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Original Article

# Comparative Analysis of Caesarean Delivery among Out-of-Pocket and Health Insurance Clients in Ilorin, Nigeria

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## Abstract

**Background:** Although out-of-pocket (OOP) payment for health services is common, information on the experience in maternal health services especially caesarean delivery (CD) is limited. **Aim:** To compare the pregnancy events and financial transactions for CD among OOP and health-insured clients. **Materials and Methods:** A comparative (retrospective) study of 200 women who had CD as OOP (100 participants) or health-insured clients (100 participants) over 30 months at Anchormed Hospital, Ilorin, using multistage sampling was conducted. The data were analysed using Chi-square, *t*-test and regression analysis; $P < 0.05$ was considered statistically significant. **Results:** Of 1246 deliveries, 410 (32.9%) had CD; of these, 186 (45.4%) were health-insured and 224 (54.6%) were OOP payers. The health-insured were mostly civil servants (60.0% vs. 40.0%; $P = 0.009$) of high social class (48.0% vs. 29.0%; $P = 0.001$). The payment for CD was higher among OOP ($P = 0.001$), whereas duration from hospital discharge to payment of hospital bill was higher for the health-insured ($P = 0.001$). On regression, social class (odds ratio [OR]: 0.23, 95% confidence interval [CI]: −0.0891252–0.112799; $P = 0.048$), amount paid (OR: 48.52, 95% CI: −7.14–6.68; $P = 0.001$) and duration from discharge to payment (OR: 28.68, 95% CI: 51.7816–70.788; $P = 0.001$) were statistically significant among participants. The amount paid was lower ($P = 0.001$), whereas time interval before payment was longer ($P = 0.001$) for the public-insured compared to private-insured clients. **Conclusion:** OOP payers are prone to catastrophic spending on health. The waiting time before reimbursement to health-care providers was significantly prolonged; private insurers offered earlier and higher reimbursement compared to public insurers. The referral and transportation of health-insured clients during emergencies is suboptimal and deserve attention.

**Keywords:** Caesarean delivery, fee-paying clients, health insurance, out-of-pocket

## Introduction

Universal Health Coverage refers to access to key preventive, curative and rehabilitative health interventions for all at an affordable cost.[1] This depends on the health-care financing strategy and system of the government. A health-care financing system involves the various means of fund generation, allocation and utilisation for health-care services. The success of a health financing method can be measured by the overall effect on access, efficiency as well as client and health facility satisfaction.[2-5] Health-care financing remains non-uniform globally, but middle- and low-income countries (LICs) continue to experiment with different methods due to perpetual underfunding of health services.[6] User fees were first explored at service points to generate revenue for running the health system, but evidence suggests that they constitute a strong barrier to utilisation and non-adherence to long-term treatment among poor and vulnerable groups.[6] The common methods of health financing in Nigeria include tax revenue, out-of-pocket (OOP), donor funding and health insurance (public and private).[7] Nigeria introduced the health insurance in mid-2005 as the National Health Insurance Scheme (NHIS) and service purchase is through a mix of public and private providers reimbursed by purchasing agency resources. The public plan accesses funds from the NHIS pool

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which is funded by contribution by the federal government in the form of a percentage of the enrolee's consolidated salary.[7] However, the private insurers have access to other funds from the enrolee's organisation based on negotiations on the desired package. For secondary care which includes caesarean delivery (CD), the NHIS has pre-determined price list which is used to reimburse the health-care provider. However, the private plan allows negotiation between the health-insurers and health-care providers, thereby encouraging better pricing in favour of the providers with a higher reimbursement for the same services under secondary care compared to the public plan.

The World Health Organization reported that in most LICs, people pay a high proportion of their health costs directly to health-care providers as OOP. In 47 LICs, over 50% of total health expenditure is from OOP.[8] A comparison showed that in Germany (GDP US$32,860 per capita), 11.3% of all medical expenses are borne by households unlike Democratic Republic of the Congo (GDP US $120 per capita) and 90% of health cost is borne by households.[8] OOP payment for health care has been shown to deter people who cannot pay from accessing care, discontinue care or cut spending on basic needs (food, clothing, shelter and education) to meet health costs. Annually, about 150 million people experience catastrophic health spending defined as obligation to pay on health care over 40% of available income after meeting basic needs, whereas 10 million of these individuals have been driven below poverty line.[8] There have been reports of slower care,[9] long waiting time and dissatisfaction with services among health-insured clients, whereas health-care providers experience long waiting time before reimbursement with negative effects on facility operations and providers' morale.[10] In Abakaliki, Nigeria, 69% of state government employees relied on OOP and 28.4% on NHIS for health care. Furthermore, 63.6% of OOP payers reported hardship in assessing care due to financial constraint, 47.7% resolved to self-medication and 28.4% delayed seeking care.[11]

