N311 Care Plan 3

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Lakeview College of Nursing

N311: Foundations of Professional Practice

Professor Smalley

10/18/2023

Demographics (5 points)

Date of Admission 10/09/2023	Client Initials AD	Age 64	Gender M
Race/Ethnicity African American	Occupation Disabled	Marital Status Divorced	Allergies No Known
Code Status Full	Height 6’	Weight 186.5 lbs	

Medical History (5 Points)

Past Medical History: 3rd nerve palsy, complete, right; 6th nerve palsy, resolved; Heart attack; Hypertension; High cholesterol; Diabetes mellitus; Myasthenia gravis (02/26/2021); coronary artery disease, s/p angioplasty; Urinary retention; Deep venous thrombosis; Pulmonary embolism; Transverse myelitis (2013); Spastic quadriparesis (2013); Neurogenic bladder (2013)

Past Surgical History: Penile prosthesis

Family History: Mother and Father with Diabetes

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): Former 12-year smoker of cigarettes, 1 pack/day

Admission Assessment

Chief Complaint (2 points): Per VA staff, client was “not acting himself” with decreased speech output and speech fluency

History of Present Illness – OLD CARTS (10 points): VA staff noticed that the client wasn’t acting like himself for several hours before admission to the ED on 10/09/2023 at 2149. The client was having problems with speech output and decreased speech fluency while at the VA facility. The client also had a low-grade fever of 99.1 upon admission. Rest seemed to be the only relief from the client’s symptoms. There were no prior diagnoses for

metabolic encephalopathy, however, the client has been treated for left-sided motor deficits in the VA rehab.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Metabolic encephalopathy

Secondary Diagnosis (if applicable): NA

Pathophysiology

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

Encephalopathy is a condition of disease or damage that affects the brain (*Malmo, 2021*). Metabolic encephalopathy can affect the brain permanently or this condition can be reversibly if treated in a timely manner (*Kumar, 2022*). In order to reverse metabolic encephalopathy, the underlying disorder causing it must be treated (*Kumar, 2022*). If the condition is not treated this can lead to permanent brain damage (*Kumar, 2022*). Metabolic encephalopathy happens when there is another condition pertaining to the metabolism going on within the body such as liver disease, kidney disease, or even diabetes (*Malmo, 2021*).

The ascending reticular activating system leading to the cerebral cortex is affected by metabolic encephalopathy, causing many complications such as affecting arousal and awareness (*Mohney & Lindberg, 2023*). Metabolic encephalopathy is one of the most common types of encephalopathy and is especially common in patients who are critically ill (*Mohney & Lindberg, 2023*). In the case of metabolic encephalopathy there are many factors contributing to the damage that is being done to the brain (*Mohney & Lindberg, 2023*).

There are several signs and symptoms of having metabolic encephalopathy. Some of the first signs are impairments of memory, attention, and awareness (*Mohney & Lindberg, 2023*). Patients can also experience difficulty with motor skills, nausea, tremors, seizures, and vision changes (*Kumar, 2022*). One of the worse symptoms of having metabolic encephalopathy is coma, where the patient completely loses consciousness and cannot be aroused (*Kumar, 2022*).

This type of encephalopathy can be diagnosed using urine and blood tests (*Kumar, 2022*). These tests are also useful in determining if there is an infection in the body that could be causing encephalopathy (*Kumar, 2022*). CT and MRI scans are also used to determine if there are any abnormalities in the brain and how extensive the damage to the brain is (*Kumar, 2022*).

Pathophysiology References (2) (APA):

Mohney, L., & Haley Lindberg, R. (2023). Metabolic encephalopathies. *PM&R KnowledgeNow*. https://now.aapmr.org/metabolic-encephalopathies/#:~:text=Patho-anatomy%2Fphysiology%20All%20forms%20of%20ME%20affect%20the%20ascending,polysynaptic%20pathways%20and%20altered%20excitatory-inhibitory%20amino%20acid%20balance.

