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

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.

Method: Semi-structured questionnaires and health facility assessment checklist were used to assess services rendered, storage of drugs and the vaccines, manpower, training opportunities,

available infrastructures and 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. The assessment showed inadequacy of some critical human resources for health. Seventeen of the 20 health facilities (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 (lack of 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.

Keywords

Health facilities, Community-Based Health Insurance Scheme, Nigeria

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) centers are relatively uniformly distributed throughout local government areas (LGAs) in 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 services. This made the Federal government of Nigeria to establish National Health Insurance Scheme (NHIS) in 1999 and also established CBHIS in 2005[5]. According to the Nigerian constitution, each state of the Federation is to be the custodian of health of her people. It has been suggested that each community should design a feasible and attainable community-based healthcare financing scheme for the people so as to eliminate the constraints of high out-of-pocket healthcare expenditure [6].

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 different skills, deliver integrated package of healthcare, provide employment opportunities, generate economic activities and promote health facility-community relationships [7]. Nigerian government is committed to Universal Health Coverage [8] hence, governments at both Federal and state levels are implementing a number of initiatives which are efforts that would contribute 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 creating the needed environment for healthcare delivery [6].

The National Healthcare system is built on the basis of the three-tier responsibilities of tertiary, 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, secondary health care level, provides specialized services to patients referred from the primary 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 minimize costs of healthcare services to the people [9]. NHIS was also designed to provide comprehensive health services to people at affordable costs covering employees of the formal sector, self-employed, rural communities and the vulnerable groups [10].

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.

2. METHODS

2.1 Study areas

The study was conducted in 20 purposively selected health facilities in Kwara and Ogun States (North-Central and South-West Geo-political zones of Nigeria respectively) (Fig 1). Seven (7) health facilities providing health services through Community-Based Health Insurance Scheme in two Local Government areas (Edu and Patigi) of Kwara State and 13 health facilities designated for providing health services through Community-Based Health Insurance Scheme in two local Government Areas (Abeokuta North and Ijebu-Ode) of Ogun State, were assessed using prepared assessment checklist. Shonga in Edu LGA of Kwara State is located on Latitude 9^0 1' north and Longitude $5^0$9' East. Lade in Patigi LGA of Kwara State is located on Latitude 8^0 44' North, Longitude 5^0 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 Ijebu 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 192 square kilometres. The two LGAs are located about 100km north of Lagos and the Atlantic Ocean.

In each State, health facilities in selected wards from two LGAs- Edu and Patigi in Kwara State; Abeokuta north and Ijebu-Ode LGAs in Ogun State were purposively sampled and assessed. Seven Primary health care facilities were assessed in Kwara State (3 from Edu LGA and 4 from Patigi LGA) while in Ogun State, five Primary Healthcare facilities were assessed each in Abeokuta north and Ijebu Ode LGAs. Three private health facilities designated to participate in the CBHIS were assessed-one in Abeokuta north and two in Ijebu-Ode LGAs.

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].

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.

