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The Clinical Evaluation of a New Community Psychiatric Service Based on General Practice Psychiatric Clinics

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A new community psychiatric service in Nottingham based on general practice clinics was compared with a conventional hospital-orientated model. Despite providing treatment for an inner-city population of significantly greater social disadvantage, the community service was associated with similar levels of symptom morbidity as assessed by the CPRS and the SFS. It also involved greater use of day-hospital facilities, more extensive multidisciplinary care, and a commitment to longer-term follow-up of chronically ill patients. Such a model is offered as a basis for future developments of urban community psychiatric services.

Recent studies have highlighted the increasing co-operation between psychiatrists and general practitioners in the delivery of community-based psychiatric services (Strathdee & Williams, 1984; Pullen & Yellowlees, 1988). A number of tangible benefits have already been identified, including reduced admission rates and bed usage, particularly of those patients suffering from the affective and personality disorders (Williams & Balestrieri, 1989), improved liaison (Tyrer *et al*, 1984*a*), and better consumer satisfaction (Tyrer, 1984; Ferguson, 1987). It is uncertain however, if these developments have yielded direct benefits to patients in terms of reduced morbidity, and there have been allegations that although attractive to psychiatrists, the new services have led to the neglect of the more seriously ill, by denying the patient the benefits of hospital-based treatment where this would have been more appropriate (Wallace, 1987; Murphy, 1987; Dear & Wolch, 1987). This study examines the impact of a new, community-based psychiatric service based on general practice clinics in respect of symptom morbidity, social functioning, and patient satisfaction, by comparing it with a more conventional, hospital-orientated psychiatric service.

Method

The community service has been described in previous reports (Tyrer, 1984; Tyrer *et al*, 1984*a*). It has as its core the devolution of out-patient work into primary care in order to offer patients combined care in a familiar environment. Frequent contact was made between general practitioner and psychiatrist in order to foster a common approach to therapy and dissemination of knowledge. The service was augmented by a day hospital and other community facilities including a drop-in centre largely run by the patients themselves. The psychiatric team operated within a multidisciplinary framework and consisted of community nurses, day-hospital staff, social workers, and psychiatrists. Patients were seen either at their family doctors' surgeries or at their homes, but were also admitted to an in-patient unit at Mapperley Hospital or to the day hospital if their clinical condition so indicated. The work of the team however, was focused on minimising in-patient treatment.

In the hospital-based service, referred patients were invited to the out-patient department, and communication with the primary-care team was principally by correspondence. No active attempt was made to bring the service closer to the client group, and although domiciliary visits were carried out by psychiatrists this was done at the request of the general practitioners only in an emergency. The hospital team was essentially similar in structure to the community team, and also worked along multidisciplinary lines. There was an equal opportunity for each of the services to admit to the in-patient units and day hospital when required. In seeking resolution of clinical problems however, the orientation of the team was towards the utilisation of hospital resources, with no specific attempts to involve the primary-care team.

While the acute psychiatric services in Nottingham (including the city centre) have been sectorised, Nottingham has a number of cross-district specialities including psychogeriatrics, psychotherapy, child and adolescent units, and a rehabilitation department; these were excluded from this investigation. At the outset of this study the rehabilitation department was in the early phases of development and provided a service to less than 1% of the patient population. The bulk of service provision for the chronically disabled was therefore supplied by the acute services. Overall, the total population for which psychiatric services were provided was around 350 000. Approximately 108 500 lived in areas served by the community psychiatric teams.

The Nottingham Psychiatric Case Register was used to identify a cohort of patients from either service who had been treated during the calendar year 1983. They were then matched for age, sex, and type of contact. In order to get a comprehensive overview, this was stratified into new referrals for that year, in-patients, day patients, and those

who had been in receipt of continuing psychiatric care before 1983. Once identified, each psychiatric case record was examined to confirm that the patient had received treatment only within that service, and information was obtained from the notes covering the nature and course of their illness over the subsequent five years, in addition to demographic details. ICD-9 diagnoses (World Health Organization, 1979) were made by experienced clinicians (BF, JB, AM) from the clinical data recorded in the patients' records.

