer, around 30% if done yearly and 18% if done every other year.

- **Option A:** Abdominal CT scan can help establish tumor size and metastasis. Ct colonography, sometimes called virtual colonoscopy, is a screening method being studied in some centers. It requires interpretation by a skilled radiologist to provide the best results. A radiologist is a doctor who specializes in obtaining and interpreting medical images. CT colonography may be an alternative for people who cannot have a standard colonoscopy due to the risk of anesthesia, which is medication to block the awareness of pain, or if a person has a blockage in the colon that prevents a full examination.
- **Option B:** Abdominal x-ray is a commonly performed diagnostic x-ray examination that produces images of the organs in the abdominal cavity including the stomach, liver, intestines, and spleen. When an abdominal x-ray is performed to provide pictures of the kidneys, ureters, and bladder, it's called a KUB x-ray.
- **Option C:** A colonoscopy can help locate a tumor as well as polyps, which can be removed before they become malignant. A colonoscopy allows the doctor to look inside the entire rectum and colon while a patient is sedated. A flexible, lighted tube called a colonoscope is inserted into the rectum and the entire colon to look for polyps or cancer. During this procedure, a doctor can remove polyps or other tissue for examination. The removal of polyps can also prevent colorectal cancer.

45. Emergency treatment for a client with impending anaphylaxis secondary to hypersensitivity to a drug should include which of the following actions first?

- A. Administering oxygen.
- B. Inserting an I.V. catheter.
- C. Obtaining a complete blood count (CBC).

D. Taking vital signs.

Correct Answer: A. Administering oxygen.

Giving oxygen would be the best first action in this case. Airway management is paramount. Thoroughly examine the patient for airway patency or any indications of an impending loss of airway. Perioral edema, stridor, and angioedema are very high risk, and obtaining a definitive airway is imperative. Delay may reduce the chances of successful intubation as continued swelling occurs, increasing the risk for a surgical airway.

- **Option B:** If the client doesn't already have an I.V. catheter, one may be inserted now if anaphylactic shock is developing. Anaphylaxis induces a distributive shock that typically is responsive to fluid resuscitation and the above epinephrine. One to 2 L or 10 to 20 mL/kg isotonic crystalloid bolus should be given for observed hypotension. Albumin or hypertonic solutions are not indicated.
- **Option C:** Obtaining a CBC wouldn't help the emergency situation. Laboratory testing is of little to no use, as there is no accurate testing for diagnosis or confirmation. Serum histamine is of no use due to transient elevation and late presentation. Serum tryptase can be considered for confirmation of an anaphylactic episode as it remains elevated for several hours, however, as a diagnostic modality, this has low sensitivity.
- **Option D:** Vital signs then should be checked and the physician immediately notified. Anaphylaxis is most often a rapidly evolving presentation, usually within one hour of exposure. Roughly half of the anaphylactic-related fatalities occur within this first hour; therefore, the first hour after the initial symptom onset is the most crucial for treatment. It is important to note that the more rapid the onset and progression of symptoms, the more severe the disease process.

46. A nurse is caring for a pregnant client with severe preeclampsia who is receiving IV magnesium sulfate. Select all nursing interventions that apply in the care for the client.

- A. Monitor maternal vital signs every 2 hours.
- B. Notify the physician if respirations are less than 18 per minute.
- C. Monitor renal function and cardiac function closely.
- D. Keep calcium gluconate on hand in case of a magnesium sulfate overdose.
- E. Monitor deep tendon reflexes hourly.
- F. Monitor I and O's hourly.
- G. Notify the physician if urinary output is less than 30 ml per hour.

Correct Answer: C, D, E, F, and G.

- **Option A:** BP should be assessed with the goal of maintaining the diastolic BP at less than 110 mm Hg with administration of antihypertensive medications as needed (eg, hydralazine, labetalol, nifedipine).
- **Option B:** When caring for a client receiving magnesium sulfate therapy, the nurse would monitor maternal vital signs, especially respirations, every 30-60 minutes and notify the physician if respirations are less than 12, because this would indicate respiratory depression.
- **Option C:** Cardiac and renal function are monitored closely. Eclampsia-associated renal abnormalities can include decreases in glomerular filtration rate, renal plasma flow, and uric acid

clearance as well as proteinuria. Eclampsia is associated with cardiovascular derangements such as generalized vasospasm, increased peripheral vascular resistance, and increased left ventricular stroke work index. Pulmonary capillary wedge pressure (PCWP) may vary from low to elevated. Importantly, central venous pressure (CVP) may not correlate with PCWP in patients with severe preeclampsia or eclampsia.

- **Option D:** Calcium gluconate is kept on hand in case of magnesium sulfate overdose because calcium gluconate is the antidote for magnesium sulfate toxicity.
- **Option E:** Deep tendon reflexes are assessed hourly. Ankle clonus indicated hyperreflexia and may precede the onset of eclampsia. Although brisk or hyperactive reflexes are common during pregnancy, clonus is a sign of neuromuscular irritability that usually reflects severe preeclampsia.
- **Option F:** Monitor fluid intake and urine output, maternal respiratory rate, and oxygenation, as indicated, and continuously monitor fetal status. Pulmonary arterial pressure monitoring is rarely indicated but may be helpful in patients who have evidence of pulmonary edema or oliguria/anuria.
- **Option G:** The urine output should be maintained at 30 ml per hour because the medication is eliminated through the kidneys.
Source:

47. Nurse Harry is developing a plan of care for a client with anorexia nervosa. Which action should the nurse include in the plan?

- A. Restrict visits with the family until the client begins to eat.
- B. Provide privacy during meals.
- C. Set up a strict eating plan for the client.
- D. Encourage the client to exercise, which will reduce her anxiety.

Correct Answer: C. Set up a strict eating plan for the client.

Establishing a consistent eating plan and monitoring the client's weight is important for this disorder. Establish a minimum weight goal and daily nutritional requirements. Malnutrition is a mood-altering condition, leading to depression and agitation and affecting cognitive function and decision making. Improved nutritional status enhances thinking ability, allowing initiation of psychological work. Make a selective menu available, and allow the patient to control choices as much as possible. Patient who gains confidence in himself and feels in control of the environment is more likely to eat preferred foods.

- **Option A:** The family should be included in the client's care. Involve patients in setting up or carrying out a program of behavior modification. Provide a reward for weight gain as individually determined; ignore the loss. It provides a structured eating situation while allowing the patient some control in choices. Behavior modification may be effective in mild cases or for short-term weight gain.
- **Option B:** The client should be monitored during meals — not given privacy. Provide one-to-one supervision and have a patient with bulimia remain in the day room area with no bathroom privileges for a specified period (2 hr) following eating, if contracting is unsuccessful. Prevents vomiting during and after eating. Patients may desire food and use a binge-purge syndrome to maintain weight. Note: Patients may purge for the first time in response to the establishment of a weight gain program.
- **Option D:** Exercise must be limited and supervised. Monitor exercise programs and set limits on physical activities. Chart activity and level of work (pacing and so on). Moderate exercise helps in maintaining muscle tone, weight and combating depression; however, patients may exercise

excessively to burn calories.

48. When delivering the baby's head the nurse supports the mother's perineum to prevent a tear. This technique is called

- A. Marmet's technique
- B. Ritgen's technique
- C. Duncan maneuver
- D. Schultze maneuver

Correct Answer: B. Ritgen's technique

Ritgen's technique is done to prevent the perineal tear. This is done by the nurse by supporting the perineum with a sterile towel and pushing the perineum downward with one hand while the other hand is supporting the baby's head as it goes out of the vaginal opening.

- **Option A:** Developed by a mother who needed to express her milk over a long period of time for medical reasons, the Marmet technique mimics the actions of a breastfeeding baby and is the most recommended method of expressing breastmilk by hand.
- **Option C:** Duncan's mechanism is the expulsion of the placenta with the presentation of the maternal rough side first, rather than the usual fetal side of the placenta.
- **Option D:** There are 2 mechanisms possible during the delivery of the placenta. If the shiny portion comes out first, it is called the Schultze mechanism; while if the meaty portion comes out first, it is called the Duncan mechanism.

49. The nurse teaches a patient with cancer of the liver about high-protein, high-calorie diet choices. Which snack choice by the patient indicates that the teaching has been effective?

- A. Fresh fruit salad
- B. Orange sherbet
- C. French fries
- D. Strawberry yogurt

Correct Answer: D. Strawberry yogurt

- **Option D:** Yogurt has high biologic value because of the protein and fat content.
- **Option A:** Fruit salad does not have high amounts of protein or fat.
- **Option B:** Orange sherbet is lower in fat and protein than yogurt.
- **Option C:** French fries are high in calories from fat but low in protein.

50. Will is being assessed by Nurse Lucas for possible intussusception. Which of the following would be least likely to provide valuable information?

- A. Abdominal palpation

- B. Family history
- C. Pain pattern
- D. Stool inspection

Correct Answer: B. Family history

Because intussusception is not believed to have familial tendencies, obtaining a family history would provide the least amount of information. The causes of intussusception are not clearly known. About 90% of cases of intussusception in children arise from an unknown cause. They can include infections, anatomical factors, and altered motility.

- **Option A:** A sausage-shaped mass may be palpated in the right upper quadrant. Physical examination may reveal a “sausage-shaped” mass. Children may cry, draw their knees up to their chest, or experience dyspnea with paroxysms of pain.
- **Option C:** Acute, episodic abdominal pain is characteristic of intussusception. Early symptoms include periodic abdominal pain, nausea, vomiting (green from bile), pulling legs to the chest, and cramping abdominal pain. Pain is intermittent because the bowel segment transiently stops contracting.
- **Option D:** Stool inspection would reveal possible indicators of intussusception. Later signs include rectal bleeding, often with “red currant jelly” stool, and lethargy. “Currant jelly” stools, containing blood and mucus, are an indication of intussusception.

51. Which of the following would be most appropriate for a nurse to use when describing menarche to a 13-year-old?

- A. A female’s first menstruation or menstrual “periods.”
- B. The first year of menstruation or “period.”
- C. The entire menstrual cycle or from one “period” to another.
- D. The onset of uterine maturation or peak growth.

Correct Answer: A. A female’s first menstruation or menstrual “periods”.

Menarche refers to the onset of the first menstruation or menstrual period and refers only to the first cycle. Uterine growth and broadening of the pelvic girdle occur before menarche. The average age of onset of menarche is 12.4 years.

- **Option B:** Pulsatile hypothalamic production of gonadotropin-releasing hormone (GnRH) at puberty stimulates the pituitary production of follicle-stimulating hormone (FSH) and luteinizing hormone (LH). This pulsatile secretion pattern appears to be necessary as continuous secretion of GnRH, or its synthetic analogs, inhibits pituitary production of FSH and LH and delays menarche.
- **Option C:** Most menstrual periods last between 3 and 7 days, and menses that last more than 10 days is considered abnormal.
- **Option D:** Menarche signals maturation of the adolescent female body. It commonly is associated with the ability to ovulate and reproduce. However, the appearance of menarche does not guarantee either ovulation or fertility.

