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Programs and Policies for Reducing Maternal Mortality in Kano State, Nigeria: A Review

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Abstract

Maternal health of any nation is a strong indication of the well being of that nation. This study is aimed to document policies and programs that are directed towards addressing maternal health issues in Kano state of Nigeria. Relevant data was obtained from the state hospital management board, NDHS 2008, and national population council Kano state office. Since the introduction of free maternity services in 2001, antenatal attendance from 28 hospitals increased from 303,649 in 2001 to 705,468 in 2006. Deliveries increased from 29,704 in 2001 to 42,127 in 2006. In one hospital, caesarean section rate increased from 2.82% in 2000 to 8.12% in 2005. Major challenges are inadequate human resource for health, inadequate funding, out of stock syndrome, inadequate infrastructure and poor staff remuneration. Governments intending to remove user fee for maternity care must plan and link this action to broaden improvements within the health system. (*Afr. J. Reprod. Health* 2010; 14[2]: 31-36).

Résumé

Programmes et politiques pour la réduction de la mortalité maternelle dans l'état de Kano : Une analyse. La santé maternelle de n'importe quel pays est une vraie indication du bien-être de cette nation-là. Cette étude a comme objectif de documenter les politiques et les programmes qui sont façonnés en vue d'aborder les problèmes de la santé maternelle dans l'état de Kano au Nigéria. Les données nécessaires ont été recueillies auprès du Conseil d'Administration de l'hôpital, de l'ENDS 2008 et du bureau de Conseil National de la Population à Kano. Depuis l'introduction des services de maternité gratuits en 2001, les visites anténatales de 28 hôpitaux ont augmenté de 303.649 en 2001 à 705.468 en 2006. Les accouchements ont augmenté de 29.704 en 2001à 42127 en 2006. Dans un hôpital, l'opération césarienne a augmenté de 2.82% en 2000 à 8.12% en 2005. Les défis importants étaient le manque de ressources humaines pour la santé, le manque de financement, le syndrome du manque de médicaments, le manque d'infrastructure et le salaire médiocre du personnel. Les gouvernements qui ont l'intention d'enlever les frais payés pour les soins de maternité, doivent planifier et lier cette action pour élargir les améliorations dans le cadre du système de santé (*Afr. J. Reprod. Health* 2010; 14[2]: 31-36).

Key words**:** Maternal mortality, Programs, Policies, Maternal health, Kano state.

Introduction

Maternal health of any nation is a strong indication of the well being of that nation. Improvement in maternal health is therefore a central focus in global health programs, that is why the 5th millennium development goals is directly related to maternal health. Nigeria's progress over the past five years in reducing maternal, infant and under 5 mortality rates has shown only a marginal reduction. The attainment of the 5th MDG in Nigeria is extremely far reaching by the year 2015 with the level of maternal health care in the country[1].

Annually, an estimated 52,900 Nigerian women die from pregnancy related complications, out of a total of 529,000 global maternal deaths. A woman's chance of dying from pregnancy and childbirth in Nigeria is 1 in 13[2]. Although many of these deaths are preventable, the coverage and quality of health care services in Nigeria continues to fail wo-men and children. However, there has been a reduction in National maternal mortality rate from 800/100,000 in 2005[3] to 545/ 100,000 with recent NDHS 2008[4].

Likewise wide variations exist across the geo-political zones. The North-East zone has the highest maternal mortality rate (MMR) of 1,549/100,000 live birth, compared to 165/ 100,000 live births in the South-West zone, an almost tenfold difference.

There is also a marked urban-rural variation in maternal mortality rate (MMR): 351/100,000 (urban) to 828/100,000 (rural)[5].

Since the return of democratic rule in 1999 the Nigerian government has shown a greater commitment to substantially reduce maternal, newborn and child mortality as well as meeting the MDG budgets and targets. The federal budgetary component of health expenditure has increased from the 1999 N16 billion (17% of the federal budget) to N63.2 billion (6.4%) of the 2002 budgetary expenditure[6]. The federal figure of 2006 was about N102 billion (5.6% of the budgetary proposal) representing a 40% increase in actual revenue, but a decrease in the percentage of the budget allocated to health[6].

