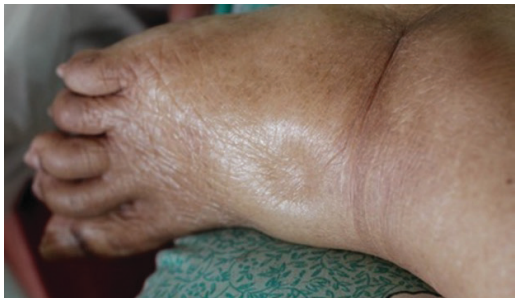
NurseThink® Clinical Judgment Exams

Sample Questions

Fundamentals

Q: The home health nurse cares for a client with peripheral vascular disease. After assessing the feet (see image), what is important for the nurse to include in the client's plan of care?



A. Call the nurse if the client gains five or more pounds in two days.

B. Keep lower extremities in a dependent position when sitting.

C. Elevate the lower extremities while sitting.

D. Do not allow the client to drink fluids after 7 pm.

Answer: C

System: Renal, **Concept:** Fluid & Electrolytes Concept, **Exemplar-Disease:** Fluid Overload, **Subtopic:** Nursing care planning, **NCLEX® Client Needs:** Management of Care, **QSEN Competencies:** Teamwork and Collaboration, **Nursing Process:** Planning, **Clinical Judgment Measurement Model:** Generate Solutions

Debriefing: Planning care for a client involves careful determination of all interventions that can help the client's condition. The client has a venous problem which causes dependent edema, so the legs should not be in a dependent position. They must be elevated whenever the client is in a sitting position to foster return of blood to the heart. The nurse should be called when the client gains three pounds in two days. There is no reason to restrict the client's fluid after 7 pm.

Clinical Tip: Care planning for a client who is in fluid overload must include daily weights as this is crucial for edema management. The client must be weighed at the same time every morning wearing similarly weighted clothing.

Pediatrics

Q: The nurse reviews the electronic health record of a 15-month-old who is to receive immunizations today. Identify the data that should be reported to the health care provider prior to the administration of the scheduled immunizations.

Nurse Think HEALTHCARE SYSTEM

Name: J.S.
Health Care Provider: T. Terry, M.D.
MRN: 7622235998

Age: 15 months
Allergies: NKDA
Code Status: Full Code

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

NURSING ASSESSMENT & NOTES

May 15	1320: Child's parent states that one parent does smoke at home. Parent states child takes the following home medications: 1. Multivitamin 1 mL/day 2. Albuterol 1 mg (0.8 mL) with 2.5 mL normal saline via nebulizer every 3-4 hours as needed for respiratory distress

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

VITAL SIGN TREND

Date	Blood Pressure (mmHg)	Heart Rate (beats/minute)	Respirations (breaths/minute)	Temperature (°F/°C)	Oxygen Saturation (%)
May 15	92/68	146	28	102.2/39	98%

Answer: The client's temperature

System: Immunity, **Concept:** Health Promotion Concept, **Exemplar-Disease:** Health Promotion, **Subtopic:** Immunization contraindications, **NCLEX® Client Needs:** Safety and Infection Control, **QSEN Competencies:** Quality Improvement, **Nursing Process:** Analysis, **Clinical Judgment Measurement Model:** Analyze Cues

Debriefing: Recommended contraindications for immunizations include severe, febrile illnesses and refraining from administering a live virus to an immunosuppressed client. With a fever this high, the nurse should hold the immunization and report to the provider. The tachycardia (normal heart rate for a toddler is 80-130 beats/minute) is likely related to the fever but not a contraindication by itself. Minor illnesses do not prevent immunization, nor does a history of asthma.

Clinical Tip: Administering acetaminophen before immunizations and every four hours for 24 hours after may prevent the irritability often noted in infants after immunization.

Women's Health

Q: The nurse cares for an infant scheduled for a circumcision. The parents ask why the circumcision is delayed until two days after birth. Which reasons should the nurse include in the teaching plan? Select all that apply.

A. To comply with religious regulations.

B. To avoid potential cold stress.

C. To give parents time to make an informed decision.

D. To ensure the consent is signed.

E. To ensure adequate clotting.

Answer: B, C, D, E

System: Safety System, **Concept:** Health Promotion Concept, **Exemplar-Disease:** Newborn Care, **Subtopic:** Circumcision care, **NCLEX® Client Needs:** Health Promotion and Maintenance, **QSEN Competencies:** Evidence-based Practice, **Nursing Process:** Analysis, **Clinical Judgment Measurement Model:** Prioritize Hypotheses

Debriefing: Circumcisions need to be delayed until day two to avoid cold stress, ensure that the consent is signed, ensure adequate clotting, and ensure that parents have the time to make an informed decision. Religious regulations have nothing to do with waiting two days; Jewish individuals have their male infants circumcised in a bris at eight days.

Clinical Tip: The choice to have a young boy circumcised is often made upon personal preference, tradition, and religious reasons.

Community Health

Q: There is an outbreak of hepatitis A in a community, and the nurse engages in strategies to prevent its transmission. Images of three strategies are shown. Which strategy is a priority for the nurse to share?

A. 

B. 

C. 

