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One Way Traffic: Nigeria's Medical Brain Drain.  
A Challenge for Maternal Health and Public Health System in Nigeria?

A thesis submitted in partial satisfaction of the requirement  
for the degree Master of Arts in African Studies

by

Joyce Imafidon

2018

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## ABSTRACT OF THE THESIS

One Way Traffic: Nigeria's Medical Brain Drain.

A Challenge for Maternal Health and Public Health System in Nigeria?

by

Joyce Imafidon

Master of Arts in African Studies

University of California, Los Angeles, 2018

Professor Deborah C. Glik, Chair

**Background:** The migration of health professionals in Africa, medical brain drain, deserves critical attention due to its adverse effects on the healthcare system (HCS) for developing nations, which indirectly impacts population health outcomes and creates greater inequity among vulnerable populations. In the case of Nigeria, the international and internal migration of medical doctors (MDs) has created a great challenge for public health systems; it worsens already weak healthcare systems, which widens the health inequalities gap worldwide. Globally Nigeria ranks among the worst countries in regards to maternal health outcomes. Although it represents 2% of the global population, it disproportionately contributes to nearly 10% of global maternal deaths.

**Aims and Objective:** The aim of this study is to examine the impact of the brain drain on Nigeria's HCS from the perspective of Nigerian MDs in the United States (US) versus Nigerian MDs who remained in Nigeria. The social ecologic model was used as a framework to examine *push factors* out of Nigeria and *pull factors* into host countries such as the US.

**Methods:** A thematic analysis of qualitative data (key-informant interviews) obtained from a convenience and snowball sample of 17 MDs residing in Nigeria and the US.

**Results:** Nearly all participants, 94% (17 out of 18), confirmed that a shortage of Nigerian medical doctors living and working throughout Nigeria exists acknowledging a medical brain drain impacting Nigeria's HCS. The medical brain drain, which exacerbates the shortage of MDs, indirectly causes adverse effects on *all health* outcomes especially maternal and child health in rural/low-resource communities.

**Conclusion:** There are many effects of the health care systems that are both directly and indirectly influenced by the shortage of available MDs such as doctor burn-out, work-related stress and medical negligence; all negatively impact patient experience, patient health outcomes and job satisfaction of MDs. Despite challenges associated with the shortage of available MDs, the Nigerian government in collaboration with health care administrators and MDs both abroad and at the home front can work towards strengthening Nigeria's health sector through various development initiatives to regulate, support and sustain the health care system.

The thesis of Joyce Imafidon is approved.

Paula A. Tavrow

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Deborah C. Glik, Committee Chair

University of California, Los Angeles

2018

## **DEDICATION**

I would first like to thank God for all of my blessing thus far. I am so grateful for my close family members and friends especially those who supported me throughout this experience. I would like to also dearly thank all the wonderful members of my thesis committee as well as others from the UCLA community who advised me anytime during this process. Lastly, I would like to thank my Aunty Osarugue and phenomenal sisters Irene and Faith for doing all in their capacity to support all my efforts and make this research possible.

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## LIST OF ACRONYMS

<b>AIDS</b>	Acquired Immunodeficiency Virus Syndrome
<b>HCS</b>	Health Care System
<b>HIV</b>	Human Immunodeficiency Virus
<b>HHR/HRH</b>	Human Health Resources/Human Resources for Health
<b>MD(s)</b>	Medical Doctor(s)
<b>MDG(s)</b>	Millennium Development Goal(s)
<b>NHIS</b>	National Health Insurance Scheme
<b>OBGYN(s)</b>	Obstetrician Gynecologist(s)
<b>SDG(s)</b>	Sustainable Development Goal(s)
<b>US</b>	United States
<b>WHO</b>	World Health Organization

## SUMMARY

In the case of Nigeria as well as many developing countries, the international and internal migration of medical doctors has created a great challenge for public health systems; it worsens already weak healthcare systems (HCS), which widens the health inequalities gap worldwide. Nigeria loses tens of millions of dollars a year from training medical doctors (MDs) who soon migrate abroad (Schrecker & Labonte, 2004). The shortage of medical professionals contributes to unequal access to health care within and between countries as well as poorer population health outcomes (World Health Organization, 2015). With its growing population, Nigeria will require a greater supply of commodities to house, clothe and feed its nation. As the giant of Africa, Nigeria will need to improve greatly their HCS by addressing both supply (e.g. patient-physician ratio, equipment/technology, infrastructure) and demand needs (e.g. wait time, service quality, treatment cost, salaries) as they are expected to become the third largest population in the world by 2050 (United Nations, 2015b).

Most current scholarship on the brain drain focuses on common push and pull factors (e.g. economic, social, political, etc.) of migrants who migrate from low income or conflict countries into a developed or stable host country. However, more research is needed to understand the direct effects of the medical brain drain on Nigeria's HCS. In addition, tangible solutions to reduce the degree of which medical doctors migrate are lacking. The aim of this study is to examine the impact of the brain drain on Nigeria's HCS from the perspective of Nigerian MDs in the United States (brain drain population) versus Nigerian MDs who remained in Nigeria (human health resource population). The social ecologic model was used as a framework to examine push and pull factors. The methodology consisted of a thematic analysis

of qualitative data (key-informant interviews) obtained from a convenience and snowball sample of 17 MDs residing in Nigeria and the US.

Overall, nearly all participants, 94% (17 out of 18), confirmed that a shortage of Nigerian MDs living and working throughout Nigeria exists acknowledging a medical brain drain impacting Nigeria's HCS. The medical brain drain, which exacerbates the shortage of MDs, indirectly causes adverse effects on *all health* outcomes especially maternal and child health in rural/low-resource communities. Key issues identified by participants included work environment, infrastructure development, medical supplies, retention of MDs, health education and training programs, safety of MDs and medical tourism/negligence. Findings showed the shortage of MDs in Nigeria is exacerbated by both international and internal migration. Nevertheless, poverty along with lack of government accountability in developing the health sector is underlying factors weakening the health care system.

In the case of the medical brain drain, pull factors should be analyzed not only as a narrative depicting problems in one's home country but also as a guideline that encourages leaders to critically analyze these concerns and propose insightful solutions. Moreover, for countries affected by the medical brain drain, push factors are more tangible areas for change. Government and health care administrators have greater agency in tackling driving push factors that lead to rapid emigration compared to pull factors that are generally beyond their control and at the discretion of the host countries.

## INTRODUCTION

The migration of skilled workers and persons of post-secondary education from developing to developed nations is widespread; for host countries, the annual inflow of thousands of skilled workers contributes to the rise in intellectual capital, labor supply and economic growth for the country. Push and pull factors are largely responsible for the outflow of skilled workers especially medical professionals; many who are motivated by driving forces (*pull factors*) such as the demand for skilled labor in developed nations, economic and social opportunities and greater political security. In addition, some are pushed to leave their home country (*push factors*) due to workforce challenges such as poor working conditions, low salary/remuneration and power dynamics between medical doctors and their supervisors (Anyangwe & Mtonga, 2007). Overall, the migration of health care workers, *medical brain drain*, jeopardizes efforts to strengthen health care systems in their home country.

Sub-Saharan Africa already has one of the poorest population health outcomes (e.g. under 5 mortality and maternal mortality) as well as the greatest healthcare needs (e.g. HIV/AIDS, post-abortion care services, infrastructure, etc.) (Anyangwe & Mtonga, 2007). African health care systems endure both structural and systematic challenges making it difficult to provide effective health services in critical areas. In addition, Sub-Saharan Africa disproportionately bears 25% of the global disease burden while representing only 14% of the world population and having about 3% of the global health workforce (Misau, Al-Sadat & Gerei, 2010; World Population Review, 2017). The shortage of medical professionals in Sub-Saharan Africa is largely attributed to the brain drain of medical professionals (Hagopian, Thompson, Fordyce, Johnson & Hart, 2014). The density of the health workforce is directly correlated with positive

health outcomes as medical professionals are essential to saving lives and improving health outcomes (Anyangwe & Mtonga, 2017).

In the case of Nigeria, the medical brain drain proposes a great challenge for public health and health care systems. It widens the health care debt from educating and training medical professionals in the country who leave. Nigeria loses tens of millions of dollars a year from training doctors who migrate abroad (Schreckner & Labonte, 2014). Nevertheless, the shortage of medical professionals contributes to unequal access to health care within and between countries as well as poorer population health outcomes (World Health Organization, 2015). Globally Nigeria ranks among the worst countries in regards to maternal health outcomes. Although it only represents 2% of the global population, it disproportionately contributes to nearly 10% of global maternal deaths (World Health Organization, 2015). Due to its high maternal mortality ratio, Nigeria also ranks as the leading contributor to all maternal death figures in Sub-Saharan Africa despite its relatively high gross domestic product (Babalola & Fatusi, 2009).

### ***From Millennium Development Goals 2015 to Sustainable Development Goals 2030***

In order to contextualize the importance of the brain drain issue for population health in developing countries, understanding the underlying reasons that health indicators are hard to change is needed. One way to understand these linkages is to look at the way that the United Nations has reconceptualized how the world development community now defines appropriate development goals for health and why. In 2000, the United Nations launched the Millennium Development Goals (MDGs), eight ambitious goals ranging from health, inequality, education, partnerships and environmental sustainability. The ultimate goal of the MDGs was to reduce global health disparities and increase women's empowerment. In 2004, the High Level Forum on

MDGs noted that without resolving the human resource for health shortage in Sub-Saharan Africa, many of the MDG goals would not be reached (World Health Organization, 2004). Despite the achievements of the MDGs in 2015, Sub-Saharan Africa still held the highest rates of maternal and infant mortality in the world. Most health outcome successes occurred in Western and developed nations but not yet in many parts of Asia and Africa. A child under 5 years old born in Africa has a 1 in 8 chance of survival as compared to the United States of America (US) of 1 in 130 or 1 in 167 for developed countries (United Nations, 2015a). In addition to the economic and infrastructure setbacks of developing nations, it has been argued that Sub-Saharan Africa's failure to meet many health indicator outcome targets set in an era of using the MDGs framework, resulted heavily from their inability to address the shortage of available health care workers.

The Sustainable Development Goals (SDGs), launched in 2015, aims to combat all forms of inequality, poverty and climate change by 2030. Similar to but more comprehensive than the MDGs, it encompasses of a variety of topics ranging from education, economic development, health and more. The SDGs are comprised of 17 goals with general targets followed by multiple indicators; the idea is that countries regardless of income and development level can set achievable and measurable goals in increments by 2030 (United Nations, 2016b). SDG 3 calls for good health and well-being: the overall goal is to ensure healthy lives and promote well-being for all age groups. SDG 3 is measured by numerous health outcome indicators including maternal mortality ratio, under-five mortality, neonatal mortality, HIV incidence, malaria incidence, tuberculosis incidence and more (United Nations, 2016a). Moreover, the SDG 3 calls for a substantial increase in the health human resource density and distribution especially in least developed and developing countries (United Nations, 2016a). The SDGs indicate that efforts



must be made not only to recruit and train health professionals but also to retain the health workforce in developing countries (United Nations, 2016b). Thus it suggests that more distal or upstream determinants of health must be considered before major shifts in health outcome indicators are feasible, including assuring a viable health infrastructure. Revisiting results from the MDG, it is critical that greater achievements are reached globally and not just the wealthiest nations.

### ***Medical Brain Drain in Sub-Saharan Africa and Nigeria, A Public Health Concern?***

The emigration of health professionals in Africa deserves critical attention due to its adverse effects on the healthcare system for developing nations, which indirectly impacts population health outcomes and creates greater inequity among vulnerable populations (Pang, Lansang & Haines, 2002). The medical brain drain “worsens the already depleted healthcare resources in poor countries and widens the gap in health inequities worldwide” (Pang, Lansang & Haines, 2002, p. 499) An effective health care system (HCS) delivering optimal and accessible primary, secondary and tertiary care services cannot operate without adequate staffing of trained and devoted health professionals.

On October 1, 1960, Nigeria gained its independence from Britain. Today Nigeria, which consists of thirty-six states and more than 250 languages and ethnic groups, is the most populated country in Africa and has one of the highest gross domestic product in the continent (Central Intelligence Agency, 2018). In 2015, the estimated population of Nigeria was 182 million (United Nations, 2015b). With its growing population, Nigeria will require a greater supply of commodities to house, clothe and feed its nation. As the giant of Africa, Nigeria will need to improve greatly their health care system by addressing both supply (e.g. patient-physician ratio, equipment/technology, infrastructure) and demand needs (e.g. wait time, service quality,

treatment cost, salaries) as they are expected to become the third most populous country in the world by 2050 (United Nations, 2015b). If Nigeria plans to achieve health indicator outcomes recommended in the SDGs, Nigeria must focus more attention on increasing and retaining their health human resource supply as well as infrastructure and service demands in order to meet the overwhelming needs of its growing population.

In this thesis, I examine how the low supply of human health workforce specifically medical doctors exacerbates structural and systematic flaws in the Nigerian healthcare system. These challenges (e.g. low density of healthcare workers per population, increased wait time, doctor burn-out) indirectly lead to poor outcomes for five major health indicators specified in the World Health Organization (WHO) and United Nations (UN): neonatal mortality, infant mortality, under 5 mortality, maternal mortality and HIV/AIDs mortality. If Nigeria wishes to attain the mortality rates identified in the Sustainable Development Goals 2030, policy-makers must look beyond primary and preventative health and address the medical brain drain of Nigerian health professionals both internationally and internally. By addressing social determinants of health and the medical brain drain, as well as advocating for overall development initiatives, public health officials can help advance the goal of a well-equipped and accessible health environment that will lead to better health outcomes for all.

## RESEARCH OVERVIEW

### *Terminologies and Definitions*

Brain drain is a subcategory of emigration. The term focuses on the outflow of human resources; specifically individuals who have attained higher education or are highly skilled who settle temporarily or permanently in a host country often of high(er) social-economic level for trade or employment. The term, *brain drain*, was introduced in the 1960s to capture the large number of trained professionals mainly teachers, scientist and physicians seeking greater economic and social opportunities in developed nations (Schnidman, 2006). The brain drain of healthcare workers is defined as “the movement of health personnel in search of a better standard of living and life quality, higher salaries, access to advanced technology and more stable political conditions in different places worldwide” (Misau et al., 2010, p.1). Although brain drain is usually used in the context of cross-border and international migration from developing country to developed country, it can also occur internally from rural areas to urban areas (Misau et al., 2010).

In this thesis, I will use the terms *medical professional(s)* interchangeably with *healthcare professionals, health care workers and/or health workers*. The WHO defines healthcare workers as “all people engaged in actions whose primary intent is to enhance health” (World Health Organization, 2009, p. 3). This includes allied health professionals and technical staff. Health workforce will be used interchangeably with health human resource (HHR) and human resources for health (HRH), which the WHO defines as “all people engaged in actions whose primary intent is to enhance health. These human resources include clinical staff such as physicians, nurses, pharmacists and dentists, as well as management and support staff – those

who do not deliver services directly but are essential to the performance of health systems” (World Health Organization, 2009, p. 3). The terms HHR/HRH will refer primarily to physicians, which will be addressed as medical doctor (MD). The brain drain of medical doctors will be reference throughout this study as *medical brain drain*.

### ***Research Aims***

There is evidence that the quality of health care is positively correlated with the number of healthcare workers, “especially in the domains of immunization coverage, primary care, and infant, child and maternal survival” (Anyangwe & Mtonga, 2007, p. 97). Medical professionals are the driving force of health care systems that provide treatment and care while preventing disease, reducing risk and relieving pain and suffering for patients. Their health knowledge, skills and training, are vital in reducing the disease burden (Anyangwe & Mtonga, 2007). Furthermore, “they play a critical role in maintain and sustaining the health of a country’s human resources” (Nigeria Health Watch & NOIPolls, 2017, p. 5). As a result, medical doctors will be the target population to be considered in this study of Nigeria’s medical brain drain.

This paper will examine how the migration of Nigerian-born medical professional to high socioeconomic status countries for permanent settlement negatively impacts Nigeria’s healthcare system (HCS) and brings many additional challenges for public health. This paper focuses on medical professionals due to their importance in the delivery of public health care services; they are the foundation of a strong health system’s core value (Anyangwe & Mtonga, 2007). The social ecologic model will be used as a framework to assess which levels and factors lead to the *push* out of Nigeria and *pull* into the United States of America (US). While Nigerian medical personnel also immigrate to other high-income countries, due to both resources and access I am using the US as proxy for numerous places where Nigerian MDs emigrate. The study will also

explore push and pull factors of Nigerian doctors who remained in Nigeria whether voluntarily or involuntarily.

### ***Research Questions***

The research questions that guide this study are:

- (1) How do Nigerian medical professionals perceive the nature and scope of the medical brain drain problem in Nigeria?
- (2) What push and pull factors influence migration patterns of Nigerian medical doctors abroad and in Nigeria?
- (3) What can be done to reduce the medical brain drain, retain the current human health workforce and encourage a brain gain?

### ***Chapters Outline***

This first section will consist of a literature review assessing previous research on the brain drain in Sub-Saharan Africa and Nigeria and its impact on health. Next will be the methodology used for this qualitative study involving Nigerian-born medical doctors working and residing in Nigeria and the United States of America. The third section will provide the key findings and emerging themes. The fourth section will conclude with the results, further discussion and policy implications.

## LITERATURE REVIEW

### *Maternal Health Outcomes in Nigeria*

The use of maternal health services is associated with improved maternal and neonatal health outcomes (Babalola & Fatusi, 2009). Babalola and Fatusi (2009) examined various determinants that impact the use of maternal health services among Nigerian women beyond the individual and household level. A sample of 2,148 women who had given birth within five years from the 2005 National HIV/AIDS and Reproductive Health Survey in Nigeria were followed. The researchers found that at the state-level, the ratio of primary health care facilities to the population presented as an underlying factor associated with the use of maternal health services among Nigerian women. There was an association between the number of available PHC facilities, the number of residents and their usage of services. In addition, the researchers found that the greater “the number of residents served by a PHC in the state, the less the odds that women would use antenatal care services” (Babalola & Fatusi, 2009, p. 6).

