

Meta-analysis demonstrated significant improvement in mean Asthma Quality of Life Questionnaire scores (AQLQ and mini-AQLQ); 0.59 (95%CI; 0.25, 0.92), p=0.0006. No significant improvement was demonstrated in mean forced expiratory volume in one second (FEV1)%predicted; 0.32 (95%CI; -2.84, 3.47), p=0.84. Asthma Control Test/Asthma Control Questionnaire improved in 2 studies, with no improvement in 1 study. 4 studies demonstrated improvement in asthma day-time/night-time symptoms, and 3 studies showed improved asthma severity. There is mixed evidence for improvement in bronchial airway responsiveness. Single studies demonstrated improved peak expiratory flow rates, arterial oxygenation/carbon dioxide levels, fractional exhaled nitric oxide and annual decline in FEV1.

Conclusion Preliminary data suggests CPAP has a positive impact on quality of life in asthmatics with co-existing OSA. Further investigation with randomised controlled trials is needed.

In depth characterisation of COPD

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CHARACTERISTICS OF ESTABLISHED AND NEWLY TREATED PATIENTS WITH COPD ACCORDING TO GOLD 2017 IN A UK PRIMARY CARE POPULATION

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Rationale The 2017 GOLD report proposed a revised assessment scheme for patients with COPD. We have examined the distribution and characteristics of patients with an established diagnosis and those started on maintenance therapy for the first time by GOLD group.

Methods 6940 patients with a recorded diagnosis of COPD on 1/1/2014 in the Optimum Patient Care Research Database

Abstract P59 Table 1

All patients with diagnosis of COPD on 1/1/2014 (n=6940)	
C n=881 (12.7%) age(SD) 73.7 (93.1) men 52.3% GOLD 1,2,3,4 (%) 22.7, 51.2, 21.3, 4.8 Exacs/y (SD) 2.85 (1.29) mMRC (SD) 0.76 (0.43)	D n=1004 (14.5%) age(SD) 84.1 (162.0) men 46.3% GOLD 1,2,3,4 (%) 12.4, 46.2, 31.0, 10.4 Exacs/y (SD) 3.14 (1.60) mMRC (SD) 2.51 (0.64)
A n=3116 (44.9%) age(SD) 77.2 (120.8) men 57.4% GOLD 1,2,3,4 (%) 24.9, 57.0, 15.4, 2.7 Exacs/y (SD) 0.29 (0.45) mMRC (SD) 0.65 (0.48)	B n=1939 (27.9%) age(SD) 80.3 (124.8) men 53.1% GOLD 1,2,3,4 (%) 15.1, 50.6, 27.2, 7.1 Exacs/y (SD) 0.37 (0.48) mMRC (SD) 2.39 (0.56)
Patients with diagnosis of COPD initiating maintenance therapy 1/1/2014-31/12/2014 (n=876)	
C n=120 (13.7%) age(SD) 68.3 (10.1) men 50.0% GOLD 1,2,3,4 (%) 23.7, 62.3, 11.4, 2.6 Exacs/y (SD) 2.54 (0.88) mMRC (SD) 0.83 (0.38) Therapy initiated: LAMA 41% LABA 18% LABA/ICS 23% LAMA/LABA/ICS 1%	D n=79 (9.0%) age(SD) 69.9 (10.4) men 53.2% GOLD 1,2,3,4 (%) 13.0, 55.1, 26.1, 5.8 Exacs/y (SD) 2.63 (1.23) mMRC (SD) 2.30 (0.49) Therapy initiated: LAMA 41% LABA 18% LABA/ICS 20% LAMA/LABA/ICS 10%
A n=424 (48.4%) age(SD) 70.2 (9.5) men 60.9% GOLD 1,2,3,4 (%) 23.0, 57.0, 18.4, 1.6 Exacs/y (SD) 0.32 (0.47) mMRC (SD) 0.70 (0.46) Therapy initiated: LAMA 47% LABA 15% LABA/ICS 18% LAMA/LABA/ICS 2%	B n=253 (28.9%) age(SD) 70.2 (11.4) men 56.5% GOLD 1,2,3,4 (%) 17.1, 51.2, 27.0, 4.7 Exacs/y (SD) 0.43 (0.50) mMRC (SD) 2.32 (0.54) Therapy initiated: LAMA 45% LABA 17% LABA/ICS 23% LAMA/LABA/ICS 2%

(ALL) and 876 patients newly initiated on maintenance therapy (NMT) in 2014 with a two-year follow-up were studied. Both cohorts had data on the number of exacerbations in the previous 12 months, mMRC and FEV1 in the year 2014.

