The following guidance considers pharmacological and non-pharmacological treatments for the management of COPD in primary care. Prior to changes in medication, check inhaler technique and concordance. Any changes to medications should be reviewed after 4 weeks to assess impact on health status, with discontinuation or substitution of treatments given for breathlessness if no improvement. To assess the impact of COPD on the patient's wellbeing and daily life, consider the use of the COPD Assessment Test (CAT), copies to download are available online at [http://www.catestonline.org](http://www.catestonline.org). A clinically meaningful improvement in health status would be a reduction in COPD Assessment Test Score of 2 points or more. If patient remains symptomatic review inhaler technique and if satisfactory, treatment should be intensified by combining therapies following the stepwise approach below.

<table>
<thead>
<tr>
<th>Indication</th>
<th>Non pharmacological interventions foundation of all management</th>
<th>Medication</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial treatment</td>
<td>All people with COPD</td>
<td>Flu vaccination, pneumonia vaccination, stop smoking support, *encourage regular exercise / activity - 30 minutes of light exercise 5 times per week, inhaler technique, concordance</td>
<td>Short acting B₂ agonist (SABA) for as required use (PRN)</td>
</tr>
<tr>
<td>1st treatment change</td>
<td>Dyspnoea and/or exercise limitation</td>
<td>Flu vaccination, pneumonia vaccination, stop smoking support, *encourage regular exercise/activity - 30 minutes of light exercise 5 times per week, inhaler technique, concordance</td>
<td>Long acting muscarinic antagonist (LAMA) OR long acting B₂ agonist (LABA)</td>
</tr>
<tr>
<td>2nd treatment change</td>
<td>Persistent dyspnoea and/or exacerbations</td>
<td>Flu vaccination, pneumonia vaccination, stop smoking support, Issue <em><strong>rescue medication,</strong></em> Pulmonary Rehabilitation, inhaler technique, concordance</td>
<td>LAMA and LABA “Dual therapy”</td>
</tr>
<tr>
<td>3rd treatment change</td>
<td>Persistent dyspnoea or exacerbations on “dual therapy”</td>
<td>Flu vaccination, pneumonia vaccination, stop smoking support, check inhaler technique, concordance, issue ***rescue medication, refer to ** Pulmonary rehabilitation, consider referral for palliative care support (see COPD Prognostic tool)</td>
<td>LAMA and LABA and inhaled corticosteroid (ICS) “Triple therapy”</td>
</tr>
<tr>
<td>4th treatment</td>
<td>Persistent dyspnoea or exacerbations on “triple therapy”</td>
<td>Flu vaccination, pneumonia vaccination, stop smoking support, check inhaler technique, concordance, issue ***rescue medication, refer to ** Pulmonary rehabilitation, consider referral for palliative care support (see COPD Prognostic tool)</td>
<td>Recommend referral to secondary care Add on therapies as described overleaf</td>
</tr>
</tbody>
</table>

*Exercise should be strongly encouraged in all people with a chronic lung condition - 30 minutes of light exercise 5 times per week.

**See Pulmonary rehabilitation guidance

***Rescue Medication: Only to be issued with appropriate education: (Plain) Prednisolone 30mg/day for 7 - 14 days, Amoxicillin 500mg tds for 5-7 days (if penicillin allergy clarithromycin 500mg BD for 5-7 days or doxycycline 200mg od for 1 day then 100mg od for 6 days
Long term oxygen (LTOT)
Oxygen saturation should be checked annually in people with FEV1<40% or <1.5 litres and MRC 3 or above for QOF purposes
Refer for home oxygen therapy assessment people with resting saturations ≤92% as per the home oxygen guideline.

Theophyllines
Not routinely used in COPD. May improve breathlessness. If considering this treatment recommend referral to secondary care. Review changes in breathlessness and health status after 4 weeks. Check theophylline level at 4 to 6 weeks

Mucolytic
Should not be routinely used in people with stable COPD. But may be of use in people with chronic productive cough, review after 4 weeks and discontinue if no benefit

Osteoporosis prophylaxis
Should be considered in people requiring frequent courses of oral corticosteroids (>2 courses per year) and in people on high doses of ICS (2mg/day beclometasone or equivalent) with a second risk factor. The risks of developing osteoporosis should be discussed with the patient

Treatments considered unsuitable for COPD
Includes maintenance oral corticosteroids, prophylactic antibiotics, Alpha-1 antitrypsin replacement therapy, antioxidant therapies and antittusive therapy

Review in Primary Care:
It is strongly recommended that the CCG COPD template, linked to the Care Planning Template, is used during COPD patient reviews. Local templates may be used but should contain all of the components below:

<table>
<thead>
<tr>
<th>Review in Primary Care</th>
<th>Mild/Moderate/Severe Airflow Obstruction</th>
<th>Very Severe Airflow Obstruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>AT LEAST ANNUAL</td>
<td>AT LEAST TWICE PER YEAR</td>
</tr>
<tr>
<td>Measurements to make</td>
<td>• *FEV1 and *FVC measurement</td>
<td>• *FEV1 and *FVC measurement</td>
</tr>
<tr>
<td></td>
<td>• Record *BMI</td>
<td>• Record *BMI</td>
</tr>
<tr>
<td></td>
<td>• *MRC Dyspnoea Score</td>
<td>• * MRC Dyspnoea Score</td>
</tr>
<tr>
<td></td>
<td>• COPD Assessment Test (CAT Score)</td>
<td>• *SpO2</td>
</tr>
<tr>
<td></td>
<td>• *FBC</td>
<td>• COPD Assessment Test (CAT Score)</td>
</tr>
</tbody>
</table>

Clinical assessment
• Smoking status and desire to quit
• Adequacy of symptom control
- Breathlessness
- Exercise tolerance
- Estimated exacerbation frequency
• Presence of complications
• Effects of each drug treatment
• Inhaler technique
• Need for referral to specialist and therapy services
• Need for pulmonary rehabilitation
• Consider referral to Expert Patient Programme
• Self management advice
• Measure saturation by pulse oximetry if *FEV1 < 1.5 litres/ 40% predicted

• Smoking status and desire to quit
• Adequacy of symptom control
- Breathlessness
- Exercise tolerance
- Estimated exacerbation frequency
• Presence of cor pulmonale
• Need for long term oxygen therapy
• Patients nutritional state
• Presence of depression
• Effects of each drug treatment
• Inhaler technique
• Need for social services and occupational therapy unit
• Need for referral to specialist and therapy services
• Need for pulmonary rehabilitation
• Presence of complications
• Consider referral to Expert Patient Programme
• Self-management advice
• Consider palliative care requirements


References
• Chronic obstructive pulmonary disease Management of chronic obstructive pulmonary disease in adults in primary and secondary care (partial update) http://www.nice.org.uk/cg101
• NICE COPD Quality Standards (QS 10) http://guidance.nice.org.uk/QS10

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Published: September 2013 | Review due: September 2016 (unless clinical evidence base changes)