52. Nitrosocarcinogen production can be inhibited with the intake of:

- A. Vitamin C
- B. Vitamin E
- C. Carbohydrates
- D. Fiber

Correct Answer: A. Vitamin C

Vitamin C and refrigeration of foods inhibit nitroso carcinogen. Humans are exposed to a wide range of nitrogen-containing compounds and nitrosating agents, such as nitrite, nitrate, and nitrogen oxides (NOx), that can react in vivo to form potentially carcinogenic N-nitroso compounds (NOCs), as well as several carcinogenic C-nitro(so) or reactive diazo compounds.

- **Option B:** Ascorbic acid, alpha-tocopherol, phenolic compounds, and fruit, vegetable and plant extracts inhibit NOC formation by destroying nitrosating agents. Fresh fruits and vegetables (sources of nitrosation inhibitors) exert a protective effect against various epithelial cancers.
- **Option C:** Although vitamin C has been known to stimulate immune function, inhibit nitrosamine formation, and block the metabolic activation of carcinogens, its cancer-preventive effects may be associated mainly with its protective effects against oxidative stress.
- **Option D:** Vitamin C, not fiber, is considered to be one of the most prevalent antioxidative components of fruit and vegetables, and it could exert chemopreventive effects without apparent toxicity at doses higher than the current recommended dietary allowance of 60 mg/d. It has also been used as a dietary supplement intended to prevent oxidative stress-mediated chronic diseases such as cancer, cardiovascular disease, hypertension, stroke, and neurodegenerative disorder.

53. Rhea has malignant lymphoma. As part of her chemotherapy, the physician prescribes chlorambucil (Leukeran), 10 mg by mouth daily. When caring for the client, the nurse teaches her about adverse reactions to chlorambucil, such as alopecia. How soon after the first administration of chlorambucil might this reaction occur?

- A. Immediately
- B. 1 week
- C. 2 to 3 weeks
- D. 1 month

Correct Answer: C. 2 to 3 weeks

- Chlorambucil-induced alopecia occurs 2 to 3 weeks after therapy begins. The medication causes structural damage to the scalp hairs resulting in reduced hair growth and complete hair loss (alopecia).

54. The client with non-Hodgkin's lymphoma is being managed with vincristine (Vincasar). Which of the following indicates a side effect specific to this medication?

- A. Alopecia
- B. Numbness in the toes

- C. Chest heaviness
- D. Weight gain

Correct Answer: B. Numbness in the toes

A side effect specific to this medication is peripheral neuropathy. It can be manifested as numbness and tingling sensation in the finger and toes.

- **Option A:** Alopecia occurs nearly with all the neoplastic medications.
- **Options C & D:** These are not related to this medication.

55. A client comes to the outpatient department complaining of vaginal discharge, dysuria, and genital irritation. Suspecting a sexually transmitted disease (STD), Dr. Smith orders diagnostic tests of the vaginal discharge. Which STD must be reported to the public health department?

- A. Chlamydia
- B. Gonorrhea
- C. Genital herpes
- D. Human papillomavirus infection

Correct Answer: B. Gonorrhea

Gonorrhea must be reported to the public health department. Public health control of gonorrhea depends upon suitable antimicrobial therapy, in tandem with generalized and targeted prevention interventions, use of accurate diagnostic assays, partner notification procedures, and epidemiological surveillance. When treating individuals with suspected or confirmed cephalosporin resistance, clinicians are recommended to consult an infectious disease consultant and report treatment failure to the Centers for Disease Control within 24 hours of laboratory culture confirmation of the diagnosis of antimicrobial-resistant *N. gonorrhoeae*.

- **Option A:** In the United States, *C. trachomatis* is considered a notifiable infection. Local and state laws regarding disease reporting apply. Sexual partners should be notified, examined, and treated if an STI is found in the index patient. Expedited partner therapy may also be available in certain settings. Expedited partner therapy allows providers to prescribe antibiotics to sexual contacts without establishing a physician-patient relationship.
- **Option C:** Herpes genitalis can be caused by the herpes simplex virus type 1 or type 2 and manifests as either a primary or recurrent infection. Most commonly, viral replication occurs in epithelial tissue and establishes dormancy in sensory neurons, reactivating periodically as localized recurrent lesions. It remains one of the most common sexually transmitted infections (STI) but continues to be underestimated, given the vague presentation of its symptoms.
- **Option D:** HPV is known to cause lesions of the mucous membranes and skin. There are over 100 subtypes of HPV, and some are associated with an increased risk of malignancy. HPV diagnosis and treatment is best done with an interprofessional team. According to the Center for Disease Control and Prevention (CDC), the most recent studies show the prevalence of genital HPV for adults aged 18 to 59 to be approximately 45.2% in men and 39.9% in women.

56. Nurse Mylene recognizes that the most important factor necessary for the establishment of trust in a critical care area is:

- A. Privacy
- B. Respect
- C. Empathy
- D. Presence

Correct Answer: D. Presence

The constant presence of a nurse provides emotional support because the client knows that someone is attentive and available in case of an emergency. Establishing positive and trusting therapeutic relationships with patients has long been recognized as an essential component of nursing practice and is important for effective care. There are various challenges in clinical practice that make it increasingly difficult to deliver effective care centered on such relationships. Understanding and addressing these challenges is crucial to ensure a positive experience of care for patients, families, carers, and nurses.

- **Option A:** Increasing therapeutic engagement has been identified as a priority within health care. Consequently, therapeutic interpersonal relationships need to be recognized in clinical practice, education, and research. Cioffi, exploring culturally diverse patient experiences in the acute care setting, found the development of therapeutic interpersonal relationships difficult, and therefore nurses require a greater capacity to develop a deeper consideration with educational support to enable effective and meaningful interactions.
- **Option B:** Consequently, providing a supportive environment enhances clinician–patient engagement and communication. This is also echoed by Tabler et al who investigated patient care experiences and perceptions of clinician–patient relationships and concluded that communication underpins patients’ perception of interpersonal continuity. Fakhr-Movahedi et al also identified therapeutic interpersonal relationships as the essence of care and the development of trust as an enabler for patient engagement.
- **Option C:** A therapeutic interpersonal relationship can be defined as one which is perceived by patients to encompass caring, and supportive nonjudgmental behavior, embedded in a safe environment during an often stressful period. These relationships can last for a brief moment in time or continue for extended periods. Typically, this type of relationship displays warmth, friendliness, genuine interest, empathy, and the wish to facilitate and support.

57. The nurse is reviewing the critical paths of the clients on the nursing unit. In performing a variance analysis, which of the following would indicate the need for further action and analysis?

- A. A client’s family attending a diabetic teaching session.
- B. Canceling physical therapy sessions on the weekend.
- C. Normal VS and absence of wound infection in a post-op client.
- D. A client demonstrating accurate medication administration following teaching.

Correct Answer: B. Canceling physical therapy sessions on the weekend.

Variance analysis is the identification of patient or family needs that are not anticipated and the actions related to these needs in a system of managed care. There are four kinds of origin for the variance: patient-family origin, system-institutional origin; community origin, and clinician origin.

- **Option A:** Critical pathways are care plans that detail the essential steps inpatient care with a view to describing the expected progress of the patient. They also have a positive impact on outcomes,

such as increased quality of care and patient satisfaction, improved continuity of information, and patient education.

- **Option C:** Clinical pathways are being increasingly used for daily patient care. The pathways consist of a sequence of critical treatment events matched to the patient's recovery. Variance analysis identifies deviations from the pathway and can be used for quality improvement and clinical audit.
- **Option D:** Clinical pathways can be used as a means of incorporating evidence-based medicine into clinical practice. Variance analysis of the pathways can be utilized as a process of quality control and to improve patient outcomes.

58. The nurse is performing colostomy irrigation on a male client. During the irrigation, the client begins to complain of abdominal cramps. What is the appropriate nursing action?

- A. Notify the physician
- B. Stop the irrigation temporarily
- C. Increase the height of the irrigation
- D. Medicate for pain and resume the irrigation

Correct Answer: B. Stop the irrigation temporarily.

If cramping occurs during colostomy irrigation, the irrigation flow is stopped temporarily and the client is allowed to rest. Cramping may occur from an infusion that is too rapid or is causing too much pressure. Have the colostomy patient sit on or near the toilet for about 15 to 20 minutes so the initial colostomy returns can drain into the toilet. (If the patient is on bed rest, allow the colostomy to drain into the bedpan.)

- **Option A:** The physician does not need to be notified. Unless contraindicated or otherwise ordered by the physician, it is best to establish a routine of daily irrigation in accordance with the patient's former bowel habits.
- **Option C:** Increasing the height of the irrigation will cause further discomfort. Hold the enema can approximately 12 inches above the bed and allow the solution to flow in slowly to avoid painful cramps usually caused by too rapid flow.
- **Option D:** Medicating the client for pain is not the appropriate action in this situation. If cramping occurs, slow down the flow rate and ask the patient to deep breathe until cramps subside. Cramping during irrigation may indicate that the flow is too fast or the water is too cold.

59. A patient in the cardiac unit is concerned about the risk factors associated with atherosclerosis. Which of the following are hereditary risk factors for developing atherosclerosis?

- A. Family history of heart disease
- B. Overweight
- C. Smoking
- D. Age

Correct Answer: A. Family history of heart disease

Family history of heart disease is an inherited risk factor that is not subject to a lifestyle change. Having a first-degree relative with heart disease has been shown to significantly increase risk. ASCVD is multifactorial etiology. The most common risk factors include hypercholesterolemia (LDL-cholesterol), hypertension, diabetes mellitus, cigarette smoking, age (male older than 45 years and female older than 55 years), male gender, and strong family history (male relative younger than 55 years and female relative younger than 65 years).

- **Option B:** Also, a sedentary lifestyle, obesity, diets high in saturated and trans-fatty acids, and certain genetic mutations contribute to risk. While a low level of high-density lipoprotein (HDL)-cholesterol is considered a risk factor, pharmacological therapy increasing HDL-cholesterol has yielded negative results raising concerns about the role of HDL in ASCVD.
- **Option C:** Smoking is a risk factor that is subject to lifestyle change and can reduce risk significantly. For the most part atherosclerosis and its pathology can be prevented. All healthcare workers who look after patients should educate patients on the need to exercise regularly, discontinue smoking, maintain healthy body weight, eat a healthy diet, and remain compliant with the medications used to lower lipids.
- **Option D:** Advancing age increases the risk of atherosclerosis but is not a hereditary factor. It has been reported that 75% of acute myocardial infarctions occur from plaque rupture and the highest incidence of plaque rupture was observed in men over 45 years; whereas, in women, the incidence increases beyond age 50 years.

60. When monitoring the fetal heart rate of a client in labor, the nurse identifies an elevation of 15 beats above the baseline rate of 135 beats per minute lasting for 15 seconds. This should be documented as:

- A. An acceleration
- B. An early elevation
- C. A sonographic motion
- D. A tachycardia

Correct Answer: A. An acceleration

An acceleration is an abrupt elevation above the baseline of 15 beats per minute for 15 seconds; if the acceleration persists for more than 10 minutes it is considered a change in baseline rate. A tachycardic FHR is above 160 beats per minute.

