N441 Care Plan

Lakeview College of Nursing

Trevor Davis

Demographics (3 points)

Date of Admission	Patient Initials	Age	Gender
1/22/2021	DF	56	Female
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White	Disabled	Widowed	Penicillin
Code Status	**Height**	**Weight**	
DNR	160 cm	149.2 kg	

Medical History (5 Points)

Past Medical History:

DF has a history of hypothyroidism, hyperlipidemia, COPD, CAD, myocardial infarction, type II diabetes, hypertension, major depressive disorder, OSA, pulmonary emphysema, tinnitus, anemia, and urinary incontinence.

Past Surgical History:

DF has had a full hysterectomy, hernia repair, cardiac catheterization with stents, uvulectomy, and tracheostomy placement with surgical repair of hemorrhage.

Family History:

No family history was charted. Patient could not speak to establish a family history.

Social History (tobacco/alcohol/drugs):

Her chart states that prior to admission, DF smoked one pack of cigarettes per day. She also smoked marijuana recreationally. She denied alcohol use at admission. DF has been free of nicotine and marijuana for over a month.

Assistive Devices:

DF has a history of gait abnormality with mobility. She uses a walker, cane, and sometimes a wheelchair if needed.

Living Situation:

DF is widowed and lives alone in Mattoon, Illinois.

Education Level:

Education level was not charted and was not accessible since the patient could not speak.

Admission Assessment

Chief Complaint (2 points): "I'm very short of breath"

History of present Illness (10 points):

DF presented to the ED with shortness of breath and chest pain that is worse with exertion. Her condition started three days ago and has progressively worsened. She tried to correct her SOB with supplemental home oxygen. She is prescribed 5 liters/ minute to help with COPD. She denies any pain. DF tested positive for COVID and treatment is started with dexamethasone and remdesivir, along with high flow oxygen via a non-rebreather mask.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): COVID-19 pneumonia

Secondary Diagnosis (if applicable):.

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

Pneumonia is a type of inflammation of the lung parenchyma that bacteria, viruses, or fungi may cause. Pneumonia commonly causes complications and potentially death. Many patients that develop pneumonia have acute or underlying conditions that impair their body's defense mechanisms. Classifications of pneumonia include community-acquired, hospital-

acquired, and aspiration pneumonia (Hinkle & Cheever, 2018). DF developed viral pneumonia related to COVID-19. It began with a nagging cough and shortness of breath. Her SaO2 at arrival to the ED was 65%. Her oxygen saturation did not rise enough with high flow oxygen and BiPAP at 100%. She was placed on a ventilator and is still recovering.

The upper airway usually prevents particles and pathogens from reaching the sterile lower portion of the respiratory tract. White blood cells move into spaces of the alveoli to fight any infection that may be present. The area where oxygen and carbon dioxide usually are is taken by white blood cells and mucosal secretions. This occlusion of the alveolar space leads to dyspnea and poor oxygenation (Hinkle & Cheever, 2018). DF has purulent drainage that is suctioned regularly.

Signs and symptoms of pneumonia can vary depending on the severity. Shortness of breath, tachypnea, fever, tachycardia, hypertension, chest pain, coughing, and low oxygen saturation are common symptoms of pneumonia. For effective breathing, accessory muscles are often involved (Hinkle & Cheever, 2018). Non- specific symptoms may include nausea, vomiting, and headache. Auscultation of the lower lungs may reveal crackles related to fluid buildup (Capriotti & Frizzell, 2016). DF presented with coughing and shortness of breath, and a nagging cough.

Pneumonia can be diagnosed with a chest x-ray and a chest CT. A CBC with differential will help determine if the pneumonia is bacterial or viral. ABGs determine the patient's oxygenation status and acid-base levels. Respiratory acidosis is common with pneumonia (Capriotti & Frizzell, 2016). Chest angiography is done for patients with pneumonia resulting from COVID 19 (Bai et al., 2020). DF's chest CT revealed infiltrates with bilateral perihilar

interstitial opacities. Her chest x-ray showed no pleural effusion. DF's ABG on admission showed a paO2 of 35% and saO2 of 65%.

Treatment for viral pneumonia is primarily supportive. Hydration is an essential part of the treatment plan since tachypnea and fever may result from fluid loss. Antipyretics may be used to treat fever and headache. Antitussive medications help treat associated cough. Oxygen therapy treats hypoxemia, and endotracheal intubation with mechanical ventilation may be required (Hinkle & Cheever, 2018). DF was put on an antiviral, remdesivir, and a corticosteroid, dexamethasone, along with fluids and oxygen. An endotracheal tube with mechanical ventilation was implemented as DF's condition declined. A tracheostomy was ultimately put in place due to extended endotracheal intubation.