Kumar, K. (2022, July 8). Metabolic encephalopathy: symptoms, causes, treatment & recovery. MedicineNet. https://www.medicinenet.com/what_is_metabolic_encephalopathy/article.htm

Malmo, K. (2019, August 2). What is encephalopathy? WebMD. https://www.webmd.com/brain/what-is-encephalopathy

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	**4.40 – 5.80/10(6) mcL**	**5.66/10(6)mcL**	**4.18/10(6)mcL**	**The reason for the low RBC count for this client is due to issues with the metabolism (*Why you have low RBC count and how to deal with it,*).**
Hgb	**13 – 16.5 g/dL**	**14 g/dL**	**10.4 g/dL**	**For this client, the Hgb is most likely low due to a major change in the brain from encephalopathy (*Caceres, 2023*).**
Hct	**38 – 50%**	**43.7%**	**31.8%**	**The client's diagnosis of diabetes mellitus could be a cause of this lab value being low because diabetes affects the signal to the bone marrow to make more red blood cells (*Langmaid, 2016*).**
Platelets	**140 – 440/10(3) mcL**	**256/10(3) mcL**	**224/10(3) mcL**	**NA**
WBC	**4 – 12/10(3) mcL**	**17.20/10(3) mcL**	**5.40/10(3)/mcL**	**The reason for this client's high levels of WBCs is due to the client having an infection caused by Klebsiella pneumoniae.**
Neutrophils	**40 – 68%**	**81.4%**	**63.4%**	**The client's high count of neutrophils is also due to the infection with Klebsiella pneumoniae.**
Lymphocytes	**19 – 49%**	**7%**	**18.5%**	**The client's high lymphocyte count is due to the infection with the**

				bacteria Klebsiella pneumoniae.
Monocytes	**3 – 13%**	**11.2%**	**14.2%**	**The client's high levels of monocytes are also due to the body fighting the infection with the bacteria Klebsiella pneumoniae.**
Eosinophils	**0 – 8%**	**0%**	**3.5%**	**NA**
Bands	**NA**	**NA**	**NA**	**NA**

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**	**140 mmol/L**	**136 mmol/L**	**NA**
K+	**3.5 – 5.1 mmol/L**	**4 mmol/L**	**3.2 mmol/L**	**The low level of potassium is most likely due to the client taking antibiotic medications (*Low potassium ((hypokalemia), 2022)*.**
Cl-	**98 – 107 mmol/L**	**100 mmol/L**	**105 mmol/L**	**NA**
CO2	**22 – 30 mmol/L**	**24 mmol/L**	**22 mmol/L**	**NA**
Glucose	**70 – 99 mg/dL**	**145 mg/dL**	**149 mg/dL**	**The reason for the client's abnormal results of glucose are most likely related to the client's history of diabetes mellitus.**
BUN	**10 – 20 mg/dL**	**13 mg/dL**	**12 mg/dL**	**NA**
Creatinine	**0.60 – 1.00 mg/dL**	**0.98 mg/dL**	**0.78 mg/dL**	**NA**
Albumin	**3.5 – 5.0 g/dL**	**5.2 g/dL**	**4.2 g/dL**	**The high level of albumin could be due to the client's low intake of fluids (*Albumin blood test*).**
Calcium	**8.7 – 10.5 mg/dL**	**10.9 mg/dL**	**9.6 mg/dL**	**The client's high calcium levels are most likely due to the client's left sided weakness (*Wiginton, 2020*).**
Mag	**1.6 – 2.3 mg/dL**	**NA**	**NA**	**NA**

Phosphate	**NA**	**NA**	**NA**	**NA**
Bilirubin	**0.2 – 1.2 mg/dL**	**2.0 mg/dL**	**1.8 mg/dL**	**The high bilirubin levels could be related to the use of antibiotics (*Daniel, 2023*).**
Alk Phos	**40 – 150 U/L**	**102 U/L**	**78 U/L**	**NA**

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	**NA**	**Yellow**	**Urinalysis was only done on admission**	**NA**
pH	**5.0 – 9.0**	**8.5**	**NA**	**NA**
Specific Gravity	**1.008 – 1.030**	**>1.080**	**NA**	**The high specific gravity of the urine is most likely due to the lack of fluid intake (*Stephens, 2023*).**
Glucose	**NEG**	**NEG**	**NA**	**NA**
Protein	**NEG**	**1+**	**NA**	**Ketones in the urine are due to the client's diagnosis of diabetes (*Mae, 2023*).**
Ketones	**NEG**	**NEG**	**NA**	**NA**
WBC	**NEG 0 – 5/npf**	**6 – 10 npf**	**NA**	**The high levels of WBCs in the urine is most likely related to the finding of Klebsiella pneumoniae in the urine.**
RBC	**NEG 0 – 2/npf**	**NEG**	**NA**	**NA**
Leukoesterase	**NEG**	**2+**	**NA**	**The presence of leukoesterase in the urine is related to the client having Klebsiella pneumoniae.**

