Healthcare Financing and Health outcomes in Nigeria: A State Level Study using Multivariate Analysis

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Abstract

The study utilizes the multivariate analytical tool to describe the relationship that exists between health care financing, health facility utilization and health outcome in Nigeria. The focus of this research was on women who are of child bearing age and who had given birth to at least one child within the past five years. The study adopted the stratified sampling technique comprising of two rural Local Government Areas and one Urban Local Government Area in Cross River State, Nigeria. The study demonstrated that the high levels of infant mortality and morbidity rate was associated with the high incidence of out-of-pocket payment, and the wide disparity and inequality in income distribution. The study further observed a disproportionate disparity in the spatial distribution of health facilities, with concentration of health facilities at the urban areas rather than the rural areas, which of course contributed to the poor service demand. The studies therefore recommend among other things the review of the current Federation revenue distribution formula, with emphasis given to the Local Government Areas (who are the principal institution responsible for primary health care in Nigeria) and the speedy implementation of the National Health Insurance Scheme (NHIS).

Key words: Health Financing, Budgetary allocation, Multivariate analysis, health facilities, income inequality,

Introduction

At the 58th World Health Assembly held in Geneva, Switzerland on May 16-25, 2005, developed and developing countries attention was drawn towards ensuring universal access and coverage in health services provision. Further recognition of the importance of universal coverage and equity in health services provision led WHO to propose at the 2010 World Health Assembly issues that will address financing of health that will ensure universal coverage (Ataguba and Akazili, 2010).

The nature of healthcare financing defines the structure, the behaviour of different stakeholders and quality of health outcomes. The pattern of health financing is therefore closely and indivisibly linked to the provisioning of services and helps define the outer boundaries of the system's capability to achieve the overall goal of enhancing nation's economic development (Rao, Selvaraju, Nagpal and Sakthivel, 2009). Health care financing therefore does not only involve how to raise sufficient resources to finance health care needs of countries, but also on how to ensure affordability and accessibility of healthcare services, equity in access to medical services as well as guarantee financial risk protection. Carrin, Evans, and Xu (2007) documented that how health systems are financed largely determines whether people can obtain needed health care and whether they suffer financial hardship at the instance of obtaining care.

In Nigeria, the major sources of health financing have been identified as through (i) the tax-based public sector that comprises Local, State and Federal Governments (ii) the private sector (including the not-for-profit sector) financing which is done, directly or indirectly through health insurance of their employees (iii) households, through out-of-pocket expenditures, including user fees paid in public facilities; (iv) other insurance-social and community-based; and (v) external financing (through grants and loans) from donor organizations.

Despite the health financing options so identified in Nigeria, there still exist disproportions in health system financing. For instance, Olaniyan and Lawanson (2010) observed severe budgetary constraints and uneven distribution of resources among the urban and rural areas with the rural areas mostly affected by inequitable budgetary health expenditure allocation. Ichoku and Fonta (2009) had also noticed a catastrophic healthcare financing in Nigeria which eventually has led to further impoverishment of the poor. According to Ichoku and Fonta (2009) Nigeria's health financial arrangement has shifted from health provisioning by government as a normal good towards a competitive market where greater proportion of health services are provided by ability to pay through out of pocket expenses (often referred to as user fee). Furthermore, excessive reliance on the ability to pay through Out-Of-Pocket payment (OOP) reduces health care consumption, exacerbates the already inequitable access to quality care, and exposes households to the financial risk of expensive illness at a time when there are both affordable and effective health financing instruments to address such problems in low income settings (O'Donnell, et al (2005); Onwujekwe, Uzochukwu,, Obikeze, Okoronkwo, Ochonma, Onoka, Madubuko and Okoli (2010) Summarily, it could be argued that the system of health care financing in Nigeria is disproportionate, such that, it pushes the burden and risk of obtaining health services to the poor.

Statement of Problem

The funding of health care in Nigeria has often been described as inadequate with budgetary provision to health hardly exceeding 3% of the nation's total budgetary provisions (Orubuloye and Oni, 1996; Ogunbekun, 1991). Health care spending in Nigeria is segmented into private and public spending. While public expenditures in Nigeria account for just 20-30% of total health expenditures, private expenditures accounts for 70-80% of total health expenditure. The dominant private expenditure is through out-of-pocket, and this accounts for more than 90% of private health expenditures (Soyibo, Olaniyan and Lawanson, 2009; Soyibo, 2004)

Health indicator of IMR for Cross River State is estimated to be in the region of 140 per 1,000 live births. Under five mortality rate (U-5MR) is over 200/1,000 live births. Cross River State has a maternal mortality rate/ratio between 1,500 - 2,000 per 100,000 live births, perhaps the highest in the South-South Zone of the country.
Furthermore, the Cross River State Community score card (2008) reported that 62 percent of the population of those interviewed expressed their dissatisfaction with the quality of services and medical provisions available at the State Primary Health Care centers. This report put a serious doubt on the state government ability to improve accessibility, reliability and affordability of health services in the state.

