Wirral COPD Supplementary Information

(To be read in conjunction with Wirral COPD Prescribing Guidelines)

Wirral University Teaching Hospital NHS
NHS Foundation Trust

NHS
Wirral Clinical Commissioning Group

Management of Stable COPD

- Promote use of self-management plan and rescue packs. A template self-management plan can be found by clicking here. Hard copies can be ordered from Albert Lodge 0151 514 2244.
- Screen for common comorbidities e.g. ischaemic heart disease, heart failure, anxiety, and depression.
- Consider referral to the rest of the multidisciplinary team e.g. Community respiratory team / Consultant led respiratory clinic, physiotherapists, dietician (follow current malnutrition guidelines if BMI/MUST score is low or high respectively), occupational therapy, social services, and palliative care teams.

Inhaler technique

- Check patients' technique with each device prescribed regularly. Poor technique could be the cause of poor control.
- Adherence checks need to be carried out when reviewing unstable patients prior to altering therapy. Investigate cause for poor adherence prior to change. If due to side effects consider technique and then trial of a different product.
- All patients should have their inspiratory flow checked with the in-check dial before prescribing inhalers and at each review. The acceptable range for Dry Powder Inhalers (DPIs) is between 30 and 90L/min. However, at the lower end of this range this may not be sufficient to get the full dose consistently or during exacerbations. In these cases a Metered Dose Inhaler (MDI) and spacer may be a more suitable option.
- Review all changes in therapy after 4 weeks of change to determine benefit.

Smoking Cessation

- Encourage and support patients to stop smoking at every opportunity. This has the greatest capacity to influence the natural history of COPD[1].
- Tailor the choice of therapy to patients' preference.
- Encourage patients to attend local smoking cessation service.

Vaccinations[1,2]

- Influenza vaccination should be encouraged and offered annually
- Pneumococcal vaccination should be encouraged and offered once in a lifetime.

Pulmonary Rehabilitation

- Pulmonary rehabilitation should be offered to all patients when the Medical Research Council (MRC) score is ≥3 and any patients with an MRC of 2 who are functionally disabled by breathlessness (or for GOLD classification B-D as per GOLD guidelines).
- Patients hospitalised for acute exacerbations should be offered pulmonary rehabilitation at hospital discharge to commence within 1 month of discharge.

Spacer Device

- Advise the patient that a single actuation should be inhaled and if indicated a further actuation should then be administered.
- The spacer device should be cleaned with water and washing up liquid and allowed to drip dry, no more than once a month.
- Spacer devices should be changed at least annually.

Nebulised therapy

- There is little, if any, evidence that nebulised bronchodilators have any advantages over inhaled bronchodilators in maintenance therapy of COPD.
- Respiratory Specialist advice should be sought if considering nebulised therapy as part of maintenance therapy.
- Continue nebuliser treatment only if there is an objective improvement in symptoms, daily living activities, exercise capacity or lung function.

Oxygen

- Pulse oximetry is recommended as part of routine COPD review.
- Oxygen saturation ≤92% should be considered (with other risk factors) for further Oxygen Assessment (Refer to Specialist Oxygen Services at the COPD and Oxygen Centre at Albert Lodge).
- All patients on Home Oxygen should be under the specialist oxygen service.

Theophylline

Consider the addition of theophylline modified release 200mg – 400mg orally twice daily (as Uniphyllin tablets) if the patient is still symptomatic with breathlessness after the addition of both short and long acting bronchodilators or if patients cannot use inhalers effectively.

- Titrate (after checking levels – aim 10-20mg/L) as per response / side effects
- Inform patients of potential side effects (nausea, vomiting, tachycardia) which may indicate high / toxic blood levels.
- Theophylline levels should be done 4-6 hrs after oral dose; patients should have been on therapy for >5 days.
- For further prescribing information refer to the BNF or SPC.

Carbocisteine

Carbocisteine (a mucolytic) may be of benefit in patients with chronic obstructive pulmonary disease (COPD) who have long-standing, troublesome cough and sputum. This includes patients with an FEV1 that is < 50% of the predicted value and any patient experiencing repeated, severe or prolonged exacerbations. Overall the benefits of mucolytics are small[1].

