

South African Mental Health Process Indicators

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Abstract

Background: In post-apartheid South Africa the organisation and delivery of mental health care is undergoing significant change. With the heritage of an under-resourced, fragmented, racially inequitable service, heavily reliant on chronic custodial treatment in large centralised institutions, this change is long overdue. New policy has set out a vision for a community-based, comprehensive, integrated mental health service. In order to realise this vision a review is required of the way in which care is currently delivered, or the "process" of mental health care. To date, no national research has been conducted regarding process of care indicators in South African mental health services.

Aims of the Study: This study documents four public sector mental health service process indicators in South Africa: bed occupancy rates, admission rates, average length of stay and default rates.

Methods: A questionnaire was distributed to provincial mental health co-ordinators, requesting numbers of occupied and available beds in psychiatric inpatient facilities, annual mental health admissions, average length of stay (ALOS), and default rate in ambulatory care settings. The information was supplemented by consultations with mental health co-ordinators in each of the 9 provinces.

Results: The national bed occupancy rate is 83% (range: 63-109%). The national annual rate of admission to psychiatric inpatient facilities is 150 per 100 000 population (range: 33-300). The national average length of admission is 219 days in psychiatric hospitals, 11 days in general regional hospitals and 7 days in general district hospitals. On average 11% of psychiatric patients who attend ambulatory care services on a monthly basis fail to keep their appointments.

Discussion: Although the national mean bed occupancy is compatible with international figures, there is considerable discrepancy between provinces, indicating both over- and under-utilisation of inpatient resources. Admission rates are low, relative to developed countries, though comparable to developing countries. Low admission rates are associated with a range of factors including inadequate service provision, unmet need, inaccessible services, cross-border flow between provinces and custodial patterns of care. There is evidence of long periods of admission relative to international settings. There is also considerable diversity between

provinces, with certain institutions continuing to provide long term custodial patterns of care. Default rates are low relative to international settings and past reports default in South Africa.

Implications for Health Policies: In keeping with current policies there is an urgent need for local level evaluation and reform of chronic custodial care. The ongoing monitoring of process indicators is important in the transition to community-based mental health care.

Implications for Further Research: Limitations of the data, and problems of collecting information on mental health care within an integrated health system indicate the need for further research in this area. There is also a need for further research into unmet need for mental health care in South Africa.

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Introduction

In post-apartheid South Africa the organisation and delivery of mental health care is undergoing significant change.¹ With the heritage of an under-resourced, fragmented, racially inequitable service, heavily reliant on chronic custodial treatment in large centralised institutions, this change is long overdue. The vision for a new community-based, comprehensive, integrated mental health service has been spelt out.² The next, more difficult step, is the implementation of these ideals.

To begin this implementation process, a review of existing services is necessary. The use of indicators to measure the functioning of a mental health service is standard practice in many international settings.³⁻⁵ Mental health service indicators are defined as quantifiable measures of current levels of mental health service provision. Usually, reviews of mental health services focus on input indicators³ - the resources invested in a system, such as beds and staff; and less frequently on outcomes - the changes in functioning, morbidity and mortality in the patient population. For example, some studies have been conducted which report on beds and staff resources in South African mental health services.^{6,7}

However, little attention has been given to indicators of the process of service delivery: "those activities which take place to deliver mental health services".⁸ Process indicators are useful because they (i) provide information on the way in which service items are delivered; (ii) make it possible to measure inequity between regions and communities in service provision;⁹ (iii) enable some assessment of the quality of care;

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(iv) promote the efficient use of resources; (v) are useful planning and management tools, which assist in the process of decentralisation and empowerment of mental health managers at a local level; (vi) when linked to clear goals or norms, can measure the extent to which objectives and targets of a programme are being attained.⁴ In developing countries, with little monitoring of the way in which scarce mental health resources are used, process indicators are an essential planning and management tool. This is particularly so in South Africa, where current health policy has recommended a shift to the management of patients with severe psychiatric conditions within a community-based service.² Process indicators are a useful means of monitoring this transition.

To date, no national research has been conducted regarding process of care indicators in South African mental health services. This paper reports on 4 process indicators: bed occupancy rates, admission rates, average length of stay (ALOS) and default rates. The importance of each of these indicators is now discussed in more detail.

