Outcomes and costs of a community support worker service for the severely mentally ill

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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
Continuing use of a community support worker (CSW) service which involved using a variety of approaches, including practical help, support, liaison with statutory services and befriending, in the provision of care for severely mentally ill. Some of the CSWs' objectives included compensating for a lack of social support in the client's environment and supporting the client in establishing new social contacts, providing practical assistance and support to reduce unmet needs and some episodes of rehospitalisation, and facilitating access to community facilities such as day care, work schemes and social clubs to reduce in-patient services.

Type of intervention
Supportive care.

Economic study type
Cost-effectiveness analysis.

Study population
Patients who were suffering from a severe mental disorder and had been in receipt of CSW services for 6 months or more.

Setting
Community. The economic study was carried out in London, UK.

Dates to which data relate
Effectiveness and resource use data corresponded to patients rehabilitated in the framework of three CSW schemes operating in the study area (their establishment dates were from 1993 to 1995), but the exact dates during which the study was performed were not explicitly specified. The price year was 1995/1996.

Source of effectiveness data
The evidence for final outcomes was based on a single study.

Link between effectiveness and cost data
Costing was undertaken retrospectively on the same study sample as that used in the effectiveness analysis.

Study sample
Power calculations were not used to determine the sample size. The initial study sample consisted of 63 patients who met the study inclusion criteria. 7 of these were found to have discontinued their contact with the service and therefore were excluded from the study. A total of 39 clients with a mean age of 48.86 (range: 21 - 76) years agreed to participate
in the study, giving a participation rate of 70%. The patients were selected from three participating CSW schemes with the following characteristics:

the Lorrimore Network was a voluntary sector service, established in 1994, and consisted of three full-time community support workers providing long-term support for 25 clients;

the Southside Partnership, operating in the independent sector, had provided a domiciliary care service since 1993, employed 2 full-time CSWs, and three bank staff regularly to provide a flexible out-of-hours service. About 70-80% of their service was dedicated to chronically ill clients with mental health problems of 6 months’ duration or longer;

Opendoor, a housing trust operating in the independent sector as a not-for-profit agency, employed a home support team from April 1995. This consisted of 6 full-time CSWs with almost all of their service provided for chronically ill clients (6 months or longer) with mental health problems.

**Study design**

This was a combined prospective-retrospective cohort study, carried out in the framework of three CSW schemes operating in an urban area. The duration of the follow-up was 6 months. Loss to follow-up was 2 patients. Sociodemographic information was collected from case notes relating to an index year prior to interviews, and research diagnoses were derived from the OPCRIT package.

**Analysis of effectiveness**

The principle used in the analysis of effectiveness was treatment completers only. The health outcomes were service satisfaction, needs, quality of life and social behaviour. The following instruments were used at baseline and follow-up: the Camberwell Assessment of Need, the Lancashire Quality of Life Profile, the Verona Service Satisfaction Scale, and the Social Network Schedule. Participants in the study were interviewed at baseline and 6-month follow-up. The client's key worker rated the Global Assessment of Functioning (GAF), the Camberwell Assessment of Need, and the Social Network Schedule at baseline and follow-up. The interviewed sample were found to be comparable with the non-interviewed group in terms of demographic and prognostic features, with the exception that the interviewed sample had a lower total level of functioning, as measured by the GAF. The clients of the three participating CSW schemes were comparable in terms of demographic and clinical characteristics.

**Effectiveness results**

The comparison between baseline and follow-up clients' assessments showed no significant difference in terms of quality of life and service satisfaction despite some upward trend being observed. With regard to social networks, a significant reduction was reported in terms of the total number of contacts, the number of active contacts, and the number of friends. According to patient ratings, the number of both met and unmet needs had risen over the study period, with little change in the proportion of needs met. The level of received formal care (as measured by the Camberwell Assessment of Need) increased during the study period. According to key-worker ratings, a significant rise in the number and proportion of met needs was reported with a corresponding decrease in the level of unmet needs. No difference in overall functioning, disability or symptom level over the study period were reported by the key workers. However, a significant decrease was reported in terms of behaviours associated with depression and anxiety, and in socially unacceptable behaviour, all as measured by the Social Behaviour Scale (SBS).

**Clinical conclusions**

Examination of the outcome measures indicates that, during receipt of the CSW service, clients became more satisfied with mental health services and reported a slightly improved quality of life. During the study period, psychiatric staff identified fewer unmet needs, but their clients expressed new needs for care which had not yet been met. Staff also identified relatively large improvements in social behaviour and a slight increase in general level of functioning. The clients identified fewer people in their social networks, with the possibility that these were being replaced by the involvement of the support worker.
Measure of benefits used in the economic analysis
No summary benefit measure was identified in the economic analysis, and only separate clinical outcomes were reported.

