TALKING POINT

What price the ambulance? A survey of psychiatric day-patient transport

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The organisation of transport for patients in the Health Service has not kept pace with the development of new patterns of care.¹⁻³ In particular, the inflexibility of traditional ambulance services and lack of imagination in seeking alternatives have led to an expensive, inefficient, and, for some groups of patients, non-existent service. In psychiatric practice the most important change has been the growth in day care. In Nottingham, for more than 10 years, this has been mainly for patients who would otherwise be long-stay inpatients, and for the elderly with organic brain disease. In 1973 there were 97 800 day-patient attendances at the Mapperley group of hospitals, which represent a rate of 24 199 per 100 000 catchment population. This was the third highest rate in England and Wales and greatly exceeded the national rate of 5051 per 100 000.⁴ Many of the day patients are physically frail or disoriented, and many show the lack of volition and behavioural abnormalities found in chronic schizophrenia after prolonged institutional care. Several patients have all these handicaps.

The volume of day care and the nature of the population suggested that an investigation of the suitability and costs of existing and alternative forms of transport was merited.

Day-care facilities in Nottingham

All attendances are to day centres or wards in the Mapperley group of mental hospitals, and these hospitals are located in a more fortunate position in relation to their catchment area than most rural and many urban psychiatric hospitals. Mapperley Hospital is two miles from the centre of the city on a main radial route. The other hospitals in the group are St Ann's Hospital, which is a short-stay unit adjacent to Mapperley, and St Francis Hospital, which is a psychogeriatric annexe on the campus of a general hospital, one and a half miles away. The farthest part of the catchment area is eight miles from the hospitals. The day facilities consist of two general day centres and a day unit for industrial therapy, with a total of 330 places, and three psychogeriatric day centres, with a total of 170 places. In addition, short-stay day patients attend many of the wards in the hospitals.

The ambulance services necessary for these patients are not specially scheduled but are provided by the same personnel and the same mixture of emergency and dual purpose vehicles as convey patients to outpatient clinics. The latter journeys have priority and the day-patient trips are made as and when possible.

Method

Using the Nottingham psychiatric case register, a census was made of all patients in

attendance during one week in December 1976. Each patient's age, sex, and address were recorded, as were the number of attendances during the week and the means of transport used. A questionnaire was circulated to the nursing staff of the day centres asking them to specify, for those patients using ambulance transport, the reasons for allocation to it. This took the form of three suggested categories—physical frailty, disorientation, and antisocial behaviour, with provision for specifying other reasons. The nursing staff, who are in practice responsible for decisions on type of transport, were also asked to indicate those patients who would be suitable for a taxi or hospital car service. Finally, comments on difficulties with the existing arrangements were invited.

Day patients using public transport receive reimbursement from the hospital, and the precise cost was obtained. It is more difficult to estimate the cost of one part of the ambulance service within its overall budget because only aggregate statistics are available. An approximate weekly ambulance mileage could be calculated because that part of the service which carried two-thirds of the day patients did not mix them together with other patients. The mileage for these journeys was obtained and an estimate made for the other areas and added to it. The running cost per vehicle mile for all services in the area was obtained. At the time of the study the rate was 92p per mile. This was an underestimate of the true cost as it excluded such overhead costs as those for administration, training, and premises.

A further problem in assessing the reduction in cost, when fewer patients were carried, is that those patients may be more widely scattered with a consequent increase in unit cost and reduction in efficiency—for example, increased lateness. This effect was assessed empirically by mapping all the ambulance patients and indicating separately those "residual" patients who were regarded as unsuitable for alternative forms of transport.

Using this map, the number of ambulances necessary for these patients was calculated, as were the total mileage and cost. Similarly the number of taxis or cars required for the patients who had been considered suitable for them was estimated, together with the total mileage. The latter was based on a complement of three patients per vehicle.

Results

During the week of the survey, 412 patients made a total of 1600 day-patient attendances. As table I shows, 32% of the patients using ambulance transport were over 65. Though those using ambulances had a rather lower frequency of attendance their average weekly cost was almost ten times that of the patients using public transport.

