Prospective, randomized, controlled, single-blind trial of the costs and consequences of systematic nutrition team follow-up over 12 mo after percutaneous endoscopic gastrostomy


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 study evaluated the cost-effectiveness of systematic long-term nutrition support team (NST) follow-up of adult patients after percutaneous endoscopic gastrostomy in comparison with no specific nutrition team. The authors found that regular NST follow-up for gastrostomy-fed patients led to lower costs and similar clinical outcomes and quality-of-life assessments. On the whole, the authors’ conclusions are consistent with the objective of the study, which was based on robust methodology and transparent reporting.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
The objective of the study was to evaluate the cost-effectiveness of systematic long-term nutrition support team (NST) follow-up of adult patients after percutaneous endoscopic gastrostomy (PEG) in comparison with no specific nutrition team.

Interventions
The health intervention under examination was a multidisciplinary NST for the long-term follow-up (12 months) of patients after PEG, versus usual care. Usual care consisted of no specific input on nutrition before or after discharge from hospital. The intervention consisted of at least weekly visits by the NST nurse and/or dietician while in the acute hospital, and at least monthly visits after discharge into the community.

Location/setting
UK/community.

Methods
Analytical approach:
The effectiveness and cost data were collected from a single clinical study. The time horizon of the study was 1 year. The authors stated that the perspective of the health service was adopted.

Effectiveness data:
The effectiveness data were based on a prospective, randomised, single-blind controlled clinical trial. Of the 112 patients initially randomised, 11 died before the start of the trial, leaving a final sample of 101 (47 in the intervention group and 54 in the control group). The patients were followed for 1 year. Among the various clinical end points, key outcomes were elective PEG removal and death. Secondary outcomes included clinical complications, readmissions and nutritional status.

Monetary benefit and utility valuations:
Quality of life was estimated from the sample of patients included in the clinical trial at 3 months after PEG insertion. Three instruments were used: the SF36, a validated quality-of-life tool specific to PEG use, and a patient/carer satisfaction questionnaire.

Measure of benefit:
No summary measure of benefit was associated with the costs since a cost-consequences analysis was conducted. Key
Cost outcomes were elective PEG removal, quality of life and death.

Cost data:
The categories of costs included in the analysis were hospital stay, community care, various health care professionals, procedures relating to PEG, feed and giving sets plus syringes, and drugs relating to PEG complications. Resource use was derived from the sample of patients included in the clinical trials. The unit costs were obtained from local finance departments and published sources. The costs were in UK pounds sterling (£). The price year was not explicitly reported. No discounting was applied as the costs were incurred within 1 year.

Analysis of uncertainty:
A deterministic univariate sensitivity analysis was performed in order to determine the impact of variations in cost items on the total costs. National rates were used instead of local rates for inpatient stay in acute and community settings.

Results
Overall, clinical end points were similar between the groups (no statistically significant differences in any outcome).

In the quality-of-life assessment, there was a statistically significant improvement in the social functioning element of the SF36 with the intervention over control, but all other dimensions were comparable.

The mean cost per patient was £13,330 (+/- 15,505) in the intervention group and £16,858 (+/- 16,351) in the control group. The difference was £3,519 (confidence interval: -9,847 to 2,790). The use of an NST team resulted in a decrease in all cost categories.

The use of national rather than local costs for hospital and community stay in the cost analysis did not alter the conclusions of the analysis.

Authors’ conclusions
The authors concluded that regular NST follow-up for gastrostomy-fed patients did not increase costs to the health care system in comparison with routine care, and that it led to similar clinical end points and quality of life.

CRD commentary
Interventions:
The choice of the two strategies was appropriate in that the proposed multidisciplinary NST was compared with the current standard practice in the authors’ institution. Furthermore, the two health care options were satisfactorily described.

Effectiveness/benefits:
The clinical data were derived from a well-conducted clinical trial, which is usually associated with a high internal validity. Strengths of the analysis were the randomised design, the use of single-blinding (double-blinding would have been unfeasible given the nature of the intervention), the appropriate length of follow-up, and the use of power-calculations (although in the end fewer patients than required were randomised to the study). In addition, the two groups of patients were well matched with respect to their baseline characteristics. Although the study was carried out in a single centre, the authors stated that the sample of patients was representative of other UK medical institutions.

Costs:
The categories of costs and their sources included in the analysis reflected the perspective adopted in the study. In effect, typical UK sources were used. Resource use reflected the actual consumption in the sample of patients. The costs were presented as macro-categories, and a detailed breakdown of cost items was not given. The cost results were extensively reported and discussed. Statistical tests of the costs were performed and confidence intervals were presented. The price year was not reported, thus the results cannot be re-valued in future years.

Analysis and results:
The costs and benefits were not combined as a cost-consequences analysis was carried out. The clinical and economic
results were reported clearly and the impact of uncertainty was addressed with respect to the key cost driver, the cost of inpatient stay. The economic analysis focused on the UK setting, which may limit the generalisability of the results to other settings.

Concluding remarks:
Overall, the methodology of the study was sound, especially on the clinical side, although the sample size of the clinical trial was relatively small. The methods and results were reported clearly. The conclusions reached by the authors seem appropriate.

Funding
None stated.

Bibliographic details

Other publications of related interest

Indexing Status
Subject indexing assigned by NLM

MeSH
Aged; Continuity of Patient Care /economics /statistics & numerical data; Enteral Nutrition; Female; Gastrostomy /economics /rehabilitation; Health Care Costs; Humans; Length of Stay; Male; Nutritional Status; Patient Care Team /economics; Patient Readmission; Prospective Studies; Quality of Health Care; Quality of Life; Single-Blind Method

AccessionNumber
22005001797

Date bibliographic record published
23/12/2005

Date abstract record published
09/08/2008