N311 Care Plan #1

Lakeview College of Nursing

Toni Andres

Demographics (5 points)

Date of Admission 04/12/18	Client Initials B.O.	Age 31	Gender Female
Race/Ethnicity White	Occupation None	Marital Status Single	Allergies NKA
Code Status DNR	Height 63in	Weight 114.2kg	

Medical History (5 Points)

Past Medical History:
Abdominal pain
Anoxic brain injury
Anxiety
Clostridium difficile
Depression
DVT prophylaxis
Dysphagia
ESBL
Gastrostomy in place
GERD
Methicillin-resistant Staphylococcus aureus
Neurogenic bladder
Paralysis of bilateral upper extremities and decreased strength and range of motion of lower extremities secondary to anoxic brain injury
Recurrent herpes labialis
Tracheostomy dependence
Decubitus ulcer of elbow, stage 4

Past Surgical History:
Replacement gastronomy tube- (08/02/2018)
Replacement gastronomy tube- (10/10/2017)
Withdrawal of Arterial Blood Gas- (02/03/2007)
Spinal Fluid Tap diagnostic- (02/02/2007)

Family History:
No qualifying data available.

Social History (tobacco/alcohol/drugs including frequency, quantity, and duration of use):
Unknown if ever smoked. No information provided.

Admission Assessment

Chief Complaint (2 points):
Excess secretions, suction of tracheostomy, inner tracheostomy cannula partial obstruction.

History of Present Illness – OLD CARTS (10 points):
The patient is a 31-year-old female with a history of anoxic brain injury, tracheostomy, chronic GERD, dysphagia, gastrostomy tube, and paralysis of upper extremities. The patient presented today for a complaint of excess secretion of the inner tracheostomy cannula. The patient is nonverbal and shook her head denying pain. The onset of the tracheostomy was the date of the anoxic brain injury. The obstruction is in the inner tracheostomy canula is within the outer cannula of the tracheostomy tube. The duration of the secretion is from the anoxic brain injury to the present. It is noted that the inner cannula has a buildup of secretion and a thick mucus-like substance. According to the patient's past medical history, the secretion is due to dysphagia, due to the weakening of the throat muscles due to neurological issues caused by anoxic brain injury. Her treatment today is the replacement of the inner tracheostomy cannula and suction of secretions of the tracheostomy tube. There was a scant amount of clear mucus-like substance suctioned from the tracheostomy tube. Her present vital signs are T: 37ºC (temporal) HR:127 RR: 24 BP: 118/77 Sp02: 97% (room air)

Primary Diagnosis

Primary Diagnosis on Admission (3 points):
Anoxic brain injury- Brain injury due to the compromise of oxygen to the brain.

Secondary Diagnosis (if applicable):
Aphasia- Loss of previous ability to speak or understand written or spoken language due to brain injury.

Pathophysiology of the Anoxic Brain Injury

Anoxic and hypoxic brain injuries are often used in conjunction with each other. Anoxia is referred to as the complete lack of oxygen to an organ, and hypoxia refers to when an organ does not get enough oxygen to meet the metabolic needs of the tissue. For the purpose and intent of this care plan, the term anoxia will be used.

Disease Process

Anoxic brain injury often results when there is a compromise of oxygen delivery to the brain. Anoxic brain injury can result from cardiac arrest, traumatic vascular injuries, poisoning (such as carbon monoxide intoxication or drug overdose), or head trauma. Cardiac arrest is the most common cause of anoxic brain injury. Other issues could include hemorrhagic and septic shock and acute lung injury (Weinhouse, Young, 2020). The brain does not store energy. It relies on supplies of glucose and oxygen to function. If there is a loss of blood flow to the brain,

the production of ATP (adenosine triphosphate) diminishes. This reaction results in the dysfunction of energy-dependent ion channels contributing to intracellular sodium accumulation and cytotoxic edema—ongoing ischemia results in the release of glutamate, which promotes calcium influx through NMDA (N-methyl-D-aspartate) receptors. (Hays Shapshak, Lacerte, Mesfin, 2021).

Signs and Symptoms

Anoxic brain injury can present as an impaired level of consciousness. Patients often cannot follow verbal commands, with no evidence of self-awareness and an inability to interact with others. There is no purposeful or voluntary response to auditory, tactile, or visual stimuli. There is no comprehension of language or expression. There can be bladder and bowel incontinence and preserved cranial nerve and spinal nerve reflexes (Weinhouse, Young, 2020).

Diagnostic Testing

Initial testing and evaluations should include a basic physical assessment to check for trauma. Basic blood work includes a basic metabolic panel, a complete blood count, blood glucose, a blood urea nitrogen, creatinine, and liver function. Also an arterial blood gas can check the acid-base status and rule out hypercarbia. A urine drug screen and or alcohol blood level could be helpful. A urine screen can detect drug intoxication or overdose. A CT without contrast should be performed to evaluate for structural lesions. A head CT could detect masses and lesions such as subdural hematomas (Hays Shapshak, Lacerte, Mesfin, 2021).

