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IMPROVING THE PRIMARY HELTHCARE IN BAUCHI, KADUNA AND LAGOS

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ABSTRACT

Many Nigerians, particularly children, die from treatable and curable diseases every day, such as malaria and pneumonia. The Primary Health Care (PHC) provides the majority of the cost effective health interventions to prevent and treat major causes of mortality in the country. Improvement of the PHC could have a large impact on the nation's citizens, especially since the majority of citizens needing help from the PHC are the poor. Although the PHC is arguably the most important among the three tiers of government healthcare, it is also the most neglected by the Nigerian government. This paper examines the factors that drive the performance of the PHC in the poorest and most crowded states in Nigeria: Kaduna, Bauchi, and Lagos. The PHC of the three states are compared and contrasted in the areas of, public funding to the PHC facilities, health service delivery of the PHC, and the performance of the PHC personnel and facilities. A part of this research is based on the analysis of legal documents, scholarly journals, and world databases. The results of the above mentioned criteria were obtained from the World Bank. Overall, the PHC health facilities in Lagos fair better than those in Kaduna and Bauchi. This trend can be attributed to the difference of the PHC organization in Lagos. Most facilities in Lagos are privately owned and located in urban areas. Although the infrastructures of the PHC varies greatly, overall, the facilities are in poor condition, and most facilities do not have taps with running water, electricity, or phones. Basic services for youth care is low, although the 15-24 year old population contract more HIV/AIDS than any other age group in Nigeria. Facilities also lack some equipment needed for maternal and child services and do not have basic drugs in stock. High morbidity and mortality in Nigeria is partly because of the high rates of malaria and HIV/AIDS. This paper provides possible improvements of the PHC nationwide, based on the

information learned by the case study of the three states. The findings of the paper suggests that increased budgetary allocation, implementation of new health policy options, increased community involvement, and proper health worker allocation, can help improve Nigeria's PHC system.

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Chapter 1

Introduction

Nigeria is the most populous country in Africa, with a population of approximately 177 million people. Many Nigerians, particularly children, die from treatable and curable diseases every day such as malaria and pneumonia (Worldbank, 2010, p. 10). The Primary Health Care (PHC) provides the majority of the cost effective health interventions, which prevent and treat major causes of mortality in the country. Moreover, they are also responsible for the progression towards the Millennium Development Goals (MDGs). Improving the delivery of the PHC can have a large impact on the health of Nigerian citizens, especially since the majority of citizens needing help from the PHC are the poor (World Bank, 2010, p.10). The PHC is regarded as the framework used to improve health services for the population of Nigeria. The PHC healthcare services include "health education; adequate nutrition; safe water and sanitation; reproductive health, including family planning; immunization against major infectious diseases; provision of essential drugs; disease control, mental and dental care" (Labiran, Mafe, Onajole & Lambo, 2008, p. 18).

The PHC was first discussed on September 6-12, 1978, at the Alma Alta conference. The conference was based on the philosophical principle of equal health opportunities for citizens, regardless of social or economic status (HEFRON, 2007, p. 11). To better devise policies to increase health services to the poor, it is necessary to gain insight on the delivery of healthcare services provided at the PHC level. This paper examines the factors that drive the performance of the PHC in the poorest and most crowded states in Nigeria: Kaduna, Bauchi and

Lagos. The report will first start with the conceptual knowledge needed to understand the PHC, and then follow with a case study of the three states.

Purpose of Study

The PHC is the level at which members of the society are introduced to the healthcare system. Although it is arguably the most important among the three tiers of government healthcare—which will be discussed later in the paper—it is also the most neglected by the government. For this reason, as well as several other factors, Nigeria's current health status is very poor and shows little to no improvement. The country currently ranks among the nations with the highest child and maternal mortality rates (Labiran, et al., 2008, p. 9). The weak health sector is characterized by shortage of qualified health professionals, inadequate transportation, lack of maintenance, and a high turn-over of leadership (Ayedemo, 2005, p. 151).

Kaduna, Bauchi, and Lagos are located in three out of the six geopolitical regions in Nigeria, meaning their locations play an important role on the performance of their PHC. As a result, the states will be viewed from a soci-cultural, economic and political perspective, with one issue being taken out of each category and applied to the review of the states.

- Some core economic factors include: level of funding of the health sector; poverty and income inequality; and availability, distribution, and condition of services of Human Resources for Health.

- Some political factors include: the nature of governance; discrimination across geopolitical zones; and war and conflict.

- Some core social factors include: cultural beliefs; illiteracy; urban-rural divide; and the quality of infrastructures and social services (HEFRON, 2007, p. 22-23).

The first part of the paper is the needed conceptual knowledge of the PHC as explained in Nigeria's National Health Policy. In 1984, the federal government of Nigeria proposed a National Health Policy that recommended a health system based on the PHC. Under the leadership of Professor Ransome-Kuti in 1988, the National Primary Health Care Development Agency was created. The national health care system is based on a three-tier responsibility of the federal, state and local governments. The responsibilities assigned to each level are prepared in consultation with all three tiers of government and approved by the Federal Ministry of Health (Labiran, et al., 2008, p. 18). This study will briefly examine the current Nigerian Constitution of 1999 and its references to the division of health responsibilities among government levels, and the Revised National Health Policy of 2004, which further defines the division of responsibilities of the three levels of government. The second part of the paper compares and contrasts the performances of the PHC in Kaduna, Bauchi, and Lagos, using three criteria that focuses on a soci-cultural, economic and political perspective:

- Public funding to PHC facilities;

- Health Service Delivery System of the PHC, which include, the availability of basic equipment/services, as well as, pharmaceuticals and vaccines;

- Performance of PHC personnel and facilities, both public and private, the allocation of healthcare workers, and the infrastructure of health clinics/hospitals/health posts.

The first criterion reviewed is public funding to the health sector. The level of funding available to the health sector determines the quality and quantity of the services provided in the hospitals and clinics, as well as the duration of health programs and initiatives. When comparing

the per capita health expenditure of Nigeria to that of Ghana and South Africa in 2002, we find

the following: $43 in Nigeria, $73 in Ghana and $689 in South Africa (HEFRON, 2007, p. 23).