In addition, there were disparities between place of birth (rural versus urban) as well as age range during time of birth delivery among those whose last live birth was assisted by a qualified medical professional such as a medical doctor, nurse or skilled midwife (Babalola & Fatusi, 2009). The percentage of last birth delivery assisted by a qualified medical professional among those surveyed was 43.4%. Those in rural regions were less likely to have a qualified medical professional attend during their last birth delivery at 32.1% compared to urban region at 68.8% There was a right skewed relationship between age group and attendance of a qualified medical professional at delivery: 29% of those between age groups 15-19 reported having a qualified medical

professional assist their birth delivery compared to 50.9% of the 30 to 34 age group and 43.1% of those 40 years or older. Lastly, respondents also commented on the shortage of available health professionals especially in primary health facilities as a barrier to receiving medical attention. Respondents further explained that this shortage of available medical professionals dissuaded them from seeking medical attention for antenatal services as well as during the onset of labor. Babalola and Fatusi (2009) findings reveal further disparities among Nigerians' access to maternal health services that must also be addressed moving forward. In addition, it reveals the negative impact the shortage of maternal health facilities and medical professionals has on patients in need of maternal health services. The medical brain drain is partially responsible for the shortage of available maternal/primary health facilities in both remote/hard-to-reach and population dense regions.

### ***Human Resources for Health Supply in Nigeria***

Although Nigeria holds one of largest supplies of human health resources in Africa, there still persists a shortage of medical professionals needed to deliver critical health services effectively (Global Health Workforce Alliance, 2018). Global health expert and medical doctor Stella Anyangwe argues that countries with the highest burden of disease ought to have the greatest number of health care workers; however this is not the case today and has never been the case. In fact in 2006, 42% of the world's health care workers resided in the Americas while 3% resided in Sub-Saharan Africa (Anyangwe & Mtonga, 2007). Sub-Saharan Africa has the lowest density of healthcare workers in the world (Anyangwe & Mtonga, 2007). In Nigeria, the latest World Health Organization reporting on the density of physician ratio is 4 per 10,000 population and

density of nurse and midwives is 16.1 per 10,000 population (Global Health Workforce Alliance, 2018). In the US, the density of physician ratio is 24.5 per 10,000 population and density of nurse and midwives is 98.1 per 10,000 population (World Bank, 2018). Nigeria has continuously failed to meet the United Nations' recommended minimum level of health workforce density at 2.5 health workers per 1,000 population (25 per 10,000 population).

Adeloye et al. (2017) study explored causes of the recent health workforce crises in the Nigeria health sector occurring 2010 to 2016 and proposed preventative measures for future health crises. The researchers pointed out the irony of a “rapidly changing developing economy with a weak national health system governance and shortage of human resources for health” (Adeloye et al., 2017, p. 2). They noted that Nigeria has a relatively weak health system with a health workforce density estimated at 1.95 per 1000 population, way below the United Nations' minimum of 2.5 health workers per 1000 population. The cause of Nigeria's health workforce crises is influenced by several factors including missed salaries, deteriorating health facilities, poor welfare and divisions among health workers, but most important of all poor health leadership (Adeloye et al., 2017). In regards to Nigeria's booming population and collapsing health care system, the researchers recommended along with other resolutions to the health sector, supplying additional health care workers to cover the population in combination with other solutions (Adeloye et al., 2017).

Agboghoroma and Gharoro (2015) study investigated the coverage and distribution of registered obstetrician/gynecologist in Nigeria from July 2012 through December 2013. Using a national survey extracted from the Society of Gynecologist and



Obstetricians in Nigeria (SOGON), the researchers identified an estimate of 968 obstetrician/gynecologists (OBGYNs) in the county at the end of 2013; therefore, there was approximately 1 OBGYN for every 181,458 persons considering the projected population size in 2013 (Agboghroma & Gharoro, 2015). The researchers found that there were disparities among geopolitical zones in Nigeria; the southwest held the highest number of OBGYNs compared to the northeast with the lowest number. Lagos state had the highest number of OBGYNs with a concentration of 18.5% of the OBGYN workforce (Agboghroma & Gharoro, 2015). Furthermore, the majority of OBGYNs listed were males at 87% (846 out of the listed 968) which the researchers noted may have social implications for women who may refuse emergency services performed by male health providers due to cultural or religious reasons. Lastly, the findings show that there is an inadequate supply of OBGYNs in view of population size, and coverage varies greatly across states and regions; coverage within states are unequal with greater concentration of OBYNs in cities and towns compared to rural areas (Agboghroma & Gharoro, 2015). In conclusion, improving maternal health outcomes and reducing maternal mortality ratio involves more than additional training and engagement but equitable distribution of OBGYNs across the country (Agboghroma & Gharoro, 2015).

### ***Medical Tourism in Nigeria***

Medical tourism is a recent phenomenon that occurs when individuals seek medical attention internationally for their health care needs (Abubakar et al., 2018). Today, medical tourism serves as a privilege for wealthy politicians and citizens in need of urgent and advanced medical attention. In November 2009, former Nigerian President Umaru Musa Yar'Adua traveled to Saudi Arabia for medical attention; he would not

return to Nigeria until February 2010, dying a few months after his return (Soyombo, 2017). On January 19, 2017, President Muhammadu Buhari of Nigeria took an unannounced medical leave presented as a 10-day vacation to the United Kingdom (UK). He soon extended his stay for an unspecified number of days for medical treatment. Nearly two months later, President Buhari returned to Nigeria on March 10, 2017 and designated Vice President Yemi Osinbajo to serve as acting president (Busari, 2017). Various media sources criticized President Buhari calling his vacation a cover-up for his deteriorating health and privilege to seek medical treatment abroad (Busari, 2017; Soyombo, 2017). The luxury to travel abroad for medical attention speaks to a larger issue about Nigeria's healthcare system. To what extent is medical tourism related to the brain drain of medical professionals? A second question that arises is, what is lacking in the health care system that leads Nigerians to seek medical attention outside of the country?

In Abubakar et al. (2018) study, the researchers examined the effects of medical tourism on Nigeria's health sector. According to the Price Waterhouse Coopers (2016) report, Nigerians spend an estimated 1 billion USD on medical tourism each year. Abubakar et al. (2018) argue that approximately 1.2 billion USD is lost to medical tourism annually in Nigeria rather than invested into the health care system. Abubakar et al. (2018) study revealed that due to the collapsing health care system in Nigeria, medical tourism is rapidly becoming normalized within Nigerian culture: about 5,000 Nigerians seek medical advice abroad monthly (Abubakar et al., 2018). As a solution, they proposed a model for the Nigerian government that increases funding for the health sector to improve health facilities and equipment, increases remuneration and work

conditions for health care workers, supports medical research and additional training for health care workers, encourages foreign investment, enforces legal action against medical negligence and most importantly bans government sponsored medical trips abroad for government officials. The researchers argued that the ban is needed as a step towards patronizing Nigerian hospitals. Also, the government must lead by example to their citizens who follow in the pattern of medical tourism (Abubakar et al., 2018).

### ***One Way Ticket: Desire to Migrate***

According to a poll measuring the desire to emigrate in 2008-2010, the Organization for Economic Co-operation and Development found that 44% of Nigerians sampled would permanently move if they had the opportunity to do so. The results for the higher educated, women and youth age 15 to 24 reported were 43%, 42% and 53% respectively (Organization for Economic Co-operation and Development, 2012). The top three destination countries listed in order were United States, United Kingdom and Saudi Arabia (Organization for Economic Co-operation and Development, 2012). About 4 in 10 people of Nigeria's educated population expressed some desire to emigrate (Organization for Economic Co-operation and Development, 2012). Furthermore, Nigeria endures a second challenge of internal medical migration from rural areas to concentrated areas. The Global Health Workforce Alliance found that the delivery of tertiary health care services and medical professionals are heavily concentrated in southern Nigeria, especially in Lagos, the former capital now the commercial capital. The Global Health Workforce Alliance identified 5 key reasons that have led to internal migration of health care workers from rural to urban settings: 1. Lack of public and private sector coordination, 2. Ethnic preferences in hiring, 3. Commercial pressures in the private

sector, 4. Poor and discouraging work environment, and 5. Lack of planning for staffing projection needs (Global Health Workforce Alliance, 2018).

### ***Shortage of Maternal Health Professionals In Sub-Saharan Africa***

Gerein et al.'s (2006) study discussed the implications of health professional shortages for maternal health and health services in Sub-Saharan Africa. Inequitable distribution of health professionals between geographic areas and public to private health facilities is also highlighted. Understaffing in rural and poorer regions impacts the availability of skilled birth attendants and emergency obstetric services. The researchers attributed the depletion of health professionals in Sub-Saharan Africa to two factors: emigration and ill health due to HIV/AIDS in health workers. Other push and pull factors for Sub-Saharan Africa include poor salary, job dissatisfaction, organizational environment and availability of resources. Therefore, the researchers argue that the health workforce situation in Sub-Saharan Africa is in crisis.

Gerein et al. (2006) study reiterated that Sub-Saharan Africa experiences the greatest burden of maternal mortality and ill-health compared to all other regions. Overall, maternal mortality rates remain highest in Sub-Saharan Africa ranging from 24 in Mauritius to 2,000 in Sierra Leone maternal deaths to 100,000 live births. They explored how the shortage of health professional impacts maternal health through two inter-related processes: effects on existing workforce and efforts on maternal health care. Effects of shortages on maternal health care include: increased workload, increased wait-time for patient, reduced time for patient, poorer infection control. Additionally, effects on the existing workforce associated with maternal health care included “restricted availability of and access to services, and reduced volume and quality of services.” For

maternal health professionals, the shortages were associated with increased workload and job dissatisfaction. Nevertheless, Gerein, Green, and Pearson (2006) found an association with the shortage of health professionals to poor quality of care and higher maternal mortality rates.

The researchers drew attention to the importance of available skilled and literate health providers specifically midwives, nurses, doctors and obstetricians' all are essential in "assuring high quality antenatal delivery, emergency obstetric and post-natal services" (Gerein, Green & Pearson, 2006, p. 40). Furthermore, they argued that it is impossible to secure maternal health without "attention to the recruitment and retention of health professionals" (Gerein et al., 2006, p. 40). The researchers demanded that governments must incorporate efforts that address the shortage of maternal health professionals into overall human resources policy in order reach global targets on maternal health. However, they acknowledged that, "adequate number and distribution of health professionals are necessary, but not sufficient" (Gerein et al., 2006, p. 47). In combination with the supply of maternal health professionals, health care workers must provide quality care that meets professional standards while also sensitive to mothers and communities (Gerein et al., 2006). Nevertheless, the health sector and macro-economic development policies must be restructured with a focus on equity and strengthening the role of the state. At the national level, the researchers suggested that African governments work with higher-income host countries to negotiate reduced recruitment strategies (Gerein et al., 2006). Other recommendations proposed include task shifting physician duties to alleviate the shortage, improved workforce planning, and increasing recruitment

through training opportunities and requirements for recent graduate to work in public sector for a fixed term (Gerein et al., 2006).

### ***Maternal Health Financing in Nigeria***

The Ebeigbe (2013) study evaluated the fairness and equitability of financing for maternal health in the Nigerian health system. In Nigeria, maternal mortality rates are among the worst in the world, with an estimated 59,000 maternal deaths per annum, which is 545 deaths per 100,000 live births (Ebeigbe, 2013). Ebeigbe argued that various past attempts by the Nigerian government to reduce maternal mortality rate have been ineffective. As a solution, she proposed a financing review of maternal health in Nigeria in order to “achieve universal access to maternal health care” (Ebeigbe, 2013, p. 140). Ebeigbe criticized Nigeria’s National Health Insurance Scheme (NHIS) created in 1999 to provide financial coverage and access to good health care services. Yet, Ebeigbe found that the NHIS has failed to cover families and individuals across all income groups. As solutions, Ebeigbe recommended that Nigerian Government value all human life and remove out of pocket payments or set an acceptable nationwide minimum. At the same time, Nigeria should implement a fair universal health coverage program that includes free maternal care services for all (Ebeigbe, 2013). Despite the solutions proposed, Ebeigbe’s policy recommendation lacks a comprehensive model that looks beyond financial fixes; the Nigerian government must also incorporate a strategy that address the demand and supply side of the available health work force.

### ***Emigration of Nigerian Medical Doctors 2017 Report***

The 2017 Emigration of Medical Doctors: Survey Report released by Nigeria Health Watch and NOIPolls surveyed 705 Nigerian-born medical doctors living in

Nigeria and abroad. The mixed-method study also conducted 26 key-informant interviews with medical doctors in the Federal Capital Territory located in Abuja, Nigeria (Nigeria Health Watch & NOIPolls, 2017). The online survey assessed the experiences of and challenges of Nigeria's healthcare workforce from the perspective of licensed Nigerian MDs at junior, mid- and senior level. The report revealed that the vast majority, 88%, of Nigerian MDs are seeking work opportunities abroad preferably in the United States and the United Kingdom while all participants indicated knowing a Nigerian-born MD practicing medicine abroad (Nigeria Health Watch & NOIPolls, 2017). In addition, junior level MDs were more likely to express the desire to migrate at 91% compared to senior level MDs at 73% (Nigeria Health Watch & NOIPolls, 2017). On the other hand, senior level MDs were more likely to indicate strong patriotism to Nigeria as a reason *not* practice medicine abroad compared to any other MD level group. At the time of the study, approximately 72,000 medical doctors were registered with the Medical and Dental Council of Nigeria with about 35,000 practicing in the country in 2015. Using the WHO recommended doctor-to-patient ratio, one finds that a shortage of roughly 303,333 MDs in Nigeria exists. As a result, Nigeria will need to produce and retain around 10,605 new MDs annually to attend to the growing population (Nigeria Health Watch & NOIPolls, 2017).

Interestingly, a majority of participants, 87%, believed the Nigerian government is *not* concerned regarding the challenges endured by medical doctors. The top three push factors out of Nigeria discussed were: 1. high taxes and deductions from salary (98%), 2. low work satisfaction (92%) and 3. poor salaries and emoluments (91%) (Nigeria Health Watch & NOIPolls, 2017). In contrast, major pull factors to desired host countries

included: better quality of life, better work facilities/environment, higher remunerations and opportunities for career progression and professional advancement. Major areas for intervention advocated by participants included upgrading hospital facilities and equipment, increasing healthcare funding and improving work conditions for health workers (Nigeria Health Watch & NOIPolls, 2017). In order to reduce the number of MDs who wish to migrate, participants advocated that better salaries, more funding in health sector and better work environment as top three solutions (Nigeria Health Watch & NOIPolls, 2017).

In conclusion, the medical brain drain is an ongoing crisis that needs to be quickly resolved given the rising population and the increasing demand for health care services. The Nigeria Health Watch and NOIPolls (2017) suggest a grassroots approach that expands beyond government intervention and towards a collaborative effort among members of the general public, civil society organizations and all other stakeholders is key to strengthening the health care system in Nigeria. Overall, the major challenge in Nigeria's health care system is attributed to poor health financing which negatively impacts both the health provider and patient. As one solution, a reformed National Health Insurance Scheme that serves more than just the minority 1% of the population must be implemented. Other resolutions included improving the work environment, greater resources in health facilities, improving treatment of MDs by supervisors, stronger public-private partnerships and increased professional development and career opportunities for MDs as essential steps to strengthen the health care system and reduce the medical brain drain (Nigeria Health Watch & NOIPolls, 2017). This report provided additional insight into the medical brain drain from the experiences of Nigerian medical



doctors in Nigeria and abroad that has policy implications for the Nigerian government and health care system.

## METHODOLOGY

### *Study Design*

The research was conducted with a qualitative study that used a descriptive conceptual approach to explore and compare the experiences and perspectives of Nigerian-born medical doctors residing in the United States of America (Group A) versus Nigerian-born medical doctors currently residing and practicing medicine in Nigeria (Group B). This study employed qualitative data collection methods using key-informant interviews conducted on phone and in-person across the United States and Southern Nigeria. This facilitated an in-depth exploration of the medical work and educational experience of Nigerian-born trained medical professionals. The study was conducted in October and November 2017 in Southern Nigeria, and from April to June 2018 in the United States of America. The University of California, Los Angeles Human Research Ethics Committee granted ethical approval for this study (Institutional Review Board, Project number: #17-000736).

### *Sample and Recruitment*

Study participants were recruited using convenience sampling (advertisements - flyers, social media) and snowball sampling (referrals) approach. Participants were categorized into two comparison groups based on location: *Group A* consisted of Nigerian-born medical doctors working and residing in the United States of America, *Group B* consisted of Nigerian-born medical doctors currently working and residing in Southern Nigeria. Eligibility was determined by a screening survey completed by potential candidates (via e-mail, phone or in person) prior to the start of the study and/or

interview. In addition, interested candidates had to meet all four of the criteria unless granted exemption from the principal investigator.

***Sample Size and Sample Demographics:***

Due to time and resource constraints, the study size was 18 doctors. Participants ranged in age from 25 to 70, with 4 months to 35 years of work experience. In total, there were 5 females and 13 males. Participants were assigned to age groups, *younger, middle or older based* on exact age, age range, graduation year or number of years of work experience information given at time of interview. The three age range groups included younger age (~25 -34), middle age (~35 – 49) or older age (~50+).

