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AUDIT OF THE REFERRED PATIENTS TO A TERTIARY CENTRE: A TOOL FOR NEED ASSESSMENTL
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AUDIT OF THE REFERRED PATIENTS TO A TERTIARY CENTRE: A TOOL FOR NEED ASSESSMENT

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ABSTRACT

***Background*: The referred patient is often regarded to as 'unbooked' at the referral centers and are most often categorized as high risk. Referrals are associated with delays which increases the morbidity and mortality pattern.**
***Objective*: The audit of the referral patterns to a tertiary center is to assist in identifying gaps in management; needs assessment and areas that that can be bridged to reduce the complications that are associated with the unbooked patient.**
***Design*: This was a retrospective study of consecutive patients that were referred to the hospital from July 2012 to June 2013. A proforma form was developed to enter the data of the patients.**
***Setting*: The study was conducted in Olabisi Onabanjo University Teaching Hospital Sagamu, Ogun state in South West of Nigeria. It is a referral centre that serves major towns and villages.**
***Subjects*: One hundred and twenty five consecutive patients referred to the obstetric emergency room were used for the study.**
***Results*: A total of 811 patients were admitted into the labour ward during the one year period with 15.4% of them unbooked. Only about half of the patients came with a referral letter (52.8%) and the referral was initiated by nurses in 43.2% of the cases. Sixty eight percent of the referrals were within 5 km radius to the referring centre and 23% were 45-50 km from the hospital. There was no statistical significance between fetal and maternal outcome and the source of referral (P> 0.05). The reason for referral in most cases (65.6%) was because of lack of expertise for management and 24.8% due to need for surgery. Using the Anaesthetic Standard of Assessment as a prototype, 72.8% of the patients were ASA 1 on admission and 78.2% of the babies were alive on arrival in OOUTH though 20.8% of them suffered moderate to severe asphyxia at birth Mean arrival-admission interval was 92.2mins and the arrival-definitive intervention time was 220.7 minutes.**
***Conclusion*: Acute shortage of personnel and equipments are the main reason why patients are referred for treatment and most of this will be avoidable if adequate facilities exist. Labour room staffs also need to be retrained and closely supervised to reduce the rate of wrong diagnosis which reduces number of referrals. Improving capacity at the peripheral centers will reduce the rate of referrals and reduce significantly maternal morbidity and mortality.**

INTRODUCTION

The referred patient is often regarded to as 'unbooked' at the referral centres and are most often categorised as high risk. The definition of the unbooked patient is also arbitrary and varies from one institution to the other. Whereas some institutions refer a patient as unbooked if she never had any form of antenatal care; some others refer to a patient as an unbooked if she has not had a formal hospital based care or if she was seen just once in pregnancy (1,2,3). The pertinent interest however should be more towards circumstances for referral and the possibility of circumventing or preventing the referral. Type 2 and 3 delays have a major role in the eventual outcome either of the mother or the baby and the more the delays can be circumvented the better for the patient.

The unbooked patient most often came from a facility from where she was receiving some care. The

level of antenatal care and birth plans is however what matters. The outcome of unbooked patients are similar worldwide viz a viz increased incidence of birth asphyxia, preterm delivery, low birth weight, post-partum haemorrhage, laparotomy for ruptured uterus and perinatal and mortality and morbidity (3,4,5) but greater interest should be taken in methods of reducing rates of referral by bridging the gap or by limiting delays.

Models for bridging the gap includes increasing the available personnel and skills at the rural areas and improving access to emergency obstetric care through the use of non- physician clinicians or assistant doctors especially in the rural areas (6). The WHO recommendation of one Comprehensive Emergency Obstetrics centre (CEmOC) to 500, 000 population and 5 Basic Emergency obstetric centre (BEmOC) is a far cry in most developing countries including Nigeria (7,8). Every Primary Health Centre is expected to be able to provide parenteral drugs like anti-convulsants, anti-biotics and Oxytocics. They are also expected to able to do assisted vaginal deliveries, manual vacuum aspiration and manual removal of placenta with neonatal resuscitation while the CEmOC centers will be able to perform Caesarean section and blood transfusion. The concept of the Non Physician clinician is to train people who can perform all this functions in the peripheral (rural) centers and therefore removing the need for referral.

