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A Cost-Effective Model for Increasing Access to Mental Health Care at the Primary Care Level in Nigeria

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Abstract

Background: Although effective treatment modalities for mental health problems currently exist in Nigeria, they remain irrelevant to the 70% of Nigeria's 120 million people who have no access to modern mental health care services. The nation's Health Ministry has adopted mental health as the 9th component of Primary Health Care (PHC) but ten years later, very little has been done to put this policy into practice. Mental Health is part of the training curriculum of PHC workers, but this appears to be money down the drain.
Aims of the Study: To review the weaknesses and problems with existing mode of mental health training for PHC workers with a view to developing a cost-effective model for integration.
Methods: A review and analysis of current training methods and their impact on the provision of mental health services in PHC in a rural and an urban local government area in Nigeria were done. An analysis of tested approaches for integrating mental health into PHC was carried out and a cost-effective model for the Nigerian situation based on these approaches and the local circumstances was derived.
Results: Virtually no mental health services are being provided at the PHC levels in the two local government areas studied. Current training is not effective and virtually none of what was learnt appears to be used by PHC workers in the field. Two models for integrating mental health into PHC emerged from the literature. Enhancement, which refers to the training of PHC personnel to carry out mental health care independently is not effective on its own and needs to be accompanied by supervision of PHC staff. Linkage, which occurs when mental health professionals leave their hospital bases to provide mental health care in PHC settings, requires a large number of skilled staff who are unavailable in Nigeria. In view of past experiences in Nigeria and other countries, a mixed enhancement-linkage model for mental health in PHC appears to be the most cost-effective approach for these Nigerian communities.
Discussion: Nigeria is currently experiencing a "double epidemic", and with high infant and maternal mortality rates, the burden of mental health problems is still invisible to policy makers. Meagre resources allocated to mental health need to be utilised maximally with cost-effective interventions. This mixed enhancement-linkage model draws on the strengths of both models, while taking into account their limitations. Concrete conclusions cannot be drawn until the model developed is fully tested.
Implications for Health Care Provision and Use: This model has the potential of making mental health services available, accessible and acceptable in these communities. This should reduce the burden of suffering for the mentally ill by providing treatment and restorative care, promoting mental health and preventing mental illness in the populace.
Implications for Health Policies: The current mental health policy for Nigeria focuses on enhancement as the mode in which mental health can be successfully integrated into PHC and so far this has not been successful. Results emerging from this model can be presented to policy makers thereby supporting replication in other parts of the country. This could ultimately lead to a change in the mental health policy on training for mental health at the PHC level.
Implications for Further Research: Mental health services and mental health economics research are still at the stage of infancy in Nigeria. This study provides baseline information and should stimulate further research in these two vital areas.

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Background

Recent estimates reveal that neuropsychiatric conditions account for 10% of the burden of disease in low and middle income countries,[1] a toll greater than that produced by even tuberculosis. Although large-scale epidemiological data for Nigeria are unavailable, estimates of mental health indices are similar to those of other developing countries.[2] Therefore for the 70% of Nigeria's 120 million people who lack access to modern mental health services,[2] the toll in human suffering, disability and loss of community resources that occur as a result of untreated mental health problems are enormous.

For several years, the integration of mental health into Primary Health Care (PHC) has been recommended by WHO.[3] In line with this, the Federal Ministry of Health (FMOH) in Nigeria added mental health as the 9th component of PHC in 1989, identifying this as the only realistic way mental health services could reach the population.[2] Over a decade later, there are essentially still no mental health services in PHC. Meanwhile the gulf between available services and mental health needs is increasing due to urbanisation, breakdown of traditional family structures, political and economic instability, and the added HIV epidemic.

