N321 Care Plan #2

Lakeview College of Nursing

Cindy Ho

Demographics (3 points)

Date of Admission 6/11/22	**Client Initials** TB	**Age** 61	**Gender** M
Race/Ethnicity White/Caucasian	**Occupation** Not employed 3/2022	**Marital Status** Married	**Allergies** Niacin
Code Status Full Code	**Height** 175 cm	**Weight** 138.7 kg	

Medical History (5 Points)

Past Medical History: COPD with acute exacerbation, atrial fibrillation, lymphedema of lower extremity, morbid obesity (BMI 45.14), obstructive sleep apnea, hyperlipemia, respiratory failure requiring mechanical intubation

Past Surgical History: Vein ablation bilateral legs 2016, left hand ganglion cyst removal, tumor removal from back 1965

Family History: Father died of CHF at 55, paternal grandfather, paternal grandmother, and twin sister also died of CHF, mother: hypertension, maternal grandmother died of breast cancer

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): Former smoker, quit 25 years ago (1997), Never smokeless tobacco, No drug use, No alcohol

Assistive Devices: Rolling walker, nothing at home prior to hospitalization

Living Situation: Lives in a single family home with wife

Education Level: High School, 1979

Admission Assessment

Chief Complaint (2 points): Acute respiratory failure with hypoxia

History of Present Illness – OLD CARTS (10 points):

The present illness began on June 11, 2022. The patient's wife noticed he did not come down for breakfast. When she checked on her husband, his O2 saturation was 58%, and he was not responsive and did not make any sense. The wife called for EMS. The patient was taken to Paris Hospital, followed by airlift to Carle Hospital, where he did not gain consciousness until Wednesday, June 15, at Carle Hospital ICU. The patient does not recall events leading up to breakfast on Saturday.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Respiratory failure with hypoxia

Secondary Diagnosis (if applicable): COPD with acute exacerbation

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

When the respiratory system fails to maintain gas exchange, the body goes into respiratory failure. Respiratory failure is classified according to blood gases abnormalities as type 1 or type 2. Type 1 hypoxemic respiratory failure is more common and characterized by abnormally low arterial oxygen (PaO2) of less than 60 mmHg with a normal or below normal PaCO2. Gas exchange is impaired at the alveolar-capillary membrane in type 1 respiratory failure. Type 2 hypercapnia respiratory failure has PaCO2 greater than 50 mmHg (Shebl et al., 2022). When a patient with COPD develops respiratory failure, often the respiratory muscles cannot maintain sufficient alveolar ventilation to prevent hypercapnia (Elliott et al., 2019). Hypoxemia is commonly seen in hypercapnic respiratory failure in persons who are breathing room air.

Predicting when a patient will cease independent breathing and incur respiratory failure is challenging (Capriotti, 2020). Arterial blood gases (ABGs) should be evaluated in patients with respiratory problems. In patients with respiratory failure, there is usually a gradual increase in

arterial carbon dioxide and a decrease in arterial oxygen. Further tests such as a complete blood count (CBC), pulmonary function test, echocardiogram, and bronchoscopy may be used to investigate the underlying cause of the respiratory failure. A chest x-ray can visualize the structure or the chest and lungs.

Assessing the patient's symptoms using the "OLDCART" method helps determine the cause of respiratory failure. Assessing dyspnea on exertion or in the presence of edema can determine whether the problem is due to a cardiac condition or edema, indicating a cardiac disorder. A chronic cough can be associated with asthma, heart failure, TB, lung cancer, or COPD. A patient presenting with cough, pallor, weak pulse, and ankle edema probably has heart failure. The patient's whole clinical picture should be considered when deciding to intubate a patient in respiratory failure (Capriotti, 2020).

Pathophysiology References (2) (APA):

Capriotti, T. (2020). Chapter 20 Respiratory Inflammation and Infection. In *Davis Advantage for pathophysiology: Introductory concepts and clinical perspectives* (p.477). F.A. Davis.

Shebl, E., Mirabile, V. S., & Burns, B. (2022, May 4). *Respiratory Failure*. National Library of Medicine. Retrieved June 24, 2022, from https://www.ncbi.nlm.nih.gov/books/NBK526127/

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	Admission	Today's	Reason for Abnormal Value

	Range	Value	Value 6/17	
RBC	4.10-5.70	4.42	4.57	
Hgb	12.0-18.0	12.4	12.7	
Hct	37.0-51.0	40.6	41.7	
Platelets	140-400	176	176	
WBC	4.0-11.00	11.37	10.06	Acute infection due to cultures found in sputum culture (Capriotti, 2020).
Absolute Neutrophils	1.60-7.70	10.14		Acute infection due to cultures found in sputum culture (Capriotti, 2020).
Absolute Lymphocytes	1.00-4.90	0.49		Acute infection due to cultures found in sputum culture (Capriotti, 2020).
Absolute Monocytes	0.00-1.10	0.66		
Absolute Eosinophils	0.00-0.50	0.00		
Bands				

