

Effect of a pharmaceutical care program for elderly diabetic and hypertensive patients

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Introduction: Diabetes mellitus and hypertension are currently major public health problems, especially regarding the elderly population. There is a need to explore alternative strategies to address this public health problem. **Objective:** To evaluate the effects of a pharmaceutical care program on clinical outcomes in elderly diabetic and hypertensive patients in a Brazilian Public Primary Health Care Unit (PHCU). **Methods:** A randomized, controlled, prospective clinical trial was carried out from October 2006 to October 2009 in a Brazilian public PHCU located in the municipality of Salto Grande, Sao Paulo State, Brazil. Patients ≥ 60 years of age, with a diagnosis of diabetes and/or hypertension, participating regularly in activities offered at the PHCU (medical and nursing consultancies), with up-to-date results for their routine physical and laboratory tests, were eligible for recruitment. Patients who experienced difficulty in speaking that would interfere with their participation were excluded. To ensure sufficient statistical power and to account for 'drop-outs' during the study, a target sample size of 200 patients was assumed. Eligible patients who were willing to participate in the study (oral and written consent), were randomized into two groups: control group (n = 100 patients) and intervention group (n = 100 patients). Patients enrolled in the control group received the usual care offered in the PHCU, consisting of appointments with physicians (every 3 months) and nurses (every month). Patients randomized into the intervention group, besides the usual care offered, also received pharmaceutical care intervention. The pharmaceutical care intervention was composed of individual follow-up attendances (according to the Pharmacotherapy Workup developed at the University of Minnesota, United States of America) and educative group activities. Routine physical and laboratory exams (arterial blood pressure, fasting glucose, hemoglobin A1C) were assessed at the baseline and after 36 months of follow-up, in both groups. The effect of pharmaceutical care on clinical outcomes was determined by comparing the baseline versus final results (after 36 months of follow-up) for the intervention and control groups. The data were analyzed using Statistica package version 7. Independent sample t-student tests were used for quantitative variables. A *p*-value of < 0.05 was considered to be statistically significant. **Results:** Significant reductions ($p < 0.05$) in the mean values (baseline vs. 36 months) of systolic blood pressure (156.7 mmHg vs. 133.7 mmHg; $p < 0.001$), diastolic blood pressure (106.6 mmHg vs. 91.6 mmHg; $p < 0.001$), fasting glucose (135.1 mg/dL vs. 107.9 mg/dL; $p < 0.001$) and hemoglobin A1C (7.7% vs. 7.0%; $p < 0.001$) were observed in the intervention group, whereas no significant changes were verified in the control group. **Conclusion:** These results suggest that the introduction of the pharmacist into the healthcare team could promote better clinical results.

Keywords: Pharmaceutical care, Diabetes, Hypertension, Elderly, Public Health, Primary care.

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