Hospital vs outreach treatment of patients with mental retardation and psychiatric disorders: a controlled 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.

Health technology
Treatment of patients with mental retardation and psychiatric disorders using psychopharmacological medication, behavioural therapy, social skills training, education, and structured daily activities, provided either in specialised hospital or in the patient's home environment (outreach treatment).

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
Both male and female patients, aged from 17 to 59 years (mean 31), with mild, or borderline, mental retardation.

Setting
Secondary care. The study was carried out in The Netherlands.

Dates to which data relate
The dates for the effectiveness, resource use and price data were not stated.

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

Link between effectiveness and cost data
The costing was undertaken prospectively on the same patient sample as that used in the effectiveness study.

Study sample
Patients were recruited from referrals to a specialized hospital for in-patient treatment. The initial sample consisted of 60 patients. They were randomly assigned in variable blocks to either hospital treatment (30) or the outreach treatment (30). Ten patients (5 in each group) dropped out before entering the study. Of these, 3 patients refused outreach treatment, one patient in the hospital group refused to take part in the research, four patients(one in the outreach treatment group and 3 in the hospital group) withdrew from the treatment, and 2 patients were excluded for legal reasons. The final sample included a total of 50 patients, 25 in the hospital treatment and 25 in the outreach treatment group. Power calculations were not used to determine the sample size.
Study design
Randomized trial based on a single centre. The observation period was 28 weeks for both groups.

Analysis of effectiveness
The analysis of the clinical study was based on treatment completers only. The primary health outcomes were psychiatric symptoms measured by four rating scales: Psychopathology Inventory for Mentally Retarded Adults (PIMRA-I and PIMRA-SR), the Reiss Screen for Maladaptive Behaviour and the Global Rating Scale for Improvement (GSI). The Nijmegen Child-Rearing Situation Questionnaire (NCSQ) was used to measure the burden on the patients’ carers. The outreach treatment and hospital treatment groups were found comparable in terms of age, sex and previous hospitalization.

Effectiveness results
The two groups (outreach treatment group and hospital treatment group) showed no significant differences with regards to psychiatric symptoms. The burden of carers was similar for both outreach treatment group and hospital treatment group. Admission to the hospital could be limited for 84% of the outreach-treated patients. A 95% confidence interval and p < 0.05 for each one-tailed test were used. However, the equivalence testing showed that, at the end of the 28-week observation period, the outcomes were non-equivalent according to all measures used. For equivalence testing 90% confidence intervals were used, and the power to establish equivalence was 0.75 for PIMRA-I, 0.66 for PIMRA-SR, 0.67 for Reiss Screen, and 0.94 for the GSI.

Clinical conclusions
Outreach treatment represents an effective alternative to hospital treatment for patients with mental retardation and psychiatric disorders.

Measure of benefits used in the economic analysis
The authors concluded that there were no differences in the primary health outcomes, and hence, the economic analysis was based on costs only.

Direct costs
The costs of the outreach treatment were based on hours of treatment allocated to the patient, or to his or her environment, by the outreach team (including home visits, telephone calls, face to face contacts), travelling costs and the costs of daily care received (e.g. in the group homes). The costs of hospital treatment were based on average price per day per patient. The cost of hospitalisations of patients in the outreach treatment group were not included. Resource quantities were not reported separately from costs. The price date was not reported.

Currency
US dollars ($).

Sensitivity analysis
Sensitivity analysis was not carried out.

Estimated benefits used in the economic analysis
Not applicable.

Cost results
The mean total cost per patient for the hospital group was $41,134 and for the outreach treatment group was $24,221.
Outreach treatment costs were 40% lower than hospital treatment costs.

**Synthesis of costs and benefits**
Not applicable.

**Authors' conclusions**
Outreach treatment represents an effective and efficient alternative to hospital treatment for patients with mental retardation and psychiatric disorders.

**CRD COMMENTARY - Selection of comparators**
A justification was given for the comparator used. Hospitalization has been a common form of treatment for patients with both mental retardation and mental illness. You, as a user of this database, should consider whether this is a relevant treatment modality in your setting.

**Validity of estimate of measure of benefit**
Effectiveness data were derived from a randomised trial, and hence, are likely to be internally valid. However, the number of subjects was small and the power to establish equivalence with 90% confidence intervals exceeded 0.80 (the commonly used criteria for sample adequacy) for only one of the four outcome measures used (GSI).

**Validity of estimate of costs**
The resource quantities were not reported separately from the costs. No adequate details were reported of the method of quantity/cost estimation. The costs included for the hospital treatment group should have been reported. The costs of hospitalisation of patients in the outreach treatment group were not included. Also, the "hotel costs" for treatment in alternative modes of accommodation (e.g. group homes) were not included, and therefore it would have been appropriate to separate this item from the cost of hospital treatment.

**Other issues**
The authors' conclusions may not be fully justified. The conclusions regarding equivalence may not be justified due to an inadequate sample size, and the validity of the cost comparison clearly needs further clarification. Due to the lack of detail regarding resources and prices the generalisability of the result to other setting cannot be assessed.

**Bibliographic details**

**PubMedID**
9242847

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Adolescent; Adult; Aggression; Analysis of Variance; Caregivers /psychology; Cost Savings; Family Health; Female; Home Care Services /economics /standards; Hospitalization /economics /statistics & numerical data; Humans; Intellectual Disability /complications /economics /therapy; Male; Mental Disorders /complications /economics /therapy; Mental Health Services /economics /standards; Middle Aged; Netherlands; Patient Care Team /organization & administration; Program Evaluation; Prospective Studies; Regression Analysis; Social Behavior; Treatment Outcome
AccessionNumber
21997000984

Date bibliographic record published
31/12/1998

Date abstract record published
31/12/1998