Direct costs
Costs were not discounted due to the short time frame of the cost analysis. Quantities were reported separately from the costs. Cost components were reported separately. The cost analysis covered the costs of community support worker, supported accommodation, in-patient services, emergency clinic, day centre, sheltered work, psychiatrist, community psychiatric nurse, psychologist, occupational therapist, depot clinic, general health care, social services, legal services (police, solicitor, and court), and education/employment services (education class and job centre). The Client Service Receipt Interview (CSRI) was used to collect service utilisation data. Interviews were performed at baseline and at 6-month follow-up and the resource use data was gathered in the 6 months prior to each interview. The perspective adopted in the direct cost analysis was not explicitly specified, but appears to have been that of the UK NHS. The sources of unit cost data for localised services were annual accounts and budgets if available. In the case of accounts not being available, average figures and estimates from other local provision were used. The source of many generic unit costs was a published report from 1994. The cost of independent living compared to costs of supported accommodation was calculated using the capital value of the property (obtained from a survey of house prices in areas near Camberwell) plus the level of weekly living expenditure (obtained from the Family Expenditure Survey). 1995/1996 price data were used. The cost analysis did not cover the costs associated with general practitioner care.

Statistical analysis of costs
Statistical analysis was performed on total costs using both non-parametric tests (Wilcoxon matched-pairs signed-ranks test) and t tests (on the log-transformed mean service costs).

Indirect Costs
Costs were not discounted due to the short time frame of the cost analysis. Quantities were not reported separately from the costs (it was only reported that 7 patients in both periods received informal care; 3 patients were common to both periods). Cost components were not reported separately. The cost analysis covered the opportunity cost of informal care. Informal care was valued equivalent to the value of the work done if traded in the labour market. The unit cost of a home help was used as a proxy for informal care costs. The perspective adopted in the indirect cost analysis was that of society. 1995/1996 price data were used.

Currency
UK pounds sterling (€).

Sensitivity analysis
Not conducted.

Estimated benefits used in the economic analysis
Not applicable.

Cost results
The mean (median) total cost at baseline was 10,232 (5,661) versus 9,778 (7,674) at follow-up, (NS). The cost of providing services at baseline was 96% of the follow-up costs. The bulk of the service costs were due to four services, namely community support worker, in-patient, supported accommodation, and day centre; these were 91% at baseline and 88% at follow-up. The intensity of informal care decreased between the two time periods.
Synthesis of costs and benefits
Costs and benefits were not combined.

Authors' conclusions
During the study period there were improvements in outcome reflecting service satisfaction, needs, quality of life and social behaviour. Whilst provision of the CSW service did not lead to extra total service costs, service use and cost data suggest that CSWs are associated with the substitution of in-patient use by community-based services.

CRD COMMENTARY - Selection of comparators
No specific justification was given for the choice of the comparator (the discontinuation of CSW service). It was only reported that it was not possible in this study to choose a matched comparison group consisting of subjects who were not in receipt of a CSW service.

Validity of estimate of measure of effectiveness
The internal validity of the effectiveness results can not be reasonably guaranteed due to the inherent limitations of the study design (lack of a proper control group), and the relatively small sample size, as the authors acknowledged. The study participant and non-participant groups were found to be comparable in terms of demographic and clinical variables, except for the poorer functioning feature in the participant group. The comparison among the clients of the three participating CSW teams showed their comparability in terms of the same variables. The study sample appears not to be fully representative of the study population (severely mentally ill patients) since, as the authors acknowledged, the study subjects had already received the CSW service prior to the commencement of the evaluation, and it is possible that those clients who had not benefited may have already left the service.

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

Validity of estimate of costs
Quantities were reported separately from the costs. Adequate details of the methods of cost estimation were given. The exclusion of the costs of GP evaluations may have had some effect on the internal validity of the cost results, as acknowledged by the authors. Statistical analysis was performed on components of the resource use data and total cost data. The price year was specified and indirect costs were included in the analysis.

Other issues
In view of the inherent limitation of the study design, the small sample size, and the lack of sensitivity analysis, some degree of caution may need to be exercised in the interpretation of the study results, as acknowledged by the authors. The issue of generalisability to other settings was not addressed. Some comparisons were made with other studies. The study sample consisted of patients who were already receiving CSW service, and this limitation was reflected in the authors' comments.

Implications of the study
The approach adopted here supports the further evaluation of CSW teams, but needs to be used with larger samples so that this type of service can be more fully evaluated. Further evaluations should select a matched control group with which to compare the effects of the support service on outcomes and wider service use, in order to allow for the confounding effects of concomitant service changes. In addition, service use may need to be observed over a longer time-span in order to detect major changes.
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