

Title: Effectiveness of an educational tool (handy- gsp) for pharmacists to improve their quality of counselling on inhaler use for asthma

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Abstract:

Background Proper inhaler administration technique must be demonstrated correctly to patients. Purpose To assess the effectiveness of a tool for pharmacists to improve their quality of counselling on asthma inhaler use. Methods A non-randomized clinical trial was conducted to assess effectiveness of Handy-GSP (Handy-Guide, Handy-Sticker and Handy-Poster). The tool was limited to metered dose inhaler (MDI) and dry powder inhaler-rotahaler (DPI). Intervention was conducted in 7 selected community pharmacies (CP) (35 pharmacists). Another CP (33 pharmacists) was the control. Pharmacists were asked to demonstrate steps of administering a MDI and DPI which was scored using a checklist, before and after the intervention. Scores were compared using paired sample t-test at 99% significance level. Perceptions about the tool were analysed qualitatively. Results Scores of pharmacists in the interventional group (IG) increased significantly (MDI,  $P < 0.001$ , DPI,  $P < 0.001$ ) compared to the control group (CG) (MDI,  $P = 0.03$ , DPI,  $P = 0.35$ ) after the intervention. Among 8 steps, only a mode (standard deviation) of 4-5 (1.2-1.6) steps were demonstrated before the intervention. They frequently missed 'hold the inhaler upright' and 'replace cap' for MDIs and 'check for remaining powder' for DPIs. Pharmacists in the IG demonstrated a mode (standard deviation) of 7 (0.7) steps for MDI and 8 (0.6) steps for DPI after the intervention, against 4 (1.0) and 5 (1.5) steps respectively in the CG. All pharmacists in the IG found the tool beneficial. Conclusion The Handy-GSP is effective in improving pharmacists' quality of counselling on asthma inhaler use.