evidence based guidelines

CHRONIC OBSTRUCTIVE PULMONARY DISEASE

BY DEFINITION: COPD is a heterogeneous lung condition characterized by chronic respiratory due to abnormalities of the airways (bronchitis, bronchiolitis) and/or alveoli (emphysema) that cause persistent, often progressive, airflow obstruction. THEREFORE, **an accurate diagnosis of COPD requires all three:**

- 1. **Medical history & symptoms**: includes chronic dyspnea, cough, sputum production lasting 3 months or more, occurring most days of the week, for at least two years
- 2. **CT Chest w/o contrast or CXR** imaging to determine abnormalities
- 3. **COMPLETE PFT** – *order at Holland Hospital as "PFT Complete Before & After Bronchodilator (PFC B&A)" Complete PFT is preferred over spirometry alone for initial testing. Obstruction = FEV1/FVC<0.7*

SYMPTOM ASSESSMENT

CAT (COPD Assessment Test): Score (0-40) based on how often (0-5) the patient experiences: cough, phlegm, chest tightness, dyspnea, limited activity, difficulty leaving home, trouble sleeping, low energy

mMRC (modified Medical Research Council): Score (0-4) based on if having dyspnea while walking on level ground:

0 –Only if strenuous, **1** –if hurrying or going up incline, **2** –worse than others their age, **3** – stop every 100yds or 3min, **4** – minimal activity

PHARMACOLOGIC TREATMENT

Group A: Bronchodilator as needed
Either short or long-acting (LA preferred)
- 0-1 moderate exacerbations not leading to hospital admission
- Low symptoms: mMRC 0-1, CAT <10

Group B: LABA + LAMA
Could start with LAMA only
- 0-1 moderate exacerbations not leading to hospital admission
- Higher symptoms: mMRC ≥2, CAT ≥10

Group E: LABA + LAMA
Consider adding ICS if eosinophils ≥300 cells/μL (0.30 k/μL)
- ≥ 2 moderate exacerbations OR ≥ 1 leading to hospitalization

Previously Group C (low symptoms, high risk) & Group D (high symptoms, high risk)

Link to full Gold recommendations here. Symptomatic assessment + exacerbation guide initial pharmacologic treatment
Concise synopsis of guidelines to guide Initial vs. Follow-up Treatment
Chart of Inhaler Combinations/Types *Tip: spacers improve delivery of medication and reduce side effects for MDIs*

MANAGEMENT

- Assure standard vaccines: Yearly Flu, RSV, PCV (PneumoRecs Advisor), Tdap, COVID, Shingles
- Self-Management Education: individualized COPD Action Plan, Inhaler Education, Tobacco Cessation, and management of comorbidities & risk factors.
- Frequent use of SABAs & OCS can lead to adverse effects. Re-evaluate treatment plan (see Gold guidelines above).
- Consider ordering Alpha-1 antitrypsin testing if patient with diagnosis of COPD+age <50 to determine cause of emphysema

REFERRAL

- Consider need for supplemental oxygen, nutritional support, or pulmonary rehab
  - Holland Hospital Pulmonary Rehab: 616-394-3398, Order required, typically 24-30 sessions.
- Holland Hospital Pulmonary & Sleep Medicine: 616-395-2853
  - *When to refer: Frequent exacerbations, hospitalizations, use of OCS.*
  - *Complete PFT + CXR or CT chest w/o contrast, must be completed prior to referral*!
- Consider Palliative Care or Advanced Illness Management for end-stage symptoms

Reference: GOLD 2024

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