ORIGINAL RESEARCH ARTICLE

A Review of Policies and Programs for Promoting Maternal Health in Plateau State, Nigeria

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Abstract

Plateau state, one of Nigeria's 36 federating states, currently has a high rate of maternal mortality in the country. This study was designed to determine the nature of policies and programs for maternal health in the State with a view to identifying strategic interventions for reducing the high rate of maternal mortality in the state. Plateau state places high priority on the provision of qualitative healthcare for the citizens, but is yet to legislate on, and develop strategic policies and plans for maternal health. Human resource for health is grossly inadequate and available data on healthcare funding and logistics are not satisfactory. The healthcare infrastructure is also inadequate, while there is a need to improve the provision of a fully functional health system, logistics and resources for health. We believe that intense advocacy is needed to increase political will to improve maternal health and to reduce the high rate of maternal morbidity and mortality in Plateau State (*Afr. J. Reprod. Health* 2010; 14[2]: 43-48).

Résumé

Bilan des politiques et des programmes destinés à la promotion de la santé maternelle dans l'état de Plateau au Nigéria. L'état de Plateau, un des états fédéraux du Nigéria a actuellement un taux élevé de mortalité maternelle dans le pays. Cette étude a été conçue pour déterminer la nature des politiques et des programmes de la santé maternelle dans l'état en vue d'identifier les interventions stratégiques destinées à la réduction du taux élevé de mortalité maternelle. L'état de Plateau accorde une haute priorité à l'assurance des services médicaux qualitatifs à ses citoyens, mais il n'a pas encore légiféré sur la santé maternelle. Il n'a pas non plus élaboré des politiques stratégiques et des plans pour la santé maternelle. Les ressources humaines pour la santé sont largement inadéquates et les données dont on dispose sur le financement de soins médicaux et sur la logistique ne sont pas satisfaisantes. L'infrastructure de soins médicaux est également inadéquate, tandis qu'il y a la nécessité d'améliorer l'assurance d'un système de santé qui fonctionne bien, ainsi que la logistique et les ressources pour la santé. Nous sommes convaincus qu'un plaidoyer intensif est nécessaire pour augmenter la volonté politique pour améliorer la santé maternelle et pour réduire le taux élevé de morbidité et mortalité maternelles dans l'état de Plateau (*Afr. J. Reprod. Health* 2010; 14[2]: 43-48)..

Key words: Policies, Programmes, maternal mortality, Jos, Plateau State.

Introduction

Maternal Mortality is the death of a woman while pregnant or within 42 days of termination of a pregnancy, irrespective of the duration or site of the pregnancy, from any cause related to, or aggravated by the pregnancy or its management, but not from accidental causes[1]. Maternal Mortality has been and still continues to be a public health problem particularly in developing countries. It is made more tragic because women die in the process of performing this essential physiological function of childbearing, and in efforts to fulfill their natural role of perpetrating the human race[2].

Maternal Mortality constitutes one of the major indices for assessing the development of any nation. With the commencement of the Safe Motherhood Initiative in Nairobi 1987, most nations have tried to device strategies and policies for reducing maternal mortality. However, despite these efforts, Nigeria continues to have one of the highest rates of maternal mortality ratios in the world (1,100 maternal deaths per 100,000 live births)[3-5], justifying the need for more research to determine the best approach to resolve the problem.

Data from the National Demographic and Health survey, indicate that maternal mortality ratio in Plateau state, one of the 36 states in the Nigerian federation has been estimated to be around 710 / 100,000 live births[6]. We believe this may be an under-reporting of the true state of affairs, since there has been a tendency towards inadequate ma-

ternal health data collection in the state. The medical causes of maternal mortality in the Plateau are similar to other parts of Nigeria which range from haemorhage, prolonged labour, genital sepsis, and abortion, while the background socio-economic determinants include poverty, bad road networks, illiteracy, just to mention a few. However, these are largely preventable even with simple technology.

Despite the complexity of the problem, we believe that the fundamental remedy is to stamp out this chaos by getting the politics and governance structures right[4]. The need to increase the political will to address the high rate of maternal mortality in Plateau State necessitated this study, to determine the possible causes and to device ways of reducing the scale of this preventable malady.

