Outcome and costs of homoeopathic and conventional treatment strategies: a comparative cohort study in patients with chronic disorders

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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.

Health technology

Homoeopathic and conventional treatment strategies for chronic disorders were studied.

Type of intervention

Treatment.

Economic study type

Cost-effectiveness analysis.

Study population

The target population comprised adults (aged over 16 years) presenting with selected chronic disorders (headache, lower back pain, depression, insomnia or sinusitis) and children (aged 1 to 16 years) presenting with bronchial asthma, atopic dermatitis or allergic rhinitis. Patients who had been treated previously by the study physician for the study indication were not included. Further specific entry criteria were defined for each diagnosis, so as to exclude patients with very mild or very severe symptoms.

Setting

The setting was primary care and secondary care. The study recruited physicians and specialists and their patients from a number of centres in Germany.

Dates to which data relate

The patients were recruited between January 1998 and December 2000. The effectiveness data were collected after 6 and 12 months, while the cost information was collected from insurers 12 months prior to the patient's inclusion in the study and 12 months after. No price year was given.

Source of effectiveness data

The effectiveness data were derived from a single study

Link between effectiveness and cost data

The costing was undertaken prospectively on the same patient sample as that used in the effectiveness study.

Study sample

Homoeopathic doctors were selected by reviewers on the basis of an evaluation questionnaire, while those practising conventional medicine were selected from a list of general practitioners. Participating physicians were recruited on a first come, first served basis. These doctors then approached their eligible patients; as such, the patients had already

made their own choice of therapy, so the study was non-randomised. A total of 493 patients were enrolled by 101 homoeopathic and 59 conventional study physicians.

Study design

This was a prospective, multi-centred comparative cohort study. The patients selected homoeopathic or conventional therapy before knowing they would be invited to participate in a study. At baseline, patients provided socio-demographic, symptom severity and quality of life information. The physicians recorded diagnosis and severity, as well as each patient's medical history. After 6 and 12 months, patients completed standardised questionnaires on current symptom severity, any perceived side effects of treatment, and quality of life. After 12 months, the study physicians also recorded the current severity of the initial diagnosis. Ninety per cent completed questionnaires after 6 months and 80% after 12 months. Economic data were obtained for a sub-group of 38% of the patients.

Analysis of effectiveness

The analysis of effectiveness was conducted on the basis of treatment completers only. The principal outcome measures were:

the severity of symptoms, as assessed by the patient on a rating scale (RS) from 0 to 10);

the severity of symptoms, as assessed by the physician using also the RS; and

quality of life, as assessed by the SF36 questionnaire for adults.

The adults' assessment of symptom severity at study entry did not yield significant differences between the diagnosis groups. Nor did it show any overall or diagnosis-specific differences between the treatment cohorts. However, there were major differences between the results for the physical component scores (PCS) and the mental component scores (MCS) of SF36 and, as such, adjustments (for covariates) were made.

Effectiveness results

Patient assessment of symptom severity.

For adults, the change in severity of symptoms differed clearly between the two treatment cohorts, (p=0.002). The difference was highly significant during the first 6-month period, (p=0.004), but not significant in the second 6-month period, (p=0.558).

For children, the outcome analysis yielded results that were qualitatively similar to the adult analysis, (p=0.029).

Physician assessment of symptom severity.

For adults, the change in symptom severity did not differ between the two treatment groups, (p=0.251), but there was a significant reduction in the severity of symptoms for each group, (p<0.001).

For children, the change in symptom severity was significantly different between the two treatment cohorts, (p<0.001).

Quality of life.

The change in PCS in the first 6-month period differed significantly between the treatment groups, whereas the change in the second 6-month period did not, (p=0.016 compared with p=0.649). For the MCS, there were no global or diagnosis-specific differences between the treatment groups at baseline. In both 6-month periods a greater increase was seen for the homoeopathically treated patients than for the conventionally treated ones, but the difference between the treatment groups was not statistically significant, (p=0.273).

Clinical conclusions

The results indicated a greater improvement in patients' assessments (for both adults and children) after homoeopathic versus conventional treatment. Physician assessments were also more favourable for children.

Measure of benefits used in the economic analysis
No summary measure of benefit was used. In effect, a cost-consequences analysis was performed.

