

# Practice Exam Questions



AGACNP-BC

## Adult-Gerontology Acute Care Nurse Practitioner



**EXAMKILLER**

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## Total Question: 350 QAs

Question No: 1

Which of the following techniques should be used when interviewing an elderly woman?

- A. Speak quickly to get through a focused assessment before the woman tires.
- B. Speak in a quiet and calming tone so that the woman does not become agitated.
- C. Speak loudly and clearly so that the woman can hear you.
- D. Perform the entire interview in front of the primary caregiver.

Answer: C

Explanation: Speaking quickly or quietly may make it difficult for the woman to hear you. If possible, the interview should be performed outside of the presence of the primary caregiver so you can properly screen for elder abuse. If this is not possible, at least perform that part of the screening while the patient is alone. When interviewing an elderly woman, you should speak in a clear voice at an adequate volume, while facing the patient. Watch for signs that she is tiring or becoming stressed and adjust your technique accordingly, or take a break if necessary.

Question No: 2

A 77-year-old male patient has increasing dementia with short-term memory loss and symptoms that fluctuate frequently. The patient experiences visual hallucinations and exhibits muscle rigidity and tremors. These symptoms are characteristic of which type of non-Alzheimer's dementia?

- A. Dementia with Lewy bodies
- B. Frontotemporal dementia
- C. Normal pressure hydrocephalus
- D. Parkinson's dementia

Answer: A

Explanation: These symptoms are characteristic of dementia with Lewy bodies. Cognitive and physical decline is similar to Alzheimer's, but symptoms may fluctuate frequently. This form of dementia may include visual hallucinations, muscle rigidity, and tremors. Frontotemporal dementia may cause marked changes in personality and behavior and is characterized by difficulty using and understanding language. Normal pressure hydrocephalus is characterized by ataxia, memory loss, and urinary incontinence. Parkinson's dementia may involve impaired decision making and difficulty concentrating, learning new material, understanding complex language, and sequencing as well as inflexibility and short- or long-term memory loss.

Question No: 3

What determines an APRN's right to write prescriptions?

- A. Standards of Practice
- B. The American Nursing Association
- C. The state where the APRN is practicing
- D. The Drug Enforcement Agency

Answer: C

Explanation: The ability to write prescriptions is dictated by the scope of practice, which is set by the state in which the nurse is practicing.

Question No: 4

A 40-year-old female hospitalized for severe exacerbation of asthma has been treated for 6 days with albuterol by small volume nebulizer, oral theophylline, and IV methylprednisolone. The patient's blood gases have stabilized. When discontinuing the IV steroid in preparation for discharge, the acute care nurse practitioner should order:

- A. Inhaled steroid, such as Azmacort, only
- B. Oral prednisone 20 mg daily for one week and then Azmacort
- C. Oral prednisone in decreasing doses
- D. Oral prednisone in decreasing doses and inhaled steroid, such as Azmacort

Answer: D

Explanation: Patients receiving oral or intravenous steroids should be prescribed oral prednisone in decreasing doses while initiating inhaled steroids. Severe episodes of asthma may occur with withdrawal of oral or IV steroids when switching to inhaled aerosol, so combining inhaled treatment with decreasing doses can help prevent adrenal suppression, which results in acute exacerbation of symptoms. Patients should use a metered-dose inhaler (MDI) with a reservoir device or a formulation with a spacing tube (such as Azmacort) and rinse the mouth thoroughly after inhaling to prevent thrush.

Question No: 5

Which of the following statements about Medicaid is TRUE?

- A. Everyone who falls below the federal poverty line is eligible to receive Medicaid.
- B. The state is allowed to require that recipients pay a small copayment.
- C. Recipients of Medicaid are not supposed to pay anything towards their medical care.
- D. Though it is both a federal and state plan, only the state government is responsible for supervision of the program.

Answer: B

Explanation: Medicaid is not always completely free for those who receive aid. Though they cannot bill recipients for medical care, the state is allowed by the federal government to charge a small co-pay. Not everyone who lives below the federal poverty guidelines will qualify for Medicaid. Medicaid is overseen by both the state and federal governments.

Question No: 6

A woman complains of a history of nausea and burning, stabbing epigastric pain which is relieved for short periods by antacids or intake of food. The patient denies NSAID use but is a heavy smoker. A urea breath test is positive. Which of the following treatment protocols is most common?

- A. Histamine-2 blocker plus bismuth plus tetracycline
- B. Proton pump inhibitor only
- C. Proton pump inhibitor plus tetracycline
- D. Proton pump inhibitor plus clarithromycin and amoxicillin/metronidazole

Answer: D

Explanation: These symptoms are consistent with a duodenal ulcer, and the positive urea breath test indicates a *Helicobacter pylori* infection, which is usually treated with a proton pump inhibitor plus clarithromycin and amoxicillin/metronidazole. About 90% of duodenal ulcers are associated with an *H. pylori* infection. *H. pylori* weakens the mucosa and results in hypersecretion of gastric acid. Eating may increase pain with gastric ulcers.

but usually relieves pain with duodenal ulcers. Smoking increases the risk of peptic ulcer disease, and use of NSAIDs increases risk of serious complications, such as bleeding or perforation.

Question No: 7

A patient who receives multiple transfusions with citrated blood products must be monitored closely for:

- A. Hyponatremia
- B. Hypomagnesemia
- C. Hypokalemia
- D. Hypocalcemia

Answer: D

Explanation: Patients who receive multiple transfusions with citrated blood products must be carefully monitored for hypocalcemia. Calcium is important for transmitting nerve impulses and regulating muscle contraction and relaxation, including the myocardium. Calcium activates enzymes that stimulate chemical reactions and has a role in coagulation of blood. Values include:

- Normal values: 8.2 to 10.2 mg/dl
- Hypocalcemia: <8.2 mg/dl. Critical value: <7 mg/dl
- Hypercalcemia: >10.2 mg/dl. Critical value: >12 mg/dl

Symptoms include tetany, tingling, seizures, altered mental status, and ventricular tachycardia.

