Devon Local Pharmaceutical Committee

PHARMACY the Heart of our Community

The COPD Consultation

This section of the COPD Consultation is designed to be used with the patient and for both the pharmacist and patient to refer to during the consultation. Remember that you must use your professional judgement when talking to patients and that they may raise issues that are not addressed in this consultation guide.

Questions and prompts	Key messages
How are you getting on with your medicines? • Talk me through your medicines. • Do you ever take medicines that you have purchased, either from a pharmacy or anywhere else? **How do you use each of these medicines?** • How do you use each medicine? • When and how often do you use each medicine?	• Explain the purpose of the consultation, which is to help the patient's understanding of their condition and medicines, and to help support effective management of their COPD. • The aim of treating stable COPD is to reduce symptoms, improve exercise tolerance, quality of life and to reduce the frequency and the severity of exacerbations. • Only 1 out of 10 patients with a metered dose inhaler (MDI) performs all essential steps correctly.[1] • Observe the patient use their inhalers, and identify issues with the patient's technique. Train the patient on how best to use their inhalers. See 'Common inhaler issues' table (adapted from paper[2]). • Advise patients carefully with aerosol or multiple inhaler devices. Studies have indicated that patients make fewer errors with dry power inhalers (DPI) versus aerosol metered MDI,[3] and patients with multiple devices are more prone to errors.[4] • Advise patients to wash inhalers regularly as per manufacturer's instructions as the inhaler can block reducing the dosage. provided. Ensure patients check with an MDI once dust cap is off that no foreign body is lodged in the inhaler.
Do you have any problems or concerns with your medicines? • How do you feel about using these medicines? • Do you have any concerns about using these medicines?	• Give the patient an opportunity to identify and discuss their concerns about medications, lifestyle (smoking cessation, exercise) and their self-management plan, so that fears can be allayed and barriers can be addressed.
Do you think they are working? Is this different from what you were expecting? • Do you know why this medicine has been prescribed to you? • Tell me in your own words what you think it is for. Do you think it works? • Do you know how it works?	• Help the patient understand the chronic and progressive nature of their disease. • Advise the patient on the variation of the effect of inhaled medicines so that realistic expectations of therapy can be set.

Common Issues With Aerosol Metered Dose Inhalers

Issues	Possible Solutions
Not exhaling fully before inspiration	Explain the need to exhale fully before inspiration and train the patient on correct technique
Not holding breathe after inhalation	Explain the need to hold breathe for 5-10 seconds, and train the patient on correct technique
Inhaling too fast	Explain the need to inhale slowly. Consider use of a spacer device
Poor timing of inhaler actuation	Use of a spacer device or change inhaler to a breath-actuated inhaler device. For patients with weak hands use of a Haleraid® device to help with dexterity
Mouth piece incorrectly placed	Explain need, and train patient on correct technique

Common Issues With Dry Power Inhalers

Issues	Solutions
Not exhaling fully before inspiration	Explain the need to exhale fully before inspiration and train the patient on correct technique
Not holding breathe after inhalation	Explain the need to hold breathe for 5-10 seconds, and train the patient on correct technique
Not exhaling fully to allow deep and quick inspiration	Explain the need to exhale fully before a quick inspiration and train the patient on correct technique. If difficulties continue propose switch to aerosol MDI and spacer
Not keeping the inhaler upright when priming the dose	Explain the need to the patient and train on correct technique
Mouth piece incorrectly placed	Explain the need to the patient and train on correct technique. If difficulties continue consider a switch to an aerosol MDI with spacer and mask.