The objective of the study was to determine the current status of maternal health in Plateau state and to explore the nature of the policies and programmatic development aimed at reducing maternal morbidity and mortality in the state. The specific research questions included examining the nature of official policies directed at addressing maternal health problems; how programmes are directed at addressing maternal health problems; what priority government accords to the reduction of maternal mortality; and the key steps that are in place for improving maternal health in the state. We believe the results will be useful for identifying measures aimed at building political commitment for addressing the high rate of maternal mortality in the state.

Study Population and Methodology

The study was designed to explore the nature of official commitment and priorities accorded to maternal health and to reducing maternal mortality in Plateau state. The study was carried out in Plateau state, one of the states in the North-Central geopolitical zone of the country. Plateau state is perched atop the nation's landscape, and Jos in particular is the higher and the more popular of the two plateaus in the country namely the Mambilla located in Adamawa state and Jos in Plateau state. The highlands of Plateau state stand at an average height of 1,829 metres above sea level, and enjoy mean temperatures of between 18.7^0 and 51.7^0F all the year round. It has a landmass of about 26,899 square kilometers. The state has a total population of 3,206,531 and is made up of 17 Local Government Areas[5] and has heterogenous inhabitants with over 40 ethno-linguistic groups.

The study consisted of interviews with officials of the State Ministry of Health and with selected public health officials in the state. Official permission to conduct the study was obtained from the Commissioner of Health, while relevant documents and records were obtained from health institutions and the Health Ministry, and used as sources of information for the study. Those interviewed included the State Health Commissioner, the Permanent Secretary of Health, the Director of Primary Health Care, Deputy Director, Primary Health Care and State Coordinator of family planning services. The Chief Medical Director of the State Hospitals Management Board also provided useful information, while the Heads of Primary Health Care in the various Local Government Councils in the state were interviewed on telephone.

The officials were asked questions on their understanding of maternal health, perceptions relating to maternal mortality and to safe motherhood, the nature of existing policies and programs that address maternal health, budgetary allocations made to health, especially maternal health, and the priority accorded to maternal health in the state. The results were analyzed qualitatively, and they were triangulated with existing statistics from the health institutions, official government gazettes and documents and relevant publications that relate to the state.

Results

Socio-Demographic Profile

Plateau State is divided into 17 Local Government Areas, with a total estimated population of 3,206,531 (1,598,998 males and 1,607,533 females)[5]. According to the 2006 National Population Census, the population growth rate of the state is 2.8%[5]. Total Fertility Rate (TFR) in Nigeria has remained constantly high over time; it was 6.3 in 1981-1982; 6.0 in 1990; 5.2 in 1999; and 5.7 in 2003[6]. By contrast, the Nigerian Demographic and Health Survey 2008 have showed a relatively lower TFR of 4.5 in North-Central Nigeria, the region in which Plateau state is located. However, no specific data on TFR could be obtained for Plateau state at the time of the survey.

The contraceptive Prevalence Rate (CPR) among currently married women in North central zone in 2003 ranged between 8.2 and 9.3 for modern methods of contraception and between 12.0 and 12.6% for all methods[7]. No local data was available for Plateau state specifically during the study.

Also not available was the official rate of maternal mortality in the state. The only available data from the State owned Specialist hospital in Jos estimated maternal mortality ratio to be 204/100,000 live births. However, this appears to be a gross under-estimate and likely to be incorrect as no special efforts are currently in place to monitor maternal mortality in the state.

Medical and Social Causes of Maternal Mortality

The medical causes of Maternal Mortality in Plateau State have been classified as direct and indirect. Direct causes include haemorrhage pregnancy indu-

Table 1. Pattern of Use of Antenatal Care and Delivery Rates.

Maternal Health Care from 2004-2009											
Year	**ANC Anemia New**	**ANC Aborti Old**	**Total Malar**	**N/D PIH**	**Comp PID Del**	**L/birth MM**	**S/birth Others**	**Prim**	**C/S**	**ANC Ref**	**Del Ref**
2004	38,666	74,347	113013	10,222	125	10122	171	23	87	1197	773
	394	244	2186	17	266	22	266				
2005	30,714	33,880	84,594	8,443	109	8448	142	42	102	775	736
	527	593	3668	179	1151	5	142				
2006	36,283	71,192	107475	9,880	139	9471	178	45	80	802	781
	531	310	3792	46	483	1	70				
2007	34,307	66,537	100846	9,495	683	9483	234	74	344	1380	737
	501	391	4279	177	1237	4	68				
2008	27,786	50,409	78195	11,353	208	8009	161	51	174	1101	714
	469	361	3483	90	1205	6	34				
2009	30,605	56,385	86990	8,198	157	8559	252	260	709	772	404
	341	4165	181	1122	22	22	56				

