

Medications

Albuterol Sulfate 2.5 mg/3 mL nebulizer every 4 hours- adrenergic/bronchodilator. The patient is taking this to prevent or treat bronchospasm with reversible obstructive airway disease. A key nursing assessment would be to monitor serum potassium levels because this drug may cause transient hypokalemia (Jones & Bartlett Learning, 2023).

Budesonide 0.5 mg nebulizer 2 times per day- corticosteroid/anti-asthmatic, anti-inflammatory. The patient is taking this medication to reduce inflammation in the airway associated with the rhino/entero virus.

D5- 0.9% NaCl continuous 40 mL/hr.- 5% dextrose in 0.9% sodium chloride. The patient is taking this for calories, electrolytes, and fluid maintenance. A key nursing assessment would be to monitor blood glucose levels (Jones & Bartlett Learning, 2023).

Acetaminophen- oral= 160 mg/5 mL PRN every 4 hours, rectal= 120 mg suppository PRN every 4 hours- Analgesic, antipyretic/Central analgesic. The patient is taking this medication for fever and pain. A key nursing assessment would be to assess the patient's temperature prior to administration (Jones & Bartlett Learning, 2023).

Ibuprofen oral 102 mg/kg PRN every 4 hours- Analgesic, antipyretic, anti-inflammatory agent/non-steroidal anti-inflammatory drug (NSAID), Propionic acid derivative. The patient is taking this for fever and pain. A key nursing assessment would be to use the FLACC pain scale to assess pain level for this infant since they are unable to vocalize this information (Jones & Bartlett Learning, 2023).

Demographic Data

Admitting diagnosis: Acute Respiratory Failure with Hypoxia

Age of client: 10 months old

Sex: Male

Weight in kgs: 10.1 kg

Allergies: Eggs

Date of admission: 10/22/2025

Psychosocial Developmental Stage: Trust vs. Mistrust

Cognitive Development Stage: Sensorimotor Stage

Admission History

Patient arrived to the EdD via EMS in respiratory distress. Mother stated symptoms started the night before with nasal congestion, coughing, and he felt warm to the touch. When the patient started retracting and breathing rapidly, mother called EMS. Patient being admitted for acute respiratory failure.

Pathophysiology

Disease process: Acute respiratory failure with hypoxia occurs when the lungs are unable to deliver oxygen throughout the body, resulting in cell injury, which then can injure organs and eventually lead to death if untreated. In this case, the patient had a severely restricted airway due to inflammation, which impaired the gas exchange within the blood and body, restricting oxygen. This can cause the body to shut down starting with the least vital to the most vital organs (Capriotti, 2024).

S/S of disease: Typical signs of respiratory distress and respiratory failure are mental status changes, irritability, cyanosis, lethargy, grunting, head bobbing, coughing continuously, retractions, accessory muscle use, "quiet" breathing, tripod position, shallow or see-saw respirations, hypopnea, hypoxemia, weak or absent cry, tachypnea, nasal flaring, hypoxia, and dyspnea. This patient was observed to be exhibiting most of these symptoms that continued to progress and worsen, coupled with the positive rhino/entero virus swab, which lead to the acute respiratory failure diagnosis once the threshold moved beyond the distress into failure (Rudd & Kocisko, 2023).

Method of Diagnosis: The primary method of diagnosis was done through a physical assessment, sign and symptoms, and a nasal swab. This can also be diagnoses using laboratory studies and diagnostic tools. However, these were not performed on this patient (Rudd & Kocisko, 2023).

Treatment of disease: This patient was being treated with supplemental oxygen, bronchodilators, and corticosteroids to maintain an open airway and appropriate oxygenation.

Relevant Lab Values/Diagnostics	Medical History	Active Orders
<p>Rhino/Entero Virus- positive. Normal is negative. This was performed to assess and diagnose the cause of the patient's respiratory distress. This viral infection likely contributed to or caused the acute respiratory failure (Pagana et al, 2023).</p> <p>Glucose- 113 mg/dL. Normal is 60-100 mg/dL. Glucose testing is part of the standard protocol when a patient is receiving D5-0.9% NaCl, which this patient was. He was also under a great deal of stress with the illness, which can increase blood glucose (Pagana et al, 2023).</p> <p>Total Protein- 7.5 g/dL. Normal is 5.5-7.0 g/dL. Total protein increases when there is an acute infection and anti-body response which increases immunoglobulin levels (Pagana et al, 2023).</p> <p>Alkaline Phosphate- 1299 units/L. Normal is 85-235 units/L. Increased levels indicate normal bone growth at this age (Pagana et al, 2023).</p>	<p>Previous Medical History: Full-term birth at 40 weeks gestation</p> <p>Prior Hospitalizations: None</p> <p>Past Surgical History: None</p> <p>Social needs: Feeding, bathing, interaction, play, consistency, routine, comfort, affection, and love. This patient is totally dependent on his parents for all care at this stage.</p>	<p>Isolation- Droplet Precautions (this patient tested positive for a contagious disease, so isolation is necessary to protect other patients/staff)</p> <p>Vital Signs Q4 (this patient needs to be assessed, especially his O2 levels, to assess if treatment is successful or ineffective)</p> <p>Pulse Oximetry (this is to assess appropriate oxygenation)</p> <p>High Flow Nasal Cannula (this is to assist the infant with breathing and take some of the labor off them and appropriate oxygenation)</p> <p>Suction PRN (this patient had significant congestion and drainage, and could not cough it up or blow their nose)</p> <p>Initiate Hospital Basic Care PRN (this is due to the patient being an infant and unable to perform any ADLs or feeding on their own)</p>