Answer: A

System: Community, **Concept:** Infection Concept, **Exemplar-Disease:** Health Promotion, **Subtopic:** Community Disease Prevention, **NCLEX® Client Needs:** Safety and Infection Control, **QSEN Competencies:** Safety, **Nursing Process:** Implementation, **Clinical Judgment Measurement Model:** Take Actions

Debriefing: Hepatitis is transferred from person to person via the fecal-oral route. It usually occurs from contaminated food, water, or surfaces. Handwashing is the greatest method to prevent transmission. There is an effective hepatitis A vaccine that may be used for those most at risk. Screening is limited to those most exposed to the hepatitis organism, not the entire community. Safe sexual practices and needle exchange programs limit the transmission of bloodborne pathogens such as hepatitis B.

Clinical Tip: Hepatitis C is an aggressive illness that requires vigilant assessment and screening. It is suggested that individuals born between 1945 and 1965 be screened for hepatitis C.

Pharmacology

Q: A 65-year-old client with hypertension, diabetes mellitus type 2, and chronic obstructive pulmonary disease is admitted to the emergency department at 1130 with a blood pressure of 180/105 mm/Hg. At 1145 he receives metoprolol 5 mg intravenously and asks if he can get lunch. The client receives a meal equivalent to 65 grams of carbs. After reviewing the electronic health record, how much insulin should the nurse administer? Round to the nearest whole number in units of insulin.

Nurse Think HEALTHCARE SYSTEM

Name: C.J.
Health Care Provider: L. Smith, M.D.
MRN: 0321054199

Age: 65 years
Allergies: Acetaminophen
Code Status: Full Code

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

VITAL SIGN RECORD

Time	Blood Pressure (mmHg)	Heart Rate (beats/minute)	Respirations (breaths/minute)	Temperature (°F/°C)	O2 Saturation (%)
1120	180/105	95	18	98.6/37	91 room air
1155	160/90	75	18	98.5/36.9	90 room air

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

LABORATORY REPORT

LAB	NORMAL	April 13	April 20
Glucose	70 – 100 mg/dL	**150 mg/dL taken at home**	**68 mg/dL**
Hemoglobin A1c	< 5.5 %	**7 %**	

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

MEDICATION ADMINISTRATION RECORD

Medication	April 20	
Metoprolol 5 mg IV STAT	Given at 1145	
Insulin aspart SQ, give 1 unit within 30 minutes of each meal or snack for each 15 grams of carbohydrates. Hold for glucose < 70 mg/dL		
Insulin aspart SQ sliding scale (in addition to carb-based insulin) 1. Glucose 130 – 200 give 1 unit 2. Glucose 201 – 300 give 2 units 3. Glucose 301 – 400 give 3 units 4. Glucose > 400 give 4 units and notify provider		

Answer: 0 units of insulin

System: Endocrine, **Concept:** Glucose Regulation Concept, **Exemplar-Disease:** Diabetes Mellitus – Type 2, **Subtopic:** Insulin administration, **NCLEX® Client Needs:** Pharmacological and Parenteral Therapies, **QSEN Competencies:** Safety, **Nursing Process:** Implementation, **Clinical Judgment Measurement Model:** Take Actions

Debriefing: The client's glucose level is below the level determined by the provider for which insulin is indicated. Administering insulin with a glucose level of 68 mg/dL is not safe nor within the prescription guidelines found in the MAR.

Clinical Tip: Calculating insulin administration based on carbs is common best practice. However, the nurse must ensure safety at all times and never administer insulin with glucose levels < 70 mg/dL.

Medical-Surgical

Q: The nurse overhears unlicensed assistive personnel (UAP) in the hallway discussing a client with dementia stating, "I am so sick of hearing the client ask what time it is over and over." Which action(s) should the nurse take? Select all that apply.

A. Inform the UAP that what was said is unkind, inappropriate, and will be reported to the supervisor.

B. Ask the UAP to come into a private area to discuss her frustration with caring for the client.

C. Provide a staff in-service about caring for clients with dementia and delirium.

D. Administer a sedative since the client is agitated and continues to repeat self.

E. Discuss with the UAP ways to provide support to the client and communicate therapeutically.

Answer: B, E

System: Leadership, **Concept:** Role of the Nurse Concept, **Exemplar-Disease:** Dementia and Alzheimer's, **Subtopic:** Addressing concerns with UAP, **NCLEX® Client Needs:** Management of Care, **QSEN Competencies:** Teamwork and Collaboration, **Nursing Process:** Planning, **Clinical Judgment Measurement Model:** Generate Solutions

Debriefing: Caring for a client with dementia requires a calm and predictable environment so they can interpret surroundings and activities. The nurse should educate the UAP about ways to support and speak therapeutically to the client but also be allowed to voice frustration in a private area with the support of the nurse. Sedation is a form of chemical restraint, and there is no indication that the client requires anything for agitation at this time. An in-service to address some of the issues related to clients with dementia or delirium is acceptable but not an immediate need or priority. The UAP should not be chastised or made to feel attacked while feeling frustrated.

Clinical Tip: Promotion of independent function for as long as possible is a primary goal of caregivers for clients with dementia. Reducing anxiety, improving communication, allowing opportunities to socialize, and providing a safe and caring atmosphere are also important goals.

