

# Chronic Obstructive Pulmonary Disease (COPD) Patients with Acute Exacerbation and its Effects on Readmission Rate

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## DESCRIPTION

After ischemic heart disease and stroke, Chronic Obstructive Pulmonary Disease (COPD) is the most common chronic lung disease and the third leading cause of mortality and years of life lost. Aortic Stenosis (AS) is also the most prevalent valvular heart disease in the West. Age is a significant factor in the rise in prevalence and percentage change in mortality for both diseases (COPD and AS). Aortic Valve Replacement (AVR) is the only therapy that has been shown to increase survival in severe AS. Nevertheless, co-morbidities raise the operation risk and have a detrimental impact on the results following AVR. Between 19% and 43% of individuals receiving AVR because of severe AS have COPD. Interestingly, a recent meta-analysis found a hazard ratio of 1.34.6 for COPD to increase the risk of all-cause mortality. Nevertheless, different studies' definitions of COPD differ and aren't necessarily based on the use of Pulmonary Function Testing (PFTs). As a result, the current study's objective was to assess the relationship between pulmonary functional measures and overall mortality following AVR in a sizable cohort of patients with severe AS [1-2].

A major contributor to morbidity and mortality worldwide, Chronic Obstructive Pulmonary Disease (COPD) places a significant socioeconomic burden on the world's healthcare system. More than 65 million individuals worldwide suffer from moderate to severe COPD, which results in more than three million fatalities annually. By 2030, it is predicted that COPD and associated comorbidities will cause more than 4.5 million annual deaths, or about 8.6% of all fatalities worldwide. Individuals with COPD frequently undergo exacerbation episodes, which typically necessitate admission and readmission. Readmission due to an acute exacerbation within a short period of release among COPD patients who survive hospitalisation nevertheless remains a significant and unsolvable issue. Thus, it is essential to identify pertinent characteristics early on that have an impact on readmission [3-4]. The 30-day readmission rate for COPD has surpassed that of heart failure and pneumonia, making it one of the conditions with the highest 30-day readmission rates. Several studies on readmission rates and risk variables after discharge have been published. According to a US study, the readmission rates for acute exacerbations were 25%, 43%, 63%, and 87%, respectively, after 30, 90, 180, and 365 days following discharge. One readmission made up 44% of them, two made up 21%, and three made up 23%. The COPD readmission rate is so high that it raises mortality risk and places a heavy financial burden on the patient. As is well known, the Medicare and Medicaid Service Center has fined hospitals with high readmission rates in the US and the UK in an effort to lower readmission rates and improve the standard of nursing care. Worldwide, readmission prevention and reduction are acknowledged as top management priorities [5].

For COPD patients, readmission is seen as a clinically devastating event. Currently, there have been reports of systematic reviews, meta-analyses, and evaluations of risk variables for readmission owing to acute exacerbation as well as readmission for all causes. The readmission rates for acute exacerbations and risk variables, however, have not undergone a comprehensive review and meta-analysis. In order to provide a reference for the post-discharge management of COPD patients as well as to contribute to clinical practise and public health policy, this study set out to synthesise, assess, and identify potential risk factors for readmission.

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