Grŵp Strategaeth Meddyginiaethau Cymru Gyfan
All Wales Medicines Strategy Group

# All Wales COPD Management and Prescribing Guideline

**December 2021**

**Updated October 2023 – treatment of phenotypes 2 and 3 now recommend triple therapy first-line and supporting information has been updated [see point 5]'.**

**Updated November 2023 – SABA inhaler options for managing exacerbations have been updated.**

This document has been prepared by the Respiratory Health Implementation Group, with support from the All Wales Prescribing Advisory Group (AWPAG) and the All Wales Therapeutics and Toxicology Centre (AWTTC), and has subsequently been endorsed by the All Wales Medicines Strategy Group (AWMSG).

AWMSG has only endorsed the guideline content. AWMSG has not endorsed the mobile technology application (app) referred to within the document as this falls outside their remit. The responsibility to ensure all regulatory requirements have been investigated in the development of the app, and continue to be adhered to, remains with the app owner.

Please direct any queries to AWTTC:

All Wales Therapeutics and Toxicology Centre
The Routledge Academic Centre
University Hospital Llandough
Penlan Road
Llandough
Vale of Glamorgan
CF64 2XX

awttc@wales.nhs.uk
029 218 26900

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# The All Wales COPD Management and Prescribing Guideline

Y Grŵp Gweithredu ar Iechyd Anadlol
Respiratory Health Implementation Group

GIG CYMRU NHS WALES

*Also available in digital format*

## The All Wales COPD Management and Prescribing Guideline

### CORE PRINCIPLES

People aged over 35 years who present with one or more features from the COPD likelihood checklist should have post-bronchodilator spirometry.

Once diagnosis is confirmed, start with high-value interventions, including smoking cessation, flu vaccination, pulmonary rehabilitation and, where appropriate, oxygen therapy.

Inhaled therapy is prescribed according to the patient's phenotype.

### STEP 1: ASSESSMENT

**STEP 1 INFORMATION:**
ASSESSMENT

**COPD likelihood Checklist**

**Perform investigations**
- **Post-bronchodilator spirometry**
- Chest X-ray (CXR)
- Full Blood Count (FBC)
- Oxygen Sats ($SpO_2$)
- α-1 anti-trypsin (if family history of emphysema)

**COPD likelihood checklist**

- ☑ Smoking history (>20 pack years)
- ☑ Other exposures (Pollution, biomass fuel burning, other noxious fume exposure)
- ☑ Exertional breathlessness
- ☑ Chronic cough
- ☑ Regular sputum production
- ☑ Frequent winter 'bronchitis'
- ☑ Wheeze
- ☑ Ankle swelling

**Red Flag Symptoms**

**Red Flag Symptoms**
- Persistent cough in a smoker
- Haemoptysis
- Chest pain
- Unexplained weight loss
- Clubbing in a smoker
- Abnormal CXR

**Any red flag symptoms?**
Perform CXR and refer as urgent suspected cancer

### STEP 2: DIAGNOSIS

Post-bronchodilator
**FEV1/FVC ratio <LLN**

### STEP 3: REFER

- ☑ Vaccination - Flu - COVID - Pneumococcal
- ☑ Exercise, education & pulmonary rehabilitation
- ☑ Smoking cessation therapy if required
- ☑ Referral for oxygen assessment if SpO2 is <93% and not smoking
- ☑ Dietary advice Refer if low or high BMI

### STEP 4: PRESCRIBE

***From the list of inhalers provided, choose the most suitable for the patient, considering inpiratory flow and inhaler technique. Choose a dry powder inhaler preferentially to reduce the carbon footprint, unless the patient cannot use one.***

**STEP 4 INFORMATION:**
PRESCRIBE

**Phenotype 1**

COPD with predominant breathlessness

Dyspnoea with less than 2 exacerbations per year

**Phenotype 2**

COPD with Exacerbation (+/- Breathlessness)

Two or more exacerbations per year

**Phenotype 3**

COPD with asthma overlap (ACOS)

