COPD Exacerbation Guideline

Initial Assessment
- CXR and ECG if clinically indicated
- Laboratory Studies (consider CBC, CMP, VBG, ABG, or capnography to assess degree of hypercarbia; BNP, Troponin in appropriate clinical circumstances)
- Sputum Assessment (if mechanically ventilated; sputum microscopy & culture – preferably prior to ABX)

Initial Treatment
- Saline lock: If HR > 120 beats/minute or RR > 24/minute
- Consider NIPPV or Mechanical Ventilation (based on work of breathing, hypoxia, or acidosis)
- Supplemental Oxygen: To achieve oxygen saturation of 88-92%
- Bronchodilator Therapy: STAT Albuterol/Ipratropium (Duoneb) delivered via breath activated nebulizer (BAN) 1, 2, 3
  - Can repeat Albuterol via BAN alone as clinically indicated
  - Consider 10-15mg/hour continuous albuterol nebulizer for severe exacerbation
- Systemic Corticosteroid Therapy: Prednisone 30-60mg PO OR methylprednisolone 60-125mg IV within 60 mins of arrival
- Antibiotic Therapy: Azithromycin 500mg IV or PO for increased dyspnea with increased sputum production or purulence (alternative agenda include doxycycline, amoxicillin-clavulanate, levofloxacin). Levofloxacin 750mg IV for intubated patients
- Treat associated conditions as appropriate

Patient response?
- Good Response/Stable for Discharge 2, 5
  - Continue inhaled bronchodilator: Albuterol MDI with Spacer two puffs up to Q4 hours
  - Review inhaler & spacer technique by RT or RN
  - Continue oral corticosteroid: Prednisone 40mg PO QD x 5-7 days
  - If started, continue azithromycin 250mg QD for 4 additional days* (or alternative antibiotic for 5-7 days)
  - Review medications
  - Review MMC COPD action plan
  - Recommend smoking cessation as indicated
- Incomplete Response 3, 5
  - Repeat bronchodilator/anticholinergic therapy x 1-3 hrs
  - Reassess
- Poor Response/Deterioration 4
  - Consider continuous bronchodilator/anticholinergic therapy
  - Consider NIPPV
  - Consider intubation/mechanical ventilation
  - Inpatients unable to tolerate NIV, or failure of NIV to improve symptoms, work of breathing, or acidosis
  - Admission to Special Care Unit
  - For persistent respiratory acidosis, mechanical ventilation, confusion, lethargy

Key
1. Within 1-2 hours reassess: patient’s subjective response, vital signs, work of breathing, acidosis/hypercarbia (if indicated)
2. Good response/stable for discharge: subjective improvement, baseline oxygen requirement, not requiring nebs more than Q4 hours
3. Incomplete response: improving but not stable for discharge
4. Poor response/deterioration: subjective worsening of symptoms, increasing work of breathing, increasing acidosis or pCO2 despite treatment
5. If patient as 2 ED visits for COPD exacerbation, consider inpatient admission OR intensified outpatient plan (care management involvement, home health, bedside discussion with RT, discussion with/referral to pulmonology, direct discussion with PCP)

This guideline was ratified by the emergency department faculty at Maine Medical Center in September 2017. It reflects our expert opinion and is not necessarily applicable to all institutions. It is intended to be a reference for clinicians caring for patients and is not intended to replace providers’ clinical judgment.