***Group A: Residents of the United States***

Demographics of the 7 participants in Group A consisted of 2 females and 5 males with medical experience ranging from 5 years to 35 years at the time of the study. Ages varied between 30 through 70s years of age. All participants were certified medical doctors who specialized in the following areas: obstetrics/gynecology, internal medicine, hepatologist, gastroenterology and pathology. Participants were recruited from the following states in the United States of America: California, Illinois, Massachusetts, Pennsylvania and Wisconsin. The majority of Group A participants (5 out of 7) trained in Nigeria while the remaining (2 out of 7) studied medicine in the US. All interviews with participants in Group A were conducted over the phone with the PI.

**Table 1: Demographic Table of Group A Participants –Residents of US**

Alias Name/ Participant	Gender	Age Range	Years Worked	Specialty	Location	Trained
1. Zara Ige	Female	Younger	5	Internal Medicine	Massachusetts	Nigeria/USA
2. Tommy Okoth	Male	Younger	6	Internal Medicine	Pennsylvania	Nigeria
3. Chikere Davidson	Male	Middle	14	Pathology	Indiana	Nigeria
4. Sekai Amazu	Male	Older	30+	Gastroenterology, Hepatology and Endoscopy	Massachusetts	USA
5. Elliot Ololade	Male	Older	35	OBGYN	California	USA
6. Odion Okeke	Male	Middle	~15	Gastroenterology	Illinois	Nigeria/USA
7. Gbemisola Brooks	Female	Middle	~15	Internal Medicine	Indiana	Nigeria/USA

\*Age range defined: younger (~25 -34), middle age (~35 – 49), older age (~50+)

### **Group B: Residents from Nigeria**

Demographics of the 11 participants in Group B consisted of 3 females and 8 males with medical experience ranging between 5 months to 25 years at the time of the study. Age range group varied between 25 through 55 years of age. All participants were certified medical doctors who specialized in obstetrics and/or gynecology. All participants were recruited from one central private women and children’s hospital in south-south geopolitical region of Nigeria (1 state). Nearly all Group B participants, 91% (10 out of 11) received their medical training in Nigeria while one completed medical training in Europe prior to returning to work as an obstetrician/gynecologist doctor in Nigeria.

**Table 2: Demographic Table of Group B Participants –Residents of Nigeria**

Alias Name/ Participant	Gender	Age Range	Years Worked	Specialty	Location	Trained
1. Chukwudie Chydie	Male	Middle	17	OBGYN	Nigeria	Nigeria
2. Alex Ayomide	Male	Middle	~15	OBGYN	Nigeria	Nigeria
3. Jabilo Tyler	Male	Younger	~10	OBGYN	Nigeria	Nigeria
4. Adanna Orjie	Female	Younger	~5	OBGYN	Nigeria	Nigeria
5. Sarah Adesanya	Female	Older	10+	OBGYN	Nigeria	Nigeria
6. Jaha Stone	Female	Younger	5 months	OBGYN	Nigeria	Europe
7. Obi Akachi	Male	Middle	~10	OBGYN	Nigeria	Nigeria
8. Dominic Eniola	Male	Middle	~15	OBGYN	Nigeria	Nigeria
9. John Bakano	Male	Older	14	OBGYN	Nigeria	Nigeria
10. Ebele Uchechee	Male	Younger	13	OBGYN	Nigeria	Nigeria
11. Sean Abiodun	Male	Older	8	OBGYN	Nigeria	Nigeria

\*Age range defined: younger (~25 -34), middle age (~35 – 49), older age (~50+)

### ***Inclusion Criteria***

The specific inclusion criteria for enrollment for participants in Group A were: 1. medical doctors preferably specializing in obstetrics, gynecology, obstetrics/gynecology, internal medicine, family medicine and/or pediatrics with consideration for candidates of additional specialties, 2. Received compulsory education and/or medical training in Nigeria, 3. Currently practicing medicine (including residency, fellowship, research or private practice) in the United States, 4. Currently residing in the United States for at least ten years with consideration of exceptions. Additional criteria include English-speaking for the purpose of the interview. An exception to any criteria was at the discretion of the principal investigator.

The specific inclusion criteria for enrollment for participants in Group B were: 1. medical doctors preferably specializing in obstetrics, gynecology, obstetrics/gynecology, internal medicine, family medicine and/or pediatrics with consideration for candidates of additional specialties, 2. Received compulsory education and/or medical training in Nigeria, 3. Currently practicing medicine (included residency, fellowship or private practice) in Southern Nigeria for at least ten years, 3. Currently residing in Southern Nigeria. Additional criteria include English-speaking for the purpose of the interview.

### ***Consent and Compensation***

This was a voluntary study. Participants in the study provided oral consent to participate via phone or in-person to the principal investigator prior to participating in the study. Participants also received information sheets via e-mail for reference. Eligible participants were informed that they could withdraw from the study at any time or refuse to answer any questions. There was no monetary compensation for participation.

### ***Measurement***

The two interview guides focused on four areas: 1. demographics, 2. opinions on Nigeria's health care system, 3. emigration history and 4. medical work experience. All participants provided demographic information about their medical specialty, location of medical training/education, average years worked as a MD, current residency, age range, family status and gender. For the opinion on Nigeria's HCS, participants responded to questions concerning the shortage of MDs, migration patterns of MDs as well as the impact of the medical brain drain in hospitals, maternal and child health and overall health sector. For emigration history, residents of the US (Group A) responded to questions concerning when they moved, why they moved (push and pull factors), future intentions to resettle in Nigeria and current involvements (if any) in Nigeria. On the other hand, residents of Nigeria (Group B) were asked about their initial intention to move (if any), where and why and if there have any future intentions to resettle and practice medicine abroad. Lastly, all participants answered questions regarding their work experience as a MD in Nigeria and/or the United States and their level of job satisfaction. All participants provided recommendations for the Nigerian government and health care administrators based on their experiences. Participants were free to ask any questions or add any additional information they felt necessary.

### ***Data Collection and Analysis***

One-on-one phone and in-person key-informant interviews were conducted to collect detailed descriptive accounts from participants. Based on the two participant groups, two versions of the interview guide were developed to capture the differences among those who are members of the medical brain drain population versus those

impacted by the medical brain drain population. Socio-demographic data including age range, gender, medical specialty and state of residence were collected prior to each recorded interview voluntarily to assist in the interpretation of research findings.

Interview guides were used to assist the principal investigator (PI) for the key-informant interviews, which were recorded via tape recorder and transcribed verbatim by the PI.

The PI took written notes during interviews in order to note responses requiring further follow up. The PI developed questions after conducting formative research and literature reviews exploring the medical brain drain and state of Nigeria's health care system.

Question topics included work experience, reason to emigrate/remain in Nigeria, medical school experience, opinion on health care system, emigration history/interest, medical brain drain impact and recommendations. The research advisors reviewed the interview guides prior to its administration to participants.

To analyze the collected data, Dedoose (mixed methods and qualitative research software version 4.0), a web-based application program to organize and analyze data, was used. A thematic analysis approach was used. Responses were coded and grouped into categories. Next, themes and sub-themes were assigned to each section using constant comparative method between each interview transcript. Participants were randomly assigned gender specific names provided by the *fantasy name generator* website chosen from the Nigerian Yoruba, Nigerian Igbo, Nigerian Hausa and English random name collections (Fantasy Name Generator, 2018).

## RESULTS

### SECTION 1: PUSH FACTORS OUT OF HOME COUNTRY

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*You are looking at the patient and that patient feels you are the one that don't want to see them, not knowing that the facility to actually meet the needs of the patient is not there and you end up referring patients you see very seriously that you ought not to refer to an environment of which they will end up dying along the way. So, looking at all these reasons, you want to go to a place where things are working, places where the patients are taken serious. –Dr. Obi Akachi (male, middle, Nigeria)*

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#### ***Shortage of Medical Doctors***

There was agreement among all participants that no single reason explains the migration of Nigerian Medical Doctors (MDs); the cause of the medical brain drain is complex and multilayered, it combines several push and pull factors based on ones experience, environment, needs and desires. The shortage of MDs leads to longer wait-times in health facilities. This discourages patients from prioritizing preventive health appointments as well as seeking medical attention when critical. For women and children, the shortage of available MDs impacts the accessibility and quality of care received which can lead to negligence and poor health outcomes. Many participants noted how the shortage of MDs and its negative impact on population health outcomes is a driving force that leads Nigerian MDs to seek work opportunities abroad. The shortage of MDs is associated with extreme doctor burn-out/work-related stress and underperformance of existing MDs.

Dr. Elliot Ololade (male, older age, California) has been regularly returning to Nigeria to participate in medical missions in collaboration with the Association of Nigerian Physicians in the Americas. He is aware of the current shortage of MD in



Nigeria and confirms, “ I know there’s a shortage because I go to Nigeria and I see the quality of medicine that they have. Most often, Nigerian specialists are all out in either in the UK or in the United States or other parts of the world. There is a shortage of specialists in Nigeria and there’s a shortage of physicians in Nigeria.” Other participants illustrated this shortage of MDs by calling attention to the high patient-to-doctor ratio throughout their facilities, state and nationally as well as absence of MDs in hard to reach regions.

One participant commented on the hospital on-call system. Dr. Dominic Eniola (male, middle age, Nigeria) noted the hypocrisy of the call system, which he argued puts the health of the doctors at risk at the expense of patient health and satisfaction. He described,

*You are preaching health and you are even stressing yourself. That is not good. I don’t know where we got our own practice from where you’re on call, the normal working hours is 8 to 4, then if you are on call its 4 to the next morning 8, then you still work the next morning 8 to the 4 before you are off for the day. And God help you if you are in a situation where there is a shortage of man power, so you have to do that every other day, and that’s terrible. You are not super human.*

In Nigeria, the call-system requires MDs to work 24-hour shifts during times of manpower shortages and medical emergencies. He associated the on-call system with greater work-related stress which he implies leads other MDs to seek work opportunities abroad in less demanding work environments.

### ***Doctor burn-out and work-related stress***

Many participants agreed doctor burn-out, a psychological syndrome comprised with emotional exhaustion, cognitive weariness, depersonalization, physical fatigue and

reduced personal achievements, as well as with work-related stress caused by overwhelming work demands pushes more MDs, especially young MDs to migrate (Aguwa, Nduka & Arinze, 2014). Due to the shortage of available MDs, existing MDs overwork themselves (e.g. on-call shifts, extended shifts) to attend to as many patients as possible. Dr. John Bakano (male, older age, Nigeria) underlines the consequences of working longer shifts and seeing more patients than recommended. In the following except he explains,

*you are working above your limit, reasons to have some challenges and emergencies that you might not be able to handle, and some mistakes will also come up, and along the line, the health sector suffers, the patient suffers, and the doctor is not able to put in his best, because he is wearied up, because after doing the call, 24 hours, 48 hour call, the next day, he is still on call, and still struggling to give his best to the environment, it's challenging.*

Doctor burn-out and work-related stress negatively impacts the quality of care delivered to patients especially expecting mothers in maternal health facilities. It creates a work environment more concerned with quantity (e.g. the number of patients attended to by the doctor) rather than quality (e.g. the health outcome and satisfaction experience of the patient). Dr. Ebele Uchechee (male, younger age, Nigeria) reiterated how the shortage of MDs impacts the quality and quantity of care MDs provide their patients especially in the maternal and child sector. He explained,

*you see a consultant seeing over 200 patients, that is not how its supposed to be, and the more patients you see, the less time you attach to each of them and the less efficient you are in finding people who are high risk, that also boils down to the increase of patient not seeing a doctor, because waiting time is very, very long for a lot of them, and you also affect the health care of the women and unborn child.*

When considering the growing demands of participants to increase the salary/remunerations of MDs especially in population dense communities, MDs are not

compensated for their sacrifice of leisure time. Nevertheless, the disregard for their own mental and physical health to meet the needs of others is a direct result of the doctor burn-out and work-related stress they experience.

### ***Work environment, Health facilities and lack of equipment***

Another push factor out of Nigeria highlighted was the poor work environment found throughout various state and federal health facilities. Poor working environment was strongly associated with job dissatisfaction among participants. Participants defined poor work environment as health facilities that lacked medical equipment new/technologies (e.g. oxygen tanks, blood supply, testing labs), poor operation function (e.g. lack of electricity) and poor infrastructure (e.g. building deterioration, lack of space).

One main challenge associated with Nigeria's poor work environment and lack of medical supplies in the health sector was patient health outcome. Some participants linked the poor work environment and its effects on patient outcomes as another reason some MDs migrate. Dr. Tommy Okoth (male, younger, Pennsylvania) recalled his experience working in Nigeria as a MD and the poor work environment. Based on his observance, he currently invests back in Nigeria's health facilities by supplying in demand medical equipment needed to perform at optimal level. He points out, "they should build good hospitals, oxygen. I worked in a hospital where there was no oxygen before I left. There was no oxygen, patients literally passed away because there was no oxygen." Working in health facilities that lack the basic tools needed to attend and treat patients makes the profession as MD nearly impossible. Nigerian MDs want to work in

fully equipped and functioning health facilities where they have all the necessary tools to best serve all patients regardless of condition.

### ***Low Salary/Remuneration***

All participants expressed frustration with missed, late and refused payments. In addition, all participants mentioned that the poor salary received as MDs in Nigeria is the principal reason many MDs, especially recent medical student graduates, migrate. This also causes many state and local level health facilities that often pay lower salary/remuneration compared to federal and private centers to experience a shortage of available MDs. Participants explained that the need for higher pay in order to provide not only for themselves but their families. When asked what would lead to fewer doctors to emigrate, Dr. Tommy Okoth states, “salary is also important, because doctors want a good remuneration. They want to work and want to be appreciated because you need to take care of yourself and your family.” There was a strong sense of collectivity among MDs in regard to ensuring an overall better standard of living for their family (e.g. parents, spouse, children).

In the following excerpt, Dr. Dominic Eniola detailed why low salary/remuneration leads some Nigerian MDs to migrate. He called attention to the low pay in poor resourced communities and tougher work conditions arguing that with the current conditions, the medical brain drain will continue. He illustrated,

*if at the end of the day, there is no difference between the man in the home that has to make all the sacrifice and stay in the area where there is no light, no good road, no water, with his degree... at the end of the month he does not even get his salary, and he can't complain? If he complains he becomes a scapegoat, and you expect him to continue to enjoy it. So if he has a better opportunity he has to move, so that is why migration will continue in Africa.*

Dr. Dominic Eniola response shows that MDs want to be compensated not only for their amount of time but for the amount of extra work they put in in work environments with greater demands.

Dr. Sean Abiodun, who has worked as a MD and consultant in the OBGYN department, confirms that in Nigeria a typical MD consultant makes an average of N400,000 (~1100 USD) a month compared to a MD working at the state level earns between N200,000 to N700,000 a month equivalent to ~\$500 to ~\$1900 (1 USD = ~ 360 Nigerian Naira). This equates to between N2.4 million to N8.4million or \$6630 to \$23,210 a year. On the other hand, a typical OBGYN as of 2018 in the United States can earn an average yearly salary of \$179,000--as low as \$136,000 and as high as \$304,000 (Glassdoor, 2018). Participants indicated that most MDs choose to migrate to Western countries such as the US, UK and similar nations due to the pay MDs receive which generally is about 10 to 15 times more than if they remained in Nigeria. In other words, Nigerian MDs desire to be financially secure and live comfortably, rather than paycheck to paycheck as found in Nigeria.

### ***Treatment of Medical Doctors***

Some participants mentioned how the government portrays MDs in a negative light, such as greedy, lazy and complainers. This negative portrayal of MDs affects the leverage that they have in the work place to advocate for themselves. Dr. Ebele Uchechee (male, younger, Nigeria) called attention to the unfavorable image for doctors created by Nigerian government. He suggested negative images discredit the needs and importance of MDs in Nigeria at the political level. In the following except, he explained,

*“Now, in Nigeria, doctors are...they see us as people who are always after money, and like going to strike and all because of the way the government has actually make us to look like in their eyes. The government has actually blackmailed the doctors and feels that they are giving us so much... So we have a bad image and doctors are not respected over here.”*

In addition to the negative image associated with the MD profession, some participants noted that the condescending treatment of MDs by their supervisors discourages MDs from remaining not only in the country but also in the health sector. Dr. Dominic Eniola (male, middle age, Nigeria) exposed the lack of sympathy of supervisors revealing their disregard for doctor's dedication. He commented, “the only thing they worry and remember is when you come late to work, and they remind you that you were late to work, but when you spend extra time, maybe you were supposed to close by 4 and because of work you have to close by 8, it's off record. But the day you come 9 o'clock when you should come by 8, it's an issue.” Poor treatment by supervisors and disregard by government officials leads MDs to seek opportunities abroad as well as open their own private practice leading to greater shortage in local, state and federal health facilities.

The safety of the doctor both in and outside of the workplace was listed as another major area of concern. This potential risk causes some MDs' decision to leave the country or seek work opportunities in more affluent and safe neighborhoods. Some participants revealed cases where supervisors and patients verbally or physically abuse MDs. Dr. Ebele Uchechee exposed incidents of doctor abuse by a patient. He stated, “you see cases where patients fight doctors, beat doctors, in our experience, it's very common over here and the government does not care, they feel that we should put the patient first and spare your life last.” In addition, there have been cases where MDs have been taken advantage of by community members due to MDs perceived status as wealthy. In fact,

MDs are sometimes charged higher rates for the same basic necessities (e.g. food, clothes).

Some participants also noted how the potential risk of being kidnapped serves as a safety concern that pushes MDs to leave. Dr. Jabilo Tyler (male, younger, Nigeria) warns about the risk of being a target for ransom due to the belief by some community members that MDs are rich. He explained, “even if you go outside you are afraid to tell people that you are a doctor...you are looking left and right because people might kidnap you.” This fear may lead MDs to consider opportunities in secure countries especially among many MDs who may be the head of their household financially.

