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Use of Hospital Services by Chronic Schizophrenics in the Community

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SUMMARY A sample of chronic schizophrenic patients from an urban community, living outside hospital, were reassessed on the Present State Examination one year after a first examination. During this time their use of psychiatric hospital services was recorded. One hundred and two patients had satisfactory interviews on both occasions. These could be divided into Heavy, Medium and Light users of services, the numbers being 8, 14 and 63 respectively, while 17 only saw their general practitioners or had no treatment. A ranking of the sample in terms of severity showed no correlation with use of these services; second PSE scores were not significantly different from the first. Heavy and Medium users of hospital services were in contact with Social Services to a significantly greater extent than other patients.

Introduction

This paper describes research undertaken in Salford concerned with evaluating a monitoring system for chronic schizophrenic patients; the operation of this system and method of deriving the sample have been described by the present authors in a previous article (Freeman, Cheadle and Korer, 1978).

The sample consisted of schizophrenics under the age of 65 who were living outside hospital and had been in contact with some form of psychiatric service during 1974. It was drawn in the latter part of 1975 and interviews started in February 1976, using the Present State Examination (PSE) (Wing, Cooper and Sartorius, 1974). These initial interviews were completed by August 1976 and an analysis of the clinical data relating to the patients has been reported by Cheadle, Freeman and Korer (1978). At the same time, the social situation of the patients was examined by questionnaire; the results of this investigation have been reported by Korer, Freeman and Cheadle (1978).

Method

After completion of the PSE and social interviews, the sample was divided into two groups, which were matched for clinical condition. Then, for a twelve-month period, all contacts of patients in both groups with any form of hospital psychiatric service were recorded, but the monitoring process was applied only to the index group. At the end of this period, the whole of the sample as far as possible was re-interviewed, using the PSE, if the first interview had been of satisfactory quality. This enabled an assessment to be made both of change over the twelve-month period and of the current state of the patients, so far as their clinical condition was concerned. The comparison of the index and control groups will be reported separately.

Data obtained from the PSE on this second occasion were analysed, as they were at the outset, into four syndrome groups (Cheadle, Freeman and Korer, op cit); these were: Schizophrenic and Paranoid (S and P); Manic and other psychoses (M and O); Psychotic (P) and Neurotic (N). Where it was possible to re-interview the patient, and where both interviews were of adequate quality, an assessment could be made as to whether each member of the sample had improved, remained the same or deteriorated during the relevant period. However, the sample became depleted at this

latter stage for four reasons: (a) Subjects had moved and could not be traced again; (b) they refused to be re-interviewed; (c) they had died or (d) the second interview was not of adequate quality. If any had to be discarded for one of these reasons, their matching patients also had to be discarded. In the end, 102 patients were left for whom both first and second interviews had been adequate—in themselves and in the matching patients.

Thus a large part of the original sample was lost, but the loss was for several reasons (as above) and there are no clear grounds for believing that it was not random for most variables. The lost patients consisted of 43 men and 45 women; the average age of the original sample was 45.5 and of this second one 46.6. The clinical condition of those who had to be discarded cannot be commented on, however, because one of the reasons for discarding cases was that there was not sufficient valid information about them. But on the basis of the data collected at the first interview, those who refused to be interviewed a second time were no more or less ill than the rest of the sample. Some refused because their illness was further in the past than it had been the first time and others because they were suspicious and did not see why they should be pestered again.

The original inter-correlations between the four syndrome groups were highly significant and positive; that is, the most ill patients tended to have scores in all four groups. It therefore seemed possible to try and find some way of ranking the sample for severity of illness and to do this, an order of severity had to be assumed among the four syndrome groups. The most generally disabling symptoms were considered to be S and P and the subject with the highest score in that group was regarded as the most ill and therefore ranked (1). All others scoring in this group were then ranked accordingly.

TABLE I

Reasons for and numbers of the sample who had to be discarded

1st interviews not adequate	1st interviews adequate		1st and 2nd interviews adequate in subject and match
	2nd interviews not adequate etc.	2nd interviews adequate but match's not	
	Not adequate 2 Refused 15 Not traced 10 Died 3		
33	30	25	102

TABLE II

Rating scale to decide degree of service use of members of the sample

	In-patient		Day-patient		Out-patient appointments		Injections	
Service	Days	Score	Days	Score	Appointments	Score	No.	Score
	365	8						
Heavy	241–364	6	241–365	3	9+	2	36+	2
Medium	126–240	4	126–240	2	5–8	1	18–35	1
Light	1–125	2	1–125	1	1–4	0.5	1–17	0.5

Those who had no score in the S and P group were ranked on their M and O score, those having no score in either of the first groups of syndromes were ranked on their P score, and the rest on their N score alone.

Once this ranking had been obtained, it became possible to use it to compare patients' clinical condition with their use of hospital services. The latter were assessed under four headings: in-patient care (in days); day-patient care (in days); out-patient appointments; and injections of depot neuroleptics. Since patients can make use of different services to different degrees, a rating scale was devised which weighted the use of each category in the form of a score; when these category scores were totalled together, an overall score was produced. These scores were divided into Heavy (6–8), Medium (3–5.5) and Light (1–2.5). To score zero, it was necessary for a patient not to have used any specialist psychiatric service, though he might have been under the care of his general practitioner.

Results

(a) *Changes in PSE scores*

In respect of those patients who had a valid PSE score at both the beginning and the end of the survey period, and whose matching patients also had valid scores (numbering 102), the second scores were analysed into syndrome groups, in the same way as the first ones. Table III shows the difference between the two PSE interviews in terms of whether the scores on each syndrome group had improved, become worse or remained the same.

