Accessibility, clinical effectiveness, and practice costs of providing a telephone option for routine asthma reviews: phase IV controlled implementation study

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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.

CRD summary
This study compared different review services for asthmatic patients in primary care. The authors concluded that offering telephone reviews appeared to be a cost-effective option for the routine review of asthmatic patients in their setting. On the whole, the methodology appears to have been appropriate and, although the reporting of cost data was limited, the authors’ conclusions are reasonable.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
This study compared the cost-effectiveness of three review services in patients suffering from active asthma, who had not been reviewed during the previous year.

Interventions
For one service, patients were given the option of receiving a structured asthma review either by telephone or face-to-face interview. The second service consisted of a face-to-face review only. The third service was the control and consisted of usual care which was established asthma clinic services for asthmatic patients with no review.

Location/setting
UK/primary care.

Methods
Analytical approach:
The effectiveness and resource use data were collected from a single, phase IV, before and after implementation study which expanded on the results of a published randomised controlled trial. The authors did not report the study perspective.

Effectiveness data:
The effectiveness data were derived from a study where two centres were randomised to the two interventions, and a third centre carried on with usual care as a control. Statistical tests were carried out on the results of the two randomised centres and further analysis was conducted to account for potential confounding due to age, sex and the number of reviews performed in the year before the study started. The entire follow-up period was 15 months. The final sample comprised 598 patients in the telephone group, 654 in the face-to-face group, and 557 in the usual care group. The primary outcomes included the proportion of patients who had received a dedicated asthma review during the last 15 months, asthma morbidity, and enablement and confidence in asthma care and self-management. The instruments used to evaluate these outcomes were reported in detail.

Monetary benefit and utility valuations:
Not relevant.

Measure of benefit:
There was no summary measure of benefit. The authors evaluated the number of reviews achieved, and asthma morbidity and enablement outcomes at 12 months.
Cost data:
The cost categories included the cost of face-to-face and telephone consultations (booked and opportunistic). The data on resource use were collected during the trial. The costs and resource quantities were reported in detail in supplementary tables. All costs were derived from UK national cost publications and retail telephone charges. The price year was 2004.

Analysis of uncertainty:
A one-way sensitivity analysis was performed on the recorded duration of the consultation.

Results
The telephone option group achieved a review rate of 66.4% compared with 53.8% in the face-to-face group ($\chi^2$: 20.52, p<0.001, risk difference: 12.6%, 95% confidence interval, CI: 7.2%, 17.9%). In the usual care group, the review rate was 50.6%.

Ability and confidence in asthma care was significantly higher in the telephone group compared with the face-to-face group (p=0.03 and p=0.007 respectively).

The cost per patient reviewed was £10.03 (standard deviation, SD: £5.53) in the telephone group compared with £12.74 (SD: £5.68) in the face-to-face group, and the difference was statistically significant (mean difference: £2.71, 95% CI: 1.92, 3.50, p<0.001).

Authors’ conclusions
The authors concluded that routine telephone reviews for asthmatic patients appeared to be a cost-effective option and appeared to increase the patients’ ability and confidence in managing asthma.

CRD commentary
Interventions:
The interventions were clearly reported. The study was thorough in its coverage of alternative interventions, including current practice in the setting.

Effectiveness/benefits:
The effectiveness data were derived from a randomised controlled trial which has potentially high validity. Power calculations were performed to ensure that the size of the sample was adequate. The authors provided sufficient details on the sample to enable readers to assess the extent to which their own patients are comparable with those in the study. In addition, appropriate statistical analyses were undertaken to take into account potential biases and confounding factors. The most important outcomes were health outcomes which included asthma morbidity and self-management ability.

Costs:
The authors did not explicitly report the perspective, but the costs appear to suggest that it was that of the health service provider. The resource use data and the costs were well reported and the cost data appears to have been appropriate for the study population and setting. The unit costs were not reported. The price year was reported, which will assist in revaluing the results in future years. Uncertainty around the estimates used was not addressed, which limits the generalisability of the results.

Analysis and results:
The economic analysis was reported in adequate detail. The authors provided a balanced discussion on the limitations to their study as well as on the findings of other relevant studies.

Concluding remarks:
The methodology appears to have been appropriate and, although the reporting of cost data was limited, the authors’ conclusions are reasonable.
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