Cost-effectiveness of cognitive behaviour therapy in addition to mebeverine for irritable bowel syndrome


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
The aim was to evaluate the cost-effectiveness of cognitive behavioural therapy (CBT) in addition to mebeverine for irritable bowel syndrome (IBS), compared with mebeverine only. The authors concluded that CBT plus mebeverine was cost-effective for patients with IBS in the short-term. The methodology of the study appears to have been appropriate and was clearly and transparently reported. The conclusions reached by the authors appear to be appropriate.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
The aim was to evaluate the cost-effectiveness of cognitive behavioural therapy (CBT) in addition to mebeverine for irritable bowel syndrome, compared with mebeverine only.

Interventions
The study compared CBT and mebeverine (270mg three times daily) with mebeverine alone in the management of patients aged 16 to 65 years with irritable bowel syndrome (IBS). The CBT comprised up to six 50-minute sessions focussed on IBS knowledge, and techniques to reduce symptoms, manage stress, and prevent relapse.

Location/setting
UK/primary care.

Methods
Analytical approach:
The effectiveness data were collected from a single randomised controlled trial (RCT). The time horizon of the study was 12 months. The authors did not report the perspective of the study.

Effectiveness data:
This was a multicentre RCT conducted in 10 practices in central and south London. A sample of 148 patients with moderate or severe IBS was randomised to either mebeverine alone or mebeverine plus CBT. The baseline clinical and demographic characteristics of patients in each group were comparable. Data were collected at the end of the treatment and at follow-up sessions three, six, and twelve months after treatment. The primary outcomes of the study included the score on a symptom-severity scale specific to IBS. The score ranged from 0 to 500 and a change of 50 was clinically significant.

Monetary benefit and utility valuations:
None.

Measure of benefit:
The measure of benefit was the change in symptom-severity scale score.

Cost data:
The costs of providing health care and social care, including CBT, drug acquisition and nurse therapy, were used. Productivity costs were also considered. The unit costs for most items were obtained from a publicly available source.
and the authors estimated those for which data were not available. The average wage used to estimate the productivity cost came from UK National Statistics. The resource use was estimated from the clinical trial. The price year was 2001 and all costs were reported in UK pounds sterling (£).

Analysis of uncertainty:
One-way and probabilistic sensitivity analyses were used to assess uncertainty and to create cost-effectiveness acceptability curves. Bootstrapping methods were used to generate the 95% confidence intervals for the costs.

Results
After the treatment, CBT in addition to mebeverine reduced severity by 69 points (1.4 units of clinically significant change) at an incremental cost of £308 generating an incremental cost-effectiveness ratio of £220.

The clinically significant unit change in symptom-severity score for CBT in addition to mebeverine was 1.8 at three months, 0.3 at six months, and 0.1 at twelve months. The cost per clinically significant reduction in symptoms was £220 at the end of treatment, £171 at three months, £1,027 at six months, and £3,080 at twelve months.

Results were generally robust but were sensitive to variations in the cost of CBT.

Authors’ conclusions
The authors concluded that CBT plus mebeverine was cost-effective for patients with IBS in the short-term, but not beyond three months.

CRD commentary
Interventions:
The selection of the interventions was justified and they were clearly described, including dosage. A detailed description of the imaging strategies was provided.

Effectiveness/benefits:
The analysis was based on a randomised controlled trial. The methods of randomisation, length of stay and loss to follow-up were all reported, suggesting that the internal validity of the study is likely to be good. Other strengths related to the study design included the fact that the baseline characteristics of the two patient groups were comparable, and that uncertainty in the clinical results was appropriately investigated through second-order sensitivity analyses. However, power calculations do not appear to have been performed which does not allow any judgements about the adequacy of the study sample size.

Costs:
The reporting of the cost analysis was transparent. The authors provided a breakdown of the cost items and justifications for excluding some cost items. However, they did not report the study perspective. The resource use reflected the actual consumption of services in the sample of patients enrolled in the clinical analysis. The bootstrapping analysis was performed to create the confidence interval for cost-differences. Other details of the analysis, such as the sources of costs and the price year, were reported which will assist reflation exercises for other time periods.

Analysis and results:
The costs and benefits were properly synthesised using an incremental net-benefit analysis. The results were presented in detail. The issue of uncertainty was satisfactorily addressed enhancing the generalisability of the study findings. The authors provided a thorough discussion on the limitations and weaknesses of the study and compared their findings with those from other studies, which were, in general, in agreement.

Concluding remarks:
The methodology of the study appears to have been appropriate and was clearly and transparently reported. The conclusions reached by the authors appear to be appropriate.

Funding

NHS Economic Evaluation Database (NHS EED)
Produced by the Centre for Reviews and Dissemination
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Funded by the National Health Service (NHS).

**Bibliographic details**

**PubMedID**
18334867

**DOI**
10.1097/MEG.0b013e3282f2519d

**Other publications of related interest**


**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Adolescent; Adult; Anticonvulsants /economics /therapeutic use; Cognitive Therapy /economics /methods; Combined Modality Therapy /economics; Cost of Illness; Cost-Benefit Analysis; Female; Humans; Irritable Bowel Syndrome /drug therapy /economics /therapy; Male; Middle Aged; Phenethylamines /economics /therapeutic use; Primary Health Care /economics; Quality of Life /psychology; Regression Analysis; Treatment Outcome

**AccessionNumber**
22008000703

**Date bibliographic record published**
01/12/2008

**Date abstract record published**
02/03/2009