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

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na-	136-145	148	142	Inadequate water intake due to
K+	3.5-5.1	3.5	4.1	
Cl-	98-107	102	99	
CO2	22.0-29.0	37.0	31.0	Hypercapnia due to reduced ability to exhale carbon dioxide adequately (Capriotti, 2020).
Glucose	74-100	161	111	Recent consumption of high carbohydrate food or side effects of medication (Capriotti, 2020).
BUN	8-26	38	38	Possbile dehydration leading to concentrated urea in the urine (Capriotti, 2020).
Creatinine	0.55 - 1.30	1.38	1.10	Elevated creatinine due to edema (Capriotti, 2020).

Albumin				
Calcium	8.9 - 10.6	8.5	8.4	Electrolyte imbalance due to edema (Capriotti, 2020).
Mag	1.6 - 2.6 mg/dL	1.9	2.5	
Phosphate				
Bilirubin				
Alk Phos				
AST				
ALT				
Amylase				
Lipase				
Lactic Acid				

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				
PT				
PTT				
D-Dimer				
BNP				
HDL				
LDL				

Cholesterol				
Triglycerides	<150 mg/dL	118		
Hgb A1c				
TSH				

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Colorless-yellow	Light yellow		
pH	5.0 - 7.0	5.0		
Specific Gravity	1.003-1.035	1.007		
Glucose	Negative	Negative		
Protein	Negative	Negative		
Ketones	Negative	Negative		
WBC	0-25 uL	20		
RBC	0-20 uL	4		
Leukoesterase	Negative	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				
Blood Culture				
Sputum Culture				Few squamous epithelium cells/lpf Few PMNs Few gram + cocci
Stool Culture				

[Type here]

ABG Admission	ABG 6/15
pH 7.44	pH 7.48
PCO2 53.2	PCO2 50.7
PO2 38.8	PO2 71.8
HCO3 35.5	HCO3 37.5
Metabolic acidosis	Metabolic acidosis

Positive MRSA 6/16

Lab Correlations Reference (1) (APA):

Capriotti, T. (2020). In *Davis Advantage for pathophysiology: Introductory concepts and clinical perspectives*. F.A. Davis.

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

6/14 lower extremity venous duplex
Bilateral lower venous duplex was performed
Deep veins below the knees are not imagined as the pt lower legs demonstrate open wounds and irregular brawny bark like skin and patient's body habitus. These conditions would not allow for adequate insonation.

Echocardiogram - complete 2D with spectral/color doppler and definity
Reason for study: respiratory failure, volume overload
Interpretation summary: Technically very difficult study. Limited views were obtained. The contract agent Definity was used to enhance this study. There is mild global hypokinesis of the left ventricle.
There is mild concentric left ventricular hypertrophy. The right ventricle is mildly dilated. The right ventricular function is mildly hypokinetic. There is mild atrial enlargement.

Diagnostic Test Correlation (5 points):

Diagnostic Test Reference (1) (APA):

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

Home Medications (5 required)

Brand/Generic	low dose ASA	carvedilol (COREG)	bumetanide	simvastatin (Zocor)	amoxicillin clavulanate (AUGMENTIN)
Dose	100 mg	12.5	1 mg	20 mg	125 mg
Frequency	Daily	BID 2x/day with meals	Daily	Daily	BID
Route	Oral	Oral	Oral	Oral	Oral
Classification	nonopioid analgesic	alpha/beta-adrenergic blocking agent	Loop diuretic	Direct factor XA inhibitors	Broad spectrum antiinfective
Mechanism of Action	Blocks pain impulses by blocking COX-1 in CNS, reduces inflammation by inhibition of prostagladin synthesis; antipyretic action results from vasodilation of peripheral vessels	alpha/beta-adrenergic blocking activity, decreases cardiac output, causes vasodilation, reduction in peripheral vascular resistance	Acts on ascending loop of Henle by inhibiting re-absorption of chloride, sodium	Inhibits HMG-CoA reductase enzyme, which reduces cholesterol synthesis	Bacteriocial, interferes with cell wall replication of susceptible organisms
Reason Client Taking	Pain	Hyper-tension	Edema	Adjunct for primary hypercholesterolemia	Lymphedema in lower extremities
Contraindicatio	GI	Asthma,	Anuria,	Active hepatic	Hyper-

ns (2)	bleeding, vit K deficiency	pulmonary edema	hepatic coma	disease, hyper-sensitivity	sensitivity to penicillins, dialysis
Side Effects/Adverse Reactions (2)	Hepto-toxicity, angioedema	Bradycardia, Stevens-Johnson syndrome	Encepha-lopathy, loss of hearing	Liver dysfunction, pancreatitis	Seizures, anaphylaxis
Nursing Considerations (2)	Assess for pain, assess urine	Assess BP when beginning treatment, periodically thereafter, Assess pulse	Dehydration - weight and I/Os to determine fluid loss, fluid and electrolyte depletion	Rhabdo-myolysis, diet history: fat consump-tion, lipid profile	C. difficile-associated disease (**CDAD**) - bowel patterns before and during, superinfection

