

## Chronic Obstructive Pulmonary Disease (COPD) Guidelines

See sections [3.1 Bronchodilators](#) and [3.2 Inhaled corticosteroids](#) for further information on inhaled medicines recommended within the Tayside Area Formulary.

The diagnosis of COPD should be confirmed by taking a history of symptoms, assessing risk factors, excluding possible other causes and objective spirometric testing. See [NHS Tayside Respiratory MCN COPD pathway and manual](#) (NHS Tayside access only) for further guidance on COPD.

### 1. Address underlying cause

- E.g. smoking cessation. See Summary Guidance for Smoking Cessation in Tayside [click here](#)

### 2. Bronchodilators and inhaled steroids

It is essential that patients are actively involved when selecting inhaler devices. Their ability to use correctly, their lifestyle and the acceptability of the device must be taken into consideration.

Start therapy at step/dose most appropriate to severity of COPD (determined by spirometry and symptoms).

	Symptoms	Inhaled Medication		
Step 1	Breathlessness and exercise limitation	SABA as required		
Step 2	Persistent breathlessness and/or repeated exacerbations	SABA as required	+	LABA
		<b>or</b>		
		SABA as required	+	LAMA
Step 3*	Persistent breathlessness and/or repeated exacerbations despite treatment at step 2	SABA as required	+	LABA + LAMA
Step 4	Persistent breathlessness and/or repeated exacerbations despite treatment at step 3	SABA as required	+	Combined ICS and LABA + LAMA

**Patient inhaler technique and preference should direct individual agent choice within each step.**

**Administration via MDI and spacer is useful for ICS in patients with recurrent candidiasis of the mouth or throat.**

**SABA** short acting  $\beta$ 2-agonist bronchodilator

**LAMA** long-acting anti-cholinergic

**LABA** long acting  $\beta$ 2-agonist bronchodilator

\* **Theophylline** (see note below)

**ICS** inhaled corticosteroids

- \*Oral slow release theophylline (**Uniphyllin**<sup>®</sup> m/r tablets) may be useful after a trial of short-acting bronchodilators and long-acting bronchodilators, or in patients who are unable to use inhaled therapy. Monitoring plasma levels of theophylline is not routinely necessary in stable patients but may be warranted in certain circumstances e.g. a change in clinical status, where toxicity is suspected or during concomitant use of interacting drugs.

- **Patient perceived benefit** should guide bronchodilator treatment rather than changes in spirometry alone.
- Where possible, inhaled medicines should be administered through the same type of inhaler device. If more than one type of device is prescribed consideration should be given to using devices that require a similar inspiratory flow.
- Bronchodilators should be initiated on a 4 week trial basis and reviewed.
- Note: At least 10% of COPD patients also suffer from asthma and therefore require treatment with an inhaled corticosteroid earlier than described above. If there is evidence of an asthmatic component to a patient's disease, they should be treated as per [asthma guideline](#). See [NHS Tayside Respiratory MCN Adult Asthma Pathway](#) (NHS Tayside access only).
- None of the single agent inhaled corticosteroids currently available are licensed for use in the treatment of COPD.
- In COPD, inhaled corticosteroid (ICS) treatment is associated with increased risk of pneumonia, in addition to other adverse effects. Therefore, the place of combined ICS/LABA in COPD is limited to those patients with more severe disease, and those having two or more exacerbations over a 12 month period (see step 3 above). Due to this risk of adverse effects (especially pneumonia), in patients whose FEV<sub>1</sub> is greater than 50% predicted (and not exacerbating regularly), consideration should be given to withdrawing the combined ICS/LABA.
- Fostair® (beclometasone/formoterol) and Seretide 500 Accuhaler® (fluticasone/salmeterol) are the first choice ICS/LABA inhalers in severe COPD. Other ICS/LABA choices are listed within the [Tayside Area Formulary](#).

**3. Mucolytic drug therapy** (e.g. carbocisteine) should be considered in COPD patients with a chronic cough productive of sputum and it should be continued if there is symptomatic improvement (for example, reduction in frequency of cough and sputum production). Review after 4 weeks and stop if no response. If symptomatic improvement reduce dose as condition improves. See formulary [section 3.7 Mucolytics](#) for further information.

**4. Influenza vaccine** – recommended annually.

**5. Pneumococcal vaccine** – recommended.

**6. LTOT** (see formulary [section 3.6 Oxygen](#))

### **Treatment of exacerbation in the community**

**Bronchodilators** - Increase dose and frequency of existing short-acting  $\beta_2$ agonist bronchodilator therapy. For very breathless patients, an MDI and spacer allow high doses of bronchodilators to be taken effectively and safely. Therapy via a nebuliser is rarely required.

**Oral Corticosteroids** should be used to treat exacerbations causing a significant increase in breathlessness that interferes with daily activities and the response to increased bronchodilators has been inadequate.

- **Prednisolone** 40mg for 5 days (30mg if <60kg / 9½ stone)

**Antibiotics** should be used to treat exacerbations of COPD associated with a history of more purulent sputum.

- **5 days** antibiotics as per NHS Tayside antibiotic policy

Patients without more purulent sputum do not need antibiotic therapy. If there is consolidation on CXR or clinical signs of pneumonia, please refer to [NHS Tayside GP Antibiotic Man](#) for appropriate assessment and antibiotic treatment of pneumonia.

**Advance supply of oral steroids / antibiotics for COPD exacerbation** – There is good evidence early interventions reduce the severity of exacerbations with benefit to the patient and health services. Following discussions with patients and the provision of a COPD self management plan, advance supply of steroids/antibiotics can be considered for specific patients.

Target patients may include patients with:

- moderate/severe disease (FEV<sub>1</sub> 30-80% predicted)
- any previous hospital admission with exacerbation of COPD
- 2 or more community exacerbations in the last year
- those on maximum inhaled therapies
- patients on LTOT/oxygen

Clinicians should ensure that the patient understands the principles of self management, can recognise the symptoms of an exacerbation and can be trusted to follow instructions in the use of medication.

Patients should notify the prescriber within 3 days of starting the medication and contact their GP after 24 hours if no response or any worsening of their condition.

**Long-term macrolides** (usually clarithromycin 250mg daily) for respiratory conditions such as COPD should only be commenced if recommended by secondary care respiratory specialists. An initial 3 month trial is overseen by a respiratory specialist and a decision on whether to continue the macrolide antibiotic beyond 3 months is taken on a case by case basis after a full assessment. For further information see respiratory guidance notes section on [Long-term macrolide antibiotics](#).

See also [NICE Clinical Guideline No.101 COPD \(update\) June 2010](#) and [Global Initiative for Chronic Lung Disease \(GOLD\) Strategy \(updated 2013\)](#)

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Approved by NHS Tayside Respiratory MCN Formulary Sub group