One hundred and thirty four patients were allocated to ambulance transport—80 (60%) because of their physical frailty; 23 (17%) because of disorientation; 10 (7%) because of antisocial behaviour; 12 (9%) because of lack of motivation to attend; and nine (6%) were allocated with no reason given.

94 patients (77%) were judged to be suitable for a car or taxi service if it became available. The ambulance patients were conveniently distributed geographically for a variety of alternative solutions to their transport needs. One hundred and nine lived within three miles of the hospital and 68 within one compass quadrant.

Table II shows the reduction in costs if ambulance transport were restricted to those 40 patients for whom it was considered essential. A maximum of 31 cars would be required for the remaining 94 patients; 15 of these cars would make a round trip of less than five miles. As an example, table II shows the costs of such a service using hospital cars, where the rate of reimbursement to the voluntary drivers was 12p per mile, with a further allowance of 25% for overhead costs. On this basis, the implementation of such a scheme would reduce the annual cost of transport for all 134 ambulance patients from £74 152 to £45 552—a saving of £28 600 (38%).

TABLE II—Estimated costs of a mixed ambulance and hospital car or taxi service

Type of transport	No of patients	Total weekly* mileage	Weekly* cost
Ambulance ..	40	500	£ 460
Hospital cars ..	94	2600	416
Taxis ..	94	1180	295
Total with cars	134	3100	876
Total with taxis	134	1680	755

*See text for methods used in making these estimates.

TABLE I—Day patients: means of transport and estimated costs

Type of transport	Number of patients	Percentage aged 65 and over	Average number of attendances in one week	Total weekly cost	Cost per patient for 1 week
None provided	35	20	4.0	£	£
Public transport	243	12	4.1	279.78	1.15
Ambulance	134	71	3.5	1426	10.64
Total	412	32	3.9	1705.78	4.14

The cost of using taxis for these 94 patients was also calculated, using the current local contract rate of 25p per mile and complement of four passengers per vehicle. Despite the higher mileage rate, both the greater carrying capacity of these vehicles and the fact that the return journey did not have to be considered (except for outlying patients) led to a further reduction to £39 260, a saving of £34 892 (47%).

Discussion

The cost of using ambulances to transport day patients has been shown to be high, even within a compact area where a high-load factor can be achieved. Though the overall mileage rate of 92p might be regarded as an overestimate of the cost of this part of the service ambulances would remain more expensive than hospital cars at half this rate. As any reduction in this part of its work load would occur at the times of day of peak demand, the ambulance service is likely to benefit greatly. There would be several ways in which this might be channelled—for example, there might be a reduction in fleet size or an improvement in efficiency. Experience in Devon has shown that both may be achieved where a hospital car service is well developed.¹

From the point of view of the day centres and the patients themselves, other benefits can confidently be predicted. Time-keeping is a major problem for the existing overstretched service. The most common complaint made by the centres in this study was that in order to meet tight ambulance schedules patients are frequently set down so late and collected so early that up to 50% of patients' planned attendance time is lost.

A co-ordinated transport system, which had established arrangements for the use of voluntary drivers and taxis, would be well placed to cope flexibly with new demands and occasional special needs, such as the geographically isolated case. Where a hospital car service has been used in this way other benefits have been found. Volunteers have befriended patients and provided non-transport services for them and this is of great value for socially isolated and elderly people.

Setting up such a service requires much effort and co-operation between hospital and voluntary agencies. Most hospitals possess voluntary service organisers and there is goodwill within the community which could find expression in such an enterprise. The number of vehicles and drivers required may appear prodigious but it has proved possible elsewhere to obtain greater numbers in smaller towns—for example, Sidmouth.¹ As an interim measure it would be possible to use a smaller number of cars and still make a substantial saving. Temporary shortages of drivers, which will inevitably occur from time to time in a voluntary service, could be overcome by the use of taxis. Therefore, on economic grounds alone the appointment of a part-time transport co-ordinator is justified for any set of psychiatric services which employs day care to the extent which Nottingham does at present.