Pathophysiology References (2) (APA):

Bai, H. X., Hsieh, B., Xiong, Z., Halsey, K., Choi, J. W., Tran, T. M. L., Pan, I., Shi, L.-B., Wang, D.-C., Mei, J., Jiang, X.-L., Zeng, Q.-H., Egglin, T. K., Hu, P.-F., Agarwal, S., Xie, F., Li, S., Healey, T., Atalay, M. K., & Liao, W.-H. (2020). Performance of radiologists in differentiating COVID-19 from viral pneumonia on chest CT. *Radiology*, 200823. https://doi.org/10.1148/radiol.2020200823

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

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

Laboratory Data (15 points)

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

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	3.8-5.41	4.08	2.5	Low Red blood cell count could be explained by a nutritional deficit related to low intake of iron and vitamins required for erythropoiesis (Van Leeuwen & Bladh, 2017, p. 497).
Hgb	11.3-15.2	11.7	7.5	Decreased hemoglobin can be explained by anemia present from a lack of iron intake in diet related to failure to thrive (Van Leeuwen & Bladh, 2017, p. 480).
Hct	33.2-45.3%	37.3	25.3	Decreased hematocrit could be explained by anemia related to a nutritional deficit and recent blood loss from hemorrhage. (Van Leeuwen & Bladh, 2017, p. 476).
Platelets	149-493 K	324	243	Expected finding
WBC	4-11.7 K	10.6	7.9	Expected finding
Neutrophils	45.3-79	78.2	N/A	Expected finding
Lymphocytes	11.8-45.9	13.8	17	Expected finding
Monocytes	4.4-12	5.1	3	The low monocyte count does not correlate with the patient's other white cell counts. A possible reason for decreased monocytes is treatment for cancers or immunosuppression (Van Leeuwen & Bladh, 2017, p. 517) DF had some labs that could be indicators for cancer.
Eosinophils	0-6.3	1.8	4	Expected finding
Bands	N/A	N/A	N/A	N/A

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

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal

Na-	135-145 mmol/L	136	141	Expected finding
K+	3.5-5.1 mmol/L	3.8	4.4	Expected finding
Cl-	98-107 mmol/dL	92	105	Decreased chloride at admission could be related to chronic respiratory acidosis related to COPD (Van Leeuwen & Bladh, 2017, p. 397).
CO2	22-30%	34	30	Elevated CO2 at the time of admission is likely related to chronic respiratory acidosis related to COPD (Van Leeuwen & Bladh, 2017, p. 397).
Glucose	70-99 mg/dL	137	99	Glucose could be elevated in response to glucose intolerance related to type two diabetes. It could be low due to administration of insulin, lack of nutritional intake, or related to stress from respiratory distress (Van Leeuwen & Bladh, 2017, p. 857).
BUN	6-20 mg/dL	20	30	Increased BUN could be related to decreased renal excretion related to diabetes (Van Leeuwen & Bladh, 2017, p. 1564).
Creatinine	0.5-0.9 mg/dL	0.97	0.82	Expected finding
Albumin	3.5-5.2 g/dL	N/A	N/A	N/A
Calcium	8.6-10.4 mmol/L	N/A	N/A	N/A
Mag	1.6-2.4 mEq/L	N/A	N/A	N/A
Phosphate	2.5-4.5 mmol/L	N/A	N/A	N/A
Bilirubin	0-1.2 mmol/L	N/A	N/A	N/A
Alk Phos	35-105 U/L	N/A	N/A	N/A
AST	0-32 U/L	N/A	N/A	N/A

ALT	0-33 U/L	N/A	N/A	N/A
Amylase	60-160 U/L	N/A	N/A	N/A
Lipase	20-180 U/L	N/A	N/A	N/A
Lactic Acid	0.5-2	N/A	N/A	N/A
Troponin	<0.05 mcg/ L	N/A	N/A	N/A
CK-MB	0-5 ng/mL	N/A	N/A	N/A
Total CK	M: 50-204 U/L F: 36-160 U/L	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 (2/28)	Today's Value	Reason for Abnormal
INR	0.86-1.14	N/A	1.05	Expected finding
PT	11.9-15 sec	N/A	14	Expected finding
PTT	60-70 sec	N/A	N/A	N/A
D-Dimer	<0.5 mcg/mL	1.22	N/A	A D-dimer that is elevated reveals the presence of a VTE (Van Leeuwen & Bladh, 2017, p. 857). DF had an upper right arm venous duplex that showed a DVT.
BNP	<100 pg/mL	N/A	N/A	N/A
HDL	>60 mg/dL	N/A	N/A	N/A
LDL	<130 mg/dL	N/A	N/A	N/A
Cholesterol	<200 mg/ dL	N/A	N/A	N/A
Triglycerides	<150mg/ dL	N/A	N/A	N/A

Hgb A1c	<6.4%	N/A	N/A	N/A
TSH	0.4-4.0 mU/L	N/A	N/A	N/A
CRP	<1 mg/dL	4.3	N/A	C- reactive protein can be elevated in response to lung inflammation and congestion related to pneumonia (Van Leeuwen & Bladh, 2017, p. 623).

