

N431 Care Plan #  
Lakeview College of Nursing  
Jerry Williams

**Demographics (3 points)**

<b>Date of Admission</b> 8.29.21	<b>Patient Initials</b> CH	<b>Age</b> 63	<b>Gender</b> female
<b>Race/Ethnicity</b> Caucasian	<b>Occupation</b> Retired form school related position	<b>Marital Status</b> divorcee	<b>Allergies</b> see *
<b>Code Status</b> Full Code	<b>Height</b> 162.6 cm (5' 4")	<b>Weight</b> unavailable in chart	

\* - verified (severity): adhesive (redness); erythromycin (difficulty breathing); Levaquin (anaphylaxis); Plavix (difficulty breathing; swelling); hydrogen peroxide (mild – red streaks); unlisted material / env (anaphylaxis)

\*- unverified (severity): aspirin (hives / no longer allergic); Bactrim DS (hives); hydrogen peroxide (red streaks into heart); Levaquin (anaphylaxis); tape (welts, redness, itching, tears skin); titanium (severe reaction while in right knee and had to be removed)

**Medical History (5 Points)**

**Past Medical History:** Chronic problems: anxiety; atherosclerosis of bypass graft of L lower extremity; carotid artery stenosis; chronic disease anemia; chronic laryngitis; chronic respiratory failure with hypoxia and hyperpnea; chronic systolic heart failure; chronic obstructive pulmonary disease (COPD); coronary artery disease (CAD) with angina pectoris; diabetic polyneuropathy; Diabetes Mellitus (DM) type 2 causing chronic kidney disease (CKD) stage 3; essential hypertension (HTN); rheumatoid arthritis; cerebrovascular accident (CVA) in adulthood; embolectomy; left above-the-knee amputee (L-AKA); left-sided carotid endarterectomy; coronary artery bypass graft (CABG); osteoporosis; peripheral artery disease (PAD); Raynaud's syndrome; restless leg syndrome; sinusitis – chronic; sleep apnea; smoker; tonsilitis and adenoiditis - chronic

**Past Surgical History:** lymphoma in bilateral neck removed X 2; rotator cuff surgery X 3 (2-right; 1-left); carpal tunnel X 2 bilateral wrists; reconstructive sinus surgery; tonsillectomy; hysterectomy; triple bypass; appendectomy; myocardial perfusion scan; atherosclerosis of coronary artery bypass graft; total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAH BSO); left femoral-tibia occluded; left leg graft femoral-tibia bypass; reoperation, femoral-popliteal or femoral-anterior tibia, posterior tibial, peroneal artery, or other distal vessels, more than one month after original operation; bypass graft, with other than vein, femoral-anterior tibial, posterior tibial, or peroneal artery; thromboendarterectomy, including patch graft, if performed, deep )Profunda) femoral; excision of infected graft – extremity; repair of multiple tendons in the extensor compartment of the forearm, wrist, or hand; ganglion cyst excision; ostectomy; chondroplasty; tenotomy; arthroscopic acromioplasty; mammogram; three stents in left leg; left hallux amputation; second digit amputation; L-AKA; left-sided carotid endarterectomy; colonoscopy; esophagogastroduodenoscopy (EGD)

**Family History:**     arthritis: mother, father, brother, daughter, grandmother;

chest pain: father

CAD: father

DM type 2: father, brother

heart attack father, brother

HTN: father, brother

lung disease: father, brother

death: mother, father

**Social History (tobacco/alcohol/drugs):** Ten or more cigarettes (1/2 pack or more) per day for 40+ years. No alcohol. No illicit drug usage.

**Assistive Devices:** rolling walker; wheel chair (w/c); entry to her residence is on the first floor; dentures

**Living Situation:** Currently, CH resides in a nursing home residence.

**Education Level:** unavailable in chart

### **Admission Assessment**

**Chief Complaint (2 points):** acute respiratory failure

**History of present Illness (10 points):** CH presents to the hospital from being short of breath, chronic/daily but worse in the last few days in its onset. The location of her illness was from her lungs/upper chest. Duration has been the previous two to three days. Her condition was constant, worse at night. The character of her illness is that she could not catch her breath, as if the fluid was in her lungs and could not expel it. Her chronic smoking and sedentary lifestyle aggravate her illness and her overall general medical state/history. Associated with her disease is her complaint of chest pain and elevated blood sugar. Oxygen helps relieves her degree of shortness of breath, as well as the medications she takes. In the past, she took her inhalers (albuterol and ipratropium) and increased her Oxygen. Timing is when she would try to correct her illness at the onset of its attack. The severity is constantly severe.

### **Primary Diagnosis**

**Primary Diagnosis on Admission (2 points):** acute respiratory failure

**Secondary Diagnosis (if applicable):** n/a

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

Heart failure, also known as congestive heart failure, is characterized by fluid overload or inadequate tissue perfusion. The heart is unable to pump blood throughout the body for proper oxygen and nutrients. In the client's history of chronic systolic heart failure, she has a problem

with the contraction of her heart. Heart failure is usually a progressive, life progressing condition managed by lifestyle changes and medication to prevent attacks. In this client's situation, the right side of the heart fails. Her lower extremity and abdominal edema are present. Some other signs and symptoms are jugular vein distension and abnormal lab values. Heart failure can come from hypertension, coronary artery disease, and valvular disease. The client has these medical issues. Currently, the client is in metabolic alkalosis, fully compensated. Heart failure affects 60% of those older than 65 (the client is 63 but has extensive medical history) and is the leading reason the elderly is hospitalized. Prevention is geared toward lifestyle changes when utilizing a healthy diet, exercising, and stopping smoking. The client continues to smoke a half-a-pack of cigarettes a day. This client's management of heart failure consists of using diuretics (furosemide and hydralazine) and a beta-blocker (carvedilol). The client is on a low sodium diet, which will help reduce fluid retention, congestion and decrease cardiac workload (Belleza, 2021).

