

**Confirmed diagnosis of COPD**

**Non pharmacological management**

Treat tobacco dependency, offer flu and pneumococcal vaccination, optimise BMI, optimise treatment for co-morbidities eg heart failure and ischaemic heart disease, promote exercise, assess symptoms using MRC / CAT Test and refer to pulmonary rehabilitation if appropriate.

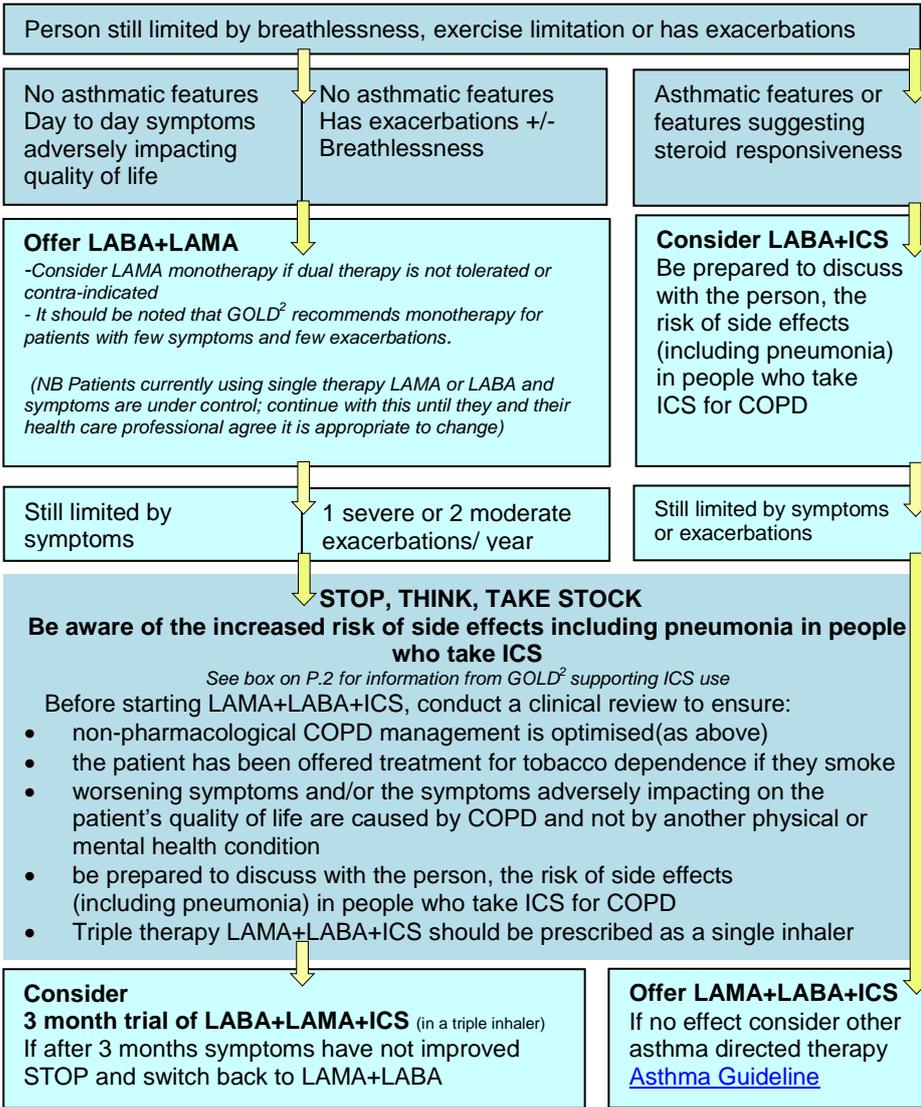
**Patients should have an agreed COPD self-management plan**

**Pulmonary rehabilitation** should be considered and discussed with patient at all stages of disease progression when symptoms and disability are present and not at a predetermined level of impairment. The threshold for referral would usually be breathlessness equivalent to MRC dyspnoea grade 3.

