

Management of exacerbations in chronic obstructive pulmonary disease in Primary Care

Acute exacerbations of chronic obstructive pulmonary disease (COPD) are associated with significant morbidity and mortality. Patients with frequent exacerbations have high levels of anxiety and depression, significantly impaired health status and faster disease progression.

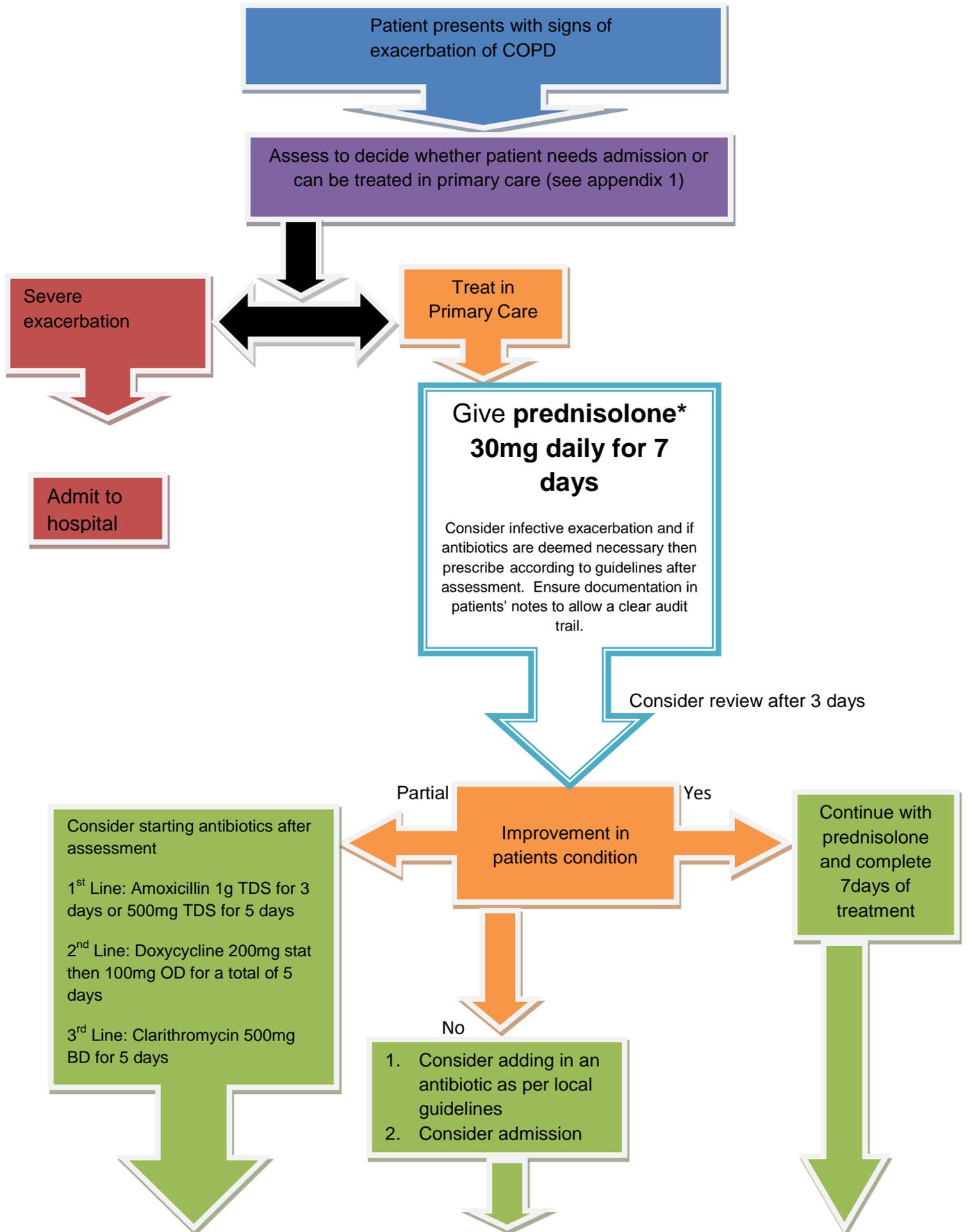
The updated NICE guideline on managing COPD makes the following recommendations:

- All patients with COPD still smoking, regardless of age, should be encouraged to stop, and offered help to do so, at every opportunity
- People with stable COPD who remain breathless or have exacerbations despite using short-acting bronchodilators as required should be offered either a long-acting beta-2 agonist (LABA) or long-acting antimuscarinic as maintenance therapy; or (if FEV₁ is below 50% of predicted) either a LABA plus an inhaled corticosteroid in a combination inhaler or a LABA plus long-acting antimuscarinic
- People with COPD who remain breathless or have exacerbations despite taking a LABA plus inhaled corticosteroid, should be offered long-acting antimuscarinic in addition, irrespective of their FEV₁
- Pulmonary rehabilitation should be available to all appropriate patients with COPD, including those who have had a recent hospitalisation for an acute exacerbation

A 2007 systematic review [1] of 13 trials (1557 patients) reported that most patients with COPD exacerbations, who do not need hospital admission, may not benefit from immediate antibiotic treatment. The most prudent choice for these patients might be to withhold antibiotics at first while first line management should include bronchodilators, systemic corticosteroids, patient instruction to use medication correctly as well as follow-up visits. If patients do not recover or show further worsening of health status, antibiotics might still be considered after 3-5 days of first line treatment.

