STATE OF HEALTH FACILITIES IN COMMUNITIES DESIGNATED FOR COMMUNITY BASED HEALTH INSURANCE SCHEME IN NIGERIA: A CASE STUDY OF KWARA AND
 OGUN STATES.

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5 ABSTRACT

Background: Nigerian Government established National Health Insurance Scheme (NHIS) including Community Based Health Insurance Scheme (CBHIS) to reduce out-of-pocket health expenses of enrollees, strengthen and ensure access to quality healthcare services. The functionality of the schemes however, revolves round health facilities being able to meet the expectation of the enrollees.

Study objectives: The study assessed the adequacy of the designated health facilities in offering quality healthcare services to the enrollees or potential enrollees under the CBHIS, and to identify likely challenges.

Study Design: This is part of a larger prospective cross-sectional study that assessed the implementation of the Community-Based Health Insurance Scheme (CBHIS) in selected local government areas of Kwara in the north central and Ogun in the South Western part of Nigeria.

Place and Duration of the Study: Health facilities of selected wards from two Local
 Government Areas in Kwara and Ogun States were assessed between February and May
 2015.

20 **Method:** Semi-structured questionnaires and health facility assessment checklist were used to 21 assess services rendered, manpower, training opportunities, available infrastructures and 22 perceived challenges to smooth operation of health facilities designated for CBHIS.

Results: A total of twenty designated health facilities were visited and assessed (Seventeen public and three private). Services claimed to be available at the facilities included clinical, nursing, pharmaceutical and laboratory services. Seventeen (85%) had evidence of recent renovation while 3 (15%) had no evidence of renovation. Twelve (60%) had backup supply of electricity from generator or solar panel. Other challenges that could impede quality healthcare service delivery under the CBHIS were identified.

Conclusion: The study showed that inadequate personnel, paucity of training opportunities for health workers, poor infrastructures (inadequate ambulance services, poor electricity supply and lack of portable water supply) were the main challenges impeding delivery of quality healthcare services to the CBHIS enrollees patronizing the studied facilities.

33 Keywords

34 Health facilities, Community-Based Health Insurance Scheme, Nigeria

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40 **1. INTRODUCTION**

Nigeria has a high population density but a weak health system [1]. Healthcare financing in most of sub-Saharan African countries is based on out-of-pocket payment from the rural dwellers. This out-of-pocket payment has caused a lot of health challenges such as premature deaths, maternal and child health issues, deficiencies in health issues in Sub Sahara African countries [1]. Nigeria's health performance has been one of the poorest in the world within the last two decades where out-of-pocket health expenditure is over 60% which makes it to be one of the highest in the world [2, 3, 4].

Quality health is a fundamental right of all Nigerians although primary health care (PHC) 48 centers are relatively uniformly distributed throughout local government areas (LGAs) in 49 50 Nigeria, yet rural people seem to underuse the basic health services [14]. It is also observed that over 70% of Nigerians live in rural communities [5] and are poorly served with healthcare 51 services. This made the Federal government of Nigeria to establish National Health Insurance 52 Scheme (NHIS) in 1999 and also established CBHIS in 2005[5]. According to the Nigeria 53 constitution, each state of the Federation is to be the custodian of health of her people. It has 54 been suggested that each community should design a feasible and attainable community-based 55 healthcare financing scheme for the people so as to eliminate the constraints of high out-of-56 pocket healthcare expenditure [6]. 57

Some States in the country, in addition to supporting NHIS, set up CBHIS to provide quality and affordable healthcare services in their communities [2]. However, the functionality of the schemes revolves round health facilities being able to meet the expectations of the people.

