Primary Care Management of COPD

Document history:

Version	Date	Main Changes/Comments
1	17/9/21	Changes to guidance as per NICE NG115 in consultation with primary, secondary and community respiratory specialists.
2	21/9/21	Alterations made as per comments from Dr Banik
3	24/9/21	Alterations made as per comments from A. Scott (Resp nurse consultant) EKHFT
4	8/10/21	Alterations made as per comments from Virgincare respiratory nurses.
5	26/10/21	Comments as per JFG
6	29/10/21	Comments as per IRDN
7	6/12/21	Comments Dr Baghia-Ravary EKHFT

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Diagnosing COPD

When **diagnosing COPD** use the MRC scale to gauge the degree of breathlessness. Undertake **spirometry** to confirm diagnosis (and FEV1/FVC ratio <0.7 will confirm diagnosis). Consider alternative diagnosis or investigations for older people who have and FEV1/FVC ratio <0.7 but do not have typical symptoms of COPD. Consider a diagnosis of COPD in younger people who have symptoms of COPD, even when their FEV1/FVC ratio is above 0.7**. At the time of diagnosis also complete: a chest X-ray, and FBC and BMI. Consider eosinophil levels and history of eosinophil levels, which will guide future steroid responsiveness.**

MRC dyspnoea scale (choose one only)	
MRC Grade 1	I am not troubled by breathlessness except on strenuous exercise
MRC Grade 2	I get short of breath when hurrying on the level or walking up a slight hill.
MRC Grade 3	I walk slower than people of the same age on the level because of breathlessness, or I have to stop for breath when walking on my own pace on the level.
MRC Grade 4	I stop for breath after walking about 100metres or after a few minutes on the level.
MRC Grade 5	I am too breathless to leave the house or I am breathless when dressing or undressing.

***Lifestyle advice**

Offer treatment and support (Very Brief Advice training https://www.ncsct.co.uk/publication_very-brief-advice.php) or refer to stop smoking (https://www.kentcht.nhs.uk/service/one-you-kent/one-you-smokefree/ and https://www.medway.gov.uk/info/200221/a_better_medway/441/reducing_smoking)

Offer pneumococcal and influenza vaccinations

Offer pulmonary rehabilitation if MRC is 3 or above (or CAT score is >10)

Co-develop a personalised self-management plan

Optimise treatment for comorbidities (including mental health)

Complete physical observation of patient and offer inhaler technique review at every consultation

Inhaler choice

THIS IS NOT INTENDED TO REPLACE ALL POTENTIAL FORMULARY AND SECONDARY CARE INHALER CHOICES, BUT TO SHARE BEST PRACTICE WHEN CONSIDERING PATIENTS JOURNEY THROUGH INHALER PATHWAY.

When considering the most appropriate inhaler for a patient we need to consider several things:

- Patient's inspiratory flow- Dry Powder inhalers require greater respiratory effort, and this may not always be appropriate as disease progresses. Use In-check dial (visit link for instructions on how to use device https://www.youtube.com/watch?v=bGCfCGw9h24) to assess and guide choice.
- Patient's ability to use the inhaler- Concordance with inhaled therapy is paramount to reduction in flare-ups and disease progression. Select an inhaler for which there is a similar inhaler device further along the pathway and ensure Inhaler training is completed comprehensively ONCE .If inspiratory flow reduces due to disease progression ensure full inhaler training is provided again when switching from a DPI to an MDI. Full inhaler guidance is available at https://www.rightbreathe.com/
- Carbon footprint- The NHS has committed to lowering the global warming potential (GWP) for inhalers. All inhaler choices for the KMCCG COPD guidance have considered the current data (available at https://www.prescqipp.info/our-resources/webkits/hot-topics/)

Changes to NICE guidelines

NICE NG115 was last updated in July 2019. The main change to guidance is the use of dual bronchodilator therapy sooner after diagnosis, based on clinical evidence that this reduces the potential for flare-ups. The other change is the importance of considering a history of asthma. This can be determined by gathering a full medical history and also by examining historical eosinophil counts (from a full blood count FBC). **Any patient with eosinophils >0.3 x 10^9/L should be considered for LABA/ ICS therapy, and <0.3 X 10^9/L should be considered for LABA/LAMA.** If symptoms persist, in spite of concordance with initial inhaled therapy, patients with an eosinophil count of <0.3 x 10^9/L CAN now be considered for a 3 **month trial of triple therapy**. If no improvement is seen treatment should be **de-escalated to LABA/LAMA** and referral considered to rule out differential diagnosis. **NOTE: LAMA INHALERS SHOULD BE USED IN CAUTION WITH PATIENTS WITH KNOWN OR SUSPECTED PROLONGED QT- ECG SHOULD BE CONSIDERED**

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Pharmacological treatment: Consider Inspiratory flow, using **In-check dial**, to ensure appropriate choice of inhaler. It is important to consider the Global Warming Potential (GWP) of inhalers. If supplying an MDI ensure the patient is also prescribed a **spacer**. **(The list of inhalers in this guidance is intended as a guide for new diagnosis. A full list of inhalers are available on the individual formularies across KMCCG ***)**

