COPD

Top tips for MURs

- Check whether the patient has a self-management plan
- Check the patient has completed a COPD assessment test (CAT) with GP/ nurse or respiratory consultant[1]
- Ensure that theophylline preparations are prescribed by brand and patients are aware of effects of stopping / starting smoking
- Ensure that inhalers are prescribed by brand to ensure patients receive the same device each time[2]
- Counsel patients on COPD triggers and how they can manage these
- Check compliance with COPD medication
- Check inhaler technique – refer to specialist nurse /GP if alternative inhalers required
- Ensure patients prescribed high dose inhaled corticosteroids at daily dose >800 micrograms beclomethasone dipropionate or equivalent have been issued with a steroid card
- Check that patients prescribed inhaled corticosteroids have been advised to rinse mouth with water after use
- Ensure patients prescribed a spacer with a pMDI device have a replacement at least every 12 months and are advised on correct spacer maintenance i.e washing and drying
- Ensure patient is having regular treatment reviews (at least every 12 months)
- Check patients using nebulisers clean their nebulisers after use to prevent infection. Tubing should be replaced after each infection or exacerbation. (Nebulisers should only be used after an assessment by a respiratory specialist, if patients have bought their own nebuliser without assessment consider referral to GP for review)
- If patients have a rescue pack, check that they know when and how to take the steroids and antibiotics. Remind them to inform GP practice when they use the rescue pack so that the exacerbation can be recorded, a follow up arranged and a new rescue pack issued
- Check that patient has had an annual influenza vaccination and a pneumococcal vaccination
- Counsel patients on common side effects **(see overleaf)** and signs and symptoms of complications that need referral **(see red flags below)**
- Signpost patients to useful resources, for example the British Lung Foundation
- Encourage patients to download the COPD passport (available from the British Lung Foundation), to help assess what issues to discuss with the GP/nurse or respiratory consultant
- Report any relevant adverse drug reactions to the yellow card scheme

Pathophysiology of COPD

COPD is a term used to describe a collection of chronic progressive lung conditions which cause airflow obstruction that is not fully reversible. COPD is a heterogenous disease and does not manifest itself in the same way in every patient. The airflow obstruction can be caused by a combination of airway narrowing, smooth muscle hypertrophy, fibrosis of respiratory bronchioles, mucus hypersecretion and a loss of lung elasticity due to the breakdown of alveolar walls. In some patients the number of mucus producing goblet cells in the lining of the lungs increases, resulting in excess mucus production that cannot be cleared due to the reduced elasticity of the lungs which increases the patient's susceptibility to infection.

Lifestyle issues

- Advise patients who smoke that giving up smoking is the single most important intervention which could positively impact their COPD - advise how to access pharmacy smoking cessation services or 'Help Me Quit' resources if willing to stop
- Counsel patient on reducing alcohol intake to within safe limits (up to 14 units a week, spread evenly over 3 or more days)
- Counsel patient on exercise & weight loss (if BMI > 25kg/m^2) - complete 30 minutes of aerobic exercise three to five times a week. Consider referral to GP for referral to Pulmonary Rehabilitation or NERS (National Exercise Referral Scheme)
- Counsel patient on healthy eating – reduce saturated fat and salt intake, avoid salt substitutes, increase oily fish intake, reduce caffeine intake to no more than 5 cups a day and recommend 5 portions of fruit and vegetables a day to help build up immune system
- Advise patient to try relaxation techniques to avoid stress

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What are the common side effects to look out for?

Drug	Common side effects	Recommendation
Adrenoreceptor agonists	Tremor (particularly of the hand).	Inhaler technique assessment and counselling; refer to prescriber for dose reduction, if prescribed dose is too high.
	Tension, headache, muscle cramps, palpitations, angioedema.	Refer to prescriber.
	Hypokalaemia in high doses (e.g muscular weakness, fatigue, muscle cramps).	Refer to prescriber for blood tests.
Antimuscarinic bronchodilators	Dryness of mouth, cough, nausea, constipation and headache, dizziness.	Advise patient to drink plenty of fluids and refer to GP if troublesome.
Theophylline	Nausea, vomiting, tremor, palpitations and arrhythmias.	Refer to prescriber for blood tests.
Corticosteroids	Oral candidiasis & sore mouth.	Inhaler technique assessment /counselling. Advise patient to rinse mouth with water immediately after use and refer to prescriber for addition of spacer device if needed.
	Dysphonia & hoarseness.	Refer to prescriber.
	Adrenal suppression, water retention, hypertension, diabetes, cataracts, muscle weakness, osteoporosis (long term use).	Ensure patient is taking oral steroids in morning as single dose and has a steroid warning card. Refer to prescriber.
Cromoglicate and related therapy	Coughing upon inhalation, headache and sore throat.	Inhaler technique assessment and counselling and then refer to prescriber if troublesome.
	Bronchospasm.	Refer to prescriber for symptom control.
Phosphodiesterase type 4 inhibitors	Diarrhoea, nausea, abdominal pain, weight loss, decreased appetite, headache, insomnia.	Refer to prescriber.

Red flags that need referral

- Severe breathing difficulties, chest pain, fever and agitation
- Any increase in sputum volume or change in sputum colour
- Haemoptysis
- Any symptoms suggestive of liver dysfunction (anorexia, nausea, vomiting, right upper quadrant pain, fatigue, lethargy, itching, jaundice or flu-like symptoms)
- Any signs of theophylline toxicity (vomiting, agitation, restlessness, pupil dilatation, sinus tachycardia and hyperglycaemia)
- Any symptoms of adrenal crisis (anorexia, abdominal pain, weight loss, tiredness, headache, nausea, vomiting, decreased level of consciousness, hypoglycaemia and seizures)
- Any symptoms of hypokalaemia (muscular weakness, myalgia, and muscle cramps)
- Paradoxical bronchospasm if taking corticosteroids
- Frequent courses of antibiotics and/or oral corticosteroids

Potential serious drug interactions?

COPD medication interacts with many other medications, such as: NSAIDs, antihypertensives, antiarrhythmics, antibacterials, antidepressants, antihistamines, antipsychotics, sympathomimetics, diuretics, antiepileptics, ciclosporin, antifungals, interferons, digoxin, cytotoxics, antivirals and lipid-lowering drugs - **See BNF Appendix 1 for more details**

Where can you find more information?

- Respiratory system – BNF sub-section 3.1 to 3.3
- Chronic respiratory disorders distance learning pack that can be found on WCPPE website **(www.wcppe.org.uk)**
- NICE guidance: COPD – management of Chronic Obstructive Pulmonary Disease in adults in primary and secondary care, 2010 can be found on NICE website **(www.nice.org.uk)**
- Clinical Knowledge Summary (Prodigy) Asthma & COPD can be found on CKS website **(www.cks.nhs.uk/home)**
- British Lung Foundation **(https://www.blf.org.uk/)**

References

1. COPD Assessment test (CAT test) GSK 2009 www.catestonline.org/english/indexEN.htmwww.catestonline.org/english/indexEN.htm
2. BTS / SIGN British Guideline on the management of asthma 2016

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