Bed occupancy

Deinstitutionalisation has drawn attention to bed occupancy levels in psychiatric inpatient facilities, both internationally and locally. Reduced numbers of beds and lengths of admission have increased the pressure on service providers and health managers to make more efficient use of available beds. If the volume of services exceeds that designed for the facility, the scheduling of service activities, maintenance and management become costly and difficult.¹⁰ This may lead to other negative consequences such as poor quality service, inadequate staff time spent in contact with patients and increased average length of stay. In South Africa, there have been infringements of patients' rights through overcrowding of chronic psychiatric hospitals, particularly historically black institutions.¹¹ In the Western Cape, bed occupancy in psychiatric hospitals has been reported at 87% (range:40-90%); as much as 18% higher than the average rate for all other public general hospitals.⁶

Conversely, low bed occupancy can carry a range of other problems. Some authors have argued that occupancy rates generally decrease as the quality of care of the hospital decreases.¹⁰ For example, in most developing countries there is low occupancy at district level. A lower bed occupancy rate raises the average cost of the services being delivered; implies poor detection of cases in the community; and may reflect inadequate staffing relative to available bed numbers.

Bed occupancy rates, as gross measures of bed utilisation in hospitals,¹⁰ are useful indicators for informing the optimal balance between the most effective use of hospital resources and the maintenance of standards of care for psychiatric inpatients.^{6,12,13} Historically in South Africa there has been little monitoring of bed occupancy rates in psychiatric institutions.

Admission rates

Internationally, changes in the rate at which people with

severe psychiatric conditions (SPC) are admitted to psychiatric inpatient facilities have been well documented during the course of deinstitutionalisation.¹⁴⁻¹⁷ Goldsmith *et al.*¹⁸ point out that the number of admissions usually represents a more volatile segment of the total caseload of specialist mental health institutions, whereas the number of resident patients under care at any given time is relatively stable from year to year.

For this reason, admission rates are likely to be more sensitive to local variables and the broad range of factors associated with deinstitutionalisation. In some instances, such as Mannheim, Germany, reduced bed numbers and lengths of admission have been associated with increased admission rates.¹⁴ In the case of Jamaica, reductions in bed numbers and more effective management of patients in the community have been associated with lower admission rates.^{16,17} In still other instances, such as the deinstitutionalisation programme in Emilia Romagna, Italy, admission rates remained relatively consistent over the 10 years in which patients were gradually discharged to an extensive range of community psychiatry facilities.¹⁵

Little is known of rates of admission to psychiatric inpatient facilities in South Africa. In order to plan and monitor the transition to community-based mental health care adequately, admission rates are crucial.

Average length of stay (ALOS)

Average length of stay is a variable frequently associated with declining bed numbers and deinstitutionalisation.^{14,19,20,21,22} Although there is some consensus that long term hospitalisation is no longer desirable,²³ the issue of length of stay remains complex. Attempts to save costs by reducing the average length of stay without taking other key service indicators into account is unlikely to be successful.²⁴ Discharge policies have a crucial effect on inpatient services, and a precondition for speedier discharge is a well coordinated comprehensive community mental health service.¹⁴

Although debate over optimal length of admission is unresolved, there is agreement that the monitoring of ALOS is an important process indicator in determining appropriate and efficient use of inpatient facilities, and that it is a concept readily understood by mental health service providers and planners alike.²⁵ Furthermore, ALOS has frequently been studied as an indicator of hospital resource utilisation.²⁶

Although some research has been conducted into quality of care in chronic psychiatric hospitals,¹¹ little is known about lengths of admission in psychiatric inpatient facilities in South Africa. The monitoring of planned service changes could go some way to ensuring that limited mental health resources are appropriately used, and that the needs of patients for inpatient care of a clinically acceptable period are ensured.

Default rates

Patient defaults from psychiatric care, whether in the form of missed appointments, aftercare dropouts or non-compliance with medication, are phenomena which both interfere with treatment programmes and disrupt efficient utilisation of staff

time.²⁷⁻²⁹ Defaults are costly problems which are widespread in community psychiatry, appear at varying stages of treatment and present a constant challenge to the treatment team.³⁰

A review of default rates in the USA reports that between 35% and 50% of patients fail to continue treatment after hospital discharge.³⁰ One study showed that when there is little involvement from staff in the referral procedure, the rate of non-compliance can be as high as 78%.³¹ Although some authors argue that a subset of patients who drop out of therapy may have done so because of their own satisfaction and therefore should not be regarded as treatment failures, this is not applicable to patients with chronic mental illnesses.³⁰ Therefore consideration of default is particularly important when investigating services for patients with SPC.

