British Journal of Psychiatry (1989), **154**, 620–624

The Glasgow Rehabilitation Survey

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To assess the future requirements for long-stay psychiatric beds, every consultant psychiatrist in Glasgow was asked to consider whether long-stay patients in his or her wards would be fit for rehabilitation and return to the community. For the purposes of the survey, long stay was defined as a single admission of at least six months, but patients with an organic diagnosis who were aged over 65 were excluded. It was estimated that, with rehabilitation, almost a third of the patients surveyed could return to the community, and that, with more participation in self-care, over 15% might be able to manage in a ward or hostel within the hospital. Patients judged fit to return to the community were preponderantly younger patients with a shorter period of in-patient care, and those suffering from a functional psychotic illness.

In Scotland, psychiatric facilities have continued to be dependent on the mental hospital and there is gross under-provision for alternative care in the community (SHHD, 1985). This is due in part to a more conservative view of psychiatric management, but an additional factor is doubtless the failure of community care programmes elsewhere to provide acceptable care for those with chronic incapacitating mental illness (House of Commons, 1985; Weller *et al*, 1986).

Greater Glasgow Health Board (GGHB) has responsibility for the provision of health services for just under one million people in the Glasgow conurbation, and is the largest health authority in the UK. There is hope that additional funding and resources will be invested in mental health as the SHAPE (Scottish Health Authorities Priorities for the 1980s) (SHHD, 1980) recommendations are implemented. SHAPE is the report of a working party set up by the Scottish Health Service Planning Council. The report suggests the need for a more equitable distribution of funds between specialities offering an acute service and those specialities which, in addition, accept a responsibility for continuing care. It further proposes in psychiatry that more facilities should be developed in the community and it emphasises the importance of rehabilitation and resettlement, envisaging co-operation between the National Health Service (NHS), local authorities, and the voluntary organisations – 'joint planning'. The size of the population served by Greater Glasgow Health Board has permitted the establishment of a separate mental health unit, and has provided a unique opportunity to examine the policy for managing the most disabled psychiatric patients.

We report here on a survey, carried out in October 1986, to assess the rehabilitation potential of every psychiatric long-stay patient in the catchment population of GGHB. Data from a census of psychiatric in-patients carried out in April 1987 provided the denominator for some of the data from the rehabilitation survey. It is our intention to repeat the exercise in five years' time in order to assess progress in rehabilitation and the development of planned community-based psychiatric services.

Method

All consultant psychiatrists with responsibility for long-stay psychiatric in-patients in the City of Glasgow were identified and asked to complete a questionnaire (available from MGL) for every in-patient under their care. For the purposes of the inquiry a long-stay patient was any who had had at least six months of in-patient care during the present admission, irrespective of diagnosis or age. Although patients over 65 were included in the survey, those from this age-group who had an organic diagnosis were excluded. The questionnaire requested details regarding hospital, ward, sex, date of birth, date of admission, length of stay in hospital, and diagnosis (ICD-9). Consultants were then asked to evaluate whether individual patients were suitable subjects for discharge to the community, or for more self-care in an area within the hospital, or were unsuitable for further rehabilitation.

To encourage co-operation, the assessment scale was designed to be completed rapidly by those who had a reasonable knowledge of the patients' level of functioning. The consultants were asked to make an estimate of an individual patient's potential to cope in the community, or in a ward or facility where they would be more independent. Consultation with other disciplines involved with the patient's care was recommended, but it was emphasised that completion

of the survey was the remit of the responsible medical officer. This was done because discharge from hospital remains essentially an area of medical responsibility and because junior medical staff, frequently on rotation, may have only a limited experience of the ward. The survey was concerned with the patient's potential within two years and assumed adequate rehabilitation resources within the hospital and support services in the community.

