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Systematic Review

Education on Inhaler Technique by Pharmacists To Improve The Quality of Life of COPD Patients.: A Systematic Review

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Abstract ← Arial 10pt, bold, justify

Background: This systematic review aimed to analyze the importance of education on using inhalers by pharmacists in improving quality of life, correct inhaler use steps, and medication adherence in patients with Chronic Obstructive Pulmonary Disease (COPD).

Methods: The databases used to search for articles in this systematic review include Scopus, ScienceDirect, and Pubmed. The articles submitted were published between 2009 and 2022, with the most recent search being conducted in December 2022. This review included a randomized controlled trial evaluating education on inhaler use techniques by pharmacists in improving the quality of life of COPD patients in inpatient and outpatient settings. This systematic review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) writing guidelines.

Results: This systematic review used six articles from five different countries. The articles involved share similar characteristics so that analysis can be carried out. The total number of research subjects included was 913 subjects. Most studies show that there is an increase in the quality of life among COPD patients who are given education on how to use inhalers by pharmacists using print or digital media. Furthermore, two articles reported that education on the technique of using inhalers by pharmacists can also increase the accuracy of using inhalers and three articles reported increasing medication adherence.

Conclusion: Interventions such as education on the technique of using inhalers by pharmacists in inpatient and outpatient settings can improve the quality of life of COPD patients, the accuracy of the steps in using inhalers, and medication adherence.

Keywords: Inhaler Technique Education, COPD, Hospital Pharmacist

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INTRODUCTION

Chronic Obstructive Pulmonary Disease (COPD) is a heterogeneous lung condition characterized by chronic respiratory symptoms (shortness of breath, coughing, sputum production), caused by abnormalities of the respiratory tract (bronchitis/bronchiolitis) and/or alveoli (emphysema), resulting in persistent, progressive, and airway obstruction[1]. COPD is a leading cause of death and disability worldwide. According to The Global Burden of Disease Study 2019, COPD is the sixth leading cause of death, up from 11th in the previous ranking[2]. COPD prevalence reached 212.3 million in 2019, with 3.3 million deaths and 74.4 disability-adjusted life years (DALYs)[3]. The rise in COPD cases worldwide can be attributed to a variety of risk factors, including smoking status, cigarette smoke exposure, occupational exposure to particulates, gases, and smoke, household air pollution from solid fuels, ambient ozone pollution, and low and high temperatures[4]. COPD prevalence is expected to rise in the coming years, and the World Health Organization predicts that COPD will be the third leading cause of death in the world by 2030[5,6]. Based on this, effective COPD management in the form of lifestyle changes and long-term commitment to treatment in patients who are already receiving treatment is required to prevent increased morbidity[6,7].