Economic evaluation of a general practitioner with special interest led dermatology service in primary care

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
The study evaluated a general practitioner (GP) with a special interest service in dermatology compared with hospital outpatient care.

Type of intervention
Treatment and secondary prevention.

Economic study type
Cost-effectiveness analysis.

Study population
The population comprised adult patients with non-urgent skin problems. No other inclusion or exclusion criteria were reported.

Setting
The setting was primary and secondary care. The economic study was carried out Bristol, UK.

Dates to which data relate
The dates of the study were not reported. The price year was 2004.

Source of effectiveness data
The effectiveness data were derived from a single study.

Link between effectiveness and cost data
The costing was conducted prospectively on the same patients as that used in the effectiveness study.

Power calculations were not used to determine the sample size. Details of sample selection, exclusions, refusals to participate, and so on were not reported in this paper. The reader is referred to another study for further details (Salisbury et al. 2005, see ‘Other Publications of Related Interest’ below for bibliographic details). A total of 556 adult patients with non-urgent skin problems were randomised. Of these, 354 were assigned to care by a GP with special interest and 202 to hospital outpatient care.

Study design
The study was a randomised controlled trial. The method of randomisation was not reported. Follow-up was for 9 months, although data on the use of National Health Service (NHS) resources were collected for an additional 3 months for the purpose of sensitivity testing. There was no loss to follow-up. Of the total sample, 257 patients in the GP with special interest group and 155 in the hospital outpatient group provided data on one of the primary outcome measures, namely the change in the dermatology life quality index. Data on the other primary outcome measure (i.e. accessibility of care) were provided by 266 patients in the GP with special interest group and 125 hospital outpatients.

**Analysis of effectiveness**
The primary health outcome used in the analysis was the change in the dermatology life quality index and accessibility of the service (based on 3 questions concerning access and scored from 0 to 100). The secondary outcomes included patient satisfaction with the consultation, satisfaction with the facilities, attendance rates and waiting times. The analysis of effectiveness was based on data from those completing the dermatology life quality index questionnaire and access scales. Data on the comparability of the groups at baseline were not provided.

**Effectiveness results**
The gain in dermatology life quality index score was 2.54 (95% confidence interval, CI: 2.0 to 3.8) in the GP practice with special interest group and 2.36 (95% CI: 1.62 to 3.10) in the hospital outpatient group. The difference between the two scores was 0.18.

In the GP with special interest group, the outcomes were:

- satisfaction on the access scale, 76.13 (95% CI: 73.79 to 78.46);
- consultation satisfaction, 71.05 (95% CI: 69.38 to 72.72);
- approval of facilities scale, 79.83 (95% CI: 78.21 to 81.46); and
- waiting time, 72 days (95% CI: 69.34 to 75.50).

In the outpatient group, the outcomes were:

- satisfaction on the access scale, 60.47 (95% CI: 62.98 to 68.87);
- consultation satisfaction, 65.93 (95% CI: 62.98 to 68.87);
- approval of facilities scale, 74.71 (95% CI: 72.04 to 77.38); and
- waiting time, 113 days (95% CI: 108.15 to 117.84).

**Clinical conclusions**
The GP with special interest service provided improved access whilst providing broadly similar health outcomes.

**Measure of benefits used in the economic analysis**
The authors used both the dermatology life quality index and composite access score.

**Direct costs**
The costs included in the analysis were those of the NHS. These included hospital, consultant, GP with special interest service, GP, district nurse, diagnostic tests, investigations and treatments, drugs, travel and costs. Resource use and costs were estimated using data from the study; these data were reported separately. The resource use data were assessed through a questionnaire administered 6 weeks after the first appointment. Discounting was not carried out, but it was not relevant given the short time horizon. The dates when the study was carried out and the quantities measured were
Statistical analysis of costs
The authors provided descriptive statistics for cost data.

Indirect Costs
Production loss was valued as time off from work to attend appointments. The hourly rate was taken from the New Earning Survey for the city of Bristol. The quantities of resources were measured during the study period. Discounting was not carried out because of the short time horizon. Information about unpaid time off work was obtained from questionnaires. The price year was 2004.

Currency
UK pounds sterling (\). 

