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The Implications of Health Financing for Health Access and Equity in Nigeria

Adelakun Edward Odunyemi

Abstract

The Nigeria health system has performed woefully against all vital health indices, trailing behind many African countries despite its enormous potentials. The reason for this is mainly due to the financial risk Nigerians face in accessing healthcare. This study addresses the implications of the current healthcare financing in Nigeria on access and equity. It shows the imperativeness of an alternative healthcare financing in line with best practices, from comparable Low- and Middle-Income Countries (LMICs), apart from the current National Health Insurance Scheme (NHIS). The findings from this study recommend that the NHIS should be strengthened through the policy reform to embrace fund pooling/risk-sharing, subsidisation for the poor and the vulnerable, mandatory enrolment, and fragmentation of NHIS. Other considerations include increasing domestic fiscal space for health and utilising a tax-based financing mechanism that has been progressive in all LMICs, thereby preventing the need for unsustainable reliance on external funding. A comprehensive package of health at the point of care is also necessary. However, all these recommendations require the government to show a commitment to improve the country's healthcare system through its health spending.

Keywords: universal health coverage, out-of-pocket expenditure, health insurance, health financing, health reform

1. Introduction

1.1 Universal health coverage in Nigeria

In 2005, the pervading global inequality in access to healthcare prompted the World Health Assembly to pronounce a resolution on Universal Health Coverage (UHC) [1]. UHC rests on two essential bedrocks: equitable access to quality healthcare and protection from financial risk. UHC forms target 8 of the United Nation's Sustainable Development Goal 3 (SDG 3). It also plays a crucial role in achieving other important SDGs, such as poverty reduction (SDG 1), gender equality (SDG 5), inclusive economic growth (SDG 8) and reduced general inequalities (SDG 10) [2–5].

The prevailing poor health indices and extreme poverty in the sub-Sahara African region, especially in Nigeria, have been attributed to inequality in access and financial protection in healthcare utilisation [4, 6, 7]. In 2000, Nigeria was ranked by the WHO as the fourth country with the worst health system, only

topping three war-torn nations [8]. After two decades, Nigeria still has one of the worst health indices in Africa (see **Tables 1–3**), despite being Africa’s largest economy in terms of Gross Domestic Product (GDP) and most populous country with an abundance of both human and material resources [5, 9–11]. For instance, while Nigeria’s infant mortality rate in 2015 was 69 deaths in every 1,000 live births, the respective figures for neighbouring Africa countries like Ghana, Niger and Cameroon were 43, 57 and 57 per 1,000 live births [12]. The maternal mortality ratio of 814 per 100,000 live births in Nigeria exceeds only those of three countries in Africa [5, 12]. Moreover, the country has the highest number of extremely poor people worldwide after India [13]. Although these abysmal indices were derived from multiple factors, the issue of poor equitable access and exposure to financial hardship arising from catastrophic healthcare costs is the most significant.

A proven mechanism for achieving the objectives of UHC is the institution of a suitable mechanism of health financing [14]. Health Financing is a mechanism by which funds are generated, mobilised and utilise for healthcare [1, 15]. An effective healthcare financing mechanism gives people adequate financial protection from impoverishment arising from health services utilisation [14]. In Nigeria, health financing has been predominantly through out-of-pocket (OOP) spending - a regressive form of health financing. OOP payment accounts for about 69% of total healthcare expenditures in Nigeria [16]. As a result, poor households in Nigeria are either unable to access quality healthcare or face financial hardship from healthcare spending [1, 2]. More often than not, OOP payment makes people refrain from utilising health services, present late to health facilities, or patronise sub-standard healthcare facilities. OOP expenditure produces inequity because quality healthcare is only available to those who can pay and not those who need it. In most instances,

Country Name	1975	1980	1985	1990	1995	2000	2005	2010	2015
Ghana	50.811	52.277	54.127	56.776	57.528	57.002	58.719	61.03	62.772
Nigeria	43.187	45.333	46.127	45.9	45.854	46.267	48.252	50.896	53.112
Rwanda	45.315	48.527	51.685	33.413	31.037	48.649	55.254	63.433	67.45
South Africa	55.428	58.107	60.946	63.307	61.561	56.048	53.447	57.669	62.649
Cote d'Ivoire	48.147	51.072	52.922	53.254	51.569	49.635	50.12	52.964	56.065

Table 1.
Life expectancy at birth (total) (in years) in Nigeria compare with selected African countries (composed from world development indicators 2021).