Mental Health

Q: The nurse reviews the progress note for a client during a routine office visit. Which action by the nurse is most appropriate at this time?

Nurse Think HEALTHCARE SYSTEM

Name: K.S.	Age: 39 years
Health Care Provider: J. Swanson, M.D.	Allergies: ciprofloxacin
MRN: 7795330214	Code Status: Full Code

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

NURSING NOTES

February 23 1030	Client received smoking cessation information today. Client responded by stating, "If I continue to smoke, it is none of your business. I will smoke where I want and when I want. You can't make me stop."

A. Explain the risks of smoking to the client.

B. Give the client more smoking cessation information.

C. Refer the client to a smoking cessation support group.

D. Avoid discussing smoking cessation with the client.

Answer: A

System: Multisystem, **Concept:** Health Promotion Concept, **Exemplar-Disease:** Antisocial disorder, **Subtopic:** Behaviors, **NCLEX® Client Needs:** Physiological Adaptation, **QSEN Competencies:** Informatics, **Nursing Process:** Implementation, **Clinical Judgment Measurement Model:** Take Actions

Debriefing: The nurse treats the visit as a new encounter with the client and delivers the information in a non-confrontational way. Clients with antisocial behavior often have ineffective coping skills and impaired communication. The nurse must be direct with information and avoid "lecturing." The best approach engages the client in a discussion about the issue, highlighting the major teaching points.

Clinical Tip: Documentation needs to be factual, timely, and concise.

Health Assessment

Q: Based on the information in the electronic health record, what is the most important intervention that the nurse must include in the client's plan of care?

Nurse Think HEALTHCARE SYSTEM

Name: X.W.	Age: 55 years
Health Care Provider: J. Swanson, M.D.	Allergies: NKDA
MRN: 7795330214	Code Status: Full Code

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

NURSING NOTES

September 23	**1340:** Client admitted to the medical unit with a diagnosis of cerebrovascular accident after "feeling funny" at work and falling. Medical history positive for hypertension, high cholesterol, and gastric ulcers. Surgical history positive for knee replacement and appendectomy. Client is alert and oriented but with slurred speech. Exhibits left hemiparesis and facial asymmetry. Vital signs BP 162/90 mmHg, HR 72 beats/min, RR 18 breaths/min, Temp 98.8 F (37.1 C), O2 saturation 98% on room air. Client made comfortable in bed, co-workers visiting with client. **1515:** Physical therapist in client's room to complete evaluation. **1730:** Speech therapist here for swallow evaluation.

A. Placing the call bell within reach on the client's right side.

B. Providing the client with a walker to ambulate.

C. Measuring the client's blood pressure every 2 hours.

D. Placing the call bell within reach on the client's left side.

Answer: A

System: Musculoskeletal, **Concept:** Mobility Concept, **Exemplar-Disease:** Falls, **Subtopic:** Fall prevention, **NCLEX® Client Needs:** Physiological Adaptation, **QSEN Competencies:** Patient-Centered Care, **Nursing Process:** Planning, **Clinical Judgment Measurement Model:** Generate Solutions

Debriefing: Nurses must review all client assessment information to determine factors that can place the client at risk for a fall. This client had a CVA with left-sided weakness, so for the client to call for assistance when needed, the call bell needs to be within reach of the client's good hand, the right side. Providing the client with a walker will not prevent the risk for falls considering the client has weakness to one side of the body. The physical therapist will evaluate the client and determine if the client needs an assistive device and if so, the most appropriate device. Measuring the client's blood pressure every two hours will not prevent the client's risk of a fall.

Clinical Tip: There are many factors that influence activity and safe client handling. Nurses must handle clients in such a manner as to prevent falls because falls can increase clients' lengths of stay, cause physical pain, and place financial burden on the institution.

Leadership

Q: After a CT scan, alteplase is prescribed for the client with stroke symptoms. Review the electronic health record and determine how much the nurse should give in the initial dose if the medication is available as 1 mg/mL? Answer in mL to the nearest hundredth place.

Nurse Think HEALTHCARE SYSTEM

Name: A.T.	Age: 52 years	Weight: 144 lbs.
Health Care Provider: I. Parker, M.D.	Allergies: alteplase	
MRN: 7622235998	Code Status: Full Code	

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

HEALTH CARE PROVIDER PRESCRIPTIONS

November 1	1. Administer oxygen 2 L/minute nasal cannula 2. Neurosurgery consult 3. Alteplase 0.9 mg/kg IV; 10% bolus, then remaining 90% over one hour

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

DRUG REFERENCE GUIDE

Alteplase	Caution in recent surgery, SBP > 175 mmHg or DBP > 110 mmHg, severe hepatic impairment, age > 75 years Do not use with INR > 1.7 or PT > 15 seconds or platelets < 100,000/mm3

Answer: 0 mL or 0.00 mL

System: Cardiovascular, **Concept:** Clotting Concept, **Exemplar-Disease:** Embolic Stroke, **Subtopic:** Drugs to modify coagulation, **NCLEX® Client Needs:** Pharmacological and Parenteral Therapies, **QSEN Competencies:** Patient-Centered Care, **Nursing Process:** Assessment, **Clinical Judgment Measurement Model:** Recognize Cues

Debriefing: 0 mL, because of the client's allergy.

