N311 Care Plan # 4

Lakeview College of Nursing

McKayla Norton

Demographics (5 points)

Date of Admission 8 Feb 2019	Patient Initials JT	Age 60	Gender Male
Race/Ethnicity White	Occupation Taxi Driver	Marital Status Never married	Allergies Lipitor
Code Status FULL	Height 67 in.	Weight 105 kg	

Medical History (5 Points)

Past Medical History: **MS, dysphagia, oral phase, pyothorax w/out fistula, paraplegia, UTI, generalized edema, sepsis, HTN, neuromuscular dysfunction of bladder, GERD, major depressive disorder, cellulitis of chest wall, insomnia, atherosclerotic heart disease of native coronary artery w/out angina pectoris, hypokalemia, hyperlipidemia, constipation, trigeminal neural.**

Past Surgical History: Supra pubic catheter, appendectomy

Family History: Mother COPD from smoking, no info on father.

Social History (tobacco/alcohol/drugs): Smoked 2 packs a day until 20 years ago, Crack cocaine 30 years ago, no alcohol.

Admission Assessment

Chief Complaint (2 points): Patient complains of pain in right hand.

History of present Illness (10 points): Patient was diagnosed with Multiple Sclerosis (M.S.) 10 years ago. His pain today was located in his right hand. Patient states that this is a constant pain, and he reports it is a "dull" pain. He also states that currently there are no other aggravating or associated factors. The patient stated that when he extends his right arm, this relieves the pain in his right hand. The patient was prescribed Gabapentin twice daily for nerve pain and Tylenol was prescribed for pain on an "as needed" basis.

Primary Diagnosis

Primary Diagnosis on Admission (3 points):Multiple Sclerosis

Secondary Diagnosis (if applicable):

Pathophysiology of the Disease, APA format (20 points): Multiple Sclerosis (MS) is a "chronic neurological disorder that affects the brain and spinal cord" (Capriotti & Frizzell pg. 784, 2019). Damage to the myelin and other cells will eventually lead to central nervous system damage and neurological disabilities. The cause of MS is currently unknown, but there are many theories about how it happens. A theory states that activated T cells have been abnormally sensitized to attack myelin cells and damage them (Capriotti & Frizzell pg. 784, 2019). This happens until it demyelinates a lot of the central nervous system (CNS) (Capriotti & Frizzell pg. 784, 2019). Sometimes, remission of the disease can happen and cause the areas affected by demyelination to heal. Other times when it cannot heal and the damage cannot be undone, it will turn into irreversible fibrotic scar tissue (Capriotti & Frizzell pg. 784, 2019). This disrupts the conduction of impulses that travel throughout the nervous system causing sensory and motor symptoms of MS (Capriotti & Frizzell pg. 784, 2019). Constant deterioration of myelin can lead to primary progressive multiple sclerosis (PPMS) (Capriotti & Frizzell pg. 784, 2019). PPMS gets its name because from the first symptoms it gradually gets worse over time unlike seeming like a sudden relapse (National Multiple Sclerosis Society, 2020). Many patients present with these most common symptoms: "weakness, numbness, tingling sensation, balance problems, blurred vision, and fatigue" (Capriotti & Frizzell pg. 784, 2019). Most patients suffer from the most common form of MS which is the relapsing-remitting form (Capriotti & Frizzell pg. 784, 2019).

Episodes for this form can vary in length. Some may last "several weeks to three months with reoccurring symptoms every one to three years" with the possibility to return to normal functions or almost normal (Capriotti & Frizzell pg. 784, 2019). When first diagnosed, sensory symptoms are first noticeable. These symptoms include paresthesia and vision problems (The Healthline Editorial Team, 2019). Optic nerves are attacked because they are covered in myelin. This can cause vision distortion or loss of vision in an eye (Capriotti & Frizzell pg. 785, 2019). Motor nerve damage like difficulty walking or performing coordinating tasks, often occur later on in the development of the disease (Capriotti & Frizzell pg. 785, 2019). Spinal tracts are covered in myelin, so this may lead to urinary and bowel incontinence which may lead to the patient needing catheters, which may also lead to infections if not properly cared for (Capriotti & Frizzell pg. 785, 2019). Patients with MS may develop depression disorders. "The lifetime risk for major depression in individuals with MS may be as high as 50%" (Capriotti & Frizzell pg. 785, 2019). It can be difficult to diagnose MS because signs and symptoms are only clues for providers. Providers need to see the presence of lesions of demyelination that can be found on imaging studies and patients must report specific neurological deficits (Capriotti & Frizzell pg. 785, 2019). The McDonald criteria is used to diagnose MS. This criteria includes "specific neurological examination findings, MRI evidence, and patient symptoms" (Capriotti & Frizzell pg. 785, 2019). The provider must look at blood work in order to rule out the chance of it being other autoimmune disorders. Treatment for MS is focused on preventing inflammatory cells from crossing the blood-brain barrier (Capriotti & Frizzell pg. 785, 2019). Although MS cannot be cured, giving immunomodulating agents can reduce the number of days a patient suffers from symptoms (Capriotti & Frizzell pg.