Follow-up data were obtained between 1986 and 1988 by a research psychologist (SC) trained in the use of the Comprehensive Psychopathological Rating Scale (CPRS; Montgomery & Asberg, 1979) and the Social Functioning Schedule (SFS; Remington & Tyrer, 1979). The CPRS was chosen in order to give a measure of all aspects of psychopathology and has the benefit of yielding subscales covering depressive (MADRAS), anxiety (BAS), schizophrenia, and obsessive symptoms (Montgomery & Montgomery, 1980; Tyrer *et al*, 1984*b*). The SFS measures the level of social maladjustment and is heavily influenced by the subjective distress experienced by respondents. A specially constructed interview designed to elicit the patients' views of treatment received was also administered; a shorter version was given to non-professional care providers where they could be identified. SC was blind to the purposes of the study, and was requested to avoid discussing details of treatment with the patients. At the end of the study her ignorance of the nature of the project was confirmed by questioning.

Statistical analysis was carried out using SPSSX and GENSTAT computer programs.

Results

Table 1 gives the age and sex distribution of all the patients attending both types of service during 1983 from which the stratified sample cohorts were randomly selected by the Nottingham Psychiatric Case Register. In the community sample 103 patients agreed to be interviewed compared with 78 in the hospital sample. This difference is statistically significant ($\chi^2 = 5.0$, d.f. 1, $P = 0.025$, with Yates' correction), and indicates a greater reluctance among those who had been treated within the hospital-orientated service to talk about their experiences. Those who agreed to interview did not appear to differ demographically or clinically from those who refused. In the community and hospital cohorts respectively, 16 and 21 patients could not be located, 2 and 4 were deceased, and 12 and 21 did not complete the initial interview.

There were no significant differences between the patients in the patterns of previous referrals to the psychiatric services or in the number of previous admissions. The ICD diagnoses made at first contact were similar for both groups: neurotic disorders (41%), personality disorders (8%), substance abuse (9%), organic states (1%), schizophrenic illnesses (13%), affective disorders (19%) and stress/adjustment disorders (9%).

Because all forms of psychiatric contact are more common in socially deprived areas (Gibbons *et al*, 1983), the relative social deprivation of the parts of Nottingham covered by the two services was examined. Data based upon the 1981 census (Nottinghamshire County Council, 1983) yielded social deprivation scores (range 0–43) for each part of the city. These were derived from 13 measures which included unemployment rates, numbers of single-parent families and households with children receiving free school meals, low-quality housing, percentage of babies of low birth weight, and children taken into care or on the register of the National Society for the Prevention of Cruelty to Children. The community group covered more areas of the city with far greater socio-economic problems (mean 19.4, 95% confidence interval (CI) 18–20.8) compared with those attending the hospital-based service (mean 12.3, 95% CI 10.8–13.8, $P < 0.0001$).

Of patients in the community cohort, 33% were still being seen by members of the psychiatric team at follow-up, compared with only 6% of the hospital cohort, 61% of whom had been discharged back to their family practitioners. The proportions who ceased attendance without formal discharge were similar: 29% and 25% in the community

Table 1
Age and sex distribution of all patients receiving psychiatric care in 1983

	Age: years					Total	Cohort size chosen	% treated in community service	% treated in hospital service
	15–24	25–34	35–44	45–54	55–64				
In-patients									
men	20	57	53	55	72	257	20	44	56
women	33	49	46	61	77	266	36		
New out-patients									
men	88	144	144	102	89	567	60	31	69
women	104	170	178	141	156	749	76		
Day patients									
men	17	33	40	36	49	175	10	29	71
women	19	14	33	44	40	150	12		
Patients in continuous care before and during 1983									
men	24	63	76	53	54	270	28	27	73
women	22	83	90	93	94	382	50		

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Table 2
Means and 95% confidence intervals for symptom outcome measures

	MADRAS score	BAS score	Schizophrenia subscale score	Obsessional subscale score	Total CPRS score	SFS score
Community cohort						
mean	4.19	6.45	2.08	2.88	15.13	20.70
95% CI	3.56-4.81	5.71-7.12	1.67-2.50	2.49-3.28	13.48-16.78	13.31-20.39
Hospital cohort						
mean	4.46	6.28	2.0	3.18	14.59	22.68
95% CI	3.57-5.34	5.33-7.23	1.53-2.47	2.67-3.68	12.30-16.89	18.89-26.48
Removing the effects of social deprivation score as covariate						
Differences between adjusted means for hospital and community cohorts[1]	-1.05	-0.76	-0.31	-0.70*	-2.20	1.54
Standard error	0.58	0.62	0.33	0.34	1.5	2.76

