N441 Care Plan

Lakeview College of Nursing

Whitney Miller

Demographics (3 points)

Date of Admission 02/24/2022	**Client Initials** WD	**Age** 66 years	**Gender** Female
Race/Ethnicity Caucasian	**Occupation** Retired	**Marital Status** Widowed	**Allergies** Aspirin – tinnitus Fosamax – GI reaction
Code Status Full	**Height** 160 centimeters	**Weight** 32.7 kilograms	

Medical History (5 Points)

Past Medical History: The patient has a past medical history of anemia, anxiety, depression, B12 deficiency, BMI <19, hyperchloremic metabolic acidosis, hypocalcemia, hypomagnesemia, hypophosphatemia, iron deficiency anemia refractory to iron therapy, malabsorption syndrome, MALT lymphoma, MGUS, renal insufficiency, Sjogren's syndrome, vitamin D deficiency, GERD, and pre-diabetes.

Past Surgical History: The patient has undergone the following surgeries: esophagogastroduodenoscopy biopsy (07/29/19), esophagogastroduodenoscopy (12/13/18), esophagogastroduodenoscopy colonoscopy (09/13/18), colonoscopy (2018), endoscopy (2018), cataract, cesarean delivery, and history of tooth extraction.

Family History: The patient's father had diabetes mellitus, gallbladder disease, heart disease, hypertension, and transient ischemic attack. The patient's mother had breast cancer and lung cancer. The patient's sister had cancer. The patient's sister had brain cancer and hypertension.

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): The patient smokes less than a fourth of a pack of cigarettes per day for the last seven years and is currently a smoker. The patient denies use of alcohol or drugs.

Assistive Devices: The patient wears glasses.

Living Situation: The patient lives alone at a private residence.

Education Level: The patient has a bachelor's degree.

Admission Assessment

Chief Complaint (2 points): Acid reflux, SOB, losing weight for months

History of Present Illness – OLD CARTS (10 points): The patient reports having loss of appetite and progressive weight loss for the last three months. The patient reports shortness of breath on her date of admission, February twenty-fourth. The patient reports experiencing acid reflux since the night before her admission. The duration of the patient's weight loss has been continuous, and her shortness of breath has been constant since onset. The patient's acid reflux comes and goes with alleviating factors such as sitting up and drinking water. The patient characterizes her acid reflux as a "burping sensation with pain and regurgitation". Aggressors for the patient's shortness of breath include walking and talking. Aggressors for the patient's acid reflux include laying down and eating acidic foods. The patient can relieve her shortness of breath by sitting down and catching her breath. The patient may alleviate some of the pain of her

acidic reflux by drinking water. The patient is unable to alleviate her weight loss or loss of appetite. The patient attempts to treat her weight loss by ingesting protein shakes but is also unable to consume these regularly and had not eaten for two days before her admission. The patient's history and physical exam does not state if the patient tried to treat her symptoms of shortness of breath and acid reflux and the patient is sedated and can neither confirm nor deny any attempt to treat.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Septic shock

Secondary Diagnosis (if applicable): Hypoxic respiratory failure and failure to thrive

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

Septic shock is a distributive shock caused by widespread infection or sepsis. Sepsis can cause life-threatening organ dysfunction and has a high mortality rate (Hinkle & Cheever, 2018). Microorganisms can invade the body and cause patients to have an immune response. This immune response causes biochemical cytokines and mediators to produce an inflammatory response. This inflammatory response causes vasodilation which creates capillary instability and poor tissue perfusion. Poor tissue perfusion leads to the inability of the body to provide adequate tissue perfusion to cells in the body. Without proper nutrients and oxygen, these tissues begin to necrotize. Systemic inflammatory response syndrome is the name of the inflammatory response brought on by sepsis. Proinflammatory and anti-inflammatory cytokines released during this inflammatory process also activate the coagulation system. This inappropriate level of coagulation can cause occlusion, which can result in complications such as myocardial infarction and stroke. As sepsis progresses, perfusion worsens, and compensation fails, resulting in organ dysfunction. When the cardiovascular system begins to fail, blood pressure will continue to drop,

and end-organ damage occurs. Sepsis progresses to septic shock as organ dysfunction continues to worsen and blood pressure and tissue perfusion continue to worsen. Urine production ceases with renal failure, and organ dysfunction progresses to death (Capriotti, 2020).

Warning signs of septic shock are beneficial to monitor early intervention and slow progression of organ dysfunction. Early warning signs of sepsis include shortness of breath, extreme pain or discomfort, and confusion. Late signs of septic shock include severe hypotension, rapid heart and respiratory rate, cessation of urine production, and cool, pale, or mottled skin (Capriotti, 2020). Temperature may remain within normal range or may be hypothermic with septic shock. Oxygen saturation will decrease in these patients. Blood coagulation labs such as prothrombin time and partial thromboplastin time will elevate with sepsis. Platelet count may decrease, and d-dimer may elevate in these patients due to inappropriate coagulation. White blood cell levels may elevate in response to inflammation and infection. Arterial blood gas labs may show metabolic acidosis. Serum lactate may increase due to dysfunctional circulation of body tissues and decreased oxygen and nutrient absorption (Hinkle & Cheever, 2018).

While there is no definitive diagnostic test for sepsis or septic shock, labs and imaging tests can help to confirm the presence and progression of this disease. Labs such as complete blood count, bilirubin, creatinine, blood cultures, and urine cultures can help detect sepsis. X-rays, computerized tomography, ultrasounds, and magnetic resonance imaging can rule out other diseases such as pneumonia as the cause for symptoms and monitor the progression of sepsis (Capriotti, 2020). This patient had arterial blood gas levels, a complete blood count, blood cultures, and urine cultures done. The patient also had X-rays and computerized tomography done to rule out pneumonia and monitor the progression of abnormalities seen.

Treatment for septic shock includes oxygen therapy, intravenous fluids, medications to counteract hypotension, and antibiotics (Capriotti, 2020). This patient is getting treatment using mechanical intubation utilizing an endotracheal tube. This patient is receiving intravenous vasopressors to increase her blood pressure. The patient is also taking an antibiotic to combat her urinary tract infection and is receiving a broad-spectrum antibiotic to treat other unknown infections in her body. The patient is getting intravenous fluids to increase her blood pressure.