While defaults present an ongoing problem to mental health planners and clinicians, the rate of default is also an important indicator in mental health care. First, it is a measure of the extent to which patients within the health care system are not receiving the treatment they require. Second, non-compliance following discharge for chronic psychiatric patients is closely associated with recidivism and re-hospitalisation.³⁰ Consequently, data on patients who default from their treatment provides valuable information for planning the prevention of default and of subsequent readmission.

Studies of default among psychiatric patients in South Africa have focused on services within a particular province,³² or on specific issues such as non-compliance with psychotropic medication,³³ and methods of improving compliance with psychotropic medication and clinic attendance.³⁴ There have hitherto been no national studies of default in psychiatric treatment in South Africa.

Methods

We conducted a quantitative cross-sectional survey of public sector mental health services in South Africa. A questionnaire was sent to the mental health coordinators in each of South Africa's 9 provinces. Respondents were identified by the central government Directorate of Mental Health and Substance Abuse as coordinators of public sector mental health services in each province. The questionnaire requested information from specialist psychiatric hospitals; general (secondary and tertiary) hospitals; general district hospitals; and community mental health services. Specific data were requested regarding: (i) bed occupancy; (ii) annual admissions of psychiatric patients; (iii) average length of stay; and (iv) outpatients who fail to keep appointments. The questionnaire elicited the data required to calculate ratios corresponding to each of the indicators listed above. Telephonic contact was maintained with all the provincial mental health coordinators during the time they were completing the questionnaire to ensure that difficulties were addressed timeously and misunderstandings prevented.

Over a period of five weeks, two-day workshops were conducted in each province. A total of approximately 120 mental health coordinators, hospital managers, district managers and service providers from all 9 provinces attended

the workshops. Delegates at the workshops were invited by the mental health coordinators in each province. During these visits, we gathered outstanding data and engaged in discussions on the methodology of calculating each indicator, including the formulas and ratios used. During the workshops, several provinces made important contributions to the substance and methodology of the indicators. We attempted to gain the full participation of key provincial role players. Our hope was that they would use the indicators as planning and management tools and adapt them for specific local needs.

Data were analysed using descriptive statistical methods. Bed occupancy rate was ascertained by calculating the mean number of occupied beds in an inpatient facility, dividing it by the total number of available beds, and reporting this figure as a percentage:

$$\text{Percentage bed occupancy} = \frac{\text{Mean number of daily occupied beds} \times 100}{\text{Number of available beds}}$$

The numerator for the bed occupancy rate was obtained using the reported numbers of beds occupied by psychiatric patients per month. This was converted to the mean occupied beds per day, assuming a 30-day month. The denominator was established from the reported number of available beds.

Admissions were ascertained by asking hospital managers to report the total admissions of psychiatric patients during 1997. Admission rates were defined as average annual admissions per 100 000 population. These were calculated using the following formula:

$$\text{Admission rate} = \frac{\text{Number of inpatient admissions per annum} \times 100\,000}{\text{Total population}}$$

Average length of stay was defined as "the average length of time (in days) that a patient spends at the hospital before discharge" (p15).[10] The average was calculated using the median length of stay.

ALOS was requested per institution or inpatient facility, which were then grouped according to whether they were specialist psychiatric institutions, general hospitals, or district hospitals. No further details were available on ALOS according to types of facilities, for example "acute" and "medium-long stay" facilities.

Default rate was defined as the percentage of patients who fail to attend appointments at clinics, community health centres (CHCs) or outpatient departments (OPDs) in hospitals. It was calculated using the following formula:

$$\text{Default rate (\%)} = \frac{\text{Number of patients who fail to keep appointments in a month} \times 100}{\text{Number of patients booked for appointments in a month}}$$

Default rates were calculated for all outpatient facilities

Table 1. Process indicators in South African public sector mental health services

