N431 Care Plan #2

Lakeview College of Nursing

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Demographics (3 points)

Date of Admission	Patient Initials	Age	Gender
10/25/2020	MK	73	Female
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
Caucasian	Retired	Married	sulfa drugs, sulfones
Code Status	**Height**	**Weight**	
FULL	170 cm	126.9 kg	

Medical History (5 Points)

Past Medical History:

MK has a past medical history of atrial fibrillation, anemia, asthma, hypertension (HTN), hyperlipidemia, hypercholesterolemia, chronic kidney disease stage III, type II diabetes, a history of falls, cerebrovascular accident (CVA), coronary heart disease, morbid obesity, Von Willebrand disease, prosthetic aortic valve, and peripheral vascular disease.

Past Surgical History:

MK has had the following procedures:

- Blood transfusion service (8/22/2014) & (9/29/2015)
- Abdominal hysterectomy
- Aortic valve replacement
- Rupture of right rotator cuff repair

Family History:

Her father was diagnosed with heart failure, cardiovascular disease, and had a heart attack. Her mother was diagnosed with hypertension, hyperlipidemia, and experienced a stroke.

Social History (tobacco/alcohol/drugs):

MK was a former 1pk/day smoker for 45 years - she quit smoking more than 30 days ago. She denies use of alcohol and illicit drugs.

Assistive Devices:

MK uses a walker or cane to ambulate. She also uses a wheelchair when she cannot walk. MK uses a CPAP when sleeping.

Living Situation:

Currently residing at Arthur Home for rehab. After rehab, she will go back home with her husband in Arthur, IL.

Education Level: Graduated high school. Did not attend college.

Admission Assessment

Chief Complaint (2 points): Shortness of breath

History of present Illness (10 points):

MK is a 73-year-old caucasian female who presented to the emergency department (ED) at Sarah Bush Lincoln for Congestive Heart Failure (CHF) exacerbation on 10/25/2020. MK suffered a stroke this month and was admitted to Carle hospital for two (2) weeks. She is now residing at Arthur Home for rehabilitation for the past three (3) weeks. Per the patient report, the onset of her symptoms started when she was discharged to Arthur Home, where she did not receive her prophylactic medication of Lasix during her stay. MK was given vasotec and Lasix in the ED on 10/25/2020. Upon assessment, the patient denied any pain but stated, "it is hard to breathe." The labored breathing of the patient supported this statement. During the three (3) week span at Arthur Home, MK gained 20 pounds, and her shortness of breath progressed from only occurring upon exertion to shortness of breath at rest. She reports that laying in a supine position aggravates her shortness of breath even more. She rests in a semi fowler's position on 2L of oxygen administered via the nasal cannula. The admitting provider ordered labs and diagnostic tests for MK. The lab results were: elevated BUN and creatinine, high potassium, decreased hemoglobin and elevated BNP. Her chest x-ray showed fluid overload. MK has been admitted to 4 medical and she is being treated for CHF exacerbation, fluid volume overload, and hyperkalemia.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Congestive Heart Failure (CHF) exacerbation

Secondary Diagnosis (if applicable): N/A

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

Pathophysiology

Congestive Heart Failure (CHF) or Heart Failure (HF) develops slowly over time. The patient will be asymptomatic for some time due to compensatory factors of the body (Hinkle & Cheever, 2018). As CHF progresses, compensatory efforts by other systems decrease in effectiveness. The heart's workload increases while the myocardial muscle fibers' contractility decreases (Hinkle & Cheever, 2018). The decline in contractility and increase in the myocardial muscle fibers' cardiac workload causes a release in Brain Natriuretic Peptide (BNP) due to excessive myocardial stretching. Further progression of CHF causes cardiomegaly and cardiac cell death (Hinkle & Cheever, 2018). As CHF gets worse, the heart continues to work harder to compensate for cardiac output (Hinkle & Cheever, 2018).