Treatment is calcium replacement and vitamin D.

Question No: 8

Negligence is:

- A. Not acting in a way that a reasonable and prudent nurse would, resulting in harm to the patient
- B. Acting in a way that is against the law, resulting in harm to the patient
- C. Not taking the appropriate preventative measures that another nurse would, to the detriment of the patient
- D. Not giving appropriate medical care to a patient

Answer: A

Explanation: The definition of negligence is a medical professional acting in a way that a reasonable person of the same education and skill level would not, and this action results in patient harm. Disloyalty, acting in an illegal manner, or not acting at all to prevent a patient from being harmed is called malpractice.

Question No: 9

An incidence of which of the following conditions requires mandatory reporting to the CDC?

- A. Influenza
- B. Lyme disease
- C. Hepatitis E
- D. Methicillin-resistant Staphylococcus aureus infection

Answer: B

Explanation: Lyme disease requires mandatory reporting while reporting of the other diseases is voluntary. The CDC maintains a reportable disease list, which is upgraded and revised as necessary and reissued July 1 of each year. Each state also maintains a reportable disease list, which may or may not be identical with that of the CDC, so the nurse must be familiar with all reportable disease requirements. Much data at the state and local level is confidential name-based information, but data collected at the CDC is without names or personal identifying information. Some states require reporting of hospital acquired infections.

Question No: 10

Which of the following arterial blood gas (ABG) findings is consistent with metabolic acidosis in an adult?

- A.  $\text{HCO}_3^- < 22 \text{ mEq/L}$  and  $\text{pH} < 7.35$
- B.  $\text{HCO}_3^- > 26 \text{ mEq/L}$  and  $\text{pH} > 7.45$
- C.  $\text{PaCO}_2$  35-45 mmHg and  $\text{PaO}_2 \geq 80 \text{ mmHg}$
- D.  $\text{PaCO}_2 > 55 \text{ mmHg}$  and  $\text{PaO}_2 < 60 \text{ mmHg}$

Answer: A

Explanation:  $\text{HCO}_3^- < 22 \text{ mEq/L}$  and  $\text{pH} < 7.35$  are consistent with metabolic acidosis, which may result from severe diarrhea, starvation, DKA, kidney failure, and aspirin toxicity. Symptoms may include headache, altered consciousness, agitation, lethargy, and coma. Cardiac dysrhythmias and Kussmaul respiration are common.

Other readings:

- $\text{HCO}_3^- > 26 \text{ mEq/L}$  and  $\text{pH} > 7.45$  are consistent with metabolic alkalosis.
- $\text{PaCO}_2$  35-45 mmHg and  $\text{PaO}_2 \geq 80 \text{ mmHg}$  are normal adult readings.
- $\text{PaCO}_2 > 55 \text{ mmHg}$  and  $\text{PaO}_2 < 60 \text{ mmHg}$  are consistent with acute respiratory failure in a previously healthy adult.

Question No: 11

A thin young adult comes into the emergency room with a sudden onset of right-sided chest pain and shortness of breath following a run. What do you suspect?

- A. Myocardial infarction
- B. Aortic dissection
- C. Asthma flare
- D. Spontaneous pneumothorax

Answer: D

Explanation: Young, thin males are particularly prone to spontaneous pneumothorax, especially following exercise. Shortness of breath would not be present in patients having an aortic dissection, and chest pain would be on the left side if they were having an MI. Asthma generally does not cause chest pain.

Question No: 12

A patient with severe type 1 diabetes mellitus refuses all treatment because of religious convictions. Which of the following is the most appropriate action?

- A. Provide the patient with facts about the disease, treatments, and prognosis
- B. Ask family members to intervene
- C. Remind the patient that he will die without treatment
- D. Refer the patient to a psychologist

Answer: A

Explanation: Patients have a right to refuse treatment for religious or other personal reasons, so the most appropriate action is to simply provide the patient with factual information about the disease, treatments, and prognosis in a neutral manner, without trying to coerce or frighten the patient. In some cases, patients may change their minds when presented with information, but the nurse should remain supportive regardless of the patient's decision. Asking the family to intervene is not appropriate, and refusal of treatment alone does not suggest the need for referral to a psychologist.

Question No: 13

A young woman presents in the emergency room with sudden shortness of breath, coughing, and slight chest pain. She is on the birth control pill and just returned home from a car trip several hours away. What tests should the practitioner order?

- A. ABG, ECG, chest x-ray, and echocardiogram
- B. CBC, pulmonary function test, stress test
- C. ECG, cardiac enzymes, stress test
- D. Sputum culture, CBC, pulmonary function test

Answer: A

Explanation: Given her history, the practitioner should immediately suspect that she has a pulmonary embolus, or a blood clot that passed into the lung tissue. The practitioner should also order an ABG to assess oxygenation, and an ECG and chest x-ray to rule out other causative conditions.

Question No: 14

When irrigating a wound, what wound irrigation pressure is needed to effectively cleanse the wound while avoiding trauma?

- A. <4 psi
- B. 20-30 psi
- C. 10-15 psi
- D. >15 psi

Answer: C

Explanation: Wounds should be irrigated with pressures of 10 to 15 psi. An irrigation pressure of <4 psi does not adequately cleanse a wound, and pressures >15 psi can result in trauma to the wound, interfering with healing. A mechanical irrigation device is more effective for irrigation than a bulb syringe, which delivers about :52 psi. A 250 ml squeeze bottle supplies about 4.5 psi, adequate for low-pressure cleaning. A 35-ml syringe with a 19-gauge needle provides about 8 psi.