Sensitivity analysis
A sensitivity analysis was carried out to investigate NHS resource use for 12 months from the date of randomisation. A sensitivity analysis was also conducted to investigate the effect on the costs of assuming full utilisation of the service which, during the study period, only reached 78% capacity. Uncertainty was captured using cost-effectiveness acceptability curves (CEACs), which were generated through bootstrapping.

Estimated benefits used in the economic analysis
The dermatology life quality index results were 2.54 for a general practitioner with special interest compared with 2.36 for hospital outpatient care.

The access scale results were 76.13 for a general practitioner with special interest compared with 60.47 for hospital outpatient care.

Cost results
The total per patient costs to the NHS were 207.92 (95% CI: 189.51 to 226.32) for patients attending the GP with special interest service, compared with 118.14 (95% CI: 103.15 to 133.13) for hospital outpatient care.

The costs to patients and companions were 48.21 (95% CI: 32.51 to 63.91) for the GP with special interest service and 51.30 (95% CI: 31.32 to 71.27) for hospital outpatient care.

The costs of lost production were 27.14 (95% CI: 8.82 to 45.46) for the GP with special interest service and 34.35 (95% CI: 10.91 to 57.78) for hospital outpatient care.

Synthesis of costs and benefits
The authors produced incremental cost-effectiveness ratios to represent the additional cost per additional dermatology life quality index and additional cost per additional 10 point increase on the access scale. The ICER for general practitioner over hospital outpatient care was 540.33 per 1 point gain in dermatology life quality index and 65.61 per 10 point gain in access score. CEACs, which showed the decision makers' willingness-to-pay for improved outcomes over a range of plausible values, were presented. CEACs were only produced for the NHS perspective.

Authors' conclusions
The general practitioner (GP) with special interest service for dermatology is more costly than hospital outpatient care, but this additional cost needs to be weighed against improved access and broadly similar health outcomes.
CRD COMMENTARY - Selection of comparators
A justification was given for the comparator used. It represented current practice in the authors' setting. You should decide if the comparator represents current practice in your own setting.

Validity of estimate of measure of effectiveness
The study sample appears to have been representative of the study population. However, given the very limited reporting of the clinical trial methodology, it is not possible to comment on the internal validity of the estimates of effectiveness obtained. The reader is referred to the parent clinical paper (Salisbury et al. 2005).

Validity of estimate of measure of benefit
The estimate of benefits used was obtained directly from the effectiveness analysis. The authors presented both an incremental analysis (from the NHS perspective) and disaggregated results. The comments under the 'Validity of estimate of measure of effectiveness' field (above) therefore apply.

Validity of estimate of costs
The study was stated to have been conducted from a number of perspectives and, appropriately, the relevant cost categories were presented for all the scenarios considered. Resource use was collected throughout the study. The unit costs were reported separately, as were the mean costs. A statistical analysis of the mean costs was performed. Discounting was unnecessary, as all costs were incurred within the year, and was therefore not carried out. The date to which the costs referred was not specified but the costs were obtained at the time of the study. The price year was specified. In general, the costing was very well reported throughout the paper.

Other issues
The authors made appropriate comparison of their findings with those from other studies. In addition, they acknowledged that their study was carried out in one geographical area and may not apply to other settings. Some of the uncertainty was addressed through the production of CEACs, which were described well in the paper. The authors do not appear to have presented their results selectively and their conclusions would appear to reflect the scope of the analysis.

Implications of the study
The authors make no specific recommendations for further research.

Source of funding
Supported by the UK NHS.

Bibliographic details

PubMedID
16339217

DOI
10.1136/bmj.38676.446910.7C

Other publications of related interest
Because readers are likely to encounter and assess individual publications, NHS EED abstracts reflect the original
publication as it is written, as a stand-alone paper. Where NHS EED abstractors are able to identify positively that a publication is significantly linked to or informed by other publications, these will be referenced in the text of the abstract and their bibliographic details recorded here for information.


**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
- Ambulatory Care /economics
- Cost-Benefit Analysis
- England
- Family Practice /economics
- Health Services Accessibility /economics
- Humans
- Patient Satisfaction
- Quality-Adjusted Life Years
- Referral and Consultation
- Skin Diseases /economics /therapy
- Treatment Outcome

**AccessionNumber**
22005008485

**Date bibliographic record published**
31/05/2007

**Date abstract record published**
31/05/2007