Health facilities occupy central focus in a health system where health professionals with 61 different skills, deliver integrated package of healthcare, provide employment opportunities, 62 generate economic activities and promote health facility-community relationships [7]. Nigerian 63 government is committed to Universal Health Coverage [8] hence, governments at both federal 64 and state levels are implementing a number of initiatives which are efforts that would contribute 65 66 to the attainment of Universal Health Coverage [8]. Health facilities are therefore essential to achieving the goals and objectives of the National Health Strategic Health Plan priority areas by 67 creating the needed environment for healthcare delivery [6]. 68

The National Healthcare system is built on the basis of the three-tier responsibilities of tertiary, 69 70 Secondary and primary [6]. While the Tertiary health care is at the apex of health care delivery consisting of highly specialized services provided by teaching and other specialist hospitals, 71 secondary health care level, provides specialized services to patients referred from the primary 72 73 healthcare level [6]. The NHIS/CBHIS are parts of the health reforms of the federal government aimed at improving efficiency in both public and the private health facilities. This is to help 74 minimize costs of healthcare services to the people [9]. NHIS was also designed to provide 75 comprehensive health services to people at affordable costs covering employees of the formal 76 sector, self-employed, rural communities and the vulnerable groups [10]. 77

One of the challenges facing health systems strengthening (HSS) is the shortage of healthcare workers in countries confronted with the epidemics of HIV/AIDS, TB, and malaria which to World Health Organization (WHO), only 5 out of the 49 low-income countries meet its minimum recommendation of 2.3 doctors, nurses, and midwives per 1,000 people [11].

This paper therefore assesses the adequacy of the designated health facilities in offering quality health services to the enrollees or potential enrollees under the CBHIS, and also identified likely challenges in the selected health facilities in Ogun and Kwara States, Nigeria.

85 2. METHODS

86 2.1 Study areas

The study was carried out in two states, Kwara and Ogun in the North Central and South 87 West, Nigeria respectively. In each State, health facilities in selected wards from two LGAs--88 Edu and Patigi in Kwara State; Abeokuta north and Ijebu-Ode LGAs in Ogun State were 89 purposively sampled and assessed. These facilities were where CBHIS is either operational or 90 earmarked for CBHIS. Seven Primary health care facilities were assessed in Kwara State (3) 91 from Edu LGA and 4 from Patigi LGA) while in Ogun State, five Primary Healthcare facilities 92 were assessed each in Abeokuta north and liebu Ode LGAs. Three private health facilities 93 designated to participate in the CBHIS were assessed-one in Abeokuta north and two in ljebu-94 Ode LGAs. 95

Shonga in Edu LGA of Kwara State is located on Latitude 9^o 1' north and Longitude 5^o9' East.
Lade in Patigi LGA of Kwara State is located on Latitude 8^o 44' North, Longitude 5^o 45' East.
Lade is a small sub-urban settlement. Both Shonga and Lade communities are inhabited by the
Nupe People who are mainly famers and traders.

In Ogun State, Abeokuta North LGA has its headquarters in Akomoje and lies between latitude7°12′N and longitude3°12′E. It covers an area of 808 square kilometres with a 2014 projected population of 261,772 people based on the 2006 National Population Census at 3.5% growth rate [12]. Ijebu Ode LGA lies between latitude 6°49′15″N and longitude3°55′15″E, it has

its headquarters in ljebu Ode. The total projected population of the LGA, based on 2006
National Population Census at 3.5% growth rate was 206,951 people [12]. It covers an area of
106 192 square kilometres. The two LGAs are located about 100km north of Lagos and the Atlantic
Ocean.

108 2.2 Study Tools

Semi-structured questionnaires and checklist were used to assess the health facilities for manpower and training opportunities for clinical, nursing, pharmaceutical and laboratory services; the status of infrastructures- physical facilities (space), electricity supply, sanitation facilities, and availability of emergency services and referrals, bio-safety practices using the checklist containing the minimum requirements for health facilities registered with NHIS [2].

114 2.3 Analysis of Data

Descriptive statistics was used to present the data generated. Counts and percentages of relevant variables were generated and presented as tables.

