

N431 Care Plan #3

Lakeview College of Nursing

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Demographics (3 points)

Date of Admission 03/30/2020	Patient Initials M.L.	Age 72	Gender Female
Race/Ethnicity Hispanic	Occupation Retired	Marital Status Widowed	Allergies Bananas, Shellfish, Cyclobenzaprine
Code Status Full Code	Height 5'2" (157.5cm)	Weight 106 lbs (48.2 kg)	

Medical History (5 Points)

Past Medical History: Hypertension, Atrial fibrillation, Hyperlipidemia, CHF

Past Surgical History: Cholecystectomy in 1995, Total Knee Replacement in 2009

Family History: Mother – diabetes, Brother – diabetes, Father – MI

Social History (tobacco/alcohol/drugs): Never smoker, never drinker, never drug use

Assistive Devices: None

Living Situation: Patient lives at the Oaks Manor Assisted Living Facility

Education Level: GED

Admission Assessment

Chief Complaint (2 points): Weight gain, swelling of the ankles

History of present Illness (10 points): Patient complains of a 12-pound weight gain over the last 4 days and an increase in peripheral edema of the bilateral ankles and pedal areas. Patient states she has been monitoring her weight every morning and has noticed an increase in her weight each day. Patient states her ankle edema worsens with ambulation and improves with rest and elevation.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): CHF exacerbation

Secondary Diagnosis (if applicable): N/A

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

Congestive heart failure (CHF) is the highest diagnosis in hospitals for patients over the age of 65 (Heart & Vascular: Conditions & Treatments, 2019). CHF is chronic, and this patient has the signs & symptoms and labs that correlate together. The patient has a history of hypertension, atrial fibrillation (afib), hyperlipidemia, and CHF.

The pathophysiology of this debilitating condition is a cardiovascular complication. According to Hinkle & Cheever (2018), “Heart failure is a clinical syndrome resulting from structural or functional cardiac disorders that impair the ability of the ventricles to fill or eject blood” (p. 818). Patients usually show the physician that the manifestation is either left ventricular failure, or right ventricular failure (Capriotti & Frizzel, 2016). The heart cannot keep up with circulating the blood throughout the body. “Fluid overload and decreased tissue perfusion result when the heart cannot generate cardiac output (CO) sufficient to meet the body’s demands for oxygen and nutrients. The term *heart failure* indicates myocardial disease in which impaired contraction of the heart (systolic dysfunction) or filling of the heart (diastolic function) may cause pulmonary or systemic congestion” (Hinkle & Cheever, 2018, p. 818). When CHF begins, the body starts a neurohormonal compensatory mechanism, and it is essential to understand these mechanisms because the treatment for CHF is designed to correct underlying issues and to relieve symptoms (Hinkle & Cheever, 2018). The signs and symptoms may vary from patient to patient, and some are not obvious. However, some cases of CHF are reversible, depending on the cause (Hinkle & Cheever, 2018).

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The signs and symptoms of CHF are also varied. The left-sided heart failure has pulmonary edema. Whereas, right-sided heart failure, the edema is distributed throughout the rest of the body. Both sides create fatigue and weakness, polyuria at rest, altered mental status, and shortness of breath (Hinkle & Cheever, 2018). In addition to congestion, there is poor tissue perfusion. Inadequate tissue perfusion can cause exercise tolerance, muscle wasting, anorexia or nausea, weight loss, altered mental status, tachycardia, and pallor (Hinkle & Cheever, 2018). Pulmonary and peripheral edema may mask the signs of CHF; however, there are several ways to identify it.

Diagnosing CHF can be done in multiple ways and is generally done with a combination of screening tests. According to Hinkle & Cheever (2018), “A chest x-ray and a 12-lead electrocardiogram (ECG) are obtained to assist in the diagnosis” (p. 823). Laboratory studies may include serum electrolytes, complete blood count (CBC), brain natriuretic peptide test (BNP), blood urea nitrogen (BUN), creatinine, liver function tests, and urinalysis (Hinkle & Cheever, 2018). The BNP level is the key diagnostic indicator of CHF, high levels are a sign of high cardiac filling pressure and can aid in both the diagnosis and management of heart failure (Hinkle & Cheever, 2018). The diagnostic results of the patient’s chest x-ray and ECG, along with the mentioned lab results indicate that my patient has CHF.

The assessment and diagnosis show that my patient has CHF. The chest x-ray showed findings consistent with an enlarged heart and pulmonary vascular congestion (Key, 2020). The ECG, also known as EKG, shows atrial fibrillation at a rate of 88 bpm (Key, 2020). The patient’s BNP level was at 4,923 pg/mL and indicative of severe heart failure. However, BNP alone cannot determine if there was heart failure. An increase in the level of troponin can detect heart failure. Troponin levels remain elevated for an extended period, often as long as two

weeks (Ahmed et al., 2017). The EKG would have an abnormal heart rate, and a chest x-ray would show an enlarged heart (Hinkle & Cheever, 2018). Other assessment findings help diagnose this patient with CHF. The patient's past medical history, acute weight gain and edema, and the physical assessment of crackles in the bases of the lungs bilaterally help reinforce her diagnosis of CHF.

Pathophysiology References (2) (APA):

Ahmed, M., Ahmed, M., Ahmed, M., Guichard, J. L., Ahmed, M., & Ahmed, M. (2017).