### ***Job Dissatisfaction***

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*“We are just trying to sustain the system, it’s just that we love the profession, and we find out that not everybody can go over there, someway somehow someone must stay behind.”*

*–Dr. Seun Abiodun (male, older age, Nigeria)*

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Participants from both groups reported job dissatisfaction as an individually determined push factor for Nigerian MDs especially young MDs who do not have job fulfillment. Job dissatisfaction was discussed in various ways: inability to perform at optimal level, inability to efficiently treat patients, inability to satisfy patients during appointment and lack of enthusiasm in the profession. All participants noted that MDs want to be satisfied in their profession, well compensated and able to satisfy and treat their patients to the best of their ability. Dr. Jabilo Tyler (male, younger, Nigeria) admitted that he experiences daily job dissatisfaction. He comments that the inability to be satisfied as a MD is a fear of all MDs. In fact, in Nigeria, it is not clear “whether you can achieve your highest dream and aspiration under the system and the way it is wired.”

This fear of not being able to achieve job fulfillment due to the numerous barriers and systematic flaws beyond the individuals control leads many Nigerian MDs to seek opportunities abroad in countries and areas associated with job satisfaction.

### ***Family Abroad***

One female participant's account revealed how the importance of family can influence one's decision to stay or leave a particular place. For Dr. Gbemisola Brooks (female, middle age, Indiana), family in the context of marriage resulted to her migration to the US in 2005 after completing her medical education in Nigeria in 2003. She explains, "I basically came to America because of marriage...I was married and my husband was here so I had to join him." Her desire to unite with her family speaks to the reality of other individuals especially those with family or spouses already abroad as the weighing decision to migrate.

Alternatively, the collectivist culture in Nigeria, which creates expectations for the breadwinners in the family to take care of their family members, can lead some Nigerian MDs to seek opportunities in countries that allow them to provide greater financial support to their family. One year after graduating from his medical program in 2005 from the University of Nigeria, Ibadan, Dr. Chikere Davidson (male, middle age, Indiana) moved to the US to specialize in pathology. Currently, he has been practicing medicine for approximately 14 years. For him, moving to the United States presented him a greater opportunity to financially support his family. He confessed, "I do not have any regrets. Because I cannot change an entire nation, but I am doing my best... I'm here to take care of my family." For some participants, being able to join a spouse/family abroad or resettle internationally to better support family is ingrained in Nigerian culture. Both



cases showed that Nigerian MDs also make life decisions based on the needs of their family and loved ones.

### ***Poor Medical Education System***

Participants who attended medical school in Nigeria discussed how challenges experienced in the medical programs might discourage medical school students and recent medical graduates from working in Nigeria's health sector. The majority of participants residing in Nigeria recalled their medical school experience as one of structural and economic hardships. Four major areas discussed include: 1. Quality of education/training received, 2. Disruption of study due to teacher/facility worker strikes, 3. Medical school quota system, and 4. Difficulty financing education.

Theory-based teaching was classified as a push factor out of Nigeria's health sector because of its inability to fully prepare medical students and doctors with practical skills critical to treating patients. Some participants criticized the lack of adequate facilities and medical equipment available in the schools. Dr. Jabilo Tyler (male, younger, Nigeria) recalled his medical education received as outdated and thus caused preventable stresses; he states, "if our education system was 21<sup>st</sup> century compliant, some of those stresses will not have been there." This theory-based teaching led to difficulties later on in the medical practice field. Dr. Adanna Orjie (female, younger, Nigeria) also underlined the challenge with the teaching method received in south-south Nigeria. In the following excerpt she associates a limited theoretical teaching as a hindrance to the performance of Nigeria MDs,

*"Lecturers have the theoretical background and theoretical knowledge but because we do not have the facilities on the ground, there is no practical. We just study theory, but where is the equipment or facility you are talking*

*about? How are we going to use it? It is not even available in the first place. So we are focused more on theoretical knowledge, and because equipment and facility is not available, doctor knowledge is a bit lower than other countries with adequate facilities.”*

Due to these reasons, she justified “most people, especially the young graduate, their first option is to travel out if they have the opportunity.” Dr. Adanna Orjie’s comments revealed the difficulty with retaining recent graduate doctors.

In addition, some called attention to the unjust quota system designed to delay potential medical doctors from advancing. Some participants indicated that their medical education programs were intentionally designed to fail students as a way to accumulate excess revenue from exam fees and re-enrollment fees. Dr. Dominic Eniola explains,

*In Nigeria, you see 1000 people write an exam, the board will sit down and say you will not pass more than 10 people and they will be happy, that 1000 people sit for an exam, 990 fail the exam and you ask them to come back and reenroll for the exam, and they are happy that they are making success. And the annoying thing is even the same success you are making from it, is not even honored abroad, across boundary.*

Due to this unjust quota system, Dr. Alex Ayomide (male, middle male, Nigeria) attributes the success of passing exams with being lucky and having a strong religious faith. In his experience, he recalls, “it was tough, it was hell. We say in quote, in spiritual, you do not pass if you are not in line with God. You will not pass, they can fail you for any reasons, if you are not loyal they fail you.” Dr. Alex Ayomide further elaborated that due to these quota systems, it is also harder to get into medical school now compared to the past due to reduced enrollment spots. This leads potential medical doctors to study medicine abroad ultimately settling in their host country after completing their programs to practice medicine abroad.

Lastly, some participants discussed the challenge with financing their medical education program as well as the difficult with the selection process to enter programs. As a result, some potential MDs look towards medical programs abroad that can provide them both entrance into a competitive medical program and financial support. Dr. Sekai Amazu (male, older age, Massachusetts) came to the US as an international student to pursue his medical education and career in medicine after he was denied entrance to medical school in Nigeria. Dr. Sekai Amazu's story reveals the challenge with the selection process to enter medical school in Nigeria. Dr. Sekai Amazu, whose first choice was medicine followed by pharmacy, was accepted to study economics which he explains, "I never applied for which tells you about how the process works. I probably would have tried again (reapply to medicine) if I hadn't gotten the opportunity to come here." His reason to emigrate was due to his strong desire to pursue medicine. At the same time, he received financial support offered from Yale University. When first considering medical school, Dr. Sekai Amazu confesses, "I did not have a penny....Yale took me without any concern about my finances...Thought I was good enough... And then they worked really hard to make sure I could find a way to fund my education...." For some, these challenges within the Nigerian medical education system pushes both potential and young MDs to consider further education, training and work opportunities abroad early in their medical careers to void other hardships observed in Nigeria's health sector.

## **SECTION 2: PULL FACTORS OF HOST COUNTRY**

### ***Financial Security***

All participants associated Western countries with financial security, which was explained as higher salaries and other subsidies. Most participants stressed the importance of a competitive salary to compensate for the time and effort required in the profession. Financial security allows MDs to support themselves and/or family members more easily. Some participants argued that most Nigerian MDs abroad are financial secure even those who are unable to practice medicine in their host countries. Some participants compared the salary received by MDs abroad to those who remained based on findings from colleagues working in the health sector abroad. Higher salaries in combination with financial security remains one of the greatest pull factor that encourages Nigerian MDs especially young MDs, prospective MDs and those with families to practice medicine abroad.

### ***Better Work Environment***

There was a general consensus among participants that Western countries provide a fully equipped, functional and supportive work environment. Participants further elaborated that these health care facilities in developed nations have secure infrastructure and adequate space, modern medical technologies and supplies, electricity/water supply and more, all of which allow MDs to best perform. In addition, some participants also expressed admiration for professional development opportunities such as further education and specialty training abroad. Therefore, most Group B participants residing in Nigeria described the health work environment in the West as better overall, especially due to its adequate supply of medical equipment, technologies as well as human health resource staffing. These assumptions were based on accounts from colleagues working in health sectors abroad. These opportunities, which many participants indicated Nigeria

lacks, verified by their colleagues abroad play a key role in the decision whether to leave and where to migrate to among some MDs in Nigeria.

### ***Job Satisfaction/Fulfillment***

Most participants expressed the importance of job satisfaction as MDs and believed that most Nigerian MDs migrate to fulfill their dreams. Job satisfaction was understood as having the opportunity to practice medicine without structural barriers (e.g. lack of equipment/supply) and being able to receive rewarding compensation. Other areas noted include positive and professional treatment by supervisors and patients as well as working in an environment with minimal work-related stress and doctor burn-out. Most participants associated job satisfaction/fulfillment as MDs with developed nations specifically the United States based on realities from colleagues abroad.

The ability to best serve patients motivates many MDs and adds to their job satisfaction. In the following excerpt, Dr. Sarah Adesanya (female, older, Nigeria) elaborated on patient survival rate and patient satisfaction as components of job satisfaction,

*a typical gynecologists sees the satisfaction when they see what he or she has been nursing regarding the antenatal care of the patient, and suddenly at the point where you want to labor the woman, where everybody should be happy, but there is fear, one, there is no light, two, there is no ambulance service to get a strong hand, or there is no blood in the blood bank, system failure, they are unhappy. That is the strong thing there is system failure. The condition of service where you are working, they are not put in place.*

MDs want to practice in places where they feel fulfilled as MDs and satisfied with their job, work environment and achievements. The ability to satisfy patients in Nigeria is often jeopardized due to poor working conditions in health facilities. This suggests the

selflessness of some MDs who desire to work in areas where patient survival and patient satisfaction is expected.

### *Competitive Medical Education System*

Many participants expressed the desire to study medicine abroad, specifically in the West, in order to acquire practical skills and a well-rounded education. The majority of participants who received their medical training in Nigeria critiqued the theory-based method taught across numerous medical programs in Nigeria. They believed that due to the lack of medical equipment and modern technologies, the knowledge and skills of Nigerian MDs are limited compared to their colleagues abroad. In the following excerpt, Dr. Sarah Adesanya (female, older age, Nigeria), “these doctors they want to actually see all these things they read in book, and go over there to not just read those things but do those things, operate in those facilities, which is a very important one and also to improve their knowledge of health care in general.” As a result, many prospective MDs prioritize medical education programs abroad.

Dr. Sekai Amazu (male, older age, Massachusetts) noted how the West offers competitive medical education and training programs that allow Nigerian MDs to become experts in various health tracks. He explained that in Nigeria, “there’s not much of an opportunity to grow, to specialize...for most young people who go into medicine...they want to go to places where there’s an opportunity to continue growing within the field.” This leads to further shortages as prospective MDs leave early in their medical careers to host countries. In fact, medical education programs in the West continue to attract not only prospective MDs in Nigeria but also current MDs who look forward to further education and medical training in more competitive health education systems. Dr.

Dominic Eniola (male, middle age, Nigeria) admired how his colleagues in the West achieve academic success. He explained, “there’s has been cases of people who came out... did not do so well in their school here, but when they have an opportunity to go abroad, you see them coming out with flying colors.” Stories of academic success and leadership in the West motivate other potential Nigerian MDs to seek education and employment opportunities abroad rather than contribute to Nigeria’s health sector.

### **SECTION 3: MAIN CONTRIBUTORS TO THE MEDICAL BRAIN DRAIN**

#### ***Politics and Government***

Accounts from participants revealed how the Nigerian government contributes to the medical brain drain in various ways. In fact, some argued that Nigerian government continuously fail to make the health sector a priority moving forward despite constant advice from health care professionals. Dr. Jabilo Tyler (male, younger age, Nigeria) warned that the shortage of MD will become worse due to the lack of attention the brain drain issues receives from the government. Dr. Sean Abiodun argued that the Nigerian government is aware of the problem. He stated, “they know the problem, they know that doctors are leaving everyday. They are supposed to be a driver to encourage doctor to stay here because if there is good remuneration, there is good equipment, there is facilities to work in Nigerian doctors will not travel abroad.” According to some participants, the Nigerian government does not address lingering issues or provide any support where needed. Some participants provided examples of strikes led by health care workers at various times, which usually go unresolved by the government.

Dr. Sekai Amazu (male, older age, Massachusetts) highlighted government’s involvement in the collapsing health care system. In the following excerpt he informs,

*they are also part of the problem. If they really do want their doctors who get training to stay then they need to take the steps to make sure that they are trained properly, they are compensated better than they are. And that they have the opportunity to grow with that job... So the government should be concerned but I think they also need to realize that they are not doing much.*

In agreement, most participants added that without attention and direct action from the Nigerian government, the shortage of MDs will reach a point where there are no remaining doctors. Dr. John Bakano demanded that more be done beyond government acknowledgement of the collapsing HCS. Instead, there must be more discussion pertaining to tangible resolutions. He adds, "I know they are concerned to an extent. But what are they doing about it? It's not enough to be concerned, but do something about it!" Acknowledgement is the first step to change. However, it cannot be the only step in the process to strengthen the health sector.

From personal experience trying to appeal to the Nigerian government and Ministry of Health to address the collapsing health care system, Dr. Elliot Ololade took active steps with a group of Nigerian MDs in the US to negotiate a strategic plan with the Nigerian government. In the following excerpt he explained,

*What we had in mind was to see how we could begin to reverse the brain drain into brain gain... During the Obasanjo administration, we had a meeting with the Minister of Finance Okonjo-Iweala, who wanted us to come and build hospitals in Nigeria. We came back here, brought the expectees, brought some willing physicians but the Nigerian government failed to even just co-sign a loan on our behalf, an international loan that we will get to build this specialty care hospital in Nigeria. They refused to even co-sign a loan, so that effort that we made just went to nothing.*

Dr. Elliot Ololade's account revealed the negligence of the Nigerian government concerning the health sector. The Nigerian government failed to uphold their



commitment to Nigeria's HCS by declining to sign off on health initiatives such as medical professional approved projects and critical loans.

Other examples noted by participants included the poor government financing of the health sector. Specifically, some participants called attention to the federal and state budget allotted to the health sector as too low. In fact, there are constant requests from health professionals who advocate for higher investment in the health budget. One participant accused Nigerian government of redirecting finances for the health sector for other projects and surplus income.

Furthermore, the ability to partake in medical tourism results to greater negligence among Nigerian politicians who prefer to seek medical services abroad. Many participants note the hypocrisy among government officials to overlook their own health care systems. Some argued that medical tourism further exacerbates the weakening health care systems because it leads some politicians to abandon their duty to a health care system they themselves do not prefer to use. Dr. Obi Akachi expressed his disappointment with the Nigerian government regarding the health sector. He emphasized that medical tourism insinuated a lack of concern with the state of health care in the country. He stated that medical tourism among politicians is associated with political corruption. He explained, "there is this kind of a mindset that the African leaders have, so what they do is that they prefer to go outside the country to receive their health care needs...because they don't see health as anything, because they can fly their private jet outside of the country to get health care." Some Nigerian government officials do not fully engage in sustainable projects to strengthen the HCS because they can take advantage of advanced health care systems abroad. Medical tourism allows some to take

advantage of unfair resources to live as private citizens unaffected by a collapsing health care system in their country.

### ***Self-Destructive Health Care System and Poor Health Care Facilitates***

Many participants critiqued the structure of Nigeria's health care system and revealed the health system is designed to not only to fail its patients but to fail its doctors. As a result, future MDs are discouraged from entering the health care system in Nigeria while current MDs continue to look for ways out of Nigeria's health sector. Specifically, participants discussed how the self-destructive system discourages MDs due to challenges beyond the individual control. Participants listed main examples at the systematic and organizational level such as health facilities that lacked adequate medical supply and technologies, power supply, operation space/infrastructure, unaffordable treatment/ non-existent insurance plans for patients, health budget cuts and understaffing with lead to overworking MDs beyond their capacity for minimal to no pay.

In support, Dr. Jubilo Tyler (male, younger, Nigeria) expanded on the unsupportive nature of Nigeria's health care system. In the following excerpt he states

*the chances or the potential of achieving your highest dreams and ambitions they are not fulfilled by the system itself and they are rigorous but the system should not be a hindrance for you to get to your highest peak or aspiration. If there is a hindrance it should be because of the individual capability not being able to reach it not the system coupling with the individual's capability.*

Dr. Jubilo Tyler argued that there is system failure in Nigeria's health care sector due to factors beyond the individual working against MDs. He advised, "the system itself should not be working against the dreams and aspirations of its own members." Doctors are

unable to perform at optimal level and reach their goals which also negatively impact the health care system overall.

Most participants who had previously worked in Nigeria's health sector explained that poor health care facilities contributed to the medical brain drain. Participants detailed how many hospitals and clinics lacked basic supplies including medical equipment and technologies. In addition, it lacks maintained building infrastructure and operation space within facilities. Lack of medical supplies (e.g. oxygen tanks, blood supply, medical beds) as well as infrastructure needs (e.g. electricity/lighting, hospital rooms, offices) make it difficult for MDs to best serve many patients they see.

Nevertheless, one great concern that negatively impacts Nigeria's HCS is the difficulty for patients to access quality pharmaceutical drugs prescribed by doctors due to cost and non-existence health care insurance coverage. Dr. Odion Okeke (male, middle age, US) attended the University of Nigeria and worked two years in Nigeria prior to migrating to the US. He recalled his challenge with Nigeria's National Health Insurance Scheme (NHIS). In the following excerpt, he explained,

*I think some of the challenges were that in Nigeria, we have a lot of patients that pay for their drugs and medical treatment. So any treatment you give to the patient you have to take into consideration their ability to afford the treatment. So some patients do well if they can afford their medicine, some have to do alternative medicine...and in terms of that there's a lot of counterfeit medication, so these are some of the challenges that happens in Nigeria...As well as doing diagnostic test, if you want to do blood test, you have to pay for it...in third world countries like Nigeria that is a huge challenge that is different from here.*

Today, the NHIS is non-existent in Nigeria. It fails to provide financial assistance to cover medical cost, prescription medicine, treatment and diagnostic testing to the vast majority of patients regardless of social-economic status and their employment sector.