Inhaled Therapies<sup>1</sup>

- Prescribe inhalers only after the patient has received training in the use of the device and can demonstrate satisfactory technique
- Before any change of therapy assess adherence and inhaler technique

Offer SABA or SAMA to use as needed



**Key SABA** short acting beta 2 agonist  
**SAMA** short acting muscarinic antagonist  
**LAMA** long acting muscarinic antagonist  
**LABA** long acting beta 2 agonist  
**ICS** inhaled corticosteroid  
**pMDI** pressurised metered dose inhaler  
**DPI** dry powder inhaler

**Diagnosis of COPD**  
Refer to [NICE NG 115](#). There is no single diagnostic test for COPD. Making a diagnosis relies on clinical judgement based on a combination of history, physical examination and confirmation of the presence of airflow obstruction using spirometry.

**Asthmatic features/steroid responsiveness**

- Previous history of asthma/ atopy
- Significant symptom variability
- Night time wakening with breathlessness and/or wheeze
- A higher blood eosinophil count (>300 cells /ul)
- Variation in FEV1>400ml or serial peak flow >20%

**Inhaler devices**  
**Prescribe by brand name only**

- With the patient, decide the best device for them – can they use it? is it suitable?
- Spacer device with MDI improves co-ordination, increases lung deposition, reduces local side effects. Requires slow, gentle, long inhalation
- DPIs need less co-ordination and reduce carbon footprint. Requires deep, forceful, long inhalation
- Video and patient leaflets for inhaler technique access at [PAD](#)
- Use an In-Check dial for assessment of inspiratory flow and to aid inhaler technique training

**Mucolytics** Patient with chronic cough productive of sputum: consider 6-8 week trial of carbocisteine 750mg tds, review and reduce to 750mg bd after 6-8 weeks if response. Stop if no reduction in cough /sputum.

**Nebulisers** should not be seen as an easy alternative for patients unable to acquire and/or attain adequate inhaler technique. Patients should be referred to local respiratory care team for formal assessment

**Long Term Oxygen Therapy (LTOT)**  
Refer patients to local Respiratory Care Team for formal assessment  
-COPD and oxygen sats ≤ 92%  
-Cyanosis, polycythaemia, peripheral oedema, raised jugular venous pressure and oxygen sats ≤ 94 %.

**If patient is still symptomatic refer to specialist**  
Prophylactic antibiotics eg Azithromycin may be started by a respiratory specialist and continued in primary care  
Phosphodiesterase-4 inhibitors: Roflumilast may be started by a specialist and continued in primary care  
<https://surreyccg.res-systems.net/PAD/Search/DrugConditionProfile/4602>

**Patients on triple therapy: document the reason for continuing ICS use in clinical records and review at least annually**

Preferred Choices		see <a href="#">PAD</a> for status of alternative devices	
Brand SABA /SAMA	Device	Drug ***see below for information on inhaler carbon footprint	Dose
Salbutamol Easyhaler	DPI	Salbutamol 100 mcg	2 puffs prn
Salbutamol /Ventolin MDI*	pMDI†	Salbutamol 100 mcg	2 puffs prn
Salamol MDI*	pMDI†	Salbutamol 100 mcg	2 puffs prn
<b>LAMA</b>			
Spiriva Respimat**	Soft Mist	Tiotropium 2.5mcg	2 puffs od
Seebri Breezhaler	DPI	Glycopyrronium 44mcg	1 puff od
Incruse Ellipta	DPI	Umeclidinium 55mcg	1 puff od
Eklira Genuair	DPI	Aclidinium 322mcg	1 puff bd
<b>LAMA/LABA</b>			
Spolto Respimat**	Soft Mist	Tiotropium/olodaterol 2.5/2.5mcg	2 puffs od
Ultibro Breezhaler	DPI	Glycopyrronium/indacaterol 85/43	1 puff od
Anoro Ellipta	DPI	Umeclidinium/vilanterol 55/22mcg	1 puff od
Duaklir Genuair	DPI	Aclidinium/formoterol 340/12	1 puff bd
<b>LABA/ICS</b>			
Fostair Nexthaler	DPI	Beclometasone/formoterol 100/6	2 puffs bd
Fobumix Easyhaler	DPI	Budesonide/formoterol 160/4.5	2 puffs bd
Relvar Ellipta	DPI	Fluticasone furoate/ vilanterol 92/22	1 puff od
Symbicort Turbohaler	DPI	Budesonide/Formoterol 400/12	1 puff bd
Fostair	pMDI†	Beclometasone/formoterol 100/6	2 puffs bd
Symbicort	pMDI†	Budesonide/Formoterol 200/6	2 puffs bd
<b>LABA/LAMA/ICS</b>			
Trelegly Ellipta	DPI	Fluticasone furoate/umeclidinium vilanterol 92/55/22	1 puff od
Trimbow	pMDI†	Beclometasone/formoterol Glycopyrronium 87/5/9	2 puffs bd

