

| INITIAL NOTES: IT IS VERY IMPORTANT TO MANAGE COPD PATIENTS HOLISTICALLY – don't merely consider the airways | |
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| <ul style="list-style-type: none"> Diagnosis and risk assessment | <ul style="list-style-type: none"> Take a history and examine: in particular, note any prior history of asthma (will still need ICS) Confirm poorly reversible airflow obstruction (FEV₁/FVC <70%, post-bronchodilator) Stage airflow obstruction according to NICE (mild/moderate, severe/very severe) or GOLD (GOLD 1/2, 3/4) Note symptom impact using CAT score/MRC dyspnoea scale (see overleaf) Note exacerbation frequency: infrequent ≤ 2, frequent >2 per annum: frequent exacerbators need enhanced care and surveillance (ie a minimum of 2 reviews per annum) Bronchitis-predominant patients tend to run into problems with more frequent flare-ups Note/manage co-morbidities robustly, especially CVS/heart failure, reflux, bones, psyche Check ECG (AF), FBC, Vitamin D, CXR FBC: note eosinophil count (see below) |
| <ul style="list-style-type: none"> General care of the COPD patient, including high value interventions | <ul style="list-style-type: none"> Vaccinations: 'flu/pneumococcal polysaccharide vaccine (not conjugate adsorbed) Offer referral to smoking cessation, a cost-effective TREATMENT for COPD Offer pulmonary rehabilitation for MRC 3 and above or those who are symptomatic and disabled by their COPD: it has a strong evidence base in COPD, is highly cost-effective and underutilised Promote self-care & an active lifestyle: all need a personalized plan with named contact Encourage use of the British Lung Foundation COPD passport Consider respiratory physiotherapy for sputum clearance and breathing technique advice If BMI >30 or < 20, dietary advice (Remember Vitamin D levels are often low in COPD) Consider mental health Consider bone and cardiovascular health Consider benefits / social support / home adaptations Ensure correct inhaler technique on prescribing and before changing inhaled medication. |

| INHALER MANAGEMENT: | | |
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| <p style="text-align: center;">Assess need for, and response to, inhalers against symptoms and exacerbation profile</p> <p style="text-align: center;">Use objective measures of disease impact to assess response: CAT score, MRC dyspnoea scale, spirometry (FEV₁)</p> <p style="text-align: center;">Consider the other causes of breathlessness (including anxiety/depression) when reviewing your patient's inhaled treatment</p> <p style="text-align: center;">Trial inhalers for 8 weeks, using a device appropriate to the patient's capabilities (right Device, right Drug and right Dose?)</p> <p style="text-align: center;">Drug cautions: take care with muscarinic agents if dysrhythmia, recent MI/HF, glaucoma, prostate hyperplasia</p> <p style="text-align: center;">Steroid Card for those on high dose inhaled steroids (>= 1000 mcg BDP or equivalent a day associated with pneumonia). Remember to consider whether your patient really needs inhaled corticosteroid (see overleaf).</p> | | |
| Confirm airflow obstruction, FEV ₁ /FVC < 70% | Infrequent exacerbator with symptoms (≤ 2 per annum) | Frequent exacerbator with symptoms (>2 per annum) |
| <p>Determine inhaled treatment according to symptom impact/response, exacerbation profile and disease severity (latter also important for prognostication)</p> <p style="text-align: center;">Mild to moderate COPD (GOLD I and II) FEV₁ > 50% predicted to > 80% predicted</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Severe to very severe COPD (GOLD III and IV) FEV₁ <49% predicted to < 30% predicted</p> | <p>Start with SABA or SAMA if few symptoms</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Or start with LAMA</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">LAMA/LABA if ineffective</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Consider LAMA/LABA/ICS if LAMA/LABA ineffective</p> <p style="text-align: center;">Review treatment response regularly and maintain without ICS if possible</p> | <p>Start with LAMA/LABA if no prior/coexistent asthma</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">LAMA/LABA/ICS if poor response, coexistent asthma or persistent eosinophilia (> 0.3)</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Review treatment response regularly: if triple therapy of no apparent benefit, no prior or coexistent asthma, eosinophils < 0.3, consider tapering ICS to maintain on LAMA/LABA</p> |

