Student Name: Destiny Klinger
Medical Diagnosis/Disease: Urinary Tract Infection

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

NCLEX IV *(7)*: **Reduction of Risk**

Anatomy and Physiology	Pathophysiology of Disease	Anticipated Diagnostics
Normal Structures There are 2 kidneys and 2 ureters that make up the upper urinary system. The lower portion is composed of the bladder and urethra. Urethra = allows urine to pass out the body, Ureters= carry urine from kidneys to bladder, Bladder = A reservoir for urine until read to pass Kidneys are the principal organ of the urinary system. They regulate the volume and composition of extracellular fluid, and excrete waste products from the body. They also help control BP, make erythropoietin (stimulates red blood cell production). The kidneys are kind of bean shaped and is located behind the peritoneum on both sides of the vertebral column around the 12th thoracic vertebra to the third lumbar vertebra. The right kidney is lower than the left. On top of each kidney is an adrenal gland. They are surrounded by a good amount of fat and connective tissue that cushions, supports and helps kidneys maintain position. A capsule covers the surface of the kidneys that is made up of fibrous membrane. The capsule is a shock absorber to protect the kidneys from traumatic amounts of force. The hilus on the medial side is the entry site for renal artery and nerves and exit site for renal veins and ureter. Parenchyma is the tissue of the kidney, outer layer is cortex, and the inner is medulla (has pyramids). Top of pyramids are papillae (urine passed through to the calyces), minor calyces turn to major which forms a funnel into the renal pelvic. Nephron is the functional unit of the kidney, each nephron has a glomerulus (urine formation begins, blood is filtered), Bowmans capsule and a tubular system(this and collecting ducts are responsible for reabsorbing needed material and excretion of non-needed ones)	UTI is an infection of the urinary tract; the most common pathogen cause is E. coli. Can affects all part if the urinary tract. The urinary tract above the urethra is normally sterile. The body has natural defense mechanisms to help prevent a UTI. Those include normal voiding w/ bladder emptying, ureterovesical junction (UVJ) competence (blockage where the ureters meet the bladder), and ureteral peristaltic activity that propels urine towards bladder, the antibacterial property of the urine is when the pH is maintained slightly acidic (6.0-7.5). A change in any of the mechanisms increases a person's risk of a UTI. The organisms that mainly cause UTI to come from the perineum. The organisms are introduced to the tract via the ascending route from the urethra. Most infections are from bacteria that is present in the GI tract. Catheterizations, cystoscopies can cause a UTI due to it introducing bacteria from the opening of the urethra to go into the urethra and into the bladder. It can also be a result of hematogenous transmission (, which allows blood borne bacteria to invade the kidneys, ureters or bladders from somewhere else in the body. UTIs are the most common health care associate infection due to indwelling catheters (CAUTIs cause by E. coli) Can be uncomplicate or complicated	Labs Dip stick urinalysis (nitrated, WBCs, and leukocyte esterase) Urine culture Additional Diagnostics Clean catch urine sample and a urine culture w/ sensitivity testing can determine the bacteria susceptibility to a variety of abx drugs CT scan if obstruction is suspected Cystoscopy showing urinary tract abnormalities

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

NCLEX IV *(7)*: **Reduction of Risk**

Contributing Risk Factors	Signs and Symptoms	Possible Therapeutic Procedures	Prevention of Complications
Urinary stasis, obesity, shorter female urethra,	LUTS -Painful urination, dysuria, frequent	Non-surgical	(What are some potential

fistula exposing urinary stream to skin, vagina, or fecal stream, prolong catheter placement, cystoscopy, Habitual delay of urination(teacher bladder or nurse bladder), bubble baths	urination, urgency, suprapubic discomfort or pressure, hematuria (grossly visible blood), cloudy urine Upper UTI – fever, chills, flank pain Older adults – abd. Discomfort, impaired cognition	Drug therapy Surgical	complications associated with this disease process) Infections of the kidney which could cause decreased kidney function(AKI), urosepsis

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

Anticipated Medication Management
Abx- nitrofurantoin, TMP/SMX, Sensitivity guiding Abx therapy – ampicillin, amoxicillin Overall Abx are used to treat Analgesics

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

Non-Pharmacologic Care Measures
Frequent bathroom trips, I & O, drinking plenty of fluids, proper hygiene care (wipe front to back), showers instead of baths

NCLEX III *(4)*: **Care Needs**

What stressors might a patient with this diagnosis be experiencing?
Stress that it could come back. The financial cost of the abx. Those with busy schedules, need to take abx. Everyday until gone

Client/Family Education

List 3 potential teaching topics/areas
• Teach about wiping front to back. • Educate on the need to take full course of abx. • Teach about the need to void regularly to prevent recurrent UTI

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)
Hospitalist, urologist, nursing staff, home health for those with care deficits, case management.

