

**Demographic Data**

**Admitting diagnosis:** Aspiration pneumonia

**Age of client:** 7-year-old

**Sex:** Female

**Weight in kgs:** 15.1 kg

**Allergies:** diaper rash, adhesive, Tegaderm (blister rash)

**Date of admission:** 9/23/24

hL water TID (6-14-22) via  
& Bartlett Learning, 2022).

yo is  
day. The dose is safe and

& Bartlett Learning,

patient has Cerebral

palsy and possibly is in pain (Jones & Bartlett Learning, 2022).

**Key nursing assessments prior to administration:** 1. Assess renal function because this medication is excreted by kidneys. If the kidney labs are not good than the dose of this drug should be readjusted. 2. Assess gastrointestinal function because this medication can cause nausea and vomiting. That would not be good because this patient already has problems with aspiration (Jones & Bartlett Learning, 2022). Continued.

70-75%. Bag valve mask ventilation was initiated. The patient was given nebulizer treatment before coming to the emergency. No additional history was given.

**Pathophysiology**

**Disease process:** **Aspiration pneumonia** is an inflammation of the lung caused by inhaling saliva, food particles, liquid or stomach content. This inflammation easily can turn into an infection caused by the growth of bacteria already present in the mouth or in nasopharynx. Aspiration pneumonia occurs in older people who have trouble swallowing and chewing food , and in those who have chronic neurological diseases like of MS or Parkinson’s disease (Hinkle et al., 2022).

. Adult that drink. Also, aspiration pneumonia occurs in population of young people who had a severe brain injury and developed cerebral palsy. They usually have problem with swallowing or coughing up secretions from the lungs ( Hinkle et al., 2022).

**S/S of disease:** The main symptoms of aspiration pneumonia occurs soon after aspiration and includes shortness of breath, wheezing, chest pain. They are coughing up green sputum and have halitosis due to bacterial growth in the lungs. Patients feel very tired. Also, they are diaphoretic and have dysphagia (Hinkle et al., 2022). This nursing student’s patient has some of the symptoms here mentioned like shortness of breath, and wheezing and crackles in the lungs on auscultation and temperature 101.3F. She is a 7 year old with severe brain injury and cannot swallow. She is on jejunal and gastric tube feeding system and has aspiration pneumonia.

**Method of Diagnosis:** X-ray and CT scan of the lungs are the main methods of diagnosis. There are CBC and sputum test. Bronchoscopy can be done also. This student’s patient had done CBC and blood culture. The blood culture showed Staphylococcus in the blood. Also, human

## Medical History

[Student Name]

**Previous Medical History:** The patient had near drowning accident (2018) with cardio pulmonary arrest. That caused anoxic brain injury. After that the patient developed severe hypertonia, joint contractions at the hips joint, dislocation of elbows, shoulder and feet. This caused the patient to have little or no voluntary motions.

The patient has also obstructive sleep apnea, epileptic seizures, quadriplegic cerebral palsy.

**Prior Hospitalizations:** Previously hospitalized for respiratory distress. No additional information available.

**Past Surgical History:** Eye surgery (2022). Gastrojejunostomy (tube change 2023). Gastrojejunostomy tube (two times in 2024). Tonsillectomy and adenoidectomy (2024).

**Social needs:** N/A

## Relevant Lab Values/Diagnostics

**Hb:** 9.5 g/dL **Normal:** 10.6-13.2g/dL **Reason for abnormal:** anemia, hemodilution, dietary deficiency (Pagana et al., 2022).

