Enabling Patient health
Improvements though COPD medicines optimisation (EPIC)

Commissioned by NHS Leeds West CCG

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Abbreviations:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLF</td>
<td>British Lung Foundation</td>
</tr>
<tr>
<td>CAT</td>
<td>COPD Assessment Test</td>
</tr>
<tr>
<td>COPD</td>
<td>Chronic Obstructive Pulmonary Disease</td>
</tr>
<tr>
<td>CPPE</td>
<td>Centre for Pharmacy Postgraduate Education</td>
</tr>
<tr>
<td>DoC</td>
<td>Declaration of Competence</td>
</tr>
<tr>
<td>ICS</td>
<td>Inhaled Corticosteroid</td>
</tr>
<tr>
<td>Lab</td>
<td>Long-Acting Beta2-Agonist</td>
</tr>
<tr>
<td>LAMA</td>
<td>Long-Acting Muscarinic Antagonist</td>
</tr>
<tr>
<td>MRC</td>
<td>British Medical Research Council Dyspnoea score</td>
</tr>
<tr>
<td>MUR</td>
<td>Medicines Use Review</td>
</tr>
<tr>
<td>PR</td>
<td>Pulmonary Rehabilitation</td>
</tr>
<tr>
<td>SABA</td>
<td>Short-Acting Beta2-Agonist</td>
</tr>
<tr>
<td>SAMA</td>
<td>Short-Acting Muscarinic Antagonist</td>
</tr>
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</table>
The folder aims to support community pharmacy teams in delivering the commissioned EPIC service.

Each section contains a summary of the actions for the consultation with further detail below. Where there is a difference in what is included in the initial and follow-up consultations this is within a box within the relevant subtitle of the section.

All service forms are in the pages behind the contents page.

The leaflets (Living with COPD and Patient Passport) for the service are within the placebo inhaler box.

This EPIC folder does not replace the formal contractual arrangement between the pharmacy and the Commissioner to provide the service. Pharmacy staff must make sure that they work within the service specification provided by the commissioner.

The content of this folder has been produced by Toby Capstick and Ruth Buchan.

Disclaimer

This folder has been developed to assist pharmacies in delivering commissioned services. It should be used alongside other reference sources, including the service specification provided by the commissioner and current published evidence. The authors, Community Pharmacy West Yorkshire, NHS Leeds West CCG and Leeds Teaching Hospitals NHS Trust do not accept any responsibility for any errors or omissions.
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Pharmacy COPD Review Appointment

Further appointment forms can be downloaded from the services pages of the CPWY website:

http://www.cpwy.org/pharmacy-contracts-services/local-services-enhanced-/respiratory-epic.shtml
EPIC Initial Consultation Form

Further copies can be downloaded from the services pages of the CPWY website:

http://www.cpwy.org/pharmacy-contracts-services/local-services-enhanced/-respiratory-epic-.shtml
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EPIC Follow-up Consultation Form

Further copies can be downloaded from the services pages of the CPWY website:

http://www.cpwy.org/pharmacy-contracts-services/local-services-enhanced-/respiratory-epic-shtml
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CAT Sheets

Further CAT test sheets can be downloaded from the services pages of the CPWY website:

http://catestonline.org/

http://catestonline.org/images/pdfs/CATest.pdf
Questions about using your PREVENTER INHALER

Further copies can be downloaded from the services pages of the CPWY website:

http://www.cpwy.org/pharmacy-contracts-services/local-services-enhanced-/respiratory-epic-.shtml
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GP Referral Form

Further GP Referral Forms can be downloaded from the services pages of the CPWY website:

http://www.cpwy.org/pharmacy-contracts-services/local-services-enhanced-/respiratory-epic-.shtml
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Introduction

In the UK, 835,000 people are diagnosed with Chronic Obstructive Pulmonary Disease (COPD), although an estimated 2,200,000 people are thought to remain undiagnosed.\textsuperscript{1} Despite the availability of national and international guidelines, the management of COPD remains sub-optimal; COPD is the second largest cause of emergency admission in the UK, accounting for one in eight (13,000) emergency admissions to hospital.\textsuperscript{2} Within NHS Leeds West CCG practices, 6,013 people are registered as having COPD, and in 2013-14, there were 642 emergency hospital admissions to hospital. Furthermore, over four years (2010-14) there were 2,028 Accident & Emergency attendances. Improvement in COPD outcomes and significant cost savings may be achieved by ensuring that patients are managed within national and local guidelines, as well as optimising and improving patients’ use of prescribed medication.

Prescribing of Long Acting Muscarinic Antagonist (LAMA) and Inhaled Corticosteroid / Long Acting Beta-2 Agonist (ICS/LABA) inhalers in England’s primary care sector is significant, with just six drugs in these two classes accounting for £631million of drug expenditure in 2014. However this may reflect significant over-prescribing of ICS/LABAs in patients with mild-moderate airway obstruction and infrequent exacerbations, and under-use of LAMAs.\textsuperscript{3}

There has recently been a significant increase in the number of new inhaled drugs and inhaler devices. This has created an opportunity for pharmacists in all sectors to use our skills to optimise patient’s medication, simplifying treatment by using simpler inhaler devices, improving health benefits, as well as realising actual cost savings. To assist this, a new COPD ‘preferred’ drug formulary and treatment algorithm, based on the GOLD 2015 COPD guidelines\textsuperscript{4} has been approved for use across primary and secondary care in Leeds.

As the majority of COPD patients are managed in primary care, community pharmacists are in an ideal position to improve the management of COPD.

Project Aims

The EPIC project will target high risk COPD patients at 14 practices in Pudsey, Armley and Bramley within the Leeds West CCG over a period of 4 months. These GP practices have been chosen as they reside within a geographical area where COPD patients have high rates of hospital admissions and accident & emergency attendances. Based on QOF data for 2013/14 there are approximately 2,600 COPD patients within these practices.

The EPIC project aims to improve patient’s ability to manage their own COPD through greater understanding of COPD and its treatment, increase the use of self-care management plans, and ensure that they are able to use their COPD treatment effectively and correctly. This service is the community pharmacy element of the EPIC project and is commissioned by NHS Leeds West CCG to
promote adherence to respiratory medication and self-care for patients with COPD. Eligible patients will receive 2 consultations 8 weeks apart with a suitably trained pharmacist / pharmacy technician. The consultations will cover smoking cessation advice, inhaler technique, COPD monitoring, pharmacotherapy, lifestyle and education.

How can I support patients with COPD?

This supporting document provides a summary about what COPD is and its management. It should be used alongside the brief consultation guide. This will provide you with information that can help you support your patients, to help them achieve the greatest benefit from their medicines.

You can support patients in a number of ways:

- Learning about what COPD is, and how it can be assessed.
- Educating patients about cost-effective strategies to control COPD and slow down disease progression.
- Educating patients about the role of different medicines, how they work, when to take them, and how to manage any side effects.
- Ensuring that patients are able to use their inhalers correctly.
- Promoting healthy living and exercise.
- Helping people who want to give up smoking.

Background information about COPD

What is COPD?

COPD describes a number of conditions that affect the airways such as emphysema and chronic bronchitis, with characteristic symptoms of persistent breathlessness, cough and sputum production. Unlike asthma, COPD is usually progressive and not fully reversible, and there is often no noticeable change in condition over several months.2,4

COPD is characterised by persistent airflow limitation resulting from small airways disease (obstructive bronchiolitis), and destruction of lung parenchyma (emphysema).2,4 Chronic inflammation causes narrowing in the airways and structural changes in the airway walls; whilst parenchymal destruction causes breakdown of alveolar attachments and loss of airway elasticity, which may result in the airways closing during expiration. Chronic bronchitis affects the airways resulting in chronic sputum production and cough for prolonged periods. These processes makes it harder for people to breathe, and can affect many aspects of their daily life.4

What causes COPD?2,4

The main cause of COPD is smoking, which is likely to be the main contributing factor in more than 90% of people with COPD. These people often are current, or have been, heavy smokers.
The other main causes of COPD include occupational exposure (including inorganic dusts, chemical agents and fumes), indoor air pollution (from open fires or poorly functioning stoves burning wood, coal, animal dung and crop residues). Genetic causes, such as alpha-1 antitrypsin deficiency may account for less than 1% of cases.

**The Diagnosis of COPD**

COPD should be considered as a diagnosis in all people with symptoms of breathlessness, chronic cough or sputum production, and with exposure to potential causes. This diagnosis should be confirmed objectively using spirometry, which is used to measure airflow obstruction. Spirometry is performed after a person has used a short-acting bronchodilator, in order to maximally open their airways and minimise the risk of variability in lung function.

Patients may describe spirometry as a ‘breathing test’ or ‘blowing into a tube’ (although this should be differentiated from Peak Flow measurements). Spirometry is usually performed at GP practices or in hospital outpatient clinics. Some community pharmacists have also been trained to perform spirometry to help identify undiagnosed cases of COPD.

Measures of lung function that are measured during spirometry include the Forced Vital Capacity (FVC), the Forced Expiratory Volume in one second (FEV₁), and the ratio of FEV₁ to FVC.

- The FVC measures the volume of lung breathed out during a forced expiratory effort after breathing in as far as possible,
- The FEV₁ measures the volume of air exhaled during the first one second of a forced expiratory effort.
- The FEV₁/FVC ratio represents the proportion of a person’s vital capacity that they are able to exhale during a forced expiratory effort. If a person has healthy lungs and no airway obstruction, they should be able to breathe out more than 70% of their vital capacity within the first one second of a forced expiratory effort.

The presence of a post-bronchodilator FEV₁/FVC ratio <0.7 indicates the presence of persistent airflow limitation indicative of COPD. As this condition progresses, the severity of airflow limitation can be assessed by a falling FEV₁, as outlined in the table below.

It is important to realise that the severity of airflow limitation is only weakly correlated with symptoms and health-related quality of life, and at each stage of severity, patients may have anything between well preserved and very poor health status. Consequently measures of the severity of symptoms are essential components of assessing overall health status in COPD.

<table>
<thead>
<tr>
<th>GOLD Classification of Airflow Limitation Severity</th>
<th>Post-Bronchodilator FEV₁</th>
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</thead>
<tbody>
<tr>
<td>GOLD 1: mild</td>
<td>≥80% predicted</td>
</tr>
<tr>
<td>GOLD 2: moderate</td>
<td>50–79% predicted</td>
</tr>
<tr>
<td>GOLD 3: severe</td>
<td>30–49% predicted</td>
</tr>
<tr>
<td>GOLD 4: very severe</td>
<td>&lt; 30% predicted</td>
</tr>
</tbody>
</table>
Non-Pharmacological Treatment of COPD\textsuperscript{2,4}

It is important that all healthcare professionals understand the most cost-effective interventions in COPD management. Non-pharmacological interventions are often more cost-effective than inhaled medication (see the COPD value pyramid below), and should be offered for all patients.


Leeds COPD Algorithm and Preferred Formulary\textsuperscript{15}

Although this project does not require community pharmacists to make treatment recommendations, it may be useful to understand the rationale for the Leeds COPD algorithm and formulary. This section provides you with further information on the rational use of inhaled medicines in COPD.