Nevertheless, the budgetary allocation for health is still below the 15% signed by the Nigerian government in the Abuja declaration (2001). Policies and strategic frameworks have been formulated and approved in the health sector in order to improve the provision of health in the Nigerian population especially women and children

Kano state is currently the most populous state in Nigeria and is located in the North Western region of the country. Several workers have reported various ranges of MMR mainly using hospital statistics. One re-current denomination amongst them all is that the reported MMR is higher than the regional average of 1026/100,000. The Kano state health services management board (KSHMB) statistics department gave the MMR of 2008 as 1600/100,000. This is three times the National average.

The leading barrier to healthcare for Nigerian women and children is getting money for treatment. Up to 56% of women reported in 2008 that getting money for treatment was a serious problem in accessing health-care[4]. This is what made the Kano state government in 2001 to make maternal care free in all secondary health care facilities of the state. It is on record that Kano state was the first to make maternal care free in Nigeria.

Despite the free maternity services, utilization of maternity services is still poor in Kano state especially in the rural areas[7]. Only about 50% of women in the northwest zone of Nigeria attend ANC[1] which is lower than the National average of 60%[8]. Home delivery is still the norm in the area with as high as 85.3% of women delivering at home[1]. These figures are higher than the national figure of 58% of women delivering at home[8]. With this background, a research was conducted in Kano state to document the current maternal health status in the state and also document policies and programs that are directed towards addressing the maternal health issues in the state.

The objective of the study is to identify existing frame work on maternal health in the state and to explore modalities of improving maternal health in the state.

Methodology

Kano state is situated in the northwestern zone of Nigeria, one of six geopolitical zones of the country. It occupies 20131 square kilometers of land mass. The state which was created in 1967 currently has 44 local government areas and is bounded to the northwest by Katsina state, northeast by Jigawa state, northeast and south by Bauchi and Kaduna states. The state is one of Nigeria`s most dynamic states with its rich historical past and a glorious culture coupled with its level of cosmopolitan, Industrious, accommodating and highly receptive populace. Its population of 9,383,6829[9] people is made up of mainly Hausa/Fulani who are predominantly Muslims. Substantial numbers are Ibos and Yorubas. Most are traders, business men, farmers and civil servants. Women constitute 4,539,554[9] of the population. The state total fertility rate is 8.1 per woman and the contraceptive prevalence is 2%[4]. Life is very vigorous for the people of Kano. 61% live below poverty line; life expectancy is 51 years for men and 52.2 years for women[10]. The state literacy rate is 35%. Primary school enrollment is 90%; secondary school enrollment is 80% while tertiary institution enrollment is 60%[10]. Women folk school enrollment is at significantly lower level. The female primary school enrollment is 40%, secondary school enrollment is 35% while tertiary institution is at abysmal 20%[10].

Data Sources and Analysis

A significant amount of the data was obtained from the statistics unit of the Kano state hospital management board (KSHMB). In depth interviews of key officials in KSHMB were also conducted to fill in the gaps. Documents obtained from the statistics unit included Kano state capital expenditure 2009, Kano state hospital management board progress reports, Kano state staff strength as at January 2009, statistical data for free maternal, child health implementation committee. Other sources of Information were from the NDHS 2008 and national population council Kano state office. A literature search was also conducted to fill in some of the information.

Results

Current State of Maternal Health in Kano State

The total fertility rate in Kano is 8.1 with only 2% contraceptive prevalence rate[4]. About 50% of women utilize antenatal care but only 13% deliver in health facilities[4]. The MMR for 2008 obtained from

the statistic unit of the KSHMB is 1600/100,000 live births. Eclampsia still remains the major cause of maternal death in Kano state, although case fatality rate for eclampsia has reduced significantly with the introduction of magnesium sulphate in the treatment of eclampsia especially in the tertiary health facilities. Other major causes of death are postpartum haemorrhage, anaemia and puerperal sepsis. Utilization of available maternity care services is still poor, this is not unconnected to low literacy rates especially in women, multiparity, disadvantaged social status of women, poorly and inadequately staffed health facilities and unfriendly attitude of health care providers[7]. The needs assessment of SOGON in 2004 showed that delay in accessing care (Phase 1 delay) accounted for 38% of maternal death in Kano state and phase 3 delay accounted for 25.3% of maternal deaths[10].