In general, reports on NHIS have been focused on attitude and outpatient experience of clients, whereas surgical operations are yet to be explored. This study therefore aimed to fill the knowledge gap by comparing the pregnancy experiences and payments for CD among OOP and health-insured clients.

## Materials and Methods

The study was conducted at Anchormed Hospital, a private multispecialist health facility in Ilorin, North-central Nigeria, offering antenatal, labour and delivery, obstetric surgeries and postpartum care services. The research is a comparative and retrospective study involving women who had CD at the study site as OOP payers or health-insured clients. The participants were women who had CD (elective or emergency) at the study site from 1st January 2016 to 30th June 2018. The inclusion criteria were delivery by CD and availability of data on clinical and financial records of the surgery and the care received. Women who had vaginal delivery were excluded from the study. The sample frame for the study comprised all women who had CD at the study site during the study period (410) out of which the participants were selected.

The sample size was calculated using the formula for comparative study[12] where

$n$ = Desired sample size

$z$ = Standard normal deviate set as 1.96 which corresponds to 95% confidence interval (CI)

$p$ = Proportion in the target population estimated to have a particular characteristic i.e., 0.05 (i.e., 5.0%)[1]

$q = 1.0 - p = 1 - 0.05 = 0.95$

$d$ = Degree of accuracy desired usually set at 0.05

$$n = \frac{1.96^2 \times 0.05 \times 0.95}{(0.05)^2} = 72.9 = 73 \text{ participants}$$

Provision for attrition was 20% i.e., 15.

Thus, minimum sample size for each arm of the study = 73 + 15 = 88.

Therefore, a minimum of 176 participants was required for the study.

### Recruitment of participants

The recruitment of participants was by multistage sampling; a list of all patients who had CD during the study period was compiled and categorised into two groups of OOP payers and the health-insured. The participants were selected by simple random sampling from each group until the sample size was completed.

The facility protocol included the use of same generic drugs for all patients, whereas discharge after CD was routinely on 4th to 5th day post-surgery.

Secondary data from the patient's hospital record (case files and financial balance sheets) were used for the study, and retrieval was with the aid of a data collection sheet designed for the study. Analysis was performed using SPSS version 21.0 (IBM, Armonk, NY, USA), and comparison was made with Chi-square or *t*-test as applicable with regression at 95% CI; $P < 0.05$ was considered statistically significant. There was no conflict of interest in the conduct of the study.

## Results

During the 30-month study period, there were a total of 1246 deliveries comprising 836 (67.1%) vaginal and 410 (32.9%) CD. Among the 410 CD, 186 (45.4%) were health-insured and 224 (54.6%) were OOP payers. Table 1 shows a similarity in the age ($P = 0.504$) and parity ($P = 0.093$) of the participants; the health-insured were mostly civil servants (60.0% vs. 40.0%; $P = 0.009$) of high social class (48.0% vs. 29.0%; $P = 0.001$) compared to OOP.

In Table 2, 95% of OOP and 79% of health-insured had antenatal care at the study site, whereas 5% of OOP and 21%

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**Table 1: Sociodemographic characteristics of participants**

