Student Name: Lucy Siranides
Medical Diagnosis/Disease: Urinary Tract Infection (UTI)

NCLEX IV *(8)*: Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures
- The upper urinary system consists of 2 kidneys and 2 ureters. The lower urinary system consists of a urinary bladder and urethra. Urine is formed in the kidneys, drains through the ureters to be stored in the bladder, and then passes out of the body through the urethra. Urinary tract ↑ urethra = sterile
- Kidneys: primary functions (1) regulate the volume and composition of extracellular fluid (ECF) & (2) excrete waste products from the body; control B/P, make erythropoietin, activate vitamin D, and regulate acid-base balance; bean-shaped organs located retroperitoneally (behind the peritoneum) on either side of the vertebral column at about the level of the twelfth thoracic (T12)...

Pathophysiology of Disease
- UTI can be classified as an upper or lower UTI according to location in the urinary system
  - **Pyelonephritis**: inflammation (from infection) of renal parenchyma and collecting system
  - **Cystitis**: inflammation of bladder
  - **Urethritis**: inflammation of urethra
  - **Urosepsis**: a UTI that has spread systemically; life-threatening condition
- **Uncomplicated UTIs**: occur in normal urinary tract and usually only involve the bladder
- Complicated UTIs: occur when there is a structural or functional problem in the urinary tract (obstruction, stones, catheters, abnormal genitourinary (GU) tract, acute kidney injury (AKI), chronic kidney disease (CKD), renal...)

NCLEX IV *(7)*: Reduction of Risk

Anticipated Diagnostics
Labs
- Dipstick Urinalysis (nitrites [indicating bacteriuria], WBC, leukocyte esterase [an enzyme present in WBCs, indicating pyuria])
- Urine Culture
- Sensitivity Testing
- Clean-Catch Urine Sample

Additional Diagnostics
- H&P
- Ultrasound
- CT (for obstruction or recurring UTIs)

NCLEX II *(3)*: Health Promotion and Maintenance

Contributing Risk Factors
- occurs primarily in women
- congenital defects leading to obstruction or urinary stasis
- fistula exposing urinary stream to skin, vagina, or fecal stream
- obesity
- shorter female urethra and colonization from normal vaginal flora

Signs and Symptoms
- painful urination
- severe systemic illness associated w/ abdominal or back pain, fever, sepsis
- dysuria
- frequency (voiding >q2hr)
- urgency
- suprapubic discomfort or pressure
- grossly visible blood (hematuria) or sediment (cloudy)

NCLEX IV *(7)*: Reduction of Risk

Possible Therapeutic Procedures
Non-surgical
- medication regimen
- health promotion

Surgical
n/a

Prevention of Complications
(What are some potential complications associated with this disease process)
- Recurring infections
- Kidney damage
- Sepsis
- Narrowed urethra in males

NCLEX IV *(6)*: Pharmacological and Parenteral Therapies

Anticipated Medication Management
- Antibiotics
- Analgesics
- Prophylactic or suppressive antibiotics

NCLEX IV *(5)*: Basic Care and Comfort

Non-Pharmacologic Care Measures
- Perineal care (hygiene)
- Linen changes
- Teaching
- Position in a place of comfort

NCLEX III *(4)*: Psychosocial/Holistic Care Needs

What stressors might a patient with this diagnosis be experiencing?
- Change in mental status
- Pain & discomfort
- Hospital & medication bills
- Possibility of problem reoccurring

Client/Family Education

List 3 potential teaching topics/areas
- Ensure medications are taken as prescribed & antibiotics are finished
- Stay adequately hydrated & void when the feeling comes
- How to properly clean genital area & w/ what products (hygiene)

NCLEX I *(1)*: Safe and Effective Care Environment

Multidisciplinary Team Involvement
(Which other disciplines do you expect to share in the care of this patient)
- Primary Care Provider
- Hospitalist
- Case Management
- Urologist
- Gerontologist

Anatomy and Physiology Normal Structures (cont.)