Potential Patient Problems (Nursing Diagnoses)

To Be Completed Before the Simulation

Anticipated Patient Problem: Impaired urinary elimination

Clinical Reasoning: dysuria -> small amount of urine output, elevated BUN and creatinine lvls

Goal 1: Pt will be able to void during my time of care.

Goal 2: Post void residual will be <200 mL of urine during my time of care.

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes.	Multidisciplinary Team Intervention (Prework) What will you do if your assessment is abnormal?
Assess I & O q 2 hrs, prn bathroom trips	Measure urine output with a Hat q bathroom visits
Assess for pain score or discomfort during urination	Administer analgesic as ordered
Palpate the abdomen for a distended bladder q 4 hrs	Perform a bladder scan q 4 hrs
Assess pt. usual voiding pattern at beginning of my care day	Provide frequent bathroom trips q 2-3 hrs, prn
Monitor BUN and creatinine lvls as ordered	Encourage adequate hydration q 4 hrs without fluid overloading due to dysuria
Assess for s/sx of infection at beginning of care day	Educate on need to complete abx course to prevent recurrent UTI that can further impair elimination

<u>To Be Completed Before the Simulation</u>

Anticipated Patient Problem: Infection

Clinical Reasoning: Burning on urination, suprapubic tenderness, elevated WBC, hematuria

Goal 1: Pt. will have a decrease in suprapubic pain by end of my care day.

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes.	Multidisciplinary Team Intervention (Prework) What will you do if your assessment is abnormal?
Assess for s/sx of UTI at beginning of care day	Provide analgesics for pain relieve q 4 hrs to help with some symptom relief
Assess for elevated WBC and RBCs in urine as ordered	Administer abx as ordered
Assess for bacteria present in urine as ordered, when uti suspected	Encourage pt. to drink plenty of fluids q2 hrs
Assess pt. urinary pattern at beginning of care day	Educate on the need to void every 2-3 hrs to avoid stasis and bacterial growth
Assess pt. perineal care technique at least ones/ care day	Educate on need to wipe front to back 1x/care day
Assess for hygiene preferences at beginning care day	Educate and provide written material on the need to take showers instead of baths to prevent recurrent infection 1x/care day

Goal 2: Pt. will start to have a decline in WBC by discharge.

To Be Completed During the Simulation:

Actual Patient Problem: **Decreased cardiac output (DCO)**

Clinical Reasoning: CHF, dyspnea, Spo2 88% on RA, Crackles in all lung fields, dependent pitting edema

Goal: Pt. will have an Spo2 greater or equal to 92% by end of care day. Met: ☐ Unmet:☐

Goal: There will be an alleviation of crackles in the lungs by end of care day. Met: ☐ Unmet:☐

Actual Patient Problem: Risk for shock (RFS)

Clinical Reasoning: urosepsis, confused, has SOB, temp. 101F, chills, Spo2 85% on 4L, urine cloudy with minimal output Goal: Temperature will be less that 100 degrees F by end on my time of care Met: ☐ Unmet:☐

Goal: pt. will maintain adequate fluid volume in body during my time of care. Met: ☐ Unmet:☐

Additional Patient Problems: Infection, Impaired urinary elimination (IUE), Fear, Impaired skin Integrity(ISI)

Below will be your notes, add more lines as needed. **Relevant Assessments:** Indicate pertinent assessment findings. **Multidisciplinary Team Intervention:** What interventions were done in response to your abnormal assessments? **Reassessment/Evaluation:** What was your patient's response to the intervention?