This patient shows evident signs of septic shock. The patient has thrombocytopenia, anemia, neutrophilia, leukocytosis, and monocytopenia, evidenced in her complete blood count. These findings align with septic shock diagnosis as they result from inappropriate coagulation, inflammation, and infection. The patient also had high levels of troponin, which can indicate sepsis. The patient's arterial blood gas values show decreased tissue perfusion and compensation for hypoxia. The patient's X-ray showed abnormal opacities found in the lungs and pleural effusion. The patient's vital signs reflect hypotension and the increased respiratory rate, which indicate septic shock. The patient's initial oxygen saturation was low, which indicated poor tissue perfusion. The patient will continue the prescribed treatment regimen (Capriotti, 2020).

Pathophysiology References (2) (APA):

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed). F.A. Davis Company.

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

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	3.80 - 5.41	4.05	3.50	This patient is anemic due to inflammation and prolonged illness (Capriotti, 2020).
Hgb	11.3 - 15.2	11.2	9.6	Low hemoglobin due to patient's history of anemia and low red blood cell count (Capriotti, 2020).
Hct	33.2 - 45.3	34.2	29.5	Low hematocrit due to patient's history of anemia and low red blood cell count (Capriotti, 2020).
Platelets	149 – 393	228	85	Thrombocytopenia due to inappropriate coagulation due to inflammatory response brought on by septic shock (Capriotti, 2020).
WBC	4.0 - 11.7	6.1	7.7	N/A
Neutrophils	45.3 - 79.0	N/A	91.2	High neutrophils due to inflammatory response caused by sepsis and infection (Capriotti, 2020).
Lymphocytes	11.8 - 45.9	N/A	4.6	Low lymphocytes due to immune suppression (Capriotti, 2020).
Monocytes	4.4 - 12.0	N/A	4.1	Low monocytes

				due to infection and inflammation (Capriotti, 2020).
Eosinophils	0.0 - 6.3	N/A	N/A	N/A
Bands	0.2 - 1.6	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-	136 – 145	132	143	Low sodium level may be related to patient's low nutrient intake or renal insufficiency (Capriotti, 2020).
K+	3.5 - 5.1	2.6	3.6	Patient may have low potassium due to prescription of antihypertensives or due to low nutrient intake (Capriotti, 2020).
Cl-	98 – 107	110	118	High levels of chloride due to renal insufficiency (Capriotti, 2020).
CO2	21 – 31	15	17	Low carbon dioxide levels due to renal insufficiency (Capriotti, 2020).
Glucose	74 – 109	86	117	Increased glucose due to patient having past medical history of pre-diabetes as well as patient intake of intravenous fluids high in glucose (Capriotti, 2020).
BUN	7 – 25	31	19	High BUN due to renal insufficiency (Capriotti, 2020).
Creatinine	0.60 - 1.20	1.20	1.46	High creatinine due to renal insufficiency

				(Capriotti, 2020).
Albumin	3.5 - 5.2	2.1	2.3	Low albumin due to malnutrition (Capriotti, 2020).
Calcium	8.6 - 10.3	6.6	6.7	Low calcium levels due to low nutrient intake in diet and renal insufficiency (Capriotti, 2020).
Mag	1.6 - 2.4	2.6	1.8	Hypermagnesemia due to renal insufficiency (Capriotti, 2020).
Phosphate	2.5 - 4.5	N/A	N/A	N/A
Bilirubin	0.3 - 1.0	0.1	0.3	Low bilirubin due to renal insufficiency (Capriotti, 2020).
Alk Phos	34 – 104	60	67	N/A
AST	13 – 39	9	12	Low AST due to lack of vitamin intake in diet as well as renal insufficiency (Capriotti, 2020).
ALT	7 – 52	6	13	Low ALT due to lack of vitamin intake in diet as well as renal insufficiency (Capriotti, 2020).
Amylase	30 – 110	N/A	N/A	N/A
Lipase	24 – 151	N/A	N/A	N/A
Lactic Acid	0.5 - 2.0	1.1	0.5	N/A
Troponin	0.000 - 0.030	0.037	0.029	Elevated troponin level is likely a result of sepsis (Capriotti, 2020).
CK-MB	5 – 25	N/A	N/A	N/A
Total CK	30 – 223	12	17	Low total CK due to muscle wasting from physical inactivity, illness, and old age (Capriotti, 2020).

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
INR	0-11	N/A	N/A	N/A
PT	11 – 13.5	N/A	N/A	N/A
PTT	25 – 35	N/A	N/A	N/A
D-Dimer	0 – 250	N/A	N/A	N/A
BNP	0 – 100	N/A	5190	High level of BNP caused by renal disease and cardiac dysfunction (Capriotti, 2020).
HDL	40 – 100	N/A	N/A	N/A
LDL	0 – 100	N/A	N/A	N/A
Cholesterol	0 – 200	N/A	N/A	N/A
Triglycerides	0 – 149	N/A	91	N/A
Hgb A1c	0 – 5.7	N/A	N/A	N/A
TSH	0.45 - 5.33	N/A	1.43	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	Colorless Clear	Colorless Clear	Colorless Clear	N/A
pH	5.0 - 8.0	7.0	6.5	N/A
Specific Gravity	1.005 - 1.034	1.007	1.006	N/A
Glucose	Negative	Negative	Negative	N/A
Protein	Negative	Trace	Negative	Trace amounts of protein in the urine may be due to renal insufficiency (Capriotti, 2020).
Ketones	Negative	Negative	Negative	N/A
WBC	0 – 5	6	2	Increase WBC count due to infection (Capriotti, 2020).
RBC	0 – 3	N/A	1	N/A

Leukoesterase	Negative	2	Negative	Increased leukoesterase due to infection (Capriotti, 2020).