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 and clear	N/A	N/A	N/A
pH	4.5-8	N/A	N/A	N/A
Specific Gravity	1.005-1.03	N/A	N/A	N/A
Glucose	Negative	N/A	N/A	N/A
Protein	<20 mg/dL	N/A	N/A	N/A
Ketones	Negative	N/A	N/A	N/A
WBC	<5 hpf	N/A	N/A	N/A
RBC	<5 hpf	N/A	N/A	N/A
Leukoesterase	Negative	N/A	N/A	N/A

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
pH	7.35-7.45	7.42	7.42	Expected finding

PaO2	80-100%	35%	87.6%	PaO2 is low due ineffective gas exchange related to pulmonary congestion and pneumonia (Hinkle & Cheever, 2018).
PaCO2	35-45 mmHg	45	50.5	PaCO2 is likely high due to COPD and the lung's inability to get rid of carbon dioxide (Hinkle & Cheever, 2018).
HCO3	22-26 mmol/ L	27.4	31	HCO3 is likely elevated to compensate for an acidotic state to maintain a pH that is in a normal range (Van Leeuwen & Bladh, 2017).
SaO2	95-100%	65%	96.5%	Oxygen saturation is low due ineffective gas exchange related to pulmonary congestion and pneumonia (Hinkle & Cheever, 2018).

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	Negative	N/A	N/A	N/A
Blood Culture	Negative	N/A	N/A	N/A
Sputum Culture	Negative	N/A	N/A	N/A
Stool Culture	Negative	N/A	N/A	N/A

Lab Correlations Reference (APA):

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

Van Leeuwen, A. M., & Bladh, M. L. (2017). *Davis's comprehensive handbook of laboratory and diagnostic tests with nursing implications* (7 ed.). F.A. Davis Company.

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

Chest X-ray

- A chest x-ray is done to evaluate cardiac, respiratory, and skeletal structures within the lung cavity to assess the potential for diseases like pneumonia and heart failure (Van Leeuwen & Bladh, 2017, p. 387). This test was done diagnostically in response to DF's shortness of breath along with a diagnosis of pneumonia.

12 lead Electrocardiogram

- An EKG is used to evaluate electrical impulses of the heart to diagnose arrythmias, blocks, damage, or infection (Van Leeuwen & Bladh, 2017, p. 727). This test as done to rule out dysthymias or heart block in addition to DF's pneumonia.

Venous duplex of lower and upper extremities

- A venous duplex is ordered to determine the presence of a thrombus or abnormality of the affected extremity (Van Leeuwen & Bladh, 2017, p. 1605). DF possibly had signs of a deep vein thrombosis due to lack of mobility and long-term bedrest.

Computed tomography of the abdomen and chest (CT)

- A CT is done to visualize abdominal structures to determine abnormalities like abscesses, tumors, or bleeding (Van Leeuwen & Bladh, 2017, p. 529). DF likely had a CT of the chest and abdomen to determine the cause of her respiratory issues and rule out other complications.

Bronchoscopy

- A bronchoscopy allows for direct visualization of the larynx, trachea, and bronchial tree with a flexible or rigid scope (Van Leeuwen & Bladh. 2017, p. 326). DF had multiple bronchoscopes to assess her lung structures for infection, remove copious secretions, and clots.

Diagnostic Test Correlation (5 points):

DF's chest x-ray showed moderated heart enlargement with no pleural effusions. Her chest CT without contrast showed a small effusion in the left lung. The CT with contrast showed bilateral infiltrates with a right perihilar mass. Adenopathy was noted. The 12 lead EKG revealed a normal sinus rhythm with pre-atrial contractions. The lower extremity venous duplex showed normal blood flow in all major veins bilaterally. The upper venous duplex revealed a deep vein thrombosis in the upper right arm. DF has had several bronchoscopies in both lungs during her admission. Copious amounts of secretions were removed. Bronchoscopy was used to remove clots after hemorrhage from her tracheostomy site.

Diagnostic Test Reference (APA):

Van Leeuwen, A. M., & Bladh, M. L. (2017). *Davis's comprehensive handbook of laboratory and diagnostic tests with nursing implications* (7 ed.). F.A. Davis Company.

