Chronic Obstructive Pulmonary Disease (COPD) Management Order Set

Consults:
☑ Respirologist On Call  ☑ Registered Respiratory Therapist  ☑ Pharmacist  ☑ Physiotherapist  ☑ Discharge Planner

Reason: assessment and possible referral to pulmonary rehabilitation
Reason: COPD education and urgent respiratory assessment
Reason: assess transitioning to MDI with MRP if patient on nebulizer
Reason: Early ambulation and chest physiotherapy if required

Diagnostic Investigations

***Investigations on admission if not already done in ED

☐ ABG  ☑ CXR PA+LAT

☐ CXR Portable  Reason: COPD exacerbation

Microbiology

☐ Blood C+S x 2 STAT (for Temp greater than 38°C)  ☑ Sputum C+S

☐ Nasopharyngeal swab for rapid influenza A+B  ☑ Throat swab C+S

Bronchodilator Therapy

***MDI with spacer is preferred delivery vehicle; nebulizer treatment is considered second-line***

***If patient already on long-acting anticholinergic (e.g. tiotropium), may continue in combination with salbutamol instead of adding or replacing with short-acting anticholinergic (i.e. ipratropium)***

☑ Supervise patient during MDI with spacer administration

☑ If both salbutamol and ipratropium MDI ordered, administer salbutamol prior to ipratropium

☐ Salbutamol ______ puffs MDI given via spacer (100 micrograms/puff)  ☑ q4h  ☑ q4h PRN  ☑ q1h PRN

☐ Salbutamol ______ mg (2.5 OR 5 mg) inhaled via nebulizer  ☑ q4h  ☑ q4h PRN  ☑ q1h PRN

☐ Ipratropium ______ puffs MDI given via spacer (20 micrograms/puff)  ☑ q4h  ☑ q4h PRN  ☑ q1h PRN

☐ Ipratropium ______ micrograms (250 OR 500 micrograms) via nebulizer  ☑ q4h  ☑ q4h PRN  ☑ q1h PRN

☑ Hold if patient is sleeping

☑ Other: ________________________________

Corticosteroid Therapy

*** IV route should only be used when oral route is not appropriate ***

*** If corticosteroid ordered, prescriber to consider a total corticosteroid course of 5 – 7 days ***

*** Lower corticosteroid dose preferred if frail elderly or comorbidities such as diabetes or osteoporosis ***

☐ prednisone ______ mg PO daily with breakfast (0.5 mg/kg; max 50 mg)  (Preferred route)

☐ methylprednisolone Sodium Succinate ______ mg IV q12h x 48 hrs then reassess
(recommend 20 - 40 mg/dose)
Chronic Obstructive Pulmonary Disease (COPD) Management Order Set

### Antibiotic Therapy

**Uncomplicated COPD** (refer to Associated Document Exacerbation of COPD Algorithm)
- Azithromycin 500 mg PO x 1 dose THEN
- 250 mg PO daily x 4 days
- OR
- cefUROXime 500 mg PO q12h

**Complicated COPD** (refer to Associated Document Exacerbation of COPD Algorithm)
- If patient able to tolerate PO
  - Amoxicillin-clavulanate 875 mg PO q12h
  - OR
  - If anaphylactic reaction to penicillins
    - Levofloxacin 750 mg PO q24h

- If patient unable to tolerate PO Only
  - Ceftriaxone 1g IV q24h
  - OR
  - If anaphylactic reaction to penicillins
    - Levofloxacin 750 mg IV q24h

- Other: ______________________________________________________

### Nicotine Replacement Therapy

Number of cigarettes smoked per day ________
- Nicotine Patch ______ mg/day

Estimated length of stay ________ days
Planned discharge date ____________________ (yyyy-mm-dd)

### Additional Orders:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

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Algorithm for Antibiotic Treatment in Patients with Acute Exacerbations of COPD

**EXACERBATION**

**Mild**
- 1 Cardinal symptom:
  - Increased dyspnea
  - Increased sputum purulence
  - Increased sputum volume

  - No antibiotics
  - Increased use of bronchodilator
  - Symptomatic therapy
  - Monitoring of symptoms

**Moderate or Severe**
- 2 or 3 Cardinal symptoms:
  - Increased dyspnea
  - Increased sputum purulence
  - Increased sputum volume

**Uncomplicated COPD**
- No risk factors:
  - Age less than 65
  - FEV\textsubscript{1} greater than 50% predicted
  - Less than 3 exacerbations/year
  - No cardiac disease

  - Advanced macrolide (Azithromycin)
  - Cephalosporin (cefuroxime)
  - Doxycycline

  - If recent antibiotic exposure (less than 3 months), use alternative class

**Complicated COPD**
- 1 or more risk factors:
  - Age greater than or equal to 65
  - FEV\textsubscript{1} less than or equal to 50% predicted
  - Greater than or equal to three exacerbations/year, Cardiac disease

  - Amoxicillin – clavulanate
    - If anaphylactic reaction to penicillins:
      - PO Fluoroquinolone (Levofloxacin)

  - *If unable to take oral medications:*
    - Ceftriaxone
    - If anaphylactic reaction to penicillins
      - IV Fluoroquinolone (Levofloxacin)

  - If at risk for Pseudomonas infection, consider ciprofloxacin and obtain sputum culture
  - If recent antibiotic exposure (less than 3 months), use alternative class

**Worsening clinical status or inadequate response in 72 hours**

**Re-evaluate**
- Consider sputum culture

(Adapted from Sethi, S., Murphy, T. (2008) Infection in the pathogenesis and course of chronic obstructive pulmonary disease, New England Journal of Medicine, 359, 2355-65)
## COPD Patient Education Checklist

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<th>Pulmonary Rehabilitation</th>
<th>Managing COPD</th>
<th>Energy Management</th>
<th>Smoking Cessation</th>
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<td>☐ Pulmonary Rehabilitation</td>
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