HEALTHCARE FINANCING FOR ANTENATAL CARE AND DELIVERY SERVICES IN A TERTIARY HEALTH FACILITY IN SOUTH-WEST NIGERIA

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ABSTRACT

Background: **Universal health coverage and healthcare financing for maternal health services are essential for quality care, prevention of complication and a reduction in maternal morbidity and mortality.**

Objective: **To evaluate the modes of healthcare financing for antenatal and delivery care among pregnant women in a tertiary health facility in South-West Nigeria.**

Methods: **This is a four-year retrospective review of maternal healthcare financing models adopted by pregnant/postpartum women at the antenatal clinic and labour/delivery unit. Data for health financing in antenatal booking clinic for a four-year period from 2016-2019 and labour & delivery for a two-year period from 2018 and 2019 were reviewed. The information collected were – number of women that paid out-of-pocket for services, number of women that paid for services using health insurance and other means of payment during the period. Data were analysed using SPSS version 23.**

Result: **A total of 7,129 women accessed antenatal care services during the period under review. About 58.9% of the women paid for antenatal care services out-of-pocket, 36.6% were covered under the health insurance (social and private health insurance). A total of 2,881 women accessed delivery services at the health facility. About 66.4% of the women paid out-of-pocket for both caesarean section and vaginal delivery. Prepaid health insurance was used by about 31% of the women.**

Conclusion: **Health insurance has been available for over a decade; however prepaid healthcare financing model remains less popular. Out-of-pocket payment constitutes the predominant mode of healthcare financing for maternal healthcare among pregnant women at the tertiary health facility. The out-of-pocket payment exposes the pregnant women and her family to financial burden and catastrophic spending especially in obstetric emergency.**

Keywords: Healthcare financing, Out-of-pocket payment, Antenatal care, Health facility-based delivery

INTRODUCTION

Universal Health Coverage (UHC) can simply be described as access to quality healthcare free of financial burden. UHC is defined as health coverage in which individuals and communities receive health services needed without suffering financial hardship.[1] The goal of UHC is to increase equity in access, quality of health care services and reduce the financial risk associated with it.[2,3] With UHC, people are able to access quality healthcare services for prevention of disease or death, health promotion, treatment of diseases and other health problems.

Access to quality antenatal care and utilization are essential for the prevention of maternal morbidity, mortality and ensuring successful pregnancy outcomes; there have been recommendations by the World Health Organization (WHO) on health system interventions to improve utilization of antenatal care.[4] Antenatal care utilization is affected by availability, accessibility, place of residence, cost of care, household income, occupation, employment status and socioeconomic status among others.[5–8] Availability of funds for birth-related expenses and complications is a vital element in obstetric care and it constitutes one of the elements of a birth preparedness and complication readiness plan.[9] Healthcare financing is an important determining factor in the provision and utilization of quality antenatal care service.

According to the World Health Organization (WHO); in the health systems framework, there are key components necessary to ensure optimal function of a healthcare system and service delivery.[10] These include leadership and governance, health information, health financing, essential medical products and technologies, human resources for health and service delivery. These form the building blocks for healthcare access, coverage, quality and safety with the ultimate goals of improved health, responsiveness, social and financial risk protection; and improved efficiency of healthcare systems.

Health care financing involves the means by "funds are generated, allocated and utilized for health care". The functions of health systems financing include revenue collection, pooling of resources and purchase of services.[11] The mechanisms of healthcare financing in Nigeria consists of a combination of tax-revenue financing, OOP payments, donor funding and health insurance.[11] In tax revenue type health financing, the funds are tax-based, generated through taxation and government revenues at the local, state and federal government levels. OOP involves payment for healthcare services at the point of care; it accounts for the highest health expenditure in Nigeria. The social health insurance involves health care system financing through contributions to an insurance fund operating within government regulations. Lastly, donor funding constitutes financial assistance contributed to the healthcare system as support for health development.[11] Payment for use of health care constitutes one of the mechanisms for health care financing; and it is clear that for any healthcare system to function, health financing is an important determinant of access and coverage. This will ensure improved healthcare, reduce or eliminate financial barriers and minimize inequalities in healthcare service delivery. According to Kutzin, for any country to achieve health coverage for her populace, compulsory or public funding is needed.[12] The implementation of UHC in various regions has demonstrated positive impacts on access to health care and service delivery. These include increased utilization of health care service among poor previously uninsured individuals.[13–15] Health insurance program is associated with a reduction of out-of-pocket (OOP) payment and catastrophic health expenditures.[16]