The budgetary allocation for health in 2003 and 2004 represented 2% and 1.2% respectively, out of the total budgetary estimates for those years. This allocation falls below the World Bank recommendation of 15%. Budgetary allocation to the health sector since then has not exceeded 2%. There is uneven distribution of finance and facilities, especially in the primary health care. Despite the budgetary provision for health, many of the health institutions still lack adequate personnel and facilities to provide quality care for the citizenry. There is gross inadequacy in the number of these facilities, and the few available are unevenly distributed The question this research seeks to answer are (a) what are the various alternative financing strategies adopted by clients to cushion the effect of unavailable, and inaccessible medical services, particularly, at the rural areas (b) what are the factors that determine the financing of health care system by the Cross River State government, given the state lean financial resources (c) can the proportion of health sector financing in Cross River State be equated with the demand for health care services, (d) what specific role do non-for-profit (donor agencies) organization play in enhancing health care delivery in the state? These questions shall also guide the formulation of research hypothesis.

Research Objective

The objective of this paper is to determine the capacity of the Cross River State governments to finance sustainable and functional health systems, and to explore realistic health financing approaches that could complement government financing.

It is critical to note that most government of developing countries, particularly, Nigeria, would usually complain of short fall in revenue allocation received from the central government as the reason for poor healthcare financing. The paper will review current patterns of health expenditures in Cross River State including the financing contributions of the public sector, the donor community, households, and other private sector stakeholders. It has been severally discussed that funding of health care in Nigeria is grossly disproportionate with health facilities located in rural areas being the least recipients of State budgetary allocation. Such mode of financing is bound to affect the extent and quality of health services and programmes rendered by the state government. Thus, the specific objective of the paper will be to assess the demand for health services by health users within the context of service accessibility, affordability and equity in financing within the public health care system, especially within primary healthcare (PHC).

Justification of Study

Substantial study had been conducted on the relationship between health inputs and health outcome using cross country data. However, these studies had been criticized on the basis of methodology used for conversion of national currencies (Moore, et al, 1992), statistical reliability of data used for the studies (Hansen and King, 1996) conversion factor of pooled cross-country and time series data and methodology of measurement of GDP (Kanavos and Mossialos, 1996). Thus, the result obtained from these studies had short coming of disaggregation of impact of health expenditure on health outcomes. This study therefore intends to use state level data to aggregate the impact of health financing on health outcomes in Nigeria. Comparison will thereafter be made between the result obtained from this study and this obtained from previous studies.

Budgetary Analysis of Cross River State Expenditure

Cross River State like every other receive the financing from internally generated revenue and periodic allocations from the federation account. Sources of internally generated revenue include taxes, fines and fees, licenses, earnings and sales, rent received on government properties, interest repayment and dividend and miscellaneous. Table 1 below shows the summary of the estimated and actual revenue of Cross River State. The table indicates that in 2004 the State had a deficit percentage variance of 20 percent of actual receipt over estimated receipts for internally generated revenue. This figure dwindled remarkable over the coming years to 125 percent as noticed in 2006. This situation therefore leaves the State Government to depend heavily on allocation that comes in from the federation account and grants and aids. For instance, the State receipt from the federation account amounted to a surplus of 43. This figure declined to 19 percent in 2005 and further worsened to a deficit of 129 percent. Over all, Cross River State had a deficit revenue receipt of 55 percent in 2006 with grants and taxes having a surplus of 26percent and 27 percent respectively. It is important to note that the expenditure of the State depends heavily on the amount of revenue receipts. When the revenue receipts declines, the State Government often would adjust it sectorial allocations to the various departments, with the department that rack it more funds from its internally generated revenue receiving priority attention.

From table 2 the study highlights that the budgetary allocation to the health sector had not been impressive. The budgetary expenditure of health in 2004 stood at 1.16 percent of total expenditure, while education received 2.61 percent of total expenditure. In 2005, the budgetary estimated allocation to health sector increased to 3.65 percent while education expended about 8.42 percent of total budgetary estimate. While the health sector benefited immensely form the previous years budget estimate, in 2006 the budgetary estimate to the health sector plummeted to 0.95 percent. The health sector has since then been experiencing deficient funding from government, however placing more reliance on the external funding that comes from the donor support. This result accounts for the poor performance of the health sector in Cross River State.

Health Institution distribution in Cross River State

Table 3 provides the health institution distribution in Cross River State between 2004 – 2006. The table reveals some improvement in the distribution of health institution in the State. While, the Primary health Centre did experience any increase within the reporting period, local health centers experience a 49.9 percent increase in the distribution. The result shows that the State government had taken measurable step within the reporting period to increase the number of existing health facilities within and across State. The number of health post (which are little health facilities usually without medical doctors and nurses) had also experienced 11.7 percent increase.