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	Kwara Ggun
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121	Figure 1: Map of Nigeria showing Kwara and Ogun States
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130 **3. RESULTS**

A total of twenty designated health facilities were visited and assessed (17 public and three 131 private primary healthcare facilities) in the two states (Tables 1 and 2). The population of the 132 catchment areas of the health facilities ranged from 9,394 to 24,076 in the two states. In Ogun 133 State, Jogbo/Molipa community in liebu-Ode LGA which had a population of 24,076 had 3 134 health facilities while Sabo community in Abeokuta North LGA with a population of 21,645 had 135 two (2) health facilities. All other communities in Ogun state had only one health facility each 136 designated for CBHIS. In Kwara State, all the communities visited had one health facility each 137 designated for CBHIS. 138

3.1 Services Rendered in the Health Facilities

Results showed that all the 20 PHCs studied had ante-natal, peri-natal and post-natal services were offered in all the health facilities. Other services rendered were general nursing care, immunization, health education, limited laboratory services, drug prescriptions and treatments, family planning, nutrition counseling, HIV Counseling and Testing(HCT). Only 9 (45%) of the 20 health facilities in two states had laboratory services.

145 **3.2 Evidence of Integrated Health Services**

Only1 (14.3%) out of the 7 health facilities assessed in the two LGAs of Kwara State had evidence of proper integrated health services encompassing clinical, nursing medical laboratory and pharmaceutical services in the health facilities assessed (Table 1) while 7 (53.8%) out of the 13 of the Primary healthcare facilities assessed in Abeokuta north and Ijebu Ode LGAs of Ogun State had evidence of integrated health services covering the mentioned service areas (Tables 1 and 2).

152 **3.3 Human Resources for Health**

3.3.1 Personnel for Clinical Services: In Ogun State, only 2 of the PHCs had a medical doctor each but all the 3 Private hospitals assessed had a medical doctor each while only 1 out 7 facilities in Kwara State had a medical doctor (Tables 1 and 2).

3.3.2 Personnel for Nursing Services: Personnel providing nursing services in the facilities were
 Nurses, Midwives, Senior and Junior Community Health Extension Workers (JCHEW),
 Community Health Officers (CHO) and Health Educators (Tables 1 and 2).

3.3.3 Personnel for Laboratory services: Out of the thirteen Health facilities visited in Ogun State, 7(53.8%) offered laboratory services while 6(46.2%) did not have laboratory services. However, the personnel were inadequate because only 1 out of the 7 (14.3%) of the facilities had Medical Laboratory Scientists, 4(57.1%) had Medical Lab Technicians while 2 (28.6%) of the PHCs had unqualified personnel working in the laboratory. In Kwara State, laboratory services were offered in two of the seven health facilities assessed and were manned by medical laboratory Technicians.

3.3.4 Personnel for Pharmaceutical services: Drugs seen on the shelves of all the health facilities assessed had evidence of NAFDAC registration and in-date expirations. However, in Ogun State 2(15.4%) out of 13 had licensed pharmacists while 11(84.6%) had CHEW or Pharmacy Technicians manning their 'pharmacy' section in the health facilities. In Kwara State, only one of the health facilities assessed had Pharmacy Technicians in the pharmacy section (Tables 1 and 2).

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174 3.3.5 Opportunities for Capacity Development

175 Results showed that majority of the health workers /professionals attended at least one 176 capacity development training. Most of the trainings were on Malaria, HIV and TB control 177 programmes supported by President's Emergency Plan for AIDS Relief (PEPFAR) project. No evidence of capacity development trainings in non-communicable health challenges such as 178 179 maternal and child health, anaemia, diabetes and hypertension. Most of the trainings were also sponsored by foreign Implementing Partners (IPs). No evidence of in-country ownership to 180 enhance sustainability of the trainings. 181

3.3.6 Evidence of Renovation 182

Seventeen (85%) had evidence of recent renovation while 3 (15%) had no evidence of 183 renovation. All the health facilities had incessant interrupted electricity supply and only 12(60%) 184 had backup supply of electricity from generator or solar panel while 8 (40%) had no such back-185 up and relied only on re-chargeable lamp, lantern and touch lights in the night. 186

3.3.7 Sanitation Facilities: In Kwara State, only 2 (28.6%) out of 7 had modern toilet facilities 187 while others had pit latrines. In contrast, all the health facilities Ogun State had modern toilets 188 and pipe-borne water supply. 189

190 3.3.7 Bio-safety Practices: Evidence of good bio-safety practices were observed in all the health facilities. Presence of sharp containers, waste segregation, waste management in the health 191 facilities assessed were in place. 192

