A randomised controlled trial to evaluate a nurse-led programme of support and lifestyle management for patients awaiting cardiac surgery: 'Fit for surgery: Fit for life' study


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 objective was to assess the outcomes and costs associated with a nurse-led programme of support and lifestyle management for patients awaiting cardiac surgery. The authors concluded that the programme did not appear to reduce risk factors prior to surgery, but did appear to reduce overall health care utilisation. There were some limitations to the study’s methodology and the level of reporting, especially for the cost data, and for this reason the authors’ conclusions should be considered with some caution.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
The objective was to assess the outcomes and costs associated with a nurse-led programme of support and lifestyle management (Fit for Surgery) for patients awaiting cardiac surgery.

Interventions
The intervention involved a monthly pre-operative appointment with a cardiac homecare nurse. At the appointment, the patient was able to ask questions and voice concerns, underwent a cardiac risk assessment, and was given counselling on lifestyle changes. The control group received the standard care, which consisted of a hospital helpline telephone number, a pre-surgery information day, and a baseline assessment.

Location/setting
UK/home and hospital.

Methods
Analytical approach:
The effectiveness data were collected from a single randomised controlled trial (RCT). The trial period started at the beginning of the wait for surgery, which was on average nine months, and patients were followed-up for three months after hospital discharge. The authors did not report the study perspective.

Effectiveness data:
The clinical data were derived from a RCT with 188 patients (94 in each group) who were on the waiting list for cardiac surgery. These patients were followed up from their baseline appointment until three months after hospital discharge. The two groups were shown to be comparable at baseline in terms of their demographic and clinical characteristics. The primary outcome measures were anxiety, length of hospital stay, and changes in blood pressure, body mass index, and serum cholesterol.

Monetary benefit and utility valuations:
Not relevant.

Measure of benefit:
There was no summary measure of benefit. The primary clinical outcomes were those of the trial: anxiety, length of hospital stay, and changes in blood pressure, body mass index, and serum cholesterol.
Cost data:
The costs of all in-patient, out-patient and community contacts and the homecare contacts were calculated. All costs were in UK pounds sterling (£) and discounting was not performed given the relatively short duration of the study.

Analysis of uncertainty:
T-tests and the Mann-Whitney U test were used to compare the clinical outcomes and costs.

Results
For both the intervention and the control group, blood pressure and total cholesterol decreased. For example, systolic blood pressure fell by 9.11mmHg in the control group and 13.02mmHg in the intervention group. There were no significant differences between the groups and no changes were found for the other outcome measures.

The total cost in the intervention group was £10,954, compared with £12,771 in the control group.

Authors’ conclusions
The authors concluded that the nurse-led programme did not appear to reduce the risk factors prior to cardiac surgery, but did appear to reduce the overall health care utilisation.

CRD commentary
Interventions:
The interventions were well described and represented the current practice in the authors' setting.

Effectiveness/benefits:
The analysis was based on a randomised controlled trial. The methods of randomisation, loss to follow-up, and sample size calculation were all reported, which increases the internal validity of the study. An additional strength was the similarity in the two patient groups at baseline. The effectiveness estimates were not subjected to sensitivity analysis, which limits their generalisability to other settings. There were a number of primary and secondary outcomes, none of which were combined with the cost data.

Costs:
The cost analysis was not reported in detail; only the total costs of the intervention and the comparator were given. Neither the source of the costs nor the price year were provided.

Analysis and results:
No synthesis of the effectiveness and cost data was carried out; in effect, a cost-consequences analysis was performed. The results of the study were clearly presented. The impact of uncertainty on the study parameters was not investigated, which makes it difficult to assess if the results were robust. The authors discussed some limitations to their analysis.

Concluding remarks:
There were some limitations to the study's methodology and the level of reporting, especially for the cost data, and for this reason the authors’ conclusions should be considered with some caution.

Funding
Supported by the British Heart Foundation.

Bibliographic details

PubMedID
18160344