

The outpatient care of psychiatric patients in a rural area: Mhala district, Northern Transvaal

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This study reviews the quality of outpatient care provided by the psychiatric service in the Mhala district of Northern Transvaal. A retrospective survey of 488 patient cards was undertaken at the end of 1989.

Diagnoses showed a high proportion of epileptic (48%) and schizophrenic (22%) disorders, but few mood disorders (4%) and no anxiety disorders. A number of drug combinations and usages for the recorded diagnoses were regarded as inappropriate.

Between 42% and 46% of patients left the service in their first year of treatment. Attendance of patients was inadequate and irregular. The referral rate to the district hospital was low, even in patients who suffered numerous relapses.

These results show a psychiatric service that requires improvement in many critical areas. This can be achieved through decentralisation of the service while ongoing support is provided. This includes training, expert support in reviewing diagnoses and drug use, logistical support and a well-functioning referral system.

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'He is said to be waking up at midnight making noise but he is not troublesome. He has a yearning for females. He was unclean but he was aware that he was not clean. His home is like a ruin.'

Community psychiatric nurse, Tintswalo Hospital, 1989

Primary health care services in the rural areas of South Africa are underdeveloped.¹⁻⁴ Psychiatric services (PSs) in particular have traditionally been neglected and, as such, are an important area for study and improvement. A Medline search covering the previous 10 years shows the absence of any detailed rural PS research in southern Africa. Extant studies indicate inadequate resources for both hospital^{5,6} and community-level care.⁷

The need for a well-functioning PS is indicated in a large study by the World Health Organisation⁸ which showed that the rate of mental disorder among patients in primary health

care settings ranged from 10,6% to 17,7% for adults and from 10% to 29% for children. However, psychiatric diagnoses tend to be missed by the primary care worker.⁹⁻¹¹

This study aimed to review the quality of outpatient psychiatric care provided by the PS in the Mhala district of Northern Transvaal.

The PS in Mhala

Mhala district is situated in the Northern Transvaal in the former 'homeland' of Gazankulu. It covers an area of 1 204 km², and is inhabited by about 200 000 people who have limited access to land, facilities and employment. Tintswalo, the district hospital, is a 260-bed rural hospital, typical in its lack of resources, staff and facilities.³

The PS operates vertically, the community psychiatric nurse (CPN) being responsible for the continuing care of all patients discharged from the hospital's psychiatric ward. These patients are seen at one of 22 clinics or visiting points that receive a monthly visit from the CPN.

Method of study

A retrospective patient card survey was undertaken at the end of 1989. The study population consisted of all ambulatory patients in Mhala seen by the PS, while the sample consisted of all patients who had an entry made on their psychiatric card in the 12 months prior to the date of review. In total, 488 cards were reviewed.

Several indicators were developed to evaluate the service. Firstly, the range and variety of diagnoses were taken as an indirect measure for initial diagnostic skills. Secondly, the combinations of drugs used and the appropriateness of drugs for the recorded diagnosis, were regarded as indicators of therapeutic competence. This drug use was reviewed by a psychiatrist (C.W.A.). These first two indicators measure the ability of the CPNs to recognise when diagnoses and treatment should be reviewed, given that the diagnoses and treatment are initially undertaken by doctors at the district hospital. Thirdly, the duration of the illness for which patients remain in the service and fourthly, the regularity of attendance of patients in the last year were seen as a reflection of the quality of the service in terms of accessibility, acceptability, adequacy of patient education and follow-up of defaulters. Fifthly, relapses and referral rates in the last year were taken as a composite indicator of the quality of the service, reflecting clinical skills in modifying treatment or referring as needed, and patient compliance in terms of taking medicines and attending the service.

Finally, an indirect technique was developed for evaluating case-holding, with a model to predict the number of cases that would be expected in the service if there were no defaulting, based only on the records of current attenders. Case-holding was quantified by comparison of the observed number of cases in the service with the predicted number. This model requires assumptions on population growth, changing incidence rates of newly diagnosed psychiatric disease, mortality rates and discharge rates. The details of the model and a rationale of the assumptions are presented elsewhere.¹²

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Results

The demographic profile of the study sample, the diagnostic profile, medications, case-holding, and rates for discharge, attendance, relapse and referral are presented in turn.