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	7.24	7.35	Alkalosis due to septic shock in an attempt to correct hypotension (Capriotti, 2020).
PaO2	35.0 - 45.0	43.3	228.0	High levels of PaO2 developed as the result of hyperoxemia in an attempt to compensate for hypoxemia (Capriotti, 2020).
PaCO2	75.0 - 85.0	41.8	29.3	This result indicated alveolar hyperventilation in an attempt to compensate for hypoxemia (Capriotti, 2020).
HCO3	22.0 - 26.0	17.1	17.6	Decreased HCO3 due to decreased tissue perfusion (Capriotti, 2020).
SaO2	95.0 - 98.0	71.0	100	Low SaO2 as a

				result of decreased tissue perfusion (Capriotti, 2020).

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	Proteus mirabilis	This finding indicated bacteria in the urine and is evidence of a urinary tract infection (Capriotti, 2020).
Blood Culture	Negative	N/A	In progress	N/A
Sputum Culture	Negative	N/A	In progress	N/A
Stool Culture	Negative	N/A	N/A	N/A
COVID 19	Negative	N/A	In progress	N/A

Lab Correlations Reference (1) (APA):

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed). F.A. Davis Company.

Sarah Bush Lincoln Health Center (2021). Cerner. https://www.sarahbush.org/

Diagnostic Imaging

All Other Diagnostic Tests (5 points): Diagnostic Test Correlation (5 points):

X-ray of chest (2/28/22 and 3/1/22) - A chest X-ray was done on 2/28 to determine ET tube placement and check for abnormalities such as pneumonia as the cause of patient's shortness of breath (Capriotti, 2020). The X-ray showed that the ET tube was four centimeters above the carina. This X-ray also showed bilateral interstitial abnormalities and increased effusion. The X-

ray on 3/1 was done to check ET tube placement and monitor the progression of lung abnormalities. This X-ray showed ET tube placement four centimeters above the carina and improved bilateral opacities from the prior X-ray. This X-ray also showed improvement of the patient's pleural effusion.

Echocardiogram (2/25/22) - Echocardiograms allow for visualization of the heart valves and how well the heart is pumping blood. An echocardiogram was done to rule out endocarditis as the cause of sepsis and to detect sepsis-related myocardial dysfunction (Capriotti, 2020). The echocardiogram showed ejection fraction of 50-55%. The right ventricle showed normal size and function and moderate mitral regurgitation.

Electrocardiogram (2/24/22 and 2/26/22) - An electrocardiogram gives information about the electrical impulses in the patient's heart. This information can be used to check for the abnormalities caused by septic shock (Capriotti, 2020). The patient also had abnormally high levels of troponin, so an electrocardiogram helps to rule out potential causes of this elevated lab level. The electrocardiogram done on 2/24 showed normal sinus rhythm. The electrocardiogram done on 2/26 showed sinus tachycardia and heart block.

CT chest with contrast (2/27/22) - The CT chest with contrast was ordered to further examine abnormalities found on the chest X-ray. A CT chest can help to show edema versus infection in the patient's lungs (Capriotti, 2020). The test showed diffuse bilateral pulmonary opacities consistent with pneumonia. The CT scan also showed bilateral pleural effusion.

Diagnostic Test Reference (1) (APA):

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd 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	Megace/ megestrol acetate	Remeron/ mirtazapine	Reglan/ Metoclopramide hydrochloride	Protonix/ pantoprazole sodium	N/A
Dose	40 mg	15 mg	5 mg	40 mg	N/A
Frequency	Daily	HS	QID	Daily	N/A
Route	Oral	Oral	Oral	Oral	N/A
Classification	Progesterone hormone Ovarian hormone replacement	Tetracyclic antidepressant Antidepressant	Dopamine – 2 receptor antagonists Antiemetic, upper GI stimulant	Proton pump inhibitor Antiulcer	N/A
Mechanism of Action	Induces endometrial secretory changes and precipitates bleeding when acting with estrogen. This drug increases basal body temperature. Inhibits secretions or gonadotropins from pituitary glands (Jones, 2021).	Inhibit neuronal reuptake of norepinephrine and serotonin to increase the action of these neurotransmitters in nerve cells. This will increase neuronal serotonin and norepinephrine to elevate moods (Jones, 2021).	Antagonizes inhibitory effect of dopamine on GI smooth muscle to cause gastric contraction. This causes gastric emptying and peristalsis to reduce gastroesophageal reflux (Jones, 2021).	Interferes with gastric acid secretion by inhibiting the hydrogen potassium adenosine triphosphatase enzyme system in gastric parietal cells. Inhibits the final step in gastric acid production (Jones, 2021).	N/A
Reason Client Taking	Loss of appetite, malnutrition, weight loss	Depression	Loss of appetite/ heart burn	Acid reflux/ history of GERD	N/A
Contraindic	Significant	Hypersensitivity	Concurrent use	Concurrent	N/A

ations (2)	hepatic disease, active thromboembolic disorder (Jones, 2021)	to mirtazapine or its components Do not use within 14 days of an MAO inhibitor (Jones, 2021)	of butyrophenones, phenothiazines, or other drugs that may cause extrapyramidal reactions. History of dystonic reaction to metoclopramide or tardive dyskinesia (Jones, 2021)	therapy with rilpivirine containing products. Hypersensitivity to pantoprazole (Jones, 2021)	
Side Effects/ Adverse Reactions (2)	Hypotension, clotting and bleeding abnormalities (Jones, 2021)	Bradycardia and serotonin syndrome (Jones, 2021)	Suicidal ideations and laryngeal edema (Jones, 2021)	Hepatic failure and pancreatitis (Jones, 2021)	N/A
Nursing Considerations (2)	Use cautiously in patients with CNS disorders such as depression because progestins may worsen these conditions. Expect to stop progestin therapy in any women who develops evidence of cancer (Jones, 2021).	Drug may lower serum sodium levels in patients. Administer mirtazapine before bedtime (Jones, 2021).	Metoclopramide therapy should not be used in patients with depression because of increased risk of suicidal ideation. Store drug in a light resistant container (Jones, 2021).	Be aware that if therapy lasts more than 3 years, patients may not be able to absorb vitamin B12. Know that proton pump inhibitors such as pantoprazole should not be given longer than medically necessary (Jones, 2021).	N/A
Key Nursing Assessment(s)/Lab(s) Prior to Administrati	Monitor patient for adrenal suppression. Assess for	Monitor patient closely for the first few weeks of therapy for akathisia.	Watch closely for tardive dyskinesia. Monitor patients closely for	Monitor patient's urine output because pantoprazole may cause acute	N/A

