# Guidance on Inhaled Therapies: Chronic Obstructive Pulmonary Disease (COPD)

NHS Lothian

## How to use this guidance

! This guideline should be used to support new patients being commenced on therapy or those requiring treatment to be stepped up or down.

! Inhaler switches should only take place if clinically appropriate after a review.

! Inhalers should be prescribed by brand name, except for salbutamol.

! Combination inhalers should be used where appropriate.

## Choosing the right device

- Inhaler technique and adherence should be checked at each review and prior to any treatment escalation.
- Choice of device should be based on individual patient inhaler technique including inspiratory flow rate.
- Can the patient inhale
  - **Hard and fast = DPI pathway**
  - **Slow and steady = MDI pathway (encourage spacer use)**
- In this guidance, inhalers are given a symbol indicating required inspiratory flow rate:

pMDI | Med Low | Medium | Med High | High

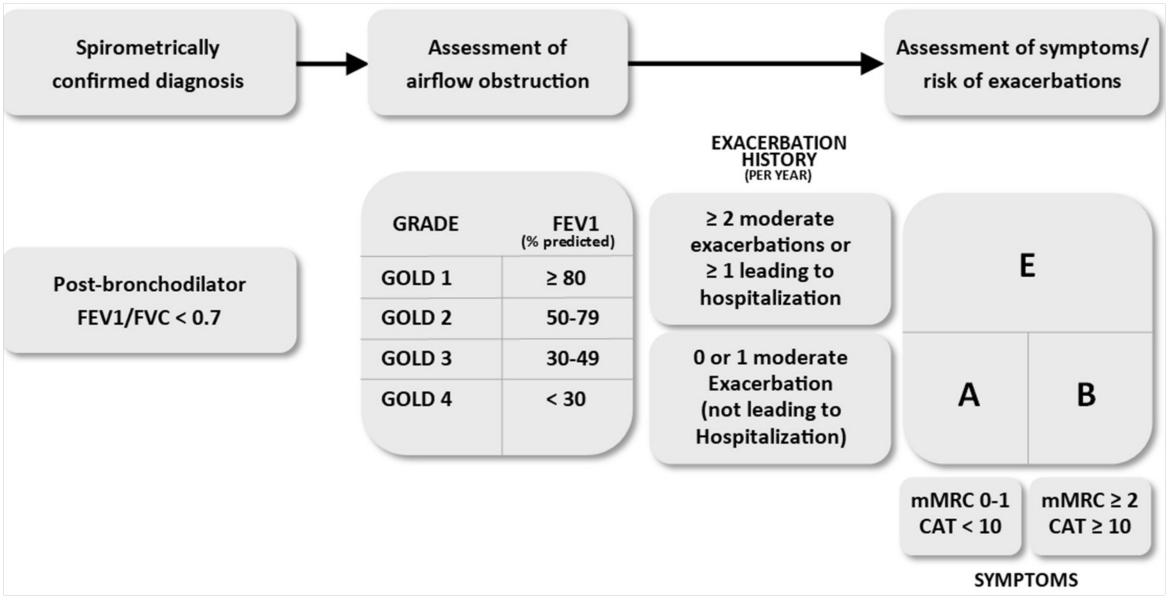
## Green Inhaler Prescribing

- As part of NHS Scotland's commitment to greener prescribing, the environmental impact of inhalers has been examined and should be incorporated into prescribing decisions.
- MDIs contain hydrofluorocarbon propellants that are greenhouse gases.
- Over-reliance of salbutamol increases the carbon footprint of a respiratory patient. Therefore, it is essential to identify and treat uncontrolled airways disease, encourage preventer adherence, and ensure inhaler devices are chosen based on individual inhaler technique to optimise control.
- DPIs have lower estimated carbon footprints than MDIs. Therefore, if a patient is able to use both MDI and DPI they should be given a DPI.
- Ventolin® evohalers have higher $CO_2$ emissions than other brands of salbutamol.
- In this guidance inhalers are given a symbol to indicate carbon footprint. This symbol indicates a 'greener' choice:

## Abbreviations

| | | | |
|---|---|---|---|
| **DPI** | Dry Powder Inhaler | **MDI** | Metered Dose Inhaler |
| **ICS** | Inhaled Corticosteroid | **SABA** | Short-Acting Beta$_2$ Agonist |
| **LABA** | Long-Acting Beta$_2$ Agonist | **LAMA** | Long-Acting Muscarinic Antagonist |
| **mMRC** | modified MRC score | **CAT score** | COPD Assessment Test Score |

