Some Aspects of Family Interventions in Schizophrenia. II: Financial Considerations

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The direct costs to the mental health services for patients who participated in a trial of a behavioural family intervention to reduce schizophrenic relapse were estimated. Comparisons were made between two patient groups from households of high expressed emotion (HEE): one group received a nine-month family intervention (HEE Intervention) and the other group routine treatment (HEE Control). A third group consisted of patients from low-EE households (LEE Control). The significant decrease in relapse rates in the HEE Intervention group compared with the HEE Control group has previously been reported; the analysis of costs indicates that any increase in costs due to the family intervention is outweighed by a decrease in usage of the established mental health services. The intervention resulted in a decrease of 27% in mean cost per patient.

In the current economic climate the economic implications of new treatment strategies are of interest, even when the treatment is of demonstrated efficacy. Although a number of controlled family intervention studies demonstrating a successful reduction in schizophrenic relapse through family management have been reported in the literature, only Falloon and his colleagues (Falloon et al, 1984) have reported on economic considerations. In a detailed analysis of all direct and indirect costs over twelve months, the costs of family management of schizophrenia were 19% less than individually managed patients (Cardin et al, 1986). This saving was mainly due to a greater need for crisis intervention services and in-patient treatment in the individually managed patients. We have previously reported on the benefits of a behavioural intervention with families of schizophrenic patients in terms of reduced relapse rates over nine months (Tarrier et al, 1988), and in terms of an increase in the patients’ social functioning (Barrowclough & Tarrier, 1990). The aim of this intervention was to provide an addendum to the best available service provided by the established mental health service. In this paper we report on the financial implications in terms of the direct costs of the added family intervention and in usage of the established services. The family interventions were carried out by clinical psychologists. We hypothesised that the extra costs of the intervention would be offset by the savings in the reduced use of other facilities of the mental health services by the intervention patients when compared with a control group of patients who did not receive family intervention.

Method

A total of 83 patients and their families were recruited for the treatment trial. Their mean age was 35.5 (s.d. 12.8) years, 54 (65%) were female, 25 (30%) were first admissions, the mean number of admissions was 2.8 (s.d. 3.6), the mean duration of illness was 6.3 (s.d. 7.4) years and the mean time since their last admission was 1.6 (s.d. 3.1) years. Of the relatives, the relationship with the patient was: mother 42%, father 24%, husband 18%, wife 6% and other, 10%. Ten patients or their relatives refused to participate in the project so 73 patients and their families entered the trial.

Treatment groups

Allocation to treatment groups was made initially on the assessment of the expressed emotion (EE) of the relatives. If at least one relative was assessed as high EE, allocation was made to one of four treatment groups: two groups received a nine-month behavioural intervention designed to reduce the EE status of their relative and hence relapse risk; one group received a short educational programme of two sessions; and one group received routine treatment. Patients living with low-EE relatives were allocated to the two-session education programme or routine care. These six groups have been categorised into three groups - HEE Intervention (n = 25), HEE Control (n = 29) and LEE Control (n = 19) – by equivalence in intervention and relapse rates. The relapse rates in these groups were: 12%, 48% and 21% respectively.

Contacts with the mental health services

All contacts with the mental health services were recorded for participating patients. These included: number of in-patient days, attendance at psychiatric out-patient and injection clinics, appointments with community psychiatric nurses (CPNs), day care, and appointments with social workers. All contacts with the mental health services were costed. A further study in Salford, carried out at the same time, examining the practices of CPNs and social workers, estimated the mean time spent with each patient for these two professions as 16 minutes and 25 minutes respectively (Wooff et al, 1988). For the purpose of these costings the mean appointment time was assumed to be 15 minutes and 30 minutes.
Cost analysis