Comprehensive health centers had also increased by 60 percent, while the number of maternity homes had also increased by 76.5 percent. Though, the result shows a better performance in the number of distributions of health facilities, the size of the existing health facilities are quite insufficient to carter for the teeming population of women of child bearing age in the State. The disturbing issue about this result is the reduction in the number of Maternal and Child Centre and Poly clinics in the State. The result reveals that these units of Maternal and Child health centers had decreased by 33.3 percent, while the Poly Clinics had also experiences a decrease of 6.7 percent.

Further analysis of the distribution of health facilities in the State reveals that as at 2006, the State witnessed a proliferation of private registered primary health care centers. Statistics show that the State had 80 registered private primary health care institutions as compared to the existing 58 government registered primary health care institutions. The number of private hospitals had also out numbered the number of established government owned hospitals in the State. Most of the established registered private primary health care centers are located at the rural areas. The continued establishment of these private health institutions amidst the rural dweller exploits the already lean financial resources of the rural poor.

Brief Literature Review

Improving financing to the health sector has become a major topic of discourse among health economist. However, relatively little attention has been placed on the relationship between spending on health and health outcomes in Nigeria. Some researchers have attempted to exposit on these relationship, however, their discussions have been narrowed to some specifics. For instance, Ichoku (2009) utilized the Aronson, Johnson, and Lambert (1994) decomposition framework to analyze the redistributive effects of healthcare financing in terms of vertical and horizontal inequities in Nigeria. While this study is commended for expositing the high incidence of catastrophic health care financing, impoverishment, and inequities, (both vertical and horizontal) in Nigeria, the study is limited by considering only household income as the major determinant of healthcare spending.

Onwujekwe, Uzochukwu,, Obikeze, Okoronkwo, Ochonma, Onoka, Madubuko and Okoli (2010) critically examined the determinants of out-of-pocket spending and the strategies clients adopt towards coping with payments for healthcare in southeast Nigeria. The study selected six communities from two states to represent the health status of the Nigeria population. This study is criticized for it hasty generalization and misrepresentation of facts. While noting the lean sample size adopted for the study, the study did not also consider the size and quantity of statutory revenue allocation to the federating states in Nigeria from the federation account which is a major determinant of health care expenditure. It is expected that the measure of allocation received by state government from federation account should also determine the amount of expenditure on health, with states that receive higher allocation from the federation account performing better.

Preston (1975), Wilkinson (1992, Winegarden (1978), Kewachi and Kennedy (1997) had also suggested that the size and distribution of income within a country is a strong determinant of health status. Helmert and Shea (1994), Kaplan, Pamuk, Cohen, Lynch and Balfour (1996) also found a direct relationship between income inequality and mortality rate. Smith (1998) further observed that being at the bottom of unequal income distribution can trigger social ranking disorder as well provoke negative health outcomes.

To improve accessibility to health care for the poor, most government had abolished cost sharing formulae in most public facilities. However, there has been mixed result on the effectiveness of this abolishment of cost sharing. Empirical evidence by Deininger and Mpuga (2003) and WHO (2002) reported abolition of cost sharing to have improved the poor's access to health facilities. However, Mwesiggye (2002) reported the quality of health to have worsened in most public facilities due to abolition of cost sharing. Frederick (1998) also observed that cost sharing and user fee could have a perverse effect, if not combined with price differentiation according to income and an improvement of quality of health facilities.

Some researchers had also identified distance to health facilities as a determinant of demand for health services. Distances to the nearest health facility has mainly an effect for the treatment of rural rich Tanzanians since the rich have higher education and higher wages (Frederickx, 1998).

Appleton (1995) Dercon (1996) and Lavy and Germain (1994) also found out that distance to health facilities affect the take-up of the ill and the choice of health facilities in Kenya, Ethiopia and Ghana. Turner (1991) found out that in Nicaragua better access to health care facilities was the strongest determinant of health care spending by household. Household that live or trek longer distances to receive health services are bound to develop evasion strategies which include patronizing quack medical stores, traditional native medical attendants and self medication. However, Collier and Mackinnon (1997) found out that household usage of health facilities is far more sensitive to quality than distance

Do non-medical variable also affect health status? Behrman and Deolaliker (1998) claimed that education can increase the use of health facilities. Ibrahim et al (2004) reported differential effect of education on health care demand between public and private health care providers in Uganda. Their results suggest that having some form of education is associated with a higher probability of seeking health care.

Turning to facility level characteristics, there seem to be greater demand for care with increasing proportion of qualified health staff. Grubaugh and Santerre (1994) in their study found a strong positive correlation between certain health inputs – number of doctors, hospital beds, number of qualified health personnel's – and health outcome. Gardtham, Sogaard, Andersson and Jonsson (1992) and Moore et al (1992) study also indicated that the number of per capita beds, ratio of public expenditure to total expenditure on healthcare prices of health care services, and substitution of informal care for formal care had negative impact on health care expenditure. These therefore suggest that the more a government spends on the provision of basic health inputs the better would be the health status of the population. But do all these assertions hold in all situations and countries? Are there some differentials in the health seeking behavior of urban populace compared to the rural populace? If there are any, what factors then could be responsible for these absolute differentials?