Not only is Nigeria's per capita health expenditure extremely low, the health care financing

framework to guide the investment and distribution of resources is almost nonexistent

(HEFRON, 2007, p. 23). The funding of the PHC is a shared responsibility among the federal,

state and local government, with the local government having the primary responsibility. The

local government does not keep accurate records of its expenditure on health, especially in Lagos

state. The low level of expenditure on the PHC negatively impacts the ability of the system to

adequately function and falls short of the country's ability to meet the MDGs (HEFRON, 2007,

p.24).

The second criterion is Health Service Delivery. Transportation systems to hospitals and

clinics are almost nonexistent. Apart from the bad transportation system, the roads in a majority

of the areas are poor. Even for the few good roads, high congestion and chaos is common

(HEFRON, 2007, p. 36). Furthermore, the lack of energy (due to no electricity) in health centers

makes it difficult for certain forms of drugs to be stored, and as a result, all the health needs of

individuals cannot be met. In a study done on Lagos state, it was shown that there was a shortage

of cold storage equipment, and as a result, vaccines were unavailable in more than 30% of the

facilities in Lagos. These numbers are shocking, especially for Lagos, which has greater access

to cold storage than any other state in Nigeria (HEFRON, 2007, p. 37).

The last criterion of the case study of the three states is a review of the PHC personnel and

facilities. Health workers come from various health institutions and vary in their forms of

degrees, i.e. certificate, diploma, graduate, and post-graduate credentials. There is also an uneven

geographical distribution of health workers. The health workers are primarily concentrated in the

southern part of the country, mainly in the urban and tertiary health care facilities. The majority

of physicians, a staggering 77.86% are in the southern regions (SE, SW, and SS), while only

about 22.14% are in the three northern regions (North Central, NE, NW). To combat the uneven

divide of health workers in the nation, all health workers that graduate from a university

(including nurses and midwives) must serve in the National Youth Service Corps (NYSC). In the

one year service as Youth Corp members, health workers are sent to states (other than their own)

and usually deployed to the rural areas, where healthcare is minimal (Labiran, et al., 2008, pp.

23-24).

     The final part of the overall paper, discusses possible improvements of the PHC based on

the information learned by the case study of the three states. This final analysis of the states

might prove only beneficial for the three states, so I have considered other factors based on

current research that can have an impact on the PHC nationwide. The most interesting is the

connection of traditional and modern health systems to help improve the PHC. Proponents of the

traditional system often argue that modern methods, such as reformed political processes and

economic models, are corrupt and do not supply the needed resources for proper healthcare. All

the while modern methods allow preventative and curative measures at a higher rate than

traditional methods (Falola & Heaton, 2006, p. 2).

     Ultimately, this thesis highlights various ways, with which the PHC can be improved, and

argues that Nigeria already has the tools that it needs to enhance the health of its citizens. The

tools include existing state structures, traditional institutions, and increased community

involvement (Falola & Heaton, 2006, p. 2). Additionally, this paper calls for increased

community involvement, which can include the augmentation of a role for faith-based

organization in the healthcare, and promotion of health education/awareness.

Literature Review

This paper analyzes numerous primary and secondary sources. This section, however, focuses on the three main works that the author has found helpful. *Traditional and Modern Health Systems in Nigeria* (2006) edited by Toyin Falola and Matthew M. Heaton is a compilation of essays from thirty authors focused on different factors in Nigeria's health sector with an emphasis on interweaving traditional and/or modern medical practices to achieve better health. The modern approach has seemed to fail because state-run hospitals have become completely bankrupt, while the traditional approach is questionable whether it can provide the same level of effectiveness as western healthcare systems. From this collection of essays, a work by Adeboye (2006) proves most beneficial to this paper.

"Improving Primary Health Care Delivery In Nigeria: Evidence from Four States" from the World Bank (2010) focuses on the primary health care delivery of four states: Bauchi, Cross River, Kaduna, and Lagos, and the variables that drive their performance. While this work covers a large array of factors, it provides some information on the performance of the PHC facilities, public funding of the PHC facilities, and the health service delivery system of the PHC in the various states. Furthermore, the work provides information on the division of responsibility within the PHC, including the laws and policies on health delivery and health personnel management.

Lastly, *The Health Reform Foundation of Nigeria* (HEFRON) (2007) views that the acceptance and proper implementation of the PHC is a major way of meeting the health needs of the population. Some important points to take from the book include its historic insight of the

PHC since its inception, the system's current status, the purpose and features of the PHC, and the socio-cultural, economic, and political factors that impact the three states.

History of PHC

The PHC is defined by the World Health Organization (WHO) as an "essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination." In short, the goal of the PHC is to establish a principle of equal health opportunities for citizens, regardless of social or economic status (HEFRON, 2007, p. 11).

The PHC was formulated, September 6-12, 1978, at the Alma Alta Conference with 134 countries present. The conference was organized by WHO and the United Nations Children Fund (UNICEF). The objectives of WHO for the PHC was "to promote health, to prevent disease, to cure disease, and to rehabilitate i.e. help people live full normal lives after an illness or disability" (Ayedemo, 2005, p. 151). A majority of the cost effective health interventions to prevent and treat major causes of mortality in the country and progress towards the MDGs are provided by the PHC.

According to the Constitution of the Federal Republic of Nigeria (1999), the three tiers of government are responsible for health service provision in the public sector. The federal, state, and local governments shall promote health through:

A. Primary Health Care Local Governments

B. Secondary Health Care State Governments

C. Tertiary Health Care Federal Governments

The power of controlling and maintaining the PHC is vested to the local governments with support from the state ministries of health. The health care delivery of the Local Government Authorities (LGAs) in each state is controlled by a Supervisor of Health, while the PHC is controlled by a PHC Coordinator. The PHC coordinator is then assisted by a Deputy Coordinator. The PHC coordinator reports to the Supervisor who in turn reports to the LGA Secretary. The different components of the LGAs' PHC are managed by personnel from all different career fields. The three levels of operation of PHC within the LGAs are (Ayedemo, 2005, p. 153):

- Village level

- District level

- Local Government level.

