N311 Care Plan #1

Lakeview College of Nursing

Dakota Clayton

Demographics (5 points)

Date of Admission 9/14/2022 MHC	**Client Initials** B.B.	**Age** 82	**Gender** Female
Race/Ethnicity White	**Occupation** Retired	**Marital Status** Widowed	**Allergies** Penicillin – anaphylaxis Green beans - hives
Code Status DNR	**Height** 152.4 cm (60 in)	**Weight** 92 kg (202 lbs)	

Medical History (5 Points)

Past Medical History: Diabetes (patient did not report date)

Past Surgical History: Right knee replacement (patient did not report date)

Left knee replacement (patient did not report date)

Right hip replacement (patient did not report date)

Right femur surgery (patient did not report date)

Family History: Lung cancer (Father); Diabetes (Mother)

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): Patient reported being a former cigarette smoker but quit use “years ago” and did not recall how long she smoked cigarettes, or how many she smoked per day. Patient does not currently use any tobacco, alcohol, or other drugs.

Admission Assessment

Chief Complaint (2 points): Urinary retention

History of Present Illness – OLD CARTS (10 points): On 9/6/2022, patient was admitted to Sarah Bush Lincoln hospital with swelling (edema) in both lower extremities and in the face. Patient had been experiencing the edema for approximately a week. Patient reported a dull pain related to the edema, and reported a 2 on the 0-10 numerical pain scale. Patient did not report any relieving or aggravating factors, but had been treated for multiple urinary tract infections (UTIs)

before, which she believed were related to her present edema and urinary retention. Patient did not report a time of day when the pain is the worst.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Congestive Heart Failure (CHF)

Secondary Diagnosis (if applicable): Urinary retention

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

Heart failure, also known as congestive heart failure (CHF), is a chronic condition of the heart and associated structures that continues to progress over time ("Heart Failure," 2022). According to Malik et al. (2022), heart failure is a general term that describes a, "clinical condition where the heart cannot pump enough blood to meet the body's requirements" (para.1). Capriotti & Frizzell (2020) have a more specific definition of heart failure, defining heart failure as a, "condition commonly resulting from a weakened ventricular muscle that is unable to sufficiently pump blood to meet the needs of the tissues" (p. 399). CHF is becoming increasingly more common in the United States, with over 500,000 individuals being diagnosed every year and over 300,000 deaths annually (Capriotti & Frizzell, 2020). According to Capriotti & Frizzell (2020), the risk for CHF increases with age – lifetime CHF risk is 20% for individuals 40 years of age and older, and for the 65 years and older population the incidence rate for CHF is 10 per 1,000 (p. 399). As the population in the United States continues to age, CHF statistics are expected to continue rising.

Capriotti & Frizzell (2020) state several ways that heart failure can be defined, including, "acute or chronic, systolic or diastolic dysfunction, … right-side or left-side failure, and forward or backward failure" (p. 411). Capriotti and Frizzell (2020) also explain that it is important to

understand that these classifications are only applicable early in CHF, and as the condition progresses these categorizations begin to combine. Overall, CHF is a progressing condition, and in the early stages of CHF the heart will use multiple adaptive and/or compensatory mechanisms to try and continue normal cardiac output (Malik et al., 2022). Malik et al. (2022) describes some compensatory mechanisms that occur in the heart with early-stage CHF, including myocardial hypertrophy, myocardial hypercontractility, and changes in myocyte regeneration (para. 11). As CHF continues to develop, the decreased cardiac output triggers multiple other compensatory mechanisms, including the following: 1) the release of epinephrine and norepinephrine from sympathetic nervous system (SNS) activation, 2) the stimulation of the renin-angiotensin-aldosterone system (RAAS) to increase sodium retention and subsequently water retention, and 3) ventricular remodeling that leads to enlargement of the left ventricle (Capriotti & Frizzell, 2020; Malik et al., 2022). Malik et al. (2022) explains that while these adaptive mechanisms are aimed at opposing the effects of CHF, many end up eventually worsening the condition. Overall, CHF progression has negative effects on many, if not all, of the bodies major systems, most notably the pulmonary and renal systems (Capriotti & Frizzell, 2020).