Signs and Symptoms

Expected findings in CHF includes bilateral pulmonary crackles, jugular vein distention, ascites, hepatosplenomegaly, cardiomegaly, and left ventricular hypertrophy (LVH) (Capriotti & Frizzell, 2016). Other expected findings include dyspnea, orthopnea, rapid weight gain, dependent edema, nocturnal dyspnea, decreased activity tolerance, and pallor (Hinkle &

Cheever, 2018). MK presented to the ED with shortness of breath and a weight gain of 20 pounds over a three (3) week period. Upon assessment, MK also had pitting edema graded at 2+ and crackles in her lungs, bilaterally. MK's activity tolerance decreased significantly, and she is dyspneic at rest. She wears a CPAP when sleeping due to nocturnal dyspnea. Her chest x-ray and echocardiogram showed cardiomegaly due to left ventricular hypertrophy.

Vital Signs, Lab Findings, and Labs Performed

Elevated blood pressure, tachycardia, increased respiration, and low oxygen saturation are expected vital signs for CHF (Hinkle & Cheever, 2018). Some expected lab findings include elevated troponin and BNP values (Hinkle & Cheever, 2018). Laboratory studies include serum electrolytes, BUN, creatinine, liver function, CBC, BNP, and urine analysis (Hinkle & Cheever, 2018). Upon assessment, MK had an elevated blood pressure of 151/69; her blood pressure decreased to 130/74 after administering antihypertensive medications. She has an increased effort during respiration, but her respirations are within normal limits. Her O2 saturation was noted at 93% during the physical assessment and 92% upon reassessment. Her laboratory findings showed an elevated BNP (496), which is indicative of myocardial muscle fiber stretching.

Diagnostic Testing

Chest x-ray, electrocardiogram, and echocardiogram are some of the diagnostic tests that may be ordered by the provider (Capriotti & Frizzell, 2016). MK's admitting provider called for a chest x-ray and echocardiogram to be done. The chest x-ray showed fluid in the lung fields, cardiomegaly, and right basilar airspace disease. Her echocardiogram showed left ventricular hypertrophy and an ejection fraction of 55-60% within normal limits.

Treatment of the disease

CHF's nonpharmacological treatments include lifestyle modifications such as a low-fat diet, low-sodium diet, smoking cessation, limited alcohol consumption, and increased physical activity (Capriotti & Frizzell, 2016). She has stopped smoking more than 30 days ago. Some pharmacological treatments include calcium channel blockers like amlodipine, angiotensin-converting enzyme (ACE) inhibitors like lisinopril, angiotensin receptor blockers (ARBs) like losartan, beta-blockers like metoprolol, and diuretics like furosemide (Capriotti & Frizzell, 2016). MK was prescribed 10mg of amlodipine, 50mg of losartan, and 40mg of furosemide, all taken daily.

Pathophysiology References (2) (APA):

Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: introductory concepts and clinical perspectives.* F.A. Davis Company.

Hinkle, J. L. & Cheever, K. H. (2018). *Brunner & Suddarth's textbook of medical-surgical nursing* (14th ed.). Wolters Kluwer Health Lippincott Williams & Wilkins

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	3.9-5.0	2.76	2.43	A low red blood cell count indicates anemia (Hinkle & Cheever, 2018). The patient has a history of anemia.
Hgb	12.0-15.5	8.5	7.4	A low hemoglobin indicates anemia (Hinkle & Cheever, 2018). The patient has a history of anemia.
Hct	35-45%	25.5	22.5	A low hematocrit is indicative of anemia (Hinkle & Cheever, 2018).

				The patient has a history of anemia.
Platelets	150-500 K	209	176	Normal lab value
WBC	4.5-11 K	7.1	6.1	Normal lab value
Neutrophils	45.3-79%	66.9	59.5	Normal lab value
Lymphocytes	11.8-45.9%	18.2	22.0	Normal lab value
Monocytes	4.4-12.0%	10.8	14.4	Normal lab value
Eosinophils	0.0-6.3%	3.6	3.4	Normal lab value
Bands	0.0-5.0%	N/A	N/A	N/A

