HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER MATERNITY AND CHILDREN HOSPITAL

Department:	Pediatrics		
Document:	Multidisciplinary Policy and Procedure		
Title:	Care of Pediatric Patient with Bronchopneumonia		
Applies To:	All Pediatric Staff		
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1. PURPOSE:

1.1 To restore optimal respiratory function.
1.2 To prevent infection.

2. DEFINITIONS:

2.1 **Pneumonia** – is an inflammation or infection of the bronchioles and alveolar spaces of the lungs. Pneumonia may be viral, mycoplasma or bacterial in origin. In children under 5 years, pneumonia is most often caused by viruses such as RSV, Influenza, Parainfluenza Virus, Adenovirus, Rhinovirus and Enterovirus. In children over 5 years, pneumonia is caused by bacteria, such as Streptococcus Pneumonia.

3. POLICY:

3.1 The nurse should assess the patient for respiratory distress. Patient should be attached to cardiac and pulse oximeter to monitor the oxygen saturation level.
3.2 Chest physiotherapy and postural drainage should be done on the affected side.
3.3 Suctioning should be done after chest physiotherapy to maintain airway patency.
3.4 Standard precautions must be adhered at all times.

4. PROCEDURE:

4.1 Perform hand hygiene. Hand hygiene is the most single important procedure to prevent the spread of infection. Additional infection control measures depend upon the likely pathogen, as follows:
- 4.1.1 Respiratory syncytial and Parainfluenza Viruses – contact precautions.
- 4.1.2 Adenovirus – contact and droplet precautions.
- 4.1.3 Influenza Virus, Group A Streptococcus (for the first 24 hours of treatment), Methicillin – Susceptible S. Aureus, Bordetella Pertussis (until patient has received five days effective therapy) and Mycoplasma Pneumonia – droplet precautions.
- 4.1.4 Methicillin – Resistant S. Aureus and other multidrug resistant organisms special organism precautions; contact and droplet precautions.

4.2 Elicit a description of the present illness and chief complaint, complete history of respiratory illness including mode of onset.
4.3 Assess patient for sign and symptom of respiratory distress to initiate immediate measures as needed.
- 4.3.1 Quality of respirations:
  - 4.3.1.1 Inspect the rate, depth and ease of respirations
  - 4.3.1.2 Auscultate breath sounds to see if they are bilateral, diminished or absent and for presence of adventitious sounds (wheezes, crackles and rhonchi).
- 4.3.2 Quality of pulse:
  - 4.3.2.1 Assess the rate and rhythm: tachycardia may indicate hypoxia

4.3.3 Color:
- 4.3.3.1 Observe overall color
- 4.3.3.2 Assess capillary refill and nail bed color.
- 4.3.3.3 Inspect mucous membranes
- 4.3.3.4 Note whether crying improves or worsens color

4.3.4 Cough:
- 4.3.4.1 Note whether it is dry (non – productive), wet (productive, mucous)
- 4.3.4.2 Note whether it is forceful or weak

4.3.5 Behavior change:
- 4.3.5.1 Note level of consciousness: alert or lethargic
- 4.3.5.2 Watch for abrupt behavior changes

4.3.6 Signs of dehydration:
- 4.3.6.1 Inspect for dry mucous membranes, lack of tears, poor skin turgor and decreased urine output.

4.4 Connect patient to cardio-respiratory monitor for close observation.
- 4.4.1 Heart Rate
- 4.4.2 Heart Rhythm
- 4.4.3 Spo_2 Level

4.5 Assist in obtaining chest X – ray as ordered to determine the presence or extent of pulmonary disease.
- 4.5.1 In infants and young children, bilateral air trapping and peripheral infiltrates are the common findings.
- 4.5.2 Older children consolidation is seen more frequent.

4.6 Promote effective breathing and airway clearance by:
- 4.6.1 Administer high concentrated oxygen to maintain PaO_2 at acceptable level as ordered. Hypoxemia may be encountered because of abnormal ventilation perfusion ratio in affected lung segments.
  - 4.6.1.1
- 4.6.2 Position the patient. Supine position with head elevated to allow better lung expansion. Prone, semi prone or side lying to prevent aspiration of secretions.
- 4.6.3 Suction secretions as needed. Encourage the patient to cough. Retained secretions interfere with gas exchange.
- 4.6.4 Perform chest physiotherapy and postural drainage to loosen secretions and improve ventilation.
- 4.6.5 Mobilize the patient in order to improve secretion clearance and reduce risk of atelectasis and worsening pneumonia.
- 4.6.6 Administer nebulization and corticosteroid as ordered.

