ALLOCATION OF PUBLIC DOMESTIC RESOURCES FOR HEALTH IN NIGERIA

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Is Primary Health Care not forgotten in the allocation of domestic health resources?

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By

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Declaration:

Where other people's work has been used (from either a printed source, internet or any other source), this has been carefully acknowledged and referenced in accordance with departmental requirements.
The thesis **"Allocation of Public Domestic Resources for Health in Nigeria-*Is Primary Health Care not forgotten in the allocation of domestic health resources?*"** is my own work.

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Table of Contents

List of Tables

List of Figures

Abbreviations

Acronyms	Meaning
AIDS	Acquired Immune Deficiency Syndorme
AJSMS	American Journal of Social and Management Sciecne
CHC	Comprehensive Health Center
CHE	Current Health Expenditure
CHECOD	Center for Health Economic and Development
CHEW	Community Health Worker
CHO	Community Health Officer
DFID	Department for International Development
DHPRS	Department of Health Planning Research and Statistic
DHS	Demographic Health Survey
DPT	Diphtheria Pertussis and Tetanus
FCT	Federal Capital Territory
FEC	Federal Executive Council
FGN	Federal Government of Nigeria
FMC	Federal Medical Center
FMOH	Federal Ministry of Health
GAVI	Global Alliance for Vaccines and Immunizations
GDP	Gross Domestic Product
GGHED	General Government Expenditure on Health
HIV	Human Immuno-deficiency Virus
HRH	Human Resources for Health
HTA	Health Technology Assessment
IMF	International Monetary Fund
JOHESU	Joint Health Sector Union
LGA	Local Government Area
LMIC	Low and Middle Income Countries
MCDA	Multi-Criteria Decision Analysis
MICS	Multiple Cluster Indicator Survey
MMR	Maternal Mortality Ratio
NBHSS	National Basic Health Service Scheme
NBS	National Bureau of Statistics
NG	Nigeria
NHA	National Health Account
NMA	Nigeria Medical Association
NPHCDA	National Primary Health Care Development Agency

OOP	Out of Pocket Expenditure
PHC	Primary Health Care
SPHCDA	State Primary Health Care Development agency
SRPMCH	Subsidy Reinvestment Programme on Maternal and Child Health
TB	Tuberclosis
UHC	Universal Health Coverage
UK	United Kingdom
UNICEF	United Nations International Children Fund
USA	United States of America
USD	United States Dollar
VAT	Value Added Tax
WB	World Bank
WDI	World Development Indicator
WHO	World Health Organisation

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I Want to first and foremost acknowledge God's impact on my life. I have lacked words of appreciation because his love towards me has been abundant.

To my family. Thank you for the unwavering support.

I want to also use this opportunity to acknowledge and appreciate the Government of The Netherlands for the Orange Knowledge Programme scholarship scheme. This has given myself and a lot other young professionals from resource poor settings the opportunity to attain quality education and achieve human capacity development.

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0. Abstract

An equitable allocation of resources for health is an important prerequisite for achieving Universal Health Coverage (UHC). In Nigeria, however, the allocation of health resources appears to be haphazard. This study aims to analyze the current policies on health, current process of resource allocation and to provide operational recommendations to the government.

This study is descriptive and analytical. Relevant literature was reviewed, and available recent information on domestic resource allocation (finances, HRH) and on key PHC / public health indicators in 12 selected States was assessed. Key informants were consulted to contribute to the interpretation of the observations and results.

Following the logic of the analytical framework, the key results are as follows:

(i) Governance: key aspects of governance in the health sector have been under-achieving with compelling evidence for corruption.

(ii) Administration: the health sector is highly fragmented, with many vertical programmes with own management procedures.

(iii) Stakeholder Engagement: many conflicts between specific interest groups, resulting in a fragmented and divided health workforce.

(iv) Allocation of financial and human resources:

- Resource allocation criteria are not equitable
- Poorer States tend to use a larger share of the public budget for health, but due to lower nominal budgets their performance in terms of public health 'outcome' is generally worse.
- Overall, current health expenditure and government health expenditure in Nigeria are very low.
- Distribution of human resources for health is skewed and heavily depends on the geographic zones (rural vs. urban; North vs. South).

(v) Decision making: In principle, the national and state councils are the main decision makers on health policies, strategies and resources allocation. However, in practice decision making is often influenced by special interest groups, such as national and local politicians.

Overall, the emerging picture of health resource allocation in Nigeria is showing a fragmented health sector. The allocation of health resources is not pro-poor. In this thesis, concrete recommendations are made to rationalize resource allocation, to improve the quality of data, to streamline reporting across States, and to enhance the national information and research capacity. More operational research is needed to expand the knowledge base for resource allocation.

Key Words: Nigeria, allocation, resources, health, priority.
Words count: 348

1. Introduction

Over the years investments made by the federal and state governments in the health sector have not yielded desired results. The country is still plagued with worsening public health outcomes. Currently one of the worst performing countries in terms of maternal and child health, with a population of more than 70% living below the poverty line, great inequality exist in accessing services (1).

The Primary Health Care system which is aimed at providing essential health services for the larger population by promoting equity has largely underperformed due to maladministration and lack of adequate funding. (2) (3)(4)(5)

My name is Zachariah ThankGod Kums, a research officer working in the Research Monitoring and Evaluation Department of the National Agency for the Control of AIDS, Nigeria. I have 7 years' experience working in the HIV response. Over the years, I have witnessed how resources are wasted in the country and how the public suffer the repercussion health wise. I strongly belief in my country and am fully aware there must be a change in how resources are utilized for health in the country to achieve better health outcomes. With the choice of this topic, I hope to find and provide answers.

2. Background

This chapter provides general information on demographics in Nigeria, and its administrative division. It also provides macro-economic data and socio-economic issues around health and health care.

2.1. Demographics.

Nigeria is the most populous country in Africa occupying a land mass of 92,3678 square kilometers (figure 1). It shares a boundary with Benin Republic to the west, Chad and Niger Republic to the north and Cameroon to the east. It is situated along the tropics between the longitudes $2^0$2' and $14^0$30'E and latitudes of $4^0$1, and $13^0$9N (6). As of 2017 It is estimated that the country has a population of 190,886,304 with a growth rate estimated at 2.56% yearly (7). The demographics in the country shows that the majority of the population is young with about 45% of the population under the age of 15 and 20% under the age of 5. Women who are within the child bearing age make up 20% of the population (6).

Figure 1. Map of Nigeria and the 36 states

2.2. Health Status, health services, and health financing.

The 2018 Demographic and Health Survey estimated a maternal mortality ratio of 512/100,000 live births and adult mortality ratio of 3.18/100,000 population (6). The trend of under 5 mortality has decreased over time with a gradual change from 157/1000 livebirths in 2008 to 132/1000 livebirths in 2018. There was also a decrease in infant mortality from 57/1000 live births in 2018 to 67/1000 live births in 2018 while there was no noticeable change in the neonatal mortality over the same duration of time (8)(1).

According to the 2018 World Development Indicators (WDI) by the World BANK (WB), Nigeria is one of the poorest performing countries even among the low- and middle-income countries (LMICs) in some Universal Health Coverage (UHC) tracer indicators. The WDI estimated that among women of reproductive age (15-49) the contraceptive prevalence by any method was 16.6%, the percentage of births attended by skill health staff was 43%, and the percentage of children age 12-23 months who were immunized (DPT) was 57%. Further to this was the percentage coverage of people living with HIV who were on antiretroviral therapy estimated to be 53.0% and a tuberculosis case detection rate of merely 24% (9).

With the GDP of the country estimated at about US$2,230 per capita in 2019 and Gini coefficient of 43.7 recently updated in 2019, it is still ranked among the poorest nations in the world with about 70% of the entire population living below the poverty threshold of US$1 every day (6)(7)(10). Poverty is endemic in the rural communities which is composed of about 52.2% of the entire population restricting access to quality health care, adequate nutrition and other essential social needs (6). As of 2017, the Current Health Expenditure (CHE) per capita was USD$74 with public spending on health as a percentage of the Gross Domestic Product (GDP) estimated at 3.8%. The Domestic Public Health Expenditure (GGHED) as a percentage of the Current Health Expenditure was 14.2% while GGHED as a percentage of GDP was 0.5%. The health financing mechanism in the country shows a high reliance on out of pocket payments with 77.2% of the CHE being out of pocket. Furthermore, the lack of commitment of the country towards implementing the Abuja declaration is proven by the global health expenditure database estimation of GGHED as a percentage of the General Government Expenditure to be 4.6% as of 2017 (7).

2.3. The Nigerian health system

The Nigerian health system is structured into three levels of service delivery. The first – Federal - level is governed by the federal government. The Federal Ministry of Health (FMOH) is in charge of the management and implementation of service delivery in the tertiary facilities[1]. It is also responsible for developing nationwide policies, for national health strategy development, and for regulating and coordinating the national health sector. The second – State - level is governed by the State governments. The State Ministries of Health (SMOH) are in charge of service delivery in the secondary facilities[2]. With some significant level of autonomy, the states are also developing policies and strategies at the subnational levels to

[1] They are facilities that provide specific disease and specialized services. They include: Federal Medical Centers and teaching hospitals.

[2] They provide specialized inpatient and outpatient services to patients and serve as referral facilities for the primary health care centers. They include the general hospitals and states specialist hospitals

improve their health systems. The third level of service delivery is 'Primary Health Care' (PHC)[3], which is governed and managed by the local governments (LG) (11)(12).

The categories of health workers in the country include: doctors, midwives, laboratory staff, public health nurses, pharmacists, and community health workers. The national distribution of doctors and nurses per 100,000 population is estimated at 12 and 21 respectively (13).

The distribution of health facilities in the country shows that Primary Health Care centers are the most visible and easily accessible. PHC centers make up 88.2% of health facilities in Nigeria. The secondary facilities and tertiary facilities make up 11.6% and 0.2% respectively (14).

2.4. Inequalities in services uptake.

Significant inequalities exist in the way different groups access health services in the country. Service delivery in the northern part of Nigeria is generally poor compared to the southern region. Women and children who live in the urban areas are about 2 times more likely to access quality health services than their rural counterparts. Women who have some form of education are 5 and 6 times more likely to give birth in a health facility and immunized their children respectively compared to women with no form of education. However, the most notable inequality exists in how the higher socio-economic class and the lower socio-economic class access services with the higher socio-economic class about 10 times more likely to access services (vaccination and skill birth attendance) than the lower socio-economic class.

3. Problem Statement

This chapter provides more background to the context of the thesis and its objectives. The situation analysis focuses on important health financing aspects, while the section on 'justification' explains why more research is needed to clarify issues around health resources allocation in the country.

3.1. Situation analysis

The WHO assessment of health systems ranked the overall performance and quality of the Nigerian health system 187th out of its 190 member states (15). There have been many concerns about the quality of health care services in the country over the years. The large proportion spent on service provider's administration and financing suggests that there is a prioritization of administration over service delivery (2). An inventory of medical equipment in 2006 showed that only 25% of the health facilities have about half of the 'minimum package' of equipment, whereas 40% had less than a quarter of the equipment needed (16).

[3] The primary health care centers are the facilities through which the communities access Primary Health Care. They include health clinics, health posts and the comprehensive health centers.

The introduction of the National Health Insurance Scheme (NHIS) in 1999 for social and financial risk protection was meant to reduce the cost of health care by providing equitable access to basic health services for all Nigerians. However, the concept has not really benefitted the majority of the population. It covers just 10% of the Nigerian Population, leaving behind the most vulnerable groups, including people living with disabilities, elderly, displaced, unemployed, retirees, which often cannot afford to use the health care services (17)(18).

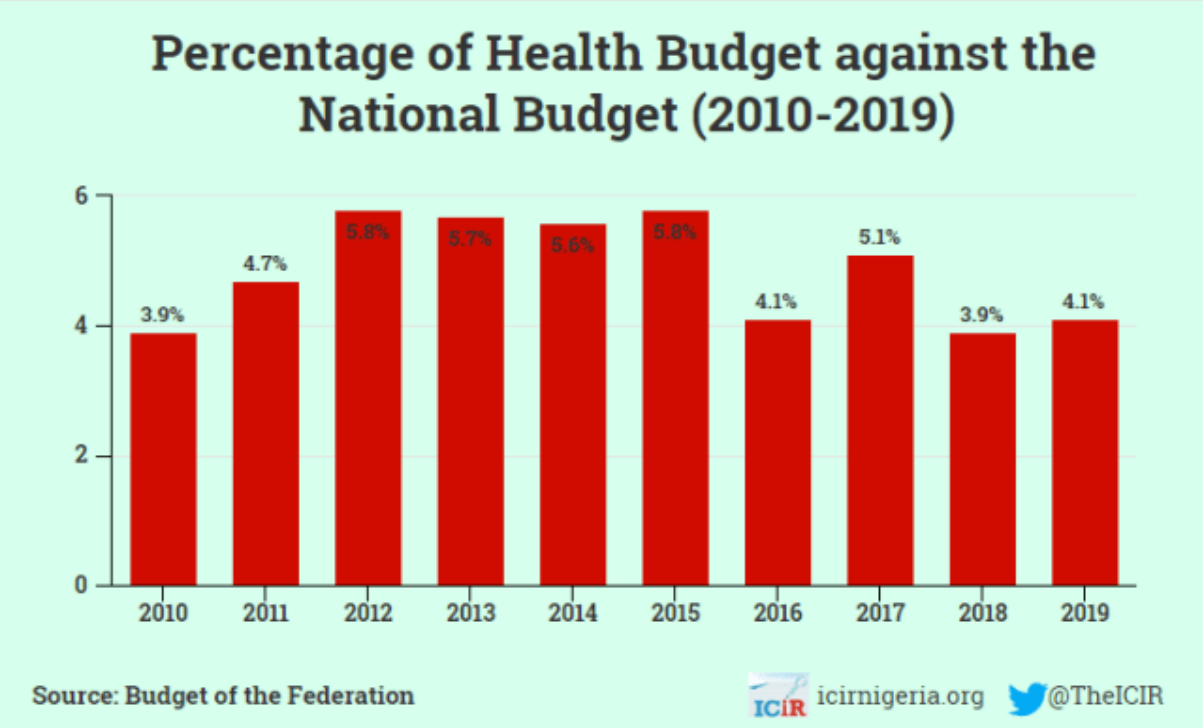
Despite distinguishing children and pregnant women as the only beneficiaries of free health policy in states like Kano, Kaduna and Niger, under-5 mortality is still high due to poor basic health services due to scarcity of resources (6). Even with the high maternal mortality ratio (MMR) in Nigeria as recorded in the 2018 DHS report (512 per 100,000 live births) (6), children and pregnant women are still charged fees as under the table payments when accessing health services despite the Nigerian governments' declaration of free health care for children under-5 and pregnant women in 2015 (1).