Assessment	
General	Patient is alert and awake. He responds to speaking, reaching to be held, and playing. His responses and expressions are appropriate for his age. He is well-developed and well-nourished.
Integument	Patient's skin is warm and dry to the touch with no discoloration, and normal skin turgor. He has a mild diaper rash on his buttock and groin area.
HEENT	Head/face/eyes/nose are symmetrical, no edema, redness, or discoloration noted. Excessive drainage and crusting around the nares bilaterally. Lips and oral mucosa are pink, moist, and intact, and swallows without difficulty. Age-appropriate expression of vision, hearing, and sensation. Patient has 8 teeth, none are loose. Trachea is midline, symmetrical, and no swelling noted.
Cardiovascular	Normal rate and regular rhythm. S1 and S2 are present with no murmurs, skips, gallops, or rubs. Heart rate was 98 bpm. Peripheral pulses are +2 and capillary refill is <2 seconds.
Respiratory	Cough, congestion, increased effort noted. Omniflow O2 12L @ 21%. Rhonchi and wheezing noted.
Genitourinary	Urine is light yellow with no strong odor noted. Patient voids spontaneously and at an appropriate rate. Mild diaper rash noted on buttock and groin area.
Gastrointestinal	Patient's last bowel movement was at 0830, healthy color and consistency. Normoactive bowel sounds in all four quadrants, nondistended abdomen and no tenderness noted upon palpation.
Musculoskeletal	Patient had normal ROM and equal strength in all extremities bilaterally.
Neurological	Patient is alert, opens eyes, arouses to touch or voice, responds appropriately to parents with excitement and calling for dad or mom, behavior appropriate for situation, and a pleasant affect.
Most recent VS (highlight if abnormal)	Time: 0900 Temperature: 37.1 (98.7 F) Route: Axillary RR: 37 HR: 98 BP and MAP: 115/62, 81 Oxygen saturation: 94% Oxygen needs: Omniflow 12 L @ 21%
Pain and Pain Scale Used	FLACC, 0 score, non-verbal indicators absent

<p>Nursing Diagnosis 1 Impaired gas exchange related to alveolar-bronchial restriction as evidenced by hypoxia (Phelps, 2023).</p>	<p>Nursing Diagnosis 2 Impaired skin integrity related to integumentary status as evidenced by moisture and lesions on buttock and groin (Phelps, 2023).</p>	<p>Nursing Diagnosis 3 Risk for fear related to separation from support system and unfamiliar setting as evidenced by crying. (Phelps, 2023).</p>
<p>Rationale This patient was retracting and wheezing, which show difficulty breathing, and became hypoxic.</p>	<p>Rationale The patient had a diaper rash on his buttock and groin that was not reported the day before.</p>	<p>Rationale The patient started crying when dad and sister left to go home and kept reaching toward the door.</p>
<p>Interventions Intervention 1: Administer supplemental oxygen or mechanical ventilation as prescribed. Intervention 2: Assess respiratory rate, depth, effort, and oxygen saturation (Phelps, 2023).</p>	<p>Interventions Intervention 1: Apply a barrier cream during every diaper change to protect the skin (Phelps, 2023). Intervention 2: Clean and dry the area as often as necessary to protect and maintain skin integrity (Phelps, 2023).</p>	<p>Interventions Intervention 1: Spend as much time as possible using non-verbal communication, such as rocking and holding (Phelps, 2023). Intervention 2: Use play therapy, parental presence, comfort positioning, or distraction to divert the child's attention (Phelps, 2023).</p>
<p>Evaluation of Interventions The patient was stable, breathing was no longer labored, and his O2 was at 94% (Phelps, 2023).</p>	<p>Evaluation of Interventions The patients bottom did not become open and appeared to be less red (Phelps, 2023).</p>	<p>Evaluation of Interventions The mother held the infant, put him in her lap, brought out toys, and played with the infant to comfort him and distract him from his distress (Phelps, 2023).</p>

References (3):

Capriotti, T. (2024). Davis Advantage for Pathophysiology (3rd ed.). F.A. Davis Company.

Jones & Bartlett Learning. (2023). 2024 Nurse's Drug Handbook (23rd ed.). Jones & Bartlett.

Pagana, K.D., Pagana, T.J., Pagana, T.N. (2023). Mosby's diagnostic & laboratory test reference. (16th ed.). Elsevier.

Phelps, L.L., (2023). Nursing diagnosis reference manual. (12th ed.). Wolters Kluwer.

Rudd, K., Kocisko, D. (2023). Pediatric Nursing Critical Components of Nursing Care. (3rd ed.). F.A. Davis Company.