Question No: 15

A thyroid panel comes back with the following results: elevated TSH, low free T4, and low free T3. What is the diagnosis?

- A. Hyperthyroidism
- B. Subclinical hypothyroidism
- C. Primary hypothyroidism
- D. Subclinical hyperthyroidism

Answer: C

Explanation: When the TSH is elevated, it is an indication that the thyroid is in a sluggish (i.e., hypothyroid) state and needs higher amounts of TSH to stimulate production of the thyroid hormones. In primary hypothyroidism, both levels of free T4 and free T3 are low. In cases of subclinical hypothyroidism, free T3 and free T4 are not affected, and their levels remain within the normal range.

Question No: 16

When the nurse practitioner enters the room of a patient whose death is imminent, the daughter states, "I can't stay in the room when Dad dies! I can't stand the thought!" Which of the following is the best response?

- A. "You will regret it if you don't."



- B. "Your father would want you with him."  
C. "I'll stay with him, and you can come and go as you feel comfortable."  
D. "Is there someone else who can stay with him?"

Answer: C

Explanation: The nurse practitioner should remain supportive and nonjudgmental. "I'll stay with him, and you can come and go as you feel comfortable" supports the daughter's stated desire while still leaving open the opportunity for her to spend time with her father during the death vigil. People react in very different ways to death, and many people have never seen a deceased person and may be very frightened. While many people find comfort in being with a dying friend or family member, this should never be imposed on anyone.

Question No: 17

A patient has chest pain, dyspnea, and hypotension. A 12-lead ECG shows atrial rates of 250 with regular ventricular rates of 100. P waves are saw-toothed (referred to as F waves), QRS shape and duration (0.04 to 0.11 seconds) is normal, PR interval is hard to calculate because of F waves, and the P:QRS ratio is 2-4:1. Which of the following diagnoses fits this profile?

- A. Premature atrial contraction  
B. Premature junctional contraction  
C. Atrial fibrillation  
D. Atrial flutter

Answer: D

Explanation: Atrial flutter (AF) occurs when the atrial rate is faster (usually 250-400 beats per minute) than the atrioventricular (AV) node conduction rate so not all of the beats are conducted into the ventricles (ventricular rate 75-150). The beats are effectively blocked at the AV node, preventing ventricular fibrillation although some extra ventricular impulses may go through. AF is caused by the same conditions that cause atrial fibrillation: coronary artery disease, valvular disease, pulmonary disease, heavy alcohol ingestion, and cardiac surgery. Treatment includes:

- Cardioversion if condition is unstable.
- Medications to slow ventricular rate and conduction through AV node: Cardizem<sup>™</sup>, Calan<sup>™</sup>.
- Medications to convert to sinus rhythm: Corvert<sup>™</sup>, Cardioquin<sup>™</sup>, Norpace<sup>™</sup>, Cordarone<sup>™</sup>.

Question No: 18

What is the antibiotic of choice in a patient with syphilis, who reports an allergy to penicillin?

- A. Doxycycline 100 mg PO BID x 14 days  
B. Ofloxacin 400 mg PO BID x 14 days  
C. Ceftriaxone 250 mg IM x 1 dose  
D. Metronidazole 500 mg PO BID x 14 days

Answer: A

Explanation: Except for neurosyphilis, the primary treatment should be penicillin G 2.4 million units IM for one dose. In patients who are allergic to penicillin, the treatment of choice is doxycycline 100 mg PO twice a day for 14 days OR tetracycline 500 mg PO four times a day for 14 days. Pregnant patients are an exception; they should still be given penicillin after undergoing desensitization.

Question No: 19

Which of the following communication approaches is most effective to facilitate communication with

a patient who has global aphasia?

- A. Speak slowly and clearly, facing the patient.
- B. Use letter boards.
- C. Ask yes/no questions.
- D. Use pictures, diagrams, and gestures.

Answer: D

Explanation: Aphasia is the loss of ability to use and/or understand written and spoken language because of damage to the speech center of the brain caused by brain tumors, brain injury, or stroke. Global aphasia is characterized by difficulty understanding and producing language in speaking, reading, and writing although patients may understand gestures. The nurse can use pictures, diagrams, and gestures to convey meaning. Picture charts are also useful. The speech pathologist should assess patients with aphasia and provide guidance in communicating with them.

Question No: 20

A 44-year-old obese woman recovering from a femoropopliteal bypass develops sudden onset of dyspnea with chest pain on inspiration, cough, and fever of 39°C. An S4 gallop rhythm is present.

The ECG shows tachycardia and nonspecific changes in ST and T waves. The most likely diagnosis is:

- A. Myocardial infarction
- B. Pulmonary embolism
- C. Pneumonia
- D. Sepsis

Answer: B

Explanation: Although symptoms of pulmonary embolism may vary widely depending on the size and location of the embolus, dyspnea, inspirational chest pain, cough, fever, S4 sound, tachycardia, and non-specific ECG changes in ST and T waves are common. Risk factors include obesity, recent surgery, history of deep vein thrombosis, and inactivity. Treatment includes oxygen, IV fluids, dobutamine for hypotension, analgesia for anxiety, and medications as indicated (digitalis, diuretic, antiarrhythmic). Intubation and mechanical ventilation may be required. Percutaneous filter may be placed in the inferior vena cava to prevent more emboli from reaching lungs.

Question No: 21

Which drug that is used for the treatment of coronary artery disease should be avoided in patients with asthma?

- A. Spironolactone
- B. Losartan
- C. Propranolol
- D. Captopril

Answer: C

Explanation: Propranolol is a beta-blocker and reduces myocardial demand for oxygen. It also can cause bronchospasm and should be avoided in patients who have any form of bronchospastic disease, such as asthma.