With poor oxygenation in heart failure, a cascade of events happens. The cells cannot transport Oxygen to other areas of the body. Therefore, saturation diminishes. Fluid presents on the right side of the heart (as in the case of my client), which backs up with the symptoms of neck vein distension, pedal edema, and edema around the back and abdomen. Anxiousness, rapid breathing, and even chest pain can occur (Fine, 2020).

### **Pathophysiology References (2) (APA):**

Belleza, M. (2021, April 22). *Heart failure nursing Care management: A study guide*.

Nurseslabs. <https://nurseslabs.com/heart-failure/>

Fine, N.(2020). *Heart failure (hf) - cardiovascular disorders*. Merck Manuals.

<https://www.merckmanuals.com/professional/cardiovascular-disorders/heart-failure/heart-failure-hf>

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 – 5.4	3.4 L	2.98 L	Severe chronic obstructive pulmonary disease (Pagana et. al., 2019).
Hgb	12.0 – 16.0	9.2 L	8.3 L	Severe chronic obstructive pulmonary disease; congestive heart failure (Pagana et. al., 2019).
Hct	36.0 – 48.0	29.6 L	26.1 L	Severe chronic obstructive pulmonary disease (Pagana et. al., 2019).
Platelets	150 – 450	378	146 L	Decreased production of platelets (chronic disease anemia history) (Mayo Clinic, 2020).
WBC	4.5 – 10.8	16 H	13.4 H	It could be her inflammatory disorder (rheumatoid arthritis history); stress (chronic hospitalization history) (Pagana et. al., 2019).
Neutrophils	55 – 70%	n/a	88.8 H	It could be her inflammatory disorder (rheumatoid arthritis history); physical or emotional stress (repeat hospitalization history); metabolic disorders (DM with CKD history) (Pagana et. al., 2019).
Lymphocytes	20 – 40%	n/a	2.7 L	Chronic bacterial infection (tonsilitis and adenoiditis – chronic history) (Pagana et. al., 2019).
Monocytes	2 – 8%	n/a	6.7	
Eosinophils	1 – 4%	n/a	0.1 L	Autoimmune disease (rheumatoid arthritis history) (Pagana et. al., 2019).
Bands	0.0 – 3%	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
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<b>Na-</b>	134 – 144	139	140	
<b>K+</b>	3.5 – 5.2	3.86	4.29	
<b>Cl-</b>	96 – 106	98	101	
<b>CO2</b>	20.0 – 29.0	<b>31 H</b>	<b>30.8 H</b>	<b>Metabolic alkalosis</b> (both draws show metabolic alkalosis, complete compensation) (Pagana et. al., 2019).
<b>Glucose</b>	65 – 99	<b>125 H</b>	<b>164 H</b>	<b>Diabetes mellitus, chronic renal failure</b> (Diabetes Mellitus (DM) type 2 causing chronic kidney disease (CKD) stage 3 history) (Pagana et. al., 2019).
<b>BUN</b>	8 – 27	<b>52 H</b>	<b>95 H</b>	<b>Congestive heart failure</b> (chronic respiratory failure with hypoxia and hyperpnea history) (Pagana et. al., 2019).
<b>Creatinine</b>	0.57 – 1.00	<b>1.68 H</b>	<b>1.5 H</b>	<b>Elevated level signifies impaired kidney function or kidney disease</b> (chronic kidney disease (CKD) stage 3 history) (Davis, 2021).
<b>Albumin</b>	3.5 – 5.2	n/a	n/a	n/a
<b>Calcium</b>	3.8 – 4.8		<b>3.0 L</b>	<b>Alkalosis</b> (both draws show metabolic alkalosis, complete compensation); <b>renal failure</b> (chronic kidney disease (CKD) stage 3 history) (Pagana et. al., 2019).
<b>Mag</b>	1.3 – 3.0	n/a	n/a	n/a
<b>Phosphate</b>	44 – 147	n/a	n/a	n/a
<b>Bilirubin</b>	0.0 – 1.2	n/a	0.3	
<b>Alk Phos</b>	48 – 121	n/a	<b>190 H</b>	<b>Rheumatoid arthritis</b> (rheumatoid arthritis history) (Pagana et. al., 2019).
<b>AST</b>	0 – 40	n/a	< 6.9	
<b>ALT</b>	0 – 32	n/a	22	

