

Medications

Tylenol/acetaminophen 160mg/5ml oral liquid. Give 147.2 mg Q 4 hours PO PRN
 Pharmacological classification: Nonsalicylate, para-aminophenol derivative (Jones & Bartlett Learning, 2022, p 9).
 Therapeutic classification: Antipyretic, nonopioid analgesic (Jones & Bartlett Learning, 2022, p 9).
 Why the patient is taking the medication: For pain relief and to reduce fever.
 Key nursing assessments prior to administration: Pain assessment using the FLACC scale, monitor all medications that may contain acetaminophen so that the max dose is not exceeded (Jones & Bartlett Learning, 2022, p 11).

Relevant Lab Values/Diagnostics

No labs or radiological studies were completed for this admission. No labs or radiological studies were completed prior to transfer to Carle.

Demographic Data

Admitting diagnosis: Bronchiolitis

Age of client: 15 Months

Sex: Female

Weight in kgs: 9.82 kg

Pathophysiology

Disease process:

Bronchiolitis is caused by a virus infecting the bronchioles and causes irritation and inflammation. The virus spreads from the upper to the lower respiratory tract, consisting of medium and small bronchi and bronchioles (Bhatia, 2024). The edema caused by the inflammatory response to the virus causes exudates that result in partial obstruction of the airways and air trapping in the alveoli (Bhatia, 2024). Alveoli move oxygen through your lungs after it has passed through the bronchi and bronchioles and from there into the bloodstream. When the bronchi and bronchioles are obstructed, oxygen cannot reach the alveoli to oxygenate your blood. According to Dr. Bhatia from the Phoenix Children's Hospital, "Complete obstruction and absorption of the trapped air may lead to multiple areas of atelectasis, which can further be exacerbated by breathing high inspired oxygen concentrations to assist with the hypoxemia" (Bhatia, 2024).

S/S of disease:

Symptoms of bronchiolitis include cold symptoms for the first few days. The patient may have a runny nose, stuffy nose, cough, and sometimes a fever, then progress into more issues with the lungs being affected (Mayo Clinic Staff, 2023). After a week of cold symptoms, the patient may start having shortness of breath, working harder than usual to breathe, wheezing may be heard, and those patients who are infants may also have otitis media (Mayo Clinic Staff, 2023). According to Mayo Clinic, some serious symptoms to look out for and see the health care provider is: "His blue or gray skin, lips, and fingernails due to low oxygen levels; Struggles to breathe and can't speak or cry; refuses to drink enough, or breathes too fast to eat or drink; breathes very fast in infant, this can be more than 60 breaths a minute with short, shallow breaths; can't breathe easily, and the ribs seem to suck inward when breathing in; makes wheezing sounds when breathing; makes grunting noises with each breath and appears slow-moving, weak, or tired" (Mayo Clinic Staff, 2023). This patient started with cold symptoms that quickly exacerbated into bronchiolitis, where this patient was struggling to breathe.

Method of Diagnosis:

The patient's health care provider will listen to their lungs and can typically diagnose bronchiolitis that way. If the patient is at risk of severe bronchiolitis, then the provider may have a chest x-ray completed, blood work done, and a mucus sample for viral testing (Mayo Clinic Staff, 2023). This patient has had chronic lung issues since she was born. This patient has a diagnosis of reactive airway disease that has resulted in multiple trips to the hospital. This patient didn't have labs or x-rays completed.

Treatment of disease:

A virus causes bronchiolitis, so an antibiotic will not be prescribed unless there is a bacterial infection, such as pneumonia or otitis media. Bronchodilators that help to open the airway are used. In severe cases of bronchiolitis, the healthcare provider may prescribe nebulized albuterol to help reach the affected areas of the child's lungs and open the airway (Mayo Clinic Staff, 2023). Bronchiolitis is associated with RSV, and treatment suggestion for bronchiolitis is a monoclonal antibody medication, Nirsevimab and Palivizumab (Bhatia, 2024). Other treatments can include supplemental oxygen as well as suctioning. This patient was on Optiflow oxygen as well as bronchodilator medications. This patient's mother would also suction her nose when the drainage was causing this patient trouble with breathing.