Country Name	1975	1980	1985	1990	1995	2000	2005	2010	2015
Ghana	186.5	166.8	154.7	127.2	114	99.4	82.9	69.1	54.6
Nigeria	241.5	211.8	206.9	209.5	204.1	183.1	155.5	136	126.8
Rwanda	246.2	218.4	159.6	149.8	249.7	178.7	109.3	63.7	41.5
South Africa	121.7	92.2	71.1	57.3	59.4	71.1	79.1	51.2	37.1
Cote d'Ivoire	202.6	168.2	154.1	152.3	152	142.3	125.3	106.4	90.6

Table 2.
Mortality rate, under-5 (per 1,000 live births) in Nigeria compare with selected African countries (composed from world development indicators 2021).

Country	Demographic Indicators		Health Indicators		Health Expenditure Indicators		
	Population (total)	GDP per capita (US\$)	Life expectancy at birth (years)	Infant mortality rate (per 1,000 live births)	Under-5 mortality rate, (per 1,000 live births)	General government health expenditure (% of GDP)	Out-of-pocket expenditure (% of current health expenditure)
Ghana (2016)	28,481,946	1931.389	63.124	37.4	52.2	1.327	37.823
Nigeria (2016)	185,960,289	2176.002	53.541	78.5	125	0.475	75.187
Thailand (2016)	68,971,331	5994.231	76.403	8.9	10.3	2.858	11.345
Ghana (2017)	29,121,471	2025.932	63.463	36.1	50	1.087	41.212
Nigeria (2017)	190,873,311	1968.564	53.95	77.3	122.8	0.532	77.224
Thailand (2017)	69,209,858	6592.914	76.683	8.4	9.9	2.934	10.898

Table 3.
Key demographic, health and economic indicators- Nigeria, Ghana and Thailand (2016–2017).

the poor and vulnerable groups, most in need of the services, have to sell their valuables, incur debts, or spend the family savings to access healthcare, resulting in further impoverishment. This phenomenon is referred to as catastrophic health spending [1, 17–20].

A household is usually classified as having incurred catastrophic expenditure “if it spends 40% or more of its discretionary (non-food), or 10% or more of its total expenditure on healthcare” [21]. Catastrophic health expenditures arise not only from direct spending on transportation to health facilities, treatment, investigations, medication and hospitalisation, but also from indirect costs resulting from depreciating health status and a resulting reduction in productivity [16]. Consequently, a household is caught up in a cycle of perpetual poverty (**Figure 1**). Ilesanmi et al. show an increase in poverty of 66.2% due to OOP spending on healthcare, especially among households in the rural communities in Nigeria [23]. Since more than 50% of Nigerians, representing more than 100 million people, live below the poverty line, catastrophic health expenditure is endemic [16, 20, 24]. This situation, therefore, calls for an urgent need to break this cycle of poverty and health-related misery by eliminating OOP payments.

1.2 Nigeria health system financing and relevant policies

Healthcare in Nigeria is financed through government budgetary allocation, donor funding, NHIS and private funding. The Nigeria 1999 Constitution empowers all the three tiers of government (federal, state and local) to mobilise and deploy resources to provide healthcare in their jurisdiction [24, 25]. The Nigerian government expenditure on health is less than nearly those of any country in the world (see **Figures 2–5**) [27, 28]. For example, only 4% of the federal budget was allocated to health in 2018 (below the 15% commitment of the 2005 Abuja Declaration). The situation is worse in the states and local government, where even less is allocated to health [1, 3]. This reflects the value the government places on health and it is the most significant challenge faced in achieving UHC by Nigeria [15, 25].

Even though Nigeria is the leading recipient of Developmental Assistance for Health (DAH) in Sub-Sahara Africa, the fund constitutes only about 4% of the

Figure 1. Cycle of impoverishment due to out-of-pocket (OOP) health spending by poor households. (Adapted from Han [22]).

