

# 1 of 2 quality-improvement interventions for depression in managed care was more effective but more costly than usual care

Schoenbaum M, Unützer J, Sherbourne C, et al. Cost-effectiveness of practice-initiated quality improvement for depression. Results of a randomized controlled trial. *JAMA*. 2001 Sep 19;286:1325-30.

## QUESTION

In patients with depression, are either of 2 quality-improvement (QI) interventions for improving the treatment of depression in managed care more cost-effective than usual care?

## DESIGN

Cost-effectiveness analysis from a societal perspective for a cluster-randomized {allocation concealed\*}†, unblinded,\* controlled trial with 2-year follow-up.

## SETTING

46 primary care clinics in 6 community-based managed-care organizations (MCOs) in the United States.

## PATIENTS

1356 patients who were  $\geq 18$  years of age {mean age 44 y, 71% women}‡, planned to use the primary care clinic over the next 12 months, and met the Composite International Diagnostic Interview criteria for depression. Follow-up at 2 years was 85%.

## INTERVENTION

Matched clinics were allocated to 1 of 2 QI interventions or to usual care (i.e., mailing of practice guidelines) (16 clinics, 443 patients). The QI interventions consisted of training for practice leaders and nurses, enhanced educational and assessment resources, and either nurses for medication follow-up

(QI-meds, 12 clinics, 424 patients) or access to trained psychotherapists (QI-therapy, 15 clinics, 489 patients).

## MAIN COST AND OUTCOME MEASURES

Outcomes were quality-adjusted life-years (QALYs), days with depression burden, and days of employment. Intervention costs (screening, intervention materials, and professional time) and health care costs (consultations and psychotropic medications) were assessed in 1998 U.S. dollars. Indirect costs for patient time were included.

## MAIN RESULTS

Intention-to-treat analyses were adjusted for baseline patient characteristics and practice randomization blocks. Patients in the QI-therapy group had more QALYs ( $P = 0.006$ ), fewer days of depression burden ( $P = 0.01$ ),

and more days of employment ( $P = 0.03$ ) than did those receiving usual care (Table). QI-meds and usual care did not differ for any outcome (Table). The groups did not differ for health care costs (including patient time) (Table).

## CONCLUSION

1 of 2 quality-improvement interventions for depression in managed care was more effective but cost more than usual care.

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\*See Glossary.

†Information provided by author.

‡Wells KB, Sherbourne C, Schoenbaum M, et al. *JAMA*. 2000;283:212-20. .

## 2 quality-improvement (QI) interventions vs usual care for depression in primary care<sup>S</sup>

Outcomes at 2 y	Usual care total	Incremental effect of QI-meds (95% CI)	Incremental effect of QI-therapy
Quality-adjusted life-years	1.7	0.01 (−0.00 to 0.03)	0.02 (0.01 to 0.04)¶
Days of depression burden	419.9	−25.0 (−63.1 to 13.2)	−46.7 (−83.1 to −10.3)¶
Days of employment	279.2	17.9 (−1.6 to 37.4)	20.9 (2.4 to 39.3)¶
Health care costs (U.S. \$)	3835	419 (−467 to 1306)	485 (−393 to 1363)

<sup>S</sup>QI-meds = QI intervention and medication follow-up by nurses; QI-therapy = QI intervention and access to psychotherapists.

¶Includes patient time.

¶Comparison with usual-care group is statistically significant.

## COMMENTARY

The study by Schoenbaum and colleagues joins many studies showing that standardized interventions improve depressed patients' perceptions of well-being but are not cost-effective (1, 2).

The outcome measures in cost-effectiveness studies of depression treatment are inherently subjective. Schoenbaum and colleagues measured days of employment, modified QALYs, and depression burden as outcomes. The long study period and the clinical setting are other defining characteristics of this study.

Implicit in the study is that an academically rigorous QI program can effectively improve the quality of depression care in an MCO setting. This improvement comes at a cost, however: The participating MCOs paid \$454 (CI −\$305 to \$1214) more over 2 years for the intervention group than for the usual-care group. The positive "lean" of the CI suggests that these interventions truly cost more than usual care. The range of cost per QALY was \$15 331 to \$30 663 for QI-meds and \$9478 to \$18 953 for QI-therapy.

If the intervention cost per QALY can be kept under \$50 000, the cost for depression treatment is similar to that for high blood pressure (3). As depression is the fourth leading cause of disease burden world-

wide (4), treatments proved to be effective and efficient can relieve suffering. But who is going to pay? Both patients and their employers can benefit from more stable employment status. Within MCOs, QI funding might be used.

The issue of financing needs further study. Furthermore, because concern exists that cost-effectiveness findings are sensitive to the utility measure used (5), research on the measure that reflects the value of mental health to the individual, employers, and society as a whole is needed.

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