N311 Care Plan # 2

Lakeview College of Nursing

Riley Black

Demographics (5 points)

Date of Admission 02/25/2021	**Patient Initials** C.S.	**Age** 08/22/1957 (63yo)	**Gender** Male
Race/Ethnicity White	**Occupation** Planning Administrator	**Marital Status** Married	**Allergies** 1. Vancomycin HCl – Severe rash 2. Rituximab – Hives, rash, itching
Code Status Full Code	**Height** 5'9" (175.3 cm)	**Weight** 78.4 kg (172 lb 13.5 oz)	

Medical History (5 Points)

Past Medical History: Chronic Lymphocytic Leukemia (02/2021)

Past Surgical History: Full Dental Extraction (pt said about 20 years ago)

Family History: Father died of lung cancer

Social History (tobacco/alcohol/drugs): Denies tobacco use/ Pt claims "probably a six pack of beer a week"/ Denies recreational drug use

Admission Assessment

Chief Complaint (2 points): Patient stated, "I have really bad shortness of breath with endurance, and I lost all of my strength because I was in a coma and on bedrest for so long."

History of present Illness (10 points): Patient was admitted with CoVid-19 on 01/27/2021 and was put into a medically induced coma that lasted for ten days. The patient was relieved from the coma and received blood testing that revealed he has CLL. The patient was in isolation until 02/25/2021 when he was transferred o

the acute rehabilitation unit. This further progressed his muscular atrophy and activity intolerance.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Critical illness myopathy

Secondary Diagnosis (if applicable): N/A

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

Critical illness myopathy, otherwise known as intensive care unit-acquired weakness (ICUAW), is the general atrophy of skeletal muscles that results from prolonged bedrest and immobility that results from treatment from a critical illness. According to Lad et al. (2020), it is a relatively common phenomenon that occurs in approximately 40% of critically ill patients who are admitted to the ICU (Lad et al., 2020). According to Capriotti, the major risks to the musculoskeletal system related to the lack of regular contraction and relaxation include disuse atrophy, weakness, contractures, decreased range of motion, and degeneration of connective tissue in joints (Capriotti, 2020).

The complications associated with critical illness myopathy can be explained by cellular interactions in the muscles. The main complication of critical illness myopathy is weakness. The weakness the patient is experiencing stems from muscle wasting due to the lack of range of motion exercise, impaired contractility, neuropathy, and muscle protein degradation (Lad et al., 2020). The major problem at the cellular level is that protein synthesis does not occur as fast as proteolysis, which causes patients to lose 20% of their muscle mass within the first ten days of being placed in ICU (Lad et al., 2020). The atrophy occurs because the muscle fibers that are inactive do not metabolize or need to metabolize like normally functioning muscles do. This

means that they are not doing any tearing or replacing that leads to continued growth and strength maintenance (Capriotti, 2020).

This disease is not one that has a definite diagnostic test. Lad et al. (2020) claims that there is no “gold standard” when it comes to diagnosing critical illness myopathy. The only way to confidently determine the presence of critical illness myopathy is by examining the electrophysiology and histology of the muscle fibers. They claim that once severe muscle weakness occurs after a long stay in the ICU, it is likely that the patient has CIM (Lad et al., 2020). My patient did not undergo any diagnostic imaging or labs, but the diagnosis is sensible because of his extended stay of multiple weeks in the ICU, with ten days being in a medically induced coma. The signs and symptoms of the severe muscular atrophy are contractures, the patient appearing to be in the fetal position, and the patient demonstrating weakness and the loss of range of motion during the physical examination (Capriotti, 2020).

Treatment for this disease includes physical therapy and increased muscular activity, like daily range of motion exercises. However, Lad et al. (2020) claims that there is no proven way to prevent the muscle loss or reverse the muscle wasting once it has occurred (Lad et al., 2020). The best way to manage the disease is to continue to exercise after ICU discharge. They also claim that some patients may make a full recovery while others will experience ongoing weakness that will affect their abilities and quality of life (Lad et al., 2020).

Pathophysiology References (2) (APA):

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

Lad, H., Saumur, T. M., Herridge, M. S., Dos Santos, C. C., Mathur, S., Batt, J., & Gilbert, P. M. (2020). Intensive care unit-acquired weakness: Not just another muscle atrophying condition. *International Journal of Molecular Sciences*, *21*(21). https://doi.org/10.3390/ijms21217840

Laboratory Data (20 points)

If laboratory data is unavailable, values will be assigned by the clinical instructor