- Kidneys (cont.): ...vertebra to the third lumbar (L3) vertebra; the R kidney is positioned lower than the L; an adrenal gland lies on top of each kidney
- Ureters: tubes that carry urine from the renal pelvis to the bladder; arranged in a mesh-like outer layer, circular and longitudinal smooth muscle fibers contract to promote the peristaltic, 1-way flow of urine through ureters; the narrow area where each ureter joins the renal pelvis is the *ureteropelvic junction* (UPJ); the ureters insert into either side of the bladder base at the *ureterovesical junctions* (UVJs); sympathetic and parasympathetic nerves, along with vascular supply, surround the mucosal lining of the ureters
- Bladder: located behind the symphysis pubis and anterior to the vagina and rectum; primary functions (1) serve as a reservoir for urine & (2) to eliminate waste products from the body; stretchable, sac-like organ that contracts when it is empty; normal adult urine output 1500mL/day; on average, 200-250mL of urine in the bladder will cause moderate distention and the urge to urinate; when the quantity of urine reaches 400-600mL, the person feels uncomfortable; average bladder capacity is 600-1000mL; lined by transitional cell epithelium referred to as *urothelium* which is unique to the urinary tract as it is resistant to absorption of urine
- Urethra: a small tube that incorporates the smooth muscle of the bladder neck and extends to the striated muscle of the external meatus; primary functions (1) control voiding & (2) serve as a conduit for urine from the bladder to the outside of the body during voiding; female urethra = 1-2in long and lies behind the symphysis pubis but anterior to the vagina; male urethra = 8-10in long and starts at the bladder neck and extends the length of the penis
- Urethrovesical Unit: includes the bladder, urethra, and pelvic floor muscles; voluntary control of this unit is called *continence*; stimulating and inhibiting impulses are sent from the brain through the thoracolumbar (T11-L2) and sacral (S2-S4) areas of the spinal cord to control voiding; bladder distention stimulates stretch receptors within the bladder wall; impulses are transmitted to the sacral spinal cord and then to the brain, causing a desire to urinate; if you cannot void at a given time, inhibitor impulses in the brain are stimulated and transmitted back through the thoracolumbar and sacral nerves innervating the bladder; in a coordinated fashion, the detrusor muscle accommodates to the pressure while the sphincter and pelvic floor muscle tighten to resist bladder pressure (opposite occurs for when voiding is possible)

Pathophysiology of Disease (cont.)

- ...transplant, diabetes, or neurological diseases; can also occur when antibiotic resistance has developed, immunocompromised
- UTIs are the second most common bacterial disease and the most common bacterial infection in women.
- *Escherichia coli* is the most common pathogen causing a UTI (causes 70-95% of cases w/o urinary tract structural abnormalities or stones)
- *Candida albicans* is the second most common pathogen causing UTIs associated with indwelling catheter use or asymptomatic colonization
- Fungal and parasitic infections may cause UTIs, but it is uncommon (occurs in immunosuppressed and diabetic pts, as well as those who have kidney problems and have received multiple courses of antibiotic therapy; those who have traveled out of the country)
- The organisms that usually cause UTIs originate in the perineum and are introduced via the ascending route from the urethra
- Most infections are caused by gram-negative bacilli normally found in gastrointestinal (GI) tract
- Gram-positive organisms such as streptococci, enterococci, and *Staphylococcus saprophyticus* can also cause UTIs
- Sexual intercourse promotes "milking" of bacteria from the vagina and perineum and may cause minor urethral trauma that predisposes women to UTIs
- UTIs can result from hematogenous transmission, in which blood-borne bacteria invade the kidneys, ureters, or bladder from elsewhere in the body
- Catheter-associated urinary tract infections (CAUTI) are often caused by *E. coli* and, less often, *Pseudomonas* organisms

Contributing Risk Factors (cont.)

- renal impairment; urinary retention; catheters; urinary tract instrumentation; urinary tract stones; constipation; habitual delay of urination; pregnancy; menopause; multiple sex partners (women); poor personal hygiene; use of spermicidal agents, contraceptive diaphragm (women), bubble baths, feminine sprays

Lucy Siranides

Patient Problems (Nursing Diagnoses)

List two potential patient problems you will be addressing as part of your nurse's notes, along with clinical reasoning, goals/expected outcomes, assessments, and priority nursing interventions. The patient problems must be in priority order. Six nursing interventions for each priority problem must be completed.

Problem # 1: Impaired Urinary Elimination
Clinical Reasoning: UTI, painful urination, fever and chills, suprapubic tenderness, elevated WBC count, incontinence

Goal/EO: ATI will be continent and void w/o pain twice before the end of my shift.

Ongoing Assessments: hx of UTIs on admission, WBC count qshift, bacteria in urine (urine culture) qshift, temperature q4hr, urine characteristics (color, transparency, odor) after every void

NI:
1. Administer Levofloxacin as ordered.
2. Educate on importance of completion of medication/antibiotic regimen before discharge.
3. Instruct to void often (q2-3hr during the day) and to empty the bladder entirely q2hr.
4. Encourage consumption of preferred fluids q4hr.
5. Educate on proper hygiene of the perineal area before discharge.
6. Encourage consumption of cranberry juice and vitamin D 500-1000mg supplements upon discharge.

Problem # 2: Acute Pain: Suprapubic area
Clinical Reasoning: UTI, painful urination, suprapubic tenderness, guarding behavior

Goal/EO: ATI will report a pain score of <3/10 on the standardized numerical rating scale (1-10) by the end of my shift.