Data

This study utilizes primary data collected through personal interview technique over two month period of reference. Selected residents of the community were trained on how to administer the questionnaires to the community members. The questionnaire was pre-tested amongst 50 residents of a peri-urban community near Odukpani Local Government Area of Cross River State and the results were used to improve on the language used in the questionnaire, sample questions, the mode of questioning and the coding of responses received. The questionnaire explored the demographic and socio-economic characteristics of respondents and their households. Healthcare seeking behavior was measured as number of cases in household that had sought healthcare services from different health care providers within the past one month. One month recall period was used to measure the amount of money required to pay for health care services obtained by mothers. This measure eventually formed the amount for out of pocket expenditure incurred by clients.

The study assumed the health status of the population to be the ratio of infant deaths rate to birth rate recorded by the health facilities within the past two months. The interview focus was on women who had more than one life birth or infant deaths in the last 5 years. This was to ensure that the study captures the number of life births and the number of deaths experienced by mothers. In most rural communities in Nigeria, mothers have also assumed the role of family up keep responsibilities, thus it was also necessary to interview mothers on the household income ability. The study attempted to evaluate the amount of revenue receipt by health facilities from the State and Local government authorities towards the running of the health facilities. Revenue receipts are usually utilized for the provision of drugs and other sundries necessary for the running of the health facilities. The study was able to establish that most health facility received an average estimated impress amount of N100,000 monthly from the government authorities. Thus, the study adopted the amount as the minimum amount required to run the health facilities.

Study Area

Cross River State has 18 local government areas within the state. 6 local government areas constitute a senatorial district (Southern, Central and Northern senatorial districts). In all, two Local Government Areas (Calabar Municipality and Calabar South Local Government Area) considered as urban Local Government Areas are located within the State capital metropolis. The study selected one local government area from each senatorial district. These local government areas are Abi (Central senatorial district) Bekwarra (Northern senatorial district) and Calabar Municipality as the only urban (Southern senatorial district).

The study randomly selected seven (7) villages from each of the chosen local government area of the senatorial districts respectively. Twenty households were also randomly selected from each village leading to a total sample size of 420 households.

Each study site selected has at least 1 primary health center, 1 poly clinic, and 1 health post. There are also a number of private hospitals/clinics, patent medicine dealers, and a wide range of private healthcare providers (including traditional medicine practitioners) in each study community.

Since the interest in this study is to identifying women at risk because they did not receive care, the outcome variables were coded as 1 if the women received medical care for their children less than five years and as 0 if she did not receive care. The same coding procedure was applied to every other variable in question in the study.

Methodology

The study shall be bed rocked on the household health production function It is noted that while Grossman (1972) included social, economic and environmental factors as input to production function, Or (2000) utilized same health production function to measure the health outcome of industrialized countries. In attempt to utilize the household model, the paper shall however adopt the infant mortality rate (under five ratios) as the index for health status. The health production function shall be specified as thus,

$Y = f(H, E)$ ……..(1)

Where Y is the expected health output, H is the vector for economic variables and E is the vector for non-economic variables. The economic variables are represented as thus, household income (HSI), government expenditure on primary health care services (MRR), share of contributory funding by donor agencies and other community based support (HFE) (measured as health facility expenditure), price/cost of obtaining medical services (measure for out-of pocket expenses spent by clients in obtaining medical services (OPE). Non-economic variables are defined as education level of service users (EDU), quality health services provided (QC), number of visits to the clinics by mother for under five patient treatment (NVHF)(measure for demand for health services), distance to the nearest health facility (DHF), Health Facility Patronage (HFP)

IMF = f(HSI, MRR, HFE, OPE, EDU. NVHF, QC, DHF, HFP,) …….(2)

Logistic regression used for the multivariate analysis was adopted from Mekonnen and Mekonnen (2002). The logistic model considers the relationship between a binary dependent variable and a set of independent variables. The logistic model for K independent variables (x1, x2, x3, . . . , xk) is given as

Logit $P(x) = \alpha + \sum \beta i xi$

$\exp \beta_i$ = odds ratio for a person having characteristic *i* versus not having characteristic *i*

ß = Regression coefficient

α = constant

The odd ratio above is calculated as the probability of an even occurring divided by the probability of an even not occurring (Udofia, 2011) Confidence intervals (CIs) are presented for the odds ratios instead of p-values. According to Mekonnen and Mekonnen (2002) CI contains more information relevant to explaining the significance of the variable than p-values. A CI covering 1 implies that there is a significant effect of the factor under consideration. A narrow CI implies a large sample size, while a large CI implies a small sample size.

The major advantages of estimating an aggregate health production function is that estimates of the over-all effect of medical care utilization on the health status of the population can be obtained (Thornton, 2002). This information can help policy makers and practitioners in their search for cost effective mechanisms for providing health services and the reallocation of health resources in such a way that the gains from health spending could be optimized.

