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Research Article

Pattern of Admission and Outcome of Obstetric Practices in a Mission-Based Secondary Healthcare Facility in Ibadan, Nigeria

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Abstract

Introduction and Objective: Poor obstetric outcomes in Nigeria with its attendant implications for measuring health indices have remained a significant health concern. The occurrence of adverse events due to unsafe care is a major contributor to the causes of maternal morbidity and mortality globally. The main objective of this study was to assess the pattern of admission as well as the outcome of Obstetrics practices in Oluyoro Catholic Hospital (OCH) Ibadan.

Methodology: This was a retrospective, cross-sectional descriptive analysis of medical records of 194 cases managed between January and December 2018. Using a proforma, data was obtained on obstetric characteristics of patients, indications for admission, outcome of pregnancy and the interventions received during patient's admission into the maternity ward. The socio-demographic characteristics were described sequentially with frequency tables and percentages. Chi-square statistics was used to determine the association between categorical variables at 5% level of statistical significance.

Results: The mean age of the participants was 30.45 ± 4.83 years and the majority, 183 (94.3%), of them were booked. Common indications for admission were onset of labour pains 74 (38.1%), and elective induction of labour 38 (19.6%). Two-fifths, 79 (40.7%), of the respondents had intrapartum augmentation of labour with oxytocin. The prevalence of episiotomy in this study was 22.2% while 5.2% had laceration. Majority, 182 (93.8%) had live babies out of which 8.2% required admission into the neonatal intensive care unit.

Conclusion: Overall findings showed that the obstetric practices in the study setting were within the margin of acceptable standard and efforts to sustain the obstetric skills and practices of healthcare providers should be maintained.

Keywords: *Mission-Based; Obstetric Practices; Outcome; Pattern of Admission; Secondary Healthcare Facility*

Background

Quality and safety assurance in obstetric care are of vital importance given the rate of poor obstetric outcomes in Nigeria with the attendant morbidity and mortality [1]. The availability of information about the pattern and outcome of obstetric practices in various levels of healthcare practices have the potential to become veritable tool in mobilizing strategies required for achieving the sustainable

development goal 3. Most mission-based hospitals offer services at secondary care level and are crucial to provision of quality obstetrics care which will lead to reduction in Obstetrics- related morbidity and mortality.

The knowledge and practice of obstetric care in some hospitals have been shown to require additional training for providers in order to enhance skills and improve overall outcome [2].

Aim of the Study

This study was aimed at reviewing the pattern of obstetrics admissions and outcome of care in comparison with the acceptable standard.

Materials and Methods

This is a retrospective single-centre cross-sectional descriptive analysis of medical records of 194 patients admitted into the maternity ward of Oluyoro Catholic Hospital (OCH), Ibadan over a period of 12 months: 01 January 2018 to 31 December 2018. OCH, situated at Oke-Adu Road, was established in 1959 and is the largest private hospital in Ibadan.

Ethical approval was obtained from OCH Ethical Review Committee (OCHERC), and additional approval was obtained from the hospital's Chief Matron. The extracted data included the patients' socio-demographic and obstetric characteristics, indications for admission, mode of delivery, management during labour and delivery as well as interventions received during labour, prevalence of NICU admission, referral rate and feto-maternal outcomes. Only patients with properly filled case notes (both booked and unbooked) were included in the study. All proforma were checked for completeness, cleaned, coded and entered into the system for analysis using the Statistical Package for Social Sciences (SPSS) 23.0. The socio-demographic characteristics were described sequentially with frequency tables and percentages while Chi-square statistics was used to determine association between categorical variables at 5% level of statistical significance.

Results

Of the 256 deliveries within the study period, only 194 case notes have full documentation of the required information. The mean age was 30.45 ± 4.83 years and majority, 135 (69.6%), were within the age group of 25 and 34 years. Most of the participants were married, 180 (92.8%); had at least secondary education, 181 (93.3%) and were booked, 183 (94.3%). Other sociodemographic characteristics are as presented in table 1.

Socio-demographic characteristics of the patients (n=194)	Frequency	Percent (%)
Age group (years)		
20 - 24	18	9.3
25 - 29	71	36.6
30 - 34	64	33.0
35 - 39	32	16.5
≥ 40	9	4.6
Mean (± SD*)	30.45 ± 4.83 years	
Marital status		
Married	180	92.8
Single	14	7.2
Highest educational level		
Primary education	13	6.7
Secondary education	166	85.6

Tertiary education	15	7.7
Booking status		
Booked	183	94.3
Unbooked	11	5.6
Occupation		
Unemployed	12	6.2
Self-employed	77	39.7
Civil servants	50	25.8
Trading	55	28.4
Tribe		
Yoruba	167	86.1
Igbo	19	9.8
Hausa	3	1.5
Others	5	2.6
Religion		
Islam	53	27.3
Christianity	141	72.7

Table 1: *Respondents' socio-demographic characteristics.*

**SD = Standard Deviation.*

As shown in table 2, about three-fifths of the respondents, 105 (54.1%) were primigravidae while 91 (46.9 %) have at least one living child. Almost three-quarters of the patients, 144 (74.2%), attended antenatal care clinics a minimum of 4 times and one-fifth of the participants, 39 (20.1%), were Rhesus negative. The commonest indication for admission was onset of labour pain, (128, 70.1%), while 38 (19.6%) were admitted for induction of labour, table 3.

