

Lancashire &
South Cumbria
Medicines
Management
Group



Midlands and Lancashire
Commissioning Support Unit

COPD Desktop Guideline Version 1.9.1

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VERSION CONTROL

Version Number	Date	Amendments made
1.0	March 14	
1.2	February 15	Updated to include Spiriva Respimat
1.3	March 2015	Link added to MHRA safety update re: tiotropium
1.4	October 2015	LABA, LAMA & LABA/LAMA inhalers updated
1.5	September 2017	GOLD principles included
1.6	Consultation Sept-Oct 2017	Non-inhaler section updated and consolidation with long-acting inhaler section v 1.5
1.6.1	March 2018	Addition of Trelegy Ellipta to device pathway
1.7	May 2018	Version number corrected
1.8	March 2019	Treatment algorithms updated to reflect NICE NIG115 (2018) and GOLD (2019)
1.9	May 2023	Updated to reflect GOLD 2023 report and Green Agenda
1.9.1	July 2025	Updated to acknowledge NGP for Trixeo Aerosphere

Background Information and the Rationale for Guideline Development.

This guideline has been updated in line with the GOLD 2023 report, including:

- a revision of the ABCD assessment tool (now ABE tool),
- the changed positioning of (LABA + LAMA) and (LABA + ICS) in initial treatment,
- updated definitions of COPD and COPD exacerbations ¹

The goals for treatment of COPD exacerbations are to minimise the negative impact of the current exacerbation and to prevent subsequent events.

These updated guidelines also acknowledge existing NICE Guidance NG115² which recommends to:

- Start inhaled therapies **only** if the non - pharmacological interventions i.e., Non inhaler considerations, have been offered (if appropriate).
- Minimise the number of inhalers and the number of different types of inhalers used by each person as far as possible.
- Ensure people receive inhalers they have been trained to use (for example, by specifying the brand in prescriptions).

These are treatment guidelines only.

Key Points To Consider When Prescribing:

1. **Blood eosinophil count (eos)**

- At present blood eosinophil counts (eos) ≥ 300 cells / μ l provide guidance to identify COPD patients at higher risk of exacerbations and therefore more likely to benefit from preventive treatment with inhaled corticosteroids (ICS).
- Data modelling indicates that ICS-containing regimens have little or no effect at an eos count <100 cells / μ l and therefore this threshold can be used to identify patients with a low likelihood of treatment benefit with ICS.
- The treatment effect of ICS-containing regimens is higher in patients with a high exacerbation risk (≥ 2 exacerbations or ≥ 1 leading to hospital admission) and therefore the

use of eos to predict ICS effects should always be combined with a clinical assessment of the exacerbation risk.

2. Inhaler Device / Technique

- The choice of inhaler device should be individually tailored to the patient with preference being given to those with a low carbon footprint.
- Education and training in inhaler device technique is of utmost importance.
- Inhaler technique should be assessed at each visit.
- Inhaler technique (and adherence to all therapy, including non-pharmacological interventions) should be assessed before concluding that the current therapy is insufficient.
- **Be aware of potential duplication** of inhaler ingredients especially LAMA/LABA combinations³
- Where an MDI device is clinically appropriate, provide one with a lower carbon footprint and consider provision of appropriate spacer device.

3. Inhaler Therapy

- Use of a combined single inhaler therapy is more convenient and effective than multiple inhalers & reduces the environmental impact.
- LABAs and LAMAs are preferred over short acting agents (SABAs and SAMAs), except for
 - patients with only occasional dyspnoea and
 - the immediate relief of symptoms in those patients already on long acting (LABAs and LAMAs) bronchodilators for maintenance therapy.

Over-use of SABA / SAMA i.e., more than 2 inhalers / year, should be investigated and the patient should be transitioned to long-acting agents where appropriate. Use of LABA + ICS in COPD is not now encouraged¹. If there is an indication for an ICS, then LABA+LAMA+ICS has been shown to be superior to LABA+ICS and is therefore the preferred choice.