Key: ANC = Antenatal Care; **N/D** = Normal Delivery; **Com Del** = Complicated Delivery; **ANC Ref** = Referred Antenatal cases; **Del Ref** = Referred Delivery cases; **L/birth** = Live birth; **Sbirth** = Still birth; **Prim** = Primigravidae; **C/S** = Caesarean section; **Aborti** = abortion; **Malar** = Malaria; **PIH** = Pregnancy induced Hypertension; **PID** = Pelvic inflammatory disease; **MM** = Maternal mortality.

ced hypertension. Indirect causes such as anaemia, malaria, etc, as shown in the table of maternal health care in Plateau state from 2004-2009 also cause maternal deaths in large numbers[8,9].

The social causes of maternal death include poverty, low literacy level, poor road net works[10] and the frequent ethnic and/or religious crises on the Plateau leading to destruction of lives and property and a few health infrastructures. However, the direct causes carry a lion share of the problem.

The pattern of use of antenatal and delivery care in plateau during the period 2004-2009 is presented in Table 1. The number and proportion of pregnant women using skilled birth attendants in the state could not be determined due to paucity of available records of data. The numbers of deliveries in the health care facilities are far lower than the number of women availing themselves of antenatal care services. Malaria in pregnancy and anaemia during pregnancy were the most common medical problems during pregnancy during the period.

Available personnel and facilities for promoting maternal health

A total number of 964 health facilities are available in Plateau State, distributed as follows: two tertiary health care institutions namely the Jos University Teaching Hospital (JUTH) and the state owned Plateau Specialist Hospital; and 15 Secondary Health Institutions located in 15 Local Government areas. Riyom and Jos South LGAs do not have any secondary health care institutions. Also there are existing 21 public and 38 private health institutions providing various types of health care to the citizenry, while there are 756 Primary Health Centers that are funded and run by the various Local Government Authorities in the state. Additionally, several non-governmental and privately owned Primary Health Centres are 148, making a total of 904 Primary health centres spread all over the state.

Nearly 100 medical doctors are in the employment of the State Government, with 60% of them located in the state capital (Plateau Specialist Hospital). The rest are spread across the state owned General and Cottage hospitals.

Table 2 shows the distribution of nurses, nurse /midwives and Community Health Extension Workers (CHEWs) across the 17 LGAs in the state. These are normally the category of health care workers that provide maternity care to pregnant women at the peripheral health centres, without which there would be little chance of reducing maternal mortality. The results show that CHEWs are the dominant maternity providers in the state. However, they have limited midwifery training and are hardly skilled in basic emergency obstetrics care needed to deal with obstetrics complications that result in maternal mortality.

There is evidence that traditional birth attendants (TBAs) offer services in the State. However, the actual number of these practitioners in the state is unknown, since they are not officially registered by the government. Their impact on maternal health cannot therefore be ascertained as data relating to the services they provide is scanty or non-existent. They are however found predominantly in the rural parts of the state.

Table 2. Number of Nurses, Midwives and Community Health Extension Workers (CHEWs) by Local Government Areas

LGA	Nurse/ Midwives	Nurses	CHEWs
Barakin Ladi	32	5	59
Bassa	35	3	67
Bokkos	20	6	122
Jos East	43	-	-
Jos North	65	3	292
Jos South	59	1	92
Kanam	11	3	56
Kanke	23	-	-
Langtang North	20	10	165
Langtang South	13	9	125
Mangu	22	6	143
Mikang	20	-	53
Pankshin	21	5	131
Qua'an Pan	19	2	-
Riyom	32	5	68
Shendam	25	4	64
Wase	19	-	64
Total	**481**	**62**	**1,582**

Existing maternal health policies

Plateau State accords priority to health in general including maternal health, although there is no written policy for the promotion of maternal health. The state operates the health policies of the federal government. It does not have specific legislative policies on maternal health. Therefore, there are no legislated policies for maternal health in the state. However, efforts are in the pipeline to initiate legislation on maternal and child health, which will serve as a springboard for promoting maternal health in the state.