- **Option B:** Increased variability in the baseline FHR is present when the oscillations exceed 25 bpm. This pattern is sometimes called a saltatory pattern and is usually caused by acute hypoxia or mechanical compression of the umbilical cord. This pattern is most often seen during the second stage of labor. The presence of a saltatory pattern, especially when paired with decelerations, should warn the physician to look for and try to correct possible causes of acute hypoxia and to be alert for signs that the hypoxia is progressing to acidosis. Although it is a nonreassuring pattern, the saltatory pattern is usually not an indication for immediate delivery.
- **Option C:** Auscultation of the fetal heart rate (FHR) is performed by external or internal means. External monitoring is performed using a hand-held Doppler ultrasound probe to auscultate and count the FHR during a uterine contraction and for 30 seconds thereafter to identify fetal response. The transducer uses Doppler ultrasound to detect fetal heart motion and is connected to an FHR monitor. The monitor calculates and records the FHR on a continuous strip of paper.

- **Option D:** Fetal tachycardia is defined as a baseline heart rate greater than 160 bpm and is considered a nonreassuring pattern. Tachycardia is considered mild when the heart rate is 160 to 180 bpm and severe when greater than 180 bpm. Tachycardia greater than 200 bpm is usually due to fetal tachyarrhythmia or congenital anomalies rather than hypoxia alone.

61. A female client who's at high risk for suicide needs close supervision. To best ensure the client's safety, Nurse Mary should:

- A. Check the client frequently at irregular intervals throughout the night.
- B. Assure the client that the nurse will hold in confidence anything the client says.
- C. Repeatedly discuss previous suicide attempts with the client.
- D. Disregard decreased communication by the client because this is common with suicidal clients.

Correct Answer: A. Check the client frequently at irregular intervals throughout the night

Checking the client frequently but at irregular intervals prevents the client from predicting when observation will take place and altering behavior in a misleading way at these times. Once the patient is deemed to be at risk for suicide, then intervention steps must be initiated right away. The individual must not be left alone. Enlist the help of a support person while at home. The suicidal individual must be treated in a safe and secure place. In addition, the place has to be monitored.

- **Option B:** This may encourage the client to try to manipulate the nurse or seek attention for having a secret suicide plan. Assessing the individual's judgment is critical. One should try and determine how the individual can handle stress. Does he or she have an impairment in decision making? Does the individual know that jumping in front of a train is dangerous? Reflect empathy and concern. Offer a hand to help. Provide the patient with confidence that he or she can overcome the issues.
- **Option C:** This may reinforce suicidal ideas. Help develop internal coping strategies (e.g., exercise, journaling, reading, developing a hobby). Utilize the help of healthcare professionals to follow up on therapy. Once the individual is safe as an inpatient or outpatient, a formal treatment plan should be established. The next step is to refer all patients deemed to be at higher risk for suicide to a mental health counselor as soon as possible. Every state has laws and procedures regarding this process which must be incorporated into the clinical practice when addressing individuals at high suicide risk.
- **Option D:** Decreased communication is a sign of withdrawal that may indicate the client has decided to commit suicide; the nurse shouldn't disregard it. In some cases, assessment of the mental status may provide a clue to the individual's potential for self-harm. Depressed patients will often tend to appear unclean and unkempt. The clothing may not be ironed or dirty. The risk of suicide is often high in people who appear very anxious or depressed. The patient may exhibit a flat affect or no emotions at all. Some depressed patients may develop hallucinations that may be telling him or her to kill themselves. The majority of these hallucinations are auditory.

62. Which of the following assessment findings would the nurse expect if the client develops DVT?

- A. Mid Calf pain, tenderness, and redness along the vein.
- B. Chills, fever, malaise, occurring 2 weeks after delivery.
- C. Muscle pain, the presence of Homans sign, and swelling in the affected limb.

D. Chills, fever, stiffness, and pain occurring 10 to 14 days after delivery.

Correct Answer: C. Muscle pain the presence of Homans sign, and swelling in the affected limb

Classic symptoms of DVT include muscle pain, the presence of Homans sign, and swelling of the affected limb.

- **Option A:** Midcalf pain, tenderness, and redness, along the vein reflect superficial thrombophlebitis. In the absence of a triggering event, neither venous stasis nor abnormal coagulability alone causes clinically important thrombosis, but vascular endothelial injury does reliably result in thrombus formation. The initiating injury triggers an inflammatory response that results in immediate platelet adhesion at the injury site. Further platelet aggregation is mediated by thromboxane A₂ (TxA₂) and by thrombin.
- **Option B:** Chills, fever, and malaise occurring 2 weeks after delivery reflect pelvic thrombophlebitis. The body naturally produces more clotting proteins during pregnancy. This ensures that the blood forms clots quickly after delivery to avoid excess bleeding. These natural changes are meant to protect you from complications during your pregnancy. But they also increase your risk of having a blood clot. Any medical procedure, including delivery of a baby, also carries a risk of infection. Septic pelvic vein thrombophlebitis is caused when a blood clot forms in the pelvic veins and becomes infected by bacteria present in the uterus.
- **Option D:** Chills, fever, stiffness, and pain occurring 10 to 14 days after delivery suggest femoral thrombophlebitis. The femoral vein runs along the inside of the legs from the groin area downward. Femoral vein thrombosis refers to a blood clot present in those veins. These veins are superficial, or close to the surface of the skin, and are often more prone to blood clots than deeper veins.

63. Nurse Grace is assessing a male client diagnosed with gonorrhea. Which symptom most likely prompted the client to seek medical attention?

- A. Rashes on the palms of the hands and soles of the feet.
- B. Cauliflower-like warts on the penis.
- C. Painful red papules on the shaft of the penis.
- D. Foul-smelling discharge from the penis.

Correct Answer: D. Foul-smelling discharge from the penis

Symptoms of gonorrhea in men include purulent, foul-smelling drainage from the penis and painful urination. The most common clinical manifestations of gonococcal disease in males include penile purulent discharge, dysuria, and testicular discomfort. Although many females, more than 50%, will not manifest symptoms of their gonococcal cervix infections, most males, more than 90%, will manifest urogenital gonorrhea symptomatically.

- **Option A:** Rashes on the palms of the hands and soles of the feet are symptoms of the secondary stage of syphilis. The clinical manifestations of secondary syphilis result from hematogenous dissemination of the infection and are protean: condyloma lata (papulosquamous eruption), hands and feet lesions, macular rash, diffuse lymphadenopathy, headache, myalgia, arthralgia, pharyngitis, hepatosplenomegaly, alopecia, and malaise.
- **Option B:** Cauliflower-like warts on the penis are a sign of human papillomavirus. Examine the anogenital region. Patients may additionally require a speculum examination of the vaginal walls and/or anus. Men may require an examination of the urethra, depending on signs and symptoms. Depending on the history of sexual practices, and oropharyngeal examination may be prudent.

- **Option C:** Painful red papules on the shaft of the penis may be a sign of the first stage of genital herpes. The classical features are macular or papular skin and mucous membrane lesions progressing to vesicles and pustules that often last for up to 3 weeks. Genital lesions can be especially painful, leading to swelling of the vulva in women, burning pain, and dysuria.

64. There are a number of risk factors associated with coronary artery disease. Which of the following is a modifiable risk factor?

- A. Gender
- B. Age
- C. Obesity
- D. Heredity

Correct Answer: C. Obesity

Obesity is an important risk factor for coronary artery disease that can be modified by improved diet and weight loss.

- **Options A, B, and D:** Family history of coronary artery disease, male gender, and advancing age increase risk but cannot be modified.

65. When preparing a woman who is 2 days postpartum for discharge, recommendations for which of the following contraceptive methods would be avoided?

- A. Diaphragm
- B. Female condom
- C. Oral contraceptives
- D. Rhythm method

Correct Answer: A. Diaphragm

The diaphragm must be fitted individually to ensure effectiveness. Because of the changes to the reproductive structures during pregnancy and following delivery, the diaphragm must be refitted, usually at the 6 weeks' examination following childbirth or after a weight loss of 15 lbs or more. In addition, for maximum effectiveness, the spermicidal jelly should be placed in the dome and around the rim. However, the spermicidal jelly should not be inserted into the vagina until involution is completed at approximately 6 weeks.

- **Option B:** Use of a female condom protects the reproductive system from the introduction of semen or spermicides into the vagina and may be used after childbirth.
- **Option C:** Oral contraceptives may be started within the first postpartum week to ensure suppression of ovulation.
- **Option D:** For the couple who has determined the female's fertile period, using the rhythm method, avoidance of intercourse during this period, is safe and effective.

66. A female client is brought to the emergency department with second-and third-degree burns on the left arm, left anterior leg, and anterior trunk. Using the Rule of Nines, what is the total body surface area that has been burned?

- A. 18%
- B. 27%
- C. 30%
- D. 36%

Correct Answer: D. 36%

The Rule of Nines divides body surface area into percentages that, when totaled, equal 100%. According to the Rule of Nines, the arms account for 9% each, the anterior legs account for 9% each, and the anterior trunk accounts for 18%. Therefore, this client's burns cover 36% of the body surface area.

- **Option A:** The Rule of Nines, also known as the Wallace Rule of Nines, is a tool used by trauma and emergency medicine providers to assess the total body surface area (TBSA) involved in burn patients. Measurement of the initial burn surface area is important in estimating fluid resuscitation requirements since patients with severe burns will have massive fluid losses due to the removal of the skin barrier.
- **Option B:** The Rule of Nines estimation of body surface area burned is based on assigning percentages to different body areas. The entire head is estimated as 9% (4.5% for anterior and posterior). The entire trunk is estimated at 36% and can be further broken down into 18% for anterior components and 18% for the back. The anterior aspect of the trunk can further be divided into the chest (9%) and abdomen (9%).
- **Option C:** The upper extremities total 18% and thus 9% for each upper extremity. Each upper extremity can further be divided into anterior (4.5%) and posterior (4.5%). The lower extremities are estimated at 36%, 18% for each lower extremity. Again this can be further divided into 9% for the anterior and 9% for the posterior aspect. The groin is estimated at 1%.

67. The nurse is preparing a discharge teaching plan for the client who had an umbilical hernia repair. Which of the following would the nurse include in the plan?

- A. Restricting pain medication.
- B. Maintaining bedrest.
- C. Avoiding coughing.
- D. Irrigating the drain.

Correct Answer: C. Avoiding coughing.

Coughing is avoided to prevent disruption of the tissue integrity, which can occur because of the location of this surgical procedure. Splint the stomach by placing a pillow over the abdomen with firm pressure before coughing or movement to help reduce the pain.

- **Option A:** The client should take analgesics as needed and as prescribed to control pain. Most non-opioid analgesics are classified as non-steroidal anti-inflammatory drugs (NSAIDs). They are used to treat mild pain and inflammation or combined with narcotics. Narcotics or opioids are used

for severe pain.

- **Option B:** Bedrest is not required following this surgical procedure. The client may slowly increase his activity. He should get up and walk every hour or so to prevent blood clot formation. After recovery, the client may return to work within 2 or 3 days. There should be no lifting anything above 10 lbs, climbing, or any strenuous activities for 4 to 6 weeks.
- **Option D:** A drain is not used in this surgical procedure, although the client may be instructed in simple dressing changes. Do not soak in a bathtub until the stitches or staples are removed. A small amount of drainage from the incision is normal.