Province	Bed Occupancy Rate			Annual Admission Rate per 100 000 population			Average Length of Stay (days)*			Default Rate		
	Available	Occupied	Rate (%)	Population (× 1000)	Admissions	Rate	Psychiatric hospitals	General hospitals	District hospitals	Attendance	Defaults	Rate (%)
Gauteng	7224	6542	91	7171	16265	227	1752	15	n/a	29474	2031	6
Northern Province	2807	1773	63	4128	4121	100	3650	10	21	4824	1267	21
Mpumalanga	152	165	109	2646	2306	87	n/a	n/a	7	6306	1045	14
North-West	476	373	78	3043	2656	87	60	13	14	7337	1851	20
Free State	580	577	99	2470	1723	70	213	7	5	3959	646	14
Northern Cape	107	70	65	746	245	33	567	2	2	3386	876	21
Eastern Cape	2330	1701	73	5865	7242	123	66	28	9	26249	2054	7
Western Cape	1400	1287	92	4118	12353	300	69	8	n/a	18840	2424	11
KwaZulu-Natal	3083	2648	86	7672	10037	131	226	14	7	7769	1472	16
Total	18159	15137	83	37859	56948	150	219	11	7	108144	13665	11

* The average was calculated using the median length of stay (see text for details).

across all levels of service. Patients may default in a range of settings from clinics and CHCs to outpatient facilities at secondary level district hospitals, general tertiary institutions and specialist psychiatric institutions. Default rate in this study therefore provides a global picture of the average rate at which psychiatric patients default from ambulatory care treatment.

Results

The national mean bed occupancy rate reported from the provincial services questionnaire is 83% **Table 1**. This ranged from 63% in the Northern Province, to 109% in Mpumalanga. The annual admission rate for South African mental health services in 1997 was 150 per 100 000. The admission rates range from a low of 33 in the Northern Cape to a high of 300 per 100 000 in the Western Cape. The average length of stay for psychiatric patients is 219 days in psychiatric hospitals, 11 days in general hospitals and 7 days in district hospitals. There was considerable variability in ALOS in psychiatric hospitals across the provinces, ranging from 60 days in North West to 3650 days in the Northern Province. The national mean default rate was reported as 11% (range: 6-21%).

Discussion

The results reflect wide variability in mental health service provision between provinces. This confirms findings of variability in levels of mental health resources nationally.⁷ It is generally apparent that urbanised, more well-resourced provinces such as Gauteng and the Western Cape make more efficient use of resources, through optimal bed occupancy and lower default rates. They also appear to provide a greater volume of inpatient services, with higher admission rates. Those rural provinces with few psychiatric hospital facilities (such as Mpumalanga and North West) or problems of access to hospital facilities (such as the Northern Cape), have low admission rates.

Interpretation of individual process indicators should proceed with caution, as these indicators are dependent on a range of factors within mental health service provision. For example, the rates of bed occupancy and admission are informed by other input, process and output ratios including bed/population ratios, staff/patient ratios, lengths of stay, and readmission rates. In addition, these process indicators are only meaningful if supplemented by information on standards or quality of care, level of staff experience and expertise, practice guidelines, clinical policy, and the facilities available within the inpatient setting.¹ This information must be kept in view while comparing process indicators across different mental health systems, and in assessing the generalisability of particular indicators.

Methodological limitations of the study centre on the quality of the data, much of which is not routinely gathered within public sector mental health services. There was therefore a lack of uniformity between provinces in the way in which data was reported. There may also have been data missing from particular health districts. This was particularly true for information regarding outpatient attendances and

defaults, as well as information about average length of stay in general hospitals. These limitations draw attention to the difficulties of gathering information specific to mental health within integrated general health services. A further limitation was the lack of wider consultation with service users regarding their utilisation of services, and their experience of the process of mental health care. Despite these limitations, we are confident that any omissions were not of a systematic nature and did not compromise the substantive findings of this study.

Bed occupancy

The national mean bed occupancy rate of 83% for all psychiatric inpatient services is comparable with international rates. The World Health Organisation (WHO), in the development of a model for national mental health programmes, assumes a bed occupancy rate of 85% for acute inpatient facilities and 95% for medium-long stay facilities.² In the deinstitutionalisation programme of an Australian mental hospital, the bed occupancy for the entire hospital of 638 beds was 84% at the onset of a deinstitutionalisation programme. This increased to 86% after the 5 years of the programme.²²

The bed occupancy rate for the Western Cape is higher than the rate of 87% reported by Ensink *et al.* in 1992/93.⁶ However, it is likely that increases in bed occupancy have been associated with decreases in numbers of available beds in the Western Cape over the past 5 years.³⁵

Excessively high and low bed occupancy levels reflect problems of overcrowding and under-utilisation of hospital resources, respectively. Excessively high bed occupancy levels in Mpumalanga are a source of particular concern. The figures in **Table 1** are consistent with qualitative reports obtained during the provincial workshops that there were insufficient beds, to the extent that the provision of "floorbeds" was commonplace. This accounts for bed occupancy levels, which exceed 100%. High bed occupancy levels in this instance are associated with poor quality of care. Bed occupancy rates of 97.5% in acute facilities in the UK have been assessed as stretching services to breaking point.¹³ Rates which exceed these by 10% in Mpumalanga provide an indication of the urgency of the situation in this province.