The PHC implementation programme in Nigeria was formalised in 1986 and, due to the size of the country,

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Table 1. Characteristics of Current Mental Health Training for CHOs

Duration	Two weeks
Site	Hospital based
Resource persons	Five highly trained mental health specialists
Process/Content	20 hours of lectures 4 ward rounds in Psychiatry 4 psychiatry outpatient clinics
Predominant mode of instruction	Lectures

implementation was done in phases until all local government areas (LGAs) were covered.[4] Each LGA (same as district) has a Medical Officer of Health (MOH) as PHC co-ordinator. Community Health Officers (CHOs), Community Health Extension Workers (CHEWs) and Voluntary Health Workers (VHWs) man the PHC system. Interestingly, training for mental health care had been incorporated into the curriculum of PHC workers since the policy on mental health came into effect, but this appears to be money down the drain because in spite of the training the service is not available. Recent reports on the status of PHC implementation in Nigeria fail to mention the state of mental health care[4] and it appears that the absence of effective mental health services in PHC is being silently ignored. This is at variance with what had been stated in the National Health Policy that a programme of mental health should be promoted in PHC.[5]

The role psychiatric hospitals play is also critical because while other specialities are established in primary, secondary and tertiary care, psychiatric facilities in Nigeria are basically limited to tertiary institutions where all the expertise is hidden. For scattered unevenly around Nigeria are 31 psychiatric facilities, which virtually have no working relationship with health facilities in the community such as the district general hospital in each LGA and the 4 to 7 PHC centres within a LGA, each of which serve 10,000 to 30,000 people.[2]

Hence, a basic infrastructure for PHC is in place and, although limited, there are trained staff and facilities for mental health care. Individuals, hospitals, and the government are expending large amounts of human, material and financial resources training CHOs for mental health care. Is this training being monitored and evaluated and are those involved aware that this is only one of several steps that need to be taken to integrate mental health into PHC? There is an urgent need to integrate mental health into PHC but how can the limited resources available be put to maximum use.

Aims of the Study

This paper reviews the existing model and the impact of mental health training for PHC workers in two local government areas in Nigeria, with a view to developing a cost-effective model for the integration of mental health into PHC in the country.

Methods

Review of Method and Impact of Current Training

A review and analysis of current training methods and their impact on the provision of mental health services in PHC in two local government areas in Nigeria were carried out. This was done by looking through the current syllabuses, interviewing tutors and students on this programme, and by direct observation during the training period. All the CHO's in the Local Government Areas (LGAs) under study were interviewed using a structured questionnaire to assess their current knowledge and practice with regard to mental health care.

Table 2. Analysis of the Training Programme

Strengths	Weaknesses
• Highly skilled mental health professionals do the training	• Lack of training needs assessment
• Mental health professionals do not have to leave the hospital environment and can carry on with other responsibilities during the training	• Training is entirely hospital based
• Off job intensive training, allowing participants to concentrate on the course	• Highly skilled mental health staff lack exposure to PC settings
• All the training is done within the hospital, so trainees do not have to move around.	• Teaching methods focus on knowledge and fail to address the mental health issues of holistic care and attitudes towards mental illness. There is dearth of interactive training, incorporating role-play, discussions and group work to change attitudes
	• Short period does not allow trainees to process information
	• There is no contact with mental health professionals after this period
	• Monitoring and evaluation not built into the training programme

Table 3. Community health workers providing mental health care

	IBADAN NORTH	AKINYELE
Basic training before CHO course	6 (60%) Nurses 4 (40%) CHEWS	12 (86%) Nurses 2 (14%) CHEWS
Carrying out mental health care	NO: 8 (80%) YES: 2 (20%) [*Limited to counselling*]	NO: 8 (57%) YES: 6 (43%) [*Limited to health education and counselling*]
Knowledge of mental health promotion	NO: 8 (80%) YES: 2 (20%) [*Limited to knowledge of good nutrition*]	NO: 4 (29%) YES: 10 (71%) [*Limited to knowledge of good nutrition*]
Knowledge of mental health prevention	NO: 5 (50%) YES: 5 (50%) *[Education on drug abuse]*	NO: 5 (36%) YES: 9 (64%) [*Antenatal care*]
Knowledge of treatment for mental illness	NO: 3 (30%) (*vague]* YES: 7 (70%)	NO: 6 (43%) YES: 8 (57%)
Knowledge about existence of a mental health policy for Nigeria	NO POLICY: 4 (40%) POLICY EXISTS: 6 (60%) *[None of the workers had knowledge of the contents of the policy]*	NO POLICY: 10 (71%) POLICY EXISTS: 4 (29%) [*Only one had some knowledge about the contents of the policy]*
Supervision for mental health care	NO SUPERVISION: 10 (100%)	NO SUPERVISION: 14 (100%)

Selection of LGAs

An urban (Ibadan North) and a rural (Akinyele) LGA were selected to create a basis for comparison. Ibadan North LGA has a population of about 300,000 people. This is an urban, mostly congested and overcrowded area where most of the inhabitants are traders, artisans and small-scale farmers. This LGA has 7 PHC facilities.