on	signs of worsening depression in clients with mental illness (Jones, 2021).	Watch closely for suicidal tendencies as depression may worsen with initial therapy or increased dosage (Jones, 2021).	neuroleptic malignant syndrome (Jones, 2021).	interstitial nephritis. Monitor patients on long-term therapy for hypomagnesemia (Jones, 2021).	
Client Teaching needs (2)	Explain risks of progestin therapy, including breast, endometrial, or ovarian cancer. Instruct women to notify prescriber if uterine bleeding continues longer than 3 months or if menstruation is delayed by 45 days (Jones, 2021).	Advise patient that drug may cause mild pupillary dilation, which may lead to an episode of acute closure glaucoma. Instruct patient to avoid alcohol and other CNS depressants during therapy and for up to 7 days after the drug is discontinued (Jones, 2021).	Advise against activities that require alertness for about two hours after each dose. Urge patients to avoid alcohol and CNS depressants while taking this medication (Jones, 2021).	Instruct the patient to swallow oral tablets whole and not to chew or crush them. Advise patients to expect relief of symptoms within 2 weeks of starting therapy (Jones, 2021).	N/A

Hospital Medications (5 required)

Brand/ Generic	Sublimaze/ fentanyl	Pressyn/ vasopressin	Prevacid/ lansoprazole	Thiamilate/ thiamine	Hepalean/ heparin

Dose	125 mcg	0.03 mcg	30 mg	100 mg	5,000 u
Frequency	Continuous	Continuous	Daily	Daily	Q12H
Route	IV drip	IV drip	NG tube oral suspension	NG tube oral suspension	Sub Q injection
Pharmacological Classification **Therapeutic classification**	Opioid Opioid analgesic	Posterior pituitary hormone Antidiuretic hormone	Proton pump inhibitor Antiulcer	Vitamin Vitamin	Anticoagulant Anticoagulant
Mechanism of Action	Binds to opioid receptor sites in the CNS to alter perception of and emotional response to pain by inhibiting ascending pain pathways (Jones, 2021).	Vasopressin is transported from neurons of the supraoptic and paraventricular nuclei to the posterior pituitary and released in response to increases in plasma osmolality to decrease blood pressure (Jones, 2021).	Binds to and inactivates the hydrogen potassium adenosine triphosphate enzyme system in gastric parietal cells to block final step of gastric acid production.	Binds with adenosine triphosphate and leukocytes to produce thiamine diphosphate (Jones, 2021).	Binds with antithrombin III enhancing inactivation of the coagulation enzymes thrombin and factor Xa and XIa. Thrombin is needed to convert fibrinogen to fibrin. Inactivating thrombin prevents fibrin formation and existing clot extension (Jones, 2021).
Reason Client Taking	To control severe pain	Correct hypotension	Gastroesophageal reflux	Deficient in vitamin B-1	Prevent thromboembolic complications

Contraindications (2)	Hypersensitivity to fentanyl or components of fentanyl and upper airway obstruction (Jones, 2021)	Chronic nephritis and hypersensitivity to vasopressin or its components (Jones, 2021)	Concurrent therapy with rilpivirine containing products and hypersensitivity to lansoprazole or its components (Jones, 2021)	History of allergic reaction to vitamin supplements and hypersensitivity to thiamine or its components (Jones, 2021)	Severe thrombocytopenia and hypersensitivity to heparin or its contents (Jones, 2021)
Side Effects/ Adverse Reactions (2)	Seizures and respiratory depression (Jones, 2021)	Dizziness and myocardial infarction (Jones, 2021)	Pharyngeal edema and hepatitis (Jones, 2021)	Anaphylaxis and restlessness (Jones, 2021)	Hemorrhage and heparin induced thrombocytopenia (Jones, 2021)
Nursing Considerations (2)	Use caution when titrating fentanyl dosage in elderly because these patients are more sensitive to the drug's effects. Know to achieve optimum pian control with the lowest possible fentanyl dose, also plan to give a nonopioid analgesic as prescribed (Jones,	Use with extreme caution in patients with heart failure because extracellular fluid may increase rapidly. Use with caution in patients with hypertension because it may increase blood pressure (Jones, 2021).	Give lansoprazole before meals. For patients with nasogastric tubes, don't use oral suspension. Instead use capsules or orally disintegrating tablets (Jones, 2021).	Be aware that IV administration of thiamine may cause severe and life-threatening reactions. Repeat administration can increase the likelihood of patients experiencing a life-threatening reaction (Jones, 2021).	Know that bleeding is a major adverse effect of heparin therapy and take safety precautions to prevent bleeding. Make sure all health care providers are aware that this patient is receiving heparin (Jones, 2021).

	2021).				
Key Nursing Assessment(s)/Lab(s) Prior to Administration	Assess the patient's pain level and respiratory rate before administration (Jones, 2021).	Monitor fluid and electrolyte balance during therapy. Check intake and output at least every eight hours and watch for evidence of water intoxication and hyponatremia (Jones, 2021)	Monitor patient for renal dysfunction. Monitor patient for hypomagnesemia (Jones, 2021)	Monitor patient closely for angioedema and respiratory distress. Monitor patient for urticaria and weakness after administration (Jones, 2021)	Assess patient's platelet count before administrations. Patient's activated partial thromboplastin time should be monitored throughout heparin therapy (Jones, 2021).
Client Teaching needs (2)	Warn patients to take the medication as prescribed and not to take it longer than necessary because excessive use may lead to abuse, addiction, and death. Instruct patients to avoid alcohol and other CNS depressants during fentanyl therapy unless prescribed (Jones,	Inform patients that abdominal cramps and nausea will subside after a few minutes of administration. Urge patients to notify provider immediately if experiencing anuria, confusion, headache, drowsiness, and unexplained weight gain as these may be signs of water intoxication (Jones, 2021).	Tell patient to stop taking drug and report to prescriber if experiencing blood in urine or decreased urination. Advise patient to report severe headache or worsening symptoms to the prescriber (Jones, 2021).	Take thiamine exactly as directed. Notify prescriber if experiencing urticaria, diaphoresis, or laryngeal swelling (Jones, 2021).	Inform patient about increased risk of bleeding and urge her to avoid injuries and to use a soft bristle toothbrush and electric razor. Instruct patients and family to watch for and report abdominal or lower back pain, black stools, bleeding gums, and severe headaches (Jones,

	2021).				2021).