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The COPD Consultation

Questions and prompts	Key messages
	• Advise patients on signs of an exacerbation; worsening breathlessness, cough and increased sputum volume and change in sputum colour, tightening of the chest. • Inform the patient the first line of treatment should be increasing the use of the bronchodilator, give clear instructions on the maximum dose. • If the patient has rescue medication, inform patients to take as soon as they recognise the exacerbation symptoms as per NICE guidance 2010.[5] The earlier the treatment the better the outcome.[6] • Tell the patient if after 2-3 days of rescue medication if there are no signs of improvement to call their GP. And that full recovery from an exacerbation can take around 35 days.[7]
Do you think you are having any side-effects or unexpected effects? • Describe those effects for me.	• Adverse events to medications are reported by 90% of the patients with COPD, as patients can have multiple medicines to treat complex co-disease.[8]
People often miss applications of their medicines at times for a wide range of reasons. Have you missed an application of your medicine or changed when, or how often, you apply it? • How and when do you use your medicines? • How often have you not used your medicines in the last two weeks? Why? • Do you ever change the way in which you use them? When do you change and why?	• Help patients manage side effects (see table overleaf on individual drugs)Adherence is lower for medicines that can cause significant side effects.[9] • Sub-optimal adherence can be caused by a COPD patients lack of understanding about their illness and have low confidence in drug therapies.[10] Depressed patients are 3 times more likely to be noncompliant with medication regimens.[11] • Adherence is lower for medicines that do not have an immediate effect on symptoms.[12] Again you need to set realistic expectations for the patient in this chronic and progressive disease. • Advise patients on the preventative action on medicines. – Tell the patient of the benefits of the inhaled medications, e.g. reduced exacerbations and hospitalisations, improved quality of life and reduced mortality.[13] • Help the patient identify other lifestyle activities they regularly practice which can act as a reminder for them to take their medications (e.g. brushing teeth morning and night, breakfast and dinner, etc.), this can increase adherence. • Synchronising doses for patients on multiple drug therapy can also improve adherence, wherever possible try to recommend optimising therapy dosing at once or twice daily.
Do you have anything else that you would like to ask about your medicines or is there anything that you would like me to go over again? • Are you happy with the information you have about your condition and medicines? • Has your doctor given you any information on the use of your medicines? • Have you been given any written information about your condition and medicines? • Have you got information on your condition and medicines from any other source (for example, the internet)?	• Signpost to the support groups and resources on the main document. • Advice on importance of non-pharmacological interventions: – Smoking cessation (referral if needed) – it is evidenced to improve the long term decline in lung function. On average each smoker who manages to stay off tobacco for the rest of their life gains 3.6 life years. – Exercise advice – all COPD patients should be advised to exercise within the limits of their disease, as it will improve quality of life. Patients should be advised to walk more often/further, that being out of breath is not dangerous (as long as they are not gasping for breath). To use bronchodilators 20 minutes before exercise to reduce breathlessness. – Pulmonary rehabilitation (referral if needed, usually MRC >3) – Pulmonary rehabilitation is a programme of care designed to help patients cope with their breathlessness and feel stronger and fitter at the same time. • Advise on the importance of vaccinations: – Annual influenza vaccination – Vaccination in COPD patients results in a significant reduction in the number of exacerbations. – Pneumococcal vaccination – is recommended although the evidence is mixed.

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Treatments prescribed for COPD