68. A female client is experiencing a painful and rigid abdomen and is diagnosed with a perforated peptic ulcer. A surgery has been scheduled and a nasogastric tube is inserted. The nurse should place the client before surgery in

- A. Sims position
- B. Supine position
- C. Semi-fowlers position
- D. Dorsal recumbent position

Correct Answer: C. Semi-fowlers position

Semi-fowlers position will localize the spilled stomach contents in the lower part of the abdominal cavity. Initiation of fluid resuscitation should start as soon as the diagnosis is made. Insertion of a nasogastric tube to decompress the stomach and a Foley catheter to monitor urine output are essential steps.

- **Option A:** Placing the client in a Sims position could let the stomach contents spill out of the perforation. Tachycardia and abdominal tenderness with rigidity are common clinical signs. Severe pain, systemic inflammatory response from chemical peritonitis, and fluid deficit either due to poor intake or vomiting or pyrexia lead to compensatory tachycardia.
- **Option B:** The supine position could aggravate the pain of the ulcer. PPU is a surgical emergency associated with high mortality if left untreated. In general, all patients with PPU require prompt resuscitation, intravenous antibiotics, analgesia, proton pump inhibitor medications, nasogastric tube, urinary catheter, and surgical source control.
- **Option D:** Placing the patient in a dorsal recumbent position would put pressure on the stomach contents and still aggravate the pain. When PUD worsens and eventually perforate, gastric juice and gas enter the peritoneal cavity leading to chemical peritonitis. 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.

69. In a complex pediatric oncology unit, a seasoned nurse is faced with the challenge of assessing and managing pain in a non-verbal 3-year-old child undergoing treatment for acute lymphoblastic leukemia. The child's limited communicative ability due to developmental age and the distressing nature of the current clinical situation necessitate a highly nuanced approach to pain assessment. Given these parameters, which pain assessment tool would be most useful for the nurse to accurately gauge the young patient's pain levels?

- A. McGill-Melzack Pain Questionnaire
- B. Simple Description Pain Intensity Scale
- C. 0-10 Numeric Pain Scale
- D. Faces Pain-Rating Scale
- E. FLACC (Face, Legs, Activity, Cry, Consolability) Behavioral Pain Assessment Scale
- F. Oucher Pain Scale

Correct Answer: E. FLACC (Face, Legs, Activity, Cry, Consolability) Behavioral Pain Assessment Scale

The FLACC Behavioral Pain Assessment Scale is a tool specifically designed for assessing pain in infants and young children who are unable to communicate their pain verbally. It evaluates five categories: Face, Legs, Activity, Cry, and Consolability, each scored from 0 to 2, providing a comprehensive and objective measure of pain based on observable behaviors. This tool is particularly suited for the clinical scenario described.

- **Option A:** The McGill-Melzack Pain Questionnaire is a comprehensive tool that requires verbal communication and abstract thinking abilities to describe pain in various dimensions. It is unsuitable for a young, non-verbal child.
- **Option B:** The Simple Description Pain Intensity Scale, while less complex than the McGill questionnaire, still relies on the child's ability to verbally describe pain, which is not feasible in this clinical scenario.
- **Option C:** The 0-10 Numeric Pain Scale requires the child to understand and quantify their pain on a scale, a task that is developmentally inappropriate for a 3-year-old child.
- **Option D:** The Faces Pain-Rating Scale uses facial expressions to depict varying levels of pain intensity. Although more child-friendly, it still necessitates a degree of abstract reasoning and the ability to match one's own pain with facial expressions, which might be challenging for a non-verbal 3-year-old.
- **Option F:** The Oucher Pain Scale uses photographs of children's faces showing different levels of distress and pain, combined with a numerical scale. While this is more suitable for children who can point to indicate their pain level, it might still be challenging for a non-verbal 3-year-old to use effectively compared to the FLACC Scale.

70. A client with a vancomycin-resistant enterococcus (VRE) infection is admitted to the medical unit. Which action can be delegated to a nursing assistant who is assisting with the client's care?

- A. Monitor the results of the laboratory culture and sensitivity test.
- B. Educate the client and family members on ways to prevent transmission of VRE.
- C. Implement contact precautions when handling the client.
- D. Collaborate with other departments when the client is transported for the ordered test.

Correct Answer: C. Implement contact precautions when handling the client.

All hospital personnel who care for the client are responsible for the correct implementation of contact precautions.

- **Options A, B, and D:** The other options should be carried out by a licensed nurse.

71. Which of the following nursing interventions should be implemented to manage a client with appendicitis?

- A. Assessing pain.
- B. Encouraging oral intake of clear fluids.
- C. Providing discharge teaching.
- D. Assessing for symptoms of peritonitis.

Correct Answer: D. Assessing for symptoms of peritonitis

The focus of care is to assess for peritonitis, or inflammation of the peritoneal cavity. Peritonitis is most commonly caused by appendix rupture and invasion of bacteria, which could be lethal. Monitor vital signs. Note onset of fever, chills, diaphoresis, changes in mentation, reports of increasing abdominal pain. This can be suggestive of the presence of infection or developing sepsis, abscess, peritonitis.

- **Option A:** The client with appendicitis will have pain that should be controlled with analgesia. Assess pain, noting location, characteristics, severity (0–10 scale). Investigate and report changes in pain as appropriate. Keep the client at rest in semi-Fowler's position to lessen the pain. Gravity localizes inflammatory exudate into the lower abdomen or pelvis, relieving abdominal tension, which is accentuated by a supine position.
- **Option B:** The nurse should discourage oral intake in preparation for surgery. Aperients should also be avoided as induced peristalsis may cause perforation. If appendicitis has been diagnosed regular analgesia, usually an opioid depending on the pain severity, should be given to make the patient comfortable before treatment.
- **Option C:** Discharge teaching is important; however, in the acute phase, management should focus on minimizing preoperative complications and recognizing when such may be occurring.

72. Which of the following liquids would nurse Leng administer to a female client who is intoxicated with phencyclidine (PCP) to hasten excretion of the chemical?

- A. Shake
- B. Tea
- C. Cranberry Juice
- D. Grape juice

Correct Answer: C. Cranberry Juice

An acid environment aids in the excretion of PCP. The nurse will definitely give the client with PCP intoxication cranberry juice to acidify the urine to a pH of 5.5 & accelerate excretion. PCP begins to cause symptoms at a dose of 0.05mg/kg, and a dose of 20 mg or more can cause seizures, coma, and death. It is mainly metabolized by the liver, and 10% is excreted in the kidneys. Inhalation (the most common route of administration) and intravenous routes of administration produce symptoms in 2 to 5 minutes. Oral ingestion produces symptoms in 30 to 60 minutes.

- **Option A:** Most patients survive PCP intoxication with supportive care. Airway, breathing, circulation, and hemodynamic monitoring are essential to the care of patients with PCP toxicity. Intubation with ventilatory support may be required for airway protection. Sedation with medication and physical restraints may be required to control agitation, violent behavior, and psychosis due to PCP intoxication. Placing the patient in a calm environment such as a quiet room with the lights dimmed may be helpful. Benzodiazepines are the preferred medication for chemical sedation in patients with PCP toxicity.
- **Option B:** Patients with mild symptoms can be discharged one to 2 hours after they become symptom-free and have no other medical complications or behavioral issues that need to be addressed. Patients with severe symptoms or medical complications should be admitted to a monitored bed. Patients who are asymptomatic who present to the emergency department after PCP use should be observed for at least 6 hours before being discharged.
- **Option D:** PCP is available as a powder, crystal, liquid, and tablet. It produces both stimulation and depression of the CNS. PCP is a non-competitive antagonist to the NMDA receptor, which causes analgesia, anesthesia, cognitive defects, and psychosis. PCP blocks the uptake of dopamine and norepinephrine, leading to sympathomimetic effects such as hypertension, tachycardia, bronchodilation, and agitation. PCP can also cause sedation, muscarinic, and nicotinic signs by binding to acetylcholine receptors and GABA receptors. Sigma receptor stimulation by PCP causes lethargy and coma.

73. A female client comes into the emergency room complaining of SOB and pain in the lung area. She states that she started taking birth control pills 3 weeks ago and that she smokes. Her VS are: 140/80, P 110, R 40. The physician orders ABG's, results are as follows: pH: 7.50; PaCO₂ 29 mm Hg; PaO₂ 60 mm Hg; HCO₃⁻ 24 mEq/L; SaO₂ 86%. Considering these results, the first intervention is to:

- Begin mechanical ventilation.
- Place the client on oxygen.
- Give the client sodium bicarbonate.
- Monitor for pulmonary embolism.

Correct Answer: B. Place the client on oxygen

The pH (7.50) reflects alkalosis, and the low PaCO₂ indicates the lungs are involved. The client should immediately be placed on oxygen via mask so that the SaO₂ is brought up to 95%. Encourage slow, regular breathing to decrease the amount of CO₂ she is losing.

- **Option A:** Mechanical ventilation may be ordered for acute respiratory acidosis. In patients who are not significantly encephalopathic and have no excessive secretions, noninvasive ventilation with CPAP or BIPAP can be a useful modality to support ventilation and avoid the need for anesthesia and sedation, as well as the risk of nosocomial infection with endotracheal intubation.
- **Option C:** Sodium bicarbonate would be given to reverse acidosis. Sodium bicarbonate infusion reduces plasma ionized calcium concentration in critically ill patients with metabolic acidosis. In vitro, bicarbonate concentration has a major effect reducing ionized calcium level in serum
- **Option D:** This client may have pulmonary embolism, so she should be monitored for this condition, but it is not the first intervention. A timely diagnosis of a pulmonary embolism (PE) is crucial because of the high associated mortality and morbidity, which may be prevented with early

treatment. It is important to note that 30% of untreated patients with pulmonary embolism die, while only 8% die after timely therapy.

74. The respiratory system regulates acid-base balance by:

- A. Increasing mucus production.
- B. Changing the rate and depth of respiration.
- C. Forming bicarbonate.
- D. Reabsorbing bicarbonate.

Correct Answer: B. Changing the rate and depth of respiration

Through changes in the rate and depth of respiration, the acid-base balance is achieved via CO₂ elimination and retention. The pulmonary system adjusts pH using carbon dioxide; upon expiration, carbon dioxide is projected into the environment. C and D are responses that refer to ways in which kidneys balance acids and bases.

- **Option A:** Mucus production is not part of the pulmonary regulatory system. Due to carbon dioxide forming carbonic acid in the body when combining with water, the amount of carbon dioxide expired can cause pH to increase or decrease. When the respiratory system is utilized to compensate for metabolic pH disturbances, the effect occurs in minutes to hours.
- **Option C:** If bicarbonate is reabsorbed and/or acid is secreted into the urine, the pH becomes more alkaline (increases). When bicarbonate is not reabsorbed or acid is not excreted into the urine, pH becomes more acidic (decreases). The metabolic compensation from the renal system takes longer to occur: days rather than minutes or hours.
- **Option D:** The renal system affects pH by reabsorbing bicarbonate and excreting fixed acids. Whether due to pathology or necessary compensation, the kidney excretes or reabsorbs these substances which affect pH. The nephron is the functional unit of the kidney.

