COPD INHALER PRESCRIBING GUIDELINE

Gloucestershire NHS
Health Community

Fundamentals of COPD care

- Smoking cessation - offer treatment and support to stop smoking
- Offer pneumococcal, influenza and Covid vaccinations
- Offer exercise advice and pulmonary rehabilitation if indicated
- Develop a respiratory action plan with the patient
- Chronic cough and mucus production - consider trial of mucolytic and refer to physiotherapist where service is available
- Optimise treatment of co-morbidities
- Low BMI or obese – offer dietary advice (+/- calorie supplementation)

Abbreviations

DPI: Dry Powder Inhaler
ICS: Inhaled corticosteroid
LABA: Long-acting beta agonist
LAMA: Long-acting muscarinic antagonist
MDI: Metered dose inhaler
SABA: Short-acting beta agonist
SAMA: Short-acting muscarinic antagonist
SMI: Soft mist inhaler (i.e. Respimat device)

Inhaler Prescribing Principles

- Initiate therapy at level appropriate to patient's stage of disease.
- Match the device type to the patient's inspiratory flow rate.
- Use DPIs first line if suitable.
- Use MDIs with spacer in patients unsuitable for DPI.
- Check inhaler technique at every review and before treatment escalation. Any new device must be demonstrated and suitability assessed.
- Use combination inhaler where appropriate.
- See information on **greener inhaler prescribing** on page 2.

Inhaler selection

Can the patient inhale quickly and deeply? (further guidance)

Yes → Follow DPI pathway (preferred)

No → Can patient inhale slow and steady over four to five seconds?

Yes → Follow MDI/SMI pathway (provide and prescribe spacer use with MDIs)

Initial Therapy:
LABA+LAMA (combination inhaler) plus SABA as required (continue PRN SABA throughout treatment stages)
If there is an asthma component start with 'triple therapy'

DPI option: **LABA+LAMA**:
Anoro® Ellipta 55/22mcg - ONE dose ONCE daily

DPI option: **SABA**:
Easyhaler® salbutamol 100mcg – TWO doses when required

MDI/SMI options: **LABA+LAMA**:
Spiolto® Respimat 2.5/2.5mcg – TWO puffs ONCE daily
OR
Bevespi® 7.2/5mcg (with spacer) – TWO puffs TWICE daily

MDI option: **SABA:**
Salbutamol MDI 100mcg – TWO puffs when required (prescribe a lower carbon footprint brand e.g. Salamol®)

If patient is deteriorating or symptoms changing, arrange a chest x-ray if not had in the last 12 months or clinically appropriate to repeat.
Consider Specialist opinion in patients that are poorly responsive to treatment, deteriorating or 2 or more exacerbations, change in cough pattern or palliative.

Patient limited by increasing breathlessness, SABA use, or CAT score. Assess inhaler technique and adherence.

- No exacerbations **or**
- exacerbations **and** eosinophils <0.3

Revisit fundamentals of COPD care (see above). Ensure all interventions considered/optimised.
Consider discussion at virtual MDT.

- **Consider a trial of triple therapy**.
- Perform CAT test before initiation and after three months to evaluate. A reduction in CAT of two units or more is significant. Change back to LABA+LAMA if no benefit.

- Two or more per exacerbations per year **or**
- One hospitalisation **or**
- Eosinophils > 0.3

'Triple therapy' ICS+LABA+LAMA (combination inhaler)

