

# SERVICE ON WHEELS: A DEVELOPING COUNTRY'S PERSPECTIVE OF HOME TREATMENT SERVICE IN PSYCHIATRY, A 4-YEAR PILOT EXPERIENCE

<sup>1</sup>Larry N Ayuba, <sup>2</sup>Moses D Audu

Departments of Psychiatrist, <sup>1</sup>Northgate Hospital, Great Yarmouth, Norfolk NR30 1BU, UK, <sup>2</sup>Jos University Teaching Hospital, Jos, PMB 2076 Jos, NIGERIA

## ABSTRACT

### Aim and Method

To establish, the effectiveness of home treatment service in psychiatry and carers' effectiveness in co-management of patients during an acute psychotic episode. The outcome measures were: To determine the percentage of hospital admissions during home treatment; To determine the number of patients that had made significant improvement (a score of 2 or 1 on the Clinical Global Impression – Change Scale) at the end of 8 weeks of acute home treatment; To determine the number of patients that dropped out of treatment or absconded from home treatment; and To determine the level of satisfaction with the programme using a Visual Analogue Scale for Satisfaction. Data was recorded for, consecutive referrals to psychiatrists. Its suitability for home treatment was assessed.

### Result

75 referrals were received over 48 months; 45 (60%) were treated at home, otherwise they would have been admitted in hospital. 42 (93.3%) had significantly improved (scored 2 on the Clinical Global Impression-Change Scale) by the end of 8 weeks of active treatment. 1 (2.2%) patient was hospitalised after commencement of acute home treatment. No patient absconded during acute home treatment. The mean score for satisfaction on the visual analogue scale for satisfaction designed by the

authors was 69.5% and the Pearson correlation coefficient between the patients' score and carers' score for satisfaction was 0.97.

The programme was associated with reduction in both direct and indirect cost of care to families.

### Clinical Implication

The programme was well received by both patients and families as evidenced by a mean score of 69.5% for both patients and carers on a visual analogue scale for satisfaction.

Suggesting that a service like this could easily be established and, once established, will be used.

## INTRODUCTION

The pioneering work of Professor Lambo TA (1966) the village system changed the face of psychiatric care in Nigeria from the mainly custodial system to the management of acutely ill psychiatric patients in the community. The village system connected with the Aro Hospital in Nigeria offers a significant alternative to hospitalisation and was further developed by Asuni (1964). The approach was unique in that it gives relatives and carers of patients the opportunity to be actively involved in the treatment programme of their relations. It also offered a natural milieu for patients and allowed for treatment and rehabilitation to run smoothly and concurrently. With this system there was a reduced need for standard occupational therapy.

Patients were drawn into normal activities of the village life and it also afforded the villagers the opportunity to have an increased understanding of mental illness with a subsequent increase in tolerance to the mentally ill in addition to increasing economic activity.

Nigerian psychiatry has since remained largely community based, not as a result of deliberate Government policy but more as a result of lack of resources. There is no national social welfare programme, halfway residential homes, sheltered accommodation and well-structured community based after-care programmes for the mentally ill in Nigeria (Ohaeri JU 2001). Patients who need to be admitted into some acute psychiatric services were required to come with carers or family members who would look after their material needs, food, and escort them to places when required, increasing the direct, indirect, and intangible cost of care (Andrew G 1991, Price et al 1992, Davies and Drummond 1994). Hence, it has been suggested that, if possible the psychiatric patient living in urban area should be treated in their own home. This is because it is convenient, less distressing, less expensive, and is often preferable in other ways especially when family members are able to supervise the patient in a kindly and therapeutic way. It also helps to uncover unhealthy family dynamics of over- or under-involvement, critical or over-indulgent attitude of family members (Asuni, Schoenberg, and Swift 1994). With this in mind there is a need to develop an alternative creative way of managing psychiatric patients within the limited available resources using various positive cultural factors in the community to enhance the care of psychiatric patients. We adopted and

modified some aspects of the village system previously used by Professor Lambo in Abeokuta, Nigeria in developing an alternative care package to hospital admission, in Jos, Central Nigeria.