 Overall, the Constitution does not clearly provide the list of functions that should be executed by the federal, state, and local governments, but only lists subjects they can legislate. Essentially, the legislative lists serve as guidelines "for other legal decrees and sector policy reports that lay out the specific expenditure responsibilities of the different tiers of government" (Khemani, 2001, p. 3). Article 7 of the Constitution states that the government has the power to enact legislation with regard to "*the establishment, structure, composition, finance and functions*" of democratically elected local government officials. However, the Constitution is unclear regarding the autonomy of local governments from the authority of the state government. The Fourth Schedule (which provides the list of functions to be performed by the local government) implies that services such as primary education and health are not only the responsibility of the local government, but the state as well. According to the Constitution:

The functions of a local government council shall include participation of such council in the Government of a State as respects the following matters: (a) the provision and maintenance of primary, adult and vocational education; (b) the development of agriculture and natural resources, other than the exploitation of minerals; (c) the provision and maintenance of health services; and (d) such other functions as may be conferred on a local government council by the House of Assembly of the State.

The basic services, as outlined in the PHC, are assigned as the responsibility of the state and local governments with no clear legal distinction between the roles of the two branches of government regarding healthcare. Not only does the state and local government have so much combined power over the health sector, but state officials are also the ones who hire local government officials. Due to the undefined powers regarding the PHC between the LGAs and the state, it has led to the LGAs functioning as an administrative extension of the state government, rather than their own separate unit.

Nigeria has a total of 774 LGAs, divided among 36 states. Each LGA is administered by a local government council, which consists of the Chief Executive of the LGA and elected Councilors. According to the Constitution, the PHC is supposed to be controlled by the local government, when in reality, it is run by state officials. For the purpose of this project, the focus is on three states, rather than three LGAs, for three reasons: (1) the large differences that exist across LGAs within a state; (2) the fact that, adequate information of the PHC is primarily based on state data (which take into account all the LGAs in that given state); (3) and the fact that, the control of the PHC starts from the state officials before it is trickled down to the LGAs.

In 1984, the federal government of Nigeria proposed a National Health Policy that recommended a health system based on the PHC. Under the leadership of Professor Ransome-

Kuti in 1988, the National Primary Health Care Development Agency was created. The national

health care system was based on a three-tier responsibility of the federal, state and local

governments. The responsibilities assigned to each level was prepared in consultation with all

tiers of government and approved by the Federal Ministry of Health (Labiran, Mafe, Onajole &

Lambo, 2008, p. 18). The original National Health Policy was formulated in 1988 and was

revised 16 years later in 2004 to meet the new health standards in Nigeria. According to the

Revised National Health Policy (2004), Nigeria's healthcare situation is as follows:

- *Health Status*

  - *Nigeria has a high rate of preventable diseases, mostly caused by poverty. The maternal mortality rate is one of the highest in the world (with 1 mother's death, every 100 delivery). Other health indicators such as the under-five mortality, and the adult mortality are higher than the average for sub-Saharan Africa.*

- *Health policy, legislation, and health sector reform agenda*

  - *There is limited policy/programming formulation, implementation and monitoring at all levels of government.*

  - *There is no health act that describes the national health system, or defines how the three tiers of government should control the system.*

- *Pharmaceuticals and medical supplies*

  - *Fake, adulterated, and unregistered drugs are still prevalent (although action has been taken to reduce this).*

  - *There are scarce supplies of drugs and other materials.*

● *Health service delivery and quality of care*

　　o *Disease programs (such as HIV/AIDS and malaria) are currently*

　　　implemented but have little impact.

　　o *High portion of PHC facilities only service 5-10% of their potential patient*

　　　load, due to lack of consumers' confidence in health personnel.

　　o *The routine immunization rates continue to be low.*

● *Health finance*

　　o *Public expenditure on health is less than $8 per capita, despite the $34*

　　　recommended internationally. Private expenditures (out-of-pocket payments)

　　　are estimated over 70% of the total health expenditure, despite the country's

　　　high poverty rate (pp. 3-4).

The objective of the Revised National Health Policy is to strengthen the national health system in a way that it will be able to provide quality, affordable, and accessible health services to Nigerians, in an effort to achieve the MDGs. The targets of the Revised National Health Policy (2004) are the same as the health targets of the Millennium Development Goals, namely:

　　• *reduce by two-thirds, between 1990 and 2015, the under-5 mortality rate;*

　　• *reduce by three-quarters, between 1990 and 2015, the maternal mortality rate;*

　　• *to have halted by 2015 and begun to reverse the spread of, HIV/AIDS;*

　　• *to have halted by 2015 and begun to reverse the incidence of malaria and other major*

　　diseases (p. 6).

Chapter 2

Analysis

Methods

Part of this research is based on the analysis of legal documents, such as the 1999 Federal Constitution of Nigeria and the Revised National Health Policy of 2004, to explain the purpose and responsibilities of the PHC among the government levels (with an emphasis on the state level). Furthermore, scholarly journals, and world databases that provide a country profile on the Nigerian healthcare system will be assessed. The remainder of the paper is based on an extensive quantitative survey provided by World Bank (2010), consisting of three areas of collection (Lagos, Bauchi, and Kaduna) that will be used to provide information on criteria pertaining to public funding, health service delivery, and performance of the PHC personnel and facilities:

- o Health Facility Survey: Provides general information and services provided at institutional facilities.

- o PHC Staff Survey: Health staff from a diverse array of occupations describing work environments, as well as, incentives provided to them.

- o Household Survey: Provides information on the satisfaction of services provided by the health institution.

Note: Data was collected in May of 2007

Findings

Although the infrastructure of the PHC varies greatly, overall the facilities are in poor condition. According to Table 1, most facilities do not have taps with running water, phones or laboratories. Less than 50% of the facilities in Bauchi have a waste and sharp disposal. This trend improves slightly in Kaduna, and improved greatly in Lagos, with over 90% of the facilities having waste and sharp disposal. Over 50% of the facilities in Bauchi and Kaduna have a leaky roof and broken doors/windows. Furthermore, only 44% and 31% of the health facilities have electricity in Bauchi and Kaduna, respectively. Over half of the clinics in these states cannot function without electricity and are burdened by the costs of using a generator. Overall, the health facilities in Lagos are considerably better than the facilities of the other two states. This trend can be attributed to the difference in PHC organization in Lagos. Most of the facilities in Lagos are privately owned and located in urban areas (World Bank, 2010, p.13).