\*Salamol MDI is a small volume branded salbutamol MDI with a lower carbon footprint than large volume MDI such as Ventolin. Access [BMJ Open Carbon Footprint Analysis](#) for information.

\*\*Respimat is now available as a re-usable device

†Use spacer device with pMDI

**Initiation of ICS treatment in combination with long acting bronchodilators** Information from GOLD<sup>2</sup> guidelines: **Strong Support**

History of hospitalisation /exacerbation of COPD  
Two or more moderate exacerbations of COPD per year

Blood eosinophils > 300 cells/ul\*

History of concomitant asthma

**Against use**

Repeated pneumonia events

Blood eosinophils <100 cells/ul\*

History of mycobacterial infection

*\*Quoted values represent approximate cut off points. This may differ according to local protocols*

**\*\*\*Low Carbon Inhalers: BTS 2019 Position Statement: Environment and Lung Health.** Access [BTS](#)

Complete elimination of pMDIs may not be possible due to patient preference and the need to generate sufficient inspiratory flow to activate DPIs. However, BTS encourages prescribers and patients to consider prescribing DPIs whenever they are likely to be equally effective.

Access [NICE](#) – information for patients on carbon footprint of inhalers (see patient decision aid: medication review above)

NICE highlights 2 puff dose of MDI/BAI has an estimated carbon footprint of 500g CO<sub>2</sub>eq (carbon dioxide equivalents) per dose, compared to 20g in a DPI.

Average trip (9 miles) in a typical car is 2610g CO<sub>2</sub>eq.

**Medication Review**

Mild/moderate COPD –annual  
Severe/very severe - twice yearly

- Develop an individualised self management plan and review at future appointments. Access [BLF](#) British Lung Foundation
- Check inhaler technique and adherence at each review and before starting new inhaler
- Review symptom control, activities of daily living and number of exacerbations in past 12 months. Use MRC dyspnoea scale or access [Cat Test](#) to assess symptoms.
- Discuss physical activity and pulmonary rehab if appropriate (threshold usually MRC grade3)
- Advice on quitting smoking
- Vaccinations
- Identifying and managing exacerbations (see below)
- [NICE](#) patient decision aid may be useful when discussing different types of inhaler available and what matters to the patient including information on the carbon footprint of inhalers NB this does not cover all COPD inhalers as is primarily a tool for asthma
- Advise patient to return used inhalers to local pharmacy

**Exacerbations of COPD** For detailed information access: [NICE Managing Acute Exacerbation of COPD NG114](#)

- Develop an individualised exacerbation plan with each person with COPD who is at risk of exacerbations. Encourage patient to respond promptly to symptoms:  
-This may include stepping up bronchodilator therapy  
-Starting antibiotic therapy if sputum changes colour, increases in volume or thickness more than normal.  
-A short course of oral corticosteroids if their increased breathlessness interferes with activities of daily living
- If they have had an exacerbation in the past year and remain at risk offer a short course of antibiotics and oral corticosteroids (COPD Rescue Pack) to keep at home as part of their plan).

The following regimen is recommended by NICE 2019

**Antibiotics**  
Amoxycillin 500mg three times daily for 5 days **or**  
Doxycycline 200mg on first day, then 100mg once a day for 5-days in total **or**  
Clarithromycin 500mg bd for 5 days

**Oral Corticosteroid**  
Offer 30mg oral prednisolone daily for 5 days  
*Refer to NICE guideline above for more detailed information including treatment of more complex patients*

- Check patient understands when and how to take the medicines, associated risks and harms
- Ensure they can advise their health care professional and are reviewed after starting the COPD rescue pack
- For people who have used 3 or more courses of the medicines in the last year investigate the possible reasons