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-	135-145	137	138	Normal lab value
K+	3.5-5.0	5.6	5.7	Hyperkalemia is one of the hallmark signs of CKD (Capriotti & Frizzell, 2016). MK has CKD stage III.
Cl-	98-108	107	108	Normal lab value
CO2	22-29	23	23	Normal lab value
Glucose	70-100	153	100	An elevated serum glucose is indicative of diabetes (Hinkle & Cheever, 2018). MK has type II diabetes.
BUN	8-25	46	46	An elevated BUN is indicative of CKD (Capriotti & Frizzell, 2016). MK has CKD stage III.
Creatinine	0.6-1.2	2.04	2.14	An elevated creatinine in indicative of CKD (Capriotti & Frizzell, 2016). MK has CKD stage III.
Albumin	3.5-5.0	3.3	N/A	Low albumin is indicative of swelling or inflammation in the body related to CKD (Capriotti & Frizzell, 2016). During physical assessment, MK had a pitting edema graded at 2+ in her lower

				extremities, bilaterally.
Calcium	8.6-10.4	8.1	7.7	Low calcium is indicative of low production of vitamin D related to CKD. Vitamin D helps with absorption of calcium (Capriotti & Frizzell, 2016). MK has CKD stage III.
Mag	1.6-2.4	2.0	N/A	Normal lab value
Phosphate	2.5-4.5	N/A	N/A	N/A
Bilirubin	0.0-1.2	0.3	N/A	Normal lab value
Alk Phos	35-105	89	N/A	Normal lab value
AST	0-35	10	N/A	Normal lab value
ALT	24-36	6	N/A	Low ALT is indicative of coronary heart disease (Peltz-Sinvani et al., 2016). MK has a coronary heart disease.
Amylase	30-110	N/A	N/A	N/A
Lipase	12-70	N/A	N/A	N/A
Lactic Acid	0.5-2.2	N/A	N/A	N/A
Troponin	0-0.4	0.018	N/A	Normal lab value
CK-MB	0-4.9	N/A	N/A	N/A
Total CK	22-198	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	0.86-1.14	N/A	N/A	N/A
PT	11.9-15	N/A	N/A	N/A

PTT	25-40	N/A	N/A	N/A
D-Dimer	<500	N/A	N/A	N/A
BNP	0-99	496	N/A	An elevated BNP can indicate heart failure (Hinkle & Cheever, 2018). The patient was admitted for CHF exacerbation.
HDL	40-80	N/A	N/A	N/A
LDL	85-125	N/A	N/A	N/A
Cholesterol	<170	N/A	N/A	N/A
Triglycerides	50-150	N/A	N/A	N/A
Hgb A1c	<6%	N/A	N/A	N/A
TSH	0.5-5	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	Yellow Clear	N/A	Yellow Clear	Normal lab value
pH	5.0-8.0	N/A	N/A	N/A
Specific Gravity	1.005-1.034	N/A	N/A	N/A
Glucose	Normal	N/A	N/A	N/A
Protein	Negative	N/A	N/A	N/A
Ketones	Negative	N/A	N/A	N/A
WBC	<5	N/A	N/A	N/A
RBC	0-4	N/A	N/A	N/A
Leukoesterase	Negative	N/A	N/A	N/A

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	N/A	N/A	N/A
PaO2	80-100	N/A	N/A	N/A
PaCO2	35-45	N/A	N/A	N/A
HCO3	22-26	N/A	N/A	N/A
SaO2	95-100	N/A	N/A	N/A

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	Negative	N/A	N/A	N/A
Blood Culture	Negative	N/A	N/A	N/A
Sputum Culture	Negative	N/A	N/A	N/A
Stool Culture	Negative	N/A	N/A	N/A

Lab Correlations Reference (APA):

Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: introductory concepts and clinical perspectives.* F.A. Davis Company.

Hinkle, J. L. & Cheever, K. H. (2018). *Brunner & Suddarth's textbook of medical-surgical nursing* (14th ed.). Wolters Kluwer Health Lippincott Williams & Wilkins

Peltz-Sinvani, N., Klempfner, R., Ramaty, E., Sela, B. A., Goldenberg, I., & Segal, G. (2016). Low alt levels independently associated with 22-year all-cause mortality among coronary heart disease patients. *Journal of general internal medicine*, *31*(2), 209–214.

https://doi.org/10.1007/s11606-015-3480-6

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

1. Chest x-ray (CXR): allows visualization of the chest cavity for diagnosis of conditions like congestive heart failure and visualization of the lung fields (Hinkle & Cheever, 2018). This test was ordered for MK because of her CHF exacerbation. The secondary reason is to see what is causing her shortness of breath.
2. Echocardiogram: assists in diagnosis of heart conditions by creating images of the heart. This allows the provider to see the heart's activities such as visualizing the heart valves, the chambers, and the pumping of the heart (Hinkle & Cheever, 2018). This test was ordered for MK because of her CHF exacerbation.