Table 1. Primary Health Care facilities, Infrastructure, and Amenities (in %)

Infrastructure	Bauchi	Kaduna	Lagos
Taps with running water	22	27	80
Safe water	66	65	91
Electricity	44	31	95
Lab	15	16	46
Phone	14	15	67
Waste Disposal	25	56	96
Sharp Disposal	39	69	95
Fridge/icebox	68	47	74
Sterilizing Equipment	41	39	91
Leaky roof	65	52	11
Broken doors/windows	61	56	12

Source: World Bank, 2010, p. 14

The ward minimum health care package (WMHCP) in Nigeria includes six groups of interventions: "(i) control of communicable diseases (Malaria, STI/HIV/AIDS), (ii) child survival, (iii) maternal and newborn care, (iv) nutrition, (v) non communicable disease prevention, and (vi) health education and community mobilization" (Worldbank, 2010, p. 14). This health care package is required in PHC centers on a daily basis. To determine the current availability of services, a facility survey was conducted, asking facility heads to comment about the services provided, as seen in Table 2. Eye care, followed by services for adolescents/youth, are the least provided services by the facilities in each state. It is no surprise youth care is low, being that the 15-24 year old population contract more HIV/AIDs than any other age group in Nigeria (Amaugo, Papadopoulos, Ochieng & Ali, 2014, para. 2).

Table 2. Percentage (%) of Facilities Offering Basic Services

	Bauchi	Kaduna	Lagos
Antenatal	45	95	90
Postnatal	45	81	90
Family Planning	43	64	82
Childcare	85	86	90
Maternal Care	45	81	93
Adolescent/Youth	28	42	59
Eye Care	34	20	14

Source: World Bank, 2010, p. 15

The facilities, more so in Bauchi and Kaduna, lack some equipment needed for maternal and child services, such as children's weight scales, forceps, and antiseptics. However, all the facilities have a fair amount of medical consumables, such as disposable syringes and needles. A malaria smear is only available in less than half of the facilities in all three states. Malaria remains one of the top problems in Nigeria, including HIV/AIDS. Overall, Bauchi is the least likely to have basic equipment and medical supplies, whereas Lagos is more likely to have them.

Table 3. Percentage (%) of Facilities offering Basic Equipment and Medical Supplies

	Bauchi	Kaduna	Lagos
Generator	18	22	84
Refrigerator	27	23	95
Sphygmomanometer	65	70	99
Child weight scale	49	52	95
Microscope	16	28	51
Obstetric Forceps	44	33	73
Thermometer	65	72	93
Bandages	60	70	87
Sharps Container	37	41	96
Stethoscope	68	83	95
Antiseptic for skin	44	50	86
Disposable syringes and needles	81	86	99
Sterile gloves	53	71	89
Malaria smear	15	20	42
Urine test strip	29	32	71

Source: World Bank, 2010, p. 15

Many of the facilities do not have basic drugs. High morbidity and mortality in Nigeria is partly because of the high rates of malaria and HIV/AIDS. However, only an average of 70% of the facilities have anti-malaria drugs, such as Chloroquine, and only an average of 54% of the facilities have injectable contraceptives. Furthermore, 33%, 38%, and 71% of the facilities have a pregnancy test kit in Bauchi, Kaduna, and Lagos, respectively. According to the CIA World Factbook (2014) the infant mortality rate in Nigeria is 74.09 deaths/ 1,000 live births, still one of the highest in the world. The high mortality rate could partially be due to the few births occurring in health facilities, and an even smaller percentage of pregnant women who are attended by trained health personnel (World Bank, 2010, p. 43).

Malnourishment is also another big problem in Nigeria, and according to Table 4, only an average of 54% of the facilities have Vitamin A supplements and only 69% of the facilities have iron/folate. Vaccine rates were not added to the table because only half of the facilities being interviewed by World Bank (2010) had vaccines in stock. Despite the Nigerian government's effort to improve child immunization rates, the percentage is still low. This trend could partly be due to the lack of cold storages in the majority of the facilities. On average, only 48% of the facilities have a refrigerator or icebox (World Bank, 2010, p. 16).

Table 4. Percentage (%) of Facilities Having Basic Pharmaceuticals and Vaccines

	Bauchi	Kaduna	Lagos
Chloroquine	77	67	66
ACT e.g. Coartem	54	51	82
Paracetanol	82	81	88
Antibiotics	73	76	81
ORS sachets	67	55	69
Pregnancy test kit	33	38	71
Vitamin A	44	52	66
Iron/ Folate	56	59	91
Oral Contraceptives	37	39	65
Injectable contraceptives	43	51	69
Co-trimoxazole	64	63	82
Measles	45	40	72
DPT	45	42	72

Source: World Bank, 2010, p. 17

There is a large difference between the private and public providers, with the private providers having a higher chance to be staffed by nurses, midwives, and doctors, than community health care workers (as compared to the public providers). Bauchi and Kaduna have 7-8 people on staff at any given time. Except for Lagos, a majority of the PHC facilities are staffed by community health workers, such as JCHEW (Junior Community Extension Worker) and/or CHEW (Community Health Extension Worker). Furthermore, Lagos has about 11 people on staff at any given time, with the majority being doctors and nurses/midwives (World Bank, 2010, p. 18).

Table 5. Average Staffing of PHC Facilities (in %)

	Bauchi	Kaduna	Lagos	Public	Private
Doctors	0.3	0.3	1.9	0.2	1.8
Community health officers	0.3	0.3	0.3	0.5	0.2
Nurse	0.8	0.7	3.1	0.5	3.1
Midwives	0.7	0.5	3.1	0.5	2.3
CHEW	0.7	1.3	0.2	1.4	0.2
JCHEW	0.8	0.4	0.2	0.9	0.3
Primary health worker	0.2	0.2	0.0	0.3	0.1
Community-based worker	0.3	0.1	0.1	0.3	0.1
Environmental health officer	0.1	0.1	0.3	0.2	0.0
Lab technician	0.2	0.2	0.6	0.2	0.7
Primary technician	0.2	0.1	0.4	0.1	0.3
Medical records officer	0.1	0.3	0.5	0.2	0.4
Dental assistant	0.0	0.1	0.0	0.1	0.1
Security guards	0.7	0.9	1.3	1.1	0.9

Source: World Bank, 2010, p. 18

According to Table 6, patient satisfaction is low for all three states. There is a correlation between patient satisfaction and the availability of equipment and supplies in the health facilities. According to World Bank (2010), household satisfaction was greater in private facilities versus public facilities, particularly in the areas of drug supply, staff availability, attitude of staff, and waiting time. Furthermore, PHC facilities in rural areas had the lowest household satisfaction, compared to urban and suburban areas regarding drug supply and staff attitude (p. 29).