Question No: 22

When determining the burden of proof for acts of negligence, how would risk management classify willfully



providing inadequate care while disregarding the safety and security of another?

- A. Negligent conduct
- B. Gross negligence
- C. Contributory negligence
- D. Comparative negligence

Answer: B

Explanation: Gross negligence. Negligence indicates that proper care has not been provided, based on established standards. Reasonable care uses rationale for decision-making in relation to providing care. Types of negligence:

- Negligent conduct indicates that an individual failed to provide reasonable care or to protect/assist another, based on standards and expertise.
- Gross negligence is willfully providing inadequate care while disregarding the safety and security of another.
- Contributory negligence involves the injured party contributing to his or her own harm.
- Comparative negligence attempts to determine what percentage amount of negligence is attributed to each individual involved.

Question No: 23

Which antibiotic should be avoided in patients taking theophylline?

- A. Doxycycline
- B. Erythromycin
- C. Vancomycin
- D. Penicillin

Answer: B

Explanation: Erythromycin lessens theophylline's effectiveness and should not be prescribed in a patient who is taking theophylline. Consider an alternate antibiotic.

Question No: 24

A 25-year-old patient with multiple fractures from an auto accident develops hypoxia, dyspnea, precordial chest pain, tachycardia, and thick milky sputum. Auscultation of the lungs shows crackles and wheezes. The patient complains of headache and has a fever of 40°C. Which of the following interventions should be done first?

- A. High-flow oxygen
- B. Corticosteroids (IV)
- C. Vasopressors
- D. Morphine

Answer: A

Explanation: These symptoms are consistent with fat embolism syndrome (FES), which may cause rapid acute pulmonary edema and ARDS, so the patient should be immediately provided with high-flow oxygen. Controlled-volume ventilation with positive end-expiratory pressure (PEEP) may be indicated to prevent/treat pulmonary edema. Corticosteroids may reduce inflammation of the lungs and reduce cerebral edema. Vasopressors prevent hypotension and interstitial pulmonary edema. Morphine with a benzodiazepine may be indicated for patients who require artificial ventilation.

Question No: 25

In patients taking valproic acid for seizure disorder, serum levels should be maintained at:

- A. 50 to 100 mcg/ml
- B. 20 to 80 mcg/ml
- C. 10 to 20 mcg/ml
- D. 4 to 12 mcg/ml

Answer: A

Explanation: The therapeutic serum levels for valproic acid is between 50 and 100 mcg/ml. Clonazepam therapeutic serum levels are between 20 and 80 ng/ml. Carbamazepine should be maintained at serum levels of 4 to 12 mcg/ml , and phenytoin should be maintained at serum levels of 10 to 20 mcg/ml .

Question No: 26

When the nurse practitioner is conducting medication reconciliation, the patient's list of current medications includes the following: Lasix®, metolazone, aminophylline, and doxapram. The nurse believes this list probably indicates:

- A. Polypharmacy
- B. Inaccurate reporting
- C. Accurate reporting
- D. Poor medical management

Answer: A

Explanation: Since Lasix® and metolazone are both diuretics and aminophylline and doxapram are both methylxanthines, this list probably indicates polypharmacy. Older adults are especially at risk for polypharmacy- taking too many drugs- because of taking the same drug under generic and brand names, taking drugs for one condition but contraindicated for another, and taking drugs that are not compatible. Reasons for polypharmacy include multiple prescriptions from different doctors; forgetfulness; confusion; failure to report current medications; the use of supplemental, over-the-counter, and herbal preparations in addition to prescribed medications; and failure of healthcare providers to adequately educate the patient.

Question No: 27

A patient is hospitalized for a myocardial infarction and exhibits increased preload, increased afterload, and decreased contractility with decreased cardiac output and increased systemic vascular resistance. BP is 84/40 and pulse 124 bpm, thready, and irregular. The patient has tachypnea, chest pain, basilar rales, and pallor. The most likely diagnosis is:

- A. Cardiogenic shock
- B. Pulmonary embolism
- C. Heart failure
- D. Atrial fibrillation

Answer: A

Explanation: These symptoms are consistent with cardiogenic shock. Cardiogenic shock has 3 characteristics: Increased preload, increased afterload, and decreased contractility. Together these result in a decreased cardiac output and an increase in systemic vascular resistance (SVR) to compensate and protect vital organs. This results in an increase of afterload in the left ventricle with increased need for oxygen. As the cardiac output continues to decrease, tissue perfusion decreases, coronary artery perfusion decreases, fluid backs up, and the left ventricle fails to adequately pump the blood, resulting in pulmonary edema and right ventricular failure.

Question No: 28

Which of the following sensory changes associated with aging has the most impact on older adults?

- A. Hearing deficit
- B. Vision deficit
- C. Decreased taste and smell
- D. Decreased sense of touch (vibration, temperature, pain)

Answer: B

Explanation: Older adults are most impacted by deteriorating vision (presbyopia, cataracts), which prevents them from reading and navigating safely. Most people older than 60 require glasses. People may be less sensitive to color differences (particularly blues and greens), and night vision decreases. Hearing impairment (impacted cerumen, presbycusis) may require periodic cleaning of the ears or hearing aids. Taste and smell usually remain fairly intact although smell of airborne chemicals may be less acute, and taste buds begin to atrophy around age 60, affecting the ability to taste sweet and salt especially. The sense of touch is usually somewhat reduced in older adults.

Question No: 29

An HIV-positive patient has experienced a recent drop in CD4 count to 190. She has developed a fever with general malaise and abdominal pain, and examination shows hepatosplenomegaly.