Result of the Multivariate Analysis

Table 3 presents the combined analysis of percentage response of women between the ages of 15 – 45 years who have at least one (1) child who is under five years and have visited the health facility at least once within the sample period. The result indicate that 54.7 percent had only visited the health facilities less than 4 times within the month for childhood related treatment, while 45.3 had visited the health facility more than five times within the month. It appears from the result that the frequency of visit to the clinic is negatively correlated with the high incidence of out-of-pocket payments and the household income level. 65.4 percent of the population complained of spending above N5, 000 ($33.3) as out-of-pocket payment for healthcare services provided, while 54.6 percent of the women earn income below N4, 500 ($30) per week. The result explains the fact that income earned by households is spent on healthcare treatment.

This result collaborates with Ichoku, Fonta, Okon, Ataguba and Okpanachi (2006) who reported a catastrophic financing (defined as that percentage of a household's income above which a given health expenditure is considered to be inimical to the survival of the household) in Nigeria from a survey carried out in Enugu State. In a bid to avoid such extraneous spending on health, households device strategies which include, reduction of visits to health facility, cut in consumption expenditure and the patronage of local medicine vendors, over the counter purchase of drugs, self medication and visits to traditional medicine homes. This is explained by the low percentage of women who visit government hospitals. The result indicate that 51.0 percent of women resort to private treatment obtainable from traditional midwives, local medicine vendors, etc. while 49 percent of women visit the public health facilities. This figure is attributable to women who dwell in urban cities where the government has substantially subsidized medical treatment by offering free medical services to children under five years and pregnant women. These services are not however easily accessible by mother in rural communities where the teeming populations dwell.

The result further reveals that 66.7 percent of health facilities are located beyond 5km distance from the women. Most women had to trek a distance beyond five (5) kilometers to access health facility. This situation makes it cumbersome and tiring to seek health services. For those who are lucky to visit health facility 66.9 percent are dissatisfied with the quality of services provided at the clinic. Most of the women complained that where health facility exist, such facilities were often be devoid of qualified health personnel's, obsolete medical equipment, lack of beds and cots, poor and dilapidated building and absence of residential buildings for medical/health workers.

Quite interestingly, the result further reveals that 31.3 percent of the women populace are still without formal education (acquisition of basic primary education). This figure is perceived to be higher amongst rural women who may not have had possible access to formal primary education. These results shows that this population of women who can neither read nor write, faces the risk of exposure to all manner of infections and diseases since due to poor knowledge of health education.

The revenue expenditure of the State and Local government authorities has been insufficient in sustaining the required level of healthcare provision. From the table 73.9 percent health workers interviewed posited that funds received from the government authorities as impress for running the clinics have been below N100,000 ($666.6) monthly, sometimes these funding has not been consistent. However, the facilities have benefited from contributory funding from local community health associations, donor organizations, and personal donations from some prominent members of the communities. These activities are geared towards augmenting government effort in health care provision. Quite remarkable, the health facilities have benefited from the initiatives of the European Union, World Health Organization, Canadian International development Agency, UNICEF etc. The assistance from these donor agencies are often in the form of providing technical assistance, training health facility workers, provision/procurement of medical and allied equipment, building/renovation of health facilities and supporting health campaigns such as Child Health Week, IPDS, Measles Campaigns, IPD, etc.

Result of Multivariate Analysis in Table 2

Table 4 presents the multivariate analysis of the study. The study utilized a stratified sample technique by studying the responses from the urban and the rural local government areas. The model for the rural and urban areas presents very interesting results regarding the predictors of health status in Nigeria.

The variables of Education, Quality of healthcare services, Monthly revenue receipt from local/state government, monthly health facility expenditure were observed to be positively and significantly responsive to health status, while out-of-pocket expenditure, household income, distance to health facilities, and level of health facility patronage were found to be negatively significant to health status in Nigeria. The result from the rural government areas indicates that reduction in household income of the women is more likely to affect health status of the population in the rural areas by 82 percent, while in the urban town household income was observed to more likely reduce health status by 51 percent Thus household income is a major determinant of health status of the women both in urban and rural dwellings.

The result suggests that the lower the amount of income earned by the population, the worse will be the health status of the population. Out-of-pocket expenditure (which measures the payment made by individuals in other to obtain health services) was observed to higher in rural communities than urban communities. The result suggests that an increase OPE is more likely to reduces health status by 71 percent and 53 percent for rural and urban communities respectively. Again, the result suggest that OPE has continued to be a major determinants of health status in Nigeria.

Educational status of the population poses as a significant factor in determining health status in Nigeria. The result suggests that an improvement in educational status of the population is more likely to improve health status by 24 percent and 87 percent for rural and urban communities respectively. The result amplifies the fact that considering the educational level of the communities, the improvement in primary education is greater in the urban communities than in the rural communities. There is likelihood that education will improve health status by only 24 percent among rural women. It is worthy to note that education improves awareness of the consequence of poor health habits, improved living conditions and nutrition.