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

Test	Normal Range	Value on Admissio	Today's Value	Explanation of Findings

		n		
Urine Culture	**NEG**	**POS**	**Urine culture was only done on admission**	**>100,000 CFU/ML Klebsiella pneumoniae**
Blood Culture	**NEG**	**POS**	**Blood culture was only done on admission**	**Klebsiella pneumoniae**
Sputum Culture	**NEG**	**NA**	**NA**	**NA**
Stool Culture	**NEG**	**NA**	**NA**	**NA**

Lab Correlations Reference (1) (APA):

***Why you have low RBC count and how to deal with it*. (n.d.). MD-Health.com.**

https://www.md-health.com/low-red-blood-cell-count.html

Caceres, V. (2023). Low hemoglobin levels: everything you need to know. Verywell Health.

https://www.verywellhealth.com/low-hemoglobin-5217077

Langmaid, S. (2016, August 30). Diabetes and anemia. WebMD.

https://www.webmd.com/diabetes/diabetes-and-anemia

Low potassium (hypokalemia). (2022, June 23). Mayo Clinic.

https://www.mayoclinic.org/symptoms/low-potassium/basics/causes/sym-20050632

Professional, C. C. M. (n.d.). Albumin blood test. Cleveland Clinic.

https://my.clevelandclinic.org/health/diagnostics/22390-albumin-blood-test

Wiginton, K. (2020, January 23). What causes hypercalcemia? WebMD.

https://www.webmd.com/a-to-z-guides/hypercalcemia-causes

Daniel, C. (2023). Hyperbilirubin in adults and babies. Verywell Health.

https://www.verywellhealth.com/bilirubin-definition-and-description-1759872

Stephens, R. (2023, April 18). Urine Specific Gravity test. Healthline.

https://www.healthline.com/health/urine-specific-gravity

Mae, A. (2023, April 12). What to know about ketones in urine.

https://www.medicalnewstoday.com/articles/ketones-in-urine#definition

Diagnostic Imaging

All Other Diagnostic Tests (10 points): CT STROKE PROTOCOL 333 (10/09/2023) – CT of the head without contrast, Findings – No acute intracranial pathology

- **Due to the client's health history and the symptoms that the client was experiencing upon admission to the ED, this test was necessary to rule out the possibility of a stroke.**

CT ANGIOGRAPHY HEAD AND NECK WITH AND WITHOUT CONTRAST (10/09/2023) – Indication – neuro deficit, acute, stroke suspected Findings – There is atherosclerotic plaque present within both cavernous ICAs, no aneurysm or AVM, vertebrobasilar system is normal, no intracranial arterial occlusion or stenosis, skull base and calvarium are normal, orbits and

paranasal sinuses are normal, atherosclerotic plaque present within both carotid bifurcations, no significant stenosis, cervical soft tissues are normal, and lung apices and cervical spine are normal.

- **The reason that the client had this test done was because it is useful for looking at why a client might be having difficulty pronouncing words. This test also rules out a stroke (*"CT Angiography - Head and Neck," 2020*).**

MRI BRAIN WITHOUT CONTRAST (10/10/2023) – Findings – No acute intracranial pathology

- **Due to the client's diagnosis of metabolic encephalopathy, this test was most likely performed to determine if there was extensive damage to the brain (*Brain MRI*).**

Diagnostic Imaging Reference (1) (APA):

Professional, C. C. M. (n.d.-b). *Brain MRI*. Cleveland Clinic.

https://my.clevelandclinic.org/health/diagnostics/22966-brain-mri

CT angiography - head and neck. (2020). ucsfhealth.org.

https://www.ucsfhealth.org/medical-tests/ct-angiography---head-and-neck

Assessment

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

General, Psychosocial/Cultural, and ONE focused assessment specific to the client is required.

The student and instructor may complete these assessments together.