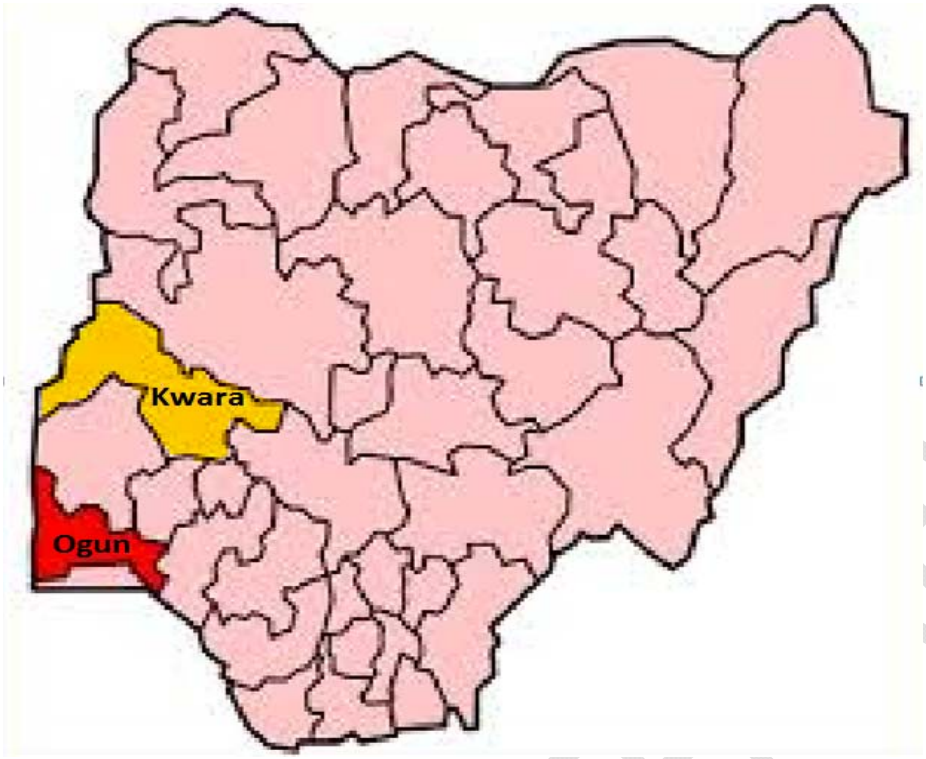

Figure 1: Map of Nigeria showing Kwara and Ogun States

3. RESULTS

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

3.1 Services Rendered in the Health Facilities

Results showed that all the assessed 20 PHCs had ante-natal, peri-natal and post-natal services 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.

The expiry dates were seen on the packets of drugs and none of them had expired. The vaccines were similarly examined and none, had expired. The vaccines were observed to be maintained under cold chain of between 4-8^{o}C.

3.2 Evidence of Integrated Health Services

Only 1(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).

3.3 Human Resources for Health

3.3.1 Personnel for Clinical Services:. In Kwara State, out of the 7 health facilities assessed in the two local Government areas (tables 1 and 3), only 1 (14.7%) had medical doctors, 3 (42.9%) had Nurses/midwives, 1(14.7%) had Community Health Officers and 1 (14.7%) had Health Educators only. All the 7 health facilities (100%) had Community Health Extension Workers (CHEW). In Ogun State, out of the 13 health facilities assessed in the two local Government areas (tables 2 and 3), 4 (30.8%) had medical doctors, 9 (69.2%) had Nurses/midwives, 1(7.7%) had Community Health Officers and 1 (7.7%) had only Health Educators. Ten (10) of the 13 health facilities (76.9%) had Community Health Extension Workers (CHEW) while 1(7.7%) had Community Health Officers.

3.3.2 Personnel for Nursing Services: Personnel providing nursing services in all the assessed facilities were Nurses, Midwives, Senior and Junior Community Health Extension Workers (JCHEW), Community Health Officers (CHO) and Health Educators (Tables 1, 2 and 3).

3.3.3 Personnel for Laboratory services: Table 3 showed inadequacy of laboratory personnel. Only two of the 7 health facilities (28.6%) and 4 of the 13 (30.8%) health facilities in

Kwara and Ogun State respectively had medical laboratory technicians in their laboratory. There was no medical laboratory scientist in any of the 7 assessed health facilities in Kwara State while in Ogun State, only one of the 13 assessed facilities had medical laboratory scientists

3.3.4 Personnel for Pharmaceutical services: Table 3 also showed inadequacy of personnel for pharmaceutical services. None (0%) and only 2 (15.4%) of the assessed health facilities in Kwara and Ogun States respectively had a pharmacist. CHEW or Pharmacy Technicians were seen in the 'pharmacy' room in the health facilities. In Kwara State, only one of the health facilities assessed had Pharmacy Technicians (Table 3).

The storage condition of drugs and vaccines were assessed in the health facilities. The expiry dates were seen on the packet of the drugs and none of them had expired. The vaccines were similarly examined and none, had expired. The vaccines were observed to be maintained under cold chain of between 4-8^{o}C. Drugs seen in all the assessed health facilities had evidence of NAFDAC registration.

3.3.5 Opportunities for Capacity Development

Results showed that majority of the health workers /professionals attended at least one capacity development training. Most of the trainings were on Malaria, HIV and TB control 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 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 enhance sustainability of the trainings.

3.3.6 Evidence of Renovation

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

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

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 facilities assessed were in place.

Facility Code	Type of Health facility	LGA	Workload per month (patients)	Human Resources for health							
				MD	Nurses	MLS	MLT	Pharm	CHEWs	CHO	HE
A	Comprehensive Health Centre	Edu	392	A	A	NA	A	NA	A	NA	NA

TABLE 1: STATUS OF HEALTH FACILITIES ASSESSED IN KWARA STATE

B	Maternity Centre		118	NA	A	NA	NA	NA	A	NA	A
C	Modern Health Centre		90	NA	NA	NA	A	NA	A	NA	NA
D	Health Post/clinic 'E'		168	NA	NA	NA	NA	NA	A	NA	NA
E	Primary Health Centre	Patigi	116	NA	NA	NA	NA	NA	A	NA	NA
F	*Cottage Hospital*		480	NA	A	NA	NA	NA	A	A	NA
G	Health Post 'S'		60	NA	NA	NA	NA	NA	A	NA	NA
Total	7 Health facilities	2	1,424	1 A 14.3%	3 A 42%	0 A 0.0%	2A 28.6%	0 A 0%	7 A 100%	1 A 14.3%	1A 14.3%

