

Patient's Age 3 Years old, and 4 months.  
Year's months

Weight (in kg) 13.3 KG

BMI 15.6KG

Allergies/Sensitivities to medications, foods, contact, environmental, etc. Include reactions: No known allergies.

Chief Complaint (Reason for admission): Difficulty Breathing, wheezing, working hard to breath. . Admit date:10/16/19

Other co-existing conditions: Asthma.

History of Present Illness (What events led up to this child being admitted to the hospital, etc.): Patient's mother brought him to his primary due to a noticeable Increased work of breathing, URI Congestion, Hypoxia, Respiratory Distress and Wheezing, Dyspnea. This has been an ongoing issue for three days. The patient did not appear to be getting any better. Therefore, his primary sent him to the ER to seek proper medical attention. My patient has a history of hospitalization due to his diagnosis of asthma. Many test were performed and it was also found that my patient has an infection known as pneumonia. My patient is on steroids and antibiotics to help decrease inflammation and fight the infection.

Pertinent Events during this Admission and Hospitalization (IV starts, lab test, etc.): Iv placed in the left AC and still in place.

We are using this IV for his medicine. A chest x-ray was done upon arrival (results below). Also, he is on 8 Liters which is a high oxygen flow via nasal cannula.

Past Medical & Surgical History (illnesses, hospitalizations, immunizations, birth history-any complications?) Asthma, Hypotnea, Klinefelter Syndrome, Umbilical Hernia (tiny).

Past Surgery: Circumcision.

Child's diagnosis: Acute and Chronic Respiratory Failure with Hypoxia.

Etiology of disease process (what causes it): Mycoplasma Pneumonia

Pathophysiology: (What is the pathophysiology of this disease and what goes on in the body as a result of this disease? Put in your own words & site reference)

Parenchyma compromises many of the thin-walled alveoli of the lung, forming a large surface area, promoting the maintenance of gas exchange. When the parenchyma becomes inflamed, it is known as a condition called pneumonia, which is known to be the eighth leading cause of death in the United States (Cheever & Hinkle, 2018). Typically, the cause of pneumonia is an infection. However, other causes of pneumonia may be due to inhalation of noxious fumes or aspirating gastric contents into the respiratory tract. Pneumonia is more common in men, the winter months, African Americans and older adults.

Acquired pneumonia, Ventilator-associated pneumonia, and healthcare-associated pneumonia are three ways to categorize how the infection came about. Hospital-acquired pneumonia is pneumonia that develops 48 hours or more after admission to the hospital. Ventilator-associated pneumonia is when pneumonia develops 48-72 hours post-tracheal intubation. Healthcare-associated pneumonia is pneumonia that develops in individuals who were hospitalized two or more days, developing pneumonia within ninety days (Cheever & Hinkle, 2018).

Before the Streptococcus Pneumonia vaccine and antibiotics to treat the infection, pneumonia was the common cause of death in older adults.

Classification of pneumonia depends solemnly on the location of where the patient had been exposed to the pathogen, the pathogen, or the location of the pathogen within the lung.

Diagnosing pneumonia starts with clinical presentation and the physical exam of the infected patient. Such clinical presentation will lead the provider to obtain either a chest x-ray, CT, or sputum analysis or all three of the following. These tests are done to work towards the confirmation of the diagnosis of pneumonia. A chest x-ray will not confirm if it is viral or bacterial pneumonia. However, it can determine if it is either pneumonia or acute bronchitis. A sputum analysis may help diagnose bacterial pneumonia, which aids in the identification of dominant or unsuspected pathogens. A CT is not routinely done in patients but is known as the "gold standard"



**Clinical Day Evaluation Data – Head to toe physical assessment (Do not use WNL or WDL)**

**NEUROLOGICAL**

Patient is alert and awake most of the day. My patient's mother was at the bedside, and my patient was sitting on mother's lap most of the day watching videos on youtube, TV, and playing games on the phone.

**MUSCULOSKELETAL**

Active ROM in upper and lower extremities, bilaterally.

**CARDIOVASCULAR**

S1 and S2 noted x5. Not abnormal heart sounds.

**CHEST**

Breath sounds clear upon auscultation, bilaterally in all four lobes.

**GASTROINTESTINAL**

Bowel sounds present in all four quadrants.

**INTEGUMENTARY**

Skin is PWD. No wounds noted. No abnormal findings.

**HEENT**

**Head:** Midline and has no deviations present.

**Ears:** Equal in size, bilaterally. No drainage.

**Eyes:** PERRLA NOTED.

**Nose:** Drainage present. Clear in color.

**GENITOURINARY**

Patient had 720 ml of output by 1200 on October 18, 2019.