DPI options:
Trelegy® Ellipta 92/55/22mcg – ONE dose ONCE daily

Trimbow® Nexthaler 88/5/9mcg – TWO puffs TWICE daily

MDI options:
Trixeo® 160/9/7.2mcg mcg with spacer – TWO puffs TWICE daily

Trimbow® 87/5/9mcg with spacer – TWO puffs TWICE daily

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Greener Inhaler Prescribing

- The NHS long term plan has committed the NHS to reducing greenhouse gas emissions from inhalers, with a target to reduce the carbon impacts of inhalers by 50% by 2030, and a drive to reduce MDI prescribing.
- Metered dose inhalers (MDIs) contain hydrofluorocarbon propellants which are powerful greenhouse gases.
- As such most MDIs have a carbon footprint many times greater than DPIs and make up the largest proportion of the NHS carbon footprint of any group of medicines.
- Therefore, if a patient is able to use both MDI and DPI they should be given a DPI or a low carbon MDI (as shown on page one i.e. Trixeo®).
- Ventolin® Evohalers should **not** be prescribed as they have a carbon footprint more than double that of the smaller volume Salamol® MDI.
- SMIs (Respimat device) do not contain a propellant and are therefore a greener inhaler choice. The reusable inhaler device may be used with six refill cartridges before it needs to be discarded.
- All inhalers should be returned to a pharmacy to be disposed of in an environmentally safe manner.
- In this guideline each inhaler is allocated a footprint symbol:
  - indicates a 'greener' choice
  - indicates a 'less-green' choice

Additional Information

- This guideline is intended to support the choice of treatment for new patients, or current patients who may benefit from a change of inhaler. Patients on alternative inhalers or devices should not be routinely switched unless this is the outcome of a COPD review.
- The intention is that, for the majority of patients requiring a new or changed inhaler, one of the above inhaler choices will be prescribed, using the brand names stated to minimise the risk of dispensing errors.
- Consider stopping new treatment if patient feels no improvement. (Symptomatic benefit is expected within 4 weeks. A longer trial period is needed to assess reduction in exacerbations).

Why dual bronchodilators?

- Evidence suggests that LABA/LAMA combination inhalers are more effective than monotherapy LAMA or LABA treatment.
- LABA/LAMAs are more effective at reducing symptoms and exacerbations and this does not appear to be associated with an increase in adverse effects.
- A reduction in symptoms can enable patients to become more active - ensure you give advice about how to increase activity and refer to pulmonary rehabilitation if appropriate.

Mucolytics

- Mucolytics do not prevent exacerbations
- Only prescribe a mucolytic to treat troublesome phlegm.
- Carbocisteine 750mg tds (£13.10) can be trialled for 4 weeks.
- If no effect – trial without.
- If effective - reduce to maintenance dose (750mg bd).
- Consider using in winter months only.

Inhaler Technique

- For **MDI** and **SMI** devices (with or without spacers) patients should be educated to inhale gently.
- For **DPI** devices patients should inhale forcefully (requiring a higher inspiratory flow rate than MDIs).
- Further information: https://www.rightbreathe.com

Inhaled corticosteroids (ICS)

- Patients who will derive greatest benefit are those have an eosinophil count of >0.3 x 10^9/L and a history of frequent exacerbations or hospitalisations.
- Use ICS at licensed dose for COPD in an ICS/LABA or triple combination inhaler licensed for COPD. There's no evidence that increasing the dose gives greater benefit but it will increase side effects.
- Inhaled steroids increase the risk of pneumonia. Ensure they are only used in patients where benefit outweighs risk. **If a patient has two or more pneumonia episodes re-evaluate benefit/risk and consider stopping ICS**.

Eosinophils

- Measure baseline eosinophils when patient is well (a result from within past 6 months is acceptable).
- Eosinophil levels don't tend to vary significantly unless the patient is ill or being treated with oral corticosteroids or methotrexate.
- Inhaled steroids at doses licensed for COPD don't impact eosinophil counts significantly. Oral corticosteroids do.
- This guideline gives some suggested cut points but bear in mind the measure is a continuous variable:
  - Over 0.3 x 10^9/L indicates likely benefit from ICS but the higher the eosinophil count, the greater the likely benefit.
  - Under 0.3 x 10^9/L patients are unlikely to benefit from ICS.

Asthma/COPD Overlap

- If asthma/COPD overlap is suspected (e.g. childhood symptoms, diurnal variability, nocturnal symptoms, atopy/allergies, previous blood eosinophilia), then a trial of ICS+LABA first-line should be considered.