Troponin Levels – The Heart Attack Blood Test. Retrieved from

<https://myheart.net/articles/troponin-levels-the-heart-attack-blood-test/>

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

Heart & Vascular: Conditions & Treatments. (2019). Retrieved from

<https://www.emoryhealthcare.org/heart-vascular/wellness/heart-failure-statistics.html>

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing* (14th ed.). Wolters Kluwer Health Lippincott William & Wilkins.

Key, E. (2020, March 30). Diagnostic Tests. Lakeview College of Nursing, Charleston, IL.

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	N/A	N/A	
Hgb	11-15.5	13.6	N/A	
Hct	33.2-45.3%	N/A	N/A	

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Platelets	150-400(k)	N/A	N/A	
WBC	5-10(k)	9.4	N/A	
Neutrophils	45-80%	N/A	N/A	
Lymphocytes	11.8-46	N/A	N/A	
Monocytes	4.4-12	N/A	N/A	
Eosinophils	0-6.3	N/A	N/A	
Bands	< x 10 ⁹ /L	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	138	N/A	
K+	3.5-5.0	3.1	N/A	Hypokalemia is can lead to abnormal heart rhythms, such as afib in this patient (Hinkle & Cheever, 2018).
Cl-	98-107	N/A	N/A	
CO2	21-34	N/A	N/A	
Glucose	70-99	94	N/A	
BUN	6-20	24	N/A	Elevated BUN and creatinine levels are indicative of renal insufficiency due to chronic reductions of renal blood flow from reduced cardiac output, as in CHF (Hinkle & Cheever, 2018).
Creatinine	0.5-0.9	2.8	N/A	Elevated BUN and creatinine levels are indicative of renal insufficiency due to chronic reductions of renal blood flow from reduced cardiac output, as in CHF (Hinkle & Cheever, 2018).

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Albumin	3.5-5.2	N/A	N/A	
Calcium	8.6-10.4	N/A	N/A	
Mag	1.6-2.4	N/A	N/A	
Phosphate	2.5-4.5	N/A	N/A	
Bilirubin	<1.2	N/A	N/A	
Alk Phos	32-100 U/ L	N/A	N/A	
AST	<32	N/A	N/A	
ALT	<33	N/A	N/A	
Amylase	50-150	N/A	N/A	
Lipase	10-140 U/ L	N/A	N/A	
Lactic Acid	0.4-2.3	N/A	N/A	
Troponin	0-0.4 ng/ mL	N/A	N/A	
CK-MB	5-25 IU/L	N/A	N/A	
Total CK	22-198 U/ L	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	
PT	11.9-15	N/A	N/A	
PTT	23-37	N/A	N/A	
D-Dimer	< 500ng/	N/A	N/A	

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	mL			
BNP	<100pg/ mL	4,923	N/A	BNP levels are typically high in patients with heart failure. This patient has CHF (Hinkle & Cheever, 2018).
HDL	> 40	N/A	N/A	
LDL	< 100	N/A	N/A	
Cholesterol	< 200	N/A	N/A	
Triglycerides	< 150	N/A	N/A	
Hgb A1c	0-5.7	N/A	N/A	
TSH	0.358- 3.740	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	N/A	
pH	4.5-8.0	N/A	N/A	
Specific Gravity	1.005- 1.035	N/A	N/A	
Glucose	< 0.8 mm/L	N/A	N/A	
Protein	6.4-8.4 g/ dL	N/A	N/A	
Ketones	0.6-1.5	N/A	N/A	
WBC	5-10(k)	N/A	N/A	
RBC	3.9-5.0	N/A	N/A	
Leukoesterase	4.5-11(k)	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	
PaO2	75-100	N/A	N/A	
PaCO2	35-45	N/A	N/A	
HCO3	22-26	N/A	N/A	
SaO2	>92%	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	Straw	N/A	N/A	
Blood Culture	N/A	N/A	N/A	
Sputum Culture	N/A	N/A	N/A	
Stool Culture	N/A	N/A	N/A	

Lab Correlations Reference (APA):

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing* (14th ed.). Wolters Kluwer Health Lippincott William & Wilkins.

Normal Lab Values - Common Laboratory Values. (n.d.). Retrieved from

<https://www.meditec.com/resourcestools/medical-reference-links/normal-lab-values/>

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

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Chest x-ray show findings consistent with an enlarged heart, and is indicative of CHF. The chest x-ray can identify if the patient has fluid buildup in her lungs that may be attributed to her weight gain and edema.

EKG shows afib at a rate of 88 bpm and is indicative of CHF. The EKG was given due to the patient's PMH of afib and CHF.

Diagnostic Test Correlation (5 points):

The B-type natriuretic peptide (BNP) is a protein that the heart and blood vessels produce. It relaxes blood vessels and funnels sodium into the urine (Mayo Clinic, 2020). The patient's BNP level was 4,923 pg/mL indicating severe heart failure. Greater than 400 pg/mL is an indicator of severe CHF (Mayo Clinic, 2020). However, a high level of BNP is not enough to diagnose a heart problem (Mayo Clinic, 2020).

Other blood tests, along with troponin levels, and diagnostic screenings, can detect heart failure (Hinkle & Cheever, 2018). Aside from an elevated BNP level and a chest x-ray showing an enlarged heart, and EKG showing afib, the patient shows signs of CHF upon assessment. The patient has crackles in the bases of her lungs bilaterally, and 3+ pitting edema on both feet, which support her diagnosis of CHF. The left ventricle is associated with the lungs and is the heart's main pumping chamber that pumps oxygenated blood through the aorta into the rest of the body. This pumping action can be measured as an ejection fraction, and indicates how well the heart is functioning (Hinkle & Cheever, 2018). A left ventricle ejection fraction of 55 percent or higher is considered as a normal functioning heart (Hinkle & Cheever, 2018). When this ejection fraction is lower than 55 percent, it can lead to fluid build-up in the lungs and can cause pitting edema, as seen with this patient.

