Derbyshire Nebuliser Guidelines for COPD patients
Assessment and initiation

For patients with chronic respiratory conditions including COPD but excluding asthma

- All routine requests for a nebuliser should be sent to the relevant community respiratory team
- Patients purchasing their own nebulisers are responsible for provision of disposables required for that device and arranging the servicing as per manufacturers guidance
- All palliative care requests for nebulisers to treat patients without COPD/Asthma should be dealt with by the community clinician involved in their end of life care (i.e. District nurse, Macmillan nurse)
- Existing COPD patients using nebulisers that have never undergone a formal assessment can be referred into this service if there is doubt about clinical appropriateness.
- COPD patients not benefiting from nebuliser treatment over the long term can be re-referred into the service for assessment

Please note that these guidelines are available on: http://www.derbyshiremedicinesmanagement.nhs.uk/home
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Nebuliser Pathway and Guide to Product Selection
*This is a guide and should be used in conjunction with clinical judgement*

1.1 Ordering a nebuliser for long-term use

Has the patient got a confirmed respiratory diagnosis?

- No
  - Is nebuliser required for palliative care?
    - No
      - Nebuliser not required
    - Yes
      - Case holder order nebuliser
      - See Product Guide
      - Order requires authorisation
- Yes
  - Assess for new pathology
  - Optimise medication
  - Inhaler technique / spacer
  - Has patient got asthma or other respiratory problems
  - Has patient got COPD
  - Refer to Adult Respiratory team (South) / Community Respiratory team (North) for nebuliser assessment

1.2 Considering Nebulisers for Acute Use

Has the patient got a confirmed respiratory diagnosis of Asthma / COPD?

- No
  - Nebuliser not required
- Yes
  - Assess O2 sats
  - Consider course of steroids +/- antibiotics
  - COPD
    - Give 400mcg (4 puffs) salbutamol with spacer
    - 1 puff each minute, tidal breathing
    - If no improvement – review and consider admission
  - Asthma
    - Give 1mg (10 puffs) of salbutamol with spacer
    - 1 puff each minute, tidal breathing
    - Follow BTS Sign Guidance (Available in BNF)
    - If no improvement consider admission
1. **Summary**

2.1 **Introduction**

Nebulisers are considered for patients when large doses of inhaled drugs are needed to gain an improvement in symptoms, or when the patients are too ill or otherwise unable to use hand held inhalers. Nebuliser therapy delivers a therapeutic dose of a desired drug in the form of respirable particles which are delivered within a fairly short period of time, 5 - 10 minutes [British Thoracic Society, Nebuliser Treatment Best Practice Guideline 1997]. Nebulised medication is delivered at a high dose which increases the risks of side effects and is also costly. Prior to commencing regular nebulised therapy it is recommended that all patients should be assessed by a trained respiratory clinician, to ensure that nebulisers are used appropriately and that the addition of the therapy gives clear benefits to the patient [NICE 2010].

The 2010 full NICE guidance (p98) states that there is little benefit in using doses of salbutamol above 1mg in COPD. This can be delivered using either a handheld inhaler or a nebuliser. Deposition of the medication depends on the particle size of the medication and the effectiveness with which the device is used. In patients experiencing a mild exacerbation of COPD, treatment with a hand held inhaler should be sufficient, using 200-400mcg salbutamol 4-6 hourly, and delivered one dose at a time, thirty seconds / a minute apart. A metered dose Inhaler (MDI) and Volumatic spacer may be the most helpful device, as little effort or coordination is required.

Some patients may benefit from using nebulised bronchodilators routinely. These patients must have demonstrated proven benefit, following a nebuliser trial. Consider patients who are unable to use a handheld device, patients reaching end stage COPD, and those who exacerbate frequently. For patients in this category Salbutamol 2.5mg is the preferred nebulised dose (NICE 2010) as no further benefit has been demonstrated when an increased dose is used. In routine situations it is preferable to continue using Tiotropium through the hand held device rather than transferring to Ipratropium nebulies. However when Ipratropium is preferred, care should be taken to ensure inhaled Tiotropium is stopped during the period of therapy.