Human Resource for Health in Kano State

The state has 4 tertiary health institutions and 19 secondary health care facilities. As at January 2009 the state had a total of 219 doctors; 5 of whom are consultant gynecologists, 1470 nurses/midwives, 267 pharmacy staff, 80 X-ray staff and 741 primary health care staff and 248 clinical assistance. This gives a ratio of one doctor to 42,847 persons and 6,383 persons per nurse. With these human resource for health statistics in the state, the goal of achieving a reduction of maternal mortality by two third in 2015 is surely a gigantic task.

Policies for promotion of maternal health

Although the state has no written policy on promotion of maternal health, it accords great priority to it. In 2001 Kano state was the first in the country to initiate the free maternity service in all its secondary and tertiary health facilities. Despite the change in leadership in 2003 the free maternity service provision has continued. The services involved in the free maternity care program includes free ANC (including card and antenatal drugs), free vaginal and assisted vaginal delivery (forceps and vacuum), free caesarean section (elective and emergency), free post abortion care services, free management of ectopic and free laparatomy for obstetric complications. Other programs in the state that impacts positively on maternal health care are the free treatment for the under 5 and free vesico-vaginal fistula repairs. These 3 programs are managed by the free maternal, child health and VVF repairs implementation committee that was set up by the State government in 2002. The Kano state government also provides free accident and emergency services, free hospital cards and consumables and free cleansing and cleaning materials.

The ministry of health also set up a task force in 2003 for the reduction of maternal mortality with the responsibility of guiding the government in programs directed at reduction of maternal mortality and also monitoring activities of NGOs in maternal health programs. This was found necessary as Kano state is a beneficiary of maternal health programs of many international organizations such as Population Council, Pathfinder Inter-national, Rotary International, MacArthur Foundation, Compass, DFID, Ghain, IHVN and many more.

In 2009 the state established a blood bank in one of its busiest hospital (Murtala Mohammed Specialist Hospital). The Executive Governor of the state and the commissioner of health donated blood voluntarily in order to launch the voluntary blood donation campaign.

Funding

Although we could not get the actual total budget for the ministry of health or the KSH-MB, there is evidence that there has been an increase in budget allocation to health and maternal health programs in the last few years. The budget for free maternity care service program has had a tremendous increase from N20, 000,000 (twenty million naira) at the commencement of the program in 2001 to N150,000,000 (one hundred and fifty million naira) in 2008.

Impact of the free maternity services

Reviewing the data from 28 participating hos-pitals of free maternity service showed there has been a significant increase in antenatal attendance from 303,649 in 2001 to 705,468 in 2006 as shown in Figure 1. Likewise deliveries increased from 29,704 in 2001 to 42,127 in 2006 as shown in Figure 2. The monthly average of hospital deliveries increased from 2475 in 2001 to 3511 in 2006. In one of the participating hospital, caesarean section rate increased from 2.82% in 2000 to 5.70% in 2001, with the introduction of free maternity services. This rate increased to 8.12% in 2005.

Challenges and Constraints of Free Maternity Services

***Inadequate Manpower*:** Free maternity service provision removes user fees and therefore increases access of women to maternity care services as shown above with consequent increases in the number of patients receiving maternal services (ANC, delivery, and caesarean section). However, since the introduction of free maternity services in Kano state, there has not been a significant corresponding increase in human resource for health. As stated above, the state has a ratio of one doctor to 42,847 persons