Ongoing Assessments: assess RR, HR, and BP q4hr, assess pain score q4hr, assess expectation for pain/pain goal q4hr, assess location and characteristics of pain q4hr, monitor analgesic effectiveness q4hr

NI:
1. Administer analgesics as ordered.
2. Reposition q2hr to positions of comfort.
3. Apply a warm compress to the suprapubic area and/or lower back as tolerated.
4. Instruct to avoid coffee, tea, soda, alcohol, spices and other urinary system irritants during my time of care.
5. Encourage adequate hydration during my time of care.
6. Encourage use of the Calm Channel on the television in the room and deep breathing q4hr.

ACTIVE LEARNING TEMPLATE: *Medication*

STUDENT NAME Lucy Siranides

MEDICATION Levofloxacin REVIEW MODULE CHAPTER

CATEGORY CLASS Antibiotic

PURPOSE OF MEDICATION

Expected Pharmacological Action

Inhibits DNA enzyme gyrase in susceptible microorganisms, interfering with bacteria cell replication, repair

Therapeutic Use

Bactericidial (kills bacteria)

Complications

Occasional: diarrhea, nausea, abdominal pain, dizziness, drowsiness, headache
Rare: flatulence; pain/inflammation/swelling in calves, hands, shoulders; chest pain; difficulty breathing; palpitations; edema; tendon pain

Medication Administration

IVPB
Adults, Elderly: 250-750mg q24hr; 750mg q24hr for severe or complicated infection
Infusion Premix: 250mg/50mL, 500mg/100mL, 750mg/150mL

Contraindications/Precautions

C: hypersensitivity to Levofloxacin or other fluroquinolones
P: known or suspected CNS disorders, seizure disorder, renal impairment, bradycardia, rheumatoid arthritis, elderly, etc.

Nursing Interventions

- monitor serum glucose, renal function, LFT
- monitor daily pattern of bowel activity, stool consistency
- promptly report hypersensitivity reaction (skin rash, urticaria, pruritus, photosensitivity)
- be alert for superinfection (fever, vomiting, diarrhea, anal/genital pruritus, oral mucosal changes)

Interactions

Drug: BCG (intravesical), antacids (calcium, magnesium, iron preparations), sucralfate, zinc, NSAIDs (ibuprofen, ketorolac, naproxen), medications that prolong QT interval (amiodarone, haloperidol, sotalol), warfarin
Lab: serum glucose

Client Education

- essential to complete drug therapy despite symptom improvement
- report any episodes of diarrhea, especially the first few months after final dose
- severe allergic reactions such as hives, palpitations, rash, SOB, or tongue swelling may occur
- drink plenty of fluids
- do not take aluminum- or magnesium- containing antacids, multivitamins, zinc or iron products at least 2hr before or 6 hr after dose
- immediately report nervous system problems such as anxiety, confusion, dizziness, nervousness, nightmares, thoughts of suicide, seizures, tremors, or trouble sleeping

Evaluation of Medication Effectiveness

Monitor for signs of infection, check cultures as they are ordered

Compatibility:

Incompatibilities: Furosemide (Lasix), heparin, insulin, nitroglycerin, propofol (Diprivan)

Compatibilities: Dexmedetomidine (Precedex), Dobutamine (Dobutrex), Dopamine (Intropin), Fentanyl (sublimaze), lidocaine, lorazepam (Ativan), magnesium, morphine

Amount:

IV: Adults, Elderly: 250-750 mg q24hr; 750mg q24hr for severe or complicated infections

Rate of Administration:

Administer no less than 60 min for 250mg or 500mg; 90 min for 750 mg

Diluent:

Reconstitution: For infusion using single-dose vial, withdraw desired amount (10mL for 250mg, 20mL for 500mg). Dilute each 10mL (250mg) with minimum 40 mL 0.9% NaCl, D_5W, providing a concentration of 5mg/mL.

Storage:

Available in single-dose 20mL (500mg) vials and premixed with D_5W, ready to infuse. Diluted vials stable for 72hr at room temperature, 14 days if refrigerated.

ACTIVE LEARNING TEMPLATE: *Medication*

STUDENT NAME Lucy Siranides

MEDICATION Lorazepam REVIEW MODULE CHAPTER_____

CATEGORY CLASS Antianxiety/Sedative-hypnotic/Antiemetic/Skeletal muscle relaxant/Amnesiac/Anticonvulsant/Antitremor

PURPOSE OF MEDICATION

Expected Pharmacological Action

Enhances action of inhibitory neurotransmitter gamma-aminobutyric acid (GABA) in CNS, affecting memory, motor, sensory, cognitive function

Therapeutic Use

PO: Management of anxiety disorders, short-term relief of symptoms of anxiety, anxiety associated w/ depressive symptoms
IV: Status epilepticus, preanesthesia for amnesia, sedation

