Anti-infective Treatment Recommendations for COPD in patients WITHOUT Community Acquired Pneumonia (CAP)

Use antimicrobials if patient has increased sputum purulence **AND one** of the following:

- ☐ Increased dyspnea
- ☐ Increased sputum volume

Recommended duration of therapy is 5 or 7 days depending on the antimicrobial used

Anti-infective doses may require adjustments for GFR less than 30 mL/min. Please consult a clinical pharmacist.

Adapted from Canadian Thoracic Society Guidelines, BCGuidelines.ca: Chronic Obstructive Pulmonary Disease (COPD): Diagnosis and Management (2017), and Bugs and Drugs 2020.

Group/ Clinical Status	Symptoms & Risk Factors	Probable Pathogens	Empirical Anti-infective¥
COPD exacerbation			
Simple (Less than 4 exacerbations / year)	Increased sputum purulence and dyspnea	*Haemophilus influenzae*, *Haemophilus* species, *Streptococcus pneumonia, Moraxella catarrhalis*, *Chlamydia pneumoniae* Viruses	amoxicillin, doxycycline, co-trimoxazole, azithromycin, clarithromycin
Complicated (4 ~~3~~ or more exacerbations / year) failure of first line agents antibiotics in last 3 months	As in simple plus at least ONE of: ▪ FEV_1 less than 50% predicted ▪ Ischemic heart disease ▪ Use of home oxygen ▪ Chronic oral steroid use	As in simple plus: Increased probability of beta-lactam resistance (beta-lactamase producing penicillin-resistant Haemophilus influenzae) Enterobacterales *Pseudomonas* species	amoxicillin-clavulanate, cefuroxime, ceftriaxone, moxifloxacin
Complicated and *Pseudomonas* suspected	As in complicated plus: isolation of *Pseudomonas* during previous exacerbation or colonization during a stable period	*Pseudomonas* species†	piperacillin-tazobactam (or equivalent anti-pneumococcal, anti-pseudomonal beta-lactam), ciprofloxacin, ceftAZIDime, aminoglycoside

¥ Refer to hospital formulary for specific antibiotic choices; repeat prescriptions of the *same* antibiotic should be avoided within a three-month interval.

†Please refer to previous sensitivities of *Pseudomonas* species (if available) in order to guide the choice of empiric antibiotic.

Prescribing Guidelines

Recommended duration of treatment for oral corticosteroids is 5 days for moderate-severe exacerbations

methylPREDNISolone 40 mg IV is equivalent to predniSONE 50 mg PO

Maintenance inhalers may be started on days 3 to 5 of hospitalization

Review PharmaNet and consider restarting inhalers used prior to admission

Assess regular salBUTamol use and discontinue or adjust as necessary

Nicotine Replacement Therapy Orders: Initiate if the patient has used tobacco in the past 6 months AND the past 7 days

Canadian Thoracic Society recommendations for optimal *maintenance* therapy in COPD:

*For moderate to severe disease (an average of one or more AECOPD/year or FEV_1 below 65% predicted); select **one** of:*

- *fluticasone-salmeterol 25-125 mcg or 25-250 mcg MDI 2 puffs via aerochamber BID (ADVAIR) ∗**OR**∗
- *fluticasone-salmeterol 50-250 mcg or 50-500 mcg DISKUS 1 inhalation BID (ADVAIR) ∗**OR**∗
- *budesonide-formoterol 200-6 mcg TURBUHALER 2 inhalations BID (SYMBICORT)

∗**AND**∗

If on tiotropium prior to admission, discontinue regularly-scheduled ipratropium and restart: tiotropium 2.5 mcg/actuation – 2 inhalations (5 mcg) once daily (SPIRVA RESPIMAT)