ECONOMICS

Standardised nortriptyline and psychotherapy were more effective and more expensive than usual care in major depression

Lave JR, Frank RG, Schulberg HC, et al. Cost-effectiveness of treatments for major depression in primary care practice. *Arch Gen Psychiatry* 1998 Jul;55:645–51.

Question

In patients with major depression, what is the cost effectiveness of interpersonal psychotherapy, standardised pharmacotherapy (nortriptyline hydrochloride), and usual care by primary physicians?

Design

A cost effectiveness analysis using data from a randomised controlled trial with 12 months follow up.

Setting

Family practice or internal medicine offices in the US.

Patients

276 patients (mean age 38 y, 83% women) in primary care who met *DSM-III* criteria for major depression (mean score 23.1 on the Hamilton Rating Scale–Depression [HRS-D] and 25.9 on the Beck Depression Inventory [BDI]).

Intervention

Patients were allocated to nortriptyline hydrochloride ($n=91$), interpersonal psychotherapy ($n=93$), or usual care by a primary care physician ($n=92$). Nortriptyline was given in weekly or biweekly visits until patients' blood concentrations had reached a consistent therapeutic state (190–270 nmol/l) and depressive symptoms had improved; patients were seen at 6 monthly visits thereafter. Psychiatrists and clinical psychologists provided psychotherapy for 16 weekly sessions and 4 monthly sessions.

Main and cost outcome measures

Depression free days (calculated using HRS-D scores) and quality adjusted days (determined by assigning utility weights to depression). Direct and indirect costs were measured in 1995 US dollars.

Main results

Over 12 months, patients in the nortriptyline, psychotherapy, and usual care groups had 243, 234, and 185 depression free days, respectively ($p<0.01$), and the total costs were \$1506.16, \$1764.83, and \$675.67, respectively ($p<0.001$). Nortriptyline compared with usual care had cost effectiveness ratios of \$14.79 for each additional depression free day ($p<0.01$) and \$13 163 for each quality adjusted life year (QALY) ($p<0.01$). The cost effectiveness ratios for psychotherapy compared with usual care were \$29.36 for each additional depression free day ($p=0.04$) and \$26 130 for each additional QALY ($p=0.04$). Cost effectiveness ratios for nortriptyline compared with psychotherapy were not calculated because a trend existed towards greater benefits and lower costs for nortriptyline (p value not reported). The cost effectiveness ratios varied according to the assigned utility weights for a quality adjusted day (greater for a weight of 0.31 than 0.41); the type of mental health professional employed (lower for non-psychiatric than psychiatric mental health professionals); and the type of depression scale used (lower for the BDI than the HRS-D in the nortriptyline group and not statistically significant for the BDI in the psychotherapy group). The level of statistical significance for the variation in cost effectiveness ratios was not reported.

Conclusion

In patients with major depression, standardised nortriptyline hydrochloride and psychotherapy were more effective but also more expensive than usual care.

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Commentary

Pragmatic trials of treatments for depression are rare in primary care, and ones that assess cost effectiveness are rarer still.¹ This study by Lave *et al* is therefore welcome and timely. The researchers used a clinically meaningful outcome (depression free days); the method for calculating this, however, was likely to lead to some imprecision in their estimate of cost effectiveness. None the less, their results agree with those of another study that also compared usual care with psychotherapy (cognitive behavioural therapy) or collaborative care with a psychiatrist.² Active treatments all cost more than usual care but were all considerably more effective. Perhaps surprisingly, the psychotherapies were not much more expensive than treatment with nortriptyline. This may be partly because nortriptyline treatment in this study

involved frequent reattendance to check blood concentrations. Many would argue that antidepressant therapy does not strictly require such intensive supervision, especially with the newer antidepressants. Thus, using newer antidepressants or simpler regimens of tricyclic drugs may be more cost effective. This study also suggests that interpersonal therapy is likely to be more cost effective if provided by non-psychiatrists.

How should these results be interpreted and what are their implications for implementation of effective treatments for depression in primary care? The authors suggest that the cost of the QALYs gained is reasonable in the context of other common treatments. These costs were limited to the costs of the treatments to the health service. They do not take into consideration the costs

associated with under treated depression for society more generally (eg, the cost of sickness absence); thus, these effective treatments for depression may have wider—and more difficult to measure—cost implications. What is striking is the clinical effectiveness of rigorous treatments, whether pharmacological or psychotherapeutic, over usual care.

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