The National health insurance scheme (NHIS) was established in 1999 and officially launched in 2005; but it is poorly implemented and mostly underutilized. In the National demographic health survey 2018, health insurance coverage was low; only 3% of the respondents had health insurance coverage, mostly employer-based; and it is limited to the urban areas. Eleven percent of women and 12% of men with more than secondary level of education have employer-based insurance coverage.[17]

The NHIS in Nigeria was introduced to enhance the plan towards ensuring UHC for all. However, since its implementation; the utilization and coverage of the health insurance scheme has been less than optimal and disappointing. In Nigeria, health care system financing has been largely out of pocket payment which has impoverished families and kept them in the vicious circle of poverty and health insurance only covers less than 5% of the populace.[18,19]

With low health insurance coverage in Nigeria; health insurance coverage among pregnant women will be poor thus impairing access to antenatal care and prompt emergency obstetric care. Pregnant women and children constitute the vulnerable group in poor health systems. According to Browne and colleagues, the utilization of the maternal, neonatal and child continuum health care service in Ghana depended largely on the maternal health insurance status.[20] Healthcare financing is an important component of birth preparedness and complication readiness. In obstetric emergency, lack of adequate funds for healthcare plays a vital role in all the level of delays contributing to maternal mortality.[21] To address the appalling health indices in Nigeria; that is to reduce maternal and perinatal morbidity and mortality, there is an urgent need to review maternal health financing in order to achieve universal access to maternal health care.[22]

This study aims to evaluate the modes of healthcare service financing for antenatal and delivery care. The findings of the study will shed light on the state of health care financing and the trend in health financing for maternal care.

MATERIALS AND METHODS

Study Setting: the study was conducted at the obstetric unit of the University College Hospital, Ibadan, Oyo State. It is a tertiary health facility in South-West, Nigeria and a major referral hospital providing specialized care in various subspecialties including obstetrics and gynaecology. The payment records of pregnant and post-postpartum women in obstetric unit were reviewed.

Study Design: This study is a four-year retrospective review of the records of various forms of maternal healthcare service financing by pregnant and postpartum women at the obstetric unit - antenatal clinic and labour/delivery ward complex of the University College Hospital, Ibadan (UCH).

Data Collection Method: The data for antenatal care financing for 4-years and data for delivery care financing for 2 years were available for review and analysis. A structured data collection form was used to extract data from the payment records on the total number of women presenting for antenatal care at the booking clinic and labour & delivery at the labour ward complex. Data for the antenatal care booking clinic for a four-year period from 2016-2019 and data for labour & delivery for a two-year period from 2018 and 2019 were available for analysis. The data collected included total number of women who paid OOP for services, the number of women who paid for services using health insurance, the number of women on hospital-based waivers.

Data Analysis: Data analysis was performed using IBM Statistical Product and Service Solutions (SPSS) version 23 software. Descriptive statistics was used to analyse the variables of interest in the form of frequencies and proportions.

Ethical Approval: Not applicable.

Description of variables in this study

Out-of Pocket Payment: OOP refers to all payments made directly by the pregnant woman for ANC and delivery services. It includes consultation fees, medicines, hospital/antenatal clinic charges and other medical expenditure.

Health Insurance: Health insurance refers to financial protection against the cost of medical care arising from attending ANC and using delivery services. These include government-based health insurance (Social health Insurance Scheme – popularly known as NHIS) and the private health insurance (private and company-based health insurance scheme).

Donor Funding: This is donor funding for Human Immunodeficiency virus (HIV) infected pregnant women.

Hospital-Based Waivers: These include hospital fee waiver granted to poor indigent patient presenting as obstetric emergencies who were unable to pay for the healthcare services received during the period of admission.