Akinyele LGA was randomly selected out of the nine rural LGAs that surround the metropolis of Ibadan. This LGA has 15 PHC centres and most of the inhabitants are small-scale farmers.

Analysis of Models for Integration

The second aspect involved the use of the literature in analysing tested approaches to integrating mental health in PHC, with a view to developing a cost-effective model for the Nigerian situation. Using the Option Appraisal Method, a systematic examination of all the advantages and disadvantages of each practical alternative way of integrating mental health into PHC was analysed.

Derivation of a Cost-Effective Way of Integrating Mental Health into PHC

The information obtained from the PHC workers and those obtained from the options appraisal analysis were harmonised to form the basis of a proposed model for the integration of mental health into primary health care in Nigeria.

Results

Characteristics of Current Mental Health Training for CHOs

Every year the Department of Psychiatry, University College Hospital (UCH), Ibadan receives a group of health workers for the Community Health Officer (CHO) course. This period for mental health training is carved out of the one-year period set for the CHO course. The characteristics of this training are summarised in **Table 1**.

During this 2 week period, each psychiatrist spends a total of about16 hours giving lectures, conducting ward rounds and teaching in outpatient clinics, providing a total of approximately 80 hours of instruction by highly trained mental health professionals. The students pay a lump sum for the whole course. This fee is highly subsidised by the government, directly and through the training institution. Training is done in specialist settings rather than in PHC setting. An analysis of the strengths and weaknesses of the training programme is provided in **Table 2**.

Impact of Training on PHC

All the CHOs manning a total of 15 primary health care centres in Akinyele and 7 PHC centres in Ibadan North LGA were interviewed. The results of their replies are seen below in **Table 3**.

These results point to the fact the current training is not

Table 4. Enhancement Model

- Commonly used approach in developed and developing countries
- Based on the recommendation of WHO which states that PHC workers must be the first point of contact for mental health care
- All PHC workers require enhancement, it really is not an option

Reality in Developing Countries

- For successful integration, enhancement in its pure form did not exist.
- Continuous supervision from mental health professionals was a needed and constant accompaniment because of cadre of staff in PHC
- Services are limited to very few conditions.
- Large numbers of patients with mental health problems still remain undetected

Cost-Effectiveness

- Cost is low because there is no need to recruit new staff or provide infrastructure.
- Unlike other areas of health, which require costly technology, all that is required is the training of PHC staff to provide psychological support and relatively inexpensive drugs.
- Studies have shown that without certain factors in place enhancement will not be effective. With the cadre of staff available, enhancement has to be accompanied by ongoing supervision from mental health professionals.
- Hospital based training alone is not effective and goes to waste if not followed up.
- If properly practised, this model caters for the vast majority of patients who present in PC with problems neither physical nor psychological but a mixture of both.

Sources: References[1,6,8-15]

effective and that CHO's are unable to implement mental health in PHC. As a result, virtually no mental health services are being provided at the PHC level in these local government areas.

Models for the Integration of Mental Health into PHC

Models for integration are specific arrangements and organisational characteristics used to provide mental health services in primary care (PC) settings.[6] The literature reveals the existence and feasibility of several arrangements, but the enhancement and linkage models of integration emerge as dominant and, with minor modifications, all suggested models fall into either category:[6,7]

- Enhancement refers to the training of PC workers to recognise, diagnose and treat mental illness, and carry out other mental health services independently.
- Linkage occurs when mental health professionals leave their hospital bases to provide mental health services in PC settings.

Detailed descriptions of the features of each model and the feasibility of applying the models in a developing country like Nigeria[1, 6-17] are provided in **Table 4** and **Table 5**.

Drawing on the strengths of both models, what will be the most cost-effective one for Nigeria?

Mixed Enhancement-Linkage Model for Nigeria

The importance of equipping every health worker to provide holistic care has been emphasised. So also has the need for PHC workers to have continuous supervision. Since supervision will have to be provided, in order to improve the effectiveness and benefit of enhancement, some linkage care might as well be incorporated. On the set days for supervision, supervisors can carry out on-site consultation alongside PHC workers, thereby maximising the benefits of their presence in PHC centres.