Hospital Medications (5 required)

Brand/ Generic	nystatin	lisinopriL	pantoprazole (Protonix)	rivaroxaban (XARELTO)	tamsulosin (Flomax) XR
Dose	100,000 unit/g	10 mg	40 mg	20 mg	0.4 mg
Frequency	BID	Daily	Daily before breakfast	Daily	Daily
Route	topical powder	Oral	Oral	Oral	Oral
Classifi-cation	topical antifungal (groin, adb, skin folds)	Antihyper-tensive, ACE inhibitor	Proton-pump inhibitor	Direct factor XA Inhibitors, anticoagulant	Benign prastatic hypertrophy / micturition agents
Mechanism of Action	Interferes with fungal DNA replication	Selectively suppresses RAAS system	suppresses gastric secretion by inhibiting hydrogen/potassium ATPase enzyme system in gastric parietal cell	Novel oral anticoagulant that selectively and potently inhibits coagulation factor Xa	Binds preferentially to alpha adrenoceptor subtype, which is mainly located in the prostate
Reason	Fungal	Hypertension	GERD	DVT	BPH

Client Taking	infection in groin, abdomen, skin folds			prophylaxis	
Contra-indications (2)	Hyper-sensitivity, pregnancy	Hyper-sensitivity, angioedema	Hyper-sensitivity to this product or benzimidazole, propon pump hypersensitivity	Severe hyper-sensitivity, active bleeding	hepatic disease, prostate cancer
Side Effects/ Adverse Reactions (2)	Nausea, rash, urticaria	Vertigo, stroke	pancreatitis, CDAD	Bleeding, increased hepatic enzymes	priapism, angioedema
Nursing Consider-ations (2)	Obtain culture, histologica l tests to confirm organism, antibiotic therapy	Hypertension : B/P, pulse q4h beginning treatment and periodically, angioedema	Diarrhea with blood or mucus, toxic epidermal necrolysis	Monitor for bleeding, avoid abrupt dis-continuation	Assess prostatic hyperplasia and orthostatic hypotension

Medications Reference (1) (APA):

Skidmore-Roth, L. (2022). *Mosby's 2022 nursing drug reference*. Elsevier.

Assessment

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

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	 Alert and oriented to person, place, time. No visible signs of distress and well groomed. Atraumatic
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:**	 Skin color is normal Warm Left calf small wound

Wounds: . **Braden Score: 19** **Drains present: Y☐ N X☐** **Type:**	Cleaned with shield barrier cream cloths. Apply aquacel/hydrofiber over wound on left calf draining area and covered with abd pad. Secured with Kerlix.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	 Normocephalic, head is midline to the spine No drainage, swelling EOM intact, sclera white, conjuntiva pink and moist, bifocal eye glasses Does not like to wear his dentures
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N X Edema Y X N☐** **Location of Edema:**	 Clear S1 and S2 sounds without murmurs, gallops, or rubs 2+ < 3 seconds Lower legs, bilateral
RESPIRATORY: **Accessory muscle use: Y☐ N X** **Breath Sounds: Location, character**	
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N X** **Nasogastric: Y ☐ N X** **Size:** **Feeding tubes/PEG tube Y ☐ N X** **Type:**	 Wife cooks all meals which include a variety of food groups. 1.75 m 138.7 kg Normoactive bowel sounds in all 4 quadrants 6/20 afternoon Abdomen soft, nontender on palpation without any masses or pain. No scars or wounds noted.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:**	 Amber with sedimentation Turbid 800 ml, voided twice

Pain with urination: Y ☐ N X **Dialysis: Y ☐ N X** **Inspection of genitals:** **Catheter: Y X N ☐** **Type:** **Size:**	 Non-latex 16 FR
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☐** **Fall Risk: Y X N☐** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk X**	 Walker 60 Rolling walker, did not use prior to hospitalization
NEUROLOGICAL: **MAEW: Y ☐ N X** **PERLA: Y X☐ N☐** **Strength Equal: Y ☐ N ☐ if no - Legs ☐** **Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	 Alert and oriented to person, place, time, situation Clear Awake and alert
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):**	 The client has a supportive wife and very close with his family. Christian

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

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0735	80	118/76	18	36.6	98

1030	84	113/58	18	36.9	91

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0735	Word		Denies having any pain		The patient is managing the pain by taking aspirin.
1030	Word		Denies having any pain		The patient is managing the pain by taking aspirin.

