Respiratory Managed Clinical Network

Chronic Obstructive Pulmonary Disease (COPD)

Guidelines for Primary Care

Respiratory MCN
1) Definition
COPD is characterised by airflow obstruction. The airflow obstruction is usually progressive, not fully reversible and does not change markedly over several months. The disease is predominantly caused by smoking.

2) Patient Identification
Consider the possibility of COPD in patients over 35 years old who smoke or have been smokers with any of these symptoms:
- exertional breathlessness
- chronic cough
- frequent winter ‘bronchitis’
- regular sputum production

3) Spirometry
A clinical diagnosis of COPD should be confirmed by the demonstration of airflow obstruction with spirometry. Airflow obstruction is defined as post-bronchodilator FEV₁/FVC < 70%. There is an open-access spirometry service provided by respiratory physiologists in Lanarkshire for the initial diagnosis of asthma and COPD*.

4) Assessment
Clinical assessments
- Functional ability and exercise capacity (using MRC dyspnoea scale)

**MRC Dyspnoea Scale**

| 1. Breathless on strenuous exercise |
| 2. Breathless on hurrying or walking up a slight hill |
| 3. Walks slower than peers on level ground |
| 4. Stops for breath after 100m or a few minutes on level ground |
| 5. Too breathless to leave the house, or breathless dressing/undressing |

- Medication review and inhaler technique
- COPD Assessment Test (CAT)
  www.catestonline.org/english/indexEN.htm

Measurements
- Spirometry values – FEV₁, % predicted, FVC and FEV₁/FVC ratio

**Severity of airflow obstruction**

<table>
<thead>
<tr>
<th>Post-bronchodilator FEV₁/FVC</th>
<th>Post-bronchodilator FEV₁</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;70%</td>
<td>≥80%</td>
<td>Mild (stage 1)</td>
</tr>
<tr>
<td>&lt;70%</td>
<td>50-79%</td>
<td>Moderate (stage 2)</td>
</tr>
<tr>
<td>&lt;70%</td>
<td>30-49%</td>
<td>Severe (stage 3)</td>
</tr>
<tr>
<td>&lt;70%</td>
<td>&lt;30%</td>
<td>Very severe (stage 4)</td>
</tr>
</tbody>
</table>

- Body mass index
- Oxygen saturation
5) **Non-pharmacological management**

- smoking cessation
- influenza and pneumococcal vaccinations
- encourage and sign-post for physical exercise - for mild COPD ± MRC ≤ 2 (eg Active Health/walking groups)
- open-access pulmonary rehabilitation - for moderate COPD ± MRC ≥ 3*
- dietetic support if BMI < 20 or > 30 kg/m²
- referral to Weigh to Go

6) **Patient self-management**

- Provide patient information and education.
- Signpost patients to My Lungs My Life self-management website www.mylungsmylife.org
- Issue COPD Management Plan to all patients with confirmed COPD
- If patient experiences frequent exacerbations and/or hospital admissions consider issuing a COPD Rescue Medication Pack

7) **Hospital outpatient referral**

Consider hospital referral if:

- diagnosis is unclear
- age <40 years or never smoked
- assessment for nebulised bronchodilator therapy
- sinister symptoms e.g. haemoptysis, weight loss
- cor pulmonale
- symptoms disproportionate to lung function
- \( \text{SpO}_2 < 92\% \)

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**Contact details**

**Outreach Spirometry Service**

Hairmyres Team
Fax 01355 585262

Monklands Team
Fax 01236 712318

Wishaw Team
Fax 01698 366019

**Respiratory Self-Management & Pulmonary Rehabilitation**

Hairmyres Hospital
Fax 01355 585416

Monklands Hospital
Fax 01236 712135

Wishaw Hospital
Fax 01698 366422

**Stop Smoking Service**

0300 303 0242 or Text 81066

**NHS Lanarkshire Enquiry**

0300 3030 243

**NHS 24 - 111**

**CHSS Helpline**
0808 081 0899
www.chss.org.uk

**BLF Helpline**
03000 030 555
www.lunguk.org

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* Refer to Lanarkshire Respiratory MCN web pages on:
  http://firstport2/staff-support/respiratory/default.aspx
COPD confirmed by spirometry with FEV1/FVC < 0.7

For intermittent symptoms, use a short-acting β agonist as required
- **Salbutamol 100 micrograms - 2 doses twice daily OR**
- **Terbutaline 500 micrograms - 1 dose up to four times daily**

If still symptomatic or CAT score > 10, is the FEV1 < 50% of predicted?