Dr. Odion Okeke also exposed that there is no federal regulation overseeing pharmaceutical drugs to be tested, labeled, prescribed, shelved or sold in Nigeria. There are two challenges: 1. The risk of purchasing fraudulent or ineffective medication, which impacts patients' ability to complete their treatment and 2. doctor's inability to fully treat their patients who require pharmaceutical drugs. This leads to poor health outcomes, as many patients are unable to fully afford complete care and therefore unable to fully treat their health issue.

### ***Medical Education Program***

The majority of participants who received their medical education at public institutions in Nigeria regardless of age group and year of study endured various challenges (e.g. finance, organizational, teaching instruction, retention rates, graduation time), which discourage prospective MDs from completing their medical education and entering the health care sector. Many emphasized the initial challenge of becoming a MD, which begins from entrance exams into medical school. After completing compulsory education, students are assigned to specific disciplines based on exam scores. This selection process further reduces the number of potential MDs in Nigeria especially among Nigerians who aspire to practice medicine but are denied.

Upon entrance into medical school programs, students are faced with various structural and social-economic barriers (e.g. finance, family demands, quota systems) that prevent them from succeeding academically. The most discussed was the quota system, which further reduces the number of potential MDs and therefore leads young MDs to seek medical education or training opportunities abroad in more competitive health care systems and education programs. Other organizational limitations include the shortage of

available professors and lack of instructional medical equipment and technologies to facilitate teaching. Dr. Gbemisola Brooks recalled her hardship due to the lack of resources in her medical program. In the following excerpt, she explained,

*medical school in Nigeria is quite poor. We don't have all the resources that we needed. Even the basic things like accommodations and things like that. We had to sit for the lectures and they were all problems. And we had to struggle for everything. There were so many things that I read in the book that I never saw.*

Theoretical base teaching instruction was found mainly in medical programs that lacked medical equipment and technologies often due to low budgets and understaffing of professor. Specifically, government funded medical schools lacks finances not only to support students in their studies but also to provide the basic supplies needed to strengthen medical education programs.

Some participants who completed their medical education in Nigeria noted the extension of completion time due to ongoing strikes led by faculty and facility workers. These ongoing strikes, often due to overwhelming work demands as well as low and late payments, were so common that some participants were delayed graduation time between 1 to 2 years. Dr. Adanna Orjie rated her medical education experience as, “good, bad, but generally okay.” She discusses how the intensity of the strikes disrupted her graduation completion time almost an addition 2 years. In the following except she states,

*there were a lot of deficiencies. First of all, we do not have a well-structured calendar, that is one. And then we have strikes, different strikes, doctors going on strike, lecturers going on strike, nurses going on strike, facility workers going on strike, and all those things have an impact on us, because we then have to skip so many things, and then, our medical training, I did in Nigeria was supposed to be 6 years, but most times its beyond 6 years. I spent up to 8 years, 7 years plus, going up to the 8th year just because of the strikes*

Disruption of academics and graduation time due to ongoing strikes was a common occurrence among participants. In fact, most participants affected by strikes revealed an average delay time between 1 to 2 years. Participants' experiences showed that lecturer strikes were not a new phenomenon; both older and younger generation of Nigerian MDs were affected by strikes during their various enrollment times.

#### **SECTION 4: BEING A NIGERIAN MEDICAL DOCTOR TODAY**

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*We are just trying to sustain the system, its just that we love the profession, and we find out that not everybody can go over there, someway somehow someone must stay behind. – Dr. Seun Abiodun (male, older, Nigeria)*

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##### ***Medical Qualifications Abroad***

Recent medical graduates from Nigeria who migrate to the United Kingdom must pass the Professional and Linguistic Assessment Board (PLAB). Similarly to the UK, the United States, another popular destination for Nigerian MDs, also requires licensing prior to practice. International MDs must pass the United States Medical Licensing Exams (USMLE). For Nigerian MDs, it is possible to take certain USMLE exams prior to arrival in the US. However, one participant noted the difficulty to pass the exams. Dr. Gbemisola Brooks completed her medical education in Nigeria prior to migrating to the United States and completing the USMLE. Due to the difference in her training received in Nigeria, she had to enroll in extra courses to prepare her for the exams. She described the difficulty some Nigerians endure prior to taking the USMLE, such as financing the exams which leads to them working part time to pay their expenses. In the following excerpt, she clarified,

*it's quite competitive...when you come here you have to take the USMLE that's United States licensing exam and there are four levels of it and of course they are very expensive. So if you have support, you can actually study and just take your exams. If you don't have enough support you have to work while taking the exams. Then even the things and materials that you have to read for the exam they are quite expensive and majority of Nigerians that come here due to visa issues they come as maybe students, public health and everything. So you have to be doing the course and studying so it's quite challenging.*

Dr. Gbemisola Brooks noted that after passing examinations, MDs previously trained in Nigeria must also enroll in residency programs to satisfy further qualifications. She discusses how specific requirements often lead MDs trained in Nigeria to take on additional preparation. In the following excerpt she explained,

*then when you finish studying and have the license and start applying for residency, many schools have many requirements that are sort of unsuitable for us. Multiple want you to be within five years of graduation and many of the schools don't recognize any work experience that you have from the third world countries. So majority of us have to look for doctors that you can shadow, do some internship, to get a piece of US medical experience before you start applying. So it's challenging but it's doable.*

Although the United States and United Kingdom (UK) allow for oversea trained MDs to practice in their country, passing the qualifying exams still entails additional measures that Nigerian MDs must prepare which often require additional years of study, training, courses and finances to achieve this goal.

### ***Life as a Nigerian Medical Doctor in Nigeria***

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*Most hospitals are not fully funded and they have limited resources to care for the many patients they have. –Dr. Zara Ige (female, younger, Massachusetts)*

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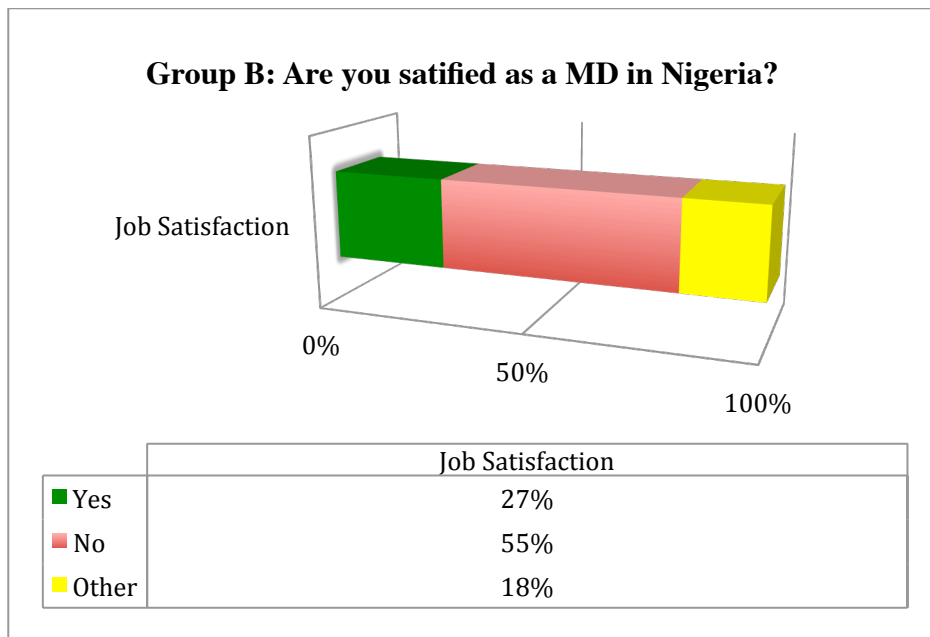
Participants who had previously worked in Nigeria's health sector were asked to discuss their overall experience and any challenges within the Nigerian HCS. Few participants who worked in Nigeria recalled an overall positive experience despite some hardship. These participants indicated that their passion for the profession outweighs the cons of working in an understaffed, under equipped and poor structured work environment. Those who expressed job satisfaction credited patient satisfaction and career fulfillment as main explanations. Dr. John Bakano looks forward to successful birth deliveries, which he states, "that is our drive as doctors." For him, the opportunity to serve and satisfy patients is more rewarding than the salary/remuneration. Similarly to his colleague, Dr. Sean Abiodun (male, older, Nigeria) highlighted his admiration for the profession as a determining factor in his job satisfaction. He states, "so its quite fulfilling because my dream has come true, because when I was small in the secondary school, my aim, ambition was to become a doctor and of course a consultant and now I am a consultant, I am happy, I am happy at least to a large extent." Dr. Sean Abiodun's satisfaction is heavily attributed to his ability to fulfill his goal to become a MD in Nigeria despite the hardships in the field.

All participants who previously worked in Nigeria, referenced limited resources in the health facilities, understaffing and work-related stress. Among Group B participants currently residing and working in Nigeria, 55% of participants (6 out of 11) expressed that they are unsatisfied in their profession as MDs in Nigeria. Only 27% (3 out of 11) find their career experience satisfying while the remaining 18% (2 out of 11) indicated a response of, "other," indifference due to experiencing both pros and cons in the field. The top 4 common responses explaining job dissatisfaction included: 1. Poor



work environment, 2. Concerns for safety/distress, 3. Inability to reach ones’ highest potential and 4. Negative image/treatment associated with profession as MDs.

**Figure 1:** *Job Satisfaction as a Medical Doctor Among Residents of Nigeria –Group B*



In the experience of Dr. Zara Ige, she noted how lack of resources negatively impacted doctors’ performance. She states, “the only greatest challenge was availability of resources, which I found very challenging. There’s many things you read in books that we never get to see, and many procedures we know how to do, but we don’t do it for lack of resources.” It is critical that medical supplies and health technologies are available in the work place especially due to the limited education training of medical students who expect to use these tools in the field. Dr. Tommy Okoth (male, younger, Pennsylvania) who studied medicine in Nigeria, worked 3 years as a MD before immigrating to Pennsylvania to specialize in internal medicine. Dr. Tommy Okoth noted, “I think we were really limited in terms of how much we can offer a patient, I didn’t know what it is

now but then, basic amenities were lacking. There were lots of mortality and morbidity that could have easily been prevented, that we couldn't do anything about then." Dr. Tommy Okoth account presents how the lack of resources also leads to greater risk of mortality and morbidity among patients.

### ***Life as a Nigerian Medical Doctor Abroad***

#### ***Reflections***

While Group A participants (Residents of US) were asked about their current experience working and residing in the United States and their level of satisfaction and/or regrets, participants in Group B (Residents of Nigeria) were asked to envision the realities of Nigerian MDs abroad mainly living in North America or Europe in regards to their job satisfaction, work environment and social life.

The majority of participants residing in Nigeria (Group B) attributed a generally positive lifestyle to Nigerian doctors who migrate abroad mixed with some hardship. These conclusions were concluded based on ideas associated with the West and accounts learned from colleagues who migrated abroad. The top three major areas of success expressed were: 1. Job fulfillment 2. Opportunity to get further education and 3. Professional development/growth in career. However, these successes were often discussed simultaneously with hardship including: 1. Difficulty entering health sector abroad, 2. Discrimination and 3. Difficulty integrating into society. While participants believed most Nigerian MDs are able to enter and succeed in the health sector abroad easily, others may have to look into other work professions (e.g. research, non-medicine, go back to school) due to discrimination or difficulty entering/navigating the health care

system. Nevertheless, most agreed that Nigerian MDs abroad are generally able to secure employment, financial security and job satisfaction in what they do.

In regards to job fulfillment, Dr. Jabilo Tyler (male, younger, Nigeria) stated,

*a fair number achieve what they get there to do and some maybe by the wayside enter into other lesser skill profession, but at the end they go there and they seem better off in terms of financial power even if they are not practicing medicine...they seem more happier, there is dignity of labor there, even street sweepers.*

Regardless of the directional changes one may face in their career path, some participants suggested that Nigerian migrants are always better off than their previous lifestyles in Nigeria. In addition, they are able to maintain dignity and achieve financial stability. Dr. Adanna Orjie (female, younger, Nigeria) agreed that even if they are changing professions, Nigerians abroad “also become productive in that area.” Moreover, they are better able in the West to climb the social-economic ladder in the health sector and “they become big chef, big guys and big women.”

In contrast, Dr. Ebele Uchechee (male, younger, Nigeria) pointed out the hardship that Nigerian MDs abroad may endure such as integration into a foreign health care system. He explained, “for those who go to Canada or US, I think a lot of them don’t evaluate what it cost them to integrate into society. So many of them, as I know, do other jobs to make a living, which is still far better than working here than a doctor because of the remuneration.” Dr. Ebele Uchechee criticized those with unrealistic views of an easy integration into health sector in host country. Adding to his comments on integration hardship, Dr. Sarah Adesanya noted the complex position of Nigerian MDs abroad. While concluding that most Nigerian MD migrants abroad are happy, she notes “no one wants to be a second[-class] citizen.” Dr. Sarah Adesanya’s comment shines light on the

double burden of being racially black, an ethnic minority, and foreign born in a host country. The idea of being treated as a second-class citizen is also associated with racial discrimination as well as disregard for Nigerian-born MDs' prior education and work experience. In the following excerpt, Dr. Dominic Eniola expressed his disagreement with the perceived medical retraining of Nigerian MD in the West once abroad,

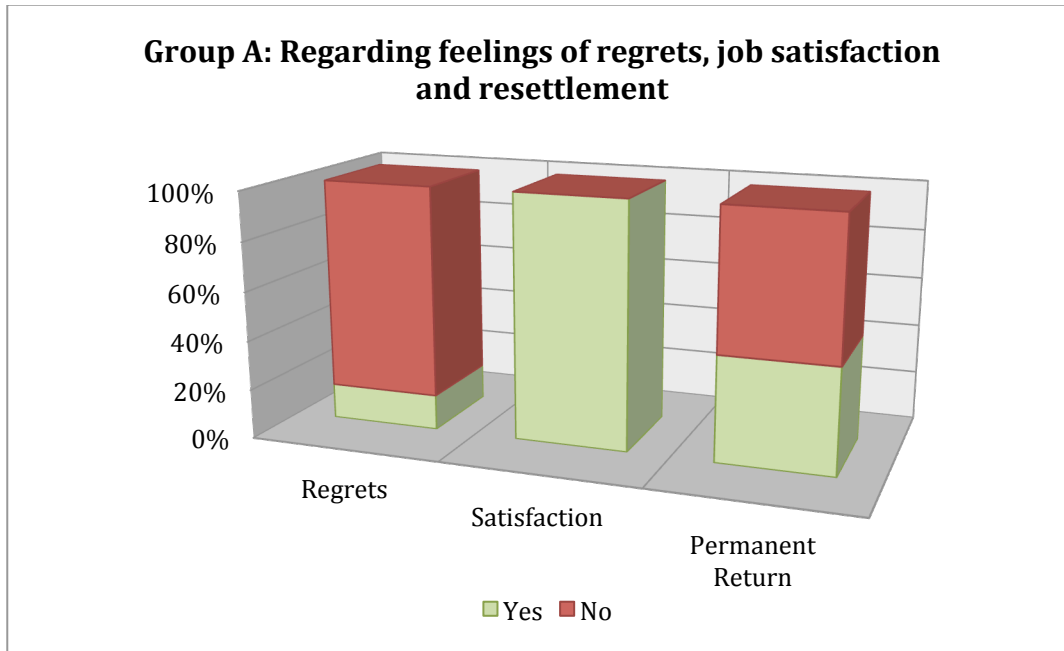
*well unfortunately, I am not impressed with lot of the ways the westerners treat our certificate as if it is trash. You imagine if someone who is a senior register here and goes there and they tell you, you have to start all over from scratch. So it is either that they don't believe in our educational system or something or as if the whole years you spent trying to become a doctor here is as if it doesn't matter.*

Dr. Dominic Eniola criticism speaks on the idea that some Nigerian MD are unable to integrate or succeed in the health sector due to the double burden of being foreign born and an racial/ethnic minority in the US.

### ***Realities***

All participants in Group A currently residing in the United States summed up their overall work and social experience as generally positive. Moreover, all participants indicated "yes," they are satisfied with their decision to reside in the US and their work experience thus far. The top 4 common responses leading to job satisfaction included: 1. Patient satisfaction, 2. Professional development and growth opportunities, 3. Financial security and better pay 4. Positive work environment. Nearly all participants, 87% (6 out of 7) indicated "no," they hold no regrets about leaving Nigeria while 1 (13%) participant indicated regret based on guilt of witnessing the collapsing health care system.

**Figure 2: Feelings of Regret, Job Satisfaction and Intention to Permanently Return to Nigeria Among US Residents –Group A**



Although they had no regrets migrating and an overall positive work experience in the US, leaving Nigeria came with other disadvantages for Dr. Zara Ige and Dr. Gbemisola Brooks. Nostalgia for Nigerian culture and the social atmosphere not to mention separation from family members were the main challenges. As for Dr. Elliot Ololade, who regularly travels to Nigeria about 3 to 4 times a year, his regret is largely attributed to the state of Nigeria’s collapsing health care system. He described,

*it’s pitiful what we encounter. The residents are so poor, they aren’t able to afford anything, and they are dying prematurely. So yeah, that’s a big regret. You know, I wish we were in a position to change things but we’re not. We’re really not. Yeah that’s a big regret. I wish Nigeria was a much better place. To tell you the truth, if Nigeria was a much better place, I would rather live in Nigeria than live in the United States of America.*

Despite the benefits associated with residing and practicing medicine in the US, there is a still great appreciation of Nigerian culture and society.

