EXCELLENCE IN EMERGENCY MEDICINE

THE URGENCY ROOM

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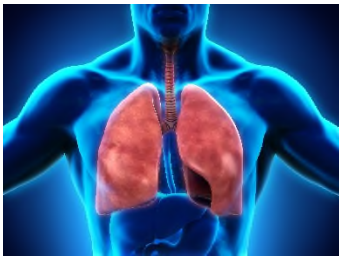

MANAGEMENT OF COPD Exacerbation

This EPPA Clinical Guideline is intended to guide most, but not all, encounters involving COPD exacerbation and should not replace clinical judgment; deviate from or adapt this guideline to meet the individual patient's needs.

Treatment

- **Medications:**
  - **Nebs:**
    - Duoneb once and reassess in 15 minutes
    - 2.5 mg albuterol neb with reassessment 15 minutes after treatment
    - If still short of breath, repeat 2.5 mg albuterol (for 3 nebs total)
    - OR
    - 10 mg continuous albuterol neb given over 1 hour
  - **Antibiotics/Antivirals (See Box)**
  - **Steroids (See Box)**
- **Consider NPPV**:
  - Appropriate for most patients with severe COPD exacerbation unless intubation is required or NPPV is otherwise contraindicated (unable to protect airway/aspiration risk, severely impaired consciousness, facial surgery/trauma/deformity, recent esophageal anastomosis).
  - Consider High flow nasal cannula for mild to moderate COPD exacerbations. BIPAP still preferred for hypercapnia, but may be an option for those that cannot tolerate BIPAP.
  - Contraindications to High flow nasal cannula include abnormalities of the airway, face, or nose that prevent appropriate fitting nasal cannula. Some experts also recommend avoidance in those following upper airway surgery, as there is potential risk of causing venous thromboembolism.

Diagnostics

- Rule out contributing co-morbidities: CXR (Pneumonia/Pneumothorax)
- Based on clinical findings, consider: CBC, BMP, EKG, blood gas, troponin, BNP, influenza, d-dimer

Findings and Disposition

Admit to Hospital If:	Discharge Home If:
• Respiratory status not improved with treatment since arrival • Acute exacerbation, failed outpatient management • Acute changes in mental status • Hypoxemia not improved with supplemental O2 • PaCO2 increased compared to baseline or acidosis (pH < 7.25) • High risk comorbidities • Newly occurring dysrhythmia • Inability to walk when at baseline mobile	• Improved respiratory status since arrival • No change in mental status • No other comorbidity contributing factors/present symptoms • Ability to ambulate (if able at baseline) • Social supports in place at home • PaCo2 at or near baseline or normal (if obtained) • 5-day course of prednisone (40 mg per day for 5 days) • If antibiotics indicated: 1st line: Azithromycin x 5 days 2nd line: Doxycycline 100 mg PO BID x 10 days • If influenza: Oseltamivir or peramivir • Albuterol nebulizer Q4H PRN or 2 puffs albuterol MDI Q4H PRN • Follow-up with PCP or pulmonary

MANAGEMENT OF **COPD Exacerbation**

References:

- Global Initiative for Chronic Obstructive Lung Disease (GOLD). Global Strategy for the Diagnosis, Management and Prevention of chronic obstructive pulmonary disease: 2018 Report. http://www.goldcopd.
- Stoller, J. Management of exacerbations of chronic obstructive pulmonary disease. Jul 2018. https://www.uptodate.com/contents/management-of-exacerbations-of-chronic-obstructive-pulmonary-disease
- Methodist Hospital COPD Guideline

Triggers to Consider

- Viral and bacterial infections
- Environmental pollution
- Pulmonary embolism
- MI, CHF, aspiration

Antibiotics and Antivirals

- **Antibiotics:**
  - If ≥ 2 of 3 symptoms:
    - Increased dyspnea
    - Increased sputum volume from baseline
    - Increased sputum purulence
  - 1st line: azithromycin
  - 2nd line: doxycycline
- **Antivirals:**
  - If influenza suspected: Oseltamivir or peramivir (if unable to take PO)

Recent Steroid Use

- If can take PO, oral is as effective as IV dosing (both in onset as well as clinical effect)
- Give 40 mg prednisone PO, or 125 solumedrol IV if cannot take PO
- Unless patient is on steroids chronically, has been taking for greater than 3 weeks, or has Cushingoid appearance, patients are typically not at risk of HPA suppression (hypothalamic-pituitary-adrenal axis)
- Evidence is lacking to support any specific tapering regimen for those on steroids or recently on a burst
- Long term systemic glucocorticoids are not recommended even for severe COPD due to significant side effects as well as increased morbidity and mortality. In the rare circumstance when discontinuing prednisone results in recurrent symptoms, prednisone should be reduced to the lowest dose possible.