The outcome of targeting community mental health services: evidence from the West Lambeth schizophrenia cohort

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Abstract

Objectives—To report outcome of targeting community mental health services to people with schizophrenia in an inner London district who had been shown, one year after discharge, to have high levels of psychotic symptomatology and social disability but very low levels of supported housing and structured day activity.

Design—Repeat interview survey of symptoms, disability, and receipt of care four years after index discharge.

Setting—Inner London health district with considerable social deprivation and a mental hospital in the process of closure.

Subjects—51 patients originally aged 20–65 years who satisfied the research diagnostic criteria for schizophrenia.

Main outcome measures—Contact with services during the three months before interview, levels of symptoms (from present state examination), global social disability rating.

Results—65% (33/51) of the study group had been readmitted at least once in the three years between surveys. Recent contacts with community psychiatric nurses and rates of hospital admission increased (8 at one year *v* 24 at four years, $p < 0.01$; 5 *v* 13, $p < 0.06$). Conversely, fewer patients were in contact with social workers (17 *v* 7, $p < 0.03$). Proportions in supported housing, day care, or sheltered work did not change. Unemployment rates remained very high. A considerable reduction (almost a halving) in psychiatric symptoms was observed, but there was no significant change in mean levels of social disability.

Conclusions—The policy of targeting the long term mentally ill resulted in significant increases in professional psychiatric input to the cohort but failed to improve access to social workers or suitable accommodation. Improvements in social functioning did not follow from reductions in the proportions of patients with psychotic mental states. Social interventions are likely to be crucial to achieving the *Health of the Nation* target of improving social functioning for the seriously mentally ill, as improving mental state seems in itself to be insufficient.

Introduction

Community care for mentally ill people remains controversial after three decades of mental hospital bed closure.¹ Few systematic data exist on the fate of acutely ill patients since the policy of deinstitutionalisation was adopted in Britain,² especially psychotic people in inner cities, who are most likely to experience abandonment and homelessness.³ While a recent large scale study in an outer London district reported relative optimism,⁴ a study in inner London of schizophrenic patients one year after hospital discharge showed that 55% had psychotic mental states and 22% were functioning socially at very poor or severely maladjusted levels.⁵ Most were in touch with health care services but there was little targeted provision, especially of day care or supported accommodation.

Following this study the mental health service in

West Lambeth implemented several improvements in the care of seriously mentally ill people by redeploying existing resources. The total numbers of community psychiatric nurses in the adult services changed very little (20 in 1989 and 19 in 1992), but their allocation and working practices were altered. At the time of the initial study over half of the community psychiatric nurses were either part of the long stay resettlement programme or mainly providing counselling services. Those nurses who were working with chronic "revolving door" patients had large case loads, with no priority being given to the long term mentally ill. Three years later twice as many community psychiatric nurses were working with these patients, each one having a smaller case load. New community teams were in the process of implementing a case management approach^{6,7} with assertive follow up of high priority cases held on a case register.⁸ In addition, consultant catchment areas and attendant resources, originally allocated purely on raw population data, were weighted to reflect measures of social deprivation, a better predictor of use of psychiatric services.^{9,10} To evaluate the impact of these changes, a further follow up of the original cohort patients from West Lambeth was undertaken four years after the index discharge. Receipt of services, symptoms and social functioning were measured with the original instruments.

Patients and methods

STUDY AREA

The service studied provides specialist mental health care to the seventh most underprivileged district health authority in the United Kingdom,⁹ which has unemployment rates above 20%. The 1991 census reported a population of 144 000, 18.5% being Afro-Caribbean.

STUDY GROUP

The original study group consisted of the 90 psychiatric inpatients in West Lambeth aged between 16 and 65 years with a diagnosis of probable or definite schizophrenia (on research diagnostic criteria¹¹ screening of case notes) discharged between 1 November 1987, and 30 April 1988. One year later, four patients had died (three by suicide); 58 patients were interviewed directly and information was obtained from a carer in a further 19. The present study group for interview included the 58 patients who were interviewed face to face in the one year follow up and case notes were traced for the patients whose carers were interviewed. As before, patients were interviewed in their own homes where possible, and if it was appropriate a carer was seen. If patients refused to be interviewed a carer was seen with the patient's permission. Interviews took place between November 1991 and April 1992.