RESULTS

A total of 7,129 women accessed ANC services during the period under review (January 2016-October 2019). The number of pregnant women accessing ANC is shown in Figure 1. More than half of the women paid for ANC services OOP (58.9%) while a little more than one third had health insurance under the NHIS and corporate health insurance (36.6%). The cost of ANC service for about 290 (4.1%) of the women were covered by donor funding while 29 (0.4%) were covered under staff eligibility at the health facility. Trends in payment pattern for antenatal care over the review period showed a similar pattern across the years for the various payment options (Figure 2). A total of 2881 women accessed delivery services at the health facility between January 2018 – September 2019 (Figure 3) with an almost equal proportion for Caesarean section (CS) (50.9%) and Vaginal delivery (VD) (49.1%) deliveries. About 66.4% of the women paid OOP for both delivery by CS (34.0%) and VD (32.4%). This was similar for the HIS payment which was used by about 31% of the women; 15.4% and 15.5% for both delivery by CS and VD respectively.

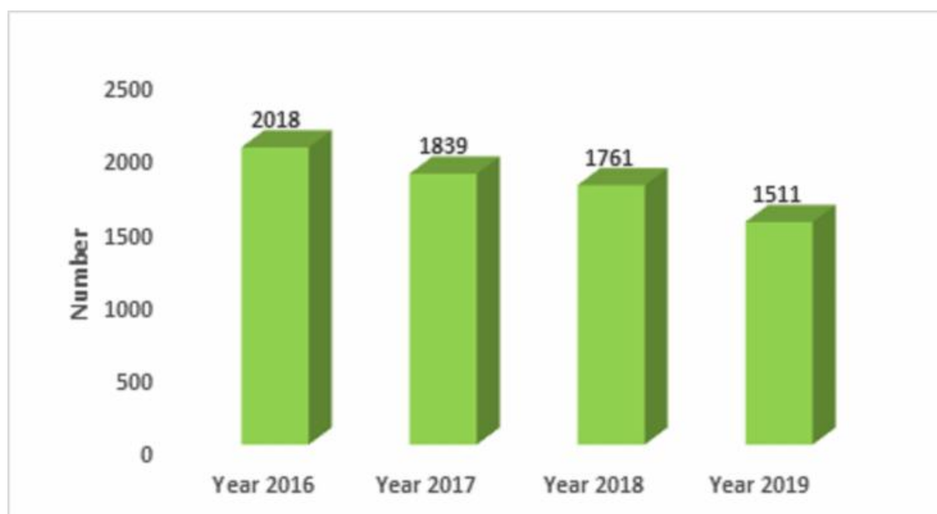

Figure 1: Number of women accessing ANC services.

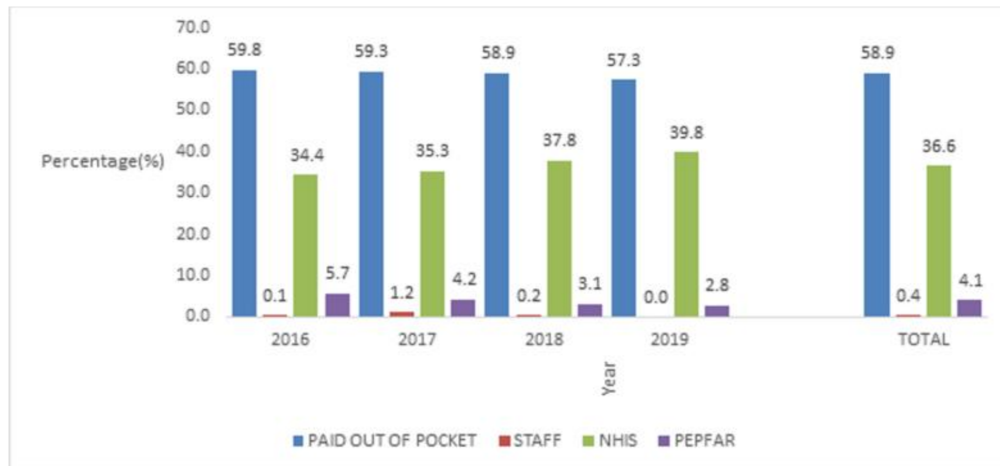

Figure 2: Mode of payment for antenatal care. (No member of staff was treated free in 2019).