- If a patient with COPD and no features of asthma, has been treated with LABA + ICS and :
 - Is **'Well-controlled'** - in terms of symptoms and exacerbations, continuation with LABA +ICS is an option **OR**
 - **If patient has further exacerbations** - treatment should be escalated to LABA + LAMA +ICS **OR**
 - Has **Major symptoms** - switching to LABA + LAMA should be considered.
- If patients with COPD have concomitant asthma, they should be treated like patients with asthma. **Under these circumstances the use of an ICS is mandatory.**

4. Environmental Impact 'Green' Agenda

- Inhalers make up 3% of all NHS carbon emissions.
- A DPI should be the first choice for inhaled therapy, if clinically appropriate.
- Choose the more environmentally friendly option, to help to cut the NHS carbon footprint.
- If an MDI is required, then an MDI with the lowest carbon emissions / recycling potential should be used.
- Data on the carbon footprint of individual inhalers is very limited and provide indicative rather than actual values. Estimated figures based on usual daily doses and median CO₂e values per inhaler can be found at <https://www.prescqipp.info/umbraco/surface/authorisedmediasurface/index?url=%2fmedia%2f6213%2finhaler-carbon-footprint-comparison-tool-21.pdf>

Non-inhaler considerations - NICE NG115 (2018) says to start inhaled therapies **only** if the non - inhaler interventions, have been offered (**if appropriate**).

LIFESTYLE ADVICE:

- Smoking intervention at every opportunity, refer to your local smoking cessation service.
- Dietary advice - If BMI < 18 or > 30 (For obesity grading I – III refer to dietician)
- Exercise – promote gentle exercise / pulmonary rehab.
- Reduce where possible exposure to indoor and outdoor air pollution.

IMMUNISATION:

- Influenza, annually
- Pneumococcal, as per green book
- COVID -19, as per national recommendations
- Pertussis and Shingles, as per local recommendation

COMORBIDITIES:

Look for and treat common co-morbidities such as:

- Heart failure
- Osteoporosis
- Anxiety/depression

PULMONARY REHABILITATION:

Refer patients with exercise limitation due to breathlessness for pulmonary rehabilitation. Refer as per local arrangements e.g., Community COPD Team, LCFT

THEOPHYLLINE: Theophylline should **only** be used after a trial of short-acting bronchodilators and long-acting bronchodilators, or in patients who are unable to use inhaled therapy, as there is a need to monitor plasma levels and interactions.

CHRONIC PRODUCTIVE COUGH: Consider a 4-week trial of a mucolytic Carbocisteine 375mg - 2 capsules 3 times/ day reducing to 2 capsules twice daily if good response or N -acetylcysteine 600mg effervescent tablets once daily. Continue only if symptomatic benefit. Do not use to prevent exacerbations.

LONG TERM OXYGEN: Refer patients with stable COPD and persistent oxygen saturation of <92% for oxygen assessment. However, please discuss with local HOSAR team before referring active smokers (NG115 section 1.2.61)²

ADVANCED DISEASE: If the patient meets Gold Standard Framework criteria:

- Ensure registered on EPACCS
- Initiate advanced care planning
- Identify preferred place of care
- Discuss Community DNA-CPR if appropriate
- Consider referral to Palliative Care Services, for complex symptom management support

ASSESS / OPTIMISE TREATMENT:

Ask the patient the following:

- Has the treatment made a difference?
- Is breathing easier in any way?
- Has sleep improved?
- Can they do some things that they could not do before or do the same things faster?
- Are they less breathless than before when doing things?
- Inhaler technique should be assessed at each visit.

EXACERBATIONS

An exacerbation of COPD is defined as an event characterised by dyspnoea and / or cough and sputum that worsen over <14 days.

Exacerbations of respiratory symptoms in patients with COPD can be triggered by a several different factors (alone or in combination), including respiratory infections, environmental pollutants or unknown factors. During exacerbations there is evidence of increased airway and systemic inflammation, increased gas trapping and hyperinflation with reduced expiratory flow and worsening of VA/Q abnormalities. Other conditions, such as pneumonia, pulmonary and / or heart failure may mimic or aggravate an exacerbation of COPD and need to be considered in the clinical management of these episodes.

Pharmacological therapy can reduce COPD symptoms, reduce the frequency and severity of exacerbations and improve health status and exercise tolerance.

The goals for treatment of COPD exacerbations are to minimise the negative impact of the current exacerbation and to prevent subsequent events.

Symptoms include: increased mucus production, increased sputum purulence and volume, increased cough and wheeze, dyspnoea.