In this paper, we present a pilot experience of the development of a home treatment service for acutely mentally ill psychiatric patients in the Central part of Nigeria without the conventional psychiatric team support but using culturally adaptable practices to deliver a service to patients, relations and carers. This programme differs from the village system in that patients did not have to congregate in some village close to a psychiatric hospital but are treated at home, cared for by their family members, with visits as required by psychiatrists, and family members or relations keep responsibility of and provide daily care. The approach was pragmatic, since it was necessitated by limited psychiatric resources. It was to be uniquely experienced by patients, carers and family members in that the needs of all involved were to be addressed in a manner and fashion that is acceptable and reflecting the structure provided in acute hospital in-patient care. All the diagnosis was made in accordance with ICD10 (WHO 1992) as was done on the ward.

## **OUTCOME MEASURES**

1. Hospital admission within 8 weeks of starting home treatment and absconsion from home during the period of home treatment service.
2. Clinical assessment using the Clinical Global Impressions Scale (CGI). A score

of 2 on the CGI-Global change scale was considered significant.

### 3. Satisfaction with the programme Using Visual Analogue Scale (VAS)

## ASSESSMENT INSTRUMENTS

1. Clinical Global Impressions Scale (Guy W. 1976).

2. Visual Analogue Scale for Satisfaction. This is a millimetre scale which was designed by the authors themselves to enable them measure the degree of satisfaction with the overall programme. The scale ranged from 0 to 100, where 0 corresponded to no satisfaction at all and 100 corresponded to complete satisfaction.

## INCLUSION AND EXCLUSION CRITERIA

All patients experiencing acute psychotic episodes for the first time, which were severe enough to need hospital admission and who were resident within 40 km of the hospital were included in this study, in addition to the availability of a carer or family member at home during the period of the home treatment. Family members, relatives, or patients must make request for home treatment themselves. Excluded from the study were all patients below the age of 18 years and patients whose primary diagnosis was either drug or alcohol misuse or patients with comorbid medical conditions or any condition which co-exists to make the provision of home treatment service risky.

## THE PROGRAMME

The programme was developed around a guideline and a structured home treatment

service protocol. The focus was on the provision of personal assistance, initiation and administration of medication by a psychiatrist, supervision of care, psycho-educational information about mental illness, medication management and practical support for the family for a period of between 6 to 8 weeks. Clinical experience and research from within Nigeria, shows that most serious acutely ill psychiatric patients requiring hospitalisation improved, within 6 to 8 weeks of admission to hospital (Ohaeri JU 1993, IKwuagwu et al 1994). The choice of medication had the aim of immediate and early period of tranquilisation, sedation and maintenance of adequate control in potentially violent patients, to provide immediate relief for patients and families who might have been overburdened by patients' destructive behaviour. Disturbed behaviour is a greater determinant of severity of burden; hence adequacy of treatment is a first step in relieving and reducing caregivers and family's burden (Ohaeri JU 2001).

Family, carers and patients were educated on the nature of the illness, supervised and instructed on how to dispense all oral medication and the side effects to expect. The attending psychiatrist administered all forms of injections and supervised the roles played by the family members, carers, and patients at home in the management of the patients. As patients improved, responsibility of medication management was gradually given to an appointed family member in a graded fashion. The process of educating the family and the patients was done mainly with the aim to increase medication compliance, prevention of relapse and the provision of basic information about the causes

of mental illness, which often contrast with held beliefs. Knowledge of causation of mental illness is poor (Gureje et al 2005) and many Nigerians believe that mental illness is caused by evil spirits, witchcraft and curses.

Patients were visited daily within the first 72 hours, then alternate days for the next 4 days, twice weekly for 2 weeks and then weekly for between 2 to 4 weeks, depending on the need. A review usually occurred at a prearranged time in the patient's home with a family member or carer present, someone who had enough knowledge and information about the patient and could give a progress report about the patient since the last visit. Each review consisted of mental state examination as would have been done while the patient was on admission in hospital and the CGI was used to assess the clinical state during visits by the most experienced psychiatrist. To prevent side effects of medication and encourage compliance, all patients on anti-psychotic medication were given routine Benzhexol 2.5 mgs to 5 mgs on a prn basis. Family members, carers and patients could ask questions regarding any part of the treatment during the visits. Advance instruction was given by the psychiatrist regarding the use of prn medication and hypnotics at night should the patient require them and the family members were given psychiatrists' contact telephone numbers for all emergency contacts. The family could freely contact the psychiatrist at any time of the day for advice.