Patients' obstetric characteristics (n = 194)	Frequency	Percent (%)
Parity		
0	105	54.1
≥ 1	89	45.9
Number of living children		
0	103	53.1
≥ 1	91	46.9
Rhesus factor		
Negative	39	20.1
Positive	120	61.9
Not documented	35	18.0
Gestational age of pregnancy at booking		
≤ 13 weeks	24	12.4
>13 - ≤ 26 weeks	96	49.5
> 26 weeks	59	30.4
Not documented	15	7.7
Number of ANC attended prior delivery		
< 4	29	14.9
≥ 4	144	74.2
Not documented	21	10.8

Table 2*: Obstetric characteristics of patients.*

Indication for patients' admission (n = 194)	Frequency	Percent (%)
Which of the following factors was an indication for admission?		
Labour pain	128	70.1
Ruptured uterus	2	1.0
Preeclampsia	3	1.5
Urinary Tract Infection (UTI)	3	1.5
Malaria	3	1.5
Prolonged labour	7	3.6
Induction of labour	38	19.6
Total	194	100.0

Table 3: *Indication for patients' admission in pregnancy.*

The mode of delivery is as presented in table 4 and it showed that more than half of the participants, 106 (54.6%), had vertex vagina delivery while the emergency caesarean delivery performed in 39 (20.1%). Although more than two-thirds of people, 134 (69%) had no complication, the mortality rate was 3.6% (Table 5). Table 6 shows the distribution of foetal history/outcome. The mean birth weight was 2.95 ± 0.50 kg and 202 (94%) of the babies were discharged alive.

There was no statistically significant relationship between the fetal outcome and respondents' educational status (p = 0.104) as well as gestational age at booking (p = 0.055).

Patients' mode of delivery/outcome of labour (n = 194)	Frequency	Percent (%)
Vertex vagina delivery	106	54.6
Breech delivery	3	1.5
Elective caesarean section	35	18.0
Emergency caesarean section	39	20.1
Not documented	11	5.7
Total	194	100.0

Table 4: *Patients' mode of delivery/outcome of labour.*

Maternal history/outcome (n = 194)		Frequency	Percent (%)
Alive	Had no complication	134	69.0
	Had Episiotomy	43	22.2
	Had Laceration	10	5.2
Dead		7	3.6
Total		194	100.0

Table 5: *Maternal history/outcome.*

Fetal history/outcome (n = 215; 21 sets of twins)	Frequency	Percent (%)
Sex of babies		
Male	119	55.3
Female	96	44.7
Weight (kg)		
<3.0 kg	135	62.9
≥3.0kg	58	26.8
Not documented	22	10.3
Mean (± SD)	2.95 ± 0.50 kg	
Alive or Dead		
Alive	202	94.0
Dead	3	1.4
Not documented	10	4.6
Transferred to neonatal intensive care unit		
Yes	16	7.4
No	199	92.6
Referred out of the hospital for tertiary care		
Yes	9	4.2
No	206	95.8

Table 6: *Fetal outcomes.*

Discussion

This assessed the pattern of admission and outcome of obstetrics practices in OCH, Ibadan, Nigeria. The mean age of the respondents was reflective of the fact that the women were in their reproductive age group and this is in tandem with previous report from [3]. This is not surprising as it falls within the reproductive age of women.

The major indications for admission in this study included onset of labour pain, ruptured uterus, preeclampsia, prolong labour and induction of labour which are in tandem with Rostad and Schei [4] where health variables that were most frequently associated with hospitalisation were current pregnancy complication, adverse reproductive history and poor complications. Other researchers have reported hospitalization to be more frequent among women with a history of adverse pregnancy outcomes or pregnancy complications such as preeclampsia, suspected IUGR and threatened preterm birth to facilitate closer surveillance of the pregnancy in consensus with medical practice and advice [5]. Although admission to hospital among these women is considered necessary for a thorough evaluation or increased surveillance to detect any deterioration in maternal and fetal condition, little is known about indication for admission in most of these mission hospitals.

This study reported a lower rate of episiotomies among the parturients which is in contrast with Oluwasola and Bello [6] where prevalence of episiotomy was 31.2% majorly due to fetal macrosomia although cases of fetal macrosomia were less prominent in this study apparently because of appropriate case selection in the mission hospital. In South eastern Nigeria, Dim [7] had reported a rate of 62.1% which is far higher that our finding. However, in the review of episiotomy for vaginal birth by the Cochrane Collaboration, it was concluded that a restrictive policy in the use of episiotomy should be recommended for practice (Joint Policy Statement on Normal Child-

birth, 2009) and World Health Organization [8] with a recommendation of 10% which implied that the mission hospital is equally yet to meet the recommended standard. Complications of vaginal laceration was reported in fewer patients compared to the 20% reported in a teaching hospital in Nigeria [9] which suggested a pragmatic approach to intrapartum monitoring of the parturients. In spite of the rate of episiotomy and perineal laceration, fewer babies required neonatal intensive care admission which is at variance with Enyindah Fiebai, Anya and Okpani [10] and de Carvalho., *et al*. [11] in separate studies on episiotomy and perineal trauma.

Although the study is limited by its failure to explore the indications for admission into neonatal intensive care for the babies, it was noted that prematurity, respiratory failure of newborn and suspected sepsis due to maternal PROM were the leading causes of admission and this is consistent with the report of Khasawneh., *et al*. [12] from Jordan where it was established that late preterm gestation and CS are the leading indication for admission. Another major limitation of this study was the inability to collect data directly from the participants as the nature of this study supports information from the medical records. It was however difficult to make use of newly delivered mothers during the period of study. The third major limitation was the incomplete documentation of necessary information in the medical records charts thus constituting a major challenge to interpreting the study outcomes. However, review of previous studies showed that the study's sample size is powered enough to make the inferences so far documented [13-15].

Conclusion

The overall findings showed that the obstetric practices in the study setting were of acceptable standard and to further improve the outcome, quality improvement projects should be implemented in terms of adequate documentation of necessary information in the medical charts.

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