Inpatient treatment in child and adolescent psychiatry: a prospective study of health gain and costs

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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 evaluated the cost-effectiveness of in-patient treatment for serious mental and psychiatric disorders in children and adolescents. The authors concluded that in-patient treatment was associated with substantive and sustained health gain across a range of diagnoses. On the whole, the study was of reasonable quality and satisfactorily reported and the authors’ conclusions appear to be valid.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
The objective was to evaluate the cost-effectiveness of in-patient treatment for the most serious mental and psychiatric disorders in children and adolescents.

Interventions
This study estimated the impact on the outcomes and costs of in-patient treatment for serious mental and psychiatric disorders in children and adolescents. The content of in-patient care depended on the unit, but the treatment models were based on the current best practice, with a structured environment and individual intervention strategies, which included a combination of psychological therapy, medication, psychosocial, family-orientated and educational interventions, as dictated by the needs of the patient.

Location/setting
UK/primary and secondary care.

Methods
Analytical approach:
This economic analysis was based on a single clinical study, which included consecutive patients admitted to eight National Health Service (NHS) psychiatric units (four child units and four adolescent units) over a 15-month period. The authors did not report the perspective.

Effectiveness data:
The clinical data were derived from a prospective cohort study. Outcome assessments were made at the point of agreement to admission, admission, decision to discharge and one year following discharge. An analysis of change was conducted, using individual change scores, with each patient acting as their own control. The possibility of heterogeneity was investigated using multivariate analysis. The primary outcome measure appears to have been the clinician-rated Childhood Global Assessment Scale (CGAS). Other outcome measures included the researcher-rated health needs assessment and the Strengths and Difficulties Questionnaire (SDQ).

Monetary benefit and utility valuations:
None.

Measure of benefit:
The primary outcome appears to have been the CGAS.
Cost data:
The service use costs were those of school and educational services; hospital care; community health care; community mental health care; social care services; and police services. The resource use data were collected prospectively; those patients with data available at both the baseline and follow-up (74 patients) were used to derive the estimates. The unit costs were, in the majority of cases, derived from relevant national sources (Netten, et al. 2002, see ‘Other Publications of Related Interest’ below for bibliographic details). These unit costs were multiplied by the service use to calculate the total cost per person. All costs were reported in UK pounds sterling (£), for the price year 2001 to 2002.

Analysis of uncertainty:
Not performed.

Results
The mean clinician CGAS score was 44.0 (standard error, SE: 1.1) for admission and 56.0 (SE: 1.0) for discharge. The mean unmet health needs score was 6.1 (SE: 0.26) for admission and 2.0 (SE: 0.19) for discharge. The mean needs persisting despite intervention score was 1.8 (SE: 1.9) for admission and 3.4 (SE: 2.8) for discharge. The mean parent SQD score was 22.9 (SE: 0.75) for admission and 20.6 (SE: 0.82) for discharge. The gains on all outcome measures were sustained up to one year of follow-up after discharge. Improvement was found across all diagnoses and longer stays, positive therapeutic alliance, and better pre-morbid family functioning all independently predicted a better outcome.

The total support service costs were higher after in-patient treatment £5,931 (SE: 7,623) than before £4,287 (SE: 4,276). However, the only statistically significant cost difference was a reduction in the costs of community health services after in-patient treatment from £162 (SE: 204) to £69 (SE: 90).

Authors’ conclusions
The authors concluded that in-patient treatment was associated with substantive and sustained health gain across a range of diagnoses.

CRD commentary
Interventions:
The rationale for the choice of the comparators was clear and reflected the current pattern of care in the authors’ setting.

Effectiveness/benefits:
This analysis was based on a single cohort study, which was appropriate for the study question. A parallel group design was precluded on practical and ethical grounds. Appropriate statistical analyses were conducted to take account of potential biases and confounding factors and some details of these were reported. The sample appeared to be representative of the population. There was no sample size calculation, so it is possible that the clinical study was underpowered. The outcome measures represented intermediate disease-specific measures and not utility outcomes. However, they are widely used as the end points for psychiatric disorder treatments and may have been appropriate.

Costs:
The authors did not explicitly state the perspective, but the cost categories suggest that the viewpoint was that of society. A full breakdown of the cost items was not reported, although some aggregated data was presented. The resource use data were collected by means of a Client Service Receipt Inventory which was administered before admission and at baseline. The price year was reported.

Analysis and results:
The costs and benefits were not synthesised. The issue of uncertainty was not addressed nor discussed. The authors did compare their findings with those from other studies. They also discussed the study strengths and implications for further research. Overall the reporting was clear, but limited in detail in some areas.

Concluding remarks:
On the whole, the study was of reasonable quality and satisfactorily reported. The authors’ conclusions appear to be
valid.

**Funding**
Funded by the UK Department of Health R&D Mental Health Research Initiative.

**Bibliographic details**

**PubMedID**
18093032

**DOI**
10.1111/j.1469-7610.2007.01802.x

**Original Paper URL**
http://onlinelibrary.wiley.com/cgi-bin/fulltext/117960487/PDFSTART

**Other publications of related interest**

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Adolescent; Adolescent Psychiatry /economics; Adult; Age Factors; Child; Child Psychiatry /economics; Cohort Studies; Female; Health Care Costs; Health Status; Hospital Costs; Hospitalization /economics /statistics & numerical data; Humans; Length of Stay /economics; Male; Mental Disorders /economics /therapy; Needs Assessment; Outcome Assessment (Health Care); Prospective Studies; Treatment Outcome

**AccessionNumber**
22008000040

**Date bibliographic record published**
15/04/2009

**Date abstract record published**
01/07/2009