For severe breathlessness or rapid onset of breathlessness:

- Increase frequency of short acting bronchodilator MDI i.e., Salbutamol or Ipratropium via spacer as per patient plan
- Prednisolone tablets 30mg each morning for 5 days¹

For purulent sputum production:

- Follow your local antibiotic guidelines – duration of therapy should normally be 5 days.
- Prophylactic antibiotics are **NOT** recommended unless initiated by a specialist.

Refer patients with >1 exacerbation/ year to Acute Respiratory Virtual Ward (ARVW) / community COPD team for admission avoidance / self-management plan. Where possible refer patients whilst exacerbating.

Guidance on Rescue Packs – See Appendix 1

Refer to specialist when there is:

- Diagnostic uncertainty – ensure patient has undergone spirometry
- Uncontrolled severe COPD
- Onset of cor pulmonale
- Nebuliser assessment is needed (**please ensure inhaler therapy has been assessed and optimised and that patient is concordant, before referral**)
- Symptoms don't match lung function tests
- Aged <40 or FH of alfa 1 antitrypsin deficiency
- Frequent infection
- Rapid decline in FEV₁

USEFUL RESOURCES

NICE: www.nice.org.uk

Patient information leaflets: www.patient.co.uk

British Thoracic Society: www.brit-thoracic.org.uk

Green Book, can be found in Publications on www.dh.gov.uk

CAT Scores: <http://www.catestonline.co.uk/>

Right Breathe: <https://www.rightbreathe.com/>

GOLD: www.goldcopd.com

GP airways group: www.gpiag.org

BNF: www.bnf.org

Asthma and Lung UK: www.asthmaandlung.org.uk/

MANAGEMENT OF COPD – following confirmation of diagnosis with spirometry

Fundamentals of COPD care:

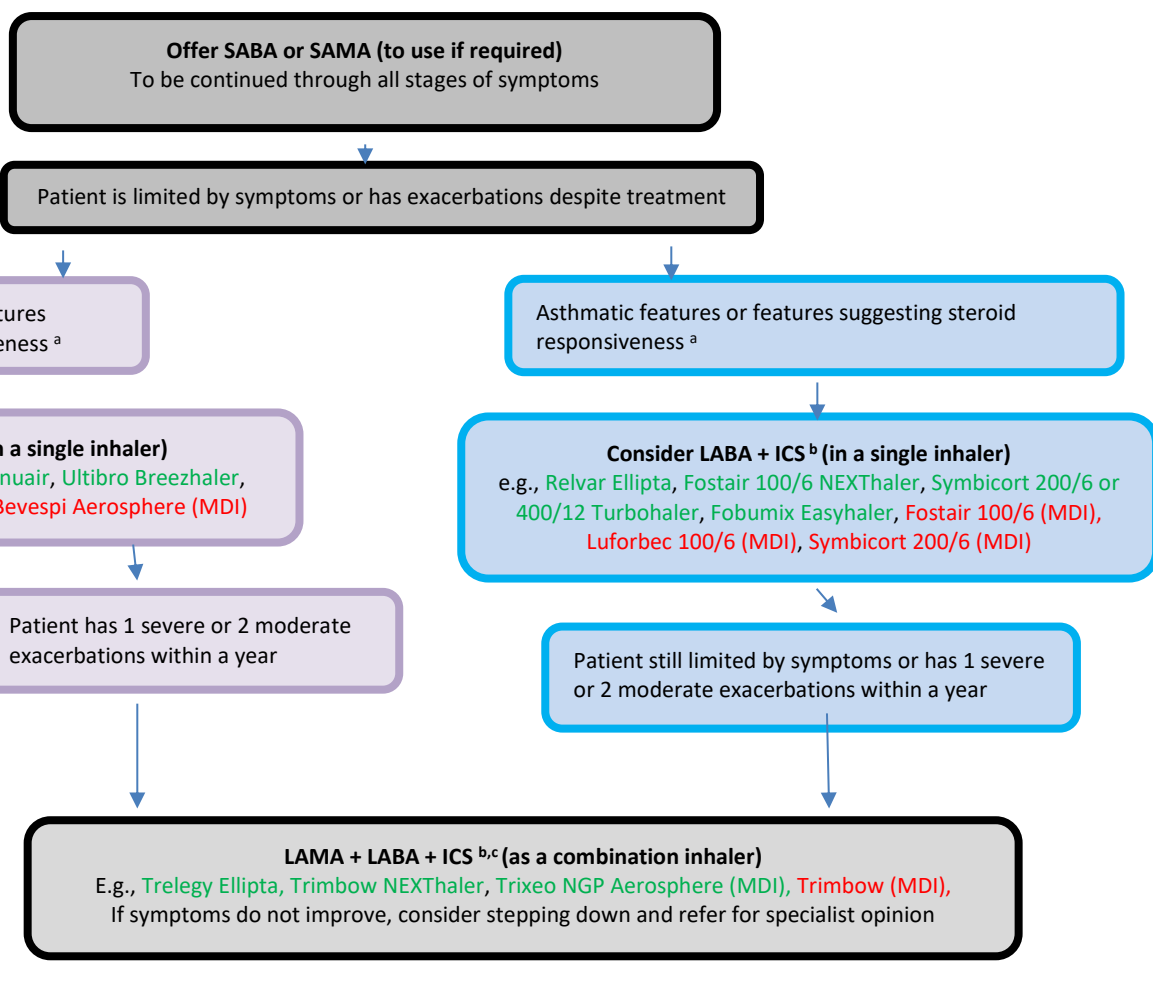
- Offer treatment and support to stop smoking
- Offer recommended vaccinations
- Offer pulmonary rehabilitation if indicated
- Co- develop a respiratory action plan e.g.: - <https://shop.asthmaandlung.org.uk/products/copd-self-management-plan>
- Optimise treatment for co-morbidities