Medications Reference (1) (APA):

Jones & Bartlett Learning. (2021). *2021 Nurse's drug handbook* (19th ed.). Jones &

Bartlett Learning

Assessment

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

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Unable to assess alertness and orientation due to the client being intubated and sedated. The patient did not show any signs of distress. The patient's overall appearance was appropriate.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N X** **Type:**	The patient's skin color was appropriate for ethnicity. The patient's skin was warm and dry. The patient's skin turgor was elastic. The patient had no rashes. The patient had bruises on her upper forearms and hands bilaterally from intravenous catheter insertion. The patient had no wounds. The patient has a Braden score of 8 making her a high risk for skin break down.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Patient's head and neck were symmetrical. Patient's trachea was without deviation and midline. No lymphadenopathy noted. Patient's thyroid is non-palpable. Thyroid rises and falls with swallowing. Tympanic membrane pearly grey. Ears are bilateral on the head. Auditory impairment is unable to be assessed due to sedation of patient. Patient unable to do a visual acuity assessment due to sedation but does wear glasses. Patient visual acuity not noted in chart. Patient pupils were 3 mm in size. Patient's pupillary response is sluggish to light. Patient sclera white with no redness or discharge. Dryness noted in eyes.

	No deviated septum, no polyps, nasal airway patent, no drainage noted. Mucous membranes dry, pink, and firm. Teeth are yellowing with back left molar missing. Rise and fall of the soft palate were observed.
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:**	Heart rhythm is normal sinus. S1 and S2 heard. Peripheral pulses 3+ radial bilaterally. 3+ bilateral dorsalis pedal pulses noted. Capillary refill less than two seconds both upper and lower extremities. Patient has a peripherally inserted central catheter in her cephalic vein. Patient upper extremities 3+ pitting edema bilaterally. Patient lower extremities 3+ pitting edema bilaterally. Cardiac rhythm strip analysis shows a first-degree heart block.
RESPIRATORY: **Accessory muscle use: Y☐ N X** **Breath Sounds: Location, character** **ET Tube:** **Size of tube:** **Placement (cm to lip):** **Respiration rate:** **FiO2:** **Total volume (TV):** **PEEP:** **VAP prevention measures:**	Coarse breath sounds heart both anteriorly and posteriorly throughout all lobes. Coarse crackles heard in the inferior lobe of the left lung anteriorly and posteriorly. Patient on mechanical ventilation. Patient respiratory pattern is regular. Lung aeration is equal. Patient has an ET tube placed. Patient's ET tube is size 7.0. ET tube placement is 20 cm at the lip. Patient has a respiration rate of 22 breaths per minute. Patient FiO2 is 32%. Patient TV is 340. Patient's PEEP is 8. VAP prevention measures include performing oral care every two hours, suctioning secretions as needed, and carefully cleaning the ET tube.
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**	Patient can have a regular diet at home; however, patient eats less than the recommended caloric intake per day. Patient drinks protein drinks to attempt to compensate for poor intake but often does not consume these either. In the hospital, the patient is prescribed Jevity 1.2kcal/mL with a goal of 60 mL/hr. Patient height is 160 cm. Patient weighs 32.7 kg. Bowel sounds hypoactive in all four quadrants. Last bowel movement 3/1. Pain with palpation unable to be assessed due to sedations. No abdominal masses were

Nasogastric: Y X **N** ☐ **Size:** **Feeding tubes/PEG tube Y** ☐ **N X** **Type:**	detected. Nasogastric tube in place in patient's right nostril. Size of nasogastric tube is 16. No distention, no incisions, no scars, no drains, no wounds present on patient's abdomen.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Not applicable** **Dialysis: Y** ☐ **N** X **Inspection of genitals:** **Catheter: Y** X **N** ☐ **Type:** **Size:** **CAUTI prevention measures:**	Patient's urine is straw colored and clear. Patient had a urine output of 495 mL during clinical period. Pain is unable to communicate pain with urination as she is sedated. No redness or swelling noted in genitals. Patient has an indwelling foley catheter in place. The catheter is size 14. CAUTI prevention measures include sterile placement, placing collection bag lower than the patient's bladder, ensuring the catheter is draining appropriately and not backing up into the bladder, and providing catheter and genital sanitation.
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y** X **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**	Nail beds smooth without pits or grooves. Extremities warm and red. Extremities motor function is fluid. Patient was able to complete passive range of motion exercises. Patient wears glasses as a supportive device. Patient also has a ventilator and ET tube as a supportive device. Patient unable to follow commands strength is unable to be assessed due to intubation and sedation. Patient needs full assistance with ADLs. Patient is a high fall risk with a score of 50. Patient is intubated and sedated on bed rest so is unable to get up. If the patient were to come out of her sedation and get her ET tube out, she would need assistance to stand up.
NEUROLOGICAL: **MAEW: Y** ☐ **N** X **PERLA: Y** X **N**☐ **Strength Equal: Y** ☐ **N** X **if no - Legs** ☐ **Arms** ☐ **Both X** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Unable to assess if patient is oriented to person, place, situation, and time because patient is intubated and sedated and there is no family at bedside. Patient pupils are equal and reactive to light but sluggish. Cognition and mental status are unable to be assessed. Speech unable to be assessed. LOC is unable to be assessed. Patient RASS score is –4.
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:**	Patient lives alone in a private residence. Patient notes no family or friends for a support system in her chart. Patient intubated

Religion & what it means to pt.: Personal/Family Data (Think about home environment, family structure, and available family support):	and sedated, and coping methods are not able to be assessed. Patient has a bachelor's degree, but developmental level is unable to be assessed at this time due to sedation. Patient's religion is unable to be assessed at this time due to sedation. Patient's chart reports that she is widowed and lives alone. Further personal and family data is unable to be assessed at this time due to sedation.