Distance to the nearest health facility is also observed to be significant in determining the health status of the population. Although, the result of the distance to health facility is noticed to reduce health status by 6 percent in the urban areas, this result is worse for the residents of the rural communities. The resident of the rural communities trek longer distance to reach the nearest health facility, this situation often prompt the women to resort to traditional treatment which can be accesses within the communities. This attitude further worsens their health status of the population.

Quite interestingly, the quality of service offered by the health facilities has a positive impact on the health status of the population. The result further reveals that the quality of service is observed to more likely improve the health status by 33 percent and 58 percent for rural and urban communities respectively. It is not surprising that the quality of service is better at the urban towns than the rural areas. Nearness to the State capital offers a great boost to the provision of better health services, highly skilled medical workers, provision of modern health equipment, effective monitoring of health workers performance to duty and cheaper cost of treatment since the drugs are readily available and affordable.

Health facility patronage is found to be weakly significant in the model. The result indicates that health facility patronage is poorer in the rural areas than the urban areas. This weak patronage has been observed to reduce health status by 33 percent in the rural areas and 16 percent in the urban areas. It is explainable that in the urban areas, clients are opportune to have various choices of where to seek medical services. Most clients prefer to seek medical care from private hospitals since services here are prompt, even though rather more expensive. It is often regarded as a show of class and wealth to patronize private health care service providers. At the rural areas though the choices of service providers are not as wide as those in the urban areas, clients still can afford to visit the local drug vendors, traditional herbal homes, local midwives attendant and probably, self medication. The strong consideration of where to seek medical treatment usually depends on the amount of income at their disposal.

Monthly revenue receipt by health facility from the government was found to be strongly significant. The result reveals that receipt of funds by health facility tends more to the health facilities located in the urban areas than those located in the rural areas. Government attention is seen to be more focused on health facilities located in the urban towns than the rural towns. But quite interestingly, the extra-government expenditure (that is, expenditure from donor organization, community insurance schemes, and personal donations from prominent folks within and outside the communities) for health is particularly focused on health facilities in the rural areas than the urban areas.

Conclusion and Recommendation

The study had attempted to examine the pattern of healthcare financing in the state as well as consider that factors that determine the health seeking behavior of client in Nigeria. To achieve the above objectives, the study had utilized the stratified sampling techniques to study the behavior of the variables between the urban and rural areas. Multivariate logit analysis was adopted to study the samples receipt from the field.

From the study analysis, the study had concluded that household income and out-of-pocket payment has continued to exert negative effect on the health status of the population in both the rural and urban areas. The situation is worse with the clients in the rural areas than the urban areas (where most of the populations are living below $1 per day). Particularly, payment for health services has continued to threaten the consumption and livelihood pattern of the rural dwellers than the urban dwellers, especially as payment for health services reduces the amount available for other household consumption, often throwing the families into perpetual borrowing habit, that is, if they must survive, thus further worsening the poverty level of the population.

Furthermore, the study had observed that the spatial dispersion of health facilities between the urban and rural areas is discriminatory (with more health facilities located in the urban areas than the rural areas). Residents of the rural areas often will need to trek over 5km to reach the nearest health facility. This situation which usually discourages the clients from seeking health services from government health facilities rather it encourages the clients to seek other forms of available and cheap healthcare services, which more often than not, are inimical to the health population.

Healthcare financing in the study has not been particularly encouraging. The study had observed that most health facilities do not receive sufficient impress from the government to run the clinics. Although funding of health facilities tend to favor the clinics located in the urban settlement, the clinics located in the rural areas are strongly affected by fund drought. However, the facilities in the rural areas are periodically supported by funds that trickle in from the limited donor agencies, community health committees and personal support from some prominent indigenes of the community, but such funds are intermittent and irregular. It is worthy to mention here that the state government had established some initiatives that are expected to enhance the health status of the population. Such initiative which include, free medical services to children under five years and pregnant mother, establishment of drug revolving funds, community health insurance scheme, and periodic renovation and building of health facilities in both the rural and urban areas, these initiatives (some of which are expected to have long run impact on health status) though commendable, but are still insufficient considering the vast growing population of the areas.

In the light of the above, the study thus recommends the following,

1. Establishment of effective monitoring committee to oversee the activities of the managers of the basic Conditional Cash Transfer scheme (an initiative that transfers cash from the State government to household as a measure to boost primary education and strengthen healthcare services) across the local government areas.
2 Establishment of virile political framework and democratic governance that will be impartial in policy formulations, especially, as it concerns healthcare provision in the state.
3. Review of the current revenue allocation/sharing formula, where (through operating joint revenue account) the state government controls the amount of revenue that goes to the local government areas from the federation account. If funding which comes from the federation account is allowed to go directly to the local government councils, much improvement will be made, more so, since the funding of primary health care centers remains the prerogatives of the local government councils.
4 More involvement of international donor agencies in the health intervention programmes of the country. Nigeria still requires the support of foreign partners in fighting the scourge of disease within and around the country.
5. The communities should awaken to a shared sense of responsibilities, through the establishment of local community health insurance schemes. Although, this scheme has been kick started by the state government, many communities have not yet awakened to the responsibility of owning the programme. Most communities still regard the scheme as solely government programme. This ought not to be so.