Clinical Tip: Thrombolytics are called "clot busters" and are used to manage embolic and thrombotic strokes.

Medical-Surgical II

Q: A client with chronic hypertension uses extended release nifedipine. After reviewing the electronic health record, identify which part of the nursing note is most concerning.

Nurse Think HEALTHCARE SYSTEM

Name: L.T.
Health Care Provider: S. Smith, M.D.
MRN: 7622235998

Age: 66 years
Allergies: NKDA
Code Status: Full Code

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

NURSING NOTES

September 14	Client in for follow-up after starting nifedipine extended release 2 months ago. Had tried lisinopril and that did not help. Notes that she has cut back on fluid intake because of urge incontinence, nocturia, and pedal edema. Reports BP last week at the store was in the 140's but "not quite sure." Taking an aspirin each day. Husband died one month ago after a long battle with cancer.

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

VITAL SIGN RECORD

Time	Blood Pressure (mmHg)	Heart Rate (beats/minute)	Respirations (breaths/minute)	Temperature (°F/°C)	Oxygen Saturation (%)
1115	150/82 sitting	72	14	98.6/37	96
1118	144/78 standing	88			

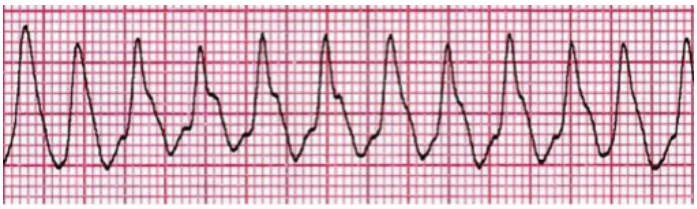
System: Cardiovascular, **Concept:** Perfusion Concept, **Exemplar-Disease:** Hypertension, **Subtopic:** Antihypertensive medications/Ca channel blockers, **NCLEX® Client Needs:** Pharmacological and parenteral therapies, **QSEN Competencies:** Safety, **Nursing Process:** Evaluation, **Clinical Judgment Measurement Model:** Evaluate Outcomes

Debriefing: Nifedipine, as a calcium channel blocker, is a potent antihypertensive and may cause peripheral edema. As an extended release it has a long half-life and once a day dosing is correct. It can cause orthostatic hypotension. Nifedipine is given in the extended release form to maintain client safety. Calcium channel blockers are effective in clients with low-renin hypertension, including African Americans.

Clinical Tip: Blood pressure should be taken before and after giving calcium channel blockers to avoid hemodynamically significant hypotension.

Readiness Exam

Q: The nurse on the telemetry unit cares for a client and reviews this telemetry strip. Nursing assessment indicates that the client is awake and alert. What is the priority nursing action?



A. Prepare the client for cardiac surgery.

B. Initiate immediate cardioversion with 200 joules.

C. Prepare the client for synchronized cardioversion.

D. The client is awake so observe for another 24 hours.

Answer: C

System: Cardiovascular, **Concept:** Perfusion Concept, **Exemplar-Disease:** Dysrhythmias, **Subtopic:** Indications for cardioversion, **NCLEX® Client Needs:** Physiological Adaptation, **QSEN Competencies:** Safety, **Nursing Process:** Implementation, **Clinical Judgment Measurement Model:** Take Actions

Debriefing: The client is experiencing ventricular tachycardia (VT) and is awake and alert. The treatment for that rhythm is synchronized cardioversion. Fifty to 100 joules should be used initially for cardioversion and not 200 joules, and even though the client is awake and stable, the VT should be treated and not watched for 24 hours.

Clinical Tip: If while doing cardioversion the client's status changes to loss of a pulse, change from synchronized cardioversion to defibrillation.

Maternal-Child

Q: A client with bone cancer has an implanted port inserted for outpatient chemotherapy. The nurse prepares to access the port. Place the steps in the order the nurse should plan to use in accessing the device. Rank order the options. Not all options will be used.

A. Cleanse the site with an antiseptic.

B. Connect the intravenous tubing with the port tubing.

C. Apply topical anesthetic and wait 30 minutes.

D. Insert the non-coring needle.

E. Administer medication.

F. Flush line with a heparinized solution per policy.

Answer: C, A, D, E

System: Safety, **Concept:** Safety Concept, **Exemplar-Disease:** Central Line, **Subtopic:** Medication Administration, **NCLEX® Client Needs:** Safety and Infection Control, **QSEN Competencies:** Safety, **Nursing Process:** Planning, **Clinical Judgment Measurement Model:** Generate Solutions

Debriefing: The implanted device (also called a port) is a device under the skin which allows for intermittent access to the central vasculature without the device being constantly visible or external to the skin. The skin is anesthetized, the skin is cleaned, the non-coring needle is inserted, the medication is administered, and the device is flushed with heparin per policy to prevent clotting. At no time does the medication administration tubing connect with the tubing of the device, which is underneath the skin. Administration of medication and fluid is done via the non-coring needle.

Clinical Tip: Implanted ports are the optimal central venous access device when clients or families do not want to care for the device or if they cannot afford the ongoing expenses of a central venous access device in the home.

Next Generation NCLEX® Case Study

Unfolding client scenario with six clinical judgment questions:

Case Study Question 1

Q: The nurse cares for a client postoperatively and reviews the health care provider's prescriptions. Which prescription prompts the nurse to follow up with the provider?