Complications

Frequent: drowsiness; dizziness
Rare: weakness; ataxia; headache; hypotension; nausea; vomiting; confusion; injection site reaction

Medication Administration

PO
- give w/ food
- tablets may be crushed
- dilute oral solution in water, juice, soda, or semisolid food

Anxiety
Adults, Elderly: initially, 0.5-2mg q4-6hr PRN up to 10mg/day
Adolescents, Children 12yrs and older: 0.25-2mg/dose 2-3 times/day
Maximum dose: 2mg

Contraindications/Precautions

C: hypersensitivity; acute narrow-angle glaucoma; severe respiratory depression (except during mechanical ventilation)
P: neonates; renal/hepatic impairment; compromised pulmonary function; depression; concomitant use of CNS depressants; pts at high risk for suicidal ideation and behavior; hx of drug abuse and misuse, drug-seeking behavior, dependency
Toxic: abrupt or too-rapid withdrawal may result in pronounced restlessness, irritability, insomnia, hand tremor, abdominal cramping, muscle cramps, diaphoresis, vomiting, seizures
Overdose: results in drowsiness, confusion, diminished reflexes, coma
Antidote: Flumazenil

Nursing Interventions

- monitor BP, RR, HR
- diligently screen for suicidal ideation and behavior
- new onset or worsening of anxiety, depression, mood disorder
- screen for drug abuse and misuse, drug-seeking behavior
- assess for paradoxical reaction, particularly during early therapy
- evaluate for therapeutic response (calm facial expression; decreased restlessness, insomnia; decrease in seizure-related symptoms)

Interactions

Drug: valproic acid may increase concentration/effects; alcohol and other CNS depressants may increase CNS depression
Herbal: chamomile, kava kava, valerian (sedative effects)
Therapeutic Serum Level: 50-240ng/mL

Client Education

- drowsiness usually subsides during continued therapy
- avoid tasks that require alertness, motor skills until response to drug is established
- smoking reduces drug effectiveness
- do not abruptly d/c medication after long-term therapy
- do not use alcohol, CNS depressants
- contraceptives recommended for long-term therapy
- seek immediate medical attention if thoughts of suicide, new onset or worsening of anxiety, depression, or changes in mood occur

Evaluation of Medication Effectiveness

Produces anxiolytic, anti-convulsant, sedative, muscle relaxant, anti-emetic effects

Module Report

Tutorial: Real Life RN Medical Surgical 4.0

Module: Urinary Tract Infection

Individual Name: **Lucy Siranides**

Institution: **Margaret H Rollins SON at Beebe Medical Center**

Program Type: **Diploma**

Standard Use Time and Score

	Date/Time	Time Use	Score
Urinary Tract Infection	2/27/2023 4:35:14 PM	1 hr 4 min	Strong

Reasoning Scenario Details
Urinary Tract Infection - Use on 2/27/2023 3:31:20 PM

Reasoning Scenario Performance Related to Outcomes:

*See Score Explanation and Interpretation below for additional details.

Body Function	Strong	Satisfactory	Needs Improvement
Cardiac Output and Tissue Perfusion	100%		
Cognition and Sensation	100%		
Immunity	100%		
Integument	100%		
Mobility	100%		
Oxygenation	100%		
Regulation and Metabolism	100%		

NCLEX RN	Strong	Satisfactory	Needs Improvement
RN Management of Care	100%		
RN Safety and Infection Control	100%		
RN Psychosocial Integrity	100%		
RN Pharmacological and Parenteral Therapies	100%		

RN Physiological Adaptation	100%		

QSEN	Strong	Satisfactory	Needs Improvement
Safety	100%		
Patient-Centered Care	100%		
Evidence Based Practice	100%		
Teamwork and Collaboration	100%		

Decision Log:

Scenario	Question Fill In the Blank Essay (Not Scored)
Question	What additional information would assist Nurse Craig in preparing to care for Mrs. Jordan? List 5 additional pieces of information that should have been included in the report.
Selected Option	Additional information that would assist Nurse Craig in preparing to care for Mrs. Jordan includes: 1. urine output - color? odor? amount? how frequently?; 2. Levofloxacin (Levaquin) - what is the patient getting it for? dosage? route? last administered? next administration?; 3. IV - where is the IV? gauge? what was/is infusing? how much has been infused?; 4. blood glucose - what is the result/level? what does the patient usually trend? when was the last blood glucose checked? any insulin and when?; 5. most recent vital signs and any trends.
Rationale	1. Levofloxacin (Levaquin) – How much was given and when is the next dose? 2. Agitation – The client's baseline level of orientation. Is this agitation new or getting worse? How do you know she is tired? Did she tell you that or is she sleeping on and off? 3. Probable discharge in next 24 hr – Is there a discharge order or plan? 4. Output – Amount, color and characteristic of urine.5. IV – The type and amount of IV solution given since arrival in the emergency department. The type and rate of IV solution that is currently infusing. Location of IV site and size of catheter.6. Vital signs – Range of vital signs, including O2 saturation. Current vital signs. 7. Blood glucose – Results of blood glucose and time obtained. 8. Social status – Any significant others that are with her. Individuals who should be contacted about hospitalization. 9. Medical history – Pre-existing conditions, allergies, and home medications and adherence. 10. Other – Normal level of activity, history of falls, and diet at home.

