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Keeping Current: Adherence to Updated Guidelines for Chronic Obstructive Pulmonary Disease

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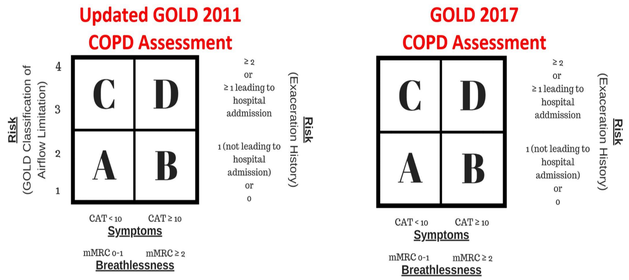
Background

- Over 15.7 million Americans have chronic obstructive pulmonary disease (COPD)[1].
  - Primary contributor to chronic lower respiratory disease.
  - 3rd leading cause of deaths in the United States in 2014[2].
- The Global Initiative for Obstructive Lung Disease (GOLD) develops evidence-based reports which guide the diagnosis, assessment, and treatment of COPD[3,4].
  - Patients prescribed GOLD-adherent pharmacotherapy regimens have significant reductions in all-cause hospitalizations and respiratory-specific emergency department visits[5].
  - 2017 GOLD report: first major changes to severity assessment and treatment recommendations in the last five years.
- Because the 2017 GOLD guidelines are still relatively new, few studies have looked at provider adherence to these most updated guidelines.

Figure 1. 2011 and 2017 GOLD Guidelines COPD Assessment Tools



Objectives

To assess prescriber uptake and adherence to the 2017 GOLD guidelines in terms of COPD treatment initiation or escalation

Methods

- Retrospective chart review using descriptive statistics for data analysis
  - Inclusion Criteria: Adults aged 18 to 89 years, ICD-10 diagnosis of COPD, UFM visit between November 1, 2016 and November 1, 2017, prescribed treatment for COPD who were initiating or maintaining treatment for COPD at University of Maryland Family Medicine Practice (UFM).
- Data collection included: COPD medications, pulmonary diagnoses, pulmonary function tests, and documentation of COPD symptom assessment scores, COPD severity grading, and exacerbation history.
- Primary Outcome: adherence rates to GOLD guideline recommendations during initiation or adjustment of COPD therapy.
- Secondary outcomes: documentation of COPD assessment scales, exacerbation histories, or spirometry tests to guide treatment.
- Approved by local institutional review board.

Results

Table 1. Baseline Characteristics* and Treatment Changes

Characteristic	New COPD Diagnosis	Previous COPD Diagnosis
Age – year	49 +/- 5.2	61 +/- 7.6
Female sex – no. (%)	17 (35.4)	25 (33.8)
Patient treatment initiation (n = 48) – no. (%)		
Start SABA	23 (47.9)	--
Start SAMA	20 (41.7)	--
Start LABA	9 (18.8)	--
Start LAMA	11 (22.9)	--
Start ICS	0 (0.0)	--
Start LABA + LAMA	4 (8.3)	--
Start LABA + ICS	21 (43.8)	--
Start LABA + LAMA + ICS	1 (2.1)	--
Patient maintenance treatment change (n = 74) – no. (%)		
Add SABA	--	2 (2.7)
Add SAMA	--	1 (1.4)
Add LABA	--	1 (1.4)
Add LAMA	--	15 (20.2)
Add ICS	--	4 (5.4)
Change to LABA + LAMA	--	10 (13.5)
Change to LABA + ICS	--	28 (37.8)
Change to LABA + LAMA + ICS	--	16 (21.6)

Table 2. Number of Patients with Documented Data in Electronic Record

Data - no. (%)	New COPD Diagnosis	Previous COPD Diagnosis
COPD Symptom Assessment Scale	27 (11.1)	17 (7.0)
Exacerbation History	39 (16.0)	31 (12.8)
Spirometry Test	65 (26.7)	19 (7.8)

- A total of 243 patients were seen at UFM during the study timeframe for a visit related to COPD.
  - 48 (19.7%) with a new diagnosis of COPD.
  - 195 (80.3%) with a previous diagnosis of COPD.
- LABA + ICS with a SABA was the most common starting regimen for new COPD diagnoses.
- Changing to a LABA + ICS was the most common adjustment to maintenance regimens in patients with previous COPD diagnoses.
- 87 (35.8%) of the total 243 patients had COPD symptom assessment scales, exacerbation histories, spirometry tests, or a combination of this information documented in their record.

*Short-acting beta¬2 agonist (SABA); Short-acting muscarinic antagonist (SAMA); Long-acting beta2 agonist (LABA); Long-acting muscarinic antagonist (LAMA); Inhaled corticosteroid (ICS)

Figure 2. Adherence to 2017 GOLD Guideline Treatment Recommendations for New COPD Diagnoses

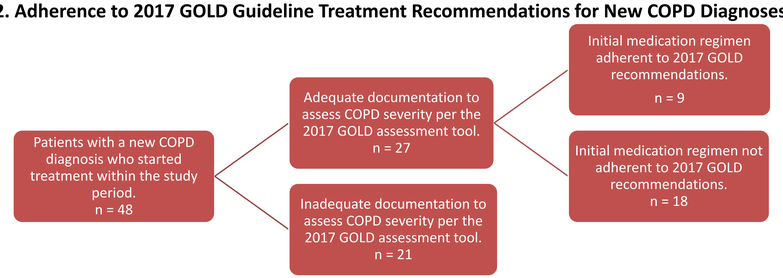
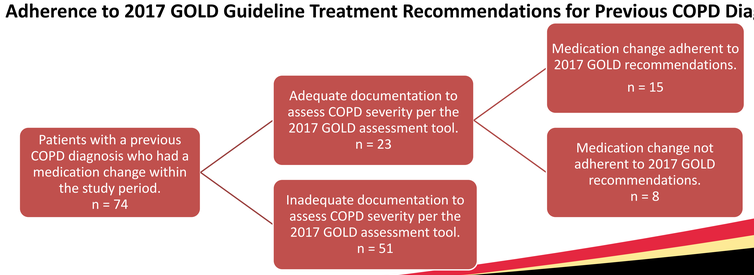


Figure 3. Adherence to 2017 GOLD Guideline Treatment Recommendations for Previous COPD Diagnoses



Conclusions

- Despite established guidelines for COPD treatment, incorporation of updated recommendations into practice takes time.
- Symptom assessment may not be routinely performed or documented for patients with COPD despite its value in guiding treatment.
- Variations in prescriber documentation can limit retrospective analysis of the adherence to established treatment guidelines and the appropriate application to individual patients.
- Incorporation of standardized document templates and provider-support tools into the electronic medical record may help providers stay abreast of evolving evidence-based medicine.
- Future study of the barriers to timely implementation of guideline updates could highlight points of system improvement to ensure quality patient care.

Disclosures

Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

Angeo Rey Belen: Nothing to disclose
Kathleen J. Pincus: Nothing to disclose

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