

## Northamptonshire COPD Guidelines

### Diagnosis

#### Consider diagnosis:

- Smokers or ex-smokers >35 years old
- Suggestive symptoms e.g. exertional breathlessness, chronic cough, regular sputum production, frequent winter 'bronchitis' or wheeze
- No classical features of asthma.

#### Check for co-morbidities

e.g. cardiac failure, bronchiectasis, anaemia, depression, anxiety, osteoporosis, metabolic syndrome, skeletal muscle dysfunction, and lung cancer; manage appropriately.

#### Confirm diagnosis:

Post-bronchodilator spirometry ( $FEV_1/FVC < 70\%$ )

Grade severity by  $FEV_1\%$  predicted:

- Mild  $\geq 80\%$ ,
- Moderate 50-79%,
- Severe 30-49%,
- Very Severe  $< 30\%$ .

There is only a weak correlation between  $FEV_1$ , symptoms and impairment of a patient's health status so a formal symptomatic assessment is also required.

#### Initial assessment:

BMI, SaO<sub>2</sub>, MRC score, FBC, CXR, consider alpha 1 antitrypsin (esp. in young or with family history).

#### Consider referral:

Diagnostic uncertainty, patients < 40 years old, rapid decline in  $FEV_1$ , frequent infections, red flag symptoms.

#### Actions:

<b>Vaccinations</b>	Influenza and pneumococcal vaccination
<b>Smoking history</b>	If current smoker, give stop smoking advice / refer to smoking cessation service. Tel: 0300 1265700 or Email: <a href="mailto:smokefree@firstforwellebing.co.uk">smokefree@firstforwellebing.co.uk</a> Fax: 01604 365759. Smoking cessation is the only treatment that slows the progression of COPD and is the most cost effective (NNT 5 – prevent death at age 70)
<b>MRC dyspnoea score</b>	Pulmonary Rehabilitation for all COPD patients with breathlessness (generally MRC 3-5), or after a hospital admission. Offer lifestyle advice. PR has NNT 2 to improve exercise tolerance by a clinically useful amount; NNT 4 to stop readmission over 6/12 if given early after an exacerbation.
<b>BMI</b>	> 35 consider overlap with obstructive sleep apnoea – weight reduction <20 consider referral / investigation / dietetic advice
<b><math>FEV_1</math></b>	Review diagnosis if rapid decline (e.g. >200ml in 3 years) or if symptoms are more severe or worsening faster than those suggested by spirometry NB 25% of patients with COPD will have IHD/cardiac failure

<b>Exacerbations/Excess sputum</b>	Re-assess for co-morbidity, treatment adherence, and inhaler technique Consider bronchiectasis and check sputum for unusual organisms. Use self-management plan and “emergency” supply.
<b>Oxygen Sat</b>	≤92% - refer to oxygen assessment service on GP Portal <a href="http://gp.neneccg.nhs.uk/clinical-topics/respiratory/67568">http://gp.neneccg.nhs.uk/clinical-topics/respiratory/67568</a>
<b>FEV1 &gt; 50% predicted</b>	Review at least yearly
<b>FEV1 &lt; 50% predicted</b>	Review at least 6 monthly
<b>Screen for anxiety and depression</b>	Use validated tools
<b>Self-Management Plans and Education</b>	NNT 10 to reduce admission in low risk patients; NNT 3 to reduce admission in high risk patients.
<b>Patient held supply of prednisolone +/- antibiotic</b>	NNT 5 to reduce admission. Consider patient suitability and give appropriate education. <ul style="list-style-type: none"> <li>• Prednisolone 30mg OD for 7-14 days</li> <li>+/- doxycycline 200mg STAT then 100mg OD OR amoxicillin 500mg TDS for 7 days.</li> </ul> Consider osteoporosis prophylaxis for patients having 3 courses of steroid within 12 months. <ul style="list-style-type: none"> <li>• Maintenance oral corticosteroids should only be prescribed if recommended by respiratory specialist.</li> </ul>
<b>Consider a mucolytic in selected patients</b>	A mucolytic should only be prescribed for troublesome phlegm: NACSYS (acetylcysteine effervescent tablet 600mg, dissolved in half a glass of water, once daily in the morning) can be trialed for 4 weeks: stop if no benefit.
<b>Consider inhaled medication</b>  <b>See treatment algorithm in appendix 1</b>	Drug treatment should be guided by breathlessness and exercise limitation, exacerbation frequency, symptoms, disability and physiological complications.  At different times in the natural history of their disease, different features may predominate and the pharmacological management of the patient should change to reflect this.  Regularly review and optimise inhaler technique (e.g. spacers with MDIs) before increasing therapy.  Consider stopping new treatment if no improvement according to an objective measure e.g. CAT or SGRQ within 8 weeks.
<b>Palliative Care Planning</b>	For end-stage COPD not responding to medical therapy (Indicators include FEV1<30%, respiratory failure, BMI<19, housebound, frequent exacerbations), complete a BODE index.

