

Kevin's Review - 85 NCLEX Practice Questions

1. A 62-year-old female patient visits the cardiology clinic after experiencing episodes of chest discomfort and shortness of breath. After her initial evaluation, the cardiologist suggests an echocardiogram to visualize the heart's structure and function. Upon reviewing the echocardiogram results, it becomes apparent that the patient has a blood flow anomaly, which the nurse suspects might be due to valve dysfunction. The nurse uses this opportunity to educate the patient about the heart's anatomy and blood flow using a visual aid. With certain components missing from the diagram, the patient is challenged to recall the order in which blood flows through the heart. Given the echocardiogram findings and the subsequent discussion on heart function, which of the following sequences represents the accurate path of blood flow through the heart?

- A. (1) Tricuspid Valve, (2) Aortic Valve, (3) Pulmonary Circulation, (4) Mitral Valve, (5) Pulmonic Valve
- B. (1) Mitral Valve, (2) Pulmonic Valve, (3) Pulmonary Circulation, (4) Tricuspid Valve, (5) Aortic Valve
- C. (1) Mitral Valve, (2) Aortic Valve, (3) Pulmonary Circulation, (4) Tricuspid Valve, (5) Pulmonic Valve
- D. (1) Tricuspid Valve, (2) Pulmonic Valve, (3) Pulmonary Circulation, (4) Mitral Valve, (5) Aortic Valve

Correct Answer: D. (1) Tricuspid Valve, (2) Pulmonic Valve, (3) Pulmonary Circulation, (4) Mitral Valve, (5) Aortic Valve

Blood enters the heart through two large veins, the inferior and superior vena cava, emptying oxygen-poor blood from the body into the right atrium. As the atrium contracts, blood flows from your right atrium into your right ventricle through the open tricuspid valve. When the ventricle is full, the tricuspid valve shuts. This prevents blood from flowing backward into the right atrium while the ventricle contracts. As the ventricle contracts, blood leaves the heart through the pulmonic valve, into the pulmonary artery, and to the lungs, where it is oxygenated. The oxygenated blood then returns to the heart through the pulmonary veins. The pulmonary veins empty oxygen-rich blood from the lungs into the left atrium. As the atrium contracts, blood flows from your left atrium into your left ventricle through the open mitral valve. When the ventricle is full, the mitral valve shuts. This prevents blood from flowing backward into the atrium while the ventricle contracts. As the ventricle contracts, blood leaves the heart through the aortic valve, into the aorta, and into the body.

- **Option A:** Incorrect order. Blood doesn't flow from the tricuspid valve directly to the aortic valve. It must first pass through the right ventricle, the pulmonic valve, the pulmonary circulation, the left atrium, and then the mitral valve before reaching the aortic valve.
- **Option B:** This order starts with the left side of the heart and moves to the right side before moving back to the left, which is not the correct flow of blood.
- **Option C:** Blood doesn't flow from the mitral valve directly to the aortic valve without first passing through the left ventricle. Additionally, this sequence has the blood traveling backward from the pulmonary circulation to the tricuspid valve.

2. During a cardiac catheterization blood samples from the right atrium, right ventricle, and pulmonary artery are analyzed for their oxygen content. Normally:

- A. All contain less CO₂ than does pulmonary vein blood.
- B. All contain more oxygen than does pulmonary vein blood.

- C. The samples of blood all contain about the same amount of oxygen.
- D. Pulmonary artery blood contains more oxygen than the other samples.

Correct Answer: C. The samples of blood all contain about the same amount of oxygen

Blood samples from the right atrium, right ventricle, and pulmonary artery would all be about the same with regard to oxygen concentration. Such blood contains slightly less oxygen than does systemic arterial blood.

- **Option A:** The right atrium receives blood from the body. This blood is low in oxygen. This is the blood from the veins. The right ventricle pumps the blood from the right atrium into the lungs to pick up oxygen and remove carbon dioxide. The left atrium receives blood from the lungs. This blood is rich in oxygen.
- **Option B:** The pulmonary veins bring oxygen-rich blood to the left atrium. The pulmonary artery carries oxygen-poor blood from the right ventricle into the lungs, where oxygen enters the bloodstream.
- **Option D:** The inferior and superior vena cava bring oxygen-poor blood from the body into the right atrium. The aorta carries oxygen-rich blood to the body from the left ventricle.

3. During the second day of hospitalization of the client after a Myocardial Infarction. Which of the following is an expected outcome?

- A. Able to perform self-care activities without pain
- B. Severe chest pain
- C. Can recognize the risk factors of Myocardial Infarction
- D. Can Participate in cardiac rehabilitation walking program

Correct Answer: A. Able to perform self-care activities without pain

By the 2nd day of hospitalization after suffering a Myocardial Infarction, clients are able to perform care without chest pain. Instruct the patient to report pain immediately. Provide a quiet environment, calm activities, and comfort measures. Approach the patient calmly and confidently. Decreases external stimuli, which may aggravate anxiety and cardiac strain, limit coping abilities, and adjustment to the current situation.

- **Option B:** Severe chest pain during the second day of hospitalization of the client should be a cause of immediate concern. Monitor and document characteristics of pain, noting verbal reports, nonverbal cues (moaning, crying, grimacing, restlessness, diaphoresis, clutching of chest) and BP or heart rate changes.
- **Option C:** The client may recognize the risks of MI but not necessarily on the second day of hospitalization. Review history of previous angina, anginal equivalent, or MI pain. Discuss family history if pertinent. Delay in reporting pain hinders pain relief and may require an increased dosage of medication to achieve relief. In addition, severe pain may induce shock by stimulating the sympathetic nervous system, thereby creating further damage and interfering with diagnostics and relief of pain.
- **Option D:** A cardiac rehabilitation walking program might be too soon for the client, but can be included in the discharge instructions. Explain the pattern of graded increase of activity level: getting up to commode or sitting in a chair, progressive ambulation, and resting after meals. Progressive activity provides a controlled demand on the heart, increasing strength and preventing overexertion.

4. To assess the kidney function of a patient with an indwelling urinary (Foley) catheter, the nurse measures his hourly urine output. She should notify the physician if the urine output is:

- A. Less than 30 ml/hour
- B. 64 ml in 2 hours
- C. 90 ml in 3 hours
- D. 125 ml in 4 hours

Correct Answer: A. Less than 30 ml/hour

A urine output of less than 30ml/hour indicates hypovolemia or oliguria, which is related to kidney function and inadequate fluid intake. Urine output is a noninvasive method to measure fluid balance once intravascular volume has been restored. Normal urine output is defined as 1.5 to 2 mL/kg per hour

- **Option B:** Micturition process entails contraction of the detrusor muscle and relaxation of the internal and external urethral sphincter. The process is slightly different based on age. Children younger than three years old have the micturition process coordinated by the spinal reflex.
- **Option C:** It starts with urine accumulation in the bladder that stretches the detrusor muscle causing activation of stretch receptors. The stretch sensation is carried by the visceral afferent to the sacral region of the spinal cord where it synapses with the interneuron that excites the parasympathetic neurons and inhibits the sympathetic neurons. The visceral afferent impulse concurrently decreases the firing of the somatic efferent that normally keeps the external urethral sphincter closed allowing reflexive urine output.
- **Option D:** Low bladder volume activates the pontine storage center which activates the sympathetic nervous system and inhibits the parasympathetic nervous system cumulatively allowing the accumulation of urine in the bladder. High bladder volume activates the pontine micturition center which activates the parasympathetic nervous system and inhibits the sympathetic nervous system as well as triggers awareness of a full bladder; consequently leading to relaxation of the internal sphincter and a choice to relax the external urethral sphincter once ready to void.

5. A 2-year-old is to be admitted in the pediatric unit. He is diagnosed with febrile seizures. In preparing for his admission, which of the following is the most important nursing action?

- A. Place a urine collection bag and specimen cup at the bedside
- B. Order a stat admission CBC
- C. Pad the side rails of his bed
- D. Place a cooling mattress on his bed

Correct Answer: C. Pad the side rails of his bed

The child has a diagnosis of febrile seizures. Precautions to prevent injury and promote safety should take precedence. Febrile seizure status is defined as a seizure lasting longer than 30 minutes. Therefore, prompt treatment of prolonged seizures of a febrile nature is as necessary as prompt treatment of prolonged seizures arising from other etiologies.

- **Option A:** Preparing for routine laboratory studies is not as high a priority as preventing injury and promoting safety. A patient with a normal general and neurologic exam, whose history is consistent with a simple febrile seizure, does not need a further laboratory, imaging, or neurophysiologic evaluation.
- **Option B:** Preparing for routine laboratory studies is not as high a priority as preventing injury and promoting safety. A lumbar puncture may be a consideration in the setting of fever and seizures. For a patient with the appropriate history of a febrile seizure and a rapid return to baseline, no lumbar puncture is necessary.
- **Option D:** A cooling blanket must be ordered by the physician and is usually not used unless other methods for the reduction of fever have not been successful. There is no specific treatment for simple or complex febrile seizures other than appropriate treatment for underlying etiologies driving the ongoing febrile illness. Antipyretics have not been shown to prevent a recurrence of febrile seizures.

6. The nurse in charge must monitor a patient receiving chloramphenicol for adverse drug reaction. What is the most toxic reaction to chloramphenicol?

- A. Lethal arrhythmias
- B. Malignant hypertension
- C. Status epilepticus
- D. Bone marrow suppression

Correct Answer: D. Bone marrow suppression

The most toxic reaction to chloramphenicol is bone marrow suppression. Chloramphenicol is a synthetically manufactured broad-spectrum antibiotic. It was initially isolated from the bacteria *Streptomyces venezuelae* in 1948 and was the first bulk produced synthetic antibiotic. However, chloramphenicol is a rarely used drug in the United States because of its known severe adverse effects, such as bone marrow toxicity and grey baby syndrome. Chloramphenicol is not known to cause lethal arrhythmias, malignant hypertension, or status epilepticus.

- **Option A:** Chloramphenicol is associated with severe hematological side effects when administered systemically. Since 1982, chloramphenicol has reportedly caused fatal aplastic anemia, with possible increased risk when taken together with cimetidine. This adverse side effect can occur even with the topical administration of the drug, which is most likely due to the systemic absorption of the drug after topical application.
- **Option B:** Besides causing fatal aplastic anemia and bone marrow suppression, other side effects of chloramphenicol include ototoxicity with the use of topical ear drops, gastrointestinal reactions such as oesophagitis with oral use, neurotoxicity, and severe metabolic acidosis.
- **Option C:** Optic neuritis is the most commonly associated neurotoxic complication that can arise from chloramphenicol use. This adverse effect usually takes more than six weeks to manifest, presenting with either acute or subacute vision loss, with possible fundal changes. It may also present with peripheral neuropathy, which may present as numbness or tingling. If optic neuropathy occurs, the drug should be withdrawn immediately, which will usually lead to partial or complete recovery of vision.

7. Patricia, a 20-year-old college student with diabetes mellitus, requests additional information about the advantages of using a pen-like insulin delivery

device. The nurse explains that the advantages of these devices over syringes include:

- A. Accurate dose delivery
- B. Shorter injection time
- C. Lower cost with reusable insulin cartridges
- D. Use of a smaller gauge needle.

Correct Answer: A. Accurate dose delivery

These devices are more accurate because they are easy to use and have improved adherence to insulin regimens by young people because the medication can be administered discreetly. Once in use, most insulin analog vials, cartridges, and prefilled pens must be discarded after 28 days. This means that many patients who use a 10-ml vial end up either wasting insulin or using insulin beyond its recommended discard date. This is rarely a problem for patients using either a 3-ml prefilled pen or a reusable pen containing a 3-ml insulin cartridge.

- **Option B:** Injection time of insulin pens and the traditional insulin syringes have no significant difference. Patients must therefore keep the device in place with the button pressed in for 5–10 seconds. If the patient is using more than 50 units of insulin per dose, a good rule of thumb might be to instruct them to count to 10 regardless of the pen they are using to ensure complete absorption of the insulin.
- **Option C:** An additional issue is the greater prescription cost of insulin cartridges and prefilled insulin pens compared with insulin vials, although the cost to the patient may be the same depending on their coverage; in fact, if they have one copay per box of pens, the cost to the patient may actually be less per unit of insulin. It should be noted, however, that despite the higher unit cost of insulin in pen devices versus vials, several studies have found that overall diabetes-related treatment costs are lower with pen devices than with vial and syringe.
- **Option D:** For all insulin pen devices, a separate prescription for pen needles is required, with gauges ranging from 29 to 32 and in lengths from 5 to 12.7 mm, much like the traditional insulin syringes used. More recent developments have resulted in the introduction of safety needles with protective shields that not only reduce needle-stick injuries but may also allay patient anxieties about needle use.

8. Which of the following classes of drugs is most widely used in the treatment of cardiomyopathy?

- A. Antihypertensive
- B. Beta-adrenergic blockers
- C. Calcium channel blockers
- D. Nitrates

Correct Answer: B. Beta-adrenergic blockers

By decreasing the heart rate and contractility, beta-adrenergic blockers improve myocardial filling and cardiac output, which are primary goals in the treatment of cardiomyopathy.

- **Option A:** Antihypertensives aren't usually indicated because they would decrease cardiac output in clients who are often already hypotensive. Many antihypertensive drugs have their primary action

on systemic vascular resistance. Some of these drugs produce vasodilation by interfering with sympathetic adrenergic vascular tone (sympatholytics) or by blocking the formation of angiotensin II or its vascular receptors.

- **Option C:** Calcium channel blockers are sometimes used for the same reasons as beta-adrenergic blockers; however, they aren't as effective as beta-adrenergic blockers and cause increased hypotension. These channels are responsible for regulating the influx of calcium into muscle cells, which in turn stimulates smooth muscle contraction and cardiac myocyte contraction. In cardiac nodal tissue, L-type calcium channels play an important role in pacemaker currents, and in phase 0 of the action potentials.
- **Option D:** Nitrates aren't used because of their dilating effects, which would further compromise the myocardium. Nitrates exert their effects by dilating venous vessels, coronary arteries, and small arterioles; its maximal vasodilation is in the venous vessels.

9. Nurse Joey is assigned to care for a postoperative male client who has diabetes mellitus. During the assessment interview, the client reports that he's impotent and says he's concerned about its effect on his marriage. In planning this client's care, the most appropriate intervention would be to:

- A. Encourage the client to ask questions about personal sexuality.
- B. Provide time for privacy.
- C. Provide support for the spouse or significant other.
- D. Suggest referral to a sex counselor or other appropriate professional.

Correct Answer: D. Suggest referral to a sex counselor or other appropriate professional.

The nurse should refer this client to a sex counselor or other professional. Making appropriate referrals is a valid part of planning the client's care. Erectile Dysfunction (ED) is common in men with diabetes; these men tend to present with more severe and refractory ED compared to non-diabetic peers. While ED is the best established diabetes-related sexual dysfunction, ejaculatory and sexual desires issues may also occur in men.