1. A positive difference favours the hospital service, a negative difference favours the community service.
*$P<0.01$.

Table 3
Consumer view of service

	Hospital sample	Community sample
No. of patients	90	112
% of patients who agree with statement		
patient made to feel rushed	27	23
service is convenient	89	92
contact perceived as formal	69	58
has confidence in psychiatric expertise	62	69
contact is stigmatised	54	46
difficulty of access to service in emergency	9	13
treatment felt to be individualised for each patient	83	70
good understanding by therapist	64	60
willing to be seen by psychiatrist team in future	59	67
satisfied with adequacy of explanation given	56	48
information given to relatives is adequate	60	62
good communication between team and general practice	37	55*
general practitioner should be more involved	36	35
satisfied with service overall	78	80
No. of care providers	36	48
% of care providers who agree with statement		
convenient for care giver	86	79
adequate information provided to family	36	40
ease of access to psychiatric service	14	17
psychiatric service effective	64	75
confidentiality respected	86	75
service is effective	64	75

and the hospital samples respectively. Two patients from the community group committed suicide and another four patients from the hospital group died from natural causes.

For both services, decisions to admit patients were principally made by senior medical staff (64%), with similar patterns of referral from general practitioners and other agencies, and no differences in the use of mental health legislation (22%). They were equally likely to have been in contact with their therapists before admission (18%). When followed up as out-patients, however, 83% of the community group were seen by a consultant compared with 57% of the hospital group. A greater proportion of the community group were likely to be seen by other therapists in addition to their psychiatrists (43% and 28% respectively); the community group also made more frequent use of day-hospital facilities after discharge from in-patient status.

Table 2 details the levels of active symptoms and the patients' views of their social functioning at the time of the follow-up interview by the research psychologist. There were no significant differences in mean scores between the two types of service. However, when the effect of social deprivation was taken into account by re-analysing the data using the social deprivation score as the covariate, the adjusted mean symptom scores showed differences favouring the community group although this trend only reached statistical significance for the obsessional subscale (Table 2).

Table 3 compares the services on consumer satisfaction as perceived by those patients and their families who agreed to complete that section of the interview.

Discussion

The community-based psychiatric team provided care to a more disadvantaged section of the population. It is of some consequence, therefore, that the services achieved similar outcomes, particularly in view of the perceived benefits of the community service (Tyrer *et al*, 1984*a*; Tyrer, 1984; Williams & Balestrieri, 1989).

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A significant number of patients refused interview, particularly in the hospital group, and although there was nothing to distinguish them from those who agreed to be seen, their representativeness seems uncertain. It might be expected that those less satisfied with the service would be less willing to take part in the study.

Patients scores on the SFS, which yields a measure of impairment of social functioning as perceived by patients, were similar in the two services, although the derived score is heavily influenced by social deprivation. The study by Tyrer *et al* (1984*a*) had identified a 20% drop in admission rates following the introduction of the community-based service. Before and after these changes, however, the rate remained relatively high, presumably as a consequence of the social deprivation in the areas served by the community-based team.

The principal characteristics which distinguish the services during the follow-up are the more frequent use of day-hospital facilities, wider involvement of all members of the psychiatric team, willingness to maintain contact with patients over a longer timescale, and the use of more senior medical staff in the delivery of out-patient care in the community service. Contrary to media speculation that community services treat only the 'worried well', there were no differences evident in the type of patient being cared for, as judged by the proportions in the different diagnostic categories. (The design of the study specifically attempted to avoid bias by selecting all categories of psychiatric patients, especially those in long-term care.)

One of the worrying findings which emerged was that of suicide in two patients in the community-treated sample. However, it is not possible to draw any conclusions which could be extrapolated to larger populations over longer periods. A separate examination (in preparation) of all suicides in Nottingham over this period has shown some evidence that the community initiatives have reduced the suicide rate.

