N431 Care Plan # 1

Lakeview College of Nursing

Amber Raimer

10/19/2022

Demographics (3 points)

Date of Admission	Client Initials	Age	Gender
10-15-22	D.A.	63	Female
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White	Retired	Divorced	Codeine- hallucinations House dust- unknown Statins- amg-coa reductase inhibitor- nausea and vomiting
Code Status	**Height**	**Weight**	
Full Code	1.702m (6'7")	63.1 kg (142 pounds)	

Medical History (5 Points)

Past Medical History: Asthma, constipation, hyperlipidemia, depression, CVA, Multiple sclerosis, seizures, traumatic hematoma of the left ankle, urinary retention, dysphagia, pulmonary embolism.

Past Surgical History: Appendectomy (no date), cystoscopy calculus removal right side- 1/29/2020, 04/29/2020. Left side 07/07/2020, 11/14/2021, 06/30/2022. Foot debridement with bone biopsy left heel 06/13/2022, left foot soft tissue 08/12/2018, Upper GI gastrointestinal 07/08/2022, ureter stent placement bilaterally 12/26/2019, left side 06/10/2020, 09/27/2021, 06/10/2022.

Family History: Father: Parkinson's, diabetes, CAD, prostate cancer, hypertension, heart issues.

Mother: Diabetes, cancer with Mets, heart a fib, lung cancer.

Brother: fatty liver

Sister: thyroid and arthritis

Social History (tobacco/alcohol/drugs including frequency, quantity, and duration of use): Tobacco use. Pack per day not provided. Last smoked 14.4 years ago ended 05/07/2008. No alcohol, no smokeless tobacco, denies drug use.

Assistive Devices: Wheelchair

Living Situation: Nursing Home

Education Level: n/a

Admission Assessment

Chief Complaint (2 points): Abdominal Pain- patient history of ureteral stones

History of Present Illness – OLD CARTS (10 points): Patient was sent from nursing home to hospital due to complaints of abdominal pain that began on or about 10-15-2022. Patient has a history of multiple sclerosis, recurrent UTI, recurrent nephrolithiasis, and ureteral stones. Pain was constant until relieved with removal of ureteral stone. Diagnostic CT of abdomen and pelvis with contrast showed that a 7x8mm calculus in the right ureter with mild hydronephrosis. Patient was also diagnosed with rhinovirus and MRSA. Patient is being treated with vancomycin for the MRSA infection.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Acute cystitis without hematuria

Secondary Diagnosis (if applicable): Acute respiratory failure with hypoxia and hypercapnia

Pathophysiology of the Disease, APA format (20 points):

Urolithiasis

Urolithiasis is a type of urinary obstruction where calculi or stones are formed anywhere in the urinary system (Capriotti, 2020). Prevalence of this disorder is present in 12% of men and

7% in women and between 240,000 to 720,000 people are affected each year (Capriotti, 2020). Those of Caucasian descent with metabolism disorders, structural abnormalities of the urinary system, and a family history of stones are at increased risk for stone development (Capriotti, 2020). Dietary habits and hydration also impacted stone formation due to the decreased urine volume and increased solute that promotes stone formation (Capriotti, 2020). Diets high in animal protein, calcium, and sodium can increase the risk for urolithiasis (Capriotti, 2020).

The stones are named after the location in which they are present such as nephrolithiasis for the renal, ureterolithiasis for ureter, and cystolithiasis for stones that have passed to the bladder (Capriotti, 2020). There are four types of stones calcium, struvite, uric acid, and cystine (Capriotti, 2020). Calcium stones are considered the most common, and the cause is hypercalciuria (Capriotti, 2020). Calcium stones are caused by a diet high in calcium and increased calcium absorption or reabsorption from bone (Capriotti, 2020). The renal tubules in the kidneys may not properly reabsorb the calcium, which leads to increased calcium concentration in the urine (Capriotti, 2020). An increased level of purines causes uric acid stones due to the consumption of animal proteins (Mayo Clinic Staff, 2022). Struvite stones are from an increase in magnesium, ammonium phosphate, and carbonate apatite that will grow in the renal pelvis (Capriotti, 2020). Urea breaks down into ammonia, bicarb, and carb ions by bacteria such as *P. mirabilis*, *S. aureus*, and *Hemophilus influenzae* to cause these stones (Capriotti, 2020). Lastly, cysteine stones are rare and linked to metabolic disorders that affect the amino acid cysteine.