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

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0830	72 bpm	76 mm Hg/ 60 mm Hg	22 br/min	36.9 °C	100%
1230	71 bpm	81 mm Hg/ 59 mm Hg	22 br/min	36.9 °C	100%

Vital Sign Trends/Correlation:

The patient's pulse remained within normal limits in both sets of vital signs taken. Patient's systolic blood pressure was low in both readings. Patient's diastolic blood pressure was low in both readings. Patient's respiratory rate is slightly elevated in both readings. The patient's temperature remained within normal limits and stayed constant in both readings. Patient's oxygen saturation is 100 in both readings.

Patient suffers from hypotension due to blood vessels dilation as a systemic response to septic shock. Sepsis can damage vital organs which can affect blood pressure (Capriotti, 2020).

Sepsis can cause an increase in respiratory rate due to systemic inflammatory syndrome. Tachypnea is associated with respiratory distress syndrome, a hallmark finding in sepsis related to abnormal arterial blood gases. An increase in respiratory rate can also occur due to an increase in total ventilation or a fall in tidal volume (Capriotti, 2020).

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0900	Critical care pain observation tool	N/A	0/10	N/A	Fentanyl drip infusion
1200	Critical care pain observation tool	N/A	0/10	N/A	Fentanyl drip infusion

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:**	Saline Lock 22 gauge Peripheral – right hand 2/25 No phlebitis No infiltration No signs of erythema or drainage IV patent Transparent dressing is clear, dry, intact
Other Lines (PICC, Port, central line, etc.)	PICC
Type: **Size:** **Location:** **Date of insertion:** **Patency:** **Signs of erythema, drainage, etc.:** **Dressing assessment:** **Date on dressing:** **CUROS caps in place: Y** X **N** ☐ **CLABSI prevention measures:**	Vasopressin infusion at 9mL/hr Magnesium infusing at 25 mL/hr Fentanyl infusing at 12.5 mL/hr PICC 18, 18, 16 – triple lumen Right upper arm 2/25 No phlebitis No infiltration No signs of erythema or drainage IV patent Transparent dressing is clear, dry, intact. Dry blood noted around the insertion site. CLABSI prevention starts with hand hygiene. CUROS caps are great in preventing infection. It is important to always cap open ports. CHG impregnated dressings add additional protection

	from infection. Using sterile technique with dressing changes can help to prevent infection. Use alcohol swabs to clean lumens when administering medications.

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**
Jevity - 225 mL Magnesium - 50 mL Vasopressin - 67.5 mL Fentanyl - 93.75 mL Cefepime + sodium chloride 0.9% - 109.06 mL Doxycycline _ sodium chloride 0.9% - 110.19 mL Lansoprazole – 10 mL Saline flush – 120 mL	Urine output – 495 mL Incontinent of stool x1 bowel movement

Nursing Care

Summary of Care (2 points)

Overview of care: The student nurse did a full head to toe assessment, pain assessment, IV assessment, and provided activities of daily living for this patient. The student helped to administer medications through a nasogastric tube and through subcutaneous injection. The student nurse primed IV bags for the patient and helped to set pumps and hook up medications to the patient’s PICC line. The student nurse performed oral care and suctioning and helped to reposition the patient every two hours. The student nurse also collected a blood sample for a culture from the patient’s PICC line.

Procedures/testing done: The patient had blood cultured drawn from her PICC line to look for infection. The patient has a COVID-19 test that is still pending at the end of the clinical day. The patient had a chest X-ray done to assess placement of her ET tube and progression of lung abnormalities.

Complaints/Issues: The patient is intubated and sedated and was unable to communicate any complaints or issues.

Vital signs (stable/unstable): Patient is stable during the clinical period. Patient maintains hypotension and tachypnea.

Tolerating diet, activity, etc.: Patient is tolerating her NG tube and Jevity well. Patient's Jevity is currently set to 30mL/hr at the time of clinical and will continue to be titrated up to 60mL/hr as the set goal. Patient is bed fast at this time.

Physician notifications: Consult order was put in with infectious diseases for input on patient's UTI which is growing proteus.

Future plans for client: The client will continue titrating up on her Jevity. The patient will attempt to be weaned off the ventilator when she shows more progress in breathing on her own. Pleural effusion will be treated, and edema will be decreased. The patient will continue treatment for septic shock and urinary tract infection.

Discharge Planning (2 points)

Discharge location: The discharge plans have not been determined for this patient due to the patient's critical condition. The patient may be transferred to a long-term care facility in the event that she does progress well enough to consider discharge planning.

Home health needs (if applicable): Home health needs for this patient are undeterminable at this time. If the patient continues to progress, she may need a home health nurse to assist her with ADLs and a treatment regimen.

Equipment needs (if applicable): The patient is currently being mechanically ventilated and fed through an NG tube. It is indeterminable what specific equipment the patient will need when she is discharged.

Follow up plan: The patient needs intensive critical care at this time. If the patient is discharged, they will need to go to an assisted living facility or potentially have a home health nurse. A follow up plan cannot be determined at this time.

Education needs: The patient is intubated and sedated and cannot currently be educated. There is currently no family members at bedside for the patient. If family members do show up, education on the patient's condition and the death and dying process may need to be considered. It is also important to consider contacting the patient's power of attorney and educating them on the patient's status and needs.