Who will provide the supervision and linkage service? This is where the psychiatric hospitals have a vital role to play. The 31 psychiatric hospitals and the specialists therein, will need to be reoriented towards supporting PHC. Each hospital can draw out a plan to support a PHC programme with a psychiatric primary care team to ensure its execution as suggested by Wulsin.[18]

A phased approach to implementation could be adopted, with each psychiatric hospital supporting 1 to 2 LGAs initially as was with the initial PHC scheme. At the commencement of the scheme in 1986, there were scarcely any skills for planning or implementation at the LGA level. Hence, federal institutions had direct input at the LGA level in the pilot scheme. To extend the scheme to all LGAs, federal institutions trained personnel at the state level to take up this crucial support role.

This same approach can be applied in introducing the mental health component. In Nigeria there is at least one psychiatric

Table 5. Linkage Model

- Broader scope of mental health services which will be available to many more patients.
- Reduced stigma since patients receive mental health care at the same site they receive PC.
- Promotion of communication between mental health staff and PC workers and improved co-ordination of care.
- Significant transfer of expertise to PC workers due to continual contact with mental health professionals on site.
- Very high cost due to numbers of highly trained staff needed.

Reality for Developing Countries
- Inadequate numbers of trained staff

Cost-Effectiveness
- In its pure form, the costs will be extremely high in terms of human, material and financial requirements and simply unaffordable by developing countries.
- However where it is practised the effectiveness is high.

Sources: References[6,7,12,16,17]

facility in 24 of the 36 states. In implementing the enhancement model each psychiatric facility could support one or two LGA's. Since there is a need to fill in the gap in the district hospitals, this initial scheme can be used as a training ground for residents in psychiatry and psychiatric nurses who can be trained to establish permanent support at the district level. These staff who would have experienced the challenges and benefits of reaching out into the community can then proceed to set up base in district hospitals providing continued supervision and linkage services to PHC settings. This will release psychiatric hospitals to support other LGA's. This model is illustrated in **Figure 1**.

Discussion

Nigeria is currently experiencing a "double epidemic" of high infant and maternal mortality rates. Thus, the burden of mental health problems is still invisible to policy makers. Data pertaining to the morbidity from untreated mental illnesses and the economic loss to the nation from them, together with cost-effective interventions need to be presented to policy makers by mental health professionals. The failures of present interventions also need to be brought to light so that meagre resources allocated to mental health can be diverted to areas where they will be effective.

The current training of community health workers is not effective, as highlighted in the results section. This waste must be brought to the attention of those concerned. It may be possible to salvage the situation if training and/or supervision is continued in the community. It is also possible that if subsequent CHO training for mental health is carried out in PHC settings it would be more effective. This is too late now for those who have completed their training and are out in the field, manning the PHC centres in both urban and rural areas. These health workers will still need to be reached and re-trained for mental health care.

Another interesting finding is that having highly skilled mental health professionals does not necessarily yield successful training. Rather, their relevance to the training needs of CHOs is in question. This is why a training resource assessment is vital to the success of any training programme.[19] Also in question is the lack of training needs assessments (TNA). This is a first step towards developing a training programme for PHC workers that will identify priority areas amenable to training and give some idea of the existing knowledge, attitudes and skill level of PHC workers. This will ensure that wastage is minimised and that training is effective. If a good TNA is done, it would identify the need for various teaching methods, not only to impart knowledge, but also to deal with attitudes, beliefs and skills which are vital for mental health care.[20]

Another issue is the site of training, on job training with shorter sessions over a longer period is said to be better for establishing long-term improvements in practices.[20] It has been shown that it is better to develop training activities that use the actual environment and situation where the trainees work[19] as this yields better results. One of the advantages of the mixed enhancement-linkage model is that components such as on job training can be built into it.

The choice of the mixed enhancement model utilises one of the elements of cost-effectiveness analysis, using the optimal choice given a certain budget.[21] What really is the difference between the costs of mixed enhancement-linkage and enhancement with supervision? Although it may be argued that mixed enhancement-linkage will be higher due to the cost of additional time for consultation. Is this difference really significant? Are the benefits of the additional linkage care worth it? These are questions that need to be answered before concrete conclusions can be drawn.