Add long-acting muscarinic antagonist (LAMA):**
- Umeclidinium (Incruise Ellipta*) 55 micrograms - 1 dose daily OR
- Acilinum (Eklira Genuair*) 322 micrograms - 1 dose twice daily
- Glycopyrronium (Seebri Breezhaler*) 50 micrograms - 1 dose daily OR
- Tiotropium (Spirovia Handihaler*) 18 micrograms - 1 dose daily OR
- Tiotropium (Spirovia Respimat*) 2.5 micrograms - 2 doses daily

If still symptomatic despite LAMA switch to LAMA / long acting β agonist (LABA) combination:**
- Umeclidinium/Vilanterol (Anoro Ellipta*) 55/222 micrograms – 1 dose daily OR
- Acilinum/Formoterol (Duaklit Genuair*) 340/12 micrograms – 1 dose twice daily
- Glycopyrronium/Indacaterol (Ultibro Breezhaler*) 50/110 micrograms – 1 dose daily
- Tiotropium / Olodaterol (Spiolto Respimat*) 2.5/2.5 micrograms – 2 doses daily

If still symptomatic despite LABA/LAMA combination consider triple therapy (Please note this is not SMC approved however it is included in NICE guidance):
- Fluticasone/vilanterol (Relvar Ellipta*) 92/222 micrograms – 1 dose daily
- Umeclidinium (Incruise Ellipta*) 55 micrograms - 1 dose daily
- Beclomethasone/Formoterol (Fostair*) 100/6 micrograms – 2 doses twice daily
- Acilinum (Eklira Genuair*) 322 micrograms - 1 dose twice daily OR
- Umeclidinium (Incruise Ellipta*) 55 micrograms - 1 dose daily

Is there a history of > 1 exacerbation in the past year?

Start an inhaled corticosteroid/LABA combination inhaler:
- Fluticasone/vilanterol (Relvar Ellipta*) 92/222 micrograms – 1 dose daily OR
- Beclomethasone/Formoterol (Fostair*) 100/6 micrograms – 2 doses twice daily
- Budesonide/Formoterol (DuoResp Spiromax*) 160/4.5 micrograms – 2 doses twice daily OR
- Budesonide/Formoterol (Symbicort*) 400/12 micrograms – 1 dose twice daily OR
- Fluticasone/Salmeterol (Seretide Accuhaler*) 500 – 1 dose twice daily

If ICS/LABA combination not tolerated consider LABA/LAMA combination*

If persistent exacerbations or breathlessness add LAMA** (Triple therapy)

If still symptomatic consider adding oral theophylline:
- **Phyllocontin Continus** 225 milligrams twice daily OR
- **Uniphyllin Continus** 200 milligrams twice daily (adjusted according to plasma levels)

If excessive mucus production, consider adding oral carbocisteine 750mg three times daily (for 4 weeks then review, and stop or reduce to twice daily)

If still symptomatic or CAT score > 30, consider referral for specialist advice

**Important considerations:**
- Ensure good inhaler technique appropriate for device
- Give a trial of treatment for 2 months; stop if no benefit
- Patients should not be prescribed inhaled steroids alone
- LAMAs should be used with caution in patients with cardiovascular disease
- Prescribe inhalers using the brand name (exceptions – Salbutamol and Terbutaline)
- Enrol into pulmonary rehabilitation programme if MRC dyspnoea scale ≥ 3
- Encourage smoking cessation
- Ensure influenza and pneumococcal vaccinations are up to date
- Check O2 saturation annually if FEV1 < 50% predicted

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