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

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	4.4-5.8	2.54	2.98	Pt has leukemia, which will cause a reduced RBC count.
Hgb	13.0-16.5	9.3	11.4	Pt was on a full liquid diet for weeks and was in a coma for 10 days prior to admission to the rehab floor. Nutritional deficiencies are cause for low Hgb. Antibiotic uses are also a cause for low Hgb.
Hct	38-50	27.7	33.9	Hematocrit is decreased in pts experiencing leukemia.
Platelets	140-440	21	111	Leukemia is a major cause for a low platelet count.
WBC	4.00-12.00	4.32	3.40	
Neutrophils	40-68	69.0	N/A	Pt was first admitted with Covid-19,

				so his neutrophils were likely responding to the infection.
Lymphocytes	19-49	28.0	N/A	
Monocytes	N/A	N/A	N/A	
Eosinophils	N/A	N/A	N/A	
Bands	0-10	3.0	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-	133-144	134	138	
K+	3.5-5.1	4.3	3.6	
Cl-	98-107	100	102	
CO2	21-31	26	26	
Glucose	70-99	103	77	The cause of the high glucose very likely could be stress induced since it is so close to normal range. Another possible cause could be that he recently had food.
BUN	7-25	14	11	
Creatinine	0.50-1.20	0.40	0.38	Decreased muscle mass is a cause for low creatinine levels, and this pt has atrophied to a great extent into CIM.
Albumin	3.5-5.7	2.9	N/A	Albumin levels become decreased with malnutrition, and the pt was admitted after being in a coma and on bedrest. His nutrition for that long period of time was likely less than normal.
Calcium	8.6-10.3	8.4	8.1	Pt is taking laxatives, corticosteroids, and diuretics, which all can lead to decreased levels of

				calcium.
Mag	N/A	N/A	N/A	
Phosphate	N/A	N/A	N/A	
Bilirubin	0.2-0.8	0.8	N/A	
Alk Phos	34-104	75	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	N/A	N/A	N/A	
pH	N/A	N/A	N/A	
Specific Gravity	N/A	N/A	N/A	
Glucose	N/A	N/A	N/A	
Protein	N/A	N/A	N/A	
Ketones	N/A	N/A	N/A	
WBC	N/A	N/A	N/A	
RBC	N/A	N/A	N/A	
Leukoesterase	N/A	N/A	N/A	

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	N/A	N/A	N/A	
Blood Culture	N/A	N/A	N/A	
Sputum Culture	N/A	N/A	N/A	
Stool Culture	N/A	N/A	N/A	

Lab Correlations Reference (APA):

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

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

Pt did not receive any other diagnostic tests other than CMP, CBC, and accucheck.

Current Medications (10 points, 2 points per completed med)

5 <u>different</u> medications must be completed

Medications (5 required)

Brand/Generic	Declomycin/ Demeclocycline	Colace/ Docusate Sodium	Deltasone/ Prednisone	Diflucan/ Fluconazole	Pepcid/ Famotidine
Dose	300 mg	100 mg	10 mg	200 mg	20 mg
Frequency	BID	Daily	Daily with breakfast	Daily	Daily
Route	PO	PO	PO	PO	PO
Classification	Antibiotic	Laxative	Immunosuppressant	Antifungal	Anitulcer agent
Mechanism of Action	Inhibits the renal action of antidiuretic hormone.	Softens stool by decreasing surface tension between oil and water in feces, allowing more water to penetrate the stool.	Binds to intracellular glucocorticoid receptors and suppresses inflammatory and immune responses.	Damages fungal cells by interfering with a cytochrome P-450 enzyme needed to convert lanosterol to ergosterol, an essential part of the fungal membrane.	Reduces HCl formation by preventing histamine from binding with H2 receptors on the surface of parietal cells.
Reason Client Taking	Pt is on a fluid restriction, and this is prescribed to make the treatment more effective.	Help pt have successful BM.	Corticosteroids like prednisone are used to treat CLL.	To treat a fungal infection.	To treat heartburn and indigestion.
Contraindications (2)	Diabetes insipidus, decreased kidney fuction	Fecal impaction, intestinal obstruction	Hypersensitivity to prednisone and its components, systemic fungal infection	Coadministration of drugs known to prolong QT interval and which are metabolized	Hypersensitivity to famotidine, other h2 receptors, or their components,

				via the enzyme CYP3A4 or concurrent therapy with terfenadine, hypersensitivity to fluconazole or its components	phenylketonuria
Side Effects/Adverse Reactions (2)	Diarrhea, nausea	Dizziness, muscle weakness	Adrenal insufficiency, heart failure	Adrenal insufficiency, hepatic failure	Hepatitis, interstitial pneumonia

Medications Reference (APA):

2021 Nurse's drug handbook (20th ed.). (2021). Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Pt was A&O x4. Appeared well groomed and attending all ADLs. Did not show any signs of distress.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:**	Skin was normal color for ethnicity. Some general flakiness presenting. Some ecchymosis on upper extremities bilaterally d/t venous puncture. Skin was cool to the touch. Some tenting present. Braden score was determined to be a 20. Points