Diagnostic Test Correlation (5 points):

1. Chest x-ray: The CXR of MK showed that she has fluid overload in her lungs. Fluid overload can cause impaired gas exchange which can result in dyspnea (Hinkle & Cheever, 2018). MK was experiencing shortness of breath at rest upon physical assessment. Additionally, MK's chest x-ray showed mild cardiomegaly and right basilar airspace disease.
2. Echocardiogram: MK's results showed that her ejection fraction is between 55-60%, meaning 55-60% of the blood in the heart is pumped out after every contraction (Hinkle & Cheever, 2018). This result falls in the 55-65% normal range of ejection fraction (Hinkle & Cheever, 2018). Additionally, MK's results showed a mild left ventricular

hypertrophy that is indicative of chronic hypertension related to CHF (Capriotti & Frizzell, 2016).

Diagnostic Test Reference (APA):

Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: introductory concepts and clinical perspectives.* F.A. Davis Company.

Hinkle, J. L. & Cheever, K. H. (2018). *Brunner & Suddarth's textbook of medical-surgical nursing* (14th ed.). Wolters Kluwer Health Lippincott Williams & Wilkins

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

Home Medications (5 required)

Brand/Generic	**Norvasc** amlodipine	**Lipitor** atorvastatin	**Cozaar** losartan	**Xarelto** rivaroxaban	**Novolog** insulin aspart
Dose	10 mg (1 tablet)	40 mg (1 tablet)	50 mg (1 tablet)	2.5 mg (1 tablet)	sliding scale
Frequency	Daily	Daily	Daily	BID	Before meals
Route	PO	PO	PO	PO	SQ
Classification	Antihypertensive (CCB); antianginal	Antihyperlipidemic	Antihypertensive (ARB); renoprotective	Antithrombolytic	Antidiabetic (rapid acting insulin)
Mechanism of Action	Decreases intracellular calcium level, inhibiting smooth-muscle cell contractions and relaxing coronary and vascular smooth muscles, decreasing peripheral vascular resistance, and	Inhibits dHMG-CoA reductase, which reduces cholesterol and lipoprotein levels. This also reduces cholesterol synthesis in the liver by increasing the number of LDL receptors on the liver to increase	Blocks the binding of angiotensin II to receptor sites. Angiotensin II is a potent vasoconstrictor, blocking its actions lowers blood pressure.	Blocks the active site of factor Xa, without this factor, blood clotting is impaired.	Increases the utilization of glucose in skeletal muscles and fat by inhibiting glucose production in the liver.

	reducing blood pressure.	LDL uptake and breakdown.			
Reason Client Taking	Hypertension	Hyperlipidemia; hypercholesterolemia	Hypertension	Prophylactic treatment for atrial fibrillation	Type II diabetes
Contraindications (2)	Aliskiren therapy in patients with diabetes; hypersensitivity	Active hepatic disease; hypersensitivity	Concurrent aliskiren therapy in patients with diabetes or renal dysfunction; hypersensitivity	Active bleeding; hypersensitivity	Hypoglycemia; hypersensitivity
Side Effects/Adverse Reactions (2)	Dyspnea; peripheral edema	Arrhythmias; anemia	Hypotension; hyperkalemia	Hemorrhage; thrombocytopenia	Hypoglycemia; shortness of breath
Nursing Considerations (2)	Use cautiously in patients with heart failure, severe aortic stenosis, or impaired renal function; Assess the patient frequently for chest pain when starting or increasing the dose.	This medication should not be used with cyclosporine, gemfibrozil, tipranavir or telaprevir because of increased risk of rhabdomyolysis with acute renal failure; Use cautiously in patients who consume substantial amounts of alcohol or have a history of liver disease.	Monitor blood pressure and renal function as ordered to evaluate the effectiveness of the medication; Monitor the patient for muscle pain - indicative of rhabdomyolysis.	This medication should not be administered in patients with prosthetic heart valves; This medication should not be given to patients with moderate to severe hepatic impairment.	Do not mix with other insulins other than NPH insulin; administer 10-15 minutes before meals.
Key Nursing Assessment(s)/Lab(s) Prior to Administration	Check blood pressure before administration, hold if the patient is hypotensive compared to their baseline.	Monitor liver function before starting atorvastatin therapy.	Monitor the patient's serum potassium levels and compare to baseline after administration - watch out for hyperkalemia.	Monitor the patient's clotting factors before and after administration. This specific patient has Von Willebrand's disease.	Check the patient's blood sugar levels before administration to give the proper dose.
Client Teaching	Take your missed	This medication	Avoid potassium	Take this	Do not use the