Optimal Decision	
Scenario	Nurse Craig just entered Mrs. Jordan's room to do his assessment.
Question	Nurse Craig is assessing Mrs. Jordan. Which of the following actions should the nurse take next?
Selected Option	Apply oxygen per nasal cannula at 2 L/min.

Rationale	According to the airway, breathing, and circulation (ABC) priority-setting framework, this is the first intervention the nurse should take to address the client's difficulty breathing.

Optimal Decision	
Scenario	Nurse Craig finds Mrs. Jordan restless and having increased difficulty breathing.
Question	Nurse Craig observes that Mrs. Jordan is restless and having increased difficulty breathing. Which of the following assessments is appropriate for Mrs. Jordan's needs at this time?
Selected Option	Rapid focused assessment
Rationale	The client is experiencing an acute episode of dyspnea. A rapid focused assessment will allow the nurse to determine the underlying cause of the dyspnea and to intervene quickly. Therefore, this is the correct assessment at this time.

Optimal Decision	
Scenario	Nurse Craig completes a rapid focused assessment.
Question	Based on the findings from the rapid focused assessment, which of the following actions should Nurse Craig perform first?
Selected Option	Increase oxygen to 4 L/min.
Rationale	The client is demonstrating clinical manifestations of heart failure and hypoxemia. Using the priority-setting framework of ABCs, increasing the rate of oxygen administration is the priority action because this promotes improved oxygenation.

Optimal Decision	
Scenario	Nurse Craig has received a bag of medications from Mrs. Jordan's home.
Question	Nurse Craig has received a bag of medications from Mrs. Jordan's home. He reviews each of the medications. Which of the following is the best action for Nurse Craig to take at this time?
Selected Option	Request medication reconciliation with pharmacy.
Rationale	The client's preadmission medications should be compared to the current medications prescribed by the provider upon admission.

Optimal Decision	
Scenario	Nurse Craig is discussing Mrs. Jordan's medications with the pharmacist.
Question	Nurse Craig has reviewed Mrs. Jordan's medications received from her home. Nurse Craig labels the medication bag and locks the medications in a cabinet. Based on events so far, which of the following best describes Mrs. Jordan's priority underlying medical condition?
Selected Option	Cardiac

Rationale	Based on the client's home medications and the events that have occurred, the client's cardiac condition is the priority at this time. Digoxin (Lanoxin), furosemide (Lasix), potassium chloride, and isosorbide (Imdur) are medications prescribed for heart failure. The client is experiencing shortness of breath and difficulty breathing related to fluid overload.

Optimal Decision	
Scenario	Mrs. Jordan is demonstrating exacerbation of heart failure.
Question	Mrs. Jordan has experienced increased respiratory distress during the past 2 hr. Since admission, she has received 2,550 mL IV and 100 mL orally. Her urinary output since admission to the medical-surgical unit has been 100 mL. Which of the following clinical manifestations indicates exacerbation of heart failure and should be reported to the provider? (Select all that apply.)
Selected Ordering	Dependant pitting edema Crackles in the lungs
Rationale	Pitting edema is a clinical manifestation of heart failure. Weak peripheral pulses is a clinical manifestation of heart failure. Dark amber urine is typically seen in a client who has fluid volume deficit. Therefore, this finding does not indicate heart failure.Neck vein distension is a typical clinical manifestation for a client who has heart failure. Crackles in the lungs is a clinical manifestation of heart failure.

Optimal Decision	
Scenario	The provider just explained to Mrs. Jordan that she is not a candidate for surgery and needs to be placed in Buck's traction. Mrs. Jordan is tearful and has a frightened look on face.
Question	The provider has just informed Mrs. Jordan that due to her cardiac condition she is not a candidate for surgery. Mrs. Jordan is tearful and has a frightened look on her face. Which of the following is an appropriate statement by Nurse Craig?
Selected Option	"Tell me about the concerns you have."
Rationale	This is a therapeutic statement by the nurse to the client.

Optimal Decision	
Scenario	Mrs. Jordan is in Buck's traction and needs a bed bath.
Question	Nurse Debbie is preparing to provide a bed bath for Mrs. Jordan, who is in Buck's traction. Which of the following is the appropriate action for Nurse Debbie to take?
Selected Option	Leave the traction in place.
Rationale	Buck's traction is to remain in place to keep the extremity immobilized to decrease muscle spasms until surgery is performed on the fractured hip.

