

The Pattern Of Utilization Of Prenatal And Delivery Services In Ilesa, Nigeria

T Ogunlesi

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Abstract

Background: Perinatal mortality reflects the quality and utilization of prenatal, delivery and immediate post-delivery care available to women and their newborn infants.

Objectives: Determination of the pattern of utilization of prenatal and delivery services in Nigeria in the 21st century.

Methodology: A hospital-based cross sectional survey of newly delivered mothers using structured questionnaires.

Results: Out of the 260 women studied, 24 (9.2%) took no form of prenatal care. Churches were most commonly patronized for prenatal care (98;37.7%) and delivery (92;35.4%) mostly for religious and financial reasons. Fifteen out of 45 (33.3%) respondents who took prenatal care in the teaching hospitals deflected into churches for delivery. Non utilization of prenatal services as well as home delivery were significantly higher in the lower social classes (26.2% Vs 1.7%; $p < 0.0001$) and (23.8% Vs 2.2%; $p < 0.0001$) respectively.

Conclusion: The utilization of orthodox prenatal and delivery services is still poor in Nigeria especially for religious and financial reasons.

INTRODUCTION

Of the annual 8 million infant deaths worldwide, 5 million occur in the neonatal period and most of these occur in the developing countries.¹ Close to two-thirds of these neonatal deaths occur in the early neonatal period.¹ Perinatal mortality, comprising of still births and early neonatal deaths is one of the sensitive indices of the quality of prenatal, obstetric and early neonatal care available to women and newborns.²

Perinatal asphyxia, prematurity and severe infections like bacterial septicaemia and tetanus are the major causes of early neonatal death^{3, 4} and these are directly or indirectly related to the quality of prenatal and delivery services available to pregnant women.

The problem of dwindling utilization of obstetric and neonatal services in consonance with the depressed national economy had previously been raised in Nigeria.^{5, 6} This study was, therefore, carried out to assess the pattern of utilization of the prenatal and delivery services available in

Ilesa – a semi urban Nigerian community in the 21st century.

The orthodox maternity services are provided in Ilesa by the Wesley Guild Hospital and the Multipurpose Health Center, both of which are arms of a tertiary health institution. The State Hospital, Ilesa provides the secondary health care while twenty eight local government-owned primary health centers and maternity centers provide primary health care. In addition to these are many privately owned clinics and hospitals. The Traditional Birth Homes, churches and unregistered health posts also provide unorthodox services.

PATIENTS AND METHODS

This multi-center cross sectional survey was carried out at the Paediatric General Out - Patient and Immunization Clinics of the Wesley Guild Hospital, Ilesa as well as the Primary Health Centers at Isokun and Ajanaku quarters of Ilesa in south-western Nigeria.

The study population comprised of mothers whose children were less than 3 months of age seen at these centers irrespective of the purpose of visit. Excluded from the study

were mothers who did not receive prenatal care nor deliver their infants in Ilesa. Using a structured questionnaire administered by the investigator information concerning age, parity, details of educational qualification and occupation of the respondents, places patronised for prenatal care and delivery as well as the reasons for those choices were gathered.

The respondents were also stratified into two socioeconomic groups for the purpose of comparison using the method recommended by Oyedemi.⁷ Socioeconomic classes I, II and III were grouped together as the upper social class while classes IV and V were grouped together as the lower social class.⁷

The data were analyzed using the appropriate statistical computer software. *p* values less than 0.05 in two-tailed tests were accepted as significant.

RESULTS

Over a period of four weeks (June/July, 2004), a total of 260 mothers were surveyed at the four recruitment points. All the respondents were married. The maternal age ranged from 17 to 40 years with the mean (SD) of 27.1 (5.5) years. Eighteen (6.9%) mothers were teenagers, 218 (83.9%) were aged between 20 and 35 years while 24 (9.2%) were older than 35 years. The distribution of the respondents in terms of parity showed that 124 (47.7%) were primiparous while 19 (7.4%) were grandmultiparous. Ten (3.8%), 26 (10.0%), 144 (55.4%), 71 (27.3%) and 9 (3.5%) respondents belonged to social classes I, II, III, IV and V respectively.

