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### Efficacy of Non-Invasive Ventilation in Patients with Chronic Obstructive Pulmonary Disease

#### Abstract:

**Background:** Chronic Obstructive Pulmonary Disease (COPD) is a progressive respiratory disorder with persistent airflow limitation. Non-invasive ventilation (NIV) is used to manage acute exacerbations and improve chronic respiratory function in COPD patients.

**Objective:** To assess the role of NIV in preventing mechanical ventilation in COPD patients, analyze its impact on hospital readmissions and mortality and evaluate its effectiveness in improving quality of life for chronic hypercapnic respiratory failure.

**Methodology:** A systematic literature review was conducted across PubMed, MEDLINE, and Cochrane Library databases. Key outcome measures included blood gas improvement, quality of life, and survival rates. Inclusion and Exclusion Criteria Studies were included if they focused on COPD patients, adults over 18, and measured outcomes such as mortality, quality of life and hospital readmissions. Studies on pediatric populations or involving invasive ventilation were excluded.

**Results:** NIV significantly improved respiratory parameters, reduced hospital admissions, and mortality, and enhanced quality of life.

**Discussion:** The findings from this systematic review underscore the effectiveness of NIV in managing both acute and chronic stages of COPD. In acute settings, NIV has been shown to significantly reduce mortality, hospital admissions, and the need for intubation in patients with acute respiratory failure.

**Conclusion:** NIV effectively reduces mortality, hospital readmissions and improves quality of life in COPD patients especially during acute exacerbations. Its role in chronic care needs further exploration, particularly regarding patient adherence and long-term outcomes.

#### Biography

**Hafsa Abdirahiim Maalim** is a recent medical graduate from Omdurman Islamic University, and currently an intern in Thumbay Teaching Hospital Ajman, UAE. Hafsa is interested in pulmonology and internal medicine and published 3 papers in different journals.