Cost-effectiveness of cognitive behaviour therapy versus talking and usual care for depressed older people in primary care

Holman AJ, Serfaty MA, Leurent BE, King MB

Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
This study assessed the cost-effectiveness of cognitive-behavioural therapy (CBT) plus usual care, compared with a talking intervention plus usual care, or usual care alone, for depressed older people. The authors concluded that CBT was clinically effective, but cost more than usual care or the talking intervention. Its cost-effectiveness depended on the decision maker's willingness-to-pay threshold. The methods, analyses, and results were mostly clear and thorough, and the authors’ conclusions appear to be reasonable.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
The aim was to examine the costs and effectiveness of a cognitive-behavioural therapy (CBT) intervention for depressed older people. The patients had a primary diagnosis of depressive disorder, with a score of 14 or more on the Beck Depression Inventory (BDI-II). They were able to understand English and were stable on antidepressants, if necessary. Most of them were female (79%) and most were white (76%); their mean age was 74 years.

Interventions
The interventions were CBT plus usual care, usual care plus a talking control, and usual care alone. The CBT and talking interventions consisted of up to 12 sessions with a qualified therapist, accredited by the British Association of Behavioural and Cognitive Psychotherapists. The talking intervention was similar to a befriending service. The usual care was provided by the patient's general practitioner.

Location/setting
UK/community and primary care.

Methods
Analytical approach:
The cost-effectiveness analysis was based on data from one blind randomised controlled trial, with 204 patients. The authors stated that the perspective was that of the UK Department of Health, and Social Services. The analytic time frame was 10 months; from the start of the intervention to the 10-month follow-up.

Effectiveness data:
A prospective three-arm single-centre randomised controlled trial was undertaken in North London between April 2004 and September 2007 (Serfaty, et al. 2009, see 'Other Publications of Related Interest' below for bibliographic details). Patients were self-referred or referred by their general practitioner (GP). The key outcome was the change in the BDI-II score from baseline to the end of the trial. BDI-II scores were missing for 13% of patients at four months and 18% at 10 months, and multiple imputation was used for these missing values. Secondary outcomes included health-related quality of life, measured on the European Quality of life (EQ-5D) questionnaire. The baseline characteristics were balanced across groups and an intention-to-treat analysis was undertaken.

Monetary benefit and utility valuations:
Not relevant.
Measure of benefit:
The measure of benefit was the change or reduction in BDI-II score.

Cost data:
The costs included those of the intervention (staff salaries and overheads) and the community health service, such as contacts with GPs, practice and district nurses, psychologists, psychiatrists, occupational therapists, and counsellors. All prescribed medications were recorded in detail, but information on the collection of prescriptions (frequency) and compliance was not available. Health service use was collected from GP practice records, using the Client Service Receipt Inventory, at baseline, and four and 10 months. The unit costs were from the Unit Costs of Health and Social Care 2008. All costs were in UK pounds sterling (£) and the price year was 2008. The costs were analysed, using analysis of variance and log-transformed data.

Analysis of uncertainty:
Non-parametric bootstrapping, with 1,000 replications, was performed to assess the distribution of possible values. The results were presented in a cost-effectiveness acceptability curve and on a cost-effectiveness plane.

Results
At 10 months, the improvements in BDI-II score favoured CBT over usual care, with a difference in change of -3.07 (95% CI -5.73 to -0.42), and they favoured CBT over the talking intervention, with a difference in change of -3.65 (95% CI -6.18 to -1.12). There were no significant differences on the EQ-5D.

The mean cost per patient at 10 months was £1,464 (SD 1,198) for CBT, £1,037 (SD 1,005) for usual care, and £884 (SD 537) for talking. The mean cost differences between CBT and the two other groups were statistically significant (p<0.001). The increased cost for CBT was mainly attributed to the intervention at £437 (SD 276); costs were also high for community health services at 10 months, for CBT and usual care.

The incremental cost-effectiveness ratio was £120 per additional point reduction in BDI-II score, for CBT versus usual care, and it was £167 for CBT versus talking. The authors reported a 90% chance that CBT was cost-effective if service providers were willing to pay up to £270 per point reduction in BDI-II score.

Authors’ conclusions
The authors concluded that CBT was clinically effective, but cost more than usual care or the talking intervention. Its cost-effectiveness depended on the decision maker’s willingness-to-pay threshold.

CRD commentary
Interventions:
The three strategies were briefly described and justified. The analysis focused on CBT and usual care. The original trial publication should be consulted to assess the patients’ severity of depression, other characteristics, and applicability to older depressed patients in other settings.

Effectiveness/benefits:
The evidence of clinical effectiveness was from a single-centre randomised controlled trial, which was not sufficiently described to determine its internal validity. The trial publication should be consulted to further assess the secondary outcomes, which showed no significant differences between groups, and whether the differences on the BDI-II were clinically significant for CBT compared with the other two groups.

Costs:
The perspective was stated as that of the UK Department of Health, and Social Services and all the relevant resources appear to have been included. The resource types and quantities were well described and presented separately. The analyses were appropriate. Discounting of the costs and effects was not necessary for the short time frame.

Analysis and results:
The health outcomes and costs were combined into incremental cost-effectiveness ratios and bootstrapping of the ratios was undertaken. The results were clearly presented and illustrated. The authors discussed some limitations to their
study.

Concluding remarks:
The methods, analyses, and results were mostly clear and comprehensive. The conclusions reached by the authors appear to be a sound assessment of the analyses performed.

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