Title: Evaluation of inhaler devices device usage skills among the medical personnels (pulmonologist, family physician, nurse), pharmacist and assistant pharmacist

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Body: Treatment failure is usually related of improper use of devices. Education of patient is a critical component of treatment and requires cooperative effort of doctor, nurse and pharmacist. We aimed to evaluate inhaler device usage skills of doctors, nurses, pharmacist and assistant pharmacist who trains patients. A total number of 120 doctors, nurses, pharmacist and assistant pharmacist included the study. We asked to demonstrate the use of each device which are widely used, metered dose inhaler (MDI), diskus, turbuhaler, aerolizer and easyhaler. Correct use of each devices was assessed in ten steps over 10 points. Mean demonstration score for meter dose inhaler 6.5, discus 6.8, turbuhaler 5.8, aerolizer 7.4 and easyhaler 2.9. Mean demonstration score for meter dose inhaler, discus, turbuhaler, aerolizer, easyhaler 6.3, 7.3, 6.6, 7.7, 3.5 in assistant pharmacist, 6.3, 6.8, 5.5, 6.7, 3.5 in pharmacist, 6.0, 4.8, 7.8, 3.1 in nurses, 6.4, 6.4, 4.3, 6.2, 1.4 in family physician, 9.0, 9.5, 9.2, 9.6 in pulmonologist (p<0.05) respectively. The percentage of true usage techniques were % 58.3 for MDI, % 66.7 for discus, % 55.8 for turbuhaler, % 76.7 for aerolizer, % 25.0 for easyhaler. In conclusion we determined high incidence of incorrect usage of inhaler devices among the all groups. We suggest that medical personnel and pharmacist should have adequate and periodically education to increase patient compliance and treatment success.