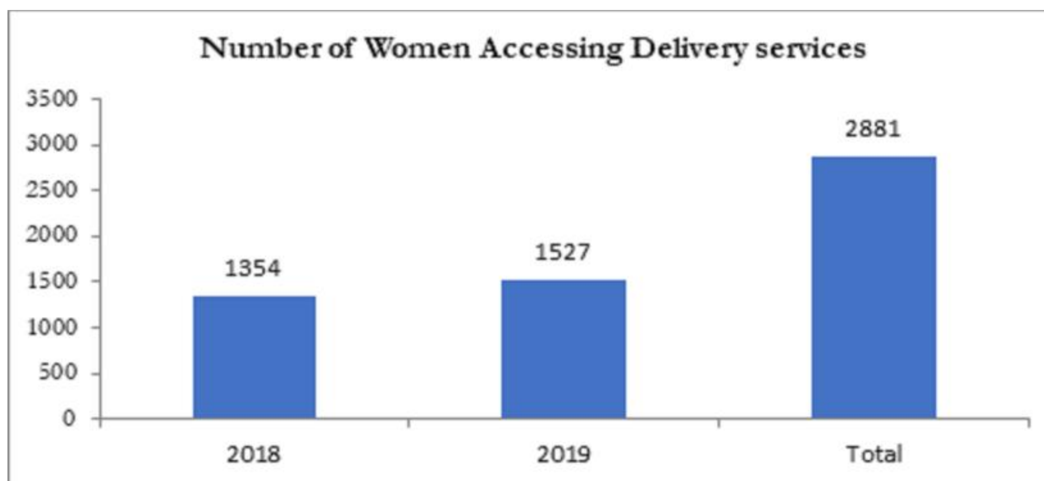

Figure 3: Number of women who accessed delivery care.

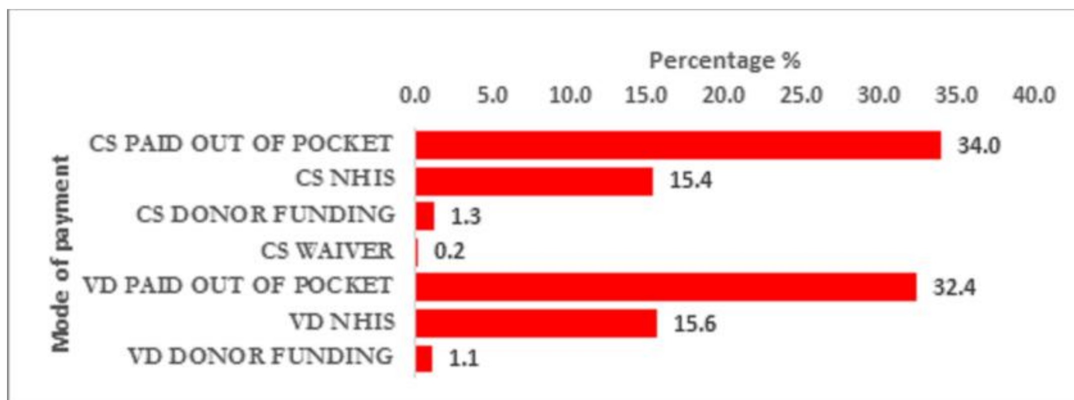

Figure 4: Mode of payment at delivery.

CS- Caesarean section; VD- Vaginal delivery; Donor funding for HIV infected pregnant women (No waiver among patients delivered by vaginal route).

Payments under the donor agency accounted for 1.3% and 1.1% for CS and VD deliveries respectively. Payment waivers were granted for seven women (0.2%) who delivered via CS (Figure 4).

DISCUSSION

This study evaluated the types of health financing models for antenatal and delivery care services among pregnant women receiving maternal healthcare in a tertiary health facility in South-west Nigeria.

The main findings of this study demonstrated that the predominant mode of maternal healthcare financing was by OOP payment, followed by health insurance and funding by donor agency. This is supported by the findings of Aregbesola & Khan *et al.*[18]

About two-third of women used the OOP payment model and this proportion was consistent over the period of the study. It shows that alternative health financing models are still poorly utilized and unpopular among women. This may suggest poor perception of the women about health insurance/alternative financing; and its benefits for routine and emergency obstetric care. It also suggests the need for interventions to encourage the uptake of health insurance especially for maternal health.