The 2016 National Health Accounts (NHA) survey shows that even though the country delegates more of the delivery of health services to the States and Local Governments, most of the expenditure takes place at the central level (67% percent federal, 26% states and 5% local government) (2). Due to their autonomy, states are not accountable to the federal government on allocation and spending. There is no legal mandate with regard to a minimum spending on health. As such, disaggregated subnational data on health spending is not readily available (2).

Most of the Primary Health Care (PHC) facilities that are supposed to meet the need of the larger population of the country - the poor and rural dwellers - are often in poor and dilapidated state due to lack of financial resources, basic equipment, and drugs with shortage of health workers. These health facilities receive little or no operating budget, reflecting inadequate resource allocation which undermines the delivery of services, negatively impacting health outcomes (2) (3)(17)(5).

Even after 18 years, the Nigeria government has not been able to meet the target set by the 2001 Abuja declaration. The 2019 budget contains a proposal of N365.7 billion (US$ 10.2 million) for the health sector which represents just 4.1% of the national budget as against the 15% as recommended by the convention. A closer look at the health budget for the country over the past 10 years shows that allocations for the health sector have remained well below the 15% benchmark (19). This poor investment in the health sector has contributed to the poor state of the health system in the country (2).

Figure 2. Allocation to health as a percentage of total government expenditure (19)



3.2. Justification for assessing the current allocation of national health resources

Evidence has shown that the inequitable allocation of scarce resources for health affects the way different socio-economic groups in the society access health services (20). A study in China shows that due to the significant inequality in the allocation of resources for health, the higher socio-economic class are more likely to utilize hospitals that are well funded for outpatient care. Whereas the poorer population are more likely to use poorly- funded primary care facilities for inpatient care, creating the risk of a dichotomy in the way the higher socio economic class and the lower socio economic class access health services (21). Evidence from a study conducted in eight low- and middle-income countries (Burkina Faso, Kyrgyzstan, Paraguay, South Africa, Thailand, Guatemala, Zambia and Paraguay) shows that inequitable allocation of resources for health has a negative impact on the lower socio-economic class assessing basic health services. Populations who are wealthier were found to be more likely to receive health care than the lower socio-economic class (22).

The concomitant effect of poor allocation of resources for health in Nigeria is that achieving Universal Health Coverage is compromised (23). With an estimated population of 182 million, 70 percent of the population live below the poverty line of $1.90 a day. This vulnerable population is left exposed to the impoverishing and catastrophic effect of high out of pocket (OOP) expenditures (24). Hence, the result the country is often associated with high maternal and child mortality amongst other health challenges as a result of the inability of these vulnerable groups to afford basic health care (24)(6)(23).

Despite the low funding of the health sector in Nigeria, evidence has shown that the equitable allocation of resources can improve the effectiveness of the system and improve service

utilization. The use of need-based resource allocation in Low- and Middle Income Countries (LMIC) has proven to be a success in improving health outcomes even where resources are scarce (25). Corruption in the health sector is a concern for LMICs such as Nigeria where resources for health are already scarce. The deplorable state of the health sector despite the spending on health by the government has raised concerns on the priority of the government, allocation and the efficient use of these resources. Even though there are evidences on the inefficiencies in the utilization of resources for health in the country, there is limited knowledge on how policy makers and service providers ensure equitable allocation of resources meaning health care priority could be sub-optimal for the most populous black nation. To achieve Universal Health Coverage, it is imperative that these processes are studied to provide evidences that will strengthen priority setting for health in the country.

In this thesis an attempt is made to highlight some of the key issues in (mis)allocation of resources for health in Nigeria. Naturally, more research is needed to complete this picture. In the section on recommendations, this is also addressed.

4. Overall Objective, Research questions, and Specific research objectives

This short chapter presents the overall objective of this study, as well as the research questions linked with that objective, and the specific study objectives.

4.1. Overall study objective

The overall objective for this study is to have more insight into the effectiveness and mechanisms of the process of allocation of public domestic resources for health, in line with the current needs in Nigeria. The study also aims to provide general and specific recommendations for the key stakeholders, to contribute to achieving Universal Health Coverage (UHC) in Nigeria.

4.2. Research questions

In line with the overall objective, the research questions for this study were formulated as follows:

- By whom are decisions about resource allocation made, implemented and evaluated?
- How are decisions on resource allocation for health being made?
- What are the criteria currently being used for the allocation of resources?
- What are feasible options that can promote rational resource allocation in health?

4.3. Specific research objectives

- The current financing policies on health expenditure and the current domestic flow of funds are adequately described.

- The current process of resource allocation for health in Nigeria is adequately assessed and described; and,
- All key stakeholders in health resources allocation are provided with relevant generic and operational recommendations to promote the equitable allocation of domestic and external resources for health, with the aim of enhancing UHC. Recommendations will also include suggestions for further operational research on health resources allocation in Nigeria.

5. Methodology

5.1 Literature Review

In this study, there was a literature review of peer reviewed articles, policy documents, reports of Ministry of Health and other relevant Ministries, Departments and Agencies (grey literature). Additionally, some papers that were not peer reviewed were used when the information was deemed to be important. Also, relevant websites of key actors - government agencies, States, etc. - where consulted to get more information on the topics for this thesis. All documents utilized in this study were in English and ranged from the year 2000 until date with few exceptions in cases where the documents/articles contain information that were indispensable. Also, the 'snow-balling approach' [4] was applied at every given opportunity

5.2 Sample considerations for the study

Out of the all 36 states of the federation, an illustrative sample of 12 states was taken to ensure that the analysis of the available information would be 'doable' within the framework of this thesis study. Two states were selected from each of the six geopolitical zones, i.e.

(i) North West,
(ii) North Central,
(iii) North East,
(iv) South West,
(v) South South, and,
(vi) South East.

The criteria for selection of the states under study were:

- Average performance on some key public health indicators namely; neonatal mortality, pentavalent vaccine coverage and tuberculosis case detection rate; and,
- The availability of a budget with defined allocation to health and primary health care. This include funds allocated to curative, preventive and other forms of health services as defined by each budget.

In each of the six geopolitical zones, one State was selected with relatively good performance on the selected public health indicators and another State with poorer performance. When

[4] An approach that utilizes a method of sourcing for information from new literature that was referenced from a previously sourced literature

states were chosen according to their performance on the selected indicators, priority was then given to states with clear budget lines for health and primary health care.

The following table (table 1) presents the selected States by geopolitical zone, as well as their (relative) public health performance (see below – selection criteria):

Table 1. Selected States by geopolitical zone

Geopolitical zone	***Selected State***	***Public Health 'performance'***
North-West	Kwara	+
	Niger	-
North-Central	Adamawa	+
	Yobe	-
North-East	Kano	+
	Jigawa	-
South-West	Anambra	+
	Abia	-
South-South	Delta	+
	Cross River	-
South-East	Lagos	+
	Ekiti	-

5.3. Core health 'input' and health 'output'/ 'outcome' data.

The Federal Government's budgetary allocation for health, as well as the States' budgetary allocation for health / primary health care formed the basis for analysis. Available data for the last three years was used. Data on Human Resources for Health (HRH) was also included in the analysis. The data on allocation for health was computed by collating information on budget lines for both recurrent and capital expenditures of all health institutions in the states. The data on allocation for Primary Health Care[5] in this study was itemized from the funds state governments allocate for the development of primary health care through the state's Primary Health Care Development Agencies (PHCDA).

Data on per capita allocation to health and primary health by state was computed using the 2016 population estimation by the National Bureau of statistics (NBS). The United Nations World Population Prospects (WPP) growth rate estimation for Nigeria which were 2.64%, 2.62%, 2.60%, and 2.58% for 2017, 2018, 2019, and 2020 respectively, were used to project the population of the country for the years 2017, 2018, 2019, and 2020 respectively (26)(27).

[5] Primary Health Care in this study is according to the WHO definition which means "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 which the county can afford to maintain at every state of their development in the spirit of self reliance and self determination(66).

Qualitative information on mechanisms for resources allocation was obtained through semi-structured interviews with key informants (see annex table 13). This information was used to feed the discussion on the interpretation of the results of the quantitative analyses on health resources allocation.

To get an adequate picture on the 'outputs' (vaccination status; TB detection rate) and health 'outcomes' (we used the neonatal mortality rate), was made from survey data (DHS, others) and routine data (see annex table 11 and 12).

5.4 Literature Search procedures

Search engines such as Google, Google Scholar, VU library and databases such as PubMed, the Cochrane Library and the WHO databases were used in sourcing for articles and relevant documents that were used in this study. A 'topdown' approach was utilized in the search of documents. The *first level search* used the following key words: "health", "allocation", "priority setting", and "decision making", so as to get relevant articles without restriction to countries or geographic areas. The *second level* was narrowed down to Africa and Subsaharan Africa using similar key terms mentioned above. This time the search included the words "Africa" and "Sub-saharan Africa". The *third level of search* was then narrowed down to Nigeria (including subnational levels); typical search terms included: "Nigeria", "Kwara state", "Adamawa state", "Niger state", "Yobe state", "Kano state", "Jigawa state", "Anambra state", "Abia state", "Delta state", "Cross river state", "Lagos state" and "Ekiti states".

Overall, literature search terms included: "Nigeria" "Health financing", "Universal Health Coverage", "UHC" "OOP" "Out of Pocket", "tax", "donor fund", "social Insurance" "pooled funds", unpooled funds", "private sector", "Public sector", "health sector", "allocation", "misallocation", "spend" "government expenditure", "efficiency", "public health indicators", "PHC", "secondary institutions", "primary institutions", "effectiveness", "need based allocation", "federal government", "state government", "Local government", "staff performance", "governance", "administration", "practice", "structure", "stakeholder engagement", "resources", "decision making", "implementation" .

Boolean operators were used to combine these terms and the snow balling approach was applied.

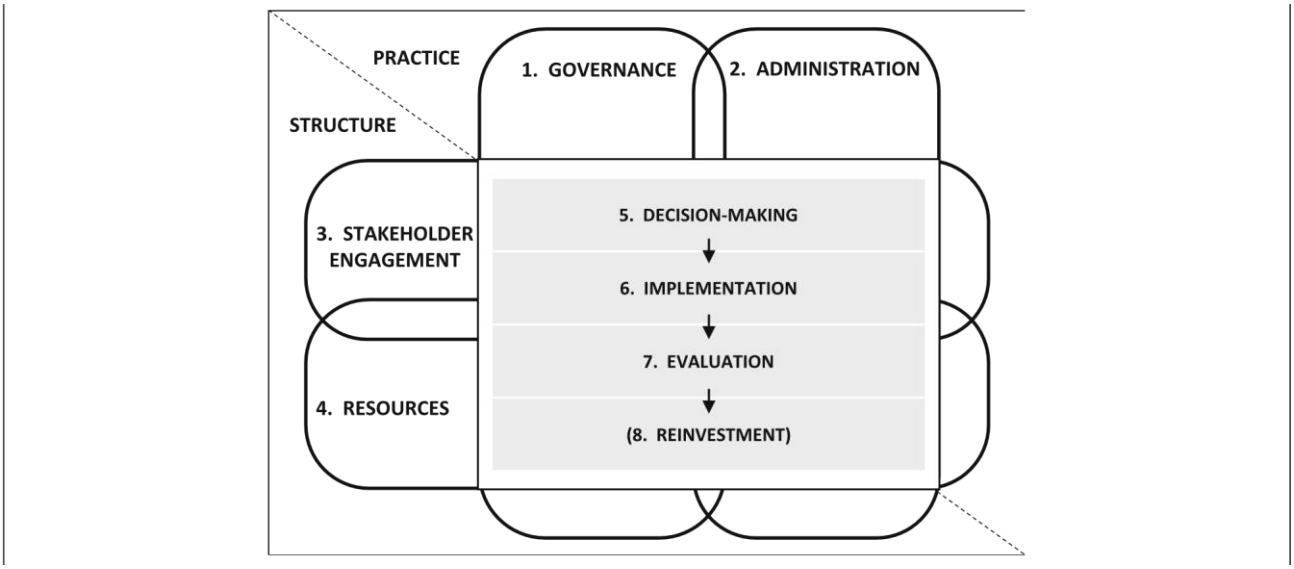
5.5 Analytical Framework

Figure 3 below shows the framework adapted for this study. The framework was used by Claire et al., in determining the effective allocation of health resources (28). In this study, the framework was used extensively to structure and critically analyze findings and results from this study. The conclusion and recommendation section of the study will also be guided by the analytical framework.

The structure of the framework shows the sequential interaction between 8 key components that are essential in the allocation of resources. A Governance and Administration which in practice is the component which provide direction, oversight, control, and executing projects. Stakeholder engagement to ensure that decision making is based on the holistic view of a

wide perspective. The presence of resources as a component ensures the delivery of projects. When decisions are made, they are implemented, evaluated and sometimes there is reinvestment.

Figure 3. Framework for Allocation of Resources (28)



For the purpose of this study, the first five components were adapted, this include: governance, administration, stakeholder engagement, resources, and, decision making. This was because the selected components were the most useful in addressing the objectives of this study.

