

IM5 (Pediatrics) Critical Thinking Worksheet**Patient Age:** 7M 3D**Patient Weight:** 5.2kg

Student Name: Brooke Carroll	Unit: 3N Pt. Initials: O.G.	Date: 8/17/2021
1. Disease Process & Brief Pathophysiology (Identify Key Concepts to Your Patient and Include Reference): Respiratory Syncytial Virus infection affects the epithelial cells of the respiratory tract. The walls of the bronchi and bronchioles are infiltrated with inflammatory cells. Luminal epithelial cells are shed into the bronchioles when they die, therefore frequently obstructing the lumina upon expiration. The varying degrees of obstruction produced in small air passages lead to hyperinflation, obstructive emphysema resulting from partial obstruction, and patchy areas of atelectasis. Dilation of bronchial passages on inspiration prevents air from leaving the lungs. As a result, air is trapped distal to the obstruction and causes progressive overinflation. (Hockenberry, 2021 pg.638)	2. Factors for the Development of the Disease/Acute Illness: -Prematurity (P) -Low birth weight (P) -Daycare attendance -Smoking household -Malnutrition -Air pollution -Not breast fed (P) -Underlying lung condition -Congenital heart disease (P) -Immunosuppressed	3. Signs and Symptoms: Coughing (P) Sneezing Runny nose (P) Wheezing Ear/Eye drainage Fever Hypoxemia (P) Tachypnea (P) Retractions (P) Copious secretions (P) Lethargy (P) Crackle lung sounds (P)

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4. Diagnostic Tests Pertinent or Confirming of Diagnosis: Nasopharyngeal Swab Specimen (P) Molecular probes Chest X-Ray Nucleic Acid Amplification Testing (NAAT) Polumerase Chain Reaction (PCR) Rapid Antigen Detection Tests (RADTs) (P)	5. Lab Values That May Be Affected: CBC Electrolytes Urinalysis	6. Current Treatment (Include Procedures): Oxygen Therapy (P) Nasopharyngeal suctioning (P) Antipyretic (P)
7. Pain & Discomfort Management: List 2 Developmentally Appropriate Non-Pharmacologic Interventions Related to Pain & Discomfort for This Patient. 1. Pacifier for child to suck on to assist in providing comfort through non-nutritive sucking. 2. Dark, quiet environment provided, along with swaddled position, to assist in patient relaxation and rest to assist in increasing comfort level.	8. Calculate the Maintenance Fluid Requirement (Show Your Work): $5.2 \text{ kg} \times 100 = 520$ $520 / 24 \text{ hrs} = 21.7 \text{ mls/hr}$ Actual Pt MIVF Rate: No main fluids running Is There a Significant Discrepancy? No Why? No main fluids running	9. Calculate the Minimum Acceptable Urine Output Requirement (Show Your Work): $1 \text{ ml} \times 5.2 \text{ kg} = 5.2 \text{ mls/hr}$ Actual Pt Urine Output: 148 mls/ 24 hr =6.2 mls/hr total

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<p>*List All Pain/Discomfort Medication on the Medication Worksheet Click here to enter text.</p>	<p>10. Growth & Development: List the Developmental Stage of Your Patient For Each Theorist Below and Document 2 OBSERVED Developmental Behaviors for Each Theorist. If Developmentally Delayed, Identify the Stage You Would Classify the Patient:</p> <p>Erickson Stage: Trust vs. Mistrust</p> <ol style="list-style-type: none"> 1. Patient calms when being comforted, held, and rocked by father after being fussy. 2. Patient is satisfied after father approaches bedside when crying and has interaction with him or is given pacifier by him. <p>Piaget Stage: Sensorimotor</p> <ol style="list-style-type: none"> 1. Increased affect is demonstrated when patient cries, and becomes suddenly alert and calm at the sound of father's voice and anticipates pacifier by opening mouth for nipple as it gets closer to their face. 2. Baby demonstrates separation anxiety and cries when father is out of sight if awake, and calms once father returns to sight. 	
<p>11. Focused Nursing Diagnosis: Impaired Gas Exchange</p>	<p>15. Nursing Interventions related to the Nursing Diagnosis in #11:</p> <ol style="list-style-type: none"> 1. Position patient in crib with their head slightly elevated, without compression on the diaphragm, to assist in maximum ventilation. <p>Evidenced Based Practice: Children are diaphragmatic breathers until 7 years of age. Preventing compression of the diaphragm enables optimal breathing effort, while an elevated head facilitates drainage of secretions. (Swearingen & Wright, 2018)</p> <ol style="list-style-type: none"> 2. Suction nose and mouth with bulb syringe as needed to assist in secretion clearance of the 	<p>16. Patient/Caregiver Teaching:</p> <ol style="list-style-type: none"> 1. Educate caregiver on the importance of maintaining a comfortable thermal environment at home to prevent infant's use of energy to cool or warm self, and therefore reduce O2 demand. 2. Consult Respiratory Therapist to assist in demonstrating and educating parents on proper use of oxygen delivery devices and safety. 3. Educate caregivers on proper use of bulb syringe to suction baby's mouth/nose, as well as times when suctioning should be performed.
<p>12. Related to (r/t): Respiratory Illness</p>		