The supersaturation of urine leaves behind stone-forming salts that result in the formation of stones (Capriotti, 2020). Stones in the bladder can result from urinary stasis from repeat UTIs or obstruction (Capriotti, 2020). When the obstruction occurs, spasms occur due to obstruction at

the ureteropelvic junction, the mid-ureter site of all iliac vessels, the posterior pelvis at the broad ligament cross-section, and the connecting point where the ureter meets the bladder (Capriotti, 2020). The stone is pushed by urine flow, so it is recommended to increase hydration to improve the stone's passing (Capriotti, 2020). If the patient becomes dehydrated, a reverse flow or hydronephrosis can flow back to the kidneys and result in kidney failure (Capriotti, 2020). Patients typically present with intense pain at the CVA, abdominal pain, nausea, vomiting, fever, hematuria, and painful urination (Capriotti, 2020). Patients may frequently move to relieve pain (Capriotti, 2020). Renal colic may persist in waves of 20-60 minutes and radiates from the lower back to the genital region (Capriotti, 2020).

The diagnosis can be through patients' history and physical exams (Capriotti, 2020). The pain, location, onset, and duration are significant in diagnosing urolithiasis (Capriotti, 2020). A urinalysis is performed that may show crystals in the urine (Capriotti, 2020). Ultrasounds and CT scans can visualize the stones with or without contrast (Capriotti, 2020). An MRI would be used if the stones were not visible during the CT scan (Capriotti, 2020). A cystoscope test called retrograde pyelography injects a dye directly into the ureter to help visualize the stone (Capriotti, 2020). Confirmation is made by physical passing, removal, and radioactive imaging (Capriotti, 2020). Analysis by 24-hour urine metabolic collection can identify the specific cause of the stone formation (Capriotti, 2020).

Treatment for stones can be surgical removal (cystoscopy surgery) of the stone (Capriotti, 2020). Increasing fluids to more than 3 liters can help move the stone (Capriotti, 2020). Pain medications can be given to help with the pain until passing (Capriotti, 2020). Lithotripsy, which utilizes sound waves to break up the stone, can also be used as a treatment (Capriotti, 2020).

The patient had a diagnostic CT scan of the abdomen and pelvis with contrast which revealed a 7x8 size calculus in the right ureter with mild hydronephrosis. A urinalysis was also performed to identify the protein, trace ketones, elevated WBC, and elevated RBC in the urine. The patient was positive for a UTI. A urine culture identified *K. pneumoniae* and *C. freundii.* Chemistry labs drawn showed increased sodium and glucose. The patient presented with pain in the abdominal area that began on 10-15-2022. The patient underwent a cystoscopy calculus removal of the right ureter and is on an antibiotic to clear the UTI.

Pathophysiology References (2) (APA):

Capriotti, T. (2020) *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd Ed.) F.A. DAVIS

Mayo Clinic Staff. (2022, June 3). *Kidney Stones.* Mayo Clinic https://www.mayoclinic.org/diseases-conditions/kidney-stones/symptoms-causes/syc-20355755#:~:text=Kidney%20stones%20(also%20called%20renal,many%20causes%20of%20kidney%20stones.

Laboratory Data (15 points)

CBC Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	**3.50-5.20 10^6 /uL**	**5.66 10^6 /uL**	**3.82 10^6 /uL**	**Patient is experiencing a urinary tract infection and obstruction from ureteral stone, increased RBC**

				indicates dehydration (Pagana et al., 2021).
Hgb	**11.0-16.0 g/dL**	**14.9 g/dL**	**10.1 g/dL**	**Decreased Hgb count is expected days after surgical procedure while body is adjusting to homeostasis and may be experiencing temporary anemia (Pagana et al., 2021).**
Hct	**34.0-47.0 g/dL**	**48.3 g/dL**	**32.2 g/dL**	**Increased Hct is an indication of dehydration (Pagana et al., 2021). Decreased Hct count is expected days after surgical procedure while body is adjusting to homeostasis, this lab is an anemia indicator (Pagana et al., 2021).**
Platelets	**140-400 10^3 /uL**	**229 10^3/uL**	**122 10^3/uL**	**Decreased platelet count is expected days after surgical procedure while adjusting to homeostasis. (Pagana et al., 2021).**
WBC	**4.0-11.0 10^3/uL**	**15.40 10^3/uL**	**21.50 10^3/uL**	**Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).**
Neutrophils	**1.60-7.70 10^3/uL**	**13.87 10^3/uL**	**18.19 10^3/uL**	**Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).**
Lymphocytes	**1.00-4.9 10^3/uL**	**1.01 10^3/uL**	**2.35 10^3/uL**	**WDL**
Monocytes	**0.00-1.10 10^3/uL**	**0.34 10^3/uL**	**0.76 10^3/uL**	**WDL**
Eosinophils	**0.00-0.50 10^3/uL**	**0.09 10^3/uL**	**0.03 10^3/uL**	**WDL**
Bands	**0.01-0.20 10^3/uL**	**0.03 10^3/uL**	**0.05 10^3/uL**	**WDL**