Diagnostic Test Reference (APA):

B-Type Natriuretic Peptide, Plasma (2020). Retrieved from

<https://www.mayocliniclabs.com/test-catalog/Clinical+and+Interpretive/83873>

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical*

Nursing (14th ed.). Wolters Kluwer Health Lippincott William & Wilkins.

Current Medications (10 points, 1 point per completed med)

10 different medications must be completed

Home Medications (5 required)

Brand/Generic	Prinivil (lisinopril)	Bayer (aspirin)	Lipitor (atorvastatin)	Lepresor (metoprolol)	Cordarone (amiodarone)
Dose	40 mg tablet	81 mg tablet	40 mg tablet	50 mg tablet	200 mg tablet
Frequency	Daily	Daily	Once daily at night	Twice per day Continuous	Daily
Route	PO	PO	PO	PO	PO
Classification	Antihypertensive	Antipyretic	Lipid-lowering agent	Antihyperten sive	antiarrhythmic (class III)
Mechanism of Action	May reduce blood pressure by inhibiting conversion of angiotensin I to angiotensin II, which is a vasoconstrictor that also stimulates adrenal cortex to secrete aldosterone that reduces sodium and water reabsorption and increases their excretion, thereby reducing blood pressure.	Produce analgesia and reduce inflammation and fever by inhibiting the production of prostaglandin s. Decreases platelet aggregation. Analgesia. Reduction of inflammation . Reduction of fever. Decreased incidence of transient ischemic attacks and	Inhibits 3- hydroxy-3- methylglutaryl -coenzyme A (HMG-CoA) reductase, an enzyme that is responsible for catalyzing an early step in the synthesis of cholesterol. Therapeutic Effects: Lowering of total and LDL cholesterol and triglycerides slightly increases HDL cholesterol.	Blocks stimulation of beta1 (myocardial) -adrenergic receptors. Does not usually affect beta2 (pulmonary, vascular, uterine)- adrenergic receptor sites.	Prolongs action potential and refractory period. Inhibits adrenergic stimulation. Slows the sinus rate, increases PR and QT intervals, and decreases peripheral vascular resistance (vasodilation).

		MI.	Reduction of lipids/cholesterol reduces the risk of myocardial infarction and stroke sequelae. Slows the progression of coronary atherosclerosis with resultant decrease in coronary heart disease–related events.		
Reason Client Taking	Reduce hypertension (Davis, 2020).	Anti-inflammatory (RNpedia, 2020).	Reduce dyslipidemia and hypercholesterolemia (RNpedia, 2020).	Decrease BP and HR. Patient has hypertension (RNpedia, 2020).	Management of ventricular arrhythmias (Davis, 2020).
Contraindications (2)	1) Diabetes 2) Renal impairment	1) Thrombocytopenia 2) Cross-sensitivity with other NSAIDs	1) Active liver disease 2) Unexplained persistent elevations in AST and ALT	1) Uncompensated HF 2) Bradycardia	1) 2nd- and 3rd-degree AV block 2) Cardiogenic shock
Side Effects/Adverse Reactions (2)	1) Depression 2) Orthostatic hypotension	1) GI bleeding 2) Urticaria	1) Amnesia 2) Peripheral edema	1) Memory loss 2) Hyperglycemia	1) Memory loss 2) Hyperglycemia
Nursing Considerations (2)	1) Be aware that Lisinopril should not be given to a	1) Assess pain and limitation of	1) Do not confuse Lipitor with Loniten	1) Monitor BP, ECG, and pulse	1) Monitor BP frequently. Hypotension

	<p>patient who is hemodynamically unstable after an acute MI.</p> <p>2) Monitor blood pressure often, especially during the first 2 weeks of therapy and whenever the dose is increased. If excessive hypotension develops, expect to withhold drug for several days.</p>	<p>movement; note type, location, and intensity before and at the peak (see Time/Action Profile) after administration.</p> <p>2) Assess fever and note associated signs (diaphoresis, tachycardia, malaise, chills).</p>	<p>or Zyrtec.</p> <p>2) Avoid grapefruit and grapefruit juice during therapy; may increase risk of toxicity.</p>	<p>frequently during dose adjustment and periodically during therapy.</p> <p>2) Monitor vital signs and ECG every 5–15 min during and for several hours after parenteral administration. If heart rate is less than 40 bpm, especially if cardiac output is also decreased, administer atropine 0.25–0.5mg IV.</p>	<p>usually occurs during first several hours of therapy and is related to rate of infusion. If hypotension occurs, slow rate.</p> <p>2) Assess for neurotoxicity (ataxia, proximal muscle weakness, tingling or numbness in fingers or toes, uncontrolled movements, tremors); common during initial therapy, but may occur within 1 week to several months of initiation of therapy and may persist for more than 1 year after withdrawal. Dose reduction is recommended. Assist patient during ambulation to prevent falls.</p>
<p>Key Nursing Assessment(s)/ Lab(s) Prior to Administration</p>	<p>1) May cause hyperkalemia</p> <p>2) Monitor renal function. May</p>	<p>1) Monitor hepatic function before anti-rheumatic</p>	<p>1) Evaluate serum cholesterol and triglyceride levels before</p>	<p>1) Lab Test Considerations: May cause elevated</p>	<p>1) Monitor liver and thyroid functions before and every 6 months during</p>