4.7 Keep the patient NPO in severe respiratory distress in order to prevent aspiration
- 4.7.1 Insert nasogastric tube (NGT) to relieve abdominal tension and decompress stomach. Nasogastric tube may compromise breathing; if necessary, the smallest NG tube possible should be used.
- 4.7.2 Aspiration of food, emesis, gastric reflux or hydrocarbons causes a chemical injury and inflammatory response. Materials with a lower pH cause more inflammation, which sets the stage for bacterial invasion.

4.8 Secure intravenous access and administer IV fluids in order to rehydrate the patient. Good hydration makes it easier for patients to expectorate secretions.

4.9 Obtain laboratory works promptly as ordered.
- 4.9.1 Obtain blood sample for CBC, chemistry, cultures as ordered to detect bacteraemia and the degree of infection. White blood cell count might be elevated in case of bacterial pneumonia.
- 4.9.2 Obtain tracheal aspiration/ swab sample for culture and sensitivity and respiratory syncytial virus (RSV). RSV sample testing will be obtained for patients under 5 year of ages unless ordered otherwise.
- 4.9.3 Obtain sample for urine analysis. The presence of glucose, protein and blood is often found initially in cases of pneumonia.

4.10 Administer antibiotic and antimicrobials as ordered in order to inhibit the growth of microorganism thus preventing infection.
4.11 Record intake and output to determine hydration status.
4.12 Monitor patient's response to treatment:
- 4.12.1 Monitor blood gas analysis to assess respiratory status.
- 4.12.2 Temperature
- 4.12.3 Respiratory Rate
- 4.12.4 Heart Rate
- 4.12.5 Work of Breathing (e.g. retractions, nasal flaring, grunting)
- 4.12.6 Chest Examination (extent of abnormal or absent breath sounds; extent of dullness to percussion)
- 4.12.7 Oxygen Saturation
- 4.12.8 Mental Status
- 4.12.9 Ability to maintain oral intake and hydration.

4.13 Provide nutritious diet according to the patient's preferences to support body's natural defence.
4.14 Provide comfort measures; establish rapport with the child and family. Explain unfamiliar procedure and equipment in order to reduce fear and anxiety.
4.15 Document in the nurse's note all nursing care rendered, all treatment given, patient's condition and tolerance to procedure.

5. MATERIAL AND EQUIPMENT:

6.1 Physician
6.2 Nurses
6.3 Radiologist

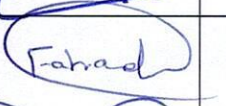
7. APPENDICES:

N/A

8. REFERENCES:

8.1 Audrey Berman, Shirlee Snyder, Kozier and Erb's Fundamentals of Nursing Concept, Process and Practice, Pearson Education, 10th edition, 2015.
8.2 Ministry of Health, General Directorate of Nursing, Manual of Nursing Policy and Procedure, 2013.
8.3 Pneumonia in children: Inpatient treatment, up to date, 2015. Accessed from http://www.uptodate.com/contents/pneumonia-in-children-inpatient-treatment.

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Ms. May Oweid Alrawaily	Pedia Medical Ward Head Nurse		January 12, 2025
Prepared by:	Dr. Ibrahim Aliyu	Pediatric Quality Coordinator		January 12, 2025
Reviewed by:	Mr. Sabah Turayhib Al Harbi	Director of Nursing		January 13, 2025
Reviewed by:	Dr. Fahad Obaid Al Shammari	Head of the Department		January 13, 2025
Reviewed by:	Mr. Abdulellah Ayed Al Mutairi	QM&PS Director		January 15, 2025
Reviewed by:	Dr. Tamer Mohamed Naguib	Medical Director		January 15, 2025
Approved by:	Mr. Fahad Hazam Al Shammari	Hospital Director		January 26, 2025