N311 Care Plan 3

Ashley Shields

Lakeview College of Nursing

N311: Foundations of Professional Practice

Linda Scribner

October 19, 2024

Demographics

Date of Admission 10/04/2024	Client Initials MC	Age 31	Gender F
Race/Ethnicity W	Occupation Caregiver	Marital Status Engaged	Allergies Lamictal, Fluoxetine (angioedema), Sulfa, Adhesive (rash,itching,redness), cat hair standardized allergenic extract, flagyl (rash), latex (rash)
Code Status Full Code	Height 170 cm	Weight 121.5 kg	

Medical History

Past Medical History: Herpes Genitalia 2020, HPV 01/02/2015, Seizures, Stevens-Johnson Syndrome 08/08/2010, Tuberous Sclerosis, Refractory Epilepsy

Past Surgical History: Deep brain stimulator placement 06/01/2016, Eye surgery (exotropia), Vagal Nerve Stimulation 3/2013

Family History: Hypertension- father, Lipids- mother, uterine cancer- maternal grandmother, colon cancer- maternal aunt

Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use): Drug use- no, alcohol- occasionally, smoking/smokeless tobacco- never

Admission Assessment

Chief Complaint: Seizure

History of Present Illness – OLD CARTS:

MC is a 31 year old female who presented with seizure like activity last night at 2230 and continued every two to three minutes until she was brought to the ED by her mother at 0930 on

10/03/2024. Mother stated it started with just her right leg showing signs of seizing intermittently and progressed to the brain to the point of loss of control and consciousness, referring to it as Tonic Clonic Phenomenon. Mother also stated she has had probably 40-50 seizures in the ten hour time span. Mother informed medical staff she tried her at home medications with no noticeable response to Klonopin and Ativan. Mom stated MC has been very stressed at work and has a history of Epilepsy but has been taking all of her home medications “religiously”.

Primary Diagnosis

Primary Diagnosis on Admission: Seizure

Secondary Diagnosis: MRSA

Tertiary Diagnosis: Pneumonia

Pathophysiology

Pathophysiology of the Disease, APA format:

Seizures are a common disorder caused by neurological injury or disease. A seizure is a surge of electrical activity between neurons and nerve cells. (JHM). There is not always a known cause for seizures, but more of a general explanation of misfiring neurons within the brain. It is believed sodium and potassium channels are a great influence for nervous system disorders. These channels can mutate or form autoantibodies which repel the proteins used to process needed functions within the body. Ion channel disorders are responsible for several neurological conditions, including epilepsy. Epilepsy is a disorder that causes chronic seizures and about 9% of the population will have an epileptic seizure at some point in there life. However, only about 3% of people will receive the diagnosis for epilepsy. (Capriotti). There are many factors that can make you more prone to develop a seizure disorder including genetics, brain tumors, head

trauma, alcoholism, alcohol withdrawal, Alzheimer's disease, heart attacks, strokes, conditions that deprive the brain of oxygen, abnormal blood vessel formation, bleeding in the brain, cerebral palsy and other developmental disorders, inflammation or swelling in the brain. Infections like meningitis, HIV-related infections, and viral encephalitis can also cause seizures. (NIH).

There are several types of seizures that range from an aura to a small tremor in an extremity to complete loss of consciousness. The type of seizure is often dependent on the location and extent of injury to the brain or the disorder causing it. It can also be a progression of symptoms as the seizure spreads through the brain. (JHM). There are two main types of seizures: focal and generalized. Focal seizures are on one side of the brain and are usually contained to one side of the body, but they can affect both sides. They may cause changes in movements, behaviors, awareness and sensation. Generalized seizures are on both sides of the body simultaneously and they usually cause loss of consciousness or awareness with abnormal body movements. These are generally more severe and can lead to more long term problems. (CDC). Tonic Clonic Seizures are generalized and tend to appear more alarming to people and are most thought of when someone mentions a seizures. Generalized seizures can be more dangerous because these tend to be when injuries occur more often due to people falling or losing consciousness.

