The costs and effectiveness of two psychosocial treatment programmes for personality disorder: 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
Patients with severe personality disorders were given one of two inpatient treatment programmes. The One-Stage programme involved an 11- to 16-month stay in a therapeutic community. It consisted of several kinds of organised treatment sessions, structured activities, teaching interpersonal skills, re-socialisation, as well as psychotropic medication. The Step-Down programme involved a 6-month stay similar to the one just described, which was then followed by 12 to 18 months of outpatient follow-on treatment. The follow-on treatment included twice weekly individual and group meetings with an outreach nurse, and meetings with a senior psychiatrist to review progress.

The two treatment programmes were compared with treatment as usual (TAU), in which patients were under the care of the general psychiatric care service. The patients received psychotropic medication and, every 2 to 4 weeks, they had outpatient and community contact with one or more care workers. They were admitted to hospital when necessary and once a month had a clinical review.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
The study population comprised patients with severe personality disorder. Patients were included if they were aged between 18 and 55 years, had a good command of the English language, and had an Axis II diagnosis of personality disorder. Patients were excluded if they had a previous diagnosis of schizophrenia, delusional disorder or organic brain damage, had been admitted to hospital for more than 2 years, or had been involved in criminal proceedings for violent crime. The full inclusion criteria were provided elsewhere (Chiesa et al, 2000, see 'Other Publications of Related Interest' below for bibliographic details).

Setting
The setting was tertiary and community care. The economic study was carried out in the UK.

Dates to which data relate
The effectiveness and resource use evidence were from 1993 to 2004. The price year was 1998/99, adjusted to 2002/03.

Source of effectiveness data
The effectiveness data were derived from a single study.
Link between effectiveness and cost data
The same patients provided both the cost data and the effectiveness data. The costing was carried out prospectively.

Study sample
Power calculations were not reported. All patients admitted between January 1993 and July 1997 to the hospital where the inpatient treatment took place were included in the study if they met the selection criteria. Sixty-four patients were allocated to the One-Stage group and 55 to the Step-Down group. Of the 73 patients meeting the inclusion criteria for the TAU group, 14 did not give consent.

Study design
This was a non-randomised study in which patients were allocated to the two inpatient groups depending on the geographical location of their home. Those patients in the Greater London area were allocated to the Step-Down programme, while others were allocated to the One-Stage programme. Patients allocated to the TAU group were under the care of the North Devon Healthcare Trust. The patients were followed up for approximately 24 months after entry into the study; those in the Step-Down group were followed up until 30 months after entry into the study. Twenty-six (48%) patients of the Step-Down group, 32 (50%) of the One-Stage group and 10 (14%) of the TAU group dropped out of the study.

Analysis of effectiveness
The analysis was conducted on the basis of treatment completers only. The patients were assessed using the Global Assessment Scale (GAS), the General Severity Index (GSI) and the Positive Symptom Total (PST) from the Symptom Checklist-90-R. The authors reported that the three groups were comparable in terms of their baseline socio-demographic characteristics, but the results were not shown in the present paper (see Chiesa M et al. 2003). Baseline scores in the GAS, GSI and PST were shown and were similar for the three groups.

Effectiveness results
The change in GAS score was 10.44 (standard deviation, SD=12.99) for the One-Stage group, 12.21 (SD=14.41) for the Step-Down group and 5.40 (SD=8.92) for the TAU group.

The change in GSI score was 0.40 (SD=0.80) for the One-Stage group, 0.82 (SD=0.89) for the Step-Down group and 0.01 (SD=0.64) for the TAU group.

The change in PST score was 9.09 (SD=18.39) for the One Stage group, 23.45 (SD=23.11) for the Step-Down group and 1.28 (SD=15.51) for the TAU group.

The Step-Down group improved significantly more than the One-Stage group on the PST, (p=0.010) and slightly more on the GSI, (p=0.055).

The Step-Down group improved significantly more than the TAU group on all three measures, (p=0.027 for the GAS, p<0.0001 for the GSI and PST).

The One-Stage group improved significantly more than the TAU group on all three measures (p=0.044 for the GAS, p=0.019 for the GSI, p=0.045 for the PST).

Clinical conclusions
Patients on the Step-Down programme showed the largest improvement in the measures used to assess patients.

Measure of benefits used in the economic analysis
The measures of benefit used were a 1-point increase in the GAS score, the GSI score and the PST score.
Direct costs
The costs were not discounted. The quantities and the costs were not analysed separately, although there was a lot of information on the different kinds of resources used by the patients. The unit costs of the different resources were not given. The costs included were psychiatric inpatient, non-psychiatric inpatient, non-inpatient hospital services, police, lawyer, psychiatrist, psychologist, community psychiatric nurse, private psychotherapist, other counselling services, general practitioner, social worker, education classes, employment services and voluntary services. Resource use was derived using actual data from the Client Service Receipt Inventory. The unit costs were taken from national data; the authors did not give sufficient detail to understand how precisely they were estimated. The price year was 1998 to 1999 and was adjusted to 2002/03 using the Hospital and Health Services Pay and Prices index.

