COMMUNITY PHARMACY FOUNDATION

COMPLETED GRANT SYNOPSIS

A Randomized Study to Assess the Impact of Pharmacist Counseling of Employer-Based Health Plan Beneficiaries with Diabetes: the EMPOWER Study

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Objectives

1) To evaluate the impact of a pharmacist-administered diabetes patient empowerment program on clinical markers for diabetes and related metabolic disorders.
2) To determine the impact of the program on the cost of care and resource utilization for diabetes and related conditions.
3) To ascertain the impact of the program on patient knowledge and perceived ability to self-manage diabetes.

Methods

Design	• Randomized controlled trial with limited blinding of subjects • Study arms were pharmacist counseling for diabetes self-management (intervention) and written educational materials about diabetes (control). Both groups also received waiver of out-of-pocket expenses for diabetes-related medication, supplies, primary care visits, lab tests, hypertensive and dyslipidemic medications. • Targeted sample size: 109 patients per group.
Study endpoints	• Primary endpoint: Hemoglobin- A_{1C} • Cholesterol (total, LDL, HDL, triglycerides) and total-to-HDL ratio. Fasting blood glucose, systolic and diastolic blood pressure, weight and waist circumference • Claims data for diabetes medications and supplies, ACE Inhibitors, hypertensive and dyslipidemic medications, diabetes-related and all other medical claims. • Diabetes Empowerment Scale, Diabetes Knowledge Test, and other humanistic outcomes.

Results

- A total of 67 patients participated; 36 received pharmacist counseling and 31 written educational materials.
- The decrease from baseline in hemoglobin- A_{1C} (0.50%) was statistically significant (p=0.0008) in the counseling arm but not in the control arm (0.17%, p=0.46) and the difference between the groups approached statistical significance (p=0.076). The groups did not differ with respect to the other clinical parameters.
- Beneficiaries in both arms had statistically-significantly greater claim costs for medications and supplies for diabetes, and blood pressure and hyperlipidemia medications during the study year compared to the prior year. Patients in the intervention arm also had a large but not statistically-significant increase in non-diabetes-related medical claim costs during the study year which did not occur in the control arm.
- Patients in both arms improved in ability to manage their diabetes with the counseling group showing a significantly better understanding of diabetes (p=0.0024). The two study arms did not differ with respect to the other humanistic outcomes.

Conclusion

Despite the small sample size, there was a trend towards improvement in hemoglobin A_{1C} in patients with diabetes who received pharmacist counseling with an associated increase utilization of diabetes medications and supplies. Pharmacist counseling also improved knowledge of diabetes and empowered patients to better manage their diabetes.