75. A client with rapid rate atrial fibrillation asks a nurse why the physician is going to perform carotid massage. The nurse responds that this procedure may stimulate the:

- A. Vagus nerve to slow the heart rate.
- B. Vagus nerve to increase the heart rate; overdriving the rhythm.
- C. Diaphragmatic nerve to slow the heart rate.
- D. Diaphragmatic nerve to overdrive the rhythm.

Correct Answer: A. Vagus nerve to slow the heart rate.

Carotid sinus massage is one of the maneuvers used for vagal stimulation to decrease a rapid heart rate and possibly terminate a tachydysrhythmias. The others include inducing the gag reflex and asking the client to strain or bear down. Medication therapy often is needed as an adjunct to keep the rate down or maintain the normal rhythm. Vagal maneuvers are techniques used to increase vagal parasympathetic tone in an attempt to diagnose and treat various arrhythmias. They are often utilized first in an effort to abort episodes of stable supraventricular tachycardia (SVT) or differentiate SVT from ventricular tachycardias (VT).

- **Option B:** Vagal maneuvers, including Carotid Sinus Massage and Valsalva Maneuver, transiently increase the arterial pressure in the carotid sinuses and aortic arch. This action triggers the baroreceptor reflex, which results in increased parasympathetic output to the heart via the vagus nerve (cranial nerve X).
- **Option C:** The location of the carotid sinus is at the bifurcation of the internal and external carotid artery from the common carotid artery. The sinus contains baroreceptors that sense changes in blood pressure. Afferent signals are then transmitted via the glossopharyngeal nerve (cranial nerve IX) to the nucleus tractus solitarius (NTS) within the medulla.
- **Option D:** Within the heart, the right vagus nerve serves to stimulate the sinoatrial (SA) node, the pacemaker of the healthy heart, in the right atrium; this causes slowed electrical activity within the SA node. The left vagus nerve mostly innervates atrioventricular (AV) node, which slows conduction between the atria and the ventricles. The end product of vagal stimulation is a decrease in the speed and frequency of electrical impulses in the heart, which could ultimately slow or terminate a tachydysrhythmia.

76. After terminating the transfusion during a reaction, which action should the nurse immediately be taken next?

- A. Run a solution of 5% dextrose in water.
- B. Run normal saline at a keep-vein-open rate.
- C. Remove the IV line.
- D. Fast drip 200ml normal saline.

Correct Answer: B. Run normal saline at a keep-vein-open rate.

The nurse will infuse normal saline at a KVO rate to keep the patency of the IV line while waiting for further orders from the physician. A transfusion reaction evaluation request form typically is used to document signs and symptoms of a suspected reaction so that the blood bank can use this information, in conjunction with laboratory testing, to arrive at a likely diagnosis. The blood bag, along with the infusion set and anything else attached to the set, should be sent with the transfusion reaction evaluation request.

- **Option A:** IV solution containing dextrose will hemolyze the red cells. IV solution containing dextrose in water will hemolyze red cells. Only isotonic, calcium-free IV solutions should be added to, or come in contact with blood products. Calcium may bind with the citrate anticoagulant and promote clotting in the tubing. Excess glucose and/or dextrose causes hemolysis and shortens red cell survival.
- **Option C:** The nurse will not remove the IV line because then there would be no IV access route. Transfusion reaction treatment varies with the reaction. Diphenhydramine and acetaminophen are some of the most commonly used drugs for treating mild allergic and febrile nonhemolytic reactions. For other reactions, expert consultation should be considered. In cases of acute hemolytic reaction, baseline laboratory tests should be performed and urine should be kept flowing, possibly with alkalinization.
- **Option D:** Doing a fast drip will potentially lead to congestion and is not done without the physician's order. Volume overload may require diuretics. TRALI is treated with oxygen and supportive care, which may involve intubation. Bacterial contamination may involve blood pressure support and antibiotics. Because anaphylaxis is treated emergently according to hospital protocol, usually with epinephrine and diphenhydramine, there may not be time for consultation until after the patient is stabilized.

77. Alfred was newly diagnosed with anxiety disorder. The physician prescribed buspirone (BuSpar). The nurse is aware that the teaching instructions for newly prescribed buspirone should include which of the following?

- A. A warning about the drug's delayed therapeutic effect, which is from 14 to 30 days.
- B. A warning about the incidence of neuroleptic malignant syndrome (NMS).
- C. A reminder of the need to schedule blood work in 1 week to check blood levels of the drug.
- D. A warning that immediate sedation can occur with a resultant drop in pulse.

Correct Answer: A. A warning about the drug's delayed therapeutic effect, which is from 14 to 30 days.

The client should be informed that the drug's therapeutic effect might not be reached for 14 to 30 days. The client must be instructed to continue taking the drug as directed. Unlike benzodiazepines and barbiturates, there is no associated risk of physical dependence or withdrawal with buspirone use due to the lack of effects on GABA receptors. However, buspirone has little efficacy as an acute anxiolytic as clinical effect typically takes 2 to 4 weeks to achieve.[1] Buspirone is FDA approved for the short and long-term treatment of GAD, as well as short-term symptomatic relief of anxiety. It is as effective as benzodiazepine treatment for GAD.

- **Option B:** NMS hasn't been reported with this drug, but tachycardia is frequently reported. Patients should receive a warning about the possibility of CNS depression. While rarer, patients should also be informed of the potential for akathisia (likely due to central dopamine antagonism) and serotonin syndrome.
- **Option C:** Blood level checks aren't necessary. Offer frequent follow-up after initiating treatment to assess for therapeutic and adverse effects. Encourage patients to stay consistent with their medication schedule and whether they take it with food. As mentioned before, a therapeutic effect typically takes 2 to 4 weeks to take effect. Often, many of the adverse effects will lessen over time, as well. However, the patient should have close monitoring for signs and symptoms of anaphylaxis, akathisia, and serotonin syndrome.
- **Option D:** Relative to other anxiolytics, buspirone has low toxicity and potential for abuse. There have been no deaths reported from a buspirone overdose alone. In pharmacological trials, healthy male patients were given up to 375 mg per day and developed nausea, vomiting, dizziness, drowsiness, miosis, and gastric distress. While buspirone overdose typically resolves with complete recovery, high suspicion of additional medication overdose should be maintained and investigated.

78. Kubler-Ross's five successive stages of death and dying are:

- A. Anger, bargaining, denial, depression, acceptance
- B. Denial, anger, depression, bargaining, acceptance
- C. Denial, anger, bargaining, depression acceptance
- D. Bargaining, denial, anger, depression, acceptance

Correct Answer: C. Denial, anger, bargaining, depression acceptance

Kubler-Ross's five successive stages of death and dying are denial, anger, bargaining, depression, and acceptance. The patient may move back and forth through the different stages as he and his family

members react to the process of dying, but he usually goes through all of these stages to reach acceptance.

- **Option A:** Denial is a common defense mechanism used to protect oneself from the hardship of considering an upsetting reality. Kubler-Ross noted that after the initial shock of receiving a terminal diagnosis, patients would often reject the reality of the new information. Patients may directly deny the diagnosis, attribute it to faulty tests or an unqualified physician, or simply avoid the topic in conversation.
- **Option B:** Anger, as Kubler-Ross pointed out, is commonly experienced and expressed by patients as they concede the reality of a terminal illness. It may be directed, as with blame of medical providers for inadequately preventing the illness, of family members for contributing to risks of not being sufficiently supportive, or of spiritual providers or higher powers for the diagnosis' injustice.
- **Option D:** Bargaining typically manifests as patients seek some measure of control over their illness. The negotiation could be verbalized or internal and could be medical, social, or religious. The patients' proffered bargains could be rational, such as a commitment to adhere to treatment recommendations or accept help from their caregivers, or could represent more magical thinking, such as with efforts to appease misattributed guilt they may feel is responsible for their diagnosis. Depression is perhaps the most immediately understandable of Kubler-Ross's stages and patients experience it with unsurprising symptoms such as sadness, fatigue, and anhedonia. Acceptance describes recognizing the reality of a difficult diagnosis while no longer protesting or struggling against it. Patients may choose to focus on enjoying the time they have left and reflecting on their memories.

79. The student nurse is teaching the family of a patient with liver failure. You instruct them to limit which foods in the patient's diet?

- A. Meats and beans
- B. Butter and gravies
- C. Potatoes and pasta
- D. Cakes and pastries

Correct Answer: A. Meats and beans

Meats and beans are high-protein foods. In liver failure, the liver is unable to metabolize protein adequately, causing protein by-products to build up in the body rather than be excreted. Have about 1.2 to 1.5 grams of protein per kilogram of body weight. This means that a 154-pound (70-kilogram) man should eat 84 to 105 grams of protein per day. Look for non-meat protein sources such as beans, tofu, and dairy products when you can.

- **Option B:** Eat a moderate intake of fat, as prescribed by the provider. The increased carbohydrates and fat help prevent protein breakdown in the liver. Eat fruits and vegetables and lean protein such as legumes, poultry, and fish. Avoid uncooked shellfish.
- **Option C:** Eat large amounts of carbohydrate foods. Carbohydrates should be the major source of calories in this diet. Increase the intake of carbohydrates to be in proportion with the amount of protein the client eats.
- **Option D:** Liver disease can affect the absorption of food and the production of proteins and vitamins. Therefore, diet may influence the weight, appetite, and the amounts of vitamins in the body. Do not limit protein too much, because it can result in a lack of certain amino acids.

80. Albert, a 35-year-old insulin-dependent diabetic, is admitted to the hospital with a diagnosis of pneumonia. He has been febrile since admission. His daily insulin requirement is 24 units of NPH. Every morning Albert is given NPH insulin at 0730. Meals are served at 0830, 1230, and 1830. The nurse expects that the NPH insulin will reach its maximum effect (peak) between the hours of:

- A. 1130 and 1330
- B. 1330 and 1930
- C. 1530 and 2130
- D. 1730 and 2330

Correct Answer: B. 1330 and 1930

The peak time of insulin is the time it is working the hardest to lower blood glucose. NPH insulin is an intermediate-acting insulin that has an onset of 1 to 3 hours after injection, peaks 4 to 12 hours later, and is effective for about 12 to 16 hours.

- **Option A:** NPH human insulin has an onset of insulin effect of 1 to 2 hours, a peak effect of 4 to 6 hours, and a duration of action of more than 12 hours. Very small doses will have an earlier peak effect and shorter duration of action, while higher doses will have a longer time to peak effect and prolonged duration.
- **Option C:** Regular human insulin has an onset of action of 1/2 hour to 1 hour, peak effect in 2 to 4 hours, and duration of action of 6 to 8 hours. The larger the dose of regular the faster the onset of action, but the longer the time to peak effect and the longer the duration of the effect.
- **Option D:** Long-acting insulin analogs have an onset of insulin effect in 1 1/2-2 hours. The insulin effect plateaus over the next few hours and is followed by a relatively flat duration of action that lasts 12-24 hours for insulin detemir and 24 hours for insulin glargine.

81. Which of the following hormones helps regulate chloride reabsorption?

- A. Antidiuretic hormone
- B. Renin
- C. Estrogen
- D. Aldosterone

Correct Answer: D. Aldosterone

Chloride reabsorption depends on sodium reabsorption, which is regulated by aldosterone in the distal tubule and collecting ducts. It affects blood pressure by regulating the amount of sodium (and the chloride that diffuses with sodium across the membranes) by increasing or decreasing the total amount of volume in the extracellular fluid (ECF).