Chemistry Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na-	**136-145 mmol/L**	**146 mmol/L**	**151 mmol/L**	**High concentration of sodium is a finding for blockage resulting in ureteral stone (Pagana et al., 2021).**
K+	**3.5-5.1 mmol/L**	**4.3 mmol/L**	**3.2 mmol/L**	**Diuretic use can lower potassium levels (Pagana et al., 2021).**

Cl-	**98-107 mmol/L**	**107 mmol/L**	**114 mmol/L**	**Elevated chloride level could indicate dehydration and kidney issue related to nephrolithiasis and hydronephrosis (Pagana et al., 2021).**
CO2	**22.0-29.0 mmol/L**	**24.0 mmol/L**	**28.0 mmol/L**	**WDL**
Glucose	**74-100 mg/dL**	**107 mg/dL**	**93 mg/dL**	**Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).**
BUN	**10-20 mg/dL**	**21 mg/dL**	**13 mg/dL**	**Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).**
Creatinine	**0.55-1.30 mg/dL**	**0.70 mg/dL**	**0.46 mg/dL**	**Low creatinine clearance can indicate damage to kidney resulting from hydronephrosis and blockage (Pagana et al., 2021).**
Albumin	**3.4-4.8 g/dL**	**2.2 g/dL**	**2.6 g/dL**	**Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).**
Calcium	**8.9-10.6 mg/dL**	**7.9 mg/dL**	**8.6 Mg/dL**	**Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).**
Mag	**1.6-2.6 mg/dL**	**n/a**	**1.9 mg/dL**	**wdl**
Phosphate	**2.3-4.7 mg/dL**	**n/a**	**n/a**	**n/a**
Bilirubin	**0.2-1.2 mg/ dL**	**n/a**	**0.6 Mg/dL**	**wdl**
Alk Phos	**40-150 u/l**	**n/a**	**106 u/l**	**wld**
AST	**5-34 u/l**	**n/a**	**28 u/l**	**wdl**
ALT	**0-55 u/l**	**n/a**	**91 u/l**	**Elevated levels coincide with mild hepatomegaly shown on CT of abdomen and pelvis (Pagana et al., 2021).**
Amylase	**40-140 u/l**	**n/a**	**n/a**	**n/a**

Lipase	**0-160 u/l**	**n/a**	**n/a**	**n/a**
Lactic Acid	**0.50-2.20**	**2.13 mmol/L**	**n/a**	**WDL**
Troponin	**0.000-0.050 mg/mL**	**n/a**	**n/a**	**n/a**
CK-MB	**5-25 IU/L**	**n/a**	**n/a**	**n/a**
Total CK	**24-204 IU/L**	**n/a**	**n/a**	**n/a**

Other Tests Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
INR	**4.00-11.00 10^3/uL**	**n/a**	**n/a**	**n/a**
PT	**11-12.5 seconds**	**n/a**	**n/a**	**n/a**
PTT	**25-35 seconds**	**n/a**	**n/a**	**n/a**
D-Dimer	**Less than 0.50**	**n/a**	**n/a**	**n/a**
BNP	**Less than 100 pg/mL**	**n/a**	**n/a**	**n/a**
HDL	**40-60-less than 60 mg/dL**	**n/a**	**n/a**	**n/a**
LDL	**<100 mg/dL**	**n/a**	**n/a**	**n/a**
Cholesterol	**0-200 mg/dL**	**n/a**	**n/a**	**n/a**
Triglycerides	**<150mg mg/ dL**	**n/a**	**n/a**	**n/a**
Hgb A1c	**4.0-5.6%**	**n/a**	**n/a**	**n/a**
TSH	**0.4-4.2 mU/L**	**n/a**	**n/a**	**n/a**

Urinalysis Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Colorless-yellow-clear	Yellow cloudy	n/a	Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).
pH	4.5-8	6.0	n/a	wdl
Specific Gravity	1.003-1.035	1.020	n/a	wdl
Glucose	Neg	neg	n/a	wdl
Protein	Neg	30	n/a	Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).
Ketones	Neg	trace	n/a	Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).
WBC	0-2,3-5/hpf	279	n/a	Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).
RBC	0-2, 3-5	303	n/a	Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).
Leukoesterase	neg	small	n/a	Patient is experiencing a urinary tract infection and obstruction from ureteral stone (Pagana et al., 2021).

