Structure of Primary Healthcare: Lessons From a Rural Area in Southwest Nigeria

*Mohammed AS *Idowu IE *Kuyinu YA

*Department of Community Health and Primary Health Care,

Lagos State University Teaching Hospital,

Ikeja, Lagos.

Corresponding Author: Dr. A.S. Mohammed

Email: ahmadumohd@yahoo.com

*Dr Mohammed A.S. is a Senior Resident in the Dept. of Community Health & Primary Health Care in Lagos State University Teaching Hospital, Ikeja.

Abstract

Introduction and Objective

Primary health care (PHC) is the basic strategy towards national health development in Nigeria, and provision of its services has been devolved to the local government. However, the PHC system in Nigeria has been hampered by several factors which have produced a negative effect on quality. It is assumed that given the proper structure, quality medical care will follow. Hence this study seeks to assess the structure of PHC in a rural area of Lagos state, southwest Nigeria.

Methodology

The study was carried out in Ikosi-Ejinrin local council development area (LCDA) of Lagos state, which had 9 primary health care facilities catering for a population of about 100,000 people, using a descriptive cross-sectional study design. Data was collected from health facilities and health workers using a health facility checklist and a structured questionnaire for the health workers.

Results

Most facilities (77.8%) had inadequate water and power supply, as well as inadequate sanitary toilet facilities. In addition 44.4% lacked basic equipment and none had a maintenance plan. Ambulance service was available in only 11.1% of the facilities. Only 33% of the facilities could be accessed easily by public transportation. Stewardship was unsatisfactory as no facility had a regular work schedule for its workers, none had a copy of the Essential Drugs List, and only 22.2% of the facilities enjoyed community participation in planning and management. There were only 19 health care workers for the LCDA. There was neither a medical doctor nor community health officer, and the workers comprised nurses/midwives (57.9%), senior and junior community health extension workers (CHEWs)-21.1% and 15.8% respectively, and pharmacy technician (5.2%). None of the workers had gone on any in-service training within the previous two years. No health care workers knew anything about the budget for the health facilities. None of the facilities had a functional 2-way referral system in place. Only 22.2% had adequate size, layout, utilities and furnishings.

Conclusion

The structure of PHC Ikosi-Ejinrin LCDA, a rural area in south-west Nigeria, is inadequate. There is a need for increased political will, funding and intersectoral collaboration. Technical supervision, manpower management, community participation and 2-way referral system need to

be improved upon.

Keywords: *Structure of primary health care, rural area, southwest Nigeria*.

Introduction

Health services in Nigeria rest upon a three-tier hierarchy of primary, secondary and tertiary levels.[1, 2] The National Health Policy of the country provides for primary health care (PHC) to be the basic philosophy and strategy towards national health development.[3] The objective of PHC facilities is to carry out health promotion and preventive activities, and also to provide general outpatient care. They serve as the point of initial entry into the health system. Patients are to be referred to higher levels of care whenever the PHC's capacity for intervention is exceeded.[3, 4] In Nigeria the provision of PHC services have been devolved to the local government councils (LGCs) of local government areas (LGAs). The organization is such that each LGA is expected to have a comprehensive health centre serving as a referral centre for four PHCs, with each PHC serving as a referral centre for five PHC clinics. This organizational scheme was sustained until 1991 when the policy was modified with the recommendation that each village should have a health post, a group of villages below the district to have a health clinic, primary health centre in each of the health district while each LGA was to have either a comprehensive health centre or a general hospital to serve as referral centres.[5]

However, the PHC system in Nigeria has been hampered by such factors as political instability, economic crises, structural adjustments, a plethora of vertical disease control programs and a neoliberal ideology, which are often averse to its principles. The health status indicators of Nigeria are poor. The World Health Report 2000 ranked Nigeria 187 out of 191 countries for health service performance.[6] Improving the quality of primary healthcare services has been an important aim of various governments in Nigeria.[5] The assessment of quality of services provided by PHC facilities is important, since performance at this level affects the whole health system.