TABLE III

Numbers in each syndrome group and whether they changed between the two interviews

(The groups are not mutually exclusive)

Change in score	S & P	M & O	P	N
Improved	11	28	22	55
Worse	10	24	7	28
Same score both times	3	8	2	5
No score both times	78	42	71	14
	102	102	102	102

In many cases, there was no score on either occasion and therefore no room for improvement; such instances are therefore listed separately under 'no score either time'. This, however, tells us very little about individuals because minor symptoms can disappear only to be replaced by more troublesome ones. It is for this reason that we felt the necessity, however arbitrary, to find a means of ranking the sample in some overall way. We could then compare the individual's first and second ranks and so discover whether, compared to the rest of the sample, he had improved his position or not. On the whole, nearly as many had improved (45) as had deteriorated (53) and a few (4) had the same rank both times. Patients may be suffering from a combination of symptoms from the four syndrome groups; the numbers of these are shown in Table IV.

(b) *Use of services*

Only eight of the sample were found to be Heavy service users; five of these had been admitted to hospital shortly after the sample was drawn and had remained there throughout the survey period.

Medium service users (14) tended to be so by virtue of being day patients for a large part of the year. There were 63 Light users; they were getting injections of long-acting neuroleptics with out-patient appointments. Those obtaining treatment only from their G.P.s or having none at all numbered 17.

Comparison of the rank order of clinical condition with that of service use shows little difference. The median rank would be 51.5, while the average rank of the Heavy users was 41.6, Medium 42.3, Light 53.9 and zero 52.3. When the four groups are compared statistically by the use of the Kruskal-Wallis one-way analysis of variance, $H = 0$ which is not significant.

A small number of subjects in the index group were noted to have attended late for appointments or to have missed the occasional one. We could find no difference in this group, compared to the rest of the group for age, sex, service use, change in clinical condition, age at

TABLE IV

Numbers in the sample and combinations of syndromes from which they suffered

The percentage of the original sample at the first interview and of the depleted sample at second interview are also given.

No.	S & P	M & O	P	N	This int.	First int.
6	*	*	*	*	5.8	8.3
1	*	*	*		1.0	1.3
6	*	*		*	5.8	4.5
5		*	*	*	4.9	6.4
2	*			*	2.0	1.3
23		*		*	22.5	22.9
2			*	*	2.0	2.5
1		*	*		1.0	0.0
2		*			2.0	1.3
33				*	32.5	31.8
21					20.6	17.8
102					100	
	*		*	*	Nil	1.2
	*				Nil	0.6
						100

first admission or whether they were working or not.

The number of patients who had been in contact with a social worker during the survey period was also recorded; these consisted of 11 Heavy or Medium users (38 per cent of the total number), 12 Light users (62 per cent) and 6 zero users. Of those not in contact with a social worker, 11 were Heavy or Medium, 51 were light and 11 were zero users. This distribution of contact with social workers is significantly different from a random one in that the number of Heavy and Medium users is about 5 higher than chance; ($\chi^2 = 8.26$, with two degrees of freedom; $P < 0.02$). Contact with social workers was not included in the scoring of use of hospital services because sufficient data were not available to judge the extent of the contact. However, the distribution of contacts suggests that social work activities were more likely to be an accompaniment to hospital services than a substitute for them.

Discussion

In this study, the instrument used to assess clinical condition (the PSE) has been taken out of its original context to some extent. It was designed to assess present psychiatric state within the last month, and we must not assume that we have any measure of 'average' state throughout the twelve-month period under scrutiny. Neither was it designed to compare one person with another in any quantitive sense, and it might be thought that we have taken a liberty in trying to make it do so. What constitutes a severe illness is debatable, especially in relation to psychosis, where from the patient's point of view he may not be ill at all. However, some operational way of assessing change was needed in this investigation, and the best available instrument was used in what we hope was a reasonable way. For statistical reasons, this has resulted to some extent in the illness being treated as a dimension, where there should rather be discrete categories—a problem discussed by Kendell (1975). Whilst there seems to be little doubt that there is a dimensional aspect to neurotic illness, the nature of psychosis is far more controversial from this point of view.

No differences were found in clinical condition according to extent of service use, and

this could conceivably be interpreted as meaning that most of the sample were getting the right degree of help. By our operational definition, the majority of the sample were Light service users. However, this whole subject is tinged with the chicken and egg problem: whether patients are Light service users because they are less ill to start with, or whether the more ill are Light service users because it has been found that they do not respond to more treatment. The question cannot be answered on the basis of these data. Likewise, those who are less ill but in hospital may be so precisely because they are relatively well in hospital, yet would quickly break down in the community. Available data on use of social services suggest that this follows the same trend as that of hospital services; there was no evidence to support the view that one compensates for the absence of the other—at least for this particular diagnostic group.

It was disappointing not to get any clue from this particular study as to how potential drop-outs from care may be identified. But since failures of contact with prescribed services actually proved to be minimal during the period of the investigation, it was only possible to look at a group who were rather less reliable than the rest, in that they missed or were late for occasional service contacts.

The main finding is one of no clinical change over the year of study in the sample as a whole, and this must emphasize the chronic nature of the condition involved, as well as the fact that most of the patients were on maintenance neuroleptics, which were fairly successful in preventing further acute relapses. At the same time, the analysis of comparative levels of service use shows that the overwhelming majority of the sample were making relatively small demands on psychiatric services. Since our previous data (Cheadle, Freeman and Korer, op cit) indicated that these patients were generally free of active psychotic features, though often handicapped by neurotic symptoms or personality problems, it may be suggested that the control of overt schizophrenic illness is a relatively economical exercise with current therapeutic methods, provided that an integrated system of mental health facilities exists—as it does in the area where this study was carried out. However, the chronic handicaps are another matter.

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