INFORMATION COLLECTED

As in the first study, the present state examination (a standardised psychiatric examination of patients interviewed directly)¹² was used to assess current mental state. The World Health Organisation's disability assessment schedule¹³ gave a measure of each patient's global social functioning, based on assessments of behaviour, social performance, and any modifying

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social factors. A questionnaire derived from the treatment outcome study questionnaire developed by the Colorado state treatment outcome programme¹⁴ was also used. This covered demographic details, accommodation, employment, finances, home activities, legal difficulties, use of medication, service receipt, and patients' wishes for services they were not receiving. All assessments were carried out by one of the authors (AC).

ANALYSIS

Data from the present state examination were initially processed with the Catego program,¹² and all data were analysed with the Statistical Package for the Social Sciences PC+.¹⁵ Statistical tests used included the McNemar test for changes in dichotomous variables, Spearman's rank correlation, and paired *t* tests. Changes at the 5% probability level were considered statistically significant.

Results

RESPONSE

Of the 58 patients who were interviewed at the one year follow up, 44 were interviewed in person at four years and a carer was seen for a further seven. Two patients had died (one of these by suicide), four refused to cooperate, and one was untraceable, giving a response rate of 88%. Thirty seven of the 51 respondents were still living in the district, and only three had moved out of London. Recent case notes of 15 of the 19 patients whose carers were interviewed were traced; no deaths were recorded in these.

DEMOGRAPHIC DETAILS AND PSYCHIATRIC HISTORY

Thirty (59%) of the respondents were male. The mean age at the four year follow up was 40.4 (range 20-65) years and 28 (55%) were single compared with 33 (65%) at one year follow up. Table I gives details of ethnic origin and history of illness up to four year follow up. Thirty three patients (65%) had been readmitted at least once during the three years after the original survey and 24 (47%) had been readmitted in the year before the second interview.

ACCOMMODATION

Table I also gives details of the type of accommodation at four year follow up. At the first interview no patients were in hospital and 11 (22%) were in specialised housing (a hostel, group home, or residential home). No patients at either time had been homeless or in prison in the three months preceding the interview. Of the 36 who were neither in hospital nor in specialised accommodation at the second interview, 16 (45%) were living alone.

EMPLOYMENT AND FINANCES

Forty three people (84%) were unemployed at the four year follow up, 39 (76%) for at least one year and 35 (69%) for at least five years. Seven patients were in paid employment (two full time) and one person was in sheltered employment (at both interviews). The unemployment rate was almost identical at the two interviews; over 60% of patients depended on social security benefits for all their income. Half (24/48) of those receiving benefits at the second interview were receiving the same or lower amounts of benefit income in unadjusted money terms than at the first interview.

SERVICE USE

Table II shows receipt of health and social services during the three months preceding each follow up. Five patients (10%) were seeing only their general practitioner. Fifteen patients who did not have contact with a social worker said they would like to have one,

particularly for help with managing debts, benefits, and housing.

Thirty eight patients had not been inpatients during the three months before interview. With structured day occupation defined as employment or attendance at any day centre or day hospital for at least one half day in the past three months, 17 (45%) were occupied at one year follow up and 21 (55%) at four year follow up.

DRUG TREATMENT

Forty seven people (92%) were being prescribed psychotropic drugs at the four year follow up, compared with 40 (78%) at one year ($p < 0.01$). There was a small increase in the numbers prescribed oral or depot neuroleptic drugs and anticholinergic drugs and a significant increase in the numbers prescribed antidepressants (1 (2%) *v* 6 (12%)) and mood stabilisers (2 (4%) *v* 11 (22%)) ($p < 0.005$).

CLINICAL STATE

Table III gives details of patients' clinical states at the follow ups; it shows that the proportion of patients with psychotic mental states was approximately halved (McNemar $p < 0.02$). Table IV shows the global social adjustment score at follow ups. Mean global disability score did not differ significantly on paired *t* testing. There was some regression towards the mean, with those who had been functioning poorly tending to improve and those who had been functioning well tending to worsen. Change in the numbers of symptoms of delusions and hallucinations was not significantly correlated (Spearman *r*) with change in social functioning.

Mean global social disability was significantly associated with psychiatric inpatient admission in the three months and the year before interview (two tailed *t* test $p < 0.005$). Provision of other services was not related to current level of disability, and neither the global disability score at one year follow up nor the change in disability score predicted service use at follow up.

Discussion

The long term outcome of schizophrenia is complex, showing varying patterns of fluctuation in symptoms and disability over time as a function of interaction

TABLE I—Ethnic origin, history of illness, and type of accommodation of schizophrenic patients interviewed four years after discharge

Characteristic	No of patients (n=51)
Ethnic origin:	
Afro-Caribbean	20
Asian	3
White	27
Other	1
Duration of illness (years)*:	
<5	5
6-10	19
11-20	18
>21	9
Longest ever stay in mental hospital:	
0-3 months	17
3-6 months	15
6-12 months	11
>1 year	8
Accommodation:	
Hospital	5
Specialised	10
Council	24
Other rented	7
Owner occupied	5

*From first psychiatric admission to interview at four years after index discharge.