For each patient, arrangement was made with the carer with the consent of the patient to transfer the patient to hospital for hospitalisation if

difficulties arose which made home treatment unsuitable. Examples of such difficulties include severe violence, refusal to take medicines or refusal to eat food. The attending psychiatrist had the responsibility of arranging for hospital admission.

The family members responsible for the patients at home or carers and the patients themselves were asked to rate their satisfaction with every aspect of the programme after the patients stabilized mentally. The rating was done on the VAS.

Given that the patients were looked after by their relations at home based on request from either the patient or family members, confidentiality could not be protected. This, however was not a problem because the home treatment was based on either the patient or family members' choice with the patient's consent.

## **RESULTS**

75 people were seen over a period of 4 years from February 1997 to January 2001.

15 patients did not meet criteria for hospital admission, 15 patients were relapsed cases who had been non-compliant with their medication for less than 6 months although they were still offered treatment at home. 45 patients met the criteria for inclusion; 36 (80%) of the patients were referred by family members, 5 (11.11%) by their church pastors (patients who had taken refuge at pastor's house), and 4 (8.89%) were referred by friends. Most of the referrals were by contacting the psychiatrist or through his work colleagues.

**Table 1:** Duration of illness before treatment started (weeks).

	<b>Male</b>	<b>%</b>	<b>Female</b>	<b>%</b>	<b>Total</b>	<b>%</b>
1-8	8	44.4	14	51.9	22	48.9
9-16	3	16.7	5	18.5	8	17.8
17-24	6	33.3	7	25.9	13	28.9
25+	1	5.6	1	3.7	2	4.4
<b>Total</b>	<b>18</b>	<b>100</b>	<b>27</b>	<b>100</b>	<b>45</b>	<b>100</b>

About 50% of our sample has been ill for 8 weeks before treatment started. The mean duration of illness was 11.6 weeks. The mean duration for males was 12.0, while the mean duration for females was 10.6 weeks. The difference between the male and female means was not significant,  $t=0.5735$ ,  $df=43$ ,  $P>0.5$ .

**Table 2:** Duration of treatment before notable clinical improvement (weeks).

	<b>Male</b>	<b>%</b>	<b>Female</b>	<b>%</b>	<b>Total</b>	<b>%</b>
1-8	16	88.89	26	96.30	42	93.34
9-16	2	11.11	0	0	2	4.44
17-24	0	0	1	3.70	1	2.22
<b>Total</b>	<b>18</b>	<b>100</b>	<b>27</b>	<b>100</b>	<b>45</b>	<b>100</b>

Over 90% of our patients had shown significant clinical improvement after 8 weeks of treatment.

**Table 3:** Psychopathology and Diagnosis

<b>A. Psychopathology</b>	<b>N</b>	<b>%</b>
Family history of mental illness	19	42.2
Severe suicide risk	12	27.0
Acts of violence / aggression	15	33.3
Various delusions	36	80.0
Hallucinations (auditory and visual)	27	60.0
Severe disturbed behaviour	34	75.6
Homicidal risk	7	15.6
Use of illicit drugs and alcohol	7	15.6
<b>B. Diagnosis</b>	<b>N</b>	<b>%</b>
Bipolar affective disorder manic type	20	44.4
Psychotic depression	15	33.3
Schizophrenia	10	22.2
Total	45	100.0

**TABLE 4: SCORE ON CGI (GLOBAL SEVERITY) AT INDEX ASSESSMENT**

Score	N	%
4	14	31.1
5	20	44.4
6	8	17.8
7	3	6.7
Total	45	100.0

Most patients scored 5 (44.4%) on the CGI (Global Severity Scale). The mean score was  $5^+ 0.88$ , which corresponds to markedly ill on the scale.

**TABLE 5: SCORE ON CGI (GLOBAL CHANGE) AT 8 WEEKS ASSESSMENT**

Score	N	%
1	11	24.4
2	31	69.0
3	1	2.2
4	1	2.2
8	1	2.2
Total	45	100.0

93.3% of the patients scored  $2^+ 1.203$  on the CGI (Global Change Scale) at 8 weeks of treatment. This corresponds to Much improved on the scale.

