COPD INHALER PRESCRIBING GUIDELINES

Fundamentals of COPD care

- Smoking cessation - offer treatment and support to stop smoking
- Offer pneumococcal and influenza 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 - consider referring for dietitian input

Confirm diagnosis of COPD perform full blood count for eosinophil level

If patient has asthma and COPD follow asthma treatment guidelines and apply fundamentals of COPD care

Inhaler principles

- Match the device type to the patients inspiratory flow rate (use Incheck device to assess)
- Use DPI first line if suitable
- Use MDI in patients unsuitable for DPI
- Check inhaler technique at every review and before treatment escalation
- Use combination inhalers where appropriate.

Inhaler selection

Can the patient inhale quickly and deeply?

- Yes → Follow DPI pathway (preferred)
- No → Can patient inhale slow and steady over 4 to 5 seconds?
  - Yes → Follow MDI/SMI pathway (provide and encourage spacer use)

Offer SABA to use as needed

DPI options:
- Salbutamol Easyhaler
- Salbutamol Accuhaler
- Terbutaline Turbohaler

MDI options:
- Salbutamol MDI with spacer

If patient symptomatic and needing SABA every day or has exacerbations - Assess inhaler techniques

- Symptomatic – no exacerbations → LABA+LAMA (combination inhaler)
- Exacerbation 1 or less per year no hospitalisations or Eosinophils < 100 (0.1) → LABA+LAMA (combination inhaler)
- Exacerbations 2 or more/year or 1 hospitalisation and Eosinophils > 100 (0.1) → ICS+LABA (combination inhaler)

LABA+LAMA (combination inhaler)

DPI options:
- Anoro Ellipta: 1 puff once daily
- Duaklir Genuair: 1 puff twice daily

MDI/SMI options:
- Spiolto Respimat: 2 puffs once daily

Patient limited by increasing symptoms or exacerbations. Assess inhaler technique and adherence

- No exacerbations or exacerbations and Eosinophils < 100 (0.1) → Revisit fundamentals of COPD care. Ensure all interventions considered/optimised.
- Exacerbations and Eosinophils > 100 (0.1) → Triple therapy ICS+LABA+LAMA (combination inhaler)

ICS+LABA (combination inhaler)

DPI options:
- DuoResp Spiromax 320/9: 1 puff twice daily
- Fostair Nexthaler 100/6: 2 puffs twice daily
- Relvar Ellipta 92/22: 1 puff once daily

MDI options with spacer:
- Fostair 100/6: 2 puffs twice daily
- Symbicort 200/6: 2 puffs twice daily

Patient limited by increasing symptoms or exacerbations. Assess inhaler technique and adherence

Triple therapy ICS+LABA+LAMA (combination inhaler)

DPI options:
- Trelegy Ellipta: 1 puff once daily

MDI options:
- Trimbow MDI with spacer: 2 puffs twice daily

- Consider a trial of triple therapy.
- Perform CAT test before initiation and after 3 months to evaluate a reduction in CAT score of 2 units or more is significant.
- Change back to LABA+LAMA if no benefit

Approved by the Royal Cornwall Hospitals NHS Trust (RCHT) consultants governance group in February 2020 and the medicines optimisation programme board in July 2020. Next review date July 2023.

Cornwall and the Isles of Scilly Health and Care Partnership

Fundamentals of COPD care

- These are high value interventions shown to improve quality of life and reduce exacerbations
- These should be individualised to each patient and form the core of COPD management
- Inhaled therapy should be used alongside the fundamentals and tailored to individual patient needs.

Inhaler strategy

- The NHS has a target to reduce carbon emissions; 1 metered dose inhaler has the same carbon footprint as up to 24 dry powder inhalers.
- Therefore if a patient can use both a DPI and MDI they should be given a DPI.
- Patients for whom MDI is the most appropriate device – give an MDI and spacer
- Use the same device type (DPI or MDI) for all inhalers where appropriate
- Use combination devices where appropriate supports adherence and is more cost effective. NICE guideline [NG115].
- Ensure patients are taught how to use a new device and technique and adherence are checked at each review and before escalating therapy.
- Inhaler devices vary in how complex or easy to use they are, the first line recommended inhalers are those which are simple for patients to use and for healthcare professionals to teach.
- Second line inhalers can be used if first line devices are not suitable.
- Use the Incheck device to assess patient inspiratory flow rate and suitability for different devices.
- Inhaler information and how to use videos are available at www.rightbreathe.com

Why dual bronchodilators?

- Evidence suggests that LABA/LAMA combination inhalers are more effective than monotherapy LAMA or LABA treatment.
- LABA/LAMA's are more effective at reducing symptoms and exacerbations and this does not appear to be associated with an increase in side 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.

The COPD inhaler prescribing guidelines have been carried out with input from Fiona Lee, pharmaceutical advisor, NHS Kernow Clinical Commissioning Group); Jill Leyshon, respiratory specialist nurse, RCHT; Matthew Berry, consultant in respiratory medicine, RCHT and the respiratory oversight group.

Inhaled corticosteroids (ICS)

- Recent evidence shows that ICS benefits some COPD patients more than others.
- Patients who will derive greatest benefit are those have an eosinophil count of >100 (0.1 x 10^9/L) and a history of frequent exacerbations or hospitalisations.
- The flow chart in the guideline takes both of these factors into account to help you decide when an ICS containing treatment is appropriate.
- There is little evidence to support the use of ICS in patients who do not have exacerbations therefore we recommend ensuring all other interventions (such as pulmonary rehab) have been considered. If you decide to trial ICS, use an objective symptom measure like the CAT score to assess benefit and stop if no benefit seen. A reduction in CAT score of 2 units is clinically meaningful.
- 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 2 or more pneumonia episodes re-evaluate benefit/ risk (exacerbation reduction vs pneumonia risk) and consider stopping ICS.

A bit more about Eosinophils

- Measure baseline Eosinophils in the stable state (when the patient is well).
- Eosinophil levels don't tend to vary significantly unless the patient is ill or being treated with oral steroids.
- Inhaled steroids at doses licensed for COPD don't impact eosinophil counts significantly. Oral steroids do.
- The guideline gives some suggested cut points but please bear in mind the measure is a continuous variable - over 100 (0.1 x 10^9/L) indicates benefit from ICS but the higher the eosinophil count the greater the likely benefit.
- Under 100 (0.1 x 10^9/L) patients are unlikely to benefit from ICS.

Abbreviations

- DPI: Dry powder inhaler
- ICS: Inhaled corticosteroid
- LABA: Long acting beta agonist
- LAMA: Long acting muscarinic agent
- MDI: Metered dose inhaler
- SABA: Short acting beta agonist
- SMI: Soft mist inhaler