5.6. Study Methodology limitations

Even though much use was made of peer-reviewed articles on quantitative health resources allocation in Nigeria, the end-result could have perhaps been better if more qualitative information on health resources allocation, including processes of formal and informal processes of allocation, could have been gathered through the use of more grey literature and of more formal and informal interviews of key informants. This shows that there are ample opportunities to expand the operational health systems research on the issue of health resources allocation. The author feels that the formulated objectives and research questions are most relevant for any subsequent research attempts. An attempt was made to address this issue of further research in the chapter on recommendations below.

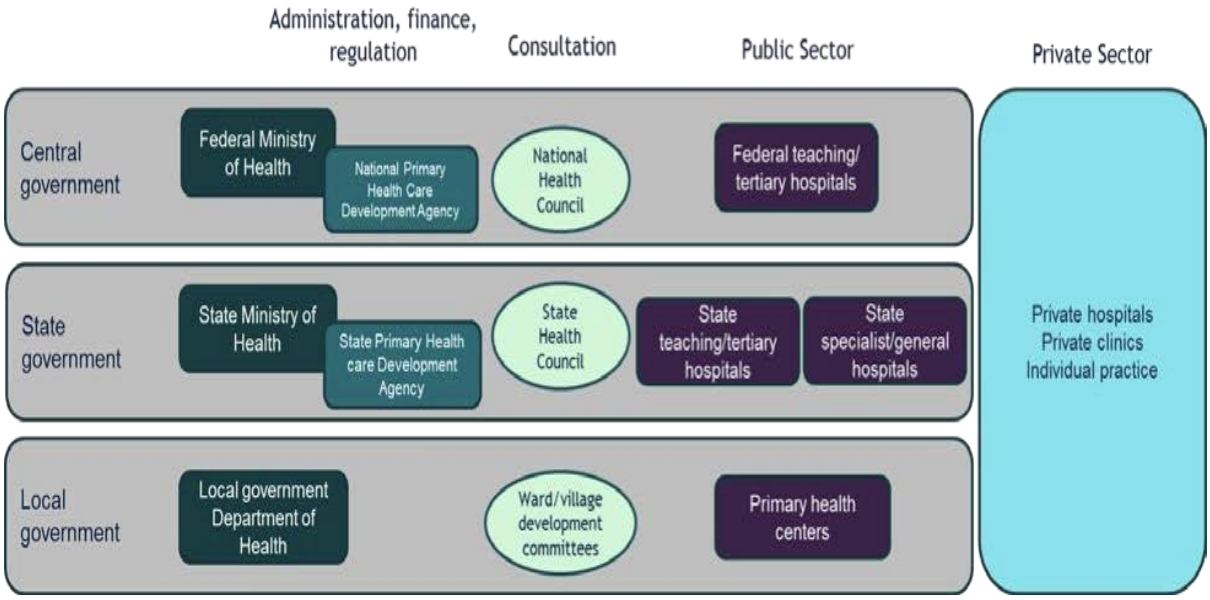
6. Study Findings/Results

This section of the thesis presents the findings of this work, structured according to the components of the analytical framework presented above. The first two sections in this chapter address the governance and administration of the health system. The next sections address stakeholder engagement, resources and decision making.

6.1 Health Governance

The Health Governance structure in Nigeria operates along three 'tiers': Federal, States and Local Government Areas (LGAs). The Federal level is governed by an elected president, the Federal Executive Council (FEC) which is based on appointments made by the president and the National House of Assembly which is the highest law making body in the country. This health governance structure is enshrined in the constitution. In the States, the Executive Governor is duly elected, as are the Executive Council and the State House of Assembly. The latter is able to make laws. The LGAs (774) are governed by an elected Executive Chairman and legislative council members elected at the ward levels. The LGAs are divided into wards; these are the 'lowest' political structures in the country (figure 4).

Figure 4. Governance structure of health service delivery in Nigeria (2)



The three tiers of the health service delivery system - tertiary, secondary and primary - are managed by the Federal State, States, and LGA's respectively. Each tier has substantial autonomy in the allocation and utilization of resources. However, even though the National health Policy (and lately the National health bill) assigned responsibilities and functions to these tiers, they are not very clearly stated in the National Health Policy or the National Constitution. The National and States' health council are the major consultative policy making bodies for all health-related matters at the national and state levels. The local levels have the

ward development committees (WDC) set up by the NPHCDA in the year 2000 which serve as a model promoting community participation (figure 4 and 5).

Through the Federal Ministry of Health (FMoH) and its parastatal National Primary Health care development Agency (NPHCDA), the Federal Government of Nigeria is in charge of developing policies, sectoral planning, regulating and coordinating the health sector. It also funds the referrals and special packages in the tertiary facilities and the Federal Medical Centers (FMCs) (2). The NPHCDA is an agency that coordinates and provides technical and programmatic assistance to states, LGAs and other stakeholders in the monitoring, planning and functioning of the services being offered by the PHCs in the country (29).

At the State level (secondary level), the States - through the State Ministries of Health (SMOH) - are responsible for overseeing the funding and provision of curative services and other medical specialties in the states-owned general hospitals and states specialist hospitals (30). PHC facilities refer to the secondary level facilities. The SMOH also builds the capacity of the LGA health departments. There is a PHC board in each State which comprises a board management team and a state level governing body. The governing body is made up of individuals who represent the interest of their communities and also their political, professional and official interest. The PHC board is required to routinely meet to ensure the smooth delivery of PHC services.

The primary level (LGA) which is the 'lowest' tier of health service delivery and the entry point of the health system, are the Primary health care centers[6] consisting of health clinics and posts, comprehensive health centers delivering basic primary care services, preventive, promotive, curative and rehabilitative services. The LGAs are in charge of the funding the management of this level of care (figure 4). Each tier of government outlines its priorities and executes them with minimal intervention from other tiers (13).

The main components of governance in the health system are policies and procedures, oversights, accountability and transparency, and improving the performance of systems and processes (…) (28).

However, a critical analysis of evidence suggests that these key aspects of governance in the health sector have been under-achieving. According to a 2019 report of Transparency International, the global coalition against corruption, Nigeria is ranked as one of the most corrupt countries in the world (31). This has affected different aspects of governance in the country including the health sector. Corruption has affected the health sector in diverse ways making some health facilities ineffective and even the scarce resources sustaining the system ending up being wasted. Corruption in the health sector is prevalent because of the lack of commitment to the rule of law including lack of trust and transparency. This is accompanied by a system with weak leadership and substandard mechanisms for accountability. (32). Corruption occurs within different stakeholders in the health sector, ranging from junior to senior cadre staff, health workers such as doctors, laboratory attendance, nurses, pharmacist

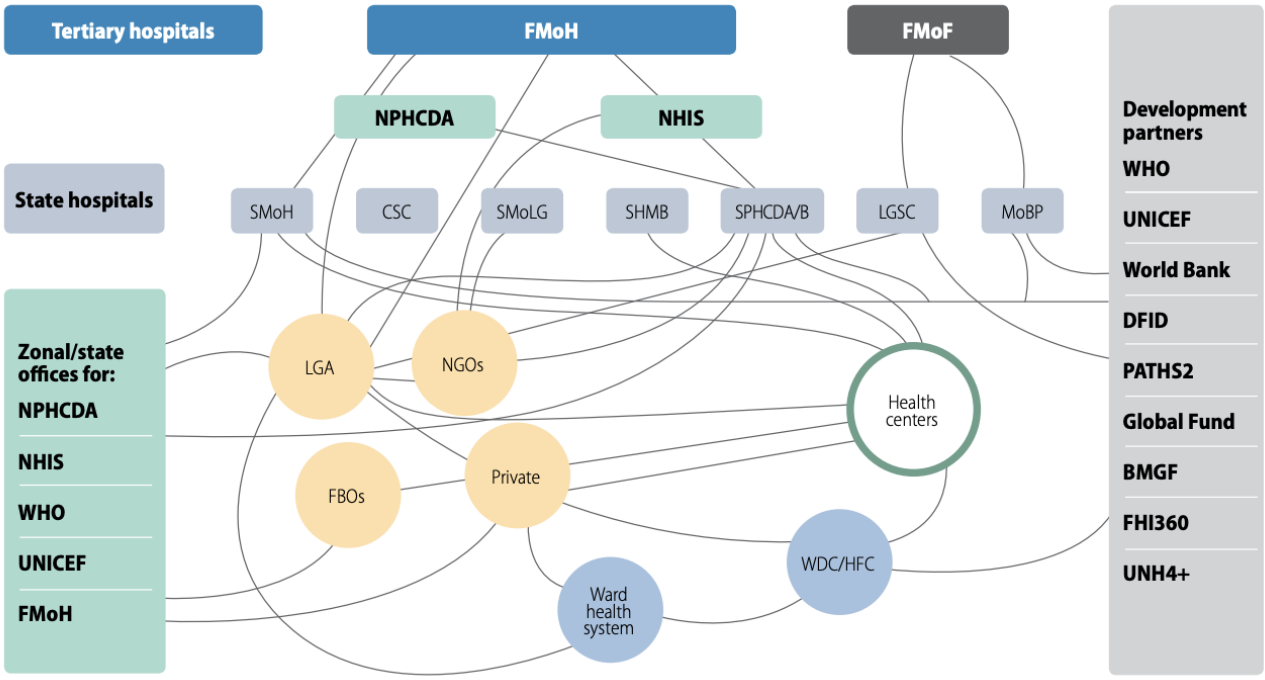
[6] The Primary health care centers are the facilities through which the communities access Primary Health Care. They include health clinics, health posts and the comprehensive health centers.

and even political actors such as the commissioners for health, ministers of health and heads of health related agencies (32).

An audit report by GAVI (the international vaccine coalition which ensures funding for Expanded Programmes of Immunization (EPI) in lower income countries) assessed the expenditure for the procurement of essential PHC / EPI products by the Federal Ministry of Health and the National Primary Health Care Development Agency during 2011 -2013. This report showed that US$2.2 million was wasted and as such, the Nigerian government had to make a refund of the said amount (33).

It is estimated that when corruption increases , the vaccination coverage levels may well drop accordingly (34). This – not surprisingly, perhaps - implies that a reduction in corruption can positively impact on health outcomes. Another critical aspect of this corruption problem is that allocation of resources may become less prudent and that potential misallocation and wastages of funds are more likely.

Figure 5. Organization of primary health care delivery (34).



Key: FMoH, Federal Ministry of Health; FMoF, Federal Ministry of Finance; NPHCDA, National Primary Health Care Development Agency; NHIS, National Health Insurance Scheme; SMoH, State Ministries of Health; CSC, Civil Service Commission; SMoLG, Ministries of Local Government Affairs; SHMB, State Hospitals Management Board; SPHCDA/B, State Primary Health Care Development Agency/Board; LGSC, Local Government Service Commission; MoBP, Ministry of Budget and Planning; WHO, World Health Organization; UNICEF, United Nations Children's Fund; LGA, local government area; NGOs, nongovernmental organizations; FBOs, faith-based organizations; WDC/HFC, Ward Development Committee/Health Facility Committee; DFID, Department for International Development; PATHS2, Partnership for Transforming Health Systems phase II; BMGF, Bill & Melinda Gate Foundation; FHI360, Family Health International 360; UNH4+, United Nations Health 4+

6.2 Administration

The main elements of administration are: coordination, collaboration, management of relationships, planning, and communication. Findings from this study show that there is no proper coordination of the sector by the governing authorities. The presence of well-funded special governmental and non-governmental agencies, as well as the well-funded single-

disease vertical programmes increases the fragmentation of the health system (34) (figure 4). This fragmentation is an obstacle for the formulation and implementation of nationwide strategies and calls for action (see below – recommendations).

An assessment of the capacity of some key administrative institutions involved in the budgeting and planning of the health sector in the country shows that Department of Health Research and Statistics (DHPRS) which is a parastatal under the Federal Ministry of Health (FMOH) lacks the capacity required to carry out its responsibilities (35). With the organization struggling to have sustainable funding from the FMOH, the staff lacks the basic tools and resources required to carry out their duty efficiently and effectively (35). Apparently, the system's capacity and infrastructure within administrative planning bodies is problematic, which could hinder an adequate allocation of health resources at all governance levels and could also hinder proper health policy and strategy development.

6.3 Stakeholder Engagement

Proper coordination and striving engagement of stakeholders in the Nigerian health sector has remained a challenge over the years (20). The tension that exists between different group professionals in the health workforce has taken a new dimension in recent times (Table 2). Frequent conflict, discord and lack of trust is now emerging among the different professional groups in the sector (36). There are allegations by other professionals that the health sector in the country is set up in a fashion that favours only the doctors (37). Other professionals have formed an alliance called the Joint Health Sector Union (JOHESU) due to the claimed supremacy of doctors over the years (37). This has made the workforce fragmented, critically affecting the adoption and implementation of policies and decision making in terms of prioritizing allocation of resources for different health programmes.

Disagreements over leadership in the sector, remunerations, allowances, consultancy position continue to linger among different groups. A scenario is the 2014 Nigeria Medical Association (NMA) and JOHESU industrial action which was caused by disagreements between doctors and laboratory workers, doctors versus pharmacists, doctors versus nurses and other allied health professionals versus doctors in a prolonged supremacy challenge (36).