needs (2)	dose as soon as possible and take the next one in 24 hours; Check your blood pressure before and after taking the medication for hypotension.	is not a replacement for a healthy diet; take this medication at the same time every day.	content salt substitutes; notify all prescribers that you are taking losartan.	medication exactly as it is prescribed; Do not stop taking this medication before consulting with your provider.	medication if you have low blood sugar; administer your insulin 15 minutes before you eat.

Hospital Medications (5 required)

Brand/Generic	**D50W** glucose (Dextrose 50%)	**Novolin R** regular insulin	**Veltassa** patiromer	**Lasix** furosemide	**Proventil** albuterol
Dose	25 mg (50 mL)	10 units (0.1 mL)	16.8 mg	40 mg (1 tablet)	2.5 mg
Frequency	Once	Once	Once	Daily	Q4H; PRN
Route	IV Push	IV Push	PO	PO	Inhalation
Classification	Glucose substitute	Antidiabetic (short acting insulin)	Potassium binder	Loop diuretic	Bronchodilator
Mechanism of Action	Causes potassium in the extracellular space to go into the intracellular space, reducing serum potassium levels in the patient.	Increases the utilization of glucose in skeletal muscles and fat by inhibiting glucose production in the liver.	Binds potassium in the lumen of the GI tract, which allows for excretion of potassium through feces.	Inhibits sodium and water reabsorption in the loop of Henle and increases urine formation. By reducing intracellular and extracellular fluids, the medication reduces blood pressure and decreases cardiac output.	Acts on beta 2 receptors on the smooth muscles and cause relaxation.
Reason Client Taking	Treatment for hyperkalemia	Counteract dextrose 50% in hyperkalemia treatment	Treatment for hyperkalemia	Hypertension; fluid volume overload; treatment for hyperkalemia	For acute asthma attacks; the patient has a hx of asthma
Contraindications	Hyperglycemia;	Hypoglycemia;	Hypersensitivity;	Anuria;	Hypersensitivit

(2)		hypokalemia	hypokalemia	hypersensitivity	y; allergic reactions
Side Effects/Adverse Reactions (2)	hyperglycemia; severe dehydration	Hypoglycemia; hypokalemia	Vomiting; constipation	Dehydration; arrhythmias	Tremor; tachycardia
Nursing Considerations (2)	Monitor the patient's blood glucose levels before and after administration; monitor the patient's hydration after administration.	Know that insulin can also cause potassium to go into the intracellular space from the extracellular space which can cause acute hypokalemia; provide quick digesting carbohydrates if hypoglycemia occurs (orange juice, etc.)	This medication will worsen abdominal bowel motility disorders; Administer this medication with food.	Be aware that patients who are allergic to sulfonamides may be allergic to furosemide; monitor the patient for hypokalemia due to decreased oral intake.	Administer pressurized inhalations of albuterol during second half of inspiration; Use cautiously in patients with cardiac disorders
Key Nursing Assessment(s)/Lab(s) Prior to Administration	Monitor the patient's blood glucose before and after administration. Monitor the patient's potassium levels before and after administration.	Monitor the patient's blood glucose before and after administration. Monitor the patient's potassium levels before and after administration.	Monitor the patient's potassium levels before and after administration.	Obtain the patient's weight before and after furosemide therapy to monitor fluid loss. Monitor blood pressure and hepatic and renal functions.	Monitor the patient's serum potassium levels, this medication can induce hypokalemia.
Client Teaching needs (2)	Notify your provider if you start to experience shortness of breath or dizziness; Drink adequate amounts of fluids.	Notify your provider if you start to develop blurry vision or faster heart beat (indicative of hypoglycemia); Notify your provider about a history of renal impairment.	Take this medication with food; Notify your provider if you start to develop abdominal discomforts and experience constipation.	Take this medication at the same time everyday; Take your last dose several hours before going to bed, you don't want to be getting up consistently when you are trying to sleep.	Educate the client how to use an inhaler; Instruct client to wash mouthpiece with water once a week and let it air-dry.