There are different triggers to induce a seizure, stress being the most commonly reported trigger, but also high fevers, alcohol, dehydration, malnutrition, exposure to toxic or poisonous materials, medications, hormonal changes, sleep deprivation, medical disorders, and visual stimulations like flashing lights or moving patterns. Medical disorders include blood glucose levels, chemical changes in the blood, eclampsia with pregnancy, and impaired function of the

liver. (NIH). Flashing lights and moving patterns are common triggers for people with cerebral palsy and development disorders as well.

There are several treatment options for seizure disorders. The most common treatment is medications which are dependent on seizure type, lifestyle, age, frequency of seizures, side effects, pregnancy, and potential drug interactions. (NIH). Klonopin and Ativan are two drugs commonly used during an active seizure. (Epic) Surgery is another option but typically is reserved for patients who have tried medications with little or no success. The surgery will depend on seizure type, region in the brain affected, and how the surgery could affect the person's function and behavior for every day activities. Surgery can be used to remove a lesion or tumor in the brain, but doctors try to avoid areas that impact speech, movement, sensation, memory, and thinking. There are also devices that can be implanted to deliver electrical stimulation to the brain to reduce the risk of seizure activity. These include vagus nerve stimulation, responsive stimulation, and deep brain stimulation. (NIH).

Pathophysiology References:

Capriotti, T. (2024). Davis Advantage for Pathophysiology (3rd ed.). F. A. Davis Company. https://fadavisreader.vitalsource.com/books/9781719650533

Center for Disease Control. (2024, May 15). *Types of Seizures*. https://www.cdc.gov/epilepsy/about/types-of-seizures.html.

Epic. Carle Foundation Hospital. (2024, October 17).

Johns Hopkins Medicine. (2024). *Types of Seizures*. Johns Hopkins University. https://www.hopkinsmedicine.org/health/conditions-and-diseases/epilepsy/types-of-

seizures#:~:text=A%20seizure%20is%20a%20burst,sensations%20or%20states%20of%20awareness.

National Institute of Health. (2024, July 19). *Epilepsy and seizures* | National Institute of Neurological Disorders and Stroke. National Institute of Health. https://www.ninds.nih.gov/health-information/disorders/epilepsy-and-seizures

Laboratory Data

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	**3.5-5.2/uL**	**4.82/uL**	**3.99/uL**	
Hgb	**11.0-16.0g/dL**	**14.8 g/dL**	**12.0 g/dL**	
Hct	**34.0-47%**	**44.2%**	**35.8%**	
Platelets	**140-400/uL**	**256/uL**	**266/uL**	
WBC	**4.0-11/uL**	**10.28/uL**	**11.92/uL**	**Patient was being treated for pneumonia and that often brings your white count up. (Epic)**
Neutrophils	**1.6-7.7/uL**	**7.11/uL**	**8.79/uL**	**N/A**
Lymphocytes	**1.0-4.9/uL**	**2.22/uL**	**2.61/uL**	
Monocytes	**0.0-1.1/uL**	**0.42/uL**	**0.48/uL**	
Eosinophils	**0.0-0.5/uL**	**0.36/uL**	**0.12/uL**	
Bands	**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 mmol/L	139 mmol/L	141 mmol/L	
K+	3.5-5.1 mmol/L	3.9 mmol/L	3.6 mmol/L	
Cl-	98-107 mmol/L	111 mmol/L	112 mmol/L	Renal tubular acidosis is likely responsible for these elevated levels. Due to the stress on MC's body for such an extended period of time, it was diverting things from the kidneys which was causing them to not function to the optimal level. (Pagana).
CO2	22-29 mmol/L	19 mmol/L	16 mmol/L	MC was tachypneic which would lower her CO2 due to hyperventilation. (Capriotti)
Glucose	74-100 mg/dL	114 mg/dL	89 mg/dL	Acute stress response can elevate your blood glucose. MC was seizing for hours which would clearly be highly stressful for her body. (Epic). (Taylor).
BUN	7.0-19.0 mg/dL	14 mg/dL	21 mg/dL	Elevated BUN levels are highly suspect for a UTI. There was a positive test but it was suspected to be from contamination. (Epic). (Pagana).
Creatinine	0.55-1.02 mg/dL	0.75 mg/dL	0.60 mg/dL	
Albumin	3.5-5.0 g/dL	4.1 g/dL	2.9 g/dL	
Calcium	8.9-10.6 mg/dL	9.8 mg/dL	9.7 mg/dL	
Mag	1.6-2.6 mg/dL	2.1 mg/dL	2.4 mg/dL	
Phosphate	3.0-4.5 mg/dL	N/A	N/A	
Bilirubin	0.2-1.2 mg/dL	0.2 mg/dL	0.3 mg/dL	