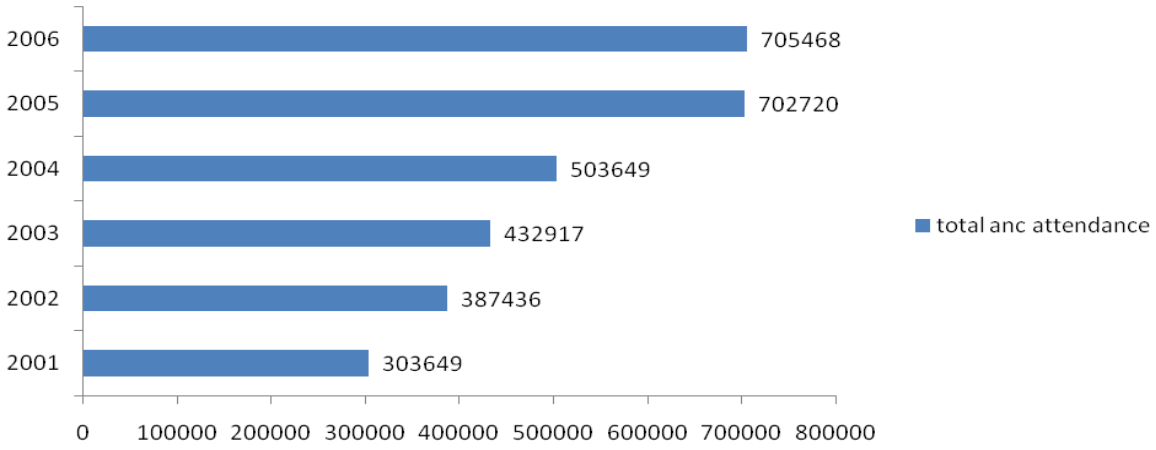

Figure 1. Total ANC Attendance of 28 Participating Hospitals of Free Maternity Care in Kano State.

Figure 2. Total Number of Deliveries of 28 participating Hospitals of Free Maternity care in Kano State.

and 6,383 persons per nurse. This is one of the major constraints of free maternity services in the state and it compromises the quality of maternity services in the state.

***Poor Remuneration of Staff*:** The free maternity care increased workload for all the staff of the maternity units. However, there has not been a matching increase in their remuneration. Therefore attitude of health care workers is poor, morale is low and hence quality of services provided is also poor. The state government has taken a bold step in addressing poor staff remuneration. It has recently approved and has commenced payment of 60% of the new Consolidated Medical Salary Scale (COMESS) and Consolidated Health workers Salary Scale (CON-HESS).

***Inadequate Infrastructure and facilities*:** It was anticipated that patient flow will increase and therefore the participating hospitals and their maternity units were upgraded in both infrastructure and facilities at the beginning of the program. However, this turned out to be inadequate as compared to the amount of increase in the demand of the services.

***Insufficient Blood Supply*:** Significant increase in patients in maternity units especially emergencies signifies increase in demand of blood. Not all participating hospitals in the state have functional blood banking system, therefore this translated into a significant 3rd phase delay in managing obstetric emergencies, especially postpartum haemorrhage. In order to address this, the State has in collaboration with Pathfinder International established a blood bank recently in one of the large maternity centers in the state.

***Cross Infection*:** The overwhelming increase in patient flow without adequate and corresponding attention to infection control measure means increase in cross infection especially post-operation sepsis.

***Out of Stock Syndrome*:** Although measures were put in place to ensure supplies are available in all participating hospitals, leakages in the system meant frequent out of stock syndrome. This affected

services and causes delays as patients and relatives were not willing to compliment government efforts at anytime.

***Lack of Local Government Hospitals participating in the Scheme*:** Finally the free maternity care services programs provided by the State Government are presently only operating in secondary health care facilities, which are under the state government control. This therefore limits the number of beneficiaries, since a large chunk of patients reside in Local Government Areas and are more accessible to primary health care facilities that are operated by Local Government.

***Policy Drive*:** In its attempt to ensure sustainability, the Ministry of health, Kano with the support of the now closed COMPASS project had developed a draft bill in order to institutionalize the Free Maternal and Child Health Services. This bill has been ratified by the state executive council but it is yet to be presented to the state house of assembly. This will require further push by some other stakeholders.