**TABLE 6: SCORES ON VAS FOR GLOBAL SATISFACTION (PATIENTS)**

Score	N	%
35	1	2.2
40	2	4.4
50	4	8.9
55	5	11.1
60	5	11.1
65	7	15.6
70	4	8.9
75	7	15.6
80	6	13.3
82	1	2.2
85	3	6.7
Total	45	100.0

The total score on global satisfaction for patients was 225 with a mean score of  $65.9^+ 12.9$  and range of 50.

**TABLE 7 SCORES ON VAS FOR GLOBAL SATISFACTION (APPOINTED RELATIVE)**

Score	N	%
60	5	11.1
65	4	8.9
70	10	22.2
75	14	31.1
80	9	20.0
85	3	6.7
Total 3285	45	100.0

The total score on the global satisfaction scale by the patients' relatives was 3285, higher than the patients' total score. The mean score was 73.0 <sup>+</sup>7.0 and the range was 25. The Pearson correlation coefficient between the scores was significant, 0.97.

### **SOCIO-DEMOGRAPHIC CHARACTERISTICS**

27 (60.0%) were females with a mean age of 42.7 years. 18 (40.0%) were males with a mean age of 36.7 years. The mean age of the whole group was 40.3 years.

25 (55.6%) were married, 10 (22.2%) were unmarried, 6 (13.3%) were widows, 4 (8.9%) were divorced, and 1 (2.2%) was a widower. 38 (84.4%) were Christians while 7 (15.6%) were Muslims.

36 (80.0%) came from middle-class families. 7 (15.6%) came from the upper class families while 5 (11.1%) were from working class families. (Classes were determined by their levels of education and income).

27 (60.0%) were highly skilled professionals (doctors, lawyers, engineers, senior accountants and senior civil servants at the peak of their careers). 9 (20.0%) were students. 9 (20.0%) were businesswomen in well-established businesses or retired civil servants, who were now well established in business.

34 (75.6%) had completed tertiary education. 9 (20.0%) were either still in secondary school or in university. 2 (4.4%) had no formal education but were married into middle-class families. 40 (88.9%) were Nigerians. 5 (11.1%) were non-Nigerian of which 3 had one Nigerian parent; one was married to a Nigerian.

### **CLINICAL OUTCOME-**

1 (2.2%) patient was admitted to hospital during the 8 weeks' period of acute treatment, for extreme violence.

No patients absconded from home during the 8 weeks of acute treatment.

- 37 (82.2%) had made significant clinical improvement within 3 weeks of treatment, 40 patients (88.9%) within 6 weeks, and 42 (93.3%) within 8 weeks of treatment as rated by the CGI. 2 (4.4%) patients had outpatient ECT.

The mean score for global satisfaction with the programme was 70 for patients and 73 for

the carers who looked after the patients and the Pearson Correlation Coefficient between the 2 scores was significant 0.97

3 patients (6.7%), all being schizophrenic, still had active psycho-pathology (delusions) even though their symptoms had greatly reduced 16 weeks after the start of treatment. These 3 notably had little support from their immediate family as their relations were either not there for them or showed little understanding of the patients' illness despite repeated explanation and discussion with regard to the patient's illness.

## **DISCUSSION**

The results of the home treatment show that the programme was well received as evidenced by the non-absconion from treatment, the high satisfaction rate and the low hospital admission within the period of acute treatment. Home treatment reduces the direct cost of treatment by removing the cost of hospital bed, the cost of having a family member, or carer to attend to the patients needs while on admission (in our environment the patients are usually accompanied by a family member or carer), and the cost of transportation all of which are the responsibility of the patient or family. Also apart from the convenience and all other indirect costs mentioned earlier, the patients and their families are also saved the stigma associated with admission into mental hospital in this part of the world. These benefits motivated clients and their family members, relations, friends and priests to recruit more patients for home treatment programme. Otherwise, those patients would, most probably, end up with the priests or the traditional healers. Worse still, some could

eventually become vagrants. Hence, over the years we have witnessed an increasing number of requests for home treatment of psychiatric disorders both by patients and their relations.

