ROYAL PHARMACEUTICAL SOCIETY

Produced in association with: United Kingdom Clinical Pharmacy Association

Supporting patients with Chronic Obstructive Airways Disease (COPD)

A QUICK REFERENCE GUIDE

Why this guidance is important for you

- COPD is the fifth most common cause of death in the UK and accounts for 25,000 deaths in England and Wales.
- It was estimated that in 2010, in the UK, there were around 900,000 people diagnosed with COPD, however a significant number of people (3 million) remain undiagnosed.
- COPD can result in disability and adversely affect a patient's quality of life.
- Pharmacists can support patients with COPD by ensuring that they understand how to use their medicines, providing advice on how to best manage exacerbations, offering lifestyle advice and signposting to specialists if necessary.

Who needs to read this?

All pharmacists who are involved in delivering services and providing care to patients with COPD.

What this guidance will tell you

This quick reference guidance will provide you with a brief summary of chronic obstructive airways disease, its causes and how it differs from asthma. It will also explain how you as pharmacists can support patients with COPD to improve management of symptoms and medicines adherence.

It does not cover the diagnosis, or information on selection of medicines for the treatment of COPD.

What is COPD?

COPD is a term used to describe a number of conditions that affect the airways that are usually progressive and are not fully reversible (unlike asthma), and do not change notably over several months. Symptoms include cough, sputum, and increasing breathlessness. These conditions usually affect those over the age of 35; often not being diagnosed until patients are over 50.

COPD can be categorised (for the purpose of treatment) into stable COPD, COPD with acute exacerbations, and end-stage COPD. The aims of management are different at each stage and it is important to understand how you can support patients as their condition progresses ensuring that their individual circumstances and needs are addressed.

Airflow obstruction is measured with a spirometer which is used in the diagnosis of COPD and may help guide the management of patients with COPD.

What are the causes of COPD?

There is no one single cause of COPD; however several risk factors have been identified.

- Smoking – over 90% of cases are caused by cigarette smoking, nevertheless COPD can still affect those who have never smoked.
- Occupational dust, chemicals, noxious gases and other particles.
- Indoor air pollution from burning fires, animal dung, crop residue, wood and coal.
- Genetics – alpha$_1$- antitrypsin deficiency accounts for less than 1% of COPD cases.

How does COPD differ from asthma?

Symptoms of each condition are similar, and sometimes a patient may suffer from both. However the main differences are summarised in the table below:

Differences between COPD and asthma

	COPD	Asthma
Airway obstruction	Permanently damaged and narrowed, therefore symptoms are persistent	Inflammation of the airways causes constriction; symptoms come and go
Cough symptoms	Chronic cough with sputum	Irritating cough
Night time symptoms	Night time breathlessness and wheeze that keeps patients awake is NOT common	Night time breathlessness and wheeze that keeps patients awake is common but variable
Age group affected	More commonly affects those over 35 years	More commonly affects those under 35 years
Atopy cause	Unlikely to be an atopic cause	Likely to be an atopic cause
Smoker or ex-smoker	Nearly all	Possibly

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How can I support patients with COPD?

The National Institute of Clinical Excellence (NICE) clinical guideline makes recommendations for the management and care of patients with COPD. You can help patients in the following ways:

- Promote effective inhaled therapy by advising patients how to use their medicines safely and correctly.
- Educate patients about how to effectively manage and prevent their exacerbations.
- Help those who smoke to quit.
- Ensure that patients have access to care from a multidisciplinary team of specialists.
- Promote healthy living and exercise
- Help monitor antibiotic and oral corticosteroid use

It may also be useful to provide information about the condition, explaining that it is a long-term condition that cannot be cured but that symptoms can be adequately managed except in very severe disease. This will help manage patient expectations.

What advice can I provide about medicines?

Support should be tailored to individual patients, taking into account their medical history and what they already know about their condition. Information about points to cover when counselling patients on their medicines can be found in the *RPS Support Counselling Patients on their Medicines quick reference guide*.