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195 TABLE 1: STATUS OF HEALTH FACILITIES ASSESSED IN KWARA STATE

State	Local Government area	Name of the Health facility	Workload/ month	Health workers/ professionals	Status of the lab services	Status of the pharmacy		
Kwara	Edu	Comprehensive Health centre, Shonga	392	Med doctor (1); MLTs (3Nos) Senior CHEW Junior CHEW Nurses	Polyvalent Laboratory present within the health facility	Designated Pharmacy present within the health facility		
		Maternity Centre, Shonga	118	Nurses and Midwives CHEW (2) Health educator (1)	No laboratory but does Malaria Parasite, HIV and Pregnancy tests	No pharmacy within the health facility		
		Kanko Modern Health Centre	90	Snr CHEW, Jnr CHEW MLT	Laboratory available but with limited services	No pharmacy within the health facility		
Kwara	Patigi	Edogichapa Health post/clinic	168	Only Junior CHEW present	No laboratory within the health facility but does Malaria Parasite test using rapid kit	No pharmacy within the health facility		
		Sakpefu Primary Health centre	116	SURE-P staff (CHEWs) employed by FGN (4 Nos)	No laboratory within the health facility but does Malaria parasite test using rapid kit	No pharmacy within the health facility		
		Lade Cottage Hospital	480	Junior CHEW (4), Senior CHEW(2), CHO (1) Nurses(3)	Designated lab space But no lab personnel	Pharmacy manned by with CHEW		
106		Sunkuso Health post/Clinic (abandonedCHE W using his room apartment	60	Junior CHEW	No laboratory within the health facility	No pharmacy within the health facility		

198 TABLE 2: STATUS OF HEALTH FACILITIES ASSESSED IN OGUN STATE

State	Local Government area	Name of the Health facility	Workload/ Month	Health workers/ Professionals	Status of the laboratory services	Status of the pharmacy
Ogun	Abeokuta North	Iberekodo PHC	400	No full time medical doctor, 2 medical laboratory scientists MLTs(3Nos), Senior CHEW	Polyvalent Laboratory present within the health facility	Designated pharmacy present within the health facility
		Totoro PHC	180	Nurses and Midwives CHEW (2) Health educator (1)	No laboratory within the health facility but does Malaria Parasite, , HIV and Pregnancy tests using rapid test kits	No pharmacy within the health facility
		Igosun/Oke Ago Owu	200	Senior CHEW, Junior CHEW	No Laboratory within the health facility	No pharmacy within the health facility
		Enugada PHC	180	Nurses, Junior CHEW	No laboratory within the health facility but does malaria Parasite test using RDT kit	No pharmacy within the health facility
		Sabo PHC	318	MLT-1 Nurses CHEW	Polyvalent laboratory within the health facility	No pharmacy within the health facility
		Private Hosp	60	1 Medical doctor Nurses, CHEW	No laboratory but does Malaria Parasite, and Widal tests	No Pharmacy within the health facility

Ogun State	ljebu-Ode LGA ljebu-Ode	Obalende Ita-Alapo PHC	480	I Med doctor Junior CHEWs (4), Senior CHEW(2),CH O (1) Nurses(3)	Polyvalent Laboratory with P-P-P (only 1 MLT, 2 other unqualified lab personnel	No pharmacy within the health facility
		Isiwo PHC	60	Junior CHEW	No laboratory within the health facility	No pharmacy within the health facility
		Ita-Osun PHC	140	Nurses CHEWs	Polyvalent Lab with MLT only	Pharmacy present with pharmacist
		Oke Oyinbo PHC	165	Nurses CHEWs	Polyvalent Laboratory with Medical Laboratory Technician only	No pharmacy within the health facility
		Jogbo/Molip a PHC	180	Nurses CHEWs	Polyvalent Laboratory with P-P-P (only 1 MLT, 2 other unqualified laboratory personnel	No pharmacy within the health facility
		Private Hospital	45	2 medical doctors	No laboratory within the health facility	No pharmacy within the health facility
		Private Hospital	40	2 medical doctors	No laboratory within the health facility	No pharmacy within the health facility

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200 Abbreviations

201 PHC-Primary Health Centre

- 202 CHEWs= Community Health Extension Workers
- 203 CHO= Community Health Officer
- 204 MLT= Medical Laboratory Technician
- 205 FGN=Federal Government of Nigeria
- 206 P-P-P+ Public Private Partnership

207 4. Discussion

A Primary Healthcare facility is expected to serve catchment area population of 10,000-30,000 people [6].This implied that the citing of the health facilities assessed in the two states conformed to the standard requirement of one Primary Healthcare facility to serve catchment area population of 10,000-30,000 people [6] as shown in the results.