The Leeds COPD Algorithm and Preferred Formulary aims to provide relatively clear advice on the selection of inhaler therapy for patients with COPD taking into account the latest developments in understanding COPD and in the availability of a range of new pharmacological products. Local formulary recommendations are made based on current evidence, ease of use of inhaler device and cost.
COPD Assessment
A combined assessment approach should be used to understand the impact of COPD on each patient, and to guide treatment decisions. For information on CAT and MRC score see Assessment of COPD section.

i. Assess symptoms using the CAT questionnaire.
   a. If the CAT score is <10, indicating that the patient has less symptoms, they are positioned in the left hand column (category A or C).
   b. If the CAT score is ≥10, indicating that the patient has more symptoms, they are positioned in the left hand column (category B or D).
   If the CAT score is not available, use the mMRC assessment of breathlessness, so that mMRC grade 0-1 indicates less symptoms, and grade 2-4 indicates more symptoms.

ii. Assess the risk of exacerbations. Patients at Low Risk belong to the bottom row (category A or B), and those at High Risk are positioned in the top row (category C or D). Patients at High Risk of exacerbations are those who meet any of the following criteria:
   a. Severe or very severe airflow limitation (FEV1 <50% predicted – GOLD classification 3 or 4),
   b. 2 or more COPD exacerbations within the previous 12 months, or
   c. At least 1 hospitalisation for a COPD exacerbation within the previous 12 months.
   If the patient meets none of these three criteria, then they are considered to have a Low Risk of exacerbations.

The combined assessment is used to position each patient in one of four categories A to D:

<table>
<thead>
<tr>
<th>Category</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| A        | • Few COPD symptoms:  
|          |   o CAT score <10, or mMRC grade 0-1.  
|          | • Low risk of exacerbations:  
|          |   o Mild to moderate airflow obstruction [FEV1 ≥50% predicted]; and/or  
<p>|          |   o 0-1 exacerbations per year and no hospitalisation for exacerbation. |</p>
<table>
<thead>
<tr>
<th>Category</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| **B**    | • More significant COPD symptoms:  
|          |   o CAT score ≥10, or mMRC grade 2-4.  
|          | • Low risk of exacerbations:  
|          |   o Mild to moderate airflow obstruction [FEV₁ ≥50% predicted]; and/or  
|          |   o 0-1 exacerbations per year and no hospitalisation for exacerbation. |
| **C**    | • Few COPD symptoms:  
|          |   o CAT score <10, or mMRC grade 0-1.  
|          | • High risk of exacerbations:  
|          |   o Severe or very severe airflow obstruction [FEV₁ <50% predicted]; and/or  
|          |   o ≥2 exacerbations per year or ≥1 hospitalisation for exacerbation. |
| **D**    | • More significant COPD symptoms:  
|          |   o CAT score ≥10, or mMRC grade 2-4.  
|          | • High risk of exacerbations:  
|          |   o Severe or very severe airflow obstruction [FEV₁ <50% predicted]; and/or  
|          |   o ≥2 exacerbations per year or ≥1 hospitalisation for exacerbation. |

**Leeds COPD Algorithm and Preferred Formulary**

The algorithm above can be accessed at:  
http://www.leedsformulary.nhs.uk/docs/LTHCOPDPreferredInhalerAlgorithm.pdf
• **Treatment of Category A COPD patients.**
Patients in Category A have few symptoms (CAT <10 & mMRC 0-1) and a low risk of exacerbations (<2 exacerbations per year, and FEV<sub>1</sub> <50%). Treatment with a single short acting bronchodilator for PRN use is recommended.

  a. **First-Line Treatment:** Patients should be offered either a salbutamol MDI or salbutamol Easyhaler.
  
b. **Second-Line Treatment:** Patients who cannot use, or decline, a first-line inhaler device should be offered a salbutamol Easi-Breathe.
  
c. If patients are unable to use, or decline, a first- or second-line inhaler device, they should be assessed for the most appropriate alternative device from the ‘COPD formulary Grey-list’. This may include a salbutamol Accuhaler or terbutaline Turbohaler.
  
d. Ipratropium bromide is of very limited use and should be considered only in patients who cannot take any SABA and do not qualify for LAMA.

• **Treatment of Category B COPD patients.**
Patients in Category B have persistent symptoms (CAT ≥10, mMRC ≥2) and a low risk of exacerbations (<2 exacerbations per year, and FEV<sub>1</sub> <50%). Treatment with dual long-acting bronchodilator combination is recommended as first-line treatment.

  a. **First-Line Treatment:** Patients should be offered Anoro Ellipta (umeclidinium/vilanterol).
  
b. **Second-Line Treatment:** Patients who cannot use, or decline, the first-line inhaler device should be offered Duaklir Genuair (aclidinium/formoterol).
  
c. If patients are unable to use, or decline, a first- or second-line inhaler device, they should be assessed for the most appropriate alternative device from the ‘COPD formulary Grey-list’. This may include Ultibro Breezhaler (glycopyrronium/indacaterol) or Spiolto Respimat (tiotropium/olodaterol).
  
d. The option of prescribing LAMA and LABA as separate inhalers remains, but this should be applied only in exceptional circumstances.

• **Treatment of Category C COPD patients with FEV<sub>1</sub><50% and no exacerbations or hospital admissions for exacerbations of COPD.**
Patients in this category have few symptoms (CAT <10 & mMRC 0-1) and infrequent exacerbations, but have poor lung function. Treatment with dual long-acting bronchodilator combination is recommended as first-line treatment.

  a. **First-Line Treatment:** Patients should be offered Anoro Ellipta (umeclidinium/vilanterol).
  
b. **Second-Line Treatment:** Patients who cannot use, or decline, the first-line inhaler device should be offered Duaklir Genuair (aclidinium/formoterol).
  
c. If patients are unable to use, or decline, a first- or second-line inhaler device, they should be assessed for the most appropriate alternative device from the ‘COPD formulary Grey-list’. This may include Ultibro Breezhaler (glycopyrronium/indacaterol) or Spiolto Respimat (tiotropium/olodaterol).
  
d. The option of prescribing LAMA and LABA as separate inhalers remains, but this should be applied only in exceptional circumstances.
• **Treatment of Category C COPD patients with exacerbations or hospital admission for genuine acute exacerbation of COPD.**

 Patients in this category have few symptoms (CAT <10 & mMRC 0-1), but experience repeated exacerbations. Treatment with an ICS/LABA is recommended, although is thought to only be cost-effective in severe airflow obstruction (FEV₁<50% predicted).

  a. **First-Line Treatment:** Patients should be offered Relvar 92/22 Ellipta.

  b. **Second-Line Treatment:** Patients who cannot use, or decline, the first-line inhaler device should be offered Fostair 100/6 MDI.

  c. If patients are unable to use, or decline, a first- or second-line inhaler device, they should be assessed for the most appropriate alternative device from the ‘COPD formulary Grey-list’. This may include Symbicort Turbinhaler, DuoResp Spiromax, or Seretide Accuhaler.

  d. **If exacerbations persist** at a later review, consider adding in a LAMA.

   iii. **First-Line Treatment:** Patients should be offered Incruse 55microgram Ellipta (umeclidinium).

   iv. **Second-Line Treatment:** Patients who cannot use, or decline, the first-line inhaler device should be offered Eklira Genuair (aclidinium).

   v. If patients are unable to use, or decline, a first- or second-line inhaler device, they should be assessed for the most appropriate alternative device from the ‘COPD formulary Grey-list’. This may include Spriva (tiotropium) HandiHaler, Spiriva (tiotropium) Respimat, or Seebrì (glycopyrronium) Breezhaler.

• **Treatment of Category D COPD patients.**

 Patients in Category D have persistent symptoms (CAT ≥10, mMRC ≥2), and a high risk of exacerbations (≥2 exacerbations per year, and FEV₁>50%). Treatment with triple therapy of ICS, LABA and LAMA is recommended.

  a. **First-Line Treatment:** Patients should be offered Relvar 92/22 Ellipta and Incruse Ellipta (umeclidinium).

  b. **Second-Line Treatment:** Patients who cannot use, or decline, the first-line inhaler device should be offered Fostair 100/6 MDI and Eklira Genuair (aclidinium).

   vi. **NB.** If patients are already established on an appropriate ICS/LABA, consider maintaining existing ICS/LABA inhaler, and adding in Incruse Ellipta (umeclidinium).

   vii. **NB.** If patients are already established on an appropriate LAMA inhaler, consider maintaining existing LAMA inhaler, and adding in Relvar 92/22 Ellipta.

### Placebo inhalers and In-Check devices

Pharmacies were provided at the start of the EPIC service with a box of placebo inhalers, In-Check DIAL Inspiratory Flow Meter and disposable one-way valve inspiratory mouthpieces. Pharmacies are responsible for the upkeep and maintenance of these resources and for the supply of on-going consumables (mouthpieces). See Resources section on p29.
Placebos are provided for single pharmacist / technician use. Patients should use their own inhaler to demonstrate technique.

**Infection Control**
Some practical recommendations for the use of respiratory devices in clinical practice have been written by the British Thoracic Society and Education for Health.

Key points include:

- Placebo devices, spacer devices, peak flow meters or inspiratory flow meters should never be used for different patients.
- As far as reasonably practicable, all devices should be ‘single patient use’.
- If placebo devices are used for more than one patient, they must be decontaminated each time they are used.
- If the same peak flow meter is used for different patients, a peak flow meter should be purchased that can be used ‘between’ patients and disposable mouthpieces with one way expiratory valves should always be used. Similar principles apply for inspiratory flow meters.

**Payments / Claims**

The pharmacy will be paid £15 (plus VAT) for the initial consultation and £15 (plus VAT) for follow up consultation.

Spacers supplied (Aerochamber plus) will be funded at £4.81.

Payments will be made based on the information recorded on PharmOutcomes. Payment will be made to pharmacies on a monthly basis by BACS transfer on the 26th of the month following activity.

Service claims / invoices can be accessed by the pharmacy via the claims tab on PharmOutcomes. A guide to claims is available under the PharmOutcomes Help tab in the provider tab, Services Section [www.pharmoutcomes.org/pharmoutcomes.guides.provider.Claims.pdf](http://www.pharmoutcomes.org/pharmoutcomes.guides.provider.Claims.pdf)

Where the EPIC service was carried out within a MUR then the pharmacy can also claim a MUR fee via the FP34c. When an MUR fee is claimed the pharmacy is responsible for ensuring that the consultation undertaken met all requirements specified for the MUR service.

**PharmOutcomes**

**Accessing PharmOutcomes**
PharmOutcomes is accessed at: [www.pharmoutcomes.org.uk](http://www.pharmoutcomes.org.uk)

If you have misplaced or lost your log on details please contact the PharmOutcomes helpdesk by either
- Go to www.pharmoutcomes.org.uk and click the Contact Us button
- Call the Helpdesk on 0330 660 0689 and leave a message clearly stating your location, your phone number and a brief description of the problem you are experiencing

**User Guides**
There are several guides to assist you with using the new PharmOutcomes. These can be accessed by clicking the help tab. Guides are available for various topics such as creating new users and an enrolment guide.