- **Option A:** Antidiuretic hormone stimulates water reabsorption by stimulating insertion of “water channels” or aquaporins into the membranes of kidney tubules. These channels transport solute-free water through tubular cells and back into blood, leading to a decrease in plasma osmolarity and an increased osmolarity of urine.
- **Option B:** It plays an essential role in the rate-limiting step of the renin-angiotensin-aldosterone system (RAAS), responsible for the homeostasis of blood volume and mean arterial blood

pressure. Renin also acts as a hormone, binding to pro-renin receptors, causing an increase in the conversion of angiotensinogen to angiotensin I.

- **Option C:** Estrogen is a steroid hormone associated with the female reproductive organs and is responsible for the development of female sexual characteristics. Estrogen or estradiol is the most common form of estrogen hormone for FDA-approved treatment as hormone replacement therapy (HRT) in the management of symptoms associated with menopause.

82. The nurse is caring for a client that is hearing impaired. Which of the following approaches will facilitate communication?

- A. Speak frequently.
- B. Speak loudly.
- C. Speak directly into the impaired ear.
- D. Speak in a normal tone.

Correct Answer: D. Speak in a normal tone.

Speaking in a normal tone to the client with impaired hearing and not shouting are important. The nurse should talk directly to the client while facing the client and speak clearly. If the client does not seem to understand what is said, the nurse should express it differently. Moving closer to the client and toward the better ear may facilitate communication, but the nurse should avoid talking directly into the impaired ear.

- **Option A:** When speaking with a patient who has a hearing impairment it's important to face him directly and make sure you have his attention. Identifying hospitalized patients who have a hearing impairment to others (for example, with a bracelet, a bed tag, or a flag on the chart) and posting communication strategies (with the patient's consent) may ease frustration and minimize miscommunication.
- **Option B:** When speaking with a patient who has a hearing impairment it's important to speak at a normal volume while clearly enunciating (but without using exaggerated lip movements). Remind patients to listen actively. However, many people with hearing impairment find it tiring to keep paying attention, so provide adequate time. Training in word recognition has also been shown to result in some improvements in older adults with hearing impairment.
- **Option C:** When speaking with a patient who has a hearing impairment it's important not to cover the mouth with a hand. When a patient has a hearing impairment, a combination of adaptive techniques, environmental modifications, and assistive devices (including hearing aids) is necessary to ensure effective communication.

83. Parents bring their infant to the clinic, seeking treatment for vomiting and diarrhea that has lasted for 2 days. On assessment, the nurse in charge detects dry mucous membranes and lethargy. What other findings suggest a fluid volume deficit?

- A. A sunken fontanel
- B. Decreased pulse rate
- C. Increased blood pressure

D. Low urine specific gravity

Correct Answer: A. A sunken fontanel

In an infant, signs of fluid volume deficit (dehydration) include sunken fontanels, increased pulse rate, and decreased blood pressure. They occur when the body can no longer maintain sufficient intravascular fluid volume. When this happens, the kidneys conserve water to minimize fluid loss, which results in concentrated urine with high specific gravity.

- **Option B:** Children with hypernatremia have better hemodynamics (eg, less tachycardia and better urine output) than do children with hyponatremia, in whom fluid has shifted out of the vascular space.
- **Option C:** Dehydrated children with hyponatremia may appear only mildly dehydrated but are actually closer to hypotension and cardiovascular collapse than are equally dehydrated children with elevated or normal sodium levels.
- **Option D:** Other laboratory abnormalities in dehydration include relative polycythemia resulting from hemoconcentration, elevated blood urea nitrogen (BUN), and increased urine specific gravity.

84. Because a client has mitral stenosis and is a prospective valve recipient, the nurse preoperatively assesses the client's past compliance with medical regimens. Lack of compliance with which of the following regimens would pose the greatest health hazard to this client?

- A. Medication therapy
- B. Diet modification
- C. Activity restrictions
- D. Dental care

Correct Answer: A. Medication therapy

Preoperatively, anticoagulants may be prescribed for the client with advanced valvular heart disease to prevent emboli. Post-op, all clients with mechanical valves and some with bioprostheses are maintained indefinitely on anticoagulation therapy. Adhering strictly to a dosage schedule and observing specific precautions are necessary to prevent hemorrhage or thromboembolism. Some clients are maintained on lifelong antibiotic prophylaxis to prevent recurrence from rheumatic fever. Episodic prophylaxis is required to prevent infective endocarditis after dental procedures or upper respiratory, GI, or GU surgery.

- **Option B:** Eat heart-healthy foods such as fruits, vegetables, whole grains, fish, lean meats, and low-fat or nonfat dairy foods. Limit sodium, sugar, and alcohol. Stay at a healthy weight. Lose weight if needed. Be safe with medicines. Take medicines exactly as prescribed. Call a doctor or nurse call line if the clients think he is having a problem with the medicine. You will get more details on the specific medicines the doctor prescribes.
- **Option C:** Be active. Ask the doctor what type and level of exercise is safe. If the stenosis is severe, the client will likely need to restrict the level of activity. Walking may be a good choice. The client may also want to swim, bike, or do other activities.
- **Option D:** Take care of the teeth and gums. Get regular dental checkups. Good dental health is important because bacteria can spread from infected teeth and gums to the heart valves. Avoid colds and flu. Get a pneumococcal vaccine shot. If you have had one before, ask your doctor if you need another dose. Get a flu vaccine every year.

85. Amphetamines and amphetamine-like compounds are most commonly used for:

- A. Narcolepsy
- B. Attention deficit disorder
- C. Exogenous obesity
- D. All of the above

Correct Answer: D. All of the above

The most common uses of amphetamines and amphetamine-like compounds are narcolepsy, exogenous obesity, and attention deficit disorder. Amphetamine is FDA-approved for the treatment of attention-deficit/hyperactivity disorder (ADHD) and narcolepsy. It has indications as a first-line agent for ADHD in adults and children six years of age and older. Amphetamine is also a second-line agent for the treatment of narcolepsy.

- **Option A:** Patients with narcolepsy generally benefit from divided doses and may require an early afternoon dose to control daytime sleepiness. Dosages usually range from 5 mg to 40 mg daily and should not exceed 60 mg, which is the maximum dose for certain adults.
- **Option B:** The choice of agent for initial therapy is based on cost, patient preference, and concern for abuse. Dextroamphetamine is the only amphetamine medication FDA-approved for use in children younger than six years, but most current guidelines recommend behavioral therapy alone in preschool-aged children with ADHD symptoms.
- **Option C:** Lisdexamfetamine, a long-acting amphetamine medication, is FDA-approved for the treatment of a binge-eating disorder. Lisdexamfetamine may be preferred if there is increased concern for abuse by the patient or a household member, as its chemically-phased release allows for once-daily dosing and may theoretically deter abuse. Lisdexamfetamine is available as capsules or chewable tablets, and typical daily dosages range from 20 mg to 70 mg.

86. Britney, a 20 y.o. student is admitted with acute pancreatitis. Which laboratory findings do you expect to be abnormal for this patient?

- A. Serum creatinine and BUN
- B. Alanine aminotransferase (ALT) and aspartate aminotransferase (AST)
- C. Serum amylase and lipase
- D. Cardiac enzymes

Correct Answer: C. Serum amylase and lipase

Pancreatitis involves the activation of pancreatic enzymes, such as amylase and lipase. These levels are elevated in a patient with acute pancreatitis. The diagnosis of acute pancreatitis has been defined by the Revised Atlanta Classification and requires at least 2 of 3 criteria to be met: 1) a lipase or amylase level that is three times the upper limit of normal 2) abdominal pain that is consistent with pancreatitis 3) abdominal imaging consistent with acute pancreatitis.

- **Option A:** Early changes in BUN level may reflect several important physiologic processes in acute pancreatitis. In addition to intravascular volume depletion, a rise in BUN level may be secondary to impairment in renal function or potentially concurrent upper gastrointestinal hemorrhage. Renal

failure is a relatively common form of organ dysfunction among patients with acute pancreatitis

- **Option B:** Jaundice with increased ALT suggests gallstone etiology requiring ERCP. ALT or AST levels more than three times the upper limit of normal indicates gallstones as the cause of acute pancreatitis. However, the absence of elevated transaminases does not rule out gallstones. ALT has high specificity, but low sensitivity for gallstone pancreatitis.
- **Option D:** Acute pancreatitis can be associated with electrical changes mimicking acute coronary syndrome with normal coronary arteries. The association of acute pancreatitis with ST-segment elevation and elevated cardiac enzymes has been reported in few observations. The pathophysiological mechanisms of this association remain poorly understood.

87. Which category of drugs prevents/treats constipation by the osmotic drawing of water from extravascular space to intestinal lumen?

- A. Stimulants
- B. Bulk-forming agents
- C. Hyperosmotic agents
- D. Lubricants

Correct Answer: C. Hyperosmotic agents

Hyperosmotic agents change the osmotic gradient between the intestine and extravascular space causing water to move into the intestinal lumen and balance the gradient. Hyperosmotic agents reduce intraocular pressure by creating an osmotic gradient between the blood and the intraocular fluid compartments that causes fluid to shift from the eye to the blood. These agents are most effective when used for a short period of time. Systemic side effects and a limited period of efficacy in maintaining a reduction in intraocular pressure preclude their chronic use in the treatment of glaucoma.

- **Option A:** Caffeine has a unique mechanism as a stimulant as it works as an inhibitor at the adenosine receptors. Agonism at these receptors induces a sensation of drowsiness, and therefore inhibition at these receptors leads to increased energy levels. The general mechanism of action of amphetamines is the induction of catecholamines, specifically norepinephrine and dopamine. These catecholamines lead to increased energy levels, euphoria, increased libido, and higher cognition. The induction of most of the effects of cocaine is through the blockade of the dopamine transporter protein. This results in increased dopamine levels at the synaptic cleft, and hence the effects of dopamine become amplified.
- **Option B:** Bulk-forming laxatives absorb liquid in the intestines. This creates a bulky, more liquid-like stool that's softer and easier to pass. Common bulk-forming laxatives include psyllium (Metamucil), polycarbophil (FiberCon), and methylcellulose (Citrucel). Bulk-forming laxatives are different from these laxatives. They're most similar to stool softeners in that they help the bowels retain water. Unlike stimulant laxatives, they don't stimulate nerves that speed up the movement of bowels through the intestines. They also don't lubricate the stools like lubricant laxatives do. Osmotic laxatives differs from bulk-forming types by helping the intestines — not the bowels — retain water.
- **Option D:** Lubricant is a substance which is used to control (more often to reduce) friction and wear of the surfaces in a contact of the bodies in relative motion [1]. Depending on its nature, lubricants are also used to eliminate heat and wear debris, supply additives into the contact, transmit power, protect, seal.

88. After seeking help at an outpatient mental health clinic, Ruby who was raped while walking her dog is diagnosed with posttraumatic stress disorder (PTSD). Three months later, Ruby returns to the clinic, complaining of fear, loss of control, and helpless feelings. Which nursing intervention is most appropriate for Ruby?