<b>Amylase</b>	30 - 110	n/a	n/a	n/a
<b>Lipase</b>	n/a	n/a	n/a	n/a
<b>Lactic Acid</b>	n/a	n/a	n/a	n/a
<b>Troponin</b>	n/a	n/a	n/a	n/a
<b>CK-MB</b>	n/a	n/a	n/a	n/a
<b>Total CK</b>	n/a	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
<b>INR</b>	n/a	n/a	n/a	n/a
<b>PT</b>	n/a	n/a	n/a	n/a
<b>PTT</b>	n/a	n/a	n/a	n/a
<b>D-Dimer</b>	0.0 – 0.50	<b>2.99 H</b>	not drawn	<b>Deep vein thrombosis</b> (taking enoxaparin to prevent clot) (Pagana et. al., 2019).
<b>BNP</b>	n/a	n/a	n/a	n/a
<b>HDL</b>	n/a	n/a	n/a	n/a
<b>LDL</b>	n/a	n/a	n/a	n/a
<b>Cholesterol</b>	n/a	n/a	n/a	n/a
<b>Triglycerides</b>	n/a	n/a	n/a	n/a
<b>Hgb A1c</b>	n/a	n/a	n/a	n/a
<b>TSH</b>	n/a	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	Amber yellow	n/a	yellow	
pH	5.0 – 7.0	n/a	5.0	
Specific Gravity	1.001 – 1.030	n/a	1.014	
Glucose	negative	n/a	3 <sup>+</sup> H	<b>Diabetes mellitus</b> (Diabetes Mellitus (DM) type 2 history) (Pagana et. al., 2019).
Protein	negative	n/a	3 <sup>+</sup> H	<b>Diabetes mellitus</b> (Diabetes Mellitus (DM) type 2 history); <b>Congestive heart failure</b> (chronic respiratory failure with hypoxia and hyperpnea history) (Pagana et. al., 2019).
Ketones	negative	n/a	negative	
WBC	0 – 5	n/a	> 50 H	<b>Bacterial infection in the urinary tract</b> (Pagana et. al., 2019).
RBC	0 – 2	n/a	> 50 H	<b>Renal issues: inflammation, trauma, stones, traumatic bladder catheterization</b> (chronic kidney disease (CKD) stage 3 history) (Pagana et. al., 2019).
Leukoesterase	negative	n/a	3 <sup>+</sup> H	<b>Possible UTI</b> (Pagana et. al., 2019).

**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	7.350 – 7.450	7.446	7.437	
PaO2	75 – 100	133 H	82	<b>Increased inspired O<sub>2</sub></b> (upon admissions, client was on 80% BiPap and able to maintain 99% O <sub>2</sub> Sat, whereas earlier, she had been on 2 L and her O <sub>2</sub> Sat was 80%;

				oversaturated with Oxygen); <b>hyperventilation</b> (respiratory rates > 20; COPD history resembles fast breathing) (Pagana et. al., 2019).
<b>PaCO2</b>	35.00 – 45.00	<b>48.8 H</b>	<b>47.8 H</b>	<b>Chronic obstructive pulmonary disease</b> (COPD history) (Pagana et. al., 2019).
<b>HCO3</b>	20.0 – 26.0	<b>33.7 H</b>	<b>32.3 H</b>	<b>Chronic obstructive pulmonary disease</b> (COPD history) (Pagana et. al., 2019).
<b>SaO2</b>	95 – 100	99	96	

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
<b>Urine Culture</b>	n/a	n/a	n/a	n/a
<b>Blood Culture</b>	n/a	n/a	n/a	n/a
<b>Sputum Culture</b>	n/a	n/a	n/a	n/a
<b>Stool Culture</b>	n/a	n/a	n/a	n/a

**Lab Correlations Reference (1) (APA):**

Davis, C. P. (2021, January 29). *Creatinine blood test: Normal, low, high levels, by age & results*. MedicineNet. [https://www.medicinenet.com/creatinine\\_blood\\_test/article.htm](https://www.medicinenet.com/creatinine_blood_test/article.htm)

Mayo Foundation for Medical Education and Research. (2020, April 8). *Thrombocytopenia (low Platelet count)*. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/thrombocytopenia/symptoms-causes/syc-20378293>

Pagana, K. D., Pagana, T. J., & Pagana, T. N. (2019). *Mosby's diagnostic and laboratory test reference* (14th ed.). Elsevier.

**Diagnostic Imaging**

**All Other Diagnostic Tests (5 points):**

EKG: The 12-lead strip can show axis deviation, ventricular or atrial hypertrophy, ischemia, or other damage patterns. An EKG can show other abnormalities like left bundle branch block, frequent premature ventricular contractions, and so on. It can show persistent ST – T segment abnormalities or decreased QRS amplitude.

Chest X-ray: This can show enlargement, hypertrophy, blood vessel changes or abnormal contour like ventricular aneurysm.

**Diagnostic Test Correlation (5 points):**

EKG and chest X-ray were compared to older readings.

**Diagnostic Test Reference (1) (APA):**

Belleza, M. (2021, April 22). *Heart failure nursing Care management: A study guide*. Nurseslabs. <https://nurseslabs.com/heart-failure/>

**Current Medications (10 points, 1 point per completed med)  
\*10 different medications must be completed\***

**Home Medications (5 required)**

<b>Brand/Generic</b>	albuterol / Proair	amlodipine / Norvasc	atorvastatin / Lipitor	furosemide / Lasix	nitroglycerine / Nitrostat
<b>Dose</b>	90 mcg X 2 puffs	5 mg	80 mg X 1 tablet	80 mg X 1 tablet	0.4 mg X 1 tablet
<b>Frequency</b>	every 6 hrs, prn	daily	at bedtime	twice-a-day	every 5 minutes, prn, maximum of 3
<b>Route</b>	inhale / aerosol	oral	oral	oral	sub-lingual
<b>Classification: Pharmacologic class / Therapeutic class</b>	Adrenergic / Bronchodilator	Calcium channel blocker / Antianginal, antihypertensive	HMG-CoA reductase inhibitor / Antihyperlipidemic	Loop diuretic / antihypertensive, diuretic	Nitrate / antianginal, vasodilator

