## **European Respiratory Society Annual Congress 2013**

**Abstract Number: 2431** 

**Publication Number:** P4712

**Abstract Group:** 6.1. Epidemiology

Keyword 1: COPD - management Keyword 2: COPD - exacerbations Keyword 3: Epidemiology

**Title:** Disease burden in COPD patients in the first 24 months following diagnosis in a UK primary care setting

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**Body:** Objectives: To examine chronic obstructive pulmonary disease (COPD) progression over 24 months following the first recorded COPD diagnosis and disease burden variation using routinely collected data in the UK General Practice Research Database (GPRD). Methods: A retrospective cohort of newly diagnosed COPD patients was identified in the GPRD between 1/1/2008-31/12/2009 and followed for up to 24 months; patients were censored at death or end of study period. Age, gender, body mass index (BMI), and smoking status were defined at diagnosis. Values for Medical Research Council (MRC) dyspnea score and Global Initiative for Chronic Obstructive Lung Disease (GOLD) stage of airflow limitation closest to 24 months of follow-up were utilized. Comorbidities were included if they occurred any time in a patient's record. Moderate/severe exacerbations and general practitioner (GP) visits were observed over 24 months. Results: Among the 7,881 COPD patients, the mean age was 67.2 yrs and 45% were female. During follow-up, 8% (n=618) of patients died and the exacerbation rate was 0.64 per person-year. As airflow limitation increased from GOLD stage 1 to 4, the exacerbation rate increased from 0.55 to 1.05. As dyspnea increased from MRC score of 1 to 5, the exacerbation rate increased from 0.44 to 1.15. The GP visit rate also increased as dyspnea increased. The rates of exacerbations and GP visits varied by comorbidities and BMI. Conclusion: In addition to lung function, outcomes in COPD patients also varied by levels of dyspnea, BMI and comorbidities; these results support a holistic patient assessment to improve COPD management. Funded by GSK (Protocol WEUSKOP5904).