According to Donabedian the measurement of quality should be based on a systemic approach that recognises criteria of structure, process and outcome.[7] Structure is concerned with such things as the adequacy of facilities and equipment; the qualifications of medical staff and their organization; the administrative structure and operations of programs and institutions providing care; fiscal organization and the like.[8] It is assumed that given the proper structure, quality medical care will follow. Hence assessing the structure offers the advantage of dealing, at least in

part, with fairly concrete and accessible information. It has the major limitation that the relationship between structure and process or structure and outcome, is often not well established.[8] Chukwuani et al in Enugu reported a lack of operational efficiency in the majority of PHC facilities, in addition majority of the facilities did not provide all services required of them, apart from being poorly maintained, not having enough skilled health workers and operating without a budget. They also reported that the facilities had no formal financial management system in place and no policy on financial resource generation.[5]
This study was aimed at evaluating the structure of PHC facilities at Ikosi-Ejinrin LCDA of Lagos state, Nigeria with a view to assessing the quality of PHC in the rural LCDA.

Methodology

Study area

Ikosi-Ejinrin is one of the rural Local Council Development Area (LCDA) in Lagos State, Nigeria. It has a population of about 110,000. The people of the area are mainly farmers, fishermen, traders, hunters and sometimes, casual workers. The LCDA has 9 PHC facilities and 2 general hospitals.

Study design

The study employed a cross sectional survey method. Both qualitative and quantitative paradigm was applied in the design of the data collection instruments. Data was collected from 2 sources as follows; the health facilities and the health workers at Ikosi-Ejinrin LCDA.

Sampling

Data was collected from all 9 health facilities in the LCDA. In addition all health workers at the various facilities were interviewed. Three key informants at the LCDA were also interviewed.

Data collection instrument

A health facility check list was used to assess the PHC health facilities. This instrument sought to classify the facilities into types and to test for distribution and coverage. It also sought to determine state and adequacy of the facility in terms of manpower, physical structure, equipment, service provision including coverage, provision of essential drugs and health care financing options available to patients. Other questions asked in this instrument covered extent of utilization of the facilities, management and administrative practice in the facilities including budgeting, and method of financial control being used.

A structured questionnaire was administered to health workers to gather their demographic details, experience, level of supervision and assessment of the quality of service they offered.

Administration of survey instrument

All instruments were administered by members of the research team. One respondent, usually the officer in charge of the facility, was required to respond to the health facility check list. Each response was confirmed by the interviewer before recording. All health workers filled the self-administered health worker questionnaire.

Data analysis

Data from the questionnaires were entered and managed using SPSS version 16 for Linux. Quantitative data from the questionnaires were compiled into frequency tables for discrete variables, while descriptive statistics were used to present continuous variables.

Results

Table 1: Distribution of primary health care facilities by wards in Ikosi-Ejinrin Local Council Development Area

Ward*	**Frequency**	**Percentage (%)**
Agbowa I (1 PHC)	1 (11.1%)	11.1
Agbowa II	0	0
Owu Ota (2 PHCs, 1 HP)	3 (33.3%)	33.3
Ajebo (2 HP)	2 (22.2%)	22.2
Ejinrin (1 PHC)	1 (11.1%)	11.1
Ifesowapo (1PHC, I HP)	2 (22.2%)	22.2
Total	**9**	**100**

*Type of health facility given in parenthesis

* **PHC**: Primary Healthcare Center; **HP**: General Hospital

Table 2: Stewardship indicators primary health care facilities in Ikosi-Ejinrin Local Council Development Area

Variable	Frequency (n=9)*
Availability of regular work schedules	0 (0)
Availability of records of activities, utilization of services/ supplies	9 (100)
Regular submission of reports	9 (100)
Community participation in planning	2 (22.2)
Availability of Essential Drug List	0 (0)

***Percentages given in parenthesis**

Table 3: Type of services provided by primary health care facilities in Ikosi-Ejinrin Local Council Development Area

Service	**Frequency * (n = 9)**
ANC/Delivery	5 (55.6)
Immunization	8 (88.9)
Treatment of ailments	9 (100)
Health Education	7 (77.8)
Family Planning	6 (66.7)
Food demonstration	1 (11.1)
Laboratory services	0 (0)

*** Percentages given in parenthesis.**

All 9 PHC health care facilities and their 19 health care workers in the LCDA participated in the study. Results of the study are presented in tables 1-3. There were 5 PHC clinics and 4 health posts (HP) and all PHC clinics were headed by nurses. Only 1 HP had a nurse as head with the remaining headed by community health extension workers (CHEW). Only 33% of the facilities could be accessed easily by public transportation at all times however, 66.7% had good access roads.