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

Home Medications (5 required)

Brand/Generic	Flonase/ fluticasone (Jones & Bartlett Learning, 2019)	Buspar/ buspirone (Shields et al., 2019).	Lipitor/ Atorvastatin (Shields et al., 2019)	Synthroid/ levothyroxine (Frandsen & Pennington, 2018).	Plavix/ clopidogrel (Shields et al., 2019)
Dose	1 spray/ nostril (88 mcg)	15 mg	80 mg	20 mcg	75 mg

Frequency	PRN	Q morning	Daily	Daily	Daily
Route	Nasal	PO	PO	PO	PO
Classification	Antiasthmatic, anti-inflammatory	Antianxiety agent benzodiazepine	Antihyperlipidemic	Synthetic thyroid (T4) agent	Anticoagulant-antiplatelet
Mechanism of Action	This medication inhibits cells like basophils, macrophages, and neutrophils involved in the inflammatory response to asthma and respiratory issues (Jones & Bartlett Learning, 2019).	This medication focuses mainly on the brain D_2-dopamine receptors. It has agonist effects on presynaptic dopamine receptors and an affinity for serotonin receptors to reduce anxiety and promote a calm feeling (Shields et al., 2019).	Atorvastatin inhibits HMG-CoA reductase and cholesterol synthesis in the liver. It can increase the number of LDL receptors on liver cells to enhance LDL uptake and breakdown (Shields et al., 2019).	This medication increases the metabolic rate in body tissues and improves respiratory and cardiac functioning (Frandsen & Pennington, 2018).	This medication inhibits platelet aggregation by selectively preventing the binding of adenosine diphosphate (Shields et al., 2019).
Reason Client Taking	DF takes this medication to relieve symptoms associated with rhinitis.	DF takes this medication to reduce his anxiety.	DF takes this medication to manage hypercholesteremia.	DF is taking this medication due to diminished thyroid functioning.	DF takes this medication as a thrombus prophylactic as prescribed for a coronary stent and to prevent MI, PE, and or stroke.
Contraindications (2)	-Hypersensitivity to medication or milk proteins -Nasal infection due to candida.	- Use with alcohol -Currently contraindicated due to the patient's strict NPO status.	-Liver disease -Myopathy	-Thyrotoxicosis, -Acute MI related to hypothyroidism	-Peptic ulcer -Intracranial hemorrhage
Side Effects/Adverse Reactions (2)	-Anxiety -Dry mouth and throat	-Tremors -Tachycardia	-Arrhythmias -hyperglycemia	Heat sensitivity, cardiac dysrhythmias	-Chest pain -Hypertension
Nursing Considerations (2)	-Monitor patient closely for allergic reaction -If the patient is switched from a corticosteroid to this medication, monitor for adrenal insufficiency.	-Monitor for therapeutic effects. May take several weeks for peak effect - Look for edema, nausea, and vomiting	-Run liver function tests regularly while using atorvastatin.	-Monitor pulse before each administration (should be <100). -Monitor the patient's baseline and periodic tests of thyroid function.	-Monitor for bleeding if administering NSAIDs or heparin -Evaluate patients with unexplained fever or infection for myelotoxicity.
Key Nursing Assessment(s)	-Monitor for excess or fatigue before and after	-Monitor liver enzymes periodically	- Monitor CPK level and discontinue the medication if CPK	-Monitor labs for T4 -Assess for tachycardia and	Monitor platelet count and lipid profile

Prior to Administration	administration of this medication. Compare baseline vital signs. -Assess the mucosa of the patient's mouth prior to administration, noting excessive dryness.	-Assess for jaundice and facial muscle spasms prior to administration	is elevated. -Monitor for increased risk for digoxin toxicity if taken with atorvastatin (Shields et al., 2019).	dysrhythmias associated with hyperthyroidism.	periodically.
Client Teaching needs (2)	-Urge the patient to avoid people with active infections due to the medication's immunosuppressive effect. -Teach the patient how to shake the canister and proper administration.	-Take only as prescribed -If medication is discontinued, taper for reduced risk of withdrawal.	-Take this medication at same time every day. -Report any abnormal weakness or fatigue to provider.	-Teach the patient to avoid OTC medications unless approved by the provider. -Teach the client that this is a lifelong medication.	-Report any unusual bleeding -Avoid chronic use of NSAIDs.