Other support/advice that you can provide (if appropriate to your patient) could include:

- **Beta$_2$ agonists** – warn about effects associated with overuse, e.g. tremors, palpitations, cramps. Also ensure that patients understand the difference between short-and long-acting medicines and when to use each type. Short-acting beta2 agonists can be used when required (frequently throughout day if necessary).
- **Antimuscarinics** – inform patients about how to manage more common side effects such as dry mouth, constipation and headache, and offer over the counter treatments if appropriate. It should be noted that cough is also a common side effect.
- **Theophylline and aminophylline** – both theophylline and aminophylline have a narrow therapeutic range and interact with a number of medicines. Be aware of the cautions and interactions (including effect of smoking) and advise patients accordingly. Brands of modified release preparations differ in the rate of absorption, thus the brand should be specified on the prescription so you know which one to supply. Patients should have blood levels checked every 12 months and if they present with symptoms suggesting that it is out of range.
- **Corticosteroids** – advise patients about the importance of using their preventer inhaler regularly and inform them about how to avoid more common side effects such as oral thrush. The risk of oral thrush can be reduced by using a spacer device with a corticosteroid inhaler; rinsing the mouth with water after inhalation of a dose may also be helpful. Also inform patients of the adverse effects associated with prolonged and/or frequent courses of oral therapy as extra monitoring may be required, e.g. for signs of osteoporosis, diabetes (serious adverse effects are more likely with oral therapy than inhaled corticosteroids. Additionally be aware that brands of CFC-free beclometasone inhalers are not bioequivalent and should not be interchanged.
- **Mucolytics** – mucolytics drug therapy should be considered in patients with a chronic cough productive of sputum, and continued if there is symptomatic improvement (e.g. reduction in frequency of cough or sputum production.
- **Antibiotics** – provide advice on the use of antibiotics for acute exacerbations. Check for allergies to antibiotics, particularly to penicillins.
- **Oxygen therapy** – provide advice on oxygen therapy, where to obtain oxygen cylinders and accessories, precautions for use, e.g. fire risk, safety at home and how to care and replace equipment. The Drug Tariff (England) and Scottish Drug Tariff provides details of oxygen suppliers. Patients should have an oxygen alert card that they can show to emergency healthcare providers in the event of an exacerbation.
- **Nebuliser** – check that the patient understands how to use a nebuliser, how to choose between a mouth piece and facemask, who to contact regarding servicing, how to clean, where to obtain replacement parts and how to change filters. You should try to find out about local services or alternatively contact manufacturers for further details. Also offer advice on how to manage adverse effects of using nebulised solutions.
- **Spacers** – ensure that the spacer prescribed fits the inhaler. Check that the patient understands how to how to use a spacer, and how to clean and care for it.

How can I help patients select the most appropriate inhaler device and check that they are using it correctly?

There are a number of inhalers available and there are advantages and disadvantages of each device. The choice of inhaler device may also depend on the drug itself, and patient preference and ability.

The best way of checking inhaler technique is to ask the patient to demonstrate how they use their inhaler. Each type of inhaler has a different delivery mechanism therefore you should be familiar with instructions for individual inhalers and brands.

If the patient is not using the inhaler properly you should perform a demonstration. It is suggested that you have dummy/placebo inhalers for this purpose; these can be obtained from most manufacturers. Placebo/dummy inhalers are single patient use and each inhaler should be not be used for more than one patient. Patient information leaflets often contain pictures and clear instructions for use and you may want to refer patients to this. It is suggested that you check the patient's technique during their next visit to the pharmacy and regularly to ensure that they are still using it correctly.

The following devices (which can be sold over the counter/obtained from manufacturer) may help improve inhaler technique:

- Spacers may help those who find it difficult to use metered dose inhalers (does not require co-ordination of pressing down of the inhaler and inhaling the dose). Many spacers are available on NHS prescriptions.

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- Inhaler aids help patients with manual dexterity problems, e.g. arthritis, press down the chamber of metered dosage inhalers.
- A winged attachment can help patients with manual dexterity problems, e.g. arthritis, twist the dial on Turbohalers (from manufacturer only).

If a patient cannot use a particular inhaler correctly they should be referred to their GP/practice nurse for an alternative.

What advice can I provide to help patients manage and prevent exacerbations?

Patients should be educated about possible causes of COPD and be advised to avoid any contributing factors. They should also be encouraged to adhere to their prescribed COPD medicines.

Breathing techniques can also help patients cope with breathlessness and enable them to manage when they suddenly get short of breath. Further information can be found on the British Lung Foundation website.

Some patients may have a self-management plan drawn up with their doctor/nurse which provides details of how to respond appropriately to the first sign of an exacerbation. You should check if the patient has one and offer any relevant advice about use of antibiotics and oral steroids for control of exacerbations, and monitor the use of these medicines.

What lifestyle advice should I provide patients with COPD?