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: **Location of IV:** **Date on IV:** **Patency of IV:** **Signs of erythema, drainage, etc.:** **IV dressing assessment:**	18G Anterior, lower right forearm 6/12/22 Open No signs of erythema or drainage Dressing is dry and clean Midline catheter - double lumen left basilic vein (medial side of arm) Dry, clean, without erythema or drainage

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
Water intake 480 mL	Voided urine 800 mL

Nursing Care

Summary of Care (2 points)

Overview of care: Vitals were taken and dressing on the lower extremities were changed.

Procedures/testing done: None

Complaints/Issues: The patient had pain in his knees due to positioning of the mattress underneath. A pillow was placed underneath the knee to relax the joint.

Vital signs (stable/unstable): Stable

Tolerating diet, activity, etc.: Dyspnea on exertion

Physician notifications: No

Future plans for client: Educate on oxygen tank safety

Discharge Planning (2 points)

Discharge location: Swing bed Paris Hospital

Home health needs (if applicable):

Equipment needs (if applicable): Rolling walker, oxygen tank, nasal cannula

Follow up plan: Follow up appointments with pulmonologist and general practitioner

Education needs: Oxygen safety

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

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client	**Rationale** • Explain why the nursing diagnosis was chosen	**Interventions (2 per dx)**	**Outcome Goal (1 per dx)**	**Evaluation** • How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Ineffective breathing pattern related to respiratory failure with hypoxemia as evidenced by ABGs.	The client was found with O2 saturation 58% at home by his wife.	**1.** Monitor rate and depth of respirations. **2**. Ventilation assistance	**1.** Unlabored respirations at 12 to 20 breaths per minute and maintain oxygen saturation above 90%.	1. The client will demonstrate how to properly store oxygen tank and use a nasal cannula. 2. The client will practice deep breathing with the use of an incentive spirometer.
2.Risk for imparied skin integrity related to lymphedema of the lower extremities as evidenced by skin breakdown.	The client's skin integrity is compromised due to lymphedema.	**1.** Assess the wound and change dressing as needed. **2.** Assess the client's nutritional status, including weight and serum albumin levels.	**1.** Absence of redness or irritation in the lower extremities.	1. The area will stay wrapped to prevent infection. 2. Nutritionist will educate on diet high in protein to promote wound healing.

3. Impaired urinary elimination related to enlargement of prostate gland as evidence by urine retention.	The client had very little urine output and verbally communicated he had trouble starting a stream.	**1.** Encourage regular intake of cranberry juice to prevent infection. **2**.Keep indwelling catheter patent, maintain drainage tubing kink-free.	**1.** The client voids in sufficient quantity with no palpable bladder distention.	1. The client will monitor urine character, color and output. 2. The client will continue taking Flomax as prescribed.

Other References (APA):

Haugen, N., & Galura, S. (2022). *Ulrich & Canale's Nursing Care Planning Guides: Prioritization, delegation, and clinical reasoning*. Elsevier.

Concept Map (20 Points):

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Subjective Data

The patient denies any pain. Last BM was today 6/20 after lunch. The client complained of pain in his knee. Position was changed and a pillow was placed under the knee. The client says he feels much better with the supplemental oxygen.

Nursing Diagnosis/Outcomes

Ineffective breathing pattern related to respiratory failure with hypoxemia as evidenced by ABGs.
Unlabored respirations at 12 to 20 breaths per minute and maintain oxygen saturation above 90%.

Risk for imparied skin integrity related to lymphedema of the lower extremities as evidenced by skin breakdown.
Absence of redness or irritation in the lower extremities.

Impaired urinary elimination related to enlargement of prostate gland as evidence by urine retention.
The client voids in sufficient quantity with no palpable bladder distention.

Objective Data

The patient is awake and A&O x4. The patient is well groomed and sitting comfortably up in bed. Morbid obesity with BMI of 45.1. Skin temperature is normal. Pulse within normal range, normal respirations, and blood pressure 118/76. Maintaining O2 saturation 90+ with assistance of nasal cannula 2L per minute.

Client Information

Name: TB
Weight: 138.7 kg
Height: 175 cm
Allergy: Niacin
61-year-old male with a history of COPD was admitted for respiratory failure with hypoxemia. The client is compliant.

Nursing Interventions

1. Ineffective breathing pattern
The client will demonstrate how to properly store oxygen tank and use a nasal cannula.
The client will practice deep breathing with the use of an incentive spirometer.
2. Risk for impaired skin
The area will stay dry and wrapped to prevent infection.
Nutritionist will educate on diet high in protein to promote wound healing.
3. Impaired urinary elimination
The client will monitor urine character, color, and output.
The client will continue taking Flomax as prescribed.