Signs and symptoms of CHF present differently as an individual progresses through early-to-late stages of the condition. Capriotti and Frizzell (2020) provide some signs and symptoms of mild-to-moderate CHF, including the following: history of CHF risk factors (hypertension, diabetes, obesity, etc.), dyspnea with exertion, orthopnea, and paroxysmal nocturnal dyspnea (PND) (p. 418). In the moderate stages of CHF, new symptoms such as pulmonary crackles and diminished pulses begin to appear (Capriotti & Frizzell, 2020). Capriotti & Frizzell (2020) describe severe CHF signs and symptoms as jugular vein distention, cyanosis of lips and nailbeds, cardiomegaly, peripheral edema, tachycardia, and ascites (p. 421).

According to Capriotti & Frizzell (2020), a diagnosis of CHF relies on the Framingham Criteria for Diagnosis of Congestive Heart Failure – for a confirmed diagnosis, one major and two minor criteria must be present (p. 421-422). Some major Framingham criteria include PND, jugular vein distention, cardiomegaly, and pulmonary crackles (Capriotti & Frizzell, 2020). Some minor Framingham criteria include peripheral edema, dyspnea with exertion, pleural effusion, and tachycardia (Capriotti & Frizzell, 2020). Capriotti and Frizzell also list labs that can indicate heart failure – for example, brain natriuretic peptide (BNP) is a major marker for CHF, and levels of over 500 indicate heart failure (Capriotti & Frizzell, 2020). Electrolyte levels can also indicate CHF – low sodium and potassium levels often occur with CHF due to increased fluid volume (Capriotti & Frizzell, 2020).

With the different stages of CHF, different levels of treatment are needed. For example, in the early stages of CHF, lifestyle modifications (low-fat diet, increased physical activity, etc.) and pharmaceuticals (ACE inhibitors, beta blockers, etc.) are commonly used (Capriotti & Frizzell, 2020). As CHF progresses, more invasive treatments, like cardiac pacemakers and balloon pumps, are more appropriate (Capriotti & Frizzell, 2020).

My patient was diagnosed with CHF after meeting multiple of the Framingham diagnoses criteria, including cardiomegaly, peripheral edema, and dyspnea with exertion. She was at high risk for CHF due to her age over 65 and history of diabetes. She is currently using pharmaceuticals including ACE inhibitors and beta blockers to treat her heart failure.

Pathophysiology References (2) (APA):

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

Heart failure (congestive heart failure). (2022, January 21). Cleveland Clinic. Retrieved October 4, 2022 from https://my.clevelandclinic.org/health/diseases/17069-heart-failure-understanding-heart-failure

Malik, A., Brito, D., Vaqar, S. & Chhabra, L. (2022, May 22). Congestive heart failure. *StatPearls*, https://www.ncbi.nlm.nih.gov/books/NBK430873/

Laboratory Data (20 points)
If laboratory data is unavailable, values will be assigned by the clinical instructor

