

COPD ACUTE EXACERBATION

Admission to Hospital

Weight (kg)

Bulleted orders are initiated by default, unless crossed out and initialed by the physician/prescriber. Boxed orders () require physician/prescriber check mark () to be initiated.

1. **ALLERGIES:** See Allergy /ADR record

2. **ADMISSION INSTRUCTIONS:** Admit to _____

- Notify the following of patient admission: Notified (date and time)
 Most Responsible Physician (name): _____
 Family Physician (name): _____
 Other (name): _____
- enter a Meditech order for Acute Care RT (where available); reason for referral: "AECOPD"
- enter a Meditech order for Community RT (where available); reason for referral: "acute admission for AECOPD"

3. **CODE STATUS / MOST**

- Refer to completed Medical Orders for Scope of Treatment (MOST) #829641

4. **CONSULTS** (where available)

- Respiriologist (MD/NP to call)
 Pharmacist
 Dietitian
 Physiotherapist
 Social Worker
 Occupational Therapist
 Palliative Care
 Other _____

5. **DIET**

- Diet Type** (choose one):
 General
 NPO
 Other _____
Diet Texture (choose one):
 Regular
 Other _____

6. **ACTIVITY**

- Activity as tolerated
 ****OR****
 Other _____

7. **MONITORING**

- Temp, BP, HR, RR, SpO₂ Q ____ H for ____ hours, then _____
- Intake and output Q shift
- Daily weights (if history of heart failure)

Glucose monitoring (select one below):

- If on corticosteroids and no diabetes, capillary blood glucose BID x 48 H then reassess ****OR****
- If non-insulin dependent diabetes, capillary blood glucose TID AC and HS ****OR****
- Refer to Insulin Subcutaneous Adult PPO # 829523 OR # 829524

8. **LABORATORY**

- CBC and differential, Lytes4 (Na, K, Cl, HCO₃), glucose, urea, creatinine
- INR PTT
- Sputum C&S (includes gram stain)
- Resp Virus Flu A/B RSV–Nasopharynx (submitted in viral transport medium)
- Blood cultures x 2 if temperature above 38.0°C
- Arterial Blood Gas on Room Air ****OR**** Oxygen at _____
- Other _____

Date (dd/mm/yyyy)	Time	Physician Signature	Printed Name or College ID#
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PRESCRIBING GUIDELINES

IMMUNIZATIONS

Pneumococcal 23-Valent Polysaccharide Vaccine should:

- be offered to all patients with COPD
- **NOT** be re-administered within 5 years of previous polysaccharide dose
- **NOT** be administered within 8 weeks of previous pneumococcal conjugate vaccine

NOTE: if administered while in hospital, notify family physician office and public health of vaccine administration date

Influenza Vaccine should be:

- administered every influenza season to patients with COPD

SHORT-ACTING BRONCHODILATORS

Combined **salbutamol** and **ipratropium** recommended to:

- improve lung function
- reduce dyspnea

Metered dose inhaler (± spacer) and nebulizer delivery provide same FEV₁ improvements

SYSTEMIC CORTICOSTEROIDS

Recommended to:

- shorten recovery time and length of stay
- improve lung function and arterial hypoxemia
- reduce the risk of early relapse and treatment failure

Recommended **duration 5 days** (more severe AECOPD may require up to 14 days)

methylPREDNISolone 40 mg IV is equivalent to predniSONE 50 mg PO.

ANTIBIOTICS

Approximately 50% of AECOPD are of viral etiology. The recommendations below are for AECOPD **WITHOUT** Pneumonia:

- **Indications**
 - » ↑ sputum purulence plus **at least 1 symptom**:
 - ↑ dyspnea
 - ↑ sputum volume
 - » Requires mechanical ventilation (invasive or non-invasive)
- **Selection (see also table below)**
 - » Avoid same antibiotic class if prescribed within the past 3 months
 - » *M. pneumoniae* and *Chlamydomphila* **should not** be empirically treated
 - » Moxifloxacin **should be reserved**: (↑ resistance, *C. difficile* risk, drug interactions)
 - for patients who are beta-lactam allergic, or
 - for patients who have failed first line antibiotic therapy
 - » Macrolides (e.g. clarithromycin, azithromycin) are **NOT** good empiric options (poor *H. influenzae* coverage and significant *S. pneumoniae* resistance)
 - » Selection for patients with history of *Pseudomonas aeruginosa* should be guided by susceptibility history
- **Route and Duration**
 - » Oral antibiotic therapy is **PREFERRED** route if possible.
 - » Antibiotic length of therapy is 5 – 7 days.
- **Evaluation**
 - » Improved dyspnea and sputum purulence are indicators of treatment success