Table 2. Selected Health Workforce Industrial Action in Nigeria, 2010 – 2016 (36)

Type of industrial action	Health workforce	Period	Reason	Themes identified
National	Joint Health Sector Unions (JOHESU)[a]	July 2014	That members be made consultants like medical doctors; demand to establish directorates for nursing, pharmacy, physiotherapy, and other allied health sectors; request for an amendment bill to correct marginalization of all health workers by doctors composition and appointment of the management boards of health institutions; extension of retirement age from 60 to 65 years; implementation of the National Health Insurance Scheme towards increased remuneration and overall funding of health system	Administration, leadership, governance, policy, finance, remuneration, supremacy challenge
	Nigerian Medical Association (NMA)	July–August 2014	Press for relativity[b] and skipping[c] in doctors salaries; to reverse the consultant status and directorates of allied health professionals; call for improved funding of health system	Administration, funding, remuneration, supremacy challenge
	National Association of Resident Doctors (NARD)	2011, 2013 and 2016	Call for teaching allowance and skipping; upgrade of doctors to Integrated Payroll and Personnel Information System (IPPIS) platform; full implementation of adjusted Consolidated Medical Salary Structure (CONMESS) across board; request for residency training guidelines, appraisal and upgrading; request for Federal Government to address high-handedness of chief medical directors of some health institutions; implementation of the National Health Act	Administration, governance, policy, funding, remuneration
Local	NMA Lagos chapter	2013	Request for improved conditions of service, better welfare and improved facilities	Welfare, funding
	Association of Resident Doctors (ARD)—selected local hospital chapters	2010–2016	Mainly protests over actions of chief medical directors (CMDs) including irregular and non-payment of salaries for several months, poor welfare (demand for renovation of call rooms and improved call meals), non-payment of teaching allowances and update courses and shortage of doctors in the hospitals, as interns and residents completing training were not promptly replaced	Administration, leadership, health workforce distribution, welfare

JOHESU consists of five registered health professionals unions: Medical and Health Workers' Union of Nigeria (MHWUN), National Association of Nigeria Nurses and Midwives (NANNM), Senior Staff Association of Universities, Teaching Hospitals, Research Institutes and Associated Institutions (SSAUTHRIAI), Nigeria Union of Allied Health Professionals (NUAHP) and Non- Academic Staff Union of Educational and Associated Institutions (NASU)

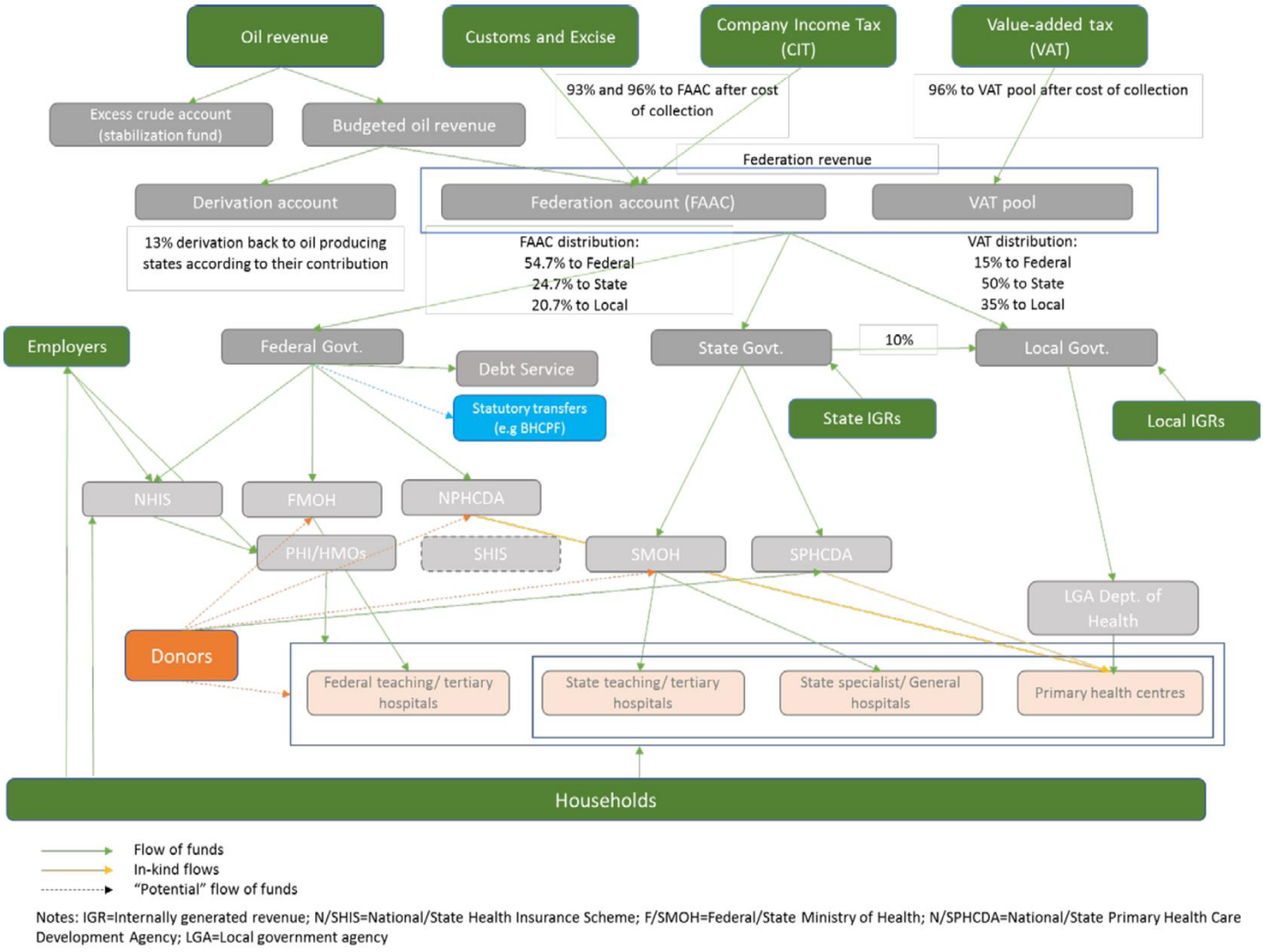
Poor wage structure and general welfare have remained a lingering challenge in the health sector (38). This has led to several strike actions by health professionals (Table 2). Despite governments effort, promises and intermediations are often focused on the immediate to get workers back to work only to not fulfill such agreements (36).

6.4 Allocation of Financial and Human Resources

6.4.1 Fund Allocation to States and Local Governments

Even though states and local governments offer most of the health services, they are dependent on the federal government for block funds[7] (2). Value added tax (VAT) and Federation account for oil and non-oil revenues are the sources of the federal government's income. From these accounts, the federal government disburses funds to the three levels of government monthly, using the vertical revenue-sharing allocation formulas (figure 6).

Figure 6. Funds Flow Diagram (2)



Notes: IGR=Internally generated revenue; N/SHIS=National/State Health Insurance Scheme; F/SMOH=Federal/State Ministry of Health; N/SPHCDA=National/State Primary Health Care Development Agency; LGA=Local government agency

[7] Monthly allocation by the Federal Government

The federal government directly funds the tertiary institutions, including the federal teaching hospitals and the federal medical centers, through the Federal Ministry of Health (FMOH) and the National Primary Health Care Development Agency (NPHCDA).

The general hospitals, states specialist hospitals and the Primary health care centers are then funded by the states through the State Ministries of Health (SMOH) and the State Primary Health Care Development Agencies (SPHCDA). Also, the Primary health care centers get funds from the Local Government (LG) at the lower district levels through the local departments of health (figure 6).

Table 3. Horizontal Revenue Sharing Formula (39)

Principle	Federation Account Revenues (percent)	VAT Revenue (percent)
Equality	45.23	40.00
Population	25.60	10.00
Population density	1.45	
Internal revenue effort	8.31	
Landmass	5.35	
Terrain	5.35	
Rural roads/inland waterways	1.21	
Potable water	1.50	
Education	3.00	
Health	3.00	
Derivation	0.00	50.00

6.4.2 States Allocation of Resources for Health

A critical analysis of the federal and 12 selected states allocation for health in the period of 2018 – 2020 shows that in 2018, none of the states were able to meet the 15% allocation to health as agreed during the Abuja 2001 declaration including the federal government(table 4). The closest to achieving that feat were Kwara and Kano states with a 13% allocation of the entire budget to health. Anambra and Ekiti states had the least allocation at 1% with a combined funding gap of N102,782,377,822 ($335,890,123.60) to realizing the 15% benchmark. The Federal Government of Nigeria budgeted 6% of the entire federal budget for both capital and recurrent expenditures in the health sector which is far below the 15% benchmark.

It is important to note that as the formula in table 3 is being implemented, a 13% derivation is shared to only the few oil producing states. The two oil producing States - Lagos and Delta States - had the highest net budget for the year 2018. This net budget was higher than a more populous non-oil producing State such as Kano. This further shows that most of the non-oil producing States with their limited fiscal capacity may allocate a larger percentage of their resources to health than their oil producing counterparts; yet, they will record less tangible (health status) results due to their smaller budgets. This could be the reason why most of the public health indicators (maternal mortality ratio, under 5 mortality, vaccination coverage) over the years are much worse in the northern part of the country.

Table 4. Federal and States 2018 health sector allocation (40)

States	Health Allocation 2018	Total Budget	Percentage Health	health per capita	15% of the budget	Funding Gap
Federal Govt	528,140,000,000	9,120,330,000,000	6%	2,594	1,368,049,500,000	839,909,500,000
North Central						
Kwara	23,920,000,000	190,900,000,000	13%	7,117	28,635,000,000	4,715,000,000
Niger	3,553,930,939	128,010,602,977	3%	608	19,201,590,447	15,647,659,508
North East						
Adamawa	6,353,300,000	177,900,000,000	4%	1,421	26,685,000,000	20,331,700,000
Yobe	6,290,000,000	92,180,000,000	7%	1,814	13,827,000,000	7,537,000,000
North West						
kano	32,240,000,000	246,608,850,598	13%	2,342	36,991,327,590	4,751,327,590
Jigawa	6,702,000,000	138,600,000,000	5%	1,092	20,790,000,000	14,088,000,000
South East						
Anambra	7,800,000,000	646,650,000,000	1%	1,340	96,997,500,000	89,197,500,000
Abia	5,433,750,000	141,000,000,000	4%	1,385	21,150,000,000	15,716,250,000
South South						
Delta	18,921,874,628	308,000,000,000	6%	3,174	46,200,000,000	27,278,125,372
Cross River	NA	130,000,000,000	NA	NA		NA
South West						
Lagos	55,149,754,185	1,046,121,000,000	5%	4,174	156,918,150,000	101,768,395,815
Ekiti	1,206,853,934.24	98,611,545,040.22	1%	351	14,791,731,756	13,584,877,822

	Federal Government of Nigeria
	Better performing states in terms of public health indicators
	Poor performing states in terms of public health indicators
NA	Not available

However, in terms of allocation per capita, Kwara State in the North Central region still had the highest allocation of N7,117 ($23) as compared to Ekiti state in the South west with the lowest allocation at N351 ($1.14) (figure 7). The trend shows a higher per capita allocation among oil producing states with the exception of Kwara state. Again, this buttresses the point that inequitable distribution of funds to the states affects the way states allocate resources to health to the subnational levels.

Figure 7. States 2016 Allocation per capita in Naira

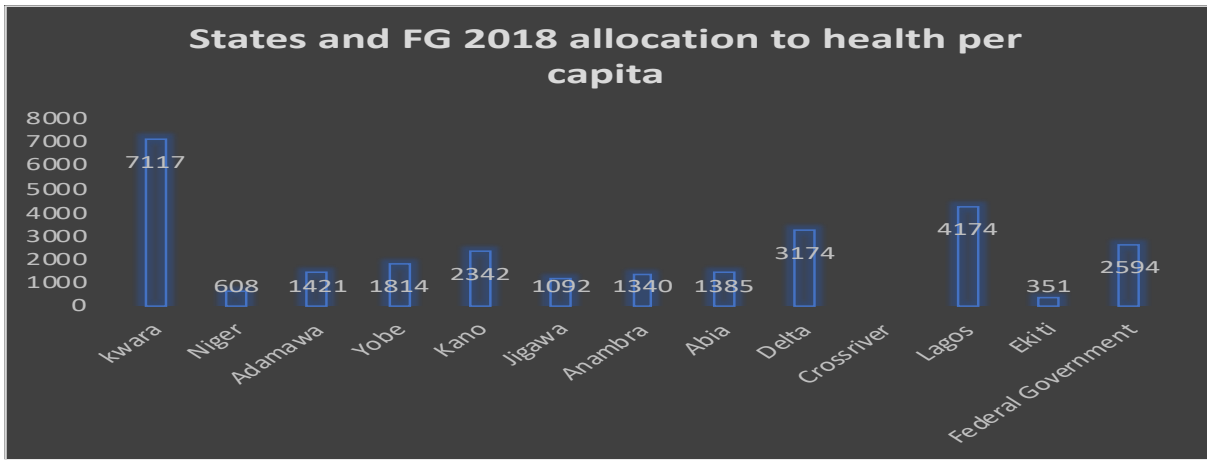


Table 5. Federal and States 2019 health sector allocation (40)

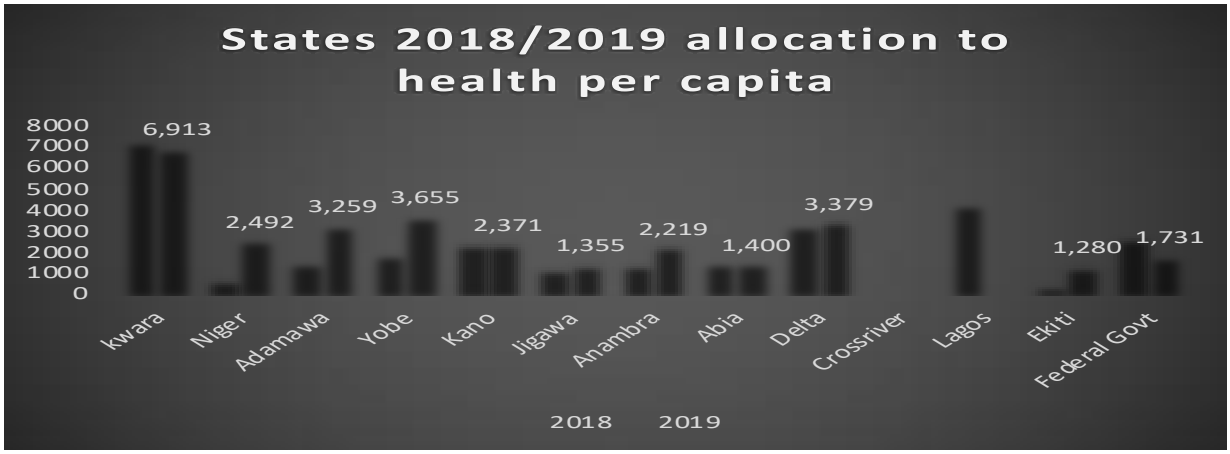
States	Health Allocation 2019	Total Budget	Percentage Health	Health per capita	15% of the budget	Funding Gap
Federal Govt	361,620,000,000	8,920,000,000,000	4%	1731	1,338,000,000,000	976,380,000,000
North Central						
Kwara	23,840,421,797	157,802,032,561	15%	6,913	23,670,304,884	(170,116,913)
Niger	11,037,000,000	164,450,863,735	7%	2492	24,667,629,560	13,630,629,560
North East						
Adamawa	14,952,518,011	139,217,811,600	11%	3,259	20,882,671,740	5,930,153,729
Yobe	13,002,338,000	91,647,597,000	14%	3,655	13,747,139,550	744,801,550
North West						
kano	33,485,220,496	219,970,976,010	15%	2,371	32,995,646,402	(489,574,095)
Jigawa	8,529,000,000	157,500,000,000	5%	1,355	23,625,000,000	15,096,000,000
South East						
Anambra	13,250,835,000	157,170,000,000	8%	2,219	23,575,500,000	10,324,665,000
Abia	5,634,876,774	140,913,617,220	4%	1,400	21,137,042,583	15,502,165,809
South South						
Delta	20,666,864,531	390,378,671,178	5%	3,379	58,556,800,677	37,889,936,146
Cross River		1,043,000,000	NA	NA	156,450,000	NA
South West						
Lagos	NA	NA	NA	NA	NA	NA
Ekiti	4,522,000,000	57,214,891,758.72	8%	1,280	8,582,233,764	4,060,233,764