Demography. There were equal numbers of male and female patients (M = 242 (49,6%) and F = 238 (48,8%); sex not recorded on card = 8 (1,6%)). The age distribution is shown in Table I.

Table I. Percentage of epileptic and other psychiatric patients in each age group, and age-specific rates* (N = 408)

Age group (yrs)	Epilepsy (N = 221)			Other psychiatric illness (N = 187)		
	No.	%	Age-specific rates (per 1 000 pop.)	No.	%	Age-specific rates (per 1 000 pop.)
0 - 9	25	11,3	0,3	2	1,1	0,02
10 - 14	25	11,3	1,0	4	2,1	0,15
15 - 19	26	11,8	1,2	5	2,7	0,24
20 - 24	25	11,3	1,8	16	8,6	1,14
25 - 34	39	17,6	2,3	50	26,7	3,00
35 - 44	34	15,4	3,0	51	27,3	4,52
45 - 54	26	11,8	2,9	28	15,0	3,10
55 or more	21	9,5	1,8	31	16,6	2,62

* Population statistics for 1989, from Gazankulu head office. These rates need to be treated with caution, given inaccuracy of baseline demographic data.

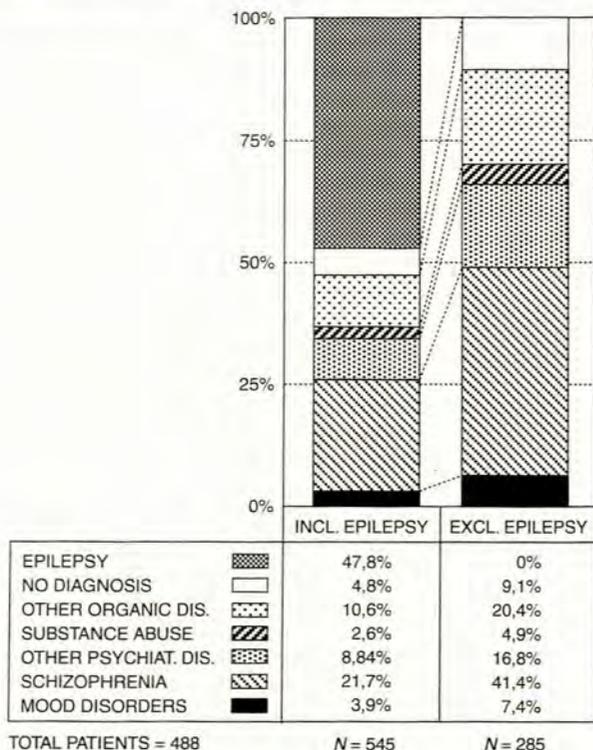


Fig. 1. Distribution of diagnoses (see footnote) of all patients (new and old) who attended the ambulatory psychiatric services in Mhala district, showing the relative frequencies with and without epilepsy.

Notes to Figs 1 and 2. The diagnoses are reported largely as recorded on the patients' record cards. However, where numbers are small, we have grouped them into categories as follows: Mood disorders include 'depression', 'affective disorder', 'depressive psychosis', 'reactive depression'. Schizophrenia includes 'schizophrenia', 'chronic schizophrenia' and 'paranoid schizophrenia'. Other psychiatric disorders include 'behavioural disorder', 'catatonia', 'delusions', 'hallucinations', 'hysteria', 'paranoid ideas', 'personality disorder', 'psychosis - acute', 'psychosis - pellagra', 'psychosis - unspecified', 'psychosomatic disorder', 'schizoid disorder'. Substance abuse-related disorders include 'substance abuse' and 'toxic psychosis'. Organic disorders include 'cerebral palsy', 'epilepsy', 'dementia', 'Down's syndrome', 'head injury', 'mental retardation', 'organic brain syndrome', 'temporal lobe epilepsy', 'senile dementia'.