GENERAL: **Alertness:** **Orientation:**	**Client appears alert and oriented to person, place, and time, well groomed, no acute distress.**

Distress: **Overall appearance:**	
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☐** **Type:**	**NA**
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	**NA** .
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:**	**NA**

RESPIRATORY: **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character**	NA
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:**	NA
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☐**	**NA**

Dialysis: Y ☐ N ☐ **Inspection of genitals:** **Catheter: Y ☐ N ☐** **Type:** **Size:**	
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**☐	NA
NEUROLOGICAL: **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☒ if no - Legs ☐ Arms ☐ Both ☒** **Orientation: A&O x 4** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Left sided weakness of arm and leg. Hand grips and pedal pushes and pulls are affected on the left side of the body. Unbalanced gait. Patient alert and oriented to person, place, and time. PERRLA. Deep tendon reflexes all locations 2+. Speech is normal and understandable. Senses are intact.
PSYCHOSOCIAL/CULTURAL: **Coping method(s):**	Client copes by watching television and communicating with his friends at the VA. The client's developmental level is appropriate to age.

Developmental level: **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	The client is not extremely religious and does not attend church but is Christian. The client has many children with whom he visits with, and he is divorced.

Vital Signs, 1 set (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1100	**64**	**118/71**	**18**	**97.6**	**98%**

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1100	**0**	**NA**	**NA**	**NA**	**NA**

Intake and Output (2 points)

Intake (in Ml)	Output (in Ml)
480 mL	**Incontinent X3**

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

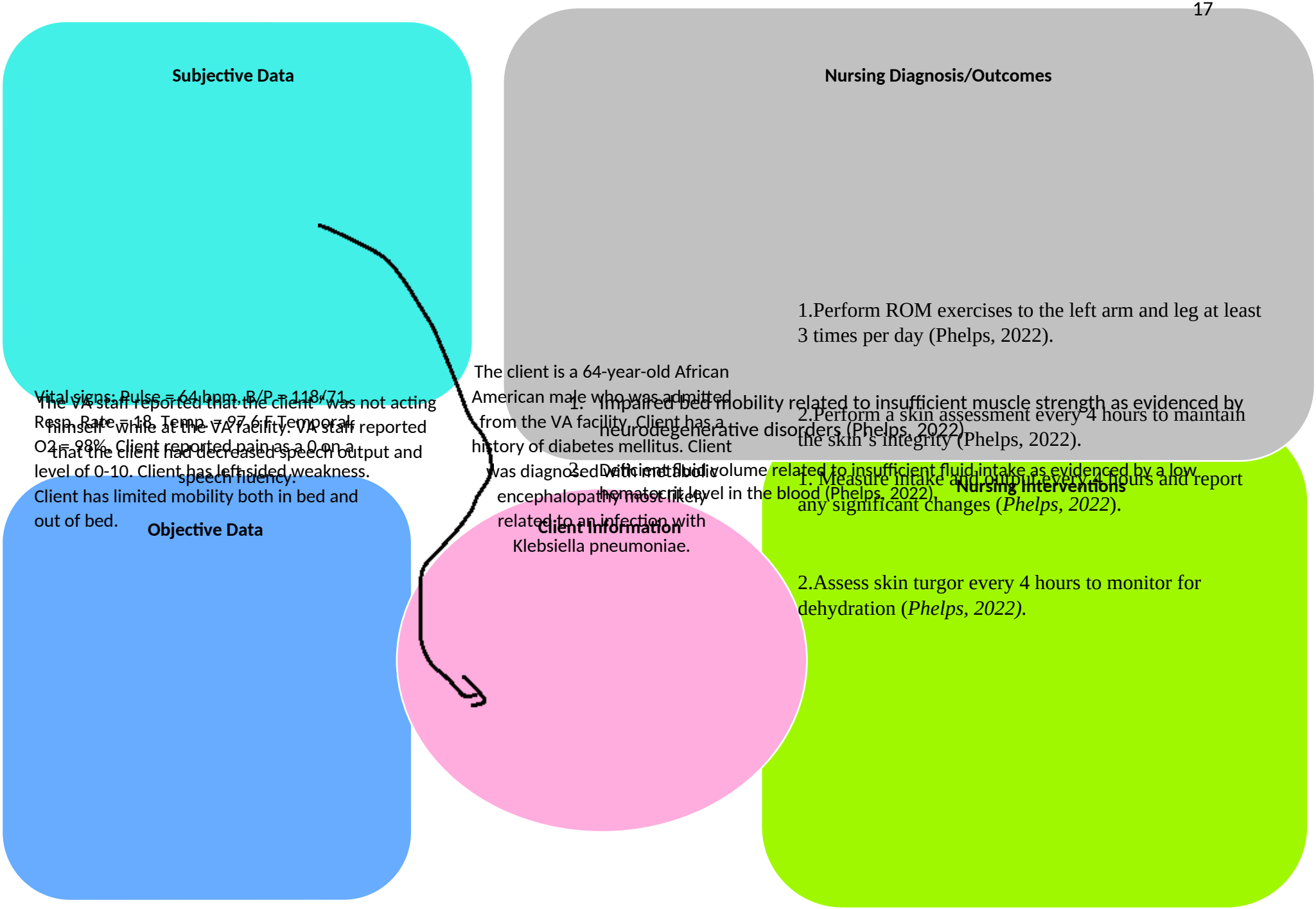
Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest priority to lowest priority pertinent to this client	**Rationale** • Explain why the nursing diagnosis was chosen	**Interventions (2 per dx)**	**Outcome Goal (1 per dx)**	**Evaluation** • How did the client/family respond to the nurse's actions? • Client response, status of goals and outcomes,