	<p>cause increase in BUN and serum creatinine.</p>	<p>therapy and if symptoms of hepatotoxicity occur, more likely in patients, especially children, with rheumatic fever, systemic lupus erythematosus, juvenile arthritis, pre-existing hepatic disease. May cause an increase in serum AST, ALT, and alkaline phosphatase, especially when plasma concentrations exceed 25 mg/100 mL. May return to normal despite continued use or dose reduction. If severe abnormalities or active liver disease occurs, discontinue and use with caution in future</p>	<p>initiating, after 2– 4 weeks of therapy, and periodically thereafter.</p> <p>2) Monitor liver function tests prior to initiation of therapy, and as clinically indicated. If symptoms of serious liver injury, hyperbilirubinaemia, or jaundice occurs, discontinue atorvastatin and do not restart. May also cause elevated alkaline phosphatase and bilirubin levels.</p>	<p>BUN, serum lipoprotein, potassium, triglyceride, and uric acid levels.</p> <p>2) PO: Take apical pulse before administering. If less than 50 bpm or if arrhythmia occurs, withhold medication and notify primary healthcare physician.</p>	<p>therapy. Drug effects persist long after discontinuation.</p> <p>2) Ophthalmic exams should be performed before and regularly during therapy and whenever visual changes (photophobia, halos around lights, decreased acuity) occur. May cause permanent loss of vision.</p>
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		<p>2) Monitor for the onset of tinnitus, headache, hyperventilation, agitation, mental confusion, lethargy, diarrhea, and sweating. If these symptoms appear, withhold medication and notify health care professional immediately.</p>			
<p>Client Teaching needs (2)</p>	<p>1) Explain that Lisinopril helps to control, but do not cure, hypertension and that patient may need lifelong therapy.</p> <p>2) Advise patient to take Lisinopril at the same time every day.</p>	<p>1) Instruct patient to take salicylates with a full glass of water and to remain in an up-right position for 15–30 min after administration.</p> <p>2) Advise patient to report tinnitus; unusual bleeding of gums; bruising;</p>	<p>1) Instruct patient to take medication as directed. Take missed doses as soon as remembered more than 12 hours since missed dose; omit and take next scheduled dose. Do not double up on missed doses. Advise patient to avoid drinking more than one quart of grapefruit juice per day during therapy. Medication</p>	<p>1) Advise patient to change positions slowly to minimize orthostatic hypotension.</p> <p>2) Advise patient to notify healthcare professional if slow pulse, difficulty breathing, wheezing, cold hands and feet, dizziness, lightheadedness, confusion, depression, rash, fever,</p>	<p>1) Advise patient to avoid drinking grapefruit juice during therapy.</p> <p>2) Instruct patient to notify health care professional of medication regimen before treatment or surgery</p>

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		black, tarry stools; or fever lasting longer than 3 days.	helps control but does not cure elevated serum cholesterol levels. 2) Advise patient that this medication should be used in conjunction with diet restrictions (fat, cholesterol, carbohydrates, alcohol, exercise, and cessation of smoking.	sore throat, unusual bleeding, or bruising occurs.	
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Hospital Medications (5 required)

Brand/Generic	Colace (docusate)	Tylenol (acetaminophen)	Lasix (furosemide)	Lasix (furosemide)	Klotrix (potassium chloride)
Dose	100 mg capsule	650 mg	40 mg	40 mg	40 mEq
Frequency	BID	Every 6 hours Continuous	BID	BID	Once
Route	PO	PO	IV	PO	PO
Classification	Stool softener	Antipyretic	Loop diuretic	Loop diuretic	Electrolyte supplement
Mechanism of Action	Promotes incorporation of water into stool,	Inhibits the enzyme cyclooxygenase,	Inhibits the reabsorption of sodium	Inhibits the reabsorption of sodium and	Maintain acid-base balance, isotonicity, and

	<p>resulting in softer fecal mass. May also promote electrolyte and water secretion into the colon. Therapeutic Effects: Softening and passage of stool.</p>	<p>blocking prostaglandin production and interfering with pain impulse generation in the PNS.</p>	<p>and chloride from the loop of Henle and distal renal tubule. Increases renal excretion of water, sodium, chloride, magnesium, potassium, and calcium. Effectiveness persists in impaired renal function.</p>	<p>chloride from the loop of Henle and distal renal tubule. Increases renal excretion of water, sodium, chloride, magnesium, potassium, and calcium. Effectiveness persists in impaired renal function.</p>	<p>electrophysiologic balance of the cell. Activator in many enzymatic reactions; essential to transmission of nerve impulses; contraction of cardiac, skeletal, and smooth muscle; gastric secretion; renal function; tissue synthesis; and carbohydrate metabolism.</p>
Reason Client Taking	Relieve constipation (Key, 2020).	Reduce pain/fever (Key, 2020).	Reduce edema due to heart failure (Davis, 2020).	Reduce edema due to heart failure (Davis, 2020).	Treat/prevent potassium depletion (Davis, 2020).
Contraindications (2)	<p>1) Abdominal pain</p> <p>2) Nausea</p>	<p>1) Severe active liver disease</p> <p>2) Severe hepatic impairment</p>	<p>1) Hepatic coma/anuria</p> <p>2) Cross-sensitivity with thiazides and sulfonamides may occur.</p>	<p>1) Hepatic coma/anuria</p> <p>2) Cross-sensitivity with thiazides and sulfonamides may occur.</p>	<p>1) Hyperkalemia</p> <p>2) Severe renal impairment</p>
Side Effects/Adverse Reactions (2)	<p>1) Throat irritation</p> <p>2) Diarrhea</p>	<p>1) Stridor</p> <p>2) Oliguria</p>	<p>1) Tinnitus</p> <p>2) Stevens-Johnson Syndrome</p>	<p>1) Hyperglycemia</p> <p>2) Hypotension</p>	<p>1) Abdominal pain</p> <p>2) ECG changes</p>
Nursing Considerations (2)	<p>1) Do not confuse Colace with Cozaar. Do not confuse Dulcolax (docusate</p>	<p>1) Use cautiously in patients with hepatic impairment, alcoholism, chronic</p>	<p>1) Assess fluid status. Monitor daily weight, intake and output ratios,</p>	<p>1) Assess fluid status. Monitor daily weight, intake and output ratios, amount</p>	<p>1) If hypokalemia is secondary to diuretic therapy, consideration should be given</p>