Figure 2.
Public health expenditure (% of total expenditures) in selected African countries. (Source: World Development Indicators).

Figure 3.
Breakdown of THE by private financing sources, 2006, 2007, 2008 and 2009. (Source: National Health Accounts 2006-2009).

county's total health spending [18, 29]. Moreover, the funding administration is bedevilled with numerous challenges such as a high technical assistance cost, unevenness in sponsored activities, poor fund tracking, and counterpart funding issues [18]. In essence, DAH is not a reliable mechanism of healthcare financing in the country.

To achieve UHC, Nigeria adopted a social health insurance scheme known as the National Health Insurance Scheme (NHIS) in 2005 through an Act of Parliament. This is now known as Cap N42 Laws of the Federation of Nigeria, 2004 [11, 30]. However, after more than a decade, this scheme has not covered more than 4% of Nigerians [3, 16]. Despite its enormous potential in Africa, Nigeria's NHIS has performed worse than many countries on the continent [4, 5, 31]. This poor performance can be attributed to several policy deficiencies. First, the scheme is fragmented, being divided into Formal Sector, Informal Sector and Vulnerable Group categories and other sub-categories [32]. Second, despite commencing operation with the formal sector, it has not moved beyond the federal civil servants (constituting only 4% of the country's population). These federal employees have refused to

Figure 4.
Health Funding in Nigeria. (Source: National Health Account 2006-2009).

Figure 5.
Capital budget implementation across selected Ministries Departments and Agencies (MDAs), 2016 [26].

contribute their 5% counterpart share of the 15% required. Therefore, the federal government is subsidising the health of a more affluent segment of the population by 10% at the expense of the poor and vulnerable people, the informal sector and the state employees, worsening the inequality situation [16, 17, 33]. Third, many states have not embraced the NHIS because the Act that set up the scheme did not capture the states in its operation [3, 14]. Even the Community Based Health Insurance (CBHI) that was recently inaugurated to cover the rural population and the informal sector has fared poorly with less than 3% enrolment. This insufficient enrolment has been attributed to unaffordable premiums, lack of trust, and poor quality of health [14, 34, 35]. Fourth, the Act that established NHIS made it voluntary for enrollees. It stripped the NHIS of the power to enforce the regulation guiding its operations, thereby causing poor participation and ineffective functioning of NHIS [33]. Fifth, the vulnerable group has not yet been covered. For example, Raji et al. discovered that retirees were not covered [36]. Sixth, the scheme's fragmentation has prevented it from having adequate resource pooling [3]. Therefore, these problems are possibly responsible for the failure of NHIS to fulfil its goal of saving Nigerians from regressive OOP health spending, which stands at 95% of the private health expenditures and 69% of the Total Health Expenditures (THE) (see **Figure 4**).

2. Healthcare financing mechanisms

Substantial evidence has proven that OPP health expenditures, rampant in LMICs, are the most regressive, inefficient and inequitable healthcare financing method [2, 24, 37]. While there is a concession that LMICs need to discard OPP expenditure, the debate is about which of the pre-payment health financial mechanisms will be the best. There is no silver bullet mechanism since each country's challenges are different [38, 39]. Moreover, each country is unique in its socio-demographic, economic and political structure. However, a health finance mechanism that can produce equitable access in LMICs must be based on compulsory pre-payment, fund pooling/risk-sharing and subsidisation, for those who cannot afford to pay [39–41]. Fund pooling and risk-sharing involves aggregating funds and redistributing them equitably between the rich and the poor, the employed and the unemployed, and the healthy and the sick [6, 14, 41]. Therefore, an exploration of different health financing mechanism follows in the next section.

2.1 Developmental assistance for health (DAH)

External funding in the form of DAH is becoming a vital funding mechanism in LMICs, especially in SSA [42]. As pointed out earlier, it is an unreliable mechanism of funding. Although DAH has decreased in the last two decades, there has not been a commensurate increase in SSA domestic financing [29]. This development could worsen the existing access, equity and financial risk problem in those countries [42]. However, DAH may be required, in the short to medium term, as complementary or supplementary funding for UHC in LMICs [40].