When asked whether participants had any intention of permanent return to Nigeria with involvement in the health care sector, there were mixed results. About 57% (4 out of 7) indicated no intentions of returning to Nigeria permanently and the remaining 43% (3 out of 7) have intentions to return permanently. The top two reasons to not return permanently included: 1. Family ties in the host country and 2. Available and abundant resources and basic necessities provided in host country.

Nevertheless, refusal of permanent resettlement in Nigeria does not mean they will not visit or get involved with strengthening Nigeria's health sector in the future. Some participants such as Dr. Gbemisola Brooks and Dr. Tommy Okoth still look forward to volunteer their expertise in the health sector or start their own private practice (e.g. health clinic, research center, health education program). However, the major reasons brought up by participants explaining their reason not to permanently resettle in Nigeria included: 1. Family ties to the US, 2. Fear for safety, and 3. Concern about the failing health care system. In fact, Dr. Elliot Ololade illustrates, "at this age which I am now can you imagine if I had a heart attack in Nigeria? I would be gone. I'd be dead completely because of the lack of healthcare delivery system all over the whole place. So for one, well I mean, I would visit Nigeria often but not to go there and live on an extended period of time because of the conditions of delivery of healthcare that are there." Dr. Elliot Ololade concerns speaks to the need and poor accessibility of emergency services for vulnerable populations.

## SECTION 5: IMPACT OF MEDICAL BRAIN DRAIN

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*If he is going to come back, if he goes there for knowledge purpose and comes back, its more knowledge to impact here, yeah that is the benefit, but if he goes there just to stay there and practice all his life, it is a disadvantage for Nigeria. All the doctors are leaving very soon there will be no doctors anymore! – Dr. Adanna Orjie (female, younger, Nigeria)*

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### **Health Care System**

All participants were asked to provide their thoughts whether the emigration of their colleagues out of the country impacted Nigeria's HCS and/or women, maternal and child health outcomes. All of the participants affirmed that the health care system has been negatively impacted by the emigration of their colleagues; the main consequence associated with the emigration of Nigerian MDs was the shortage of MDs and its adverse effects on existing human health resources and patient health experiences.

Dr. John Bakano (male, older, Nigeria), who has worked as a MD in Nigeria for over 14 years, comments on shortage of MDs and the difficulty replenishing the pool of available MDs and stated,

*of course, there is a direct impact on the health sector. Because employment, those who are coming into the sector is very slow. Government is not employing doctors the way they are leaving, so there is a gap between those coming into the system, and those leaving. We have more people leaving the system than those coming in. Some are retired and all that, so the gap is widening over time and it's a major challenge.*

He highlights the importance of addressing the depleting supply of human health resources, which he explains would eventually collapse the health care system.

Dr. Ebele Uchechee focuses on the brain drain from the avenue of recently trained MDs. He portrays the problem of a country producing human health resources that are eager to provide their services outside of their home country. He insisted that the medical brain

drain, “has a negative impact, just imagine the people are trained in this country, millions of money are spent in their training to become doctors and a year after they go out there to be helping foreigners in improving their health care system. It’s a great disadvantage to our society.” Despite the great effort MDs may contribute in their host countries, emigration of MDs sometimes comes at a cost to their home country.

Most participants rationalized that the only benefits from the emigration of Nigerian MDs for the health care system is when MDs contribute some type of resource back into the country (e.g. training, service, tools/equipment resources). Participants further explained that investment is not limited to financial (e.g. remittances) support, permanent resettlement to Nigeria or fulltime employment in the health care sector in Nigeria; instead it may involve voluntary mission trips, training MDs on the ground, educational workshops, donating medical equipment from the host country, building health facilities or supervising medical practices in Nigeria.

Both Dr. Zara Ige and Dr. Sekai Amazu acknowledged the negative impact of the brain drain on Nigeria’s HCS while also rationalizing benefits when the brain drain population invests back in Nigeria leading to *brain gain*. Dr. Zara Ige further explained, “if they do come back and give to the system the kind of training they have received and there are other opportunities like even the equipment they asked them to use or some things but can be useful in Nigeria, they can bring and import those into Nigeria, definitely there is a benefit.” Dr. Sekai Amazu highlighted the importance of investing knowledge, skills and tools gained in host countries while underlining his own experience teaching at medical schools, training staff abroad and leading medical mission trips.



For a few like Dr. Ebele Uchechee, he stated that in reality there are no benefits of medical brain drain because, “only a few do come back to invest in the health care system or relations. And moreover, the government do not really give them the wherewithal to do that and they are not even encouraged to keep repatriating foreign exchange to the nation.” Overall, the majority of participants generally expressed that due to the socio-economic, professional and intellectual advancements that Nigerian MDs gain in their host country, Nigerian MDs abroad are obligated to give back to Nigeria’s health care system in some way. Nevertheless, Nigeria is a collectivist country and therefore Nigerian professionals abroad must retain their collective identity and duty to build their communities rather than abandon it.

### ***Maternal and Child Health***

All participants residing in the US confessed that the emigration of Nigerian MDs negatively and indirectly impact maternal and child health outcomes. Negative and indirect impact was understood as the shortage of available MDs in the maternal and child health division, which leads to greater doctor burn-out/stress and a reduction in quality performance. Dr. Sekai Amazu discussed the challenge with a system that produces MDs who desire to emigrate: “ultimately if most people you are training are only thinking of how they are going to go to America or Saudi Arabia or somewhere else to practice, then you are not going to have enough people at home to take care of the people who need taking care of. So yes I think that’s a big part definitely.”

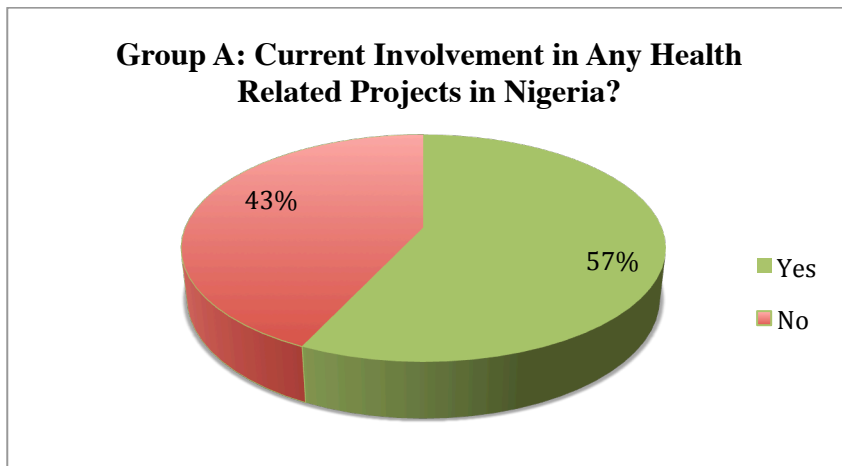
Like her colleague, Dr. Zara Ige agreed the shortage of MDs indirectly and negatively impacts maternal and child health outcomes by reducing the quality of care received. In the following excerpt, she confirmed,

*yes, definitely, it would have an impact on maternal child health and any other area or specialty in Nigeria because definitely that's a reduction in manpower when it comes to the health system, and like I mentioned earlier that could lead to increased work-related stress and less satisfaction to those working in Nigeria already...[it] can affect the quality of service they give and it can actually reduce the number of those who reach out for help.*

High patient to doctor ratio coupled with longer wait times, shorter appointment meetings and poorer quality of care can also lead to a rise in the number of expecting mothers whose care goes unattended especially those in need of emergency services and therefore lead to poorer maternal and child health outcomes and deaths.

## **SECTION 6: EVIDENCE OF A MEDICAL BRAIN GAIN**

**Figure 3:** *Percentage of US Resident –Group A Currently Involved in Health Related Projects in Nigeria*



Residents of the US (Group A) were asked if they are currently involved with any projects (e.g. work, paid, volunteer) in the health care sector. About 57% (4 out of 7) stated current involvement while the remaining 43% indicated no current involvement in a health related project in Nigeria. These involvements included service trips to provide

free medical services and equipment as well as managing and financing infrastructure projects (e.g. schools, testing laboratories, etc.).

Dr. Chikere Davidson, who opened a diagnostic department in Nigeria, volunteers as a medical diagnostic technician providing basic labs and resources to his community. Both Dr. Sekai Amazu and Dr. Elliot Ololade discussed their medical mission trips. In addition to volunteer medical missions, Dr. Sekai Amazu also invested in the education sector, he disclosed, “we built a school in Nigeria, we have a scholarship fund that we run every year and we have sent people to the university. So we are, we are, we donate generously to projects at home.” For Dr. Elliot Ololade’s family project, providing health care services for women and children are the priority. He elaborated, “the healthcare delivery system is women. We go to hospitals and we perform gynecological surgeries for free. We also take some other surgeons and then perform their surgeries for free. My wife is a pediatrician, so we go there and she takes care of the kids, she does pediatrics. So we do that about two to three times a year in collaboration with the Association of Nigerian Physicians.” Dr. Elliot Ololade acknowledged the greater need for health services in the rural areas and the challenges sending doctors to the Northern rural region due to geopolitical insecurities attributed to Boko Haram terrorist group. As a result, his team focuses primarily in rural Southern Nigeria, sending approximately 40 to 50 doctors per project.

In addition to medical service mission trips to Nigeria, Dr. Elliot Ololade proactively revised the medical curriculum in Nigeria, which he argues is outdated. In the following excerpt, he defends, “under my leadership, I got money from the American government and redid the medical Nigerian curriculum in Nigeria which has not been

touched since they started medical school in Nigeria. So we did that. And then we are still trying to work with the ministry and some private healthcare organizations to see how we can improve the healthcare system in Nigeria. Regardless of the obstacles, Dr. Elliot Ololade remained proactive in his goal to rebuild the Nigeria's health care system while incorporating the political, education and business sector.

## **SECTION 7: POLCIY RECOMMENDATIONS**

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*It's the policy, those who implement the policy, those are the people who count but quite frankly the same people who are creating the problem are not the ones you cry to. Imagine, your mom kept the key after making a pot of soup and kept the key somewhere else, and she is asking you have you eaten? And she knows that she locked the soup inside the cupboard, so you are going to have a lot of problem. So it's the same thing that we have here, the same people who are supposed to make sure that things are in place, who eat the money, are the same people you cry to for the same issues? So you don't get anything, you just go around in circles. So that's a very big problem for us. So what do you do?  
– Dr. Dominic Eniola (male, middle, Nigeria)*

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All participants were asked to provide recommendations to address the medical brain drain based on their experiencing living and/or working in Nigeria.

Recommendations were grouped into major topics of discussion based on findings from push factors. Major areas of recommendations discussed were: 1. Government Engagement and Accountability, 2. Medical Education System, 3. Remunerations, 4. Health Insurance Coverage and Direction, 5. Brain Gain and Brain Retention, 6. Medical Tourism, 7. Internal Medical Brain Drain and 8. Poverty Alleviation.

Participants were asked:

1. What do you think would lead fewer doctors to come to the US?

2. Any recommendations for Nigerian government and/or health care administrators regarding the health care system?

### **A. Government Engagement and Accountability**

As a basis to strengthening Nigeria's health care system, participants recommended that there should be 1. Checks and balances that hold both government and health care administrators accountable for their actions and implementing sustainable change in the health sector and 2. A committed government that listens to the concerns of all Nigerians to better understands their needs.

Dr. Zara Ige (female, younger, Massachusetts) called attention to the lack of engagement of Nigerian government regarding the needs of all people and the health sector. She advises,

*I believe that if more resources are provided for the health care system, then we will be off to a better spot in the country. Government should pay more attention to the health care that we have in the country, listen to what the people are saying, listen to what the doctors are saying, listen to what the patients are saying, like common people, listen to what they are saying!*

Dr. Zara Ige statement suggests the need for dialogue between the state and the public that would allow government to become better aware of the specific needs and concerns of Nigerian people.

Accountability of the Nigerian government and health care administrators in combination with checks and balances was also proposed as a basis needed to strengthen the health care system. In the following excerpt, Dr. John Bakano (male, older, Nigeria) criticized the involvement of the Nigerian government thus far and recommends a system with checks and balances. He stated,

*If I was talking to the president now, face to face, I would add something more and say Mr. president you are doing this wrong, Buhari and the governor here...there's a group of people, let's just say a system in place that makes things not to work...and the worse part of it, why things are that way, is because there are no checks and balance, that's the main place where our problem is.*

Ensuring that there are set rules and regulations that are followed by all parties could lead to better outcomes.

Dr. John Bakano noted how some projects introduced by the government are unregulated supporting the need for checks and balances. One example highlighted is new construction projects planned in Nigeria. He states, “you see, N100billion is awarded for a contract [but] nobody cares if it is implemented...the cabinet, they just take [the money] whether it was done or not. The money is released, nobody makes sure it was done...” Dr. John Bakano called attention to Nigeria’s rich economy and adds, “you keep hearing everyday, billions and trillions, is it because we are poor? No, we are not poor! We just have the wrong people at the end of our face, and unless accountability is there, there’s nothing we can do.” Here, he pointed out the problem with poor leadership in the Government and how it hinders development projects. Moving beyond accountability of the government, Dr. Ebele Uchechee (male, younger, Nigeria) urged for standard procedures to be followed. Specifically, he stressed the importance of following guidelines set by the World Health Organization or other experts moving forward.

## **B. Medical School Reformation, Continuous Education and Professional Development**

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*One thing is to make the medical schools better organized. We don't even have the basic things, like in classes...the hostels, you need accommodations for people. The lecturers should be up to date, procedures that are being read in the book we would like to see the*

*practical side of it, open up more residency posts so that people can do their residencies. –Dr. Gbemisola Brooks (female, middle, Indiana)*

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Participants discussed the importance to financially support medical students throughout their education and their programs. Other recommendations included: 1. Improved administrative organization, 2. Adapting the curriculum, 3. Supplying medical equipment/technologies for instruction, 4. Eliminating the quota system, 5. Providing scholarships to students, 6. Supporting training abroad opportunities and 7. Improving accommodation for students on campus. Nevertheless, constant strikes led by lecturers and facility workers were noted. Although no solutions to end the strikes, the government must acknowledge the significance of lecturers and facilitators in the health education sector and work with union leaders more effectively and promptly to negotiate demands (e.g. pay, work hours). This could reduce the prolongation of graduation time for many students.

For Dr. Alex Ayomide (male, middle, Nigeria), financial support such as scholarships to newly admitted medical students to complete their studies is key to addressing the brain drain of future MDs in Nigeria. He insisted that better financial support can serve as an incentive for medical students to contribute to their country. He explains, “start from those who will become doctors, in medical school, that is an alternative way, sponsor them, so that they will now know they are under government payroll. That satisfaction will be there...these people, the government sponsored me, let me work for them, you know, that is an alternative way.” With the growing demand to take advantage of the medical technologies abroad, Dr. Adanna Orjie (female, younger,

Nigeria) urged the government to also sponsor medical students to study abroad with the intention to return and invest.

Sponsoring professional development opportunities (e.g. skill building, master programs, specialty training) for MDs was suggested as an alternative to reduce the brain drain of MDs. Dr. John Bakano (male, older, Nigeria) reinforced the need for more financial aid provided by the Nigerian Government to support further education and training of MD. In the following excerpt he proposed,

*I would encourage the governor to sponsor doctors annually, or based on their financial capability to countries outside the shores of this nation, where they can build their capacity, where eventually they can come back and develop the health sector...and they come back and build the environment.*

Similarly to his colleague, Dr. Ebele Uchechee (male, younger, Nigeria) discussed his own experience self-sponsoring professional development. He noted, “I am a doing master now, I am sponsoring myself. Professional development...government can sponsor people over there, medical students, consultants, for further training and then bring them back to improve the system.”

Lastly, there were some concerns about the teaching instruction across medical schools as unethical and ineffective. Specifically, participants called attention to the theory-based teaching, which limits students from mastering practical skills. Some recommendations included funding medical schools with sufficient funds or medical equipment/technologies necessary to build practical skills and complement theoretical lessons. A second critique underlined was the quota system designed to limit the number of medical students who are allowed to pass exams or advance to the next level. Dr. Dominic Eniola (male, middle, Nigeria) revealed, “here, lecturers pride themselves with



the number of people that fail, the lecturer thinks he's a better teacher." The government as well as program administrators must implement and abide to regulations that support academic success rather than profiting from a model set to fail students. Removing the quota system and replacing it with a system concerned with completion rate rather than retention rate can lead to an abundance of qualified MDs. Nevertheless, a holistic training that encompasses practical skills may also reduce the number of students who leave to study medicine abroad.

### **C. Remunerations: Salary, Subsidy and other Benefits**

All participants discussed salary/remunerations in the context of both a push and pull factor. All participants supported raising the salary for MDs and/or adding other subsidies/benefits. The major reason for the wage increase was due to sacrifice of MDs in the field and expenses for self and/or family. Residents of Nigeria (Group B) strongly advised the state and federal government to prioritize the annual budget awarded to the health sector and raise the percentage accordingly.

There was general consensus that the government increases the salary at both the federal and state level to a livable wage in accordance with the rising cost of living. Dr. Dominic Eniola (male, middle, Nigeria) discussed the salary difference between federal and state workers. He notes, "when people push for increase in wages, those who are working federal get it, those in the state they don't get it. Sometimes they have to struggle for years, pressure for it, fight for it, and it doesn't get to them." He demanded that MDs in the state health sector receives equal receive the same wages and raises provided in the federal sector.