NurseThink HEALTHCARE SYSTEM

Name: D.S.		Age: 58 years	Height: 5 ft. 8 in.
Health Care Provider: J. Swanson, M.D.		Allergies: Sulfa	Weight: 210 lbs.
MRN: 2182256301		Code Status: Full Code	BMI: 32

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

HEALTH HISTORY

Medical History
- Hypercholesterolemia
- Pre-diabetes

Surgical History
- Appendectomy age 19

Immunization History
- Tdap 5 years ago

Medications
- Occasional ibuprofen as needed for headache

Provider Concerns
- Family history of diabetes; last HbA1c 6.2 %
- Triglycerides & LDL trending up, HDL trending down
- Recommended lifestyle and nutrition changes
  - Referral made to Diabetes Education Clinic

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

NURSING NOTES

April 4 1130	Client admitted to orthopedic unit following an open reduction internal fixation of right lower tibia and fibula. Client was brought to the emergency department by family after falling on the stairs at home. Client reports pain currently 4 out of 10 and tolerable. Right lower leg in cast, elevated on pillows. Toes warm, capillary refill < 3 seconds, client denies numbness or tingling. Client reminded of non-weight bearing status on the right leg. Reviewed prescriptions and expectations for hospital stay. Client asks, "Why do I need insulin? I don't have diabetes. The last time I saw my doctor, I was just told to eat less sweets and try to walk more often."

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

HEALTH CARE PROVIDER PRESCRIPTIONS

April 4 1030	1. 1000 mL 5% Dextrose 0.45% Sodium Chloride 20 mEq Potassium Chloride; Infuse at 125 mL/hr 2. Check blood glucose before meals and at bedtime 3. Insulin lispro subcutaneous injection before meals based on sliding scale: Glucose < 120 mg/dL; give 0 units Glucose 110 – 130 mg/dL; give 2 units Glucose 131 – 150 mg/dL; give 4 units Glucose 151 – 200 mg/dL; give 6 units Glucose > 200 mg/dL; call provider 4. Metformin extended release 500 mg by mouth daily 5. Clear liquid diet; advance to 1800 calorie diabetic diet as tolerated 6. Morphine 4 mg IV push every 4 hours as needed for severe pain 7. Tramadol 50 mg by mouth every 6 hours as needed for moderate pain 8. Ibuprofen 400 mg by mouth every 6 hours as needed for mild pain

System: Endocrine, **Concept:** Glucose Regulation Concept, **Exemplar-Disease:** Diabetes Mellitus – Type 2, **Subtopic:** Preventing medication errors, **NCLEX® Client Needs:** Reduction of Risk Potential, **QSEN Competencies:** Quality Improvement, **Nursing Process:** Assessment, **Clinical Judgment Measurement Model:** Recognize Cues

Debriefing: The nurse should contact the health care provider to clarify this prescription for the insulin sliding scale as two of the glucose ranges are overlapping. The nurse needs to know whether to give 0 or 2 units of insulin for glucose between 110 and 120. Although the client thinks they do not need insulin, clients with diabetes often need insulin during times of physiological stress, such as surgery. The client has a sulfa allergy, but none of the prescribed medications are contraindicated with a sulfa allergy. IV fluid with dextrose is given to avoid hypoglycemia in a client with diabetes. Metformin should only be given once a day, as prescribed, when it is extended release. The diet prescription is appropriate for a postoperative diabetic client. The options for analgesia are appropriate and would only require follow-up if the client's pain was not well managed with these medications.

Clinical Tip: The primary goal of treating type 2 diabetes is prevention of long-term complications, which requires a comprehensive treatment plan based on client-specific considerations. Lifestyle measures and drug therapy are the foundation of glycemic control.

Case Study Question 2

Q: The nurse discusses the postoperative plan of care with the client. Review the electronic health record. Which responses are not appropriate for the nurse to include when addressing the client's concerns? Select all that apply.

Nurse Think HEALTHCARE SYSTEM

Name: D.S.	**Age: 58 years**	**Height: 5 ft. 8 in.**
Health Care Provider: J. Swanson, M.D.	**Allergies: Sulfa**	**Weight: 210 lbs.**
MRN: 2182256301	**Code Status: Full Code**	**BMI: 32**

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

HEALTH HISTORY

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- Hypercholesterolemia
- Pre-diabetes

Surgical History
- Appendectomy age 19

Immunization History
- Tdap 5 years ago

Medications
- Occasional ibuprofen as needed for headache

Provider Concerns
- Family history of diabetes; last HbA1c 6.2 %
- Triglycerides & LDL trending up, HDL trending down
- Recommended lifestyle and nutrition changes
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Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

NURSING NOTES

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Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

LABORATORY RESULTS

Lab	Normal	April 3	
Red Blood Cells (RBC)	4.2 – 5.9 cells/L	**4.9 cells/L**	
Hemoglobin (Hgb)	12 – 17 g/dL	**13 g/dL**	
Hematocrit (Hct)	36 – 51 %	**38 %**	
White Blood Cells (WBC)	4,000 – 10,000 µL	**9,500 µL**	
Glucose	70 – 100 mg/dL	**280 mg/dL**	
Hemoglobin A1c	< 5.7 %	**7.2 %**	
Potassium	3.5 – 5.0 mEq/L	**3.5 mEq/L**	