Conversely the low bed occupancy rate of 63% in the Northern Province and 65% in the Northern Cape point to the need for more effective use of existing resources. A simplistic conclusion from this analysis may be to call for the reduction of beds in these provinces. This may be necessary in the case of long stay beds in certain facilities, in keeping with current policy shifts towards the provision of community-based care.^{2,37} But in general, it seems more likely that these figures reflect low staff/bed ratios and poor access to services, confirmed elsewhere.³⁵ Low staff/bed ratios may imply that even if beds are available, staff shortages limit admissions to wards. In the case of the Northern Cape, a geographically large, rural province, it is likely that this problem is augmented by the inaccessibility of hospital facilities, particularly in areas of low population density.

There were two major limitations to this aspect of the study.

First, the questionnaire did not request separate bed occupancy rates for acute and medium-long stay facilities. These provincial ratios may mask important variation across acute and medium-long stay facilities. In terms of the future development of this indicator, there is a need to develop more specific bed occupancy rates for different levels of care, from district hospitals to specialist psychiatric institutions, with specifications according to different kinds of facilities (acute, medium-long stay and forensic facilities). Second, the method of estimating numbers of available beds in integrated mental health settings has limitations. With increasing levels of integration in district hospitals, this problem is likely to persist. The development of provincial information systems needs to address this issue in the monitoring of bed occupancy indicators for mental health, particularly in general district hospitals.

Admission rates

The national average admission rate of 150 per 100 000 is considerably lower than that in developed countries. Annual admission rates (per 100 000) of 600 in Mannheim, Germany,¹⁴ 705 in the USA,¹⁸ 420 in an Illinois State Hospital,³⁸ 494 in English psychiatric hospitals,³⁹ and 220 in Emilia-Romagna, Italy,¹⁵ have been reported.

Low admission rates relative to developed countries may be partially attributable to the high level of unmet need in mental health care in this country (confirmed elsewhere).³⁵ It may also be attributed to the historical pattern of custodial care in long stay facilities in South Africa, which implies less turnover of patients and therefore fewer admissions. As long stay bed numbers are reduced and acute facilities developed, admission rates may increase. The task of the services will be to ensure that patients are successfully managed in community settings, while continuing to admit those patients who are in need of inpatient care.

It is likely that low admission rates for Mpumalanga, North West and Northern Province, together with high admission rates for Gauteng, provide evidence of cross-border flow (the use of hospital facilities in Gauteng by patients in the surrounding provinces). The same may be said for cross-border flow of patients from Northern Cape and Eastern Cape to the Western Cape. The low admission rates for Free State reflect the strict admission criteria in Oranje Hospital, the main tertiary hospital in that province, and the concerted attempt over the last 10-12 years to manage patients with severe psychiatric conditions in community settings.³²

A limitation of this study is that admission rates are calculated for all inpatient facilities regardless of the specific setting. This is in spite of the fact that patients with SPC may be admitted to a range of settings from general district hospitals to wards in general tertiary institutions and specialist psychiatric institutions. Admission rates therefore provide a global picture of the rate at which SPC patients are admitted to psychiatric facilities. More sophisticated studies in future might explore admissions according to types of facilities.

Admission rates are complex. Diverse patterns of

admission during deinstitutionalisation indicate that admission rates are particularly sensitive to the successful management of patients in community settings. As Hickling warns,¹⁶ low admission rates do not necessarily reflect effective management of patients in community settings and should be interpreted with caution. They may indicate poor referral procedures, under-diagnosis or unmet need for services. Conversely, sharp increases in admission rates are likely to indicate that deinstitutionalisation is proceeding too rapidly, with inadequate development of community services.

With shifts towards shorter admissions, more acute facilities, and hopefully improved detection of patients in South Africa, we anticipate that admission rates will increase marginally to reflect the greater turnover of patients in inpatient facilities. The monitoring of admission rates during this process is crucial to the development of services for people with severe psychiatric conditions.