Table 6. Household Satisfaction with the Nearest PHC Facility

	Bauchi	**Kaduna**	**Lagos**
Drug Supply	19	12	44
Availability of Supplies	25	15	43
Availability of Staff	23	19	61
Attitude of staff	70	51	62
Availability of Equipment	11	7	51
Availability of /diagnostic services	21	11	44
Information on diseases and care	21	22	52
Information on facility management	20	23	42
Waiting Times	45	26	51

Source: World Bank, 2010, p. 28

Chapter 3

Discussion

When considering infrastructure and amenities, the majority of the health facilities are in poor condition. A major problem is the lack of running water. As a result of lack of running water, some facilities have to get water from elsewhere and store it, often in non-sanitary conditions. Studies have shown that unimproved water and lack of sanitation is a leading cause of childhood diarrhea and increased childhood mortality. In response to this epidemic, the Nigerian government has implemented the National Water Supply and Sanitation Policy, the Presidential Water Initiative, and the National Economic Empowerment and Development Strategy. Despite these initiatives, "approximately 109 million and 66 million people lack access to sanitation facilities and water, respectively [in Nigeria]" (Ezeh, Agho, Dibley, Hall & Page, 2014, para. 3).

A study done by Ezeh et al. (2014) aimed to determine if children under five years old, who did not have access to improved water and sanitation facilities, are at a higher risk of death in Nigeria. Their data was extracted during 2003, 2008, and 2013. The Nigeria Demographic and Health Survey was used to examine water and sanitation deaths of children aged 0-28 days, 1-11 months, and 12-59 months via Cox regression analysis. Information from 63,844 children was obtained, which included, 6,285 deaths: there were 2,254 cases of neonatal mortality (0–28 days), 1,859 cases of post-neonatal mortality (1–11 months), and 2,172 cases of child mortality (1–4 years old). The risk of mortality from unimproved water and sanitation increased by 38% and 24% for post-neonatal mortality and child mortality, respectively. The risk of neonatal mortality was the lowest and increased by 6% (Ezeh, et al., 2014, para. 17). Overall, the Nigerian

government must revamp its initiatives already in play, or create new ones in order to invest in improved water and sanitation, to help reduce preventable child deaths.

Another major lack the facilities have, are equipment needed for maternal and child services, such as children's weight scales, forceps, and antiseptics. There is a large gap in maternal mortality rates between poor and rich regions in the world. In 2005, the maternal mortality was highest in developing countries (450 maternal deaths per 100,000 live births) compared to developed countries (51 maternal deaths per 100,000 live births) (Ahmed, Creanga, Gillespie, Duff, & Tsui, 2010, p.1). Pregnancy and childbirth present major health risks for Nigerian women. Nigeria has made efforts to reach the MDG's of decreasing maternal mortality by 75% between 1990 and 2015. However, since the 1990s, the country's maternal mortality has only decreased by 24% (Ezeonwu, 2014, para. 2). Nigeria has one of the highest maternal mortality ratio (MMR) in the world at 630 deaths per 100,000 live births. Previous reports have shown that obstetric complications play a major role in maternal or fetal deaths. Life threatening conditions are often not "identified, treated, referred, or followed up appropriately by trained providers during the course of the pregnancy, delivery, and postpartum sometimes resulting in disability or death" (Ezeonwu, 2014, para. 4).

A qualitative descriptive study done by Mabel Ezeonwu (2014) explores the perspectives of nurse leaders on policy strategies that could help improve maternal health in Anambra State (located in the southeast region of Nigeria). Although state-specific maternal health data was not available, the country-level data was believed to adequately reflect the maternal health status of the states in Nigeria. Anambra has numerous rural villages with an estimated 1,500 to 2,000 persons living within every square kilometer (National Bureau of Statistics, 2014). Based on his data, Ezeonwu suggests the removal of financial barriers in order to allow access and utilization

of health services, health care plans that include spouses and family, and physical and human

infrastructural improvements (Ezeonwu, 2014). Table 7, gives a summary of policy suggestions

provided by the study to improve maternal health outcomes.

Table 7. Themes and Subthemes Related to Policy Suggestion to Improve Maternal Health Outcomes

Main Themes	Subthemes
Free Health Care	No charges for provider visits, hospitalizations/birthing, drugs, and other supplies
Broad Outreach and Education	Spousal, family, and community inclusiveness (in reproductive health and maternal plan of care)
Stronger health system to improve access to quality maternal care	Physical infrastructural improvement
	• Physical access to care
	• Equipment, supplies, and blood products availability

Source: Ezeonwu, 2014, p. 832

A study done by Aremu, Lawoko, & Dahal (2011) is a reminder that although policies are

a great way to make changes in a country, the people of the country have to be willing to accept

and use the health policies to their advantage. The study explains that individuals living in highly

socioeconomic disadvantaged neighborhoods had a higher home birth rate compared to the upper

class. Moreover, even in the upper class, home delivery, which cuts across all socioeconomic

strata, is a common practice among Nigerian women. High mortality rates in the country are a

result of unskilled health personnel and lack of diagnosis of life threatening conditions either

during the course of the pregnancy, delivery, and/or postpartum (Ezeonwu, 2014, para. 4).

Aremu et al., (2011) suggests that perhaps Nigeria's cultural practice of giving birth at home

may be the cause of the high maternal mortality rates.