Discussion

The current fertility rate for Kano of 8.1 is higher than the National figure of 5.7[4] and is also the second highest for the North West Zone. Sokoto State is the only state in the Zone with a higher figure of 8.7[4]. There is clear evidence that the fertility rate of women in the Zone is increasing. In 2004, a study reported a fertility rate of 6.7 for the Zone[1]. It is not surprising that the CPR of Kano State is only 2%, which is much lower than the National figure of 10%[4] and also lower than the average figure for North West Zone of 3%. Kaduna State has the highest CPR of 8% in the Zone[4].The use of contraceptive is influenced by religion, tradition, is dependent on age, on attitudes within the family, on the marital status[11] and finally by educational status, knowledge and wishes of the women themselves.

Despite eight years of free maternity ser-vices in Kano State, there is still low utilization of maternity services. Only 50% of women in the State utilize antenatal clinic in the recent NDHS. This is lower than 58% National antenatal clinic attendance and Kaduna State had 62% antenatal clinic attendance as the highest in the North West Zone[4].

The low figure of skilled attendants at delivery of 13% and hospital delivery of 11% further stresses the low utilization of maternity services in the State. Both figures are much lower than the National figure of 39% and 35% respectively[4]. Home delivery and utilization of Traditional Birth Attendants is still the norm in the zone. Traditional Birth Attendants are also likely to remain as delivery care attendants for sometime because of difficulties experienced in posting trained professionals to rural areas in many developing countries[1]. This is unfortunate given that greater use of services (skilled attendant at birth) is a key step in reducing the half million maternal deaths in developing countries each year[12].

User fees are the most regressive form of healthcare financing available; they contribute to the unaffordable cost burdens imposed on poor households and they represent one facet of the social exclusion experienced by these households[13]. Hence, the move by Kano State to remove user fee is justified. Though important, removing fees is not a simple exercise. Without supportive action, the policy of Free Maternity Care can itself add to the performance problems of health system. Thus it is important to pay careful attention to the processes and strategies through which any policy change is implemented[13]. Before fees can be removed, the levels of funding available for health care must be increased. As user fee restrict utilization of health services and create a large pool of unmet need, fee removal is likely to result in substantial and sustained increases in utilization[14]. Although Kano State has been increasing its funding for the free maternity services over the years, the funding for health has not been proportionate to the substantial increase in utilization of the health system. Without increased funding for health care, these increases could well lead to falling quality of care generated by drug shortages and staff difficulties in manning increased workloads[15].

This explains the present situation of free maternity care service in the State. With so much increase in workload and no appropriate compensating remuneration, there is bound to be a negative impact on the morale of health care workers, which will in turn reduce the quality of care they provide. Similar adverse impacts on morale were reported from South Africa[14] and Uganda[16] with the removal of user fees. With the recently introduced CONMESS and CONHESS, health workers morale and performance is likely to improve or may open other inadequacies not formally realized.

There is need to develop action communication strategies, provide opportunities for dialogue between senior health managers and low level health care workers. Such dialogue can elicit good ideas about how to implement the policy effectively as well as enhance the acceptability of the new policy and maintain morale[15]. There is also the need to boost the remuneration or salaries of the health care workers.

Likewise poor supply chain logistics means clinics run out of crucial medicine such as oxytocin, which raises women's risk of dying[17]. Therefore there is need to plan adequately for the implementation to avoid exhaustion of drug supply as utilization increases. For example, the Ugandan Ministry of

Health provided a $5.5 million buffer fund to offset the potential impact on availability revenue and increased utilization[16]. Although the free maternity service improved access of women to the maternity care services as evidenced by the increased number of antenatal clinic attendance and hospital deliveries in our participating hospitals, there has not been any major impact on the health indices of the state. This may not be unconnected to several other social factors that influence maternity care that free maternity services do not address. These factors include low literacy level of the women in the community. Only 31% of women in the reproductive age group (15-49 years) were literate in Kano State in the last NDHS 2008[4]. This figure is lower than the National average of 54%. Other social factors include cultural factors and general lack of health education of the community. Inadequate coverage and low quality of essential obstetric care underlies the high maternal and newborn deaths seen in the country. In one study conducted by Federal Ministry of Health and the United Nations population Fund 2003 on the quality of care, only 18.5% of the 4500 facilities surveyed had capacity to provide emergency obstetric care[18]. Indeed, only Lagos State met the four basic essential standards of obstetric care facilities per 500,000 populations.