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	4.0 – 4.9 x10^6/ mcL (Females)	N/A	4.32 x10^6/ mcL	
Hgb	12 -16 g/dL (F)	N/A	11.5 g/dL	Hgb levels are low due to fluid retention related to CHF causing the bloodstream to dilute (Van Luuewen & Bladh, 2021, p. 699) .
Hct	37 – 48%	N/A	35.2%	Hct value is low due to increased fluid volume in the bloodstream related to CHF – this increase in fluid volume can cause hemodilution, which presents with a decrease in hematocrit (Capriotti & Frizzell, 2020, p. 280).
Platelets	150 - 400 K/ mcL	N/A	152 K/ mcL	
WBC	4 – 10 KmcL	N/A	5.6 KmcL	
Neutrophils	40 – 80%	N/A	61.7%	
Lymphocytes	20 – 40%	N/A	27.7%	
Monocytes	2 – 10%	N/A	7.8%	
Eosinophils	1 – 7%	N/A	1.5%	
Bands	0 -10%	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 mmol/L	N/A	141 mmol/L	
K+	3.5 – 5.2 mmol/L	N/A	3.4 mmol/L	Potassium level is low because aldosterone causes potassium excretion with heart failure (Capriotti & Frizzell, 2020, p. 421).
Cl-	95 – 105 mmol/L	N/A	100 mmol/L	
CO2	35 – 45 mmol/L	N/A	36 mmol/L	
Glucose	< 100 mg/dL	N/A	142 mg/dL	Glucose levels are increased in patients with diabetes, which this patient has a diagnosed history of (Van Luuewen & Bladh, 2021, p. 653).
BUN	8 – 25 mg/dL	N/A	18 mg/dL	
Creatinine	0.6 – 1.3 mg/dL	N/A	0.72 mg/dL	
Albumin	3.4 – 5.0 g/dL	N/A	N/A	
Calcium	8.7 – 10 mg/dL	N/A	8 mg/dL	In adults, hypocalcemia is most commonly due to low dietary calcium intake (Capriotti & Fizzell, 2020, p. 130).
Mag	1.5 – 2.5 mg/dL	N/A	1.8 mg/dL	
Phosphate	2.5 – 4.5 mg/dL	N/A	N/A	
Bilirubin	0.3 – 1.0 mg/dL	N/A	N/A	
Alk Phos	35 – 150 units/mL	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	Value on	Today's	Reason for Abnormal

	Range	Admission	Value	
Color & Clarity	Pale yellow and clear	N/A	Yellow & clear	
pH	4.5- 7.8	N/A	5.5	
Specific Gravity	1.005 – 1.03	N/A	1.009	
Glucose	Normal	N/A	Normal	
Protein	Negative	N/A	Negative	
Ketones	Negative	N/A	Negative	
WBC	< 5	N/A	1	
RBC	< 5	N/A	< 1	
Leukoesterase	N/A	N/A	Negative	

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	Positive - Gram neg. bacilli	Positive bacterial cultures in urine are indicative of a present urinary tract infection (Van Luuewen & Bladh, 2021, p. 457).
Blood Culture	Negative	N/A	Negative	
Sputum Culture	N/A	N/A	N/A	
Stool Culture	N/A	N/A	N/A	

Lab Correlations Reference (1) (APA):

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

Van Leeuwen, A. M., & Bladh, M. L. (2021). *Davis's comprehensive handbook of laboratory & diagnostic tests with nursing implication* (9th ed.). F. A. Davis Company

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

Chest x-ray: During patient's hospital stay, a chest x-ray was completed. According to Capriotti & Frizzell (2020), the chest x-ray is essential to the patient's diagnosis of CHF because cardiomegaly is often identified using this diagnostic test (p. 421). The impression from the patient's chest x-ray was documented as cardiomegaly with pulmonary edema, which contributed to her diagnosis of CHF.

Diagnostic Imaging Reference (1) (APA):

Capriotti, T. & Frizzell, J.P. (2020). *Pathophysiology: Introductory concepts and clinical perspectives.* (2nd ed.). F.A. Davis Company.

Current Medications (10 points, 2 points per completed med)
5 <u>different</u> medications must be completed

Medications (5 required)