Evidence of significant symptomatic or lung function response to steroids (oral or inhaled). Blood eosinophil counts >0.3

| Phenotype 1 | Phenotype 2 | Phenotype 3 |
|---|---|---|
| **Prescribe LABA + LAMA** | **Prescribe Triple therapy** (stop other preventer inhalers) | **Prescribe Triple therapy** (stop other preventer inhalers) |
| Review exacerbation frequency regularly, and escalate to Phenotype 2 if ≥2 exacerbations/year | If continued exacerbations or breathlessness, review adherence, inhaler technique, and consider referral (see below) | If poorly controlled asthma symptoms, refer to the All Wales Asthma Management guidelines (step 4) - consider MART plus LAMA |

**Prescribe a (LABA + LAMA)**
*Below are options in this category*

| Duaklir Genuair 340/12 1 dose BD *Forceful and deep* | Ultibro Breezhaler 85/43 1 dose OD *Forceful and deep* | Anoro Ellipta 55/22 1 dose OD *Forceful and deep* |
|---|---|---|
|  |  |  |

| Spiolto Respimat 2.5/2.5 2 doses OD *Gentle and deep* | Bevespi Aerosphere 7.2/5 2 doses BD via spacer *Gentle and deep via spacer* |
|---|---|
|  |  |

Ensure patient can use device. All MDIs must be used with a spacer

**Prescribe triple therapy (ICS + LABA + LAMA)**
*Below are options in this category*

| Trelegy Ellipta 92/55/22 1 dose OD *Forceful and deep* | Trimbow NEXThaler 88/5/9 2 dose BD *Forceful and deep* |
|---|---|
|  |  |

| Trimbow MDI 87/5/9 2 doses BD via spacer *Gentle and deep via spacer* | Trixeo Aerosphere 5/7.2/160 2 doses BD via spacer *Gentle & deep via spacer* |
|---|---|
|  |  |

Ensure patient can use device. All MDIs must be used with a spacer

### STEP 5: REVIEW

***Review annually if COPD is well controlled***

**Poorly controlled?**

**Consider:**
- Inhaler technique
- Non-pharmacological interventions
- Smoking status

**If symptoms worsen, consider referral**

**Manage exacerbations**

- Prescribe a SABA
- Prescribe prednisolone (30-40mg once a day for 5 days)
- Prescribe antibiotic if increased sputum purulence, volume and breathlessness

**Manage Exacerbations**
**Prescribe a SABA**
*Below are options in this category*

| Salbutamol 100mcg Easyhaler PRN *Forceful and deep* | Ventolin Accuhaler 200mcg PRN *Forceful and deep* | Salamol 100mcg MDI via spacer PRN *Gentle and deep via spacer* |
|---|---|---|
|  |  |  |

Ensure patient can use device. All MDIs must be used with a spacer

Find out more here

COPDhub
Get your patients to download the COPD App

**DID YOU KNOW?**

NHS Wales has set a target to reduce the proportion of high global warming potential (GWP) inhalers from more than 70% to less than 20% by 2025

**PRESCRIBE A DPI PREFERENTIALLY UNLESS THE PATIENT CANNOT USE ONE**

Learn more here

**ACOS:** Asthma COPD overlap syndrome
**CXR:** Chest X-ray
**DPI:** Dry Powder Inhaler
**GWP:** Global warming potential
**FBC:** Full Blood Count
**ICS:** Inhaled Corticosteroid
**LABA:** Long-acting $Beta_2$ Agonist
**LAMA:** Long Acting Muscarinic Antagonist
**LLN:** Lower limit of normal
**MDI:** Metered Dose Inhaler
**SABA:** Short-acting $Beta_2$ Agonist
**$SpO_2$:** Oxygen Sats
**OD:** Once daily
**BD:** Twice a day

**Low global warming potential**
**High global warming potential**

**Find out more about this guideline**
icst.info/the-all-wales-copd-and-management-prescribing-guideline

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# The All Wales COPD Management and Prescribing Guideline