Differential diagnoses should include:

- A. Pneumocystis jiroveci pneumonia, bacterial pneumonia, and TB
- B. Toxoplasmosis, herpes encephalitis, and CNS lymphoma
- C. Histoplasmosis, Mycobacterium avium complex, and bacillary peliosis
- D. TB, non-Hodgkin's lymphoma, and bacillary angiomatosis

Answer: C

Explanation: Fever, malaise, abdominal pain, and hepatosplenomegaly in an HIV-positive patient with CD4 count < 200 may result from histoplasmosis, Mycobacterium avium complex, and bacillary peliosis. Fever, cough, and dyspnea may indicate Pneumocystis jiroveci pneumonia, bacterial pneumonia, and TB.

Fever, headache, neck pain, and altered mental status may indicate toxoplasmosis, herpes encephalitis, and CNS lymphoma. Fever with asymmetric or unilateral lymphadenopathy may indicate TB, non-Hodgkin's lymphoma, and bacillary angiomatosis.

Question No: 30

With the Braden scale to assess risk for developing pressure sores, the patient scores 1 to 3 in all six assessment areas with a total score of 14. What is the patient's risk?

- A. High risk, poor prognosis
- B. Breakpoint for risk, moderate prognosis
- C. Minimal risk, excellent prognosis
- D. No risk

Answer: B

Explanation: Breakpoint for risk, moderate prognosis. Six assessment areas include sensory perception, moisture, activity, mobility, usual nutrition pattern, and friction and shear. The first four categories are scored from 1 (worst) to 4 (best) and the last category (friction and shear) is scored from 1 to 3. The scores for all six items are totaled and a risk assigned according to the number.

- 23: (Best score) excellent prognosis, very minimal risk
- $\leq 16$ : Breakpoint for risk of pressure ulcer (will vary somewhat for different populations)
- 6: (Worst score) prognosis very poor, strong likelihood of developing pressure ulcers

Question No: 31

An 80-year-old male has had post-herpetic neuralgia for 11 months, but pain is increasingly intractable despite his taking 10 hydrocodone tablets daily. He has coronary stents in place and takes warfarin. The patient is weak, somnolent, and lethargic, and eats and sleeps poorly. Modifying his pain management should include:

- A. Weaning patient from hydrocodone and starting gabapentin in slowly increasing doses
- B. Discontinuing hydrocodone and starting morphine pump
- C. Weaning patient from hydrocodone and starting biofeedback
- D. Lowering the dose of hydrocodone and supplementing with NSAIDs

Answer: A

Explanation: Post-herpetic neuralgia is a chronic pain condition that responds poorly to opioids and is better treated with anticonvulsants, such as gabapentin. Tricyclic antidepressants are also used but may have severe side effects in the elderly. Because the patient has been on high doses of hydrocodone, he may experience withdrawal with abrupt discontinuation of the drug, so the dose should be decreased by one tablet every 2 to 3 days while gabapentin is started at a low dose and slowly increased to reduce incidence of side effects. Morphine pumps and NSAIDs are usually avoided with warfarin and are often ineffective.

Question No: 32

A 76-year-old male is recovering from surgery but exhibits sudden onset of confusion with fluctuating inattention, disorganized thinking, and altered level of consciousness. Which of the following assessment tools is most indicated?

- A. Mini-mental state exam (MMSE)
- B. Mini-Cog
- C. Confusion assessment method (CAM)
- D. Geriatric depression scale (GOS)

Answer: C

Explanation: CAM: Assesses development of delirium. Factors indicative of delirium include:

- Onset: Acute change in mental status.
- Attention: Inattentive, stable, or fluctuating.
- Thinking: Disorganized, rambling conversation, switching topics, illogical.
- Level of consciousness: Altered, ranging from alert to coma.
- Orientation: Disoriented (person, place, time).
- Memory: Impaired.
- Perceptual disturbances: Hallucinations, illusions.
- Psychomotor abnormalities: Agitation (tapping, picking, moving) or retardation (staring, not moving).
- Sleep-wake cycle: Awake at night and sleepy in the daytime.

MMSE and Mini-Cog are used to assess evidence of dementia or short-term memory loss, often associated with Alzheimer's disease. GOS is a self-assessment tool to identify older adults with depression.

Question No: 33

When forced expiratory volume in one second (FEV1) is markedly more reduced than the reduction in forced vital capacity (FVC), the patient is probably experiencing:

- A. Restriction of maximal lung expansion
- B. Airway obstruction
- C. Depressed respiratory center
- D. Limitation in neurological impulses to the muscles of respiration

Answer: B

Explanation: Airway obstruction often results in FEV1 that is more reduced than FVC because the air is trapped and cannot be readily expelled in one second. Normally, FEV1 is about 80% of vital capacity with most of the remaining air expelled by 3 seconds (FEV3). Proportional reduction of both FEV1 and FVC indicate reduced lung expansion. Depression of respiratory centers results from anesthesia or sedation.

Limitation in neurological impulses results from damage to the brain or spinal cord.

Question No: 34

A 70-year-old female with Alzheimer's and a history of falls is admitted to the unit with pneumonitis after a seven-hour wait in the emergency department. The patient is agitated, restless, and repeatedly says "I'm hungry." The nurse's first priority should be to:

- A. Assess diet needs and order food.
- B. Institute a fall-prevention program.
- C. Review all medications.
- D. Assess cognitive abilities.

Answer: A

Explanation: The first priority should be to attend to the patient's comfort needs by assessing diet needs, including food allergies, and ordering food. Because the patient has a history of falls, the nurse practitioner should institute a program of fall prevention, assessing the best methods to prevent injury to the patient. The nurse should then review all medications to ensure that no ongoing medical needs are overlooked, as patients may not provide full information in the emergency department. Cognitive abilities are best assessed when the patient is comfortable and rested.