Optimal Decision	
Scenario	Nurse Stephanie has inspected Mrs. Jordan's back for skin breakdown.

Question	Image|RN_AMS_UTI_22_stem_800px.png|Mrs. Jordan is at risk for skin breakdown due to her age, her cardiac condition and her mobility that is restricted due to the placement of Buck's traction. Nurse Stephanie assesses the client for skin breakdown. Based on the photograph, Nurse Stephanie should classify the skin breakdown as which of the following?
Selected Option	Stage 2
Rationale	In stage 2, there is partial thickness skin loss involving the dermis with a shallow pink ulcer that has a red pink bed without sloughing. It also can appear as an intact blister.

Optimal Decision	
Scenario	Nurse Debbie is planning care for Mrs. Jordan
Question	Which of the following should Nurse Debbie include in the plan of care for Mrs. Jordan, who has a fractured hip and is in Buck's traction?
Selected Option	Monitor Mrs. Jordan's ability to move her toes on the affected leg.
Rationale	The nurse should monitor the client's ability to move her toes on the affected extremity to assess for circulatory compromise.

Optimal Decision	
Scenario	Mrs. Jordan tells Nurse Debbie that she is short of breath. Mrs. Jordan's SaO2 saturation is 85%. Nurse Debbie increased the oxygen flow rate to 6 L/min.
Question	Mrs. Jordan reports that she is short of breath. Her SaO2 is 85%, and the oxygen flow rate has been increased to 6 L/min. Nurse Debbie reassesses the client. Which of the following clinical findings is an early indicator of shock?
Selected Option	Restlessness
Rationale	Restlessness is due to decreased cerebral perfusion and can be a clinical finding in the early stages of shock.

Optimal Decision	
Scenario	Nurse Debbie completes an assessment of Mrs. Jordan.
Question	Nurse Debbie assessed Mrs. Jordan and determined that Mrs. Jordan is at risk for shock. Which of the following types of shock is Mrs. Jordan at risk for?
Selected Option	Distributive shock
Rationale	The client is becoming septic. Sepsis is a widespread infection that triggers a whole-body inflammatory response. It leads to distributive shock when infectious micro-organisms are present in the blood.

Optimal Decision	
Scenario	Nurse Debbie has received the laboratory reports.
Question	Nurse Debbie is reviewing the laboratory report. Which of the following arterial blood gases (ABGs) indicate that Mrs. Jordan is experiencing metabolic acidosis?
Selected Option	pH 7.28, PaCO2 35, HCO3 20

Rationale	The client is at risk for metabolic acidosis. In the presence of metabolic acidosis, the pH is less than 7.35, the HCO3 is less than 22, and the PaCO2 is within the expected reference range.

ati NURSING EDUCATION

Score Explanation and Interpretation
Individual Performance Profile

REASONING SCENARIO INFORMATION

Reasoning Scenario Information provides the date, time and amount of time use, along with the score earned for each attempt. The percentage of students earning a Scenario Performance of Strong, Satisfactory, or Needs Improvement is provided. In addition, the Scenario Performance for each student is provided, along with date, time, and time use for each attempt. This information is also provided for the Optimal Decision Mode if it has been enabled.

If a detrimental decision is made during a Real Life scenario, the scenario will diverge from the optimal path and potentially end prematurely, in which case an indicator will appear on the score report.

REASONING SCENARIO PERFORMANCE SCORES

Strong	Exhibits optimal reasoning that results in positive outcomes in the care of clients and resolution of problems.
Satisfactory	Exhibits reasoning that results in mildly helpful or neutral outcomes in the care of clients and resolution of problems.
Needs Improvement	Exhibits reasoning that results in harmful or detrimental outcomes in the care of clients and resolution of problems.

REASONING SCENARIO PERFORMANCE RELATED TO NURSING COMPETENCY OUTCOMES

A performance indicator is provided for each outcome listed within the nursing competency outcome categories. Percentages are based on the number of questions answered correctly out of the total number of questions that were assigned to the given outcome. Outcomes have varying numbers of questions assigned to them. Also, due to divergent paths within the branching simulation, the outcomes encountered and the number of questions for each outcome can vary. The above factors cause limitations related to comparing scores across students or groups of students.

NCLEX® CLIENT NEED CATEGORIES

Management of Care	Providing integrated, cost-effective care to clients by coordinating, supervising, and/or collaborating with members of the multi-disciplinary health care team.
Safety and Infection Control	Incorporating preventative safety measures in the provision of client care that provides for the health and well-being of clients, significant others, and members of the health care team.
Health Promotion and Maintenance	Providing and directing nursing care that encourages prevention and early detection of illness, as well as the promotion of health.
Psychosocial Integrity	Promoting mental, emotional, and social well-being of clients and significant others through the provision of nursing care.
Basic Care and Comfort	Promoting comfort while helping clients perform activities of daily living.
Pharmacological and Parenteral Therapies	Providing and directing administration of medication, including parenteral therapy.
Reduction of Risk Potential	Providing nursing care that decreases the risk of clients developing health-related complications.
Physiological Adaptation	Providing and directing nursing care for clients experiencing physical illness.