	<p>sodium) with Dulcolax (bisacodyl). Do not confuse Kaopectate Stool Softener (docusate calcium) with Kaopectate (bismuth subsalicylate).</p> <p>2) Assess color, consistency, and amount of stool produced.</p>	<p>malnutrition, severe hypovolemia, or severe renal impairment.</p> <p>2) Make sure dose is based on patient's weight and infusion pumps are properly programmed</p>	<p>amount and location of edema, lung sounds, skin turgor, and mucous membranes. Notify health care professional if thirst, dry mouth, lethargy, weakness, hypotension, or oliguria occurs.</p> <p>2) Diuretic use is associated with increased risk for falls in older adults. Assess falls risk and implement fall prevention strategies.</p>	<p>and location of edema, lung sounds, skin turgor, and mucous membranes. Notify health care professional if thirst, dry mouth, lethargy, weakness, hypotension, or oliguria occurs.</p> <p>2) Diuretic use is associated with increased risk for falls in older adults. Assess falls risk and implement fall prevention strategies.</p>	<p>to decreasing the dose of diuretic, unless there is a history of significant arrhythmias or concurrent digitalis glycoside therapy.</p> <p>2) : Administer with or after meals to decrease GI irritation.</p>
<p>Key Nursing Assessment(s)/ Lab(s) Prior to Administration</p>	<p>1) Assess for constipation indications</p> <p>2) Assess for abdominal distention, presence of bowel sounds, and usual pattern of bowel function.</p>	<p>1) Increased serum bilirubin, LDH, AST, ALT, and prothrombin time may indicate hepatotoxicity.</p> <p>2) Assess overall health status and alcohol usage before administering acetaminophen. Patients who are</p>	<p>1) Monitor electrolytes, renal and hepatic function, serum glucose, and uric acid levels before and periodically throughout therapy. Commonly</p>	<p>1) Monitor electrolytes, renal and hepatic function, serum glucose, and uric acid levels before and periodically throughout therapy. Commonly</p>	<p>1) Monitor serum potassium before and periodically during therapy. Monitor renal function, serum bicarbonate, and pH. Determine serum magnesium level if patient has refractory hypokalemia;</p>

		malnourished or chronically abuse alcohol are at higher risk of developing hepatotoxicity with chronic use of usual doses of this drug.	decreased serum potassium. May cause decreased serum sodium, calcium, and magnesium concentrations. May also cause elevated BUN, serum glucose, creatinine, and uric acid levels. 2) Assess for allergy to sulfonamides .	decreased serum potassium. May cause decreased serum sodium, calcium, and magnesium concentrations . May also cause elevated BUN, serum glucose, creatinine, and uric acid levels. 2) Assess for allergy to sulfonamides.	hypomagneseemia should be corrected to facilitate effectiveness of potassium replacement. Monitor serum chloride because hypochloremia may occur if replacing potassium without concurrent chloride. 2) Assess for signs and symptoms of hypokalemia (weakness, fatigue, U wave on ECG, arrhythmias, polyuria, polydipsia) and hyperkalemia.
Client Teaching needs (2)	1) Advise patients that laxatives should be used only for short-term therapy. Long-term therapy may cause electrolyte imbalance and dependence. 2) Instruct patients with cardiac disease to avoid straining during bowel	1) Inform patient that tablet may be crushed or swallowed. 2) Caution patient not to exceed recommended dosage or take other drugs containing acetaminophen at the same time because of risk of liver damage.	1) Instruct patient to consult health care professional regarding a diet high in potassium. 2) Advise patient to contact health care professional of weight gain more than 3 lbs in 1 day.	1) Instruct patient to consult health care professional regarding a diet high in potassium. 2) Advise patient to contact health care professional of weight gain more than 3 lbs in 1 day.	1) Emphasize correct method of administration. GI irritation or ulceration may result from chewing enteric-coated tablets or insufficient dilution of liquid or powder forms. 2) Emphasize the importance of regular follow-up exams to monitor serum

	movements (Valsalva maneuver).				levels and progress.
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Medications Reference (APA):

Davis, F.A. (2020, March 30). *Online Resource Center for Instructors and Students.*

<https://davisplus.fadavis.com>

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth’s Textbook of Medical Surgical Nursing* (14th ed.). Wolters Kluwer Health Lippincott William & Wilkins.