Priority Accorded Maternal Health

There is no difference in priority for maternal health compared with other health issues, as there is no evidence to demonstrate this. The health of the citizenry is accorded equal priority with those of maternal health.

Available Programmes Relating to Reduction of Maternal Mortality

Like in other parts of the country, international and national non-governmental organizations, faith based organizations and private institutions in the state have different programmes aimed at improving maternal and child health in the state. Some of these include: the role of government hospitals and PHCs as aforementioned above; the contributions of UNFPA to maternal health training and capacity building of providers; Private institutions such as ECWA, Evangel Hospital, Our Lady of Apostles (OLA), Catholic Hospital both in Jos; Vom Christian Hospital in Vom; and NGOs such as Faith Alive and Messiah Foundation.

Funds available for Maternal Mortality reduction

There was no fund specifically allocated in 2008 and 2009 budget for maternal mortality reduction in the state. However the state has continued to support the promotion of health care through the prompt payment of staff salaries and allowances, purchase of some equipment such as ultrasound scanning machines, supply of basic equipment and instruments, essential drugs and other forms of support to the hospitals and clinics. There was however no available data on sources of funds from NGOs in the state.

There is no officially free medical services for maternal and child health in the state. What is obtainable is fees charged for services offered. These fees vary from the state capital to the local government areas. For instance the state specialist hospital charges N1, 500 ($10) for antenatal care, N3, 000 - N4, 000 ($20-$25) for normal vaginal delivery and N30, 000-N40, 000 ($200-$250) for caesarean section. The cost of maternal and child health services in other hospitals in the state LGAs managed by the state Hospitals Management Board are just a little below these figures. The patients provide what is not available for their care in the hospitals. The charges appear to be subsidized as they are cheaper than fees charged in faith-based health facilities and private medical centres. This is probably because government agencies provide infrastructure, personnel and other facilities without charging for them. This may explain the variation in charges. Some states of the federation like Gombe, Kano, Nasarawa and Enugu offer free maternal and child health but this has not been implemented in Plateau state.

Quality of medical services offered in the state

The quality of medical services offered in the state is adjudged to be satisfactory. However, there is room for improvement. The existing teaching hospital in the state capital, the Jos University Teaching hospital (JUTH), provides leadership role in the provision of qualitative maternal health care to women in Jos area. This is achieved through properly organized and implemented antenatal care, labour, delivery and postnatal care services, PMTCT, family planning services and through the training of manpower as medical officers and obstetricians /gynaecologists for the state.

Major constraints facing Maternal Health

The major constraints include the following:

- Inadequate staffing – with just about 100 doctors to serve a population of about 3.2 million, is grossly inadequate to serve the health care needs of the state. Worst still is the fact that about 75-80% of the doctors work and reside in Jos Township (State Specialist Hospital and Dadin Kowa Comprehensive Health Centre, Jos), while only 20% are left to serve the remaining 60% of the population that reside in the other parts of the state.
- Traditional birth attendants – These groups of health care givers have not been shown to reduce maternal mortality but they provide care to women in the local government areas outside of Jos. With limited facilities and training to refer women in difficult labor, this has contributed to the poor maternal health outcomes in the state.
- Few Primary Health Care Centres (PHCs) – The PHC centres as already tabulated above are grossly inadequate for the state. A cursory look at some of the facilities demonstrates deficiencies in personnel and infrastructure. The Community Health Extension workers appear to constitute the bulk of health personnel in the PHCs. These personnel are not skilled birth attendants as their training curriculum does not contain midwifery skills required to offer maternal health care. There is no doctor in any of the PHCs in the state.
- Lack of Policies and Legislations – The lack of legislation or policies on maternal health care has limited opportunities at both State and local Government Councils, to provide standardized maternal care that will pave the way for a reduction in maternal mortality.
- Lack of Free or highly subsidized maternal health – this is necessary for the benefit of women to whom cost is a limiting factor for accessing care during pregnancy, labour and delivery. Studies abound to prove that the number of women increase when the cost of maternal care is waived.