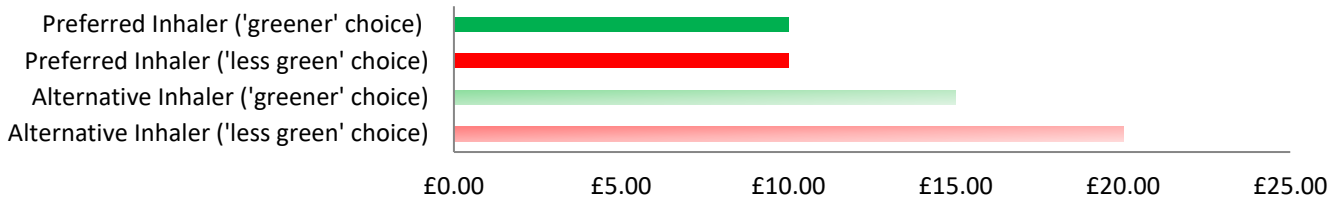
Spacer Devices

- Prescribing a compatible spacer for use with MDI devices in ALL patients, but especially those with sub-optimal inhaler technique.
- Advise on care and cleaning of spacer.
- Spacers should be replaced at least annually.

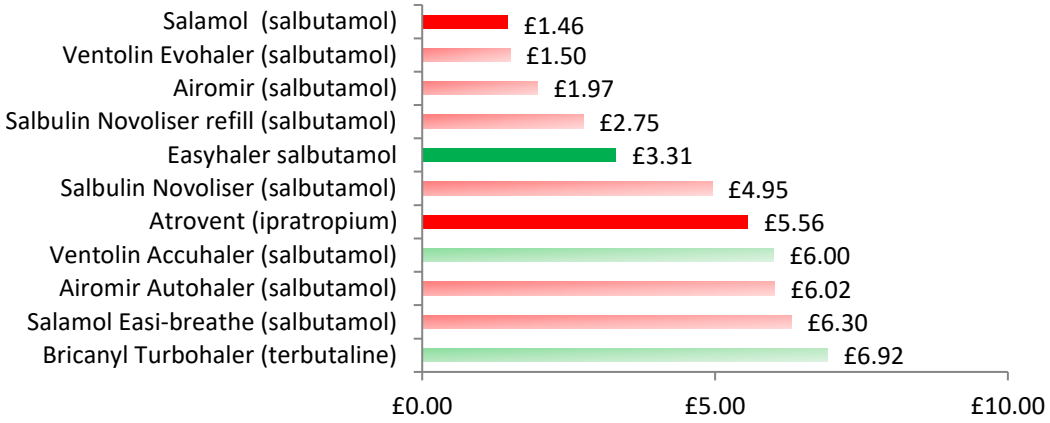
Appendix:

- The following charts provide a cost comparison to aid decision making when the formulary recommended first-choice inhalers (page 1) are not suitable
- Prices correspond to 30 days' treatment (SABA prices correspond to 200 doses of salbutamol 100mcg or 100 doses of terbutaline 500mcg, SAMA price corresponds to 200 doses of ipratropium)

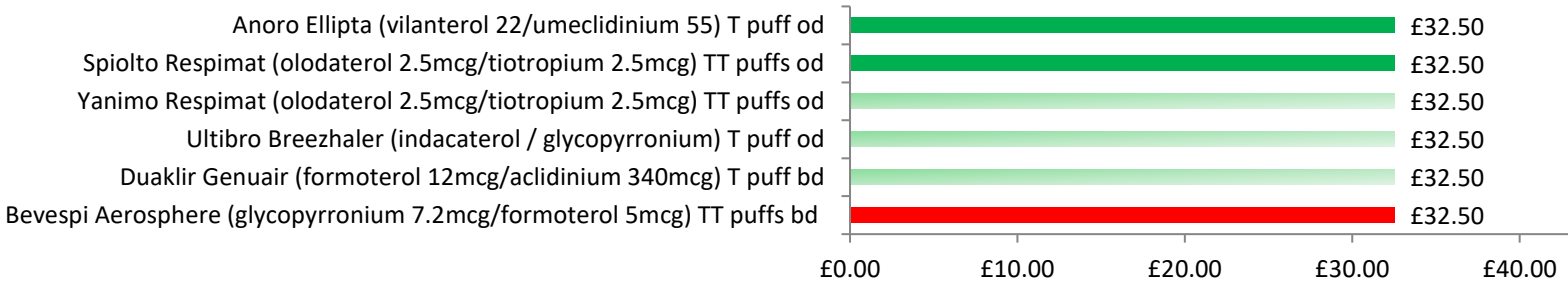
Example:



SABA or SAMA



LABA + LAMA



ICS + LABA + LAMA