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Title: Mild cognitive impairment and self reported exacerbation rate in patients with COPD

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Body: Chronic Obstructive Pulmonary disease (COPD) and Dementia normally present between the ages of 40 and 65. Co-morbidities associated with COPD may also predispose the onset of dementia. This audit was undertaken to determine the degree of mild cognitive impairment (MCI) in patients presenting to the COPD Outreach Department when compared to age matched norms using the Montreal Cognitive Assessment Tool (MoCA: range 0-30: <26 abnormal) and to determine the relationship with other standard outcome measures. An audit (n=66) was undertaken; included: 23M, 32F; excluded: depression n=7; legally blind n=1; refused n=3. Results were compared to age matched norms by calculating the Z-Score. Descriptive and correlation analysis (Spearman's Rank), were used. A linear regression analysis was undertaken to identify the independence of relationships to the MoCA. Average age [72 (±8)], COPD GOLD stage (mode III), self reported (SR) exacerbation rate [3 (±2)] and smoke pack years [53 (±40)]were calculated. The average school leaving (SL) age was 14 (±3)] and 45% reported anxiety or depression (32.5% undiagnosed). The average MoCA+1 [for <12 years education) was 21.6 (±4.1)] with an average Z-score of -0.191 (± 0.9). A linear regression analysis taking SR exacerbations, SL age and patient reported anxiety explained 39% of the variation in the Z-Score (p=<0.0005). Age (SL) (Beta.456,p=001) explained 25% and SR exacerbation rate (Beta -0.304. p=0.026) explained 8% of the variation. Stage of disease, CAT or mMRC showed no relationship. When compared to reported age matched norms, patients with COPD scored worse on the MoCA. A lower Z-score on the MoCA is independently associated with exacerbation rate.