| EXACERBATIONS: aim to transform frequent into infrequent exacerbators. Treat frequent exacerbators for longer | | |
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| Antibiotics/prednisolone | Infrequent Exacerbator | Frequent Exacerbator |
| <p>Start when increase in sputum/deteriorating SOB</p> <p>Follow-up call/consult at 2 weeks</p> | <p>Amoxicillin 500mg tds or Doxycycline 100mg od as 1st line 5-7 days</p> | <p>Amoxicillin 500mg tds or Doxycycline 100mg od as 1st line 10-14 days</p> |
| | <p>Clarithromycin, 500mg bd or Co-trimoxazole, 960mg bd, 2nd line or penicillin allergic 5-7 days</p> | <p>Clarithromycin, 500mg bd, or Co-trimoxazole, 960mg bd, 2nd line or penicillin allergic 10-14 days</p> |
| | <p>Prednisolone 30mg daily for 5-7 days</p> | <p>Prednisolone 30mg daily for 10 days</p> |

| SELF CARE | |
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| <p>Ensure all patients have a self-care plan, a BLF Passport, breathlessness management advice, a named contact & have been considered for pulmonary rehab if > MRC 3</p> |  <p style="text-align: center;">SMP</p> <p style="text-align: center;">Managing Breathlessness</p> |

TIPS FOR MANAGING COPD: offer smoking cessation support and Pulmonary Rehabilitation at every opportunity