Key CHO = Community Health Officers

MD = Medical Doctors HE = Health Educators

Nurses=Nurses/Midwives A= Available in the health facility

MLS = Medical Laboratory Scientists NA= Not Available in the health facility

MLT = Medical Laboratory Technicians LGA=Local Government Area

Pharm = Pharmacists

CHEWs = Community Health Extension Workers

TABLE 2: STATUS OF HEALTH FACILITIES ASSESSED IN OGUN STATE

				Human Resources for Health					
Facility code	**Type of Health Facility**	**LGA**	**Workload/month**	MD CHO	Nurses	MLS	MLT	Pharm	CHEW
A	PHC A		400	NA	A	A	A	NA	NA	NA

B	PHC B		180	NA	A	NA	NA	NA	A	NA
C	PHC C	Abeokuta North LGA	200	NA	NA	NA	NA	NA	A	NA
D	PHC D		180	NA	A	NA	NA	NA	A	NA
E	PHC E		318	NA	A	NA	A	NA	A	NA
F	Private Hospital F		60	A	A	NA	NA	NA	A	NA
G	PHC G		480	A	A	NA	A	NA	A	A
H	PHC H		60	NA	NA	NA	NA	NA	A	NA
I	PHC I		140	NA	A	NA	NA	NA	A	NA
J	PHC J		165	NA	A	NA	NA	NA	A	NA
K	PHC K	Ijebu-Ode LGA	180	NA	A	NA	A	NA	A	NA
L	Private Hospital L		45	A	NA	NA	NA	NA	NA	NA
M	Private Hospital M		40	A	NA	NA	NA	NA	NA	NA
Total	**13 Health Facilities**	**2**	**2,448 patients**	**4A (%)30.8**	**9A 69.2**	**1A 7.7**	**4A 30.8**	**0A 0.0**	**10 A 76.9**	**1A 7.7**

Key

PHC-Primary Health Centre

LGA=Local Government Area CHO = Community Health Officers

MD = Medical Doctors HE = Health Educators

Nurses=Nurses/Midwives A= Available in the health facility

MLS = Medical Laboratory Scientists NA= Not Available in the health facility

MLT = Medical Laboratory Technicians

Pharm = Pharmacists

CHEWs = Community Health Extension Workers

CHEWs= Community Health Extension Workers

FGN=Federal Government of Nigeria

Table 3: Comparison of Human resources for Health in the Assessed Health facilities in Kwara and Ogun States

Human Resources For Health	No of facilities [N=7; (%)] Kwara State	No of Facilities N=13; (%)] Ogun State
MD	1 (14.3)	4 (30.8)
Nurses	3 (42.9)	9 (69.2)
MLS	0 (0.0)	1 (7.7)
MLT	2 (28.6)	4 (30.8)
Pharm	0 (0.0)	2 (15.4)
Pharm Technician	1(14.3)	0 (0.0)
CHO	1(14.3)	1 (7.7)
CHEWs	7 (100.0)	10 (76.9)
HE	1(14.3)	1(7.7)

Key

MD = Medical Doctors

Nurses=Nurses/Midwives

MLS = Medical Laboratory Scientists

MLT = Medical Laboratory Technicians

Pharm = Pharmacists

CHEWs = Community Health Extension Workers

CHEWs= Community Health Extension Workers

FGN=Federal Government of Nigeri

CHO = Community Health Officers

HE = Health Educators

A= Available in the health facility

NA= Not Available in the health facility

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 intentions because most of the plaques indicated which government in power did such renovations.

The inadequate availability of required human resources for health is a serious challenge and may affect quality of healthcare in the health facilities. None (0%) had medical laboratory scientists and pharmacists. This finding agreed with that of [11] which reported that 5 out of the 49 low-income countries meet its minimum recommendation of 2.3 doctors, nurses, and midwives per 1,000 people. Results also showed the possibility of higher referrals of cases to health facilities where resources are adequate. There is also possible increase in out-of-pocket health expenditures due to referral to other suitable health facilities. The lack of ambulance in all the facilities to facilitate ease of transportation of referred patients was also a big challenge for effective healthcare and the 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. About 55.7% of Healthcare services most frequently accessed by enrollees under NHIS were treatment and general care, followed by about 8.6% antenatal care. The results of the study showed inadequate health professionals in

the health facilities especially in the rural areas of the states. This finding agreed with that of [11] who reported similar challenges and stated that shortages of Health Worker lessen the likelihood of proper diagnosis and supervision once a patient is receiving medication and this increases the potential for poor adherence and eventual 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 recruitment and salaries; and work environments with few supplies and limited support [11].