2.2 Community-based health insurance (CBHI)

CBHI is a form of private health insurance in which a group of people in a community contributes to financing their healthcare. It is used in LMIC to cater for the rural population and the informal workers usually not covered by other health insurance. CBHI suffers adverse selection and low participation and retention, resulting in low fund pooling and risk-sharing like any voluntary insurance scheme.

The poor resource pooled also produces high administrative costs and sustainability issues. Moreover, no matter how small, the premium may be unaffordable for the poorest members of the community [18, 42]. Although CBHI can potentially protect the enrollee from OOP spending, the very poor, who are not covered suffer financial risk, poor access and inequity. Therefore, CBHI is only helpful as a short-term measure against OOP spending [35, 42].

2.3 Social health insurance

Most developed countries have protected people from financial risk using social health insurance (SHI) or a tax-based funding mechanism [37]. SHI is a scheme in which the government mandates people to contribute to financing their health. It is usually funded jointly by the employees and their employers. The government pays for those who cannot pay, such as the poor, unemployed and vulnerable. SHI became the predominant health financing method in LMICs having been adopted by the African Union Conference of health ministers in 2007 [1, 37, 42]. While some countries such as Kenya, Tanzania and Nigeria introduced their SHI beginning with the formal sector and planned to expand it later, others like Ghana, Rwanda and Mali began with the entire population. Generally, countries in the latter group have successfully covered a more significant population, while the former has been unable to move beyond the formal sector. This issue has generated a severe equity problem of leaving behind the poor community of informal employees [42]. Consequently, a bottom-up approach, starting with the poor and vulnerable group and then the informal sector, has been suggested if this scaling-up approach is adopted [43].

SHI's success story in high-income countries like Germany has not been replicated in LMICs because of the mostly poor, unemployed and informal population. Moreover, LMICs cannot wait the length of time usually required for SHI to achieve UHC. Germany had to wait for 127 years [40]. Ghana and Rwanda's success stories with SHI have been made possible by subsidising mandatory enrolment for the poor and vulnerable group, a large percentage of their population, through tax revenue and donor funds [42].

2.4 Domestic government funding through taxation

A mechanism in which government funds healthcare mainly from its revenue or general taxation is called tax-based health financing [1, 18]. by Wagstaff et al. in their study of thirteen OECD countries, proved that direct taxes are progressive and indirect taxes are regressive in all the countries. It, however, shows that SHI is only progressive in eleven countries [44]. In contrast, a global review by Aurelio Mejía shows that direct and, even, indirect tax-funded systems are generally more progressive than SHI in LMICs [45].

A growing body of evidence has shown that tax-generated revenue is a significant potential source for expanding domestic fiscal space for health (DFSH) [42, 46]. Some consumption taxes on products (such as tobacco, alcohol and sugar) that are harmful to health (the so-called "sin tax") could be earmarked for healthcare financing as has been carried out in Thailand [42, 47]. Mobile phone usage tax is another revenue source for healthcare, considering the sizeable mobile phone subscriber base in Nigeria [48]. Subsidy from petroleum products can also be used to fund healthcare as is done in Indonesia [49]. It has been established that an increase in health expenditure can increase the economic growth of LMIC by 0.4 [10]. However, governments in LMIC must prioritise health financing following the example of countries like China, Cuba and South Korea [29, 50].

Two approaches to healthcare financing have shown consistent results in LMICs. First, the adoption of a tax-based health financing mechanism for population coverage as used with great success in Sri Lanka, Malaysia and Brazil. Second, SHI and general tax use to target the formal sector and the rest of the country, respectively. This approach was employed to achieve UHC in Thailand, Mexico and Kyrgyzstan [40].

