Management of COPD

Chronic Obstructive Pulmonary Disease

www.elmmb.nhs.uk

Pulmonary Rehabilitation
- If MRC score is 3 or more refer to pulmonary rehabilitation. Visit www.elht.nhs.uk for referral details.

Lifestyle Advice & Education
- Smoking cessation advice at every opportunity (See Benefits Curve: Page 2).
- Dietary advice - If BMI < 18 or > 30 (For obesity grading I – III refer to dietician).
- Exercise – promote exercise.

Immunisation
- Seasonal influenza, annually.
- Pneumococcal, once only as per green book.

Care/Self-Management Plan
- Provide a self-management & if appropriate, a rescue pack.

Anxiety & Depression
- Screen for depression & anxiety using QOF tool screening and if appropriate, offer treatment.
- Breathlessness can be a manifestation of anxiety.

Chronic productive cough
- Consider a 4 week trial of a mucolytic Carbocisteine 375mg - 2 capsules three times/day reducing to 2 capsules twice daily if there is a good response.
- Continue only if symptomatic benefit. Do not use to prevent exacerbations.

Oxygen
- For all patients if O2 sats < 92% refer to Home Oxygen Service for assessment.

Review Treatment:
- Review effectiveness of LABA & LAMA at 4 weeks and ICS at 8 weeks. If no response then stop & try alternative.
- Check compliance and technique at every opportunity
- Ask: has the treatment made a difference to you?
- Ask: Is your breathing easier in any way?
- Ask: Has your sleep improved?
- Ask: Can you do some things that you could not do before or do the same things faster?
- Ask: Are you less breathless than before when doing things?
- Record MRC (Medical Research Council) scale & BORG scale (rating perceived exertion)
- For severe and very severe patients introduce concept of End of Life Planning and DNAR forms

Follow up:
- Annual review for mild to moderate; at least 6 monthly for severe / very severe.
- Reviews to include spirometry.
- Ensure recall date is highlighted to patient & recorded

Step 1 – Symptom Management

Start SABA or SAMA
Salbutamol MDI or **Ipratropium MDI** when required
Alternatives: Salbutamol Easyhaler® or Bricanyl® (Terbutaline) Turbohaler DPD
Review symptoms after 4 weeks (ask questions in Review panel). If not controlled move to Step 2. Remember to confirm diagnosis.

Step 2 – Persistent exacerbations / breathlessness

If FEV1≥50% of predicted

If FEV1<50% of predicted

Add LAMA (strong evidence)

1st line: Spiriva® (Tiotropium) ***remember to stop ipratropium*** *1 **Handihaler® 18 mcg**
(Inhalation powder) Inhale contents of one capsule once daily.
Repeat the inhalation in order to empty the capsule completely.
(Put the refill pack on repeat)
or
Respimat® 2.5 mcg (Solution for inhalation) inhale two puffs once daily
(Respimat inhaler device may need to be prepared by dispenser for patients to use)

Step 3 – If still symptomatic and diagnosis is confirmed

Consider adding LABA. Based on GOLD 2014 & Local Consensus

Spiriva® (Handihaler® or Respimat®) & Formoterol Easyhaler® 12 mcg

- If ICS declined or not suitable*2 use LAMA + LABA combination.
- If there are compliance issues, difficulties with a device or not tolerated consider alternative inhalers including LABA/LAMA combination inhalers as recommended on the ELMMB joint formulary. Seek medical advice to ensure the inhaler is suitable.

Consider adding ICS (weak evidence)

[Spiriva® Handihaler® 18mcg or Respimat® 2.5 mcg] ***AND***
[Fostair® 100/6 MDI or NEXThaler or DuoResp® Spiromax 320/9]

"Triple therapy" has to be exceptional - severe disease in the presence of frequent exacerbations.
Ascertain if significant benefits have been achieved before continuing.

Be aware of the potential risk of developing side effects (including pneumonia) with high dose ICS.
These risks should be discussed with the patient. Issue a Steroid card to all high dose ICS patients.

Use Fostair® 100/6 via AeroChamber Plus® spacer in patients with very poor lung function i.e. inspiratory flow <30 L/min.

Step 4 – If still symptomatic

- ☑ Check patient has been referred for pulmonary rehabilitation
- ☑ Consider oral theophylline (First line: Slo-Phyllin)

If still symptomatic and severe:
- ☑ Referral to respiratory physician
- ☑ Consider palliative care issues
- ☑ Consider nebuliser assessment
- ☑ Consider referral for O2 assessment

If there are compliance issues, difficulties with a device or not tolerated consider an alternative as recommended on the ELMMB joint formulary and seek medical advice. (www.elmmb.nhs.uk)

SABA: short-acting bronchodilator agonist
SAMA: short acting muscarinic agonist
LABA: long-acting bronchodilator agonist
LAMA: long-acting muscarinic antagonist
ICS: inhaled corticosteroid

Prescribe Combination Inhalers By BRAND To Ensure Correct Device Is Dispensed.