Bruises: **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	were deducted for activity level and mobility.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Head and face appeared symmetrical. Lymph nodes were nonpalpable. No tracheal deviation noted. Eyes PERLA with no sign of drainage. Conjunctiva pink and moist. No drainage from nose or sign of deviation. Oral mucosa appeared pink and moist. Pt has dentures. No drainage from ears. Cerumen present. .
CARDIOVASCULAR: **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:**	Heart sounds and rhythm were regular. S1 and S2 noted. Peripheral pulses were a +3. Capillary refill was under 3 seconds. No JVD or edema.
RESPIRATORY: **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character**	Respirations were quick and shallow but unlabored. Vesicular sounds noted upon auscultation.
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 ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	Pt claims diet at home has a wide variety of foods and is unrestricted. Pt's current diet is normal but with a fluid restriction. Bowel sounds are normoactive. Pt's last BM was in the AM. No pain or tenderness on palpation.

GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	Pt claims urine is dark amber but clear. Pt did not void while I was with him. Pt denied pain with urination.
MUSCULOSKELETAL: **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** ☒	Pt demonstrated good ROM. ROM on right side was slightly less mobile in upper extremity. Pt showed good strength against resistance bilaterally in upper and lower extremities but sated "I feel like my right side is weaker than my left." Strength is a 4/5. Low fall risk with a score of 15 because pt uses a walker. Pt was a stand-by assist.
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☐ Arms ☒ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Pt is A&O x4 with normal cognition. Speech is clear. Pt LOC is alert. Patient can move all extremities well, but the ROM on his right upper extremity is slightly behind what his left upper extremity can do.
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):**	Pt claims that he is slowly beginning to understand his situation more each day. He says he does a lot of research on CIM and CLL to get a better understanding of what he is dealing with. He also claims to anticipate his release and follow-up appointments because he is ready to feel like he is moving on from his initial admission. He says he was raised Roman Catholic and that it plays a major role in his life and decisions. He lives with his wife and has three kids that live close to him that offer great support to him.

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1015	95	104/74	18	97.7	98%

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1015	Numeric	Pt denied any pain.	0	Pt denied any pain.	Pt denied any pain.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
360 ml water 120 ml apple juice 100 % of breakfast – oatmeal, scrambled eggs, two sausage links, mixed fruit cup	BM in the morning (unobserved) No urine output while I was present (pt is on fluid restrictions)

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

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. Impaired	r/t prolonged	1. PROM and	Goal met. Pt completed all

mobility	bedrest and critical illness myopathy AEB 1 person assist with walker and difficulty sitting up and standing	ROM exercises two times per shift 2. Ambulation in the hallways two times per shift	PROM and ROM exercises. Goal met. Pt ambulated to and from the gym twice.
2. Activity intolerance	r/t prolonged bedrest and critical illness myopathy AEB pt experiencing SOB during therapy and ambulation	1. Allow pt to rest PRN during activity 2. Gradually increase the amount of activity pt does during therapy and PROM, ROM, and ambulation during each shift	Goal met. Pt was given time to rest between exercise which led to him having more energy when starting each new exercise. Goal partially met. Pt does a little more each therapy session and did some extra activity outside of therapy, but he is still limited on the activities he can do.

Overall APA format (5 points):

Concept Map (20 Points):

Subjective Data

Pt stated his main concerns are, "I get really short of breath when I try to do anything, and I just feel really weak."
Pt stated, "I feel like my right side is weaker than my left side, and I can't move my right arm as well as my left."

Nursing Diagnosis/Outcomes

Impaired mobility r/t prolonged bedrest and critical illness myopathy AEB 1 person assist with walker and difficulty sitting up and standing.
Outcome: Pt will regain full ROM and strength to return to his normal daily activities unassisted.
Activity intolerance r/t prolonged bedrest and critical illness myopathy AEB pt experiencing SOB during therapy and ambulation.
Outcome: Pt will gradually increase his endurance that will allow him to complete daily activities without having to stop to rest.

Objective Data

VS = T: 97.7 P: 95 R: 18 BP: 104/74 O2: 98%
CBC Abnormalities: RBC=2.98 Hgb=11.4 Hct=33.9 Platelets=111
Neutrophils=69.0
Chemistry Abnormalities:
Creatinine=0.40 Albumin=2.9
Calcium=8.1
Pt was not very stable when walking and had quick, shallow breaths upon exertion

Patient Information

On 02/25/2021 a 63 yo male was admitted to the acute rehab unit at OSF HMMC Urbana with a primary diagnosis of CIM r/t prolonged bedrest and a medically induced coma. Pt was recently diagnosed with Covid-19, and during his treatment for the virus, he was diagnosed with CLL.

Nursing Interventions

PROM and ROM exercises two times per shift
Ambulation in the hallways two times per shift
Allow pt to rest PRN during activity
Gradually increase the amount of activity pt does during therapy and PROM, ROM, and ambulation during each shift