Hospital Medications (5 required)

Brand/Generic	Lovenox/ enoxaparin (Shields et al., 2019)	Protonix/ pantoprazole (Shields et al., 2019)	Seroquel/ quetiapine (Shields et al., 2019)	Coreg/ carvedilol (Shields et al., 2019)	Pulmicort/ budesonide (Frandsen & Pennington, 2018).
Dose	150 mg/ 1 mL	40 mg/ 10mL	12.5 mg	12.5 mg	0.5 mg/ 2mL
Frequency	BID Q 12 hours	Daily	Daily	BID	BID
Route	Sub Q	IV push	PO (NG)	PO (NG)	Inhaled aerosol (nebulizer through ET/trach tube)
Classification	Low molecular weight heparin anticoagulant	GI agent, proton pump inhibitor	CNS agent- Antipsychotic	Antihypertensive- Beta- adrenergic antagonist	Corticosteroid
Mechanism of Action	The drug accelerates the activity of antithrombin III, an	Gastric acid secretion is decreased by inhibiting the	This medication antagonizes multiple neurotransmitter	This medication combines selective alpha activity and nonselective beta-	Corticosteroids decrease the formation of inflammatory

	enzyme which causes clotting of blood by acting on fibrinogen (Frandsen & Pennington, 2018).	enzyme system responsible for acid production (Shields et al., 2019).	receptors in the brain including serotonin and dopamine (Shields et al., 2019).	adrenergic blocking actions. These actions work to reduce blood pressure (Shields et al., 2019).	prostaglandins and leukotrienes (Frandsen & Pennington, 2018).
Reason Client Taking	DF is taking enoxaparin to prevent the formation of VTEs.	DF likely takes this medication to prevent erosive esophagitis.	DF takes this medication to manage her major depressive disorder.	DF takes this medication to manage hypertension.	DF takes this medication to facilitate ventilation and respiration.
Contraindications (2)	-GI bleeding -HIT	-Hypersensitivity to proton pump inhibitors, - hepatic insufficiency	-History of MI - Patients at risk for aspiration pneumonia	-Emphysema/ chronic bronchitis -Cardiac failure	Allergic reaction to medication, antibiotic resistant infections.
Side Effects/Adverse Reactions (2)	-Peripheral edema -thrombocytopenia	Abdominal pain, insomnia	-tachycardia -constipation	-Bradycardia -Hyperglycemia	Headache, insomnia
Nursing Considerations (2)	-Monitor for and report immediately any sign of unexplained bleeding. -Withhold drug and notify physician if the platelet count is lower than 100,000 (Shields et al., 2019)	-Assess for signs of angioedema. -Give this medication with food.	-Monitor EKG since medication can cause arrythmias. - Monitor diabetics for loss of glycemic control	-Monitor for therapeutic effect -Monitor liver function tests periodically.	-Monitor closely for S&S of hypercorticism -Monitor patients with moderate to severe liver disease
Key Nursing Assessment(s) Prior to Administration	-Monitor platelet count, CBC, urine, and stool for occult blood. -Assess coagulation panels for therapeutic bleeding times.	-Monitor the patient's urea levels -Assess for severe skin reactions	Monitor liver function tests, thyroid function, and CBC with differential	Monitor lab tests and assess liver function periodically.	-Monitor serum potassium -Do not give patient grapefruit or grapefruit juice while taking this medication.
Client Teaching needs (2)	-Report to the physician promptly any signs of unexplained bleeding -Do not take any OTC medication without approval from your provider.	-Do not breast feed while taking this drug without consulting physician. -Contact physician if severe rash or other skin abnormalities develop.	-Carefully monitor blood glucose levels -Make position changes slowly since orthostatic hypotension is possible.	-Do not discontinue this medication abruptly. -Monitor for hypoglycemia. This medication may mask the effects of hypoglycemia.	-Avoid contact with people that have infections, especially varicella or measles. -Notify provider if you develop rash, fever, dyspnea, or swelling of face.

Medications Reference (APA):

Frandsen, G., & Pennington, S. (2018). *Abrams' clinical drug therapy: Rationales for nursing practice*. Wolters Kluwer Health.

Jones & Bartlett Learning. (2019). *2020 Nurse's Drug Handbook* (19th ed.). Jones & Bartlett Learning.

Shields, K. M., Fox, K. L., & Liebrecht, C. (2019). *Pearson nurse's drug guide 2019*. Pearson.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	DF is on mechanical ventilation via ET tube in her trachea. She is on light sedation and she is in and out of consciousness. She is mostly calm and can respond to simple yes or no questions. She is occasionally agitated and reaches for her NG tube to try to remove it. A&O status cannot be determined due to the patient's inability to speak. She does seem aware of her situation and recognizes her son and nurses that have cared for her before.
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	Skin color is age and race appropriate. Several bruises on the abdomen are present in different stages of healing. Her skin is warm and dry. She has some moisture under abdominal skin folds and around the pubic area. Nystatin and moisture wicking fabric were applied. Skin turgor is age appropriate and shows no signs of dehydration. Tracheal opening wound present. No rashes or drains present. Braden score → 9 = very high risk of skin breakdown
HEENT (1 point): **Head/Neck:** **Ears:**	DF's head is normocephalic with no notable abnormalities. Neck is straight with no tracheal deviations. Her hair is red with streaks of grey.