Question No: 35

A patient with a score of 10 on the Glasgow coma scale is classified as:

- A. Comatose
- B. Severe head injury
- C. Moderate head injury
- D. Mild head injury

Answer: C

Explanation: A score of 10 on the Glasgow Coma Scale (GCS) indicates a moderate head injury. GCS measures the depth and duration of coma or impaired level of consciousness and is used for postoperative/brain injury assessment. The GCS measures three parameters- best eye response, best verbal response, and best motor response- with a total possible score that ranges from 3 to 15. Injuries/conditions are classified according to the total score:

- 3-8 coma
- $\geq 8$  severe head injury
- 9-12 moderate head injury

- 13-15 mild head injury

Question No: 36

A patient's laboratory tests show that the TSH is 14 mU/mL, free T4 is 3.5 µg/dl and free T3 is 100 ng/dl. These findings indicate:

- A. Normal values
- B. Hypothyroidism
- C. Hyperthyroidism
- D. Hashimoto's thyroiditis

Answer: B

Explanation: These laboratory findings indicate hypothyroidism, which is characterized by increased TSH, decreased free T4, and normal free T3. Normal values for an older adult:

- TSH: 0.32-5.0 mU/mL.
- Free T4: 4.5-12 µg/dl
- Free T3: 75-200 ng/dl .

Hyperthyroidism is characterized by decreased TSH (<0.30), increased free T4 and increased T3.

Additional tests may be indicated for those with comorbidities and multiple medications. Thyroid autoantibody tests are used to help diagnose Hashimoto's thyroiditis.

Question No: 37

A patient with bone metastasis from prostate cancer is to be treated with zoledronic acid (Reclast, Zometa). Which laboratory test(s) must be done prior to initiating treatment?

- A. Serum creatinine/creatinine clearance
- B. Blood urea nitrogen (BUN)
- C. Complete blood count (CBC)
- D. Electrolyte panel

Answer: A

Explanation: Because zoledronic acid may result in decreased renal function in acute renal failure, a serum creatinine and calculation of creatinine clearance should be done before every dose. Zoledronic acid is contra indicated with creatinine clearance <35 ml/min or with severe renal impairment. Additional treatments are withheld if renal deterioration occurs and not resumed until creatinine is within 10% of baseline value. Normal CC values: Adult male: 97-137 ml/min: Adult female: 88-128 ml/min. During treatment, patients should receive calcium (500 mg) and vitamin D (400 IU) supplements daily unless the patient has hypercalcemia.

Question No: 38

A 69-year-old female hospitalized for a fractured hip is being evaluated for comorbidities. The most common comorbidity for hospitalized patients ages 65 to 80 is:

- A. Fluid and electrolyte imbalance
- B. COPD
- C. Anemia
- D. Hypertension

Answer: D

Explanation: The most common comorbidities (with approximate percentages) for those hospitalized include:



Hypertension: 30%	CHF: 6%
COPD: 12%	Hypothyroidism: 6%
Diabetes: 12%	Depression/bipolar disorder: 5%
Fluid/electrolyte imbalance: 12%	Neurological disorder: 4%
Iron deficiency/anemia: 8%	Obesity: 4%

Comorbidities vary according to age. In those under 18 and over 80, fluid and electrolyte disorders from dehydration or excess fluids predominate while hypertension is most common for those over 18.

Diabetes is the next most common disorder for those under 80.

Question No: 39

A 45-year-old male has renal calculi. He has passed one stone, but ultrasound shows multiple stones present in the urinary tract. Stone analysis shows the stone is calcium-containing. In addition to analgesia and antispasmodics, which medication is indicated?

- A. Indomethacin
- B. Allopurinol and Vitamin B6
- C. Alpha-mercato-propionyl-glycine (aMPG) and captopril
- D. Hydrochlorothiazide

Answer: D

Explanation: Thiazides, such as hydrochlorothiazide, are indicated to increase reabsorption of calcium with calcium-containing renal calculi. Allopurinol and vitamin B6 are used with oxalate-containing stones. Alpha-mercato-propionyl-glycine (aMPG) and captopril are used with cystine-containing stones if increasing hydration and alkalinization is ineffective. Indomethacin is used with allopurinol to maintain uric acid levels. Alkalinizing agents, such as Polycitra and Allopurinol, are used with uric acid stones. Additional medications can include antibiotics if infection occurs. Some patients may require opioids, such as morphine, to control pain.

Question No: 40

When prescribing an oral anti-diabetic agent for an older patient, the patient's initial dose should be

- A. The same as the usual dose for a younger adult
- B. 25% of the usual dose
- C. 50% of the usual dose
- D. 75% of the usual dose

Answer: C

Explanation: When prescribing an oral anti-diabetic agent for an older patient, the patient's initial dose should be 50% of the usual dose.

#### Problems associated with older adults and different types of drugs

Anti-diabetics	Oral anti-diabetic agents should be started at 50% of the usual dose because of the danger of hypoglycemia. First generation drugs should be avoided. Glucotrol® has fewer side effects than Diabeta®.
Antidepressants	Antidepressants are associated with excess sedation, so typical doses are only 16-33% of a younger adult's dose. SSRIs are safest, but Prozac® should be avoided because it may cause anorexia, anxiety, and insomnia.
Anticoagulants	Anticoagulants may cause severe bleeding in those over 65. Warfarin should be used with care and at a lower dose if total protein or albumin concentration is low.

Question No: 41

A 56-year-old female has pain and swelling of the small joints of the hands and wrist. Which test(s) should the acute care nurse practitioner order to confirm a diagnosis of rheumatoid arthritis?