Costings were calculated from Korner cost accounts for acute psychiatric care (Salford Health Authority, 1988). All costs were at the 1987/88 prices for comparability and included only direct costs (i.e. medical, nursing, drugs, dressings, paramedical, and diagnostic input) and not overheads and indirect costs. The latter were not directly relevant to the intervention trial and were not included. Hospital admission was costed on the total number of days per patient multiplied by the cost per in-patient day, taken from the Korner cost accounts for acute psychiatric care. Similarly, the cost of out-patient visit was calculated on the cost per out-patient visit times the number of out-patient visits for each patient. A similar calculation was made for day care attendance. The cost of CPN contacts and injection clinic visits was calculated from the salary of a Grade G nurse plus psychiatric lead, at the mid-point on the scale and assumed the nurse worked 200 days per year with six hours per day contact time, and each patient was seen for 15 minutes, plus costs for drugs, dressings etc. The total for CPN visits and injection clinic contacts were combined.

Similarly, social worker contacts were calculated from the salary of a senior social worker plus additional costs assuming a 30-minute contact time. The behavioural intervention was of 13 sessions over the nine-month post-discharge period, so the cost of 13 hours of a senior psychologist’s time was calculated from the mid-point of the scale again assuming 200 working days per year and six hours per day contact time, for each of the HEE Intervention patients. Costs for two sessions of psychologist’s time were added to the costs for patients in the HEE Control and LEE Control groups who had received the education programme.

Results

The costs of hospital admission, day care, psychiatric outpatient treatment, CPN contacts, social worker contacts, and psychologist contacts for each of the three patient groups over the nine-month period are presented as mean cost per patient in Table 1.

Comparisons were made between the three groups for each expenditure category of the established services. There were no significant differences between the LEE Control group and the HEE Intervention group. The LEE Control group showed significantly lower costs in terms of social worker contact than the HEE Control group (t = 2.3, P < 0.05), but all other comparisons were non-significant. Comparisons between the HEE Control and Intervention groups demonstrated a significantly greater cost in social worker contact (t = 2.37, P < 0.05) and hospital admission (t = 2.44, P < 0.05) for the HEE Control group.

In terms of total group costs, the HEE Intervention group showed an overall saving compared with the HEE Control group of £27 112 over nine months, which is a financial benefit of 37%, and a mean saving of £432 per patient over the nine months, which is a saving of 27%.

Discussion

It is clear that, despite the extra cost of the intervention in terms of psychologist’s time, there are considerable savings as a result of decreased use of the established mental health services. The main saving is in terms of reduced hospital admission in the HEE Intervention group compared with the HEE Control group. Hospital admission is a considerable drain on financial resources, accounting for 52% of the costs incurred by the HEE Control group, which must be compared with the 8% of the overall costs of the HEE Intervention group. This saving more than covers the extra cost of family interventions. It presumably reflects the decrease in relapses experienced by patients receiving family intervention. There is also an indication that the HEE Intervention group cost significantly less in terms of social worker time. This is perhaps because the traditional role of social workers in offering family therapy would have been decreased in families receiving intervention from psychologists.

Similar changes in in-patient costs were reported by Falloon and his colleagues (Cardin et al, 1986) in their analysis of the economic benefits of family management of schizophrenia, and although not directly comparable, they are in agreement with a study in Australia by Hoult (1986) which aimed to treat psychiatric patients in the community as an alternative to mental hospital admission. In this later study, the average patient treatment (public and private, direct and indirect) was 26% more for standard hospital care compared with community care (Cass & Lapsley, 1983).

Although this report indicates financial savings over nine months for the family intervention, the
question remains whether this saving would continue over time. Clearly this is impossible to answer from the present data; however, the two-year follow-up results indicate that although relapse rates increase in the family intervention group between 9 and 24 months (33%), they are still significantly lower than those for the HEE Control group (59%) over the same period (Tarrier et al., 1989). Since relapses were identified from hospital admissions it is reasonable to suggest that financial savings would still occur over this period. Although our analysis is of the limited costs pertaining to the intervention trial with a relatively small group of patients it does indicate that resources can be conserved by family management which would allow their diversion elsewhere.

In conclusion, within the constraints and difficulties of costing health services, the economic benefits as well as the clinical benefits of family management of schizophrenia within the community are considerable. This is especially pertinent at a time of scarce resources and increasing demand.

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