Active Orders

Previous Medical History:

Prior Hospitalizations: S

airway disease: 2/16/2023

6/4/23 ER stayed on obser

Chicago Lurie Children's I

asked that she be transferre

Past Surgical History: N

Social needs: Chronic illn

- Check vital signs every 4 hours- Facility protocol
- Check blood pressure every 8 hours while awake- Facility protocol
- Pediatric respiratory score on admission, every four hours, and PRN for mild bronchiolitis. Score prior to and after suctioning. For moderate bronchiolitis score upon admission, every two hours and PRN. For severe bronchiolitis score upon admission, every 30 minutes to an hour, and PRN - This is done to predict the patient's level of illness.
- Neonatal pediatric status- Facility protocol
- Brief desaturation of 20 seconds or less in sleeping infant that do not routinely require supplemental O2, suction and reposition first- Patient doesn't usually require oxygen at home, only when she is having an exacerbated episode of her Reactive Airway disease.
- Notify MD if respiratory score is > 9-12- This score will allow the doctor to make decisions on needed interventions that may not be in place yet.
- Increase activity as tolerated- Patient is still very congested and has a hard time catching her breath when she gets excited. Taking it easy will help the patient to not become even more short of breath than she already is.
- I&O- Facility protocol
- Orders to maintain IV but patient doesn't have an IV
- Suction PRN- Keep air way clear
- Reposition PRN- Keeps the secretions moving
- Keep O2 saturation at > = 90 %

Assessment	
General	Patient was alert and oriented to her name and to her parents/caregivers. Patient was able to follow simple commands. Patient smiled, laughed, and fussed as appropriate to the situation.
Integument	Skin is intact and absent of rashes or bruises.
HEENT	Patient's head is symmetrical, no edema or redness noted, eyes were clear and free of drainage, nose was congested and had clear drainage from bilateral nares , mouth without sores or rash, patient has four teeth on top and bottom, gums free from sores, patient was able to follow pen light after checking PERRLA, patient able to focus and grab objects. Patient turned her head to the side where a noise was made. Bilateral ears intact and free of drainage. Was not able to check tympanic membrane. Patient was able to drink her milk, as well as chew and swallow food without difficulty.
Cardiovascular	S1 S2 present, normal rhythm, Mom states she noted tachycardic episodes when the patient cries where the pulse rate will get up to 182. Pulse rate at 1352 was 148 and pulse rate at 1600 was 134. Capillary refill normal. No edema noted.
Respiratory	Breath sounds wheezing heard bilaterally. Patient still being treated for bronchiolitis. No accessory muscle use noted. No use of ET tube. Patient is 8L of O2 with an FIO2 of 21% with an optiflow device being used.
Genitourinary	Patient voids spontaneously. Wears diapers. Urine is yellow and without odor. No rashes or discharge noted to the peri area. Urine output during this clinical was 79cc.
Gastrointestinal	Bowel sounds active. Last BM was 3/21/2024 and patient's mother reported it was "normal". Current weight 9.82kg. No abdominal distention noted. No ostomy, nasogastric, or feeding tubes used. Patient is on regular diet with thin liquids at home as well as at the hospital. Patient is able to use fingers to grab and place food in her own mouth.
Musculoskeletal	Patient able to move all extremities. Patient able to squeeze my fingers with both of her hands. Patient able to use thumb and pointer finger to pick up snacks off of her tray without assistance. Patient was able to walk around on a mat in her room with the assistance of her parents.
Neurological	Patient was able to follow pen light, patient able to focus and grab objects. Patient turned her head to the side where a noise was made. Patient was able to follow directions when asked to follow the pen light. Patient responded to tactile stimuli and laughed when I tickled her feet. Pedal pulses felt, extremities warm, capillary refill less than 3 seconds.
Most recent VS (highlight if abnormal)	Time: 1600 Temperature: 98.2 Route: Axillary RR: 40 HR: 134 BP and MAP: 110/65 MAP: 82 Oxygen saturation: 96% Oxygen needs: Optiflow 8L with FIO2 21%
Pain and Pain Scale Used	1415 PRN pain medication requested by patient's mother, due to patient being agitated and restless. Patient's mom felt like the patient may be in pain. 1519 FLACC scale used to reassess pain level. Patient's score was a 0 and patient appeared to be

comfortable compared to earlier.