The results by Aremu et al. (2011) are similar to another study taken in Lagos that tested the patterns and the use of maternity services. Over half the participants in the study delivered outside of hospital facilities and 81.8% of that group had no skilled attendants during delivery. The results also suggest that the availability of and access to hospital facilities by skilled attendants does not guarantee use of maternal services by Nigerian citizens (Olusanya, Alakija, & Inem, 2010). A similar study done by Ahmed et al. (2010) found that maternal mortality can be reduced if health and government officials help improve women's economic, educational, and empowerment status (or socioeconomic factors). "The odds of having a skilled attendant at delivery for women in the poorest wealth quintile are 94% lower than that for women in the highest wealth quintile and almost 5 times higher for women with complete primary education relative to those less educated. The likelihood of using modern contraception and attending four or more antenatal care visits are 2.01 and 2.89 times, respectively, are higher for women with complete primary education than for those less educated" (Ahmed et al., 2010, p. 1). While skilled birth attendance and obstetric care are essential to reduce maternal mortality, programs must also be aimed at poverty eradication, universal primary education, and the empowerment of women (Ahmed et al., 2010).

It has been proven that the health of citizens within a country affects the country's economic growth and development. Health can enhance worker effectiveness and productivity of individuals. The Nigerian government has improved the health care of its citizens by budgeting high allocations to the health sector and creating government policy interventions. The government expenditure for health in 1986, 1990, 2000, and 2010, were ₦360.4M, ₦558.1M,

N18181.8M, and N 149269.8M, respectively (Imoughele & Ismaila, 2013, p. 220). However, a study done by Alabi, Adams, Chime, Abu, & Aiglomudu (2010) revealed that less than 1% of GDP was allocated to health care provision, and about 2% of government revenue was allocated to the health sector between 1981 and 2006. The low financial commitment of the government results in inequality to healthcare accessibility, since the majority of Nigerians are poor and pay out-of pocket for health care.

Imoughele & Ismaila (2013) suggest that improvements in budget allocation relies in the area of planning and execution, and apart from proper budget allocation, there must be a reduction of infants, under five, and maternal mortalities (p. 221). The conclusion from their study reinforces the idea that investment in human capital through health could bring about economic growth in Nigeria. However, the government must be committed in budgetary allocations to the health sector. The authors of this study provide the following policy implications:

- *There is need for increase in government spending on health at all levels (primary, secondary and tertiary institution). Government budgetary allocation to health sector should be increased to the prescription of 15% of its annual budgetary allocation to the health sector. This will make government health expenditure to have a robust effect on Nigerian health status and meet [the] WHO recommended budgetary allocation to the sector.*

- *There is also the need for investment in health and nutrition. Adequate investment in the sector will improve educational outcome and induce the nation economic growth. It is also necessary that government health policies that support provision of facilities are induced in the country.*

- *There is need for government to take cognizance of the growth population of Nigerian 14 Years of Age and Younger in health care expenditure and allocation policies since this group are the major determents of health expenditure in Nigeria. Government would need to form synergy with the private sector in providing quality and quantitative health facility to meet the demand of Nigerians in line with the Millennium Development Goal (MDGS).*

- *There is need for proper implementation and monitoring of our national health policy such as national health insurance scheme (NHIS). This will improve the health status and reduced health burden on household and the government* (Imoghele & Ismaila, 2013, p. 231).

"Universal access to good quality care and optimal patient safety is the goal of health systems and governments all over the world" (Alhassan, Spieker, Van Ostenberg, Ogink, & Nketiah-Amponsah, 2013, p. 1). Although African countries have continuously progressed towards this goal, they still lag behind because of financial, material, and human resource problems. The global health workforce is estimated to be 59.2 million, with only 3% found in Africa, which deals with 25% of the global disease burden. The health sector workforce density per 1000 population in Africa is estimated at 2.3, whereas, in America, it is 24.8 (Alhassan et al., 2013, p. 1).

While Ghana is the prime example as one of the sub-Saharan African countries that is making significant progress towards universal access to quality healthcare, it may fail to reach its 2015 Millennium Development Goals, partly due to the health sector human resource challenges, mainly low staff-motivation (Alhassan et al., 2013). This paper has shown that Nigeria also has an uneven geographical distribution of health workers. Health workers are concentrated in the

southern part of the country, mainly in the urban and tertiary health care facilities. The majority

of physicians (77.86 %) are located in southern regions, while a small percentage (22.14%) are in

the northern regions (Labiran et al., 2008, pp. 23-24). Lack of health worker motivation seems to

be prominent in Africa.

Alhassan et al. (2013) study concluded, based on 64 surveyed primary healthcare facilities,

that worker motivation was low because of the lack of financial incentives and career

development prospects. Furthermore, health workers in private and urban facilities are motivated

by their working conditions, more so than workers in public and rural facilities. It was found that

staff motivation levels with working conditions have a direct impact on quality care and patient

safety standards in health facilities. Based on the results of the authors' survey, the following

intervention areas were proposed:

- *Health managers in public health facilities should invest more in health infrastructure*
  and regular supply of drugs since this was a major source of de-motivation for workers
  in public facilities. Infrastructural investment should be improved in terms of regular
  supply of water, provision of modern medical equipment and upgrading of facility OPDs
  and consulting rooms. These infrastructural investments not only motivate health workers
  but are also important inputs in delivery of good quality health services needed to attain
  the health related MDGs.

- *Staff motivation markers as identified in this study should be incorporated into revised*
  NHIA accreditation modules and quality improvement plans for health facilities. The
  current accreditation tool is predominantly process oriented with minimal criteria on
  staff efforts towards quality improvement and patient safety. Criteria scores on staff level
  of motivation with intrinsic and extrinsic motivational factors could form part of the

accreditation process for health facilities. Facilities with poorly motivated staff could,

therefore, be denied full accreditation.

- *Performance-based remuneration systems should be implemented in private and public*

  health facilities to motivate workers based on quarterly (every three months)

  performance evaluation outcomes. The current yearly performance appraisals for staff in

  public health facilities in Ghana are done largely for promotions (Alhassan et al., 2013,

  p. 9).

A study done by Ojakka, Olango, & Jarvis (2014) investigated the factors that influence the

motivation and retention of health care workers at the primary healthcare facilities in three

different geographical areas in Kenya. Kenya and Nigeria face many similar struggles:

overcoming health care worker shortages, low healthcare worker retention, and a lack of

equitable distribution of human resources for health. In Kenya, all the regions had over 60%

shortages of health workers. The authors constructed a cross sectional cluster design of 59 health

care facilities, constructing a total of 404 patient interviews. Based on the results, the authors

concluded that "gender mainstreaming, development of appropriate retention schemes,

competitive compensation packages, strategies for career growth, [and] establishment of a model

HRH community" are possible ways to improve motivation and retention of health care workers

(Ojakka et al., 2014, pp. 1-8).