However, one aspect appears unavoidable: For the successful integration of mental health into PHC in Nigeria, some mental health professionals will have to leave their hospital bases to support and sustain the integration process.

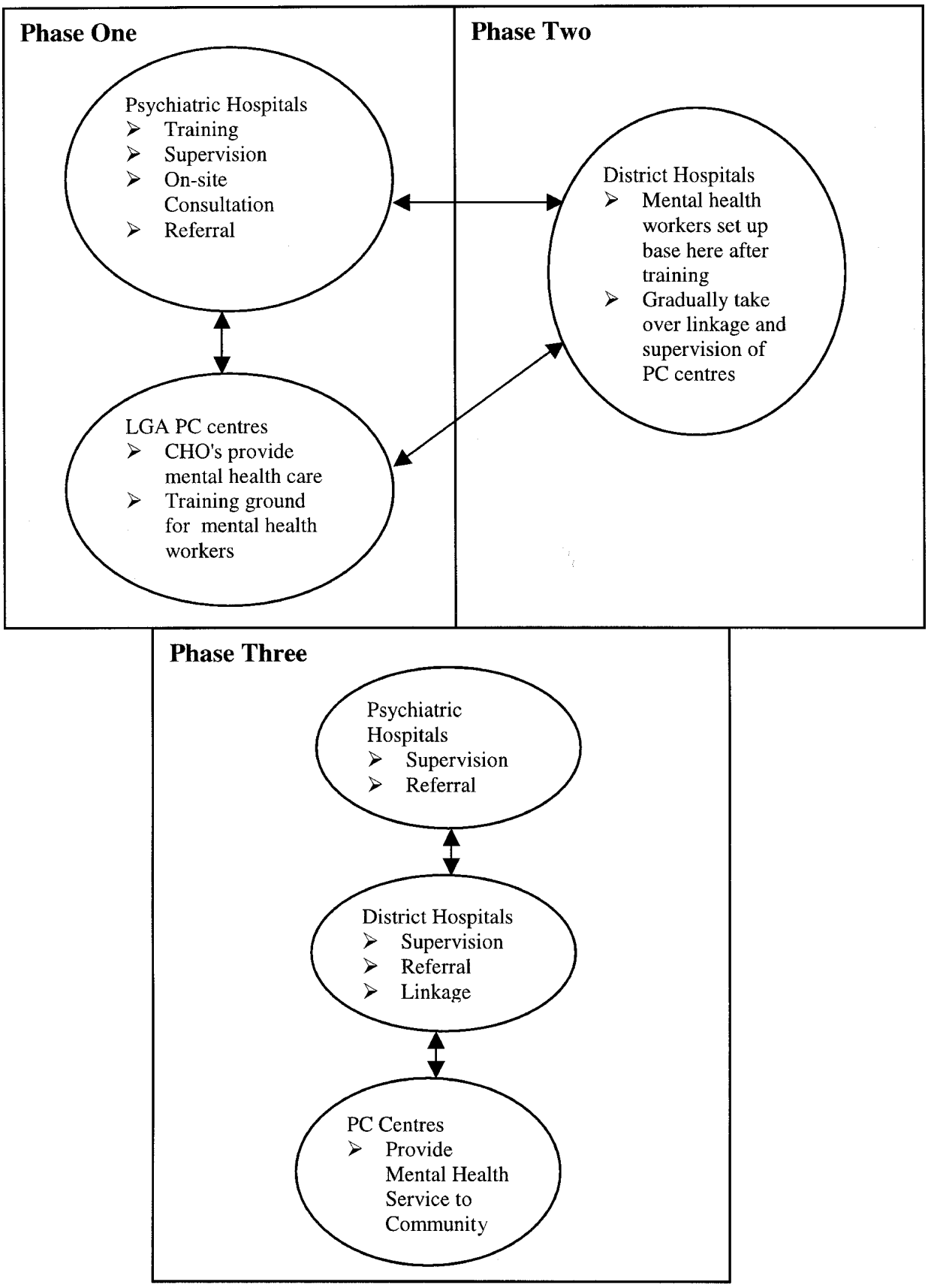

Figure 1. Mixed Enhancement-Linkage Model for Nigeria*

*With a phased approach to filling the existing personnel gap in district hospital

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