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The effect of Home Medication Review on the blood pressure and cholesterol levels of elderly home-dwelling patients

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Oral communication

Introduction: Home Medication Review (HMR) is a clinical medication review that incorporates a patient interview at home. The aim of the study is to examine the effect of HMR on blood pressure and cholesterol values.

Materials & Methods:

Design and Setting:

RCT in a primary care setting.

Patients

Patients were recruited from ten Dutch community pharmacies. Patients were eligible if they were home-dwelling, aged 65 years and over and used five or more different drugs, including at least one cardiovascular or anti-diabetic drug.

Intervention

The patient's community pharmacist visited the patient at home for an interview about the patient's medicines. A pharmaceutical care plan was proposed by the community pharmacist using both the patient medication and clinical records and the data from the patient interview. These pharmaceutical care plans were evaluated and completed by an independent pharmacist reviewers panel. Care plans were implemented after face-to-face discussion and agreement between the community pharmacist and patients' general practitioner.

Blood pressure was measured at home for both intervention and control patients. In addition, patients were offered additional laboratory measurements of cholesterol.

Main outcome measures

1. mean change in systolic blood pressure (SBP) and LDL-levels 6 and 12 months after first measurement
2. percentage of patients that achieved goal of treatment for blood pressure (< 140 mm Hg) and/or LDL-cholesterol (< 2,5 mmol/l) after 6 and 12 months

Results:

There were no significant differences for SBP and LDL-levels at baseline for 144 intervention patients (IP) and 130 control patients (CP). LDL-levels for IP significantly decreased with 0.14 ± 0.73 and 0.21 ± 0.67 after 6 and 12 months compared to CP (increase of 0.09 ± 0.56 , $p=0.02$ and 0.03 ± 0.61 , $p=0.02$ respectively). SBP decreased for IP with 0.8 ± 19.1 and 6.2 ± 19.8 after 6 and 12 months which was not significantly different from CP (5.2 ± 19.8 , $p=0.10$ and 5.1 ± 18.8 , $p=0.71$ respectively).

At baseline, 52% of IP and 51% of CP had LDL-levels < 2.5. At 6 and 12 months, these percentages were 51% and 60% for IP and 36% and 49% for CP. At baseline, 41% of IP and 45% of CP had a blood pressure < 140 mm Hg. These percentages were 46% and 44% for IP and 45% and 43% for CP after 6 and 12 months. 20% of IP and 25% of CP achieved goal of treatment for both LDL and SBP at baseline. This increased to 21% and 30% for IP after 6 and 12 months, but decreased to 17% and 22% for CP.

Discussions, Conclusion:

This study shows that home medication review for elderly home dwelling patients has effect on clinical outcomes. Effects on LDL cholesterol are more pronounced than for systolic blood pressure.

Keywords: blood pressure, cholesterol, medication review, patient interview