Dry powder inhaler (DPI): Requires HIGH inspiratory Flow. Technique: Steady/forceful and deep	**Metered dose Inhaler (MDI) and mist inhalers** Requires LOW inspiratory Flow Technique: Slow and Deep

Mild disease and short term relief (where MRC <3 and infrequent exacerbations) : Short term Beta-2-Agonist (SABA) or short acting muscarinic antagonist (SAMA)

DPI FIRST LINE- LOW GWP	MDI (IF DPI NOT SUITABLE)
Salbutamol Easyhaler® (Salbutamol) 1-2 puffs qds prn OR Bricanyl Turbohaler (Terbutaline) 1 puffs qds prn  	Salamol® (salbutamol) 1-2 puffs qds prn 

ESCALATE

Patient is limited by disease or is suffering from flare-ups: Revisit lifestyle advice* and concordance with SABA. Prescribe LABA/LAMA or LABA/ICS. CAUTION: Spiolto Respimat is not suitable for patients with a CrCl <50ml/min unless benefits outweigh risks. ALL INHALERS SHOULD BE PRESCRIBED BY BRAND.

If eosinophil levels <0.3 x 10^9/L (and no past or concurrent history of asthma)			If eosinophil levels ≥0.3 x 10^9/L and /or past or concurrent history of asthma	
Consider LABA/LAMA			Consider LABA/ICS	
DPI FIRST LINE - LOW GWP	Inhaled Solution- MED GWP	MDI IF DPI NOT SUITABLE	DPI FIRST LINE- LOW GWP	MDI IF DPI NOT SUITABLE
Anoro Elipta® (Umeclidinium 55µg/Vilanterol 22mcg) 	Spiolto Respimat® (Titropium 2.5mcg/ Oldaterol 2.5mcg) 	Bevespi Aerosphere® (Glycopyrronium 7.2mcg/Formoterol 5mcg) 	Fostair Nexthaler® (Formoterol 6mcg/ Beclometasone 100mcg) 	Fostair® (Formoterol 6mcg/ Beclometasone 100mcg) 

ESCALATE

Patient is limited by disease or is suffering from flare-ups: Revisit lifestyle advice * and concordance with current treatment. Consider switching to a different formulation of inhaler. If still no improvement, consider a 3 month trail of LABA/ICS/LAMA. If sufficient improvement- continue

DPI FIRST LINE - LOW GWP		DE-ESCALATE	MDI IF DPI NOT SUITABLE	
Trelegy Elipta® (Umeclidinium 55mcg/Vilanterol 22mcg/Fluticasone 92mcg) 	Trimbow Nexthaler® (Glycopyrronium 11mcg/Formoterol 5mcg/Beclometasone 87mcg) 		Trixeo Aerosphere® (Glycopyrronium 7.2mcg/Formoterol 5mcg/Budesonide 160mcg) 	Trimbow® (Glycopyrronium 11mcg/Formoterol 5mcg/Beclometasone 87mcg) 

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Monitoring and follow up

- Review symptoms including dyspnoea.
- Ensure all patients have a self-management plan. (Appendix 1)
- Review exacerbation risk and number of flare ups in the last 12 months.
- Review need for COPD rescue pack (See KM individual formularies COPD rescue pack guidance [reference 6 for links])
- Assess inhaler technique and adherence (signpost patient to https://www.rightbreathe.com/)
- Discuss concerns, issues and side effects.
- Adjust therapy including de-prescribing, switching device or inhaler molecule of same drug class or adding to therapy.
- Consider referral for Pulmonary Rehab (PR) if MRC is 3 or above.
- If symptoms are not controlled by current treatment consider treatment escalation or pro-BNP and ECG to rule out alternative diagnosis.

Depression and anxiety

- Depression and anxiety are frequent and important co-morbidities in COPD..
- Simple anxiety management techniques and breathing control should be advised. (https://www.blf.org.uk/support-for-you/long-covid/breathlessness-support/managing-breathlessness)
- Severe anxiety and depression requires treatment in the form of counselling and medication to limit the impact on breathlessness and mobility.
- Consider s**ocial prescribing** to improve general wellbeing and physical activity.
- Consider referral to IAPT (https://www.helpkentandmedway.co.uk/)following completion of anxiety and depression assessment tools

Nutrition

- 1 in 5 patients in primary care, with COPD are at risk of malnutrition.
- Normal BMI is 20-25, and should be assessed at diagnosis of COPD, and ideally annually.
- Refer people for dietetic advice if they have a BMI that is abnormal (high or low) or changing over time.

Management of other co-morbidities

Ensure optimal management of other co-morbidities particularly cardiovascular disease (including heart failure). Rapid worsening of COPD including recent flare-ups, should be referred for lung cancer screening.