Results

The census indicated that 3122 beds were occupied by patients with mental illness, including the elderly, in April 1987. This is equivalent to 3.2 beds per 1000 of the catchment population served. Although the denominator used is not, in fact, the population at risk for mental illness, since all those under the age of 18 are included, a previous survey carried out by one of us (Bryson, 1987) enables some comment to be made on the demography of the four Glasgow catchment areas. There is a significant excess of single, widowed and divorced males in the age groups 45 and over in the catchment area served by hospital B (see Table I), with a corresponding deficit in the population served by hospital C. In Glasgow as a whole compared with the remainder of Scotland, there is a significant deficit of married, and an excess of single, widowed and divorced adults (aged 16–64 for males, and 16–59 for females). Excluding the elderly with organic diagnoses, 1313 (1.3 per 1000 of the catchment population) of the beds were occupied by long-stay patients, a rate below that for the whole of Scotland in 1979 (1.6 per 1000) but greater than that projected for 1991 (1.2 per 1000) (SHHD, 1985).

Comparison with the rest of Scotland is further complicated by the fact that over 4 million of Scotland's 5.5. million population live in the highly urbanised central belt. One would, therefore, expect rates for admission to be higher for Glasgow than for the rest of Scotland because of the drift of people with serious mental illness towards urban centres. There has been, in addition, a reduction in the occupancy of long-stay psychiatric beds for the populations studied since 1979.

In the rehabilitation survey 1102 questionnaires were returned, representing 84% of the population under consideration. Completed survey forms were obtained relating to 597 males and 502 females, with 3 patients for whom sexual status was not recorded. The majority of those forms which were not returned related to patients over the age of 65, suggesting that a few consultants felt that all patients over 65 were to be excluded.

From the numbers of patients who were surveyed in each hospital, together with the catchment population of each hospital, a residence rate per 1000 of each hospital's catchment population was calculated (Table I). (The catchment areas given for hospitals only became fixed in 1974.) All four hospitals have an almost entirely urban catchment area. The rate of residence in long-stay care in each of the hospitals showed a wide range from 0.77 to 1.64 per 1000, suggesting that uniform criteria for admission and/or discharge from long-term care are not being applied throughout the city. Hospital A had the highest rate of residence. Rates of residence in all other hospitals were compared with it in turn. There was a statistically significant difference in the rates of residence in hospitals B, C and D ($\chi^2 = 16.52$, 68.38, 53.23 respectively; all $P < 0.001$) when compared with hospital A.

Table II shows a summary of the patients' assessed rehabilitation potential in each of the four hospitals. Hospitals estimated that, on average, 33% of patients could return to the community (95% confidence

TABLE I
Rate of residence in long-stay care per 1000 of the catchment population in the four Glasgow psychiatric hospitals

Hospital	*Current catchment population*	*Rate of residence in long-stay care per 1000 of the catchment population*
A	248 000	1.64
B	191 000	1.16
C	208 000	0.77
D	328 000	0.95

TABLE II
Assessment of rehabilitation potential

Hospital	*Patients assessed*	*Rehabilitation potential*			
		Community	*Lower dependency area in hospital*	*No rehabilitation possible*	*Not stated*
A	407	126 (31%)	24 (6%)	256 (63%)	1
B	223	69 (31%)	21 (9%)	132 (54%)	1
C	160	60 (38%)	43 (27%)	57 (36%)	0
D	312	101 (32%)	87 (28%)	122 (39%)	2
Total	1102	356 (32%)	175 (16%)	567 (52%)	4

https://doi.org/10.1192/bjp.154.5.620 Published online by Cambridge University Press

interval = 29.5%–35.0%), representing 387–460 patients throughout Glasgow. When the proportion of patients in each hospital was compared with respect to capacity for return to the community, no significant difference was found ($\chi^2 = 2.50$, d.f. = 3, NS). The proportion of patients thought to be able to manage additional self-care, corresponding to 180–236 of Glasgow's long-stay psychiatric in-patients, was 16% (95% c.i. = 13.7%–18.0%).

Similarly, when the proportion of males and females in each of the three rehabilitation categories was compared, no significant difference was found ($\chi^2 = 1.9$, d.f. = 2, NS). These data are illustrated in Table III.

Consultants were then asked to judge which would be the most appropriate community setting for those patients whom they considered fit for rehabilitation and discharge to the community. Of 356 patients, 175 were thought to require the support of a warden in a sheltered housing complex or a community hostel placement, a group residence staffed by non-professional personnel. This compares with 110 patients said to require some form of group tenancy, either a group home (2–4 tenants), or a cluster flat (individual rooms with simple toilet and kitchen facilities and warden support), and 59 whom psychiatrists felt could cope in normal community accommodation, usually a flat provided by the local authority. For the remaining 15 patients assessed suitable for return to the community, the level of independent living was not specified.

