

## LOWER RESPIRATORY TRACT INFECTIONS

### Acute Exacerbation of COPD

#### [NICE NG 114 COPD \(acute exacerbation\) December 2018](#)

#### Organisms

- Respiratory viruses (30%), bacterial (30-50%) – *Streptococcus pneumoniae*, *Haemophilus influenzae* (amoxicillin sensitive and resistant strains), *Moraxella catarrhalis*, and atypical pathogens such as *Mycoplasma pneumoniae* and *Chlamydia pneumoniae*.
- Check results of previous sputum cultures and send sputum sample if possible, before prescribing antibiotics.
- Viral infections may cause acute exacerbations, but if purulent sputum is being produced bacterial infection is possible.
- Antibiotics are most valuable in patients with purulent sputum **and** increased shortness of breath **and/or** increased sputum volume.
- NICE recommend as part of self-management that patients are given a course of antibiotics and oral corticosteroids to keep at home and commence if their sputum becomes purulent (see [Nottinghamshire guidance for prescribers on COPD Exacerbation Rescue Medication Pack](#))

#### Risk factors for antibiotic resistant organisms include:

- Severe COPD
- Co-morbid disease
- Frequent exacerbations and/or hospital admissions
- Multiple courses of antibiotics, or antibiotics within last 3 months.
- Previous resistant organisms in sputum culture.

#### Treatment

Medication	Dose	Duration of Treatment
<b>Empirical treatment guided by most recent sputum culture and susceptibilities</b>		
<b>First line:</b> Amoxicillin <b>OR</b> Doxycycline <b>OR</b> if penicillin allergy and where doxycycline is contraindicated: <a href="#">Clarithromycin</a>	500mg TDS  Stat 200mg first day then 100mg OD for four days  500mg BD	5 days  5 days in total  5 days
<b>Second line:</b> Use alternative first line (from a different class)		
<b>If higher risk of treatment failure, treat according to sputum culture: (guided by microbiology sensitivities)</b>		
Co-amoxiclav 625mg TDS plus Amoxicillin 500mg TDS for 5 days if reported sensitivity to Co-amoxiclav is "I"*		
<b>Or</b>		
Levofloxacin 500mg OD for 5 days (increase frequency to BD if reported sensitivity to Levofloxacin is "I"*)		
<b>Or</b>		
Co-trimoxazole 960mg BD for 5 days		
* "I" = susceptible at <b>increased medication exposures</b> . This means there is a high likelihood of therapeutic success if antibiotic exposure is optimised by using higher doses or increasing dosing frequency.		
<ul style="list-style-type: none"> <li><a href="#">Microbiology interpreting Sensitivity Results</a></li> </ul>		

Version Control- Acute Exacerbation of COPD			
Version	Author(s)	Date	Changes
V2.2	Shary Walker, Interface and Formulary Pharmacist	29/01/21	1. Added amoxicillin 250mg TDS on alternative choice for H. influenza sensitivity reported as I. 2. Lab sensitivity reporting and interpretation link added
V2.3	Shary Walker, Interface and Formulary Pharmacist	04/03/21	1. Microbiology interpreting sensitivity results link edited due to updates 2. Amoxicillin combination dose (with co-amoxiclav) increased to 500mg TDS. 3. Format changed
V2.4	Shary Walker, Interface and Formulary Pharmacist	30/04/21	1. Levofloxacin "I" sensitivity