Arterial Blood Gas Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
pH	**7.35-7.45**	**7.33**	**7.377**	**WDL**
PaO2	**80-100**	**52.9**	**135.5**	**Patient is experiencing acute respiratory failure with hypoxia and hypercapnia (Pagana et al., 2021).**
PaCO2	**35-45**	**36.0**	**42.5**	**WDL**
HCO3	**21.5-25.5**	**18.7**	**24.4**	**Patient is experiencing acute respiratory failure with hypoxia and hypercapnia (Pagana et al., 2021).**
SaO2	**95-100%**	**98.1**	**98.7**	**WDL**

Cultures Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	**Neg**	**pos**	**neg**	Patient was positive for Klebsiella pneumoniae and Citrobacter freundii which indicates a urinary tract infection (Pagana et al., 2021).
Blood Culture	**neg**	**neg**	**neg**	**WDL**
Sputum Culture	**neg**	**n/a**	**n/a**	**n/a**
Stool Culture	**neg**	**n/a**	**n/a**	**n/a**

Lab Correlations Reference (1) (APA):

Pagana, K.D., Pagana, T.J., & Pagana, T.N. (2021). *Mosby's diagnostic and laboratory test reference* (15th Ed.). Elsevier

Diagnostic Imaging

All Other Diagnostic Tests (5 points): CT abdomen and pelvis with contrast, echocardiogram on 10/18/2022 results not available at end of rotation.

Diagnostic Test Correlation (5 points):

CT of abdomen and pelvis with contrast was used to diagnose the patient with cystitis without hematuria. The patient had a ureteral stone located in the right ureter. A cystoscopy procedure was performed to remove the 7x8 calculus. The diagnostic test allowed a visualization to the location of the stone in the ureter (Capriotti, 2020).

An echocardiogram was performed to visualize fluid between the two layers of the heart or the pericardium (Capriotti, 2020). The test can also show heart function, the 4 heart chambers, and how the heart is overall performing (Capriotti, 2020). However, results were not yet available as echocardiogram was still in process at end of clinical rotation. The patient is to undergo a thoracentesis on 10/19/2022 after ECG.

Diagnostic Test Reference (1) (APA):

Capriotti, T. (2020) *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd Ed.) F.A. DAVIS

Current Medications (10 points, 1 point per completed med)
10 <u>different</u> medications must be completed

Home Medications (5 required)

Brand/ Generic	**Benadryl/ diphenhydramine**	**paroxetine/Paxil**	**Keppra, levetiracetam**	**Xarelto/ rivaroxaban**	**ondansetron/Zofran**
Dose	**25 mg tab**	**20 mg tab**	**750 mg tab**	**20 mg tablet**	**4 mg tab**
Frequency	**Every 8 hour as needed**	**Daily morning**	**2 times a day**	**1 tablet every evening**	**Every 6 hours as needed**
Route	**PO**	**PO**	**PO**	**PO**	**PO**
Classification	**Antihistamine/ antianaphylaxis adjunct**	**SSRI/ Antianxiety**	**Pyrrolidine derivative/anticonvulsant**	**Factor Xa inhibitor/ Anticoagulant**	**Selective serotonin receptor antagonist/antiemetic**
Mechanism of Action	**Blocks histamine while inhibiting GI and respiratory smooth muscle contractions. Reduces itching and salivary gland secretions. (Nurse's Drug Handbook, 2021).**	**Relieves symptoms of anxiety/ depression by inhibiting serotonin reuptake level increases at serotonin receptors (Nurses Drug Handbook, 2021).**	**Prevents against epileptiform burst. (Nurses Drug Handbook, 2021).**	**Blocks Xa factor which is responsible for blood coagulation (Nurses Drug Handbook, 2021).**	**Blocks serotonin at the vagal nerve to reduce nausea and vomiting (Nurses Drug Handbook, 2021).**
Reason Client	**Rash/itching**	**depression**	**seizure**	**Reduce risk of**	**Nausea/ vomiting**

Taking				**blood clot.**	
Contraindications (2)	**Driving, taking similar antihistamines or CNS depressants (Nurses Drug Handbook, 2021).**	**Use within 14 days of an MAOI. (Nurses Drug Handbook, 2021). Hypersensitivity to paroxetine (Nurses Drug Handbook, 2021).**	**Hypersensitivity to levetiracetam or components. Drug can cause acute thrombocytopenia. Patient currently has low platelet count.**	**Active bleeding or sensitivity to medication (Nurses Drug Handbook, 2021).**	**Sensitivity to ondansetron or use of apomorphine.**
Side Effects/Adverse Reactions (2)	**Thrombocytopenia, hemolytic anemia (Nurses Drug Handbook, 2021).**	**Suicidal ideation, serotonin syndrome (Nurses Drug Handbook, 2021).**	**Can cause seizures if stopping drug suddenly (Nurses Drug Handbook, 2021). Leukopenia (Nurses Drug Handbook, 2021).**	**Hemorrhage subdural hematoma (Nurses Drug Handbook, 2021).**	**Serotonin syndrome Angioedema (Nurses Drug Handbook, 2021).**
Nursing Considerations (2)	**Discontinue 72 hours prior to skin or allergy tests (Nurses Drug Handbook, 2021). Keep medication out of light if in elixir form (Nurses Drug Handbook, 2021).**	**Monitor for akathisia, monitor patient for serotonin syndrome which is rapid changes in mental status, hyperthermia, and muscle rigidity (Nurses Drug**	**Implement seizure precautions if client is presently being treated for seizures (Nurses Drug Handbook, 2021). Monitor for bleeding and infections (Nurses Drug Handbook, 2021).**	**Do not give to patients with liver impairment (Nurses Drug Handbook, 2021). Should not be given to persons who are medically ill as they are at high risk for thrombolyt**	**Avoid use in patients with phenylketonuria. Monitor for s/s of serotonin syndrome. (Nurses Drug Handbook, 2021).**

