

Real-World Adherence to Single-Inhaler versus Multiple-Inhaler Triple Therapy Among Patients with Chronic Obstructive Pulmonary Disease in a Commercially Insured US Population

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Aims

- Triple therapy with an inhaled corticosteroid/long-acting muscarinic antagonist/long-acting beta-agonist (ICS/LAMA/LABA) is recommended for COPD patients with persistent symptoms or exacerbations while on dual therapy with LAMA/LABA or ICS/LABA. Multiple-inhaler triple therapy (MITT) has been associated with poor adherence and persistence; however, single-inhaler triple therapy with FF/UMEC/VI has not been assessed.
- The aim of this study was to compare treatment adherence between MITT and FF/UMEC/VI

Methods

Study Design and Inclusion Criteria

Retrospective weighted cohort analysis of commercially-insured US patients with COPD and triple therapy use between September 2017 and December 2018 in the IQVIA RWD Adjudicated Claims database.

- At least one dispensing of single-inhaler FF/UMEC/VI or at least one overlapping day of supply with all three COPD medication classes (i.e., ICS/LABA/LAMA), defined as the index date
- Continuous enrollment with medical and pharmacy coverage of at least 12 months prior to (baseline) and at least 6 months after the index date
- At least two diagnoses of COPD in an outpatient setting, or at least one in a hospitalization or ER setting, during the 12-month baseline period or on the index date
- At least 40 years of age as of the index date
- Patients were excluded if they used MITT in the baseline period

Outcomes

- Proportion of Days Covered (PDC)**
 - Adherence to therapy was measured as the PDC by FF/UMEC/VI or MITT drug supplies
- Adherence to Triple Therapy**
 - Defined as having PDC ≥ 0.8 during the follow up period
 - Rates of adherent patients were compared using risk ratios from log-binomial regression models
- Persistence to Triple Therapy**
 - Kaplan-Meier persistence rates were evaluated for both cohorts at 3, 6, 9, and 12 months and compared using hazard ratios from a Cox proportional hazards regression
 - Non-persistence was defined as a gap of >60 days between the end of a dispensing and the following fill
- Treatment Patterns**

Disclosures

- MB and BW are GSK employees and hold stocks/shares. GG, FL, SDM, YJ and MSD are current employees Analysis Group, a consulting company that has received research funds from GSK.

- This study was funded by GlaxoSmithKline (GSK ID 212139).

Results

Table 1. Weighted Baseline Characteristics

Characteristic	FF/UMEC/VI N = 2,782	MITT N = 7,160
Age, mean (SD)	60.6 (7.8)	60.4 (7.8)
Female, (%)	54.5	52.1
Quan-CCI, mean (SD)	2.0 (1.7)	2.0 (1.7)
Select comorbidities		
Hypertension, (%)	66.2	64.8
Asthma, (%)	29.8	31.2
Diabetes, (%)	23.4	23.9
Obesity, (%)	23.3	22.6
COPD-related exacerbations, mean (SD)	1.4 (1.6)	1.4 (1.6)
COPD-related HRU and Costs		
Hospitalizations, mean (SD)	0.4 (0.8)	0.4 (0.8)
ER visits, mean (SD)	0.4 (1.0)	0.3 (1.0)
Outpatient visits, mean (SD)	6.3 (7.8)	6.2 (11.9)
COPD-related total medical costs, \$USD 2019, mean (SD)	11,538 (28,932)	9,107 (22,954)

Figure 1. Adherence to FF/UMEC/VI vs MITT (mean PDC)



Figure 2. Adherence to FF/UMEC/VI vs MITT (% with PDC ≥ 0.8)

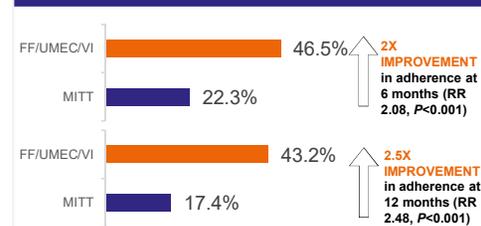
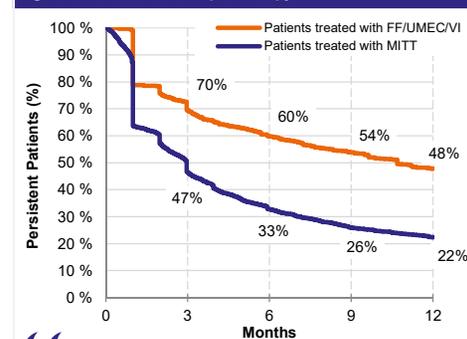


Figure 3. Persistence to Triple Therapy



FF/UMEC/VI patients were more likely to persist on treatment compared to MITT patients at both 6 and 12 months ($P < 0.001$)

Table 2. Follow-Up COPD Medication Use

	FF/UMEC/VI	MITT
Duration of triple therapy, days, mean \pm SD [median]	263.7 \pm 132.5 [311]	182.5 \pm 131.1 [183]
FF/UMEC/VI, mean \pm SD [median]	6.1 \pm 3.8 [6]	-
ICS, mean \pm SD [median]	-	5.3 \pm 3.7 [4]
LAMA, mean \pm SD [median]	-	5.2 \pm 3.6 [4]
LABA, mean \pm SD [median]	-	5.5 \pm 3.6 [5]
Other COPD medication use during follow-up, n (%)		
SABA	1,848 (66.4)	5,095 (71.2)
Antibiotics	1,844 (66.3)	4,971 (69.4)
SCS	1,536 (55.2)	4,191 (58.5)
Leukotriene modifiers	560 (20.1)	1,793 (25.0)
SAMA/SABA	438 (15.8)	1,286 (18.0)
PDE-4 inhibitor	94 (3.4)	214 (3.0)
Methylxanthines	83 (3.0)	104 (1.5)
SAMA	47 (1.7)	204 (2.8)
Biologic agents	11 (0.4)	19 (0.3)

Conclusions

Patients with COPD initiating single-inhaler triple therapy with FF/UMEC/VI may have better adherence and persistence compared with patients initiating MITT

Triple therapy with FF/UMEC/VI could help patients with COPD stay more adherent and persistent to their treatment.

Disclosures (cont.)

- On behalf of all authors, an audio recording of this poster was prepared by Michael Bogart, who did not receive any payment for the recording.

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