**Respiratory Teams**

**Community Specialist Respiratory Team**, work in North Derbyshire

Base – Welbeck Suite, Walton Hospital, Whitecotes Lane, Walton, Chesterfield, S40 3HW
Tel - 01246 253067

**The Adult Respiratory Team (ART)**, work in South Derbyshire and Derby City

Base – Coleman Health Centre, Coleman Street Derby DE248NH
Tel – 01332 861189 (option 1)
Fax – 01332 861182

2.2 **Purpose**

The purpose of these guidelines is to provide staff who administers nebulised therapy with a standardised framework of when to use nebulisers and how they can be obtained.

2.3 **Responsibility and Accountability**

It is the responsibility of all Health Care Professionals who administer nebulised therapy to be aware of and adhere to these guidelines.

2.4 **Patients Covered**

These guidelines are applicable to all patients with confirmed Chronic Obstructive Pulmonary Disease, (excluding asthma), who are treated as inpatients, outpatients and within their own homes.

2.5 **Colomycin**

Patients requiring a nebuliser for Colomycin therapy should all be referred to secondary care

All patients thought to require a nebuliser for long term management of their Asthma should be referred directly to secondary care for assessment.
2. **Nebuliser Referrals**
Referrals for nebuliser assessments have been separated into three categories:
1. Routine
2. Palliative Care
3. Urgent situations

3.1 **ROUTINE REFERRALS**

All **routine** requests for a nebuliser should be sent to the relevant community respiratory team. This will ensure that all assessments for nebulised therapy and ordering of equipment are carried out by an appropriate respiratory clinician.

It is necessary for **ALL** referrers to identify initial indications and carry out an assessment prior to referral to ensure that it is appropriate.

**Routine Referral Process**

| Identify initial indications | Carry out referral assessment | Complete referral form and fax it to the appropriate community respiratory team |

**STEP ONE - Initial Indications**

Patients should be identified from the following indications **BEFORE** being referred for an assessment:

1. Experiencing persistent symptoms despite optimised bronchodilator therapy
2. Frequent exacerbations
3. Inability to use inhalers

**STEP TWO - Referral Assessment**

Carry out the following assessment **BEFORE** referring patients for a nebuliser assessment:

1. Confirm COPD diagnosis
2. Carry out treatment review - see [Derbyshire COPD guidelines](#)
3. Confirm patient has optimal therapy with hand held inhalers and check they are used correctly with good technique
4. Confirm that the patient, or carer, has a good level of understanding and dexterity required to take part in a nebuliser trial

**STEP THREE - Referral to Community Respiratory Team**

1. Complete a referral form to the relevant service, including as much information as possible
2. Fax to team base at:
   - **Adult Respiratory Team (ART)** - Coleman Health Centre – Fax 01332 861182 Tel: 01332 861189
   - **North Derbyshire (Derbyshire Community Health Services)**
     Fax – 01246 565053 Tel 01246 253070 / 253067
3. The community team will arrange to see the patient within four weeks

**Referrals for nebulisers are accepted from:**

1. **Primary Care**
   GPs and Practice nurses or any other Health Care Professional

2. **Secondary Care**
   If a patient is admitted to hospital and given nebulised therapy, the treatment should be changed back to hand held inhaler devices and the patient observed for 24 hours before discharge from hospital. [British Thoracic Society, Nebuliser Treatment Best Practice Guideline, 1997]. The patient understands of their inhalers and their technique should be checked prior to discharge.
   If a patient requires a nebuliser to assist discharge from hospital, it is the responsibility of the ward staff / secondary care clinician to carry out a formal assessment and issue a nebuliser accordingly. The ward staff must ensure that patient and carers are given instructions on using and cleaning the nebuliser prior to discharge.
   **All COPD patients discharged home with a nebuliser should be referred by the hospital to the relevant respiratory community team and they will be reviewed within one month of the referral.**
3. Community Hospitals

Ideally patients previously managed with a nebuliser should be weaned back onto hand held devices prior to discharge. If this is unsuccessful or inappropriate then a referral should be faxed to the appropriate respiratory team 2 weeks prior to discharge so an assessment can be arranged.

3.2 Palliative Care Referrals

All palliative care requests for nebulisers to treat patients without COPD/Asthma should be dealt with by the community clinician involved in their end of life care (i.e. District nurse, Macmillan nurse) that have a PIN number for Medequip orders. They do not need to be referred to specialist respiratory services.

Nebulisers for palliative care should be ordered using the equipment provider’s website (currently Medequip). The equipment is listed under Respiratory items. During the ordering process, the site will ask for authorisation. A list of the nominated network leads allocated by each service will be offered and one should be selected, and then contacted to ensure they are aware of the order. The process is the same as when ordering any other items that require authorisation.