The mean duration of illness before the index assessment was 11.6 weeks. The delay in seeking treatment could be attributed to several factors. These are cultural beliefs as to the causes of mental illness, e.g. demonic possession, bewitchment, curses, and the breaking of taboos. Hence patients and their relations tend to visit religious priests and traditional healers to exorcise the evil spirits, break the curses, or appease the gods and might consult the psychiatrist only after these other modes of treatment have failed. Additionally, consulting priests or traditional healers not only conforms to held beliefs but also tends to earn the patients and their relations some sympathy from the community and thereby reduce the stigma associated with mental illness. Other factors are poor knowledge of mental illness and, hence inability to detect the illness early except, of course in acute cases who present with florid symptoms.

The management of patients with acute psychiatric disorder within the home setting lacks the structure of the hospital inpatients environment. This no doubt is recognised as strength in the current drive towards provision of services to patients in a homely and nice environment. This lack of structure allows for flexibility in approach to treatment and service delivery but it potentially allows room for some aspect of treatment and service delivery to be neglected or overlooked. This can be addressed



by involving the family, relations and carers in the treatment and management of patients at the onset of care.

High proportions of female gender, the married, the middle class, as well as high-flying professionals characterize the data presented here. Also, major mood disorders formed the largest diagnostic category. The high female to male ratio corresponds well with most West-African studies (Jegade RO and Adaranijo H 1976, Makanjuola ROA 1985). The tendency is for female patients and their families to prefer private psychiatric treatment in order to avoid the social stigma and problems that may be associated with potential suitors. However, most of our patients were already married so this might be more an index of social stigma and class status. In addition, most of the patients came from families that could easily access private care. The high rate of upper and middle class individuals (about 89%) was similar to a study by Makanjuola in Ife Nigeria (Makanjuola ROA 1985) in which the middle-class predominated but it contrasts with two other studies from Central Nigeria done by Johnson FYA (1981).

Nearly 80% of our patients had the diagnosis of a major mood disorder. This was much higher than previous Nigerian studies, while schizophrenia accounted for about 22% of our sample. This finding is similar to other studies within the West-African sub-region (Jegade RO and Adaranijo H 1976, Makanjuola ROA 1985). The higher proportion of mood disorders is a reflection of the greater number of females in the sample and might partly account for the delay in

seeking psychiatric care because of the difficulty in recognising depression when it is mild or moderate. Hence most of the presentations were severe cases.

The finding of one third of our patients presenting with aggression and 27% with suicide risk was similar to other studies within the African region. These studies found that patients in Africa were more likely to be admitted for non-aggressive behaviour. This may be a reflection of cultural tolerance towards acts of aggression but not other bizarre forms of beliefs and behaviour, which might be judged more socially embarrassing than aggression, while suicide risk has always been found to be relatively low among African patients (Onyeama WPC and Onuora AN 1980, Odejide et al 1989).

Ninety three percent of our patients had made significant improvement in their mental state within 4 weeks. All of them had been discharged from acute care to follow-up. This is similar to IKwuagwu's finding where they found that about 90% of their patients had made significant improvement within 4 weeks of admission into hospital while the low admission rate into hospital of 2.2% and the non-absconion from home during the initial 8 weeks of treatment was significantly low compared to an earlier acute inpatient study within the same area where there was an absconion rate of about 14% while patients were on admission in hospital and re-admission rate of 15%, 3 months after discharge from acute services (IKwuagwu et al 1994), suggesting that patients were more likely to cooperate with care if they were managed in a

familiar environment, that they have control over.

There are limitations with regard to the data presented here. The sample size is small, the findings were mainly clinical in nature and there was no control group. Also no attempt was objectively made to examine the impact of the provision of the service on the acute beds in the hospital.

Despite these limitations a number of conclusions could be drawn from the experience. It suggests that Home Treatment service for acute psychotic patients was possible in a developing country provided there is a good and appropriate social support network at home for the patients and appropriate care could be provided for patients without necessarily needing all members of the psychiatry service, especially where there is a dearth or shortage of such staff.

Home treatment service is likely to be valuable in developing countries in their rights, but the ultimate usefulness will be as part of an integrated, psychiatric service with inpatient admission facility.

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#### **DECLARATION OF INTEREST**

None

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Dr Larry Nanjul Ayuba, Consultant Psychiatrist  
Northgate Hospital, Great Yarmouth,  
Norfolk NR30 1BU, UK

Dr Moses David Audu, Consultant Psychiatrist  
Jos University Teaching Hospital, Jos,  
PMB 2076 Jos, NIGERIA