Diagnosis

Consider
Consider diagnosis of COPD in anyone >35 with no clinical features of asthma and who is a smoker / ex-smoker with the following symptoms:

- **Chronic cough**
- **Breathlessness on exertion**
- **Regular sputum production**
- **Wheeze**
- **Frequent winter bronchitis**

Do post bronchodilatory Spirometry (absolute & % predicted)
Chest X-ray
Full blood count
BMI
Assess severity

Severity based on FEV_1 % of predicted:

Mild:	**>80%**
Moderate:	**50 - 79 %**
Severe:	**30 - 49 %**
Very Severe:	**<30%**

For ALL people with COPD, ensure that the diagnosis is highlighted using active coding, and record spirometry

Exacerbations (Lung Attack) or following non-invasive ventilation

Step 1 Are there any features to suggest hospital management?

- Severe/Rapid onset of breathlessness
- Cyanosis
- Worsening level of consciousness
- Acute confusion
- Receiving Long term oxygen therapy
- Worsening peripheral oedema
- Poor / deteriorating general condition
- Unable to cope at home/ lives alone
- Significant co morbidity e.g. CVD, diabetes
- O2 sat < 90%

Consider treatment in hospital or Specialist Respiratory Service (BWD only)

Step 2 ↑ Breathlessness?

- Increase frequency of short acting bronchodilator MDI i.e. Salbutamol or Ipratropium via spacer
- Prednisolone tablets 30mg each morning for 7-14 days

Step 3 Purulent sputum production

Amoxicillin 500mg three times a day for 5 days
(if allergic or recent course, Clarithromycin 500mg twice a day for 5 days).
OR
Doxycycline 200mg on 1st day then 100mg on days 2 - 5
Prophylactic antibiotics are NOT recommended

Action

- Check adherence and inhaler technique
- Optimise treatment (see page 1)
- Give self-management advice (This has an NNT of 3 in high risk patients to prevent 1 admission)
- Review patients if more than 3 courses of oral steroids given in one year and over 65. Consider assessing for osteoporosis risk
- Issue a steroid card to those on regular long term inhaled or oral steroids.

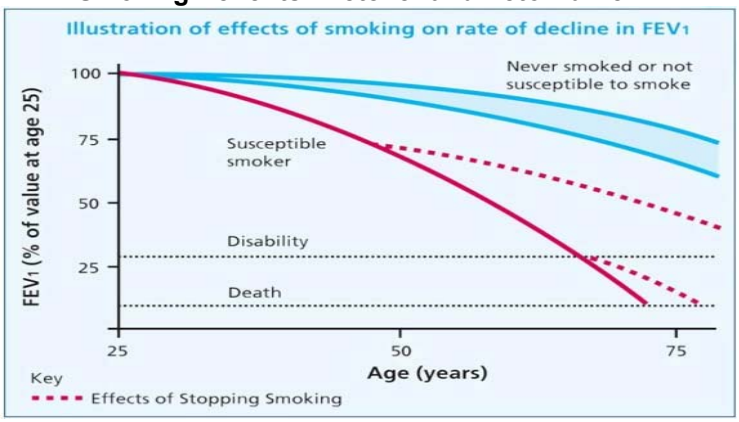
RESCUE MEDICATION RECOMMENDED: suitable patients should have antibiotics and steroids in stock to use as rescue medication

Inhaler Technique and appropriate device

Minimum inspiratory flow for dry powder devices (DPDs)	
Handihaler	>20L/min
Accuhaler	>30L/min (usual range 30-90L/min)
Turbohaler/	>30L/min (usual range 60-90L/min)
Easyhaler/Nexthaler	>30L/min
Genuair	35L/min
Breezhaler	50L/min

Choose devices the patient can use effectively (aerosols (includes respimat) slow/gentle inspiration & for DPDs - deep/forceful inspiration); train the patient to use the device; check the patient's inhaler technique regularly at each visit; try to use same delivery device/brand for each inhaled drug.

Smoking Benefits: Fletcher and Peto Curve



Referral to specialist when there is:

- Diagnostic uncertainty
- Uncontrolled severe COPD
- Prior to a palliative care review
- Haemoptysis (with urgent chest X-ray request); and/or unexpected weight loss or other RED FLAG symptoms
- Nebuliser assessment
- Rapid decline in FEV1
- Frequent infection
- Assessment for surgery: bullous lung disease
- Aged < 40 or FH of alfa 1 antitrypsin deficiency
- Symptoms don't match lung function tests
- Onset of cor pulmonale

Resources
NICE: www.nice.org.uk GOLD: www.goldcopd.com
Patient information leaflets: www.patient.co.uk
GP airways group: www.gpiag.org
British Thoracic Society: www.brit-thoracic.org.uk
Fletcher C, Peto R, Br Med J, 1:1645-1648, 1977
Green Book, can be found in Publications on www.dh.gov.uk
Antimicrobial Guidelines for Primary Care www.elmmb.nhs.uk
Summary Product Characteristics - SPC

Version: 6.7
Updated: Dec 2015
Review date: Jan 2017
East Lancashire Health Economy Medicines Management Board
Developed by: East Lancashire CCG Medicines Management in conjunction with Dr R Green, Dr I Hafeez and Dr S Baksi East Lancashire Hospitals Trust.