Patients expressed acceptance of both services. It would have been surprising to find significant differences, considering that both had in common a multidisciplinary approach combined with modern treatment methods and full access to in-patient and day-hospital facilities. Stigmatisation of mental illness, however, remains a problem. There are clearly areas which would warrant improvements, especially in communication between all the personnel involved. Neither service provides crisis intervention, which is probably reflected in the dissatisfaction expressed with getting help in an emergency, and in this context the needs of care providers in the family require more priority.

This kind of detailed audit is not possible as a matter of routine. It also has the drawback of giving a cross-sectional view which may not necessarily reflect the overall pattern of morbidity during the entire follow-up. However, a longitudinal assessment would be much more problematic and might distort the clinical presentation as a result of increased contact with patients by specialist researchers who could not remain 'blind'.

The issue of cost comparisons between these services was not examined. It clearly requires more detailed work, which in part will have to depend on measures designed to evaluate the more indirect costs of a true community service. There was, however, no suggestion of resource imbalance between the two models described.

In conclusion, this study provides evidence that community psychiatric services based on general practice psychiatric clinics are at least as good as their hospital-based counterparts in the delivery of psychiatric care. Their advantages in terms of reduced admission rates and bed usage are not achieved at the expense of symptoms or social dysfunction, and the continuation of contact negates the charge of 'community neglect' that is often attributed to extra-hospital psychiatry (Scull, 1989).

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References

DEAR, M. & WOLCH, J. (1987) *Landscapes of Despair: From Deinstitutionalization to Homelessness*. Oxford: Polity Press.

FERGUSON, B. (1987) Psychiatric clinics in general practice – an asset for primary care. *Health Trends*, **19**, 22.

GIBBONS, J. C., JENNINGS, C. & WING, J. K. (1983) *Psychiatric Care in Eight Register Areas: Statistics from Eight Psychiatric Registers in Britain 1976–1981*. Southampton Psychiatric Case Register, Knowle Hospital, Fareham, Hants.

MONTGOMERY, S. A. & ASBERG, M. (1979) A new depression scale designed to be sensitive to change. *British Journal of Psychiatry*, **134**, 382–389.

—— & MONTGOMERY, D. B. (1980) Measurement of change in psychiatric illness. New obsessional, schizophrenia and depression scales. *Postgraduate Medical Journal*, **50** (suppl. 3), 50–52.

MURPHY, E. (1987) Community care: I problems. *British Medical Journal*, **295**, 1505–1508.

NOTTINGHAMSHIRE COUNTY COUNCIL (1983) *Disadvantage in Nottinghamshire County Deprived Area Study, Part 1*. Nottingham: Nottinghamshire County Council.

PULLEN, I. M. & YELLOWLEES, A. J. (1988) Scottish psychiatrists in primary care settings: a silent majority. *British Journal of Psychiatry*, **153**, 663–666.

REMINGTON, M. & TYRER, P. (1979) The social functioning schedule – a brief semi-structured interview. *Social Psychiatry*, **14**, 151–157.

SCULL, A. (1989) *Social Order – Mental Disorder: Anglo-American Psychiatry in Historical Perspective*. London: Routledge.

STRATHDEE, G. & WILLIAMS, P. A. (1984) Survey of psychiatrists in primary care: the silent growth of a new service. *Journal of the Royal College of General Practitioners*, **34**, 615–618.

TYRER, P. (1984) Psychiatric clinics in general practice: an extension of community care. *British Journal of Psychiatry*, **145**, 9–14.

———, SEIVEWRIGHT, N. & WOLLERTON, S. (1984) General practice psychiatric clinics: impact on psychiatric services. *British Journal of Psychiatry*, **143**, 15–19.

———, OWEN, R. T., CICCHETTI, D. V. (1984*b*) The brief rating scale for anxiety: a subdivision of the comprehensive psychopathological rating scale. *Journal of Neurology, Neurosurgery and Psychiatry*, **47**, 970–975.

WALLACE, M. (1987) A caring community. *Sunday Times Magazine*, 3 May, 25–38.

WILLIAMS, P. & BALESTRIERI, M. (1989) Psychiatric clinics in general practice: do they reduce admissions? *British Journal of Psychiatry*, **154**, 67–71.

WORLD HEALTH ORGANIZATION (1979) *Ninth Revision of the International Classification of Diseases* (ICD–9). Geneva: WHO.

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