		Handbook, 2021).		**ic event (Nurses Drug Handbook, 2021).**	
Key Nursing Assessment (s)/Lab(s) Prior to Administration	**Respiratory assessment/watch for use with other CNS medications as it is a known depressant (Nurses Drug Handbook, 2021).** **Pulse/heart rate for arrhythmia as this is a side effect of medication (Nurses Drug Handbook, 2021).**	**Vital signs and Nuero exam for baseline prior to administration (Nurses Drug Handbook, 2021).**	**Check medication levels for compliance during first 4 weeks (Nurses Drug Handbook, 2021).** **Monitor for adverse side effects during first 4 weeks when they are likely to occur (Nurses Drug Handbook, 2021).**	**INR** **PT** **(Nurses Drug Handbook, 2021).**	**Calcium and** **Magnesium** **Levels should be in range before administering medication.** **(Nurses Drug Handbook, 2021).**
Client Teaching Needs (2)	**Take 30 minutes prior to expected exposure. (Nurses Drug Handbook, 2021).** **Take with food to prevent upset GI. (Nurses Drug Handbook, 2021).**	**Drug may take 4 weeks to reach therapeutic effects (Nurses Drug Handbook, 2021).** **Avoid driving or hazardous activity until effects are known (Nurses Drug Handbook**	**Do not stop drug suddenly (Nurses Drug Handbook, 2021).** **Monitor for suicidal ideations (Nurses Drug Handbook, 2021).**	**Take exactly as prescribed (Nurses Drug Handbook, 2021).** **Report bleeding, use a soft bristle toothbrush, and avoid razor usage (Nurses Drug Handbook, 2021).**	**Place on tongue and allow to dissolve before swallowing.** **Report rashes or skin changes (Nurses Drug Handbook, 2021).**

		, 2021).			

Hospital Medications (5 required)

Brand/ Generic	**ertapenem/ Invanz**	**vancomycin/ Vancocin**	**famotidine/Pepcid**	**vilanterol/ fluticasone furoate/ Ellipta**	**prochlorperazine/Compro**
Dose	**1g**	**250 mL in NS**	**20 mg**	**200-25 mcg/ dose inhaler- 1 puff daily**	**10 mg tab**
Frequency	**1 a day**	**1000 mg day**	**daily**	**daily**	**PRN- every 6 hours**
Route	**IV PB**	**IV PB**	**IV push**	**Inhale via mouth**	**Gastric tube**
Classification	**Antibiotic/ carbapenem**	**Glycopeptide /antibiotic**	**Histamine -2 blocker Antiulcer agent**	**Corticosteroid/anti-asthmatic**	**Piperazine phenothiazine/ antiemetic**
Mechanism of Action	**Leads to bacterial cell wall lysis which in turn destroys the bacteria that is targeted (Nurses Drug Handbook, 2021).**	**Inhibits RNA and cell wall synthesis and creates lysis (Nurses Drug Handbook, 2021).**	**Reduced hydrochloric acid production and prevents histamine binding to receptors of parietal cells (Nurses Drug Handbook , 2021).**	**Inhibits inflammatory response (Nurses Drug Handbook, 2021).**	**Blocks dopamine receptors which in turn can relieve nausea and vomiting (Nurses Drug Handbook, 2021).**
Reason Client Taking	**Infection**	**infection**	**Acid reflux**	**asthma**	**Antivertigo/ antiemetic**
Contraindic	**Intolerance**	**Corn**	**Azathiopr**	**Sensitivity**	**Coma**