- **Option A:** The nurse doesn't normally provide sex counseling. Diabetic neuropathy may impair autonomic and somatic nerve processes essential to erections. Diabetes is also associated with impaired relaxation of cavernosal smooth muscle due to endothelial-derived nitric oxide, which may be a side effect of glycosylation products.
- **Option B:** It is recommended that diabetic men be screened for the presence of low testosterone by checking serum total testosterone; sex hormone binding globulin and albumin should also be tested to assess for free and bioavailable testosterone.
- **Option C:** As with most aspects of diabetes care, routine exercise, careful monitoring of glucose levels, and usage of appropriate therapies to prevent hyperglycemia are key to preventing progression of diabetes-induced sexual problems. Weight management and dietary prudence are also critical in the management of diabetes.

10. The nurse is assigned to care for a female client with herpes zoster (Shingles). Which of the following characteristics would the nurse expect to note when assessing the lesions of this infection?

- A. Clustered skin vesicles
- B. A generalized body rash
- C. Small blue-white spots with a red base
- D. Cutaneous lesions on the hands, feet, and buttocks

Correct Answer: A. Clustered skin vesicles

The primary lesion of herpes zoster is a vesicle. The classic presentation is grouped vesicles on an erythematous base along a dermatome. Because the lesions follow nerve pathways, they do not cross the midline of the body.

- **Option B:** Generalized rashes are normally the result of skin inflammation that is observed in eczema and atopic dermatitis.
- **Option C:** Small blue-white spot with a red base is a characteristic of a Koplik spot that is seen in measles.
- **Option D:** Cutaneous lesions on the hands, feet, and buttocks are signs of Hand-foot-and-mouth disease (HFMD).

11. A male client suffers acute respiratory distress syndrome as a consequence of shock. The client's condition deteriorates rapidly, and endotracheal (ET) intubation and mechanical ventilation are initiated. When the high-pressure alarm on the mechanical ventilator sounds, the nurse starts to check for the cause. Which condition triggers the high-pressure alarm?

- A. Kinking of the ventilator tubing.
- B. A disconnected ventilator tube.
- C. An ET cuff leak.
- D. A change in the oxygen concentration without resetting the oxygen level alarm.

Correct Answer: A. Kinking of the ventilator tubing

Conditions that trigger the high-pressure alarm include kinking of the ventilator tubing, bronchospasm or pulmonary embolism, mucus plugging, water in the tube, coughing or biting on the ET tube, and the client's being out of breathing rhythm with the ventilator.

- **Option B:** A disconnected ventilator tube or an ET cuff leak would trigger the low-pressure alarm. The low-pressure alarm indicates a possible disconnection or mechanical ventilator malfunction.
- **Option C:** The high peak pressure alarm indicates bronchospasm, retained secretions, obstruction of ET tube, atelectasis, acute respiratory distress syndrome (ARDS), or pneumothorax, among others.
- **Option D:** Changing the oxygen concentration without resetting the oxygen level alarm would trigger the oxygen alarm. Listen for alarms. Know the range in which the ventilator will set off the alarm and how to troubleshoot.

12. Reye's syndrome is a rare and severe illness affecting children and teenagers. Its development has been linked with the use of aspirin and which of the following?

- A. Meningitis
- B. Encephalitis
- C. Strep throat
- D. Varicella

Correct Answer: D. Varicella

Reye's syndrome has been linked with the ingestion of aspirin in children with viral infections like varicella. Epidemiologic studies found a link between the use of salicylate and the development of Reye syndrome. While less than 0.1% of children who took aspirin developed Reye syndrome, more than 80% of children diagnosed with Reye syndrome had taken aspirin in the preceding 3 weeks.

- **Option A:** Reye syndrome is most commonly precipitated by viral pathogens such as influenza A and B as well as varicella. Center for Disease Control and Prevention (CDC) surveillance data between 1980 and 1997 found that cases of Reye syndrome were preceded by influenza infection 73%, varicella infection 21%, and gastroenteritis infections 14% of the time.
- **Option B:** Encephalitis is a component of Reye's syndrome. Features such as lack of viral prodrome, family history of IEM, a family history of unexplained encephalopathy, preexisting neurologic symptoms, and patient age less than one year make the diagnosis of Reye syndrome less likely.
- **Option C:** There is no association between bacterial infections such as strep throat and the development of Reye's syndrome. Serum salicylate concentrations were detectable in 82% of cases. Less commonly associated viral associations are seen with coxsackie, parainfluenza, Epstein-Barr (EBV), cytomegalovirus (CMV), adenovirus, and hepatitis. Bacterial pathogens such as Chlamydia, Bordetella pertussis, Mycoplasma, and Shigella have also been associated with the development of Reye syndrome.

13. The community nurse visits the home of George, a child recently diagnosed with autism. The parents express feelings of shame and guilt about having somehow caused this problem. Which statement by the nurse would best help alleviate parental guilt?

- A. "Autism is a rare disorder. Your other children shouldn't be affected."
- B. "The specific cause of autism is unknown. However, it is known to be associated with problems in the structure of and chemicals in the brain."
- C. "Sometimes a lack of prenatal care can be the cause of autism."
- D. "Although autism is genetically inherited if you didn't have testing you could not have known this would happen."

Correct Answer: B. "The specific cause of autism is unknown. However, it is known to be associated with problems in the structure of and chemicals in the brain."

This statement is factual and does not cast blame on anything the parents did or did not do. The cause is still not known. The onset is variable. It develops in days to weeks, while in other cases, it develops slowly. It is not known whether epilepsy causes it, but children that have an autism spectrum disorder have an increased risk of having epilepsy.

- **Option A:** The parents are not questioning whether other children will be affected; their concern is directed to the current situation and their feelings about it. Autism spectrum disorder is becoming

increasingly prevalent, and its prevalence is reported to be 1 in 68. Childhood disintegrative disorder is a rare disease, with only 1.7 in 100,000 cases, and the prevalence of this disease is estimated to be 1 to 2 in 100,000.

- **Option C:** Lack of prenatal care may be a risk factor in pervasive developmental disorders, but it is not the cause of autism. There is no clear-cut pathology of the disease, so the causes of childhood disintegrative disorder are still unknown. Regression occurs in children who have achieved normal developmental milestones, and this regression sometimes occurs very rapidly.
- **Option D:** Although it is thought that there is a genetic component in autism, research has not identified specific genes, and there is no diagnostic test for this. The statement is misleading and would not alleviate guilt. This condition develops in days or overtime and is most commonly seen in the fourth year of life, but there can be variation.

14. Mr. Bartowski who is newly diagnosed with rheumatoid arthritis asks the community nurse how stress can affect his disease. The nurse would explain that:

- A. The psychological experience of stress will not affect symptoms of physical disease.
- B. Psychological stress can cause painful emotions, which are harmful to a person with an illness.
- C. Stress can overburden the body's immune system, and therefore one can experience increased symptoms.
- D. The body's stress response is stimulated when there are major disruptions in one's life.

Correct Answer: C. Stress can overburden the body's immune system, and therefore one can experience increased symptoms.

The stress response causes stimulation of the hypothalamic-pituitary-adrenal axis, which can further compromise an immune system that has been activated by the autoimmune disorder of rheumatoid arthritis. Consequently, the client can expect disease symptoms to exacerbate when under stress.

- **Option A:** Research says that rheumatoid arthritis can be caused by stress. Stress triggers rheumatoid arthritis by setting off the immune system's inflammatory response in which cytokines are released. Cytokines are chemicals that play an important role in inflammation and can increase the severity of rheumatoid arthritis in some patients. The greater the exposure to stress, the greater the inflammation becomes. This triggers a rheumatoid arthritis flare.
- **Option B:** Around one out of five patients with rheumatoid arthritis has depression due to the illness. Depression, in turn, further aggravates rheumatoid arthritis and leads to a greater number of painful joints, reduced functioning (higher number of days in bed), and increased visits to the doctor's clinic. All these further affect the patient's mental health and cause more stress and depression.
- **Option D:** Stress can cause rheumatoid arthritis and rheumatoid arthritis itself can also cause stress. Treatments that don't work or their side effects might affect the patient's mind. Joint pain and swelling can make routine activities difficult for the patient. All these things that come with rheumatoid arthritis can make the patient stressed, which can further trigger joint inflammation.

15. An adolescent brings a physician's note to school stating that he is not to participate in sports due to a diagnosis of Osgood-Schlatter disease. Which of the following statements about the disease is correct?

- A. The condition was caused by the student's competitive swimming schedule.
- B. The student will most likely require surgical intervention.
- C. The student experiences pain in the inferior aspect of the knee.
- D. The student is trying to avoid participation in physical education.

Correct Answer: C. The student experiences pain in the inferior aspect of the knee.

Osgood-Schlatter disease occurs in adolescents in rapid growth phase when the infrapatellar ligament of the quadriceps muscle pulls on the tibial tubercle, causing pain and swelling in the inferior aspect of the knee. Osgood-Schlatter disease is commonly caused by activities that require repeated use of the quadriceps, including track and soccer.

- **Option A:** Swimming is not a likely cause. Osgood Schlatter disease is an overuse injury that occurs in active adolescent patients. It occurs secondary to repetitive strain and microtrauma from the force applied by the strong patellar tendon at its insertion into the relatively soft apophysis of the tibial tubercle. This force results in irritation and severe cases partial avulsion of the tibial tubercle apophysis.
- **Option B:** The condition is usually self-limited, responding to ice, rest, and analgesics. The condition is self-limited and occurs secondary to repetitive extensor mechanism stress activities such as jumping and sprinting. Ultimately, the condition is self-limiting but may persist for up to 2 years until the apophysis fuses. Treatment includes relative rest and activity modification from the offending activity as guided by the level of pain.
- **Option D:** Continued participation will worsen the condition and the symptoms. Force is increased with higher levels of activity and especially after periods of rapid growth. Rarely trauma may lead to a full avulsion fracture. Predisposing factors include poor flexibility of quadriceps and hamstrings or other evidence of extensor mechanism malalignment.

16. Which of the following information, when voiced by the mother, would indicate to the nurse that she understands home care instructions following the administration of diphtheria, tetanus, and pertussis injection?

- A. Measures to reduce fever.
- B. Need for dietary restrictions.
- C. Reasons for subsequent rash.
- D. Measures to control subsequent diarrhea.

Correct Answer: A. Measures to reduce fever

The pertussis component may result in fever and the tetanus component may result in injection soreness. Therefore, the mother's verbalization of information about measures to reduce fever indicates understanding.

- **Option B:** No dietary restrictions are necessary after this injection is given.
- **Option C:** Subsequent rash is more likely to be seen 5 to 10 days after receiving the MMR vaccine, not diphtheria, pertussis, and tetanus vaccine.
- **Option D:** Diarrhea is not associated with this vaccine. Common side effects include soreness or swelling where the shot was given, fever, irritability, feeling tired, loss of appetite, and vomiting.

17. Mr. Lewis, a 45-year-old photographer, visits the ophthalmologist due to a recent decline in his night vision. He explains that clear images during low light are crucial for his profession. While discussing potential reasons and treatments, Mr. Lewis showcases a keen interest in understanding the deeper structures of the eye and their functions. The ophthalmologist decides to engage his curiosity by asking him about the anatomy of the eye, focusing on the innermost layer that plays a pivotal role in ensuring optimal visual clarity. During a patient's eye examination, the healthcare provider discusses the anatomy of the eye and its different layers. Which of the following best describes the innermost tunic that covers the posterior five-sixths of the eye and plays a crucial role in nourishing the retina, regulating temperature, and optimizing visual clarity by reducing glare?

- A. Choroid
- B. Cornea
- C. Sclera
- D. Retina

Correct Answer: A. Choroid

The choroid is a vascular layer situated between the retina and the sclera. It covers the posterior five-sixths of the eye and provides nourishment to the outer retina. It is heavily pigmented, which helps in preventing light reflection within the eye, thereby reducing glare and optimizing visual clarity.

- **Option B:** The cornea is the transparent, anterior portion of the eye's outer covering. It allows light to enter the eye and helps to focus it. While crucial for vision, it doesn't play a role in nourishing the retina or reducing glare.
- **Option C:** The sclera is the white, opaque portion of the eye's outer covering. It provides protection and structural integrity to the eye. Though it covers the majority of the eye's surface area, it doesn't have the functions attributed to the choroid.
- **Option D:** The retina is the innermost layer of the eye, containing light-sensitive cells (photoreceptors) that convert light into neural signals. While it is essential for vision, the retina itself doesn't nourish other structures or reduce glare.

18. A male client complains of sporadic epigastric pain, yellow skin, nausea, vomiting, weight loss, and fatigue. Suspecting gallbladder disease, the physician orders a diagnostic workup, which reveals gallbladder cancer. Which nursing diagnosis may be appropriate for this client?

- A. Chronic low self-esteem
- B. Disturbed body image
- C. Anticipatory grieving
- D. Impaired swallowing

Correct Answer: C. Anticipatory grieving

- **Option C:** Anticipatory grieving is an appropriate nursing diagnosis for this client because few clients with gallbladder cancer live more than 1 year after diagnosis.
- **Option A:** Chronic low self-esteem isn't an appropriate nursing diagnosis at this time because the diagnosis has just been made.
- **Option B:** Although surgery typically is done to remove the gallbladder and, possibly, a section of the liver, it isn't disfiguring and doesn't cause Disturbed body image.
- **Option D:** Impaired swallowing isn't associated with gallbladder cancer.

19. A patient with ovarian cancer tells the nurse, "I don't think my husband cares about me anymore. He rarely visits me." On one occasion when the husband was present, he told the nurse he just could not stand to see his wife so ill and never knew what to say to her. An appropriate nursing diagnosis in this situation is

- A. Risk for caregiver role strain related to burdens of caregiving responsibilities
- B. Interrupted family processes related to the effect of illness on family members
- C. Compromised family coping related to disruption in lifestyle and role changes
- D. Impaired home maintenance related to perceived role changes

Correct Answer: B. Interrupted family processes related to the effect of illness on family members

- **Option B:** The data indicate that this diagnosis is most appropriate because the family members are impacted differently by the patient's cancer diagnosis.
- **Options A and C:** There are no data to suggest a change in lifestyle or role as an etiology.
- **Option D:** The data do not support impairment in home maintenance or a burden caused by caregiving responsibilities.

20. When assessing a client diagnosed with impulse control disorder, the nurse observes violent, aggressive, and assaultive behavior. Which of the following assessment data is the nurse also likely to find? Select all that apply.

- A. The client functions well in other areas of his life.
- B. The degree of aggressiveness is out of proportion to the stressor.
- C. The violent behavior is most often justified by the stressor.
- D. The client has a history of parental alcoholism and chaotic, abusive family life.
- E. The client has no remorse about the inability to control his anger.