TABLE III

Rehabilitation potential and sex, diagnostic category, age and length of stay of patients

Rehabilitation potential	*Male*	*Female*	*Not available*	*Total*
Community rehabilitation	193 (54%)	161 (45%)	2	356
Lower dependency area rehabilitation	86 (49%)	83 (49%)	3	172
No rehabilitation	314 (55%)	253 (45%)	0	567
Totals	—	—	—	—

Rehabilitation category	*Diagnostic category*						
	Functional psychosis	*Organic psychosis*	*Personality disorder*	*Neurosis*	*Other*	*Not Stated*	*Total*
Community rehabilitation possible	269	21	26	15	21	4	356
Lower dependency area rehabilitation possible	133	17	5	7	10	3	175
No rehabilitation possible	429	87	12	7	30	2	567
Total	831	125	43	29	61	9	1098

Rehabilitation potential	*Age (years)*		
	<45	*45–64*	*65+*
Community	74 (56%)	185 (34%)	90 (22%)
Low dependency ward in hospital	26 (20%)	88 (16%)	60 (15%)
No rehabilitation possible	32 (24%)	276 (50%)	258 (63%)
Total	132	549	408

Rehabilitation	*Length of stay*	
	6 months–5 years	*5 years+*
Community	130 (48%)	226 (28%)
Low dependency ward in hospital	34 (12%)	141 (17%)
No rehabilitation possible	110 (40%)	457 (55%)
Total	275	824

https://doi.org/10.1192/bjp.154.5.620 Published online by Cambridge University Press

The proportion of males and females considered by consultants to be suitable for various community placements was next examined, using the χ^2 test. The proportion of males and females considered suitable for cluster flats, group homes, sheltered housing, ordinary or mainstream housing, and supported lodgings was similar. However, significantly more males were thought to require hostel care in the community ($\chi^2 = 4.8$, d.f. = 1, $P < 0.05$), and halfway housing ($\chi^2 = 8.4$, d.f. = 1, $P < 0.01$). These results indicate a male population more incapacitated, at least in social terms.

The diagnosis of patients judged to have potential for return to the community was considered (see Table III). When elderly patients with dementia were excluded, the overwhelming preponderance of patients remaining suffered from the functional psychoses. The proportion of patients with such a diagnosis in the three categories (community, lower dependency, no rehabilitation possible) was essentially the same, at 76%.

New long-stay patients in Glasgow are being recruited from those with functional illness. Of those patients in hospital for 6 to 12 months (the new long-stay patients), 64% had such a diagnosis, and 80% of those who had been in hospital for 12 months to 5 years also suffered from one of the functional psychoses.

The data collected from those patients whom consultants considered likely to be more able to cope with a hospital environment which makes more demands on them, showed a similar pattern. Of 175 patients 133 (76%) had a functional psychosis, and the largest remaining group had an organic psychosis.

To examine whether age was associated with rehabilitation potential, the proportion of patients in different age groups was compared with respect to the category assigned them by the assessing doctor (community, lower dependency ward, no change). Significantly more patients in the under-45 age group were considered to have potential to return to the community ($\chi^2 = 38.53$, d.f. = 4, $P < 0.001$) (Table III). Of those aged under 45, 76% were judged able to improve their level of functioning; of those aged 45–64, 50%; and of those aged 65 and over, 37%.

The association between length of stay and rehabilitation potential was next examined (see Table III). Only 28% of those patients who had been hospitalised for longer than 5 years were judged able to return to the community, as against 47% of those hospitalised for 6 months to 5 years ($\chi^2 = 36.70$, d.f. = 1, $P < 0.001$), but more patients in the longer stay category were thought able to benefit from a lower dependency area in the hospital.

