

DETERMINANTS OF POOR INHALER TECHNIQUE AND POOR THERAPY ADHERENCE: A CROSS-SECTIONAL STUDY IN COMMUNITY PHARMACIES

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Aims: The aim of this study was to examine factors associated with poor inhaler technique and poor therapy adherence among patients with obstructive lung disease in community pharmacies. **Methods:** A cross-sectional study was conducted in patients with obstructive lung diseases in nine Belgian community pharmacies. Logistic regression analyses identified factors associated with poor inhaler technique and poor therapy adherence (assessed by the Test of Adherence to Inhalers and the modified Medication Possession Ratio). **Results:** Seventy obstructively impaired community patients (median age 64 y, 56% females) were included and the technique of 122 inhalers was assessed. Inhaler technique scored generally poor, with half of patients making critical errors in using at least one of their inhalers. In multivariable analysis, the use of multiple devices (aOR 11.68; 95% CI 3.29-41.51) and a diagnosis of asthma-COPD overlap (ACO; aOR 7.06; 95% CI 1.15-43.35), were associated with making critical errors in inhaler technique independent of quality of life. Non-adherence occurred in more than one third of patients, and occurred in up to one half of the patients when also taking overuse into account. In multivariable analysis for therapy adherence, current smoking was associated with poor therapy adherence (aOR 0.15; 95% CI 0.02-0.96) independently of age and poor treatment knowledge. Therapy adherence was poor in patients with asthma compared to those with ACO. Current smokers and highly educated patients seemed to be at increased risk for inhaler overuse. **Conclusions:** Given the important role of a correct inhaler technique and therapy adherence in disease control, these findings emphasize the need for patient education and aiming uniformity in the inhaler device.