

## Location of Health Care Facilities and Access to Health Care Services in Nasarawa State

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### Abstract

**Introduction:** Studies have indicated that access to adequate healthcare and services in developing economies is hindered by many factors such as gender, income, distance, financial status and geographical proximity to basic, primary, secondary or even tertiary health facilities and services. This situation has contributed to poor health statuses in developing areas. This study is focused on the geographical barriers that prevent the rural populace of Nasarawa State from accessing health facilities and services that bring them physiological wellbeing and satisfaction.

**Methods:** The study utilized the exploratory method to identify health facilities and the accessibility of these facilities to health seekers. The National Population Commission (NPC), Nasarawa State Ministry of Health and the Nasarawa State Primary Healthcare Development Agency were approached and data on health facilities were collected. The facilities were classified into Primary, Secondary and Tertiary institutions with categories ranging from Performance Based financing health facilities, Decentralised financing health facilities, Sub-contracted health facilities, Non Performance Based Financing health facilities, and the Hard to Reach health facilities.

**Findings:** Findings indicated that a majority of health facilities were located in urban centres. The majority of rural areas have only a few poorly equipped health facilities. Besides over sixty percent of the health facilities in rural areas are very difficult to reach as a result of distance from seekers. Health facilities are crucial to achieving the expansion in access to all as a global health reform policy to improve access to health.

**Recommendation:** It is therefore very critical for government and other agencies to provide health facilities within the locality for easy access in order to ensure health for all.

**Keywords:** Geographical Barriers, Nasarawa, Healthcare, Rural, Urban, Facilities, Access

### Introduction/Statement of the Problem

Access to health care is crucial to improving health, preventing disease and extending life, and the quality of life. Access is the opportunity and freedom to use available services; it encompasses the circumstances that allow for appropriate service utilization (Harrisa, Goudge, Ataguba, McIntyre, Nxumalo, Jikwana & Chersich 2011). Access to health care is commonly defined geographically, economically, and culturally (Gulliford, Figueroa-Munoz, Morgan, Hughes, Gibson, Beech, & Hudson 2002; Ricketts and Goldsmith 2005). In a theoretical exploration, Fortney, Burgess, Bosworth, Booth, & Kaboli (2011) have identified the following dimensions of access: geographical, temporal, financial, cultural, and digital— to update the framework to include recent innovations in e-health technologies. Geographic health care access refers to supply, diversity and distribution of services, and physical accessibility. Temporal access includes the time it takes to be seen by a provider, times available as a provider, or time spent receiving treatment. Economic or financial access refers to the affordability of services, insurance access, etc. Social or cultural health care access tends to refer to acceptability of services, social norms, or language issues. Digital access refers to recent innovations in e-health technologies. Health care access research typically focuses on non- geographical issues, e.g. cost, culture, and attitude of medical staff. Greater distances to health care facilities or increased travel times discourage use of those health care facilities.

Many studies focused on the health status of persons living in developing countries and have identified age, gender, education, place of residence, ethnic group, working conditions, financial status, and lack of health insurance as constituting stringent barriers to access to healthcare. (Gonçalves, Travassos, De Almeida, Guimarães & Gois 2014).

Aside these, physical agents such as long distance to health care facilities have long been established as one of the barriers to health care utilization (Gbaden, 2011). Because health care facilities are widely dispersed, many patients have to travel long distances in order to receive treatment. In addition, there are uneven distributions of health care facilities and a dearth of health personnel across communities due to the scarcity of health funds and due to health budget cutbacks in many developing countries (Adedini, Odimegwu, Bamiwuye, Fadeyibi, & DeWet 2014).

Some other studies showed that the poor are more disadvantaged in accessing health interventions. This is because supply and demand factors drive the poor to benefit less from the use of public services of which health services are at the centre. Also identified are consumer cost, household barriers, cultural and religious norms, education, marital status, and community preferences and attitudes (Ensor and Cooper, 2004; Harrisa, 2011; Gazali, Gbaden and Mukhtar, 2015).

It is known that geography stands as a barrier to healthcare access. Spatial factors such as distance, time and space play a key role in determining care access since most health facilities are usually unevenly distributed; and on a converse side health providers and the consumers of the health services live worlds apart. In situations where there are health facilities within proximal reach the population density may constitute some form of hindrance in the inadequacy of the physician to patient ratio (Wang and Lou, 2005).

Geographic mal-distribution of health care providers and services is a major problem as evidenced in the American healthcare system. There, just like in many low income societies in the developing world, rural, low-income, and minority communities, in particular, suffer. It is paradoxical that some urban centres have an oversupply of some specialties and

rural communities suffer from a shortage of providers (Beedasy, 2010). Nasarawa State is not an exception in terms of geographic access or rather a lack of it.