Alk Phos	**40-150 u/L**	**88 u/L**	**130 u/L**	

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	**Clear**	**Turbid**		**Lower urinary tract infections can make the urine have a cloudy, turbid appearance. (Capriotti)**
pH	**4.5-8.0 pH**	**6.5 pH**		
Specific Gravity	**1.003-1.035**	**1.015**		
Glucose	**Negative**	**Negative**		
Protein	**Negative**	**Negative**		
Ketones	**Negative**	**Negative**		
WBC	**0.0-25.0/uL**	**122/uL**		**Vaginal discharge may contaminate the urine and factitiously cause WBC in the urine. (Pagana)**
RBC	**0.0-20.0/uL**	**15/uL**		
Leukoesterase	**Negative**	**Moderate**		**False positives may occur in specimens contaminated by vaginal secretions that contain WBCs. (Pagana)**

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**	**Positive**		**There was a mixed growth of urogenital flora which is suggestive of an improper collection technique. This sample was contaminated. (Epic).**
Blood Culture	**Negative**	**Negative**		

Sputum Culture	**Negative**	**Positive**		**The culture revealed a rare gram-positive cocci growth. Another test was ordered for further investigation and came back positive for MRSA. (Epic).**
Stool Culture	**Negative**	**Negative**		

Lab Correlations Reference:

Capriotti, T. (2024). Davis Advantage for Pathophysiology (3rd ed.). F. A. Davis Company. https://fadavisreader.vitalsource.com/books/9781719650533

Pagana, K. D., Pagana, T. N., & Pagana, T. J. (2023). *Mosby's Diagnostic and laboratory test reference: 16th edition*. Elsevier.

Epic. Carle Foundation Hospital. October 17, 2024.

Diagnostic Imaging

All Other Diagnostic Tests (10 points): Chest x-ray to ensure endotracheal tube and nasogastric tube is placed properly to prevent aspiration and proper oxygenation of the patient. (Taylor). CT chest with contrast was ordered to check for pneumonia complications. She developed ventilator pneumonia during her intubation in the ICU. (Epic). An ultrasound of her abdomen of the right upper quadrant was ordered to evaluate for cholecystitis. (Epic). Due to some of her labs raising concerns for the doctor and their clinical judgement, they ordered an ultrasound to check for the presence of stones, gallbladder wall thickening, distention, and inflammation. (Capriotti). An x-ray of the chest was also ordered to evaluate the patient's tachypnea. (Epic). An x-ray is often the first test to run when a patient is suspected of having an infection in the lungs because it allows

you to see the structures of the chest and lungs. With her having tachypnea, this could indicate a problem with her lungs and be a sign of pulmonary distress. (Capriotti).

Diagnostic Imaging Reference:

Capriotti, T. (2024). Davis Advantage for Pathophysiology (3rd ed.). F. A. Davis Company. https://fadavisreader.vitalsource.com/books/9781719650533

Epic. Carle Foundation Hospital. (October 17, 2024).

Taylor, C., Lynn, P. 1., & Bartlett, J. L. (2023). *Fundamentals of nursing: the art and science of person-centered care.* Tenth edition. Philadelphia, Wolters Kluwer.

Assessment

Physical Exam– 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:** **Distress:** **Overall appearance:**	**MC is alert and oriented x3, does not appear in distress, and was independently grooming and performing ADLs. MC reports 0 pain on a 0-10 scale.**
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:**	

Wounds: . **Braden Score: 20** **Drains present: Y☐ N ☐** **Type:**	
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	.
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:**	.
RESPIRATORY: **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character**	.
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:**	
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☐** **Dialysis: Y ☐ N ☐** **Inspection of genitals:** **Catheter: Y ☐ N ☐** **Type:** **Size:**	
MUSCULOSKELETAL:	.