785, 2019). Typically, when a patient suffers from MS, there is a lot of inflammation. Providers may choose to prescribe corticosteroids to help reduce inflammation (Capriotti & Frizzell pg. 785, 2019).

Pathophysiology References (2) (APA):

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

The Healthline Editorial Team. (2019, October). *Early signs of MS: 16 early warning signs of multiple sclerosis*. Healthline. https://www.healthline.com/health/multiple-sclerosis/early-signs

National Multiple Sclerosis Society. (2020). *Primary progressive MS (PPMS)*. https://www.nationalmssociety.org/What-is-MS/Types-of-MS/Primary-progressive-MS

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

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

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	**4.0-4.9 *10^6/ uL***		**4.37**	
Hgb	**12.0-16.0 *g/dL***		**10.4**	**Patient's with MS can have Hgb levels that can be low due to the fact that red blood cells are more fragile causing them to damage more easily.**
Hct	**37.0-48.0%**		**33.4**	**Patient's with MS can have Hgb**

				levels that can be low due to the fact that red blood cells are more fragile causing them to damage more easily.
Platelets	**150-400** ***10^3/uL***		**440**	**Platelets may be high due to the inflammation MS causes.**
WBC	**4.1-10.9** ***10^3/uL***		**9.8**	
Neutrophils	**1.50-7.70** ***10^3/uL***		**0.8-3.4**	
Lymphocytes	**1.00-4.90** ***10^3/uL***		**1.80**	
Monocytes	**0.00-0.80** ***10^3/uL***		**0.0-0.9**	**Monocytes may be high due to MS inflammation.**
Eosinophils	**0.00-0.50** ***10^3/uL***		**0.20**	
Bands			**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** ***mmol/L***		**144**	
K+	**3.5-5.1** ***mmol/L***		**3.2**	**K+ is low due to the patient being diagnosed with hypokalemia, which may be caused by the patient having high blood pressure and taking medication for this.**
Cl-	**98-107** ***mmol/L***		**104**	
CO2	**21.0-32.0** ***mmol/L***		**31.1**	
Glucose	**60-99** ***mg/dL***		**78**	
BUN	**5-20** ***mg/dL***		**9**	
Creatinine	**0.5-1.5** ***mg/dL***		**0.9**	

Albumin	**3.5-5.2 *mg/dL***		**3.3**	**Albumin levels may be low due to inflammation caused by MS.**
Calcium	**8.5-10.1 *mg/dL***		**8.5**	
Mag	**1.6-2.6 *mg/dL***		**N/A**	
Phosphate	**-**		**N/A**	
Bilirubin	**0.0-1.2 *mg/dL***		**0.2**	
Alk Phos	**35-105 *u/L***		**102**	

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

Lab Test	**Normal Range**	**Value on Admission**	**Today's Value**	**Reason for Abnormal**
Color & Clarity	**Colorless-Yellow, Clear**		**Straw/Hazy**	**Patient's values may differ due to a UTI.**
pH	**5.0-7.0**		**7.0**	
Specific Gravity	**1.003-1.005**		**1.004**	
Glucose	**Negative**		**Normal**	
Protein	**Negative**		**N/A**	
Ketones	**Negative**		**N/A**	
WBC	**0-25/*uL***		**3**	
RBC	**0-20/*uL***		**2**	
Leukoesterase	**Negative**		**3+**	**Patient's values may differ due to a UTI.**

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	**Normal**		**Normal**	
Blood Culture	**Normal**		**Normal**	
Sputum Culture	**Normal**		**Normal**	
Stool Culture	**Normal**		**Normal**	

Lab Correlations Reference (APA):

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

Diagnostic Imaging

All Other Diagnostic Tests (10 points): N/A

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

Medications (5 required)