Since geographic barriers to health care have been recognised as a global health phenomenon, this study sets out to access the availability of health care facilities, distribution and distance from the available health care facilities in Nasarawa State.

#### Data and Methods

This study was carried out in Nasarawa State, one of the states in the North Central Geopolitical zone. Nasarawa State was created in 1996 and is made up of thirteen (13) local government areas, Wamba, Kokona, Keana, Nassarawa/Egon, Toto, Awe, Akwanga, Keffi, Karu, Lafia, Obi, Doma and Nasarawa. It is bordered on the West by the Federal Capital Territory, the North by Kaduna, the South by Benue and Kogi, and on the East by Plateau and Taraba states ([www.ngex.com](http://www.ngex.com)). The population of the state is 1,869,377 going by the 2006 estimates (NPC 2010).

(PBF HF), Decentralised facility financing (DFF), Sub-contracted health facilities (SC HF), Non Performance based financing health facilities (Non PBF HF) and Hard to Reach (HR HF). These parameters have been used to assess the distribution, location and timing to each of the health facilities in each of the local government areas. Health facilities located in areas with Hard to Reach category mean that they are further away and in difficult terrains while those that are near are said to be close to the people. The more tertiary health facilities, the more health services are available. These parameters were used to interpret the data as presented in the next section. Adopting the medium variant of the population projections computed by Marcus and Makanjuola in 2011, Nasarawa State population in 2016 should grow to 2,576, 809. This predicates a significant growth in the population of the state. The implication therefore is that in order to meet the health requirements of this growing population, there is the need for an increase in the siting of health facilities, gainful employment and subsequent training of manpower, and increased provision of logistics geared at enhancing the effective management of the health facilities on ground as well as the physical and



Fig. 1, Map of Nasarawa State Showing Locations of Local Government Areas (Source: NPC 2010)

Apart from using the data provided by the Nasarawa State Primary Healthcare Development Agency (NSPHCDA), the National Population Commission (NPC), and the Nasarawa State Ministry of Health, other materials for this study were gotten via secondary sources; scholarly articles were digested and relevant analysis extrapolated thereof. The analysis for this research is based on the health facilities available to the populace in Nasarawa State in 2016, as compared to what was available in the previous years. One would expect that as population increases there should also be requisite increase in health facilities to cater for the health needs of the growing population.

The health facilities are categorised into primary, secondary and tertiary health facilities. They are further categorised into Performance Based financing health facilities

mental health conditions of the populace.

One disturbing question, however, that nags our collective conscience is, is there an increase in health facilities commensurate to the increment in population size? This the researchers sought to find out by comparing available health facilities in Nasarawa State in 2016 to what was available in 2009 as indicated by Marcus and Makanjuola (2011).

This approach is particularly relevant because the last published empirical study carried out about the health facilities of the state was conducted by Marcus and Makanjuola (2011) and covered the period 2000 up to 2009. This present study incidentally fills the gap from 2009 to 2016 thus providing key pointers to the assessment of progression or retrogression in the attainment levels of health care by the people of the state.

## Results

The findings of this exploratory study aimed at assessing the availability, distribution and distance from health care facilities in the state. The study also adopted the data found in different data bases ranging from the National Population Commission to the data by the state ministry of health. These data is presented in both tables and charts to show the relative availability, distribution (ie usable or otherwise) of health facilities in Nasarawa state.

The table below presents the number of health facilities available in Nasarawa State in 2009 and 2016 and the inevitable differentials.

handled by primary health facilities, it is thus expected that they be in good supply.

In 2009 there were 2 tertiary healthcare institutions in Nasarawa State, located in Lafia town, the state capital. The other in Keffi, the headquarters of Keffi Local Government Area, which is very close to Abuja, Nigeria's Federal Capital Territory, Keffi is also home to the State owned University (NSUK). This number has not changed in 2016, seven years later.

The available health facilities as indicated in the table above have serious implications for access to health services. The implication is that too many persons in need of health services are excluded as a result of availability. It is therefore

**Table 1: Distribution of available health facilities in Nasarawa State between 2009 and 2016**

2009			2016			Differential		
Primary	Secondary	Tertiary	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
698	19	2	721	18	2	+23	-1	-

Source: Nasarawa State Ministry of Health Headquarters Lafia, 2016; Nasarawa State Primary Healthcare Development Agency (NSPHCDA), Lafia, 2016; Marcus and Makanjuola (2011)