Key, E. (2020, March 30). Document. Lakeview College of Nursing, Charleston, IL.

RNpedia (2020, March 30). *Complete Nursing Notes and Community.*

<https://www.rnpedia.com/>

Assessment

Physical Exam (18 points)

<p>GENERAL (1 point): Alertness: A&Ox4 Pt is alert and oriented to person/place/time/current situation. Orientation: A&Ox4 Pt is alert and oriented to person/place/time/current Distress: No acute distress Overall appearance: Appears stated age</p>	<p>Patient is A&Ox4, no acute distress, and appears stated age.</p>
<p>INTEGUMENTARY (2 points): Skin color: Pink Character: PWD Temperature: Warm Turgor: Appropriate for age Rashes: No noted rashes Bruises: No noted bruises Wounds: No noted wounds Braden Score: 20 Drains present: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Type:</p>	<p>Skin is PWD (pink, warm and dry) and intact. Skin turgor is appropriate for age. No noted lesions or rashes. Braden Score of 20 indicates no risk for developing pressure ulcer.</p>

<p>HEENT (1 point): Head/Neck: Head is normocephalic and atraumatic. Trachea is midline Ears: TMs pearly gray bilaterally. Eyes: PERRLA and EOMI bilaterally Nose: No noted deviated septum, polyps or turbinates. Teeth: Teeth are present and appropriate for age</p>	<p>Patient has no palpable lymph nodes. Head is normocephalic and atraumatic. Trachea is midline. Eyes are PERRLA and EOMI bilaterally. TMs pearly gray bilaterally. No noted deviated septum, polyps or turbinates. Moist mucus membranes, no noted exudate, lesions, erythema around the head and neck.</p>
<p>CARDIOVASCULAR (2 points): Heart sounds: S1, S2, S3, S4, murmur etc. Cardiac rhythm (if applicable): Afib Peripheral Pulses: dorsalis pedis 2+ bilaterally Capillary refill: <3 seconds upper and lower extremities bilaterally Neck Vein Distention: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Edema Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Location of Edema: 3+ pitting edema on lower extremities bilaterally</p>	<p>S1, S2 detected. Atrial fibrillation noted on EKG at a rate of 88 bpm. No noted murmurs, gallops, or rubs. Capillary refill less than 3 seconds. 2+ pedal pulses bilaterally. No noted deformities. 3+ pitting edema noted on lower extremities bilaterally.</p>
<p>RESPIRATORY (2 points): Accessory muscle use: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Breath Sounds: Location, character</p>	<p>Crackles noted in the bases of lungs bilaterally.</p>
<p>GASTROINTESTINAL (2 points): Diet at home: Regular Current Diet: Fluid restriction of 1,000 mL/day Height: 157.5cm Weight: 48.2kg Auscultation Bowel sounds: Active in all four quadrants Last BM: 03/30/2020 Palpation: Pain, Mass etc.: Inspection: No noted lesions or rashes Distention: No noted distention Incisions: No noted incisions Scars: Scars present from Cholecystectomy (1995) and Total Knee Replacement (2009) Drains: No noted drains Wounds: No noted wounds Ostomy: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></p>	<p>Bowel sounds active in all four quadrants. Patient is on fluid restriction of 1,000 mL per day. Patient voided stool x2 today.</p>

<p>Nasogastric: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Size: Feeding tubes/PEG tube Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Type:</p>	
<p>GENITOURINARY (2 Points): Color: Yellow Character: Yellow color, Clear Quantity of urine: 1750 mL voided in 4 hours. Pain with urination: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Dialysis: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Inspection of genitals: I did not inspect genitals Catheter: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Type: Size:</p>	<p>Patient urinated a total of 1750 mL in 4 hours on 03/30/2020. Polyruia (438 mL/hr). Patient has family history of diabetes mellitus.</p>
<p>MUSCULOSKELETAL (2 points): Neurovascular status: All 4 extremities are atraumatic, well developed, and move without difficulty (MAEW). No noted erythema, cyanosis, or edema. ROM: Intact in the upper and lower extremities bilaterally and moves without difficulty Supportive devices: None Strength: 5/5 in upper and lower extremities bilaterally ADL Assistance: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Fall Risk: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Fall Score: 20 Activity/Mobility Status: Patient can ambulate freely with no assistance Independent (up ad lib) <input checked="" type="checkbox"/> Needs assistance with equipment <input type="checkbox"/> Needs support to stand and walk <input type="checkbox"/></p>	<p>Hand grips equal bilaterally. DTRs intact. ROM intact in the upper and lower extremities bilaterally, 5/5 musculoskeletal strength in upper and lower extremities bilaterally and moves without difficulty (MAEW). No noted erythema, cyanosis, or edema. Patient is NOT a fall risk as evidence by Morse Fall Scale of 20.</p>
<p>NEUROLOGICAL (2 points): MAEW: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> PERLA: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Strength Equal: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> if no - Legs <input type="checkbox"/> Arms <input type="checkbox"/> Both <input type="checkbox"/> Orientation: Mental Status: A&Ox4 Speech: Normal</p>	<p>Patient is A&Ox4. She is able to orient person/place/time/current situation. Muscle strength and sensation intact in upper and lower extremities bilaterally. No noted nuchal rigidity or meningeal signs.</p>