Stewardship assessment was not satisfactory as shown in table 2. No facility had a regular work schedule for workers, and none had a copy of Essential Drug List. Only 22.2% of the facilities enjoyed community participation in planning and management, but all kept good records of their activities and sent monthly reports to the LGA. There were no indications of activity plans besides planning for immunization. Other PHC activities were done without operational plans. Available information was not being used to identify service coverage and unreached segments of the population. No facility had a written organizational structure. Workers received administrative supervision especially from the apex nurse at the LCDA headquarters but did not receive sufficient technical support.

Most facilities (77.8%) were found to be inadequate in terms of water and power supply or the provision of sanitary toilet facilities. About half (44.4%) lacked basic equipment, which even when available, was old or non-functional, or being poorly maintained none of the facilities had any form of maintenance plan.

None of the facilities surveyed had the required number of health workers, and there were not enough health workers with the required skills in the facilities. The total number of health workers available to the LCDA was 19 with 94.7% females. The average age of the workers was 39 years and they had a mean experience of 16.89 years. The LCDA had neither a medical officer nor a community health officer (CHO), and the workers comprised nurses/midwives (57.9%), senior CHEW (21.1%), junior CHEW (15.8%) and pharmacy technicians (5.2%). Majority of the workers (73.7%) adjudged the quality of health care being provided as good or very good. Except for one facility, others had only one or two health care workers. None of the facilities provided all essential services nor did any facility have all essential drugs; in addition, all facilities experienced exhaustion of drug stock probably due to lack of continuity in supplies. No facility offered even the simplest laboratory investigation. Only 11.1% of the facilities offered supervision or training to traditional birth attendants or village health workers. None had a functional 2-way referral system in place. Only 11.1% of the facilities had any form of written job description for workers, while 22.2% held regular staff meetings. Less than half (44.4%)

were open for service during weekends and public holidays.

Many of the facilities were undergoing some form of renovation, with only 22.2% of them being adequate in terms of size, layout, utilities and furnishings. Less than 50% of officers in charge of facilities felt that their co-workers were well motivated to work. In contrast, half (55.5%) of respondents felt that they were providing an excellent service. Two services – treatment of common ailments and immunization – were provided by almost all facilities (100% and 88.9% respectively). Only 22% had arteminisinin combination therapy (ACT) for treatment of malaria. Training of health workers was program-specific; none of the workers had gone on any in-service training within the last 2 years. Ambulance service availability was only found in 11.1% of the facilities.

The assessment of health care financing was also poor. None of the respondents had any knowledge of how much was budgeted for their facilities or what percentage of the budget was released for the year. None was involved in budgeting and none had knowledge of who did the budgeting for the facility. Only 22.2% practiced some form of expenditure control method at all. Health care was completely free of charge to all categories of patients. Drugs were given free, if available. There was nothing to suggest that something concrete is being done to improve efficiency in the use of resources. There was equally no evidence of effort being made to increase the resources available. Key health workers were skeptical about the workability of any form of community health insurance.

Only 9 deliveries were recorded from all the facilities during the period of one month prior to assessment even though ANC visits were up to 120 clients for the same period. Moreover, only 5 women received family planning service within the month.

Discussion

The study confirmed that health facilities are too few with a noticeable maldistribution. This is likely to affect equity negatively.[9] While one of the 6 geopolitical wards had PHC clinics, another geopolitical ward did not have any health facility. A lot of the villages did not have the recommended health post. This could be due to poor funding of PHC and lack of political will, among several reasons.[2] The misdistribution of health facilities may be due to political interference in the siting of PHC facilities. This could be addressed if a bottom-up approach is adopted when planning to build health care facilities.[10]

Our findings also indicate poor stewardship in the PHC system. This will further weaken a system that already has poor coverage. The absence of operational plans, written organizational structure and technical supervision are all indicators of poor stewardship.[11, 12] In addition, the

non-availability of regular work schedules, Essential Drug List and little or no community participation are equally of concern. Chukwuani et al have observed poor community participation, absence of documented, well-articulated organogram, poor coordination and supervision of PHC in south eastern Nigeria.[5] The consequences of poor stewardship are numerous. One of these is poor quality health care provision with its attendant effects on overall health status of the population. Uzochukwu and Onwujekwe[13] have also highlighted some of these consequences as including irrational prescribing and poor technical practice.