Prior to authorisation the answer to these questions will be checked by the network lead:

- Does the patient have a confirmed diagnosis of COPD or asthma?
- Is the nebuliser being used to deliver bronchodilators, i.e. salbutamol, Ipratropium.

If the answer to the above questions is yes - contact the relevant community respiratory team for further advice if needed.

If the answers to the above questions is no – Authorisation should go ahead.

After authorisation to order the equipment and the patient being issued with a nebuliser, it is the responsibility of the community clinician to provide a follow up and on-going care of patients.

**Palliative Care Referral Process**

| Nebuliser required for palliative care | Order and obtain authorisation by nominated network lead | Issue nebuliser | Advice regarding care of nebuliser to be provided by issuer of nebuliser |

3.3 URGENT SITUATIONS

Patients who are acutely unwell, and who present at their surgery or walk in centre should be assessed and treated appropriately by the clinician at that time. If a nebuliser is used it is the responsibility of the clinician to ensure equipment has been serviced and cleaned appropriately.

In most cases, a nebuliser is not required. Increasing the dose of the patient’s Salbutamol to 400mcg - 1mg, given one dose at a time at 1 minute intervals and repeated at 4 -6 hourly intervals, will provide sufficient symptom relief during their exacerbation (p98, NICE 2010). It is important that their inhaler technique is checked and if patients have poor inspiratory effort and struggle using a dry powder device, consider transferring to a large volume spacer device (Volumatic) and MDI. This offers minimal resistance and co-ordination and tidal breathing can be used, thus increasing deposition of the bronchodilator. Patients requiring nebulisation should be referred on to the hospital for assessment.

In patients who do not respond to this, consider hospital admission.
4. Provision of Equipment for Care Homes

Provision of equipment to Care Homes should be based on an assessment of need with the assessor. Assessment should be undertaken by a relevant professional and all staff assessing for equipment must be competent and confident, having received appropriate training.

CARE HOME REFERRALS

Care homes without qualified nursing staff
All patients in care [residential] homes without qualified nursing staff should be referred for a formal assessment via the relevant community respiratory team using the appropriate referral form.

Once a formal assessment has been undertaken the respiratory clinician will determine the best treatment and follow up the patient within an agreed timescale.

When a nebuliser has been provided to the care home and is no longer required by the person being cared for, it is the responsibility of the care home to notify the supplier immediately so that arrangements can be made to return the equipment.

Care homes with qualified nursing staff
All patients who meet the referral criteria for a nebuliser should be referred for assessment to the appropriate community respiratory team. If a nebuliser is required it is the responsibility of the care home to purchase and service the equipment.

Community matrons
Community matrons can now access their own nebulisers for appropriate patients on their caseloads. The nebuliser assessment guidelines should be followed. If any guidance or additional respiratory assessment is required, please refer to the community respiratory team.

5. Nebuliser Assessments

It is recommended that a formal nebuliser assessment be conducted for all patients prior to commencing routine high dose bronchodilators via the nebuliser. This will ensure that objective evidence is gained and can confirm definite improvements as a result of the treatment.

The NICE COPD Guidelines [2010] state that nebuliser therapy should not be prescribed or continue to be prescribed without assessing and confirming that one or more of the following occurs:
- A reduction in symptoms
- An increase in the ability to undertake activities of daily living and exercise capacity
- An improvement in lung function

It also states that if therapy is prescribed, the patient should be provided with equipment, servicing, advice and support.

Continued Care of the nebulisers

It is the responsibility of the prescribing clinician to ensure the patient/carer is educated in how to use the nebulisers, in regard to administering the medication, cleaning, and changing the filters. Each nebuliser has slight variations so it is important to check the manufacturers leaflet.
The equipment services, currently Medequip, are responsible for servicing the nebulisers annually and supplying a further year of consumables. They also provide urgent care should a nebuliser suddenly stop working. Patients requiring replacement consumables should contact the clinician who placed initial order for further supplies. Medequip will not accept direct requests from patients for consumables at present.

Factors to consider

If patient using Ipratropium bromide nebules, a mouth piece should be ordered to reduce risk of glaucoma. If unable to use mouthpiece instruct patient to wear eye protection if possible i.e. glasses.