## Appendix 1

# Northamptonshire Guidelines on Inhaler Therapy for COPD

1) INITIATE INHALED THERAPY BASED ON MRC SCORE & EXACERBATIONS WITHIN LAST 12 MONTHS:

BREATHLESSNESS MRC score	EXACERBATIONS	
	≤ 1 <u>or</u> an admission	≥ 2 <u>or</u> an admission
1 or 2	A → SABA/SAMA	C → LAMA
3, 4 or 5	B → LABA	D → LABA + LAMA

(Consider and exclude comorbidities e.g. heart failure when MRC ≥ 3)

2) IF PATIENT REMAINS SYMPTOMATIC OR HAS FURTHER EXACERBATIONS, THEN PROCEED AS FOLLOWS:

SABA <u>or</u> SAMA →	LABA <u>or</u> LAMA →	LABA + LAMA
Salbutamol pMDI 2 puffs prn	<b>First choice LABA:</b> Formoterol Easyhaler 12microgram 1 puff BD	<b>First choice:</b> Duaklir Genuair (Acclidinium and formoterol) 1 puff BD
Ipratropium pMDI 2 puffs prn	<b>First choice LAMA:</b> Tiotropium (Braltus Zonda) 10microgram 1 puff OD <b>Poor inspiratory flow:</b> Tiotropium (Spiriva Respimat) 2.5microgram 2 puffs OD	<b>Poor inspiratory flow:</b> Spiolto Respimat (Tiotropium and olodaterol) 2 puffs OD
Stop SAMA if LAMA started	<b>eGFR &lt; 50:</b> Acclidinium (Eklira Genuair) 375microgram 1 puff BD	

IF PATIENT REMAINS SYMPTOMATIC OR HAS FURTHER EXACERBATIONS AND HAS FEATURES OF ACOS\*, THEN CONSIDER A TRIAL OF LABA + ICS:

<b>First choice</b>	Fobumix (Budesonide and formoterol) 160/4.5 Easyhaler 2 puffs BD
<b>Second choice</b>	Fostair (Beclomethasone and formoterol) 100/6 pMDI <u>or</u> NEXThaler 2 puffs BD

(Inhaled steroids increase the risk of pneumonia. If symptoms fail to respond to ICS, or in the event of pneumonia, consider stopping ICS)

### \*Asthma-COPD Overlap Syndrome (ACOS)

Consider ACOS in COPD patients with:-

- Definite history of asthma or atopy
- Positive bronchodilator reversibility test
- Blood eosinophilia

3) IF PATIENT REMAINS SYMPTOMATIC OR HAS FURTHER EXACERBATIONS, THEN OFFER LABA + LAMA + ICS:

Trimbow (formoterol, glycopyronium and beclomethasone) 2 puffs BD.

### References

NICE (2018b) NG115: Chronic obstructive pulmonary disease in over 16s: diagnosis and management. National Institute for Health and Care Excellence.

<https://www.nice.org.uk/guidance/ng115>

GOLD (2019) Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease (updated 2019). Global Initiative for Chronic Obstructive Lung Disease <https://goldcopd.org/gold-reports/>