The gross inadequacy of power supply, water and sanitation in the facilities might be a reflection of the general situation in the country. For the situation to improve there must be increased political will and greater inter-sectorial collaboration.[14]

The availability of skilled/qualified health care workers and training level of officers in charge of facilities are key quality determinants of PHC service delivery.[15] This study showed a gap in the skill level of health workers manning the PHC facilities. The LCDA did not have a medical officer of health, and none of the facilities had a community health officer. This is likely to have negative implications for quality of service delivery and the attendant customer satisfaction.[16, 17] Onwujekwe et al observed that patients in rural areas prefer community health workers to other health workers for treatment of common ailments like malaria.[18] Chukwuani et al reported that only 26.7% of PHC facilities have senior CHEW in southeastern Nigeria.[5] The shortage of manpower could be explained by factors like apathy for work in rural areas, poor funding and poor incentives.[14, 17] The formulation and implementation of policies envisioning improvements in the management of medical professionals in rural areas could help improve the quality of care in the LCDA.[19-21]

The PHC has minimum package of ten essential services, but our study showed that immunization and treatment of common ailments form the majority of services provided by the PHC facilities of Ikosi-Ejinrin LCDA. Ehiri et al reported that PHC facilities in Calabar, south-east Nigeria, were adequately equipped to the extent of providing immunization services and management of diarrhoea but not for other aspects of care expected of a PHC centre.[22] The number of deliveries at the PHC facilities was observed to be very low compared to the number of women attending antenatal care (ANC) services. This may be because most women prefer to give birth with traditional birth attendants (TBA) even though they judge the quality of ANC to be good.[23] It only shows the lack of confidence members of the community have in the PHC facilities. This situation could easily be connected to the poor political will, poor funding and inadequate staffing. Similar findings were observed in southeastern Nigeria.[5]

The PHC facilities receive their main funding from the LCDA authority. But key health care workers knew next to nothing about budgeting for the health facilities. There is no evidence of financial control in place. Even though health care was provided free to all categories of patients, the lack of essential drugs like Artemesinin Combination Therapy (ACT) is a clear indication that the system is either under-funded or inefficient.[24] Other studies have observed that introduction of user fees at health care facilities tended to reduce usage, while usage tended to increase with increased quality of care.[25-27] Thus despite evidence of inadequate funding, the political leadership might be unwilling to introduce user fees at this PHC facilities.

Conclusion and Recommendations

The survey has generated a wealth of credible data that can be used as a basis for evidenced-based policy formulation and strategic planning process for efficient performance of the PHC facilities in Ikosi-Ejinrin Local Council Development Area.

Some critical issues identified from the evidence presented by the data, which could form the basis of major policy thrust include the need to increase funding of the health sector, especially in the provision of essential drugs. There is also a need for employment of more skilled health workers. The LCDA should provide another ambulance for the health facilities. Effort should be made to ensure adequate water and power supply at the health facilities. Health facility managers should have written work schedules and job description, as well as regular documented meetings with subordinates. Health workers should ensure they use their standing orders when caring for their patients. Facility managers must improve their knowledge of catchment area and use available data to reach out to the under-served in the community. Health facility managers should be made to participate in budget formulation and implementation at facilities they control. More careful measures should be taken for financial control. It will be difficult to sustain a completely free medical service, hence other options of health care financing like community health insurance and some user fees. Community participation is very important and should be ensured. There is also the need to revitalize the 2-way referral system.