Results Nearly half of patients in both cohorts were GOLD A. There was little difference in the proportion of patients by GOLD stage between the cohorts. In all groups NMT patients were younger. The biggest differences between ALL and NMT were seen in those in GOLD D: NMT patients had higher FEV1, lower mMRC scores and lower exacerbation rates. The commonest therapy started in NMT patients was LAMA followed by ICS/LABA with triple therapy mostly used in GOLD D.

Conclusion Patients started on maintenance therapy were most commonly in GOLD A. Initiation of bronchodilator therapy in most cases was in line with current GOLD recommendations in groups B C and D but there was over initiation of LABA/ICS in groups A and B.

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COPD-RELATED HEALTH CARE COSTS FOR GOLD C/D PATIENTS WITH ELEVATED BLOOD EOSINOPHIL COUNTS

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Introduction and objectives Chronic obstructive pulmonary disease (COPD) is a costly condition. There is a need to identify patient characteristics associated with greater health care resource utilization and treatable traits. We compared COPD-related health care costs by treatment subgroups for UK patients with elevated blood eosinophil counts (BEC, defined as $\geq 0.45 \times 10^9/L$) who were at high risk of exacerbations (Global Initiative for Chronic Obstructive Lung Disease [GOLD] group C/D) with costs for low-risk patients (GOLD group A/B) with elevated BEC.

Methods Data from the Clinical Practice Research Datalink with Hospital Episode Statistics linkage were used to evaluate the GOLD grade and therapy for patients in a year prior to stable disease and elevated BEC (defined in this study as $\geq 0.45 \times 10^9/L$). Mean total COPD-related costs for 2016 were compared during a follow-up year for four groups of patients with elevated BEC: GOLD group C/D receiving triple therapy (TT; inhaled corticosteroid [ICS]+long acting β_2 -agonist [LABA]+long acting muscarinic antagonist [LAMA]), dual therapy (DT; ICS +LABA, ICS +LAMA, or LABA +LAMA), or other therapy (single or no maintenance inhaler), and GOLD group A/B.

Results Of 5046 patients with COPD and elevated BEC, 19% were GOLD group C/D receiving TT, 10% were GOLD group C/D receiving DT, 6% were GOLD group C/D receiving other therapy, and 64% were GOLD group A/B. Mean total COPD-related costs were three times as high for GOLD group C/D patients receiving TT as for GOLD group A/B patients, whereas costs for patients in GOLD group C/D in other therapy subgroups were not significantly greater than for those in GOLD group A/B (table 1).

Conclusions Patients graded GOLD C/D with elevated BEC receiving TT accounted for three times greater COPD-related costs than patients with less severe disease. This points to an unmet need and potential opportunity for intervention to alleviate burden of disease for these patients.

Please refer to page A267 for declarations of interest related to this abstract.

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DOES BLOOD EOSINOPHIL COUNT CORRELATE WITH CLINICAL OUTCOMES IN PATIENTS PRESENTING WITH AN INFECTIVE EXACERBATION OF COPD?

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Introduction and objectives There is increasing interest in the role of eosinophils in the pathogenesis of COPD. We know that in stable COPD, patients with raised blood eosinophil count benefit more from inhaled corticosteroids than patients with lower blood eosinophil counts. A raised blood eosinophil

Abstract P60 Table 1 COPD related health care costs

	GOLD group C/D with elevated BEC ^a			GOLD group A/B with elevated BEC ^a n=3,236
	TT n=976	DT n=522	Other n=312	
Costs, mean £ (SD)				
GP consultations	37.7 (49.8)	29.4 (36.9)	25.2 (29.5)	20.7 (26.4)
Outpatient visits	3.6 (45.0)	2.4 (27.0)	2.5 (29.0)	0.8 (16.3)
A&E attendances	39.1 (146.0)	18.3 (67.5)	20.0 (78.7)	8.9 (46.5)
Hospital admissions	561.7 (2,130.7)	259.0 (1,021.6)	196.2 (1,068.6)	101.9 (584.2)
Medications	855.0 (820.1)	279.6 (435.4)	302.0 (531.9)	365.5 (565.2)
Total	1,497.1 (2,351.7)	588.6 (1,184.9)	545.9 (1,265.9)	497.8 (856.1)

A&E, accident & emergency department; BEC, blood eosinophil counts; COPD, chronic obstructive pulmonary disease; DT, dual therapy; GP, general practitioner; SD, standard deviation; TT, triple therapy.

^aElevated defined as BEC $\geq 0.45 \times 10^9/L$.