	Federal Government of Nigeria
	Better performing states in terms of public health indicators
	Poor performing states in terms of public health indicators
NA	Not available

The 2019 budget showed an improvement in the states determination towards achieving Universal Health Coverage. During this period, Kwara state, improving on the 2018 budget allocated 15% of the budget to health. Kano state also showed remarkable progress by meeting the 15% benchmark. However, the rest of the states with the exception of Lagos whose data was unavailable had allocations way below the required benchmark. The most notable fact was the drop in the percentage allocation by the Federal Government from 6% in 2018 to 4% in 2019 (table 4 and 5).

Adamawa and Yobe states were able to allocate more than more 10% of their entire budget to health, while the other states allotted less than 10% of their budgets to health with the exclusion of Lagos whose information was not found.

Figure 8. States 2018/2019 allocation to health per capita in Naira



A further analysis of the budgets on allocations per capita shows that Kwara State even though experiencing a slight drop in the allocation from N7117 ($23) in 2018 to 6,913 ($19), it still remained the State with the highest allocation per capita (figure 8). The rest of the states had notable increase in their allocation per capita from 2018 with only the Federal allocating less.

Table 6. Federal and States 2020 health sector allocation (40)

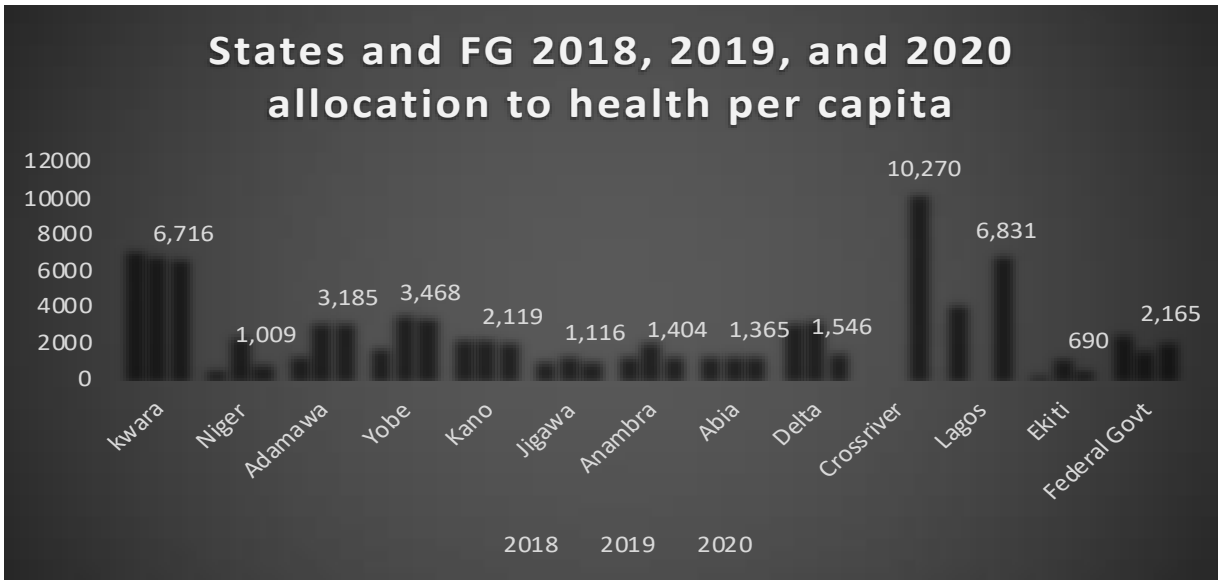
States	Health Allocation 2020	Total Budget	Percentage Health	Health per capita	15% of the budget	Funding Gap
Federal Govt	464,000,000,000	10,590,000,000,000	4%	2,165	1,588,500,000,000	1,124,500,000,000
North Central						
Kwara	23,763,095,838	162,487,666,170	15%	6,716	24,373,149,926	610,054,088
Niger	6,215,326,020	155,459,814,700	4%	1,009	23,318,972,205	17,103,646,185
North East						
Adamawa	14,993,478,800	274,304,616,438	5%	3,185	41,145,692,466	26,152,213,666
Yobe	12,658,000,000	108,314,101,082	12%	3,468	16,247,115,162	3,589,115,162
North West						
kano	30,700,000,000	206,267,759,657	15%	2,119	30,940,163,949	240,163,949
Jigawa	7,206,000,000	152,920,000,000	5%	1,116	22,938,000,000	15,732,000,000
South East						
Anambra	8,600,232,165	137,135,743,439	6%	1,404	20,570,361,516	11,970,129,351
Abia	5,636,003,750	140,941,797,923	4%	1,365	21,141,269,688	15,505,265,938
South South						
Delta	9,700,000,000	389,190,799,362	2%	1,546	58,378,619,904	48,678,619,904
Cross River	44,000,000,000	1,100,168,507,687.94	4%	10,270	165,025,276,153	121,025,276,153
South West						
Lagos	95,007,317,787	1,168,562,000,000	8%	6,831	175,284,300,000	80,276,982,213
Ekiti	2,500,000,000	91,128,000,000	3%	690	13,669,200,000	11,169,200,000

	Federal Government of Nigeria
	Better performing states in terms of public health indicators
	Poor performing states in terms of public health indicators
NA	Not available

The recent 2020 budget shows a consistency over time in allocation to healthcare from both Kano and Kwara states, which progressed from 2019. These states were again able to meet the 15% benchmark as set by the 2001 Abuja declaration by allocating 15% of their budgets to health care (table 6). The closest to these two states was Yobe state with a 12% commitment in the budget while the rest of the states could only commit less than 10% of their budgets to health. Again, the federal government could not make any improvement towards committing more resources to health as it still maintained the 4% in 2020 as it is in 2019(table 6).

Kwara State still maintained its status as the leading state in terms of per capita allocation by devoting N6716($19) per capita. Ekiti State still remained the least with a budget of N690($1.9) per capita which was a drop from 2019.

Figure 9. States 2018, 2019 and 2020 Allocation to health per capita



Following the progress more than 90% of the states sampled in the study made during the 2019 allocations from 2018, the 2020 figures shows a drop in the states' allocation to health per capita with the exception of Cross river and Lagos states who had incomplete data (figure 9). There was a noticeable increase in the Federal Government's allocation from N1,731 in 2019 to 2165.15, however it is still far below the required standard.

A critical feature to note on the 2020 health allocation to states is how inequitable allocation of funds to states by the Federal Government affects the fiscal capacity of the states to budget for health. An example is Cross River State which is an oil producing State, allocated just 4% of its entire 2020 budget for health which was the second lowest among the states yet it has the highest per capita allocation among the states simply because it has a much larger total budget size. This is influenced by the horizontal sharing formula which favours the oil producing states. Other oil producing states Lagos and Delta had considerably larger budget sizes than the non-oil producing counterparts (table 6).

The World Health Organization had estimated in its 2010 report that there was a need for low and middle income countries to spend averagely $60 per capita on essential health services by 2015 (41), which has since been reviewed to $86 according to the 2012 US dollar terms(42). However, the analysis of the states' and Federal Government's budget for the three-year period shows that not one of the states or the Federal Government was able to meet the $86 benchmark. This goes to illustrates the lack of commitment by decision makers over the years towards the development of the health sector in the country.

6.4.3 Allocation to Primary Health Care

Nigerian States allocate resources to Primary health care centers through the States' Primary Health Care Development Agency (SPHCDA) (figure 4). As seen in table 7, there is an inconsistent variation across states in view of their allocation to Primary health care.

Table 7. States Allocation to Primary Health Care (40)

States	PHC Allocation 2018	Health Budget 2018	% PHC	PHC Per capita	PHC Allocation 2019	Health Budget 2019	% PHC	PHC per capita	PHC Allocation 2020	Health Budget 2020	% PHC	PHC per capit
North Central												
Kwara	NA	23,920,000,000	NA	NA	30,448,800	23,840,421,797	0.13%	9	46,020,020	23,763,095,838	0.19%	13
Niger	303,182,662	3,553,930,939	9%	52	393,062,079.46	11,037,000,000	4%	66	100,000,000	6,215,326,020	2%	16
North East												
Adamawa	896,918,625	6,353,300,000	14%	201	695,240,000	14,952,518,011	5%	187	1,141,113,000	14,993,478,800	8%	242
Yobe	1,233,000,000	6,290,000,000	20%	356	859,549,000	13,002,338,000	7%	242	483,200,000	12,658,000,000	4%	132
North West												
kano	2,670,172,942	32,240,000,000	8%	194	1,490,956,697	33,485,220,496	4%	106	NA	30,700,000,000	NA	NA
Jigawa	2,127,000,000	6,702,000,000	32%	347	1,997,000,000	8,529,000,000	23%	317	1,574,000,000	7,206,000,000	22%	243
South East												
Anambra	824,000,000	7,800,000,000	11%	142	470,943,375	13,250,835,000	4%	79	472,203,375	8,600,232,165	5%	77
Abia	2,718,450,690	5,433,750,000	50%	693	2,718,994,370	5,634,876,774	48%	675	2,719,538,161	5,636,003,750	48%	658
South South												
Delta	216,000,000	18,921,874,628	1%	36	254,000,000	20,666,864,531	1%	42	516,153,395	9,700,000,000	5%	82
Cross River	NA	NA	NA		NA	NA	NA	NA	3,332,332,023.05	44,000,000,000	8%	778
South West												
Lagos	2,736,225,502	55,149,754,185	5%	207	NA	NA	NA		9,448,938,305	95,007,317,787	10%	679
Ekiti	196,653,968	1,206,853,934.24	16%	57	29,852,801	4,522,000,000	1%	8		25,000,000,000	NA	NA

	Better performing states in terms of public health indicators
	Poor performing states in terms of public health indicators
NA	Not available

A critical evaluation of the budget of the selected states in table 7, shows states' inconsistent variation when compared to their performance on some selected public health indicators (see annex table 11 and 12) . Some states such as Abia in the south east budgeted more funds for Primary health care for the 3 year period yet neonatal mortality, vaccination coverage and tuberculosis case detection rate remains one of the worst in the south east region as compared to a neighboring state (Anambra) which budgeted less resources.

Jigawa State in the North West region also consistently budgeted a larger percentage of its health budget to primary health care, yet recorded worse public health outcomes than the neighbouring Kano State with a lower allocation for health per capita, in nominal terms. In

the North Central and South South regions, a more consistent higher allocation to primary health care is accompanied by better public health outcomes among the states in the region.

It is also important to note that the quality of data (table 7) from the data sources[8] may not be reliable. This is seen in a State like Kwara State which is one of the better performing states on the public health indicators selected, consistently allocating less than 1% of its funds as a percentage of the GGHED to Primary. The reliability of the available data is often questionable.

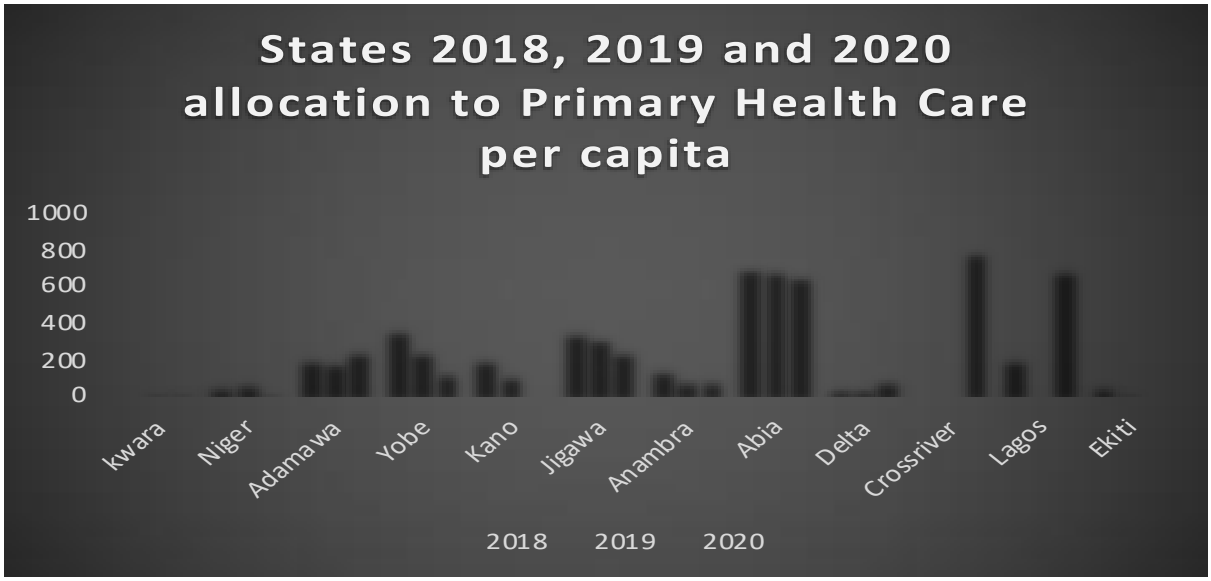
A critical analysis of the states' allocation to Primary Health Care per capita (table 7, figure 9) shows a lack of association between how much states invest per capita and public health outcomes. In the North West, Jigawa state had consistently allocated more funds per capita than Kano state over the three years period but yet recorded poorer performance on the indicators. This trend was also observed in the North central where Niger state consistently allocated more resources for Primary Health Care per capita than Kwara state yet was recording poorer public health outcomes. The unavailability of complete data means that this association cannot be substantiated for the South South and South West regions.