There is no provision for portable nebulisers for holidays. Patients wishing access to this equipment should be advised they will need to purchase this themselves.

Patients purchasing their own nebulisers are responsible for provision of disposables required for that device and arranging the servicing as per manufacturers guidance.
6. NEBULISER ASSESSMENT PROCESS BY SPECIALIST TEAM

Fax referral form received

Appointment made

Assessment
- Confirm diagnosis
- Assess exercise tolerance and breathlessness scores.
- Check patient compliant with treatment

Increase short acting reliever treatment for 2 weeks
- Salbutamol 100mcg, 4 puffs, QDS via spacer

End of 2 week Trial
- Re-assess exercise tolerance and breathlessness scores.

1st nebulised treatment given to patient for 2 weeks
- If on Tiotropium follow nebuliser trial A
- if not using Tiotropium follow nebuliser trial B

End of 2 week Trial
- Re-assess exercise tolerance and breathlessness scores
- Agree on method of most effective treatment with patient

1st Visit

2nd Visit

No improvement

If improved

Nebuliser NOT required

3rd Visit

If improved

Continue nebulised therapy

Stop nebulised therapy and ensure on optimised inhaled therapy

No improvement

Give patient management plan, advice and nurse contact details

Give patient management plan, advice and nurse contact details

Discharge back to GP

Discharge back to GP
7. Nebuliser trial forms

**Nebuliser Trial A** - with Long Acting Muscarinic Antagonist (LAMA) prescribed i.e. Tiotropium

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salbutamol 100mcg INHALER</td>
<td>4 PUFFS 4 times a day with SPACER DEVICE</td>
</tr>
</tbody>
</table>

**YOUR TRIAL WILL LAST FOUR WEEKS**

**STEP ONE – week 1 and 2**

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salbutamol 100mcg INHALER</td>
<td>4 PUFFS 4 times a day with SPACER DEVICE</td>
</tr>
</tbody>
</table>

**ANSWER THE FOLLOWING QUESTIONS AT THE END OF WEEK 2**

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>Y or N</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the treatment made a difference?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is your breathing easier in any way?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can you do some things that you couldn’t do before?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can you do the same things but faster?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are you less breathless when you do things that you did before?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has your sleep improved?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Fill in MRC and Oxygen Cost Diagram]

**STEP TWO – week 3 and 4**

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salbutamol 2.5mg NEBULISER SOLUTION</td>
<td>1 Nebule 4 times a day in NEBULISER</td>
</tr>
</tbody>
</table>

**ANSWER THE FOLLOWING QUESTIONS AT THE END OF WEEK 4**

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>Y or N</th>
<th>COMMENTS</th>
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</thead>
<tbody>
<tr>
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<tr>
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</tr>
</tbody>
</table>

[Fill in MRC and Oxygen Cost Diagram]
Nebuliser Trial B - (without LAMA)

Patient Name: 
NHS No: 
Date of Birth: / / 
Date: 

YOUR TRIAL WILL LAST FOUR WEEKS

STEP ONE – week 1 and 2

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salbutamol 100mcg INHALER</td>
<td>4 PUFFS 4 times a day with SPACER DEVICE</td>
</tr>
<tr>
<td>Ipratropium 20mcg INHALER</td>
<td>4 PUFFS 4 times a day with Spacer Device</td>
</tr>
</tbody>
</table>

ANSWER THE FOLLOWING QUESTIONS AT THE END OF WEEK 2

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>Y / N</th>
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<tr>
<td>Has your sleep improved?</td>
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<td></td>
</tr>
</tbody>
</table>

[Fill in MRC and Oxygen Cost Diagram]

STEP TWO – week 3 and 4

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salbutamol 2.5mg [Nebuliser Solution]</td>
<td>1 NEBULE 4 times a day in NEBULISER</td>
</tr>
<tr>
<td>Ipratropium 500mcg [Nebuliser Solution]</td>
<td>1 NEBULE 4 times a day in NEBULISER</td>
</tr>
</tbody>
</table>

FILL THE FOLLOWING QUESTIONS AT THE END OF WEEK 4

<table>
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<th>COMMENTS</th>
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<td></td>
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<tr>
<td>Has your sleep improved?</td>
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<td></td>
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</tbody>
</table>