Recommendations

There is need to have a policy on free maternity health care in the state developed and institutionalize. The Bill on the free maternal and child health services should be pushed to the state house of assembly for adoption and legalization to ensure sustainability of the free services. This is necessary in order to have a legal backing for the program as well as ensure that the program is backed up by adequate funding for provision of adequate supplies.

The free maternity care policy should be implemented at all the health facilities of the state including tertiary, secondary and primary health care facilities, which mean the local government, should also adopt the policy. Adequate drug supply logistics must be in place to avoid out of stock syndrome. A monitoring system should be established that cover utilization trends and give health workers and managers opportunity to feed back on health facility experience[13].

Conclusion

Free maternity service is an excellent initiative in Kano state and every effort should be made to institutionalise it. Governments intending to remove user fee must plan strategically and link this single action to broader improvements within the health system.

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References

1. Galandanci H, Ejembi C, Iliyasu Z, Alagh B, Umar U. Maternal health in Northern Nigeria—a far cry from ideal. *BJOG* 2007;114:448–452.
2. Integrated Maternal, Newborn and Child Health Strategy. Federal ministry of Health 2007, Abuja.
3. National Population Commission (Nigeria). Nigerian Demographic and Health Survey: Policy and Programme Implications (Northeast Zone). Abuja, Nigeria: National Population Commission, 2001
4. National Population Commission (Nigeria). Nigeria Demographic and Health Survey 2008. Abuja, Nigeria: National Populaton Commission and ICF Macro
5. The Maternal Newborn Roadmap. Federal Ministry of Health, 2005 Nigeria.
6. Idogho O, Ogundipe A. Reproductive Health / HIV / AIDS policy Environment in Nigeria –Challenges and opportunities. Abuja, Nigeria. Action Aid Nigeria 2004.
7. TA Jido, Sarkinfada, HS Galadanci, ID Garba**.** Prevalence and Associated factors in the non-utilization of Maternity Care Services in a Rural Area of Kano State. *Highland Med. Res. J.* 2(2) 2004:29-36
8. National Population Commission (Nigeria) and ORC Macro. Nigerian Demographic and Health Survey 2003. Key Findings. Calverton, MD: National Population Commission and ORC Macro, 2004.
9. National Population Commission (Nigeria).Census 2006 in Federal Government Extraordinary Gazette, No 4 of January 18th 2007, Vol. 94.
10. Status of Emergency Obstetric Services in Six States of Nigeria- A needs Assessment Report. *Soc. Gynaecol. Obstet. Nig.*
11. Okunlola MA, Owonikoko KM, Roberts OA, Morhason-Bello IO. Discontinuation pattern among IUCD users at the family planning clinic, University College Hospital, Ibadan. *J. Obstet. Gynaecol.* 2006 Feb; 26(2):152-156.
12. Nzama B, Hofoney J. Improving the experience of birth in poor community. *BJOG* 2005;112:1165–7
13. Gilson L, McIntyre D. Removing User Fee for Primary Health in Africa; the need for careful action. *BMJ* 2005;331:762-5.
14. Deininger K, Mpuga P. Economic and welfare effects of the abolition of healthuser fees: evidence from Uganda. Washington, DC:World Bank, 2004. (World Bank policy research working paper 3276).
15. McCoy D. Free health care for pregnant women and children under six in South Africa: an impact assessment. Durban: Health Systems Trust, 1996.
16. Burnham G, Pariyo G, Galiwango E,Wabwire- Mangen F. Discontinuation of cost sharing in Uganda. *Bull. World Health* Org 2004;82:187-95.
17. Anderson T. How can Child and maternal Mortality be cut?. *BMJ* 2010;340:240-2.
18. National Study on Essential Obstetric Care facilities in Nigeria. Federal Ministry of Health, 2003, Nigeria.