Correct Answer: A, B, & D.

Impulse control disorders are pervasive and often lifelong manifestations of disabling behavioral patterns. Unchecked, these disorders can result in deleterious outcomes for those afflicted. Disinhibited psychopathology has precipitated the nosologic identification of 'impulse control disorders' (ICD), in DSM 5. Those falling under the taxon of ICD experience "failure to resist an impulse, temptation, or drive to perform an act that is harmful to the other person or others."

- **Option A:** A client with an impulse control disorder who displays violent, aggressive, and assaultive behavior generally functions well in other areas of his life. Between explosive episodes, these patients will demonstrate appropriate behavior; however, upon exposure to minimal adversity, these patients will respond with violent, disproportionate tantrums, which may seem “out of character.” Incidentally, the rapidity of the escalation is mirrored, temporally, by the de-escalation.
- **Option B:** The degree of aggressiveness is typically out of proportion with the stressor. The patient may feel like a hapless bystander, victim to his impulses. Most importantly, these behavior patterns are extreme and inappropriate when contrasted with those of similar biological and developmental age, resulting in severe psychosocial and functional impairments.
- **Option C:** The disorders encompassed within impulse control disorder (ICD) are identified as externalizing disorders, as these individuals express hostility and resentment externally, made manifest by conflicts with others; whereas, those with internalizing disorders direct their distress inwardly onto themselves, ego-dystonically.
- **Option D:** Such a client commonly has a history of parental alcoholism and chaotic family life, and often verbalizes sincere remorse and guilt for the aggressive behavior. Social factors implicated in the development of ICD include low socioeconomic status, community violence, lack of structure, neglect, abusive environment, and deviant peer relations.
- **Option E:** Antisocial personality disorder causes people to act without thinking about how they’re affecting others. Someone with ASPD may break rules or laws. They often show no remorse and take no responsibility. Psychotherapy and certain medications may help people with ASPD.

21. Which of the following are the most commonly assessed findings in cystitis?

- A. Frequency, urgency, dehydration, nausea, chills, and flank pain
- B. Nocturia, frequency, urgency dysuria, hematuria, fever, and suprapubic pain
- C. Dehydration, hypertension, dysuria, suprapubic pain, chills, and fever
- D. High fever, chills, flank pain nausea, vomiting, dysuria, and frequency

Correct Answer: B. Manifestations of cystitis include, frequency, urgency, dysuria, hematuria nocturia, fever, and suprapubic pain.

Dehydration, hypertension, and chills are not typically associated with cystitis. High fever chills, flank pain, nausea, vomiting, dysuria, and frequency are associated with pyelonephritis.

- **Option A:** Cystitis usually develops due to the colonization of the periurethral mucosa by bacteria from the fecal or vaginal flora and ascension of such pathogens to the urinary bladder. Uropathogens may have microbial virulence factors that allow them to escape host defenses and invade host tissues in the urinary tract.
- **Option C:** Acute cystitis often presents with urinary symptoms which include dysuria, urinary frequency urgency, suprapubic pain or tenderness, and occasionally hematuria. Based on a systematic review examining history and examination findings of women with uncomplicated UTI, the combination of dysuria and urinary frequency in the absence of vaginal discharge or irritation is highly predictive of uncomplicated cystitis.
- **Option D:** Cystitis may be differentiated from pyelonephritis by the absence of systemic findings such as fever, chills, or sepsis. Findings such as flank pain, costovertebral angle tenderness, nausea, and vomiting are also more indicative of upper UTI or pyelonephritis.

22. A 32-year-old client, who is on an anticoagulant medication due to a history of deep vein thrombosis, arrives at the emergency department after accidentally spilling a pot of boiling water mixed with hot oil on their right arm while attempting to deep-fry food at home. The client is in significant pain and reports that the burn occurred approximately 30 minutes ago. Upon assessment, the nurse observes a large burned area on the client's right arm with a mix of pink and mottled red areas, blisters, and signs of active bleeding from the blistered areas. The burned area is very painful to touch and the client is visibly anxious. Based on the assessment findings and the client's medical history, how will the nurse categorize this burn injury?

- A. Full-thickness
- B. Partial-thickness superficial
- C. Partial-thickness deep
- D. Full-thickness deep

Correct Answer: C. Partial-thickness deep

Deep partial-thickness burns are pink or red in color, swollen, painful, with blisters that may ooze a clear fluid. Deep partial-thickness (second-degree) involves the deeper dermis. Healing occurs in 3 to 8 weeks with scarring present.

- **Option A:** Third-degree involves the full thickness of skin and subcutaneous structures. It appears white or black/brown. With pressure, no blanching occurs. The burn is leathery and dry. There is minimal to no pain because of decreased sensation.
- **Option B:** The characteristics of the wound meet the criteria for a superficial partial-thickness injury: color that is red; without blisters and pain present. Superficial (first-degree) involves the epidermis of the skin only. It appears pink to red, there are no blisters, and it is dry. It is moderately painful. Superficial burns heal without scarring within 5 to 10 days.
- **Option D:** Blisters are not seen with full-thickness burns and are rarely seen with deep partial-thickness burns. Full-thickness burns heal by contracture and take greater than 8 weeks. Full-thickness burns require skin grafting.

23. A female client with a urinary tract infection is prescribed co-trimoxazole (trimethoprim-sulfamethoxazole). Nurse Dolly should provide which medication instruction?

- A. "Take the medication with food."
- B. "Drink at least eight 8-oz glasses of fluid daily."
- C. "Avoid taking antacids during co-trimoxazole therapy."
- D. "Don't be afraid to go out in the sun."

Correct Answer: B. "Drink at least eight 8-oz glasses of fluid daily."

When receiving a sulfonamide such as co-trimoxazole, the client should drink at least eight 8-oz glasses of fluid daily to maintain a urine output of at least 1,500 ml/day. Otherwise, inadequate urine output may lead to crystalluria or tubular deposits. Sulfamethoxazole/trimethoprim may be administered

orally without regard to meals. However, it is best to take it with at least 8 ounces of water.

- **Option A:** For maximum absorption, the client should take this drug at least 1 hour before or 2 hours after meals. Administration of the two drugs is in a 1 to 5 ratio (trimethoprim: sulfamethoxazole) as a tablet formulation; this is so when they enter the body, their concentration throughout the blood/tissues is 1 to 20, which is the peak synergistic desired effect ratio of the two drugs in combination.
- **Option C:** No evidence indicates that antacids interfere with the effects of sulfonamides. When initiating therapy with trimethoprim/sulfamethoxazole, some patients may require a baseline blood urea nitrogen and serum creatinine ratio, frequent complete blood counts (CBC), and electrolyte measurements if renal impairment is known or if taking a drug that has interactions with potassium.
- **Option D:** To prevent a photosensitivity reaction, the client should avoid direct sunlight during co-trimoxazole therapy. The primary adverse effects of trimethoprim/sulfamethoxazole include rash, photosensitivity, as well as folate deficiency.

24. Lisa, a client with altered urinary function, is under the care of nurse Tine. Which intervention is appropriate to include when developing a plan of care for Lisa who is experiencing urinary dribbling?

- A. Inserting an indwelling Foley catheter.
- B. Having the client perform Kegel exercises.
- C. Keeping the skin clean and dry.
- D. Using pads or diapers on the client.

Correct Answer: B. Having the client perform Kegel exercises.

Kegel exercises, which help strengthen the muscles in the perineal area, are used to maintain urinary continence. To perform these exercises, the client tightens pelvic floor muscles for 4 seconds 10 times at least 20 times each day, stopping and starting the urinary flow.

- **Option A:** Inserting an indwelling Foley catheter increases the risk for infection and should be avoided. Begin bladder retraining per protocol when appropriate (fluids between certain hours, digital stimulation of trigger area, contraction of abdominal muscles, Credé's maneuver).
- **Option C:** Proper perineal hygiene decreases the risk of skin irritation or breakdown and the development of ascending infection. The nurse should encourage the client to develop a toileting schedule based on normal urinary habits. However, suggesting bathroom use every 8 hours may be too long an interval to wait.
- **Option D:** Pads or diapers should be used only as a resort. Refer to the urinary continence specialist as indicated. Collaboration with specialists is helpful for developing an individual plan of care to meet a patient's specific needs using the latest techniques, continence products.

25. Nurse Fey is aware that the drug of choice for treating Tourette syndrome?

- A. Fluoxetine (Prozac)
- B. Fluvoxamine (Luvox)
- C. Haloperidol (Haldol)
- D. Paroxetine (Paxil)

Correct Answer: C. Haloperidol (Haldol)

Haloperidol is the drug of choice for treating Tourette syndrome. Antipsychotic medications have been the most extensively studied. Haloperidol and pimozide are the first-generation antipsychotics with the most data showing efficacy in reducing tic severity. However, their use is limited by potentially severe side effects such as sedation, acute dystonia, and other drug-induced movement disorders like weight gain, and prolonged QTc interval (pimozide).

- **Option A:** Fluoxetine has FDA-approval for major depressive disorder (age eight and older), obsessive-compulsive disorder (age seven and older), panic disorder, bulimia, binge eating disorder, premenstrual dysphoric disorder, bipolar depression (as an adjunct with olanzapine also known as Symbyax), and treatment-resistant depression when used in combination with olanzapine.
- **Option B:** Fluvoxamine is used to treat obsessive-compulsive disorder (OCD). It helps decrease persistent/unwanted thoughts (obsessions) and urges to perform repeated tasks (compulsions such as hand-washing, counting, checking) that interfere with daily living. Fluvoxamine is known as a selective serotonin reuptake inhibitor (SSRI). This medication works by helping to restore the balance of a certain natural substance (serotonin) in the brain.
- **Option D:** Paroxetine is a selective serotonin reuptake inhibitor (SSRI), and, as such, is identified as an antidepressant. It is FDA approved for major depressive disorder (MDD), obsessive-compulsive disorder (OCD), social anxiety disorder (SAD), panic disorder, posttraumatic stress disorder (PTSD), generalized anxiety disorder (GAD), and premenstrual dysphoric disorder (PMDD), vasomotor symptoms associated with menopause.

26. Lily , age 5, with an intelligence quotient of 65 is admitted to the hospital for evaluation. When planning care, the nurse should keep in mind that this child is:

- A. Within the lower range of normal intelligence
- B. Mildly retarded but educable
- C. Moderately retarded but trainable
- D. Completely dependent on others for care

Correct Answer: B. Mildly retarded but educable.

According to the American Association on Mental Deficiency, a person with an intelligence quotient (IQ) between 50 and 70 is classified as mildly mentally retarded but educable. However, it is no longer a standard to classify intellectual disability by IQ score alone. For instance, if an individual has an IQ below 70, but has a good adaptive function, the subject does not have an intellectual disability.

- **Option A:** On the other side, individuals with a normal, or even higher than normal IQ, may manifest severe deficits in adaptive functions and are, therefore, classified as having an intellectual disability. In turn, the current diagnosis of intellectual disability also considers a person's adaptive function.
- **Option C:** One with an IQ between 35 and 50 is classified as moderately retarded but trainable. The DSM-5 also has "Unspecified Intellectual Disability" (Intellectual Developmental Disorder) to describe individuals over the age of 5 suspected of having an intellectual disability who has difficulty completing required tests, usually because of limitations resulting from blindness, deafness, or concurrent mental illness.

- **Option D:** One with an IQ below 36 is severely and profoundly impaired, requiring custodial care. When initiating therapy, a healthcare provider must be aware of the various avenues of treating intellectual disability to orchestrate a multidisciplinary and individually tailored treatment appropriately.

27. Mr. Mendoza who has suffered a cerebrovascular accident (CVA) is too weak to move on his own. To help the client avoid pressure ulcers, Nurse Celia should:

- A. Turn him frequently.
- B. Perform passive range-of-motion (ROM) exercises.
- C. Reduce the client's fluid intake.
- D. Encourage the client to use a footboard.

Correct Answer: A. Turn him frequently.

The most important intervention to prevent pressure ulcers is frequent position changes, which relieve pressure on the skin and underlying tissues. If pressure isn't relieved, capillaries become occluded, reducing circulation and oxygenation of the tissues and resulting in cell death and ulcer formation.

- **Option B:** During passive ROM exercises, the nurse moves each joint through its range of movement, which improves joint mobility and circulation to the affected area but doesn't prevent pressure ulcers.
- **Option C:** Adequate hydration is necessary to maintain healthy skin and ensure tissue repair.
- **Option D:** A footboard prevents plantar flexion and foot drop by maintaining the foot in a dorsiflexed position.

28. A male client with a history of cocaine addiction is admitted to the coronary care unit for evaluation of substernal chest pain. The electrocardiogram (ECG) shows a 1-mm ST-segment elevation of the anteroseptal leads and T-wave inversion in leads V3 to V5. Considering the client's history of drug abuse, nurse Greg expects the physician to prescribe:

- A. Lidocaine (Xylocaine).
- B. Procainamide (Pronestyl).
- C. Nitroglycerin (Nitro-Bid IV).
- D. Epinephrine.

Correct Answer: C. Nitroglycerin (Nitro-Bid IV).

The elevated ST segments in this client's ECG indicate myocardial ischemia. To reverse this problem, the physician is most likely to prescribe an infusion of nitroglycerin to dilate the coronary arteries. Nitroglycerin is a vasodilatory drug used primarily to provide relief from anginal chest pain. Although nitroglycerin has a vasodilatory effect in both arteries and veins, the profound desired effects caused by nitroglycerin are primarily due to venodilation. Venodilation causes pooling of blood within the venous system, reducing preload to the heart, which causes a decrease in cardiac work, reducing anginal symptoms secondary to demand ischemia.

- **Option A:** Lidocaine, formerly also referred to as lignocaine, is an amide local anesthetic agent. The drug is commonly used for local anesthesia, often in combination with epinephrine (which acts as a vasopressor and extends its duration of action at a site by opposing the local vasodilatory effects of lidocaine).
- **Option B:** Procainamide is a cardiac drug that may be indicated for this client at some point but isn't used for coronary artery dilation. Procainamide is a medication used in the management and treatment of ventricular arrhythmias, supraventricular arrhythmias, atrial flutter, atrial fibrillation, AV nodal reentrant tachycardia, and Wolf-Parkinson-White syndrome. It is a Class 1A antiarrhythmic agent.
- **Option D:** If a cocaine user experiences ventricular fibrillation or asystole, the physician may prescribe epinephrine. However, this drug must be used with caution because cocaine may potentiate its adrenergic effects. Epinephrine is one of the most commonly used agents in a variety of settings as it functions as medication and hormone. It is currently FDA-approved for various situations, including emergency treatment of type 1 hypersensitivity reactions including anaphylaxis, induction, and maintenance of mydriasis during intraocular surgeries, and hypotension due to septic shock.