| Parameter | Out-of-pocket, *n* (%) | Health-insured, *n* (%) | $\chi^2$ | *P* |
|---|---|---|---|---|
| Age | | | | |
| <20 | 0 (0.0) | 1 (1.0) | 1.3691 | 0.504 |
| 20-35 | 85 (85.0) | 81 (81.0) | | |
| >35 | 15 (15.0) | 18 (18.0) | | |
| Mean | 31.37 | 31.93 | 0.9061[t] | 0.817 |
| Parity | | | | |
| 0 | 28 (28.0) | 30 (30.0) | 6.4106 | 0.093 |
| 1 | 30 (30.0) | 29 (29.0) | | |
| 2-4 | 36 (36.0) | 41 (41.0) | | |
| ≥5 | 6 (6.0) | 0 (0.0) | | |
| Occupation | | | | |
| Unemployed | 14 (14.0) | 8 (8.0) | 13.5235 | 0.009 |
| Self-employed | 46 (46.0) | 32 (32.0) | | |
| Civil servant | 40 (40.0) | 60 (60.0) | | |
| Level of education | | | | |
| Primary | 3 (3.0) | 4 (4.0) | 0.8495 | 0.654 |
| Secondary | 39 (39.0) | 33 (33.0) | | |
| Tertiary | 58958.0) | 66 (66.0) | | |
| Partner's occupation | | | | |
| Self-employed | 39 (39.0) | 32 (32.0) | 1.1897 | 0.552 |
| Civil servant | 61 (61.0) | 68 (68.0) | | |
| Social class | | | | |
| High (I and II) | 29 (29.0) | 48 (48.0) | 18.7854 | 0.001 |
| Middle (III) | 40 (40.0) | 19 (19.0) | | |
| Low (IV and V) | 31 (31.0) | 33 (33.0) | | |

of health-insured clients were referred in labour ($P = 0.001$). The health-insured had more cases of elective CD (49.0% vs. 35.0%; $P = 0.045$) and better compliance with postpartum follow-up plan ($P = 0.001$). There was no statistical significance in the determinant for surgery ($P = 0.788$) and occurrence of post-operative complications ($P = 0.141$).

In Table 3, the total amount paid for CD was significantly higher in the OOP payers ($P = 0.001$). The range for duration from hospital discharge to payment of hospital bill was significantly prolonged in the health-insured clients ($P = 0.001$) with a range of 0–10 days for OOP and 30–184 days for the health-insured.

In Table 4, regression analysis showed that social class of participants (odds ratio [OR]: 0.23, 95% CI: 0.0891252–0.112799; $P = 0.048$), total payment made (OR: 48.52, 95% CI: 7.14–6.68; $P = 0.001$) and time interval from hospital discharge to payment (OR: 28.68, 95% CI: 51.7816–70.788; $P = 0.001$) were significantly different among the participants.

Table 5 shows that clients insured under public insurance recorded lower mean payment as reimbursement to the health facility ($P = 0.001$), longer time interval from hospital discharge to payment ($P = 0.001$) and were of lower social class ($P = 0.021$) compared to clients insured under private insurance.

## Discussion

The study shows that the health-insured were mostly civil servants of high social class compared to OOP payers. There was no evidence of significant overutilisation of CD by the health-insured, whereas surgery outcomes were comparable among participants. In addition, the amount paid by OOP payers was significantly higher, whereas time interval from hospital discharge to settlement of hospital bills was significantly longer for the health-insured.

This report supports the assertion that NHIS in Nigeria is an elitist programme primarily for those with higher education and high social class, whereas the urban low social class has limited access to these services.[13,14] Therefore, in its current format, health insurance in LICs including Nigeria is unable to ensure equity in health care with skewed advantages to the affluent to further exploit the public health venture[15] and minimal benefit to the private and informal sectors.[13]

Previous reports supported the concept of 'moral hazard' which implies overutilisation or utilising unnecessary medical care by the health-insured[16-18] due to the highly subsidised services. However, in contrast to this, this study reported comparable use of CD among the health-insured and OOP payers. However, this may be connected to the aversion for CD in low-income settings,[19] making it an unlikely service to be overutilised relative to other socially acceptable services.

This study reported a 21% referral rate for CD among the health-insured who received antenatal care at other facilities. This suggests an improvement over a previous report of poor referral system for the health-insured.[20] However, these health-insured women were referred as emergencies after developing intra-partum complications; they lost additional time during the transfers. Furthermore, inter-hospital transfers were at the discretion of the patient and relatives and were done in private and commercial vehicles which were not equipped for medical transfers. Therefore, the referred health-insured clients often arrive at the referral centre with additional morbidity compared to parturient with the same clinical condition who were managed primarily at the referral centre so not requiring referral. These may explain the higher post-operative morbidity (complications and longer duration of hospital admissions) recorded among the health-insured who were referred for secondary care. Therefore, our health-system should not just provide health insurance, but prioritise provision of prompt referrals and medically safe modes of inter-hospital transfers equipped to provide medical services during transfer. The health-insured and OOP payers received the same generic-named drugs contrary to reports of limited availability of essential drugs or non-dispensing of expensive drugs in the treatment of the health-insured in previous studies.[21,22]