Score Explanation and Interpretation
Individual Performance Profile

QUALITY AND SAFETY EDUCATION FOR NURSES (QSEN)

Safety	The minimization of risk factors that could cause injury or harm while promoting quality care and maintaining a secure environment for clients, self, and others.
Patient-Centered Care	The provision of caring and compassionate, culturally sensitive care that is based on a client's physiological, psychological, sociological, spiritual, and cultural needs, preferences, and values.
Evidence Based Practice	The use of current knowledge from research and other credible sources, upon which clinical judgment and client care are based.
Informatics	The use of information technology as a communication and information gathering tool that supports clinical decision making and scientifically based nursing practice.
Quality Improvement	Care related and organizational processes that involve the development and implementation of a plan to improve health care services and better meet the needs of clients.
Teamwork and Collaboration	The delivery of client care in partnership with multidisciplinary members of the health care team, to achieve continuity of care and positive client outcomes.

BODY FUNCTION

Cardiac Output and Tissue Perfusion	The anatomical structures (heart, blood vessels, and blood) and body functions that support adequate cardiac output and perfusion of body tissues.
Cognition and Sensation	The anatomical structures (brain, central and peripheral nervous systems, eyes and ears) and body functions that support perception, interpretation, and response to internal and external stimuli.
Excretion	The anatomical structures (kidney, ureters, and bladder) and body functions that support filtration and excretion of liquid wastes, regulate fluid and electrolyte and acid-base balance.
Immunity	The anatomic structures (spleen, thymus, bone marrow, and lymphatic system) and body functions related to inflammation, immunity, and cell growth.
Ingestion, Digestion, Absorption, and Elimination	The anatomical structures (mouth, esophagus, stomach, gall bladder, liver, small and large bowel, and rectum) and body functions that support ingestion, digestion, and absorption of food and elimination of solid wastes from the body.
Integument	The anatomical structures (skin, hair, and nails) and body functions related to protecting the inner organs from the external environment and injury.
Mobility	The anatomical structures (bones, joints, and muscles) and body functions that support the body and provide its movement.
Oxygenation	The anatomical structures (nose, pharynx, larynx, trachea, and lungs) and body functions that support adequate oxygenation of tissues and removal of carbon dioxide.
Regulation and Metabolism	The anatomical structures (pituitary, thyroid, parathyroid, pancreas, and adrenal glands) and body functions that regulate the body's internal environment.
Reproduction	The anatomical structures (breasts, ovaries, fallopian tubes, uterus, vagina, vulva, testicles, prostate, scrotum, and penis) and body functions that support reproductive functions.

DECISION LOG

Information related to each question answered in a scenario attempt is listed in the report. A brief description of the scenario, question, selected option and rationale for that option are provided for each question answered. The words "Optimal Decision" appear next to the question when the most optimal option was selected.

The rationale for each selected option may be used to guide remediation. A variety of learning resources may be used in the review process, including related ATI Review Modules.

If a detrimental decision that could result in grave harm to the client is made during a Real Life scenario, the scenario ends immediately and an indicator that a detrimental decision has been made appears in the score report.
A detrimental decision indicates the need to remediate the related topic area to prevent detrimental outcomes in the future.

ATI Virtual Clinical Questions and Reflection:

1) Identify two members of the healthcare team collaborating in the care of this patient:
   a. **_Angela RN, Charge Nurse_**
   b. **_Ashley Assistive Personnel_**
2) What were some steps the nursing team demonstrated that promoted patient safety?
   a. **_Medication reconciliation with pharmacy_____**
   b. **_Reading back orders with provider on the phone_____**
   c. **_Nurse Craig went right into the patient's room after being told she was SOB_**
3) Do you feel the nurse and medical team utilized therapeutic communication techniques when interacting with individuals, families, and health team members of all cultural backgrounds?
   a. If **yes**, describe: **_The provider, charge nurse, RN, and assistive personnel communicated effectively about the status of the patient in order to keep her as safe as possible. _____**
   b. If **no**, describe:
      _____
      _____

Reflection

1) Go back to your Preconference Template:
   a. Indicate (circle, star, highlight, etc.) the components of your preconference template that you saw applied to the care of this patient.
2) Review your Nursing Process Form: Did you select a correct priority nursing problem?
   a. If **yes,** write it here: _____
   b. If **no,** write what you now understand the priority nursing problem to be:

      _Decreased Cardiac Output_____
3) Review your Patient Problem Form: Did you see many of your anticipated nursing assessments and interventions used?
   a. Were there interventions you included that *were not* used in the scenario that could help this patient?
      i. If **yes,** describe:

         _Encourage hydration, catheter care, education on medication regimen_____
      ii. If **no,** describe:
         _____
         _____
4) After completing the scenario, what is your patient at risk for developing?
   a. **_Kidney Disease/Failure_____**
   b. Why? **_Decreased cardiac output could lead to decreased tissue perfusion in the kidneys as well as a decreased glomerular filtration rate (GFR). The patient's admitting diagnosis of urosepsis also can contribute to kidney disease or failure if not properly treated._____**

5) What was your biggest "take-away" from participating in the care of this patient? How did this impact your nursing practice?

My biggest "take-away" from participating in the care of this patient is to be conscious of keeping an open mind to other issues the patient may be having and not only what they are admitted for. In the ATI simulation, the patient came in for urosepsis; however, it was later discovered by Nurse Craig performing medication reconciliation with the pharmacy that the patient has been taking numerous cardiac medications at home (for her congestive heart failure), but were not ordered for her in the hospital. If the nurse had not taken this step, the patient could have had more serious cardiac related complications on top of the sepsis she was already experiencing. This will impact my practice as nurse by serving as a reminder to always follow up on their existing conditions and what type of management (if any) is used to treat it.

SOAP Note Based on Priority Problems

Priority Patient Problem #1: __Decreased Cardiac Output_____

Subjective: *This section explains the client symptoms. Include a narrative of the patient's complaints/concerns and/or information obtained from secondary sources.*	**History Present Illness (HPI):** 78yr old female admitted from home through ED for urosepsis **PMH:** Congestive heart failure; diabetes **Allergies:** NKA **Current Medications:** Glyburide (DiaBeta) 2.5mg PO daily w/ breakfast Levofloxacin (Levaquin) 250mg IV bolus q12hr Acetaminophen (Tylenol) 325mg PO q4hr PRN for fever >37.7°C (100°F) Lorazepam (Altivan) 2mg PO q6hr PRN for agitation and restlessness
Objective: *This section is your clinical observations. Include pertinent vital signs, pertinent labs and diagnostics related to the priority problem.*	**Vital Signs:** Admission – T: 37.4°C, 96bpm, RR: 24, BP: 136/76, Pulse Ox.: 91% RA **Labs:** Hgb 11.3, Hct 33%, WBC 13,000, BUN 21, Albumin 3.2, Cholesterol 225 UA – cloudy, slightly amber, specific gravity: 1.039, protein: 2mg/dL ABGs – pH: 7.28, PaCO2: 35mmHg, PaO2 88mmHg, HCO3-: 20mEq/L **Diagnostics:** CXR – "The lungs are well aerated. There is no evidence of any focal area of consolidation. A faint rounded density is seen in the base of the left lower hemithorax probably representing a nipple shadow. The hilar and pulmonary vasculature is dilated consistent with long-standing mild chronic obstructive pulmonary disease. The heart size is enlarged consistent with hypertrophy of the left ventricle. The costophrenic angles are clear."
Assessment: *Focused assessments on your priority problem.*	**Vital Signs:** @2400 T: 38.3°C, 98bpm, RR: 24, BP: 128/82, Pulse Ox.: 85% 4L NC **Assessment:** - Lungs clear, labored and shallow breathing, RR: 32 - Reports chills and states "I'm so cold." - States "I don't feel so good." - Urine is cloudy in foley bag and 100mL voided since transfer to medical surgical unit
Plan ***Based on priority problem only** *Include what your plan is for the client. What treatments or medications are needed? You can include procedures, consults, labs/diagnostics, etc. What nursing interventions are being performed?*	**Plan:** 1. Digoxin (Lanoxin) 0.25mg PO now 2. Digoxin (Lanoxin) 0.25mg PO daily starting 08/02/XX 3. Furosemide (Lasix) 20mg IV bolus now 4. Furosemide (Lasix) 20mg IV bolus if urinary output less than 500mL in next 6hr 5. Albuterol (Proventil) 0.5% solution in 3mL 0.9% sodium chloride via nebulizer q6hr 6. Albuterol (Proventil) 0.5% solution in 3mL 0.9% sodium chloride via nebulizer q2hr PRN for respiratory difficulty 7. Continue IVF NS 150mL/hr 8. Maintain O2 6L NC (titrate PRN to keep O2 sats >90%) 9. Push high IV antibiotics **Teaching & Resources:** - Teach s/sx of urinary tract infection before discharge and when to seek medical attention - Teach about importance of adhering to the medication regimen - Resource – Physical Therapy for hip fracture/fall - Resource – Case Management for discharge and possibility of home health or facility - Resource – Urology for follow-up