A. "Sometimes diabetes can be controlled by lifestyle and nutrition changes."

B. "Diabetes is a progressive disease and often eventually requires medication."

B. "People with diabetes may require insulin during times of stress, such as surgery."

D. "Your hemoglobin A1c indicates elevated blood glucose over the last 2-3 months."

E. "Your BMI indicates obesity, which means you didn't follow lifestyle recommendations."

F. "Your lab results indicate metabolic syndrome, which requires insulin to reverse."

G. "Care in the hospital is different than care at home. It's important to just trust your provider."

H. "Do you have any other questions or concerns about your plan of care?"

Answer: E, F, G

System: Endocrine, **Concept:** Glucose Regulation Concept, **Exemplar-Disease:** Diabetes Mellitus – Type 2, **Subtopic:** Postoperative insulin, **NCLEX® Client Needs:** Physiological Adaptation, **QSEN Competencies:** Evidence-based Practice, **Nursing Process:** Analysis, **Clinical Judgment Measurement Model:** Analyze Cues

Debriefing: Clients often control type 2 diabetes mellitus with exercise and diet initially; however, if these measures are ineffective, it becomes necessary to add oral medication. Insulin injections may follow if the disease worsens. Diabetes is a chronic, progressive metabolic disorder from abnormalities in glucose metabolism which results in hyperglycemia. Physiological responses to stress, such as surgery, include increased levels of blood glucose, serum cholesterol, circulating free fatty acids, and triglycerides. Hemoglobin A1c provides an indication of the blood glucose levels over the previous two to three months; 6.5 % or higher indicates diabetes. Obesity is a risk factor for diabetes; however, this client's lifestyle changes are unknown and not relevant to this hospitalization treatment plan. While metabolic syndrome is associated with insulin resistance, oral agents are also effective and would be the first treatment option. Telling the client to trust the provider dismisses their concerns and implies paternalism, rather than client-centered care. The client should be an active participant in their plan of care, and the nurse should create space for the client to voice any other questions or concerns they may have.

Clinical Tip: Because there is endogenous insulin production in patients with T2DM, insulin may not be required initially but may be required during acute illness or stress. The need for insulin for clients with DM after surgery varies; some need more in response to the stress, others need less due to decreased nutritional intake after surgery.

Case Study Question 3

Q: Review the electronic health record and complete the sentences using the drop-down lists.

The nurse prepares to administer (A) _____ units of insulin lispro before the evening meal. During administration, the nurse reminds the client to begin eating within (B) _____ minute(s).

Nurse Think HEALTHCARE SYSTEM

Name: D.S.	Age: 58 years	Height: 5 ft. 8 in.
Health Care Provider: J. Swanson, M.D.	Allergies: Sulfa	Weight: 210 lbs.
MRN: 2182256301	Code Status: Full Code	BMI: 32

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

LABORATORY RESULTS

Date	Time	Blood Glucose	Glucometer
April 4	1130	**136 mg/dL**	Ortho North
April 4	1730	**153 mg/dL**	Ortho North

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

NURSING NOTES

April 4 1130	Client admitted to orthopedic unit following an open reduction internal fixation of right lower tibia and fibula. Client was brought to the emergency department by family after falling on the stairs at home. Client reports pain currently 4 out of 10 and tolerable. Right lower leg in cast, elevated on pillows. Toes warm, capillary refill < 3 seconds, client denies numbness or tingling. Client reminded of non-weight bearing status on the right leg. Reviewed prescriptions and expectations for hospital stay. Client asks, "Why do I need insulin? I don't have diabetes. The last time I saw my doctor, I was just told to eat less sweets and try to walk more often."

Nursing	Flowsheets	Provider	Labs & Diagnostics	MAR	Collaborative Care	Other

HEALTH CARE PROVIDER PRESCRIPTIONS

April 4 1030	1. 1000 mL 5% Dextrose 0.45% Sodium Chloride 20 mEq Potassium Chloride; Infuse at 125 mL/hr 2. Check blood glucose before meals and at bedtime 3. Insulin lispro subcutaneous injection before meals based on sliding scale: Glucose < 110 mg/dL; give 0 units Glucose 110 – 130 mg/dL; give 2 units Glucose 131 – 150 mg/dL; give 4 units Glucose 151 – 200 mg/dL; give 6 units Glucose > 200 mg/dL; call provider 4. Metformin extended release 500 mg by mouth daily 5. Clear liquid diet; advance to 1800 calorie diabetic diet as tolerated 6. Morphine 4 mg IV push every 4 hours as needed for severe pain 7. Tramadol 50 mg by mouth every 6 hours as needed for moderate pain 8. Ibuprofen 400 mg by mouth every 6 hours as needed for mild pain

Answer: A: 6, B: 15

System: Endocrine, **Concept:** Glucose Regulation Concept, **Exemplar-Disease:** Medication Administration, **Subtopic:** Rapid insulin sliding scale, **NCLEX® Client Needs:** Pharmacological and Parenteral Therapies, **QSEN Competencies:** Informatics, **Nursing Process:** Analysis, **Clinical Judgment Measurement Model:** Prioritize Hypotheses

Debriefing: Insulin lispro is a rapid-acting insulin with an onset of action within 15 minutes; the client should begin eating within this timeframe. The client's bedside blood glucose before the evening meal is 153 mg/dL; according to the sliding scale, the nurse should administer 6 units of insulin lispro.