[Fill in MRC and Oxygen Cost Diagram]
8. Referral forms

**Adult Respiratory Team Referral Form – Community (South)**

*All sections must be completed for acceptance of the referral*

*Guidance notes on reverse*

<table>
<thead>
<tr>
<th>1.1 Name:</th>
<th>1.2 Address:</th>
<th>1.3 NHS no:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender:</td>
<td>Postcode:</td>
<td>Language/communication requirements (please specify):</td>
</tr>
<tr>
<td>DOB:</td>
<td>Tel no:</td>
<td></td>
</tr>
</tbody>
</table>

| 1.4 Consultant: | 1.5 Can patient attend clinic? Y / N | 2.1 Confirmed respiratory diagnosis: |
| GP details:     | Potential safety risks:             | Date: |
|                | Alternative contact:                | Smoking status: Yes / No/ Ex / Passive |
|                | Tel No:                             | |

<table>
<thead>
<tr>
<th>2.2 Current medication/attach list:</th>
<th>2.3 Oxygen use:</th>
<th>2.4 Spirometry: ATTACH LATEST COPY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flow rate/hours per day:</td>
<td>Date:</td>
</tr>
<tr>
<td></td>
<td>Concentrator Y / N</td>
<td>FEV₁: ........ (......% predicted)</td>
</tr>
<tr>
<td></td>
<td>Cylinder SBO Y / N</td>
<td>FVC: ........ (......% predicted)</td>
</tr>
<tr>
<td></td>
<td>Ambulatory oxygen Y / N</td>
<td>FEV₁/FVC:</td>
</tr>
<tr>
<td></td>
<td>SpO₂ ...........on air/oxygen (delete)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.5 Frequent hospital admissions for respiratory problems? Y / N</th>
<th>2.6 Provide details of recent / pending investigations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent exacerbations of respiratory condition? Y / N</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.7 Previous medical history</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>3.1 Other services currently involved or onward referrals made (specify date of referral):</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Is the patient on the Palliative Care Register? Y / N</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>3.2 Main problems identified:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Reason for referral:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Has the patient given consent to this referral? Y / N</th>
</tr>
</thead>
</table>

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<table>
<thead>
<tr>
<th>Referred by:</th>
<th>Date of referral:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Designation:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Contact address:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Contact number:</th>
</tr>
</thead>
</table>

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Please return to:

- Adult Respiratory Team
- Coleman Health Centre
- Coleman Street
- Alvaston
- Derby
- DE24 8NH
- Tel: 01332 861189
- Fax: 01332 861182
1. Patient Details

1.3: State if an interpreter or any alternative methods of communication is required

1.5: Include any potential risks / threats to clinician or service user

   Alternative contact: State name and relationship

2. Clinical Details

2.1: Complete in full or attach medication list.

2.6: Include medication, latest spirometry, blood tests, CXR etc

3. Multidisciplinary Involvement.

3.2: Agree referral with patient and gain verbal consent.

NB: Referrals will be prioritised according to the information you provide on the referral form
# Respiratory Team Referral form

Please complete the details below - incomplete forms will be returned to the sender. It is the responsibility of the originator to ensure patient consent is obtained.

<table>
<thead>
<tr>
<th><strong>Patient Details:</strong></th>
<th><strong>Surname:</strong></th>
<th><strong>First Name:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postcode:</td>
<td>Ethnic origin:</td>
<td></td>
</tr>
<tr>
<td>Date of Birth:</td>
<td>NHS Number:</td>
<td></td>
</tr>
<tr>
<td>Tel No:</td>
<td>Patient’s GP &amp; Surgery:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Diagnosis/PMH</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Current Medication:</strong></th>
<th>Please attach current prescription to referral form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spirometry:</strong></td>
<td>Please attach most recent result to referral form</td>
</tr>
</tbody>
</table>

| **Risk factors in home environment:** |

<table>
<thead>
<tr>
<th><strong>Pulse oximetry / ABG’s:</strong></th>
<th>Please attach most recent results</th>
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| **Recent investigations:** |

| **Previous trialled medicines & Allergies:** |

| **Reason for admission: discharge date** |

| **Reason for referral / hospital follow up arranged** |

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Referral can be made for advice and specialist input for patients with respiratory conditions.

Consider referral for;

- Complex respiratory patients requiring case management
- Management advice and optimisation of patient’s therapies and quality of life
- Support and education for patients and carers
- Pulmonary rehabilitation
- Specialist respiratory physiotherapy to support and educate local community rehabilitation services
- End of stage COPD or Fibrosing lung disease
What is a nebuliser?
A nebuliser is a device which converts a drug solution into a continuous fine aerosol mist which can be inhaled directly into your lungs via a mask or a mouthpiece.