6. Emphasis should be placed on the implementation of the National Health Insurance Scheme across all the local government area in the State. While we may argue that the proposed NHIS will completely ameliorate the deplorable health situation at a go. However, if the NHIS is well designed, planned, managed and effectively implemented, it is likely to improve the overall health outcomes of Nigerians as well as nudge the country towards achieving the Millennium Development Goals.
7 Efforts should be made to reduce costs in the delivery of social services, as well as increase the efficiency in resources allocations to the primary level, must be considered prior to the introduction of cost sharing. Cost sharing if it must be maintained should be accompanied by special measures that effectively protect the poor. Experience shows that the poor have not been effectively protected against the negative impact of cost sharing on their access to basic education and basic health.
8 While the abolition of cost sharing might not be pursued considering the severe constraints in terms of financial resources and/or institutional capacities faced by government, caution must be exercised wherever there is doubt about the ability to protect the poor. No one child should be deprived of his or her right of access to basic education and basic health.
9. The government should encourage the establishment of village/ward development committees whose responsibilities should include taking initiative to assist in government in building health post (in communities where such do not exist), maintenance of established health facilities, provision of logistics during health campaigns and monitoring of health workers activities at the health facilities.

The above recommendations if undertaken has the capacity to turn around and reduce the incidence of maternal mortality rate in Nigeria as well as improving the health status of the population.

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Estimated and Actual Capital Expenditure of Cross River State 2004 - 2005

		2004			2005		2006	
Title of Projet		Estimated	Actual	% of Total	Estimated	% of Total	Estimated	% of Total
Economics	Agriculture	201,000,020	164,752,398	1.145230499	256,450,000	1.576628154	260,660,180	1.063363883
	Livestock	10,000,000			10,000,000	0.061478969		
	Forestry	105,000,010	36,901,946	0.25651362	454,300,000	2.792989551	75,500,000	0.308002447
	Fisheries	6,000,000			9,000,000	0.055331072	3,000,000	0.012238508
	manufacturing & Cra	6,000,030	960,000	0.006673173	6,002,020	0.0368998		
	Rural Electrifiction	1,020,000,000	698,016,729	4.852069265	1,500,000,000	9.221845316	1,190,053,050	4.854824515
	Transport	1,200,000,000	645,538,685	4.48728273	1,510,000,000	9.283324285	7,159,052,770	29.20537441
	Commerce	1,219,000,020	1,156,117,132	8.03642688	2,348,000,060	14.43526224	8,129,426,690	33.16401734
	Total	3,767,000,080	2,702,286,890	18.78419617	6,093,752,080	37.46375939	16,817,692,690	68.60782111
Social Services	Education	734,000,010	376,574,090	2.617650111	1,371,000,010	8.428766681	434,618,870	1.773028812
	Health	359,300,030	167,034,304	1.161092534	594,600,030	3.655539668	234,442,400	0.956408381
	Information	130,000,000	65,865,039	0.45784251	115,000,000	0.707008141	70,000,000	0.285565182
	Social Development	62,000,000	18,207,056	0.126561289	195,500,000	1.20191384	96,600,000	0.394079951
	Tourism	4,600,000,000	4,595,192,826	31.94220561	1,000,000,000	6.147896878	2,680,000,000	10.93306698
	Total	5,885,300,040	5,222,873,315	36.30535206	3,276,100,040	20.14112521	3,515,661,270	14.3421493
Regional Development	Water supply	3,396,500,000	581,034,619	4.038900645	624,500,020	3.839361723	140,000,000	0.571130364
	Sewage, & Drinage	215,000,000	169,258,021	1.176550085	142,400,000	0.875460515	155,000,000	0.632322903
	Housing	1,020,000,000	288,121,935	2.002799543	512,068,800	3.148146177	105,000,000	0.428347773
	Town Planning	3,527,554,780	3,442,533,125	23.92981211	2,252,500,000	13.84813772	507,695,120	2.071143564
	Community Develop	100,000,000	100,000,000	0.695122203	10,000,000	0.061478969		
	Total	8,259,054,820	4,580,947,700	31.84318458	3,541,468,820	21.7725851	907,695,120	3.702944605
General Administration	General Administrati	2,774,898,180	1,491,584,611	10.36833581	3,009,404,060	18.50150582	907,695,120	3.702944605
	Miscellaneous Capita	670,780,230	388,267,180	2.698931376	345,000,010	2.121024484	1,713,000,000	6.988187959
	Total General Admin	3,445,678,410	1,879,851,791	13.06726719	3,354,404,070	20.62253031	651,048,100	2.655952419
							3,271,743,220	
Grand total		21,357,033,350	14,385,959,697		16,265,725,010		24,512,792,300	