29. Which of the following laboratory results indicates hypoparathyroidism?

- A. Serum potassium of 3.6 mEq/L.
- B. Serum calcium level of 4.3 mEq/L.
- C. Serum phosphorus level of 5.7 mg/dL.
- D. Serum magnesium level of 1.7 mg/dL.

Correct Answer: C. Serum phosphorus level of 5.7 mg/dL.

The parathyroid is responsible for the absorption of calcium and phosphorus. When a client has hypoparathyroidism, the serum calcium levels are low and the serum phosphorus levels are high. The normal phosphorus level is 2.7 to 4.5 mg/dL. Parathyroid hormone deficiency, also called hypoparathyroidism, results in hypocalcemia, hyperphosphatemia, and increased neuromuscular irritability. Patients may present with myalgias, muscle spasms, and in extreme cases tetany.

- **Option A:** Calcium is maintained within a fairly narrow range from 8.5 to 10.5 mg/dl (4.3 to 5.3 mEq/L or 2.2 to 2.7 mmol/L). Normal values and reference ranges may vary among laboratories as much as 0.5 mg/dl. Aldinger KA, et al., studied a large group of patients of normal renal function with hypercalcemia to determine the prevalence of hypokalemia and reported that 16.9% had hyperparathyroidism, and the degree and frequency of hypokalemia were greatest at the higher serum calcium levels.
- **Option B:** Parathyroid hormone activates the PTH receptor, another G-protein coupled receptor, increasing resorption of calcium and phosphorus from bone, enhancing the distal tubular reabsorption of calcium, and decreasing the renal tubular reabsorption of phosphorus. Deficient PTH results in hypocalcemia, hyperphosphatemia, while alkaline phosphatase, a marker of bone formation, is normal.
- **Option D:** The normal range for blood magnesium level is 1.7 to 2.2 mg/dL (0.85 to 1.10 mmol/L). Another common cause of hypoparathyroidism is abnormally low levels of magnesium (hypomagnesemia) in the blood. This is often called functional hypoparathyroidism because it resolves when magnesium is restored. Magnesium is a mineral that is very important in the function of the parathyroid glands.

30. The nurse is providing lunch to a 68-year-old male patient with a history of stroke which has affected his swallowing reflex. As the patient begins to eat, he suddenly starts choking on a piece of food but is coughing loudly and forcefully. Observing this, what should the nurse do?

- A. Assist the patient to stand up and perform the abdominal thrust maneuver immediately.
- B. Lay the patient down and prepare to perform back blows and chest thrusts.
- C. Exit the room quickly to summon for additional help from the healthcare team.
- D. Stay with the patient, encourage him to keep coughing, and monitor him closely.
- E. Provide a drink of water to help the patient swallow the obstructing food.

Correct Answer: D. Stay with the patient, encourage him to keep coughing, and monitor him closely.

When an individual is choking but still able to cough forcefully, it indicates that the airway is not completely blocked and air is still passing through. The coughing reflex is the most effective way to expel an obstruction from the airway. Therefore, the nurse should closely observe the client and encourage them to continue coughing. Performing abdominal thrusts or back blows when the individual is still able to cough may worsen the situation or cause unnecessary harm.

31. Which of the following calcium channel blockers is used to counteract or prevent cerebral vasospasm?

- A. verapamil
- B. nimodipine
- C. nifedipine
- D. felodipine

Correct Answer: B. nimodipine

Nimodipine is given in the neurologic client to prevent cerebral vasospasm. Nimodipine should be given to patients with no neurological deficits after subarachnoid hemorrhage to reduce the onset of new neurological deficits due to vasospasm. (Cerebral arterial spasm controlled trial of nimodipine in patients with subarachnoid hemorrhage, 1983). Verapamil, nifedipine, and felodipine are given in cardiac disease and in the management of hypertension only.

- **Option A:** Verapamil is a non-dihydropyridine calcium channel blocker. Calcium channel blockers inhibit the entry of calcium ions into the slow L-type calcium channels in the myocardium and vascular smooth muscle during depolarization. This inhibition will produce relaxation of coronary vascular smooth muscle as well as coronary vasodilation, which is helpful in patients with hypertension.
- **Option C:** Nifedipine reduced the frequency of angina and increased the mean exercise time in the IMAGE trial. Reflex tachycardia may limit its effectiveness; the addition of a beta-blocker can overcome this limitation.
- **Option D:** Felodipine is an agent in the dihydropyridine class of calcium channel blockers. Felodipine is FDA approved and indicated in the treatment of essential hypertension. Reduction in blood pressure lowers the risk of cardiovascular morbidity and mortality. The most significant benefit of the antihypertensive effect of felodipine is a decrease in the incidence of stroke.

32. Papanicolaou smear is usually done to determine cancer of:

- A. Cervix
- B. Ovaries
- C. Fallopian tubes
- D. Breast

Correct Answer: A. Cervix

Papanicolaou (Paps) smear is done to detect cervical cancer. It can't detect cancer in ovaries and fallopian tubes because these organs are outside of the uterus and the abnormal cells from these organs will not be detected from a smear done on the cervix.

- **Option B:** The 2 tests used most often (in addition to a complete pelvic exam) to screen for ovarian cancer are transvaginal ultrasound (TVUS) and the CA-125 blood test. TVUS (transvaginal ultrasound) is a test that uses sound waves to look at the uterus, fallopian tubes, and ovaries by putting an ultrasound wand into the vagina.
- **Option C:** Through biopsy, the doctor removes a sample of cells from the fallopian tubes. A technician in a lab looks at these cells under a microscope to see if they are cancer. Fallopian tube cancers release a protein called CA125 that can show up in the blood.
- **Option D:** A biopsy is the only definitive way to make a diagnosis of breast cancer. During a biopsy, the doctor uses a specialized needle device guided by X-ray or another imaging test to extract a core of tissue from the suspicious area.

33. 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.

34. Genevieve only attends social events when a family member is also present. She exhibits behavior typical of which anxiety disorder?

- A. Agoraphobia
- B. Generalized anxiety disorder
- C. Obsessive-compulsive disorder
- D. Post-traumatic stress disorder

Correct Answer: A. Agoraphobia

Agoraphobia is a disorder characterized by avoidance of situations in which escape may not be possible or help may be unavailable. Agoraphobia is the anxiety that occurs when one is in a public or crowded place, from which a potential escape is difficult, or help may not be readily available. It is characterized by the fear that a panic attack or panic-like symptoms may occur in these situations. Individuals with agoraphobia, therefore, strive to avoid such situations or locations.

- **Option B:** Generalized anxiety disorder is one of the most common mental disorders. Up to 20% of adults are affected by anxiety disorders each year. Generalized anxiety disorder produces fear, worry, and a constant feeling of being overwhelmed. Generalized anxiety disorder is characterized by persistent, excessive, and unrealistic worry about everyday things. This worry could be multifocal such as finance, family, health, and the future. It is excessive, difficult to control, and is often accompanied by many non-specific psychological and physical symptoms. Excessive worry is the central feature of generalized anxiety disorder.
- **Option C:** Obsessive-compulsive disorder (OCD) is often a disabling condition consisting of bothersome intrusive thoughts that elicit a feeling of discomfort. To reduce the anxiety and distress associated with these thoughts, the patient may employ compulsions or rituals. These rituals may be personal and private, or they may involve others to participate; the rituals are to compensate for the ego-dystonic feelings of the obsessional thoughts and can cause a significant decline in function.
- **Option D:** Posttraumatic stress disorder (PTSD) is a syndrome that results from exposure to real or threatened death, serious injury, or sexual assault. Following the traumatic event, PTSD is common and is one of the serious health concerns that is associated with comorbidity, functional impairment, and increased mortality with suicidal ideations and attempts. The Diagnostic and Statistical Manual of Mental Disorders(DSM-5) has included PTSD in the new category of Trauma- and Stress-related Disorders.

35. A nurse is about to administer naloxone hydrochloride (Narcan) to a client with a known opioid overdose. Which of the following equipment should be readily available at the bedside?

- A. Suction machine
- B. Nasogastric tube
- C. Resuscitative equipment
- D. Dressing tray

Correct Answer: C. Resuscitative equipment

Naloxone is an opioid antagonist medication that is used to rapidly reverse an opioid overdose. While administering, resuscitation equipment, oxygen, mechanical ventilator should be readily available in case of the occurrence of an overdose which is life-threatening and requires immediate emergency attention.

- **Options A, B, & D:** These are not used during the medication therapy.

36. When the nurse checks the fundus of a client on the first postpartum day, she notes that the fundus is firm, is at the level of the umbilicus, and is displaced to the right. The next action the nurse should take is to:

- A. Check the client for bladder distention
- B. Assess the blood pressure for hypotension
- C. Determine whether an oxytocic drug was given
- D. Check for the expulsion of small clots

Correct Answer: A. Check the client for bladder distention

If the fundus of the client is displaced to the side, this might indicate a full bladder. The next action by the nurse should be to check for bladder distention and catheterize, if necessary. The uterus continues to contract after delivery, and its size decreases rapidly as estrogen and progesterone levels diminish. Immediately after delivery, the upper portion of the uterus, known as the fundus, is midline and palpable halfway between the symphysis pubis and the umbilicus.

- **Option B:** Primary responsibilities of nurses in postpartum settings are to assess postpartum patients, provide care and teaching, and if necessary, report any significant findings. It is imperative for nurses to distinguish between normal and abnormal findings and to have a clear understanding of the nursing care necessary to promote patients' health and well-being.
- **Option C:** By approximately one-hour post-delivery, the fundus is firm and at the level of the umbilicus. The fundus continues to descend into the pelvis at the rate of approximately one centimeter (finger-breadth) per day and should be nonpalpable by two weeks postpartum.
- **Option D:** These are actions that relate to postpartum hemorrhage. After delivery, the endometrial surface of the uterus is shed via the vagina. The shedding endometrium is known as lochia. Menstruation does not typically return until 12 weeks or later. However ovulation can return prior to menses, and it is important for healthcare providers to discuss family planning with patients during the early postpartum period in order to prevent undesired pregnancies.

37. A nurse is performing a routine assessment of an IV site in a patient receiving both IV fluids and medications through the line. Which of the following would indicate the need for discontinuation of the IV line as the next nursing action?

- A. The patient complains of pain from movement.
- B. The area proximal to the insertion site is reddened, warm, and painful.
- C. The IV solution is infusing too slowly, particularly when the limb is elevated.
- D. A hematoma is visible in the area of the IV insertion site.

Correct Answer: B. The area proximal to the insertion site is reddened, warm, and painful.

An IV site that is red, warm, painful and swollen indicates that phlebitis has developed and the line should be discontinued and restarted at another site. Phlebitis is inflammation of a vein. It is usually associated with acidic or alkaline solutions or solutions that have a high osmolarity. Phlebitis can also occur as a result of vein trauma during insertion, use of an inappropriate I.V. catheter size for the vein, or prolonged use of the same I.V. site.

- **Option A:** Pain on movement should be managed by maneuvers such as splinting the limb with an IV board or gently shifting the position of the catheter before making a decision to remove the line. Apply warm, moist compresses to the area. Document the patient's condition and interventions.
- **Option C:** An IV line that is running slowly may simply need flushing or repositioning. Monitor administration rates and inspect the I.V. site frequently. Change the infusion site according to the facility's policy.
- **Option D:** A hematoma at the site is likely a result of minor bleeding at the time of insertion and does not require discontinuation of the line. Avoid veins that are small and/or fragile, veins in areas of flexion, veins in extremities with preexisting edema, or veins in areas with known neurologic impairment.

38. The nurse is evaluating a 63-year-old female patient who has been admitted with worsening heart failure. During the physical examination, the nurse uses a stethoscope to listen to the patient's lung fields. The patient presents with shortness of breath, a cough that worsens when lying down, and fatigue. Which type of breath sounds is the nurse most likely to auscultate that are typically associated with heart failure?

- A. Tracheal
- B. Fine crackles
- C. Coarse crackles
- D. Friction rubs
- E. Wheezes
- F. Stridor
- G. Pleural knock

Correct Answer: B. Fine crackles

This choice is the most consistent with fluid accumulation in the air spaces of the lungs, a common complication in patients with heart failure. Fine crackles are created by the opening of small airways and alveoli that are compromised by fluid, which is often present in heart failure due to the heart's reduced ability to pump effectively.

39. A client receiving chemotherapy for breast cancer has an order for Zofran (ondansetron) 8 mg PO to be given 30 minutes before induction of the chemotherapy. The purpose of the medication is to:

- A. Prevent anemia
- B. Promote relaxation
- C. Prevent nausea
- D. Increase neutrophil counts

Correct Answer: C. Prevent nausea

- Option C: Zofran is an antiemetic given before chemotherapy to prevent nausea and vomiting.
- Option A: Drugs that can prevent anemia include ferrous sulfate, folic acid, and erythropoietin.
- Option B: Drugs that promote relaxation include diazepam, alprazolam, and chlordiazepoxide.
- Option D: Drugs that may increase neutrophil count include allopurinol, epinephrine, heparin, and corticosteroids.

40. Signs of hypoglycemia include:

- A. Fruity breath, thirst, flushed skin
- B. Diarrhea, itching, hypertension
- C. Anxiety, weakness, pallor, sweating
- D. Muscle ache, fever, thirst

Correct Answer: C. Anxiety, weakness, pallor, sweating

These are signs of hypoglycemia, along with restlessness, chills, confusion, nausea, hunger, tachycardia, weakness, or headache. Neurogenic signs and symptoms can either be adrenergic (tremor, palpitations, anxiety) or cholinergic (hunger, diaphoresis, paresthesias). Neurogenic symptoms and signs arise from sympathoadrenal involvement (either norepinephrine or acetylcholine release) in response to perceived hypoglycemia.

- **Option A:** These are signs of hyperglycemia. Symptoms of severe hyperglycemia include polyuria, polydipsia, and weight loss. As the patient's blood glucose increases, neurologic symptoms can develop. The patient may experience lethargy, focal neurologic deficits, or altered mental status. The patient can progress to a comatose state.
- **Option B:** 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.
- **Option D:** Patients who have diabetes can present with symptoms of hypoglycemia at relatively higher serum glucose levels. The chronic hyperglycemia alters the "set point" in which neuroglycopenic/neurogenic symptoms become apparent. This phenomenon is referred to as "pseudohypoglycemia" because the serum glucose may be within normal range despite symptom presentation.

41. A nurse is caring for a client receiving a heparin intravenous (IV) infusion. The nurse expects that which of the following laboratory will be prescribed to monitor the therapeutic effect of heparin?

- A. Prothrombin time (PT)
- B. Activated partial thromboplastin time (aPTT)
- C. Hematocrit (Hgb)
- D. Hemoglobin (Hct)

Correct Answer: B. Activated partial thromboplastin time (aPTT)

Activated partial thromboplastin time assesses the therapeutic level of heparin.