Pulmonary Rehabilitation

- DGS and EK:
  Whitstable and Tankerton Hospital 01227 594657
  kcht.pulmonaryrehab@nhs.net
- Medway: 01634 382860 medch.respiratory@nhs.net
- Swale: Currently no commissioned service
- West Kent: MTW 01622 227583 mtw-tr.ICP-RESP@nhs.net

Other pharmacological therapies

- **The list of inhalers in this guidance is intended as a guide for new diagnosis and is not exhaustive. A full list of inhalers are available on the individual formularies across KMCCG ***(https://www.medwayswaleformulary.co.uk/, https://www.formularywkccgmtw.co.uk/, https://www.eastkentformulary.nhs.uk/ and https://www.dgsdvhformulary.nhs.uk/)**
- **Mucolytics –** Consider prescribing a mucolytic, such as carbocisteine if a person with stable COPD develops a productive cough. It is important to monitor efficacy and review as appropriate.
- **Oral antibiotics** – For patients with frequent exacerbations azithromycin 250mg three times a week may be added to therapy. **This should be initiated in secondary care**.
- **Oral theophylline -** There is limited and contradictory evidence regarding the effect of low dose methylxanthines, and their side effect and interaction profiles may discourage clinicians from prescribing. Treatment with methylxanthines is no longer considered empirical treatment for COPD
- **Phosphodiesterase-**4-inhibitirs- Roflumilast is an add-on to bronchodilator therapy and is an option for treating severe COPD. **This should be initiated in secondary care.**
- **Oxygen-** Long term oxygen therapy (>15 hours per day) has been shown to improve survival for those with severe hypoxia. Refer to community services for assessment)

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References

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2. Symptoms suggestive of lung and pleural cancers. NICE CKS February 2021. **https://cks.nice.org.uk/topics/lung-pleural-cancers-recognition-referral/diagnosis/symptoms-suggestive-of-lung-pleural-cancers/**
3. Costs of switching to low global warming potential inhalers. An economic and carbon footprint analysis of NHS prescription data in England. Alexander J K Wilkinson, Rory Braggins, Ingeborg Steinbach, James Smith. BMJ Open Volume 9 Issue 10. https://bmjopen.bmj.com/content/9/10/e028763
4. NICE encourages use of greener inhalers. https://www.nice.org.uk/news/article/nice-encourages-use-of-greener-asthma-inhalers
5. GOLD pocket guide to diagnosis, management and prevention of COPD. 2020 report. https://goldcopd.org/wp-content/uploads/2020/03/GOLD-2020-POCKET-GUIDE-ver1.0_FINAL-WMV.pdf
6. Chronic Obstructive Pulmonary Disease Rescue Pack guidance for primary healthcare professionals: individual formularies (https://www.medwayswaleformulary.co.uk/media/1345/km-copd-rescue-pack-guidance-final-v-4.pdf , https://www.dgsdvhformulary.nhs.uk/media/1071/km-copd-rescue-pack-guidance-final-v-4.pdf , **https://www.eastkentformulary.nhs.uk/media/1656/km-copd-rescue-pack-guidance-final-v-4.pdf, https://www.formularywkccgmtw.co.uk/therapeutic-sections/respiratory-system/airways-disease-obstructive/)**

Appendix 1- Self-Management of Flare-ups Guide

Patient name		Date of birth	
Clinician name		Signed	
Job title		Date	
GP practice		Practice Tel No.	

If you have COPD you are at risk of getting exacerbations/flare up or chest infections when your symptoms get worse. Your COPD rescue medicines are a supply of standby medications to start if this happens before you are able to see your GP.

It is important to recognise the symptoms early as good treatment taken early can help you get better quicker and reduce further damage to your lungs. Always follow the directions on your medication.

WHEN YOU ARE WELL

KNOW

- How much you can do each day
- How your breathing is at rest and during activity
- What makes your breathing worse
- How much you cough and if you produce sputum, what colour is your sputum
- How often you use your reliever (blue inhaler)

LIFESTYLE TIPS

- Eat a balanced diet
- Stop smoking, avoid triggers
- Keep active, exercise as much as you can
- Take your medicines as prescribed
- Avoid running out of medication
- Ensure you have an annual review with your GP

WARNING SIGNS OF EXACERBATION

SIGNS	WHAT TO DO	IF NO RESPONSE AFTER 48HRS
• Breathlessness – more breathless than usual that interferes with daily activities • Increased volume of sputum (phlegm), is thicker or stickier than normal or it has changed colour to yellow or green	• Monitor your symptoms closely • Rest – allow more time for rest • Drink extra fluids and eat regular meals • Increase use of reliever inhaler to 2-4puffs every 4-6hours for 24hours	• For breathlessness: start rescue medication – oral prednisolone • For change in sputum: start rescue medication – antibiotics • For both symptoms: start prednisolone and antibiotics **Contact your GP surgery if you have used your rescue medication**

SEVERE SYMPTOMS

SIGNS	WHAT TO DO
• Very short of breath with NO response to reliever inhaler • Chest pain • High fever (above 38°C) • Feel agitated, panic or fear • Confusion or drowsiness • You develop any other symptoms of concern	**Urgent GP appointment or contact 111 or 999**

If you are using your rescue medication:
Continue with your usual medication and contact your GP surgery to book for a post-exacerbation

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