Intensive day programme treatment for severe anorexia nervosa: the Leicester experience

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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
The study evaluated the impact of a new intensive day programme for people with severe anorexia. Patients could attend as "pure" day patients, or when necessary, would be admitted to the ward and begin attending the day programme from the ward after an initial ward-based period, eventually graduating to day patient care when appropriate. The day programme was designed to help patients achieve "plateau weight" by means of an extensive support programme.

Type of intervention
Treatment and rehabilitation.

Economic study type
Cost-effectiveness analysis.

Study population
The study population comprised outpatients with low-weight anorexia who were failing to gain or were losing weight (i.e. "stuck" in therapy), and people with low-weight anorexia who had undergone the inpatient regime and were continuing the task of weight restoration, weight maintenance and therapy.

Setting
The setting was an institution. The economic study was carried out in a hospital in Leicester, UK.

Dates to which data relate
The effectiveness evidence was collected between February 1994 and January 2000. Although it was not explicitly stated, the resource use data appears to have been collected at the same time. The price year was not stated.

Source of effectiveness data
The evidence for the final outcomes was derived from a single study.

Link between effectiveness and cost data
The costing was carried out retrospectively using the same patient sample as that used in the effectiveness study.

Study sample
There was no mention of whether power calculations were used to determine the sample size. Twelve local patients were admitted for intensive care between February 1994 and January 1997, while 15 local patients started their admissions to the day programme between February 1997 and January 2000.
Study design
The study was a retrospective cohort study that was conducted in a single centre. Twelve patients were enrolled for the period before the implementation of the day programme and 15 after its implementation. The 1994 cohort was followed for an average of 4.2 years post discharge, while the 1997 cohort was followed for a mean of 1.45 years.

Analysis of effectiveness
All of the patients included in the study were accounted for at analysis. The primary health outcomes used in the analysis were the number of inpatient days, the mean body mass index (BMI) of the patients before and after admission to intensive care, and the readmission rates. It was highlighted that the BMI values of the later cohort were higher at admission. This was attributed to the fact that there were patients who were complicated in other ways. It was not stated whether these factors were adjusted for.

Effectiveness results
The pre-programme group had a total of 2,601 inpatient days and an average of 217 days per patient. The post-programme group had a total of 1,348 inpatient days and an average of 90 days per patient.

The mean BMI values of the pre-programme groups were 13.5 (range: 10.3 - 18.7) on admission, 17.6 (range: 13.5 - 21.2) on discharge, and 17.2 (range: 12.1 - 23.4) 6 months after discharge.

The BMI values the post-programme group were 15.0 (range: 10.8 - 18.4) on admission, 18.7 (range: 13.0 - 21.9) on discharge, and 18.0 (range: 15.2 - 21.9) 6 months after discharge.

The most recent BMI was 18.7 (range: 11.5 - 23.4) for the pre-programme group and 18.8 (range: 13.8 - 22.6) for the post-programme group.

The readmissions rates were 33% for the pre-programme group and 20% for the post-programme group.

Clinical conclusions
The authors concluded that the inpatient days had been reduced, and that the early results of weight gain and readmission rates were promising.

Measure of benefits used in the economic analysis
No summary measure of benefit was used in the economic analysis. A cost-consequences analysis was therefore performed.

Direct costs
Discounting was not undertaken since the costs were incurred during less than one year. The costs and the quantities were reported separately. The costs were calculated for inpatient days and day programme days. The costs were estimated from actual data. The source of the quantity and cost data was not stated. The quantities of resources used were measured between 1994 and 2000. The price year was not stated.

Statistical analysis of costs
The authors provided mean values and standard deviations (SDs) of the costs.

Indirect Costs
The indirect costs were not included since the study was conducted from the perspective of a health service provider.
Currency
UK pounds sterling (€).

Sensitivity analysis
A sensitivity analysis was not undertaken.

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

Cost results
The total average cost was 47,030 (SD=21,000) for the pre-programme group and 30,923 (66% of 47,030) (SD=21,000) for the post-programme group.

When the days used by inpatients as an enhancement to their inpatient stay were included, the costs increased slightly to 36,514 (78% of 47,030) (SD=25,000).

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

Authors’ conclusions
The authors concluded that, despite the factors that should be considered when looking at the results, the inpatient bed days and overall costs of treatment for local patients had been reduced. The also concluded that the early results in terms of weight gain and readmission rates were promising.

CRD COMMENTARY - Selection of comparators
The comparator was justified on the grounds that there was no treatment between the existing treatment modes, and that the comparators were the current practice at the time of the study. You should decide whether this is a commonly used technology in your setting.

Validity of estimate of measure of effectiveness
The study used a retrospective cohort design, which was appropriate for the study question. However, this study design has several limitations, which have the potential for bias and confounding as illustrated by the authors. Although the study sample appears to have been representative of the population, the authors indicated that there were some differences in the BMI of the patients of the two groups. There were no details of whether any statistical analyses were undertaken to take account of potential biases and confounding factors, such as the reason for the higher BMI in the post-programme group. Thus, it was unclear whether the two groups were comparable at baseline.

Validity of estimate of measure of benefit
The authors did not derive a measure of health benefit. The analysis was therefore categorised as a cost-consequences analysis.

Validity of estimate of costs
All the cost categories relevant to the provider perspective appear to have been included in the analysis. The unit costs and the quantities were not reported separately. The total daily costs for inpatients and outpatients were reported, but there were no details of what was included in these costs. In addition, the price year was not reported. These factors limit the reproducibility of the results obtained in other settings. No statistical analysis of the quantities or prices was
performed. It is not possible to be certain, but it appears that all the costs have been incurred during one year. Hence, discounting was not undertaken. The indirect costs were not considered since the study was conducted from the perspective of a provider.

Other issues
The authors mentioned other studies, but they did not make appropriate comparisons of their findings with those from these studies. They also mentioned some factors that should be considered when looking at their results. For example, there were teething problems such as anxiety and resistance to early discharge to day programme status. The issue of generalisability to other settings was partially addressed, as the authors highlighted that they did not include patients who were not in their local area.

Implications of the study
The authors believed that the programme showed promise and had the potential to facilitate the management of severely ill patients as pure day patients. They also suggested ways that the efficacy of the programme could be increased, by having extended opening hours and opening 7 days a week so that patients could have three meals in a supportive environment.

Source of funding
None stated.

Bibliographic details

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