Majority of the renovations carried out in the facilities laid emphasis on the renovations of the building without serious emphasis on the adequacy of equipment and personnel especially in the professional services. The renovations may be attributed to political intensions because most of the plaques indicated which government in power did such renovations.

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The inadequate health professionals, inadequate laboratory and pharmaceutical services in most of the health facilities in this study are serious challenges to effective implementation of Community Based Health Insurance Scheme. This finding agreed with the report of [16] who reported that most enrollees were dissatisfied about the National Health Insurance Scheme (NHIS) because of increasing out-of-pocket payment for drugs and diagnostic tests and that 55.7% of Healthcare services most frequently accessed by enrolees under NHIS were

treatment and general care followed by about 8.6% antenatal care. The results of the study 223 showed inadequate health professionals in the health facilities especially in the rural areas of 224 the states. This finding agreed with that of [11] who reported similar challenges and stated that 225 shortages of Health Worker lessen the likelihood of proper diagnosis and supervision once a 226 patient is receiving medication and this increases the potential for poor adherence and eventual 227 228 drug resistance. The reasons for the limited workforce are many; but experts point to factors such as "brain drain"; chronic underinvestment in health workforces, including frozen 229 recruitment and salaries; and work environments with few supplies and limited support [11]. 230

The erratic power supply (electricity) is inimical to quality service delivery especially in emergency situations such as pregnant women in labour and road traffic accidents which could be rushed to the health facilities in the night.

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Sanitation facilities in the studied health facilities in Kwara State were generally poor with majority of the health facilities relying on pit toilets. The lack of adequate water supply in the health facilities could promote nosocomial infections [14]. Unavailability of ambulance by majority of the health facilities could hinder effective referral of emergency cases because delay in emergency referrals could promote mortality especially during antenatal and child health requiring emergency higher level of cares.

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The observed good biosafety practices in all the assessed health facilities is encouraging. This could be attributed to the training exposure on making medical injections safe attended by most of the health workers in the facilities, was having the desired impact.

The laboratory and pharmaceutical services in the health facilities need to be strengthened because outsourcing of these services as observed in some of the facilities assessed would contribute to high out-of-pocket expenses by patients. This would defeat the essence of CBHIS.

Many of the health workers would need retraining on other areas of healthcare services such as 249 non-communicable health challenges (eg anaemia, diabetes and hypertension) and maternal 250 and child health, given that majority of the health workers /professionals attended more 251 trainings on HIV, TB, malaria, safety and use of sharps. Also, most of the trainings were 252 253 sponsored by the foreign implementing partners and no evidence of in-country ownership to enhance sustainability. In-country ownership for capacity development of human resources for 254 health is very crucial in resource-poor countries that have been reported to have the highest 255 disease burdens and suffer from widespread lack of educational and training opportunities [11]. 256 Health challenges therefore, require training attentions and updates in knowledge on 257 prevention, diagnosis and treatment for quality service delivery. 258

259 **5. Conclusion/Recommendation**

The challenges of the health facilities in the selected communities designated for CBHIS ranged from inadequate manpower especially the human resource for health, improvement in the services rendered to allow for integrated health services, provision of constant electricity supply, adequate capacity development trainings in communicable and non-communicable health challenges in the communities. There is also the need to provide adequate ambulances for emergency referrals. These are to

Ethical considerations: Institutional Review Board (IRB) approval for the study was obtained from NIMR IRB with assigned number IRB/13/237 for the research protocol while consent was obtained from the head of the assessed health facilities.

Competing Interest: Authors have declared that no competing interests exist.

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