**Pain History & assessment: Type, location, intensity & timing, precipitating factors, relief measures/interventions, rating scale used, physiological and/or behavioral signs, evaluation of pain status after medication is given:**

**FLACC Scale used:**

**FACE:** 0, No particular expression.

**LEGS:** 0, Normal position, relaxed.

**ACTIVITY:** 0, Sitting in normal position with mother.

**CRY:** 0, No cry. awake.

**CONSOLABILITY:** Relaxed, content playing on mother's phone.

**FLACC SCORE: 0, NO PAIN**

No interventions needed for pain.

**Lab Tests:**

<b>TEST</b>	<b>NORMAL</b> (specific for age)			
<b>RBCs</b>	3.89-4.97	3.98	NA	
<b>Hgb</b>	10.2-12.7	11.2	NA	
<b>Hct</b>	31.0-37.7	34.6	NA	
<b>MCV</b>	71.3-81.4	80.9	NA	
<b>MCH</b>	23.7-28.3	28.1	NA	
<b>MCHC</b>	32.0-34.7	32.4	NA	
<b>WBCs</b>	5.14-13.38	7.46	NA	
Neutrophils	1.54-7.92	3.25	NA	
Eosinophils	0.03-0.53	0.20	NA	
Basophils	0.01-0.06	0.03	NA	
Monocytes	0.19-0.94	0.81	NA	
Lymphocytes	1.13-5.52	3.14	NA	
<b>Platelets</b>	202-403	314	NA	
<b>TEST</b>	<b>NORMAL</b> (specific for age)			
Glucose	60-99	105	NA	Hyperglycemia is a common occurrence in patients who are diagnosed with pneumonia. Monitoring my patients glucose is crucial due to the severe effects it can cause, death being the worst outcome (Klein, Quinn & Sorenson, 2017). However, the cause in my three year old patient is most likely from severe stress my patients body is under and his decreased potassium levels. We will still be extra cautious and continue to monitor his glucose levels closely).
Na <sup>+</sup>	136-145	140	NA	
Cl <sup>-</sup>	98-107	107	NA	
K <sup>+</sup>	3.5-5.1	3.2	NA	Low potassium levels can have many causes Antibiotics being one of the causes to low levels (Klein, Quinn & Sorenson, 2017). Due to my patient being on antibiotics for his pneumonia, his potassium levels were decreased.
Ca <sup>++</sup>	8.5-10.1	9.7	NA	
Phosphorus		NA	NA	
Albumin	4-5.9	NA	NA	
Total Protein		NA	NA	
BUN	7-18	6	NA	BUN levels decrease in patients who are dehydrated(Klein, Quinn & Sorenson, 2017).. My patient has pneumonia and has not had a good fluid intake, resulting in dehydration which was the cause in these

				levels to be decreased.
Creatinine	0.70-1.30	0.45	NA	Creatinine levels tend to lower during an acute illness or malnutrition (Klein, Quinn & Sorenson, 2017). As mentioned above, my patient has not had an adequate fluid intake with his pneumonia diagnosis. His creatinine levels were low due to his inadequate fluid intake.
<b>TEST</b>	<b>NORMAL</b> (specific for age)			
Liver Function Tests	NA	NA	NA	
Urinalysis	NA	NA	NA	
Urine specific gravity	1.003-1.035	1.003	NA	
Urine pH	5.0-7.0	6.0	NA	
Creatinine clearance	NA	NA	NA	
<b>Other Labs:</b>	NA	NA	NA	
NA	NA	NA	NA	

Klein, D., Quinn, L., & Sorenson, M. (2017). *Pathophysiology: Concepts of Human Disease*. New York, NY. Pearson.

### Diagnostic Studies

<b>TEST &amp; RESULTS</b>	<b>Correlation to current health status</b> (if abnormal)
Chest x-ray:	Possible perihilar pneumonitis, possible trace of pleural fluid, and wall thickening of bronchitis.
CT Scan/MRI:	NA
Biopsy/Scope:	NA
Cultures:	NA
Other:	Rhinovirus and Pneumonia detected.

### List of active orders on this patient:

<b>ORDER</b>	<b>COMMENTS/RESULTS/COMPLETION</b>
Activity:	Up ad lib, as tolerated. Mother is at bedside and usually helping with this.
Diet/Nutrition:	Regular Diet.
Frequent Assessments:	Vitals Q4H
Labs/Diagnostic Studies:	None
Treatments:	High flow NC, antibiotics and steroids.