The inconsistencies in the data on allocation of resources for Primary Health Care in Nigeria with regard to the public health outcomes could be explained by the influence of diverse determinants peculiar to Nigeria as a country. Corruption, the diversity between allocation of financial allocation in the budget and actual release of funds, decision making in terms of governance and proper documentation are some of the key challenges affecting the proper utilization of resources in the country.

The timely and adequate release of funds for governance has been a lingering challenge in Nigeria. Often times, the allocation of resources for health is met with erratic budget release and sometimes complete non release of funds. A case study is the 2009 allocation in Kaduna state, where the state had budgeted 12.8% of its entire revenue to health but ended up releasing about 6.7%. **B**udget release in the state for health has cycled around 53% and has since 2004, it has been reducing gradually (43). At the federal level in 2011, the government budgeted N63.4 billion for capital expenditure for health but ended up releasing only N38.8 billion (61.2%) out of which only N26.02 billion (67%) was actually expended (44). The inadequate release of funds across states in the country is a common theme. This has over the years affected both capital and recurrent budgets for health programmes which has significantly affected project implementation and health outcomes.

[8] Data sources mean States budget

Figure 10. States 2018, 2019 and 2020 Allocation to Primary Health Care per capita



In a resource poor setting like Nigeria, prioritizing preventive services and primary health care is a key blue print in reducing the inequity that exists in service utilization in the sector. However, states have been less committed to prioritizing allocation to primary health care. An analysis of the data on table 7 shows that only Abia state was able to consistently allocate about 50% of its health budget to primary health care. The rest of the states committed far less proportions of their health budgets to primary health care with some of the states allocating as little as 1% and less to primary health care. This signifies a favoritism towards curative services in the hospitals as compared to preventive services utilized in the Primary health care centers.

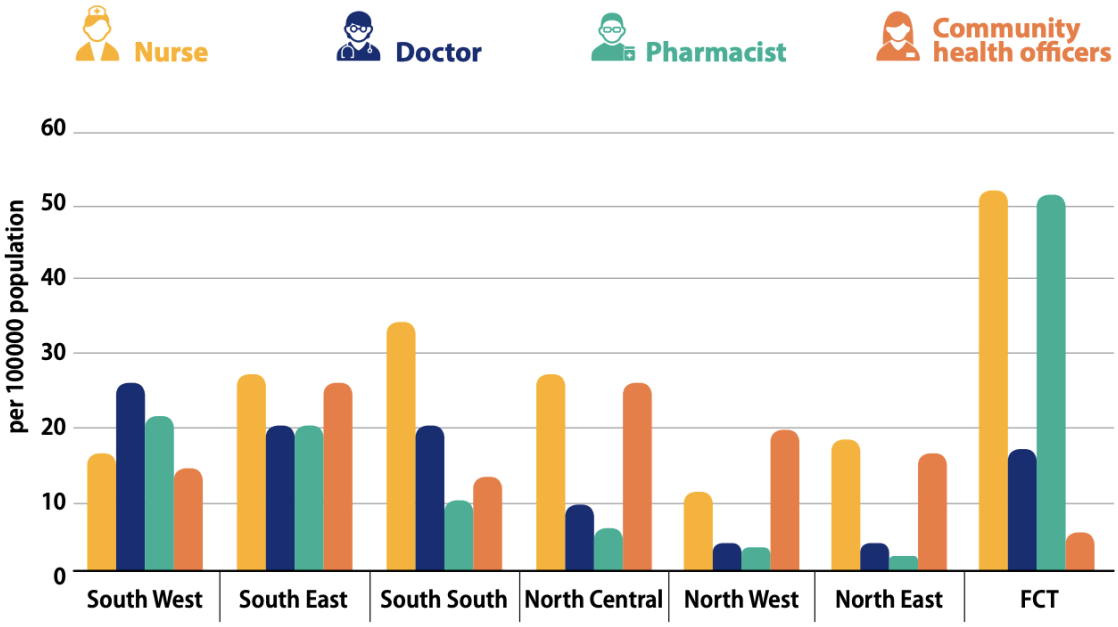
Table 8. Disaggregation of Public Health Indicators and PHC allocation per capita by States (6)(45)(46)

States	2018 Neonatal Mortality	Penta 3 vaccine coverage2016/2017	TB Case detection Rate 2012	PHC 2018 Allocation Per capita	PHC 2019 Allocation Per capita	PHC 2020 Allocation Per capita	PHC Allocation average
North Central							
Kwara	31	49.1%	25	NA	9	13	11
Niger	29	20.0%	24	52	66	16	45
North East							
Adamawa	32	37.9%	53	201	187	242	210
Yobe	44	8.7%	24	356	242	132	243
North West							
kano	37	15.9%	30	194	106	NA	150
Jigawa	47	7.1%	21	347	317	243	302
South East							
Anambra	17	76.20%	21	142	79	77	99
Abia	39	54.80%	33	693	675	658	675
South South							
Delta	21	57.2%	36	36	42	82	53
Cross River	32	69.5%	24	NA	NA	778	778
South West							
Lagos	35	80.2%	46	207	NA	679	443
Ekiti	42	72.2%	9	57	8	NA	33

6.4.4 Human Resources

Human Resources for Health (HRH)_in Nigeria include the doctors, nurses, laboratory staff, midwives, community health extension workers (CHEWs), community health officers (CHOs), public health nutritionist, public health nurses and community health assistants (13). Renumeration for health workers in the country is according to the level of government where they work, though there are exceptions in some cases where professionals who work in the Primary health care centers are employed by the state government (13). The distribution of human resources for health per 1000 population varies across the different regions in the country. Even though the national distribution of doctors per 1000 population is estimated at 12, north east and north west have as low as 4 (figure 11). While the national ratio per 100,000 population of midwives and nurses is estimated at 21, the North East, North West, and South West geopolitical zones have 18, 11 and 16 respectively (47).

Figure 11. Zonal disparities in human resources for health (34)



6.4.4.1 Staffing at Primary Health Care Level

Studies have shown that staffing at the Primary Health Care level suffer setbacks over time in the country due to the fact that health workers perceive rural life to be difficult. Lack of basic amenities associated with rural settings; poor equipments, lack of water and power supply at the facilities leading to poor performance and the quality of care, and also poor drugs supply which is a significant challenge to the delivery of service are considered as some of the factors creating dissatisfaction among health workers working in the rural settings (48) (49).

The distribution of community health workers in Nigeria according the six geo political zones and the federal capital territory (FCT) shows that the South East, South East, North Central and North West have more CHOs per 1000 population compared to the other regions, with the South South constituting the least (figure 6).

CHEWs constitute the larger majority of health workers across the states, with doctors, nurses and midwives more present in the non- primary health care centers (table 8). Osun, Kaduna and Adamawa states had more CHEWs working in the states' primary health care level compared to the rest of the states in the country. The statistics also showed that Yobe and Delta states had the lowest distribution of CHEWs working at the community levels (table 8).

Table 9. Distribution of health workers by State as of 2005 (40) (47)

States	Doctors	Dentists	Nurses	Midwives	Med-Lab scientists	Rehab-Therapist	Radiographers	Pharmacist	Health Record Officers	CHO/CHEWs	CHO/CHEWS per 100,000 population	Health Allocation Per capita	PHC Allocation per capita
North Central													
Kwara	843	NA	1691	NA	30	24	10	205	48	1047	44	6915	11
Niger	69	NA	1236	NA	5	3	4	174	4	825	22	1370	45
North East													
Adamawa	89	NA	882	NA	9	4	2	116	18	1159	36	2621	210
Yobe	72	NA	607	NA	7	3	2	21	0	149	7	2979	243
North West													
kano	234	NA	1001	NA	24	28	9	275	18	374	4	2277	150
Jigawa	75	NA	408	17	13	1	0	28	1	337	8	1188	302
South East													
Anambra	669	6	1395	240	239	8	11	342	22	336	8	1655	99
Abia	527	NA	1123	NA	185	8	5	238	24	262	9	1383	675
South South													
Delta	470	NA	1950	NA	144	18	16	277	57	149	4	2699	53
Cross River	407	2	1642	999	39	6	7	102	58	861	34	10270	778
South West													
Lagos	3705	NA	NA	NA	313	302	129	4394	66	261	3	5503	443
Ekiti	173	NA	421	NA	48	7	3	66	61	411	17	773	33

	Better performing states in terms of public health indicators
	Poor performing states in terms of public health indicators
NA	Not Available

In the table above (table 9) there was a relationship between allocation per capita to PHC and the number of CHO[9]/CHEWs[10] per 1000 population 50% of the regions namely; North West, South East and South South. However, this relationship was not observed in North Central North East and South West with the relationship showing states with high proportion of CHO/CHEWs allocating less funds than states with lower proportion of health workers.

In terms of performance on public health indicators an association between states performing better on the selected public health indicators and the distribution of CHO/CHEWs exists in the North East and North Central Region where Kwara and Adamawa states had more CHO/CHEWs for Primary Health Care than Niger and Yobe respectively. However, the reverse was the case in the rest of the regions.

It is imperative to also note that this is not a conclusive analysis due to the time difference between the data on human resources' classification by states (2005) and the data on PHC allocation per capita by states

[9] CHO refers to Community Health Officers
[10] CHEWs refers to Community Health Extension Workers

Table 10. Statistics of health workers by state as of 2005 (47)

S/N	State	Populatio	Doctors	Dentists	Nurses	Mid-wive	Med- Lab Scientists	Rehab. Therapist	Radiogra phers	Pharmaci	Health Records Officers	CHO/ CHEWs
1	Abia	2,963,275	527	NA	1123	NA	185	8	5	238	24	262
2	Adamawa	3,254,227	89	NA	882	NA	9	4	2	116	18	1159
3	Akwa Ibom	3,730,227	321	NA	6528	NA	122	3	9	142	32	224
4	Anambra	4,329,820	669	6	1395	240	239	8	11	342	22	336
5	Bauchi	4,431,424	110	5	200	330	7	4	1	73	1	524
6	Bayelsa	1,737,020	278	6	586	392	17	1	0	35	35	336
7	Benue	4,262,764	222	NA	995	305	41	5	5	163	25	748
8	Borno	3.926,764	198	20	1194	36	16	7	4	123	5	374
9	C/ River	2,551,896	407	2	1642	999	39	6	7	102	58	861
10	Delta	4,010,879	470	NA	1950	NA	144	18	16	277	57	149
11	Ebonyi	2,250,677	134	NA	349	NA	30	2	10	39	28	373

12	Edo	3,363,098	399	NA	1431	NA	203	18	7	436	38	299
13	Ekiti	2,377,829	173	NA	421	NA	48	7	3	66	61	411
14	Enugu	3,289,864	1017	NA	1196	NA	266	40	32	417	20	785
15	F.C.T	575,666	232	NA	913	NA	2	38	36	720	22	75
16	Gombe	2,305,771	81	NA	577	NA	16	1	5	52	9	486
17	Imo	3,848,656	914	NA	2074	NA	307	8	13	197	24	374
18	Jigawa	4,452,685	75	NA	408	17	13	1	0	28	1	337
19	Kaduna	6,094,506	610	NA	1903	NA	45	9	11	476	34	1168
20	Kano	8,997,330	234	NA	1001	NA	24	28	9	275	18	374
21	Katsina	5,811,165	146	NA	904	NA	5	7	0	59	13	187
22	Kebbi	3,202,837	91	NA	324	NA	2	6	0	19	1	187
23	Kogi	3,325,256	185	NA	1970	NA	27	1	4	112	26	860
24	Kwara	2,397,533	843	NA	1691	NA	30	24	10	205	48	1047
25	Lagos	8,865,999	3705	NA	NA	NA	313	302	129	4394	66	261
26	Nasarawa	1,870,248	147	NA	476	134	12	1	2	88	17	336
27	Niger	3,749,912	69	NA	1236	NA	5	3	4	174	4	825
28	Ogun	3,613,345	698	NA	1471	NA	63	31	4	25	15	524
29	Ondo	3,483,147	265	NA	NA	NA	99	8	6	164	18	598
30	Osun	3,341,326	1093	NA	1765	NA	222	37	11	262	24	1198
31	Oyo	5,346,017	1366	NA	1650	NA	288	89	23	681	12	787
32	Plateau	3,258,658	102	NA	1234	NA	55	16	12	346	14	1046
33	Rivers	4,936,589	404	NA	NA	NA	118	10	21	448	20	786
34	Sokoto	3,297,979	154	NA	599	746	2	12	5	60	10	186
35	Taraba	2,341,448	89	NA	235	409	7	2	0	38	0	411
36	Yobe	2,167,389	72	NA	607	NA	7	3	2	21	0	149
37	Zamfara	3,209,910	68	NA	285	NA	1	1	1	15	0	225
	Total		**16,572**	**2,649**	**121,243**	**87,171**	**3029**	**769**	**420**	**12,072**	**820**	**19268**