**Enrolment**
Each pharmacist / pharmacy technician providing the EPIC service will need to enrol onto the service. You will be asked to enrol once only, even if you work at multiple sites. Instructions on how to enrol are provided on screen when you access the Pharmacy First service on PharmOutcomes.

A guide to enrolment is available under the PharmOutcomes Help tab in the provider tab, Services Section. www.pharmoutcomes.org/pharmoutcomes/help/home

**Recording Service Delivery**
The EPIC consultation forms capture all the information that is required for PharmOutcomes. PharmOutcomes will not allow you to save the data unless all the information is recorded so please ensure that you fully complete all the boxes on the record form.

1. Log onto PharmOutcomes.
2. Click the Services Tab.
3. On the left-hand side find and click on the relevant EPIC service.
4. Enter the data.
5. Click Save. This will save the data onto the system, email the GP and trigger a claim.
6. Ensure you have a process set up in the pharmacy to prevent a patient’s consultation from being entered twice.

The EPIC initial consultation and EPIC follow-up consultation services on PharmOutcomes are linked to each other. A follow-up consultation cannot be recorded unless an initial consultation has previously been recorded for the patient. In-line with the service specification the follow-up consultation should be recorded between 6-10 weeks following the initial consultation. PharmOutcomes will not allow a follow-up consultation to be recorded 12 weeks after the initial consultation.

EPIC Consultations must be promptly recorded on PharmOutcomes, ideally on the same day and within 48 hours of the consultation. This is because entry of the data onto PharmOutcomes triggers a notification email to the GP of the EPIC consultation.

**Entering data onto PharmOutcomes MUST NOT be left until the month end as this will delay the information being sent to the GP**
Person Requirements to Deliver the Service

The EPIC service can only be delivered by a Pharmacist or Pharmacy Technician has attended the EPIC training event, has the required competencies and has completed the CPPE Declaration of Competence self-assessment and declaration statement for Improving Inhaler Technique available at www.cppe.ac.uk.

Under the Declaration of Competence model a pharmacy professional has responsibility to ensure that they have the up-to-date knowledge and skills relevant to the role they are undertaking, to understand the limits of their professional competence and to identify areas for further development. The pharmacy professional is accountable for ensuring they have met the skills and knowledge and could demonstrate their competence if requested to do so.

<table>
<thead>
<tr>
<th>Pathway to completing the CPPE Declaration of Competence</th>
<th>Supporting Information</th>
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<tbody>
<tr>
<td><strong>Step</strong></td>
<td><strong>Supporting Information</strong></td>
</tr>
</tbody>
</table>
| **1** | **Understand the Model**  
Review the information available on the CPPE website so that you have an understanding of the Declaration of Competence model and your responsibilities under this model.  
Under the DoC model a pharmacy professional is responsible and accountable for reflecting on their learning needs and completing the relevant training to declare themselves competent to deliver the service in question. | Access the information at: [https://www.cppe.ac.uk/services/declaration-of-competence#navTop](https://www.cppe.ac.uk/services/declaration-of-competence#navTop)  
Declaration of Competence fact sheet: [https://www.cppe.ac.uk/wizard/files/nhs_and%20pharmacy%20services/declaration%20of%20competence%20fact%20sheet%20april%202015%20final.pdf](https://www.cppe.ac.uk/wizard/files/nhs_and%20pharmacy%20services/declaration%20of%20competence%20fact%20sheet%20april%202015%20final.pdf) |
| **2** | **Self-Assessment Framework**  
Assess the competencies, suggested learning and self-assessment and review your competence against the framework.  
Identify any gaps in competency.  
The DoC framework supports and guides pharmacy professionals in reflecting on their current competence to deliver a service and identifies the steps needed to develop practice. | Access the framework at: [https://www.cppe.ac.uk/services/declaration-of-competence#navTop](https://www.cppe.ac.uk/services/declaration-of-competence#navTop) |
| **3** | **Learning and Development**  
Undertake any necessary CPD.  
The CPD that is necessary will differ between each pharmacist. The recommended list of CPD on CPPE is not compulsory, just a suggested list for those who feel that they need to undertake additional training to be competent to deliver a minor ailment service. | Additional sources of possible CPD are listed on the next page. |
### Pathway to completing the CPPE Declaration of Competence

<table>
<thead>
<tr>
<th>Step</th>
<th>Supporting Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td><strong>Complete the self-assessment Framework</strong>&lt;br&gt;Print the self-assessment tool and complete the framework by writing in a response for each competency.&lt;br&gt;Ensure that you are able to answer 'yes' to all of the self-assessment questions and would be able to demonstrate how you meet each competency.</td>
</tr>
<tr>
<td>5</td>
<td><strong>Declaration of Competence Certificate</strong>&lt;br&gt;Generate your personalised Declaration of Competence and Qualifications certificate.&lt;br&gt;Print-out, sign and date the declaration statement (the certificate will include relevant CPPE packs that have been completed).&lt;br&gt;The self-declaration certificate has been developed to provide evidence that a pharmacy professional has reflected on their learning needs and completed the relevant learning to declare themselves competent to deliver the service in question.</td>
</tr>
<tr>
<td>6</td>
<td><strong>Link declaration on PharmOutcomes</strong>&lt;br&gt;Complete the enrolment within the EPIC service on PharmOutcomes.&lt;br&gt;Each pharmacist / pharmacy technician is asked to enrol once only, even if they work at multiple sites.</td>
</tr>
</tbody>
</table>

A signed copy of the Improving Inhaler Technique DoC should be retained for each pharmacy professional providing EPIC within the pharmacy. This is because the pharmacy contractor must hold evidence of competency to provide the service for each pharmacist / pharmacy technician who conducts EPIC consultations (i.e. retain copies of the Declaration of Competence statements for each pharmacist and technician) and make these available to the commissioner if requested.
### Resources to support delivery of the service

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Product Description</th>
<th>How to obtain</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPIC Initial Consultation form</td>
<td>TBC</td>
<td>Forms can be downloaded from the services pages of the CPWy website: <a href="http://www.cpwy.org/pharmacy-contracts-services/local-services-enhanced-/respiratory-epic.shtml">www.cpwy.org/pharmacy-contracts-services/local-services-enhanced-/respiratory-epic.shtml</a></td>
</tr>
<tr>
<td>Questions about using your PREVENTER INHALER</td>
<td>TBC</td>
<td></td>
</tr>
<tr>
<td>Pharmacy COPD Review Appointment</td>
<td>TBC</td>
<td></td>
</tr>
<tr>
<td>EPIC follow-up Consultation form</td>
<td>TBC</td>
<td></td>
</tr>
<tr>
<td>GP Referral Form</td>
<td>TBC</td>
<td></td>
</tr>
<tr>
<td>BLF Living with COPD</td>
<td>BLF Patient passport</td>
<td>Further BLF Leaflets and passports can be ordered free of charge from: <a href="http://shop.blf.org.uk/products/living-with-copd">http://shop.blf.org.uk/products/living-with-copd</a></td>
</tr>
<tr>
<td>In-Check device</td>
<td>Adult Disposable One-Way Valve Mouthpieces</td>
<td><a href="http://www.clement-clarke.com/EShop.aspx">http://www.clement-clarke.com/EShop.aspx</a></td>
</tr>
<tr>
<td>Placebo Inhalers</td>
<td><a href="http://www.medicinesresources.nhs.uk/upload/Availability%20of%20placebo%20inhalers%20FINAL_June13_LMEN.pdf">http://www.medicinesresources.nhs.uk/upload/Availability%20of%20placebo%20inhalers%20FINAL_June13_LMEN.pdf</a></td>
<td></td>
</tr>
<tr>
<td>CAT Test (COPD Assessment Test)</td>
<td>Further CAT test sheets can be downloaded from the services pages of the CPWy website: <a href="http://catestonline.org/">http://catestonline.org/</a> <a href="http://catestonline.org/images/pdfs/CATest.pdf">http://catestonline.org/images/pdfs/CATest.pdf</a></td>
<td></td>
</tr>
<tr>
<td>Poster</td>
<td>TBC</td>
<td>Further copies may be available from Leeds West CCG Medicines Optimisation Team</td>
</tr>
</tbody>
</table>

**EPIC Pharmacy Folder**

Jan 16

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References


11. Melani et al. Inhaler mishandling remains common in real life and is associated with reduced disease control Resp Med 2011;105:930-8

12. Baverstock M et al. Do healthcare professionals have sufficient knowledge of inhaler techniques in order to educate their patients effectively in their use? Thorax 2010;65(Suppl 4):A118


Identifying Patients

In order for this service to be a success, with significant numbers of COPD patients benefiting from the service, pharmacies will need to be proactive with the whole pharmacy team being involved in identifying patients.

**ACTION:** Proactively identify patients for the EPIC service

- **IDENTIFY:** Suitable patients for the service.
- **INCLUSION:** Check the patient meets the inclusion criteria for the service.
- **DISCUSS:** Explain and offer the COPD review to the patient.
- **APPOINTMENT:** Arrange a mutually convenient time for a COPD review with the patient
  - Gain consent to share details with the GP and store the patients details so that you can contact them about their appointment
  - Record the patients details (the first section of the EPIC initial consultation form can be used to do this)
  - Issue the patient with a Pharmacy COPD Review Appointment form

Identifying patients for the service can be carried out by any member of the pharmacy team.

*Introduce yourself to the patient ([http://hellomynamesis.org.uk/](http://hellomynamesis.org.uk/))*

*“We are currently looking at how we help patients with COPD look after themselves better. As someone living with COPD you qualify for a Pharmacy COPD review. This is an NHS service – you don’t need to pay for it.”*

**Identifying patients for the service**

Pharmacies should be pro-active in identifying patients for the service. Potential patients can be identified:

- At the point of dispensing highlighting any patient on inhalers
- Actively searching the pharmacy patient database for patients on inhalers

Promote the service by displaying the poster.

**GP Referral**

GP Practices are being asked to write to all mobile (i.e. not housebound) COPD patients requesting that they attend the pharmacy for a COPD review. GP referral should not be relied upon as the only source of patients being identified for the service as patients may not act on the GP letter.
Make sure that all staff are aware of the key role they have in promoting the COPD review service to patients and know that patients may request a COPD review following a letter to them from the practice.