TABLE II—Numbers of patients (n=51) using services at least once in three months before interview

Service	Follow up		P value*
	One year	Four years	
Health:			
Inpatient (psychiatric)	5	13	<0.06
Outpatient (psychiatric)	35	30	0.12
Day hospital	7	5	0.73
General practitioner	34	26	<0.06
Community psychiatric nurse	8	24	<0.01
Other nurse	14	6	<0.04
Occupational therapist	4	2	0.63
Any of the above	50	49	1.00
Social:			
Social worker	17	7	<0.03
Day care†	11	13	0.75

*McNemar test.

†Day centre, drop in centre, or industrial therapy.

TABLE III—Mental state of patients interviewed directly one year and four years after discharge (n=44)

Mental state at four years	Mental state at one year*				Total
	Psychotic	Neurotic	Other	None	
Psychotic	14	2	0	0	16
Neurotic	4	0	1	2	7
Other	7	3	6	1	17
None	1	0	2	1	4
Total	26	5	9	4	44

*Present state examination diagnostic class (by Catego program).

TABLE IV—Global social adjustment scores at one and four years after discharge in 51 schizophrenic patients

Global social adjustment at four years	Global social adjustment at one year*			Total
	Excellent/good	Fair/poor	Very poor/severe maladjustment	
Excellent/good	11	9	1	21
Fair/poor	7	10	4	21
Very poor/severe maladjustment	0	6	3	9
Total	18	25	8	51

*WHO disability assessment schedule global disability rating.

with the social environment.¹⁶⁻¹⁸ The current study has followed up a group consecutively discharged from an inner city catchment area service, measuring symptoms, circumstances, and social disability at one and four years after index discharge. Previous findings of high morbidity but limited community support⁵ and poor service targeting¹⁹ contributed to the local policies giving priority to care of long term seriously mentally ill patients in the community, as well as to resettling long stay patients. These changes resulted in increased contacts with specific psychiatric services, mainly through increases in hospital admission and contact with community psychiatric nurses, but input from other nursing services, general practitioners, and social workers was reduced. The sample in this study is no longer representative of all discharges of people with schizophrenia within the catchment area, as only those individuals who were interviewed in person in the first study were followed up again. Patient characteristics and length of illness did not differ significantly in those followed up and those whose carers were interviewed, but five patients with poor social functioning were lost to follow up. The results set out in this paper are the outcome of a group biased towards better social outcome, suggesting that the picture for the whole cohort may be less optimistic.

PSYCHOTIC SYMPTOMS

The observed reduction in psychotic symptoms cannot be explained by a "burn out" of symptoms with time as symptom change was not associated with length of illness. However, the reduction may be attributable to increased contact with psychiatric services. Increased admission rates may be partly due to closer supervision and monitoring by community psychiatric nurses, leading to earlier detection and referral to hospital. This agrees with the findings of the previous study,⁵ in which the district with the community oriented service had higher admission rates, implying that such a team can facilitate hospital admission in the absence of other community services to deal with relapse or declining social functioning. This contrasts with the stated goal of many community services, including the one studied—namely, avoiding admission.

Prescribing increased, as presumably did acceptance of all forms of psychotropic drug treatment. In particular, more patients were prescribed antidepressants and mood stabilisers, which may reflect better detection of concurrent depression or change in primary diagnosis. As depression rather than ongoing psychotic symptoms seems to best predict suicide in schizophrenic patients,²⁰ changed prescribing might influence the suicide rate, which has been targeted for reduction in *The Health of the Nation*.²¹ The apparent reduction in suicide rates compared with the earlier follow up period is encouraging, although it remains unclear whether this is due to improved vigilance and contact rates or reduced psychosis and depression because of a higher prescription rate of psychotropic drugs.

SOCIAL FUNCTIONING

Despite the reductions in psychotic symptoms,

mean social functioning did not change, although some regression towards the mean did occur. This dissociation between symptoms and social functioning in the absence of service change²²⁻²⁴ has been recognised.²⁵ Some studies, however, have suggested some relation between symptom severity and social outcome, at least in specific areas of functioning,⁴ but interventions that benefit mental state have not been causally linked with social functioning. Even when programmes of active social rehabilitation are in place, there may be considerable delays between treatment and improvement in social functioning,²⁶ and a core of very dependent patients will persist.²⁷ The measured pattern serves as a warning that health service targeting alone may well not be sufficient to improve social functioning, which is another major *Health of the Nation* target for mentally ill people.