Average length of stay

The results indicate that South African mental health services continue to be marked by patterns of long term custodial care. Of note are psychiatric hospitals in Gauteng, the Northern Province and the Northern Cape which report ALOS of over 1.5 years. On a qualitative level, several individual questionnaires reported lengths of stay in excess of 10 years. This pattern has been confirmed by Porteus *et al.*, in a study of quality of care in chronic psychiatric hospitals in South Africa.¹¹

These findings stand in stark contrast to the ALOS in many developed countries, post-deinstitutionalisation. In Helsinki, the mean length of hospitalisation for first-time schizophrenic patients was 148 days in 1960, 72 days in 1965, and 38 days in 1970.¹⁹ In Sweden, the average stay in mental hospitals decreased from 298 days in 1960 to 81 days in 1977.²¹ In a hospital undergoing a programme of deinstitutionalisation over 5 years in Adelaide, Australia, as bed numbers fell by some 45%, the average length of stay dropped from 57 to 37 days.²² Medians of patients' length of stay in three psychiatric hospitals in the UK from 1978 to 1985 were 26, 26 and 49 days respectively.⁴⁰ In the USA, total days of care divided by episodes of care during 1983 yielded average lengths of admission of 41 and 43 days in Non-Veterans Affairs facilities and Veterans Affairs facilities respectively.⁴¹

A second feature of the reported ALOS in this study is the diversity between provinces. Oranje Hospital, the major specialist psychiatric hospital in the Free State, appears to maintain tight control over length of stay, with its programme of active community-based care. Other provinces, notably Northern Province, Gauteng and the Northern Cape continue to maintain long term custodial patterns of care. In the most extreme instance, Mpumalanga has no medium-long stay facilities and struggles to contain patients in inadequate facilities in district hospitals for extremely brief periods of time.

The median ALOS of 11 and 7 days for general and district hospitals respectively, is low, though comparable with the international literature on ALOS in acute facilities. In an acute

psychiatric unit in central London the median length of stay of a cohort of patients admitted to a 60-bed facility over 13 weeks was 15 days.²⁵ In the psychiatric ward of a public general hospital in New York, the average length of stay for 700 patients (mostly involuntary or emergency admissions) was 22 days.⁴²

The findings for this indicator are limited by the fact that lengths of stay were not requested according to types of facility in the questionnaire. This conflated the ALOS for acute and medium-long stay facilities in psychiatric institutions, and results provide an unrealistic pattern of inpatient care. It is likely that the ALOS for medium-long stay facilities in psychiatric hospitals is even higher than that reported here.

Current international patterns of care and local policy recommendations² demonstrate the need to revise lengths of admission in medium-long stay facilities in South Africa. However, several provinces report the presence of a cohort of patients who have remained in custodial care for many years and are thoroughly institutionalised.³⁵ It would be inhumane to apply a blanket policy of reducing ALOS and discharging these patients without careful consideration of their needs and circumstances. The diversity of ALOS across the provinces shows the need for each province to address this particular issue according to their own situation and implement changes in the most humane, clinically sound and cost-effective manner.

At the same time, there appears to be a certain small sector of the patient population who will always require inpatient care, and should be housed either in community residential care facilities or in long term psychiatric hospitals. Within this proposed change there is an urgent need for further research into humane and clinically sound criteria for discharging chronically institutionalised patients.

Default rates

The results of this study indicate low default rates relative to both international and local findings. Literature reviews report that 20-60%,²⁸ or in other reports 26-50%³⁰ of psychiatric patients fail to attend their first outpatient appointments in the USA. Between 20% and 57%,⁹ or in other reports, 9-40%³⁰ fail to attend after the first visit. Between 31% and 56%,⁴³ or in other reports, 30-60%³⁰ fail to attend after the fourth visit.

A previous South African study by Freeman *et al.*³² appears to fall broadly within these parameters, and shows higher levels of default than reported in the current study. They found that 17% of patients in the Free State could be identified as defaulters (had failed to attend monthly maintenance medication appointments for the last 4 months), while 39% were irregular attenders (had failed to attend for 2 or more consecutive months some time in the previous year).

Possible explanations for the low default rates reported in this study focus on poor data quality. From qualitative observations of the data, the chief problem appeared to be reporting the number of patients on local registers as attenders, rather than the actual number of patients who attended services during the month. As registers are updated on a

regular basis in most provincial services,³⁵ it is likely that patients on registers will represent a more stable population who consistently make use of services, and are less likely to default. From qualitative observations, it appears that in some instances, actual attendance is not recorded. As with other indicators in this series, this highlights the limitations of current indicators and information systems in mental health care in South Africa.

