Needs Assessment of Emergency Obstetric Care in Benue State, Nigeria, Using the United Nations Process Indicators

Silas Ochejele[1], Arthur Heywood[2] and Innocent O. Ujah[3]

[1]Department of Obstetrics & Gynaecology, Federal Medical Centre Makurdi, [2]Partnership for Transforming Health Systems, Makurdi, Benue State and [3]Department of Obstetrics & Gynaecology, Jos University Teaching Hospital, Jos, Nigeria.

Abstract

Context: Maternal mortality reduction by 75% by the year 2015 is one of the eight priority millennium development goals (MDG) set by member states of the United Nations. The use of impact indicators (maternal mortality rate and ratio, and the lifetime risk of maternal deaths) to monitor progress in reducing maternal deaths is difficult, making it necessary to use process indicators.

Objective: To determine the availability, utilisation and quality of emergency obstetric care (EmOC) in Benue State, Nigeria, using the United Nation process indicators.

Study Design: A one year descriptive analysis of health facility records of 100 busiest health facilities in Benue state, from May 2002- April 2003.

Main Outcome Measure: The process indicators for monitoring progress in maternal mortality reduction in Benue state.

Result: Benue state has 0.7 comprehensive emergency obstetric care facility/ 500,000 people, which were inequitably distributed, and has no basic emergency obstetric care facility. 1% of all births in the population took place in EmOC facilities. 0.8% of women with obstetric complications delivered in EmOC facilities. 0.5% of all births in the population were by caesarean section. The case fatality rate was 7%.

Conclusion: The study shows that the state has inadequate emergency obstetric care facilities that were of poor quality and grossly underutilized.

Key Words: Emergency Obstetric Care, Process Indicators, Benue State, Nigeria [Trop J Obstet Gynaecol, 2006, 23:157-159]

Introduction

Reducing maternal mortality by 75% by the year 2015 is one of the eight priority millennium development goals (MDG) set by member states of the United Nations[1]. The 'process indicators' were issued by UNICEF, WHO, UNFPA in 1997 in order to overcome the difficulties in monitoring maternal mortality reduction with 'impact indicators'. They were developed from an understanding that certain medical services or procedures are necessary to save the lives of women with obstetric complications. These procedures or signal functions distinguish facilities that provide basic or comprehensive emergency obstetric care (EmOC) from those that do not. If a facility has provided the first six of the following functions in the past three months, it provides basic EmOC and if it has provided all eight of the functions, it qualifies as comprehensive EmOC [2] (Table 1)

The process indicators for Monitoring Progress in Maternal Mortality Reduction answer the following questions [2] (Table 2):

The objective of this report is to determine the availability, utilisation and quality of emergency obstetric care (EmOC) in Benue State, Nigeria, using the United Nations process indicators.

Study Design and Methodology

Benue State is located in North Central Nigeria, toward the eastern part of the country. The state has 122 health districts and a total of 192 public and private health institutions, including the Federal Medical Centre, Makurdi. There are nineteen (9 government and 10 mission) general hospitals, twenty three (23) comprehensive and many primary health care centres.

A state-wide needs assessment of emergency obstetric care was conducted by the state Ministry of Health, the Federal Medical Centre Makurdi (FMC) and the Partnership for Transforming Health System Benue State on 100 health facilities, between 2nd June and 19th June 2003. The study included the FMC, all the general hospitals (both government and mission-owned), all comprehensive health centres and other busy health facilities. Since there were no reliable data available to show which health facilities were the busiest, the head of the Department of Primary Health Care (PHC) and the Safe Motherhood coordinator in each local government area (LGA) selected the four busiest maternity units in their location, except in the large

Correspondence: *Dr. Silas Ochejele, Emergency Obstetric Care Consultant & Head, Department of Obstetrics & Gynaecology, Federal Medical Centre Makurdi, Benue State, Nigeria.*

Phone: *08038759701* ***E-mail-*** *silasfriday@yahoo.com*

towns of Otukpo and Gboko where two facilities were added, and in Makurdi where four additional busy health facilities were included, be they government, private, mission or LGA-owned.

The research team confirmed the selection in each LGA. For the purpose of this study, the LGA were divided into four zones. Each zone had a team of three data collectors made up of professionals (doctors and midwives) and each was headed by a team leader. The LGA coordinator for PHC in the respective local government areas was added to the team to make a total of 4 data collectors. A questionnaire was designed and the data collectors had a two-day intensive training workshop on the administration of the questionnaire at the health facilities. An advocacy/sensitization visit was undertaken to all the LGA to inform the policy makers and health care practitioners of the study and its value to government as well as the communities. The visit provided an opportunity for answering questions and soliciting for their co-operation for a successful study. The data were obtained from routine obstetric registers in the maternity units, operating theatres and gynaecology wards. Information obtained include signal functions performed, total deliveries, caesarean sections, obstetric complications, and maternal deaths.

Table 1

Emergency Obstetric Care
Basic Emergency Obstetric Care (EmOC)
1. Parenteral Antibiotics
2. Parenteral Oxytocics/ Ergometrine
3. Parenteral Anti-Convulsants
4. Removal of Retained Products of Conception.
5. Manual Removal of the Placenta.
6. Assisted vaginal delivery (Ventouse/Forceps)
Comprehensive Emergency Obstetric Care (EmOC)
All basic functions above, PLUS
7. Caesarean section.
8. Blood transfusion.