Diagnostic profile. The distribution of all diagnoses is shown in Fig. 1. As a way of estimating incidence, Fig. 2 shows only new diagnoses made in 1989.

There was a high proportion of epileptic (48%) and schizophrenic (22%) disorders, but few mood disorders (4%) and no anxiety disorders. No bipolar disorders were recorded.

Table II. Drugs used in the current treatment of PS patients

Drugs	Frequency of drug prescription	Patients on drug (%)
Antipsychotics		
Thioridazine	95	19,5
Fluphenazine decanoate	81	16,6
Chlorpromazine	59	12,1
Trifluoperazine	20	4,1
Haloperidol	15	3,1
Anticholinergics		
Biperiden	118	24,2
Antidepressants		
Amitriptyline	5	1,0
Imipramine	1	0,2
Anticonvulsants		
Phenobarbitone	140	28,7
Carbamazepine	57	11,7
Phenytoin	52	10,7
Phenytoin with phenobarbitone	29	5,9

Three hundred and seventeen (65%) patients were on one drug only, 129 (26%) patients were on 2 drugs, 28 (6%) were on 3 drugs and 4 (1%) were on 4 drugs; 10 (2%) patients were on no drugs.

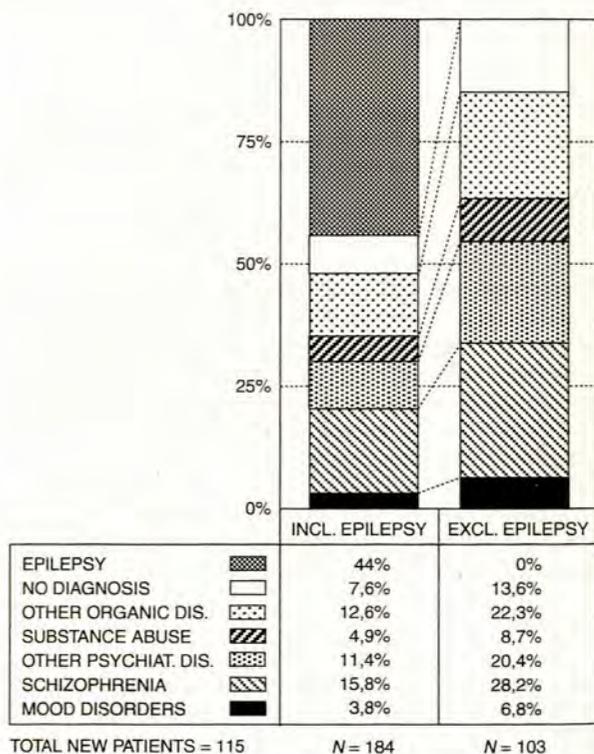


Fig. 2. Distribution of diagnoses of all patients newly diagnosed in 1989 who attended the ambulatory psychiatric services in Mhala district, showing the relative frequencies with and without epilepsy.

Medication. Drugs used are shown in Table II. Polypharmacy was evident. Forty-three patients (9%) were on drug combinations that were considered to be unnecessary or inappropriate.

Twelve per cent of all the patients were considered to have a mismatch between the diagnosis and the treatment being given to them. A further 5% of patients had no diagnosis at all but were being treated with antipsychotics.

The notes indicate that staff seemed to be reluctant to alter or stop medication on their own initiative. Some epileptics were recorded as having '2 - 3 seizures per month' yet no changes to the medication were made. Epileptic and schizophrenic patients who had been stable for 4 years had not had their treatment reviewed.

By contrast, medication was frequently changed for no recorded medical indication; the usual reason was that the original medicine was 'out of stock'.

Case-holding. Between 43% and 46% of patients left the service in their first year of treatment. The median duration of ambulatory treatment for patients currently in the service was 33 months. The median number of months for which patients were kept in the programme when grouped under the disorders 'schizophrenia', 'epilepsy' and 'other' were 41, 29 and 17 respectively.

Discharge rate. The discharge rate was less than 1% per year. Of the 331 patients who had been on treatment for 12 or more months, only 3 had been formally discharged by the PS in the last year.