- A. Recommending a high-protein, low-fat diet.
- B. Giving sleep medication, as prescribed, to restore a normal sleep-wake cycle.
- C. Allowing the client time to heal.
- D. Exploring the meaning of the traumatic event with the client.

Correct Answer: D. Exploring the meaning of the traumatic event with the client.

The client with PTSD needs encouragement to examine and understand the meaning of the traumatic event and consequent losses. Otherwise, symptoms may worsen and the client may become depressed or engage in self-destructive behavior such as substance abuse. PTSD stems from events that cause moderate to severe stress reactions that may be experienced as a sense of horror, helplessness, serious injury, or threat of serious injury or death. Common precipitating events include combat, natural and man-made disasters, the sudden or unexpected death of a loved one, terrorist attacks, serious accidents or illnesses, sexual or physical assault, and various forms of abuse.

- **Option A:** A special diet isn't indicated unless the client also has an eating disorder or a nutritional problem. With proper training, health care professionals in multiple disciplines — including psychologists and psychiatrists, advanced social workers, licensed professional counselors, and psychiatric mental health nurse practitioners (PMHNPs) — can conduct PTSD interventions.
- **Option B:** The physician may prescribe anti-anxiety agents or antidepressants cautiously to avoid dependence; sleep medication is rarely appropriate. PTSD symptoms can be treated with any of multiple types of medications, including antidepressants and anti-anxiety drugs. Prazosin has been identified as a possible aid in reducing or suppressing nightmares in some people with PTSD, but its efficacy is still being studied.
- **Option C:** The client must explore the meaning of the event and won't heal without this, no matter how much time passes. Behavioral techniques, such as relaxation therapy, may help decrease the client's anxiety and induce sleep. A type of talk therapy, cognitive therapy helps patients recognize and modify potentially harmful thinking patterns, such as fears that traumatic events will recur.

89. A patient must receive 50 units of Humulin regular insulin. The label reads 100 units = 1 ml. How many milliliters should the nurse administer?

- A. 0.5 ml
- B. 0.75 ml
- C. 1 ml
- D. 2 ml

Correct Answer: A. 0.5 ml

There are 3 primary methods for calculation of medication dosages; Dimensional Analysis, Ratio Proportion, and Formula or Desired Over Have Method. Desired Over Have or Formula Method uses a formula or equation to solve for an unknown quantity (x) much like ratio proportion.

- **Option B:** Drug calculations require the use of conversion factors, for example, when converting from pounds to kilograms or liters to milliliters. Simplistic in design, this method allows clinicians to work with various units of measurement, converting factors to find the answer. These methods are useful in checking the accuracy of the other methods of calculation, thus acting as a double or triple check.
- **Option C:** 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.
- **Option D:** High-risk medications such as heparin and insulin often require a second check on dosage amounts by more than one provider before the administration of the drug. Follow institutional policies and recommendations on the double-checking of dose calculations by another licensed provider.

90. Which of the following NSAIDs is used to prevent thrombosis?

- A. ibuprofen (Motrin)
- B. ketorolac tromethamine (Toradol)
- C. aspirin (Zorprin)
- D. naproxen (Naprosyn)

Correct Answer: C. aspirin (Zorprin)

Aspirin prevents platelet aggregation and thereby has an anticoagulant effect. Aspirin is a cyclooxygenase-1 (COX-1) inhibitor. It is a modifier of the enzymatic activity of cyclooxygenase-2 (COX-2). Unlike other NSAIDs (ibuprofen/naproxen), which bind reversibly to this enzyme, aspirin binding is irreversible. It also blocks thromboxane A2 on platelets in an irreversible fashion preventing platelet aggregation.

- **Option A:** Ibuprofen is also FDA-approved for use in mild to moderate pain. It is also available as an over-the-counter medication for pain, usually mild. Some common over-the-counter uses for ibuprofen are muscle sprains or strains, joint aches, pain from migraine, sore throat, and pain from cold or cases of flu.
- **Option B:** Ketorolac is an FDA-approved medication used in the treatment of moderate to severe acute onset pain. It is in the nonsteroidal anti-inflammatory drug (NSAID) drug class. Ketorolac is versatile, as it is available in multiple-dose forms: oral, nasal spray, IV, or IM. It is commonly used postoperatively for pain management.
- **Option D:** Naproxen has been FDA-approved for the treatment of acute gout, ankylosing spondylitis, bursitis, polyarticular juvenile idiopathic arthritis, osteoarthritis, tendonitis, rheumatoid arthritis, pain, and primary dysmenorrhea. It is considered the first-line treatment for acute gouty arthritis, osteoarthritis, musculoskeletal pain, inflammation, and dysmenorrhea.

91. A 62-year-old client arrives at a community health fair where the nurse is offering blood pressure screenings. Upon assessment, the nurse notes that the client's blood pressure is 160/96 mmHg. The client claims that their blood pressure is "usually much lower" and they recently started new medication for arthritis. What would the nurse advise the client to do?

- A. Go get a blood pressure check within the next 15 minutes
- B. Check blood pressure again in two (2) months
- C. See the healthcare provider immediately
- D. Visit the health care provider within one (1) week for a BP check

Correct Answer: A. Go get a blood pressure check within the next 15 minutes

The blood pressure reading is moderately high with the need to have it rechecked after a few minutes to verify. The client states it is 'usually much lower.' Thus a concern exists for complications such as stroke.

- **Options B & D:** Waiting 2 months or a week for follow-up is too long.
- **Option C:** Immediate check by the provider of care is not warranted.

92. A client diagnosed with schizoaffective disorder is suffering from schizophrenia with elements of which of the following disorders?

- A. Personality disorder
- B. Mood disorder
- C. Thought disorder
- D. Amnestic disorder

Correct Answer: B. Mood disorder

According to the DSM-IV, schizoaffective disorder refers to clients suffering from schizophrenia with elements of a mood disorder, either mania or depression. The prognosis is generally better than for the other types of schizophrenia, but it's worse than the prognosis for a mood disorder alone. The term schizoaffective disorder first appeared as a subtype of schizophrenia in the first edition of the DSM. It eventually became its own diagnosis despite lack of evidence for unique differences in etiology or pathophysiology. Therefore, there have been no conclusive studies on the etiology of the disorder. However, investigating the potential causes of mood disorders and schizophrenia as individual disorders allows for further discussion.

- **Option A:** This is incorrect because personality disorders and psychotic illness aren't listed together on the same axis. Some studies show that as high as 50% of people with schizophrenia also have comorbid depression. The pathogenesis of both mood disorders and schizophrenia is multifactorial and covers a range of risk factors including genetics, social factors, trauma, and stress. Among people with schizophrenia, there is a possible increased risk for first-degree relatives for schizoaffective disorder and vice-versa; there may be increased risk among individuals for schizoaffective disorder who have a first-degree relative with bipolar disorder, schizophrenia, or schizoaffective disorder.
- **Option C:** This is incorrect because schizophrenia is a major thought disorder and the question asks for elements of another disorder. The exact pathophysiology of schizoaffective disorder is currently unknown. Some studies have shown that abnormalities in dopamine, norepinephrine, and serotonin may play a role. Also, white matter abnormalities in multiple areas of the brain, particularly the right lentiform nucleus, left temporal gyrus and right precuneus are associated with schizophrenia and schizoaffective disorder.
- **Option D:** Clients with schizoaffective disorder aren't suffering from schizophrenia and an amnestic disorder. The diagnostic criteria for the schizoaffective disorder have been reworded and added

since its inclusion in the DSM, which made it difficult to subsequently conduct appropriate epidemiological studies. Thus, there have been no large-scale studies on the epidemiology, incidence, or prevalence of schizoaffective disorder. Research shows that 30% of cases occur between the ages of 25 and 35, and it occurs more frequently in women.

93. Identify the five most important elements in conducting disaster triage for multiple victims. Select all that apply.

- A. Assess level of consciousness
- B. Check airway, breathing, and circulation
- C. Monitor vital signs, including pulse and respirations
- D. Inquire about last tetanus shot
- E. Determine a history of allergies to food or medicine
- F. Know the list of current medications
- G. Identify past medical and surgical history
- H. Note color, presence of moisture and temperature of the skin
- I. Visually examine for gross deformities, bleeding, and obvious injuries

Correct Answers: A, B, C, H, and I

The following would be appropriate for disaster triage. The other options would be discussed when the staff has time and means to collect additional data. It would be appropriate to include all items during nondisaster circumstances.

- **Option A:** A rapid assessment of the patient's neurologic status is necessary on arrival in the emergency department. This should include the patient's conscious state and neurological signs. This is assessed by the patient's Glasgow coma scale (GCS), pupil size and reaction, and lateralizing signs.
- **Option B:** The common acronym for performing the primary trauma survey is ABCDE, each letter representing an area of focus. If any abnormality is identified in one of the areas of focus, it should be resolved before a practitioner progresses further through the algorithm.
- **Option C:** Assess vital signs; A narrow pulse pressure and tachycardia indicate hypovolemic shock in a trauma setting until proven otherwise. Vital signs should be closely monitored and response to interventions should be assessed. In elderly population, normal vital signs should not be reassuring as hemodynamic changes such as tachycardia or hypotension may be delayed.
- **Option D:** Rendering care to a trauma patient can be a challenging endeavor due to the potential for numerous injuries. This part of evaluation should not be performed until the primary survey is completed.
- **Option E:** It should be performed after the primary survey and the initial stabilization is complete. The purpose of the secondary survey is to obtain pertinent historical data about the patient and his or her injury, as well as to evaluate and treat injuries not found during the primary survey.
- **Option F:** Patients who are hemodynamically unstable should be stabilized first before they are transferred to a trauma center. An attempt should be made to obtain the patient's history regarding the mechanism of injury since certain mechanisms can raise suspicion for certain injuries.
- **Option G:** The purpose of the secondary survey is to obtain a detailed history, perform a head-to-toe physical exam, reassess all vital signs, and obtain pertinent lab and imaging studies to

identify injuries and metabolic abnormalities.

- **Option H:** In this, visualize all possible areas of skin. This includes the locations of lacerations, abrasions, ecchymosis, hematoma, marks, or bruises. Pay attention to the hidden areas. Back should be evaluated by log-rolling the patient, and the spine should be palpated for step-offs or focal tenderness.
- **Option I:** The extremities should be assessed for fractures by carefully palpating each extremity over its entire length for tenderness and decreased the range of motion. Assess the integrity of uninjured joints by both active and passive movements. Injured joints should also be immobilized, and radiographs should be obtained if necessary.

94. A client with chronic renal failure has asked to be evaluated for a home continuous ambulatory peritoneal dialysis (CAPD) program. The nurse should explain that the major advantage of this approach is that it:

- A. Is relatively low in cost.
- B. Allows the client to be more independent.
- C. Is faster and more efficient than standard peritoneal dialysis.
- D. Has fewer potential complications than standard peritoneal dialysis.

Correct Answer: B. Allows the client to be more independent.