**Table 2: Distribution of Healthcare facilities according to Local Government Areas**

S/N	LGA	Primary Health Facilities	Secondary Health Facilities	Tertiary Health Facilities	Total
1.	Akwanga	52	1		53
2.	Awe	31	1		32
3.	Doma	32	2		34
4.	Karu	82	3		85
5.	Keana	28	1		29
6.	Keffi	12	1	1	14
7.	Kokona	51	1		52
8.	Lafia	87		1	88
9.	Nasarawa	80	1		81
10.	N/Eggon	90	2		92
11.	Obi	53	1		54
12.	Toto	69	3		72
13.	Wamba	54	1		55
Total		721	18	2	741

Source: Nasarawa State Primary Healthcare Development Agency (NSPHCDA), Lafia 2016

Table 1 above presents information on the number of public health care facilities available in Nasarawa State between 2009 and 2016. In 2009 there were 698 government owned primary healthcare facilities while in 2016 there are 721 government owned primary healthcare facilities, indicating a facility difference of 23 with a percentage difference of 3.3%. This is not likely to cater for the health needs of the population that has steadily been on the increase (Ministry of Health Headquarters Lafia 2016, Nasarawa State Primary Healthcare Development Agency (NSPHCDA), Lafia 2016; Marcus and Makanjuola 2011)

Government owned secondary health facilities from Table 1 were 19 in 2009 but have dropped to 18 in 2016, indicating a negative differential of -1 in facilities and a percentage differential of -5.2%. Secondary facilities serve as referral points for those whose health conditions cannot be

instructive to state that in siting health facilities due consideration should be taken to bring them closer to the people so that access can be possible. Following the World Health Organisation's health personnel and patient ratio, for any country to have enough doctors for its population there is supposed to be 1:600 (one doctor to every 600 persons) yet the World Health Organisation: Global Atlas of the Health Workforce recently reported Nigeria's density of physicians as standing at 4:10,000 (four doctors to a whopping 10,000 population) that translates to one doctor attending to 2,500 population. It becomes obvious that the present ratio of health personnel to population does not meet the standard criterion. The implication of this is that most persons needing to be attended by qualified health personnel are likely to be excluded because the personnel are not just available. Since health care facilities are not available, access is hampered. It follows

therefore that urgent steps be taken to arrest this situation.

In addition the number of health facilities and doctors available also show that health facilities clusters side by side the cluster of people per square kilometre is poor.

facilities are not owned or controlled by government but by private ownership and are often profit based.

Furthermore, only a few of the available health care facilities are PBF. For instance only 10 (20%) of the facilities are PBF in Akwanga, 10 (30%) in Doma, 16 (19.5%) in Karu, same in

### Status of available health facilities

**Table 3: Status of Healthcare facilities according to Local Government Areas in Nasarawa State**

S/N	LGA	ALL HF	PBF HF	DFH HF	SUB Contact HF	NON PBF HF	HARD TO REACH HF
1.	Akwanga	52	10(19)	0(0%)	37(71%)	5(10%)	0(0%)
2.	Awe	31	0(0%)	10(32%)	0(0%)	21(68%)	10(32%)
3.	Doma	32	10(31%)	0(0%)	0(0%)	22(69%)	0(0%)
4.	Karu	82	16(19.5%)	0(0%)	42(51%)	24(29%)	13(15%)
5.	Keana	28	0(0%)	10(35%)	0(0%)	18(64%)	7(25%)
6.	Keffi	12	0(0%)	10(83%)	0(0%)	2(16.5%)	3(25%)
7.	Kokona	51	12(23.5%)	0(0%)	29(56.8%)	10(19.6%)	6(11.7%)
8.	Lafia	87	0(0%)	18(20.6%)	0(0%)	67(77%)	5(5.7%)
9.	Nasarawa	80	16(20%)	0(0%)	45(56%)	19(23.7%)	40(50%)
10.	N/Eggon	90	0(0%)	15(16.6%)	0(0%)	75(83%)	8(8.8%)
11.	Obi	53	12(22.6%)	0(0%)	0(0%)	41(77%)	2(3.7%)
12.	Toto	69	12(17%)	0(0%)	44(63.7%)	13(18.8%)	34(49%)
13.	Wamba	54	10(18.5%)	0(0%)	0(0%)	44(81%)	13(24%)
	<b>TOTAL</b>	<b>721</b>	<b>98(13.7%)</b>	<b>63(8.7%)</b>	<b>197(27%)</b>	<b>361(50%)</b>	<b>14(1.95%)</b>

Source: Nasarawa State Primary Healthcare Development Agency (NSPHCDA), Lafia 2016

The distribution of health care facilities above shows that they are disproportionately distributed along the status of the area. That is, the state capital, Nasarawa Eggon and Karu Local government areas have the highest number of both primary and secondary health care facilities. This is because Lafia, Nasarawa Eggon and Karu are all semi urban towns with Lafia as the capital city while Karu is the closest Local Government Area to the Federal Capital Territory. Furthermore, the two tertiary health care facilities are located in Lafia and Keffi. This follows that the larger population of the state located in other local government areas are excluded from secondary and tertiary level health care or they will have to travel long distances to those places to access them. This invariably affects the health status of the people as access is a function of availability and distribution or location.