Treatment

When treating brain anoxia due to cardiac arrest, the critical components of treatment are maintaining system profusion, resuscitation efforts, and optimizing blood pressure. Clinical management is focused on supportive care and treatment of the underlying cause of hypoxia. Trials have evaluated the use of hypothermia to a target temperature of 32 to 34 degrees Celsius, specifically for patients with brain anoxia of cardiac arrest due to atrial fibrillation or pulses ventricular tachycardia. These random controlled trials indicate that patients who received hypothermia had a lower mortality rate and improved neurological outcomes (Hays Shapshak, Lacerte, Mesfin, 2021). Currently there is no treatment being used on this patient.

Pathophysiology References

Hays Shapshak, A., Lacerte, M., & Mesfin, F. B. (2021, August 14). *Hypoxic brain injury*. StatPearls [Internet]. Retrieved February 13, 2022, from https://www.ncbi.nlm.nih.gov/books/NBK537310/

Weinhouse, G. L., & Young, G. B. (2020, February 27). *Hypoxic-ischemic brain injury in adults: Evaluation and prognosis*. UpToDate. Retrieved February 13, 2022, from https://www.uptodate.com/contents/hypoxic-ischemic-brain-injury-in-adults-evaluation-and prognosis?search=anoxic+brain+injury+adult&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1#H12

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				
Hgb				
Hct				
Platelets				
WBC				
Neutrophils				
Lymphocytes				
Monocytes				
Eosinophils				

Bands				

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-				
K+				
Cl-				
CO2				
Glucose				
BUN				
Creatinine				
Albumin				
Calcium				
Mag				
Phosphate				
Bilirubin				
Alk Phos				

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				

pH				
Specific Gravity				
Glucose				
Protein				
Ketones				
WBC				
RBC				
Leukoesterase				

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				
Blood Culture				
Sputum Culture				
Stool Culture				

Lab Correlations Reference (1) (APA):

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

Diagnostic Imaging Reference (1) (APA):

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

Medications (5 required)

Brand/Generic					
Dose					
Frequency					
Route					
Classification					
Mechanism of Action					
Reason Client Taking					
Contraindications (2)					

Side Effects/Adverse Reactions (2)					

Medications Reference (1) (APA):

Assessment

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

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** **Braden Score:** **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:** **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☐**	.
NEUROLOGICAL: **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	.
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):**	.

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

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
10:00	**127**	**118/77**	**24**	**37ºC**	**97% RA**

Pain Assessment, 1 set (5 points)

Time	Scale Yes/No	Location	Severity	Characteristics	Interventions

10:05	**0**	**None**	**None**	**None**	**None**

Patient is nonverbal and was able to shake her head when asked if she was in pain. Patient denies any pain.

Intake and Output (2 points)