Fee-paying clients pay more than the health-insured; a study reported a 1.4 to 10 times higher payment,[23] which is comparable to 2.2 times in this study. This is because health-insurers pay a fixed amount which is lower than routine facility service cost and is at variance with financial realities;

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**Table 2: Obstetric characteristics and events surrounding the caesarean delivery**

| Parameter | Out-of-pocket | Health-insured | $\chi^2$ | *P* |
|---|---|---|---|---|
| Site of antenatal care | | | | |
| Study site | 95 (95.0) | 79 (79.0) | 11.3174 | 0.001 |
| Another facility | 5 (5.0) | 21 (21.0) | | |
| Previous surgery | | | | |
| Yes | 44 (44.0) | 47 (47.0) | 0.1815 | 0.670 |
| No | 56 (56.0) | 53 (53.0) | | |
| Type of previous surgery | | | | |
| Myomectomy | 1 (1.0) | 1 (1.0) | 8.2687 | 0.142 |
| Salpingectomy | 1 (1.0) | 0 (0.0) | | |
| Appendectomy | 2 (2.0) | 0 (0.0) | | |
| Laparotomy | 5 (5.0) | 2 (2.0) | | |
| CD | 35 (35.0) | 44 (44.0) | | |
| None | 56 (56.0) | 53 (53.0) | | |
| Number of previous surgery | | | | |
| 0 | 56 (56.0) | 53 (53.0) | 5.2744 | 0.153 |
| 1 | 21 (21.0) | 31 (31.0) | | |
| 2 | 15 (15.0) | 12 (12.0) | | |
| 3 | 5 (5.0) | 4 (4.0) | | |
| 4 | 3 (3.0) | 0 (0.0) | | |
| Type of CD | | | | |
| Elective | 35 (35.0) | 49 (49.0) | 4.0230 | 0.045 |
| Emergency | 65 (65.0) | 51 (51.0) | | |
| Major determinant of CD | | | | |
| Patient request | 7 (7.0) | 8 (8.0) | 0.0721 | 0.788 |
| Obstetric indication | 93 (93.0) | (92.0) | | |
| Indication for CD | | | | |
| Background infertility | 0 (0.0) | 1 (1.0) | 19.1580 | 0.024 |
| Oligohydraminos | 1 (1.0) | 2 (2.0) | | |
| Antepartum haemorrhage | 2 (2.0) | 10 (10.0) | | |
| Abnormal lie | 3 (3.0) | 8 (8.0) | | |
| Abnormal presentation | 6 (6.00 | 5 (5.0) | | |
| Severe preeclampsia | 6 (6.0) | 14 (14.0) | | |
| Two previous CD | 22 (22.0) | 14 (14.0) | | |
| Cephalopelvic disproportion | 41 (41.0) | 29 (29.0) | | |
| Patient request | 7 (7.0) | 8 (8.0) | | |
| Others | 12 (12.0) | 9 (9.0) | | |
| Duration of admission (days) | | | | |
| 3-5 | 91 (91.0) | 77 (77.0) | 10.681 | 0.060 |
| ≥6 | 9 (9.0) | 23 (23.0) | | |
| Complications | | | | |
| Yes | 14 (14.0) | 22 (22.0) | 2.1680 | 0.141 |
| No | 86 (86.0) | 78 (78.0) | | |
| Complied with follow-up | | | | |
| Yes | 84 (84.0) | 98 (98.0) | 11.9658 | 0.001 |
| No | 12 (12.0) | 2 (2.0) | | |

CD: Caesarean delivery

however, health-care providers usually oblige due to the benefit of capitation and other remunerations from the care of other health-insured clients. This further emphasises the potential to incur catastrophic health expenditure among OOP payers.[23] This brings to the fore the need to prioritise enrolment and access to health-insured health-care services for the low social class in the private and informal sectors of the populace.

While health insurance seeks to protect patients from exploitation by health facilities, the role of finance as a major factor in the sustenance of health facilities cannot be overemphasised. In a report, 25% of private facilities withdrew their services to the health-insured due to inadequate reimbursement by the insurers,[24] whereas reimbursement generally falls below the local economic realities.[25] Prolonged delay in reimbursement is the norm; this hinders cash flow and

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supplies leading to stock depletion of essential drugs[21] and non-availability of modern equipment at health facilities.[26] Health-care providers therefore prefer OOP payers, whereas others indulge in the unethical and illegal act of turning away the health-insured; these ultimately make health care expensive to fee-payers.[10] The delayed payment is a major challenge to health facilities in most LICs, where the benefit of special credit facilities for entrepreneurs in the health sector is non-existent.