Attendance rate. Patients are expected to attend the clinic or visiting point at least once a month. If a cut-off attendance rate of 80% is used as a criterion for 'adequate attendance', then 61% of patients had not attended adequately.

One hundred and eighty-seven out of 488 (38,3%) patients were *irregular* attenders. (Patients were considered irregular attenders if they had neither attended personally nor sent someone else to collect medicines for 3 or more consecutive months in the preceding year.)

Relapse rate. Relapses were defined as those instances in the last year when it was either recorded in the patient's card that he/she had relapsed, or when the patient needed psychiatric referral or an increased drug dose. Table III shows the frequency of relapses for the main diagnostic groupings. (The 40 patients for whom data on relapses/referrals were not collected, have been excluded from Tables III and IV.)

Table III. Patients relapsing within 12 months according to diagnostic category and number of relapses (N = 448)

No. of relapses in preceding year	Epilepsy		Schizophrenia		Other		Total	
	No.	%	No.	%	No.	%	No.	%
0	52	24,0	88	75,9	82	71,3	222	49,6
1 - 2	46	21,2	26	22,4	23	20,0	95	21,2
3 - 4	32	14,7	1	0,9	4	3,5	37	8,3
5 - 6	25	11,5	0	0,0	2	1,7	27	6,0
7 or more	62	28,6	1	0,9	4	3,5	67	15,0
Total	217	100	116	100	115	100	448	100

One hundred and thirty-one (29,2%) patients had 3 or more relapses in the preceding 12 months. Twelve out of the 96 patients who had had 6 or more relapses in the last year had not had any change in medication during this period.

Referral rate. Table IV shows the frequency of referrals against the number of relapses in the 12 months prior to record review. Only 9 out of 131 patients (6,9%) who had suffered 3 or more relapses in the last year had been referred to hospital for further investigation and treatment.

Table IV. Patients experiencing relapses who were referred to a doctor for further treatment (N = 448)

No. of relapses in preceding year	Referred		Not referred		Total	
	No.	%	No.	%	No.	%
0	7	3	215	97	222	100
1 - 2	12	13	83	87	95	100
3 - 4	2	5	35	95	37	100
5 - 6	3	11	24	89	27	100
7 or more	4	6	63	94	67	100
Total	28	6	420	94	448	100

Discussion

The quotation at the beginning of this article, from one of the records of a home visit, captures some of the pathos of the psychiatric patient but also the humane quality typical of the CPN's work. Problems have been described in the service but these should in no way detract from the performance of the psychiatric staff who were observed to work with creativity and dedication in adverse conditions. Managerial staff were supportive but constrained by a lack of resources.

The spectrum of diagnoses reflects the strong tendency to detect illnesses which have a psychotic manifestation. The frequency of diagnosis of mood disorder is extremely low compared with other studies.^{13,14} Orley and Wing¹³ have shown that rates of depression and anxiety in African and Western patients are comparable, which suggests underdiagnosis of these conditions in the Mhala programme. Mood disorder patients may either be being treated as somatic complaints or misclassified in the 'other psychiatric diagnoses' group (which was usually treated with antipsychotics only). The latter may reflect outdated training where depression was considered rare in black Africans.¹⁵

Thirty-five out of the 48 patients (73%) in the 'other psychiatric diagnoses' group were labelled in terms of symptoms rather than diagnoses. This may reflect poor diagnostic skills. However, German¹⁶ has noted that short-lived transient psychotic reactions to various precipitants are particularly common in Africa and that all these 'acute psychotic reactions' cannot be accurately labelled. Nevertheless, this finding points to the need to review diagnoses.

The low number of patients discharged implies that once diagnosed as a psychiatric patient, the label remains for life. This indicates a lack of confidence in the CPN's ability to review diagnoses or release patients from her control.

The 'lifelong' label is also problematic as, given the lack of diagnostic expertise, the original assessment may have been incorrect.