There is also less variability in default rate between provinces than was evident in other service ratios. However, poor data quality limits discussion on factors which may have influenced this apparent trend.

Aside from methodological limitations, this study demonstrates the need to plan services which account for defaulters. Sparr *et al.*²⁹ argue that unless it can be demonstrated that outpatient treatment dropouts have high re-hospitalisation rates, or other adverse sequelae, attempts to re-engage dropout patients should be left to clinical judgement and not adopted as policy. For some patients with chronic SPC it is likely that defaults will lead to rehospitalisation, but this is not true for all SPC patients, such as those defaulting from follow-up appointments in acute facilities. Therefore policy around defaults should be adapted to these needs. As argued in other studies, some level of default should be catered for, without regarding it as costly or a risk factor.²⁹ Studies which cost re-admissions and examine factors associated with default would be useful to give substance to these claims and inform clinical policy on default.

In conclusion, the study of default rate indicators highlights two important issues. First, the complexities of attempting to monitor default rates and plan services for the relatively diverse group of people with SPC. Chiefly, in this instance, the tensions between predicted course, treatment and behaviour of patients with chronic conditions compared to those with acute conditions. Second, the problems of recording defaults for mental health services within integrated general health services. These include the limitations of mental health information systems, and the problems of recording defaults when accurate data on patient attendance, bookings and defaults are not available.