Approaches in Modern and Traditional Medicine

There is a connection between traditional and modern health systems that can help improve the PHC. Proponents for the traditional system often argue that modern methods, such as modern political processes and economic models are corrupt and do not supply the needed resources for proper health care. However, modern methods also allow preventative and curative measures at a higher rate than traditional methods (Falola & Heaton, 2006, p. 2). "African Traditional Medicine involves collecting, conserving, utilizing and the application of medicinal plants for the cure, prevention and promotion of physical and spiritual well-being of citizens" (Isola, 2013).

Traditional practitioners are often called "traditional healers" or "herbalists." The traditional healer is able to differentiate between different herbs and allocate the appropriate herbs for a specific aliment. The use of herbs and other substances for the treatment of diseases are analogous to analgesics used in orthodox medicine. Overall, herbalists are known to guard against diseases, alleviate sufferings, and cure people. This source of grass roots health care is especially prominent in villages where a large amount of Nigerians live (Isola, 2013, p. 320). The big difference between traditional and modern medicine is that the healing methods of herbalists sometimes involve the use of supernatural powers. As a result, traditional medicine cannot be scientifically investigated and is often classified under occultism. African traditional healers are therefore consulted not only for sickness and disabilities, but also for good luck, security of lives and property, and warding off evil, etc. (Isola, 2013, p. 321).

A study done by Isola (2013) examined the relevance of African traditional medicine in Health Care Delivery Services in Nigeria. The author interviewed 150 people, consisting of 50

traditional medicine practitioners, 50 orthodox medicine practitioners, and 50 patients, to get evidence on the relevance of traditional medicine in the country's current health system. From the data collected, the following conclusions were made: "1. African traditional medicine predated orthodox medicine in Nigeria. 2. Traditional medical care is strong in some areas where the orthodox medicine is not very effective. 3. There are problems associated with administration of traditional medical care such as issues of measurability of its drugs, dosage, preparation, documentation, preservation, potency and determination of the side effect. 4. if the shortcomings are rectified, then the African traditional medicine has a lot to offer in saving lives of African citizens and beyond the continent" (Isola, 2013, p. 319).

The shortcomings of traditional medicine must be rectified before it can be considered in the improvement of modern medicine in Nigeria. Many articles discussed in this paper so far, implicate that Nigeria already has the tools that it needs to improve health for its citizens with its current health system. These tools include existing state structures, traditional institutions, and increased community involvement (Falola & Heaton, 2006, p. 2). The remainder of the paper will focus on alternate approaches to modern medicine, specifically, community involvement, and the roles of faith-based organizations and non-profit organizations in increasing health care, and promoting health education/awareness.

In Nigeria, three million are estimated to be living with AIDS. The country has the third largest AIDS population in the world (after South Africa and India). Furthermore, the country has the second largest number of new HIV infections. In 2009, 220,000 lives were lost to AIDS. This is one factor why Nigeria's life expectancy is at 53 years old, versus the average global life expectancy of 70 years old. It is estimated that 19.3% of Nigeria's population is between 15-24

years old, and within that age group, approximately 4.1% are infected with HIV (the largest than any other age group). Young adults are the most vulnerable group because of their engagement of sexual activities at an alarmingly earlier age. As a result, the majority of HIV infections are related to poor sexual health behaviors (Amaugo, Papadopoulos, Ochieng, & Ali, 2014, para. 2).

Apart from the AIDS epidemic, Nigeria also suffers from poverty, underdevelopment, and soci-political feuds. As of 2004, the majority of Nigerians live on less than $1 per day. Nigeria's poor economy has made the country vulnerable to HIV/AIDS, not only because of the citizens' lack of access to a consistent health care, but also in terms of the government's incapability to effectively fight off the epidemic (Adeboye, 2006, p.14).

Increased Roles of Faith Based Organizations

Activism with Faith-Based Organization

Faith-Based Organizations (FBOS) in Nigeria are made up of non-profit religious bodies "whose activities and focus are underpinned by religious beliefs, which appeal to the faith of the individuals concerned and are not amenable to critical scientific rationalization" (Adeboye, 2006, p.18). The FBOS can be split into three distinct categories:

1. The Religious Congregation: Local grouping of believers (such as a church), or a body of traditional religious adherents.

2. The Religious Coordinating Body (RCB): Intermediary organization that coordinates and supports the denominations and other component congregations.

3. The Faith Based Non-Governmental Organization: An NGO (Non-Governmental

   Association) that is controlled by a religious congregation, but also receives external

   donor support and employs a full-time staff (Adeboye, 2006, p.18).

The Nigerian Pentecostal landscape originated in 1952, and by 2002, the church had a total

membership of about 700,000 people spread over 5,500 parishes. The church, once belonging

solely to the lower class that lived strict lifestyles, now attracted many people from the middle

and upper classes. Over time, the church had created an identity for itself as an organization

responsive to the soci-cultural society, and the scale of its activities and projects indicate that the

church has an abundant amount of resources at its disposal, to aid in the health of Nigerian

citizens; mainly combating the epidemic of HIV/AIDs, with its creation of the Redeemed Aids

Programme Action Committe (RAPAC) Establishment (Adeboye, 2006, p. 18).

Activities of RAPAC

RAPAC was established in 1999 and its first activity was organizing sensitization seminars

to create an awareness in the church about itself and its relevance to members' lives. The

emphasis of RAPAC was to educate people about HIV/AIDS because the majority of people at

the time strictly associated the disease with homosexuals, prostitutes, and the likes. The

organization's most effective campaign was to end stigmatization in the church by invoking the

love of Christ and appealing to members to demonstrate Christian virtues, such as, the "Good

Samaritan." After much success with the desentization seminars, RAPAC moved on to its other

objectives: support and care services, and prevention campaigns (Adeboye, 2006, p. 22).

Support and Care Services

RAPAC supported all individuals infected with AIDS via inter-personal counseling. Trained counselors were located in stations close to their main church body and pastors were trained to counsel individuals with HIV/AIDS in their parishes. The principles of RAPAC were to give the individuals hope and to allow them to come to terms with the disease, and teach them how to maintain a proper diet, health, and hygiene habits. Counseling encouraged infected individuals to take pragmatic steps, such as: breaking the news to their family, especially their spouses (if they were married), making wills and provision for their family in case of unfortunate circumstances; and seeking emotional support. Women generally suffered more than men emotionally with regaining society's acceptance. Lastly, RAPAC made home visitations with infected individuals to pray with them and offer biblical encouragement (Adeboye, 2006, p. 24).