<p><b>Mechanism of Action</b></p>	<p>Albuterol attaches to beta<sub>2</sub> receptors on bronchial cell membranes, which stimulates the intracellular enzyme adenylate cyclase to convert adenosine triphosphate (ATP) to cyclic adenosine monophosphate (cAMP). This reaction decreases intracellular calcium levels. It also increases intracellular levels of cAMP. Together, these effects relax bronchial smooth-muscle cells and inhibit histamine release.</p>	<p>Binds to dihydropyridine and nondihydropyridine cell membrane receptor sites on myocardial and vascular smooth-muscle cells and inhibits influx of extracellular calcium ions across slow calcium channels. This decreases intracellular calcium level, inhibiting smooth-muscle cell contractions and relaxing coronary and vascular smooth muscles, decreasing peripheral vascular resistance, and reducing systolic and diastolic blood pressure. Decreased peripheral vascular resistance also decreases myocardial workload, oxygen</p>	<p>Reduces plasma cholesterol and lipoprotein levels by inhibiting HMG-CoA reductase and cholesterol synthesis in the liver and by increasing the number of LDL receptors on liver cells to enhance LDL uptake and breakdown.</p>	<p>Inhibits sodium and water reabsorption in the loop of Henle and increases urine formation. As the body's plasma volume decreases, aldosterone production increases, which promotes sodium reabsorption and the loss of potassium and hydrogen ions. Furosemide also increases the excretion of calcium, magnesium, bicarbonate, ammonium, and phosphate. By reducing intracellular and extracellular fluid volume, the drug reduces blood pressure and decreases</p>	<p>May interact with nitrate receptors in vascular smooth-muscle cell membrane. This interaction reduces nitroglycerin to nitric oxide, which activates the enzyme guanylate cyclase, increasing intracellular formation of cGMP. Increased cGMP level may relax vascular smooth muscle by forcing calcium out of muscle cells, causing vasodilation. Venous dilation</p>
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		<p>demand, and possibly angina. Also, by inhibiting coronary artery muscle cell contractions and restoring blood flow, drug may relieve Prinzmetal's angina.</p>		<p>cardiac output. Over time, cardiac output returns to normal.</p>	<p>decreases venous return to the heart, reducing left ventricular end-diastolic pressure. Arterial dilation decreases systemic arterial pressure, systemic vascular resistance, and mean arterial pressure. Thus, nitroglycerin reduces preload and afterload, decreasing myocardial workload and oxygen demand. It also dilates coronary arteries, increasing blood flow to ischemic myocardia</p>
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					l tissue and provides analgesic effects in anal tissue.
<b>Reason Client Taking</b>	To treat wheezing	To treat high blood pressure	To treat high cholesterol	To treat high blood pressure	To treat chest pain
<b>Contraindications (2)</b>	1) Hypersensitivity to albuterol or its components	1) Hypersensitivity to amlodipine or its components	1) Active hepatic disease; 2) hypersensitivity to atorvastatin or its components, pregnancy, unexplained persistent rise in serum transaminase level.	1) Anuria; 2) hypersensitivity to furosemide or its components	1) Severe anemia; 2) hypotension
<b>Side Effects/Adverse Reactions (2)</b>	1) Arrhythmias ; 2) <b>hyperglycemia</b>	1) Arrhythmias; 2) hypotension	1) Hypoglycemia ; 2) thrombocytopenia	1) Hypokalemia; 2) hyponatremia	1) hypotension; 2) headache
<b>Nursing Considerations (2)</b>	1) Administer pressurized inhalations of albuterol during second half of inspiration, when airways are open wider and aerosol distribution is more effective. 2) Use	1) Use amlodipine cautiously in clients with heart block, <b>heart failure, impaired renal function,</b> hepatic disorder, or <b>severe aortic stenosis.</b> 2) Assess client frequently for chest pain when starting	1) Expect atorvastatin to be used in clients with obvious coronary artery disease (CAD) but with <b>multiple risk factors</b> (such as <b>age 55 or older, family history of early CAD, history of hypertension</b>	1) Know that for once-a-day dosing, drug should be given in the morning so patient's sleep won't be interrupted by increased need to urinate. 2) Expect client to have	1) Place sublingual tablet under client's tongue and make sure it dissolves completely. 2) Plan a nitroglycerin-free period of about 10 hours

	cautiously in clients with cardiac disorders, <b>diabetes mellitus</b> , digitalis intoxication, <b>hypertension</b> , hyperthyroidism, or history of seizures	or increasing the dose of amlodipine, because worsening of angina or an acute myocardial infarction can occur, especially in clients with <b>severe obstructive coronary artery disease</b> .	or low HDL level, or <b>smoker</b> ). 2) Monitor diabetic client's blood glucose levels because atorvastatin therapy can affect blood glucose control.	periodic hearing test during prolonged or high-dose I.V. therapy.	each day, as prescribed, to maintain therapeutic effects and avoid tolerance.
<b>Key Nursing Assessment(s)/ Lab(s) Prior to Administration</b>	Monitor serum potassium level because albuterol may cause transient hypokalemia.	Monitor blood pressure while adjusting dosage, especially in clients with <b>heart failure</b> or <b>severe aortic stenosis</b> because symptomatic hypotension may occur.	Expect to measure lipid levels 2 to 4 weeks after therapy starts, to adjust dosage as directed, and to repeat periodically until lipid levels are within desired range.	Monitor blood pressure and hepatic and renal function as well as <b>BUN, blood glucose</b> , and serum <b>creatinine, electrolyte</b> , and uric acid levels, as appropriate.	Check vital signs before every dosage adjustment and often during therapy.
<b>Client Teaching needs (2)</b>	1) Warn client not to exceed prescribed dose or frequency. If doses become less effective, tell client to contact his prescriber. 2) Advise client to wait	1) Advise client to have blood pressure checked routinely for possible hypotension; 2) Suggest taking amlodipine with food to reduce GI upset.	1) Advise client with <b>diabetes</b> to monitor blood glucose levels closely. 2) Advise client to notify prescriber immediately if he develops unexplained muscle pain, tenderness, or	1) Inform diabetic client that <b>furosemide may increase blood glucose level</b> , and advise her to <b>check her blood glucose level</b>	1) Inform client that nitroglycerin commonly causes headache, which typically resolves after a few days of continuous

	at least one minute between inhalations if dosage requires more than one inhalation.		weakness, especially if accompanied by fatigue or fever.	<b>frequently.</b> 2) Advise client to change position slowly to minimize effects of orthostatic hypotension and to take furosemide with food or milk to reduce GI distress.	s therapy; 2) Suggest that client change position slowly to minimize orthostatic hypotension.
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**Hospital Medications (5 required)**