**Hct:** 28.4% **Normal:** 32.4-39.5.0% **Reason for abnormal:** anemia, hemodilution IV , dietary deficiency (Pagana et al., 2022).

in the next pages

## Active Orders

**Precaution:** isolation contact/droplet continuous. This is done because the patient has Rhino virus infection.

**Pediatric feeding:** 60 mL/h x18h total

Assessment	
General	Patient is awake and alert and with nonverbal baseline.
Integument	Skin is light pink color, dry and warm on palpation. No rashes, redness, bruising or lesions were noted. There are no scars noted. Hair quantity, distribution, and texture is as expected. Nails w/o clubbing or cyanosis. Skin turgor is good, skin recoils fast. A bilaterally capillary refill on fingers and toes is good and takes less than 3 seconds.
HEENT	<b>Head and neck</b> are symmetrical, <b>trachea is deviating toward the left side</b> . Thyroid is not palpable, no noted nodules bilaterally. Neck is round with <b>some passive ROM</b> . Bilateral carotid pulses are palpable and 2+. No lymphadenopathy in the head or neck is noted. <b>Eyes:</b> Bilateral sclera white, bilateral cornea clear, bilateral conjunctiva pink. Bilateral lids moist, no discharge noted. <b>PERRLA cannot be examined. Patient does not follow.</b> Nystagmus present and rowing eye movements. <b>Pupils are wide with very sluggish reaction to light. EOMS cannot be examined due to patient's medical condition.</b> <b>Ears:</b> Bilateral auricles have no visible or palpable deformities, lumps or lesions. Bilateral canals clear no discharge noted. <b>Patient does not react or respond to normal tone of voice or other sounds.</b> <b>Nose:</b> Septum is in midline; turbinates are moist and pink with <b>little exudate</b> noted and <b>polyps could not be determined.</b> <b>Tenderness of frontal and maxillary sinuses to palpation could not be determined.</b> <b>Throat:</b> Buccal mucosa and tongue pale pink, no lesions noted. Dentition present.
Cardiovascular	Clear S1 an S2, <b>very loud</b> No gallops, rubs or rumsors. <b>HR is tachycardic 130- 144 BPM.</b> No edema on the legs or arms. Peripheral pulses are all palpable on upper and lower extremities bilaterally.
Respiratory	<b>Respirations are labored and abdominal with retractions</b> Respirations per minute are <b>32-36.</b> <b>Lungs are displaced to the left side due to scoliosis.</b> Respiratory sounds are diminished. Auscultation on the back was not done because the patient could not be moved. <b>The patient is producing large amount of saliva and nasal secretions that needs to be aspirated constantly.</b>
Genitourinary	Urine is yellow and has no signs of UTI. Patient is getting 50 mL of normal saline 0.9% NaCl and 5% glucose solution for hydration.
Gastrointestinal	The patient's abdomen is dislocated toward the left side of the body due to severe scoliosis. There are no rashes wounds or unusual growths noted. On auscultation, bowel sounds are normoactive in all four quadrants. On palpation the abdomen is soft, no hard masses, organomegaly, or rebound. The patient is on formula Pediasure 1.0W/fibers and water.
Musculoskeletal	<b>The system is significantly impaired. The patient has spastic quadriplegia and severe scoliosis.</b> Assessment cannot be done on this system.
Neurological	Patient is alert and awake. <b>Pupils are wide and give sluggish response.</b> <b>Nystagmus is present and rowing eyes.</b>
Most recent VS (highlight if	<b>Time:</b> 14:00 1600

abnormal)	<b>Temperature:</b> 99.9 F	101.3 F (Medication given)
	<b>Route:</b>	axillary
	<b>RR:</b> 32 RPM	36 RPM
	<b>HR:</b> 144 BPM	134 BPM
	<b>BP and MAP:</b> not measured since 06:00 (91/55)	
	<b>Oxygen saturation:</b> 94%	
	<b>Oxygen needs:</b> 3L 23% since morning (on Opti flow)	6L 26%
<b>Pain and Pain Scale Used</b>	Pain scale used is FLACC: non-verbal or verbal indicators absent. F: face has no particular expression or smile. L: legs are relaxed in normal position. A: activity lying quietly, normal position moves easily but no reaction on touch. C: no cry C: no consolement needed.	