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References

- Crisp N, Ntuli A (Eds.) *South African health review 1999*. Durban: Health Systems Trust, 1999.
- Department of Health. *White paper for the transformation of the health system in South Africa*. Pretoria: Government Gazette, 1997.
- Jenkins R. Towards a system of outcome indicators for mental health care. *Br J Psychiatry* 1990; **157**: 500-514.
- World Health Organisation (WHO). *Mental health care in developing countries: a critical appraisal of research findings*. Geneva: WHO, 1984.
- Andrews G. *The Tolkien Report: a description of a model mental health service*. Sydney: University of New South Wales, 1991.
- Ensink K, Leger PH, Robertson BA. Mental health services in the Western Cape. *S Afr Med J* 1997; **87**: 1183-1210.
- Lee T, Zwi R. 1997. Mental Health. In *South African Health Review*. Durban: Health Systems Trust.
- Thornicroft G, Tansella M. *The mental health matrix: A manual to provide services*. Cambridge: Cambridge University Press, 1999.
- Monitor Company. *Use of indicators of hospital service provision, utilisation and efficiency*. Johannesburg: Health Partners International, The Centre for Health Policy, National Labour and Economic Development Institute, Hospital strategy project, 1996.
- Monitor Company. *Hospital Strategy Project: Development of National Affordability Guidelines for Hospital Service Delivery*. Johannesburg: Health Partners International, Centre for Health Policy, National Labour and Economic Development Institute, 1996.
- Porteus K, Sibeko M, Lee T. *Cost and Quality of Care: A Comparative Study of Publically and Privately Contracted Chronic Psychiatric Hospitals*. Johannesburg: Centre for Health Policy, University of the Witwatersrand, 1998.
- Hollander D, Tobiansky RI, Powell RB. Crisis in admission beds. *BMJ* 1990; **301**: 664.
- Powell RB, Hollander D, Tobiansky RI. Crisis in admission beds: a four-year survey of the bed state of greater London's acute psychiatric units. *Br J Psychiatry* 1995; **167**: 765-769.
- Hafner H. Do we still need beds for psychiatric patients? An analysis of changing patterns of mental health care. *Acta Psychiatr Scand* 1987; **75**: 113-126.
- Fioritti A, Lo Russo L, Melega V. Reform said or done? The case of Emilia-Romagna within the Italian psychiatric context. *Am J Psychiatry* 1997; **154**: 94-98.
- Hickling FW. Psychiatric hospital admission rates in Jamaica, 1971 and 1988. *Br J Psychiatry* 1991; **159**: 817-821.
- Hickling FW. Community psychiatry and deinstitutionalisation in Jamaica. *Hosp Comm Psychiatry* 1994; **45**: 1122-1126.
- Goldsmith HF, Manderscheid RW, Henderson MJ, Sacks AJ. Projections of inpatient admissions to specialty mental health organisations: 1990 to 2010. *Hosp Comm Psychiatry* 1993; **44**: 478-483.
- Nieminen P, Isohanni M, Winblad I. Length of hospitalisation in an acute patients' therapeutic community ward. *Acta Psychiatr Scand* 1994; **90**: 466-472.
- Dekker JJM, Van den Langenberg SJAM. Trends in mental health care in Amsterdam. *Hosp Comm Psychiatry* 1994; **45**: 494-496.
- Holmberg G. Treatment, care and rehabilitation of the chronic mentally ill in Sweden. *Hosp Comm Psychiatry* 1988; **39**: 190-194.
- James NM. Deinstitutionalisation in an Australian mental hospital: five years experience. *Hosp Comm Psychiatry* 1987; **38**: 772-774.
- Allen H, Baigent B, Kent A, Bolton J. Rehabilitation and staffing levels in a 'new look' hospital-hostel. *Psychol Med* 1993; **23**: 203-211.
- Geller JL. We still count beds. *Psychiatr Serv* 1997; **48**: 1233.
- Priest RG, Fineberg N, Merson S, Kurian T. Length of stay of acute psychiatric inpatients: an exponential model. *Acta Psychiatr Scand* 1995; **92**: 315-317.
- Chang G, Brenner L, Bryant K. Factors predicting inpatient length of stay in a CMHC. *Hosp Comm Psychiatry* 1991; **42**: 853-855.
- Grunebaum M, Lubner P, Callahan M, Leon AC, Olfson M, Portera L. Predictors of missed appointments for psychiatric consultations in a primary care clinic. *Psychiatr Serv* 1996; **47**: 848-852.
- Nicholson IR. Factors involved in failure to keep initial appointments with mental health professionals. *Hosp Comm Psychiatry* 1994; **45**: 276-278.
- Sparr LF, Moffitt MC, Ward MF. Missed psychiatric appointments: who returns and who stays away. *Am J Psychiatry* 1993; **150**: 801-805.
- Chen A. Noncompliance in community psychiatry: A review of clinical interventions. *Hosp Comm Psychiatry* 1991; **42**: 282-287.
- Stickney SK, Hall RCW, Gardner ER. The effect of referral procedures on aftercare compliance. *Hosp Comm Psychiatry* 1980; **31**: 567-569.
- Freeman M, Lee T, Vivian W. *Evaluation of Mental Health Services in the Orange Free State*. Johannesburg: Centre for Health Policy, University of the Witwatersrand, 1994.
- Gillis LS, Trollip D, Jakoet A, Holden T. Non-compliance with psychotropic medication. *S Afr Med J* 1987; **72**: 602-606.
- Gillis LS, Koch A, Joyl M. Improving compliance in Xhosa psychiatric patients. *S Afr Med J* 1989; **76**: 205-208.
- Flisher AJ, Lund C, Muller L, et al. *Norms and Standards for Psychiatric Care in South Africa*. A report submitted to the Department of Health, Republic of South Africa (Tender No. GES 105/96-97). Department of Psychiatry, University of Cape Town, 1998.
- World Health Organisation (WHO). *Public Mental Health Guidelines for the Elaboration and Management of National Mental Health Programmes*. Geneva: WHO, 1996.
- Foster D, Freeman M, Pillay Y. *Mental Health Policy Issues for South Africa*. Cape Town: Medical Association of South Africa (MASA), 1997.
- Pomp HC, McGovern MP. Integrating state hospital and community-based services for the chronically mentally ill. *Hosp Comm Psychiatry* 1988; **39**: 553-555.
- Cochrane R, Bal SS. Mental hospital admission rates of immigrants to England: a comparison of 1971 and 1981. *Soc Psychiatry Psychiatr Epidemiol* 1989; **24**: 2-11.
- Lawrence RE, Copas JB, Cooper PW. Community care: does it reduce the need for psychiatric beds? A comparison of two different styles of service in three hospitals. *Br J Psychiatry* 1991; **159**: 334-340.
- Rosenheck R, Astrachan B. Regional variation in patterns of inpatient psychiatric care. *Am J Psychiatry* 1990; **147**: 1180-1183.
- Curtis JL, Millman EJ, Struening E, D'Ercole A. Effect of case management on rehospitalisation and utilisation of ambulatory care services. *Hosp Comm Psychiatry* 1992; **43**: 895-899.
- Cohen K, Edstrom K, Smith-Papke L. Identifying early dropouts from a rehabilitation program for psychiatric outpatients. *Psychiatr Serv* 1995; **46**: 1076-1078.