**Inclusion Criteria**

Once a potential patient has been identified for the EPIC service, confirm they meet the inclusion criteria:

- Aged 35 and over
- Self-reported diagnosis of COPD
- Speak English or have someone to interpret
- Uses inhalers
- Registered with a Leeds West GP participating in the EPIC project
- Is able to attend the pharmacy for both EPIC consultations
- Is prescribed inhalers
- Has not already received a Pharmacy EPIC service from another pharmacy

<table>
<thead>
<tr>
<th>GP Practices participating in the EPIC project</th>
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</thead>
<tbody>
<tr>
<td>Armley Medical Centre</td>
<td>Pudsey Health Centre</td>
</tr>
<tr>
<td>Beech Tree Surgery</td>
<td>Robin Lane Health and Wellbeing Centre</td>
</tr>
<tr>
<td>Hawthorn Surgery</td>
<td>Sunfield Medical centre</td>
</tr>
<tr>
<td>Highfield Medical Centre - Bramley</td>
<td>The Gables Surgery</td>
</tr>
<tr>
<td>Hillfoot Surgery</td>
<td>Thornton Medical Centre</td>
</tr>
<tr>
<td>Manor Park Surgery</td>
<td>West Lodge Surgery</td>
</tr>
<tr>
<td>Priory View Medical Centre</td>
<td>Whitehall Surgery</td>
</tr>
</tbody>
</table>

Patients not eligible for the EPIC service can be offered a Medicines Use Review (MUR) where the patient and the pharmacist can cover the patient’s medicines (including COPD medicines/ inhalers), checking and supporting adherence and inhaler technique, identifying and taking steps to resolve any problems, and answering any questions the patient has about their medicines.

**Discuss the service with COPD patients**

Explain the COPD review service to the patient.

- It is an NHS service – you don’t need to pay for it.
- Consultations are carried out in a consultation room and therefore will not be overheard by other patients/members of the pharmacy team.
- The consultation aims to help you to find out more about the inhaler(s) you are taking.
- The consultation aims to help you better understand your COPD and how to manage your symptoms.
- The consultation aims to pick up any problems you are having with your inhaler(s).
- The consultation gives you time to ask about any concerns or questions that you have about your COPD and inhaler(s) / medicines.
- This pharmacy review is being carried out as part of a project which local GPs are also taking part in. The Pharmacy COPD review is needed as well as any review you have with your GP / nurse.
- You will be asked to come back in 8 weeks for a follow-up consultation.

**Appointment**

Capture the patient’s details on the first section of the EPIC initial consultation form.

Arrange a suitable appointment date and time for the patient (which may be immediately if appropriate). Record this date in the usual manner for booked pharmacy appointments (e.g. diary, PMR).

Gain informed consent from the patient for details of the consultations to be shared with their GP. Ask the patient if they consent to your pharmacy contacting them on their contact telephone number to remind them about their consultation. Record this verbal consent on the consultation form.

Complete and issue a Pharmacy COPD Review Appointment form to the patient. Point out the ‘please bring with you’ section of the appointment form to the patient and ask them to bring all their inhalers to the appointment.

NB- If you plan to conduct an MUR alongside the EPIC / COPD review consultation ask the patient to bring all their medicines with them, not just their inhaler(s) / COPD medicines.
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Assessment of COPD

A brief assessment of COPD health status is beneficial in determining whether patients are appropriately managed, as well as determining the impact of any interventions that have been made.

**ACTION:** Check each patient knows and understands what COPD is:
- **EDUCATION:** Using the BLF 'Living with COPD' booklet as a guide, ensure the patient understands what COPD is, and what their symptoms are.
- **SPIROMETRY:** This is a recommended NICE COPD Quality Standard and a QOF indicator.
  - Ask each patient if they have had their COPD diagnosis confirmed by spirometry (breathing tests).
  - Patients who have not had, or do not remember having spirometry should be referred to the GP using the GP referral form.
- **ANNUAL REVIEW:** This is a recommended NICE COPD Quality Standard and a QOF indicator.
  - Ask when they last had an annual review of their COPD by their GP or Practice Nurse.

**ACTION:** Check each COPD patient’s health status and exacerbation history:
- **Give the COPD Assessment Test (CAT) questionnaire to the patient, so they can complete this immediately prior to each consultation.** This is available at [www.catestonline.org/](http://www.catestonline.org/)
  - **CAT score 0-9:** Low impact of COPD
  - **CAT score 10-20:** Medium and significant impact of COPD
  - **CAT score 21-40:** High to very high impact of COPD
- **Check each patient’s breathlessness using the MRC dyspnoea score during each consultation.**
  - An MRC ≥3 identifies people with ‘more breathlessness’ from those with ‘less breathlessness’

<table>
<thead>
<tr>
<th>MRC</th>
<th>Degree of breathlessness related to activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not troubled by breathlessness except on strenuous exercise</td>
</tr>
<tr>
<td>2</td>
<td>Short of breath when hurrying or walking up a slight hill</td>
</tr>
<tr>
<td>3</td>
<td>Walks slower than contemporaries on the level because of breathlessness, or has to stop for breath when walking at own pace</td>
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<td>Stops for breath after walking about 100m or after a few minutes on the level</td>
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<tr>
<td>5</td>
<td>Too breathless to leave the house, or breathless when dressing or undressing</td>
</tr>
</tbody>
</table>


- **Ask each patient about their exacerbation history:**
  - At the first consultation: ask how many exacerbations (requiring oral steroids and/or hospital admission) they have had in the previous 12 months.
  - At the follow-up consultation: ask if they have had an exacerbation since the first consultation.

Explain to the patient that you are going to take some information from them to help you better understand them and their COPD.

Use the BLF ‘Living with COPD’ booklet p4-6 to support the discussion.
The consultation must be undertaken in a consultation room that meets the requirements for the MUR service. Only a pharmacist / pharmacy technician who has undergone the EPIC training and completed the Improving Inhaler Technique DoC can carry out the EPIC consultation.

Introduce yourself to the patient (http://hellomynames.org.uk/)

Ask the patient to complete the CAT and the ‘Questions about using your PREVENTER INHALER’ questionnaires while they wait for you to prepare for the consultation (e.g. finish off current task, prepare paperwork etc). It may be helpful to provide the patient with a clipboard if they are completing these questionnaires without a desk.

NB The ‘Questions about using your PREVENTER INHALER’ questions are included in the appointment form and don’t need to be completed again if the patient has presented at the consultation with their appointment form.

**Spirometry**

Spirometry is used to help diagnose and monitor COPD by measuring how much air can be expelled in one forced breath. Spirometry should be carried out every 12 months as part of the patients COPD review with the GP practice.

A spirometer is a small machine attached by a cable to a mouthpiece. Patients can refer to spirometry as a blowing test.

Another useful picture of a spirometer is on p6 of the living with COPD booklet.

---

**Follow-up Consultation**

You do not need to ask if the patient has had spirometry in the follow-up consultation.

If the patient was referred to the GP for spirometry at the initial appointment confirm if the patient has been invited to the GP for the test.

---

**COPD Assessment Test (CAT)**

The COPD assessment Test (http://catestonline.org/) is a validated 8-item patient-completed questionnaire designed to measure the impact of COPD on a person’s life, and how this changes over time. It is quick and simple to use, and the results correlate closely with health-related quality of life questionnaires such as the St George’s Respiratory Questionnaire (SGRQ). It is available to download from the website in over 50 languages.

It is not a diagnostic tool, but the results of the CAT questionnaire allow patients and healthcare professionals to understand the impact of COPD, and identify where COPD has the greatest effect on each patient’s health and daily life. This can assist discussions and decisions about managing COPD, and may be repeated every 2 to 3 months to detect changes and trends in CAT score.
The CAT questionnaire has a scoring range of 0-40. A change of 2 or more in the score suggests a clinically significant change in health status. The score is used by health care professionals to guide the management of the patient.

A score of less than 10 indicates a low impact of COPD on a person’s life, and management includes:
- Smoking cessation advice.
- Annual flu vaccination.
- Advice to avoid exposure to exacerbation risk factors.
- Prescription of short-acting bronchodilators on a when required basis.

A score of 10-20 indicates a medium and significant impact of COPD on a person’s life, including breathlessness, wheeze, cough and/or sputum production on most days. Further management includes:
- Optimising COPD inhaled therapy.
- Referral for pulmonary rehabilitation.
- Ensuring best approaches to minimising and managing exacerbations.
- Reviewing aggravating factors – is the patient still smoking?

A score of 21-40 indicates a high to very high impact of COPD on a person’s life, such that their COPD stops them doing most things that they want to do. Further management includes:
- Referral to specialist care.
- Ensuring that COPD inhaled management is optimised, and using additional pharmacological treatments where indicated.
- Referral for pulmonary rehabilitation.
- Ensuring best approaches to minimising and managing exacerbations.

**MRC Dyspnoea Score**

A simple measure of breathlessness is the British Medical Research Council (MRC) Questionnaire, which relates well to health status and predicts future mortality risk. However it is not a comprehensive measure of COPD symptoms, and it does not consider other factors that affect patient’s lives. Consequently, where possible the CAT score is preferred to the MRC score when assessing patients and making comprehensive management decisions. However, we would like you to also record each patient’s MRC score, as this is used by GP practices as a QOF indicator.

The MRC may be given to the patient, who is asked to choose a phrase that best describes their condition. Alternatively it may administered by the pharmacist / technician who expresses the statements framed as questions, e.g. ‘Are you short of breath when hurrying on the level or walking up a slight incline’ (Grade 2). The score is the number that best fits the patient’s level of activity.

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</table>

Adapted from Fletcher CM et al. BMJ 1959;2:257–66
An MRC ≥3 is used as a cut-point for identifying people with ‘more breathlessness’ from those with ‘less breathlessness’.

It should be noted that there are two different scoring systems for reporting the MRC Dyspnoea score. QOF requires Practices to report the MRC score (scale 1-5), but most clinical studies and guidelines report the use of the modified MRC score (mMRC), which has a different numbering system (scale 0-4). The description of breathlessness is identical in the MRC and mMRC scores, but the numbering system is altered. For the purposes of the EPIC project, we are reporting the MRC score, but please note that they current Leeds Inhaler Algorithm uses the mMRC score, where an mMRC ≥2 is used as a cut-point for identifying people with ‘more breathlessness’.

Exacerbation Risk

Avoiding COPD exacerbations is an important aspect of COPD management, as these are associated with increased lung function decline, deterioration in health status, and increased risk of death.

Risk factors for patients experiencing frequent exacerbations include a history of previous exacerbations, hospitalisations for COPD exacerbation and worsening airflow limitation. COPD patients are considered to be at High Risk of exacerbations if they meet any of the following criteria:

(i) severe or very severe airflow limitation (FEV1 <50% predicted – GOLD classification 3 or 4),
(ii) 2 or more COPD exacerbations within the previous 12 months, or
(iii) at least 1 hospitalisation for a COPD exacerbation within the previous 12 months.

Follow-up Consultation
The follow-up consultation should include as assessment of any exacerbations since the initial consultation (i.e. over the previous 8 weeks)
Ensuring that all COPD patients are up to date with their vaccinations can reduce hospital admissions for both pneumonia and influenza, and reduce their mortality risk.

**ACTION:** All COPD patients should be asked about their vaccination status.

- **OFFER** the annual FLU VACCINATION if the patient has not had it this season (up to end Feb 16):
  - From your pharmacy if providing the NHS flu vaccination service, or
  - Refer to an alternative pharmacy for flu vaccination, or
  - Complete GP referral form to request the GP check vaccination status.

- **REFER** patients to receive the PNEUMOCOCCAL VACCINATION, if they have not previously had this, by completing a GP referral form.

Explain to patients that they are eligible for a free annual flu vaccination and a one-off pneumonia vaccination.