				modifications to plan.
1. Impaired bed mobility related to insufficient muscle strength as evidenced by neurodegenerative disorders (Phelps, 2022).	**I chose this diagnosis because the client has left sided weakness of the body causing him to not be able to move in the bed on his own.**	**1.Perform ROM exercises to the left arm and leg at least 3 times per day (*Phelps, 2022*).** **2.Perform a skin assessment every 4 hours to maintain the skin's integrity (*Phelps, 2022*).**	**1. Client will not have any complication related to his inability to perform bed mobility independently, including no evidence of skin breakdown (*Phelps, 2022*).**	**Client has no complications associated with impaired bed mobility and skin integrity remains clear (*Phelps, 2022*).**
2. Deficient fluid volume related to insufficient fluid intake as evidenced by a low hematocrit level in the blood (Phelps, 2022).	**I chose this diagnosis because the client seems to have some issues with dehydration by assessing the levels on his blood work.**	**1. Measure intake and output every 4 hours and report any significant changes (*Phelps, 2022*).** **2.Assess skin turgor every 4 hours to monitor for dehydration (*Phelps, 2022).***	**1. The client's intake and output will be within normal limits for his age at the end of each shift (*Phelps, 2022*).**	**Client's fluid volume has remained balanced and the client has agreed to drink more fluids throughout the day (*Phelps, 2022*).**

Other References (APA):

Phelps, L. (2022). Nursing Diagnosis Reference Manual. LWW.

Concept Map (20 Points):


Subjective Data
The VA staff reported that the client was not acting himself while at the VA facility. VA staff reported that the client had decreased speech output and speech fluency.
Objective Data
Vital signs: Pulse = 64 bpm, B/P = 118/71, Resp. Rate = 18, Temp. = 97.6 F Temporal, O2 = 98%. Client reported pain as a 0 on a level of 0-10. Client has left-sided weakness. Client has limited mobility both in bed and out of bed.
Client Information
The client is a 64-year-old African American male who was admitted from the VA facility. Client has a history of diabetes mellitus. Client was diagnosed with metabolic encephalopathy most likely related to an infection with Klebsiella pneumoniae.
Nursing Diagnosis/Outcomes
1. Impaired bed mobility related to insufficient muscle strength as evidenced by neurodegenerative disorders (Phelps, 2022).
2. Deficient fluid volume related to insufficient fluid intake as evidenced by a low hematocrit level in the blood (Phelps, 2022).
Nursing Interventions
1. Measure intake and output every 4 hours and report any significant changes (*Phelps, 2022*).
2.Assess skin turgor every 4 hours to monitor for dehydration (*Phelps, 2022).*
1.Perform ROM exercises to the left arm and leg at least 3 times per day (Phelps, 2022).
2.Perform a skin assessment every 4 hours to maintain the skin's integrity (Phelps, 2022).