ations (2)	**to beta-lactams or allergy to ertapenem (Nurses Drug Handbook, 2021).**	**insensitivity, or intolerance to vancomycin (Nurses Drug Handbook, 2021).**	**ine and mercapto purine (Nurses Drug Handbook , 2021).**	**to fluticasone or to milk products (Nurses Drug Handbook, 2021).**	**Severe CNS depression (Nurses Drug Handbook, 2021).**
Side Effects/ Adverse Reactions (2)	**C-diff, anaphylaxis**	**C-diff, neutropenia, and thrombocytopenia**	**CVA, ECG abnormalities (Nurses Drug Handbook , 2021).**	**Bronchospasms and oropharyngeal edema**	**Hypotension/ other CNS depressants (Nurses Drug Handbook, 2021).**
Nursing Considerations (2)	**Monitor for diarrhea for signs of C.diff,** **Inspect drug for particulate and discoloration after reconstitution of the drug.**	**Use a separate line to administer this drug (Nurses Drug Handbook, 2021).** **Infuse over at least 1 hr/g as the administration of this drug can lead to red man syndrome.**	**Dilute injection form 2mL with normal saline 5-10 mL solution. Give over 2 minutes.** **Dilute 100 mL of d5w and infuse over 15-30 minutes.** **(Nurses Drug Handbook , 2021).**	**Use caution if patient has other active viral infections, bacterial infection, fungal or parasitic (Nurses Drug Handbook, 2021).** **Monitor closely when starting medication and watch for those who are sensitive to milk or milk products (Nurses Drug Handbook, 2021).**	**Do not mix in same syringe with other medications (Nurses Drug Handbook, 2021).** **Give no more than 5 mg/min (Nurses Drug Handbook, 2021).**

Key Nursing Assessment(s)/Lab(s) Prior to Administration	**Obtain culture prior to administration of this medication (Nurses Drug Handbook, 2021).**	**Prior and during CBC, BUN, serum creatinine levels during therapy.**	**Assess during treatment for gastric malignancy (Nurses Drug Handbook, 2021).** **Watch for bloody stools or vomit (Nurses Drug Handbook, 2021).**	**Do not use for asthma attack. Use fast acting inhaler if bronchospasms occur (Nurses Drug Handbook, 2021).**	**N/A-monitor for anticholinergic effects of the drugs (Nurses Drug Handbook, 2021).**
Client Teaching Needs (2)	**Do not take medications with valproic acid (Nurses Drug Handbook, 2021).** **Notify provider of rash, itching, shortness of breath as these are signs of allergic reaction (Nurses Drug Handbook, 2021).**	**Notify of rash, itching, shortness of breath (Nurses Drug Handbook, 2021).** **Notify if pain during urination (Nurses Drug Handbook, 2021).**	**Avoid hazardous activity.** **Avoid alcohol and smoking**	**Ensure patient that this inhaler does not act as rapid acting inhaler** **Be sure to carry a rapid acting inhaler with you and for the use of bronchospasms (Nurses Drug Handbook, 2021).**	**Notify provider if you experience involuntary movements or restlessness (Nurses Drug Handbook, 2021).** **Adverse effects may take up to 12 weeks to take place (Nurses Drug Handbook, 2021).**

Medications Reference (1) (APA):

Nurse's Drug Handbook (2021).

Jones and Bartlett Learning

Assessment

Physical Exam (18 points) – HIGHLIGHT ALL PERTINENT ABNORMAL FINDINGS

GENERAL: **Alertness: Alert/arousable** **Orientation: oriented to place, situation, person. Not time.** **Distress: no signs of distress** **Overall appearance: Appropriate to situation.**	**Oriented x3 place, situation, and person. Not time. No physical signs of distress. Overall appearance is appropriate to situation.**
INTEGUMENTARY: **Skin color: pale** **Character: dry** **Temperature: warm** **Turgor: no tenting** **Rashes: no** **Bruises: bilateral bruising** **Wounds: yes** **Braden Score: 10** **Drains present: Y☐ N ☒** **Type:**	**Wounds: coccyx pressure wound stage 2. Red and non-blanchable.** **Reddened area under left breast** **No rashes, good skin turgor, skin warm, dry, but pale.** **Braden score is a 10. No drains present.**
HEENT: **Head/Neck: No jvd, WDL** **Ears: WDL** **Eyes: 4mm equal and reactive. PERRLA** **Nose: nasogastric tube present and high flow nasal canula. No signs of redness or irritation.**	**HEENT- WDL** **No JVD, Ears WDL, Eyes 4mm equal and reactive. Perrla,** **Nose- nasogastric tube present and use of high flow nasal canula**

Teeth: teeth present, some dentition missing	
CARDIOVASCULAR: **Heart sounds: WDL** **S1, S2, S3, S4, murmur etc.WDL** **Cardiac rhythm (if applicable): WDL** **Peripheral Pulses: arms 2+, legs 1+** **Capillary refill: less than 3 seconds** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema: no edema**	**No signs of JVD, Regular rhythm and rate. No murmurs. Peripheral pulse arms 2+ and legs 1+, no signs of edema.**
RESPIRATORY: **Accessory muscle use: Y☒ N ☐** **Breath Sounds: Location, character**	**Shallow respirations with diminished lung sound that are equal bilaterally to the anterior.**
GASTROINTESTINAL: **Diet at home: regular** **Current Diet NPO** **Height: 1.702 m (5'7")** **Weight: 142 pounds 63.1 kg** **Auscultation Bowel sounds: present in all 4 quads, soft and non-tender** **Last BM: 10/18/2022** **Palpation: Pain, Mass etc.:** **Inspection: soft, non-tender** **Distention: no** **Incisions: no** **Scars: former appendectomy scar** **Drains: no** **Wounds: no** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☒ N ☐** **Size: 8 fr** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	.
GENITOURINARY: **Color: yellow** **Character: cloudy** **Quantity of urine: 250 ml urine** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☒ N ☐**	**Incision in ureteral meatus, Ureteral catheter present 6 fr.** **No present pain upon urination.** **Stage 2 pressure wound on coccyx.** **Urine cloudy and yellow.**