An audit of the referral patterns to a tertiary centre can assist in identifying gaps in management; needs assessment and areas that that can be bridged to reduce the complications that are associated with the unbooked patient.

MATERIALS AND METHODS

This was a retrospective study of consecutive patients that were referred to the hospital from July 2012 to June 2013. A proforma form was developed to enter the data of the patients admitted into the labour ward. Data extracted included referral notes and diagnosis from referring centre; who initiated the referral and the reason for referral; the distance of the referring hospital to the teaching hospital was also extracted. The condition of the mother and baby were also assessed. The data obtained were analysed using SPSS 16.

RESULTS

A total of 811 patients were admitted into the labour ward during the period and 125 were unbooked patients representing 15.4% of all admissions. Majority of the patients (77.6%) were between the age 20-34 years and 77.6% of them were between Para 0-2. Only about half of the patients came with a referral letter (52.8%) and the referral was initiated by nurses in 43.2% of the cases. Sixty eight percent of the referrals were within five kilometres radius to the referring centre and 23% were from the 45-50 kilometres from the hospital. There was no statistical significance between foetal and maternal outcome and the source of referral. (P> 0.05)The reason for referral in most cases (65.6%) was because of lack of expertise for management and 24.8% due to need for surgery. Using the Anaesthetic Standard of Assessment as a prototype, 72.8% of the patients were ASA 1 on admission and 78.2% of the Babies were alive on arrival in OOUTH though 20.8% of them suffered moderate to severe asphyxia at birth. The arrival-admission interval and definitive intervention time is as shown in Table 1. Mean arrival-admission interval was 92.2mins and the arrival-definitive intervention was 220.7minutes

About half of the patients (50.4%) of the patients were delivered by Caesarian section and 40.8% by spontaneous vaginal delivery Figure 1.

Severe anaemia was the most common morbidity in the parturients (70.6%). Case fatality was 1.6 %.

Table 1

Source of Referral	Frequency	Percent
Traditional Birth Attendant	15	12.0
Maternity Home	57	45.6
Private Hospital	36	28.8
General Hospital	17	13.6
Total	125	100.0

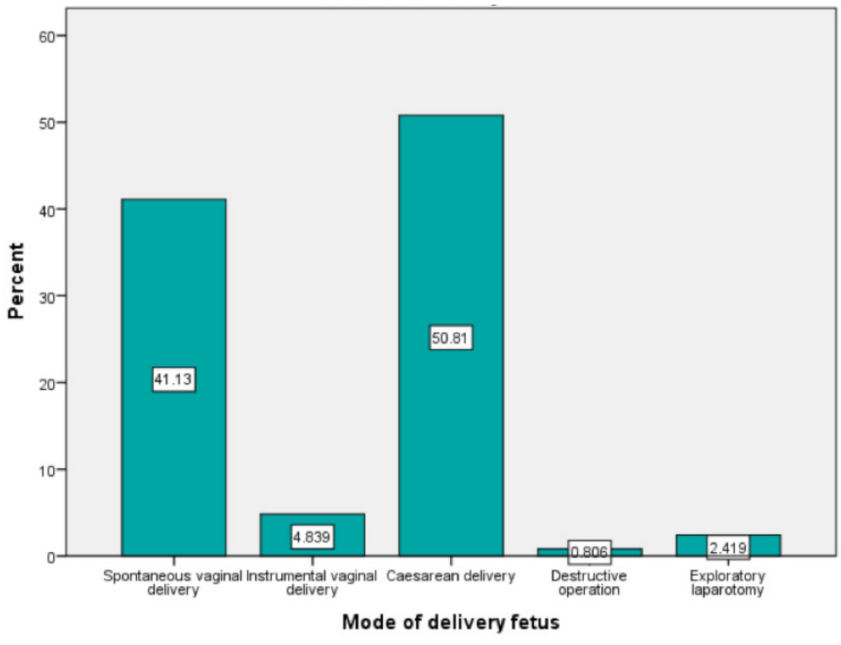
Table 2

Time	Arrival-Admission Interval (%)	Definite Intervention (%)
<30min	13.6	4.2
30-60mins	40.8	10.0
61-90mins	4.0	0.8
91-120mins	28.0	30.0
>120mins	13.6	55.0