<b>Brand/Generic</b>	carvedilol / Coreg	enoxaparin / Lovenox	docusate-senna / Colace	hydralazine / Apresoline (CAN)	Insulin detemir / Levemir
<b>Dose</b>	3.125	40 mg	50 mg – 8.6 mg	100 mg	25 units
<b>Frequency</b>	twice-a-day	daily	twice-a-day	three times a day	twice-a-day
<b>Route</b>	oral	sub-cutaneous	oral	oral	Subcutaneous injection
<b>Classification</b> Pharmacologic class / Therapeutic class	Nonselective beta blocker and alpha-1 blocker / Antihypertensive, heart failure treatment adjunct	Low-molecular-weight heparin / Anticoagulant	Surfactant / Laxative, stool softener	Vasodilator / Antihypertensive	Hormone / Antidiabetic
<b>Mechanism of Action</b>	Reduces cardiac output and tachycardia, causes vasodilation, and	Potentiates the action of antithrombin III, a coagulation inhibitor. By binding with	Acts as a surfactant that softens stool by decreasing surface	May act in a manner that resembles organic nitrates and sodium nitroprussid	Insulin is a hormone that works by lowering levels of glucose (sugar) in the blood. Insulin

	<p>decreases peripheral vascular resistance, which reduces blood pressure and cardiac workload. When given for at least 4 weeks, carvediol reduces plasma renin activity.</p>	<p>antithrombin III, enoxaparin rapidly binds with and inactivates clotting factors (primarily factor Xa and thrombin). Without thrombin, fibrinogen can't convert to fibrin and clots can't form.</p>	<p>tension between oil and water in feces. This action lets more fluid penetrate stool, forming a softer fecal mass.</p>	<p>e, except that hydralazine is selective for arteries. It:                  -Exerts a direct vasodilating effect on vascular smooth muscle;                  -Interferes with calcium movement in vascular smooth muscle by altering cellular calcium metabolism;                  -Dilates arteries, not veins, which minimizes orthostatic hypotension and increases cardiac output and cerebral blood flow;                  -Causes reflex autonomic response that increases, cardiac output, heart rate, and left ventricular</p>	<p>detemir is a long-acting insulin that starts to work several hours after injection and keeps working evenly for 24 hours.</p>
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				ejection fraction; -Has a positive inotropic effect on the heart.	
<b>Reason Client Taking</b>	To treat high blood pressure	To prevent DVT in medical clients who are at risk for thromboembolic complications due to <b>severely restricted mobility</b> during acute illness	To treat constipation	To treat congestive heart failure	To treat diabetes
<b>Contraindications (2)</b>	1) Asthma or related bronchospastic conditions; 2) cardiogenic shock	1) Active major bleeding; 2) history of heparin-induced thrombocytopenia (HIT) or immune-mediated HIT within past 100 days or in the presence of circulating antibodies, which may persist for several years	1) Fecal impaction ; 2) undiagnosed abdominal pain	1) Coronary artery disease; 2) mitral valve disease	1) hypoglycemia; 2) hypersensitivity to drug/class/composition
<b>Side Effects/Adverse Reactions (2)</b>	1) unusual bleeding or bruising; 2) heart failure	1) congestive heart failure; 2) pulmonary edema	1) Abdominal cramps and distention , diarrhea,	1) Dyspnea; 2) angina	1) hypoglycemia; 2) hypokalemia

			nausea, perianal irritation, vomiting; 2) palpitations		
<b>Nursing Considerations (2)</b>	1) Know that if client has <b>heart failure</b> , expect to also give digoxin, a diuretic, and an ACE inhibitor; 2) Use carvediol cautiously in clients with peripheral vascular disease because it may aggravate symptoms of arterial insufficiency . In clients with diabetes mellitus it may mask signs of hypoglycemia, such as tachycardia, and may delay recovery.	1) Don't give drug by I.M. injection; 2) Use enoxaparin with extreme caution in clients with a history of heparin-induced thrombocytopenia (HIT). Know that enoxaparin should only be used in these clients if more than 100 days have elapsed since the prior HIT episode and no circulating antibodies are present.	1) Expect excessive or long-term use of docusate to cause dependence on laxatives for bowel movements electrolyte imbalances, osteomalacia, steatorrhea, and vitamin and mineral deficiencies; 2) Assess for laxative abuse syndrome , especially in women with anorexia nervosa, depression, or	1) Give tablet with food to increase bioavailability; 2) Be aware that hydralazine may change color when exposed to a metal filter.	1) Ensure uniform dispersion of insulin suspension by rolling the vial gently between hands; avoid vigorous shaking; 2) Give maintenance doses subcutaneously, rotating injection sites regularly to decrease incidence of lipodystrophy; give regular insulin IV or IM in severe ketoacidosis or diabetic coma.