Brand/Generic	**Carbamazepine / Tegretol-XR**	**Citalopram hydrobromide/ Celexa**	**Furosemide/ Lasix**	**Gabapentin/ Neurontin**	**Bisacodyl /Dulcolax**
Dose	**2 tablets (200mg tablet)**	**1 tablet (200mg tablet)**	**1 tablet (20mg tablet)**	**1 capsule (300mg capsule)**	**1 suppository (10mg)**
Frequency	**BID**	**Qd**	**Qd**	**BID**	**Qd**
Route	**PO**	**PO**	**PO**	**PO**	**Rectally**
Classification	**Anticonvulsant Analgesic**	**Antidepressant**	**Antihypertensive, diuretic**	**Anticonvulsant**	**Laxative**
Mechanism of Action	**Carbamazepine may prevent or**	**Citalopram blocks serotonin**	**Inhibits sodium and water**	**Gabapentin's MOA is**	**Bisacodyl stimulates**

	block sodium from entering the cell. This may slow nerve impulse transmission, which will slow the rate at which neurons fire.	**reuptake by adrenergic nerves, which normally releases a neurotransmitter from storage sites. This increases serotonin levels at nerves synapses, which may elevate mood and reduce depression.**	**reabsorption in the loop of Henle and increases urine formation. By reducing intracellular and extracellular fluid volume, this will reduce blood pressure and decrease cardiac output.**	**unknown, but it is structurally like gamma-aminobutyric acid (GABA). GABA inhibits the rapid firing of neurons associated with seizures. It also prevents exaggerated responses to painful stimuli.**	**enteric nerves to causes peristalsis. It increases fluid and salt secretion.**
Reason Client Taking	**Patient is taking this medication to help with nerve pain. It helps relieve shock-like pain caused by trigeminal neuralgia.**	**Patient is taking this medication due to his major depressive disorder.**	**Patient is taking this medication due to fluid retention known as edema and the patient has a diagnosis of hypertension.**	**Patient is taking this medication to help with nerve pain and altered sensations like numbness, burning, or pins and needles.**	**Patient is taking this medication to help with constipation.**
Contraindications (2)	**concurrent therapy with delavirdine or non-nucleotide reverse transcriptase inhibitors, or history of bone marrow depression.**	**Hypersensitivity to citalopram or its components and pimozide therapy.**	**Anuria, hypersensitivity to furosemide or its components.**	**Hypersensitivity to gabapentin or its components.**	**Appendicitis, and acute inflammatory bowel diseases**
Side Effects/Adverse Reactions (2)	**Chills, confusion, suicidal ideations**	**Neuroleptic malignant syndrome, seizures**	**Dizziness, lethargy**	**Altered proprioception, delusions**	**Electrolyte and fluid imbalance, abdominal cramping**

Medications Reference (APA):

Jones & Bartless Learning. (2020). *2020 Nurse’s drug handbook* (19th ed.). Burlington, MA.

Assessment

Physical Exam (18 points)

GENERAL: Patient appears pleasant. Alertness: A&O x4 Orientation: Oriented to person, time, place, and current events. Distress: No acute distress Overall appearance:	
INTEGUMENTARY: Skin color: normal for race Character: appears hydrated, clean. Temperature: warm Turgor: rapid recoil Rashes: none noted. Bruises: none noted. Wounds: none noted. Braden Score: 15 Drains present: Y☐ N ☒ Type:	
HEENT: Head/Neck: Head and neck symmetrical. No lesions or rashes noted. Ears: Auricle was pink, moist with no rashes or lesions noted. Eyes: Sclera was white, cornea was clear, conjunctiva was pink with no noted lesions or discharge noted. Nose: Septum midline. No drainage or bleeding noted. Teeth: Patient was missing some teeth, but overall good dentition.	.
CARDIOVASCULAR: Heart sounds: S1, S2 clear with no gallops, murmurs or rubs. Cardiac rhythm (if applicable): Peripheral Pulses: Present. Capillary refill: <3 seconds. Neck Vein Distention: Y ☐ N ☒ Edema Y ☐ N ☒	.

Location of Edema:	
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character: Nonlabored breathing. Lobes clear bilaterally, no wheezes or crackles noted.**	.
GASTROINTESTINAL: **Diet at home: Patient doesn't follow diet as he should.** **Current Diet: Patient is on a no salt diet at nursing home.** **Height: 67 in** **Weight: 105kg** **Auscultation Bowel sounds: Present in all four quadrants.** **Last BM: Yesterday.** **Palpation: Pain, Mass etc.: No pain or masses noted during palpation.** **Inspection:** **Distention: none noted.** **Incisions: none noted.** **Scars: Scar in the right lower quadrant from appendectomy.** **Drains: none noted.** **Wounds: none noted.** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	.
GENITOURINARY: **Color: Straw colored.** **Character: Hazy.** **Quantity of urine: 200 mL** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals: No abnormal findings.** **Catheter: Y ☒ N ☐** **Type: Suprapubic** **Size: 12FR**	**Catheter dressing was clean, dry, and intact.**
MUSCULOSKELETAL: **Neurovascular status: Alert.**	**Patient has active ROM (AROM) in right upper extremity. Passive ROM (PROM) in**