Clinical Tip: Treatment goals are to achieve near normal glucose levels; recent studies indicate tighter glycemic control may lead to higher mortality rates in some populations, such as older adults and those with comorbidities; current guidelines recommend an individualized approach; acceptable to client and provider; preventing acute complications such as hypoglycemia and chronic complications from DM.

Case Study Question 4

Q: Review the electronic health record and determine whether each nursing action is urgent, nonessential, or contraindicated for the client in this situation.

Nurse Think HEALTHCARE SYSTEM

Name: D.S.	Age: 58 years	Height: 5 ft. 8 in.
Health Care Provider: J. Swanson, M.D.	Allergies: Sulfa	Weight: 210 lbs.
MRN: 2182256301	Code Status: Full Code	BMI: 32

Nursing	Flowsheets	Provider	Labs & Diagnostics	MAR	Collaborative Care	Other

NURSING NOTES

April 4 1910	Entered client's room to perform bedside change of shift report. Client unresponsive except briefly awakens to painful stimuli. Client with generalized pallor and a respiratory rate of 8 breaths/minute and heart rate 65 beats/minute.

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

MEDICATION ADMINISTRATION RECORD

Medication	April 4
Metformin extended release 500 mg by mouth daily	Given at 0715
Insulin lispro subcutaneous injection before meals based on sliding scale: Glucose < 110 mg/dL; give 0 units Glucose 110 – 130 mg/dL; give 2 units Glucose 131 – 150 mg/dL; give 4 units Glucose 151 – 200 mg/dL; give 6 units Glucose > 200 mg/dL; call provider	4 units Given at 1135 BG 136 6 units Given at 1740 BG 153
Ibuprofen 400 mg by mouth every 6 hours as needed for mild pain	
Tramadol 50 mg by mouth every 6 hours as needed for moderate pain	Given at 0500 Pain 5/10 Given at 1200 Pain 6/10 Given at 1800 Pain 7/10
Morphine 4 mg IV push every 4 hours as needed for severe pain	Given at 0200 Pain 8/10 Given at 0630 Pain 8/10 Given at 1030 Pain 9/10 Given at 1445 Pain 8/10 Given at 1855 Pain 9/10

Nursing Actions	Urgent	Nonessential	Contraindicated
Call the provider to obtain a STAT prescription for flumazenil.			X
Obtain point-of-care blood glucose.		X	
Utilize the standardized procedure to administer naloxone IV.	X		
Administer glucagon intramuscularly.			X
Apply oxygen via nasal cannula.	X		

System: Multisystem, **Concept:** Oxygenation Concept, **Exemplar-Disease:** Medication Administration, **Subtopic:** Opioid-induced respiratory depression, **NCLEX® Client Needs:** Management of Care, **QSEN Competencies:** Patient-Centered Care, **Nursing Process:** Implementation, **Clinical Judgment Measurement Model:** Take Actions

Debriefing: The client has been receiving alternating doses of morphine and tramadol and is most likely experiencing opioid-induced respiratory depression. The nurse should apply oxygen and administer naloxone to reverse the effects of the opioids. If the client doesn't already have a prescription, most facilities have policies and procedures for the nurse to administer naloxone without waiting for a provider. Flumazenil is the antidote for benzodiazepines. The client's insulin is peaking, but their vital signs are not congruent with hypoglycemia so glucagon should not be administered. The nurse could check the client's glucose after administering naloxone, but this is not the nurse's priority action.

Clinical Tip: Naloxone has a shorter half-life than morphine, so the nurse should continue to assess for signs of respiratory depression throughout the shift.

Case Study Question 5

Q: The nurse assesses the client after the urgent administration of naloxone. Review the electronic health record. Identify the assessment data that is consistent with the expected side effects of the medication and drag them to the box labeled Expected Side Effects.

Nurse Think HEALTHCARE SYSTEM

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Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

NURSING NOTES

April 4 1910	Entered client's room to perform bedside change of shift report. Client unresponsive except briefly awakens to painful stimuli. Client with generalized pallor and a respiratory rate of 8 breaths/minute and heart rate 65 beats/minute.
April 4 1915	Naloxone administered per standardized procedure. Client immediately opened eyes, 1 mm pupils noted, and began moaning, "Why is my leg hurting so bad again?" Heart rate 80 beats/minute, respirations 9 breaths/minute. Client appears diaphoretic and complains of headache and mild nausea.