<p>Sensory: Intact LOC: Normal for appropriate age</p>	
<p>PSYCHOSOCIAL/CULTURAL (2 points): Coping method(s): Talking with friends Developmental level: Appropriate for age Religion & what it means to pt.: Patient is a Catholic, and treats others with kindness. Personal/Family Data (Think about home environment, family structure, and available family support): Pt is widowed, lives at an assisted living facility, and feels safe at her residence.</p>	<p>Patient’s coping method is talking with her friends. Patient states that she is of Catholic faith and practices kindness towards others. Patient is widowed, lives at an assisted living facility, and feels safe at her residence.</p>

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0700	88	152/68	24	36.5 C	98% on 2L of O2 via NC
1100	68	138/62	24	36.8 C	97% on 2L of O2 via NC

Vital Sign Trends: Vital signs stable, continue to monitor patient.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0700	0/10 (0-10 pain scale)	N/A	N/A	N/A	No further intervention needed at this time, continue to monitor patient.
1100	1/10 (0-10 pain scale)	Headache	Minimal	Headache	Tylenol administered

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: 20 gauge Location of IV: Left AC Date on IV: 03/30/2020 Patency of IV: Patent, no phlebitis/infiltration present, infusing without difficulty Signs of erythema, drainage, etc.: No noted signs of erythema, drainage, etc. IV dressing assessment: Clean, dry, and intact	N/A

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
Tea PO 240 mL with breakfast Apple Juice 120 mL with breakfast	Urine = 1,750 mL total voided in 4 hours Stool x2

Nursing Care

Summary of Care (2 points)

Overview of care:

The patient is a 72-year-old female and has a past medical history of hypertension, atrial fibrillation (afib), hyperlipidemia, and CHF. The patient has a family history of diabetes mellitus. She is diagnosed with having CHF exacerbation. She is A&Ox4 and does not show any signs of acute distress. This patient lives in an assisted living facility, and complains of recent weight gain and swelling of her ankles. She is being treated with diuretics, beta-blockers, rest, and a fluid restriction of 1,000 mL per day. She drank 240 mL of tea and 120 mL of apple juice with her breakfast.

The patient urinated 1,750 mL in 4 hours (polyuria) and stool x2. The patient complained of a headache and rated her pain at 1/10 on a 0-10 pain scale at 1100 and was given Tylenol 650mg. She has a 20 gauge IV in her left AC dated 03-30-20. The patient's medications

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consisted of acetaminophen 650mg PO; furosemide 40mg IV BID; potassium chloride 40mEq PO; and docusate 100mg PO. She did not show any signs of acute distress, and her vital signs remained stable throughout my time with her. The patient had a Chest X-ray and EKG. The Chest X-ray indicate an enlarged heart. The EKG indicate afib at a rate of 88 bpm. The patient's physical assessment noted crackles in the bases of her lungs bilaterally and 3+ pitting edema to both feet. She will be monitored continuously until the hospitalist determines the appropriate treatment. I anticipate that the patient will be tested for diabetes mellitus and stay at the hospital until she can maintain normal urine production, electrolyte balance, and CHF management. The patient will return to her assisted living facility upon discharge.

Procedures/testing done: Chest X-ray and EKG

Complaints/Issues: "Weight gain, swelling of the ankles"

Vital signs (stable/unstable): Stable

Tolerating diet, activity, etc.: Fluid restriction of 1,000 mL per day. Patient tolerating diet and activity.

Physician notifications: Fluid restriction of 1,000 mL per day; check daily weight; strict I&O.

Future plans for patient:

The plan will include continued telemetry monitoring, beta-blockers to lower BP and increase her dose of diuretics to relieve the pressure from the fluid around the heart. The patient needs strict I&O with a low sodium diet. Furthermore, educate the patient on the DASH diet and monitoring BP for when she returns home.

Discharge Planning (2 points)

Discharge location: The patient will return to her assisted living facility upon discharge.

Home health needs (if applicable): The patient requests a one-time visit from a Care Coach.

Equipment needs (if applicable): None

Follow up plan: The patient will follow up with her PCP in one week following discharge.

Education needs:

The patient will be educated on the causes of CHF exacerbation before being discharged (i.e., hypertension, hyperlipidemia, and cardiomyopathy). The patient will be educated on the symptoms of CHF, such as SOB, fatigue, dizziness, rapid heart rate while resting, peripheral edema, and unintentional weight loss. The patient will be educated on when she should see her doctor, and the types of treatments (i.e., medications, diet and lifestyle changes).

Nursing Diagnosis (15 points)

Must be NANDA approved nursing diagnosis and listed in order of priority

<p>Nursing Diagnosis</p> <ul style="list-style-type: none"> • Include full nursing diagnosis with “related to” and “as evidenced by” components 	<p>Rational</p> <ul style="list-style-type: none"> • Explain why the nursing diagnosis was chosen 	<p>Intervention (2 per dx)</p>	<p>Evaluation</p> <ul style="list-style-type: none"> • How did the patient/family respond to the nurse’s actions? • Client response, status of goals and outcomes, modifications to plan.
<p>1. Risk for decreased cardiac output related to alterations in heart rate as evidence by EKG results of afib.</p>	<p>The patient’s chest x-ray results show her having an enlarged heart indicative of heart failure.</p>	<p>1. Assess for abnormal heart and lung sounds. 2. Monitor BP and HR.</p>	<p>* The patient is cooperative and agrees with intervention. * The patient’s caregivers understand that S₁ and S₂ may be weak because of diminished pumping action. Gallop rhythms are common (S₃and S₄),</p>