<p><b>Nursing Diagnosis 1</b>  <b>Risk for complications of aspirational pneumonia related to tube feeding system in patient with CP</b>                  (Ackley et al., 2022).</p>	<p><b>Nursing Diagnosis 2</b>  <b>Risk for complication of hypoxemia r/t pneumonia</b>                  (Ackley et al., 2022).</p>	<p><b>Nursing Diagnosis 3</b>  <b>Risk for impaired skin integrity r/t immobility and brain damage</b>                  (Ackley et al., 2022).</p>
<p><b>Rationale</b>                  The patient has aspirational pneumonia and cannot swallow. The patient feed through G- J tube due to CP.</p>	<p><b>Rationale</b>                  The patient has difficulty breathing due to pneumonia and is constantly requiring oxygen therapy.</p>	<p><b>Rationale</b>                  The patient is quadriplegic and makes no voluntary movements.</p>
<p><b>Interventions</b>  <b>Intervention 1:</b> Elevate the head of bed to avoid repeated aspirations during and after feedings.  <b>Intervention 2:</b> medications like antibiotics to be part of treatment (Ackley et al., 2022).</p>	<p><b>Interventions</b>  <b>Intervention 1:</b> Check O2 % in blood continuously  <b>Intervention 2:</b> apply sufficient amount of therapeutic oxygen (Ackley et al., 2022).</p>	<p><b>Interventions</b>  <b>Intervention 1:</b> Reposition patient Q 2 hr  <b>Intervention 2:</b> Physical therapy can help (Ackley et al., 2022).</p>
<p><b>Evaluation of Interventions</b>                  Evaluation can be done by monitoring for SOB, increased respiration rate and HR and other vitals (Ackley et al., 2022).</p>	<p><b>Evaluation of Interventions</b>                  Evaluation of intervention should be continuous using pulse oximetry (Ackley et al., 2022).</p>	<p><b>Evaluation of Interventions</b>                  To evaluate interventions, the patient needs to be checked at least once daily for any changes on the skin, like redness, pressure ulcers (Ackley et al., 2022).</p>

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<b>Erickson’s Psychosocial Developmental Stage</b>	<b>School age child (6-12 y)</b>	Increased interest in knowledge, increased activities outside the home, develops friendships with peers, interested in making things. (Rudd & Kocisko, 2023).	The patient has not developed none of these activities. The patient does not communicate with the rest of the world due to severe medical problems (Rudd & Kocisko, 2023).
<b>Piaget’s Cognitive Developmental Stage</b>	<b>School age (7-11 y) Concrete Operational</b>	Understand the meaning of time but does not have yet ability to think abstractly. Collecting things. Learns math and reading. Can understand cause and effect (Rudd & Kocisko, 2023).	The patient doesn’t do any of these activities due to her medical condition (Rudd & Kocisko, 2023).
<b>Age-Appropriate Growth &amp; Development Milestones</b>	1. loss of primary teeth and growth of adult teeth. Starts at age 6 y with molars. 2. they grow 3 kg and grow 6 cm in a year 3. They learn to speak better (Rudd & Kocisko, 2023).		
<b>Age-Appropriate Diversional Activities</b>	1. Riding bicycle. 2. Read a book 3. Doing crafts, playing memory games (Rudd & Kocisko, 2023).		

## Medications Continuation

**Clonidine (Catapres)** 20 mcg oral suspension J tube 2 times daily, in prefilled syringe. This is safe dose. Max is 400mcg/day (6-17) (Jones & Bartlett Learning, 2022).

**Therapeutic class:** Antihypertensives (Jones & Bartlett Learning, 2022).

**Pharmacologic class:** Centrally acting alpha agonists (Jones & Bartlett Learning, 2022).

**Reason for taking:** relaxes muscle spasm in Children with CP and increases comfort. (The patient has CP and spasms) (Jones & Bartlett Learning, 2022).

**Key nursing assessment before administrating the drug:** check BP because this drug can cause severe rebound HTN (Jones & Bartlett Learning, 2022).

**Baclofen (Gablofen):** 10 mg, 2 times daily via gastric tube, administration dose is 2mL=10 mg of 5mg/mL, in prefilled syringe. Safety: start with 5mcg to see the reaction and than the dose can be increased to 10mg, 20 mg, or 0.5mg/mL, 2mg/L.