The relatively poor social outcome in this group may be partly determined by the high levels of social deprivation in the district.^{28,29} Unemployment rates were high compared with those in other studies,³⁰ and most sheltered workshop places were permanently occupied by former long stay patients. Patients tended to be socially isolated and to lack a confiding relationship, and many were financially poorer than three years previously. Only a minority were in supervised or specialised housing.

The greatly reduced contact with social workers is worrying. Fewer patients were allocated a case worker in the community or followed up by hospital based social workers after discharge. This was partly accounted for by social workers' substantially increased responsibilities for child care and partly by the disruption caused by reorganisation. These patients still regarded access to a social worker as particularly important as they were preoccupied with finances and accommodation. The low rate of contact with social workers raises concerns in the context of their new role as case managers, organising and coordinating services for long term mentally ill people.

The reduced contact with general practitioners indicates a need for closer liaison with primary care so that both the psychiatric needs and the considerable physical needs of chronically mentally ill people³¹ can be met. General practitioners tend to perform mental state assessments and adjust drug regimens less often than for long term physically ill patients,³² and some have expressed a wish for sharing care with psychiatric services.³³

In conclusion, this study has shown that deliberately targeting care to long term mentally ill people in a deprived inner city area resulted in increased receipt of services—in particular, hospital admissions, care by community psychiatric nurses, and prescription drugs. The outcome in the patients studied was a reduction in psychotic symptoms but no change in mean social

Clinical implications

- In 1991 a study in inner London found that one year after discharge half of a cohort of patients with schizophrenia had psychotic mental states and over a fifth showed poor social functioning
- Following this, the local mental health services were reorganised to concentrate on this group of patients
- Three years later, psychotic symptoms had almost halved in the cohort but there was little change in social functioning
- Comprehensive approaches to treatment are needed to improve the care of mentally ill patients in the community

functioning, underlining the independence of clinical and social outcome in schizophrenia. High rates of unemployment and inactivity persisted, and the numbers in specialised accommodation did not change. *The Health of the Nation* emphasises that improving services can do much to reduce the harm that mental illnesses can cause and outlines targets for improving both health and social functioning of those suffering from a mental illness.²¹ These targets will not be achieved with patterns of community care such as those found in this study, in which very few patients are receiving coordinated packages of social care to address poor social functioning. There is a need for comprehensive treatment programmes involving long term social activity as well as assertively delivered medical care.

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Nocturnal blood pressure in normotensive subjects and those with white coat, primary, and secondary hypertension

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Abstract

Objective—To compare the mean nocturnal blood pressure of patients with various forms of renal and endocrine hypertension with that in patients with primary and white coat hypertension, and normal blood pressure.

Design—Ambulatory monitoring of blood pressure over 24 hours in a prospective study.

Setting—Two German centres for outpatients with hypertension and kidney diseases.

Subjects—176 normotensive subjects, 490 patients with primary hypertension including mild and severe forms, 42 with white coat hypertension, 208 patients with renal and renovascular hypertension, 43 with hypertension and endocrine disorders, and three with coarctation of the aorta.

Main outcome measures—Fall in nocturnal blood pressure.

Results—Blood pressure in normotensive subjects fell by a mean of 14 mm Hg (11%) systolic and 13 mm Hg (17%) diastolic overnight (2200 to 0600). The falls in patients with primary and white coat hypertension were not significantly different. In all patients with renal and renovascular hypertension, however, the fall was significantly reduced

(range of fall from 3/3 mm Hg to 7/9 mm Hg). In patients with hypertension and endocrine disorders the pattern of night time blood pressure was not uniform: patients with hyperthyroidism, primary hyperaldosteronism, and Cushing's syndrome had significantly smaller reductions in blood pressure (6/8, 4/7, 3/6 mm Hg, respectively). In patients with pheochromocytoma the mean night time blood pressure increased by 4/2 mm Hg. In patients with hypertension, primary hyperparathyroidism, and unoperated coarctation of the aorta the falls in blood pressure were normal.

Conclusions—In normotensive subjects and those with primary hypertension there is usually a reduction in blood pressure at night. In all renal forms of secondary hypertension and in most endocrine forms the reduction in blood pressure is only a third to a half of normal. Patients with primary hyperparathyroidism and unoperated coarctation of the aorta show a normal reduction.

Introduction

After the description by Zadek in 1881 of a diurnal variation in blood pressure¹ Howell later observed the

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