Collaborative care for depression in patients with diabetes increased depression-free days and had economic benefit

Simon GE, Katon WJ, Lin EH, et al. **Cost-effectiveness of systematic depression treatment among people with diabetes mellitus.** Arch Gen Psychiatry. 2007;64:65-72.

Clinical impact ratings: Mental Health ★★★★★★☆ GIM/FP/GP ★★★★★☆☆ Endocrinology ★★★★★☆☆

QUESTION

In outpatients with diabetes mellitus and depression, what is the incremental cost-effectiveness of systematic depression treatment?

METHODS

Design: Randomized {allocation concealed}†,* blinded (outcome assessors),* controlled trial with 24-month follow-up (Pathways Study) and cost-effectiveness and cost-benefit analyses.

Setting: 9 primary care clinics of a health maintenance organization in Washington and Idaho, United States.

Patients: 329 patients (mean age 58 y, 66% men) who were screened in 2 stages. Patients had diabetes mellitus and a Hopkins Symptom Checklist depression score ≥ 1.1 (presence of at least moderate depressive symptoms) at the second screening. Exclusion criteria included recent psychiatric treatment, bipolar or psychotic disorder, cognitive impairment, or plans to move or leave the health plan. Follow-up was 89% at 6 months, 88% at 12 months, and 85% at 24 months.

Intervention: Collaborative care (n = 165) or usual care (n =164). Collaborative care consisted of a stepped-care model: Step 1 treatment was either antidepressant pharmacotherapy or structured psychotherapy, depending on the patient's preference. If no improvement was seen by 12 weeks, step 2 consisted of a second treatment modality (e.g., adding pharmacotherapy to structured psychotherapy, or medication adjustment, or both). For patients still not responding after 24 weeks, step 3 included in-person consultation with a study psychiatrist or referral for ongoing specialty mental health care within the health plan. Patients were monitored closely by study nurses.

Outcomes and costs: Number of depression-free days (Hopkins Symptom Checklist score ≤ 0.5). Costs of outpatient use of health services were assessed in U.S. dollars from the perspective of the health plan.

MAIN RESULTS

Relative to patients in the usual-care group, patients in the collaborative-care group had a similar number of depression-free days in year 1 (mean difference 20 d, 95% CI −2 to 42) but more depression-free days in year 2 (mean difference 33 d, CI 5 to 61) and over the whole study period (mean difference 53 d, CI 0 to 97). The Table shows the incremental depression-free days, incremental outpatient cost, incremental cost per depression-free day, and incremental net benefit.

CONCLUSION

In patients who had diabetes mellitus and depression, a collaborative-care program increased time free of depression and saved money.

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*See Glossary.

†Information provided by author.

Collaborative-care program vs usual care for diabetes mellitus and depression‡

Incremental depression-free days (95% CI)	Incremental outpatient cost (U.S. $) (CI)	Incremental cost per depression-free day (CI)	Incremental net benefit (U.S. $) (CI)
61 (11 to 82)	−314 (−1007 to 379)	−5.2 (−17.6 to 7.2)	952 (244 to 1660)§

‡Depression-free days are adjusted for age, sex, and baseline depression severity. Costs are adjusted for age, sex, costs before randomization, and RxRisk score.
§The net benefit obtained when an additional depression-free day is valued at $10.

COMMENTARY

The cumulative evidence about the efficacy of collaborative care for the management of depression indicates that it is clearly effective (1). The study by Simon and colleagues goes 1 step further by showing effectiveness and economic value (indeed cost savings) in a specific subgroup of patients: those with type 2 diabetes mellitus. This finding is particularly important because the prevalence of depression among diabetic patients is higher than in the general population. The costs of diabetes care are high, diabetes prevalence is on the rise, and comorbid depression confounds optimal diabetes care.

This study's findings have particular importance to payers and insurers of health care, who can be reassured that investments in collaborative-care processes will reap benefits and cost savings in a relatively short period—at year 2 of the diagnosis.

However, concerns remain about the generalizability of these results, particularly in younger populations and less organized systems of care. The focus now should be on translating these models into practice. Encouraging data suggest that collaborative-care programs are effective outside the context of research, but more corroborative data are needed (2). Questions arise about the relative contributions of the specific elements of the intervention, for example, about regular follow-up with the depression-care nurse specialists as well as timely consultation with the psychiatrist. Could less specialized health care providers, such as nurses and psychologists, be used? Could some of their functions be replaced with such information technology innovations as electronic medical record alerts for patients and providers?

Given the scope of the problem, more systematic processes are needed to assist primary care providers when managing depression care for patients with diabetes. The collaborative-care model seems an attractive way to accomplish this goal and at the right price.

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References

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