AECOPD	Characteristics	Bacterial Pathogens	Antibiotic Options (<i>choose one</i>)
Simple	↑ sputum purulence **AND** ↑ sputum volume **OR** ↑ dyspnea	<i>H. influenzae</i> <i>M. catarrhalis</i> <i>S. pneumoniae</i>	amoxicillin **OR** doxycycline **OR** sulfamethoxazole / trimethoprim
Complicated	As in simple **AND at least 1 of** : • FEV1 less than 50% predicted • 4 or more exacerbations/year • Ischemic heart disease • Use of home oxygen • Chronic oral corticosteroid use	As in simple plus: • Beta-lactam resistance • Gram-negatives	Oral Route Preferred amoxicillin-clavulanate **OR** moxifloxacin (penicillin allergy) IV Route cefTRIAxone **OR** moxifloxacin (severe β-lactam allergy)
Complicated with suspected <i>Pseudomonas</i>	As in complicated **AND** : • <i>Pseudomonas</i> isolated during previous AECOPD **OR** • <i>Pseudomonas</i> colonization	As in complicated plus increase risk of: • <i>Pseudomonas</i>	Oral Route Preferred amoxicillin + ciprofloxacin **OR** cefuroxime axetil + ciprofloxacin IV Route cefTRIAxone + ciprofloxacin **OR** piperacillin-tazobactam

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9. DIAGNOSTICS

- If Pulmonary Function Tests available, put most recent on chart
- 12-lead ECG on admission (*if not already ordered*)
- Chest x-ray (*choose one if not already ordered*): PA/Lateral ****OR**** Portable
- Other _____

10. INTRAVENOUS THERAPY AND HYDRATION

- Saline lock ****OR****
- Other _____

11. PROPHYLAXIS

- **Venous Thromboembolism (VTE) Prophylaxis – Adult** (form #829495)
- Nicotine Replacement Therapy (NRT) for Tobacco Withdrawal** (form #829435)

Pneumococcal 23-valent polysaccharide vaccine (fax vaccination date to GP/Public Health)

- up to date
- 0.5 mL IM/SC x 1 dose on day 5 or on day of hospital discharge, whichever comes first (*date*) _____

Influenza vaccine

- up to date or not indicated because it is not influenza season
- 0.5 mL IM x 1 dose on day 5 or on day of hospital discharge, whichever comes first (*date*) _____

12. MEDICATIONS (Refer to prescribing guidelines on the back of Page 1 and Page 2)

- **Refer to Best Possible Medication History (BPMH)**
- **Prescriber to determine if regularly scheduled home inhaled medications to be continued**

Oxygen

- **Titrate to keep O₂ saturation between** 88 and 92% ****OR**** Other _____%

Inhaled Bronchodilators (do not prescribe tiotropium when using ipratropium acutely)

- salbutamol 2.5 mg nebulized ****OR**** 400 mcg MDI with spacer Q4H while awake
- salbutamol 2.5 mg nebulized ****OR**** 200 mcg MDI with spacer Q1H PRN dyspnea
- ipratropium 500 mcg nebulized ****OR**** 80 mcg MDI with spacer Q4H while awake
- ipratropium 500 mcg nebulized ****OR**** 80 mcg MDI with spacer Q1H PRN dyspnea

Corticosteroids (*choose one; oral route is preferred where possible*)

- predniSONE 50 mg PO DAILY x 5 days ****OR**** x _____ days
- methylPREDNISolone sodium succinate 40 mg IV DAILY x 5 days ****OR**** x _____ days (if no enteral intake)

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12. MEDICATIONS (*cont'd*)

Oral Antibiotics (preferred route)

Simple COPD (*choose one*)

- amoxicillin 500 mg PO Q8H × 7 days
- doxycycline 200 mg PO × 1 on day 1, then 100 mg PO BID × 6 days
- sulfamethoxazole-trimethoprim 800/160 mg PO Q12H × 7 days

Complicated COPD (*choose one*)

- amoxicillin-clavulanate 875/125 mg PO Q12H × 7 days
- moxifloxacin 400 mg PO DAILY × 5 days (for patients with penicillin allergy)

Complicated COPD - Pseudomonas aeruginosa SUSPECTED (*choose one*)

- amoxicillin 500 mg PO Q8H ****PLUS****
 ciprofloxacin 750 mg PO Q12H × 7 days
- cefuroxime axetil 500 mg PO Q12H ****PLUS****
 ciprofloxacin 750 mg PO Q12H × 7 days

IV Antibiotics (oral therapy is preferable; consider IV if enteral route unavailable)

Complicated COPD (*choose one*)

- cefTRIAxone 2 g IV DAILY × 7 days
- moxifloxacin 400 mg IV DAILY × 5 days (for patients with severe beta-lactam allergy)

Complicated COPD - Pseudomonas aeruginosa SUSPECTED (*choose one*)

- cefTRIAxone 2 g IV DAILY ****PLUS****
 ciprofloxacin 400 mg IV Q12H × 7 days
- piperacillin-tazobactam 4.5 g IV Q6H × 7 days

Antivirals (for suspected influenza with influenza symptom onset within 48 hours)

- oseltamivir 75 mg PO BID × 5 days

Other Orders: _____

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/ /			