- **Option A:** Prothrombin time (PT) assesses the therapeutic level of warfarin sodium (Coumadin).
- **Options C & D:** Hematocrit (Hgb) and Hemoglobin (Hct) measure the aspect of the red blood cells.

42. A nurse is assigned to a patient who is receiving oxytocin (Pitocin) to induce labor. The nurse terminates the oxycontin infusion if which of the following is noted on the assessment of the client?

- A. Nausea
- B. Fatigue
- C. Early decelerations of the fetal heart rate
- D. Uterine hyperstimulation

Correct Answer: D. Uterine hyperstimulation.

Oxytocin is used to induce labor by stimulating uterine contraction. Oxytocin infusion must be discontinued if any signs of uterine stimulation are present.

- **Options A & B:** These are probably caused by the labor experience itself.
- **Option C:** Early decelerations of the fetal heart rate are a reassuring sign, but it does not indicate fetal distress.

43. A client returns to the clinic for follow-up treatment following a skin biopsy of a suspicious lesion performed one (1) week ago. The biopsy report indicates that the lesion is melanoma. The nurse understands that which of the following describes a characteristic of this type of lesion?

- A. Melanoma is characterized by local invasion.
- B. Melanoma is highly metastatic.
- C. Metastasis is rare.
- D. Melanoma is encapsulated.

Correct Answer: B. Melanoma is highly metastatic.

Melanomas are pigmented malignant lesions originating in the melanin-producing cells of the epidermis. This cancer is highly metastatic, and prognosis depends on early diagnosis and treatment.

44. Culture strongly influences pain expression and the need for pain medication. However, cultural pain:

- A. May be suffered by a client whose valued way of life is disregarded by practitioners.
- B. Is more intense, thus necessitating more medication.
- C. Is not expressed verbally or physically.
- D. Is expressed only to others of like culture.

Correct Answer: A. May be suffered by a client whose valued way of life is disregarded by practitioners.

Nurses need not assume that pain relief is equally valued across groups. Cultural pain may be suffered by a client whose valued way of life is disregarded by practitioners. The relationship between pain and ethnicity is shaped by experience, learning and culture. A cultural group's expectations and acceptance of pain as a normal part of life will determine whether pain is seen as a clinical problem that requires a clinical solution.

- **Option B:** Experience, learning and culture shape the relationship between pain and ethnicity rather than any fundamental neurological differences. The distinction between race and ethnicity is particularly important for pain research based on the biopsychosocial model. This model suggests the experience of pain is derived via the interaction of biological, psychological, and social factors.
- **Option C:** Chronic pain affects approximately 1 in 5 adults in Europe resulting in substantial healthcare costs. Evidence that cultural influences have an impact on pain is readily available from the UK where the pain is the most common symptom encountered by the medical profession.
- **Option D:** Mistaken beliefs about the nature of pain and disability, resistance to treatment-seeking, reluctance to comply with treatment, and failure to accept responsibility for the treatment outcome are not culturally or sub-culturally specific obstacles to pain management.

45. George, age 8, is admitted with rheumatic fever. Which clinical finding indicates to the nurse that George needs to continue taking the salicylates he had received at home?

- A. Chorea
- B. Polyarthrititis
- C. Subcutaneous nodules
- D. Erythema marginatum

Correct Answer: B. Polyarthrititis

Polyarthrititis is characterized by swollen, painful, hot joints that respond to salicylates. Polyarthrititis refers to a joint disease that involves at least five joints. One or more signs of inflammation, including pain, movement restriction, swelling, warmth, and redness, are seen in the joints involved.

- **Option A:** Chorea is the restless and sudden aimless and irregular movements of the extremities suddenly seen in persons with rheumatic fever, especially girls. Chorea may be viewed as resulting

from increased dopaminergic activity in the projections from the substantia nigra to the striatum, resulting in decreased GABAergic projection from the striatum to the globus pallidus.

- **Option C:** Subcutaneous nodules are non tender swellings over bony prominences sometimes seen in persons with rheumatic fever. Subcutaneous nodules are deep-seated lesions in the skin, located in the deep dermis and subcutis, often with minimal changes appreciated on the surface of the skin. They are often easier to feel than see.
- **Option D:** Erythema marginatum is a skin condition characterized by nonpruritic rash, affecting the trunk and proximal extremities, seen in persons with rheumatic fever. The pathogenesis for the occurrence of these lesions in cases of hereditary angioedema is proposed to be bradykinin mediated. This was evidenced by the presence of dense stromal and endothelial deposits of bradykinin in skin biopsy specimens taken from lesions of erythema marginatum in patients with hereditary angioedema.

46. A client is being admitted for the treatment of acute cellulitis of the thigh. The client asks the admitting nurse to explain what cellulitis means. The nurse bases the response on the understanding that the characteristics of cellulitis include:

- A. An epidermal and lymphatic infection caused by Staphylococcus.
- B. An inflammation of the epidermis only.
- C. A skin infection into the subcutaneous tissue and dermis.
- D. An acute superficial infection of the lymphatics and dermis.

Correct Answer: C. A skin infection into the subcutaneous tissue and dermis.

Cellulitis is an infection into deeper dermal and subcutaneous tissue that results in a deep red erythema without sharp borders and spreads widely throughout tissue spaces.

- **Option D:** Erysipelas is an acute, superficial, rapidly spreading inflammation of the dermis and lymphatics.

47. After a motor vehicle accident, Armand, a 22-year-old client, is admitted with a pneumothorax. The surgeon inserts a chest tube and attaches it to a chest drainage system. Bubbling soon appears in the water seal chamber. Which of the following is the most likely cause of the bubbling?

- A. Air leak
- B. Adequate suction
- C. Inadequate suction
- D. Kinked chest tube

Correct Answer: A. Air leak

Bubbling in the water seal chamber of a chest drainage system stems from an air leak. In pneumothorax, an air leak can occur as air is pulled from the pleural space.

- **Option B:** Inadequate suction does not cause bubbling.

- **Option C:** Bubbling doesn't normally occur with adequate suction or any preexisting bubbling in the water seal chamber.
- **Option D:** A kinked chest tube does not cause bubbling in the water seal chamber.

48. In planning care for a client with borderline personality disorder, a nurse must be aware that this client is prone to develop which of the following conditions?

- A. Binge eating
- B. Memory loss
- C. Cult membership
- D. Delusional thinking

Correct Answer: A. Binge eating

Clients with borderline personality disorder are likely to develop dysfunctional coping and act out in self-destructive ways such as binge eating. Help clients to cope and to control emotions. The nurse can help the clients to identify their feelings and learn to tolerate them without exaggerated responses such as destruction of property or self-harm; keeping a journal often helps clients gain awareness of feelings.

- **Option B:** Cognitive restructuring is a technique useful in changing patterns of thinking by helping clients to recognize negative thoughts and feelings and to replace them with positive patterns of thinking; thought stopping is a technique to alter the process of negative or self-critical thought patterns.
- **Option C:** Minimizing unstructured time by planning activities can help clients to manage time alone; clients can make a written schedule that includes appointments, shopping, reading the paper, and going for a walk.
- **Option D:** Regardless of the clinical setting, the nurse must provide structure and limit setting in the therapeutic relationship; in a clinic setting, this may mean seeing the client for scheduled appointments of a predetermined length rather than whenever the client appears and demands the nurse's immediate attention.

49. When caring for a terminally ill client, it is important for the nurse to maintain the client's dignity. This can be facilitated by:

- A. Spending time to let clients share their life experiences.
- B. Decreasing emphasis on attending to the client's appearance because it only increases their fatigue.
- C. Making decisions for clients so they do not have to make them.
- D. Placing the client in a private room to provide privacy at all times.

Correct Answer: A. Spending time to let clients share their life experiences.

Spending time to let clients share their life experiences enables the nurse to know clients better. Knowing clients then facilitates the choice of therapies that promote client decision-making and autonomy, thus promoting a client's self-esteem and dignity. Regarding emotional needs, a review found that important actions for healthcare professionals providing end-of-life care include communicating, listening, conveying empathy, and involving patients in decision-making. Furthermore,

good communication between the patient and their partner about their feelings should be promoted.

- **Option B:** Regarding physical needs, when trying to enhance and preserve dignity, a systematic review found that symptom control and being placed in the correct environment are important in delivering dignified end-of-life care 5. Good management of physical symptoms such as pain, dyspnoea, constipation, nausea, and respiratory secretions may allow for opportunities to work through unfinished emotional, psychological, and spiritual issues, and promote a sense of closure towards the end of life.
- **Option C:** Dignity can be upheld by measures such as symptom control 5; promoting independence, privacy, social support, and a positive tone of care; listening, giving appropriate information, having a caring bedside manner; and showing respect, empathy and companionship. Spiritual care has been shown to be facilitated by having sufficient time, employing effective communication, and reflecting on one's personal experiences.
- **Option D:** Other measures found to promote dignity include enabling the management of finances, facilitating activities such as reading or watching television, allowing the patient to spend time with their family, providing choices regarding the place of death, remembering the dignity of the family after the death of the individual, and offering emotional support.

50. Nurse Clarisse is teaching a patient about a newly prescribed drug. What could cause a geriatric patient to have difficulty retaining knowledge about prescribed medications?

- A. Decreased plasma drug levels
- B. Sensory deficits
- C. Lack of family support
- D. History of Tourette syndrome

Correct Answer: B. Sensory deficits

Sensory deficits could cause a geriatric patient to have difficulty retaining knowledge about prescribed medications. Age-related decline of the five classical senses (vision, smell, hearing, touch, and taste) poses significant burdens on older adults. The co-occurrence of multiple sensory deficits in older adults is not well characterized and may reflect a common mechanism resulting in global sensory impairment.

- **Option A:** Decreased plasma drug levels do not alter the patient's knowledge about the drug. Aging has long been associated with decline in sensory function, a critical component of the health and quality of life of older people
- **Option C:** A lack of family support may affect compliance, not knowledge retention. Vision impairment is correlated with depression, poor quality of life, cognitive decline, and mortality. Hearing loss is associated with slower gait speed (a marker of physical decline), poor cognition, and mortality. Like smell, taste has been associated with nutritional compromise and in-patient mortality, suggesting that chemosensory function is critical. Tactile discrimination declines with age due to the cumulative effects of decreased nerve conduction velocity, decreased density of Meissner's and Pacinian corpuscles, and gray matter changes within the central nervous system, and is also associated with cognitive decline
- **Option D:** Tourette syndrome is unrelated to knowledge retention. Tourette syndrome referred to as Tourette disorder in the recently updated Diagnostic and Statistical Manual of Mental Disorders (DSM-5), is a common neurodevelopmental disorder affecting up to 1% of the population. It is characterized by multiple motor and vocal tics and starts in childhood.

51. A client with Congestive heart failure is about to take a dose of furosemide (Lasix). Which of the following potassium levels, if noted in the client's record, should be reported before giving the due medication?

- A. 5.1 mEq/L.
- B. 4.9 mEq/L.
- C. 3.9 mEq/L.
- D. 3.3 mEq/L.

Correct Answer: D. 3.3 mEq/L.

The normal potassium level is 3.5 to 5.5 mEq/L. Low potassium levels can be dangerous, especially for people with CHF. Low potassium can cause fatal heart arrhythmias. An abnormal serum K⁺ level is associated with an increased risk of ventricular arrhythmia and sudden cardiac death (SCD) and these patients are generally prescribed furosemide and potassium chloride (KCl).

- **Option A:** Furosemide, a short-acting diuretic is commonly recommended as an essential drug in patients with heart failure and fluid retention. A recent study has shown that furosemide administration increases mortality in heart failure rat models. The commonly used drugs, furosemide, and KCl in the treatment of various diseases render the differential expression of proteins in the LV tissue, which is involved in the cardiac conductivity.
- **Option B:** The risk of hypokalemia increases with the use of a high dose of furosemide, decreased oral intake of potassium in patients with hyperaldosteronism states (liver abnormalities or licorice ingestion), or concomitant use of corticosteroid, ACTH, and laxatives.
- **Option C:** Careful monitoring of the patient's clinical condition, daily weight, fluids intake, and urine output, electrolytes, i.e., potassium and magnesium, kidney function monitoring with serum creatinine and serum blood urea nitrogen level is vital to monitor the response to furosemide. If indicated as diuresis with furosemide, replete electrolytes lead to electrolyte depletion and adjust the dose or even hold off on furosemide if laboratory work shows signs of kidney dysfunction.

52. During the history, which information from a 21-year-old client would indicate a risk for development of testicular cancer?

- A. Genital Herpes
- B. Hydrocele
- C. Measles
- D. Undescended testicle

Correct Answer: D. Undescended testicle

Undescended testicles make the client at high risk for testicular cancer. Mumps, inguinal hernia in childhood, orchitis, and testicular cancer in the contralateral testis are other predisposing factors. The risk of testicular cancer might be a little higher for men whose testicles stayed in the abdomen as opposed to one that has descended at least partway. If cancer does develop, it's usually in the undescended testicle, but about 1 out of 4 cases occur in the normally descended testicle.

- **Option A:** While HPV infections are very common, cancer caused by HPV is not. Most people infected with HPV will not develop cancer-related to the infection. However, some people with long-lasting infections of high-risk types of HPV, are at risk of developing cancer.

- **Option B:** Hydroceles generally don't pose any threat to the testicles. They're usually painless and disappear without treatment. However, if the patient has scrotal swelling, he should see his doctor rule out other causes that are more harmful such as testicular cancer.
- **Option C:** Measles has a low death rate in healthy children and adults, and most people who contract the measles virus recover fully. The risk of complications is higher in the following groups: children under 5 years old. adults over 20 years old.

53. A client with leukemia is receiving Trimetrexate. After reviewing the client's chart, the physician orders Wellcovorin (leucovorin calcium). The rationale for administering leucovorin calcium to a client receiving Trimetrexate is to:

- A. Treat iron-deficiency anemia caused by chemotherapeutic agents
- B. Create a synergistic effect that shortens treatment time
- C. Increase the number of circulating neutrophils
- D. Reverse drug toxicity and prevent tissue damage

Correct Answer: D. Reverse drug toxicity and prevent tissue damage

Leucovorin is the antidote for Methotrexate and Trimetrexate which are folic acid antagonists. Leucovorin is a folic acid derivative. Leucovorin is FDA indicated after high dose methotrexate therapy in osteosarcoma, to decrease the toxic effects of methotrexate or to counter the toxic effects of folate antagonists. Leucovorin is also occasionally an alternative agent used in the treatment of megaloblastic anemia when oral intake of folic acid is not possible.