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"	**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

components • Listed in order by priority – highest priority to lowest priority pertinent to this client				actions ? • Client response, status of goals and outcomes, modifications to plan.
1. Risk for shock related to reduction of arterial and venous blood flow as evidenced by hypotension.	Patient is displaying hypotension. Hypotension causes decreased blood flow. Shock is life-threatening and occurs when the body is not receiving adequate blood flow and perfusion. Shock can lead to damage to multiple organs and, progressively, organ failure.	**1.Monitor trends in blood pressure and note progressive hypotension.** **2.Monitor heart rate and rhythm for dysrhythmias.**	**1.Client will display adequate perfusion greater than 92% SaO2 and stable vital signs.**	The client continued to display hypotension throughout the clinical day. There is no family at bedside. Goal met to monitor hypotension and heart rate. Outcome of interventions include finding the patient in normal heart rate and rhythm and hypotension. No modification to plans were made.
2.Risk for impaired gas exchange related to altered blood flow as evidenced by tachypnea and abnormal arterial blood gas ranges.	Patient has abnormal arterial blood gas ranges and is experiencing increased respiratory rate. Patient is also experiencing hypotension	**1.Monitor respiratory rate and depth as well as looking for use of accessory muscles.** **2.Auscultate breath sounds and note abnormalities.**	**1. Client will display respiratory rate within normal limits, between 12-20 bpm, with no use of accessory muscles. The client will display clear**	The client displayed an abnormal respiratory rate. The client also displayed crackles and coarseness heard upon auscultation of

	which can alter blood flow. Interference with oxygen delivery is the cause of impaired gas exchange.		**breathing sounds bilaterally in all lobes.**	lung sounds. Goal of monitoring respiratory rate and breath sounds met. Outcome of goals not met. Patient is displaying signs of impaired gas exchange such as tachypnea and coarse crackles. No modification to plans made.
3.Risk for fluid volume overload related to septic shock as evidenced by coarse crackles heard upon auscultation of lung sounds, pleural effusion, and peripheral edema.	Fluid volume overload is associated with poor mobility and increased fluid volume. The patient is on bedrest with septic shock.	**1.Closely monitor intake and output. 2.Continue to auscultate lung sounds and monitor respiratory rate.**	**1.The patient will display adequate urine output >30mL/hr. The patient will have clear lung sounds bilaterally in all lobes and will display a respiratory rate within normal limits.**	The client displayed adequate urinary output throughout the clinical day. The client displayed continued coarse crackles upon auscultation of lung sounds. The patient's respiratory rate remained elevated. Goal of monitoring patient's intake and output, lung sounds, and respiratory met. Outcome of goals represents continued signs of fluid volume

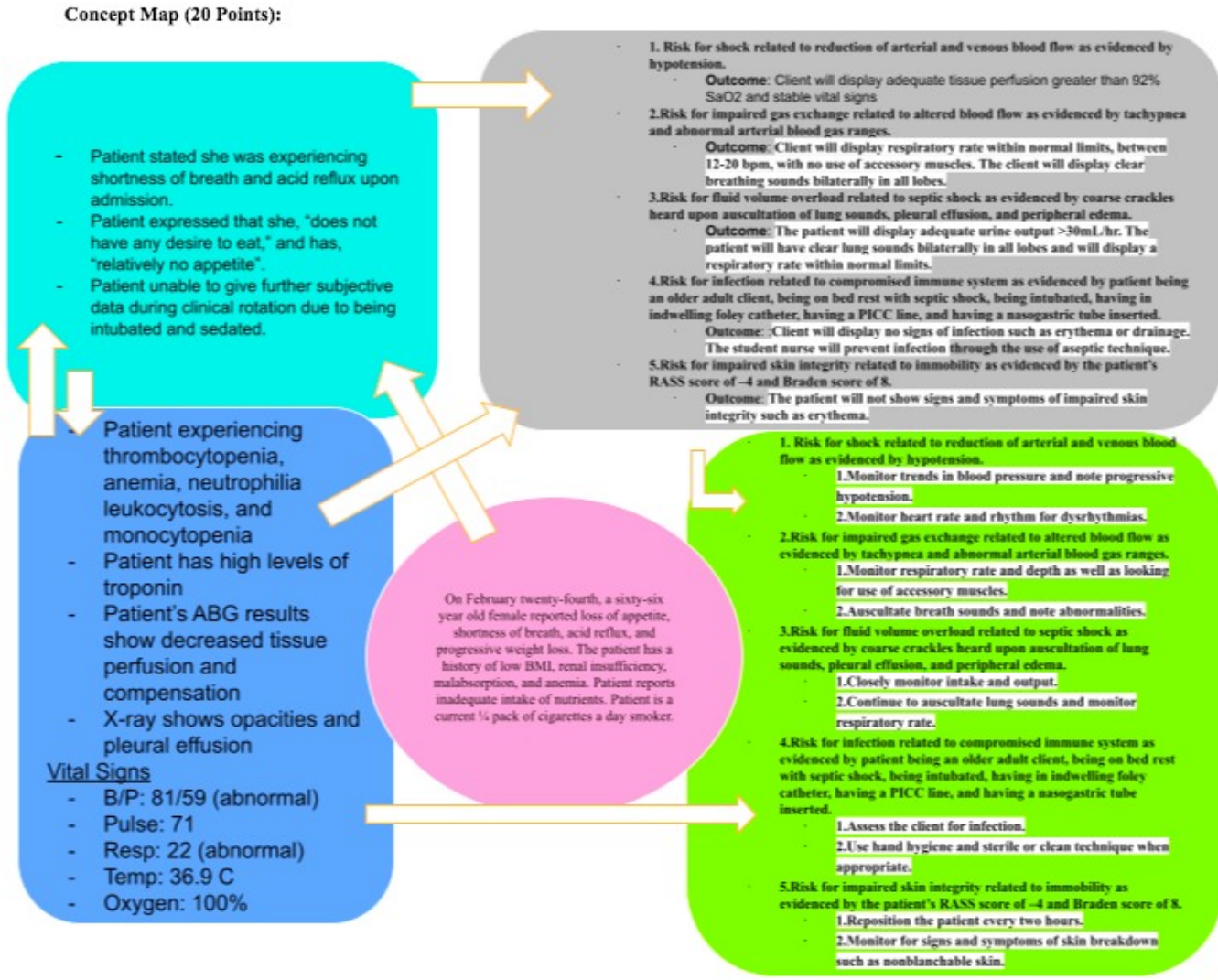
				overload and pleural effusion. Outcome of monitoring intake and output showed adequate output. No modification to plans made.
4.Risk for infection related to compromised immune system as evidenced by patient being an older adult client, being on bed rest with septic shock, being intubated, having in indwelling foley catheter, having a PICC line, and having a nasogastric tube inserted.	The patient has many routes of entry for bacteria to cause infection. The patient has an ET tube, a foley, a PICC line, and an NG tube. The patient is also an older adult client and is on bed rest. The patient already has a urinary tract infection and sepsis and is an immunocompromised individual.	**1.Assess the client for infection.** **2.Use hand hygiene and sterile or clean technique when appropriate.**	**1.Client will display no signs of infection such as erythema or drainage. The student nurse will prevent infection through the use of aseptic technique.**	The client did not present with signs or symptoms of infection. The student nurse used hand hygiene, and sterile or clean technique when appropriate to prevent infection. The goal was met to assess for infection and use aseptic technique to prevent infection. Outcome of interventions include no signs and symptoms of infection. No modifications to plan were made.
5.Risk for impaired skin integrity related to immobility as	The patient is on bedrest and is unable to	**1.Reposition the patient every two hours.** **2.Monitor for**	**1. The patient will not show signs and symptoms of**	Patient was repositioned every two hours. Patient