- Smoking cessation is the most effective intervention for patients with COPD and has been shown to slow the decline in lung function. Advise smokers to stop smoking, regardless of age, and offer the full range of evidence-based smoking cessation support (unless contraindicated), including Nicotine Replacement Therapy, bupropion, or varenicline where appropriate. Also refer patients to local stop smoking services where appropriate.
- Weight loss and weight gain may be part of the COPD phenotype (different levels of metabolism and effects on skeletal muscle etc) and the impact of the condition on patients' lifestyle, e.g. they may lose weight as a consequence of decreased food intake due to symptoms, and in severe COPD patients may gain weight due to the immobilising nature of the condition. Patients should be advised to maintain a healthy weight (BMI 18.5-24.9kg/m^2). If BMI is low, nutritional supplements, e.g. liquid feeds, may be required.
- Exercise may help with breathing. Patients should be advised to exercise at their own level, but not to overstrain themselves. Mobile patients should be encouraged to walk for 20-30 minutes, 3-4 times a week. If immobile then upper limb activities, e.g. twisting and stretching arms, and leg exercises should be advised.

What other advice should I provide patients with COPD?

- Annual influenza and pneumococcal vaccinations are recommended.
- COPD often co-exists with conditions that are caused by smoking such as heart disease and lung cancer, therefore information about these conditions and advice about relevant medication should also be offered if appropriate.
- Patients with COPD may also suffer from anxiety and depression, and again advice about these conditions and prescribed medicines should be provided if appropriate where patients have been already diagnosed by their GP.
- Patients may need to make adjustments to daily activities e.g. severe COPD may impact on their ability to drive.
- Pulmonary rehabilitation - these programmes lead to significant improvements in Quality of Life, exercise tolerance and dyspnoea.

What other services are available for patients with COPD?

NICE recommends that COPD care should be delivered by a specialist multidisciplinary team which may involve:

- **Physiotherapy** - useful for patients with excessive sputum and will teach them about active cycle of breathing techniques. Physiotherapists can also advise on exercise programmes for people who are very symptomatic.
- **Diabetes advice** - important for those with a BMI that is high, low or changing over time.
- **Occupational therapy** can help patients who need help with activities of daily living.
- **Social services** - to assist those who are disabled by COPD and cannot work.
- **Hospital at home schemes** may be available as an alternative to hospital admission. These are usually provided by the community respiratory team.
- **Palliative care teams** can provide patients with end-stage COPD and their family and carers with specialist care (hospices).
- **Respiratory nurse specialists** can also support patients with COPD.

When to refer patients?

You should discuss with other healthcare professionals local procedures for referral of patients. Patients who may require referral to a doctor or other healthcare professional could include:

- Those with suspected undiagnosed COPD
- Those who have not responded to treatment with medicines
- Those experiencing serious side effects from their medicines
- Those with acute exacerbations with complications
- Those who have not had review with their doctor in the last year
- Those requiring specialist support
- Those with haemoptysis

Where to signpost patients wanting further information?

- Breatheasy http://www.lunguk.org/supporting-you/breathe-easy
- NHS Choices http://www.nhs.uk/Conditions/Chronic-obstructive-pulmonary-disease/Pages/Introduction.aspx
- Patient.co.uk http://www.patient.co.uk/health/Chronic-Obstructive-Pulmonary-Disease.htm

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Where to go for further information

RPS Support: 0845 257 2570

Email **support@rpharms.com** or complete an online web form at **www.rpharms.com**

UKCPA Respiratory Group 0116 277 6999

http://www.ukcpa.org

RPS Support Resources

- Counselling patients on medicines quick reference guide
- Smoking cessation quick reference guide
- Weight management quick reference guide
- Mental Health quick reference guide
- Mental Health Toolkit
- Supporting patients with Asthma quick reference guide

Useful References

- An outcomes strategy for people with chronic obstructive pulmonary disease (COPD) and asthma in England http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_127974
- British National Formulary http://bnf.org/bnf/index.htm
- Clinical Knowledge Summaries: COPD http://www.cks.nhs.uk/chronic_obstructive_pulmonary_disease/view_whole_topic
- Clinical Pharmacist , COPD: clinical features and diagnosis 2010:2:382-389 (Dec) (3/12/11) http://www.pjonline.com/cpd/cp201012_copd_clinical_features
- Clinical Pharmacist , COPD: management 2010:2:390-394 (Dec) (3/12/11) http://www.pjonline.com/cpd/cp201012_copd_management
- National Clinical Guideline Centre COPD: Management of chronic obstructive pulmonary disease in adults in primary and secondary care (NICE CG101) http://www.nice.org.uk/CG101
- NICE quality standard COPD http://www.nice.org.uk/guidance/qualitystandards/chronicobstructivepulmonarydisease/copdqualitystandard.jsp
- Pharmaceutical Journal , Choosing a treatment for COPD 2011:286:17 (07/01/11) http://www.pjonline.com/content/pj20110108_bnf_case_study_copd
- Summary of Products Characteristics on the electronic Medicines Compendium http://www.medicines.org.uk/emc/

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