Medications Reference (APA):

Jones & Bartlett Learning. (2019). *Nurses drug handbook.*

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	The patient was awake and oriented to person, place, time, and situation (x4). The patient responded to the questions asked appropriately. She looked well nourished and in a good mood. She showed visible signs of distress due to very labored breathing.
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☐** **Type:**	Braden Score: 18 (mild risk for skin breakdown) The skin was pale in color, intact, warm, and dry to touch with good skin turgor. There was a slight bruising around the umbilical area - possibly caused by insulin SQ injections. Slight bruising in the left antecubital area from previous IV. There were no rashes or wounds noted or reported by the patient. No drains are present.
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	The patient’s head is normocephalic and midline with no deviations. The neck is short with trachea in midline. The patient exhibited PERRLA and the six cardinal fields of gaze. The tympanic membrane is pearly, grey in color, and intact bilaterally. There was no drainage in the patient’s ears. Her nose showed no deviated septum. Her nose showed equal turbinates, bilaterally. The skin around her nostrils are intact and shows no signs of breakdown caused by the nasal cannula. The oral mucosa is pink, moist, and intact with teeth present. Tongue was pink in color. No abnormalities noted.

CARDIOVASCULAR (2 points): **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☐** **Edema Y ☐ N ☐** **Location of Edema:**	S1 and S2 were heard with bradycardic rate. Pedal pulses were strong and graded at 2+. Her capillary refill was less than 3 seconds. MK had edema in her lower extremities, bilaterally, graded at 2+. No murmurs or JVD noted.
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character**	The patient's respirations were labored at 18 breaths/min with clear signs of accessory muscle use. Crackles were present at the base of the lungs, bilaterally. The patient's chest moved with each respiration with no chest wall deformities observed. Her O2 sat was noted at 93% on 2L via nasal cannula at the time of assessment. The head of the bed is at 45 degrees. She is resting in a semi-fowler's position. The patient had no productive cough.
GASTROINTESTINAL (2 points): **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☐** **Nasogastric: Y ☐ N ☐** **Size:** **Feeding tubes/PEG tube Y ☐ N ☐** **Type:**	Ht: 170 cm Wt: 126.9 kg Last BM: 10/24/2020 The patient was not on any special diet at home; she was on a heart healthy diet during her inpatient stay. Her abdomen was soft and nondistended with active bowel sounds in the all four quadrants after auscultating for 3 minutes. The abdomen was round and moved with respirations. Slight bruising around her umbilicus noted. There was no organomegaly noted. No distention, incision, scar, drain, or wound noted. No feeding tubes in use. No mass palpated. No discomfort reported.
GENITOURINARY (2 Points): **Color:** **Character:**	Upon assessment, the patient's urine was clear and yellow in the Purewick, measured at 110 mL.

Quantity of urine: **Pain with urination: Y ☐ N ☐** **Dialysis: Y ☐ N ☐** **Inspection of genitals:** **Catheter: Y ☐ N ☐** **Type:** **Size:**	No distention of the bladder noted. The patient did not report any changes in voiding or dysuria. The patient has a Purewick in place. Patient was not on dialysis.
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☐** **Fall Risk: Y ☐ N☐** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	Fall Score: 60 (high fall risk) The patient has a history of falls. The patient was able to perform active range of motion in both upper and lower extremities, bilaterally. She exhibited equal strength in all four extremities. The patient is a 2 assist for getting out of bed and 2 assist for transfers. The patient requires a walker, a cane, and a wheelchair when she is unable to walk. The doctor ordered for activity as tolerated. The goal is to decrease the fluid volume, to increase her activity tolerance. There was no joint swelling noted. No discomforts reported.
NEUROLOGICAL (2 points): **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Mrs. K speaks English as her primary language and responded appropriately for her age. She is alert and oriented x4. The patient moved all extremities well (MAEW). PERRLA was noted. Mrs. K's strength is equal bilaterally in all four extremities. Her mental status is appropriate for her age. Sensory and judgement are intact. No change in LOC noted.
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	MK was calm and cooperative. MK is a mennonite and has very strong beliefs. Her husband is her support person. She stated that she is very happy with her life. Her developmental level is appropriate for age.