evidenced by the patient's RASS score of –4 and Braden score of 8.	move or assess their own pain level. The patient is also incontinent of bowel or bladder. Skin breakdown can easily occur with this patient.	**signs and symptoms of skin breakdown such as nonblanchable skin.**	**impaired skin integrity such as erythema.**	was monitored for signs and symptoms of skin breakdown. Goal met to reposition and monitor the patient. Outcome of goals was no findings of impaired skin integrity. No modifications to plan made.

Other References (APA):

Capriotti, T. (2020). *Davis advantage for pathophysiology: Introductory concepts and clinical perspectives* (2nd ed). F.A. Davis Company.

Concept Map (20 Points):



Included in typing in case the diagram is too difficult to read.

Subjective:

- Patient stated she was experiencing shortness of breath and acid reflux upon admission.

- Patient expressed that she, “does not have any desire to eat,” and has, “relatively no appetite”.
- Patient unable to give further subjective data during clinical rotation due to being intubated and sedated.

Objective:

- Patient experiencing thrombocytopenia, anemia, neutrophilia leukocytosis, and monocytopenia
- Patient has high levels of troponin
- Patient’s ABG results show decreased tissue perfusion and compensation
- X-ray shows opacities and pleural effusion

Vital Signs

- B/P: 81/59 (abnormal)
- Pulse: 71
- Resp: 22 (abnormal)
- Temp: 36.9 C
- Oxygen: 100%

Center:

On February twenty-fourth, a sixty-six-year-old female reported loss of appetite, shortness of breath, acid reflux, and progressive weight loss. The patient has a history of low BMI, renal insufficiency, malabsorption, and anemia. Patient reports inadequate intake of nutrients. Patient is a current ¼ pack of cigarettes a day smoker

Nursing diagnosis/outcomes:

- 1. Risk for shock related to reduction of arterial and venous blood flow as evidenced by hypotension.
    - Outcome: Client will display adequate tissue perfusion greater than 92% SaO2 and stable vital signs
- 2.Risk for impaired gas exchange related to altered blood flow as evidenced by tachypnea and abnormal arterial blood gas ranges.
    - Outcome: Client will display respiratory rate within normal limits, between 12-20 bpm, with no use of accessory muscles. The client will display clear breathing sounds bilaterally in all lobes.
- 3.Risk for fluid volume overload related to septic shock as evidenced by coarse crackles heard upon auscultation of lung sounds, pleural effusion, and peripheral edema.
    - Outcome: The patient will display adequate urine output >30mL/hr. The patient will have clear lung sounds bilaterally in all lobes and will display a respiratory rate within normal limits.
- 4.Risk for infection related to compromised immune system as evidenced by patient being an older adult client, being on bed rest with septic shock, being intubated, having in indwelling foley catheter, having a PICC line, and having a nasogastric tube inserted.
    - Outcome: :Client will display no signs of infection such as erythema or drainage. The student nurse will prevent infection through the use of aseptic technique.
- 5.Risk for impaired skin integrity related to immobility as evidenced by the patient’s RASS score of –4 and Braden score of 8.

- Outcome: The patient will not show signs and symptoms of impaired skin integrity such as erythema.

Nursing diagnosis/ Interventions:

- 1. Risk for shock related to reduction of arterial and venous blood flow as evidenced by hypotension.
  - 1.Monitor trends in blood pressure and note progressive hypotension.
  - 2.Monitor heart rate and rhythm for dysrhythmias.
- 2.Risk for impaired gas exchange related to altered blood flow as evidenced by tachypnea and abnormal arterial blood gas ranges.
  - 1.Monitor respiratory rate and depth as well as looking for use of accessory muscles.
  - 2.Auscultate breath sounds and note abnormalities.
- 3.Risk for fluid volume overload related to septic shock as evidenced by coarse crackles heard upon auscultation of lung sounds, pleural effusion, and peripheral edema.
  - 1.Closely monitor intake and output.
  - 2.Continue to auscultate lung sounds and monitor respiratory rate.
- 4.Risk for infection related to compromised immune system as evidenced by patient being an older adult client, being on bed rest with septic shock, being intubated, having in indwelling foley catheter, having a PICC line, and having a nasogastric tube inserted.
  - 1.Assess the client for infection.
  - 2.Use hand hygiene and sterile or clean technique when appropriate.

- 5.Risk for impaired skin integrity related to immobility as evidenced by the patient's RASS score of –4 and Braden score of 8.
    - 1.Reposition the patient every two hours.
    - 2.Monitor for signs and symptoms of skin breakdown such as nonblanchable skin.