Table 3

	Frequency	Percent
Spontaneous vaginal delivery	51	41.1
Instrumental vaginal delivery	6	4.8
Caesarean delivery	63	50.8
Destructive operation	1	.8
Exploratory laparotomy	3	2.4
Total	124	100.0

Figure 1
Mode of delivery



DISCUSSION

The unbooked patient has an inherent associated morbidity and mortality but the main reason why they are referred is to limit the risk. The unbooked patient in this study is the patient who never had any form of antenatal care in our centre. Improving access to health by all is as germane as making available the right resources available. The main indicators of quality of health care in any country includes maternal mortality ratio and perinatal or Neonatal death, therefore provision of basic obstetric care as required by WHO will reduce the rate of referrals and the poor neonatal outcome. Inadequate

manpower and facilities are the bane of healthcare in the developing countries. The study shows 15.4% of the patients attended to in the labour room were unbooked which falls within the range of 2-29% from studies done all over Nigeria (4,10,11). Ninety percent of the referrals were because of lack of expertise or inability to perform surgery which underscores the need for skill and infrastructure acquisition to be able to meet the BEmOC criteria as recommended by WHO (7). Studies from different part of Nigeria has however shown that BEmOC and CEmOC services are deficient and Ogun state is not an exemption (12-15). This explains why referrals are made across urban and semi urban centers. The distance from the source of referral does not matter much if there is good road network as exist in this area neither does the source of referral count much as shown in the study. The most important factor however is what is done on arrival. In this study, average arrival-admission interval was 92.2mins and the arrival-definitive intervention was 220.7minutes which is comparable with findings in some hospitals in Angola (16). Third degree delay according to the Thaddeus model are factors that prevent timely and adequate treatment at the referral centre (17). Improving the quality and scope of care available at existing medical facilities therefore reduces third delay. Studies has shown that third delay is the most common of all the delays and it is responsible for the majority of perinatal mortality and morbidity (18-20). The global deficit of trained health workers is most acute where maternal and perinatal mortality are highest, especially in Sub-Saharan Africa and much of South Asia (21), it is however expedient that the few available should be well equipped for the task even within the limited available resources (22). A system where BEmOC is well established within the community would have averted about 50% of the referrals in this study and reduce the perinatal morbidity (asphyxia). Care within the domicile community will not only reduce the delay in care but will also ensure quality of care (23).

An essential ingredient to reducing the delay in care and ensuring quality care is Task shifting which has been adopted by most Low resource countries. Mid level personnel are trained to provide quality service in the rural or hard to reach areas and have been found to have positively influenced the health indices where they exist. Task-shifting maximises available human resources by redistributing specific tasks from highly qualified professionals to the least specialised professional capable of performing the task safely and reliably, including general practitioners or non-physician clinicians (NPCs) such as nurse-aides, midwives, surgical technicians, medical or clinical officers, and community-based workers (24). Task-shifting may also mean having midwives perform instrumental deliveries, or using nurse-aides to provide intra-partum supervision to enable midwives or physicians to handle obstetric emergencies (25-27). In countries with inadequate resources and poor health indices like Nigeria where this is not in existence, it might be worth considering to complement the human resources.

In Conclusion, acute shortage of personnel and equipments are the main reason why patients are referred for treatment and most of this will be avoidable if adequate facilities exist. Delay in receiving appropriate care at the referral centre is a problem that increases morbidity and mortality. Labour room staff also need to be retrained and closely supervised to reduce the rate of wrong diagnosis which reduces number of referrals. Improving capacity at the peripheral centers will reduce the rate of referrals and reduce significantly maternal morbidity and mortality.

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