Most of the respondents (171; 65.8%) utilized single health facilities (orthodox or unorthodox) for prenatal care while 65 (25.0%) utilized multiple health facilities. Twenty four (9.2%) respondents did not take any form of prenatal care. Prenatal care was taken from churches, primary health centres, teaching hospitals, private clinics, unregistered health posts and state hospital in 98 (37.7%), 74 (28.5%), 45 (17.3%), 44 (16.9%), 22 (8.5%) and 18 (6.9%) respectively. The choice of the place patronised for prenatal care was determined by convenience in terms of distance from homes, finances and religious beliefs in 139 (53.5%), 87 (33.5%) and 19 (7.3%) cases respectively. Thirteen respondents (5.0%) had no specific reason for their choice of prenatal care. Some respondents patronised multiple places of prenatal care and gave multiple reasons for making those choices. The choice of health facility utilized for prenatal care was personal among 157 (60.4%) respondents but that of the husband and relations including in-laws among 49

(18.8%) and 54 (20.8%) respectively.

Delivery services provided by churches, teaching hospitals, primary health centers, private clinics, unregistered health posts and the state hospital were utilized by 92 (35.4%), 60 (23.1%), 36 (13.9%), 24 (9.2%), 17 (6.5%) and 8 (3.1%) respondents respectively. Delivery took place at home among 23 (8.8%) respondents. Fifteen out of 45 (33.3%) women who took prenatal care in teaching hospitals deflected into churches for delivery. The reasons given for the choices of places of delivery included preference, pressure from relations, religious beliefs, financial constraints and referral in emergency situations in 86 (33.1%), 58 (22.3%), 45 (17.3%), 44 (16.9%) and 27 (10.4%) cases respectively.

Fifty three (55.8%) respondents who did not take orthodox prenatal care preferred to take orthodox prenatal care in subsequent pregnancies while 109 (41.9%) of all the respondents would prefer to deliver their infants elsewhere in their subsequent pregnancies. The teaching hospitals were preferred as places of delivery in subsequent deliveries by 98(89.9%) respondents while the state hospital and primary health centers were preferred by 9(8.3%) and 2(1.8%) respondents respectively.

Table I shows the comparison of the upper and lower social classes for the patterns of utilization of prenatal services. One hundred and eighty (69.2%) respondents belonged to the upper social class while 80 (30.8%) respondents were in the lower social class. A higher proportion of respondents in the lower social class (14;17.5%) were teenagers compared with those in the upper class (4;2.2%) and this difference was statistically significant (*p* by Fisher's exact test = 0.000). However, the proportion of the upper social class (15;8.3%) and the lower social class (9;11.2%) who were older than 35 years was not significantly different ($\chi^2 = 0.5$, *p* = 0.45).

Figure 1

Pattern	Upper Social class (%)	Lower Social class (%)	p value
1. Health Facilities attended[§]			
a. Teaching Hospitals	45(24.9)	0 (0.0)	<0.00001*
b. General Hospital	11(6.1)	7(8.8)	0.43
c. PHC	49(27.2)	25(31.3)	0.51
d. Private Clinics	34(18.9)	10(12.5)	0.21
e. Churches	88(37.8)	30(37.5)	0.92
f. UHP	14(7.8)	8(10.0)	0.55
g. None	3(1.7)	21(26.3)	<0.00001
2. Reasons for choice of health facility attended[§]			
a. Finances	51(28.3)	43(53.8)	<0.00001
b. Religion	30(16.7)	14(17.5)	0.8
c. Convenience in terms of distance	101(56.1)	27(33.8)	0.001
d. None	8(4.4)	5(6.3)	0.5

KEYS : § - Some respondents made multiple choices/reasons
 * - Hospitals, Private Clinics and Primary Health Centers
 ** - Unregistered health posts and churches
 UHP – Unregistered Health Post
 PHC – Primary Health Centers
 + - Yates correction applied

None of the respondents in both groups patronised the Traditional Birth Homes for prenatal care and none in the lower class received prenatal care in the teaching hospitals. However, non-utilization of prenatal services was significantly higher in the lower class (21/80 Vs 3/180; p by Fisher's exact test = 0.0001).

Table II shows the comparison of the two social groups for the pattern of utilization of delivery services. The utilization of delivery facilities in teaching hospitals was significantly higher among the respondents in the upper class. Home delivery was also significantly higher in the lower social class. Preference was the commonest reason for the choice of delivery facility utilized with statistical significance. Financial difficulties and pressure from relations and in-laws were significantly commoner in the lower class. Referral in emergency situation was also commoner in the upper class but without statistical significance.