Table 2

Process Indicators for Monitoring Progress in Maternal Mortality Reduction
Are there sufficient facilities providing EmOC?
Are they well distributed?
Are enough women using them?
Are the right women using them?
Are enough critical services provided?
Is the quality of the services adequate?

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Data from these 100 busiest health facilities in the state for services rendered between May 2002 April 2003 were collected. The major obstetric complications that were taken into consideration for the calculation of the process indicators are obstetric haemorrhage, puerperal sepsis, prolonged obstructed labour, eclampsia/severe pre-eclampsia, complications from abortion, ruptured uterus, and ectopic pregnancy.

Results

Benue State has a population of 3.8 million with a crude birth rate of 4%, giving an annual expected 152,000 deliveries. Approximately 15% of these (22,800) are expected to be complicated. There were 52 maternal deaths recorded. There were six Comprehensive EmOC (CEmOC) facilities that were in the rural areas and inaccessible. Only one was government owned, two were privately owned and three were owned by religious missions. There were no Basic EmOC (BEmOC) facilities. Some 94% of the health facilities in the state had no capability for instrumental vaginal deliveries..

Discussion

Benue State, Nigeria has 0.7 comprehensive emergency obstetric care facility/ 500,000 people. These were inequitably distributed. The state has no identifiable basic emergency obstetric care facility. Only 1% of all births in the population take place in EmOC facilities and only 0.8% of women with obstetric complications delivered in EMOC facilities. About 0.5% of all births in the population were by caesarean section, with a case fatality rate of 7%. These indicators show the actual performance of the health facilities in the state in relation to obstetric care provision. It also provides a baseline data useful for programme monitoring and evaluation.

Benue State, with a population of 3.8 million people, needs a minimum of 32 BEmOC facilities (4 per 500,000 population) but this low international benchmark is not even met when in fact the state needs more than these minimum standards. The state has no identifiable BEmOC in any of its LGAs. The proportion of BEmOC facilities per 500,000 population in other West African countries are 10.2, 2.5 and 0.25 for Cote D'Ivoire, Niger and Senegal respectively [4].The major reason for this low performance was due to lack of facilities for assisted/instrumental vaginal deliveries.

The state needs a minimum of 8 CEmOC (1 CEmOC per 500,000 population) but has only 0.7 CEmOC per 500,000, and these were not easily accessible because of bad roads. Compared to 1.5, 1.4 and 1.4 from Cote D'Ivoire, Cameroon and Mauritania respectively, this is low[4].

Table 3
United Nations Process Indicators for Benue State, Nigeria

Process Indicator	*Definition*	*Recommended Level*	*Result*
Availability of EmOC	Number of facilities that provide EmOC per 500,000 population	Basic 4 Comprehensive 1	0.7
Proportion of all Births in EmOC Facilities	Proportion of all births in EmOC facilities	>15%	1%
Meeting the Needs	Proportion of women estimated to have complications who are treated in EmOC facilities	100%	0.8%
Caesarean Deliveries as a Proportion of All Births	Caesarean deliveries as a proportion of all births	5 - 15%	0.7%

The facilities available were also underutilized as only 1% of the births occurred in the EmOC facilities compared to the minimum international benchmark of 15%. This figure is also less than 31.3% and 9.7% reported from Cote D'Ivoire and Senegal respectively [4]. Only 0.8% of women with obstetric complications have their needs met in EmOC facilities compared to the minimum international level of 100% and the 42.8%, and 3.0% reported from Cote D'Ivoire and Cameroon respectively[4]. All these indices are very low. The caesarean section of 0.5% is higher than 0.2% in Cameroon and similar to 0.5% from Mauritania but lower than 0.8% and 1.1% reported from Cote D'Ivoire and Senegal respectively[4]. The case fatality rate (CFR) of 7% is far above the maximum international benchmark of 1%, and it is also much higher than the 5.7%, 2.7%, 1.9%, 2.2%, and 4% reported from Cameroon, Cote D'Ivoire, Mauritania, Niger and Senegal respectively[4], all countries from the same West African sub-region in which Nigeria is situated. Compared to other parts of the world the CFR of 7% is higher than the 0.84%, 0.43% and 0.25% reported from Morocco, Nicaragua and Sri Lanka respectively[2]. The high CFR and low caesarean section rate is a reflection of the poor quality of EmOC services in the state. The underutilization of these facilities might be due to lack of confidence in the poor quality of services by the communities or other barriers.

The study shows that the state has inadequate EmOC facilities. The available facilities were of poor quality and grossly underutilized. The EmOC facilities were inaccessible and mainly owned by missionary organizations and private individuals. Community-based surveys to identify barriers to the utilization of the health facilities are urgently needed. Health facility survey of barriers to the provision of quality EmOC services is also recommended.

The availability, utilization and quality of emergency obstetric care in the state is poor and urgent steps should be taken to achieve the millennium development goal of reducing maternal mortality by 75% by the year 2015 in Benue State.

References

1. Laura W, Jean-Claude J, Andrew R, France D. *Maternal mortality update, a focus on emergency obstetric care.* UNFPA Bulletin, 2002: 2
2. Bailey PE. Averting maternal death and disability - Program Note: Using UN process indicators to assess need in emergency obstetric services: Morocco, Nicaragua and Sri Lanka. *Int J Gynecol Obstet.* 2003; 80: 222-230
3. Carol B. *The State of the World's Children 2004.* Geneva, UNICEF, 2003: 130-132
4. Mari S, Fama H. *Making Safe Motherhood a Reality in West Africa. Using Indicators to Programme for Results.* New York, UNFPA, 2003: 3-8