Type: external urinary catheter **Ureteral catheter** **Size: 6 french**	
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices: compression boots** **Strength: weak** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 15 high risk for falls** **Activity/Mobility Status: requires assistance for transfer, wheelchair** **Independent (up ad lib) ☐No** **Needs assistance with equipment ☐ yes, Wheelchair** **Needs support to stand and walk☐ wheelchair and support for transferring**	**Neurovascular status: weak in all 4 extremities. Weak grasp of hands.** **Passive ROM WDL. Active ROM arms and hands.**
NEUROLOGICAL: **MAEW: Y ☐ N☒ weak** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no - Legs ☐ Arms ☐ Both ☒** **Orientation: Alert and oriented x3** **Mental Status: lethargic** **Speech: WDL** **Sensory: WDL** **LOC: glascow coma scale 12**	**Weak grasp left and right arms. Pedal push weak.**
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	**Coping methods: Patient is in denial phase for disease progression. Patient has support system in terms of family, but not present at hospital. Developmental level is appropriate to age, retired/ no-longer employed due to disease progression. Religious information and preference not listed.**

Vital Signs, 2 sets (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0800	**95**	**133/72**	**15**	**Not taken**	**99 on 4 L** **high flow**

					nasal cannula
1149	**89**	**109/77**	**18**	**98.5 (36.9)**	**99- on 4 L high flow nasal cannula**

Vital Sign Trends: Vital signs are stable.

Pain Assessment, 2 sets (2 points)

Time	**Scale**	**Location**	**Severity**	**Characteristics**	**Interventions**
0800	**rFlacc 0-2**	**No pain**	**0**	**0**	**None- pain managed**
1149	**rFlacc 0-2**	**No pain**	**0**	**0**	**None- pain managed**

IV Assessment (2 Points)

IV Assessment	**Fluid Type/Rate or Saline Lock**
Size of IV: **Location of IV:** **Date on IV:** **Patency of IV:** **Signs of erythema, drainage, etc.:** **IV dressing assessment:**	20G left radial- lock 10/16/2022-patent. No signs of erythema, drainage, etc. Dressing dry, clean, and intact. 18G- right peripheral IV antecubital 10/15/2022. Blood pressure-patent. No signs of erythema, drainage, etc. Dressing dry, clean, and intact. 18G left antecubital IV peripheral 10/15-

	patent. Dressing dry, clean, and intact. Patent. no signs of erythema, drainage, etc.

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
500 mL Vancomycin **50 mL Normal saline via NG tube- flush**	**250 mL output urine**

Nursing Care

Summary of Care (2 points)

Overview of care: Patient repositioned, urine output monitored, IV sites assessed, mouth rinsed with sponge/water. Patient is alert and arousable. Visiting departments were Speech, OT/PT, RT, Radiology departments. Patient is being seen for acute cystitis without hematuria and acute respiratory failure with hypoxia and hypercapnia.

Procedures/testing done: Echocardiogram, Speech Therapy visit, OT/PT visit.
Respiratory therapy: CPAP 8+ and 50% overnight- stable report
Speech Therapy: Maintain NPO for next 24 hours, will reevaluate once patient is less lethargic to prevent aspiration.

OT/PT: Patient can follow directions and maintain strength in arms to tolerate feeding self once able to resume diet.

Echocardiogram was in process at end of rotation. No results yet available.

Complaints/Issues: No complaints or issues reported from patient.

Vital signs (stable/unstable): Stable, patient is on high flow nasal canula at 4L to maintain 99% oxygenation. Blood pressure at 08:00 was slightly elevated, but has lowered at

Tolerating diet, activity, etc.: NPO- patient was accessed by Speech therapy and able to swallow water through a straw and consumed a spoonful of applesauce. However, Speech therapy was concerned that patient was not alert enough to swallow without aspiration. Maintain NPO status and will reevaluate in 24 hours.

Physician notifications: Patient to have thoracentesis performed on 10/19/2022.

Future plans for client: Patient to remain in CCU for further monitoring.

Discharge Planning (2 points)

Discharge location: Nursing home: patient resides in nursing home on a full-time basis.

Home health needs (if applicable): Patient will discharge to nursing home.

Equipment needs (if applicable): wheelchair

Follow up plan: Monitoring will be required at nursing home. Assistance in ADL's.