The major benefit of CAPD is that it frees the client from daily dependence on dialysis centers, home health care personnel, and machines for life-sustaining treatment. Independence is a valuable outcome for some people. Continuous ambulatory peritoneal dialysis (CAPD) represents a new method for the treatment of end-stage renal disease. It offers the advantages of greater clearance of higher molecular-weight substances than during haemodialysis, good control of blood pressure, marked improvement of anemia, and unrestricted diet.

- **Option A:** CAPD is costly and must be done daily. In many developing countries, the annual cost of continuous ambulatory peritoneal dialysis (CAPD) is greater than the per-capita gross national income (GNI). The median cost of a 2-L bag of peritoneal dialysis (PD) fluid is around US\$5. The absolute cost of PD fluid among countries with significant differences in per-capita GNI actually varies very little. Thus, most renal failure patients can be expected to have problems accessing PD therapy in developing countries in Asia.
- **Option C:** Furthermore, CAPD is a time-consuming procedure. In spite of the need for technical improvements, CAPD is even now, for selected patients, a valuable alternative treatment to intermittent dialysis methods.
- **Option D:** Side effects and complications are similar to those of standard peritoneal dialysis. In contrast, the risks of peritonitis, hypoproteinemia, and hypertriglyceridemia are major disadvantages.

95. Which phase of hepatitis would the nurse incur strict precautionary measures at?

- A. Icteric
- B. Non-icteric
- C. Post-icteric

D. Pre-icteric

Correct Answer: D. Pre-icteric

Pre-icteric is the infective phase and precautionary measures should be strictly enforced. However, most patients are not always diagnosed during this phase. Nonspecific symptoms occur; they include profound anorexia, malaise, nausea and vomiting, a newly developed distaste for cigarettes (in smokers), and often fever or right upper quadrant abdominal pain. Urticaria and arthralgias occasionally occur, especially in HBV infection.

- **Option A:** During the icteric phase, precautionary measures should already be in place. After 3 to 10 days, the urine darkens, followed by jaundice. Systemic symptoms often regress, and patients feel better despite worsening jaundice. The liver is usually enlarged and tender, but the edge of the liver remains soft and smooth. Mild splenomegaly occurs in 15 to 20% of patients. Jaundice usually peaks within 1 to 2 weeks.
- **Option B:** There is no non-icteric phase. Some manifestations of acute hepatitis are virus-specific, but in general, acute infection tends to develop in predictable phases. Acute viral hepatitis is a common, worldwide disease that has different causes; each type shares clinical, biochemical, and morphologic features. The term acute viral hepatitis often refers to infection of the liver by one of the hepatitis viruses.
- **Option C:** During the post-icteric phase, precautionary measures should already be in place. During this 2- to 4-week period, jaundice fades. Appetite usually returns after the first week of symptoms. Acute viral hepatitis usually resolves spontaneously 4 to 8 weeks after symptom onset.

96. Currently, there is no way to prevent myelosuppression. However, there are medications available to elicit a more rapid bone marrow recovery. An example is:

- A. epoetin alfa (Epogen, Procrit).
- B. glucagon (Glucagen).
- C. fenofibrate (Tricor).
- D. lamotrigine (Lamictal).

Correct Answer: A. epoetin alfa (Epogen, Procrit).

Epoetin alfa (Epogen, Procrit) is a recombinant form of endogenous erythropoietin, a hematopoietic growth factor normally produced by the kidney that is used to induce red blood cell production in the bone marrow and reduce the need for blood transfusion.

- **Option B:** Glucagon is a pancreatic alpha cell hormone, which causes glycogenolysis and gluconeogenesis. Glucagon is a polypeptide hormone commonly used in the treatment of severe hypoglycemia with FDA approval for the treatment of severe hypoglycemia and as a diagnostic aid in imaging of the GI tract. Glucagon binds G-coupled surface receptors found throughout the body in varying concentrations; binding to the glucagon receptors in the liver, GI tract, heart, pancreas, fat, adrenal glands, and kidneys activate adenylate cyclase which in turn raises cAMP levels. cAMP stimulates glycogenolysis and gluconeogenesis, resulting in the release of glucose, primarily from liver glycogen stores. The extrahepatic effects of glucagon are also mediated by adenylate cyclase, including relaxation of GI smooth muscle and positive inotropic effects.
- **Option C:** Fenofibrate (Tricor) is an antihyperlipidemic agent that lowers plasma triglycerides. Fenofibrate is FDA approved for the management and treatment of hypertriglyceridemia, primary hypercholesterolemia or mixed dyslipidemia. It reduces low-density lipoprotein, triglycerides, and

total cholesterol while increasing high-density lipoprotein cholesterol in adults. Fenofibrate should be used in conjunction with a restriction of cholesterol intake and exercise if lifestyle modifications alone have been insufficient.

- **Option D:** Lamotrigine (Lamictal) is an anticonvulsant. Lamotrigine can be used to treat the following: partial seizures, primary generalized tonic-clonic seizures, bipolar depression, bipolar disorder type I maintenance), and Lennox-Gastaut syndrome. The mechanism of action for lamotrigine is not entirely understood. It is a triazine, and research has shown that lamotrigine selectively binds sodium channels, stabilizing presynaptic neuronal membranes and inhibiting glutamate release.

97. Which of the following patients is at greatest risk for developing pressure ulcers?

- A. An alert, chronic arthritic patient treated with steroids and aspirin.
- B. An 88-year old incontinent patient with gastric cancer who is confined to his bed at home.
- C. An apathetic 63-year old COPD patient receiving nasal oxygen via cannula.
- D. A confused 78-year old patient with congestive heart failure (CHF) who requires assistance to get out of bed.

Correct Answer: B. An 88-year old incontinent patient with gastric cancer who is confined to his bed at home.

Pressure ulcers are most likely to develop in patients with impaired mental status, mobility, activity level, nutrition, circulation and bladder or bowel control. Age is also a factor. Thus, the 88-year old incontinent patient who has impaired nutrition (from gastric cancer) and is confined to bed is at greater risk. Pressure injuries are defined as localized damage to the skin as well as underlying soft tissue, usually occurring over a bony prominence or related to medical devices. They are the result of prolonged or severe pressure with contributions from shear and friction forces.

- **Option A:** Risk factors for developing pressure injuries, in general, include immobility, reduced perfusion, malnutrition, and sensory loss. Other patients at increased risk for pressure injury development include those with cerebrovascular or cardiovascular disease, recent fracture of a lower extremity, diabetes, and incontinence. Older patients are also at increased risk for the formation of pressure injuries due to skin changes associated with aging, including thinning of the dermis and epidermis, resulting in decreased resistance to shear forces.
- **Option C:** The pressure of an individual's body weight or pressure from a medical device above a certain threshold for a prolonged period is thought to be the cause of pressure injuries. In patients with sensory deficits, an absent pressure feedback response may result in sustained pressure for a prolonged period, leading to tissue injury. Many factors are identified in contributing to pressure ulcer and injury formation, such as increased arteriole pressure, shearing forces, friction, moisture, and nutrition status.
- **Option D:** Pressure injuries of the skin and soft tissues affect an estimated 1 to 3 million people in the United States each year. The incidence differs based on the clinical setting. For example, the prevalence of pressure injuries among hospitalized patients is 5% to 15%, with the percentage considerably higher in some long-term care environments and intensive care units.

98. A nurse is caring for a client with unstable ventricular tachycardia. The nurse instructs the client to do which of the following, if prescribed, during an

episode of ventricular tachycardia?

- A. Breathe deeply, regularly, and easily.
- B. Inhale deeply and cough forcefully every 1 to 3 seconds.
- C. Lie down flat in bed.
- D. Remove any metal jewelry.

Correct Answer: B. Inhale deeply and cough forcefully every 1 to 3 seconds.

Cough Cardiopulmonary Resuscitation (CPR) sometimes is used in the client with unstable ventricular tachycardia. The nurse tells the client to use cough CPR, if prescribed, by inhaling deeply and coughing forcefully every 1 to 3 seconds. Cough CPR may terminate the dysrhythmia or sustain the cerebral and coronary circulation for a short time until other measures can be implemented. A nurse or physician can instruct and coach the patients to cough forcefully every one to three seconds during the initial seconds of a sudden arrhythmia. But because it's not effective in all patients, it shouldn't delay definitive treatment.

- **Option A:** Asymptomatic patients with non-sustained ventricular tachycardia (VT) and no underlying cardiac comorbidities require no additional therapy. Patients that are symptomatic and without cardiac comorbidities should be started on a beta-blocker due to favorable efficacy and safety profile.
- **Option C:** If these patients continue to have episodes of non-sustained VT despite beta-blocker therapy, or cannot tolerate beta-blocker therapy, a calcium channel with atrioventricular nodal action such as verapamil or diltiazem can be used.
- **Option D:** Patients with sustained monomorphic ventricular tachycardia (SMVT) that are unstable should be managed following advanced cardiac life support (ACLS) guidelines. Hemodynamically stable patients should be pharmacologically cardioverted using an antiarrhythmic medication. Intravenous amiodarone or procainamide can be used for this purpose.

99. Nurse Bennet is a community nurse practicing primary prevention for psychiatric disorders in children. On which of the following risk factors would he focus?

- A. Being raised in a single-parent home
- B. Family history of mental illness
- C. Lack of peer friendship
- D. Family culture

Correct Answer: B. Family history of mental illness

Abnormal genes and family history of mental illness have been implicated in many psychiatric disorders occurring in children and adolescents. Genes associated with mental health disorders have been reported to show high expression throughout the lifespan, beginning in the 2nd trimester and impacting neurodevelopmental processes, which may explain the early ages of onset.

- **Option A:** There is no evidence that being raised in a single-parent home will increase a child's risk of developing a psychiatric disorder. Like adults, children and adolescents vary in temperament. Some are shy and reticent; others are socially exuberant. Some are methodical and cautious; others are impulsive and careless. Whether a child is behaving like a typical child or has a disorder

is determined by the presence of impairment and the degree of distress related to the symptoms.

- **Option C:** Children who have problems with peers and withdraw from social interaction may have a psychiatric disorder; however, the nurse noting this problem would be practicing secondary, not primary, prevention. Children also exist in the context of environmental stressors such as the COVID-19 pandemic and military conflict. The resultant disruption of critical routines and isolation from extended family, peers, teachers, and cultural and religious groups have a significant impact, especially on the most vulnerable groups.
- **Option D:** Family culture is not a risk factor unless the parental behavior is dramatically atypical from the surrounding culture. Children exist in the context of a family system, and that system has a profound effect on children's symptoms and behaviors; normal children living in a family troubled by domestic violence and substance abuse may superficially appear to have one or more mental disorders.

100. The nurse is teaching the parents of a newborn with osteogenesis imperfecta. The nurse should tell the parents:

- A. That the baby will need daily calcium supplements
- B. To lift the baby by the buttocks when diapering
- C. That the condition is a temporary one
- D. That only the bones are affected by the disease

Correct Answer: B. To lift the baby by the buttocks when diapering

- Option B: Osteogenesis imperfecta (brittle bone disease) is a genetic disorder that causes the bone to break easily. Parents should lift the baby with this condition by the buttocks rather than the ankles when diapering to prevent fractures.
- Option A: Children with osteogenesis imperfecta have normal calcium and phosphorus levels.
- Option C: The condition is not temporary.
- Option D: Teeth and the sclera are also affected.