Direct costs
The cost analysis was based on costs as reported by the insurers. The costs were classified as "overall costs" (e.g. doctor visits, medication, physiotherapy, hospital stay, sick pay and other remedies/devices) and "medication costs". For patients in the homoeopathic group, medication was further sub-classified into conventional and homoeopathic medication. The quantities of resource use were not reported and, as such, resource use and costs were not analysed separately. Discounting was not carried out, which was appropriate given the time horizon of the study. No price date was reported.

Statistical analysis of costs
The costs during the study period were compared using two sample t-tests (unadjusted analysis) and an analysis of variance (ANOVA) model adjusted for differences in age, gender, education and duration of symptoms (adjusted analysis). Changes in costs were analysed using a repeated measurement ANOVA model.

Indirect Costs
The indirect costs were not included.

Currency
Euros (EUR).

Sensitivity analysis
A sensitivity analysis was not conducted.

Estimated benefits used in the economic analysis
See the 'Effectiveness Results' section.

Cost results
The overall unadjusted costs were EUR 1,764 during homoeopathic therapy and EUR 2,696 during conventional therapy for adults, (p=0.157), and EUR 1,392 and EUR 814, respectively, for children, (p=0.176).

After adjustment, the corresponding overall costs for patients with homoeopathic and conventional treatment showed no significant differences for adults (EUR 2,155 and EUR 2,013; p=0.856) or children (EUR 1,471 and EUR 786; p=0.137).

Overall unadjusted cost increases (compared with the 12 months before inclusion) were EUR 1,226 during homoeopathic therapy and EUR 1,067 during conventional therapy for adults, (p=0.831), and EUR 1,015 and EUR 371, respectively, for children, (p=0.128).

After adjustment, the corresponding overall cost increases for patients with homoeopathic and conventional showed no significant differences for adults (EUR 1,446 and EUR 912; p=0.573) or children (EUR 1,049 and EUR 366; p=0.129).

Unadjusted medication cost increases (compared with the 12 months before inclusion) were EUR 39 during

homoeopathic therapy and EUR 508 during conventional therapy for adults, (p<0.001), and EUR 128 and EUR 142, respectively, for children, (p=0.940).

After adjustment, the respective medication cost increases showed a significant difference for adults (EUR 18 and EUR 478; p=0.027), but not for children (EUR 152 and EUR 206; p=0.794).

Synthesis of costs and benefits
The costs and benefits were not combined

Authors' conclusions
Patients seeking homoeopathic treatment had a better outcome overall than patients on conventional treatment, whereas the total costs in both groups were similar.

CRD COMMENTARY - Selection of comparators
No explicit justification was given for the comparator used. However, it would appear appropriate as conventional treatment generally represents current practice. You should decide if this is a widely used health technology in your own setting.

Validity of estimate of measure of effectiveness
The analysis was based on a cohort study, which was appropriate for the study question. As such, the results of the study cannot be used to determine whether one or the other of the treatments is optimal for all patients of a given population, although the population was quite broad and covered several conditions. The study sample was representative of the study population. The patient groups were found to be similar at baseline, although adults in the conventional group had greater use of medical services in the 12 months prior to evaluation. The analysis of effectiveness was handled appropriately as the authors undertook a three-step approach: first, testing for significant differences in demographic data; second, using ANOVA models and testing for the inclusion of interaction terms; and finally including covariants in the ANOVA.

Validity of estimate of measure of benefit
The analysis did not derive a summary measure of health benefit. The analysis was, in effect, a cost-consequences analysis

Validity of estimate of costs
All the categories of cost relevant to the perspective adopted were included in the analysis. The costs and the quantities were not reported separately because they used actual cost data, as provided by insurance companies. Therefore, a statistical analysis of the prices could not be performed either. No price year was reported. There was no further analysis of the prices.

Other issues
The authors made some comparisons of their (clinical) findings with those of other studies. However, the issue of generalisability to other settings was not addressed. The authors do not appear to have presented their results selectively. The authors reflected on the scope of the analysis, noting that, although they attempted to recruit patients who presented for the first time, there was some patient self selection. A further limitation of the cost analysis, as the authors acknowledged, was that it was only performed for a sub-group of patients because the cost data could only be obtained from two insurance companies.

Implications of the study

From a community perspective, the differences observed in the present study appear to support the use of homoeopathic treatment. Thus, the global trends seen here could, if confirmed by further studies, influence the reimbursement policies of medical insurers towards the coverage of homoeopathic treatment strategies.

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