Further to this, antibiotic choice has also been investigated and it has been found that amoxicillin was non-inferior to co-amoxiclav in treating patients with exacerbation of COPD in a 2009 paper [3].

Please see treatment flow diagram on how to manage patients with exacerbation of COPD.



Review after completion of treatment. If patient has improved then give advice on how to manage condition.

If not improved or worse at any stage, please reassess and consider admission.

*If more than 4 courses of prednisolone have been prescribed in a year, consider osteoporosis prophylaxis

References

1. Puhan MA, Vollenweider D, Latshang T, Steurer J and Steurer-Stey C. Exacerbations of chronic obstructive pulmonary disease: when are antibiotics indicated? A systematic review. *Respir Res.* 2007; 8(1): 30
2. Wilson R. Short course of antibiotic treatment in acute exacerbations of COPD. *Thorax* 2008;63:390-392
3. Llor C, Hernández S, Ribas A, Álvarez C, Cots JM, Bayona C, González I, Miravittles M. Efficacy of amoxicillin versus amoxicillin/clavulanate in acute exacerbations of chronic pulmonary obstructive disease in primary care. *Int J COPD* 2009; 4:45-53
4. NICE clinical guidance 101. Chronic obstructive pulmonary disease – management of chronic obstructive pulmonary disease in adults in primary care and secondary care. June 2010
5. Drug and Therapeutics Bulletin. Preventing exacerbations in chronic obstructive pulmonary disease. *BMJ* 2011; 342:c7202
6. Patient information leaflet. Getting through the winter with a bad chest. Provided by Dr Richard Bircher, Lockside Medical Centre.
7. http://www.cks.nhs.uk/chest_infections_adult/management/scenario_community_acquired_pneumonia/admission_and_referral#

Appendix 1

Factors to consider when deciding where to manage exacerbations

Factor	Treat at home?	Treat in hospital?
Able to cope at home	Yes	No
Breathlessness	Mild	Severe
General condition	Good	Poor/deteriorating
Level of activity	Good	Poor/confined to bed
Cyanosis	No	Yes
Worsening peripheral oedema	No	Yes
Level of consciousness	Normal	Impaired
Already receiving LTOT	No	Yes
Social circumstances	Good	Living alone/not coping
Acute confusion	No	Yes
Rapid rate on onset	No	Yes
Significant comorbidity (particularly cardiac disease and insulin-dependent diabetes)	No	Yes
SaO ₂ <90%	No	Yes
Changes on chest X-ray	No	Present
Arterial pH level	≥ 7.35	<7.35
Arterial PaO ₂	≥ 7kPa	< 7 kPa

(taken from NICE clinical guidance 101)

What is CRB-65 and how do I calculate it?

Assess the **CRB-65** score for all people diagnosed with pneumonia. One point is awarded for each of the following features:

Confusion — recent

Respiratory rate of 30 breaths/min or greater

Blood pressure — systolic of 90 mmHg or less or diastolic of 60 mmHg or less

65 years old or older

For people with a CRB-65 score of 3 or more, arrange urgent admission to hospital.

For people with a CRB-65 score of 2, arrange same-day assessment in secondary care. Secondary care options include short-stay inpatient treatment or hospital-supervised outpatient treatment.

For people with a CRB-65 score of 1, consider arranging same-day assessment in secondary care.

For people with a CRB-65 score of 0, treatment at home is usually appropriate, depending on *clinical judgement* (for example the stability of any comorbid illness) and available social support.

Getting through the winter with a bad chest



Medical advice on how deal with illnesses which effect your chest over the winter months

Tips on keeping well

As we all know there are many infections, coughs and colds, which go around in the winter months. Certain people with bad chests, especially those with a condition called chronic obstructive pulmonary disease find it difficult to fight off colds and they can soon become a serious chest infection.

We feel you are such a patient and we would like to do our best to keep you as well as possible this winter. Though, we can't stop you from catching the coughs and colds that go around, there are some important things which can be done to greatly reduce the chances of a simple winter bug becoming a serious chest infection.

- have an influenza immunisation
- have a second immunisation called the pneumovax, this protects you against the commonest bacteria to cause pneumonia. (You need only one of these immunisations in your life)
- Stop smoking
- take steps to prevent a serious infection developing as soon as possible. Follow the 'Winter Chest Plan'. (see next page)

The winter chest plan

You have probably lived with your 'bad chest' for many years and can judge when it is becoming worse.

Start steroid tablet treatment if you are unwell with your chest and you are:

1. More short of breath than usual
2. Coughing up more phlegm than normal

And start antibiotics tablets if

3. The colour of your phlegm has turned to green or brown

Also please:

- Increase the use of your 'reliever' inhaler (the blue one)
- Phone the surgery to let us know you are unwell

If you are feeling better after three days on your antibiotics there is no need to finish the complete 5 day course.

For most people we would not usually recommend early use of antibiotics for winter chest problems. However, you have a chest problem which makes you more at risk of serious infection.

Please keep the enclosed prescription safe, and use it if you get unwell. Please do not get the tablets unless you feel you need them.