Nursing Diagnosis 1	Nursing Diagnosis 2	Nursing Diagnosis 3
Impaired gas exchange related to nasal and lung congestion as evidenced by need for 8L O2 with FIO2 at 21%.	Ineffective breathing pattern related to nose congestion as evidenced by nasal drainage and audible nasal congestion.	Ineffective airway clearance related to ineffective cough as evidenced by congestion and wheezing noted on assessment.
Rationale Patient requires use of an Optiflo in order to keep her O2 saturation above 90%.	Rationale Patient has had to breathe through her mouth related to nasal congestion. Patient has clear drainage coming out of her nares.	Rationale Patient is not able to understand how to cough and deep breathe. Patient is able to cough but it is not productive.
Interventions Intervention 1: “Check VS every 4 hours” (Phelps, 2023, p 278). Intervention 2: “Reposition every 2 hours to keep secretions mobile and allow aeration” (Phelps, 2023, p 278).	Interventions Intervention 1: “Auscultate breath sounds every four hours or per facility protocol” (Phelps, 2023, p 78). Intervention 2: “Suction airway as needed” (Phelps, 2023, p 78).	Interventions Intervention 1: “Auscultate breath sounds every four hours or per facility protocol” (Phelps, 2023, p 21). Intervention 2: “Suction airway as needed” (Phelps, 2023, p 21).
Evaluation of Interventions Patient kept O2 saturation above 90% during my clinical rotation. Respirations were in the 40s. Patient was up moving around in her high chair, her parent’s arms, and moving around on a mat that was brought into her room for some exercise.	Evaluation of Interventions Patient’s mother had suctioned her before I got there for clinical. Patient had clear drainage coming from her nose. Patient had wheezing upon exhalation.	Evaluation of Interventions Patient’s mother had suctioned her before I got there for clinical. Patient had wheezing upon exhalation. Patient had some coughing, but I didn’t note nor did the patient’s parents state if they saw it was a productive cough.

		What do you expect?	What did you observe?
Erickson’s Psychosocial Developmental Stage	Trust vs Mistrust	The patient to either trust me or to not allow me to care for her and mistrust me since I am a new person in her life.	Patient trusted me to assess her and to take medication from me. Patient was comfortable in her room with her parents who took care of her and made sure she was comfortable. By them being so attentive she learned to trust that she would be taken care of.
Piaget’s Cognitive Developmental Stage	Sensory Motor	Crawling, walking, picking up and dropping items, feeding self with finger foods, speaking a few words.	Patient was speaking words such as look, hi, bye bye, and no. Patient was able to feed herself finger foods at lunch and yogurt drops for snack. Patient would purposefully drop items off of her tray and laugh as her dad would pick up the items to put them back on her tray only for her to drop them again.
Age-Appropriate Growth &	1. Strong attachments to her parents. 2. Saying a few words like hi, bye bye, and		

<p>Development Milestones</p>	<p>look. 3. Picking up small objects like the yogurt drops she was snacking on.</p>		
<p>Age-Appropriate Diversional Activities</p>	<p>1. Playing a Mickey Mouse game with her dad on his phone. 2. Played with her toys 3. Watching cartoons</p>		

References (3):

Bhatia , R. (n.d.). *Bronchiolitis*. <https://www.merckmanuals.com/professional/pediatrics/respiratory-disorders-in-young-children/bronchiolitis>

Jones & Bartlett Learning. (2022). *2022 Nurse's drug handbook* (19th ed. Pp 9, 11, 33, 35, 578 & 581). Jones & Bartlett Learning

Mayo Clinic Staff (2023, February 25). *Bronchiolitis*. <https://www.mayoclinic.org/diseases-conditions/bronchiolitis/symptoms-causes/syc-20351565>

Phelps, L.L. (2023). *Nursing diagnosis reference manual* (12th ed., pp 20, 78, 278). Wolters Kluwer.