New Orders for Clinical Day	
ORDER	COMMENTS/RESULTS/COMPLETION
Wean oxygen.	His oxygen was decreased from 6 Liters to 5 Liters. We are monitoring his O2 closely. Making sure he has no difficulties with the decrease in the oxygen being delivered.

**Teaching & Learning: Identified teaching need (be specific):** Teaching was given to the mother who is present at bedside. Teaching included signs and symptoms to watch for in association with his diagnosis of asthma. We made sure to have her watch her sons breathing and to notify the nurse as she notices any increase in his respirations, overworked breathing or difficulty breathing.

**Summarize your teaching (prioritization in care, methods used, materials used, time to provide, etc.):** I explained to the mother what signs and symptoms to look for, prioritizing the need for her to notify the nurse as soon as she notices this manifestation.

**Evaluation of your teaching (establish expected outcomes and describe if met; effectiveness of materials/approach, what next?):**

The mother verified that she understood how important it was to notify the provider or nurse of any manifestations associated with his asthma.

**Developmental Assessment:** Be sure to **HIGHLIGHT** the achievements of any milestone if noted in your child. Be sure to circle any use of diversional activity if utilized during clinical. There should be a minimum of 3 descriptors under each heading.

#### Age Appropriate Growth & Developmental Milestones

1. Language: combining several words to create simple sentences.
2. Walk without any help, jump across floor, walk up stairs by placing both feet on each step.
3. Draws circles and has good hand-finger coordination.

#### Age Appropriate Diversional Activities

1. Builds a tower of six or seven blocks.

2. Manages a spoon without rotation.

3. Turns pages of a book, two or three at a time.

**Psychosocial Development: Which of Erikson's stages does this child fit?** Autonomy versus shame and doubt.

**What behaviors would you expect?** Independence is paramount for toddlers, who are attempting to do everything themselves.

**What did you observe?** Patient was watching youtube on his mother's phone, and did not want her help when turning the youtube channel. He wanted to be able to do it all by himself.

**Cognitive Development: Which stage does this child fit, using Piaget as a reference?** Preoperational stage.

**What behaviors would you expect?** Magical thinking. Thoughts are all powerful and can cause events to occur.

**What did you observe?** Patient pretended he was shooting a web out of his hand.

**Vocalization/vocabulary: Development expected for child's age and any concerns?**

Child should be combining many words to make a sentence. However, he was behind on his speech due to his diagnosis of klinefelter's syndrome.

**Any concerns regarding growth and development?** No concerns, his growth and development is appropriate for his age.

**Potential Complications that can occur because of this disease/disorder:**

<b>Potential Complication</b>	<b>Signs/Symptoms</b>	<b>Preventative Nursing Actions</b>
1. Bacteremia	Fever, rapid heart rate, GI Upset and Hypotensive.	Monitor BP. Assess vitals frequently. Physical assessments.
2. Septic Shock	Decreased urine output, changes in mental status, abnormal heart rate, and low platelet counts.	Monitor I/O's Monitor Mental status, document any changes. Assess vitals frequently.

**Nursing Care Plan**

<p>Nursing Diagnosis <b><u>Prioritize-most important to least</u></b></p>	<p>Outcomes (Patient/Family will: ..... and <b><u>give time line</u></b>) (MUST BE MEASURABLE)</p>	<p>Nursing Interventions <b><u>With rationale</u></b> <b><u>(At least 2 nursing interventions per outcome)</u></b></p>	<p>Evaluation of <b><u>EACH</u></b> outcome Outcomes Met/ Partially met/ Not met (with Explanation)</p>
<p>At risk for ineffective airway clearance</p> <p><b>Related to:</b> Pneumonia</p> <p><b>AEB (as evidenced by):</b> Inability to maintain a clear airway due to inflammation.</p>	<p>1.Patient will demonstrate the ability to achieve airway clearance.</p> <hr/> <p>1.Patient will be able to maintain a patent airway.</p>	<p>1.Assess Vitals frequently, documenting any signs of tachypnea or shallow respirations.As tachypnea is a problem occurring in pneumonia and can be very harmful if not treated.</p> <p>2.Auscultate lung and breathing sounds. Both are very crucial nursing intervention. Wheezing is heard in a patient with asthma and pneumonia. Monitoring lung sounds will guide the nurse in what direction to take in my patients care.</p> <hr/> <p>1.Assess patients cough frequently, documenting and monitoring the removal of any secretions. Secretions are what cause patients to choke, which can be a very dangerous situation for a three year old if not monitored and treated appropriately.</p> <p>2.Observe sputum color, viscosity and odor. This can determine if any infection is present, and the outcome of if it is getting better or not with treatment.</p>	<p>1. MET: Patient had no sign of any sputum blocking his airway clearance. Clear sounds noted upon auscultation.</p> <hr/> <p>1. MET:.Patient was able take deep breaths for me. Lung sounds were clear upon auscultation.</p> <hr/> <p><b><u>What next?</u></b> Continue to monitor all of the following mentioned throughout the day. Document any changes and perform appropriate nursing interventions as needed.</p>