- **Option A:** Leucovorin does not treat iron deficiency. Off-label uses include as neoadjuvant treatment in bladder cancer, as a cofactor in methanol toxicity, in the treatment of advanced esophageal cancer, advanced gastric cancer, advanced pancreatic cancer, prevention of hematological toxicity of pyrimethamine in patients with AIDS, and the treatment of ectopic pregnancy (along with methotrexate).
- **Option B:** Leucovorin does not create a synergistic effect when taken with Trimetrexate. When used as a part of chemotherapeutic regimens, leucovorin is not administered along with methotrexate. It is usually administered 24 hours after a course of methotrexate. Tissue toxicity may be permanent if leucovorin therapy gets delayed beyond 40 hours.
- **Option C:** An increase in neutrophils is not an effect of Leucovorin. Folic acid in large quantities has been shown to counteract the pharmacological actions of antiepileptics such as primidone, phenobarbital, and phenytoin. When leucovorin has been used concomitantly during the treatment of *Pneumocystis jirovecii* with trimethoprim-sulfamethoxazole (TMP-SMX), higher rates of treatment failure and morbidity have been reported.

54. The doctor has prescribed Cortisone (cortisone) for a child with systemic lupus erythematosus. Which instruction should be given to the client?

- A. Take the medication 30 minutes before eating
- B. Report changes in appetite and weight
- C. Wear sunglasses to prevent cataracts
- D. Schedule a time to take the influenza vaccine

Correct Answer: D. Schedule a time to take the influenza vaccine

- Option D: Long-term use of steroids can increase the risk of infection, the client taking steroid medication should receive an annual influenza vaccine (inactivated vaccine).
- Option A: The medication should be taken with food.
- Option B: Increased appetite and weight gain are expected side effects of the medication.
- Option C: Wearing sunglasses will not prevent cataracts.

55. The nurse wishes to identify nursing diagnoses for a patient. She can best do this by using a data collection form organized according to: Select all that apply.

- A. A body systems model
- B. A head-to-toe framework
- C. Maslow's hierarchy of needs
- D. Gordon's functional health patterns
- E. Adaptation Model of Nursing

Correct Answer: C & D

Nursing models produce a holistic database that is useful in identifying nursing rather than medical diagnoses. Body systems and Maslow's hierarchy is not a nursing model, but it is holistic, so it is acceptable for identifying nursing diagnoses. Gordon's functional health patterns are a nursing model.

- **Option A:** A body system model is not a nursing model. It is a representation of all the systems of the body in a figurine.
- **Option B:** Head-to-toe framework is not a nursing model, and they are not holistic; they focus on identifying physiological needs or disease.
- **Option C:** Maslow's hierarchy of needs is a motivational theory in psychology comprising a five-tier model of human needs, often depicted as hierarchical levels within a pyramid. From the bottom of the hierarchy upwards, the needs are: physiological (food and clothing), safety (job security), love and belonging needs (friendship), esteem, and self-actualization.
- **Option D:** Gordon's functional health patterns is a method devised by Marjory Gordon to be used by nurses in the nursing process to provide a more comprehensive nursing assessment of the patient.
- **Option E:** The Adaptation Model of Nursing is a prominent nursing theory aiming to explain or define the provision of nursing science. In her theory, Sister Callista Roy's model sees the individual as a set of interrelated systems that strives to maintain a balance between various stimuli.

56. The nurse is formulating a plan of care for a client with a cognitive disorder. Which activity is most appropriate for the client with confusion and a short attention span?

- A. Meeting with an assertiveness training group

- B. Participating in unit community goal setting
- C. Going on a field trip with a group of clients
- D. Taking part in a reality-orientation group

Correct Answer: D. Taking part in a reality-orientation group

- Option D: Participating in reality orientation is an appropriate activity for the client who is confused since it can improve their cognitive and psychomotor functions. It can help the client to focus on their environment so they can master essential information such as orientation to time, person, and place.
- Options A, B, and C: These activities are not suitable activities for a client who is confused.

57. An elderly client was admitted to hospital in a coma. Analysis of the arterial blood gave the following values: PCO₂ 16 mm Hg, HCO₃⁻ 5 mmol/L and pH 7.1. As a well-rounded nurse, you know that the normal value for HCO₃ is:

- A. 20 mmol/L
- B. 24 mmol/L
- C. 29 mmol/L
- D. 31 mmol/L

Correct Answer: B. 24 mmol/L

The normal value for bicarbonate (HCO₃) is 22-26 mmol/L or mEq/L. It may vary slightly among different laboratories. The given values show the common measurement range of results for these tests. Some laboratories use different measurements or may test different specimens.

58. A mother of a term neonate asks what the thick, white, cheesy coating is on his skin. Which correctly describes this finding?

- A. Lanugo
- B. Milia
- C. Nevus flammeus
- D. Vernix

Correct Answer: D. Vernix.

- **Option D:** Vernix caseosa or vernix is the waxy or cheese-like white substance found coating the skin of newborn human babies. It is produced by dedicated cells and is thought to have some protective roles during fetal development and for a few hours after birth.

59. A mother of a three (3)-year-old tells a clinic nurse that the child is constantly rebelling and having temper tantrums. The nurse most appropriately tells the mother to:

- A. Punish the child every time the child says "no", to change the behavior

- B. Allow the behavior because this is normal at this age period
- C. Set limits on the child's behavior
- D. Ignore the child when this behavior occurs

Correct Answer: C. Set limits on the child's behavior.

Being consistent and setting limits on the child's behavior are the necessary elements in order for the toddler to learn what is acceptable so they can understand the impact of their behaviors.

- **Option A:** Saying things like “no” or “mine” and having temper tantrums are common during this period of development. Parents who are negative or who punish a child for simple mistakes can contribute to feelings of shame or self-doubt.
- **Option B:** According to Erikson, the child focuses on independence between ages 1 and 3 years. Gaining independence often means that the child has to rebel against the parents' wishes. Children at this age are becoming increasingly independent and want to gain more control over what they do and how they do it.
- **Option D:** Do not ignore the child when this behavior occurs. Instead, provide opportunities for children to be independent. Allow them to make food, clothing, and toy choices and provide reassurance that they have done a good job.

60. Mr. Howard, a 45-year-old patient, presents to the dermatology clinic with concerns about progressive hair thinning. After discussing the potential causes, Dr. Smith delves deeper into the science behind hair growth and explains the stages of the hair growth cycle. During this conversation, Dr. Smith mentions a phase in which the hair follicle starts to shrink and gradually detaches from the hair bulb. This results in the cessation of hair growth and ultimately leads to the hair strand falling out. Which term from the given options best describes this transitional stage?

- A. Catagen
- B. Anagen
- C. Collagen
- D. Telogen

Correct Answer: A. Catagen

The catagen phase is the transitional phase of the hair growth cycle. During the catagen phase, the hair follicle undergoes involution, or shrinkage, and begins to detach from the dermal papilla (hair bulb). This stage typically lasts a few weeks. Hair growth stops, and the hair strand is cut off from its nourishing blood supply. Over time, the hair eventually falls out.

- **Option B:** Anagen is the active growth phase of the hair follicle where new hair cells are rapidly produced at the hair bulb, resulting in the continuous lengthening of the hair shaft. This phase can last for several years, and the hair typically grows about half an inch (1.25 cm) per month during this period.
- **Option C:** Collagen is the most abundant protein in the human body and plays a crucial role in maintaining the skin's strength, structure, and elasticity. It forms a supportive framework for tissues and contributes to skin's firmness and resilience, but collagen production can decrease with age, leading to wrinkles and sagging skin.

- **Option D:** Telogen is the resting phase of the hair growth cycle, during which the hair follicle is no longer actively producing new hair cells. Hair in the telogen phase remains in place but is not growing, and this phase can last for several weeks to several months before the hair eventually falls out and is replaced by a new hair shaft in the anagen phase.

61. A client with a spinal cord injury is prone to experiencing autonomic dysreflexia. The nurse would avoid which of the following measures to minimize the risk of recurrence?

- A. Strict adherence to a bowel retraining program.
- B. Limiting bladder catheterization to once every 12 hours.
- C. Keeping the linen wrinkle-free under the client.
- D. Preventing unnecessary pressure on the lower limbs.

Correct Answer: B. Limiting bladder catheterization to once every 12 hours.

The most frequent cause of autonomic dysreflexia is a distended bladder. Straight catheterization should be done every 4 to 6 hours, and Foley catheters should be checked frequently to prevent kinks in the tubing. Eliminate causative stimulus as able such as bladder, bowel, skin pressure (including loosening tight leg bands or clothing, removing abdominal binder or elastic stockings); temperature extremes.

- **Option A:** Constipation and fecal impaction are other causes, so maintaining bowel regularity is important. Establish a regular daily bowel program (digital stimulation, prune juice, warm beverage, and use of stool softeners and suppositories at set intervals. Determine the usual time and routine of post-injury evacuations.
- **Option C:** Keep bedclothes dry and free of wrinkles, crumbs. Reduces or prevents skin irritation. Wash and dry skin, especially in high moisture areas such as the perineum. Take care to avoid wetting the lining of the brace or halo vest. Clean, dry skin is less prone to excoriation and breakdown.
- **Option D:** Other causes include stimulation of the skin from tactile, thermal, or painful stimuli. The nurse administers care to minimize risk in these areas. Reposition frequently, whether in bed or in a sitting position. Place in a prone position periodically. Improves skin circulation and reduces pressure time on bony prominences.

62. The nurse calculates the amount of an antibiotic for injection to be given to an infant. The amount of medication to be administered is 1.25mL. The nurse should:

- A. Give the medication in one injection in the ventrogluteal muscle
- B. Give the medication in one injection in the dorsogluteal muscle
- C. Divide the amount into two injections and give one in the ventrogluteal muscle and one in the vastus lateralis muscle
- D. Divide the amount into two injections and administer in each vastus lateralis muscle

Correct Answer: D. Divide the amount into two injections and administer in each vastus lateralis muscle

- Option D: No more than 1mL should be given in the vastus lateralis of the infant.
- Options A, B, and C: The dorsogluteal and ventrogluteal muscles are not used for injections in the infant.

63. A client is diagnosed with methicillin-resistant staphylococcus aureus pneumonia. What type of isolation is most appropriate for this client?

- A. Reverse isolation
- B. Respiratory isolation
- C. Contact isolation
- D. Standard precautions

Correct Answer: C. Contact isolation

Contact or Body Substance Isolation (BSI) involves the use of barrier protection (e.g. gloves, mask, gown, or protective eyewear as appropriate) whenever direct contact with any body fluid is expected. When determining the type of isolation to use, one must consider the mode of transmission. The hands of personnel continue to be the principal mode of transmission for methicillin-resistant staphylococcus aureus (MRSA). Because the organism is limited to the sputum in this example, precautions are taken if contact with the patient's sputum is expected. A private room and BSI, along with good hand washing techniques, are the best defense against the spread of MRSA pneumonia.

- **Option A:** Reverse isolation refers to the practice of healthcare workers and visitors wearing barriers (i.e., gown, gloves, mask, etc.) routinely upon entry to the client room, for the purpose of preventing client exposure to external microbes. Certain immunocompromised clients have been shown to benefit from specific additional "interventions". These interventions create a "Protective Environment".
- **Option B:** Respiratory isolation is used for diseases that are spread through particles that are exhaled. Those having contact with or exposure to such a patient are required to wear a mask. Respiratory isolation guidelines for patients admitted from the ED with pneumonia were developed and validated in a study. These guidelines provide satisfactory guidance for isolation of patients at risk for PTB in a high-TB-prevalence population.
- **Option D:** Standard Precautions are the minimum infection prevention practices that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where healthcare is delivered. These practices are designed to both protect DHCP and prevent DHCP from spreading infections among patients.

64. A patient is scheduled for a magnetic resonance imaging (MRI) scan for suspected lung cancer. Which of the following is a contraindication to the study for this patient?

- A. The patient is allergic to shellfish.
- B. The patient has a pacemaker.
- C. The patient suffers from claustrophobia.
- D. The patient takes antipsychotic medication.

Correct Answer: B. The patient has a pacemaker

The implanted pacemaker will interfere with the magnetic fields of the MRI scanner and may be deactivated by them. Patients with cardiac implantable electronic devices or CIED are at risk for inappropriate device therapy, device heating/movement, and arrhythmia during MRI. These patients must be scheduled in a CIED blocked slot or scheduled with electrophysiology nurse or technician support. But nowadays MRI conditional cardiac implantable electronic devices are widely available.

- **Option A:** Shellfish/iodine allergy is not a contraindication because the contrast used in MRI scanning is not iodine-based. MRI contrast agents are gadolinium chelates with different stability, viscosity, and osmolality. Gadolinium is a relatively very safe contrast; however, it rarely might cause allergic reactions in patients.
- **Options C:** Open MRI scanners and anti-anxiety medications are available for patients with claustrophobia. Claustrophobic patients might refuse to complete the MRI scan and need sedation. These patients need to be well informed about the MRI scan procedure. The recommendation is that a physician has a discussion with them about the details in advance. Using Larger and opener MRI systems might be helpful in claustrophobic patients.
- **Option D:** Psychiatric medication is not a contraindication to MRI scanning. MRI helps in high-resolution investigations of soft tissues without the use of ionizing radiation. This safe modality currently becomes the imaging technique of choice for diagnosing musculoskeletal, neurologic, and cardiovascular disease. However, there are restrictions and contraindications caused by MRI magnetic fields, machine structure, and gadolinium contrast agents.

65. Tommy, with a dependent personality disorder, is working to increase his self-esteem. Which of the following statements by Tommy shows teaching was successful?

- A. "I'm not going to look just at the negative things about myself".
- B. "I'm most concerned about my level of competence and progress".
- C. "I'm not as envious of the things other people have as I used to be".
- D. "I find I can't stop myself from taking over things others should be doing".

Correct Answer: A. "I'm not going to look just at the negative things about myself"

As the clients make progress on improving self-esteem, self-blame and negative self-evaluation will decrease. Dependent personality disorder (DPD) is a type of anxious personality disorder. People with DPD often feel helpless, submissive or incapable of taking care of themselves. They may have trouble making simple decisions. But, with help, someone with a dependent personality can learn self-confidence and self-reliance.

- **Option B:** Clients with dependent personality disorder tend to feel fragile and inadequate and would be extremely unlikely to discuss their level of competence and progress. People with DPD have an overwhelming need to have others take care of them. Often, a person with DPD relies on people close to them for their emotional or physical needs. Others may describe them as needy or clingy.
- **Option C:** These clients focus on self and aren't envious or jealous. People with DPD may believe they can't take care of themselves. They may have trouble making everyday decisions, such as what to wear, without others' reassurance.
- **Option D:** Individuals with dependent personality disorders don't take over situations because they see themselves as inept and inadequate. Statistics show that roughly 10% of adults have a personality disorder. Less than 1% of adults meet the criteria for DPD. More women than men tend

to have DPD.