			personality disorders.		
<b>Key Nursing Assessment(s)/ Lab(s) Prior to Administration</b>	Monitor client's blood glucose level, as ordered, during carvediol therapy because drug may alter blood glucose level.	Watch closely for bleeding. Notify prescriber immediately if platelet count falls below 100,000/mm <sup>3</sup> . Expect to stop drug and start treatment if client has a thromboembolic event, such as a stroke. Test stool for occult blood, as ordered. Check serum potassium level for elevation, especially in clients with renal impairment or who are currently using potassium-sparing diuretics.	If giving as an enema, do not use undue force.	Monitor blood pressure and pulse rate regularly and weigh daily during therapy. Check blood pressure with client in lying, sitting, and standing positions, and watch for signs of orthostatic hypotension. Expect orthostatic hypotension to be most common in the morning, during hot weather, and with exercise.	Obtain baseline and periodic PFTs (pulmonary function tests) for clients using inhaled insulin; carefully monitor glucose levels when converting from subcutaneous to inhaled insulin.
<b>Client Teaching needs (2)</b>	1) Warn client that drug may cause dizziness, light-headedness,	1) Caution client not to rub the site after giving the injection to minimize bruising; 2)	1) Tell client not to use docusate when she has abdominal	1) Instruct client to take hydralazine tablets with food; 2) Caution	1) Prepare an injection only when you are ready to give it. Do not use if the medicine looks cloudy, has

	and orthostatic hypotension; advise him to take precautions; 2) Alert client with diabetes to monitor his glycemic control closely because drug may increase blood glucose level or mask symptoms of hypoglycemia.	Advise client to notify prescriber about adverse reactions, especially bleeding. Inform client that taking aspirin or other NSAIDs may increase risk for bleeding.	1) pain, nausea, or vomiting; 2) Instruct client to notify prescriber about rectal bleeding; symptoms of electrolyte imbalances, such as dizziness, lightheadedness, muscle cramping, and weakness; and unrelieved constipation.	client against stopping drug abruptly because doing so may cause severe hypertension.	changed colors, or has particles in it. Call your pharmacist for new medicine; 2) Do not inject this medicine into skin that is damaged, tender, bruised, pitted, thickened, scaly, or has a scar or hard lump.
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**Medications Reference (1) (APA):**

*The clinical information you need, at your fingertips.* Epocrates Web. (n.d.). Retrieved September 18, 2021, from <https://online.epocrates.com/home>

*Insulin nursing Considerations & management.* RNpedia. (2019, February 13). Retrieved September 19, 2021, from <https://www.rnpedia.com/nursing-notes/pharmacology-drug-study-notes/insulin/>

Loebl, S. (2020). *2020 Nurse's drug handbook* (19th ed.). Jones & Bartlett Learning.

**Assessment**

**Physical Exam (18 points)**

<p><b>GENERAL (1 point):</b>  <b>Alertness:</b>  <b>Orientation:</b>  <b>Distress:</b>  <b>Overall appearance:</b></p>	<p>Eyes open                  To person, place, and time                  Mild respiratory and pain distress                  Appears content; happy when FaceTiming granddaughter</p>
<p><b>INTEGUMENTARY (2 points):</b>  <b>Skin color:</b>  <b>Character:</b>  <b>Temperature:</b>  <b>Turgor:</b>  <b>Rashes:</b>  <b>Bruises:</b>  <b>Wounds:</b>  <b>Braden Score:</b>  <b>Drains present:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Type:</b></p>	<p>Pale, warm, intact                  Dry to the touch                  Warm                  Normal                  None noted                  Ecchymosis to left arm                  None noted                  19 = risk due to L-AKA</p>
<p><b>HEENT (1 point):</b>  <b>Head/Neck:</b>  <b>Ears:</b>  <b>Eyes:</b>  <b>Nose:</b>  <b>Teeth:</b></p>	<p>Symmetrical; normocephalic; no contusions or abrasions; Neck is supple, non-tender, intact range-of-motion; Ears free of discharge; no head pain; No lesions on external ears; no hearing loss                  No visual disturbances; extraocular motion intact; normal conjunctiva; Nose symmetrical; no discharge, deviation, or lesions on external nose                  Wears dentures; moist oral mucosa</p>
<p><b>CARDIOVASCULAR (2 points):</b>  <b>Heart sounds:</b>  <b>S1, S2, S3, S4, murmur etc.</b>  <b>Cardiac rhythm (if applicable):</b>  <b>Peripheral Pulses:</b>  <b>Capillary refill:</b>  <b>Neck Vein Distention:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Edema</b> Y <input checked="" type="checkbox"/> N <input type="checkbox"/>  <b>Location of Edema:</b></p>	<p>S<sub>1</sub> and S<sub>2</sub> appear normal. No S<sub>3</sub> or S<sub>4</sub> present; regular rate and rhythm; A-fib                  Palpable; +2 radial and right dorsalis pedal (L-AKA); Blanching &lt; 2 seconds                  Edema to bilateral extremities, abdomen, and lower back</p>
<p><b>RESPIRATORY (2 points):</b>  <b>Accessory muscle use:</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>  <b>Breath Sounds: Location, character</b></p>	<p>Diminished lung sounds bilaterally; basilar crackles; mild respiratory distress</p>
<p><b>GASTROINTESTINAL (2 points):</b>  <b>Diet at home:</b></p>	<p>Low salt diet at nursing residence</p>