Dr. Ebele Uchechee (male, younger, Nigeria) admired the salary of MDs received in the West. He insists that a competitive salary in Nigeria may reduce the number of those wishing to migrate at first chance mainly due to financial security. In the following excerpt he suggested,

*I think one of the things that the government should do, is try to improve the remunerations. Now we see in the recent times, how they compare the salaries and wages of the president and senators of that in USA, now if you can compare salaries of doctors in Nigeria with that of their counterpart in the US and try to make it be a priority, a lot of Nigerian doctors will remain here.*

While ensuring that the salary remains competitive, Dr. Obi Akachi (male, middle, Nigeria) advocated for a wage in accordance to the profession. He insisted that the recent demands from other health care workers to receive the same pay as doctors may discourage prospective MDs from pursuing the profession. In the following excerpt, he explained,

*“And to even make things worse, even the other health system, they are even fighting the doctors that they want to actually be having the same pay with the medical doctor and that will further reduce the number of people that will want to read medicine, so instead they will want to do 3 years nursing and be earning the same amount with doctors in Nigeria. Or, go and do a medical lab scientist in 4 and 5 years, that is less demanding, and receive the same pay, so that will further crash/reduce the number of doctor. So a time will come that there will not even be doctors again in Nigeria.”*

Combatting the medical brain drain also involves addressing internal medical migration from rural to urban regions. Dr. Dominic Eniola explained, “there is great disparity, and with that, that’s even within the state and those who do not travel outside the country, so they move from state to federal, and the state continually experience shortage and shortage and shortage.” In order to address the internal medical brain drain, residents of Nigeria (Group B) strongly advised that further incentives should be provided to MDs

working in rural or resource limited regions. Dr. Dominic Eniola added, “those who are sent to areas where they are disadvantage in terms of facility, modern facility like light and stuff, if you make the place comfortable and convenient, and pay much more, people will see reason to go there, even if you have to go there for 6 months or 1 year, its like, I’m doing this because I’m going to make a little bit more extra, which are incentives that will make people work more.” Also in support of incentives, Dr. Alex Ayomide (male, middle, Nigeria) elaborated that incentives do not have to be solely monetary; the government can supply subsidies that assist with housing, bills, transportation or other insurance benefits.

#### **D. Health Insurance and Full Privatization of Health Care System**

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*United States of America, the environment is very conducive. You know the hospital systems are very well developed and people have ways of paying for alternatives. They have the healthcare insurance, which is non-existent in Nigeria. People have to pay cash. How many people will have enough cash to pay for their healthcare?  
–Dr. Elliot Ololade (male, older, California)*

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In Nigeria, patients are responsible for covering their health expenses (e.g. emergency visits, consultations, surgery, medications). However, the cost of treatment can sometimes discourage patients from prioritizing their health. Therefore, Dr. John Bakano (male, older, Nigeria) stressed the need for the government to, “make the health sector a place of secure for so many, like having a health insurance, people can afford health care and make it more affordable.” In order to address the financial burden of treatments, Dr. Zara Ige (female, younger, Massachusetts) recommended implementing a

universal health care insurance program that covers all health expenses as she notes is found in other Western countries. In the following excerpt, she expressed,

*I still believe that in terms of payment for healthcare that causes a very big problem in the country...when there are insurances that help people to pay back or supplement their payment, people are able to make contributions to their health care and then can take responsibility for their health care in a way that I think would help.*

Dr. Sarah Adesanya (female, older, Nigeria) added that within the health insurance program, coverage must also extend to health care employees. She stressed the importance of fair policy for all workers regardless of state or federal division. She proposed,

*the government on its own should have an effective health care financing, but for both health workers and for the population in general, like shared health insurance, which the current government is trying to put in practice. There is only a few percentage that is benefiting from them [National Health Insurance Scheme] especially those in federal establishment compared to state. I think if those were put in place, people would want to work in Nigeria.*

Health care benefits must extend to all citizens and not a selected minority. She suggested that an effective and fair health insurance program may also reduce the medical brain drain. Nevertheless, a universal health insurance program may also reduce the number of citizens who partake in medical tourism as well as increase the number of patients originally unable to seek medical attention in Nigeria due to financial barriers.

Along with a national and efficient health insurance program, some MDs recommended privatizing the health care system altogether. Currently, there is a combination of both public and private funded and managed health facilities in Nigeria. The state and federal government leads publically funded facilities while private organizations (e.g. church, international sponsors, private business) oversee privately

funded facilities. Dr. Tommy Okoth (male, younger, Pennsylvania), who has lived and worked as a MD in both the United Kingdom and United States, favored a privatized health care system led by MDs, private business owners, health organizations and health administrators. He reasoned that private hospitals are generally better funded, well equipped and provide better patient services compared to public hospitals. Therefore, he recommended that Nigeria move toward a fully privatize health care system specifically led by MDs both in Nigeria and abroad. In the following except, he explained,

*I think they need to privatize the health care system...The problem is, anything the government does is never as good private....government things are at most time never as good as private hospitals... so if you have private individual hospitals running, people who will put patients first, doctors work, every other stuff work ... patients will have to pay a little more, but that can also be regulated by the government or subsidize by the government. But I think that will be a good step.*

Dr. Tommy Okoth clarified that a privatized health care system does not necessarily mean no involvement from the government. Instead, he explained how government can still assist in the rebuilding and strengthening of the health care system through financial assistance and insurance coverage plans for patients. Lastly, he referenced the case of India in their mission to strengthen their health care system. In the following excerpt he claimed,

*If doctors abroad, or probably a group of doctors can come together and raise some funds and establish a major center in the country which will be an example of what can be obtained in other countries. For example, in India...many of the hospitals in India are built by Chinese and are run by private doctors who have acquired skills in other countries who come and practice world class medicine and deliver quality health to citizens. But if we come together and pull resources and build a standard facilities or many standard facilities around Nigeria and deliver world class health, at reasonable costs and location with something good, taking responsibility and not relying on the government, because to be honest with you... the government is just going to continue, the lectures will come, nobody will do anything except private citizens who take responsibility and you know*

*doctors that deliver quality care to patients, that's what I believe is the way forwards for Nigeria, private practice.*

While Dr. Tommy Okoth urged a privatized practice led by motivated doctors as key to improving the health care system, Dr. Seun Abiodun (male, older, Nigeria) suggested more partnership between public and private sector. In fact, he believes, “we doctors, other people must work to make the system work because the government alone cannot do everything,”

### **E. Brain Gain and Brain Retention Campaign**

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*The funny thing is I did not receive my medical study here, I studied it in Ukraine, and so I did not receive it here. So I came back because I wanted to impact, I wanted to give my own impact, but that doesn't mean that after my compulsory 1 year internship I am not going to leave. I want to leave definitely, because I want to pursue a masters program, in just a year and some month and than I will be back. Yeah, I will still come back, I am not going anywhere, I will come back. I will come back because I know that I or someone can improve the country, we are going down but we need people, so disappearing and running away is not going to do anything. – Dr. Jaha Stone (female, younger, Nigeria)*

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Some participants advocated for government-sponsored campaigns to address the medical brain drain. Ideally, these campaigns would encourage current medical students and early graduates to work in the country as well as Nigerian MDs abroad to return or invest in their home country health sector. Although migration is inevitable, addressing push factors that exacerbate migration patterns may reduce the severity of the medical brain drain. Dr. Seun Abiodun (male, older, Nigeria) proposed, “they should do a campaign, strategies, introduced by the government to make Nigerian doctors to realize, although some are abroad, to realize that there is a better system here... encourage the doctors by giving them good pay, good equipment, good environment.” In collaboration

with the campaign, governments could consider other benefits/subsidies to incentivize MDs that can assist with housing, transportation, education and family care.

Equally important, participants discussed creating a work environment that is well resourced and well managed moving forward. Improving the work place may encourage current MDs to remain as well as other MDs of the brain drain population to either return or invest more, leading to further *brain gain*. Dr. Odion Okeke (male, middle, Nigeria) recommended repairing the work environment as a step towards a brain gain movement. He poses, “so I think having a leveled environment can make people go back and practice, having a leveled environment can make people not leave because they are comfortable in what they are doing, they can order test and get a diagnostic test at the end of it and they will be confident that the results are accurate.” For residents of the US (Group A) work environment presented as a major push factor out of the country and pull factor into destination countries (e.g. USA, UK). The government can work towards changing the direction from *brain drain* to *brain gain* by creating pull factors that attract Nigerian professionals abroad to return or invest. Furthermore, if the work environment is conducive in combination with pull factors, the government could create campaigns that encourage foreign doctors to reside and work in Nigeria to reduce the shortage of available MDs.

As an alternative, Dr. Sekai Amazu (male, older, Massachusetts) proposed an agenda less concerned with immediate and permanent resettlement in Nigeria. Instead, he pushes for a campaign that facilitates various investments in the health sector for Nigerian MDs abroad. He warns, “instead of trying to do it in mass and make people come home permanently start by just simply offering people the opportunity to come

home and contribute piecemeal.” Nevertheless, Dr. Sekai Amazu still recognized the importance of addressing the shortage of MDs in Nigeria. Therefore, he admitted that a supportive campaign aiding projects of MDs abroad may result to return to Nigeria overtime.

#### **F. Ending Medical Tourism and Developing Health Facilities at Home**

Some participants weighed the pros and cons about medical tourism. While it presents individuals the opportunity to seek advanced health care abroad, it leads politicians to neglect the health care system in their home countries. All participants who referenced medical tourism criticized politicians and affiliated members who take advantage of it as irresponsible. Some participants questioned the motives of politicians and whether they have any real intention to improve the health sector at home. Dr. Obi Akachi (male, middle, Nigeria) stated “the attitude of the government towards the healthcare workers in this country is very poor because our government rather go outside of the country to receive health care while abandoning their own healthcare system in Nigeria.” When asked about the actions of the government in regards to developing the health care system, Dr. Elliot Ololade (male, older, California) doubted future improvements under an inattentive government. In the following excerpt he criticizes,

*for them, they have enough money, if it is urgent enough for them to fly out and seek medical help from either going to Western Europe or coming to the United States of America. You know. So it's when Nigeria gets a good government, that's when things will begin to change.*

The controversy regarding medical tourism in Nigeria among politicians has been a long discussed. In the past, Nigerian MDs teamed together to raise awareness about the negative impact of medical tourism on the health sector; they attempted to appeal to policy makers to push for more support to “fix what is on ground.” Specifically,



participants mentioned infrastructure development, modern health technologies, basic necessities (e.g. electricity, water, infrastructure) and other critical health resources (e.g. blood supply, medical supply, diagnostic centers) provided. Moving forward, participants agreed that government put more emphasis on developing health care facilities at home; Nigeria's health care system should be able to compete with health care systems globally. Nevertheless, the governments must implement measures that support favorable and well-equipped health facilities that they themselves are equally confident to use.

### **G. Internal Medical Brain Drain: Rural to Urban Migration**

Internal brain drain is a subcategory of the brain drain; it occurs when highly skilled individuals migrate from regions classified as low-income, low-resourced, rural or low population density areas into urban, concentrated and/or higher-income/resourced settings. Other migration flow patterns attributed to the internal brain drain in the health sector include state/government to private employment, primary to hospital levels or research to managerial positions (Marchal & Kegels, 2003). Generally, this leads to reductions in intellectual and human manual labor capital (Marchal & Kegels, 2003). In the case of Nigeria, internal brain drain not only occurs between rural and urban regions but even within urban/high-resource regions between state and federal health facilities.

Although work location preference is a right of the employee, these preferences can also exacerbate shortages. In general, pay scale, work environment, work schedule and other factors influence work location preferences. Dr. Dominic Eniola (male, middle, Nigeria) explained that disparities between state and federal health facilities are rampant. He illustrated, "the state will employ 10 [employees], and then less than 6 months they move to federal, some move to state, because poor remuneration, dissatisfaction with the

work.” He expands, “there is great disparity, and with that, that’s even within the state and those who do not travel outside the country, so they move from state to federal, and the state continually experience shortage and shortage and shortage.” Dr. Gbemisola Brooks (female, middle, Indiana) theorized that the shortage of MDs in Nigeria may actually result from issues with dispersing of available MDs within the country rather than international brain drain. She explains, “so I wouldn’t really consider it so much a shortage because there are so many doctors there it’s just how is it organized? And where are people? Because many people want to be in township...” Her statement hints to another migration pattern within Nigeria: internal medical migration from rural to urban regions, state to federal institutions and community centers to private hospitals. As a solution, she urged that the government create an agenda focused on equally distributing medical professionals in more rural, low-income and population dense regions. One participant suggested that in order to recruit more human health resources at less preferred work locations, government should consider providing incentives (e.g. subsidies, housing support, transportation support, monetary value) to assist and retain MDs and other health care workers. Health care administrators at these health facilities must work with the government to assure that local health and state health facilities are well equipped, well paid and structured.

## **H. Addressing Poverty and Basic Standard of Living**

Despite the challenges found within the Nigerian health care system, some participants argued that the key to addressing the medical brain drain and strengthening the health care system is to address poverty in Nigeria. Specifically, to create awareness about the social-economic disparities and push for more resources that provides citizens

with the basic necessities to survive and maintain good health. Dr. Elliot Ololade (male, older, California) recommended overall development of the country as a way to improve the health care system. Specifically, he calls for more resources on infrastructure projects such as transportation and power systems and notes how poor roads and lack of power negatively harms one's health and safety. He commented, "you know the number of people that died just from auto accidents, and there's no adequate hospital to take care of them. They need to improve the roads, they need to improve the power delivery system and then things will begin to change. Put in some money into the healthcare delivery system so that it will be of benefit to everybody in the country."

Like his colleague, Dr. Odion Okeke (male, middle, Illinois) suggested that Nigerian government must address basic necessities as a first step to rebuilding the Nation and health sector. He explained, "take for example, light, common things we have there, light. We don't have 24 hour light in Nigeria it comes and goes and the government has not done anything about it until today and that's the ability of not enforcing or putting table structures in place, it is affecting the whole system, not only healthcare." Dr. Tommy Okoth (male, younger, Pennsylvania) discussed why government and public health officials must look beyond the health care sector as a solution. In the following excerpt, he argued,

*we need to address the basic needs of the people, and I am not only talking about health care now, the basic needs of the people: security, power, good roads. Nobody wants to live in a place where there is robbed armory everyday, every other day. Nobody wants to live in a place where there is no power supply, no water, and bad roads. So those are general problems that need to be addressed, okay! Nobody wants to relocate from the UK or from the US where you never worried about no power or no water to go back to Lagos or to go to Abuja or another state where there is always power outage.*

Dr. Tommy Okoth linked the connection between lack of development, insecurity, and dissatisfaction to migration. When asked what would lead to fewer doctors to migrate or MDs to return to their home countries, he suggests overall development initiatives. He suggested, “if there are good roads, and there is power, and there is you know security, and you got good hospitals, there is a change in fulfillment that comes with keeping patients...they improve the remunerations, the salaries and stuff like that, nobody would want to leave Nigeria. And even people who have left will start thinking, maybe I should just go back.”

Dr. Tommy Okoth associated the medical brain drain and the collapsing health care system as layers under a larger systematic problem. He explains, “so I think it is a systemic problem, its not just healthcare so if you have good hospitals and paying millions a month for doctors, but then there is no security, there’s kidnapping, no power at home, bad roads, no ambulances, I don’t think anybody would want to leave US or UK and still go back to that system.” In agreement with her colleagues, Dr. Gbemisola Brooks advocated looking beyond the health sector to strengthen the health care system and rebuild the nation. She advised, “[there are] so many things but first of all, the standard of living,” as a first step. She further explained that in Nigeria, “you don’t have to be rich to have those basic things, ok?” She also notes that the rapid emigration is not unique to MDs but all of Nigerians, “everybody is migrating if they have opportunity.” Therefore, she recommends concentrating on “the standard of living, working, the basic things, water, roads, schools.” Focusing on the standard of living is vital to the health sector because all sectors are interconnected and no one sector should be isolated in the discussion of health.

## DISCUSSION

### *Purpose and Strengths of Study*

The purpose of this study was to add to the literature of Nigeria's medical brain drain by providing a platform for current Nigerian doctors currently residing and practicing in Nigeria as well as members of the Nigerian medical brain drain population in the United States of America, a group that is directly impacted by this issue, to call attention to the collapsing health care sector in Nigeria. It provides Nigerian MDs with the opportunity to discuss their experience in the health care system and/or reasons for migrating. Most importantly, they have proposed tangible recommendations to reduce the medical brain drain and strengthen Nigeria's health care system based on their own work, travel and educational experiences.

Licensed Nigerian MDs were interviewed individually. Using a qualitative study permitted the researcher(s) to conduct in-depth interviews with participants about Nigeria's health care system. The open-ended format allowed for participants to further elaborate and propose future policy interventions based on their perspectives. Both male and female perspectives were incorporated. Age of participants was widespread and ranged from 25 years to 70 years old with work experience ranging from 5 months to over 30 years at the time of the study. This allowed for perspectives from a fairly young generation to an older generation that could speak on the health sector from the last three decades of Nigerian history. In addition, Nigerian MDs beyond the scope of obstetrics and gynecology (maternal and child health experts) was interviewed in the United States, which diversified the viewpoint on the health care system in Nigeria. Recommendations

from this report are influenced directly by ideas from the Nigerian MD communities for Nigerian government and health care administrators to consider.

### ***Major Finding***

Overall, nearly all participants, 94% (17 out of 18), confirmed that a shortage of Nigerian medical doctors living and working throughout Nigeria exists acknowledging a medical brain drain impacting Nigeria's health care system. The medical brain drain, which exacerbates the shortage of MDs, indirectly causes adverse effects on *all health* outcomes especially maternal and child health in rural/low-resource communities. All participants indicated that the Nigerian government is *not* concerned about the medical brain drain however *should* be concerned about it. Lack of concern causes Nigerian government to disengage in conversations and initiatives aimed at rebuilding the health care system. Most participants elaborated that the Nigerian government is already aware about the issue however they are not interested in resolving it and therefore part of the problem of a collapsing health care system.