Table 3 above indicates the status of health care facilities according to some parameters including: Performance Based Financing Health Facility (PBF HF), Decentralised Financing Health Facility (DFH HF), Subcontracted Health Facilities (SC HF), Non Performance Based Financing health facility (Non PBF HF) and Hard to Reach Health Facilities. These are parameters used by the United Nations in accessing the status of health care facilities (NSPHCDA 2016).

Information above showed that a majority of the primary health care facilities are subcontracted, for instance thirty seven (37) or over sixty percent of health care facilities in Akwanga are subcontracted. The implication of this is obvious; the cost of access will be higher. This is the same case in Karu 42 (50%), Kokona 29 (54%), Nasarawa 45 (55%) and Toto 44 (60%). This is very instructive as it shows that most health care

others. It is indeed obvious that the status of health facilities in the state is very far below standards as provided by international best practices. It follows therefore that access to health care facilities is hampered by the status of facilities as indicated by scholars who have severally maintained that access is a function of availability, affordability and locality.

#### Distance of health care facilities

This is a factor in the utilization of health care facility. The farther a health care facility is from the settlement of the people or the people from the facility, the less likely the use of such a facility. Thus the World Health Organisation guidelines, emphasis monitoring the health status of those who live farther than 5 km away from a health centre in developing countries. That is to say health care facilities should not be more than five kilometres from where the people who utilize its services are resident. Since studies including the one by Kashima, Suzuki, Okayasu, Jean Louis, Eboshida & Subramanian (2012) on a nationally representative sample in Madagascar provide evidence that among other things a longer distance to a health centre is a risk factor for early childhood mortality. Thus they concluded that although other factors are involved, accessibility to health care among those who live further than 5 km away from a health centre may be a key factor to achieve more favourable early childhood health. Data collected in relation to distance showed that many health facilities are difficult to reach. For instance, over twenty percent and thirty percent of all health care facilities in Awe and Karu local government areas are hard to reach. The case is not different in Nasarawa L.G.A where over fifty percent of health care facilities are hard to reach. In Toto L.G.A, close to fifty percent of health care facilities are hard to reach. This is the same case in

almost all the L.G.As. The overall number for hard to reach health care facilities is 141 representing 20% of all the health care facilities in the state. The situation as it is on ground affects the access people have to these facilities.

#### Discussion

The study was undertaken to explore the availability, distribution, status and distance of health care facilities in Nasarawa state. Findings indicate that the available health facilities in Nasarawa state do not meet the United Nation's facility-patient ratio hence there is an urgent need to improve on the provision of health facilities in the state. This situation becomes crucial because there is need to provide health facilities as a social service to the populace. This is in line with different scholars who have opined that provision of health facilities is a social responsibility of all governments at all levels.

More so, the health facilities are disproportionately distributed among the L.G.A's. That more health facilities are found in urban L.G.A's than in the rural L.G.A's, meanwhile there are more people in the rural L.G.A" in need of health services hence, there is need to locate health facilities in rural areas where there is more need for it.

Also, the status of health facilities indicate that they are subcontracted, since they are likely going to be for profit and most people will not be able to afford this. It behoves on government therefore to live up to its social responsibility by financing the provision of health services to the populace. A majority of the health facilities are not been funded by government and this exposes the people to a lot of hardship and difficulty in accessing health services.

Finally, the distance of health facilities is quite far from settlements and this affects the access and utilization of the health facility. There is therefore need to locate health facilities within reachable limits for health seekers to reach with ease. By so doing, health facilities will be made available to the populace and good health will be the lot of the people. All the variables used in exploring health facilities in Nasarawa state show that they are poor. A lot needs to be done to be able to meet up the demands of health services according to international standards.

#### Conclusion

The location, distribution and status of health facilities play an important role in determining accessibility and in some way utilization too and thereby working towards improving the unmet needs for health services. The suggestion is that the distribution of health facilities should be made more equitable between rural and urban LGAs in Nasarawa state. Implementing officers in such situations should bear in mind the difficulty in reaching the facilities in hard to reach terrains. Over and above all, much effort is needed in the provision of health facilities in the state in order to meet up or at least meet mid way with the growing population of the state.

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