

# CAESAREAN SECTION RATE AT FEDERAL MEDICAL CENTRE, MAKURDI, REVISITED

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## ABSTRACT

**Context:** Regular auditing of caesarean section rate is important to establish trend, review indications, associated complications and offer possible solutions to improve outcome.

**Objective:** To audit caesarean section rate done over a 3 year period from January 2010 to December 2012 and to compare such with the last reported study done at the same centre.

**Materials and Method:** A three year retrospective study from January 2010 to December 2012 involving all women who had caesarean delivery at the Federal Medical Centre Makurdi was conducted.

**Results:** The overall caesarean section (CS) rate was 15.2%. The CS rate in 2010, 2011 and 2012 showed a steady increase of 14.2%, 14.6% and 16.8% respectively.

Cephalopelvic disproportion ( 25.3%) was the commonest indication for CS, followed by fetal distress (16.6%) and previous CS for booked patients. For unbooked patients, fetal distress (23.8%) and obstructed labour (20.4%) were the commonest indications. Over 80% of the procedure was carried out by registrars with consultants accounting for only 13.1%.

**Conclusion:** The CS rate has steadily been on the increase in our facility compared with the last, though better than most, reported in this country. There is much room for improvement.

## INTRODUCTION

Caesarean section is an important aspect of modern obstetric care and a major tool in the reduction of maternal and perinatal morbidity and mortality. It is one of the oldest operation in medical history with far reaching effects on modern obstetric practice<sup>1</sup>. The incidence of this procedure has been on the increase, both in the developed and developing countries<sup>2</sup>. In the United Kingdom it rose from 5.2% in 1970 to 12.7% in 1987<sup>2</sup>, while in the United States of America, it rose from 4.5% in 1965 to 25% in 1998<sup>1,2</sup> and to above 30% in 2005<sup>3</sup>. In developing countries like Nigeria, where there is aversion to CS<sup>4,5</sup> partly because of maternal and fetal hazards, constitutes a very formidable obstacle to safe motherhood<sup>5</sup>. Recently, with increase in

knowledge of women and increase safety about the procedure; the CS rate appears to be on the rise in most Nigerian hospitals.

It is also important to note that this procedure is also associated with morbidity and mortality if not performed well, especially by experienced obstetricians.

This study reviews all caesarean sections performed during the study period in our centre with a view to analyzing the rate, indications and attending physician at time of surgery in order to offer suggestions in improving the quality of services.

## **SUBJECTS AND METHODS**

This retrospective study was conducted at the Department of Obstetrics and Gynaecology, Federal Medical Centre Makurdi in North – Central Nigeria. All patients who had caesarean delivery in the facility over three year period, between January 2010 to December 2012 were analysed. The records of all 1,084 women who had CS at the centre within the study period were retrieved from the medical, theatre and labour ward and details extracted on the patients age, parity, booking status, indication for CS, type of CS and the surgeon. The data were analysed manually.

## **RESULTS**

During the period of review, there were a total of 7,125 deliveries, of which 1,084 were by CS given an overall CS rate of 15.2%. The changes occurring in CS rate from year to year during the period is as shown in table 1.

**TABLE 1: ANNUAL CHANGES IN CAESAREAN SECTION RATES**

Year	No. of deliveries	No. of CS	CS rate
2010	1,966	280	14.2%
2011	2,775	404	14.6%
2012	2,384	400	16.8%
Total	7,125	1,084	

Also, of the 1,084 patients who had CS, 790 were booked while 294 were unbooked.

The commonest indications for CS amongst the booked patients were cephalopelvic disproportion (25.3%), fetal distress (16.6%), previous CS (15.2%, that is one or more previous CS). While the commonest indications for unbooked patients were fetal distress (23.8%), obstructed labour (20.4%), eclampsia/severe pre – eclampsia (17%), HIV/AIDS accounts for 6.8% and 10.2% for booked and unbooked patients respectively.