Use the BLF ‘Living with COPD’ booklet p12 to support the discussion.

If a patient has not received a flu vaccination this season (up to end Feb 16) and the pharmacy provides the NHS flu vaccination service, offer the patient a vaccination from the pharmacy. This is best carried out at the end of the EPIC consultation. If your pharmacy does not offer the NHS flu vaccination service, explain the benefits of vaccination and urge the patient to attend their GP practice / a pharmacy who can offer a flu vaccination (text pharmacy flu with the patient’s postcode to 80011 to find their nearest pharmacy offering the NHS Flu vaccine. Texts are charged at the standard messaging rate).

Patients with COPD only need a single pneumococcal vaccination, which will protect for life. If the patient has not, or is not sure that they have received a pneumococcal vaccine, explain the benefits and refer to the GP for vaccination.

Further information on promoting the flu vaccination to patients can be found at: [http://psnc.org.uk/services-commissioning/advanced-services/flu-vaccination-service/flu-vaccination-promoting-the-service-to-patients/](http://psnc.org.uk/services-commissioning/advanced-services/flu-vaccination-service/flu-vaccination-promoting-the-service-to-patients/)

**Follow-up Consultation**
If the patient was referred to the GP for vaccination at the initial appointment confirm if the patient has been vaccinated.
Smoking 2,4,7

Stopping smoking is the single most important intervention that can be made in COPD, regardless of disease severity. Stopping smoking is one of the most cost-effective interventions that can be made in COPD, will slow disease progression, and will have health benefits for other conditions.

**ACTION:** One of the most effective ways of ensuring that patients access local stop smoking services is to give very brief advice (30 seconds).

‘Ask, Advise and Act’ will give them the best chance to successfully stop smoking:
- **ASK** and record smoking status, and whether they live with a smoker.
- **ADVISE** patient of health benefits of quitting, and inform them that the best way to quit is with a combination of trained support and medication.
- **ACT** on patient’s response and refer smokers who want to quit to their local NHS stop smoking service.

### Leeds NHS Stop Smoking Service

- **Telephone:** 0800 169 4219
- **Text:** ‘SMOKEFREE’ to 60066
- **email:** stopsmokingleeds@nhs.net
- **Web resources:** [http://smokefree.nhs.uk/](http://smokefree.nhs.uk/)

Use the BLF ‘Living with COPD’ booklet p8 to support the discussion

**ASK**

Assess current smoking behaviour

‘Do you or anyone else in your household smoke?’

**ADVISE**

Provide information on consequences of smoking and smoking cessation

‘Do you know that stopping smoking can improve breathlessness, reduce hospital admissions, help prevent disease progression and increase life expectancy?’

‘It’s never too late to stop.’

‘Have you ever thought of stopping or tried to stop before? I can tell you where to get the best help.’

**ACT**

Provide options for later/additional support

‘The Local NHS Stop Smoking Service can offer you support and advice on quitting. You are up to 4 times more likely to stop with the support from the service’

‘The Stop Smoking Service can make this much easier for you.’

‘Shall I refer you? It really is the best thing you can do right now.’

‘It’s a free advice service’*

*Treatments are paid for by the patient under a prescription which is often cheaper than over the counter

If the patient lives with a smoker they should try to limit exposure to second-hand smoke.
Follow-up Consultation
If the patient was signposted to a stop smoking service at the initial appointment confirm if the patient has followed this up.

The HSCIC infographic is included below as it demonstrates that half of the people who access NHS Stop Smoking services set a quit date.

http://www.hscic.gov.uk/media/18659/Smoking-factsheet/pdf/HSCIC_Stoptober_infographic_A3_0915a.pdf
Medication

Medication is used to reduce COPD symptoms, reduce the frequency and severity of exacerbations, and to improve health status and exercise tolerance.

**ACTION:** Many patients with COPD benefit from receiving education about their medicines.

- **ADHERENCE:** Check that the patient has completed the ‘Questions about using your PREVENTER INHALER’ questionnaire:
  - Explore and identify reasons for reported non-adherence (e.g. due to beliefs, device, medicine, or side-effects) for inhalers.
  - Ask the patient how they feel about using their COPD inhalers. Do they have any concerns about using these medicines?
  - Using a patient-centred approach, discuss and agree strategies and solutions to improve adherence with the patient.

- **EDUCATION:** Discuss each COPD medicine/inhaler, providing information that is tailored to each patient:
  - Check that the person understands what all their medicines are, why each is used, when it should be used, and how to manage any potential side effects.
  - Explain to the patient of the aim of treatment is to reduce symptoms and flare-ups and enable them to be as active as possible.
  - All patients on a high dose ICS/LABA inhaler should be issued a High Dose Inhaled Steroid Warning Card.
  - All patients taking oral corticosteroids for long durations (>3 weeks) should be issued with a Steroid Treatment Card.

Many patients with COPD benefit from receiving education about their medicines to understand why each medicine is used, when it should be used, and how to manage any potential side effects.

Explain to patients that you are going to ask them about their COPD medicines and how they take them. It can be helpful to reassure the patient that people often miss taking doses of their medicines, for a wide range of reasons.

Use the BLF ‘Living with COPD’ booklet p11-13 to support the discussion.

**Adherence**

Assist the patient in completing the ‘Questions about using your PREVENTER INHALER’ questionnaire if this is needed. For patients with limited literacy this may mean that you read out the questions to them and record their answers.
Preventer Inhaler Compliance Assessment
Examples of each type are given below the heading

<table>
<thead>
<tr>
<th>Belief:</th>
<th>Device</th>
<th>Medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Denial of condition</td>
<td>• Dexterity problems</td>
<td>• Frequency of dosing</td>
</tr>
<tr>
<td>• Concern about quantity</td>
<td>• Incorrect technique</td>
<td>• Several different medicines</td>
</tr>
<tr>
<td>• Misunderstand condition</td>
<td>• Incorrect cleaning of spacer</td>
<td>• Actual side-effects</td>
</tr>
<tr>
<td>• Misunderstand treatment</td>
<td></td>
<td>• Forgetfulness</td>
</tr>
<tr>
<td>• Fear of side-effects</td>
<td></td>
<td>• Cost of prescription levies</td>
</tr>
<tr>
<td>• Embarrassment</td>
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</table>

Follow-up Consultation
It may be more relevant in the follow-up consultation if you discuss adherence over the previous 8 weeks (i.e. since the previous consultation)

A patient-centred approach to supporting adherence should be used at all times, taking into account patients’ needs and preferences, and allowing them to make informed decisions about their treatment. Although adherence can often be improved, no specific intervention can be recommended for every patient, and solutions should be tailored to address any difficulties the patient may be experiencing. Potential interventions to improve adherence have been highlighted by NICE,16 and examples may include:

- Discuss with the patient whether any non-adherence is intentional (because of beliefs or concerns about their medicines), or unintentional (because of practical problems taking medicines or using inhalers).
- Provide information and education about COPD and medicines to address any beliefs or concerns affecting adherence.
- Adherence may be lower for medicines such as inhaled corticosteroids that do not have an immediate effect on symptoms – set realistic expectations for this chronic and progressive disease.
- A perceived lack of effect may in some cases be related to poor care of inhaler and spacer devices. Cleaning recommendations are outlined in the Leeds Inhaler Device Guide.
- Forgetfulness may be addressed by recording dosing in a diary or calendar, or by keeping regular inhalers in a place that would regularly remind them to use their inhaler (e.g. on a bedside table, or by the kettle. Storing dry powder inhalers next to a toothbrush in a bathroom may not be appropriate as the humidity generated from baths and showers is not compatible with their storage requirements).
- Inability to use different inhalers should be addressed by determining an alternative inhaler device that the patient can use, or by issuing an Aerocahmber spacer to use with pMDI devices.
- Side effects may be addressed by discussion of ways to minimise or preventing them (e.g. rinsing the mouth after using inhaled corticosteroids or long-acting muscarinic antagonists, trial of alternative drugs/inhaler device within the same class (as some oropharyngeal side effects may be enhanced by poor inhaler technique), altering the timing of using inhalers).
**Education**

It may be helpful to discuss each COPD medicine / inhaler in turn.

Check the patient understands each inhaler / COPD medicine, what it is, how it works to manage the patients COPD, potential side-effects and how to minimise them (use drug information table below to assist). Patients should be asked to explain what they know about each medicine / inhaler before additional information is provided to them.

Tailor the advice and support to the individual taking into account their medical history and what they already know about their condition and inhalers.

**Follow-up Consultation**

Don't assume that a patient undertaking a follow-up consultation will remember what was discussed in the previous appointment. The approach needs to be tailored to each patient.

The questions below (adapted from the NMS / MUR interview schedule) may be helpful in providing a framework for the discussions.

<table>
<thead>
<tr>
<th>How are you getting on with this medicine / inhaler?</th>
</tr>
</thead>
<tbody>
<tr>
<td>This is an open question to get the patient talking and bringing out any issues which are important to them. These can be dealt with here rather than waiting until the appropriate question below.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>When and how often do you use this medicine / inhaler?</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is important for all patients to understand when to take their medicine / inhaler and which ones are to be taken regularly.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Are you having any problems with this medicine / inhaler, or concerns about taking or using it?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assure the patient that it is perfectly normal for some people to have concerns about taking a medicine.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Do you think this medicine / inhaler is working? (Prompt- is this different from what you were expecting?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• It is important for all patients to understand their medicines and the benefits.</td>
</tr>
<tr>
<td>• This gives a chance to discuss that some patients will not feel any different if some of these drugs are working.</td>
</tr>
<tr>
<td>• Do they know what it is for and how it works to manage their COPD?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Do you think you are getting any side effects or unexpected effects?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• If the patient feels different it may lead them to change their behaviour, even though it is not a side effect of the drug. This may also be an opportunity to fill in a Yellow Card.</td>
</tr>
<tr>
<td>• This is an opportunity to discuss whether side effects are likely to be transitory and what can be done to minimise them.</td>
</tr>
<tr>
<td>• Adverse events to medications are reported by 90% of the patients with COPD, as patients can have multiple medicines to treat complex co-disease.</td>
</tr>
<tr>
<td>• This could also alert to serious side effects that may occur and would involve an immediate need to take action.</td>
</tr>
</tbody>
</table>
The number and range of medicines available to treat COPD has increased significantly over the past few years, and the way in which many patients are treated in Leeds has changed.

A new Leeds COPD Algorithm and Preferred Formulary was approved for use in June 2015, which aims to provide relatively clear advice to prescribers on the selection of inhaler therapy for patients with COPD taking into account the latest developments in understanding COPD and in the availability of a range of new pharmacological products. The formulary recommendations were made based on current evidence, ease of use of inhaler device and cost (further detail in the background section).