66. The two blood vessels most commonly used for TPN infusion are the:

- A. Subclavian and jugular veins
- B. Brachial and subclavian veins
- C. Femoral and subclavian veins
- D. Brachial and femoral veins

Correct Answer: A. Subclavian and jugular veins

Total Parenteral Nutrition (TPN) requires the use of a large vessel, such as the subclavian or jugular vein, to ensure the rapid dilution of the solution and thereby prevent complications, such as hyperglycemia. TPN is a mixture of separate components that contain lipid emulsions, dextrose, amino acids, vitamins, electrolytes, minerals, and trace elements. TPN composition should be adjusted to fulfill individual patients' needs. The main three macronutrients are lipids, emulsions, proteins, and dextrose.

- **Option B:** Total parenteral nutrition is not administered through a peripheral intravenous catheter (Peripheral Parenteral Nutrition, PPN) because it has high osmolarity. PPN osmolarity needs to be less than 900 mOsm. The lower concentration necessitates larger volume feedings, and high-fat content is necessary. High osmolarity irritates peripheral veins; hence TPN is given through central venous access. PPN is used to provide additional nutrition to patients with functional gut and enteral feedings.
- **Option C:** Historically, total parenteral nutrition (TPN) has been administered by the central venous route because of the rapid development of thrombophlebitis when TPN solutions are administered into peripheral veins. The insertion and placement of central venous catheters are, however, associated with morbidity and mortality and is the main cause of TPN-related complications.
- **Option D:** The brachial and femoral veins usually are contraindicated because they pose an increased risk of thrombophlebitis. By avoiding central venous catheterization, TPN can be made safer. Current awareness about the pathophysiology of peripheral vein thrombophlebitis and the use of a number of techniques that prevent or delay the onset of peripheral vein thrombophlebitis means it is now possible to administer TPN via the peripheral route.

67. Which of the following types of behavior is expected from a client diagnosed with a paranoid personality disorder?

- A. Eccentric
- B. Exploitative
- C. Hypersensitive
- D. Seductive

Correct Answer: C. Hypersensitive

People with paranoid personality disorders are hypersensitive to perceived threats. While this mistrust is unfounded, their distrust of others makes it difficult to form relationships and can interfere with many aspects of life including at home, at school, and at work. People with PPD do not see their behaviors as out of the ordinary but are perceived by others as hostile and suspicious.

- **Option A:** Schizotypal personalities appear eccentric and engage in activities others find perplexing. Schizotypal personality disorder is marked by a pervasive pattern of social and interpersonal deficits. Individuals with schizotypal personality disorder have little capacity—and perhaps even need—for close relationships.
- **Option B:** Clients with narcissistic personality disorder are interpersonally exploitative to enhance themselves or indulge in their own desires. Narcissistic personality disorder (NPD) is an enduring pattern of inner experience and behavior characterized by self-centeredness, lack of empathy, and an exaggerated sense of self-importance.
- **Option D:** A client with a histrionic personality disorder can be extremely seductive when in search of stimulation and approval. Histrionic personality disorder, or dramatic personality disorder, is a psychiatric disorder distinguished by a pattern of exaggerated emotionality and attention-seeking behaviors. Histrionic personality disorder falls within the “Cluster B” of personality disorders.

68. Steve is diagnosed with celiac disease and experiences celiac crisis secondary to upper respiratory tract infection; which of the following would Nurse Nancy expect to assess?

- A. Lethargy
- B. Weight gain
- C. Respiratory distress
- D. Watery diarrhea

Correct Answer: D. Watery diarrhea

Episodes of celiac crises are precipitated by infections, ingestion of gluten, prolonged fasting, or exposure to anticholinergics. Celiac crisis is typically characterized by severe watery diarrhea. Celiac crisis is a life-threatening syndrome in which patients with celiac disease have profuse diarrhea and severe metabolic disturbances.

- **Option A:** Irritability, rather than lethargy, is more likely. Clinically it is characterized by severe diarrhea, dehydration, and metabolic disturbances including hypokalemia, hyponatremia, hypocalcemia, hypomagnesemia, and hypoproteinemia.
- **Option B:** Because of the fluid loss associated with severe watery diarrhea, the child’s weight is more likely to be decreased. In childhood, failure to thrive is an important aspect of history, while in adulthood the corresponding symptom would be unexplained weight loss.
- **Option C:** Respiratory distress is unlikely in a routine upper respiratory tract infection. Symptoms from other than gastrointestinal systems include recurrent aphthous ulcers in the mouth, iron deficiency anemia, ataxia, chronic headaches, and delayed menarche.

69. A client with cystic fibrosis is taking pancreatic enzymes. The nurse should administer this medication:

- A. Once per day in the morning
- B. Three times per day with meals
- C. Once per day at bedtime
- D. Four times per day

Correct Answer: B. Three times per day with meals

Pancreatic enzymes should be given with meals for optimal effects. These enzymes assist the body in digesting needed nutrients. Chronic, supportive therapy for patients with CF includes regular pancreatic enzymes, fat-soluble vitamins (A, D, E, K), mucolytics, bronchodilators, antibiotics, and anti-inflammatory agents.

- **Option A:** A new class of medications known as CFTR modulator therapies is designed to correct the dysfunction by improving production, intracellular processing, or function of the CFTR protein caused by the mutated gene. Each medication is targeted at a specific dysfunction caused by a specific gene mutation.
- **Option C:** Individuals with CF are encouraged to consume a high-fat diet with supplemental fat-soluble vitamins to compensate for malabsorption. Additionally, patients living with CF are encouraged to consume a high-calorie diet to maintain a healthy weight and combat chronic inflammation and frequent infections that are commonly encountered.
- **Option D:** According to the Cystic Fibrosis Foundation, women should consume 2500 to 3000 calories a day, while men should consume 3000 to 3700 calories a day. Those living in hot climates or who participate in activities that cause sweating are encouraged to consume additional sodium in their diet.

70. A nurse obtained a client's pulse and found the rate to be above normal. The nurse document these findings as:

- A. Tachypnea
- B. Hyperpyrexia
- C. Arrhythmia
- D. Tachycardia

Correct Answer: D. Tachycardia

Tachycardia means rapid heart rate. Tachycardia refers to a heart rate that's too fast. How that's defined may depend on age and physical condition. Generally speaking, for adults, a heart rate of more than 100 beats per minute (BPM) is considered too fast.

- **Option A:** Tachypnea refers to rapid respiratory rate. Tachypnea is a respiration rate greater than normal, resulting in abnormally rapid breathing. In adult humans at rest, any respiratory rate between 12 and 20 breaths is normal and tachypnea is indicated by a rate greater than 20 breaths per minute.
- **Option B:** Hyperpyrexia means increase in temperature. Hyperpyrexia is another term for a very high fever. The medical criterion for hyperpyrexia is when someone is running a body temperature of more than 106.7°F or 41.5°C. Hyperpyrexia is an emergency that needs immediate attention from a medical professional.
- **Option C:** Arrhythmia means irregular heart rate. An arrhythmia is a problem with the rate or rhythm of the heartbeat. During an arrhythmia, the heart can beat too fast, too slowly, or with an irregular rhythm. When a heart beats too fast, the condition is called tachycardia. When a heart beats too slowly, the condition is called bradycardia.

71. Phenobarbital (luminal) is given to a client for a short treatment of anxiety. Which of the following results would indicate a therapeutic serum range of the

medication?

- A. 5-10 mcg/ml
- B. 15-40 mcg/ml
- C. 45-65 mcg/ml
- D. 50-90 mcg/ml

Correct Answer: B. 15-40 mcg/ml

Phenobarbital is a barbiturate, non-selective central nervous system depressant that acts on the GABA receptors, increasing synaptic inhibition. It is used for a short time usually not more than 2 weeks in the treatment of anxiety. The therapeutic serum range of phenobarbital is 15-40 ng/ml.

72. Nurse Jamie should explain to a male client with diabetes that self-monitoring of blood glucose is preferred to urine glucose testing because:

- A. More accurate
- B. Can be done by the client
- C. It is easy to perform
- D. It is not influenced by drugs

Correct Answer: A. More accurate

Urine testing provides an indirect measure that may be influenced by kidney function while blood glucose testing is a more direct and accurate measure. Accurate measurement of blood glucose is superior to the capillary blood glucose test. However, this is dependent on the laboratory meeting established industry standards.

- **Option B:** Both tests can be done by the client himself. Equipment used includes a lancet used to prick the skin, a glucometer, and test strips. Glucometers have a range of features with modern smart machines requiring a very small sample of blood (from 0.3 to 1 microL), have Bluetooth capabilities that synchronize data with paired applications (apps) on smartphones. These machines and apps record data and provide trends in glucose measurements undertaken.
- **Option C:** Both procedures can be easily performed by the client. Blood samples can also be sourced from alternate sites such as the earlobe, heel, forearm, palm. Alternate site testing provides similar results to finger-prick testing, especially in the fasting and two-hour post meal times. Using alternate sites may be less painful but may need a deeper lance.
- **Option D:** When the client has taken a drug before performing a procedure, this procedure could be affected by the drug taken. Blood glucose monitoring may support the diagnosis and management of the client with impaired glucose metabolism or diabetes. Regular monitoring of blood glucose levels is not recommended for patients with type 2 diabetes on oral antidiabetic drugs and or dietary management.

73. 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.

74. How can qualitative outcome analysis be used? Select all that apply.

- A. To determine the reliability of intervention outcomes in a study.
- B. To confirm the applicability of clinical strategies.
- C. To develop interventions and then test those selected.
- D. To build theory.

Correct Answers: B, C, D

Qualitative Outcome Analysis (QOA) enhances the identification of meaningful intervention strategies and plans for utilization. The researcher identifies the type of qualitative data that will enable the interpretation and evaluation of interventions, devises a means of data recording and analysis, and finally, disseminates the findings.

- **Option A:** QOA is a systematic means to confirm the applicability of clinical strategies developed from a single qualitative project, to extend the repertoire of clinical interventions, and to evaluate clinical outcomes.

- **Option B:** QOA also provides a way to describe interventions that cannot be easily measured or interventions that are more usefully communicated by description.
- **Option C:** Qualitative Outcome Analysis provides a way to identify and evaluate these interventions and to systematically and descriptively analyze alternative or new interventions.
- **Option D:** This method is used to confirm the efficacy of nursing interventions when experience changes over time, to extend the repertoire of intervention strategies, and to further clinicians' understanding of possible outcomes.

75. Which of the following would the nurse identify as the initial priority for a child with acute lymphocytic leukemia?

- A. Instituting infection control precautions.
- B. Encouraging adequate intake of iron-rich foods.
- C. Assisting with coping with chronic illness.
- D. Administering medications via IM injections.

Correct Answer: A. Instituting infection control precautions

Acute lymphocytic leukemia (ALL) causes leukopenia, resulting in immunosuppression and increasing the risk of infection, a leading cause of death in children with ALL. Therefore, the initial priority nursing intervention would be to institute infection control precautions to decrease the risk of infection.

- **Option B:** Iron-rich foods help with anemia, but dietary iron is not an initial intervention. For the treatment of iron deficiency anemia in adults, 100 to 200 mg of elemental iron per day has been recommended. The best way to take the supplement so that it can be absorbed in the greatest amount of iron is to take it in two or more doses during the day.
- **Option C:** The prognosis of ALL usually is good. However, later on, the nurse may need to assist the child and family with coping since death and dying may still be an issue in need of discussion.
- **Option D:** Injections should be discouraged, owing to increased risk of bleeding due to thrombocytopenia.

76. Nurse Gretchen is discussing the use of cocaine as a local anesthetic with a nursing student. Which statement by the student indicates understanding of this agent?

- A. "Anesthetic effects develop slowly and persist for several hours."
- B. "Cocaine is a local anesthetic administered by injection."
- C. "Vasoconstrictors should not be used as adjunct agents with this drug."
- D. "When abused, cocaine causes physical dependence."

Correct Answer: C. "Vasoconstrictors should not be used as adjunct agents with this drug."

Cocaine should not be combined with epinephrine or other vasoconstrictors, because it causes vasoconstriction itself, and the combination could precipitate severe hypertension. The principal action of cocaine on the mucosa is anesthesia and vasoconstriction, however significant systemic absorption may occur; this may adversely affect the cardiovascular system, after which alpha- and beta 1-adrenoceptor stimulation results in increased heart rate, systemic arterial pressure, and myocardial

contractility, which are major determinants of myocardial oxygen demand.

- **Option A:** Cocaine has a rapid onset of effects, which last about 1 hour. Cocaine and its metabolites may cause arterial vasoconstriction hours after use. Epicardial coronary arteries are especially vulnerable to these effects, leading to a decreased myocardial oxygen supply.
- **Option B:** It is used only topically for anesthesia. Topical cocaine has an anesthetic effect similar to local anesthetics (such as lidocaine) from sodium channel blockade and interference with action potential propagation. This Vaughn-Williams class IC effect also increases the risk of conduction disturbance and tachyarrhythmias.
- **Option D:** Although subject to widespread abuse with profound psychological dependence, it does not cause substantial physical dependence. The fatal dose of cocaine has been estimated to be 1.2 g, but there are reports of severe adverse effects from doses as low as 20 mg. The single-use vial contains four mL of a 40 mg/mL solution, thus 160 mg in total. There is also a multi-use vial containing 10 mL of 4% cocaine. As mucosal absorption is variable, the possibility of receiving the entire amount of cocaine is low, especially when delivered by cotton pledgets or gauze.

77. Nurse Shey is educating a pregnant client who has gestational diabetes. Which of the following statements should the nurse make to the client? Select all that apply.

- A. Cakes, candies, cookies, and regular soft drinks should be avoided.
- B. Gestational diabetes increases the risk that the mother will develop diabetes later in life.
- C. Gestational diabetes usually resolves after the baby is born.
- D. Insulin injections may be necessary.
- E. The mother should strive to gain no more weight during pregnancy.
- F. The baby will likely be born with diabetes

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

Gestational diabetes can occur between the 16th and 28th week of pregnancy. If not responsive to diet and exercise, insulin injections may be necessary. Concentrated sugars should be avoided.

- **Option A:** Most carbohydrates are found in starchy or sugary foods. They include bread, rice, pasta, cereal, potatoes, peas, corn, fruit, fruit juice, milk, yogurt, cookies, candy, soda, and other sweets. Try to avoid eating simple carbohydrates, such as potatoes, french-fries, white rice, candy, soda, and other sweets. This is because they cause the blood sugar to rise quickly after eating such foods.
- **Option B:** Women with gestational diabetes (GDM) have an increased 35 to 60% risk of developing diabetes mellitus over 10 to 20 years after pregnancy. Gestational diabetes etiology is apparently related to 1) the pancreatic beta-cell dysfunction or the delayed response of the beta cells to the glycemic levels, and 2) the marked insulin resistance secondary to placental hormonal release.
- **Option C:** ADA and ACOG recommend repeating testing every 1 to 3 years for women who developed GDM and had normal postpartum screening results. At 4 to 12 weeks postpartum, the recommendation is to perform a 75g oral glucose tolerance test to rule out the possibility of the development of type 2 diabetes, impaired fasting glucose, or impaired glucose tolerance test.
- **Option D:** Insulin can help achieve an appropriate metabolic control, and it is added to the management if fasting blood glucose is greater or equal to 95 mg/dL, if 1-hour glucose level is

greater or equal to 140 mg/dL, or if 2-hour glucose level is greater than 120 mg/dL.