Source: Cross River State Statistical Year Book. 2006

Summary of Estimated/Actual Revenue of Cross River State 2004-2006

	2004			2005			20
Types of Revenue	Estimated	Actual	% Variance	Estimated	Actual	% Variance	Estimated
Fedral allocation	10,600,000,000	18,669,757,555	43	19,398,022,360	24,003,887,363	19.18799623	29,441,131,450
Value Added tax	1,309,259,000	1,662,357,204	21	1,600,000,000	1,830,702,017	12.60183333	1,600,000,000
Internal Generated Funds	2,271,397,540	1,897,882,141	-20	6,703,788,720	2,978,175,115	-125.0971975	2,616,200,000
Grants/others	15,194,818,850	7,332,376,642	-107	7,503,967,580	6,256,418,781	-19.94030199	7,503,967,580
Total	29,375,475,390	29,562,373,542	1	35,205,778,660	35,069,183,276	-0.38950261	41,161,299,030

Source: Cross River State Statistical Year Book. 2006

DISTRIBUTION OF HEALTH INSTITUTIONS IN CROSS RIVER STATE BY TYPE 2004 - 2006

	2004	2005	2006	% INCREASE B/W 2005-2006
1 TEACHING HOSPITAL	1	1	1	
2 GENERAL HOSPITAL	13	11	14	21.4
3 HEALTH CENTRE	179	176	351	49.9
4 PRIMARY HEALTH CENTRE	45	58	58	0.0
5 HEALTH POST	164	173	196	11.7
6 COMP. HEALTH CENTRE	7	4	10	60.0
7 IDH	1	1	1	0.0
8 MATERNITY HOSPITAL	1	1	1	0.0
9 MATERNAL & CHILD HEALTH	2	4	3	-33.3
10 TBL	6	3	3	0.0
11 MATERNITY HOME	3	4	17	76.5
12 POLY CLINIC	4	96	90	-6.7
13 SPECIAL CENTRE	6	2	4	50.0
14 MRS HOSPITAL	2	2	2	0.0
TOTAL	434	536	751	28.6

Source: Cross River State Statistical Year Book, December 2006

TABLE 3

PERCENTAGE RESPONSE OF WOMEN AND HEALTH FACILITY WORKERS WHO WERE INTERVIEWED

Case Processing Summary

		N	Marginal Percentage
Health Status	< 25 deaths per 1000 per month	100	24.9%
	> 25 deaths per 1000 per month	302	75.1%
Number of Visits to health facility	< 4times	220	54.7%
	> 4 times	182	45.3%
House Hold Income	< 4500	139	34.6%
	> 4500	263	65.4%
Out of Pocket expenditure	< 5000	124	30.8%
	> 5000	278	69.2%
Educational status	without FSLC	126	31.3%
	Has FSLC	276	68.7%
Distance to Health Facility	< 5km	134	33.3%
	> 5km	268	66.7%
Quality of Health Services Provided	Not Satisfied	133	33.1%
	Satisfied	269	66.9%
Health Facility Patronage	Private	197	49.0%
	Government	205	51.0%
Monthly Revenue Receipt	< N100,000 per health Facility	297	73.9%
	> N100,000 per health facility	105	26.1%
Monthly Health facility Expenditure	< N100,000 per month	308	76.6%
	> N100,000 per month	94	23.4%
Valid		402	100.0%
Missing		6	
Total		408	
Subpopulation		186[a]	

Table 4 Case Processing Summary

	Combined Rural			Urban			Total		
	Coefficient	Wald Value	95% Confidence Interval	Coefficient	Wald Value	95% Confidence Interval	Coefficient	Wald Value	95% Confidence Interval
Number of Visits to health facility	0.574	4.386**	1.038-3.038	0.418	2.886**	0.939-2.461	0.464	2.974**	0.939-2.696
House Hold Income	-0.826	10.281***	0.264-0.725	-0.516	4.242**	0.365-0.975	-0.903	12.199***	0.244-0.673
Out of Pocket expenditure	-0.710	6.646**	0.287-0.844	-0.539	4.239**	0.349-0.974	-0.733	7.482***	0.284-0.812
Educational status	0.242	2.513*	0.657-2.469	0.872	8.810***	1.345-4.255	0.681	4.404**	1.046-3.731
Distance to Health Facility	-0.273	3.823**	0.422-1.372	-0.065	0.061	0.560-1.567	-0.219	2.743**	0.466-1.384
Quality of Health Services Provided	0.336	1.423*	0.806-2.428	0.581	1.054*	0.775-2.265	0.309	1.256*	0.794-2.335
Health Facility Patronage	-0.332	1.547*	0.425-1.211	-0.162	0.413	0.519-1.394	-0.337	1.621*	0.425-1.199
Monthly Revenue Receipt	0.299	6.877**	0.721-2.524	0.525	3.663**	0.987-2.892	0.344	1.440*	0.804-2.472
Monthly Health facility Expenditure	0.338	1.347*	0.792-2.484	0.199	0.163	0.498-1.582	0.227	0.616	0.712-2.213

N – 402, * Significant at 1% ** significant at 2.5-5%% *significant at 6-10%**
Source: Researcher's computation