## Supporting notes

**THE ALL WALES COPD MANAGEMENT AND PRESCRIBING GUIDELINE**

icst.info/the-all-wales-copd-and-management-prescribing-guideline

# SUPPORTING INFORMATION

1. Spirometry is necessary to make a diagnosis of COPD. It cannot be made on the basis of radiological appearances, symptoms or smoking history alone. Inhalers should not be prescribed in the absence of spirometry except when patients have asthma/COPD overlap syndrome (ACOS) in which raised peripheral blood eosinophils and good response to steroids are helpful markers.

2. Delivery of Spirometry was significantly impacted by the COVID pandemic, however RHIG are in the process of introducing a solution to deliver this nationally in Wales using trained practitioners.

3. While the Global Initiative for Chronic Obstructive Lung Disease (GOLD) and NICE use a fixed ratio of < 0.7 $FEV_1$/FVC to diagnose COPD, RHIG advise the use of the lower limit of normal (LLN) which reflects changes in lung elasticity with age. Using a fixed ratio will misidentify up to 30% of healthy, non-smoking, 80 year old patients as having COPD. Given the more widespread availability of trained spirometry practitioners going forward, RHIG is recommending this switch in the method for diagnosis.

4. Non-pharmacological interventions are highlighted as first steps in this pathway since they are the highest value interventions. Smoking in particular should be addressed at every opportunity.

5. The recent GOLD guidelines suggest improved outcomes for patients with Asthma/ COPD overlap syndrome (ACOS) who are treated with triple therapy as opposed to ICS/LABA. For this reason we have suggested that patients with ACOS should be commenced on triple therapy as first line.

6. The use of short acting $beta_2$ agonists (SABAs) on a regular basis for stable COPD is not recommended in line with GOLD guidance.[1]

7. In Wales we have set an ambitious goal to reduce the use of high global warming potential (GWP) inhalers from >70% of all inhalers to <20% by 2025.[2] Currently, the carbon footprint of inhaler usage in Wales each year is equivalent to 60,000 tonnes of $CO_2$ being emitted, 98% of which is due to metered dose inhalers (MDI) and only 2% is due to dry powder inhalers (DPI). Salbutamol MDI alone accounts for 66% of the total carbon footprint. Prescribe a DPI preferentially unless a patient cannot use one.

8. An essential part of COPD management is to minimise exacerbations, which have been shown to increase mortality, worsen quality of life and result in lung function decline. Patients who have 2 or more exacerbations in the community or an exacerbation leading to a hospital admission within the last 12 months, should be regarded as “high risk” for exacerbations and should have a step up in their pharmacotherapy. Other interventions which have been shown to reduce exacerbations include smoking cessation, flu vaccination, as well as azithromycin and roflumilast in selected patients (these drugs should be initiated in Secondary Care).

9. Nebulised bronchodilators confer no significant advantage over inhaled bronchodilators and are likely to cause more side effects. They should only be considered in palliative patients or when the use of a nebuliser during exacerbations is likely to avoid admission to hospital.

10. In patients with chronic bronchitis (chronic sputum producers), particularly when this is thick and difficult to expectorate, give a trial of carbocisteine 750mg TDS for two weeks then to reduce to 750mg BD long term. Reassess and stop if no clinical improvement after 2-3 months.

11. Rescue packs can, in certain instances, be a useful means by which patients can initiate prompt and effect treatment for an exacerbation of airways disease. They are NOT suitable for all patients in all circumstances. Healthcare professional issuing rescue packs need to be confident that the individual patient is able to recognise a true exacerbation and be able to differentiate if from chronic symptoms. Ideally such patients should have attended a COPD education program. Rescue packs should not be a substitute for a consultation where this is clinically indicated.

1. GOLD-2023-ver-1.3-17Feb2023_WMV.pdf (goldcopd.org)
2. NHS Wales decarbonisation strategic delivery plan | GOV.WALES