Start inhaled therapy only if:

- All the above fundamentals of COPD care have been offered (if appropriate) and
- Inhaled therapies are needed to relieve breathlessness or exercise limitation

Before escalating to a next stage in treatment, check the patients' inhaler technique, compliance with administration instructions and tolerance of the current device. If a patient is unable to use a particular device satisfactorily, then an alternative device should be sought.

Choice of inhaler should be based on patient tolerance, ease of use and environmental impact of the device.
DPI inhalers are preferred if clinically appropriate



^a asthmatic features / features suggesting steroid responsiveness include any previous diagnosis of asthma or atopy, a blood eos >300, substantial variation in FEV1 over time (at least 400ml) or substantial diurnal variation in PEF (at least 20%)

^b Be aware of an increased risk of side effects (including pneumonia) in patients taking ICS.

^c Document in clinical records the reason for continuing ICS treatment

Green text indicates low CO₂ emissions, Red text indicates high CO₂ emissions.

The Medicines Management Team at MLCSU would like to thank all clinicians and commissioners in the Lancashire and South Cumbria Health Economy who provided valuable insight which was essential in the development of this guideline.

This guidance does not override the individual responsibility of health professionals to make decisions in exercising their clinical judgement in the circumstances of the individual patient, in consultation with the patient and/or guardian or carer. For full prescribing information please refer to the BNF and SPC.

References









¹ GOLD 2023 report <https://goldcopd.org/2023-gold-report-2/>










² NICE guideline [NG115]: Chronic obstructive pulmonary disease in over 16s: diagnosis and management <https://www.nice.org.uk/guidance/ng115>

³ Inhaler prescribing errors– do they matter? Rachel Wilson, Helen Iddon, Julie Lawson & Victoria Birchall. Midlands and Lancashire Commissioning Support Unit (MLCSU) / Lancashire and South Cumbria Integrated Care Board (ICB) [Presentations - MLCSU Medicines Management and Optimisation Services \(midlandsandlancashirecsu.nhs.uk\)](https://www.midlandsandlancashirecsu.nhs.uk/presentations-mlcsu-medicines-management-and-optimisation-services)

Inhalers licensed for treatment of COPD.**A DPI should be the first choice for inhaled therapy, if clinically appropriate**








*If a patient with COPD and no features of asthma has been treated with ICS + LABA and is well controlled in terms of symptoms and exacerbations, continuation with ICS + LABA is an option- see inhaler device / technique section above.

