



Acacium Group

Nebuliser Therapy

Procedure Reference | SOP VENT 27

Version | V4.0

Procedure Name	Nebuliser Therapy
Purpose of Document	To ensure that the correct preparation, procedure & outcome are achieved by implementing a consistent and systematic approach to the use of nebulisers
Target Audience	All Nurses & appropriately trained carers
Version	V4.0
Author	Karen Matthews-Shard
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Next Review Date	May 2025
Equality Impact Assessment (EIA) Form	Acacium Group is committed to Equality, Diversity and Inclusion and in line with our values, we strive to ensure that everyone that is part of the Acacium community is not disadvantaged or discriminated against given their individual need or characteristics. To support this, an Equality Impact Assessment has been undertaken on this policy/procedure. This information is held centrally and can be requested from the Clinical Governance Team.
About Acacium Group	Details of all Acacium Group trading companies that this policy applies to are detailed within Appendix A

Document History			
Version	Date	Changes made/comments	By whom
V1	Jun 2017	Implementation of SOP Vent 27	KNF/SJ
V1	Jul 2017	Published	KNF/VM
V2	Jul 2019	2 yearly review	SJ
V2.1	Feb 2020	Update to new Community Template	CCR/CC
V2.2	Jun 2020	Update re Colomycin	TJ
V2.3	Nov 2020	Rebrand	CC
V2.4	Jul 2021	2 yearly review	Clinical Advisory Group
V3	May 2023	Reviewed and updated	Clinical Advisory Group
V4	Jan 2024	Rebrand	Clinical Advisory Group

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1. Introduction

A nebuliser is an important device for service users with certain health conditions. It creates a mist out of a liquid medication, allowing for quicker and easier absorption of medication into the lungs, which is inhaled through a mouthpiece or mask, allowing it to reach the affected areas quickly and directly.

Nebulisers can be administered as regular drug therapy or when the service user are unwell, for example with a chest infection, to aid loosening of secretions, relieve bronchospasm and when unable to use their usual handheld inhalers.



Nebulisers can also be administered via oxygen cylinders if prescribed to do so, at the rate of 5-6 l/min as an alternative to a nebuliser machine. This needs to be advised and prescribed by the MDT. Nebulisers should be driven by machine or air unless specifically advised otherwise.

2. General

Drug delivery via inhalation is the mainstay of treatment for many respiratory diseases. The lungs provide an efficient route for the administration of several classes of drugs, as they allow receptors in the airways to be targeted by therapeutic agents. There are several devices and delivery methods available for the administration of specific drugs, which include metered-dose inhalers (MDIs), breath-actuated inhalers and dry powder inhalers.

Nebulisation is also an important and common method of delivering drugs to the airways. Those caring for service users receiving nebuliser therapy should understand the advantages and limitations of nebuliser use.

3. Aim

The aim of this document is to help improve practice in the use of nebulised therapy in the service user's home. It will provide practical advice about maintaining nebulisers, for those involved in the care of people who use nebulisers and for those whom nebulisation is prescribed. Its focus is on the individual service user in their home environment, this document does not cover nebuliser use in acute hospital settings, emergency care or primary care locations.

The aims are to:

- Maintain and ensure a high standard of clinical practice is provided
- Enhance the safety and efficacy of nebuliser use
- Serve as a resource for healthcare workers
- Maintain safety for those providing nebuliser therapy

4. Consent

Consent is required before any care is given. However, during an emergency, an Acacium Group Healthcare worker is able to provide any form of care prescribed, that is deemed to be in the best interests of the client if mental capacity is compromised. Any care provided in the best interests of the client must be fully documented along with the rationale for performing any given tasks.

Please read the ***Acacium Group Consent Policy*** for full details.

5. Client and relatives / carers involvement

It is best practice to involve clients and their relatives in the provision of all care, while keeping them fully informed of progress and any concerns.

6. Who may undertake this procedure?

All Acacium Group workers who are trained and deemed competent in Medication management and the safe administration of nebuliser therapy.

7. Medication used in Nebulisers

- **Saltwater solution such as Saline**, which helps to loosen phlegm (mucus), making it easier to cough up
- **Corticosteroids**, used to prevent inflammation, which may be needed at a high dose or if the service user's ability to get medication into their lungs with an inhaler and spacer is compromised
- **Respiratory medications**, there are many medications for nebulisation for example those which open up and maintain good airway patency, bronchodilators or medications that prevent bronchospasm.
- **Antibiotics**, which are sometimes delivered by a nebuliser to treat conditions where mucus builds up in damaged airways in the lungs, making them more vulnerable to infection.

Some medications/Antibiotics will require additional Risk Assessments, the use of separate consumables and specific care. All details should be included within the client's care plan. For example, Colomycin – this should be administered in a well-ventilated room and wherever possible should not be administered by a pregnant worker. Please perform a local risk assessment and then refer to Acacium Group OH Risk Assessments for Pregnant worker.

8. Equipment

- Nebuliser machine or oxygen cylinder if prescribed and tubing.
- Appropriate mask, nasal canular or hand piece.
- Prescribed medication on MAR Chart
- Appropriate PPE as per infection control guidance.