- 1. What features in the history suggest COPD?**
 - Slowly progressive breathlessness that varies little from day to day; cough and phlegm; a risk factor: most often, but not exclusively, smoking.
- 2. What are the important features to note on examination?**
 - BMI and muscle mass; does the chest appear emphysematous? Wet cough or difficulty expectorating (suggests bronchitic profile)? Features of right or left heart failure? Atrial fibrillation? Oedema (may be transient during exacerbation)? Risk factors for sleep disordered breathing (obese, large neck, Pickwickian profile - particularly common in bronchitis-predominant cases)?
- 3. What are the best objective measures of respiratory health in COPD, and what about prognostication?**
 - The CAT score gives a snapshot of disease and treatment impact; MRC score considers breathlessness alone; % predicted FEV₁ shows severity of airflow obstruction. Prognostication can be very hard in COPD; those with very frequent exacerbations, multiple hospital admissions, low BMI, home oxygen, high impact measures, respiratory failure and multi-morbidity do less well.
- 4. What investigations should I do for a new patient?**
 - Confirm the diagnosis by noting airflow obstruction (FEV₁/FVC <70%) post-bronchodilator; Note the MRC score and undertake a CAT score; Check saturation; CXR and QRISK2score (prognosis worse if there is CVS disease); Fbc (note eosinophils)/renal/glucose/cholesterol; Remember some may be Vitamin D deficient if poor exposure to sunlight. Consider A1AT if younger patient or non-tobacco smoking.
- 5. How do I manage COPD?**
 - Refer to smoking cessation
 - Vaccinations
 - Refer for pulmonary rehab (MRC >3)
 - Follow the guidance overleaf; remember it's not just about inhalers; treating the wider aspects of the disease, managing breathlessness and co-morbidities is especially important; airways care includes secretion management (carbocysteine/physio/adequate hydration) as well as bronchodilation; pay particular attention to CVS co-morbidities: do not shy from beta-blockers in COPD – they are cardio-protective; Think social, motivation, work and retirement, holidays, insurance (ie holistic care).
- 6. What else do I need to think about?**
 - Mood; bones; nutrition; rescue medication; self-care plan; enhanced surveillance (at least biannual for frequent exacerbators); is my patient on the right dose of ICS, or does my patient really need an ICS (see section below on inhaled steroids in COPD, a rapidly changing area of care)?
- 7. What about pulmonary rehabilitation (PR)? THIS IS A GRADE A EVIDENCE-BASED, COST-EFFECTIVE AND UNDERUTILISED INTERVENTION**
 - Service available across Somerset, so please use. More locality-based courses will run if sufficient patients are referred; PR reduces disease burden, improves health status/survival and reduces service demand; consider referring patients with grade [MRC 3](#) dyspnoea or above.
- 8. What about nebulisers?**
 - There is no nebulizer assessment service in Somerset; nebulisers largely superseded by newer long-acting bronchodilators; should only be prescribed from secondary care as part of a thorough COPD assessment. Nebulisers increase the risk of infection and cardiac arrhythmia.
- 9. How do I separate asthma from COPD?**
 - Asthma has variable symptoms and can be separated from COPD if there is a large (~200mls) increase in FEV₁ after a prednisolone or inhaled corticosteroid trial. But
- 10. What about asthma and COPD, or the so-called asthma/COPD overlap syndrome (ACOS)?**
 - Both asthma and COPD are common, and can therefore co-exist, and some patients with COPD develop or retain asthmatic features, for whom the term 'asthma/COPD overlap syndrome' has been coined; most patients with COPD should manage with bronchodilator inhalers alone, but those with both asthma/COPD, and those with eosinophilic COPD that exacerbates frequently, should have triple therapy with a combination LABA/LAMA/ICS inhaler (or LABA/ICS + LAMA combination). Do not attempt to withdraw inhaled steroids in asthma patients who go on to develop COPD. Do not use bronchodilators alone if there is suspected asthma.
- 11. Does my COPD patient require an inhaled corticosteroid (ICS), and what about dose reduction/withdrawal in those already on treatment?**
 - Patients with COPD or fixed airflow obstruction and a history of asthma should receive an ICS; though review the dose on a regular basis.
 - For newly-diagnosed COPD patients, use the guidance overleaf to steer initial treatment, **but review progress regularly**
 - There is evidence suggesting patients with an eosinophil count consistently >0.3 have eosinophilic airways inflammation, and may benefit from ICS.
 - It is therefore reasonable to use the eosinophil count as a pointer in predicting those who might **withdraw** from ICS (Though remember other causes of eosinophilia)
 - Patients who have an eosinophil count < 0.3 may be able to withdraw from ICS if there is no prior/coexisting asthma
 - For patients with established COPD already in receipt of ICS, consider whether the ICS component is necessary and if the dose is too high
 - Attempt a steroid reduction/withdrawal in patients where ICS isn't deemed necessary (generally non-eosinophilic disease and no history of asthma). Do so slowly over three months, and remember to ensure the patient remains on LAMA/LABA therapy
 - Attempt a steroid reduction if the ICS is necessary but the dose is too high (>2000 mcg BDP equivalent per day). Again, do so slowly over three months or longer, eg to BDP equivalent of 800mcg daily, maintaining the bronchodilator component. Review regularly.
- 12. What about oxygen?**
 - Refer for LTOT assessment if saturation < 92% on 2 occasions at least 5 weeks out of exacerbation; consider ambulatory oxygen assessment if active but O₂ sats fall rapidly on exertion (typically in emphysema-predominant cases). Short burst (SBOT): only consider if patient does not recover from exertional breathlessness within a few minutes and is medically optimized, including pulmonary rehabilitation.
- 13. What about patients who still have repeated infections/bronchitic spells despite appropriate other treatment?**
 - There is evidence that low-dose macrolide therapy is beneficial for some patients with repeated infections. Similarly, roflumilast, a PDE4 inhibitor, may help some patients with recalcitrant chronic bronchitis and severe disease. Refer for further advice.
- 14. Which COPD patients should be referred to secondary care?**
 - Unclear diagnosis; queries around treatment regimen; rapidly progressive disease; poor response to treatment; suspected cor pulmonale; unexplained respiratory failure; individual requests second opinion; suspected bullous lung disease; assessment for lung volume reduction/transplantation; dysfunctional breathing; onset of symptoms under 40 or family history of alpha 1 antitrypsin deficiency; symptoms disproportionate to lung function deficit; frequent infections/suspected bronchiectasis/suitability for macrolides or roflumilast.

SOME USEFUL NUMBERS:

Musgrove Park COPD Team (THREADS): 01823 344756 or 07788725139, THREADS@tst.nhs.uk – happy to receive clinical and COPD management enquiries

Yeovil Hospital Respiratory Team: 01935 384574 – happy to receive clinical and COPD management enquiries

Community Pulmonary Rehabilitation and Oxygen Service (BOC): Fax: 0845 5600096, Tel: 0800 0121858

Somerset Smoking Cessation Service: 01823 356222; www.healthysomerset.co.uk/smokefree, smokefreelife@somerset.gsi.gov.uk

Patient support groups: Breathability Group (East Area) - 01935 412234; Breathe Easy (Taunton) - 03000 030 555

SOME USEFUL

DOCUMENTS/LINK:



cat mrc.pdf

[I've just been diagnosed with COPD](#)



SMP 2.pdf

[INHALERS](#)

[BLF PASSPORT](#)