<table>
<thead>
<tr>
<th>Drug</th>
<th>Role in Treatment</th>
<th>Common side effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short-acting beta₂-agonist (SABA)</strong></td>
<td>These are used on an as needed basis to provide fast-acting relief of breathlessness and wheezing. A noticeable effect should be noticed within 5 minutes, but duration of effect is only 4-6 hours. All COPD patients should have a SABA inhaler.</td>
<td>Tremor, palpitations, headache. Tend to occur with high use, or larger doses given as a nebuliser.</td>
</tr>
<tr>
<td>Salbutamol, terbutaline</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Long-acting muscarinic antagonists (LAMA)</strong></td>
<td>These are used regularly once or twice (aclidinium/Eklira only) a day. Long-acting bronchodilators are more effective than short-acting relievers, and provide larger improvements in lung function, breathlessness and quality of life, and reductions in hospitalisations. They are recommended for patients with more significant COPD symptoms (CAT score ≥10; MRC ≥3). There is no strong evidence whether a LABA or a LAMA is most effective, and the choice may depend on each patient’s perception of symptomatic relief.</td>
<td>Dry mouth is the most common side effect. This may be managed by rinsing mouth after use, or may require switch to an alternative within this class.</td>
</tr>
<tr>
<td>Eklira®, Incruse®, Seebri®, Spiriva®</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Long-acting beta₂-agonist (LABA)</strong></td>
<td>These are used regularly once (Onbrez® and Striverdi®) or twice a day. Long-acting bronchodilators are more effective than short-acting relievers, and provide larger improvements in lung function, breathlessness and quality of life, and reductions in hospitalisations. They are recommended for patients with more significant COPD symptoms (CAT score ≥10; MRC ≥3). There is no strong evidence whether a LABA or a LAMA is most effective, and the choice may depend on each patient’s perception of symptomatic relief.</td>
<td>Tremor, palpitations, headache, muscle cramps. May occur more commonly with high use of SABA.</td>
</tr>
<tr>
<td>Onbrez®, Oxis®, Serevent®, Striverdi®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug</td>
<td>Role in Treatment</td>
<td>Common side effects</td>
</tr>
<tr>
<td>------</td>
<td>-------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>Combination long-acting bronchodilator (LAMA/LABA)</strong>&lt;br&gt;Anoro®, Duaklir®, Spiolto®, Ultibo®</td>
<td>These are used regularly once or twice (Duaklir® only) a day. Combining two classes of long-acting bronchodilator produces greater increases in lung function, breathlessness and quality of life than using only one long-acting bronchodilator. Furthermore, a significant increase in exercise endurance may be seen. In Leeds, they are recommended as a first-line option for patients with more significant COPD symptoms (CAT score ≥10; MRC ≥3), ahead of using single-agent long-acting bronchodilator.</td>
<td>Side effects are likely to be similar to those observed with each single agent, i.e. dry mouth, tremor, palpitations, headache, muscle cramps.</td>
</tr>
<tr>
<td><strong>Combination corticosteroid &amp; long-acting beta₂-agonist (ICS/LABA)</strong>&lt;br&gt;AirFluSal®, DuoResp®, Fostair®, Relvar®, Seretide®, Sirdupla®, Symbicort®</td>
<td>These are used regularly once (Relvar® only) or twice a day. Inhaled corticosteroids (ICS) decrease the number and activity of inflammatory cells that are present in the lungs of people with severe COPD (FEV₁ &lt;50%) who experience frequent exacerbations. They have no role in the management of COPD in people with only mild to moderate airway obstruction as these inflammatory cells are not present in significant numbers. NB. Inhaled corticosteroid inhalers are only licensed for use in COPD when used as a combination ICS/LABA inhaler.</td>
<td>Local side effects associated with ICS such as oral thrush and dysphonia (altered pitch of the voice) are common. Management includes rinsing the mouth after use, use of a spacer with a MDI, or switching to an alternative drug or device. Other side effects caused by ICS include skin thinning and bruising. High doses may increase the risk of osteoporosis. Some ICS have been associated with an increased risk of pneumonia, which may require discontinuation of the ICS. All patients on high dose ICS/LABA should be given a High Dose Inhaled Steroid Warning Card.</td>
</tr>
<tr>
<td><strong>Mucolytic</strong>&lt;br&gt;Carbocisteine</td>
<td>Mucolytics reduce the viscosity of phlegm, making it thinner and easier to cough up. The initial dose of carbocisteine is a 4-6 week trial of 6 capsules per day (usually 2 capsules three times a day). Long-term treatment should continue in patients who notice a benefit at a dose of 4 capsules per day (usually 2 capsules twice a day).</td>
<td>Side effects are uncommon, but may include gastritis or gastrointestinal bleeding.</td>
</tr>
<tr>
<td><strong>Methylxanthines</strong>&lt;br&gt;Uniphyllin®&lt;br&gt;Phyllocontin®</td>
<td>Theophylline and aminophylline are taken regularly twice a day. They are non-selective bronchodilators and may also have some anti-inflammatory effect. There is limited evidence that they may provide additive effects in improving lung function. They may be used in selected patients who remain symptomatic despite optimised bronchodilator therapy.</td>
<td>Theophylline and aminophylline have a narrow therapeutic window, and require serum level monitoring. Common side effects include headache, indigestion, nausea, tachycardia. Toxic levels may result in arrhythmias or seizures.</td>
</tr>
<tr>
<td>Drug</td>
<td>Role in Treatment</td>
<td>Common side effects</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Oral corticosteroids</td>
<td>Oral corticosteroids are taken once a day. Long-term maintenance therapy with oral corticosteroids is not usually recommended due to the risk of side effects. During an exacerbation of COPD, a short-course of prednisolone shortens the duration of exacerbation and hospital admission. The usual dose for an exacerbation of COPD is prednisolone 30mg once daily for 5-7 days. Patients at high risk of exacerbations may be given a rescue pack of prednisolone to commence at home at the onset of symptoms of an exacerbation (e.g. increased breathlessness). Patients should contact their GP if symptoms do not improve after 48 hours.</td>
<td>Side effects are more common with long-term treatment, and include indigestion, altered mood, weight gain, osteoporosis, and adrenal suppression. All patients taking oral corticosteroids for long durations (&gt;3 weeks) should be issued with a Steroid Treatment Card.</td>
</tr>
<tr>
<td>Prednisolone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antibiotics</td>
<td>Antibiotics are used to treat infective exacerbations of COPD, which are characterised by an increase in breathlessness and either an increase in sputum volume or an increase in sputum purulence (discoloured phlegm). They have been shown to reduce mortality by 77% Common antibiotics used include a 7-day course of amoxicillin 500mg three times a day or doxycycline 200mg daily.</td>
<td>See individual antibiotic monographs in BNF or SPC</td>
</tr>
<tr>
<td>Oxygen</td>
<td>Long-term oxygen therapy (for more than 15 hours per day) has been shown to improve survival in people with COPD who have a severe resting hypoxaemia. It has no role in the management of people with milder COPD and good oxygenation levels. Patients thought suitable for long term oxygen therapy are assessed in specialist oxygen clinics (in primary or secondary care). Supplies of oxygen concentrators or cylinders are provided direct to the patient by Baywater Healthcare.</td>
<td>Excessive administration of oxygen in some COPD patients can worsen hypercapnic respiratory failure.</td>
</tr>
</tbody>
</table>

**High Dose Inhaled Corticosteroid Card**

See the information on the NHS England Guidance for Health Care Professional on Inhaled Corticosteroids in Adults information on the next page.

Inhaler technique

Prescribing and teaching of correct inhaler technique is known to be an area for improvement, as 50-75% of patients have sub-optimal inhaler technique, and 10% to 33% of patients make critical errors using Accuhaler, MDI and Turbohaler devices. This increases the risk of COPD exacerbations, hospital admissions and A&E visits. Similarly, many healthcare professionals themselves have poor inhaler technique, with one study reporting that only 8% could use MDIs correctly.

**ACTION:** Assess and improve inhaler technique in order to optimise the management of COPD.

**Step 1 - Check inhaler technique**
- Each patient should be asked to demonstrate how to use their own inhaler (unless it is newly prescribed, and you need to teach the patient first).
- Use the Leeds Inhaler Device Guide to support your consultation.
- Assess Inhaler technique as ‘Optimal’ (all steps completed correctly), ‘Satisfactory’ (some minor errors, but all critical steps completed correctly), or ‘Unsatisfactory’ (at least one critical error made).

**Step 2 - Teach correct inhaler technique**
- The best way to teach correct inhaler technique is for the healthcare professional to demonstrate correct inhaler technique to the patient. Therefore it will be useful for you to keep your own set of placebos to use.
- An Aerochamber spacer may be issued to patients with difficulty coordinating actuation and inhalation of MDI devices, or those experiencing oropharyngeal side effects from inhaled corticosteroids.

**Step 3 - Check inspiratory flow**
- If required, the In-Check DIAL inspiratory flow meter should be used to measure the patient’s inspiratory flow through the inhaler device(s) that they are prescribed.
- Using the appropriate setting on the In-Check DIAL inspiratory flow meter, the patient should be asked to inhale through the mouthpiece as if they were breathing in through their inhaler device.
- It may be useful to check inspiratory flow two or three times through each device to ensure that the patient achieves the same inspiratory flows consistently.

**Step 4 - Re-check inhaler technique and check understanding**
- Once the patient has been taught and shown how to use their inhaler correctly, they should be asked to demonstrate how they would use it again.
- This allows the healthcare professional to check they understand how to use their inhaler device, and to reinforce any steps they are unable to perform correctly.
- Assess Inhaler technique as ‘Optimal’, ‘Satisfactory’, or ‘Unsatisfactory’.

**Patients assessed as unable to use their prescribed inhaler device**
- Using the In-Check DIAL inspiratory flow meter and placebo inhalers as appropriate, assess the most suitable inhaler device that the patient can use.
- Complete the GP referral form to request a prescription for an alternative inhaler device, documenting the reasons for advising a switch and whether the patient consents to this.

**Further Support**
- Patients may be directed to Inhaler Technique videos:
Inhaler technique should be assessed for every patient, at every contact with a healthcare professional to achieve and maintain good control. Advise each patient to clean their inhalers and spacers regularly as per the manufacturer’s instructions, as the inhaler can block reducing the dosage provided. Further information is available in the Leeds Inhaler Device Guide.

Explain that patients should have their inhaler technique checked regularly.

Use the Leeds Inhaler Device Guide for details on how to support the discussion.

Inhaler technique assessments are important to determine whether a patient is able to use their prescribed inhaler device, or whether an alternative would be better. The Leeds Inhaler Device Guide should be used to assist inhaler technique training. The inhaler device monographs may be printed and given to the patient as an instruction guide.