Other indications for CS are as shown in table 2 below;

**TABLE2: INDICATIONS FOR CAESAREAN SECTION**

Indications	Booked patients N (%)	Unbooked patients N (%)	Total N (%)
Cephalopelvic disproportion	200 (25.3)	27 (9.2)	227 (20.9)
Fetal distress	131 (16.6)	70 (23.8)	201 (18.5)
Previous CS	120 (15.2)	20 (6.8)	140 (12.9)
Antepartum haemorrhage	77 (9.8)	12 (4.1)	89 (8.2)
Eclampsia/severe pre- eclampsia	38 (4.8)	50 (17.0)	88 (8.1)
Malpresentation/ malposition/abnormal lie	100 (12.7)	18 (6.1)	118 (10.9)
HIV/AIDS	55 (6.8)	30 (10.2)	85 (7.8)
Obstructed labour	48 (6.1)	60 (20.4)	108 (10.1)
Others	21 (2.7)	7 (2.4)	28 (2.6)
Total	790 (100)	294 (100)	1, 084 (100)

Most of the caesarean section was done by Registrars, Junior Registrars/senior house officers accounted for 63.1% of the CS, Senior registrars (23.8%), while Consultants performed only 13.1%. These are shown in table3 below;

**TABLE3: ATTENDING PHYSICIAN AT SURGERY**

Physicians level of qualification	Total No. of Patients operated	%
Consultants	142	13.1
Senior Registrar	258	23.8
Registrar/Senior house officer	684	63.1
Total	1, 084	100

## DISCUSSION

The overall CS rate in this review was 15.2% which was higher than that reported by Swende in the same hospital between 2004 and 2006<sup>4</sup>. The CS rate in 2010, 2011 and 2012 all showed a steady increase of 14.2%, 14.6% and 16.8% respectively, above that reported. This rise in CS rate is similar to trends observed in other studies<sup>5,6</sup>. Various factors have been shown to influence the rate of caesarean operations in most countries or localities. These include the geographical location with its associated obstetric complications, changing obstetric population, as well as caliber of medical personel. The referral system of the hospital is another factor<sup>3,4</sup>.

Between January 2011 to June 2012, most of the general hospitals in the state were on strike resulting in increased number of referrals to the centre. This may account for the increased CS rate in this study. Over the years the caliber of medical personel has changed with a larger number of residents in training. Training programmes for obstetricians and gynaecologist have been implicated as a cause for increasing Ceasarean Section rates<sup>7,8</sup>.

Cephalopelvic disproportion, fetal distress and previous CS were the commonest indications for CS as seen in the previous study and earlier reports<sup>4,9,10</sup>. Others were antepartum haemorrhage, hypertensive disorders in pregnancy, malpositions and malpresentations, obstructed labour and HIV/ AIDS. For the unbooked patients, they were more likely to have CS indicating that most of them were referred cases. Obstructed labour, fetal distress and hypertensive disorders were the commonest indications as seen by Adinma in a secondary level hospital<sup>11</sup>. HIV/ AIDS was another common indication for CS in unbooked patients. This is possible because the state has the highest prevalence of the disease<sup>12</sup>.

Over 80% of the procedure was carried out by residents while consultants accounted for about 13.1%. This is not different from what is obtained in most teaching hospital and federal medical centres in Nigeria, where resident doctors on training are allowed to perform this procedure, with complicated cases attended to by the consultants.

In conclusion, CS rate is on the increase in our centre as observed in most studies. The commonest indications still remains the same. Therefore, to reduce this rate, measures like active management of labour to reduce incidence of prolonged obstructed labour, vaginal birth after CS (VBAC) for patients with 1 previous CS<sup>13</sup>, fetal scalp blood sampling to accurately diagnose fetal distress in labour, external cephalic version for breech presentations, use of highly active antiretroviral therapy to reduce viral load in HIV patients, and involvement of consultants at initial management are some of this measures that will reduce the CS rate.

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