ROM: **Supportive devices: Patient uses a Hoyer lift and wheelchair.** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 15—low risk** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☒** **Needs support to stand and walk☐**	**other extremities.** **Patient has limited mobility of knees bilaterally. Patient has weak strength of the left upper extremity and bilaterally of lower extremities. Patient has good strength in right upper extremity.**
NEUROLOGICAL: **MAEW: Y ☐ N☒** **PERLA: Y ☒ N☐** **Strength Equal: Y ☐ N ☒ if no -** **Legs ☐ Arms ☒ Both ☐** **Orientation: x4** **Mental Status: Alert.** **Speech: clear speech.** **Sensory: Patient has no sensory deficits.** **LOC: Alert and awake.**	.
PSYCHOSOCIAL/CULTURAL: **Coping method(s): Patient copes by watching Gunsmoke on the tv and is the President of the Resident Counsel, which keeps him busy. Visits every other week from his Aunt, Uncle, and cousin are other coping mechanisms.** **Developmental level: Appropriate for age.** **Religion & what it means to pt.: Patient is a Christian who prays and attends services at the nursing home. Patient uses his religion as a coping mechanism, along with praying and reading the bible.** **Personal/Family Data (Think about home environment, family structure, and available family support): Patient's family lives in Paris, IL and is very supportive and visits patient often. Patient says the nursing home staff is like a second family and is very supportive of him.**	.

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1000	88	176/78	18	36.5 C	Room Air

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1000	0-10	Right hand	8	Dull, constant	Tylenol PRN Gabapentin 2x daily

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
120 mL	200mL

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. Chronic pain	**This diagnosis was**	**1.Repositioning**	**Patient's arm was**

related to Multiple Sclerosis as evidence by patient rating his pain as an 8 on a scale of 0-10 and patient stating that the pain is "constant".	**chosen because the patient reports his pain is constant and his pain is only relieved in his right hand when extended and elevated.**	**the right upper extremity to be extended and elevated by placing pillows underneath the arm.** **2. Give Tylenol per physicians order as needed to help decrease pain.**	**elevated and reported this, and the PRN Tylenol helped decrease his pain.** **Goal was met.**
2. Impaired physical mobility related to Multiple Sclerosis as evidence by patient's ROM in arms, limited mobility in lower extremities due to being paraplegic, and use of Hoyer lift.	**Patient is unable to help assist moving from bed to chair due to limited mobility in his lower extremities. Range of motion is limited in left upper extremity and bilaterally in the lower extremities.**	**1. Provide assistance with ROM and PROM every two hours.** **2.Provide assistance when transferring the patient and help with activities of daily living.**	**Patient was provided help with PROM of the lower extremities and left upper extremity and patient completed active ROM on right upper extremity with nurse. Patient and staff are educated on how often these exercises should be completed.** **Goal was met.**

Other References (APA):

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

Concept Map (20 Points):

Subjective Data

Patient stated his pain was an 8 on a scale of 0-10. He stated his pain was “constant” and “dull”. Patient said his pain in his right hand would be relieved when extended.

Nursing Diagnosis/Outcomes

Chronic pain related to Multiple Sclerosis as evidence by patient rating his pain as an 8 on a scale of 0-10 and patient stating that the pain is “constant”.

Desired outcome:
Within 1-2 hours patient’s subjective evaluation of pain has decreased by pain scale.

Impaired physical mobility related to Multiple Sclerosis as evidence by patient’s ROM in arms, limited mobility in lower extremities due to being paraplegic, and use of Hoyer lift.

Desired outcome:
Patient will become stronger after ROM exercises are completed and re-evaluated daily for progress.

Objective Data

Patient was diagnosed with MS 10 years ago. Patient had active ROM in right upper extremity, but PROM in left upper extremity and bilaterally in lower extremities. Patient’s Hgb, Hct, platelets, monocytes, and albumin levels were abnormal. Patient’s K+ was also abnormal. Patient was also diagnosed with paraplegia.

Patient Information

JT
60-year-old Male
FULL Code
Primary diagnosis was Multiple Sclerosis.

Nursing Interventions

1.Repositioning the right upper extremity to be extended and elevated by placing pillows underneath the arm.

2. Give Tylenol per physicians order as needed to help decrease pain.

1. Provide assistance with ROM and PROM every two hours.

2.Provide assistance when transferring the patient and help with activities of daily living.