In a report from Ghana, delay in claim reimbursement take up to 6 months; its negative effect include depleted drug stock which forced facilities to buy on credit coupled with inability to pay staff salaries.[27] In Kenya, <50% of facilities were National Hospital Insurance Fund-enrolled, but were plagued by cumbersome accreditation process and long delays in reimbursement. Thus, the delay in payment of reimbursement to health facilities by health insurance organisations seems to be the norm in LICs.[27] Health-care providers are concerned about the long waiting time from service delivery to reimbursement; this is opined to be the bedrock of perceived negative attitude of the providers and their staff towards health-insured clients seeking health-care services.[10]

In general, health facilities prefer private to the public health-insured because the modalities of operations in the private plan enable negotiations for better package which offers higher reimbursement for secondary care. This explains the discrepancy noticed in the reimbursements from private and public health insurance. The NHIS is designed to be funded by employer (government) and enrolee (civil servant) contributions; currently, the enrolee contribution has not been implemented; its activation may harmonise the NHIS and improve service availability and delivery. Available evidence suggest that the health insurance scheme is grossly underfunded in LICs with up to a one-third shortfall of total expected fund causing a negative effect on service efficiency and equitable access to quality health care.[28] Although health is a social good, access to it has been fraught with difficulties relative to finance and cost of billing for the services received. Therefore, health insurers should prioritise timely payment to service providers with minimal bureaucracy to avert frustration of health service providers.[29]

**Table 3: Financial transactions concerning the caesarean delivery**

| Parameter | Out-of-pocket | Health-insured | $\chi^2$ | *P* |
|---|---|---|---|---|
| Cost of theatre items used (USD) | | | | |
| <100 | 28 (28.0) | 20 (20.0) | 1.7650 | 0.414 |
| 100-150 | 33 (33.0) | 36 (36.0) | | |
| 151-200 | 39 (39.0) | 44 (44.0) | | |
| Total amount paid for surgery (USD) | | | | |
| <300 | 0 (0.0) | 90 (90.0) | 183.5294 | 0.001 |
| 301-350 | 7 (7.0) | 10 (10.0) | | |
| 351-500 | 93 (93.0) | 0 (0.0) | | |
| Time from discharge to payment (days) | | | | |
| 0 (at discharge) | 96 (96.0) | 0 (0.0) | 112.3210 | 0.001 |
| 1-10 | 4 (4.0) | 0 (0.0) | | |
| >10 | 0 (0.0) | 100 (100.0) | | |
| Range | 0-10 | 30-184 | | |

**Table 4: Regression analysis of sociodemographic factors among participants**

| Parameter | Coefficient | SE | OR | 95% CI | *P* |
|---|---|---|---|---|---|
| Sociodemography | | | | | |
| Age of participant | 0.0039569 | 0.0083012 | 0.48 | −0.1242-0.0203 | 0.634 |
| Occupation | 0.0528011 | 0.0284703 | 1.85 | −0.0034-0.1090 | 0.046 |
| Level of education | −0.995351 | 0.0871026 | −1.14 | −0.2713-0.0723 | 0.255 |
| Partner's occupation | 0.291087 | 0.0633761 | 0.46 | −0.0959-0.1541 | 0.647 |
| Social class | 0.118373 | 0.0511894 | 0.23 | −0.0891-0.1128 | 0.048 |
| _cons | 0.6594745 | 0.5902358 | 1.12 | −0.5047-1.8236 | 0.265 |
| Obstetric factors and events around CD | | | | | |
| Type of CD | 0.1218977 | 0.115503 | 1.06 | −0.1078-0.3516 | 0.294 |
| Major influence | −0.0568288 | 0.2007598 | −0.28 | −0.4561-0.3425 | 0.778 |
| Indication | −0.0004318 | 0.0139625 | −0.03 | −0.0282-0.2734 | 0.975 |
| Previous surgery | 0.030245 | 0.0713241 | 0.42 | −0.1104-0.1709 | 0.672 |
| Number of surgeries | −0.1357208 | 0.0748904 | −1.81 | −0.2847-0.0132 | 0.074 |
| Type of surgery | −0.985598 | 0.0414391 | −2.38 | −0.1810-0.0161 | 0.210 |
| Antenatal care site | 0.3169006 | 0.1293108 | 2.45 | 0.5971-0.5741 | 0.016 |
| Complications | 0.2947549 | 0.1345183 | 2.19 | 0.2720-0.5623 | 0.131 |
| _cons | 1.380594 | 0.499516 | 2.76 | 0.3871-2.3741 | 0.007 |
| Financial transactions | | | | | |
| Cost of theatre items | 3.12 | 1.49 | 2.09 | 1.2801-6.0714 | 0.038 |
| Total payment for CD | −6.86 | 1.41 | −48.52 | −7.1422-6.5805 | 0.001 |
| Time from discharge to payment | −122.07 | 4.23 | −28.68 | 51.7816-70.788 | 0.001 |