**Nursing Care Plan**

Nursing Diagnosis <b><u>Prioritize-most important to least</u></b>	Outcomes (Patient/Family will: ..... and <b>give time line</b> ) (MUST BE MEASURABLE)	Nursing Interventions <b><u>With rationale</u></b> <b><u>(At least 2 nursing interventions per outcome)</u></b>	Evaluation of <b><u>EACH</u></b> outcome Outcomes Met/ Partially met/ Not met (with explanation)
<p>At risk for Impaired Gas exchange.</p> <p><b>Related to:</b></p> <p>Retained secretions</p> <p><b>AEB (as evidenced by):</b></p> <p>A decrease in oxygen or carbon monoxide elimination.</p>	<p>1.Patient will maintain optimal gas exchange.</p> <p>_____</p> <p>1.Patient will participate in actions demonstrated to maximize oxygenation.</p>	<p>1.Assess Vitals frequently as these will indicate if medication and actions being done are working or not.</p> <p>2.Assess mental status as neurological signs and symptoms are the number one indicator of immediate nursing actions needed to be done for patient.</p> <p>_____</p> <p>1.Monitor Blood pressure and heart rate, as tachycardia is a result of hypoxia.</p> <p>2.Monitor/observe the pulse oximetry and ABGs to see if the therapy is working or not.</p>	<p>1.Partially met: patient is demonstrating a decrease in his high RR rate. However, we are still not within normal range.</p> <p>_____</p> <p>1.Not met. Patient is still on 8L of oxygen. We are trying to wean him off, but it has been a slow progress.</p> <p>_____</p> <p><b><u>What next?</u></b></p> <p>Continue to monitor all of the following mentioned. Also, gradually continue to wean him off of oxygen, being sure to monitor patient closely.</p>

### N433 Medication Form

Patient Initials: LM

Patient Age: 3 years, 4 months.

Patient Weight (in kg): 13.3 kg

Scheduled Medications
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<b>Medication Trade &amp; Generic Names, Pharmaceutical Class Action of the medication (how does the medication work in the body <u>in your own words</u>)</b>	<b>Dose, route, &amp; frequency ordered for this patient</b>	<b>Concentration Available</b>  <b>Why is this pt. taking this?</b>	<b>Calculate the safe dose ranges by what is given as a safe dose times the child's weight. Do this for a 24 hour period. (Show Calculations)</b>  <b>Is this dose safe for this pt.?</b>	<b><u>Nursing Considerations</u> (at least 3 &amp; must be appropriate for this patient, &amp; include any labs that need to done to monitor pt. while taking this medication)</b> <b><u>Contraindications</u></b> <b><u>Common side effects</u></b>
<b>Azithromycin (Zithromax)</b> <b>Macrolide Antibiotics</b> <b>Fight infection within the body.</b>	<b>33.3 ML</b> <b>PO</b> <b>Daily</b>	<b>100MG/60ML</b>  <b>Why is this pt. taking this?</b> To treat his infection, pneumonia.	$3.33\text{ml} \times 100 \text{ divided by } 5 = 66.6\text{mg}$ $3.33 \times 13.3\text{kg} = 44\text{mg}$  <b>Yes, this dose is safe.</b>	<b><u>Nursing Considerations</u></b> <ol style="list-style-type: none"> <li>1. Shake well before use.</li> <li>2. Take with food.</li> <li>3. Do not refrigerate.</li> </ol> <b><u>Contraindications</u></b> Hypersensitivity to medication  <b><u>Common side effects</u></b> GI Upset, Nausea and Vomiting.
<b>Methylprednisolone (Solu-Medrol)</b> <b>Glucocorticosteroid suppresses inflammation due to pneumonia.</b>	<b>0.38 ML</b> <b>IV Push</b> <b>Q6H</b>	<b>40MG/1ML</b>  <b>Why is this pt. taking this?</b> Reduce Inflammation.	$15 \times 40 \text{ mg divided by } 1 \text{ ml} = 0.38 \text{ ml} \times 13.3 \text{ kg}$ $0.38 \times 13.3 \text{ kg} = 44 \text{ mg}$  <b>Yes, this dose is safe.</b>	<b><u>Nursing Considerations</u></b> <ol style="list-style-type: none"> <li>1. Administer with meals.</li> <li>2. Shake well before drawing up.</li> <li>3. Do not dilute with another solution.</li> </ol> <b><u>Contraindications</u></b> Hypersensitivity to medication. <b><u>Common side effects:</u></b> Hypertension, nausea, thromboembolism.
<b>Acetaminophen (Tylenol)</b> <b>Analgesic/ antipyretic, non-salicylate</b> <b>This medication halts the fever producing mechanism to decrease fever in patient.</b>	<b>195.2 mg</b> <b>PO</b> <b>Q4H</b> <b>210mg</b> <b>Rectal</b> <b>Q4H</b>	<b>PO:</b> <b>160MG/5ML</b>  <b>Rectal: 120 MG</b>  <b>Why is this pt. taking this?</b> Fever	$195.2 \text{ mg} \times 5\text{ml} \text{ divided by } 160\text{mg} = 6.1 \text{ ml}$ $195.2 \text{ mg} \times 13.3\text{kg}$ $250 \text{ mg divided by } 120 \text{ mg} = 1.75 \text{ ml}$ $210 \text{ mg} \times 13.3\text{kg} =$  <b>Yes, this dose is safe.</b>	<b><u>Nursing Considerations</u></b> <ol style="list-style-type: none"> <li>1. Administer with or prior to meal</li> <li>2. Monitor liver function test.</li> <li>3. Administer with fluids.</li> </ol> <b><u>Contraindications</u></b> Hypersensitivity to medication <b><u>Common side effects</u></b> Agitation, nausea and vomiting.