			<p>produced as blood flows into noncompliant chambers. Murmurs may reflect valvular incompetence. CHF, BP may be elevated because of increased SVR. In advanced heart failure, the body may no longer be able to compensate, and profound hypotension may occur. The goals and outcomes are for the patient to demonstrate adequate cardiac output as evidenced by vital signs within acceptable limits, dysrhythmias absent/controlled, and no symptoms of failure (e.g., hemodynamic parameters within acceptable limits, urinary output adequate).</p>
<p>2. Ineffective tissue perfusion related to decreased cardiac output as evidenced by tachypnea.</p>	<p>The patient's PMH and current diagnostic screenings indicate inadequate cardiac output. Decreased cardiac output equals decreased oxygen to nourish tissues at the capillary level.</p>	<p>1. Provide oxygen and monitor oxygen saturation via pulse oximetry, as ordered.</p> <p>2. Assess the response to medications every 5 minutes.</p>	<p>* The patient is cooperative and agrees with intervention.</p> <p>* The patient's caregivers understand that oxygenation increases the amount of oxygen circulating in the blood and, therefore, increases the amount of available oxygen to the myocardium, decreasing myocardial ischemia and pain. Assessing response determines effectiveness of medication and whether further interventions are required. The goals and outcomes are for the patient to display vital signs within acceptable</p>

			limits, dysrhythmias absent/controlled, and no symptoms of CHF.
<p>3. Excess fluid volume related to use of diuretics as evidence by 3+ pitting edema of the lower extremities.</p>	<p>The patient has 3+ pitting edema to both feet due to right-sided heart failure.</p>	<p>1. Monitor and calculate 24-hour intake and output (I&O) balance.</p> <p>2. Establish fluid intake schedule if fluids are medically restricted, incorporating beverage preferences when possible. Give frequent mouth care . Ice chips can be part of fluid allotment.</p>	<p>* The patient is cooperative and agrees with intervention.</p> <p>* The patient’s caregivers understand that Diuretic therapy may result in sudden increase in fluid loss (circulating hypovolemia), even though edema or ascites remains. Involving patient in therapy regimen may enhance sense of control and cooperation with restrictions. The goals and outcomes are for the patient to verbalize understanding of individual dietary/fluid restrictions, and demonstrate stabilized fluid volume with balanced intake and output, breath sounds clear/clearing, vital signs within acceptable range, stable weight, and absence of edema.</p>
<p>4. Risk for impaired skin integrity related to prolonged rest periods as evidence by decreased activity level.</p>	<p>The patient states that her ankle edema worsens with ambulation and improves with rest and elevation.</p>	<p>1. Inspect skin, noting skeletal prominences, presence of edema, areas of altered circulation, or obesity and/or emaciation.</p> <p>2. Ensure patient turns every 2 hours, and assist with active and passive range of motion</p>	<p>* The patient is cooperative and agrees with intervention.</p> <p>* The patient’s caregivers understand that these interventions reduces pressure on tissues, improves circulation and promotes blood flow. The goals and outcomes are for the patient to demonstrate behaviors/techniques to</p>

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		(ROM) exercises.	prevent skin breakdown and maintain skin integrity.
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Other References (APA):

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing* (14th ed.). Wolters Kluwer Health Lippincott William & Wilkins.

Swearingen, P. L. (2016). *All-in-one nursing care planning resource: Medical-surgical, pediatric, maternity, psychiatric nursing care plans*. Elsevier/Mosby.

Concept Map (20 Points):

Subjective Data

Generalized weakness
Difficulty breathing
Fatigue
Weight gain

Objective Data

Chest X-ray (enlarged heart)
EKG (afib)
3+ pitting edema of both feet
Crackles in bases of lungs bilaterally
Elevated BNP

Patient Information

The patient is a 72-year-old female and has a past medical history of hypertension, Afib, hyperlipidemia, and CHF. The patient has a family history of diabetes mellitus. She is diagnosed with having CHF exacerbation.

Nursing Diagnosis/Outcomes

Risk for decreased cardiac output related to alterations in heart rate as evidenced by EKG results of afib.
Outcome: The patient to demonstrate adequate cardiac output as evidenced by vital signs within acceptable limits.
Ineffective tissue perfusion related to decreased cardiac output as evidenced by tachypnea.
Outcome: The patient to display vital signs within acceptable limits, dysrhythmias absent/controlled, and no symptoms of CHF.
Excess fluid volume related to use of diuretics as evidence by 3+ pitting edema of the lower extremities.
Outcome: The patient to verbalize understanding of individual dietary/fluid restrictions, and demonstrate stabilized fluid volume with balanced intake and output, breath sounds clear/clearing, vital signs within acceptable range, stable weight, and absence of edema.
Risk for impaired skin integrity related to prolonged rest periods as evidence by decreased activity level.
Outcome: The patient to demonstrate behaviors/techniques to prevent skin breakdown and maintain skin integrity.

Nursing Interventions

Assess for abnormal heart and lung sounds.
Monitor BP (noting postural changes) and HR.
Provide oxygen and monitor oxygen saturation via pulse oximetry, as ordered.
Assess the response to medications every 5 minutes.
Monitor and calculate 24-hour intake and output (I&O) balance.
Establish fluid intake schedule if fluids are medically restricted, incorporating beverage preferences when possible. Give frequent mouth care.
Inspect skin, noting skeletal prominences, presence of edema, areas of altered circulation, or obesity and/or emaciation.
Ensure patient turns every 2 hours, and assist with active and passive range of motion (ROM) exercises.

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