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.

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.

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 non-communicable health challenges (eg anaemia, diabetes and hypertension) and maternal and child health, given that majority of the health workers /professionals attended more trainings on HIV, TB, malaria, safety and use of sharps. Also, most of the trainings were 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 health is very crucial in resource-poor countries that have been reported to have the highest disease burdens and suffer from widespread lack of educational and training opportunities [11]. Health challenges therefore, require training attentions and updates in knowledge on prevention, diagnosis and treatment for quality service delivery.

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 that can provide quality health services, erratic electricity supply, inadequate capacity development trainings in communicable and non-communicable health challenges in the communities. There is also the challenge of lack of ambulance for emergency referrals. This can delay referral and transportation of patients to suitable health facilities and may cause avoidable mortality.

Ethical considerations: Administrative approval for the study was obtained from the Ministries of Health of Ogun and Kwara States, Nigeria. The Institutional Review Board (IRB) of Nigerian

Institute of Medical Research, Yaba, Lagos, Nigeria approved the study with number IRB/13/237. The assessed health facilities were coded A, B, C, D, E, etc to ensure confidentiality of the facilities. Consent was also obtained from Head of each of the assessed health facilities.

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

References

(1) Garba, Ibrahim, T. 1, Azhar Harun, Salihu, Abdulwaheed A: The Way forward for Community-Based Health Insurance Scheme in Funding Health Care among the Rural Communities of Sokoto State, Nigeria. Research on Humanities and Social Sciences, 2015. www.iiste.org ISSN (Paper)., 2224-5766 ISSN (Online) 2225-0484 (Online) Vol.5, No.8, 2015

(2) National Health Insurance Scheme. Operational guidelines. Revised October; 2012. Abuja Nigeria. (Revised). Available: http://www.ghmlnigeria.com/down loads/NHIS_OPERATIONAL _GUIDELINES.

(3) World Health Organisation.The world health report 2000 health systems: Improving performance. Geneva: World Health Organization, 2000.

(4) The World Bank: Out-of-pocket health expenditure (% of private expenditure on health). Available at: http://data.worldbank.org/indicator/SH.XPD.OOPC.ZS.

(5) National Population Commission (NPC) [Nigeria] and MEASURE DHS ICF Marco. *Nigeria demographic and health survey 2008*. Calverton, Maryland: National Population Commission and MEASURE DHS ICF Macro; 2009.

(6) Usman Aishat Bukola, Preferred Mode of Payments for Community Based Health Care Financing Scheme among Households in Osun State, Southwestern Nigeria. Journal of Natural Sciences Research (2013). Vol.3, No.1. www.iiste.org ISSN 2224-3186 (Paper)., ISSN 2225-0921 (Online)

(7) Federal Ministry of Health (FMOH). A Directory of Health Facilities in Nigeria. 2011

(8) Federal Ministry of Health. National Strategic Health Development Plan 2010-2015. 2005

(9) Sanusi RA and Awe AT. Perception of national health insurance scheme (NHIS) by health care consumers in oyo State, Nigeria. *Pakistan Journal of Social Sciences*. 2009., 6(1): 48-53.

(10) Ononokpono, E. NHIS and the Challenges of Healthcare Delivery. Available at:http://www.dailytrust.com/content/view/4297/8 Accessed June 6, 2014.

(11) Alexandra E. Kendall. The Global Challenge of HIV/AIDS, Tuberculosis, and Malaria. Global Health. 2012 February.

(12) Inter agency Task Team on Human Resources for Health (IATT), 2012.

(13) Nigerian National Medical Laboratory Services Policy, 2009.

(14) Ken Inweregbu, Jayshree Dave, Alison Pittard. Nosocomial infections. The British Journal of Anaesthesia Continuing Education in Anaesthesia, Critical Care & Pain. 2005., Volume 5 Number 1. Online ISSN 1743-1824 - Print ISSN 1743-1816 Pp. 14-17.

(15) Abdulraheem I. S, Olapipo A. R and Amodu M. O. Primary health care services in Nigeria: Critical issues and strategies for enhancing the use by the rural communities. Journal of Public Health and Epidemiology 2012. Vol. 4(1), pp. 5-13.

(16) B. Adewale, A. K. Adeneye, S. M. C. Ezeugwu, E. E. Afocha, A. Z. Musa, C. A. Enwuru, et al. A Preliminary Study on Enrollees Perception and Experiences of National Health Insurance Scheme in Lagos State, Nigeria. *International Journal of TROPICAL DISEASE & Health 2016. 18(3): 1-14, 2016, Article no.IJTDH.27309.*