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<p>13. As evidenced by (aeb): Fine crackles in lungs auscultated upon inspiration, dyspnea, chest retractions with increased respiratory rate of 78 breaths/min, and decreased oxygen saturation of 82% without oxygen.</p>	<p>airway.</p> <p>Evidenced Based Practice: The purpose of nasal suctioning is to clear the airway of an infant who is unable to do so independently. Infants are nasal breather, so removal of secretions is thought to relieve respiratory distress. (National Collaborating Centre for Women's and Children's Health, 2015)</p>	<p>17. Discharge Planning/Community Resources:</p> <p>1. Consult case worker to assist family in receiving home health to assist in providing care for child with extensive medical conditions.</p> <p>2. Consult dietary to discuss the best formula to meet baby's dietary and vitamin needs to help maintain a stronger immune system.</p>
<p>14. Desired patient outcome: Patient will maintain an O2 Saturation of at least 95% until discharge.</p>	<p>3. Provide a humidifier bottle to connect to ordered oxygen to provide moisture and prevent drying.</p> <p>Evidenced Based Practice: Oxygen is drying to the nasal mucosa as well as to mucus in the airway, therefore proper humidification to liquify secretions is important. (Swearingen & Wright, 2018)</p>	<p>3. Provide caregiver with list of financial resources to assist in affording medical devices to properly care for child.</p>

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	<p>Resources</p> <p>Czarnecki, M. L. (1999). Infant nasal-pharyngeal suctioning: is it beneficial? PubMed. https://pubmed.ncbi.nlm.nih.gov/10532015/</p> <p>Faan, P. R. P. M. H. J., Cpon, C. R. P. C. R. C., & (Nic), R. D. C. (2021). Wong’s Essentials of Pediatric Nursing (11th ed.). Mosby.</p> <p>Learn about RSV in Infants and Young Children. (2020, December 18). Centers for Disease Control and Prevention. https://www.cdc.gov/rsv/high-risk/infants-young-children.html</p> <p>Muncie, M. D. L., Jr. (2011, January 15). Respiratory Syncytial Virus Infection in Children. American Family Physician. https://www.aafp.org/afp/2011/0115/p141.html</p> <p>National Collaborating Centre for Women’s and Children’s Health (UK). (2015). Supportive treatment - Bronchiolitis: Diagnosis and Management of Bronchiolitis in Children - NCBI Bookshelf. NCBI.</p> <p>https://www.ncbi.nlm.nih.gov/books/NBK328408/ Risk factors for respiratory syncytial virus associated with acute lower respiratory infection in children under five years: Systematic review and meta-analysis. (2015, December 1). PubMed Central (PMC).</p> <p>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC46</p>	

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	76580/ Suppl 2: Diagnosis of Respiratory Syncytial Virus Infection. (2011). PubMed Central (PMC). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3258569/ Swearingen, P. L., & Wright, J. (2018). All-in-One Nursing Care Planning Resource: Medical-Surgical, Pediatric, Maternity, and Psychiatric-Mental Health (5th ed.). Mosby.	