Education needs: Coping and information about disease process for MS.

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis and listed in order of priority

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client	**Rationale** • Explain why the nursing diagnosis was chosen	**Interventions (2 per dx)**	**Outcome Goal (1 per dx)**	**Evaluation** • How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Risk for impaired gas exchange related to acute respiratory failure as evidenced by diminished anterior lung sounds (Carpenito, 2017).	**Patient is set to have a thoracentesis to remove excess fluid surrounding lungs. Accessory muscles were in use.**	**1.Maintain oxygenation at or above 92 percent while on high flow nasal cannula.** **2.Keep HOB elevated.**	**1. Patient will maintain an O2 Sat above 92% while on 4L on a high flow nasal cannula during shift.**	**Patient was comfortable and was able to rest during shift.** **Status for improvement is for patient to have a thoracentesis to improve oxygenation.**
2. Risk for pressure ulcer related	**Patient has a stage 2 pressure ulcer**	**1. Frequent repositioning** **2.Monitor and**	**1. Patient will maintain intact skin integrity and wound will**	**1. Patient was not in pain and was approving of repositioning.**

to impaired mobility as evidenced by Braden score of 10 (Carpenito, 2017)	**located on coccyx area that has been present for several months.**	**change wound for signs of infection and keep area clean.**	**not worsen.**	**2 Patient will be discharged to a nursing facility. Nursing home will continue care to meet patient outcomes.**
3. Risk for ureteral/ cystic stones related to recurrent UTI as evidenced by a history 11 prior calculus stones removed (Carpenito, 2017).	**Patient has had 11 previous calculus stones removed.**	**1. Increase fluid intake to prevent dehydration and accumulation of solute salts.** **2 Modify diet to prevent accumulation of mineral formation.**	**1. Outcome cannot be monitored in one clinical setting. However, patient will be on IV fluid replacement periodically during hospital stay.** **2. Patient is currently NPO.**	**Client understands how the stones form and is related in part to recurrent UTI's and disease process. Patient resides at nursing facility who will be responsible for care diet modification will take time to evaluate, if effective.**
4. Readiness for enhanced coping related to Multiple Sclerosis as evidence by desire to discuss disease process (Carpeni	**Patient is unsure of what is to come with disease process.**	**1. Encourage discussion about disease process.** **2. Form a social circle with friends or those with MS to aid in coping.**	**1. Patient will be able to openly discuss feelings to peer, family member, or staff about thought and emotions associated with MS disease process.**	**Patient was only alert at times due to medication. Information should be presented/discussed with patient when they are more alert and readily able to accept and understand information given.**

to, 2017).				

Other References (APA):

Carpenito, L.J., (2017) *Nursing Diagnosis: Application to Clinical Practice Fifteen Edition.* Philadelphia, PA: Wolters Kluwer

Concept Map (20 Points):

Subjective Data

Patient presented with abdominal pain that is unrelieved.
History of calculus stones and recurrent urinary tract infections.

Objective Data

Diagnostic CT scan of abdomen and Pelvis with contrast indicates a calculus stone 7x8mm in right ureter. Cystoscope was used to remove the stone.
Patient is on high flow nasal cannula to promote a 99% o2 rate. Patient schedule for a thoracentesis.

Client Information

63-year-old female with history of Multiple Sclerosis presents with abdominal pain. Has history of ureteral stones. Patient has had 11 prior calculus stone removals and is being treated for a UTI presently.

Nursing Diagnosis/Outcomes

diminished anterior lung sounds (Carpenito, 2017).
PT is on 4L oxygen on a high flow nasal cannula. Patient will maintain o2 level above 92% during shift.
Risk for pressure ulcer related to impaired mobility as evidenced by Braden score of 1[illegible] (Carpenito, 2017)
[illegible]ient will maintain intact skin integrity and wound will not worsen.

3.Risk for ureteral/ cystic stones related to recurrent UTI as evidenced by a history 11 prior calculus stones removed (Carpenito, 2017).
Outcome cannot be monitored in one clinical setting. However, patient will be on IV fluid replacement periodically during hospital stay.
Patient is currently NPO.
4.Readiness for enhanced coping related to Multiple Sclerosis as evidence by desire to discuss disease process (Carpenito, 2017).
Patient will be able to openly discuss feelings to peer, family member, or staff about thought and emotions associated with MS disease process.

Nursing Interventions

1.Maintain oxygenation at or above 92 percent while on high flow nasal cannula. 2. Keep HOB elevated.

2. Frequent repositioning 2.Monitor and change wound for signs of infection and keep area clean.

Increase fluid intake to prevent dehydration and accumulation of solute salts. Modify diet to prevent accumulation of mineral formation.
Encourage discussion about disease process. Form a social circle with friend or those with MS to aid in coping