**Therapeutic class:** Skeletal muscle relaxant (Jones & Bartlett Learning, 2022).

**Pharmacological class:** Gamma-aminobutyric acid derivatives (Jones & Bartlett Learning, 2022).

**Reason for taking:** manage spasticity in a child with CP (Jones & Bartlett Learning, 2022).

**Key nursing assessment before administration:** Assess patient for impaired renal function, seizures and respiratory disease.

The patient has these problems (Jones & Bartlett Learning, 2022).

**Ceftriaxone:** 685 mg in 0.9% NaCl, 31.85 mL total volume IVPB Peds,

50mg/kg/day x 13.7 kg = administration dose 685mg : speed 63.7 mL/hr IVPB Q24hr

Safe dose for a child younger than 12yo and 15.1 kg is 750-1125 mg. The administered dose is safe but not therapeutic. The dose was calculated for a smaller child.

**Therapeutic class:** Antibiotics (Jones & Bartlett Learning, 2022).

**Pharmacologic class:** Third generation cephalosporins (Jones & Bartlett Learning, 2022).

**Reason for taking:** bacterial infection. (Jones & Bartlett Learning, 2022). The patient has aspirational pneumonia and bacteria were found in her blood culture.

**Key nursing assessment before administration:** check for BUN level because this medication can be nephrotoxic (Jones & Bartlett Learning, 2022).

**Infusion:** IV 50mL/hr of normal saline 0.9% and 5% glucose for rehydration. Together it is 1200mL/day. The patient has 15.1kg=1500mL/day. The infusion is safe.

### Relevant lab values continuation

**MCV:** 75.6 fL **Normal:** 80.0- 95.0 fL **Reason for abnormal:** usually iron deficiency anemia (Pagana et al., 2022).

**MCH:** 23.9 pg **Normal:** 24.8-29.5 pg **Reason for abnormal:** iron deficiency anemia (Pagana et al., 2022).

**Platelet:** 603 x10<sup>3</sup>/uL **Normal:** 199-367 x 10<sup>3</sup>/L **Reason for abnormal:** infections, immune system problems. (Pagana et al., 2022).

### Basic chemistry

**Glucose** 106 mg/dL **Normal:** 74-100 mg/L **Reason for abnormal:** sample taken during feeding. The patient has prolonged feeding time (18 hr) or diabetes (Pagana et al., 2022). mg

**BUN:** 6mg/dL **Normal:** 7-17mg/dL **Reason for abnormal:** diluted by fluid overflow (Pagana et al., 2022). The patient has constant IV on for rehydration.

**Creatinine:**0.43mg/dL **Normal:** 0.55-1.02mg/dL **Reason for abnormal:** diluted by IV fluid overflow (Pagana et al., 2022).

**Albumin** 3.6 g/dL **Normal:** 3.8-5.4 g/dL **Reason for abnormal:** infection, liver disease, poor nutrition (Pagana et al., 2022). The patient has infection.

**Chloride** 110 mmol/L **Normal:** 98-107 mmol/L **Reason for abnormal:** dehydration, kidney problems, certain medications (Pagana et al., 2022).

### Basic Urine

**Glucose** 250 mg/dL **Normal:** negative **Reasons for abnormal:** diabetes, low insulin level (Pagana et al., 2022). There are no data in the medical history about diabetes.

**Ketone** 15mg/dL **Normal:** negative **Reasons for abnormal:** body cannot use glucose for energy (Pagana et al., 2022). There are no data on diabetes in the patient.

**WBC** 38/ $\mu$ L **Normal:** 0- 25/ $\mu$ L **Reasons for abnormal:** infection (Pagana et al., 2022)

**Blood culture** showed presence of Staphylococcus.

**Human respiratory pathology** detected Rhinovirus/Enterovirus.

### References (3):

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Hinkle, J. L., Cheever, K. H. & Overbaugh, K. (2022). *Bruner's & Suddarth's Textbook of Medical Surgical Nursing*. Walter Kluwer.

Jones & Bartlett Learning. (2020). *2021 Nurse's drug handbook* (20<sup>th</sup> ed.). Jones & Bartlett Learning.

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