Statistical analysis of costs
Statistical analyses of the costs were performed, in that the authors showed the mean and SD obtained in each group.

Indirect Costs
No indirect costs were estimated as the authors considered that these would have been negligible. In effect, the authors reported the employment rates in each group rather than the cost implications.

Currency
UK pounds sterling (£).

Sensitivity analysis
No sensitivity analysis was carried out.

Estimated benefits used in the economic analysis
The estimated benefits were taken directly from the effectiveness results reported above. The benefits were estimated at follow-up (i.e. 24 months for the One-Stage and TAU groups, and 30 months for the Step-Down group).

Side effects of treatment were considered in the economic analysis to the extent that the GAS, GSI and PST scores could capture such side effects.

Cost results
The mean costs over the entire study period (i.e. treatment and follow-up) were 58,241 (SD=12,623) for the One-Stage group, 59,041 (SD=13,172) for the Step-Down group and 29,002 (SD=10,682) for the TAU group.

The difference in costs between the Step-Down and One-Stage groups was not significant. The TAU costs were lower than both the One-Stage group, (p<0.0001), and the Step-Down group, (p<0.0001).

The costs of adverse effects were dealt with in the analysis.

Synthesis of costs and benefits
The authors wrote that as the Step-Down treatment dominated the One-Stage treatment, they would calculate the incremental cost-effectiveness ratio (ICER) for the Step-Down treatment compared with TAU.

If the Step-Down treatment was compared with the TAU, a 1-point gain cost 3,405 for the GAS, 30,304 for the GSI and 1,131 for the PST.
Authors' conclusions
The Step-Down and One-Stage programmes generated better outcomes for patients than treatment as usual (TAU), but these groups also received more expensive treatment. Although there was no significant cost-difference between the two specialist programmes, the Step-Down group improved more in terms of their outcomes than the One-Stage Group, particularly in their positive symptoms. The authors acknowledged that the cost of the best treatment appeared high and did not present a way by which this could be compared with other uses of that expenditure.

CRD COMMENTARY - Selection of comparators
The comparator, TAU, was the treatment given by the psychiatric service of the North Devon Healthcare NHS Trust. You should decide whether the comparator represents current practice in your own setting.

Validity of estimate of measure of effectiveness
The source of the effectiveness data was a single study. The study design was not ideal as patients were not randomly allocated to the treatment options, their treatment depended on their geographic location. Thus, there may have been differences between patient groups originated from different geographic locations. The three patient groups were not shown clearly to be comparable at baseline; an earlier study had shown comparability between the Step-Down and One-Stage groups. Apart from the problem of allocation to treatment, the analysis of effectiveness was handled credibly. There were no other sources of the effectiveness data.

Validity of estimate of measure of benefit
The estimation of benefits was obtained directly from the effectiveness analysis.

Validity of estimate of costs
Although the authors stated that the costs were estimated from a societal perspective, no indirect costs were included (but see the not regarding the perspective under 'Hypothesis/Study Question' above). The costs were not reported separately from the quantities, which limits the usefulness of the cost information. The resource use quantities were taken from a single study. Statistical analyses of the quantities and mean costs between the treatment groups were performed and, although the study was based on a very small patient sample, the authors found statistically significant differences in the costs. Discounting was not carried out, although it would have been relevant as some costs were incurred within 30 months. The price year was reported, which aids reflation exercises in other settings. In addition, the authors reported the method used to adjust the cost data to the stated price year (2002/03).

Other issues
The authors made appropriate comparisons of their results with those from other studies. They did not address the issue of generalisability to other settings as their study was a comparison of three different treatment programmes in specific locations provided by specific institutions. The authors did not present their results selectively and their conclusions reflected the scope of the analysis. However, the authors acknowledged several drawbacks of the study. First, the costs estimated for the Step-Down programme were over a longer time period than the others, therefore they were bound to be higher and the authors would have overestimated the cost-advantage of TAU. Second, the fact that patients were assessed at a different time period after starting treatment means that the authors might not have accurately measured the differences in the effectiveness of the three programmes. Further limitations of the study were the small sample size, the different drop-out rates in the different treatment groups, and the non-random allocation of patients.

Implications of the study
The authors recommended further research to understand the reason why there were different drop-out rates between the different treatment groups. Although the authors appeared confident that the Step-Down treatment resulted in the best outcomes, they realised that whether the extra expense of this treatment can be justified is a matter for discussion.
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Other publications of related interest


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