DPI	LAMA + LABA	ICS + LABA * (Concomitant asthma)	ICS + LAMA +LABA
Ellipta 	Anoro Ellipta (Umeclidinium + Vilanterol) 	Relvar Ellipta (Fluticasone + Vilanterol) 	Trelegy Ellipta (Fluticasone + Umeclidinium + Vilanterol) 
Genuair 	Duaklir Genuair (Aclidinium + Formoterol) 		
Breezhaler 	Ultibro Breezhaler (Glycopyrronium + Indacaterol) 		

DPI	LAMA + LABA	ICS + LABA (Concomitant asthma)	ICS + LAMA + LABA
NEXThaler 		Fostair 100/6 NEXThaler (Beclometasone + Formoterol) 	Trimbow NEXThaler (Beclometasone + Glycopyrronium + Formoterol) 
Turbohaler 		Symbicort 200/6 or 400/12 Turbohaler (Budesonide + Formoterol)  	
Easyhaler 		Fobumix 160/4.5 or 320/9 Easyhaler (Budesonide + Formoterol)  	

Soft Mist	LAMA + LABA	ICS + LABA (Concomitant asthma)	ICS + LAMA + LABA
RespiMat 	Spiolto RespiMat (Tiotropium + Olodaterol) 		
MDI	LAMA + LABA	ICS + LABA (Concomitant asthma)	ICS + LAMA + LABA
Aerosphere	Bevespi Aerosphere (Glycopyrronium + Formoterol)  		Trixeo NGP Aerosphere (Budesonide + Glycopyrronium + Formoterol)  
Standard MDI device 		Fostair 100/6 (Beclometasone + Formoterol)  Luforbec 100/6 (Beclometasone + Formoterol) 	Trimbow (Beclometasone + Glycopyrronium + Formoterol) 

SABA or SAMA to be used only if required (over-use should be investigated)

DPI	SABA	SAMA
<p>Turbohaler</p> 	<p>Bricanyl 500 Turbohaler (Terbutaline)</p> 	
MDI	SABA	SAMA
<p>Autohaler</p> 	<p>Airomir Autohaler (Salbutamol)</p> 	
<p>Standard MDI device</p> 	<p>Airomir Inhaler (Salbutamol)</p> 	<p>Atrovent Inhaler (Ipratropium Bromide)</p> 

Appendix 1

[COPD – Guidance on ‘Rescue Packs’ \(for appropriate patients\) to manage exacerbations.](#)

(Refer to local/practice protocol if available.)

The effectiveness of patients having a rescue pack on standby at home, is much debated. The risk of inappropriate use needs to be balanced with timely intervention to avoid an admission to hospital.

Exacerbation symptoms include: increased mucus production, increased sputum purulence and volume, increased cough and wheeze, dyspnoea.

Prescriber action

The options are:

1. Provide a Rescue Pack to the patient to keep at home to enable them to initiate treatment as soon as possible.
2. Offer a same day triage with the ‘pack’ ready to prescribe (acute item **NOT a repeat**), on the patients record, which is also visible to out of hours clinicians.

Consider a ‘Rescue Pack’ for those patients who:

- Have had one exacerbation of COPD in the last 12 months
- Are at risk of further exacerbations
- Have been recommended to have one by the respiratory specialist
- Are motivated to self-manage, can identify symptoms of flare-up, and is educated on how to use the pack.

Non-infective exacerbation:

Short course of oral corticosteroid: ***Prednisolone tablets 5mg tablets – Six tablets (30mg) once daily for 5 days.***

Infective exacerbation:

Course of antibiotics - First line options:

Amoxicillin 500mg Capsules X 15. One capsule 3 times a day for 5 days maximum

Doxycycline 100mg capsules X 6. Two capsules (200mg) immediately then 100mg daily thereafter for 5 days.

Clarithromycin 500mg tablets x 10. One tablet twice a day for 5 days.

For further information: [Antibiotic and diagnostic quick reference tools: Summary of antimicrobial prescribing guidance - managing common infections \(rcgp.org.uk\)](#)

Patient action

Initial action: Use reliever inhaler as per Personal Asthma Action Plan. If 2 or more further symptoms over the next 24 hours despite increased inhaler use, start/request rescue pack.

When to seek advice or help:

1. When first experiencing symptoms, contact the GP practice to request a rescue pack **OR** As soon as the steroid and/or antibiotic are started.
2. Contact the GP practice if no improvement after 2-3 days.
3. If severe symptoms persist, contact the GP practice, or dial 999. Severe symptoms include:
Severe Breathlessness, chest pain, high fever/temperature, agitation, drowsiness or confusion.