Treatments	How it works	Advantages	Disadvantages (factors that could affect adherence)	Optimisation/Patient Advice
Short acting β2 bronchodilators (e.g. salbutamol)	β2-adrenoreceptor agonist, which relaxes bronchial smooth muscle, reducing airway resistance, increasing ventilation.	Bronchodilator occurs quickly within 5 minutes (peak 20 minutes). Can be used at higher doses to control exacerbations (see above exacerbations).	Poor inhaler technique. **Common Side effects:** Tremor, headache tachycardia.	Advise patients to clean inhaler with warm soapy water if a blockage is seen with inhaler nozzle, leave to dry naturally. **Side effects:** Common side effects tend to be transient and with regular use will diminish.
Short acting antimuscarinic bronchodilators (e.g. ipratropium)	Anticholinergic , causes relaxation of the smooth muscle via the muscarinic receptor. Reducing airway resistance, tincreasing ventilation.	Increases lung FEV1 by up to 15% in 15 minutes (peak 1-2 hours), note longer to act than β2-agonists. Note: NICE Guidance CG101 (2010) do not recommend regular use of SAMA, it recommends switching to a LAMA.	Poor inhaler technique **Side effects:** Headache, dizziness, dry mouth, cough.	**Side effects:** Common side effects are transient and with regular use will diminish, to reduce cough dosing via a spacer could be employed or a switch to a faster acting β2-agonist. Reduce caffeine and alcohol intake, as these can cause dry mouth.
Long acting β2 bronchodilators (e.g. salmeterol, formeterol)	Long acting β2 bronchodilators (e.g. salmeterol, formeterol) β2-adrenoreceptor agonist, relaxes bronchial smooth muscle, reducing airway resistance, increasing ventilation.	Improves lung function/ventilation decline over time (FEV1),[15] reduces rate of exacerbations improves quality of life and reduces hospitalisations.[16] Produces a longer duration of bronchodilation, lasting for at least 12 hours. Bronchodilation takes around 10-20 minutes for salmeterol, whereas formeterol is quicker at around 5 minutes.[17]	Poor inhaler technique **Side effects:** Headache, tremor, tachycardia.	**Side effects:** Common side effects tend to be transient and with regular use will diminish. Severe muscle cramping is rarely seen, if necessary trial of another long acting β2 agonist could be used.
Long acting bronchodilators (e.g. tiotropium, aclidinium, glycopyrronium)	Anticholinergic, causes relaxation of the smooth muscle via the muscarinic receptor. Reducing airway resistance, thus increasing ventilation.	Tiotropium improves lung function/ventilation decline over time (FEV1),[18] reduced the risk of hospitalisation from an exacerbation (28% compared to salmeterol),[19] exercise tolerance,[20] and improves quality of life. Glycopyrronium causes a similar decrease in hospitalisations compared to tiotropium, it improves lung function/ventilation decline over time, exercise endurance and reduces symptoms.[21] Aclidinium has comparable efficacy to tiotropium on improvement in lung function (FEV1),[22] and in quality of life, it may also decrease exacerbation rates.[23] Bronchodilation for tiotropium take is 30 minutes and last for approximately 24 hours. Glycopyrronium is around 5 minutes to act.[24] Aclidinium is about 15 minutes.[25]	Poor inhaler technique **Side effects:** Dry mouth, constipation, headache, insomina.	**Side effects:** Common side effects tend to be transient and with regular use will diminish. Constipation can be addressed by increasing fibre, and fluids in daily diet. Reduce caffeine and alcohol intake, as these can cause dry mouth. NB. Eklira Genuair does not need cleaning.

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Treatments prescribed for COPD