From what this study could discern, there were no major differences across age group, gender, specialty or location; similar types of push and pull factors influencing Nigerian MDs were found across all demographics. For residents of the US (Group A participants), the most prevalent push factors out of Nigeria ranked in order of weight included: 1. Low salary/remunerations, 2. Job dissatisfaction and 3. Challenges within Nigeria's health care system. Pull factors to the United States included: 1. Attraction to competitive health care system/medical school, 2. Financial security/higher salary, 3. Job satisfaction/fulfillment and 4. Uniting with family members in the US. Among residents residing in Nigeria (Group B participants), the most common push factors out of Nigeria

in order of weight included: 1. Low salary/remunerations, 2. Challenges within Nigeria's health care system, and 3. Job dissatisfaction. Pull factors included: 1. Financial security/higher salary, 2. Attraction to competitive health care system/medical school, 3. Improved quality of life and 4. Job satisfaction/fulfillment.

Despite major concern about low salary/remuneration of MDs for both groups, participants illustrated that the cause of the medical brain drain is complex; it is a combination of numerous factors at the individual and structural level. Key issues identified by participants included work environment, infrastructure development, supply of medical resources, retention of MDs, health education and training programs, safety of MDs and medical tourism/negligence. Findings from the key-informant interviews also revealed that the shortage of MDs in Nigeria is not only caused by international migration but internal migration shifts from rural to urban regions. Nevertheless, poverty along with lack of government accountability in developing the health sector is underlying factors weakening the health care system.

Furthermore, creating a sustainable environment suitable for work and living for all Nigerians is an essential step in the push for brain gain. Furthermore, promoting a sense of Nigerian pride and call to duty may lead to further investment by the brain drain population abroad in the future. Participants clarified that investment back into Nigeria's health care system does not require permanent resettlement; instead any form of intellectual, financial, organizational, educational/training or material investments is equally beneficial. Other main concerns for government and healthcare administrators involved confronting medical tourism, establishing a fairer universal National Insurance Health plan and restructuring medical education programs.

## ***Reflections on Findings***

One benefit of qualitative research is that it allows for greater insight into valuable ideas and concerns. In addition, it sheds light on other unforeseen themes and connections. Although the focus of this study was to examine how members of the Nigerian medical professional community perceived the brain drain, several unexpected findings emerged from the respondents' experiences. These findings discussed the brain drain in a large context. Four important findings of this included: 1. how the medical brain drain is linked to systematic poverty, 2. how Nigeria loses some of the greatest leaders in the health sector, 3. how the collective culture influences many Nigerians to want to give back to the health sector and the barriers that prevent them from doing so and 4. the greater relationship concerning poor medical training programs in Nigeria, emigration and the growing demand to restructure medical training programs in Nigeria.

### Poverty Alleviation

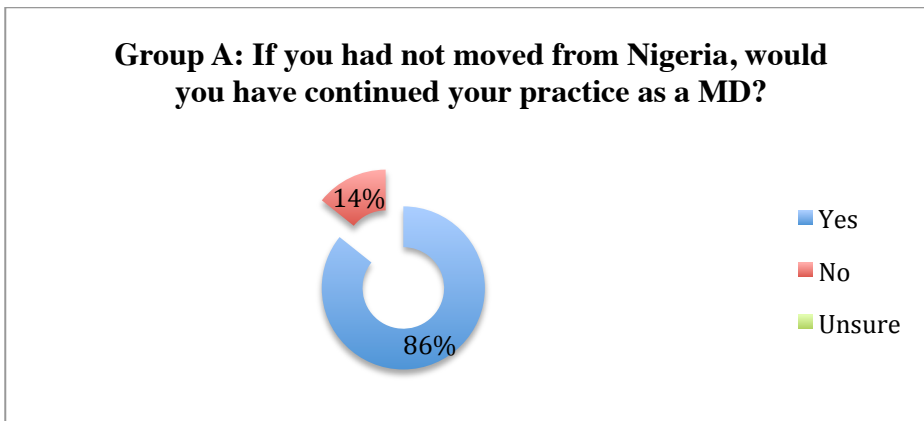
The medical brain drain in Nigeria should be understood as a systematic issue rather than due to a specific, individual and isolated factor. Nigeria's collapsing health care system is linked to its systematic poverty. These living conditions create further social-economic disparities and insecurities that influence MDs to seek shelter and employment in financially secure, socially and politically stable regions. Poverty alleviation in combination with various development initiatives aimed at providing citizens with basic necessities (e.g. water, electricity), security and economic opportunities may serve as another promising resolution to strengthen the health care system. In addition to advocating for a stronger health care system with adequate supply



of resources and health care workers, MDs on the home front and abroad could consider leading further projects aimed at overall development. Some specific poverty alleviation and development projects areas include: water access, electricity supply, transportation accessibility, safety, infrastructure development, unemployment and violence prevention which impacts the daily life and overall health of citizens.

### Best Are Leaving to the US

**Figure 4:** *Alternative Reality Percentage of US Residents –Group A*



Given the competitive nature of the US visa application process for many Nigerian citizens, the medical brain drain removes some of the top applicants of Nigeria’s health professionals. In fact, most of the participants residing in the US (Group A) entered the country after already receiving a college degree in Nigeria. After receiving a bachelors of medicine and bachelor of surgery from the University of Ibadan in Nigeria, Dr. Zara Ife (female, younger, Massachusetts) emigrated to the US in 2012 to pursue her career in a country she believed could best provide her the education and resources necessary to become a successful MD. Dr. Sekai Amazu acknowledges how his decision to study medicine in the US led to opportunities he would have never received in Nigeria; therefore he has no regrets about leaving. These examples are just a few realities faced by

many Nigerian MDs who leave Nigeria early in their medical career and excel in the health sector in their host country. This creates further disparities between health care systems, as Nigeria loses some of their most competitive members among the higher educated population to high-income nations annually.

Nearly all participants, 6 out of 7, residing in the US (Group A) indicated “yes” that if they had never left Nigeria, they would have still work as a medical doctor despite some of the known challenges discussed. The most common explanation was their desire to fulfill their passion in medicine and patient service. Despite the challenges, working in Nigeria’s health sector provided Dr. Zara Ige a level of satisfaction strong enough to continue the profession. She explains, “I would have still worked as a doctor back in Nigeria, I would have continued what I was doing. Honestly speaking, I still felt satisfaction from what I was doing, I enjoyed the fact I was seeing patients.” Although hypothetical, these responses show the determination of Nigerian MDs in the field of medicine. However, push and pull factors beyond their control cause them to invest their efforts elsewhere. More effort is needed to retain these populations who aspire to give their all to their communities but are unable due to the circumstances of the environment.

#### Desire to Give Back

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*And obviously you know if the system wasn't so corrupt, maybe people wouldn't feel so uncomfortable coming home. They would feel like it's their home, maybe they could really contribute to the medical structure in a way that actually helps pushes the process forward. Not to enrich themselves, but to help others –Dr. Sekai Amazu (male, older, Massachusetts)*

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Although many Nigerian MDs prefer to live in developed nations, one finds that some Nigerians still desire to re-invest in Nigeria's health sector. It is possible that due to the collectivist upbringing of the Nigerian culture, Nigerian medical doctors are inherently moved to give back to their country. In fact, permanent resettlement abroad does not necessarily result in cutting ties with one's home country. The study reveals that about half of the participants residing in the US are still currently involved with projects related to health, education and development initiatives in Nigeria. Those who were not currently involved with any projects in Nigeria all mentioned that they would like to invest in Nigeria's health and development sector in the future. This speaks to the sense of duty and connection that Nigerian immigrants still have regardless of where they settle.

Dr. Jaha Stone, a native of southern Nigeria, left after completing her compulsory education to receive her medical degree in Ukraine. In 2017, she returned to Nigeria to work as an OBGYN. When asked whether she was satisfied with her decision to return and practice medicine in Nigeria, she expressed contentedness despite some hardships (e.g. lack of resources/equipment and structure). She stated, "I have been here for about 5 months and some weeks, and it's hell. It's hard for me to adjust, because where I was trained it was actually different, cause we had a lot of equipment, new things, and here you just have to start from the bottom, everything is difficult, but it's okay, it's been okay." Dr. Jaha Stone is an example of a brain drain to brain gain participant who is committed to her mission and eager to share the skills and knowledge accumulated abroad based on her pride and sense of duty to Nigeria.

Nevertheless, not everyone who wishes to return or invest in Nigeria's health sector are able to due to some of the financial, regional and political barriers that restrict

his/her activity. Dr. Sekai Amazu explained the reality for many Nigerian doctors abroad, “Many people leave Nigeria with the intention that someday they’ll go back home and bring something back but once they maybe have been there for a while and they just realize that it becomes really difficult to go home and do the kind of work you want to do...” In fact, one participant spoke about his project to ship donated modern medical technologies to Nigeria, however, due to taxes proposed by the Nigerian government on these items, the mission was terminated. Another participant who regularly goes on medical missions and works with expecting mothers in rural South noted the challenge of working in other critical areas such as the north east due to violence and political instability. Among those participants who find ways to give back to Nigeria, there is a sense that they are still not doing as much as they would like to due to these barriers. For those who are not actively involved, they feel a sense of guilt for their lack of participation possible due to Nigeria’s collectivist and cultural expectations. If there are strong intentions among those abroad to eventually return or invest in Nigeria’s health, education and development sector, Nigerian government must open paths that facilitate a brain gain investment. Policies aimed at financial and social support of members of the brain drain population who wish to involve themselves in long term and sustainable projects must be implemented.

### Medical Brain Drain Starts with Medical Education System and Prospective Medical Doctors

One finds that in the case of Nigeria, the issues leading to the medical brain drain does not start at equipping and strengthening existing health care facilities and improving

the work environment. Instead, it starts even earlier with the medical education system in the country. In fact, some aspiring prospective MDs do not receive entry into medical programs based on exam scores and entrance requirements and therefore have to consider medical programs abroad to fulfill their dream. In addition, most federally funded medical programs lack adequate resources necessary to provide medical doctors with a competitive education and advanced skills needed in the field. Moreover, there are many organizational and structural barriers that discourage medical students at the very beginning of their medical careers as well as prevent medical students from graduation.

While few participants recalled an easy and excellent time as a medical student in Nigeria, the vast majority of participants emphasized several barriers that negatively impacted their academic experience ranging from difficulty financing education, disruption in completion time due to faculty strikes, theory-based instruction, quota system to increase retention and lack of medical resources. In fact, after completion of medical school, 54% (6 out of 11) of participants currently residing in Nigeria (Group B) retroactively desired to permanently resettle and seek health employment opportunities abroad. Western countries such as the US, UK, Canada and Australia were some of the highest ranked countries in order of preference. Those who expressed desire to emigrate attributed their reasons to providing their families with better social and economic opportunities, personal financial gain and desire to obtain job satisfaction. Not having the opportunity, family responsibility, age, pride for Nigeria and concerns about health practice certification abroad were the major reasons presented by the remaining 46% (5 out of 11) of participants explaining their current residence in Nigeria. Despite the small sample size, this study shows that almost half of MDs consider leaving the country as

early as the completion of their medical programs. Medical programs must be fully equipped, supportive, competitive and able to retain prospective MDs who immediately look for further education and work opportunities abroad. Addressing the medical brain drain and collapsing health care system in Nigeria must incorporate efforts to facilitate entrance as well as social and financial support of prospective MDs throughout their medical programs and transition into the health sector in Nigeria.

### ***Limitations***

One of the limitations of this study is that it is a qualitative study. Thus, it lacks statistic representation about the medical brain drain and Nigeria's health care system. Furthermore, the data gathered is highly subjective and therefore more difficult to investigate causality. Secondly, the sample size of the study was relatively small. A total of 19 participants were used for the study, 11 in Nigeria and 8 in the United States of America with the omission of 1 participants who was found to be ineligible for the study after conducted and therefore omitted, resulting in 18 (Group A: 7 and Group B: 11) eligible participants and interviews used and reflected in the results.

Third, there are some concerns with low generalizability, as the study only sampled from one state in Nigeria at one central hospital due to convenience sampling, budget and time limitations. Results from this study are based on the experiences of MDs, specifically, OBGYNs, from south-south geopolitical region of Nigeria. Lastly, there was greater representation of males. Among Group A, the ratio of males to females is 5:2 and in Group B 8:3 with a total representation of 28% female (adjusted sample size). Therefore, due to the low participations of females, this study could not establish any significant gender patterns.

## **IMPLICATIONS**

This study adds to our understanding of why medical doctors from a developing country like Nigeria leave or remain by providing insights into their own thoughts about brain drain. This study adds to the literature on emigration by emphasizing the importance of addressing the medical brain drain of Nigerian medical doctors living in the West and its impact on Nigeria's healthcare system (HCS) from the perspectives of Nigerian MDs and those who remained in Nigeria. This study has policy implications for the Nigerian government and highlights the urgency to address the ongoing medical brain drain of Nigerian medical doctors, which has adverse effects on the Nigeria's HCS and population health outcomes.

Based on the findings from this study, it would be beneficial for the Nigerian government to implement a universal health insurance program for all citizens that makes access to care more obtainable financially. Nevertheless, the government should consider committing to an annual national forum with representation of government officials, health care administrators, health care workers and union leaders to survey the state of the health care system regularly and propose solutions as a team. In addition, new nationwide regulations for health facilities, pharmaceutical companies and medical school programs must be created and enforced. This includes assuring that health facilities are equipped with the necessary medical tools to function at optimal level. Both federal and state budget must be raised accordingly each year with the intention to prioritize health. Addressing the medical brain drain means more than retaining medical doctors; it requires the strengthening of the health care sector as a whole through overall development efforts. Greater resources to develop the country overall must be provided.

In the fight to prevent the downfall of Nigeria's health care system, the government must prioritize development projects that secure safety and basic necessities (e.g. roads and transportation, power supply, water, etc.) to all citizens.



## CONCLUSION

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*I think we are doing well for now, gradually step by step. I think in the next 20 years, something is going to happen, in the next 10 years something is going to happen, something good, I believe, and I trust.*  
–Dr. Jaha Stone (female, younger, Nigeria)

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### ***Moving Forward: Nigeria Today***

On May 8, 2018, Nigerian President Muhammadu Buhari visited the United Kingdom to seek medical advice despite the criticism received the previous year after his nearly 4 month medical leave accumulated (Akinwotu, 2018). His four day medical trip occurred amidst a nationwide strike led by health care workers against poor working conditions and low pay (News24, 2018). The strikers, comprised of union health care workers from the Joint Health Workers Union (JOHESU) and National Association of Resident Doctors (NARD), returned to work after six weeks from strike's start on April 18, 2018 (Adebowale, 2018). Chairperson Biobelemoye Josiah explained the decision to end the strike due to the “sympathy the unions have for the suffering Nigerian masses and also to pave way for further negotiations” (News24, 2018). In response, President Buhari reassured the union workers that the government is working towards a plan to prioritize the health sector as well as develop universal health coverage (Agbakwuru, 2018).

The timing and ending of the strike of healthcare workers show the current urgency to address the collapsing health care system. It also speaks to the sacrifices made by health care workers to serve the community despite dire conditions. Moving forward, the government must adhere to their commitment to building the health sector and be

more responsive to the concerns of health care workers especially MDs. It is too early to see how the universal health coverage will surface as well as what other measures the government will implement to save the health care system. However, this study as well as recent scholarship on the medical brain drain with direct representation of health care workers, can serve as a guideline for sustainable change that the population wishes to see. Politicians must work towards creating a strong health care system all citizens can benefit from equally as well as a competitive system that they themselves look forward to using rather than abroad. Despite the feedback provided by participants in this study, there is belief that a strong and functional healthcare system is very much achievable in Nigeria's near future with the right attitude, commitment, redirection, policies, action and support.

### ***Strengthening Nigeria's Health Care System***

There are many effects of the health care systems that are both directly and indirectly influenced by the shortage of available MDs such as doctor burn out, work-related stress and medical negligence; all negatively impact patient experience, patient health outcomes and job satisfaction of medical doctors. Despite challenges associated with the shortage of available MDs, the Nigerian government in collaboration with Health Care Administrators and MDs both abroad and on the home front can work towards strengthening Nigeria's health sector through various development initiatives to regulate, support and sustain the health care system. Strengthening the health care system in Nigeria will not only mean meeting the needs of MDs on the home front but also resolving lingering issues noted by MDs of the brain drain population and current patients in need of accessible and affordable emergency and quality services.

In the case of the medical brain drain, pull factors should be analyzed not only as a narrative depicting problems in one's home country but as a guideline that encourages leaders to critically analyze these concerns and propose insightful solutions. Moreover, for countries affected by the medical brain drain, push factors are more tangible areas for change. Government and health care administrators have greater agency in tackling driving push factors that lead to rapid emigration compared to pull factors that are generally beyond their control and at the discretion of the host countries. Nigerian government and health care administrators must learn from these narratives provided by both members of the brain drain population and human health resources in order to reduce push factors driving Nigerian MDs out of the country especially current and prospective medical students. By doing so, they can create pull factors that facilitate reintegration of MDs and retention of human health resources already within the country.

Although migration is inevitable, the extent to which the medical brain drain occurs can be reduced. Moreover, some reasons (*push factors*) as to why it occurs can be resolved if specific measures are put in place. Promoting unity and pride among Nigerian professionals especially prospective MDs could lead to a strong sense of duty to Nigeria and the profession despite the hardships. Current and prospective medical students are the future leaders of Nigeria's human health resource. As the population of Nigeria rapidly increases, the supply of human health workers especially medical doctors must complement the population size accordingly. Another consideration for the Nigerian government is to recruit foreign doctors to fill the vacancies. Further research that examines this demographic of prospective doctors and current medical students who are most critical to Nigeria's human health resource population is needed.

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