Assessment of RAPAC's Activities

RAPAC has attempted to gain moral and spiritual authority to combat AIDS by emphasizing behavioral change, abstinence, faithfulness to one's spouse, and an understanding of the disease.   However, its success continues to be limited by several factors. Firstly, FBOs such as RAPAC are only capable of establishing effective health interventions, so long as they have the necessary support and resources to do so. Second, behavioral change based on biblical and Christian morality is a faulty subject manner. Many youth believe that the purpose of the church is to destroy their freedom and lessen their enjoyments. Thirdly, stigmatization will always be around associating HIV/AIDS with promiscuous behavior. HIV/AIDS counseling is often kept separate from church congregation matters; as a result, infected individuals do not speak about their conditions in church or to fellow-goers, which would be beneficial in passing

on awareness to non-infected members. Lastly, FBOs (mostly Pentecostal associations) must be

able to merge doctrines with biomedical requirements and other secular pragmatism (Adeboye,

2006, pp. 24-30).

Promotion of Health Education: HIV/AIDS Counseling

Sexual health, school-based, education is a method the government is using to implement

healthy sexual behaviors in adolescents. School-based education is predicted to be the best way

to combat AIDS for three reasons: (1) schools are a location where large members of youth can

be reached; (2) schools offer an established and controllable setting; (3) schools are usually

linked to local communities, thus allowing community involvement in interventions. The Global

Campaign for Education estimated that universal primary education alone could prevent 700,

000 new HIV infections globally, each year (Amaugo et al., 2014, para. 4). As a result of this

prediction, many school-based educational programs have been designing interventions to

improve sexual health behavior, in hopes of decreasing rates of HIV/AIDS among Nigerian

adolescents.

A research team from the University of Bedfordshire (in UK) did a systematic review of

school-based educational programs between January 2002 and May 2012 in Nigeria. The review

was taken in order to assess the efficacy of these educational programs. The data measured

sexual health outcomes among Nigerian students before and after a sexual health education

program was given. Overall, the data suggested positive outcomes from the educational

programs. These positive outcomes consisted of "increased knowledge, healthier attitudes and

safer sexual health behavior" (Amaugo et al., 2014, para. 25).

Chapter 4

Conclusion

The Primary Health Care of Nigeria still has a long way to go before it is fully able to meet the health demands of its citizens. Although the facilities in Lagos fair better than those in Kaduna and Bauchi, overall, the facilities are in poor condition, and most facilities lack taps with running water, electricity, or phones. Basic services for youth care are low, although the 15-24 year old population contract more HIV/AIDS than any other age group in Nigeria. There is also a lack of equipment for maternal and child services, and many basic drugs that can prevent and cure diseases are unavailable. Moreover, this paper cannot fail to recognize that the health services in Nigeria mirror Nigeria's political organization. The lack of legal distinction between the roles of the state and local government regarding healthcare are evident in the poor PHC system. Furthermore, soci-economic factors play a big role regarding the citizens who visit and take advantage of the PHC. PHC improvement is not only dependent on the quality of the system, but the amount of people it is able to effectively reach. Of course change will be difficult, but based on the findings of this study, increased budgetary allocation, implementation of new health policy options, increased community involvement, and proper health worker allocation, are all ways that can help improve Nigeria's PHC system.

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ACADEMIC VITA

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SUMMARY OF SKILLS

I am best known for my communication skills, mainly for my effective presentations of breaking down complex scenarios and/or problems. My second and third most mentioned skill sets would be my analytical research skills and my flexibility and adaptability in managing multiple priorities, respectively.

EDUCATION

The Pennsylvania State University, Abington, PA.

- Bachelor of Science; Biology Major

- Schreyer Honors College, Fall 2013-present

- Anticipated Date of Graduation, May 2015.

- Abington College Undergraduate Research Activities (ACURA)- first place winner, under the division of Science & Engineering, Spring 2014

- Undergraduate thesis on "Improving the Primary Healthcare of Nigeria," Fall 2013-present

- Semifinalist for *The Dialectics*, a scholarly research journal

- Nordstrom Scholarship winner for NJ State, 2011-present

- Dean's List, Fall 2011-present

- Abington Honors Program, Fall 2011-Spring 2013

- President's Freshman Award (for 4.0 GPA), Spring 2011

RESEARCH

ACURA (Abington College Undergraduate Research Activities): is a research fair for undergraduate students to present research they worked on with faculty from different majors. I was the first place winner across the curriculum for my study on the response of Imatinib Mesylate in Gastrointestinal Stromal Tumors at Fox Chase Cancer Center.

EXPERIENCE

Volunteer Research Assistant, Fox Chase Cancer Center: August 2013- May 2014

- Develop Research Protocol
- Preparation of tissues, cell cultures, etc. for testing
- Modify, test, verify and analyze research data
- Record results of experiment
- Coordinate clinical trials
- Abstract data from patient chart
- Analyze and record test data to issue reports that use charts, graphs, or narratives.
- Prepare standard volumetric solutions or reagents to be combined with samples, following standardized formulas or experimental procedures.
- Perform medical research to further control or cure disease.

Customer Service Specialist, JcPenney: June 2011- present

- Recognized for Exceptional Customer Service
- Provide training coaching and feedback to new associates.
- Watch for and recognize security risks and thefts; ability to handle these situations.
- Inventory stock and requisition new stock.

EXTRACURRICULAR ACTIVITIES AND COMMUNITY SERVICE

The Pennsylvania State University, Abington, PA

Editor-in-chief and Poetry Editor of *The Abington Review*, 2011-present
- Edit and critique works of fiction, poetry, nonfiction, essays, and digital art submitted by Penn State Abington students to the literary magazine.

Lion Ambassador, 2011-present
- Give tours of the school campus and host school-related events.
Instill Penn State pride in prospective students, current students and alumni.

Organizing for Action Fellowship Program, spring 2014- present
- Learn practices in area of community organizing, media relations, and grassroots fundraising.