(Abstract P208 figure 1, ($p=0.018$)). In parallel, reactive oxygen species generation increased with each BMI category ($p=0.026$). Furthermore, the eosinophil count dropped significantly with increasing BMI in the asthma patients ($p=0.045$).

Abstract P208 Figure 1 Whole blood neutrophil count in controls vs asthmatic individuals according to BMI category ($p=0.022$).

Conclusion Preliminary data from this study suggests that obesity is associated with systemic inflammation resulting in increasing levels of circulating neutrophils and that this is more marked in asthmatics than controls. This is in keeping with recent work showing increased neutrophils locally in the sputum of obese asthmatics. Our findings could explain the reduced inhaled corticosteroid efficacy observed in this asthma phenotype.

COPD: exacerbations, survival and end of life care

P209 RISK FACTORS FOR RESPIRATORY EXACERBATIONS IN THE BOLD STUDY

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Background Exacerbations are important clinical events related to long-term outcomes in asthma and Chronic Obstructive Pulmonary Disease (COPD). However their determinants are not fully understood (Hurst *et al*, 2010). We used the BOLD data to assess the prevalence and risk factors for respiratory exacerbations among population-based samples of adults aged 40+ across 18 BOLD sites.

Methods Exacerbations were defined as at least one reported episode of breathing problems that interfered with usual daily activities or led to missing work in the previous 12 months. Multiple logistic regressions were used to estimate the effects of potential risk factors for reported exacerbations: medical history, FVC, occupational, biomass and smoking exposures, education, age and sex. All effects were mutually adjusted and estimated using probability weights to allow for the sampling design. Regression models were fitted separately for each centre before pooling results across centres using

random effects meta-analysis. Heterogeneity was summarised using the I^2 statistic.

Results The 12-month prevalence of reported exacerbations ranged from 1.9% in Guangzhou, China to 14.2% in Lexington, USA, it was higher in subjects with spirometrically defined COPD as compared to subjects without spirometric COPD (14.4% vs 4.2%, $p<0.0001$) and in low and middle income countries as compared to high income countries (7.9% vs 4.9%, $p<0.0001$). Exacerbations were associated with doctor diagnosed asthma, COPD stage 1+, chronic bronchitis, increase in MMRC dyspnoea score, current exposures to biomass and dusty jobs and history of TB (see Abstract P209 table 1). Similar trends for overall effect estimates were obtained for low and middle income countries and high income countries with and without biomass exposure information. The variation in reported exacerbations across sites is unlikely to be due to variation in the influence of different risk factors between sites except for COPD stages 1 and 2 ($I^2=44\%$, $p=0.03$), biomass exposure ($I^2=57\%$, $p=0.01$) and reported history of TB ($I^2=65.2\%$, $p=0.001$).

Abstract P209 Table 1 Risk factors for exacerbations (meta-analysis)

	Overall Adjusted OR* (95% CI)	Overall I^2 (%)	p Value for overall I^2
Female	1.45 (1.00 to 2.09)	0.0	0.8
Age	0.97 (0.95 to 0.99)	42.1	0.03
Education level	0.95 (0.78 to 1.15)	18.6	0.2
Pack years smoked—per 10 increase	0.90 (0.73 to 1.12)	24.7	0.2
Ex-smoker	1.19 (0.81 to 1.74)	0.0	0.8
Current-smoker	1.37 (0.85 to 2.21)	0.0	0.5
COPD—mild and moderate	2.55 (1.70 to 3.82)	44.0	0.03
COPD—severe and very severe	3.62 (2.11 to 6.18)	0.0	0.6
Doctor Diagnosed Asthma	4.92 (3.77 to 6.42)	0.0	0.9
MMRC Dyspnoea—increased severity	2.14 (1.86 to 2.46)	31.7	0.1
Chronic bronchitis	3.03 (1.97 to 4.66)	14.4	0.3
Post BD FVC	0.90 (0.68 to 1.19)	40.4	0.04
Current biomass exposure	2.67 (1.25 to 5.68)	57.0	0.01
Current dusty job	1.60 (1.16 to 2.22)	15.5	0.3
CVD	1.28 (0.98 to 1.68)	0.0	0.9
Diabetes	1.52 (0.94 to 2.48)	35.3	0.08
Tuberculosis	2.76 (1.10 to 6.91)	65.2	0.001
Childhood respiratory disease	1.52 (0.92 to 2.51)	0.0	0.6
Family history of COPD or asthma	1.35 (1.00 to 1.83)	11.4	0.3

*Mutual adjustment for all the risk factors in the table and height and weight, weighted for survey design.

Conclusion Respiratory exacerbations commonly occur in those with normal ventilatory function. Exacerbations are associated with severity of COPD, doctor diagnosed asthma, and environmental exposure to biomass and workplace dust. Chronic cough and phlegm and a diagnosis of emphysema are also associated with an increased risk for exacerbation in people with and without irreversible airway obstruction.

P210 WHICH SYMPTOMS PROMPT PATIENTS WITH AN EXACERBATION OF COPD TO PERSEVERE, SELF-TREAT OR SEEK CARE? A COMPARISON WITH HEALTH PROFESSIONALS

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Introduction and Objectives Exacerbations of Chronic Obstructive Pulmonary Disease are a major cause of morbidity and mortality. Despite the increased healthcare utilisation involved in treatment,