

PAEDIATRIC NURSING PRACTICE MANUAL  
SECTION 7

CARE OF THE CHILD WITH A RESPIRATORY CONDITION

7.1 DELIVERY OF INHALED MEDICATIONS

**7.1.1 ADMINISTRATION OF A NEBULISER USING COMPRESSED GASES**  
(see [policy 7.1.5](#) for administration of nebuliser to children with cystic fibrosis)

**Aim**

To administer prescribed medications via an aerosol mist.

**Key points**

1. All children with asthma should have their nebulisers driven by oxygen. Medical air can be used for all other patients, unless they have an oxygen requirement, or are in respiratory distress, in which case oxygen should be used.
2. If driving the nebuliser by oxygen, use green or clear tubing. Use red tubing if the nebuliser is being driven by air.

**Equipment**

Nebuliser pot

Appropriate tubing (air/oxygen)

Nebuliser face mask

Prescribed medication for inhalation

0.9% Sodium Chloride 10mL ampoule if required, for dilution

5mL syringes, if required, for drawing up medication for inhalation and diluent

PROCEDURE	ADDITIONAL INFORMATION
Check expiry date of medication for inhalation.	
Add medication to nebuliser bowl.	
Add normal saline to the nebuliser bowl to make up a total volume of 4mL.	Best drug deposition to the lungs is achieved with a total volume of 4mL. <sup>1,2</sup> <b>Note:</b> Salbutamol comes in 2.5 mg or 5mg nebulisers and does not require dilution to 4mL. Atrovent, if prescribed, can be mixed with salbutamol in the same nebuliser bowl. <sup>3</sup>

PROCEDURE	ADDITIONAL INFORMATION
Follow checking procedure for medication administration.	
Familiarise the child with the equipment.	
Sit the child in an upright position.	Optimises lung expansion. <sup>4</sup>
Attach appropriate tubing to the base of the nebuliser pot and the other end to the gas outlet.	
Set flow rate to 8-10 litres per minute.	To ensure optimal molecule size for inhalation into the small airways. <sup>1, 4, 5</sup>
Secure the mask securely to the patients face with the elastic strap. Encourage them to breathe slowly and deeply through the mouth.	Not achieving a good seal reduces drug delivery considerably. <sup>3</sup>
Discontinue the nebuliser at the first splutter.	Little drug delivery occurs after this point. <sup>2, 4</sup>
If the child has been prescribed the inhaled corticosteroid Budesonide ( <i>Pulmicort</i> ®) via the nebuliser, rinse the child's mouth after administration. Wipe the child's face with a damp face cloth. <sup>5, 6</sup>	To reduce the risk of oropharyngeal thrush or dysphonia.
Dissemble the nebuliser and discard the remaining solution.	
Between use on the same patient, wash the nebuliser pot and mask with detergent. Rinse with water and air dry.	To prevent healthcare associated bacterial pneumonia. <sup>9</sup>
Store nebuliser pots and masks in a clean (preferably lidded) container by the patient's bedside.	Patients should have their own allocated container, which has their MRN label on it.
Discard the nebuliser pot, tubing and mask after the child has been discharged.	

### References:

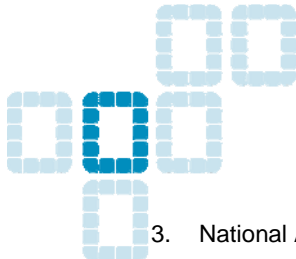
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Administration of a Nebuliser using Compressed Gases  
 Delivery of Inhaled Medications  
 Paediatric Nursing Practice Manual (PNPM)  
 Princess Margaret Hospital  
 Perth, Western Australia

All protocols should be read in conjunction with the disclaimer in the preface of this manual

Administration of a Nebuliser using Compressed Gases

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