Brand/ Generic	Eliquis/ Apixaban	Vitamin C/ Ascorbic acid	Gablofen/ Baclofen	Coreg/ Carvedilol	Prinivil/ Lisinopril
Dose	2.5 mg	500 mg	10 mg	6.25 mg	5 mg
Frequency	BID	Daily	BID	BID	Daily
Route	PO	PO	PO	PO	PO
Classification	Anti-coagulant	Dietary vitamin	Muscle relaxer	Beta blocker	ACE inhibitor
Mechanism of Action	"Medication acts as a selective, reversible site inhibitor of factor Xa, inhibiting both free and bound factor. Medication inhibits thrombin-induced platelet aggregation" (Vallerand & Sanoski, 2023, p. 171).	Vitamin C (Ascorbic Acid) absorption is an energy-dependent process through both simple diffusion and active transport. Vitamin C acts as an antioxidant and a cofactor to multiple metabolic processes within the body (Abdullah, Jamil & Attia, 2022).	"Medication inhibits reflexes at the spinal level" (Vallerand & Sanoski, 2023, p. 209).	Beta blockers block beta 1 and beta 2 receptor sites from activation (Vallerand & Sanoski, 2023).	"ACE inhibitors block the conversion of angiotensin I to the vasoconstrictor angiotensin II" (Vallerand & Sanoski, 2023, p. 155).
Reason Client Taking	Decrease risk of stroke	Decrease risk of vitamin C deficiency	Pain management	Hypertension control	Hypertension control
Contraindications (2)	1. Previous severe hypersensitivity	1. Blood disorders (sickle cell	1. Hypersensitivity	1. Pulmonary edema 2. Asthma	1. History of angioedema with other

	reactions 2. Severe hepatic impairment (Vallerand & Sanoski, 2023)	anemia, thalassemia) 2. Diabetes (Abdullah, Jamil & Attia, 2022)	2. Epilepsy (Vallerand & Sanoski, 2023)	(Vallerand & Sanoski, 2023)	ACE inhibitors 2. Pregnancy (Vallerand & Sanoski, 2023)
Side Effects/Adverse Reactions (2)	1. Increased bleeding risk 2. Hypersensitivity reactions (anaphylaxis) (Vallerand & Sanoski, 2023)	1. Headaches 2. Nausea (Abdullah, Jamil & Attia, 2022)	1. Nausea 2. Dizziness (Vallerand & Sanoski, 2023)	1. Hyperglycemia 2. Diarrhea (Vallerand & Sanoski, 2023)	1. Hypotension 2. Taste disturbances (Vallerand & Sanoski, 2023)

Medications Reference (1) (APA):

Abdullah, M., Jamil, R. T, & Attia, F. N. (2022, May 8). Vitamin C (ascorbic acid). *StatPearls*, https://www.ncbi.nlm.nih.gov/books/NBK499877/

Vallerand, A. H., & Sanoski, C. A. (2023). *Davis's Drug Guide for Nurses* (18th ed.). F.A. Davis Company.

Assessment

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

GENERAL: **Alertness:**	A&O x4. Patient was resting, calm, and open to assessment. Overall appearance was well-

Orientation: **Distress:** **Overall appearance:**	groomed and healthy.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score: 18** **Drains present: Y☐ N ☒** **Type:**	Patient's skin was warm, dry, and color was appropriate for ethnicity. Patient had light bruising and loose skin on both upper extremities, and scars on left and right knees from previous surgeries. Patient had a covered wound on the left heel that was assessed by the wound nurse earlier in the day. Skin turgor was elastic and < 3 seconds. Patient had no rashes or drains. Patient's Braden score was 18 which indicates low risk for pressure ulcers.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Patient's head and neck are symmetrical and trachea is midline without deviation. Auricles are symmetrical bilaterally with no visible or palpable lumps, lesions, or deformities. No visible drainage from ears. Patient's sclera are white bilaterally and conjunctiva pink and moist bilaterally with no visible drainage from eyes. Eye lids pink and moist. Patient displays right eye drooping and droop is not present in left eye. PERRLA bilaterally. EOMs intact bilaterally. Nose is symmetrical with septum midline. No visible drainage from nose. Patient has upper dentures, and overall dentition is good. Overall oral mucosa pink and moist with no noted lesions.
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill: < 3** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☒ N ☐** **Location of Edema: Lower extremities**	S1 and S2 heart sounds auscultated with no S3, S4, or murmurs noted. Cardiac rate is normal and cardiac rhythm is regular. Patient's peripheral pulses are palpable with radial pulse 2+. Capillary refill was < 3 seconds, and no jugular vein distention noted. Patient is displaying 2+ pitting edema in the left and right lower extremities, and reports no pain related to the edema.
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	**N/A**
GASTROINTESTINAL: **Diet at home:**	**N/A**