3. Healthcare financing in Nigeria compared with selected countries

3.1 Ghana social health insurance Scheme

Ghana is a middle-income country in West Africa with a total population of 28,207,000 in 2015 and gross national income per capita of \$3,880 in 2013 [51]. It is noteworthy that Ghana and Nigeria operate SHI (both known as National Health Insurance Scheme. Ghana began its SHI in 2004, just a year before Nigeria. Although Ghana has not achieved the recommended 90% UHC, it has become a success story in Africa within two decades of commencing the scheme, having covered about 64% of its total population. It has gone through different phases and challenges to reach this pedestal [6, 40]. Therefore, Nigeria can learn from Ghana how it was able to achieve this success, despite limited economic and human capital resources compared to Nigeria [11, 17]. Although, Ghana has not reached the targeted UHC goal, but it prides itself on achieving better health outcomes than Nigeria (see **Table 4**). This is not unrelated to its achievement so far with universal health coverage [33, 52]. While Nigeria's NHIS coverage stands at less than 5%, Ghana's rose exponentially from 6.5% in 2005 to 36% in 2010, then 40% at the close of 2015, and about 64% in 2018 [5, 6, 31]. In 2012, the previous National Insurance Act 2003 that established Ghana's NHIS was amended to accommodate some efficient changes, including merging all previously existing schemes into a unifying scheme under NHIS [5]. This 'umbrella' mechanism contrasts with the mostly fragmented NHIS in Nigeria, as discussed earlier.

One approach that helped Ghana to scale up coverage within a short time is the level of awareness and advocacy in the mass and electronic media [5]. Oni et al. has shown that the level of awareness of and access to NHIS has significant impact on service delivery [6]. The compulsory enrollment into NHIS by all residents of Ghana is another important reason why the scheme has been able to cover the country widely. This is in sharp contrast to Nigeria, where it is statutorily voluntary. Although Ghana's implementation of NHIS is faced with the problem of poverty like Nigeria, it has exempted the poor and other vulnerable groups from paying an insurance premium. This exemption resulted in increasing access and equity in healthcare. Although Nigeria NHIS made provision for the vulnerable group to include the physically and mentally challenged, prisoners, pregnant women, under-five children, and the aged, the reality in Nigeria is that no such exception is provided [5, 31, 52].

Moreover, enrollees of Nigeria NHIS still pay some hidden charges, co-payments and deductibles at the point of care, in contrast to Ghana, where no additional payment is required from their counterparts. Besides, there is a variable benefits package offered by Nigeria NHIS depending on the membership category. This is not the case in Ghana, where all benefit packages are uniform across the board using the diagnosis-related group (DRG). The most important factor contributing to the achievement recorded by Ghana is the fact that there has been an increase in total health expenditure as a percentage of total government expenditure to meet the 15% Abuja target. Moreover, Ghana finances 70% of its NHIS from taxation, used mainly for those exempted from paying the premium. The situation in Nigeria is the

Country	Demographic indicators		Health indicators				Health expenditure indicators					
	Population (millions)	GDP (p.cap)	LE (Male)	LE (Female)	IMR	U-5 year MR	p-HIV (% pop)	i-TB (cases)	THE (p.cap)	THE (% GDP)	Public HE (%THE)	OOPHE (% private)
Nigeria 2000	123.7	371	48	47	116	186	3.9	172	17	4.7	33	93
Ghana 2000	192	260	58	59	64	99	2.3	152	19	7.2	41	80
Nigeria 2002	129.8	455	47	48	107	177	3.8	182	18	4.0	26	90
Ghana 2002	20.1	306	58	60	61	94	2.2	138	20	6.5	36	80
Nigeria 2004	136.4	644	48	49	102	168	3.7	180	44	7.0	32	95
Ghana 2004	21.1	420	60	61	58	88	2.1	125	26	6.3	35	80
Nigeria 2006	143.3	1,014	49	50	97	159	3.6	168	59	5.7	34	96
Ghana 2006	21.1	920	61	63	55	83	1.9	112	48	4.4	57	65
Nigeria 2008	150.7	1,374	50	51	93	151	3.6	145	80	5.7	41	95
Ghana 2008	233	1,226	62	64	53	79	1.8	99	68	5.6	58	67
Nigeria 2010	158.4	1,278	51	52	88	143	3.6	133	63	5.1	38	95
Ghana 2010	24.4	1,325	63	65	50	74	1.8	86	67	5.2	60	66
OECD 2010	N/A	34,774	77	82	6.8	8.2	0.3	N/A	4,365	12.6	65	67

Notes: OECD, Organisation for Economic Co-operation and Development; **LE**, life expectancy at birth; **IMR**, infant mortality rate per 1,000 live births; **U-5 year MR** is per 1,000 live births; **p-HIV**, prevalence of HIV % of population aged 15–49; **i-TB**, incidence of TB per 100,000; **GDP**, Gross Domestic Product (in 2012 US\$); **THE**, total healthcare expenditure; **p.cap**, per capita; **OOP**, Out of pocket.