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0800	55	151/69	18	37 C	93% (2L nasal cannula)
1100	56	130/74	20	36.7 C	92% (2L nasal cannula)

Vital Sign Trends: The patient's baseline heart rate is bradycardic at rest. MK has hypertension so it is an expected finding that she would have high blood pressure. The decrease in blood pressure was a result of the administration of her antihypertensive medications (losartan and amlodipine) at 0900. MK was experiencing shortness of breath at rest due to increased fluid volume in her lungs and was on 2L of oxygen administered via nasal cannula. There was no improvement in oxygen saturation between 0800 and 1100.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0800	Numeric	None	0/10	None	None
1100	Numeric	None	0/10	None	None

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:**	18 gauge saline lock in the right antecubital (AC) started on 10/26/2020. The IV is patent with no signs of erythema or drainage noted. The IV dressing is clean, dry, and intact. The patient reported discomfort in the IV in

	her left AC that was started on 10/25/2020 during her ambulance transport. The nurse removed the IV and found a kink in the catheter. New IV started in the right AC.

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
600 mL	110 mL (purewick)

Nursing Care

Summary of Care (2 points)

Overview of care:

The first set of vital signs for MK were taken at 0800. The patient has a medical history of hypertension and her blood pressure was at 151/69. The patient has a baseline heart rate of 55-60bpm. MK's chest x-ray showed fluid in her lungs, which makes it difficult for her to breath, her O2 saturation was noted at 93% on 2L. MK was given her morning medications at 0900. After administering MK's medications, a full head-to-toe assessment was performed at the bedside. She was showing clear signs of labored breathing with accessory muscle use. Her statement, "it's hard to breath," supported this finding. The last set of vital signs were taken at 1100; MK's blood pressure decreased to 130/74 and no improvements with her O2 saturation at 92% on 2L.

Procedures/testing done:

A hemoglobin and hematocrit test was done during the shift because MK had low hemoglobin and low hematocrit. The results were not back before the end of clinical. Other diagnostic tests that were done before clinical included a chest x-ray and echocardiogram.

Complaints/Issues:

MK did not report any pain during 0800 and 1100 assessments. The only complaint she had was that she was having a hard time breathing.

Vital signs (stable/unstable):

MK's vital signs were stable compared to her reported baseline throughout my time on the floor. She did have high blood pressure, low O2 saturation, and decreased heart rate (between 55-60 was her baseline) - these are expected findings in CHF (Hinkle & Cheever, 2018).

Tolerating diet, activity, etc.:

MK was on a heart healthy diet during her inpatient stay and was tolerating her diet well.

Physician notifications:

Her doctor ordered for monitoring her fluid loss with the treatment of Lasix. His desired goal is for MK to lose enough fluid to increase her activity tolerance. He did not want an increase in oxygen rate and wanted to see if Lasix will be adequate.

Future plans for patient:

The goal for MK is to achieve an increase in activity tolerance before discharge. Her doctor had no discharge orders at the time of clinical.

Discharge Planning (2 points)

Discharge location:

MK will be discharged back to Arthur Home to complete her rehabilitation. She will then be discharged home with her husband back in Arthur, IL.

Home health needs (if applicable):

MK will need to adhere to her medication regimen and physician's orders at home to decrease future CHF exacerbation.

Equipment needs (if applicable):

MK will need continued use of her assistive devices when at home to ensure safety. She will need to use her walker and gait belt when she is walking. She will also need to keep using her CPAP when she sleeps.

Follow up plan:

MK will need to follow up with her provider for any signs and symptoms of CHF exacerbation.

Education needs:

MK will need education about CHF and the preventative measures to ensure that she minimizes future episodes of CHF exacerbation. MK and her husband will need patient education related to fall precautions because she has a history of fall and is a very high risk. MK will also need education about properly managing her hypertension through nonpharmacological interventions.