Discussion

Maternal mortality is a symptom of poverty and the low status accorded to women. Women themselves contribute to this problem through repeated pregnancies, and thereby cause significant socio-economic loss to society[11]. This study revealed a high maternal mortality ratio of 204/100,000. The maternal mortality ratio (MMR) of 204/100,000 is low compared with the National figure of 800/100,000[6] and 710/100,000 recorded in JUTH in 2006[7]. A facility based maternal mortality ratio of 704/100,000 total births was also reported in Jos University Teaching Hospital in 2005[9]. It is also lower than the rate reported from Port Harcourt (2,736)[12] and Kano (2,420)[13] but similar to the rate reported from Enugu (270)[14]. The low rate might be due to under reporting for the fact that most maternal deaths occurring in the rural areas are not reported and so makes it difficult to calculate the actual maternal mortality ratio. The differences in ratios between the state and the teaching hospital may be explained by the referral of women experiencing complications of pregnancy, labour and delivery to the teaching hospital from the PHCs for further management. Some of these referred cases result in maternal death in the teaching hospital and thus increasing the maternal mortality ratio. The specialist hospital in the state capital also refers complications of pregnancy, labour and delivery to the teaching hospital. Therefore most figures are only institutional. However some of the differences may be explained by the socio-cultural characteristics of the catchment populations including illiteracy and poor access to maternal health services.

The main causes of maternal mortality are medical and social reasons as already mentioned above, but the interesting thing is that there are largely preventable even with the lowest technology available. Obstetric haemorrhage is still the commonest as documented by Ujah et al in 2005[9]. This is followed by sepsis and eclampsia. The characteristics of women that died during pregnancy, labour, delivery or pueperium in this study are similar to the causes of death in other centres across Nigeria[7,11,12].

Maternal health in the state can be said to be ill-advertised as evidenced by the complete absence of medical doctors (apart from NYSC doctors) in the local government areas, few staffing of health institutions, absence of specific funding for reduction of maternal health, lack of free or subsidized maternal and child health issues. There are also no specific health policies directed at the promotion of maternal health in Plateau state, aside the federal government frame work.

This study could not come up with a contraceptive prevalence rate for the state, but rates of less than 10% have been reported for North-Central Nigeria where Plateau state is located. This low rate has been attributed to conservative culture, custom and religious doctrines that form barriers to modern family planning[9].

Community Health Extension workers are the largest number of health care providers in the PHCs in the Local Government Areas. However, it is heartwarming to observe that there are Nurses/ Midwives in every PHC in all the Local Government areas. The other observation from the study is the PHCs, which are supposed to be basic health

Centres with the capacity to effectively conduct deliveries, administer antibiotics to desiring patients, perform vacuum delivery and do manual removal of the placenta. These services require the supervision of a doctor. The presence of a doctor in PHCs is still a mirage as the Local Government Councils have no medical doctor in their employment in the state. This entails that women with problems during pregnancy, labour and delivery, who would have been attended to in the PHC would now require referral to secon-dary health centres.

The Primary Health Care centres are controlled and managed by the Local Government Councils while the state government manages the secondary health centres and one tertiary hospital in the state capital. The only observed collaboration in these health sectors is probably in referral of complications of pregnancy, labour and delivery. Local Government Councils manage the PHCs the way they deem fit which may actually not be in the best interest of maternal health. The state has no direct contribution to the management of the PHCs. The State has better compliment of skilled birth attendants including doctors. One foresees the possibility of supervision of the PHCs by doctors, and therefore improved maternal health care at the grassroots, if there was a direct link between the state and LGAs. Data could also be shared for overall benefit of the health system in the state.

Conclusion

Maternal mortality ratio is still high in the state. Causes have been identified in this study to be multifactorial. Legislation for free maternal and child health is yet to be put in place for the benefit of the women and children in the state. There is a lot of room for improvement in this regard. The following recommendations may go a long way in reducing the existing high Maternal Mortality ratio in Plateau state.

Recommendations

There is the need to urgently improve on data collection, particularly in the Primary Health Centres and other health facilities in the state in addition to enhancing information dissemination. In order to achieve this, there may be the need to merge the health record system for both state and local Government, for easy accessibility. The Government should legislate for employment of medical doctors to serve the grassroots at the local Government levels.

Many state governments in this part of the country have made concerted effort to provide free maternal and child health. Plateau State government should follow suit to advocate free maternal and child health programmes or at most subsidize them. Appropriate staffing was generally of concern in the various health facilities in the state. This requires improvement if maternal health care is to be improved upon with expected reduction in maternal mortality ratios in the state.

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