Figure 2

Table 2: Comparison of the Upper and Lower Social Classes for the pattern of utilization of delivery services

Pattern	Upper Social class (%) n = 180	Lower Social class (%) n = 80	p value
1. Places of delivery			
a. Teaching Hospitals	51(28.3)	9(11.2)	0.003
b. General Hospital	5(2.8)	3(3.8)	0.98
c. PHC	22(12.2)	14(17.5)	0.26
d. Private Clinics	19(10.6)	5(6.2)	0.37
e. Churches	70(38.9)	22(27.5)	0.07
f. UHP	9(5.0)	8(10.0)	0.13
g. Home	4(2.2)	19(23.8)	<0.00001
2. Reasons for choice of place of delivery			
a. Preference	68(37.8)	18(22.5)	0.016
b. Finance	25(13.9)	19(23.8)	0.049
c. Religion	35(19.4)	10(12.5)	0.17
d. Pressure from relations	29(16.1)	29(36.2)	0.0003
e. Referral in emergencies	23(12.8)	4(5.0)	0.058

KEYS : PHC – Primary Health Centers
 UHP – Unregistered Health Posts

In terms of preference for orthodox delivery facilities in their subsequent pregnancies, a higher proportion of respondents in the lower class preferred to deliver their infants elsewhere in subsequent pregnancies but the difference was not significant (40/80 Vs 69/180 ; $\chi^2 = 3.1, p = 0.078$). There was preference for the teaching hospitals in this wise in both groups.

DISCUSSION

Although, the focus of this study is the pattern of utilization of maternity services during pregnancy without emphasis on the details of the outcome of the pregnancies, the orthodox prenatal and delivery services in Ilesa, a semi-urban Nigerian community, are obviously under-utilized in the 21st century. The non-utilization of the available orthodox prenatal care services encourages poorly supervised deliveries in unorthodox places with the risk of perinatal mortality. Prenatal care and deliveries in churches and other unorthodox places are often unsupervised or attended by untrained persons. High stillbirth and early neonatal mortality rate have been associated with unattended deliveries compared with hospital based deliveries. These losses follow perinatal asphyxia, severe infections and hypothermia. This is similar to the high perinatal deaths previously recorded among unbooked mothers from various centers.

Mothers who are unbooked for orthodox care are at risk of significant perinatal morbidity and mortality when easily

treatable medical complications of pregnancy are neglected.

Some hospital based studies have earlier shown that out-born babies contribute significantly to neonatal deaths than in-born babies.^{3, 4} Compared to an earlier hospital-based study conducted in the same community about fifteen years ago,³ church deliveries seem to have increased in this study. Also the incidence of church deliveries in this study is higher than 23 percent reported from Ile Ife, a neighbouring community, about five years ago.⁶ The likely reason for this trend may be the worsening socioeconomic situation in the country as suggested by an earlier observation that utilization of maternity services at a tertiary hospital nose-dived at the introduction of fees in the hospital in 1984.⁵ This is the 21st century and the situation has not changed significantly in the positive direction since that time.

The influence of socioeconomic status on the utilization of maternity services as well as perinatal and neonatal survival is important.¹³ Families in the higher social rung are more likely to appreciate the value of and adequately utilize the available orthodox prenatal and delivery services.⁶ Women in this group are also less likely to suffer prenatal morbidities like malaria, anaemia, pre-eclampsia which may predispose to fetal and neonatal losses.^{14, 15} On the other hand, people in the lower social classes have been reported to be socially disadvantaged.¹⁶ The implication of social disadvantage is principally the inability to take prompt and appropriate cost-effective health decisions. The higher incidence of referral to tertiary hospitals in emergency situations among women in the higher social classes in this study corroborates this fact. Similarly, the fact that none of the mothers in the lower social class in this study took prenatal care in the teaching hospitals suggests lack of access to good quality orthodox maternity services. This calls the impacts of the various health interventions targeted at improving access to medical care to question.

The preference for orthodox prenatal care and delivery services suggests that the respondents were not totally oblivious of risk involved in taking unorthodox maternity care. Therefore, health policy makers should make provision for more comprehensive regionalized maternity services which are accessible both in terms of cost and location. These services should be subsidized especially for families in the lower socioeconomic classes to improve their access

to these services.

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Author Information

Tinuade A. Ogunlesi, Bachelor of Medicine and Surgery, Membership of the West African College of Physician
Department of Paediatrics, Wesley Guild Hospital