Intake (in mL)	**Output (in mL)**

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

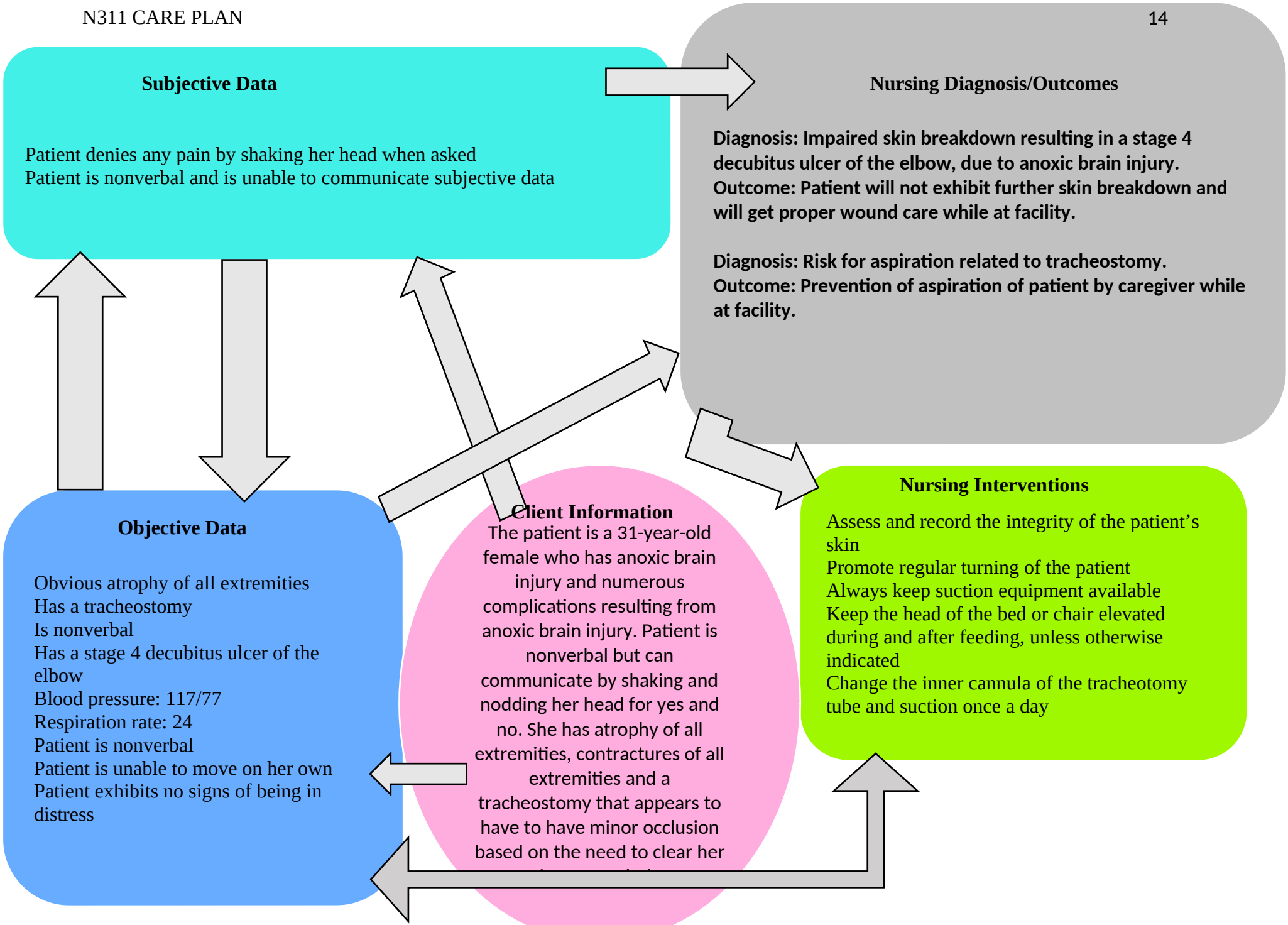
Nursing Diagnosis	**Rationale**	**Interventions**	**Outcome Goal**	**Evaluation**
1. Impaired skin breakdown resulting in a stage 4 decubitus ulcer of the elbow, due to anoxic brain injury	To prevent prolonged pressure on one area of the body due to the patient's constant state of immobility and to provide evidence of an effective skincare regimen (Phelps et al., 2020).	**1**. Assess and record the integrity of the skin **2.** Promote regular turning or position change (Phelps et al., 2020).	1. Patient will not exhibit further skin breakdown 2. Patient will get appropriate wound care (Phelps et al., 2020).	No family was available to respond to nursing actions. The patient is nonverbal but is able to respond to pain levels in regard to impaired skin integrity.
2. Risk for aspiration related to tracheostomy	Ensure to keep the airway clear and to prevent aspiration	**1.** Keep suction equipment available at all times.	**1.** Caregiver will apply measures to prevent aspiration (Phelps et al., 2020).	No family was available to respond to nursing actions. The patient is nonverbal but is

	(Phelps et al., 2020).	**2.** Elevate the head of bed or chair during and after feedings unless contraindicated (Phelps et al., 2020)	2. Patient will have inner cannula of the tracheostomy changed and suctioned once a day while at the facility.	able to cough to clear secretions or obstruction of the airway.

Other References (APA):

Phelps, L. L. (2020). *Sparks & Taylor's nursing diagnosis reference manual*. Wolters Kluwer.

Concept Map (20 Points):


Subjective Data
Patient denies any pain by shaking her head when asked
Patient is nonverbal and is unable to communicate subjective data
Nursing Diagnosis/Outcomes
Diagnosis: Impaired skin breakdown resulting in a stage 4 decubitus ulcer of the elbow, due to anoxic brain injury.
Outcome: Patient will not exhibit further skin breakdown and will get proper wound care while at facility.
Diagnosis: Risk for aspiration related to tracheostomy.
Outcome: Prevention of aspiration of patient by caregiver while at facility.
Objective Data
Obvious atrophy of all extremities
Has a tracheostomy
Is nonverbal
Has a stage 4 decubitus ulcer of the elbow
Blood pressure: 117/77
Respiration rate: 24
Patient is nonverbal
Patient is unable to move on her own
Patient exhibits no signs of being in distress
Client Information
The patient is a 31-year-old female who has anoxic brain injury and numerous complications resulting from anoxic brain injury. Patient is nonverbal but can communicate by shaking and nodding her head for yes and no. She has atrophy of all extremities, contractures of all extremities and a tracheostomy that appears to have to have minor occlusion based on the need to clear her
Nursing Interventions
Assess and record the integrity of the patient's skin
Promote regular turning of the patient
Always keep suction equipment available
Keep the head of the bed or chair elevated during and after feeding, unless otherwise indicated
Change the inner cannula of the tracheotomy tube and suction once a day

References

Hays Shapshak, A., Lacerte, M., & Mesfin, F. B. (2021, August 14). *Hypoxic brain injury*. StatPearls [Internet]. Retrieved February 13, 2022, from https://www.ncbi.nlm.nih.gov/books/NBK537310/

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