References

1. National Population Commission Federal Republic of Nigeria, ICF Macro. Nigeria Demographic and Health Survey 2008. Abuja, Nigeria: National Population Commission and ICF Macro; 2009.
2. Cole FGA. Hospital and health service management in Nigeria: Problems and possible solutions. World Hosp. 1981;17(4):27-9.
3. Federal Ministry of Health. Revised National Health Policy. Abuja, Nigeria: Federal Ministry of Health; 2004.
4. WHO, editor. Declaration of Alma Ata. International conference on primary health care; 1978; Alma-Ata, USSR: WHO.
5. Chukwuani CM, Olugboji A, Akuto EE, Odebunmi A, Ezeilo E, Ugbene E. A baseline survey of the Primary Healthcare System in South Eastern Nigeria. Health Policy. 2006;77(2):182-201.
6. World Health Organization. The World Health Report 2000. Health Systems: Improving Performance: World Health Organization; 2000.
7. Donabedian A. The Quality of Care: How Can It Be Assessed? JAMA. 1988 September 23, 1988;260(12):1743-8.
8. Donabedian A. Evaluating the quality of medical care. 1966. Milbank Q. 2005;83(4):691-729.
9. Evandrou M, Falkingham J, Grand JL, Winter D. Equity in Health and Social Care. J Soc Policy. 1992;21(04):489-523.
10 Sakyi EK. A retrospective content analysis of studies on factors constraining the implementation of health sector reform in Ghana. Int J Health Plann Manage. 2008;23(3):259-85.
11. Allen TD, Smith MA, Mael FA, O'Shea PG, Eby LT. Organization-level mentoring and organizational performance within substance abuse centers. Journal of Management. 2009;35(5):1113-28.
12.Guévart E, Ekambi A, Noeske J, Mouangue A, Solle J. Formative supervision: The experience of cholera treatment units during epidemic in Douala, Cameroon. Sante Publique (Bucur). 2008;20(1):39-57.
13. Uzochukwu BSC, Onwujekwe OE. Socio-economic differences and health seeking behaviour for the diagnosis and treatment of malaria: A case study of four local government areas operating the Bamako initiative programme in south-east Nigeria. International Journal for

Equity in Health. 2004;3.
14. Omoleke II. The primary health care services in Nigeria: constraints to optimal performance. Nigerian journal of medicine : journal of the National Association of Resident Doctors of Nigeria. 2005;14(2):206-12.
15. Richard V, Morel B, Wadack NA, Banguio M. Factors explaining quality of primary health care in Logone Occidental (Chad). Revue D'Epidemiologie et de Sante Publique. 2004;52(3):249-59.
16. Kim H, Kovner C, Harrington C, Greene W, Mezey M. A panel data analysis of the relationships of nursing home staffing levels and standards to regulatory deficiencies. Journals of Gerontology - Series B Psychological Sciences and Social Sciences. 2009;64(2):269-78.
17. Nyamtema AS, Urassa DP, Massawe S, Massawe A, Lindmark G, Van Roosmalen J. Staffing needs for quality perinatal care in Tanzania. Afr J Reprod Health. 2008;12(3):113-24.
18. Onwujekwe O, Dike N, Ojukwu J, Uzochukwu B, Ezumah N, Shu E, et al. Consumers stated and revealed preferences for community health workers and other strategies for the provision of timely and appropriate treatment of malaria in southeast Nigeria. Malaria Journal. 2006;5.
19. Dos Santos De Oliveira M, Artmann E. Characteristics of the medical workforce in the Province of Cabinda, Angola. Características da força de trabalho médica na Província de Cabinda, Angola. 2009;25(3):540-50.
20. Katrak H. Measuring the shortage of medical practitioners in rural and urban areas in developing countries: a simple framework and simulation exercises with data from India. Int J Health Plann Manage. 2008 Apr-Jun;23(2):93-105.
21. Tourangeau AE, Widger K, Cranley LA, Bookey-Bassett S, Pachis J. Work environments and staff responses to work environments in institutional long-term care. Health Care Manage Rev. 2009;34(2):171-81.
22. Ehiri JE, Oyo-Ita AE, Anyanwu EC, Meremikwu MM, Ikpeme MB. Quality of child health services in primary health care facilities in south-east Nigeria. Child Care Health Dev. 2005;31(2):181-91.
23. Oladapo OT, Iyaniwura CA, Sule-Odu AO. Quality of antenatal services at the primary care level in southwest Nigeria. Afr J Reprod Health. 2008;12(3):71-92.
24. Ikoh MU, Udo AU, Charles AO, Charles JO. The influence of "stock out" on health-seeking behavior of low income women in Uyo urban, Akwa Ibom State, Nigeria. International quarterly of community health education. 2008;29(3):257-73.
25. Akin JS, Guilkey DK, Hazeldenton E. Quality of services and demand for health care in

Nigeria: A multinomial probit estimation. Soc Sci Med. 1995;40(11):1527-37.

26. Katung P. Socio-economic factors responsible for poor utilisation of the primary health care services in a rural community in Nigeria. Nigerian Journal of Medicine: journal of the National Association of Resident Doctors of Nigeria.10(1):28.
27. McIntyre D, Thiede M, Dahlgren G, Whitehead M. What are the economic consequences for households of illness and of paying for health care in low-and middle-income country contexts? Soc Sci Med. 2006;62(4):858-65.