Patient Problem	Time	Relevant Assessments	Time	Multidisciplinary Team Intervention	Time	Reassessment/ Evaluation
Infection	08/01 0545	BUN 21, cloudy, slightly amber urine, 1.039 specific gravity, Leukocyte esterase +, WBC 10, RBC 4-6, here for urosepsis	08/01 2100	Administered Levaquin 250 mg IV	1040	WBC 13, BUN 21
DCO	0730	Gasping for air, dyspnea	0732	Elevated HOB	0734	Still experiencing dyspnea but not visually working as hard to breath
DCO	0730	Dyspnea while laying in bed, Spo2 88% with HOB elevated	0735	Administered O2 via NC at 2L/min	0745	Spo2 90% on 2 L NC
DCO	0833	Restless and having increased difficulty breathing, Crackles present in posterior lobes 89% on 2L NC	0835	Administered 4L of O2 via NC	0838	Crackles still present on expiration and inspiration, respiration better but not great
DCO, IUE	1030	Increase respiratory distress, since	1045	Administered 0.25 mg of digoxin PO &	1200	Spo2 93% on 4 L NC and stayed at 92%

		admission received 2,650 mL fluid total, only 100 mL of urine output, crackles in lungs, dependent pitting edema		furosemide 20 mg IV push		next two checks, 150mL intake with another 310mL 2 hrs later with a output of 680
Fear	1100	Fell OOB and fx her hip	1120	Educated on why surgery is not an option at this time	1125	Pt. is in disbelief that this is happening to her
Fear	1230	Pt. crying upon arrival to room after getting the news about not being a candidate for surgery, frightening look on face	1233	Actively listened to the pt. concerns	1238	Reported she is scared due to not knowing what the traction is and what is going on
ISI	Late entry(0924) 1100	Fell OOB and Fx hp	1330	Placed in bucks traction	2000	4/10 pain but says it feels a better than before, buck traction looked to be intact causing no problems
ISI	1330	Bucks traction in place	2030	Skin inspected during bed bath	2040	Pt. stated bottom is sore, upon inspection there is skin breakdown present
ISI	2040	Stage 2 pressure injury on pt. bottom	2045	Barrier cream applied		Simulation did not reassess at end of shift
RFS	2400	Confused, experiencing SOB, and Spo2 85% on 4L, respirations shallow 32/min, temp 101, urine is cloudy and minimal urine output since beginning of shift, lung sound clear	2402	Increased O2 to 6L/min via NC & notify Dr. Baxtor on the pt. change in condition		Simulation did not reassess, but doctor ordered medication to help and was coming to check pt. out

ATI Virtual Clinical Questions and Reflection:

1) Identify two members of the healthcare team collaborating in the care of this patient:
    a. **_Craig -> a nurse _**
    b. **__Dr. Baxtor__**
2) What were some steps the nursing team demonstrated that promoted patient safety?
    a. **___Asked for name and date of birth before starting anything__**
    b. **_Got assistance with bed bath while pt. was in bucks traction_**
    c. **_Lowered the bed back down into the lowest position after care was provided _**

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: __Yes, I do thing the nurse and medical team utilized therapeutic communication techniques. This is because every single person listened to the pt. and made sure to explain to the pt. what was going on. They also explained it to the pt. in terms they would understand. When communicating with each other the healthcare team made sure to include all relative, important, time sensitive information with each other regarding the pt. __

    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: **_I now understand the priority problem to be decrease cardiac output. This is because she has crackles in her lungs. Then a decreased amount of urine output paired with dyspnea, SOB. Then she takes multiple cardiac medication at home. _**

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: ____

        ii. If **no**, describe: **_No, I did not see many of my anticipated assessments and interventions take place. One reason is because the pt. had a Foley and for impaired urinary elimination was based off of not having one. Then they didn't really focus on the infection much but they did do lab draws to look at WBC. They did more for her congestive heart failure. _**

4) After completing the scenario, what is your patient at risk for developing?

    a. __I would say she is at risk for an AKI__

    b. Why? __The reason for this is towards the end the health care team said that she was going into shock. But this is due to the amount of waste and bacteria in the blood stream that is then going to the kidneys to get filtered and they most likely won't be able to remove enough waste to correct what is going on. Then I anticipate that she could be put on other meds, such as a new abx to help clear the infection and there are a few that are nephrotoxic and receiving high quantity of them over a long period of time can cause damage to the kidneys. _

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

_The big take away from participating in the care of this patient is that even though they come in for one problem there can be other issues or conditions that is causing all the signs and symptoms they are experiencing. I was able to see how even though she came in for urosepsis she also had increased CHF exacerbation that was causing majority of the issue she was exhibiting. I was surprised that I can to the conclusion of possible exacerbation of CHF before I reached that part in the simulation. This has impacted my nursing practice by really showing me how even with one diagnosis the issue can be something totally opposite of what we thought it was. I came into the care expecting to do so much for her lack of urination but in the end her cardiac issue was what was treated more. It allowed for clarity on how not every pt. with a diagnosis will present just how the disease is written in a book Care has to be patient specific. _