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:**	
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	**N/A**
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: <u>40 (Low risk)</u>** **Activity/Mobility Status:** **Independent (up ad lib)** **Needs assistance with equipment** **Needs support to stand and walk <u>X</u>**	**N/A**
NEUROLOGICAL: **MAEW: Y ☐ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐**	**N/A**

Orientation: **Mental Status:** **Speech:** **Sensory:** **LOC:**	
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	**N/A**

Vital Signs, 1 set (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0835	64	112/70	14	36.2 C	96%

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0845	Numerical (0 – 10)	N/A	0	N/A	N/A

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
Patient ate 75% of food this shift Patient drank 240 ml of fluids this shift	Patient voided 1x No BM

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client	**Rationale** • Explain why the nursing diagnosis was chosen	**Interventions (2 per dx)**	**Outcome Goal (1 per dx)**	**Evaluation** • How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Excessive fluid volume related to decreased cardiac output as evidenced by cardiomegaly, peripheral edema, urinary retention, decreased hemoglobin, decreased hematocrit, and fatigue.	This nursing diagnosis was given because patient has been experiencing peripheral edema of the lower extremities and face and this is the main cause of her pain.	1.Monitor patient's fluid volume 2.Educate and manage patient's urinary elimination patterns	1. Patient's fluid intake and output remain within expected limits	Patient responded well to nursing instructions and showed willingness to learn about factors relating to her excess fluid volume. Patient also understands the importance of proper urinary elimination practices.
2. Risk for electrolyte imbalance related to excessive fluid	This nursing diagnosis was given because the excess fluid volume	1. Monitor patient's serum electrolyte levels	1. Patient's electrolyte levels move to and stay within the expected limits.	The patient responded well to the nursing instructions and was willing to have

volume as evidenced by peripheral edema, urinary retention, hypocalcemia, and hypokalemia.	the patient is experiencing puts her at higher risk for detrimental electrolyte changes.	2.Educate patient and family about the risks of electrolyte imbalance		her electrolyte levels checked on a more frequent basis. Patient now understands the importance of maintaining proper electrolyte levels.

Other References (APA):

Phelps, L. L. (2020). *Sparks and Taylor's nursing diagnosis reference manual* (11th ed.) Wolters Kluwer.

Concept Map (20 Points):

Subjective Data

2/10 pain in extremities
Urinary hesitancy
Urinary retention
Fatigue

Nursing Diagnosis/Outcomes

Excessive fluid volume related to decreased cardiac output as evidenced by cardiomegaly, peripheral edema, urinary retention, decreased hemoglobin, decreased hematocrit, and fatigue.
Patient's fluid intake and output remain within expected limits
Risk for electrolyte imbalance related to excessive fluid volume as evidenced by peripheral edema, urinary retention, hypocalcemia, and hypokalemia
Patient's electrolyte levels move to and stay within the expected limits.

Objective Data

Low hgb (11.5 mg/dL)
Low hct (35.2%)
Low K+ (3.4 mmol/L)
Low Ca++ (8 mg/dL)
High blood glucose (142 mg/dL)
Positive bacterial urine culture
Chest x-ray indicating cardiomegaly
Pitting edema of extremities
VS: P: 64, B/P: 112/70, R: 14, T: 36.2 C, O2: 96%

Client Information

82 year old patient has congestive heart failure and urinary retention
Admitted to hospital due to edema of the lower extremities and face

Nursing Interventions

Monitor patient's fluid volume
Educate and manage patient's urinary elimination patterns
Monitor patient's serum electrolyte levels
Educate patient and family about the risks of electrolyte imbalance

Monitor patient’s fluid volume