- **Option E:** Weight gain should continue, but not in excessive amounts. The clinical features of gestational diabetes mellitus can be varied. The disproportionate weight gain, obesity, and elevated BMI can be suggestive features. The diagnosis is established by the laboratory screening method at the
- **Option F:** Usually, gestational diabetes disappears after the infant is born. However, diabetes can develop 5 to 10 years after pregnancy. The complications of developing gestational diabetes are categorized as maternal and fetal. The fetal complications include macrosomia, neonatal hypoglycemia, polycythemia, shoulder dystocia, hyperbilirubinemia, neonatal respiratory distress syndrome, increased perinatal mortality, and hypocalcemia.

78. Hypertension is known as the silent killer. This phrase is associated with the fact that hypertension often goes undetected until symptoms of other system failures occur. This may occur in the form of:

- A. Cerebrovascular accident
- B. Liver disease
- C. Myocardial infarction
- D. Pulmonary disease

Correct Answer: A. Cerebrovascular accident

Hypertension is referred to as the silent killer for adults, because until the adult has significant damage to other systems, hypertension may go undetected. CVA's can be related to long-term hypertension. Large-scale meta-analyses have also shown the rising CVD and vascular disease risk with a rise in systolic and diastolic blood pressures, with almost doubling the risk of death from heart disease and stroke with rising SBP of as much as 20 and DBP of 10mmHg.

- **Option B:** A diseased liver can cause portal hypertension, which is high blood pressure in the portal vein. The portal vein supplies the liver with blood. Over time, this pressure causes blood vessels to grow, called collateral blood vessels. These vessels act as channels to divert the blood under high pressure.
- **Option D:** Pulmonary disease is generally not associated with hypertension. Pulmonary hypertension is a rare lung disorder in which the arteries that carry blood from the heart to the lungs become narrowed, making it difficult for blood to flow through the vessels. As a result, the blood pressure in these arteries — called pulmonary arteries — rises far above normal levels.
- **Option C:** Myocardial infarction is generally related to coronary artery disease. There is linear increase in risk of MI with an increase in blood pressure status. HTN particularly raises the risk of MI in people under 65 years. Commonest basis for MI is atherosclerotic disease of coronaries with thrombosis, spasm, or plaque rupture, the precipitating entity being atheroma.

79. The client's right to refuse treatment is an example of:

- A. Statutory law
- B. Common law
- C. Civil laws

D. Nurse practice acts

Correct Answer: B. Common law

Common law results from judicial decisions made in courts when individual legal cases are decided. Examples of common law include informed consent, the patient's right to refuse treatment, negligence, and malpractice.

- **Option A:** Statutory Law is the term used to define written laws, usually enacted by a legislative body. Statutory laws vary from regulatory or administrative laws that are passed by executive agencies, and common law, or the law created by prior court decisions.
- **Option C:** Civil laws protect the rights of individuals within our society and provide for fair and equitable treatment when civil wrongs or violations occur (Garner, 2006). The consequences of civil law violations are damages in the form of fines or specific performance of good works such as public service. An example of a civil law violation for a nurse is negligence or malpractice.
- **Option D:** The NPA is then interpreted into regulations by each state and territorial nursing board with the authority to regulate the practice of nursing care and the power to enforce the laws. Fifty states, the District of Columbia and 4 United States (US) territories, have state boards of nursing (BON) that are responsible for regulating their individual NPA.

80. Nurse Aldrin is preparing to perform endotracheal suctioning for a client. Which of the following are appropriate guidelines for the nurse to follow? Select all that apply.

- A. Apply suction while withdrawing the catheter.
- B. Perform suctioning on a routine basis, every 2 to 3 hours.
- C. Maintain medical asepsis during suctioning.
- D. Use a new catheter for each suctioning attempt.
- E. Limit suctioning to 2 to 3 attempts.

Correct Answer: A, D, & E

Within intensive care units (ICUs), one such common procedure is the suctioning of respiratory secretions in patients who have been intubated or who have undergone tracheostomy. The traditional goal of suctioning is to aid in maintaining airway patency and prevent complications related to the retention of secretions

- **Option A:** The nurse should apply suction pressure only while withdrawing the catheter, not while inserting it. One interesting thing to note about ETS is that negative pressure is created inside of the lungs only while air flows out of the suction catheter. As soon as secretions are aspirated into the catheter, the intrapulmonary pressure returns to that of the atmospheric level, and lung volume loss stops.
- **Option B:** The nurse should not suction routinely because suctioning is not without risk. It can cause mucosal damage, bleeding, and bronchospasm. Although there has been a very limited number of studies regarding a scheduled frequency of performing ETS every 1, 3, 4, 6, 8, or even 12 hours, the overall recommendation is to suction only as indicated (as needed).
- **Option C:** Endotracheal suctioning requires surgical asepsis. The second method of suctioning is the shallow (premeasured) technique, which is also considered minimally invasive. 1-3 With shallow ETS, the catheter is inserted only to the tip of the ETT, thereby avoiding injury to the airway.

- **Option D:** The nurse should not reuse the suction catheter unless an in-line suctioning system is in place. If a suction catheter is too large for the ETT, and/or there is too much vacuum pressure, massive atelectasis may occur. Therefore, the general recommendation is to use a suction catheter that has an external diameter less than 50% of the size of the ETT inner diameter.
- **Option E:** To prevent hypoxemia, the nurse should limit each suctioning session to 2 to 3 attempts and allow at least one minute between passes for ventilation and oxygenation. The reason for this is because there is considerable risk with using “routine” suctioning. It has been suggested by Pedersen et al³ that ETS should be performed at least every 8 hours to slow the formation of the secretion biofilm within the lumen of the endotracheal tube (ETT). Clifton-Koeppel¹ made a good general recommendation that ETS should be performed as infrequently as possible—yet as much as needed.

81. A male patient is to be discharged with a prescription for an analgesic that is a controlled substance. During discharge teaching, the nurse should explain that the patient must fill this prescription how soon after the date on which it was written?

- A. Within 1 month
- B. Within 3 months
- C. Within 6 months
- D. Within 12 months

Correct Answer: C. Within 6 months

In most cases, an outpatient must fill a prescription for a controlled substance within 6 months of the date on which the prescription was written. A common reason people seek the care of medical professionals is pain relief. While many categories of pain medications are available, opioid analgesics are FDA-approved for moderate to severe pain. As such, they are a common choice for patients with acute, cancer-related, neurologic, and end-of-life pain. The prescribing of opioid analgesics for chronic pain is controversial and fraught with inconclusive standards.

- **Option A:** All health professionals engaged in pain management need an understanding of the treatment recommendations and safety concerns in prescribing opioid analgesics. Appropriate opioid prescribing requires a thorough patient assessment, short and long-term treatment planning, close follow-up, and continued monitoring.
- **Option B:** All providers need to be aware of not only appropriate patient assessment and treatment planning but also the possibility of use disorder, diversion, and potentially dangerous behavioral responses to controlled substances, e.g., opioid analgesics differ from pseudo-addiction and physical dependence.
- **Option D:** All providers should be familiar with the guidelines and laws for each schedule, which have, as their basis, the purpose of the drug and the risk of use disorder. In the United States, controlled substances are under strict regulation by both federal and state laws that guide their manufacture and distribution. Controlled substances have a high risk of resulting in an addiction and substance use disorder.

82. For a client with hepatic cirrhosis who has altered clotting mechanisms, which intervention would be most important?

- A. Allowing complete independence of mobility
- B. Applying pressure to injection sites
- C. Administering antibiotics as prescribed
- D. Increasing nutritional intake

Correct Answer: B. Applying pressure to injection sites.

The client with cirrhosis who has altered clotting is at high risk for hemorrhage. Prolonged application of pressure to injection or bleeding sites is important. Instruct patient/SO of signs and symptoms that warrant notification of health care provider: increased abdominal girth; rapid weight loss/gain; increased peripheral edema; increased dyspnea, fever; blood in stool or urine; excess bleeding of any kind; jaundice.

- **Option A:** Complete independence may increase the client's potential for injury, because an unsupervised client may injure himself and bleed excessively. Instruct SO to notify health care providers of any confusion, untidiness, night wandering, tremors, or personality change. Changes (reflecting deterioration) may be more apparent to SO, although insidious changes may be noted by others with less frequent contact with the patient.
- **Option C:** Antibiotics are important to promote liver regeneration. However, they are not most important for a client at high risk for hemorrhage. Some drugs are hepatotoxic (especially narcotics, sedatives, and hypnotics). In addition, the damaged liver has a decreased ability to metabolize all drugs, potentiating cumulative effect and/or aggravation of bleeding tendencies.
- **Option D:** Encourage the patient to eat; explain reasons for the types of diet. Feed the patient if tiring easily, or have SO assisted the patient. Include the patient in meal planning to consider his/her preferences in food choices. Improved nutrition and diet are vital to recovery. The patient may eat better if the family is involved and preferred foods are included as much as possible.

83. A client with a T1 spinal cord injury arrives at the emergency department with a BP of 82/40, pulse 34, dry skin, and flaccid paralysis of the lower extremities. Which of the following conditions would most likely be suspected?

- A. Autonomic dysreflexia
- B. Hypervolemia
- C. Neurogenic shock
- D. Sepsis

Correct Answer: C. Neurogenic shock

Loss of sympathetic control and unopposed vagal stimulation below the level of injury typically cause hypotension, bradycardia, pallor, flaccid paralysis, and warm, dry skin in the client in neurogenic shock. Neurogenic shock is a devastating consequence of spinal cord injury (SCI), also known as vasogenic shock. Injury to the spinal cord results in a sudden loss of sympathetic tone, which leads to the autonomic instability that is manifested in hypotension, bradyarrhythmia, and temperature dysregulation.

- **Option A:** Autonomic dysreflexia occurs after neurogenic shock abates. Neurogenic shock is defined as the injury to the spinal cord with associated autonomic dysregulation. This dysregulation is due to a loss of sympathetic tone and an unopposed parasympathetic response. Neurogenic shock is most commonly a consequence of traumatic spinal cord injuries.

- **Option B:** Hypervolemia is indicated by rapid and bounding pulse and edema. The joint committee of the American Spinal Injury Association and the International Spinal Cord Society proposed the definition of a neurogenic shock to be general autonomic nervous system dysfunction that also includes symptoms such as orthostatic hypotension, autonomic dysreflexia, temperature dysregulation.
- **Option D:** Signs of sepsis would include elevated temperature, increased heart rate, and increased respiratory rate. Though neurogenic shock should be considered only after a hemorrhagic shock has been ruled out in a traumatic patient, the presence of vertebral fracture or dislocation raises the concern for a neurogenic shock. Bradyarrhythmia, hypotension, flushed warm skin are the classic signs associated with neurogenic shock.

84. Nurse Greta is aware that the following is classified as an Axis I disorder by the *Diagnosis and Statistical Manual of Mental Disorders, Text Revision (DSM-IV-TR)* is:

- A. Obesity
- B. Borderline personality disorder
- C. Major depression
- D. Hypertension

Correct Answer: C. Major depression

The DSM-IV-TR classifies major depression as an Axis I disorder. Axis I disorders tend to be the most commonly found in the public. They include anxiety disorders, such as panic disorder, social anxiety disorder, and post-traumatic stress disorder. Other examples of Axis I disorders are as follows: Dissociative disorders. Eating disorders (anorexia nervosa, bulimia nervosa, etc.) Mood disorders (major depression, bipolar disorder, etc.) Published by the American Psychiatric Association, the DSM is the mental health bible of sorts. The DSM-IV organized all psychiatric disorders and other problems into five different categories or axes.

- **Option A:** Obesity was in Axis III. DSM-IV approached psychiatric assessment and organization of biopsychosocial information using a multi-axial formulation (American Psychiatric Association, 2013b). There were five different axes. Axis I consisted of mental health and substance use disorders (SUDs); Axis II was reserved for personality disorders and mental retardation; Axis III was used for coding general medical conditions; Axis IV was to note psychosocial and environmental problems (e.g., housing, employment); and Axis V was an assessment of overall functioning known as the GAF.
- **Option B:** Mental disorders are diagnosed according to a manual published by the American Psychiatric Association called the Diagnostic and Statistical Manual of Mental Disorders. A diagnosis under the fourth edition of this manual, which was often referred to as simply the DSM-IV, had five parts, called axes. Each axis of this multi-axial system gave a different type of information about the diagnosis. Borderline personality disorder as an Axis II. Axis II provided information about personality disorders and mental retardation.
- **Option D:** Hypertension was in Axis III. Axis III provided information about any medical conditions that were present which might impact the patient's mental disorder or its management. General Medical Condition (GMC) Axis III is for reporting current general medical conditions that are potentially relevant to the understanding or management of the individual's mental disorder. The purpose of recording General Medical Conditions on Axis III is to encourage thoroughness in evaluation/assessment and to enhance communication among healthcare providers. Axis III also

ensures that medical or physical conditions that can directly or indirectly influence management and treatment are not forgotten.

85. Following a precipitous delivery, examination of the client's vagina reveals a fourth-degree laceration. Which of the following would be contraindicated when caring for this client?

- A. Applying cold to limit edema during the first 12 to 24 hours.
- B. Instructing the client to use two or more peri pads to cushion the area.
- C. Instructing the client on the use of sitz baths if ordered.
- D. Instructing the client about the importance of perineal (Kegel) exercises.

Correct Answer: B. Instructing the client to use two or more peri pads to cushion the area

Using two or more peripads would do little to reduce the pain or promote perineal healing. A fourth-degree perineal laceration is the injury to the perineum involving the anal sphincter complex and anorectal mucosa.

- **Option A:** Ice packs can help reduce pain and swelling in the perineum. Use ice cubes in a clean, disposable glove. Wrapped in a damp cloth or place the ice pack inside a pad. Never apply directly on skin. Apply for 10-20 minutes. Repeat every 2-3 hours until pain and swelling decrease.
- **Option C:** Hot sitz bath may help speed up the healing process. Use sitz baths a few times a day, 24 hours after giving birth. Sit in water that covers the vulvar area.
- **Option D:** The muscles lie deep in the pelvis and support the pelvic organs and control the bladder and bowel function. The pelvic floor muscles attach to the pubic bone at the front, tail bone at the back, and from one sitting bone to the other sitting bone. It is important to retrain the muscles after a tear, to prevent problems such as incontinence.