Though the high volume of day care in Nottingham is unusual, it matches closely the DHSS's current proposals for district psychiatric services.⁵ As other districts move—with varying amounts of haste—towards the recommended style of psychiatric practice, transport will become an increasingly important item in planning. More staff will spend

more time travelling to treat patients in the community, and more patients will attend day centres.

The Department's policy document⁵ does not consider the problem of transport in its analysis of the needs of the new services. In most areas these services do not yet exist on a large scale and an alternative approach would not necessarily lead to redundancies of ambulance staff. Ambulance costs can only be reduced by employing a high load factor and a crowded schedule, which leads to considerable inefficiency in terms of unnecessary patient travel, increased waiting time, and the loss of planned time at the day centres.

Each area should examine its needs in advance and find the best solution, because there will be much local variation. For example, the particularly favourable cost for taxis in Nottingham would not be obtained outside urban areas. A voluntary service should always be economical and efficient, but the really important reward for the effort put into such an enterprise would be the breaking down of barriers which remain between the mentally ill and the community at large.

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Functional budgeting

BMA advice to consultants

The General Purposes Subcommittee of the Central Committee for Hospital Medical Services has approved the following statement on functional budgeting:

The BMA has been considering the implications for the medical profession of the functional budgeting procedure. This has already been introduced in certain areas of hospital activity, notably pathology and radiology departments, on the grounds that these support services are more easily organised from a functional budgeting standpoint.

The Association, through the Central Committee for Hospital Medical Services, has studied the implications of functional budgeting and finds certain disturbing aspects already prevailing, in that the basis on which the budget of pathology and radiology departments is constructed is incomplete and unsound. Secondly, the "budget holder" has been appointed in many of these departments from the ranks of non-medical personnel directly by the area health authority without consultation with the consultants concerned in these departments.

The Association wishes to draw the attention of all consultants to this state of affairs and firmly advises the following principles to be adopted by all consultants in districts where functional budgeting is being introduced:

(a) The introduction of the functional budgeting system in any department should be rejected unless the budgeting information accurately and appropriately reflects the working costs and expenditure of all aspects of the department. Unless this is ensured consultants responsible for the work of a hospital's departments cannot be expected to argue from a sound basis about expenditure and economies.

(b) The direction and control of a departmental budget (which is taken to be the most important implication of the term "budget holder") must be in the hands of consultants—

or a consultant—in charge of that department, division, or section. The utilisation of available finance and in particular decisions arising from constraints put upon a department by shortage of money may have profound effects on patient care. Policy decisions in this connection can logically only be taken by consultants, with their medical training and full knowledge of the medical significance of the departments of which they are in charge.

(c) The day-to-day accounting and stock-taking procedure connected with a functional budget administration should not necessarily be placed in the hands of a consultant. The delegation of this responsibility should be agreed between the area/district treasurer/administrator and the consultant concerned. These daily duties could be undertaken by a technical officer or, better, by a member of the local treasurer's department given this special responsibility.

(d) Any financial deprivation preventing or restricting patient care or investigation shall be communicated to the consultants concerned and responsible for the budget. They, having ensured that full economic efficiency already exists in their departments, are duty bound to communicate the medical consequences of financial restriction to both the employing authority and the consumer.

(e) In the event of financial restriction so limiting the performance of patient care on the part of a budget-holding unit it is the duty of the consultant medical staff concerned to maintain proper standards by restricting the service offered. This, if necessary, would be a matter for the appropriate medical committee to consider.

The attention of all consultants is drawn to this subject and in particular consultants who are members of district medical committees and regional medical committees are strongly urged to consider and put into practice the above recommendations.

The CCHMS will be sending copies of the statement to members of the Consulting Pathologists and Radiologists Groups, consultant members of district medical committees, and regional committees for hospital medical services.