Eyes: **Nose:** **Teeth:**	Ears show no signs of drainage with normal amounts of cerumen. PERRLA was noted with slightly sluggish pupillary response. DF has amblyopia of the right eye. Her nose is midline and proportionate with her face. No abnormal drainage, erythema, or deviated septum was noted. Turbinates are equal bilaterally. Her oral mucosa is moist and pink with no notable abnormalities. No teeth are present.
CARDIOVASCULAR (2 points): **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	S1 and S2 heart sounds are heard. Telemetry revealed normal sinus rhythm with a prolonged QT interval. Radial and pedal pulses are present and 2+ bilaterally. Capillary refill is within 3 seconds in all extremities bilaterally.
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character** **ET Tube:** **Size of tube:** **Placement (cm to lip):** **Respiration rate:** 22 bpm **FiO2**: 95% **Total volume (TV):** 354 **PEEP:** 8 **VAP prevention measures:**	No accessory muscle use is noted due to mechanical ventilation. Breath sounds are present and clear in all lobes bilaterally. Size 7 ET tube placed in tracheal opening. The tube is suture in place. VAP prevention: Oral care is done every 2 hours to prevent microbial buildup in the oral cavity. Frequent suctioning is done to remove copious secretions.
GASTROINTESTINAL (2 points): **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:**	DF consumes a regular diet at home. Currently, she is only receiving dextrose 5% in normal saline in consideration of going on palliative care or hospice. She was receiving tube feedings via NG tube in the days before my rotation. DF currently weighs 149.2 kg and is 160 cm tall. Active bowel sounds are heard in all four quadrants. Her last bowel movement was 3/1. Several bruises are noted around the abdomen likely from injections and anemia. No scars, drains, incisions, or wounds noted. Abdomen is firm to palpation in some places. NG tube present for gastric decompression and for potential

Wounds: **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☒ N ☐** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	feedings/ medication.
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:** **CAUTI prevention measures:**	Urine is yellow and clear. DF voided 1200 mL in urine on 3/1. She has a pure wick in place attached to suction for urine collection. No genital abnormalities noted upon inspection. CAUTI prevention measures: Use sterile insertion, use a closed drainage system, hang urine collection below the bed. Perform regular catheter care and cleaning. Empty the collection container before it is full.
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☒** **Needs support to stand and walk☒**	Peripheral pulses, sensation, temperature and color are normal bilaterally in all extremities. DF does not have free active range of motion in lower extremities. She is atrophied from prolonged bedrest. She has a history of gait abnormalities and trouble ambulating. DF can move her upper extremities well and responds to commands of hand squeezing. DF is on bedrest and used a cane, walker, and wheelchair prior to her admission. Morse Fall Score → 50 = high risk of falls
NEUROLOGICAL (2 points): **MAEW: Y ☐ N☒** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☐ Arms ☐ Both ☒** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	DF does not move all extremities well. She has been confined to a bed since her intubation with mechanical ventilation on 2/3. DF did not have full range of motion before her admission and she has declined due to atrophy from bedrest. She is in and out of consciousness from moderate sedation. She is in a constant drowsy state but responds to basic physical commands and yes or no questions. She is unable to speak due to tracheal intubation.
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:**	Coping methods, developmental level, religion, and family structure are not able to be obtained due to the patient's intubation and sedation level. Her chart states that she is widowed. Her son came to visit and appears to be close to her. (I did

Personal/Family Data (Think about home environment, family structure, and available family support):	not want to ask him a bunch of personal questions since they were deciding whether to go on palliative/ hospice care. There was no appropriate time).

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0800	76 bpm	110/58 mmHg	22 respirations/ min	36.5 C	100% on 95% FiO2
1000	80 bpm	108/56 mmHg	18 respirations/ min	36.9 C	97% on 90% FiO2

Vital Sign Trends/Correlation:

DF's vital signs are stable for the moment. Her FiO2 was reduced to see if she could tolerate less supplemental oxygen. At rest, her oxygen saturation is stable. With any exertion or movement her saturation drops to the low 80s. Her sedation was recently discontinued, she will require close monitoring to see how she responds.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0800	FLACC	No pain	0/10	No observable signs of pain	Fentanyl drip and continued monitoring
10:00	FLACC	Unable to determine	1/10	Unable to assess due to tracheal intubation	Fentanyl drip and continued monitoring

IV Assessment (2 Points)