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

MEDICATION ADMINISTRATION RECORD

Medication	April 4
Naloxone 0.4 mg IV push x1; call provider if ineffective	Given at 1913
Tramadol 50 mg by mouth every 6 hours as needed for moderate pain	Given at 0500 Pain 5/10 Given at 1200 Pain 6/10 Given at 1800 Pain 7/10
Morphine 4 mg IV push every 4 hours as needed for severe pain	Given at 0200 Pain 8/10 Given at 0630 Pain 8/10 Given at 1030 Pain 9/10 Given at 1445 Pain 8/10 Given at 1855 Pain 9/10

Assessment Data
Nausea
Leg pain
Diaphoresis
Level of arousal
Pupil size
Respiratory rate
Headache

Expected Side Effects

Answer: Nausea, diaphoresis, headache

System: Multisystem, **Concept:** Pain Concept, **Exemplar-Disease:** Intravenous Therapy, **Subtopic:** Opioid antagonist **NCLEX® Client Needs:** Pharmacological and Parenteral Therapies, **QSEN Competencies:** Patient-Centered Care, **Nursing Process:** Evaluation, **Clinical Judgment Measurement Model:** Evaluate Outcomes

Debriefing: The intended outcome of naloxone is to reverse the effects of any opioids given to the client. Evidence of efficacy includes the client waking up and reporting the return of severe pain in the leg. Pinpoint pupils and a respiratory rate of 9 breaths/minute are attributable to the opioids and do not indicate the naloxone was effective. Nausea, headache, and diaphoresis are among naloxone's expected side effects.

Clinical Tip: A hypoglycemic client may experience tachycardia, anxiety, tremors, agitation, pallor, and diaphoresis, which may progress to confusion, vision changes, and loss of consciousness.

Case Study Question 6

Q: The nurse prepares the client for discharge. Review the electronic health record. What additional education should the nurse include in the client's teaching plan?

Nurse Think HEALTHCARE SYSTEM

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Health Care Provider: J. Swanson, M.D.	Allergies: Sulfa	Weight: 210 lbs.
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Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

HEALTH HISTORY

Medical History
- Hypercholesterolemia
- Pre-diabetes

Surgical History
- Appendectomy age 19

Immunization History
- Tdap 5 years ago

Medications
- Occasional ibuprofen as needed for headache

Provider Concerns
- Family history of diabetes; last HbA1c 6.2 %
- Triglycerides & LDL trending up, HDL trending down
- Recommended lifestyle and nutrition changes
  - Referral made to Diabetes Education Clinic

Nursing | Flowsheets | Provider | Labs & Diagnostics | MAR | Collaborative Care | Other

NURSING NOTES

April 6 1100	Client is alert and oriented, vital signs stable. Cast to right lower extremity, toes warm and dry, capillary refill 2 seconds, client denies numbness and tingling, pedal pulses 3+. Client reports pain "varies between 2 and 5" on a 0-10 scale, has been well controlled with tramadol and ibuprofen since morphine was discontinued yesterday. Client has not required sliding scale insulin since April 4. Client demonstrates appropriate use of crutches when ambulating.

Nursing	Flowsheets	Provider	Labs & Diagnostics	MAR	Collaborative Care	Other

HEALTH CARE PROVIDER PRESCRIPTIONS

April 6 1200	1. Discharge home today 2. Referral to Diabetic Education Clinic 3. Follow-up with primary care provider in one week; bring home glucose log 4. Activity as tolerated with partial weight-bearing to right leg 5. Durable medical equipment: crutches, glucose meter, test strips, lancets 6. 1800 calorie diabetic diet 7. Metformin extended release 500 mg by mouth daily, dispense 30 tablets 8. Tramadol 50 mg by mouth every 6 hours as needed for moderate pain, dispense 24 tablets 9. Ibuprofen 400 mg by mouth every 6 hours as needed for mild pain, dispense 30 tablets

Additional Education	Include	Do Not Include
Ensure client knows how to obtain future refills of tramadol.		X
Return demonstration of subcutaneous insulin injections.		X
Caution the client to avoid taking tramadol to prevent addiction.		X
Explain the benefits of metformin in decreasing LDL cholesterol.	X	
Instruct the client to take metformin with meals to minimize side effects.	X	
Tell the client to weigh themself daily as metformin can cause weight loss.		X

System: Multisystem, **Concept:** Health Promotion Concept, **Exemplar-Disease:** Health Promotion, **Subtopic:** Metformin education, **NCLEX® Client Needs:** Health Promotion and Maintenance, **QSEN Competencies:** Teamwork and Collaboration, **Nursing Process:** Planning, **Clinical Judgment Measurement Model:** Generate Solutions

Debriefing: The primary action of metformin is to decrease hepatic glucose production; it also improves hepatic response to blood glucose levels and decreases the absorption of glucose in the intestines. A beneficial side effect of metformin is a reduction in LDL, total cholesterol and triglycerides and an increase in HDL. Gastrointestinal upset is a common side effect of metformin; the client should be encouraged to take it with meals if these symptoms occur. This medication may result in weight loss, but this is usually minimal and daily weights are unnecessary. The client has already demonstrated proper use of crutches, but the nurse still needs to verify whether the client can perform glucose self-monitoring. Insulin is not prescribed. Tramadol is an opioid that should be used cautiously, but it is effective for acute pain that does not need to be avoided. The risk of addiction is low for clients taking a limited number of doses for a short period of time. There are no refills noted on this prescription and the nurse would not expect the provider to prescribe refills, as the client should transition to taking only ibuprofen for pain before needing no pharmaceutical pain management.

Clinical Tip: GI disturbances are the most common adverse reaction of metformin, which may be reduced by taking the drug with food rather than before the meals. GI disturbances usually resolve after two weeks.