<p><b>Current Diet</b>  <b>Height:</b>  <b>Weight:</b>  <b>Auscultation Bowel sounds:</b>  <b>Last BM:</b>  <b>Palpation: Pain, Mass etc.:</b>  <b>Inspection:</b>              <b>Distention:</b>              <b>Incisions:</b>              <b>Scars:</b>              <b>Drains:</b>              <b>Wounds:</b>  <b>Ostomy: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>  <b>Nasogastric: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>              <b>Size:</b>  <b>Feeding tubes/PEG tube Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>              <b>Type:</b></p>	<p>Low salt diet at hospital                      5 ft 4 in (162.6 cm)                      not available/taken                       Today; Bristol Stool Chart Type 5; brown; easily passed in crash cast                       No distention; non-tender; soft                      No incisions                      No scars                      No drains                      No wounds</p>
<p><b>GENITOURINARY (2 Points):</b>  <b>Color:</b>  <b>Character:</b>  <b>Quantity of urine:</b>  <b>Pain with urination: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>  <b>Dialysis: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>  <b>Inspection of genitals:</b>  <b>Catheter: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>              <b>Type:</b>              <b>Size:</b></p>	<p>Yellow in bed pan                      Hazy                      700</p>
<p><b>MUSCULOSKELETAL (2 points):</b>  <b>Neurovascular status:</b>  <b>ROM:</b>  <b>Supportive devices:</b>  <b>Strength:</b>  <b>ADL Assistance: Y <input type="checkbox"/> N <input checked="" type="checkbox"/></b>  <b>Fall Risk: Y <input checked="" type="checkbox"/> N <input type="checkbox"/></b>  <b>Fall Score:</b>  <b>Activity/Mobility Status:</b>  <b>Independent (up ad lib) <input type="checkbox"/></b>  <b>Needs assistance with equipment <input type="checkbox"/></b>  <b>Needs support to stand and walk <input type="checkbox"/></b></p>	<p>No deficits noted                      Able to move both upper and right lower extremity well (L-AKA); no joint swelling                      Good strength to upper extremities                       Morse Fall Scale = 70 high risk</p>
<p><b>NEUROLOGICAL (2 points):</b>  <b>MAEW: Y <input checked="" type="checkbox"/> N <input type="checkbox"/></b>  <b>PERLA: Y <input type="checkbox"/> N <input type="checkbox"/></b>  <b>Strength Equal: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> if no -</b>  <b>Legs <input type="checkbox"/> Arms <input checked="" type="checkbox"/> Both <input type="checkbox"/></b></p>	<p>Moves extremities well (L-AKA but moves it good); accommodation not performed</p>

<b>Orientation:</b> <b>Mental Status:</b> <b>Speech:</b> <b>Sensory:</b> <b>LOC:</b>	X 3; person, place, time Alert Normal; no cognitive impairment Normal; no focal deficits Eyes open spontaneously
<b>PSYCHOSOCIAL/CULTURAL (2 points):</b> <b>Coping method(s):</b> <b>Developmental level:</b> <b>Religion &amp; what it means to pt.:</b> <b>Personal/Family Data (Think about home environment, family structure, and available family support):</b>	. Appears in good coping despite chronic medical conditions and surgeries; cooperative; appropriate mood and affect; Christian Has a daughter and granddaughter; fond of granddaughter especially; currently lives in nursing residence

**Vital Signs, 2 sets (5 points)**

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0707	64 regular, L wrist	153/70 mechanical	18 regular non-labored	36.5 oral	40 L/min BiPap
1512	73 regular, L wrist	144/69 mechanical	17 regular non-labored	36.8 oral	40 L/min BiPap

**Vital Sign Trends:**

**Pain Assessment, 2 sets (2 points)**

Time	Scale	Location	Severity	Characteristics	Interventions
1330	numeric	all over	5/10	achy	Continue providing BiPap therapy
1700	numeric	all over	4/10	achy	Continue providing BiPap therapy

**IV Assessment (2 Points)**

<b>IV Assessment</b>	<b>Fluid Type/Rate or Saline Lock</b>
<b>Size of IV:</b> 20 guage angiocath <b>Location of IV:</b> left antecubital <b>Date on IV:</b> 9/11/21 <b>Patency of IV:</b> patent <b>Signs of erythema, drainage, etc.:</b> No signs of erythema, drainage, extravasation, swelling, or redness. <b>IV dressing assessment:</b> Tegaderm	Saline lock

**Intake and Output (2 points)**

<b>Intake (in mL)</b>	<b>Output (in mL)</b>
240 ml of fluid	700 ml of urine/stool

**Nursing Care****Summary of Care (2 points)**

**Overview of care:** Nursing care included v/s, brief body assessment, cleaning buttock after client voided and urinated in bed pan; changed bed linen with nurse.