### In-Check DIAL inspiratory flow meter

<table>
<thead>
<tr>
<th>Device Setting</th>
<th>Resistance Setting</th>
<th>Approximately Suitable For</th>
</tr>
</thead>
<tbody>
<tr>
<td>pMDI</td>
<td>Low</td>
<td>pMDI</td>
</tr>
<tr>
<td>Autohaler</td>
<td>Low</td>
<td>Autohaler</td>
</tr>
<tr>
<td>EasiBreathe</td>
<td>Low</td>
<td>EasiBreathe, Breezhaler</td>
</tr>
<tr>
<td>Accuhaler</td>
<td>Medium-Low</td>
<td>Accuhaler, Ellipta</td>
</tr>
<tr>
<td>Turbohaler (‘S’ Symbicort)</td>
<td>Medium</td>
<td>Turbohaler (‘S’ Symbicort), Clickhaler, Spiromax, Genuair</td>
</tr>
<tr>
<td>Turbohaler (old style)</td>
<td>Medium-High</td>
<td>Turbohaler (old style), NEXThaler, Twistrhaler.</td>
</tr>
</tbody>
</table>

Consider use for Easyhaler, HandiHaler (caution: this setting will overestimate actual inspiratory flow through these devices. Inspiratory flow rates <35L/min may suggest these devices are not suitable)

### Spacer and other devices to assist with inhaler use

Spacers remove the need to co-ordinate the pressing down of the inhaler and inhaling the dose.

An Aerochamber spacer may be issued to patients with difficulty coordinating actuation and inhalation of MDI devices, or those experiencing oropharyngeal side effects from inhaled corticosteroids.

Inhaler aids can also help patients with manual dexterity problems, e.g. arthritis, press down the chamber of metered dosage inhalers.

A Turbohaler Turn Aid can help patients with manual dexterity problems, e.g. arthritis, twist the base on Turbohalers (available from manufacturer only).
Leeds Inhaler Device Guide

This guide is currently undergoing formal ratification by Leeds Teaching Hospitals NHS Trust. For this reason the guide is watermarked with DRAFT.

A non-draft version will be distributed in the next couple of months.

The content of this guide is correct and should be used to assist with inhaler technique training with patients.
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Exacerbations (Flare Ups)²,⁴

Avoiding and treating COPD exacerbations is an important aspect of COPD management, as these are associated with increased lung function decline, deterioration in health status, and increased risk of death.

**ACTION:** Many patients with COPD may benefit from receiving education:

- **EDUCATION:**
  - Check each patient understands what an exacerbation is and how to recognise the symptoms (worsening breathlessness, increased sputum volume, increased sputum purulence (discolouration)).
  - Check the patient has contact details for their GP, practice or COPD nurse in case they need to arrange an urgent appointment or prescription.

- **RESCUE PACKS:** If the patient has a Rescue Pack of prednisolone and an antibiotic:
  - Check that the person understands when it is appropriate to commence treatment for an exacerbation.

It is important that patients know how to recognise an exacerbation and respond quickly to the symptoms.

Use the BLF ‘Living with COPD’ booklet p15 to support the discussion

**What is an exacerbation?**

An exacerbation (or flare up) of COPD is **an acute event characterised by a worsening of the patient’s respiratory symptoms that is beyond normal day-to-day variations and leads to a change in medication.** A clinical diagnosis is made based on the presence of an acute change in symptoms, including significantly increased breathlessness, cough and/or sputum production. This change in symptom intensity is beyond a person’s usual day-to-day variation.

Treatment of an exacerbation of COPD in community settings is centred on the use of bronchodilators, oral corticosteroids and antibiotics.
The following advice and plan of action may assist your consultation

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Plan of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>When the patient is well</strong></td>
<td>• Continue usual medication as prescribed</td>
</tr>
<tr>
<td>It is important that the patient knows:</td>
<td>• Maintain healthy lifestyle (see next section)</td>
</tr>
<tr>
<td>• How much they can do each day</td>
<td></td>
</tr>
<tr>
<td>• How their breathing is at rest and during activity</td>
<td></td>
</tr>
<tr>
<td>• How much phlegm they cough up</td>
<td></td>
</tr>
<tr>
<td>• What colour their phlegm is</td>
<td></td>
</tr>
</tbody>
</table>

| **Mild Flare-up**                      | • Use reliever medicine more frequently, as necessary to relieve breathlessness. Then reduce back to the usual dose after the flare-up has resolved. |
| The patient may be less well:         | • Continue regular medication as prescribed.                                 |
| • Reduced energy for daily activities  | • Allow more time to complete activities.                                    |
| • Loss of appetite                     | • Get plenty of rest, and practice relaxation techniques.                    |
| • Increasing tiredness or poor sleep   | • Keep calm, and use breathing control and chest clearance techniques.       |
| • But no fever, and no change in the colour and volume of phlegm | • Eat small meals, more frequently.                                          |
|                                       | • Drink plenty.                                                              |

<p>| <strong>Moderate Flare-up</strong>                  | • Use reliever medicine more frequently, as necessary to relieve breathlessness. Then reduce back to the usual dose after the flare-up has resolved. |
| The patient may experience major symptoms: | • Continue regular medication as prescribed.                                 |
| • More breathless or wheezy than usual, particularly if this persists despite using their reliever inhaler | • Commence Rescue Pack of prednisolone and antibiotic (if they have one). |
| • More phlegm than usual               |   o Contact GP/Practice nurse within 2 days of starting rescue pack.         |
| • Yellower/ Greener phlegm than usual. |   o If they do not have a rescue pack, contact GP/Practice nurse for an urgent appointment. |
|                                       | • Allow more time to complete activities.                                    |
|                                       | • Get plenty of rest, and practice relaxation techniques.                    |
|                                       | • Keep calm, and use breathing control and chest clearance techniques.       |
|                                       | • Eat small meals, more frequently.                                          |
|                                       | • Drink plenty.                                                              |</p>
<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Plan of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Severe Flare-up</strong>&lt;br&gt;The patient may be much worse than normal despite treatment, and danger signs may be present:&lt;br&gt;• Very short of breath at rest&lt;br&gt;• Severe chest pain&lt;br&gt;• Drowsiness or confusion&lt;br&gt;• Blue appearance</td>
<td>• Contact GP for an urgent appointment, as soon as the symptoms become this bad.&lt;br&gt;• <strong>If they are concerned, or cannot wait to see their GP, dial 999 straight away for an ambulance.</strong></td>
</tr>
</tbody>
</table>

**Prevention**<br>Risk factors for patients experiencing frequent exacerbations include a history of previous exacerbations, hospitalisations for COPD exacerbation and worsening airflow limitation.<br>COPD patients are considered to be at High Risk of exacerbations if they meet any of the following criteria:<br>• Severe or very severe airflow limitation (FEV1 <50% predicted),<br>• 2 or more COPD exacerbations within the previous 12 months, or<br>• At least 1 hospitalisation for a COPD exacerbation within the previous 12 months.<br>Prevention of COPD exacerbations is achieved through:<br>• Smoking cessation<br>• Influenza and pneumococcal vaccinations<br>• Optimising medication (especially long-acting bronchodilators and inhaled corticosteroids)<br>• Correctly using inhaler devices.<br>If patients meet the criteria for having a high risk of exacerbation but have not received all the interventions listed that may prevent COPD exacerbations, complete the GP referral form.

**Short-acting beta₂-agonists**<br>Symptomatic relief of breathlessness and cough may be provided by using an increased dose and frequency of short-acting beta₂-agonists. For most patients, this involves the regular use of their usual short-acting beta₂-agonist inhaler e.g. salbutamol 200micrograms four to six times a day. There is no evidence that nebulisers are superior to inhalers when used correctly, and so do not need to be prescribed for many people with COPD in community settings.<br><br>Each patient should use their usual salbutamol inhaler, whether it is a dry powder inhaler or a metered dose inhaler (MDI), however if they are using a salbutamol MDI, the use of an Aerolizer spacer may assist in taking doses and improve delivery of the drug to the lungs, particularly during an exacerbation. It is important that inhaler technique is checked and optimised to ensure that the patient receives the maximum benefit from their inhaler.<br><br>Alternatively, if the person is usually prescribed nebulised salbutamol, this can be used during the exacerbation at a regular and increased dose or frequency (e.g. increasing the frequency of nebulised salbutamol 2.5mg from four times daily to six times daily.

**Short-acting muscarinic antagonists**<br>For mild exacerbations of COPD managed in community settings, the use of ipratropium is often not necessary. However if ipratropium is prescribed for treating an exacerbation, patients should be advised to omit their long-acting muscarinic antagonist, as this may increase the risk of anticholinergic side effects with minimal additive clinical benefit.
**Oral corticosteroids**

Oral corticosteroids such as prednisolone are used to treat an exacerbation of COPD as they have been shown to shorten recovery time, improve lung function and blood oxygen saturation levels, and also reduce the risk of an early relapse.

Prednisolone is the most common oral corticosteroid used, usually at a dose of 40mg once daily for 5 to 7 days. However this should be continued until resolution of the exacerbation, so occasionally some patients may require longer courses.

A slowly reducing course of prednisolone may be required for the following patients:

- Patients prescribed long-term maintenance doses of prednisolone.
- High dose prednisolone course lasting for more than 3 weeks.
- Patients who have required a number of relatively recent and frequent short courses.
- Patients who relapse soon after abruptly stopping a course of prednisolone.

There is no one standard reducing regimen for weaning high dose oral corticosteroids, but may be guided by past experience in individual patients. Some people may be able to reduce rapidly by 5mg every day, whereas others may reduce by 5mg every five days until they stop.

**Antibiotics**

The most common cause of a COPD exacerbation is a respiratory tract infection, although these maybe viral or bacterial. The presence of purulent (discoloured) or an increased volume of sputum during an exacerbation is associated with a bacterial infection, and the use of oral antibiotics in these situations has been shown to improve outcomes (shortened time to recovery and reduction in mortality).

The most common bacterial pathogens associated with COPD exacerbations are *Haemophilus influenzae*, *Streptococcus pneumoniae*, and *Moraxella catarrhalis*. Amoxicillin, doxycycline and clarithromycin are suitable antibiotics for strains commonly found in Leeds COPD patients. COPD patients with more severe disease may be at risk of *Pseudomonas aeruginosa* infection, which is usually susceptible to ciprofloxacin.

**Rescue Packs**

Some COPD patients may be prescribed a rescue pack of prednisolone and an antibiotic (e.g. amoxicillin) to keep at home and only commence at the onset of an exacerbation, rather than having to contact their GP for a prescription.

There have been anecdotal reports that some patients may become confused of forget when they are to be used and take them inappropriately. Patients prescribed a rescue pack should receive additional education and support to ensure the rescue packs are used effectively. This should take the form of clear education, and place the rescue pack in a separate bag from regular medication and consider distinctly labelling this bag as “COPD Rescue Pack”. On commencing their rescue pack medications, it is important patients know to contact their GP or COPD nurse to let them know they are less well and have started these medications.
**Lifestyle 2,4,14**

All patients should receive general advice on healthy living, including diet and the fact that physical exercise is safe and encouraged for people with COPD.

**ACTION:** A healthy, active lifestyle should be encouraged:

- **EXERCISE:**
  - All patients with COPD should be encouraged to do exercise for 30 minutes on 5 days a week. Exercise should be done at their own pace (this is a pace that causes mild breathlessness), but they should not overstrain themselves.

- **PULMONARY REHABILITATION (PR):**
  - Patients are eligible for PR if they are breathless walking at their own pace on the level (MRC grade ≥3 [mMRC grade ≥2]), or who have had recent hospitalisation for an exacerbation of COPD.
  - If eligible patients have not been to pulmonary rehabilitation, discuss the benefits of PR, and complete the GP referral form to recommend referral to PR.

