Is a dedicated specialist social worker working exclusively with psychogeriatric inpatients and an associated dedicated domiciliary care package cost-effective?

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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 health intervention examined in the study was a dedicated specialist social worker service working exclusively with psychogeriatric inpatients and an associated dedicated domiciliary care package to organise home help, home care, meals on wheels and other services for a period of 6 weeks after discharge.

Type of intervention
Social worker service.

Economic study type
Cost-effectiveness analysis.

Study population
The study population comprised psychogeriatric inpatients over 65 years of age.

Setting
The setting was a hospital psychogeriatric unit. The economic study was carried out in a large district hospital in London, UK.

Dates to which data relate
Data on effectiveness and resource use were gathered in the periods September 1997-March 1998 (Year 1) and September 1998-March 1999 (Year 2). No price year was reported.

Source of effectiveness data
A single study was used as the source of the effectiveness evidence.

Link between effectiveness and cost data
The costing was performed retrospectively on the same patient sample as that used in the effectiveness analysis.

Study sample
Power calculations were not performed. All discharges from the study hospital or from extra-contractual referral (ECR, patients who had been admitted to another NHS hospital or a private sector hospital) in Year 1 (when no social worker service was set up) and Year 2 (when the social worker service was activated) were included in the study. A sample of 213 discharges was selected: 104 cases (81 local NHS discharges and 23 ECR discharges; median age: 78 years; range: 66 - 95 years; 61% women) were included in the Year 1 group and 109 cases (92 local NHS discharges and 17 ECR discharges; median age: 77 years; range: 65 - 95 years; 63% women) were included in the Year 2 group.
Study design
This was a retrospective before-and-after cohort study, carried out in a single centre. The same period of the year was selected in the two patient groups to limit the impact of any seasonal variations in discharges. Patients were followed during the study period and loss to follow-up was not reported.

Analysis of effectiveness
All patients included in the study were accounted for in the analysis. The primary health outcomes assessed in the analysis were length of stay, overall bed usage, and ECR bed usage. The factors statistically associated with length of stay were also estimated. Study groups were shown to be comparable at baseline in terms of sex, number of discharges, admission accommodation, and change of accommodation between admission and discharge, but patients in Year 1 were older, and there were fewer patients with dementia and more patients with schizophrenia in Year 2. A further difference was the smaller number of patients discharged to NHS continuing-care psychogeriatric wards in Year 2.

Effectiveness results
The effectiveness results were as follows:

The median length of stay was 60 days (range: 1 - 180 days) in Year 1 and 67 days (range: 1 - 175 days) in Year 2. The difference was not statistically significant.

The total number of bed usage days was 11,165 (9,848 bed days in the local NHS hospital and 1,317 bed days in ECR hospitals) in Year 1 and 9,813 (8,696 bed days in the local NHS hospital and 1,117 bed days in ECR hospitals) in Year 2, with a difference of 1,352 bed days (1,152 in the local NHS hospital and 200 in ECR hospitals) in Year 2.

The factors that had a statistically significant impact on length of stay were female sex, diagnosis of depression, admission to local NHS hospital, discharge to an institutional setting, and change in the categories of admission and discharge accommodation.

Clinical conclusions
The analysis showed that the use of a dedicated psychogeriatric social worker service was effective in reducing bed usage in both a local NHS hospital and ECR hospitals.

Measure of benefits used in the economic analysis
Health outcomes were left disaggregated and no summary benefit measure was used, thus a cost-consequences analysis was carried out.

Direct costs
Discounting was not relevant as costs in each study period were assessed over 7 months. Unit costs and quantities of resources were not reported separately. The health services included in the economic evaluation were the dedicated specialist social worker service and the domiciliary care packages, and the cost of ECR bed usage. The cost/resource boundary adopted in the analysis was that of the NHS. The estimation of quantities was based on actual data from the study. The estimation of both costs of social worker and daily bed costs for specific ECR was based on actual data derived from the local health authority. The period of collection of quantities of resources was clearly stated, but no price year was reported.

Statistical analysis of costs
No statistical analysis of costs was performed.
Indirect Costs
Indirect costs were not included.

Currency
UK pounds sterling ( ).

Sensitivity analysis
Sensitivity analyses were not conducted.

Estimated benefits used in the economic analysis
Please refer to the effectiveness results reported earlier.

Cost results
The cost of the specialised social worker service was 35,000 (17,500 each for social worker and domiciliary package), but only 27,500 (17,500 for social worker and 10,000 for domiciliary care package) were actually used. The cost of ECR bed usage was 270,210 in Year 1 and 246,790 in Year 2, with a reduction in ECR bed usage of 23,420 in Year 2. The actual cost-savings in Year 2 compared with Year 1 were 4,080.

Synthesis of costs and benefits
Costs and benefits were not combined as a cost-consequences analysis was carried out.

Authors' conclusions
The authors concluded that the dedicated specialist social worker was effective in reducing bed usage and resulted in cost-savings from the perspective of the NHS.

CRD COMMENTARY - Selection of comparators
The rationale for the choice of the comparator was clear. The social worker service was compared with the previous routine of no dedicated service for the management of psychogeriatric inpatients. You, as a user of this database, should assess whether it represents a currently used management system in your own setting.

Validity of estimate of measure of effectiveness
The effectiveness estimates were derived from a before-and-after cohort study, which appears to have been appropriate for the study question. However, two distinct study groups were enrolled in the two periods of the study. The same calendar months were selected in the two study periods to limit the potential impact of seasonal factors on the estimated outcomes. The authors acknowledged that power calculations were not performed and that sample size was mainly determined by study duration. Further limitations of the analysis were the use of retrospective data collection, and the fact that study groups were not comparable at baseline. The authors also recognised that the outcome measures used in the analysis represented service-related measures and were not related to clinical effectiveness, which would have been more appropriate.

Validity of estimate of measure of benefit
Health outcomes were left disaggregated and no summary benefit measure was used in the economic analysis, hence a cost-consequences analysis was performed. Therefore, please refer to the comments reported above.

Validity of estimate of costs
The analysis of costs was carried out from the perspective of the NHS and it appears that all relevant categories of costs were included. The sources of cost and quantity data were clearly stated. However, unit costs were not reported and no price year was indicated, thus making the extrapolation of the economic analysis to other settings difficult. Costs were treated deterministically and no sensitivity analyses were performed. Indirect costs were not included in the analysis and the authors noted that their inclusion would have enhanced the cost-savings obtained during Year 2 with the dedicated social worker service.

Other issues
The authors made some comparisons of their findings with those from other studies. As regards the issue of the generalisability of the study results to other settings, the authors stated that caution should be exercised. Furthermore, the extrapolation of these findings to countries with different funding structures may be difficult. The study enrolled psychogeriatric inpatients over 65 years of age and this was reflected in the conclusions of the study. The authors pointed out some limitations of their analysis, which are reported above. The study results appear to have been presented selectively.

Implications of the study
The authors noted that their findings must be confirmed in a study based on a randomised design, carried out in several units, and using health-related outcome measures.

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