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**Title:** COPD comorbidities – Do they add more cost? A 1-year follow-up study

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**Body:** Introduction Comorbidities associated with COPD are an additional burden to disease severity. Aim This study attempted to determine the direct costs and costs of associated comorbidities derived from the management of COPD patients in hospital through a retrospective 1-year, follow-up study. Methods A total of 512 (397 male and 117 female) COPD patients with different severity degrees were recruited. Comorbidities were searched by history, previous medical papers and by performing clinical examinations. All direct medical costs incurred by the cohort and related to their comorbidities were calculated. Results The mean age of patients was 67 years (SD ± 10,3). Severity evaluation of airflow limitation showed that – 3,7% had mild COPD, 27,7% - moderate, 37,5% - severe and 31,2% - very severe obstruction. Mean FEV<sub>1</sub> was 42,5% predicted value. From all patients 82,5% (424) had comorbidities. The mean direct cost for COPD patients was €431 per hospitalization. The mean cost generated by the patients with COPD and with associated comorbidities were as follows – cardiovascular diseases €438, diabetes €437, anemia €571, osteoporosis €426, depression €503. The patients without comorbidities generated mean direct cost of €416. Conclusion Costs of comorbidities were found to be higher than the mean costs of COPD without comorbidities. In percentage the added cost were as follows – cardiovascular disease +5.13%, diabetes +4.93%, anemia +37.13%, osteoporosis +2.40% and depression +20.80%. Mean added cost is 12,34%. There was a statistically significant difference only for the costs incurred by COPD patients with cardiovascular diseases and anemia (p>0,05) respectively compared to the cost of COPD patients without comorbidities.