Length of stay in hospital and age are linked. Obviously, younger patients will be less likely to have accumulated as lengthy a period of in-patient stay as older patients. Therefore, the rehabilitation potential of patients aged under 45 was analysed. Of 74 patients, 47 (60%) from this age group who had been in hospital for less than 5 years were thought to be fit for rehabilitation, compared with 13 of 58 (22%) in this age group who had been in hospital for longer than 5 years ($\chi^2 = 20.52$, d.f. = 1, $P < 0.001$). Thus a shorter length of stay is associated with greater rehabilitation potential, even when the effect of age is discounted.

Discussion

We believe this to be the largest complete survey of the rehabilitation potential of psychiatric in-patients in a discrete geographical area. In the opinion of consultants, almost a third of the patients surveyed would be able to live in the community if the appropriate facilities were present. This figure is very close to McCreadie *et al*'s (1985) estimate of 37% of new (Scottish) chronic in-patients judged able to cope with life in the community. Each hospital produced remarkably similar results here, providing a measure of face validity for the method used. Reliability studies might have improved the quality of data collection but, in view of the scale of the exercise, it would have been difficult to arrange and might have reduced the numbers of consultants prepared to participate in the study.

The data suggest that approximately 400 patients throughout Glasgow might return to the community. Almost 50% were thought to require either sheltered housing or hostels, and a further 30% a group tenancy or cluster flat. Facilities of this nature in Glasgow are wholly insufficient to meet this need, and community care for discharged long-stay psychiatric patients is usually placement in local authority housing with support by hospital staff. It would be interesting to know why consultants envisaged that on-site supervision would be important for such a large proportion of the discharged patient population.

In the present survey, hospitals fell into two groups regarding their view on whether patients could undertake more of their own self-care in hospital: two hospitals judged that less than 10% of patients were in this category and two that the figure was less than 30%. The discrepancy may relate more to the perception of individual consultants about whether this is a desirable approach to psychiatric management than to real inter-hospital differences between the patients. However, Wykes (1983), and more recently Goldberg *et al* (1985), have demonstrated that a very disabled group of chronic psychiatric in-patients is able to benefit from hostel-type accommodation in or adjacent to the hospital, and staffed by nurses. In addition, some of this group of people may be able to live outwith hospital if an appropriate community can be created for them (Wing & Furlong, 1986), i.e. a less stigmatising form of asylum.

McCreadie *et al* (1985) found that younger patients with a shorter duration of in-patient treatment were more likely to return to the community following admission to long-term psychiatric care. There were similar findings in the present survey. Another

finding of McCreadie's group (McCreadie *et al*, 1983) was that the patients most likely to remain in the long-term wards of Scottish psychiatric hospitals were schizophrenic, although organic mental disorders (in the under-65s) formed a higher proportion of first admissions to long-term care. In the present survey a diagnosis of this group of functional psychosis (the vast majority of patients are likely to be schizophrenic) was, in addition to age and length of stay, associated with potential for rehabilitation.

An interesting feature of the present survey was the differing rates of residence for patients in long-stay care in each of the hospitals. While there are demographic differences in the catchment populations served by each of the hospitals, they all offer a service for a mainly urban population, namely a large sector of the City of Glasgow. Although the catchment population statistics can only be related with some certainty to the period from 1974 onwards, the data suggest differing criteria for admission or discharge throughout the city. It is tempting to think that the availability of beds is one of the main factors in determining admission to long-stay care. This, in turn, is likely to reflect the availability of community support and accommodation services, together with the availability of hospital-based services.

The number of patients judged unsuitable for rehabilitation was 567. This would be an interesting population to examine in more detail. The main association with poor rehabilitation prospects is length of stay as an in-patient. It is possible that a more gradual and graded approach towards rehabilitation might enable a proportion of these patients to function adequately in the community with support.

The results in this survey of long-stay psychiatric in-patients in Glasgow, relating to a catchment population of almost 1 million people, are, therefore, similar to those of previous work in Scotland (McCreadie *et al*, 1985) involving newly admitted long-stay in-patients. Glasgow, and Scotland, have been slow to implement programmes of community care as set out in the SHAPE report (SHHD, 1980) and *Mental Health in Focus* (SHHD, 1985). This survey shows that over 400 patients in Glasgow could be living in the community, provided that the Health Board and the local authority make adequate provision for community facilities.

Acknowledgements

Thanks are due to Mrs S. Neilson and to Consultant colleagues throughout the city.

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