The use of the health insurance scheme including the social health insurance scheme and private health insurance was constant over the period. About a third of the pregnant women used the health insurance model to finance the maternal health care – antenatal and delivery care. This is low and may be explained by the fact that most health insurance packages are employer-based and limited to the educated, employed or residents of the urban areas. It is important to understand the perception of pregnant women on the use of health insurance for pregnancy and delivery care and to determine the barriers and challenges to the use. Furthermore, it is important to evaluate and understand the experience of the current users of health insurance among the pregnant women; including accessibility and delays in processing. According to previous studies only a small proportion of people are on prepaid health financing as primary enrollee in Nigeria especially when enrolment is not employer based.[18,19,23]

Payment for delivery care services was also predominantly by OOP payment. Equitable access to quality health care through UHC will encourage individuals to seek health maintenance services and preventive care. Prepayment for health care will enhance access to quality maternal health care while minimizing financial hardship; thus increasing hospital-supervised delivery of pregnant women by skilled birth attendants. The three levels of delay in accessing obstetric care services have been described by Thaddeus and Maine. These include first level - delay in the decision to seek care; second level delay - delay in reaching the health facility; and third level delay – delay in receiving care at the healthcare facility.[24,25] Lack of funds and unavailability of medical supplies will affect promptness of services at the health facility irrespective of the role of other factors in the delay in receiving care. Availability of funds or an alternative funding model for maternal health financing will encourage a pregnant woman and family to decide to seek care early and have prompt medical intervention.

Birth preparedness and complication readiness (BPCR) is a strategy designed to encourage and promote timely use of skilled maternal and neonatal care services. (9,26) Making funds available for birth- or complication-related expenses is an important component of BPCR. The use of health insurance by pregnant women will cater for provision of funds for maternal health services for both routine and emergency care while removing the direct financial burden. It is important to encourage pregnant women to use of the health insurance for maternal health services in order to reduce the effects of non-availability of funds in the three levels of delay in obstetric emergencies. Furthermore, this will have a positive impact on reduction in maternal morbidity and mortality.

Donor funding and hospital staff eligibility waiver for healthcare financing were negligible. Staff eligibility waiver is commonly limited to new staffs that are yet to obtain their health insurance and only applicable to limited services.

Limitation

The limitation of the study includes unavailability of data on healthcare financing prior to the period of the study. The retrospective nature of the study limits the available data for this study. A prospective study design will provide more data including socio-demographic characteristics of women that had prepaid health insurance.

Recommendations

The development of individual-based health insurance packages among women including self-employed or unemployed may help increase health insurance coverage among pregnant women and non-pregnant individuals in Nigeria. Health management organizations need to explore development well-structured individual-based health insurance for pregnant women in order eliminate delays in seeking care among this high-risk group. It will enhance utilization of preventive care - antenatal including use of skilled healthcare personnel at delivery and prompt emergency obstetric and newborn care. It is known that lack of fund or inadequate fund will affect decision making by the patient and choice of quality care in obstetric emergency.

The development of hospital-based maternal health insurance or waiver will also be beneficial for maternal health services. The enrolment and pooling of resources from registered pregnant women or women

intending future use of the hospital for delivery service will buffer unplanned emergency expenditure and prevent catastrophic expenditure in emergency obstetric care. Women may purchase a pre-paid hospital-based health insurance package to enhance referral and prompt care in emergency situations.

A dedicated government-based maternal, newborn and child health insurance package in the state will further enhance efforts to achieve sustainable development goal 3 among these vulnerable groups. Such package will also encourage early referral of patients across healthcare levels for better health service when indicated without the fear of financial burden associated with it. A dependable healthcare insurance package, will allow equitable access to healthcare for all and people are likely to maintain their health irrespective of the cost. Individuals will be able to maintain the choice of quality of healthcare facility not burdened by the cost of care. Furthermore, preventive care will be better utilized, including the use of curative care for early stage disease management with successful outcome of care.

CONCLUSION

Health insurance scheme as a mode of payment for antenatal and delivery health services is largely underutilized by pregnant women. Out-of Pocket Payment (OOP) payment constitutes the predominant mode of healthcare financing for maternal healthcare among pregnant women at the tertiary health facility. OOP payment exposes the pregnant women and her family to financial burden and catastrophic spending especially in obstetric emergency. It is imperative to encourage a shift to prepaid health care financing in order to address the financial burden and improve access to quality maternal health care.

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