Neurovascular status: Seizure precaution **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 17** **Activity/Mobility Status: Standby assist** **Independent (up ad lib)** ☐ **Needs assistance with equipment** ☐ **Needs support to stand and walk**☐	
NEUROLOGICAL: Seizure precaution **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no - Legs ☐ Arms ☐ Both ☐** **Orientation: Intact** **Mental Status: Clear** **Speech: Slight impediment** **Sensory: Intact** **LOC: Alert and oriented**	.
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):**	MC stated she talks to her mom, friends, and fiancé when she is depressed or stressed from her job. She is clearly close to her mother and stated so. MC is developmentally delayed with no indication to what extent. MC stated she has always been Catholic, but this hospitalization has made her lean on that more than she did before. MC stated she feels very supported and well loved by her family and friends and is excited to go home because she loves it there.

Vital Signs, 1 set – HIGHLIGHT ALL ABNORMAL VITAL SIGNS

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
7:30	78	122/72	22	36.7 C	95% Room Air

Pain Assessment, 1 set

Time	Scale	Location	Severity	Characteristics	Interventions
7:30	Number scale	N/A	O/10	N/A	N/A

Intake and Output

Intake (in mL)	Output (in mL)
N/A	Voided

Nursing Diagnosis
Must be NANDA approved nursing diagnosis

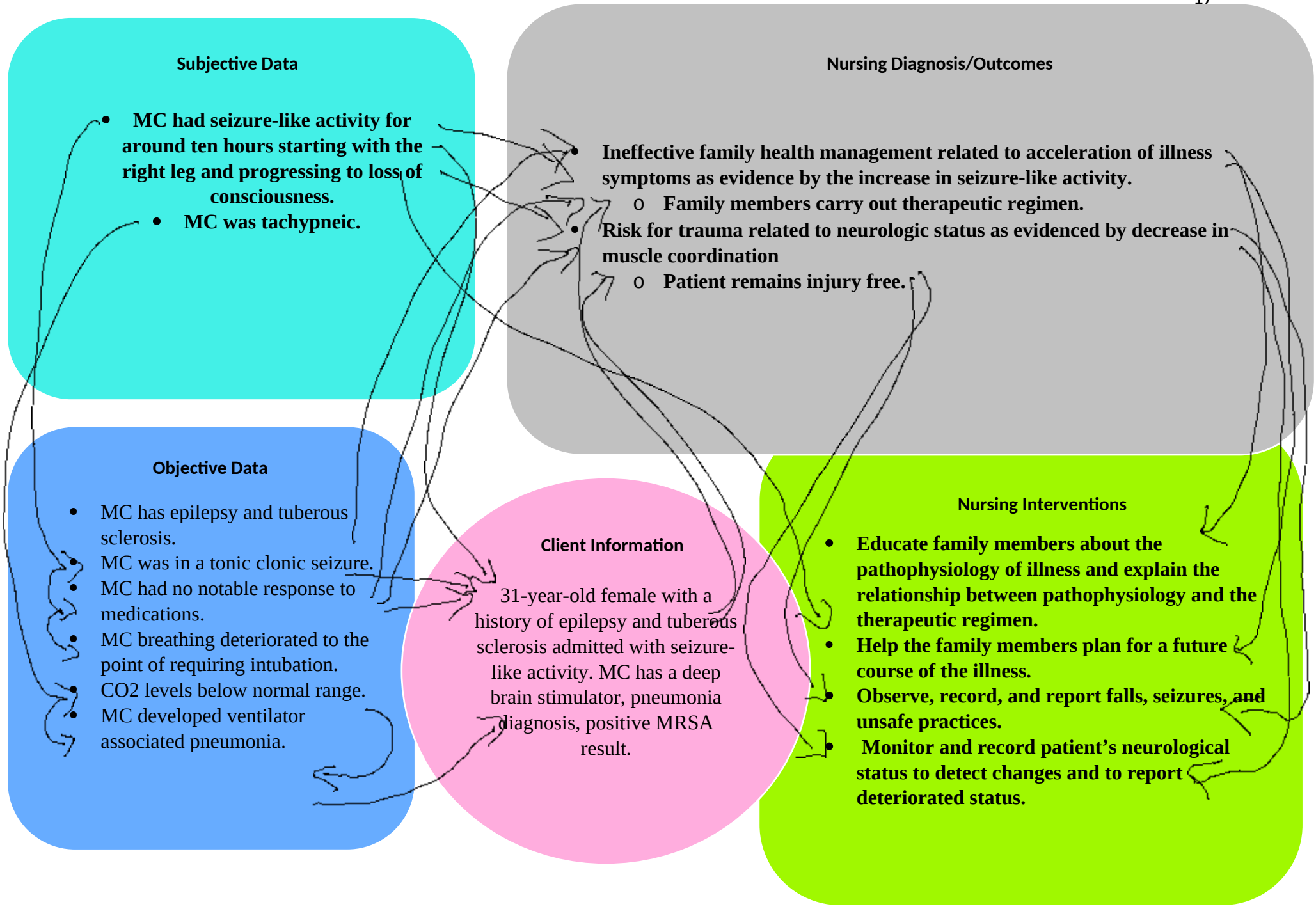
Nursing Diagnosis	Rationale	Interventions (2 per dx)	Outcome Goal (1 per dx)	Evaluation
• Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order by priority – highest	• Explain why the nursing diagnosis was chosen			• How did the client/family respond to the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