## GOLD ABE Assessment Tool





**References**

Alliance Tech Medical: In-check dial: Inhaler resistance range. Issue number: 3 Available from: In-Check DIAL | Alliance Tech Medical

PrescQIPP Community Interest Company. Lowering the Inhaler Carbon Footprint. Bulletin 295; 2021. Available from: Respiratory care | PrescQIPP C.I.C

Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2023: Global strategy for prevention, diagnosis and management of COPD: 2023 Report. Available from https://goldcopd.org/2023-gold-report-2/

# Guidance on Inhaled Therapies: Chronic Obstructive Pulmonary Disease (COPD)

Supported by: NHS Lothian Charity

NHS Lothian

**COPD confirmed by post bronchodilator spirometry with FEV1/FVC <0.7 or lower limit of normal**
Inhaled bronchodilation is not recommended for patients with smoking related symptoms but preserved lung function. (seek specialist advise if needed)

**Assess inhaler technique** to determine suitability for MDI or DPI pathway

**COPD with breathlessness**
- 0-1 exacerbations leading to no hospitalisation **or**
- Some breathlessness and exercise limitation **or**
- CAT <10/mMRC <2 (**GOLD A**)

**COPD with multiple exacerbations and/or worsening breathlessness**
- ≥ 2 exacerbations **or** 1 leading to hospital admission **or** (**GOLD E**)
- CAT score ≥ 10 or mMRC ≥ 2 (**GOLD B**)

**STOP. THINK. REVIEW.**

Before stepping up treatment
- Check inhaler technique/adherence
- Referral to pulmonary rehabilitation through Primary Care
- Consider smoking status and smoking cessation
- Lifestyle and exercise
- Manage co-morbidities
- Consider self-management advice and ACP document as necessary
- Assess if suitable for oxygen therapy
- Vaccination

**If infrequent symptoms:** SABA as required → If frequent use of SABA → SABA as required PLUS LABA+LAMA dual therapy → If continued breathlessness or exacerbations → SABA as required PLUS ICS+LABA+LAMA

**For the symptomatic group** if no response to triple therapy after 3 months, consider stepping down to LABA+LAMA. Consider referral to a specialist if:
- **CAT score >30 (at any stage of the pathway)**
- **Suspicion of asthma-COPD overlap**
- **Worsening exacerbations despite triple therapy**

Eosinophil can be used to aid prescribing choice: Blood eosinophil count: >300/µL very high chance of response to ICS component, 100-300/µL intermediate chance, <100/µL less chance.

| | | DPI Pathway - *hard and fast breath* | | MDI Pathway - *slow and steady breath* | |
|---|---|---|---|---|---|
| **SABA** | 1st | **Salbutamol Easyhaler® 100mcg** 1-2 inhalations as required (blue) High |  | **Salbutamol 100mcg pMDI** (blue) 1-2 inhalations as required pMDI |  |
| | 2nd | **Bricanyl Turbohaler® 500mcg** (Terbutaline) 1 inhalation as required (blue) Medium |  | | |
| **LABA + LAMA** | 1st | **Anoro Ellipta® 55/22mcg** (red top) (Umeclidinium/Vilanterol) 1 inhalation once a day Med Low |  | **Spiolto Respimat® 2.5/2.5mcg** (Tiotropium/Olodaterol) 2 inhalations once a day (green top) |  |
| **ICS + LABA + LAMA** | 1st | **Trelegy Ellipta® 92/22/55mcg** (Fluticasone fuorate/Umeclidinium/ Vilanterol) 1 inhalation once a day (beige) Med High |  | **Trimbow® 87/5/9mcg pMDI** (Beclometasone/Formoterol/Glycopyrronium) 2 inhalations twice daily (grey/red top) pMDI |  |
| | | **Trimbow NEXThaler® 87/5/9mcg** (Beclometasone/Formoterol/ Glycopyrronium) 2 inhalations twice daily (grey top) Med High |  | **Trixeo Aerosphere 5/7.2/160 mcg pMDI** (Formoterol/Budesonide/Glycopyrronium) 2 inhalations twice daily (grey & yellow) pMDI |  |

Produced by NHS Lothian Respiratory Managed Clinical Network. This guidance is supplementary to the East Region Formulary, please visit the ERF for the most up to date information.
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