**Procedures/testing done:** None

**Complaints/Issues:** None

**Vital signs (stable/unstable):** Vital signs were stable.

**Tolerating diet, activity, etc.:** Client ate well

**Physician notifications:** No

**Future plans for patient:** Continue to improve to return to nursing residence.

**Discharge Planning (2 points)**

**Discharge location:** CH will return to the nursing residence upon discharge.

**Home health needs (if applicable):** Needs will be available at nursing residence.

**Equipment needs (if applicable):** Needs will be available at nursing residence.

**Follow up plan:** Client will be seen by her medical team at the nursing residence.

**Education needs:** Aware of needing to use the call-light to contact the nurse for anything.

**Nursing Diagnosis (15 points)**

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

<p><b>Nursing Diagnosis</b></p> <ul style="list-style-type: none"> <li>• Include full nursing diagnosis with “related to” and “as evidenced by” components</li> </ul>	<p><b>Rational</b></p> <ul style="list-style-type: none"> <li>• Explain why the nursing diagnosis was chosen</li> </ul>	<p><b>Intervention (2 per dx)</b></p>	<p><b>Evaluation</b></p> <ul style="list-style-type: none"> <li>• How did the patient/family respond to the nurse’s actions?</li> <li>• Client response, status of goals and outcomes, modifications to plan.</li> </ul>
<p><b>1.</b> Ineffective gas exchange related to edema as evidence by poor Oxygen saturation, crackles, and tachypnea</p>	<p>Improvement in gas exchange provides the client toward wellness. Increasing Oxygen saturation of 95% and above, maintaining a heart rate below 100 decreases cardiac workload, and eliminating adventitious lung sounds all contribute to a healthier client (Vera, 2021).</p>	<p><b>1.</b> Administer BiPap Oxygen therapy per prescriber’s order.</p> <p><b>2.</b> Maintain the client in a high Fowler’s position with the head of the bed elevated up to 90° each shift.</p>	<p>1) Client’s respiratory rate is within normal limits, Oxygen saturation is &gt; 95%, crackles are more diminished. Client’s anxiety level has decrease. Goal met.</p> <p>2) This position enhances ventilation by providing maximal inspiration. Any secretions exiting helps client’s gas exchange in this position. Goal met.</p>
<p><b>2.</b> Excess fluid volume related to use of furosemide as evidence of</p>	<p>Taking a diuretic will eliminate the excess fluid (crackles, edema) built up in the</p>	<p><b>1.</b> Administer 80 mg of furosemide, BID per prescriber’s order.</p>	<p>1) Continued administration of furosemide has produced less crackles, a respiratory rate within</p>

<p>crackles and edema, and high blood pressure.</p>	<p>client's body. It will improve her Oxygen saturation. It will help control her hypertension. Taking a diuretic is one way to help improve her overall condition (Vera, 2021).</p>	<p>2. Weigh client the same time daily</p>	<p>normal range, and edema decreases from 3<sup>+</sup> to 2<sup>+</sup> in lower extremities. Goal met.</p> <p>2) No entry on client's weight. Through weighing, fluid volume excess can be evaluated. Goal not met.</p>
<p>3. Risk for impaired skin integrity related to skin breakdown as evidenced by prolonged bedrest and presence of edema.</p>	<p>By performing certain exercises and positions, client can maintain skin integrity (Vera, 2021).</p>	<p>1. Provide certain active and passive range of motion exercises two or three times a shift.</p> <p>2. Change client's position in bed every two hours.</p>	<p>1) Physical therapy performed active- and taught passive- exercises. Client is performing them twice a shift. Goal met.</p> <p>2) Client was rotated from right-lateral to supine to left-lateral and reversal throughout shift. Goal met.</p>
<p>4. Powerlessness related to dependence on others as evidence by chronic illness and hospitalizations .</p>	<p>Client has an extensive medical and surgical history. In having client express the positiveness despite these instances, client can remain positive for herself and her family (Vera, 2021).</p>	<p>1. Once a shift, have the client express one positive aspect of her life in spite of having chronic illnesses and hospitalizations.</p> <p>2. Render to the client a positive thought, praise, or encouragement at least once a shift.</p>	<p>1) Client expressed she lives for her granddaughter as they did Facetime. Client appeared happy. Goal met.</p> <p>2) By rendering something positive, a sense of care and unconditional support to interpreted by the client.</p>

**Other References (APA):**

Vera, M. (2021, September 15). *18 nursing diagnosis for heart Failure nursing care plans*. Nurseslabs. <https://nurseslabs.com/heart-failure-nursing-care-plans/3/>

**Concept Map (20 Points):**

**Subjective Data**  
 Elevated BUN and creatinine reveal renal failure  
 Client has CKD;  
 Arterial blood gases reveal metabolic alkalosis;  
 Complete blood count reveal anemia  
 Pulse oximetry shows improvement in Oxygen saturation;  
 Continues to smoke cigarettes  
 Initially complained of SOB and CP  
 Full code

**Objective Data**  
 Many lab values are outside of their norms: alkalotic end normal pH, acidic CO<sub>2</sub>, and alkalotic verifies fully compensated, metabolic alkalosis; high BUN and high creatinine verifies kidney disorder; high BUN points to CHF; low platelets verifies anemia; low RBC, low Hgb, low Hct verifies COPD; high WBC, high neutrophils, low eosinophil could be related to her auto immune disease (rheumatoid arthritis); glucose and protein in the urine verifies DM  
 D-Dimer high on admission

**Patient Information**  
 Client is a 63-year-old female with an extensive medical and surgical history. She arrived at the hospital complaining of shortness of breath and chest pain. Some of her medical history is: COPD, DM, CAD, PAD, L-AKA. Her surgical history is: triple bypass; removal of left knee prosthesis resulting in L-AKA.

- Nursing Diagnosis/Outcomes**
- 1) Ineffective gas exchange related to edema as evidence by poor Oxygen saturation, crackles, and tachypnea / Goal is to improve client's oxygenation.
  - 2) Excess fluid volume related to use of furosemide as evidence of crackles and edema, and high blood pressure / Goal is to reduce client's excess fluid.
  - 3) Risk for impaired skin integrity related to skin breakdown as evidenced by prolonged bedrest and presence of edema / Goal is to prevent skin breakdown.
  - 4) Powerlessness related to dependence on others as evidence by chronic illness and hospitalizations / Goal is to have client express a positiveness in spite of her extensive medical history and surgeries and receive positiveness from the nurse.

- Nursing Interventions**
1. Administer 80 mg of furosemide, BID per prescriber's order.
  2. Maintain the client in a high Fowler's position with the head of the bed elevated up to 90° each shift.
  1. Provide certain active and passive range of motion exercises two or three times a shift.
  2. Change client's position in bed every two hours.
  1. Once a shift, have the client express one positive aspect of her life in spite of having chronic illnesses and hospitalizations.
  2. Render to the client a positive thought, praise, or encouragement at least once a shift.