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	**Rational** ● Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** ● How did the patient/family respond to the nurse's actions? ● Client response, status of goals and outcomes, modifications to plan.
Impaired gas exchange related to fluid in the lungs as evidenced by crackles in the lungs and dyspnea at rest.	The patient was dyspneic at rest and stated that she was having a hard time breathing.	1 Administer oxygen as prescribed. 2 Promote optimal resting position to promote breathing (Semi/High Fowler's).	**Goal:** The goal for MK is to improve her oxygen saturation to normal limits at 95%. MK was put on 2L of oxygen administered via nasal cannula and on furosemide.
Fluid volume excess related to CHF	The patient presented to the	1 Administer diuretics as	**Goal:** Decrease fluid volume to increase

exacerbation as evidenced by weight gain of 20 pounds, crackles in the lungs and pitting edema in the lower extremities.	ED with a 20 pound weight gain over 3 weeks.	prescribed. 2 Limit fluids and sodium intake.	activity tolerance. The provider wants the patient to be monitored for decreased fluid volume with the desire to increase activity tolerance.
Risk for falls related to advanced age as evidenced by history of falls.	The patient has a fall score of 60 and history of falls.	1 Recognize causative factors for falls. 2 Eliminate causative factors.	**Goal:** MK will demonstrate how to use her walker and cane properly when ambulating. MK is on bedrest during the time of clinical.
Imbalance electrolytes related to potassium levels as evidenced by three different treatments for hyperkalemia.	The patient was prescribed lasix for fluid volume treatment and hyperkalemia treatment. This approach did not produce desired outcomes so the provider prescribed D50W and regular insulin. The provider also prescribed Veltassa.	1 Monitor the patient's potassium levels and watch closely for hypokalemia. 2 Monitor the patient for cardiac dysrhythmias related to hypokalemia.	**Goal:** Reach a desired level of potassium between 3.5-5.0. The nurse and student administered D50W with regular insulin and Veltassa. The patient is being monitored closely for acute hypokalemia.

Other References (APA):

Carpenito, L. J. (2017). *Handbook of nursing diagnosis*. Philadelphia: Wolters Kluwer.

Swearingen, P. L., & Wright, J. D. (2019). *All-in-one nursing care planning resource: medical-surgical, pediatric, maternity, and psychiatric-mental health*. Elsevier.

Concept Map (20 Points):

N431 Care Plan

Subjective Data

“It is hard to breath”
“They did not give me my lasix for 3 weeks” - at Arthur Home
“I get tired just trying to breath”
The patient did not report any pain during clinical but she reported that she was having trouble breathing.

Nursing Diagnosis/Outcomes

Impaired gas exchange related to fluid in the lungs as evidenced by crackles in the lungs and dyspnea at rest.

Goal: The goal for MK is to improve her oxygen saturation to normal limits at 95%.

Fluid volume excess related to CHF exacerbation as evidenced by weight gain of 20 pounds, crackles in the lungs and pitting edema in the lower extremities.

Goal: Decrease fluid volume to increase activity tolerance.

Risk for falls related to advanced age as evidenced by history of falls.

Goal: MK will demonstrate how to use her walker and cane properly when ambulating.

Imbalance electrolytes related to potassium levels as evidenced by three different treatments for hypokalemia.

Goal: Reach a desired level of potassium between 3.5-5.0.

Objective Data

Blood pressure of 151/69 and 130/74
O2 saturation of 93% and 92%
Pitting edema 2+
Crackle is the lungs
Elevated BNP (496)
Left Ventricular Hypertrophy showed in echocardiogram
Fluids in the lungs showed in chest x-ray

Patient Information

MK, a 73-year-old female who presented to the ED at SBL on 10/25/2020 with SOB and weight gain of 20 pounds in the last 3 weeks. She was diagnosed with CHF exacerbation.

Nursing Interventions

1 Administer diuretics as prescribed.

2 Limit fluids and sodium intake.
1 Administer diuretics as prescribed.

2 Limit fluids and sodium intake.
1 Recognize causative factors for falls.

2 Eliminate causative factors.
1 Monitor the patient’s potassium levels and watch closely for hypokalemia.

2 Monitor the patient for cardiac dysrhythmias related to hypokalemia.