- **DIET:**
  - Stress the importance of eating a healthy balanced diet, including plenty of fruit and vegetables, starchy foods for energy (e.g. bread, pasta, potatoes, rice), protein foods (e.g. meat, fish, eggs, nuts and beans), and dairy products.

- **FLUIDS:**
  - Encourage good hydration with 6 to 8 cups of fluid each day (including water, juice, tea, coffee), as this can help with sputum clearance.

- **BREATHLESSNESS:**
  - Signpost patients to advice on dealing with breathlessness in the BLF ‘Living with COPD’ booklet p16-18.
  - Advice on managing breathlessness is available through specialist advice in Pulmonary Rehab programmes.

- **ANXIETY AND DEPRESSION:**
  - Signpost patients to advice on ‘Taking care of your feelings’ in the BLF ‘Living with COPD’ booklet p19.
  - Emotional support can help people cope, e.g. from family or friends, or from local support groups (e.g. Breathe Easy groups). Patients may need to talk to their Doctor; counselling or medication may be required.

**Explain to patients that there are several things they can do to manage their COPD better.**

Use the BLF ‘Living with COPD’ booklet p9 & 16-19 to support the discussion.
**Exercise and Pulmonary Rehabilitation**

Exercise may help with breathing. Patients should be advised to exercise at their own level, but not to overstrain themselves. Exercise should be taken for 30 minutes on 5 days a week, at a pace that causes mild breathlessness.

Patients can be advised that taking a dose of quick acting bronchodilator before doing something that they know will make them breathless can help reduce symptoms.

Pulmonary Rehabilitation (PR) is an 8-week course of twice-weekly group exercise classes, with combined educational sessions designed to optimise each patient’s physical and social performance and autonomy, and improve quality of life, exercise tolerance and breathlessness.

Patients who meet the criteria to receive Pulmonary Rehabilitation on the NHS, are those who feel functionally disabled by COPD, and are breathless walking at their own pace on the level (MRC grade ≥3), or who have had recent hospitalisation for an exacerbation of COPD, should be considered for pulmonary rehabilitation.

There are four Pulmonary Rehabilitation programmes running in Leeds (Armley, Middleton, Seacroft, and Woodhouse), and comprise an 8-week course of twice-weekly group exercise classes to improve muscle strength and fitness, and help people cope better with their breathlessness. This is combined with a series of education sessions (before or after each exercise session) on living with COPD, breathing techniques, emotional support and managing stress, healthy eating, financial help, social services, and advice on using COPD medicines.

**Diet**

A healthy balanced diet is essential for people with COPD to maintain a healthy weight and lead an active life. People who are overweight should be encouraged to lose weight as the excess weight will require more effort to breathe move around. Some people with COPD may lose too much weight because they may become too breathless whilst eating or preparing food. In these situations, people should be encouraged to eat smaller, more frequent meals.

Discuss the components of a healthy diet.

- **Fruit and vegetables**: at least 5 portions a day, as a good source of fibre, vitamins and minerals.
- **Starchy foods such as bread, pasta, potatoes and rice**: with each meal to provide energy.
- **Protein foods such as meat, fish, eggs, nuts, and beans**: 2 portions a day, to keep muscles strong.
- **Milk and dairy products**: at least 2 portions a day (e.g. a third of a pint of milk, or matchbox-sized piece of cheese), as a source of proteins, vitamins and minerals.
- **Sugary or fatty foods and drinks**: cut down on foods that are high in sugar or fats to maintain a healthy diet.
- **Fluids**: at least 6 to 8 cups a day of water, juice, tea, coffee or milk – to maintain adequate hydration and help with sputum clearance.
Breathlessness

One of the most commonly perceived and distressing symptom of COPD is shortness of breath. This can make people become anxious and avoid activities and exercise that make them breathless, which can result in losing muscle strength.

It is important that patients understand how to cope with their breathlessness using breathing techniques, which are outlined in the British Lung Foundation Living with COPD booklet.

Patients with end-stage COPD unresponsive to other medical therapy may sometimes be prescribed low dose opiates for the palliation of breathlessness. These are usually commenced in secondary care COPD clinics, and patients may want to discuss the role or need for this treatment.

Anxiety / Depression

COPD leads to disabling and distressing symptoms that can lead to a patient becoming socially isolated and unable to take part in activities they may previously have enjoyed. This can lead to anxiety and depression and can have a significant effect on their quality of life.

Patients who are struggling emotionally should be encouraged to talk to family or their GP. They may find it useful to contact a local COPD/ lung support group (see BLF Breathe Easy in support for patients section).

Medication with anxiolytics such as low-dose benzodiazepines, or antidepressants such as SSRIs, or mirtazapine may be required for some people, and they may want to discuss the role or need for this treatment.
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Support for Patients

There are a variety of resources available for patients to help them self-care and take responsibility for their health and wellbeing.

**ACTION:** Signpost patients to further support materials:

- Give patient the BLF ‘Living with COPD’ booklet.
- Signpost patients to inhaler technique training videos (see section 6).
- Signpost patients to the British Lung Foundation Breathe Easy Groups [https://www.blf.org.uk/BreatheEasy](https://www.blf.org.uk/BreatheEasy) (BLF Tel: 0300 030 555).
  - The closest groups are based in Seacroft, Leeds and Undercliffe, Bradford.
- Signpost patients to other patient resources on the internet, e.g.
  - British Lung Foundation ([www.blf.org.uk](http://www.blf.org.uk))
  - My Lungs, My Life ([http://mylungsmylife.org/](http://mylungsmylife.org/))

**Web**

- British Lung Foundation: [www.blf.org.uk](http://www.blf.org.uk)
- NHS Smoke Free: [www.nhs.uk/smokefree](http://www.nhs.uk/smokefree)
- My Lungs, My Life ([http://mylungsmylife.org/](http://mylungsmylife.org/))

**Patient Groups**

- British Lung Foundation Breathe Easy Groups [https://www.blf.org.uk/BreatheEasy](https://www.blf.org.uk/BreatheEasy) (BLF Tel: 0300 030 555).
- Health-unlocked COPD community: [https://healthunlocked.com/blf](https://healthunlocked.com/blf)

**Patient Information Leaflets**

- British Lung Foundation Leaflets: [http://shop.blf.org.uk/collections/copd](http://shop.blf.org.uk/collections/copd) Suggested leaflets that may be useful:
  - COPD booklet: Living with COPD (to be issued to each patient)
  - Exercise Handbook (£5)
  - COPD Self-Management Plan (£3.60)
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Complete the consultation

**ACTION:**

- Summarise the key points from the consultation with the patient e.g. stop smoking referral, prompts to remember inhalers, reinforcement of importance of taking preventer inhalers regularly, flu vaccination
- Confirm the issues being referred to the patients GP.
- Ask the patient if they have any final questions.
- Ask patient to complete the patient feedback questions on the consultation form.
- Arrange follow-up appointment, and complete a Pharmacy COPD Review Appointment form for the patient.
- Send the GP referral form to the GP surgery (if needed).
- Record consultation onto PharmOutcomes (within 48-hours).

Summarise the key points with the patient and check they don’t have any outstanding questions.

Remind the patient they can contact the pharmacy to discuss any medicines related issues at any time.

‘Do you have anything else you would like to know about your COPD and medicines or is there anything you would like me to go over again?’

The patient feedback questions should be completed by all patients. If necessary assist the patient in completing the questions. For patients with limited literacy this may mean that you read out the questions to them and record their answers.

**Follow-up Consultation**

The EPIC service is for 2 consultations only, so another Pharmacy COPD review cannot be arranged. However, you should explain to the patient that you are there to support them and they can contact the pharmacy to discuss any medicines related issues at any time.

‘The pharmacy telephone number is on your medicines label. Please call if you have any questions about your medicines or inhaler’

EPIC consultations must be promptly recorded on PharmOutcomes (see p16), ideally on the same day and within 48 hours of the consultation. This is because entry of the data onto PharmOutcomes triggers a notification email to the GP of the EPIC consultation.

The pharmacy must retain the initial EPIC Consultation forms in a safe and secure manner in-between appointments as these are required for reference during the follow-up appointment.

The record on PharmOutcomes will be the enduring record of the consultation. Following completion of both the EPIC consultations (or if the patient is lost to follow-up and it is 12 weeks...
past the initial consultation) and recording of the information onto PharmOutcomes the paper records can be destroyed.

**GP referral**

A GP referral letter must be completed if any of the following

- Patient has not had / does not remember having spirometry
- Patient has not received flu vaccination for 15/16 (up to 28th Feb only) or a pneumococcal vaccination or is unsure of vaccination status
- A medication / inhaler technique related issue has been identified as part of the review which needs action or change to medication / inhaler
- The patient has an MRC of 3 or over and wishes to take part in a pulmonary rehabilitation programme

The referral letter should be delivered to the surgery (by hand or post) in a timely manner following the consultation. As the form contains patient identifiable information it is recommended that the form is sent within an envelope (this will also differentiate it from a prescription request etc).

The GP notification on PharmOutcomes does not replace the GP referral letter.

**Follow-up consultation**

The follow-up consultation is a key element of the EPIC project. A follow-up consultation will reinforce the messages of the initial consultation, assess and re-teach inhaler technique which can improve patients understanding of their COPD, adherence and correct use of inhalers. Pharmacies should endeavour in getting as many patients as possible to return for a follow-up consultation.

The follow-up appointment should ideally be 8 weeks after the initial consultation and must be within 6 – 12 weeks of the initial consultation.

Where a patient has consented to telephone contact from the pharmacy, the patient could be contacted to remind them of their follow-up appointment.

The pharmacy should make reasonable attempts to contact patients who have missed an appointment to re-arrange. If it is more than 12 weeks following the initial EPIC consultation then the patient is no longer eligible for a follow-up consultation and is considered lost to follow-up.
The Follow-up Consultation
The follow-up consultation repeats all the stages of the initial consultation.

Reference should be made to the initial consultation recommendations to confirm if these have been followed up (e.g. has the patient had a spirometry, change in inhaler device).

The table below outlines where the follow-up consultation differs from the initial consultation.

<table>
<thead>
<tr>
<th>Follow-up Consultation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spirometry</strong></td>
</tr>
<tr>
<td>An assessment of previous spirometry is not necessary for the follow-up consultation.</td>
</tr>
<tr>
<td>If the patient was referred to the GP for spirometry at the initial appointment confirm if the patient has been invited to the GP for the test.</td>
</tr>
<tr>
<td><strong>Exacerbations</strong></td>
</tr>
<tr>
<td>The follow-up consultation should include as assessment of any exacerbations since the initial consultation (i.e. over the previous 8 weeks)</td>
</tr>
<tr>
<td><strong>Vaccination</strong></td>
</tr>
<tr>
<td>If the patient was referred to the GP for vaccination at the initial appointment confirm if the patient has been vaccinated.</td>
</tr>
<tr>
<td><strong>Smoking</strong></td>
</tr>
<tr>
<td>If the patient was signposted to a stop smoking service at the initial appointment confirm if the patient has followed this up.</td>
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</tbody>
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