Initiating therapy: Obtain a baseline assessment of:

- Colour/consistency and amount of sputum
- Difficulty of expectoration
- Amount of coughing

Dose: 750mg, orally, three times daily for 1 month
Reassess patients against baseline assessment after 4 weeks. Include patient perception of improvement in assessed symptoms by asking:
1. Is your sputum easier to cough up?
2. Has the amount or colour of sputum changed?
3. Is your cough less troublesome?
4. Have you noticed improvement in any other COPD related symptoms?

Continuation therapy: Continue therapy if patient reports improvement in cough/sputum or expectoration with no adverse effects. Dose: 750mg, orally, twice a day or 375mg four times a day. Continue treatment indefinitely. If symptoms are seasonal, continue treatment during the months when symptomatic (e.g. for 3 to 6 months) and use on an annual basis.

Discontinue therapy: Discontinue if no improvement in above symptoms or if adverse effects observed.

Managing COPD Exacerbations

Considerations: (circle as appropriate)	**Favours specialist treatment**	**Favours treatment at home**
Able to cope at home:	No	Yes
Breathlessness:	Severe	Mild
General condition:	Poor / deteriorating	Good
Level of activity:	Poor / confined to bed	Good
Cyanosis:	Yes	No
Worsening Peripheral Oedema:	Yes	No
Level of consciousness:	Impaired	Normal
LTOT currently received:	Yes	No
Social circumstances:	Living alone / not coping	Good
Acute confusion:	Yes	No
Rapid rate of onset:	Yes	No
Significant morbidity:	Yes	No
SaO_2 <90%:	Yes	No
Decide where to treat:	**Hospital**	**Home**

Acute Management

Rescue Therapy

As supported in NICE[2], a reserve course of formulary choice antibiotics, a sputum sample pot and oral corticosteroids (prednisolone 30mg for 7-14 days) should be given to patients who have had 2 or more exacerbations or 1 hospital admission in the last 12 months to help patients 'self manage' their condition when acutely unwell. Patients should be encouraged to submit an early morning sputum sample on starting their rescue pack. For guidance on oral steroids please refer to BNF[3] Chapter 6, section 2. For formulary choice of antibiotics please refer to the Wirral Antimicrobial Guidelines.

These should be issued with the Self-Management Plan explaining when to start therapy and what action to take. Patients should be followed up within 2 weeks of an exacerbation to reassess COPD control and consider bone protection if required and at this time another rescue prescription could be given.

Oral Corticosteroid Maintenance Dose

Use of oral corticosteroid therapy is not routinely recommended[1,2].
This should be initiated under specialist advice only
Consider long term side effect on gastrointestinal system and risk of osteoporosis.

Prophylactic Antibiotics

Initiated by respiratory specialist only in certain clinical scenarios such as patients with end stage COPD with repeated infections – can then be continued by primary care. Microbiology results should be reviewed at the start of antibiotics and if there are any problems / further infections.

Optimise treatment

Increase SABA to 2-8 puffs up to 4 hourly (watch for side effects e.g. tremor)

If no improvement at one week or deterioration in symptoms, clinician to consider referral or advice from community COPD team.

Prevention of Future Exacerbations

- Refer to Pulmonary Rehabilitation
- Optimise inhaled therapy in line with GOLD standards as described in the Wirral COPD Prescribing Guidelines [*Add link*].

References:

1. Strategy for the Diagnosis, Management and Prevention of COPD, Global Initiative for Chronic Obstructive Lung Disease (GOLD) *2015. Accessed via* http://www.goldcopd.org/ on 17.2.16
2. NICE Chronic obstructive pulmonary disease in over 16s: diagnosis and management (CG 101). Accessed via http://www.nice.org.uk/guidance/cg101/resources/chronic-obstructive-pulmonary-disease-in-over-16s-diagnosis-and-management-35109323931589 on 17.2.16
3. BNF. February 2016. Accessed via https://www.medicinescomplete.com/mc/bnf/current/ 17.2.16