- A. Rheumatoid factor (RF) and anti-citrullinated protein antibody (ACPA)
- B. RF and erythrocyte sedimentation rate (ESR)
- C. C-reactive protein (CRP) and RF
- D. Synovial fluid analysis, ESR, and CRP

Answer: A

Explanation: Tests for diagnosis of rheumatoid arthritis in the presence of joint involvement of the small joints (fingers, wrists) or large joints (elbows, hips, knees) includes primarily RF and ACPA. ESR and CRP may also show elevation but are less specific. Diagnosis is usually made if 4 of 7 positive symptoms for RA are present: morning stiffness >1 hour, ~2 involved joints with involvement of wrists, or finger joints >6 weeks, bilateral and symmetrical involvement, presence of rheumatoid nodules, joint destruction on x-ray, and positive RF or ACPA.

Question No: 42

A 78-year-old patient is hospitalized with severe dehydration from influenza. Which type of precaution is indicated when caring for the patient?

- A. Use personal protective equipment, including gown and gloves for all contact.
- B. Wear a mask while caring for patient.
- C. Wear a mask and gloves for all contact with patient.
- D. Use a ~N95 respirator while caring for patient.

Answer: B

Explanation: Influenza requires droplet precautions, using a mask.

Contact	Use personal protective equipment (PPE), including gown and gloves, for all contacts with the patient or patient's immediate environment. Maintain patient in private room or >3 feet away from other patients.
Droplet	Use mask while caring for the patient. Maintain patient in a private room or >3 feet away from other patients with curtain separating them. Use patient mask if transporting patient from one area to another.
Airborne	Place patient in an airborne infection isolation room. Use ≥N95 respirators (or masks) while caring for patient.

Question No: 43

A patient has a chronic leg ulcer covered with black eschar and is to have chemical debridement with collagenase. Preparation includes:

- A. Thoroughly drying the eschar and surrounding skin
- B. Applying topical antibiotic
- C. Scrubbing the wound with hexachlorophene
- D. Cross-hatching the upper layers of the eschar

Answer: D

Explanation: Chemical debridement is used for chronic wounds (burns, ulcers) with necrotic tissue and eschar. However, the enzymes (collagenase and papain/urea) require a moist environment, so the eschar must be cross-hatched through the upper layers before the enzyme is administered. The pH must remain between 6

and 8 to prevent inactivation. Hexachlorophene, Burrow's solution, and heavy metal ions also inactivate the enzymes. Collagenase is applied one time daily, either directly to the wound for deep wounds or to gauze packing for shallow wounds.

Question No: 44

A 36-year-old female was injured in a fall when drunk. CT shows contusion on the left side of the brain. The patient responds lethargically to verbal commands and shows some confusion and restlessness. Vital signs: BP 154/116, pulse 68, and respirations 28. Previous records indicate her normal BP was 128/110, pulse 76, and respirations 16. The change in VS is most likely an indication of:

- A. Increasing intracranial pressure
- B. Stress response
- C. Ethanol intoxication
- D. Delirium tremens

Answer: A

Explanation: These VS changes are consistent with increasing intracranial pressure. Typical findings include widened pulse pressure, with rising blood pressure and depressed heart rate. Because the patient is drunk, evaluating level of consciousness can be difficult, but lethargy, confusion, and restlessness are characteristic of increasing ICP. Stress response usually results in increased BP and pulse. Ethanol intoxication usually causes hypotension, bradycardia with arrhythmias, and respiratory depression.

Delirium tremens includes tremors, tachycardia, and cardiac dysrhythmias.

Question No: 45

Which of the following is the best documentation of the behavior of a difficult patient?

- A. "Patient is belligerent and uncooperative."
- B. "Patient is spitting at nurses, throwing magazines, and refusing to get out of bed for therapy."
- C. "Patient appears to dislike nurses and other care providers."
- D. "Patient believes staff members are going to hurt her."

Answer: B

Explanation: "Patient is spitting at nurses, throwing magazines, and refusing to get out of bed for therapy" describes the patient's behavior without placing a value judgment ("belligerent and uncooperative"), which might indicate bias against the patient. The nurse should avoid interpreting behavior ("appears to dislike") or characterizing what's in a patient's mind ("Patient believes"). Patients, especially older adults or those who are confused, may behave in a difficult manner if they are afraid, in pain, or overwhelmed, so the nurse should attempt to find the reason for the behavior.

Question No: 46

A 75-year-old male is receiving warfarin after the insertion of an aortic stent for aortic aneurysm.

The patient states he usually takes a number of vitamins and herbal preparations. Which of the following should the patient avoid?

- A. St. John's wort
- B. Melatonin
- C. Echinacea
- D. Vitamin B complex

Answer: A

Explanation: St. John's wort may interact with antibiotics, birth control pills, antidepressants, warfarin, anticonvulsants, MAO inhibitors, antivirals, immunosuppressants, and migraine drugs. Melatonin may interact with NSAIDs, antihypertensives, steroids, and anti-anxiety medications. Echinacea may interact with immunosuppressants and steroids. Vitamin B complex is safe to take with warfarin, as it does not affect the INR; however, multivitamins with vitamin K may. If patients take a multivitamin during warfarin therapy, they should do so daily and not intermittently so that intake of vitamin K does not fluctuate. Vitamin C should be limited to 500 mg daily and vitamin E to 400 IU daily.

Question No: 47

A retrospective attempt to determine the cause of an event, often a sentinel event such as an unexpected death, is the definition of:

- A. A t-test
- B. Regression analysis
- C. Tracer methodology
- D. Root cause analysis

Answer: D

Explanation: Root cause analysis is a retrospective attempt to determine the cause of an event. Regression analysis compares the relationship between two variables to determine if the relationship correlates.

T-test is used to analyze data to determine if there is a statistically significant difference in the means of two groups. The t-test looks at two sets of things that are similar, such as exercise in women over 65 with cancer and over 65 without cancer. Tracer methodology is a method that looks at the continuum of care a patient receives from admission to post-discharge.