The median number of months for patients with schizophrenia and epilepsy may have been expected to be longer than for other conditions. The overt symptoms of the former two groups are more difficult to ignore than those of the latter, and the former patients would therefore present (or be brought) to the health service for longer than patients with less socially problematic psychiatric symptoms. Moreover, patients in the 'other' category, and even some in the 'schizophrenia' category, may have had much shorter, self-limiting mental illness and may have discharged themselves even though they were never formally discharged.

There are several possible explanations for the very high loss of patients of all diagnoses in their first year. There is probably a subgroup of patients who suffer from a short-lived transient psychotic disorder¹⁶ which resolves within 6 months to a year. These patients probably stop coming to the service of their own accord, even though they have not been formally discharged. Alternatively, most of this 'lost' group of patients may have a serious disorder but have nevertheless defaulted on treatment. This may be due to problems with the PS.

This loss of patients in their first year is a serious indictment of the discharge procedures, the default tracing effort and the combination of factors that influence patient compliance, such as accessibility and reliability of the clinics, the effectiveness of treatments and patient education. In the case of epilepsy, fewer than 50% of sufferers are treated for more than 2 years and fewer than 30% remain in the service longer than 7 years.

The low psychiatric referral rate may indicate the lack of a supportive referral system. In practice, referral would be to a medical officer with less psychiatric experience than the CPN. There is no full-time psychiatrist in the former Gazankulu. Another example of the lack of expert support may be the reluctance of staff to reduce medications, given fear of relapse and difficulty in obtaining help in isolated places.

With regard to methodology, the validity of data gleaned from a problematic service may be questioned. However, the data collected were objective (e.g. the transcribing of the diagnoses and drugs in patient records). While the actual diagnoses recorded may be incorrect, the diagnoses and drugs that the health service used served as an indicator of problems in the service (e.g. the absence of diagnoses of anxiety, the number of patients whose diagnosis and treatment do not match). Any inaccuracies in note-taking for variables like relapse rate would have resulted in underestimates. The high relapse rate is therefore a minimum estimate of the problem. Moreover, given the limited research capacity of most health services, particularly in a developing country like South Africa, record reviews are the most accessible research instruments. The method and indicators used here are presented as being within the capacity of most health services and therefore of use in the periodic monitoring of chronic disease care services.

Conclusion and recommendations

These problems show a need for greater support of the PS along primary health care lines.¹⁷ This would help ensure ongoing training, expert support in reviewing of diagnoses and drug use, logistical support (e.g. reliable transport, adequate stationery) and a well-functioning referral system.

In line with PHC principles, decentralisation of the service by training staff at peripheral clinics to detect new cases and manage patients currently seen by the CPN would increase accessibility.¹⁸ It would also both allow the CPN to fulfil a greater supervisory, consultative and developmental role in the PS and give her more time for seeing problem patients either in the clinic or in the community. In this way, 'horizontal implementation' of psychiatric care by general health workers with 'vertical support' by the CPN could take place.

The training of general staff in psychiatric skills should not pose insurmountable problems as successful training has been reported elsewhere.¹⁹

Specific recommendations include: (i) the need for a basic standard protocol of management to be used by both nursing and medical staff; (ii) the authorisation of appropriately trained nurses to prescribe psychotropic drugs at peripheral clinics; and (iii) increased psychiatric training of nurses and doctors at undergraduate level and ongoing training at postgraduate level (e.g. the Diploma in Psychiatry for doctors). University psychiatric departments could 'adopt' rural districts, thus playing a consultant and supportive role.

Broader recommendations include the need for the development of systems for diagnosis, treatment and referral of patients. Effective systems also need to be developed for drug dispensing, record-keeping, supervision and ongoing training.

The inadequacies of the PS described probably exist in many parts of the country.²⁰ In view of this and the large number of patients presenting to primary care facilities with underlying psychiatric problems, there is an urgent need to give far greater priority to primary psychiatric care than was accorded it in the past.

Finally, the record review methodology described in this study and the indicators used should become part of the training of those supervising psychiatric services as they offer rapid, simple and cheap approaches to the ongoing evaluation of psychiatric service performance and as such contribute towards the field of Rapid Epidemiological Assessment²¹ (or Rapid Evaluation Methods²²) as applied to psychiatric services.

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