The Management of Chronic Obstructive Pulmonary Disease (COPD)

Module A: Management of COPD in Primary Care

1. Patient with chief complaint suggestive of COPD presents to primary care

2. Perform brief clinical assessment to determine if patient is clinically stable

3. Is patient having an acute exacerbation? (see Sidebar 1)
   - No
   - Yes

4. Management of an acute exacerbation (see Module B)

5. Complete clinical assessment including consideration of common co-occurring conditions (see Sidebar 2):
   - History: including tobacco use, activity level, exercise tolerance, symptom burden, mental well-being, and history of acute exacerbations
   - Exam: including wheezing, use of accessory muscles and labored breathing, BMI, and pulse oximetry if available
   - Evaluate for other contributing diagnoses and co-occurring conditions: refer to other VA/DoD CPGs as needed
   - Obtain diagnostic spirometry if available (see Recommendation 1)

6. Is there a confident clinical diagnosis of COPD?
   - Yes
   - No

7. • Offer prevention and risk reduction methods including smoking cessation, vaccination, and patient education
   • Suggest spirometry if not already completed

8. Treat or refer as clinically indicated

9. Is patient chronically symptomatic and/or has patient had a moderate to severe exacerbation in the past year? (see Sidebar 1)
   - No
   - Yes

10. If symptoms persist, consider need to initiate/adjust medication and assess inhaler technique (see Appendix G); ensure patient is on SABA (PRN), then use following steps for increasing intensity:
    - 1. First line LAMA
    - 2. Add LABA for severe symptoms (preferably combination inhaler)
    - 3. Add ICS only for continued moderate to severe exacerbations (see Sidebar 1)
    - 4. Pulmonology referral

11. Consider need for oxygen if patient has resting hypoxemia (refer to home oxygen clinic if appropriate)

12. • Continue follow-up and monitoring
    • Reassess severity periodically
    • Consider pulmonary rehabilitation
    • Consider medication adjustment if patient is on an inhaled corticosteroid (see Module C)
    • Consider offering referral to a pulmonologist or a palliative care specialist as appropriate for patients with persistent refractory dyspnea
    • Carefully consider alternatives to beta blockers for non-cardiac indications (e.g., HTN)

Sidebar 1: Definition of Exacerbations
Increased dyspnea above day-to-day variability with or without change in sputum amount or color. Moderate to severe exacerbations are those that require antibiotics and/or systemic corticosteroids. Patients with exacerbation within the past six months would be considered to have “severe COPD.”

Sidebar 2: Common Comorbidities
• CVD
• CHF
• Pulmonary embolism
• Sleep disorders
• Poor nutritional status (both under & over nutrition)
• Gastroesophageal reflux
• Depression
• Anxiety

Abbreviations:
BMI: body mass index; CHF: congestive heart failure; COPD: chronic obstructive pulmonary disease; CPG: clinical practice guideline; CVD: cardiovascular disease; HTN: hypertension; ICS: inhaled corticosteroid; kg: kilogram; LABA: long-acting beta 2-agonist; LAMA: long-acting antimuscarinic agent; m: meter; MDI: metered-dose inhaler; mg: milligram; PRN: pro re nata (as needed); SABA: short-acting beta 2-agonist; SaO2: peripheral capillary oxygen saturation; SMX: sulfamethoxazole; TMP: trimethoprim; VA/DoD: Department of Veterans Affairs/Department of Defense

Access to the full guideline and additional resources is available at the following link:
https://www.healthquality.va.gov/guidelines/CD/copd/
Module B: Management of Acute COPD Exacerbations

13. Patient presenting with an acute exacerbation to primary care

14. Assess/triage condition

15. Is there indication for emergency department or inpatient admission? (see Sidebar 3)

16. Initiate short-acting acute bronchodilator therapy (albuterol ± ipratropium MDI with spacer or via nebulizer) and administer oxygen if necessary

17. Obtain history, physical exam, and tests as clinically indicated to evaluate for alternate diagnoses

18. Initiate short-acting acute bronchodilator therapy (albuterol ± ipratropium MDI with spacer or via nebulizer) and administer oxygen if necessary

19. Are acute symptoms resolved?

20. Consider:
   - Continuing short-acting bronchodilator therapy
   - Initiating long-acting bronchodilator therapy
   - Initiating steroid therapy (see Sidebar 4)
   - Initiating antibiotic therapy (see Sidebar 5)

21. Arrange follow-up
   - Instruct patient to contact clinic if condition deteriorates

22. Return to primary care pathway (see Module A)

23. Arrange transfer

24. Patient on ICS

25. Does the patient have stable COPD? (no moderate to severe exacerbations in 2 years)

26. Obtain eosinophil count if not already obtained within the past year; is eosinophil count <300?

27. Remove ICS:
   - If patient is on LABA/ICS + LAMA, consider switching to single combination inhaler if available
   - If patient is on LABA/ICS, then no adjustments needed

28. Return to primary care pathway (see Module A, Box 9)

29. Maintain ICS:
   - If patient is on LABA/ICS + LAMA, consider switching to single combination inhaler if available
   - If patient is on LABA/ICS, then no adjustments needed

Sidebar 3: Criteria for Possible Admission
- Accessible muscle use
- Tachypnea
- Hypoxemia or hypercapnea above baseline
- Failure to respond to initial therapy
- Clinical judgement

Sidebar 4: Initiating Steroid Therapy
- Oral glucocorticoid:
  - 30 – 40 mg daily prednisone equivalent for 5 – 7 days
  - No benefit in higher doses
  - Generally no benefit in longer duration

Sidebar 5: Initiating Antibiotic Therapy
- Antibiotic choice:
  - Amoxicillin
  - Amoxicillin/clavulanate
  - Azithromycin
  - Doxycycline
  - Second generation cephalosporin
  - Trimethoprim/sulfamethoxazole (TMP-SMX)
  - Reserve broader spectrum antibiotics for severe or specific risk