IV Assessment	**Fluid Type/Rate or Saline Lock**
Size of IV: 20 gauge **Location of IV:** Left hand **Date on IV**: 2/17/2021 **Patency of IV:** IV was not accessed **Signs of erythema, drainage, etc.:** IV is site is free of erythema or warmth. No drainage noted. **IV dressing assessment:** IV dressing is clean and dry	IV is saline locked
Other Lines (PICC, Port, central line, etc.)	
Type: PICC triple **Size:** 5 Fr. **Location:** Upper left arm **Date of insertion**: 2/16/2021 **Patency:** PICC is patent **Signs of erythema, drainage, etc.:** No signs of drainage, erythema, or warmth noted **Dressing assessment: Dressing is clean and dry** **Date on dressing:** 3/1/2021 **CUROS caps in place: Y ☒ N ☐** **CLABSI prevention measures:** CUROS caps are in place to prevent microbes from entering the PIIC line. Dressing changes are done Q7 days to prevent infection from soilage.	Dextrose 5% with 0.9% NaCl 1000 mL →50 mL/hour Fentanyl and propofol titrations have been discontinued.

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
1200 mL IV D5 NS Q24 hours 350 mL NG flush with medication Total: 1550 mL	1200 mL urine

Nursing Care

Summary of Care (2 points)

Overview of care:

During my rotation, I performed a head to toe assessment. I was not able to perform oral care since the nurse did right before we were going to. We were trying to keep agitation to a minimum for the patient to keep her oxygen saturation above 90. Almost any interaction with the patient caused her saO2 to plummet. I was able to suction DF several times to clear her copious secretions. I was able to give peri care and apply nystatin to areas that were moist/ irritated. At 930 medications were given through the patient's NG tube and PICC line. DF was repositioned every two hours.

Procedures/testing done:

No procedures or testing was done during my rotation. Respiratory therapy came twice to adjust her ventilator setting and administer a breathing treatment.

Complaints/Issues:

DF had moments of agitation but denied being in pain. She is unable to speak but moved her lips as if she was trying to say something. We could not determine what she was trying to communicate and did not want to write it down.

Vital signs (stable/unstable):

Vital signs were stable with the assistance of mechanical ventilation.

Tolerating diet, activity, etc.:

DF is currently only receiving D5 solution as a form of nutrition to keep her blood sugar regulated. She seems to be tolerating this ok. Her oxygen saturation drops whenever she is repositioned or given PROM exercises. At rest, she is drowsy and stable.

Physician notifications:

Dr. Cudone was notified one time regarding her tracheostomy opening. The nurse thought the opening had gotten larger. Dr. Cudone was not concerned if it was not bleeding.

Future plans for patient:

DF and her family are currently weighing the options for her continued care. Palliative and hospice care are being considered.

Discharge Planning (2 points)

It is unlikely that the patient will be discharged. She is not stable enough to come off the ventilator. She is not progressing and does not wish to continue this way. Palliative care and hospice care are currently being considered by the patient and her family.

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

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. DF is at risk for impaired gas exchange related to mechanical ventilation as evidenced by low oxygen saturation and high CO2 values (Swearingen & Wright, 2019).	DF's oxygen saturation is frequently low, especially when basic care activities are performed. She is on 95% FiO2. COPD affects CO2 removal from lungs. Low hemoglobin limits the amount of oxygen in the blood.	**1.**Monitor the patient's ABG values and oxygen saturation. 2.Monior the patient's appearance/ distress level along with her vital signs every 2 hours.	Latest ABG: pH=7.42 PaO2=87.6 PaCO2=50.5 HCO3=31 SaO2= 96.5 The acid base level is fully compensated. Her oxygen saturation at rest is within a normal range. She is responding well to the current ventilation settings. Goal: Reduce the FiO2 needed over time and remove the patient from the

			mechanical ventilation.
2. Ineffective airway clearance related to airway obstruction as evidenced by copious airway secretions (Martin, 2019).	DF requires frequent suctioning to remove excessive secretions that obstruct air flow.	1.Auscultate lungs for the presence of normal or adventitious breath sounds. 2.Observe the color, odor, quantity, and consistency of sputum for signs of infection.	DF's lung sounds are clear to auscultation in all lobes bilaterally. DF continues to need secretions suctioned frequently. The secretions are purulent and rust colored, thick, and copious. She does not like to be suctioned but understands that it is needed for adequate ventilation. Goal: Continue to have clear breath sounds. Continue to provide oral care and tracheal suctioning as needed to keep a clear airway. Monitor the characteristics of the secretions and possibly send off for a culture and sensitivity to determine the presence of a bacterial infection.
3. DF is at risk for ventilator associated pneumonia related to tracheal intubation as evidenced by prolonged use of ET and tracheal mechanical ventilation (Swearingen & Wright, 2019).	DF has been intubated and on a mechanical ventilator since 2/3. Prolonged intubation increases the risk of VAP.	1.Practice good hand hygiene before implanting care for the patient. 2Perform good oral care with suctioning to remove microbes and remove bronchial secretions.	Good hand hygiene is being done by all staff members interacting with the patient. Suctioning is done as needed to remove secretions. DF has responded well to these interventions. Goal: Continue good hygiene practices to reduce the risk of VAP.
4. DF is at risk for deep vein thrombosis related to inactivity as	DF had impaired mobility before her admission. She has been on bedrest since her	**1.**Reposition the patient every 2 hours and perform passive range of motion exercises.	DF is repositioned every 2 hours but does not respond well to PROM exercises. Her oxygen saturation plummets with any

