Title: Profiling dyspnoea in primary care patients with COPD

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Body: Objectives: Identify descriptors of clinically significant dyspnoea in patients with Chronic Obstructive Pulmonary Disease (COPD). Methods: A COPD cohort was identified in the UK General Practice Research Database (GPRD) using a record of COPD dg after Jan1 2008 and nearest recorded spirometry (FEV1/FVC<70%). Dyspnoea was identified using Medical Research Council (MRC) dyspnoea scale, recorded as a part of the Quality Outcomes Framework, during observation period, from the latter of Apr1 2009 or cohort entry until censoring (earliest of death, transfer out of practice or follow-up end at March31 2011). The first MRC score recorded, within observation period, defined patients as (A) with (MRC≥3) or (B) without (MRC 1,2) clinically significant dyspnoea; other traits were collected on or before MRC score date. Stepwise multivariate logistic regression estimated independent associations with dyspnoea. Results: 38,256 COPD patients with MRC dyspnoea score were identified: females 46%, mean age(SD)=70(10)yrs, GOLD stage I=15%, II=50%, III=27%, IV=6%. Of these, 16,919 (44%) reported clinically significant dyspnoea. Most of the studied characteristics, except for smoking, showed an independent association with significant dyspnoea, most notably females (OR[95% CI]=1.33[1.27, 1.39]), GOLD stage (odds increasing with increasing stage, GOLD IV vs. I = OR[95% CI]=7.67[6.82, 8.63]), heart failure (OR[95% CI]=1.69[1.54, 1.85]), or moderate or severe COPD exacerbation in the past 12months (OR[95% CI]=1.68[1.59, 1.79]). Conclusions: Clinically significant dyspnoea (MRC≥3) is prevalent in primary COPD patients and associated with markers of higher disease severity and increased risk of poorer outcomes. Funded by GSK (Protocol WEUSKOP5224).