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Comparative costs of adult acute psychiatric services

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There is currently considerable debate in the UK as to the preferred model of services for adults with an acute mental health problem. Most of this debate has focused on the apparent benefits of the various models. Little research has been undertaken, however, on the financial costs of the models. This paper attempts to present some initial costs for both innovative and standard models of service. It is intended to generate thought about the scale and nature of the financial costs entailed in different models of service.

The study

Thirteen services which purported to provide or were planning to provide innovative community services for adults were identified, largely from a review of the recent psychiatric literature. The authors were sent a questionnaire which asked them to provide a brief description of the components of the service (see Table I) and specific financial information. Of the 13 localities asked for information, nine responded. Of these nine responses, only four provided sufficient financial information to allow a confident comparison of costs to be made. Most respondents indicated the difficulty that they had experienced in linking components of service with precise costs. The four services included were confident, however, that the costs included in this paper were accurate as of February 1992. As a point of comparison, service components and financial costs were drawn from an Approval in Principle submission for a standard district general hospital (DGH) based service.

The services for all five localities were then analysed for the presence of eight components. In order to generate a basis for comparison of the financial costs of services, which served populations ranging from 26,000 to 200,000, costs were calculated for each 10,000 of population served. In this analysis no weighting for demographic or socio-economic factors was included although deprivation indicators (Jarman indices) were reviewed to establish if there was any correlation between high cost per 10,000 population and high indicators of deprivation (see Table II). The study focused on the costs of in-patient beds, day places and community teams provided for general adult acute psychiatry in each locality. Care was taken to ensure that like was being compared with like, both in terms of the scope of the services and the items included in building up the financial profiles. Costs for specialist psychiatric services which might be provided to adults, for example special care or rehabilitation teams, have been excluded.

TABLE I
Components of service

	Acute beds on DGH site	*Acute beds in community location*	*Home treatment service*	*CMH team*	*CMH centre*	*24 hour access to CMHT*	*Day-places*	*Out-patient Care*
Community-based service (1)	√ (10)	√ (32)			√		√	√
service (2)	√ (5)		√	√	√	√	√	√
service (3)	√ (1)		√	√		√		√
service (4)		√ (24)	√	√	√	√	√	√
DGH-based service (1)	√ (60)			√	√		√	√

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TABLE II
Jarman deprivation scores

	Community based Service 1	*Community based Service 2*	*Community based Service 3*	*Community based Service 4*	*DGH-based Service*
Jarman score for District Health Authority	+28	+67	−11.72	−13.03	+8.14
Range of Jarman scores across Regional Health Authority	−50 to +68	−50 to +68	−24.49 to +14.31	−38.95 to 67.23	−9.34 to +18.67

Brief descriptions of the services

The following paragraphs give a brief description of each of the five services.

Community service 1

The service envisages the establishment of three community mental health centres, each serving a geographically defined area and each including 14 acute beds. Projected developments include the setting up of 24 hour on-call system, and extending CMH facilities to include provision for a drop in service (Rooney, 1992).

Community service 2

A Resource Centre is located in a residential street in an inner city district. The centre is open five days a week and some evenings, with the mental health team providing a 24-hour on-call system. The services provided from the centre include day care facilities for people with serious mental health problems, out-patient care, home treatment, and outreach work linking clients with ordinary facilities in the community (Dean & Gadd, 1990).

Community service 3

In this approach mental health workers are integrated into the primary care team, and the whole of that team is involved in the early detection of major disorders through joint screening. The majority of crisis care is delivered in a "hospital at home" setting, involving both the client and carer in education, stress management, and occupational therapy programmes. The emphasis is on early detection and intervention with targeted drug therapy and psychosocial interventions (Falloon, 1993).

Community service 4

In addition to a Community Mental Health Centre, a Community Treatment Team will be established, available 15 hours per day, seven days a week. Eventually this service will be accessible 24 hours per day. Access during the remaining nine hours will eventually be provided through the Community Treatment Unit. This Community Treatment Unit will provide both residential and non-residential care and treatment for the acutely ill. The Community Treatment Unit is planned to provide 24 beds and 12 day hospital places.

DGH-based service

A standard DGH-based psychiatric unit of 60 beds is being planned. Two day hospitals, also on hospital sites, are proposed. Five sector teams, located in premises in the community, will be developed alongside the hospital-based provision.

Comparative costs

The major cost element of traditional mental health services is in-patient beds. Table III shows the total number of beds being provided by each service and the total number being used for each 10,000 of population. The figure varies over ten-fold between the lowest bed provider (community service 3) at 0.28 beds per 10,000 and the highest bed provider (DGH-based service) at 3.3 per 10,000. The impact of the bed:population ratio on the overall cost of service is clear in Table IV. Revenue costs per 10,000 population for the lowest bed provider are almost half those of the highest bed provider.

As can be seen from Table IV, the capital costs of the current or proposed services varies from £50,000 per 10,000 population to £500,000 per 10,000 population – a twenty-fold difference. The major factor influencing this large difference in capital costs in the number of in-patient beds. There is no correlation between levels of deprivation and in-patient bed provision (see Table II).

Comments

We are aware of the shortcomings of the methodology of this study (e.g. the small size of the sample; the disregard of capital charges). Nonetheless, the study

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TABLE III
Comparison of beds provided per 10,000 population

	Community Service 1	*Community Service 2*	*Community Service 3*	*Community Service 4*	*DGH-based Service*
Number of beds	42	5	1	24	60
Beds:10,000	2.4	1.92	0.28	1.89	3.3

Note: DHSS/Royal College of Psychiatrists "norms" issued in the early 1980s suggested between 3 and 5 acute beds per 10,000 population.

TABLE IV
Comparative costs of the four services, standardised for 10,000 population

	Community Service 1	*Community Service 2*	*Community Service 3*	*Community Service 4*	*DGH-based Service*
Capital costs (Total)	£5,000,000	£150,000	£100,000	Not available	£8,500,000
Revenue costs (Total)	£5,550,000	£350,000	£300,000	£2,000,000	£3,000,000
Capital costs Per 10,000	£250,000	£50,000	£50,000	Not available	£500,000
Revenue Costs per 10,000	£270,000	£130,000	£1000,000	£150,000	£170,000

Note: Figures in this table have been rounded to the nearest £50,000, except in the final line where they have been rounded to the nearest £10,000.

clearly illustrates two issues about the provision of community mental health services. The first of these relates to the overall costs of adult acute services. The second relates to the accuracy and availability of financial information about such services.

This study confirms the appetite of such hospital beds for capital and revenue. It is scarcely surprising that many Districts complain about lack of funds to develop community services when such large amounts are being invested in hospital services. Those services which make an investment in community services, and especially home treatment services, (such as Community Services 2, 3 and 4), reap the apparent financial benefits of not having to support large numbers of hospital beds. In financial terms, Community Services 2, 3 and 4 offer firm grounds for optimism about the financial viability of community based adult acute services.

Only four out of nine localities which responded were able to provide detailed financial information about the components of their service. The task therefore of providing accurate costs for adult acute services was not achieved by over half of the localities which attempted to do so. We would speculate that this is as much a consequence of services failing to be clear about the needs that they are addressing as it is a consequence of poor financial systems.

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