SE: Standard error, OR: Odds ratio, CI: Confidence interval, CD: Caesarean delivery

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**Table 5: Comparison between experience with public and private health insurance outfits**

| Parameter | Public insurers ($n=37$) | Private insurers ($n=63$) | $\chi^2$/t | *P* |
|---|---|---|---|---|
| Occupation | | | | |
| Unemployed | 3 (8.1) | 5 (7.9) | 1.4993 | 0.827 |
| Self-employed | 12 ( (32.4) | 20 (31.8) | | |
| Civil servant | 22 (59.5) | 38 (60.3) | | |
| Level of education | | | | |
| Primary | 2 (5.4) | 2 (3.2) | 2.0480 | 0.359 |
| Secondary | 15 (40.5) | 18 (28.6) | | |
| Tertiary | 20 (54.1) | 43 (68.2) | | |
| Duration of admission (days) | | | | |
| 3-5 | 29 (78.4) | 48 (76.2) | 6.2805 | 0.280 |
| ≥6 | 8 (21.6) | 15 (23.8) | | |
| Social class | | | | |
| High (I and II) | 12 (32.4) | 36 (57.1) | 9.7579 | 0.021 |
| Middle (III) | 6 (16.2) | 13 (20.7) | | |
| Low (IV and V) | 19 (51.4) | 14 (22.2) | | |
| Mean duration of admission | 4.756±1.23 | 4.888±1.41 | 0.524[t] | 0.699 |
| Mean duration from discharge to settle hospital bill | 156±34 | 102±62 | 7.785[t] | 0.001 |
| Mean amount paid (USD) | 250±45.15 | 450±30.18 | 6.055[t] | 0.001 |

## Conclusion

This study concludes that health insurance services and its benefits are skewed in favor of the civil servants and those of high social class at the detriment of the low social class. However, CD was not significantly overutilised by the health-insured when it is not medically indicated. The uninsured pay significantly more for health with a possibility for catastrophic spending on health. There is a significantly long delay in reimbursement to health-care providers by health insurers with potential disequilibrium in cash flow for the health facilities and potential negative consequences on service delivery. Health-insured clients risk higher morbidity due to time lost during inter-facility transfers; thus, attention should be paid to early referral and medically safe modes of transfer that allow intra-transfer medical care to improve treatment outcome.

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### Conflicts of interest

There are no conflicts of interest.