Treatments	How it works	Advantages	Disadvantages (factors that could affect adherence)	Optimisation/Patient Advice
Inhaled corticosteroids (in concomitant use with LABA/LAMA)	ICS is likely to decrease the number and activity of inflammatory cells, in turn decreasing airway hyper-responsiveness.	Although corticosteroids are not as effective in improving symptoms as in asthma, they are still useful. When used in combination therapy with LABA or LAMAs in COPD the combination reduces the rate of exacerbations,[26,27] may improve quality of life . Most products are a twice daily dose with onset of action of the steroid which takes places over 8-48hrs. The DPI fluticasone furoate and vilanterol is a once daily product.	Poor inhaler technique **Side effects:** Oral candidiasis, dysphonia, coughing horseness. Also see LABA and LAMA. NB. ICS/LABA combination has been shown to increase risk of pneumonia (see MHRA advice).	**Side effects:** Candida infection in the oropharynx is due to drug deposition. Advising the patient to rinse the mouth out with water after each dose will minimise the risk. Oropharyngeal Candida infection usually responds to topical anti-fungal treatment without the need to discontinue the inhaled corticosteroid. Keep well hydrated, use of non-medicated lozenges. Avoid dry, smoky atmospheres, and hot and spicy foods. See LABA and LAMA for solutions. Patients who experience repeated exacerbations (>2 a year) but who develop pneumonia while taking ICS, consider alternative combination of LABA and LAMA. Patients on high dose ICS/LABA should be advised to carry a steroid card.
Oral corticosteroids	Oral corticosteroids are likely to decrease the number and activity of inflammatory cells, in turn decreasing airway hyper -responsiveness.	Maintenance use of oral corticosteroid therapy in COPD is not normally recommended because of side effects. Some patients with advanced COPD may require (lowest dose possible) maintenance oral corticosteroids.[30] When used for acute exacerbations (7-14 days treatment period), shortens hospital stay, and reduces treatment failure, increases rate of improvement in lung function, and improves dyspnoea (for the duration of treatment period).[31]	**Side effects:** dyspepsia, nausea, increased appetite, oesophageal candidiasis, stomach/oesophage al ulceration Irritability, depressed and labile mood. **Note** side effects less likely with acute therapy.	Patients should always carry steroid treatment cards which give clear guidance on the medicine. In patients who have received more approximately 7.5mg prednisolone for greater than 3 weeks, withdrawal should be tapered to reduce risk of symptom relapse. **Side effects:** The dose used for maintenance therapy should be at the lowest dose to control symptoms, as this will reduce the risk of side effects. Ensure you are aware to any red flag symptoms which could be related to the corticosteroid regime such as GI ulceration, depression, severe mood change, symptoms of diabetes where no diagnosis exists, symptoms of chicken pox, if identified patients should be referred to their doctor without delay.
Xanthines (theophylline)	Relaxes the smooth muscles of the bronchi and pulmonary blood vessels.	Oral low-dose theophylline can reduce exacerbation rates in COPD patients but offers minimal benefits in terms of lung function.[32]	**Side effects:** Diarrhoea, nausea, vomiting, palpitations, tachycardia, tremor, headache. Note: The above symptoms if severe can be indicative of overdosage.	The tablets/capsules should be swallowed whole and not crushed or chewed. Patients should not be changed from one prolonged release theophylline preparation because of differences in bioequivalence. **Side effects:** Theophylline has a narrow margin between therapeutic and toxic dose and must be monitored closely with blood tests (see summary product characteristic SPC). Theophylline has a number of interactions see product SPC, and advise patient to always inform health professionals when being prescribed or purchasing medicines.
Mucolytics	Mucolytics Reduces the amount of mucus produced and the thickness.	Mucolytic drug therapy is most effective in patients with a persistent productive cough,[33] and viscous sputum.[34]	**Side effects:** Side effects are rare. They can include skin reactions, GI bleeding.	Where treatment is effective it should be continued for 3-6 months, particularly over the winter months. Where there is no symptomatic improvement within 4 weeks, mucolytics should be stopped.
COPD exacerbation management medicines (Rescue Packs)	Packs usually contain a broad-spectrum antibiotic such as doxycyline/amoxillin and a corticosteroid prednisolone. Antibiotics work to decreasing the bacterial load in the lungs.	Although most exacerbations are caused by viral agents, the use of antibiotics improves the lung function, reduces the time of the exacerbation, and improves symptoms e.g. shortness of breath and sputum purulence.[35] In addition there is evidence that antibiotics improve the risk of short term mortality by around 77%.[36]	**Side effects:** See respective antibiotic SPC (medicines.org).	Exacerbations are 50% more likely in the winter and with colder outdoor temperatures,[37] advise patients to take precautions and wrap up warm. Patients who are at risk of having an exacerbation are encouraged to respond quickly to start their rescue pack as this will improve their outcomes. **The key symptoms to recognise an exacerbation are;** worsening breathlessness, increased sputum volume (and increased purulence), change in colour of sputum and cough. If symptoms from an exacerbation do not improve after 48 hours, advise the patient to contact their GP, for symptoms to fully resolve it usually takes around 7 days, but in 25% of patients can take longer than 35 days.[38]

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