Question No: 48

A 72-year-old female on Medicare is being discharged home with a healing burn on her left arm that she is unable to care for independently because of arthritis. She requires dressing changes every 3 days. She depends on public transportation and walks with difficulty. The bus stop is two blocks from her house. Her 12-year-old granddaughter lives with her. The best solution is:

- A. Transferring the patient to an extended care facility
- B. Providing treatment on an outpatient basis at the hospital clinic
- C. Teaching the woman's 12-year-old granddaughter to do the dressing changes
- D. Making a referral to a home health agency to provide in-home care

Answer: D

Explanation: The best solution is a referral to a home health agency to provide in-home care, as this ensures that the woman will receive skilled nursing care and be able to stay at home and supervise her granddaughter.

A 12-year-old is too young for the responsibility of wound care. The patient's dependence on public transportation and difficulty walking precludes outpatient care. Home health care is a more cost-effective solution than transferring the patient to an extended care facility, which would leave the granddaughter without care. Medicare will not pay for extended hospital care for healing wounds.

Question No: 49

If all patients who develop urinary infections with urinary catheters are evaluated per urine culture and sensitivities for microbial resistance, but only those patients with clinically evident infections are included, this is an example of:

- A. Information bias
- B. Selection bias
- C. Compliance bias
- D. Admission bias

Answer: B

Explanation: This is an example of selection bias because those with catheters without clinically evident infections were excluded. The results are skewed because many patients may have subclinical infections.

Information bias occurs when there are errors in classification, so an estimate of association is incorrect. Information bias may be non-differential or differential. Compliance bias occurs when adherence to protocol is inconsistent. Admission bias occurs when some groups, such as spinal cord injury patients, are omitted from the study.

Question No: 50

A 68-year-old male has an asynchronous pacemaker and has been experiencing cardiac palpitations, headache, anxiety, general malaise, pain in the jaw and chest, and unexplained weakness with pulsations evident in the neck and abdomen. The most likely cause is:

- A. Broken pacemaker wires
- B. Dislodged pacemaker wires
- C. Myocardial infarction
- D. Pacemaker syndrome

Answer: D

Explanation: These symptoms are consistent with pacemaker syndrome.

Mild	Pulsations evident in neck and abdomen. Cardiac palpitations. Headache and feeling of anxiety. General malaise and unexplained weakness. Pain or "fullness" in jaw, chest.
Moderate	Increasing dyspnea on exertion with accompanying orthopnea Dizziness, vertigo, increasing confusion. Feeling of choking.
Severe	Increasing pulmonary edema with dyspnea even at rest and crackling rales. Syncope. Heart failure.

Question No: 51

A normally healthy male presents to the ER with complaints of productive cough and fever for the past three days. Chest x-rays reveals a small infiltrate in the right lower lobe. The most appropriate antibiotic therapy for this patient is:

- A. Azithromycin 500 mg PO on day one, then 250 mg PO once daily for 4 days.
- B. Ceftriaxone 1 g IM today, followed by doxycycline 100 mg PO twice daily for 10 days.
- C. Amoxicillin 875 mg PO twice daily for 10 days.
- D. No antibiotic therapy is necessary because the cause of these findings is most likely viral.

Answer: A

Explanation: The type of pneumonia that is most common in a person who is normally healthy is community



acquired pneumonia. Without any other co-morbidities present, the most appropriate treatment is with azithromycin. Clarithromycin and doxycycline are also options for treatment if there is an allergy to azithromycin.

Question No: 52

A pre-menopausal woman who has been treated for breast cancer is taking tamoxifen. She asks her nurse practitioner how long she will need to take this. The most appropriate answer is:

- A. Two years following treatment of the cancer
- B. Five years following treatment of the cancer
- C. Seven years following treatment of the cancer
- D. Ten years following treatment of the cancer

Answer: D

Explanation: The ATLAS trial evaluated the benefits of long-term tamoxifen treatment in thousands of women worldwide who had been treated for breast cancer. It was found that completing a ten-year treatment with tamoxifen provided longer survival rates and a lower repeat incidence of breast cancer.

Question No: 53

What is the rationale for initiating beta blocker therapy in a patient with congestive heart failure?

- A. Beta blockers are contraindicated in patients with CHF.
- B. Beta blockers will reduce catecholamine stimulation in patients with CHF.
- C. Beta blockers will stimulate serotonin release to improve mood and decrease anxiety.
- D. Beta blockers can help improve renal function.

Answer: B

Explanation: Beta blockers have been shown to decrease catecholamine stimulation in patients with CHF. Catecholamine has been found to impair heart function by affecting ejection fraction, ventricular hypertrophy, and even contributing to cardiac muscle cell death. By decreasing the amount of catecholamine present, the heart is not subjected to the potential injury that can occur.

Question No: 54

A 54-year-old female is taking levothyroxine 0.125 mg daily. Her most recent labs show TSH increased at 8.1 and T4 decreased at 4.2. What is the most appropriate step to take next?

- A. Continue the levothyroxine at the current dosage and recheck labs at her next follow-up.
- B. Decrease the levothyroxine dosage to 0.1 mg daily and recheck labs in 6-8 weeks.
- C. Increase the levothyroxine dosage to 0.137 mg daily and recheck labs in 6-8 weeks.
- D. Increase the levothyroxine dosage to 0.3 mg daily and recheck labs in 6-8 weeks.

Answer: C

Explanation: An increased TSH level and decreased T4 level would indicate mild hypothyroidism and her medication dosage should be increased. It is recommended that levothyroxine be increased in increments of 0.0125 to 0.025 mg and then have labs rechecked before adjusting the medication again.

Question No: 55

A contraindication for using gentamicin ear drops to treat otitis externa is:

- A. Renal failure
- B. A perforated ear drum