<b>Medication Trade &amp; Generic Names, Pharmaceutical Class Action of the medication (how does the medication work in the body <u>in your own words</u>)</b>	<b>Dose, route, &amp; frequency ordered for this patient</b>	<b>Concentration Available</b>  <b>Why is this pt. taking this?</b>	<b>Calculate the safe dose ranges by what is given as a safe dose times the child's weight. Do this for a 24 hour period. (Show Calculations)</b>  <b>Is this dose safe for this pt.?</b>	<b><u>Nursing Considerations</u> (at least 3 &amp; must be appropriate for this patient, &amp; include any labs that need to be done to monitor pt. while taking this medication)</b>  <b><u>Contraindications</u></b>  <b><u>Common side effects</u></b>
<b>Budesonide (Pulmicort)</b>  <b>Nebulizer Suspension Inhaled</b> <b>Glucocorticosteroid</b> Decreases the inflammation that occurs from his asthma.	2ml Inhaled BID	0.25mg/ 2ml  <b>Why is this pt. taking this?</b> Asthma.	0.25mg x 13.3kg =3.3 mg  <b>Yes, this dose is safe.</b>	<b><u>Nursing Considerations</u></b>  1. <b>Monitor respiratory status</b> 2. <b>Assess pulmonary fx tests</b> 3. <b>Assess mental status</b>  <b><u>Contraindications</u></b> Hypersensitivity to medication <b><u>Common side effects</u></b> Headache, otitis media..
<b>Montelukast (Singulair)</b>  <b>Leukotriene Receptor Antagonists</b> To aide in the decrease of inflammation during an asthma attack.	PO 1 tablet HS	4mg/1 tablet  <b>Why is this pt. taking this?</b> Asthmas	1tablet x 1mg = divided by 4 mg= 1 tablet. 4 mg x 13.3kg =53.3 mg  <b>Yes, this dose is safe.</b>	<b><u>Nursing Considerations</u></b>  1. <b>Gradually decrease with supervision.</b> 2. <b>Administer in the evening.</b> 3. <b>Do not dissolve.</b>  <b><u>Contraindications</u></b> Hypersensitivity to medication <b><u>Common side effects</u></b> Cough, nosebleeds, and abdominal pain..
<b>Albuterol Sulfate (Nebulizer Solution)</b>  <b>Beta- adrenergic agents</b> <b>Short acting, Inhaled</b> helps prevent a bronchospasm from occurring in any situation that increases the chances of bronchospasm.	3 ml Inhaled Q4H	2.5mg/ 3ml  <b>Why is this pt. taking this?</b> acute asthma attack.	2.5 mg x 13.3kg =33.3 mg / 3ml = 11.0 ml  <b>Yes, this dose is safe.</b>	<b><u>Nursing Considerations</u></b>  1. <b>Assess lung sounds.</b> 2. <b>Assess VITALS frequently.</b> 3. <b>Monitor sputum document color odor.</b>  <b><u>Contraindications</u></b> Hypersensitivity to medication <b><u>Common side effects</u></b> Nervousness restlessness and headache..