9. Procedure

Action	Rationale
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1.	Explain the procedure to the service user and gain consent prior to treatment as per care plan	To confirm service user consent and to gain their co-operation
2.	As per care plan, basic observations should be recorded before commencement of the nebuliser, if this is to be administered for respiratory distress, stridor or asthma. These should be documented in the service users daily records	To benchmark the service users' vital signs prior to treatment and monitor the effectiveness of nebuliser therapy post treatment
3.	Wash hands prior to procedure in accordance with applicable policies	To reduce the risk of transfer of transient micro-organisms on the healthcare workers hands
4.	Clients receiving nebuliser therapy at home should take appropriate precautions such as: using equipment in a well-ventilated room medication guidelines	To minimise staff exposure.
5.	Place the nebuliser machine on a clean, flat surface and plug into the mains. Alternatively, connect the tubing to a suitable located oxygen/air cylinder (ensuring to check volume available in the cylinders) (Never place the nebuliser machine on the floor)	To prevent dust particles from being drawn into the machine
6.	<p>All prescribed medications should be drawn up and administered according to the medicines administration policy and the service users MAR chart. Ensure a clean technique is used for this process.</p> <p>Ensure that the chamber is held in an upright position to receive the medication</p> 	<p>To ensure that all necessary medication is prescribed clearly and available for administration</p> <p>To ensure effective administration of medication</p>
7.	<p>The nebuliser chamber comes in 3 components:</p> <ul style="list-style-type: none"> • The chamber  <ul style="list-style-type: none"> • The mouthpiece or mask 	To maintain infection control and ensure that all equipment required is functioning correctly

	 <ul style="list-style-type: none"> The oxygen tubing (if applicable) <p>Ensure that these are all available, clean and in working order. The tubing should be attached to the compressor and nebuliser chamber or the oxygen/air cylinder</p>	
8.	<p>Ensure that the mask is the right size for the service user. For service users with tracheostomies and laryngectomies a 'trachy' mask may be used</p> 	To ensure effective nebuliser therapy
9.	<p>Long term ventilation service users may require their nebuliser to be manually 'bagged' in. This will be documented on the care plan.</p>	
10.	<p>Encourage service user to breathe normally if able to do so</p>	To maximise lung expansion and medication delivery
11.	<p>Administration of the nebuliser solution takes between 5 – 10 minutes to complete</p>	
12.	<p>For any reason if the aerosol becomes less apparent, there is still solution in the chamber, a gentle tap might encourage the flow. When no further aerosol can be seen the nebuliser should be turned off, and the mask should be removed from the service user</p>	To ensure that the full amount of the prescribed medication is received
13.	<p>Disconnect the nebuliser set. Take the nebuliser chamber apart, so that the three components are separated from each other. Wash the three parts of the chamber in warm soapy water (neutral detergent/ washing up liquid) Leave in a clean area to air dry. Disconnect the nebuliser from the tubing and clear any moisture in the tubing but do not wash the tubing</p>	<p>To minimise and control the spread of infection</p> <p>To minimise the risk of microbial build up as there are potential risks of bacterial contamination if moisture remains in the tubing</p>
14.	<p>Discard the chamber and tubing into the appropriate clinical waste receptacle if it either shows any of the following:</p> <ul style="list-style-type: none"> - Discoloration 	To ensure that infection control guidelines are adhered to and that all working parts of the nebuliser are checked and safe to use

	<ul style="list-style-type: none"> - Stickiness - Cracking of the chamber <p>All consumables should be discarded according to the manufacturer's instructions on the packages. If consumables are labelled, they are single use only and should be immediately discarded after use</p>	To comply with medical device alert (2004): Potential risk of transmission of Legionella bacteria due to poor drying after cleaning
15.	Clean the machine weekly in line with manufacturer's instructions or when visibly contaminated	To minimise the risk of transmission of infection and reduce the risk of contamination

10. Cleaning

- Nebulisers should be cleaned daily in regular usage and after each use in intermittent use
- The mask, mouthpiece and chamber should be disconnected, disassembled, and washed in a warm detergent and water solution. The components should be left to dry overnight
- Before reuse, the nebuliser should be run for a few seconds before adding medications
- Clean the machine weekly in line with manufacturer's instructions or when visibly contaminated

11. Maintenance

- Disposable components such as the mouthpiece, mask, tubing, and nebuliser chamber should be changed every three to four months and single use items disposed after each use or as per care plan or when damaged
- Compressors require annual servicing by manufacturer or local service provider
- All compressors require regular servicing each year. This is to check electrical connections, change air filters and ensure the correct flow rate is generated. Refer to the manufacturer's instructions regarding the frequency and indication for replacement of the filter

12. Breakdown

- Service users must have a written plan describing whom to contact in the case of emergency, such as a respiratory or practice nurse. This should always be documented in the care plan
- If nebuliser times are slow, the equipment should be cleaned, and treatment tried again. If it remains slow, a spare nebuliser should be sought and used
- Failure to troubleshoot and rectify the fault, contact the local office, or inform the service user/and or family member to arrange a replacement or repair by a qualified person/engineer

13. Associated Policies / SOPs

Policies

CLIN 03 Medicines Management Policy

CLIN 06 Consent Policy

CLIN 12 Safe Use of Medical Devices Policy

SOPs

SOP INF CON 01 Gaining Consent and Declining

SOP INF CON 02 Standard Precautions

SOP INF CON 03 Hand Washing

Colomycin Nebuliser

Ventilation
Oxygen

14. References

- <https://patient.info/doctor/nebulisers-in-general-practice>
- <https://www.asthmaandlung.org.uk/symptoms-tests-treatments/treatments/nebulisers>
- [Respiratory system, drug delivery | Treatment summaries | BNF | NICE](#)

Appendix A: About Acacium Group

Acacium Group consists of a number of trading companies, each providing services within core niche areas of the health and social care industries. Therefore, as this document is a Group Policy, the Policy herein applies to all trading companies detailed below:

 Part of Acacium Group	 Part of Acacium Group
 Part of Acacium Group	 Part of Acacium Group