Source: World Bank [15]. (Adapted from Odeyemi and Nixon [52]).

Table 4.
Key demographic, health and economic indicators - Nigeria, Ghana and OECD mean 2000–2010.

opposite [4, 5, 31, 52]. All these benefits offered by Ghana NHIS have contributed to expanding equity in access and provision of healthcare. Recently, Ghana is proposing a one-time payment for healthcare services known as the “One-time Premium Payment Policy” to mainly serve those in the informal sector [14, 15]. This step has the potential of boosting NHIS coverage and in turn, reducing OOP.

3.2 Thailand health insurance Scheme

Thailand is a middle-income country in South-East Asia, with a population of 69 million and a GDP per capita of \$7,792. About 56% of its population is in rural area [51]. Thailand's health financing is worthy of consideration because of its long history of challenges similar to Nigeria, and its eventual rapid success which has become a global reference [53, 54]. The quest of Thailand toward achieving UHC began as early as 1975. After several trials with several health insurance mechanisms, Thailand achieved UHC in 2002 after commencing its Universal Coverage Scheme (UCS) the previous year [55]. By 2015, Thailand had been able to provide health coverage for 98% of its population [54]. Before 2001, the formation of different health insurance types to cater for various risk pool resulted in the fragmentation and failure of those schemes. When UCS was introduced, against all the odds, other fragments were collapsed into UCS except the Civil Servant Benefit Scheme (CMBS) and the Social Security Scheme (SSS). CMBS is a tax-funded health insurance that provides coverage for the formal sector, while SSS is a form of SHI for the private sector, covering about 12.3 million people.

Three essential factors contributed to the success of UCS within just a year. First, it is funded exclusively through government tax except at the beginning of the scheme when patients were required to pay 30 Baht (\$0.75) co-payment. Excise tax on alcohol and tobacco were earmarked to fund the scheme [43, 56]. Evidence has proven that tax-funded (especially direct-tax) health insurance is less regressive compared to SHI [45, 57]. Second, contrary to what operates in Nigeria, UCS uses a comprehensive medical package with only very few diseases not covered. This saw improvement in access and equity. Third, there is a purchase-provider split in the payment for health services. Capitations are paid for outpatient service, while DRG is used to pay for inpatient care [57]. Since UCS was introduced, there has been an improvement in health outcomes of the population reflected in Thailand's positive health indices. Moreover, the number of households suffering from catastrophic health spending became insignificant [47, 53]. Thailand's success story will not be complete without pointing out that the resilient political determination, community engagement, evidence-based research, and regular monitoring and evaluation employed by the Thai government were instrumental to achieving the feat [58].

4. Conclusion and recommendations

This study has shown that about 70% of Nigerians pay for healthcare through OOP, hindering their access to quality healthcare. While the trend continues, many households in the country have been impoverished through catastrophic health expenditure. This has culminated in the poor health-seeking and consequent poor health indices. Therefore,

However, the country has the potential to reverse the trend by learning from other countries all over the globe which have achieved UHC by adopting either a tax-based insurance scheme or an SHI scheme. Consequent to this, it is recommended the scheme is overhauled and repositioned to promote equity and access to healthcare. This can be done using an excise tax or “sin tax”. The revenue generated could be used

to finance the health of the entire country in combination with the existing NHIS. Moreover, this study recommends that the law that established the NHIS should be amended to make insurance mandatory to increase participation. However, adequate awareness should be created for the same reason. The currently fragmented NHIS should be amalgamated for efficiency, risk sharing and fund pooling. The benefits package should also be reviewed to be more comprehensive to attract and encourage enrollees. Enrolment could also be boosted by providing free healthcare to the poor and the vulnerable group, thereby removing inequality and inaccessibility. Finally, in line with the 15% Abuja declaration, there is a need for the government to demonstrate political commitment toward UHC by increasing budgetary allocation to health.

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Conflict of interest

The author declares no conflict of interest.

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