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Impact of Community Pharmacy Diabetes Monitoring and Education Programme on Diabetes Management: A Randomized Controlled Study

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Abstract

Objectives: To evaluate the impact of a pharmacist-led patient education and diabetes monitoring program on HbA1c and other cardiovascular risk factors in the community setting.

Materials and methods: Patients with Type 2 diabetes (n=46) attending two community pharmacies in Hertfordshire, UK were randomized to one of two groups. The 'intervention' group (n=23) received a program of education about diabetes, its treatment and associated cardiovascular risk factors. They were seen for monitoring/counselling by community pharmacist on 6 occasions over a 12-month period. Measures included HbA1c, BMI, BP, blood glucose and lipid profile. The 'control' group (n=23) underwent these measurements at baseline and at 12 months only, without specific counselling or education over and above usual care.

Results: HbA1c fell from 8.2% (65.55 mmol/mol) to 6.6% (48.73 mmol/mol) ($p<0.001$) in the intervention group, compared with a fall from 8.1% (64.54 mmol/mol) to 7.5% (58.76 mmol/mol) in the control group ($p=0.03$). BP fell from 146/87 mmHg to 126/81 mmHg in the intervention group ($p=0.01$) compared with no significant change in the control group (136/86 mmHg to 139/82 mmHg). Significant reductions in BMI (30.8 kg/m² to 27 kg/m², $p<0.001$) and blood glucose (8.8 mmol/l to 6.9 mmol/l, $p<0.001$) were also observed in the intervention group as compared to no significant changes in the control group. Lipid profile changes were mixed. In the intervention group, improvements were seen in diabetes-related quality of life ($p=0.001$), diabetes knowledge ($p=0.018$), belief about the need for medication ($p=0.004$) and a reduced concern regarding their medication ($p<0.001$).

Conclusion: Education and counselling by community pharmacists can result in favourable improvements to cardiovascular risk profile of patients with Type 2 diabetes.

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