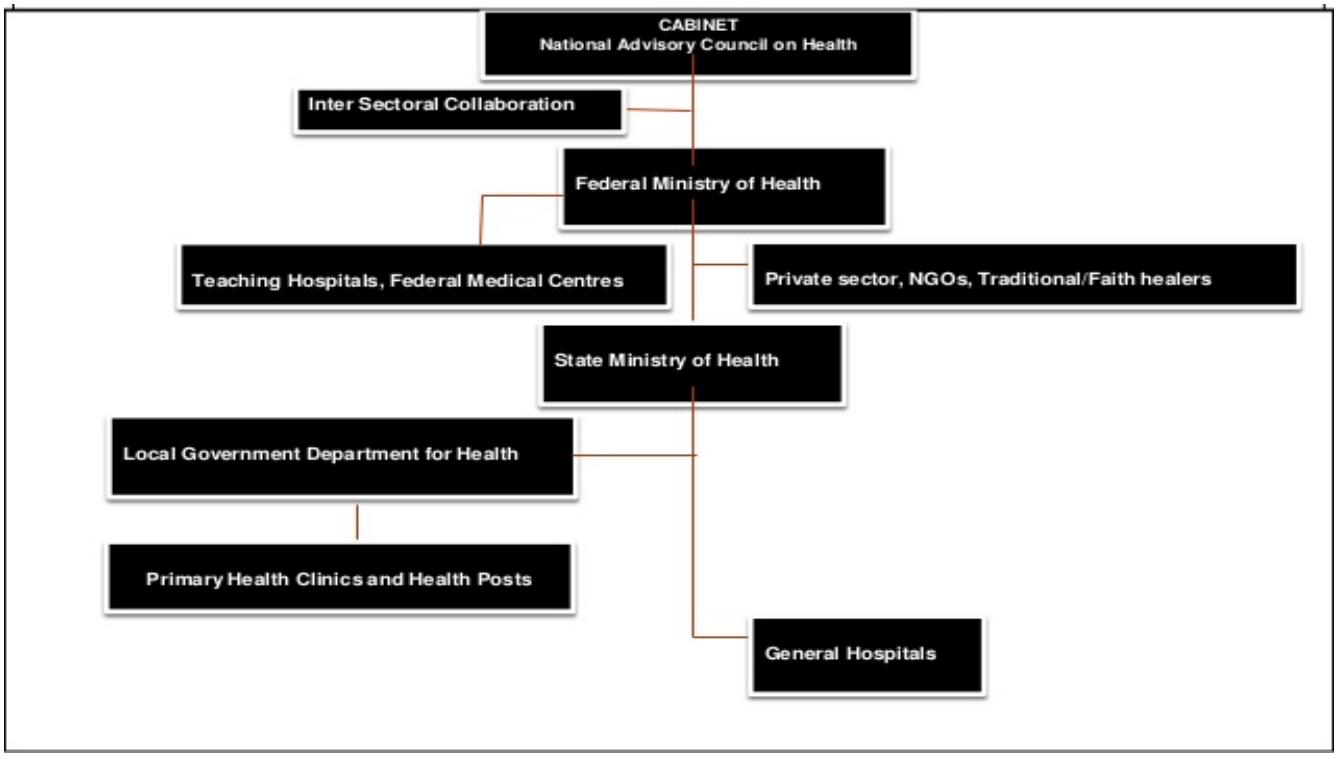
Due to the non-availability of an updated database for health workers in Nigeria disaggregated by state, the data used in table 8 was adopted from the national human resources for health strategic plan 2008-2012. This was used with the assumption that the trend in the distribution of the health workers by state continued in the same format over time.

6.5 Decision Making

The national council on health is the national decision and priority setting body in charge of formulating national policies for health in the country including the allocation of resources for health. The states council on health/committees are the next tier of decision making bodies domiciled at the state levels, providing technical support and supervisory role to the board members states hospital management board and primary health care management boards (figure 12).

However, in practice, the National and State Councils are often just mere ceremonial bodies with key decisions on health taken by the executive arms of the governments (Personal Observation). There is also overruling and duplication of duties in the states as decisions on primary health care are often made at the state levels by either the state councils on health of the executive arms of the government instead of the committees in the Local Government Areas.

Figure 12. Health System Structure (50)



6.5.1 Criteria for Resource Allocation

The use of need-based allocation formulae has been the standard to the effective and equitable allocation of resources for health in some established health systems (51). This take into account the size of the population, the age and sex profiles, and the degree of absolute poverty (51). A qualitative study among key stakeholders in the health sector carried out by the Institute of Health and Society, Newcastle University in Nigeria, looked at potential key drivers for the allocation of resources. One of these was 'needs', as perceived by the communities. Other important criteria for health resopurces allocation included: political consideration; historical budgeting; funding source requirements; effectiveness of the intervention; expert opinions; efficiency of the national health system; interest of pressure groups; and, international influence on reforms of the national health system (50). However, in reality, politics and corruption sets precedence when resources are being allocated for health in the country (52). Personal observation and anecdotal evidence also support this principle with an experience health professional sharing with the author of this study saying "the decision makers are more interested in personal benefits at the detriment of the population". Even though this may not be admissible due to the fact that it is not a formal qualitative component of the study, it is the reality.

7. Discussion

7.1 Assessment of the Policies on Health

The endorsement of Health for All during the Alma-Ata convention in 1978, led to the origination of primary health care in Nigeria(…) (53). The strategy was to construct a comprehensive health center (CHC), four Primary health care centers and twenty health clinics in all the local government areas with the CHC serving as a headquarter. Based on the primary health care model, the national basic health service scheme (NBHSS) evolved which unfortunately did not achieve its purpose due to challenges faced during implementation, as such the delivery of services at the primary health care level was not operative as at that time (54).

The appointment of Professor Ransome-Kuti as the Minister of Health in 1985 led to the adoption of Primary Health Care in 52 LGAs as a pilot (55). This led to the formulation of the first national policy on health in 1988 which enhanced the expanding of primary health care across all the other local government areas (55). The national policy on health focused on PHC with emphasis on both preventive and curative services at the community levels, providing free immunization for children, ensuring the practice of exclusive breastfeeding, made the documentation of maternal mortality compulsory, promoting the use of oral rehydration therapy by mothers who are breastfeeding and also initiating the campaign against HIV/AIDS (54) (55). The establishment of the NPHCDA in 1992 was 1992 was aimed at ensuring the continuity and sustainability of the PHC agenda (54)(55). Programmes such as Subsidy Reinvestment Programme on Maternal and Child Health (SRPMCH) and Midwives Service Scheme (MSS) which were coordinated by the agency since its creation are targeted at revitalizing PHC in the country (56). Between 2003 and 2007, the Bamako initiative programme which was the health component of the National Economic Empowerment and Development Strategy was executed. As a result of these reforms, existing policies and strategies for health were revised and new ones developed.

Between 2004 and 2007, the Health Sector Reform Programme was initiated to strengthen the health system by improving the delivery of health services in order to achieve better health outcomes. The health sector reform had seven key purposes; to Improve the leadership function of the government, Lessen the burden of diseases, Support the management of the National Health systems, Generate more resources for health and its management, Expand access to quality service delivery, Improve community collaboration and consumer understanding and Improve active collaboration, partnership and coordination.

During the implementation of the Health Sector Reform Programme, the top down approach was utilized which led to challenges it was meant to solve persistent. Even though PHC serve as a key component in the evolution of the health system in the country, the Health Sector Reform Programme document failed to state clearly the function and responsibility of the local government to its renaissance (57)

Due to the problem of disintegration in PHC, the PHC under one roof policy was developed in 2011 to foster the integration of PHC services under one coordinating body. Even though since the inception of this policy, the purpose for which it was formulated has not been achieved. Currently, the PHC facilities are unable to provide basic health services for the country which has led to the secondary and tertiary facilities being overburdened (56).

Other new policies developed in the health sector were:
(a) Development of the National Health Bill;
(b) the creation of the NPHCDA action plan towards the delivery of a Minimum Health Care Package for the wards;
(c) review of the National health policy;
(d) the integration of the National Programme of Immunization and the National Primary Health Care Development Agency;
(e) the official inauguration of the National Health Insurance Scheme;
(f) the restructuring of the National Council on Health; and,
(g) the drafting of a n integrated approach for newborn, maternal and child health.

The National Health Bill and a 5 year National Strategic Health Development Plan 2010-2015 were two important policy documents develop with the vision of ensuring the sustainability of the reforms going forward (13).

Overall, policies with influence on PHC can be enhanced and sustained by dedicating more resources for health in the country. Implementing the 2001 Abuja declaration is key in generating more funds for health and pushing the agenda of Universal Health Coverage forward. Policies that will encourage the rural-urban migration of health workers need to be improved upon and implemented to reduce the problem of misallocation of human resources for health in Nigeria. The three tier of governance should prioritise preventive services there by allocating more funds for the development of Primary health care centers in order to reduce the inequality in accessing quality health services in the population.

7.2 Current Process of Resource Allocation in Nigeria

The current process of allocation of health resources in Nigeria is not equitable in practice. The horizontal sharing formula currently being utilized by the federal government in allocating federal funds to states has proven to only favour the oil producing states. This shows that the non-oil producing states who have high health needs are often left with a limited fiscal space in spending. An analysis of the data in this study shows that the oil producing states which are predominantly in the southern region of the country always have larger budget sizes for expenditure on governance than the non-oil producing states. Over the years the inequality has affected the standard of living and health outcomes between the north and southern regions of the country. The north which is made up of states who are predominantly non-oil producing state has consistently suffered more casualties over the years in terms of key public health indicators[11] than the southern regions.

[11] Maternal Mortality Ratios, Neonatal Mortality, Under 5 Mortality, vaccination coverage.

In most countries that are decentralized, funds transfer within the government structures is a medium through which income generated by the central government is redistributed according to the needs of the population. However, the use of the horizontal revenue sharing formula in Nigeria inhibit the country's ability to address the problem of inequity in fiscal revenue allocation to the different states in the country (table 3). The formula follows a principle of equality in the distribution of funds among states with demographic factors such as size, population, the level in which the states are socially developed and fiscal capacity having little influence. This shows that the formula is not only inequitable, favoring largely the oil rich states.

This critically summaries the problem the health system face in terms of equitable allocation of resources. With the demographic diversity in the country's regions, the northern states who over the years have shown greater need for health interventions always have less funds accrued to them to spend on health and other forms of governance as compared to the southern counterparts who are largely the oil producing states.

7.2.1 Decision making and Priority Setting

Sometimes often referred to as rationing, the process of priority setting entails the series of decisions taken in the allocation of resources around competing health interventions (58) (59). In all countries, the task of providing access to quality health services within a fixed budget exists. Prioritization of resources for health is always driven by factors such as political, economical, evidence on cost effectiveness and limitations in the health system(60). In view of the Sustainable Development Goals 2030 agenda, several low and middle income countries (LMICs) are determined to achieve Universal Health Coverage (61). As such, the need for effective priority setting with a standard criterion on the spending of funds for health arises. usually, the need for this is influenced by limited budgets, increasing demanded for health services, lack of legal frameworks and lack of suffiient data on cost effectiveness (62).

The process of priority setting in low and middle income countries is usually implicit (63). A flawed system of rationing and the lack of data to inform priority and decision making is always a challenge towards attaining Universal Health Coverage (64). More efficient and high impact health systems around the world utilize a robust approach to priority setting which include multi-criteria decision analysis (MCDA), programme budgeting and marginal analysis (PMBA), health technology assessment (HTA), and Cookson and Dolan (65).

The result of the study by the Institute of Health and Society and Newcastle University in Nigeria which identified priority setting for health to include consideration of needs as the most popular approach, followed by political consideration, history of budgeting, funding source requirements, effectiveness of the intervention, expert opinion, efficiency of the system, interest of pressure groups, and international influence respectively is an official process. In Nigeria, the procedure for decision making and priority setting is often a complicated process. In practice, evidence and personal observation of the author suggest that politics play a much significant role in the rationing of resources for health (52). With the diversity in the political structure of the country and the scourge of corruption, most

stakeholders and decision makers often unofficially prioritise personal benefits over adequate resource allocation for health.

Politics and corruption work in tandem in the Nigeria health sector. Often, political considerations are always given high priority even at the expense of health needs (52). These political considerations are most at times geared towards influencing contracting processes for bribes and kickbacks and even when the contractors fail to meet up with desired results they are not held accountable (52). This could also be deduced from the data seen in this study where it shows no association between investment and public health outcomes. This is because regardless of how much is earmarked for health interventions, wastages could mean it has less impact on health outcomes.

In Nigeria, the relevant decision making bodies are comprised of the National Council on health; State Councils; and, the Local Government Committees. These are responsible in making decisions and setting priorities for the tertiary, secondary and primary levels of care. It is important to show how decisions are made in terms of Primary Health Care in the country. According to the three tiered system of health service delivery being implemented in the country, the Local Government Committees are responsible for making decisions for primary health care at the community levels. However, in practice they are often redundant with decisions in terms of funding and setting priorities made at the state levels. This has been one of the key challenges being experienced in the delivery of Primary Health Care. The Local Governments are supposed to be autonomous in making decisions for health and other aspects of governance, yet they are largely subdued by the State Governments. This has resulted in the Federal Government making efforts recently to disburse federal allocations to Local Governments directly, side lining the states to improve development at the community levels, yet it has been met with stiff resistance from state governments.

7.2.2 Information on health resources

In a country faced with diverse health challenges, the need for proper allocation of resources is crucial. However, lack of up to date quality data for decision making is prevalent in Nigeria. The last census conducted in the country is more than 15 years ago. The last updated version of the human resources for health by states in the country is also more than 15 years ago. With key demographic changes occurring throughout the country, the lack relevant data means allocating resources for different populations haphazardly.

Proper documentation and the use of quality data is essential in planning and the execution of projects. However, lack of data on the cost and utilization of health services, available funds for health and the performance of human resources for health have made it difficult for the health sector to effectively plan and even request for additional funds(2). The National Health Accounts (NHA) which was developed with the aim of tracking the financial expenditure and resource allocation at the national and sub national level has not achieved its purpose.