## References

1. World Health Organization. Social Health Insurance: Sustainable health Financing, Universal Coverage and Social health Insurance. Fact sheet No 320. World Health Organization; 2005. Available from: http://www.who.int/ha. [Last accessed on 2018 Jun 12].
2. Olakunle BO. Public health financing in Nigeria: Which way forward? Ann Niger Med 2012;6:4-10.
3. Alsan M, Bloom DE, Canning D. The effect of population health on foreign investment inflows to low and middle-income countries. World Dev 2006;34:613-30.
4. Carrin G, Evans D, Xu K. Designing health financing policy towards universal coverage. Bull World Health Organ 2007;85:652.
5. Palmer N, Mueller DH, Gilson L, Mills A, Haines A. Health financing to promote access in low income settings-how much do we know? Lancet 2004;364:1365-70.
6. James CD, Hanson K, McPake B, Balabanova D, Gwatkin D, Hopwood I, *et al*. To retain or remove user fees? Reflections on the current debate in low- and middle-income countries. Appl Health Econ Health Policy 2006;5:137-53.
7. National Health Insurance Scheme. National Health Insurance Scheme Operational Guidelines. Abuja, Nigeria: National Health Insurance Scheme; 2005. Available from: http://www.nhis.gov.ng/index.php. [Last accessed on 2018 Feb 12].
8. World Health Organization. WHO Country Cooperation Strategy: Nigeria 2008-2013. Brazzaville: WHO Regional Office for Africa; 2009.
9. Ilesanmi OS, Ige OK. Equity of care: A comparison of National Health Insurance Scheme enrollee and fee-paying patients at a private health facility in Ibadan, Nigeria. J Public Health Epidemiol 2013;5:51-5.
10. Dalinjong PA, Laar AS. The national health insurance scheme: Perceptions and experiences of health care providers and clients in two districts of Ghana. Health Econ Rev 2012;2:13.
11. Oyibo PG. Out-of-pocket payment for health services: Constraints and implications for government employees in Abakaliki, Ebonyi State, South East Nigeria. Afr Health Sci 2011;11:481-5.
12. Araoye MO. Research Methodology with Statistics for Health and Social sciences. Ilorin: Nathadex Press; 2003. p. 115-21.
13. Ayanleye OA. A legal appraisal of the national health insurance scheme in Nigeria. J Public Private Law 2013;5:106-17.
14. Adefolaju T. Repositioning health insurance in Nigeria: Prospects and challenges. Int J Health Sci 2014;2:151-62.
15. Sanusi RA, Awe AT. Perception of National Health Insurance Scheme (NHIS) by Healthcare consumers in Oyo State, Nigeria. Pak J Social Sci 2009;6:48-53.
16. Chen LM, Wen SW, Li CY. The impact of national health insurance on the utilization of health care services by pregnant women: The case in Taiwan. Matern Child Health J 2001;5:35-42.
17. Sulzbach S, Garshong B, Owusu-Banahene G. Evaluating the Effect of the National Health Insurance Act in Ghana: Baseline Report. United States Agency for International Development; 2005.
18. Ekman B. Community-based health insurance in low-income countries: A systematic review of the evidence. Health Policy Plan 2004;19:249-70.
19. Adeniran AS, Aboyeji AP, Fawole AA, Balogun OR, Adesina KT, Isiaka-Lawal S. Evaluation of parturient perception and aversion before

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and after primary cesarean delivery in a low-resource country. Int J Gynaecol Obstet 2016;132:77-81.
20. Onyedibe KI, Goyit MG, Nnadi NE. An evaluation of the national health insurance scheme (NHIS) in Jos, a north-central Nigerian city. Global Adv Res J Microbiol 2012;1:5-12.
21. Ele GN, Ogbonna BO, Ochei UM, Odili VU. Assessment of national health insurance's (NHIS) effectiveness in a tertiary teaching hospital in Southeast Nigeria. J Advances in Med Pharm Sci 2017;13:1-9.
22. Akande TM, Salaudeen A, Babatunde O. The effects of National Health Insurance Scheme on utilization of health services at University of Ilorin Teaching Hospital staff clinic, Ilorin, Nigeria. Niger Health Sci J 2011;5:98-106.
23. Okoroh J, Essoun S, Seddoh A, Harris H, Weissman JS, Dsane-Selby L, *et al*. Evaluating the impact of the national health insurance scheme of Ghana on out of pocket expenditures: A systematic review. BMC Health Serv Res 2018;18:426.
24. Adei D, Amankwah E, Mireku IS. An assessment of the national health insurance scheme in Sekyere South District, Ghana. Current Res J Soc Sci 2015;7:67-80.
25. Mohammed S, Sambo MN, Dong H. Understanding client satisfaction with a health insurance scheme in Nigeria: Factors and enrollees experiences. Health Res Policy Syst 2011;9:20.
26. Apeloko DO. Health insurance scheme in Nigeria (NHIS): An empirical survey. Int J Policy Good Gover 2017;8:1-25.
27. Sieverding M, Onyango C, Suchman L. Private healthcare provider experiences with social health insurance schemes: Findings from a qualitative study in Ghana and Kenya. PLoS One 2018;13:e0192973.
28. Adewole DA, Osungbade KO. Nigeria National Health Insurance Scheme: A highly subsidized health care program for a privileged few. Int J Trop Dis Health 2016;19:1-11.
29. Agyemang KK. Prospects and challenges of implementing a sustainable National Health Insurance scheme: A case of the cape coast metropolis, Ghana. Develop Country Stud 2013;3:140-8.