priority to lowest priority pertinent to this client				goals and outcomes, modifications to plan.
1. Ineffective family health management related to acceleration of illness symptoms as evidence by the increase in seizure-like activity.	**MC has a condition causing tumors in her brain and it is progressing.**	**1. Educate family members about the pathophysiology of illness and explain the relationship between pathophysiology and the therapeutic regimen.** **2. Help the family members plan for a future course of the illness.**	**1. Family members carry out therapeutic regimen.**	**MC and her mother both seemed responsive to suggestions and were more than happy to talk about what they can do to cope with everything in a healthy way.**
2. Risk for trauma related to neurologic status as evidenced by decrease in muscle coordination.	**MC suffers from seizures due to the tumor in her brain which causes her to lose control of her muscles.**	**1. Observe, record, and report falls, seizures, and unsafe practices.** **2. Monitor and record patient's neurological status to detect changes and to report deteriorated status.**	**1. Patient remains injury free.**	**MC and her mother agreed to record and keep track of any seizures and unusual mental status changes.**

Other References (APA):

Phelps, L.L. (2023). *Nursing Diagnosis Reference Manual* 12th ed. Philadelphia, Wolters Kluwer Health/Lippincott Williams & Wilkins.

Concept Map (20 Points):


Subjective Data
MC had seizure-like activity for around ten hours starting with the right leg and progressing to loss of consciousness.
MC was tachypneic.
Nursing Diagnosis/Outcomes
Ineffective family health management related to acceleration of illness symptoms as evidence by the increase in seizure-like activity.
Family members carry out therapeutic regimen.
Risk for trauma related to neurologic status as evidenced by decrease in muscle coordination
Patient remains injury free.
Objective Data
MC has epilepsy and tuberous sclerosis.
MC was in a tonic clonic seizure.
MC had no notable response to medications.
MC breathing deteriorated to the point of requiring intubation.
CO2 levels below normal range.
MC developed ventilator associated pneumonia.
Client Information
31-year-old female with a history of epilepsy and tuberous sclerosis admitted with seizure-like activity. MC has a deep brain stimulator, pneumonia diagnosis, positive MRSA result.
Nursing Interventions
Educate family members about the pathophysiology of illness and explain the relationship between pathophysiology and the therapeutic regimen.
Help the family members plan for a future course of the illness.
Observe, record, and report falls, seizures, and unsafe practices.
Monitor and record patient's neurological status to detect changes and to report deteriorated status.