evidenced by prolonged bedrest (Belleza, 2021).	arrival. DF did not receive todays dose of enoxaparin either. Lack of mobility leads to venous stasis.	2. Assess for signs of VTE such as unilateral warmth, redness, and swelling. Administer pharmacological prophylactic measures like enoxaparin.	movement or activity. No signs of VTE are present. The provider ordered us to withhold the morning dose of enoxaparin. Goal: Continue with current interventions to prevent a DVT.
5. DF is at risk for skin breakdown related to immobility and incontinence (Swearingen & Wright, 2019).	DF is on extended bedrest and is incontinent. Her anatomy and size allow for areas of moisture to be retained, leading to skin breakdown. Lack of movement lead to pressure injuries as well.	1.Reposition the patient every 2 hours and assess for areas of skin breakdown related to pressure injury. 2.Keep the patient clean and dry.	DF is repositioned every 2 hours and bony prominences are examined for signs of irritation. Peri care is performed as needed to ensure the patient is clean and dry. Nystatin and moisture wicking fabric was applied to areas retaining moisture. DF is responding well to these interventions and shows no significant signs of skin breakdown. Goal: Keep DF clean and dry. Reposition every 2 hours to keep skin intact.

Other References (APA):

Belleza, M. (2021). *Deep vein thrombosis.* Nurseslabs. https://nurseslabs.com/deep-vein-thrombosis/

Martin, P. (2019). *Mechanical ventilation care plans*. Nurseslabs. https://nurseslabs.com/6-mechanical-ventilation-nursing-care-plans/2/

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

Concept Map (20 Points):

Subjective Data

Subjective data is limited due to the patient's inability to speak.

- "I'm very short of breath" (at admission)

Nursing Diagnosis/Outcomes

- DF is at risk for impaired gas exchange related to mechanical ventilation as evidenced by low oxygen saturation and high CO2 values.
  - Goal: maintain SaO2 over 95%.
- Ineffective airway clearance related to airway obstruction as evidenced by copious airway secretions
  - Goal: Maintain clear breath sounds and SaO2 over 95%.
- DF is at risk for ventilator associated pneumonia related to tracheal intubation as evidenced by prolonged use of ET and tracheal mechanical ventilation.
  - Goal: Perform hand hygiene every time care for the patient is done. Perform oral care for the patient every 2 hours.
- DF is at risk for deep vein thrombosis related to inactivity as evidenced by prolonged bedrest.
  - Goal: Reposition the patient every 2 hours and perform regularly scheduled PROM exercises as tolerated by the patient.
- DF is at risk for skin breakdown related to immobility and incontinence.
  - Goal: reposition the patient every 2 hours. Assess the patient for wetness/ soilage whenever repositioning is done. Keep the patient clean and dry.

Objective Data

- SaO2 at admission: 65%
- RBCs: 2.5
- Hgb: 7.5
- Hct: 25.3
- D-dimer 1.22
- PaCO2: 50.5
- Copious secretions from bronchus and trach opening.
- DF is on 95% FiO2

Patient Information

DF is a 56-year-old woman that admitted with severe shortness of breath and was diagnosed with COVID-19 related pneumonia. She has been admitted since 1/22. She was intubated on 2/3 with an ET tube. She had a Trach placed on 2/16. She hemorrhaged from the trach site on 2/25 and again on 2/28. She currently has an ET tube placed in her trach opening. The family is currently deciding the next course of action to be taken.

Nursing Interventions

- Monitor the patient's ABG values and oxygen saturation.
- Monitor the patient's appearance/ distress level along with her vital signs every 2 hours.
- Auscultate lungs for the presence of normal or adventitious breath sounds.
- Observe the color, odor, quantity, and consistency of sputum for sign of infection.
- Practice good hand hygiene before implanting care for the patient.
- Perform good oral care with suctioning to remove microbes and remove bronchial secretions.
- Reposition the patient every 2 hours and perform passive range of motion exercises.
- Assess for signs of VTE such as unilateral warmth, redness, and swelling. Administer pharmacological prophylactic measures like enoxaparin.
- Reposition the patient every 2 hours and assess for areas of skin breakdown related to pressure injury.
- Keep the patient clean and dry.