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## Prevalence and associated factors of the incorrect administration of Metered Dose Inhaler (MDI), dispensing a short-acting bronchodilator by COPD patients in primary care setting

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**Background:** Chronic Obstructive Pulmonary Disease (COPD) is a common lung disease characterized by airflow limitation. The Global Initiative for Chronic Obstructive Lung Disease (GOLD) guideline suggests a short-acting inhaled bronchodilators and anticholinergic inhaled agents as a first line COPD treatment. In spite of its popularity, many COPD patients use inhalers incorrectly.

**Material and Method:** This is a cross-sectional study. The sample includes patients diagnosed with COPD who visit Muangsongkhla hospital (N=92) during 1-31 July 2016. The inhaler technique was directly observed during their visits. Data were analyzed by Program R version 2.13.0.

**Results:** 92 patients diagnosed with COPD were enrolled in this study. Prevalence of the incorrect administration of MDI dispensing a short-acting bronchodilator by COPD patients in primary care setting was 72.8%. Breath-holding for at least 10 seconds after inhalation was found to be the most critical step that was mistaken. Education was found to be significantly associated with the incorrect administration of MDI dispensing a short-acting bronchodilator.

**Conclusion:** Almost three quarters of COPD patients in primary care setting administer short-acting bronchodilator incorrectly. The most important factors associated with incorrect inhaler usage of the MDI are education and income. Therefore, healthcare provider team should carefully provide the instruction for the methods of using MDI administration to COPD patients and reinforce them periodically asking the patients to demonstrate how they administer MDI.

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