Why are nebulisers used?
1. A nebuliser is used to give a large dose of a drug simply and effectively.
2. To administer a drug to a patient who is too ill or too breathless to use an inhaler.
3. To administer drugs to the lungs that are not available in inhalers.

Who needs a nebuliser?
1. Someone who needs emergency treatment for asthma or COPD. (chronic obstructive pulmonary disease.)
2. Someone who needs long term treatment for COPD.
4. Patients who have cystic fibrosis, bronchiectasis or HIV for antibiotic treatment.
5. Some people who have lung cancer use nebulised medication to relieve symptoms.

Does everyone with breathing problems need to use a nebuliser?
No. Most asthmatics and people with COPD can be well controlled using inhalers. Research shows that inhalers are as good as nebulisers and more convenient, particularly a metered dose inhaler and spacer device.

How often is it necessary to use a nebuliser?
If the medical condition is stable, a nebuliser can be used up to 4 times daily. In some circumstances it can be used more frequently following consultation with a Doctor or Nurse.

Does the compressor need to be replaced?
No, not unless it breaks down. However, it will need servicing annually and the service provider will do this, if they supplied the compressor. If you have bought the nebuliser yourself then you will need to take out a service contract with the manufacturer.

Why is it important to have the compressor serviced regularly?
Your compressor needs to run at a rate of 6 litres of air per minute to produce the right size droplets required to reach the base of your lungs. Larger droplets will stay in the back of the throat and very small droplets are breathed out. The compressor also has filters, which need changing.

How often do the nebuliser and masks/mouthpieces need replacing?
A nebuliser mask/mouthpiece is designed to be used by only you and should be changed as advised. Please check manufacturer's guidance on when to change these. Some nebuliser masks/mouthpieces are more durable and last up to one year (pale blue).

How often should a nebuliser be cleaned?
At home, nebulisers and masks/mouthpieces should be washed in warm soapy water after each use or at least once a day. They should be rinsed and dried. 10 seconds of air must be blown through the system before further use. The tubing should be kept dry. DO NOT IMMERSE THE TUBING IN WATER. A moist environment will encourage the growth of bacteria which can cause chest infections.

Pale blue nebuliser pots (NOT SUPPLIED in Derby City) should be boiled in a pan of water for 10 minutes once a week with a small drop of washing up liquid. Filters should be changed when they become discoloured or according to the manufacturers instructions. (you should obtain replacements by telephoning the equipment service provider).

How do you know if you need a nebuliser?
If you have a hospital consultant he/she will discuss your requirements with you. Or your GP might suggest it. Ideally you should have a trial period to see if it gives you any benefit. Recent research has shown that a metered dose inhaler and a spacer device can be as effective as a nebuliser with none of the inconvenience.

How long does it take to nebulise medication?
For normal use it should take no longer than 10 minutes. However, thicker medication such as antibiotics may take longer.

Does all the liquid in the nebuliser get used up?
There is usually a small amount left in the chamber at the end of use. You should use the nebuliser until it starts to splutter then tap the chamber and continue for another minute.
Is a mask or mouthpiece better?
Bronchodilator response is the same for both. However, a mask should be tight fitting and you need to breathe through your mouth and wash your face following nebulisation. If using ipratropium or steroids, a mouthpiece should be used as there is a possibility of glaucoma or cataracts.

Is there a special way to breathe?
No, just breathe in and out normally.

Your nebulised medication is:

1. ........................................Dose........................................
   Frequency........................................

2. ........................................Dose........................................
   Frequency........................................

3. ........................................Dose........................................
   Frequency........................................

4. ........................................Dose........................................
   Frequency........................................

Do not fill the nebuliser until you are ready to use it.

Nebuliser problems
If your nebuliser takes much longer than normal ie longer than ten minutes to run or it bubbles with no mist, repeat the cleaning process. If it still does not work, replace the nebuliser chamber. If your compressor breaks down, you should use your inhaler and spacer device until you can get help.

In case of breakdown contact:
Medequip on (01773) 604426 (24 hours)

If there is a power cut or the nebuliser has broken until repair use your short-acting reliever

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4 puffs through a spacer device.