Information on the statistics of human resources for health in Nigeria by states and was last updated in 2005 during the national census (47). As such, this study had to use some data that are not up to date. This shows the poor standard of the not up to date documentation and monitoring system in the health system.

Even where data is available most especially on some financial parameters, the quality of the data is often problematic. A strategic analysis of states financial data for the period of 2018 to 2020 and the States' allocation of resources to health and primary health (care?) showed that there is substantial reason for concern about the lack of rationale of resources allocation. It was observed that there was no uniformity in the templates the states used for the budgets, no clear definition of budget lines across the states and even summaries for thematic areas of governance were not found on some states budget which makes it difficult to analyze. Among the states analysed, Kwara state is a typical example of the challenge with the quality of data on the budget templates. The analysis for the three year period (2018-2020) showed that despite Kwara State being one of the two states allocating about 15% of their budget to health (table 4-6), the percentage allocated to PHC as a proportion of the allocation to health was less than 1% across the three years. This data is questionable, considering the strides Kwara State is making in terms of public health indicators as compared to states in the same region. The fact that the State has one of the largest workforce for PHC in the country further makes one doubt about the reliability of this data (table 8).

The inconsistencies observed in states' allocation to PHC compared to public health outcomes further dampens the validity of bookkeeping in the country, even though several other factors play important roles in the effective utilization of resources for health. Niger, Yobe, Jigawa and Abia States who had more allocation to Primary Health Care per capita were observed to be performing rather poorly on some key public health outcomes (neonatal mortality, vaccination coverage and TB Case Detection Rate) than their counterparts in the same regions; Kwara, Adamawa, Kano and Anambra respectively.

7.2.3 Commitment to Health and Primary Health Care.

Since the inauguration of the 2001 Abuja declaration, Nigeria as a country has failed to implement this agreement. The inability of stakeholders, policy and decision makers to realize that health is a fundamental human right has been a major concern in the country with less priority given to health. Over the three-year period analysed in this study, the Federal Government has consistently allocated between 4% to 6% of its budget to health. This is significantly a meagre proportion of commitment to the development of the health system in the country. The attainment of Universal Health Coverage in a country who has a population of about 70% of individuals living below the poverty line (24) is imperative.

The states data for the period under review also showed that only Kano and Kwara states were able to averagely allocate about 15% of their entire budget to health. This in itself shows the lack of commitment to health throughout the three tiers of the government. This has over the years led to great inequity in the accessibility of quality health services among the difference socio-economic groups due to the over reliance on Out of Pocket expenditures. With the inability of the relevant decision-making bodies to effectively carry out deicisons on health intervntions

The Nigerian context has shown specifically that allocation is not spending, as such, it is not enough to only allocate resources for health, but the release and the proper utilization of such funds is a major concern. This further shows that it is not so conclusive to base impact

of resources on health outcome using only allocation as an indicator. Nigeria as a country and the states over the years have a customary poor release of funds allocated for health over the years (43).

There is a need for a complete overhaul of the health financing system in the country. The federal and state governments need to implement the Abuja declaration by meeting the 15% allocation to the sector. This is achievable by prioritizing health as a corner stone to governance and also increasing the fiscal space for revenue generation. The three tier of health system delivery (federal, states and local governments) need to also prioritise primary health care as a concept towards achieving Universal Health Coverage in the allocation of resources.

As it is with every other study, there are limitations in this study. Due to the unavailability of data on human resources for health in Nigeria, the data on human resources used for analysis in this study is as of 2005 with the assumption that the trend over time remain the same among states. The author acknowledges the fact that the theory might be wrong. Another limitation in this study is the data quality of states' budget utilized for the three year period under review. The states' budgets were not uniform with a lot of disparity in budget lines across states. There was no standard template adopted by the states which could influence error during data collation across budget lines.

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8. Conclusions and Recommendations

Prioritization in the health sector is a process that is specific to every context, which requires modification of methods to fit into all strata of health care. It is also a robust process involving diverse stakeholders with often conflicting interest which then brings out the political aspect. This problem exists even among the different tiers of health service delivery. The influence politics and corruption have on priority setting in the Nigeria health sector is alarming. If this is not addressed immediately, there is a risk of having continually flawed decisions on health care priorities.

The process of resource allocation by the Federal Government to states is not equitable. The horizontal sharing formula is not the way forward if the country is to achieve equity in access to health services in the country. The current preference of allocating more funds to the tertiary institutions instead of the secondary and primary facilities is not efficient. This is because the primary and secondary facilities provide essential health services to the larger proportion of the population than the tertiary institutions.

One great challenge Primary Health Care faces in Nigeria is underfunding. As seen in this study, less priority is given to the development of Primary Health Care at the grass root levels. The decision of the State Governments to often overruling the Local Government committees on allocation of resources to Primary Health Care and priority settings is not sustainable going forward if Primary health Care is to be utilized as an approach towards attaining UHC.

The analysis of data in this study highlighted the fact that there are challenges that the country needs to fix if achieving Universal Health Coverage (UHC) is on the agenda. The poor quality of data observed during analysis in this study suggest that only looking at data on allocation does not provide concrete evidence on the impact investments have on health outcomes in the country. There is a need for further research to be done to look at data on expenditure using much updated data on human resources and more quality sources of financial data for health in the country taking into consideration the diverse factors that can influence expenditure in the Nigerian context. In summary, this study shows that in Nigeria, allocation of resources for health is not enough, but following up on more stringent challenges such as corruption, budget release on time, politics and availability of quality data for decision making is imperative.

As a way forward to improving allocation of resources for health in the country, the immediate needs are for the Federal Government need to put in place a Proper financial mechanism to improve book keeping and ensure accountability in the utilization of resources for health if the country is to actualize the drive towards achieving Universal Health Coverage.

The Government of Nigeria (Federal level, State level) should consider increasing the share of the public budgets for health, to achieve the Abuja target. The use of the horizontal sharing formula for allocation of resources to states by the Federal Government need to be jettisoned. A more need based approach which takes into consideration the need and sizes of the populations across the different regions. This will ensure equity in the accessibility of funds by states which will also have an impact on the equitable access to health services.

The Federal Government of Nigeria need to provide the required leadership and governance by providing a standard template for states to adopt when projecting budgets. This will enhance transparency and accountability in the system. Also, Federal Government of Nigeria need to invest in the National Health Account to make it active and up to date as this will foster the financial coordination and utilization of resources for health in the country. A standard budgeting format should be a way forward for all the states in the country, improving uniformity and clear definitions' of thematic areas and budget lines will aid transparency in states utilizations of funds.

Fragmentation that exists in the health workforce should be addressed by the Federal Government to improve decision making, proper utilization of funds and generally the efficiency of the health sector. As such, organizing an 'open stakeholders forum' would be essential in addressing these challenges where all the relevant bodies can jointly agree on demonstrable solutions to strengthen the system. There is also the need to include requirements for robust administrative policies fostering partnership and collaboration among the stakeholders in the health sector into national health policies.

The Federal Government also needs to set up a mechanism or a department in the Federal Ministry of Health (FMOH) with the sole aim of tackling and limiting corrupt practices in the health system if the country is determined to achieve UHC.

The federal and state governments need to set up mechanisms that will ensure timely and adequate release of budgeted funds for health in the country. This could be done by giving more priority to health care when disbursing funds for governance. The national health policies should clearly state that adequate resources be spent on Primary Health Care, to ensure that public health indicators improve, in line with Universal Health Coverage.

More work is needed in the development of adequate Human Resources for Health Strategies by the federal, states and local governments. For example, future HRH strategies should be pro-poor, and should include adequate mechanisms to motivate and enable qualified health staff to work in hardship areas.

The relevant decision-making bodies[12] in the states need to be afforded the maximum capacity to make decisions in the health sector without much interference from the executive arm of the government and stakeholders. This will promote efficiency and performance of the health system at the subnational levels.

The state governments should prioritise Primary Health Care when allocating funds to health care by budgeting more resources to the development of Primary health care through the Primary Health Care Development Agencies.

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Annexes

Table 11. Neonatal Mortality and Pentavalent vaccine coverage (6)(45)

States	2018 Neonatal Mortality per 1000	Average
North Central		
FCT- Abuja	27	32
Benue	25	
Kogi	50	
Kwara	31	
Nasarawa	36	
Niger	29	
Plateau	36	
North East		
Adamawa	32	37
Bauchi	38	
Borno	27	
Gombe	45	
Taraba	37	
Yobe	44	
North West		
Jigawa	47	46
Kaduna	63	
kano	37	
Katsina	38	
Kebbi	55	
Sokoto	50	
Zamfara	33	
South East		
Abia	39	27
Anambra	17	
Ebonyi	35	
Enugu	21	
Imo	27	
South South		
Akwa Ibom	37	27
Bayelsa	13	
Cross River	32	
Delta	21	
Edo	29	
Rivers	27	
South West		
Ekiti	42	31
Lagos	35	
Ogun	15	
Ondo	30	
Osun	32	
Oyo	30	
source: DHS 2018		

States	Penta 3 vaccine coverage2016/2017	Average
North Central		
FCT- Abuja	65.7%	39.0%
Benue	57.4%	
Kogi	38.4%	
Kwara	49.1%	
Nasarawa	34.9%	
Niger	20.0%	
Plateau	45.3%	
North East		
Adamawa	37.9%	28.2%
Bauchi	18.5%	
Borno	47.7%	
Gombe	25.0%	
Taraba	16.4%	
Yobe	8.7%	
North West		
Jigawa	7.1%	13.7%
Kaduna	29.5%	
kano	15.9%	
Katsina	12.1%	
Kebbi	11.3%	
Sokoto	2.9%	
Zamfara	8.9%	
South East		
Abia	54.80%	65.90%
Anambra	76.20%	
Ebonyi	54.40%	
Enugu	73.80%	
Imo	65.60%	
South South		
Akwa Ibom	68.4%	64.8%
Bayelsa	42.6%	
Cross River	69.5%	
Delta	57.2%	
Edo	74.5%	
Rivers	66.0%	
South West		
Ekiti	72.2%	66.4%
Lagos	80.2%	
Ogun	52.1%	
Ondo	66.2%	
Osun	60.0%	
Oyo	54.1%	
source: MICS/NICS 2016/2017		

Table 12. TB Case Detection Rates by states

State	Population		Smear positive (%)		All TB		CDR		% Change
	2008	2012	2008	2012	2008	2012	2008	2012	
Zamfara	3 446 964	3 854 039	1.25	24.23	148	1185	3	24	21.18
Abia	2 996 673	3 350 570	3.94	32.86	317	1377	7	33	26.22
Jigawa	4 598 265	5 141 305	1.48	20.77	376	1533	7	21	14.07
Sokoto	3 909 210	4 370 875	2.38	47.04	445	2614	9	47	38.04
Kebbi	3 424 528	3 828 953	6.02	33.09	530	2052	9	33	23.63
Osun	3 620 049	4 047 565	3.4	52.35	513	2844	11	52	41.58
Anambra	4 422 084	4 944 318	3.82	20.53	676	1461	11	21	9.06
Akwa Ibom	4 145 231	4 634 769	4.22	39.01	652	2493	12	39	27.49
Enugu	3 444 270	3 851 027	1.86	30.95	472	1660	12	31	19.1
Rivers	5 483 047	6 130 576	1.42	26.52	753	2477	12	27	14.21
Bayelsa	1 801 132	2 013 840	2.17	26.37	270	751	13	26	13.54
Ekiti	2 521 068	2 818 798	1.11	8.98	355	477	13	9	−3.99
Imo	4 160 766	4 652 138	1.87	18.79	665	1261	14	19	4.68
Katsina	6 125 077	6 848 428	1.8	19.57	990	2211	14	20	5.2
Ondo	3 638 542	4 068 241	2.42	22.39	614	1405	14	22	7.93
Oyo	5 912 551	6 610 804	4.41	59.57	1265	6137	17	60	42.59
Delta	4 333 642	4 845 431	4.04	36.05	921	2799	17	36	18.84
Edo	3 403 067	3 804 958	5.91	34.61	807	1737	18	35	16.8
Ogun	3 942 094	4 407 642	4.24	36.12	883	2271	18	36	17.96
Kwara	2 507 192	2 803 283	2.51	25.01	237	995	20	25	4.74
Kogi	3 466 675	3 876 078	1.3	43.63	86	2262	22	44	21.45
Cross River	3 054 795	3 415 556	2.36	24.39	795	1781	24	24	0.72
Borno	4 389 475	4 907 857	2.19	24.55	1223	2009	26	25	−1.13
Taraba	2 432 800	2 720 106	7.65	61.73	834	2919	27	62	35.09
Yobe	2 454 852	2 744 762	2.93	24.01	749	1151	28	24	−3.58
Niger	4 176 997	4 670 286	2.25	23.79	240	1532	28	24	−3.93
Plateau	3 361 173	3 758 116	2.98	32.09	1702	2749	28	32	4.12
Kano	9 922 314	11 094 106	2.89	30.02	3289	5328	30	30	−0.24
Ebonyi	2298262	2569679	2.22	34.44	791	1283	32	34	2.24
Kaduna	6 414 788	7 172 353	2.23	31.34	2274	3749	33	31	−1.88
Gombe	2 488 994	2 782 936	2.29	34.28	888	1784	33	34	0.89
Bauchi	4 944 898	5 528 874	1.78	29.64	1872	2595	36	30	−6.44
Benue	4 461 432	4 988 313	4.39	61.1	3229	5895	39	61	22.37
Lagos	9 530 919	10 656 488	6.18	46.33	4848	7712	45	46	1.64
Adamawa	3 349 953	3 745 571	5.01	52.6	1681	3112	45	53	7.44
FCT	1 485 861	1 661 336	6.86	71.15	894	1983	46	71	25.38
Nasarawa	1 970 229	2 202 906	7.21	55.97	1618	2588	53	56	3.44

s/n	Name	Organisation
1	Dr Uba	FMOH
2	Mr David Abimiku	National Agency for the Control of AIDS
3	Mr Abdurahman Abdullahi	Federal Capital territory Administration

Table 13. List of Key Informants