Targeting poverty to improve maternal health in Sokoto State, Nigeria

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Abstract

The health of women during pregnancy, childbirth and postpartum period is a critical measure of maternal health while maternal mortality is an important indicator of the well-being of women as well as the performance of any state's health system. Disparities in the provision of health facilities and the relationships between poverty and maternal health are two primary community issues in the Sokoto State of Nigeria. Using relevant data from secondary sources, this study reviews maternal deaths and assesses the availability and quality of health facilities in Sokoto State. It reveals that the percentage of births attended to by a skilled professional ranged from a high of 81.8% in the SE to a low of 9.8% in Sokoto, NW. Similarly, 90.1% of women in Sokoto, NW are more likely to give birth at home compared to 22.5% in the SW. This implies that with 81.2% poverty rate and 900/100,000 maternal mortality rate in the state there is a critical relationship between poverty and the delivery of maternal health services. Thus, to improve maternal health services delivery, the study advocates for more women empowerment programmes in the state. In addition, government needs to provide more funds for the provision of more efficient maternal health facilities in order to reduce the mortality rates of women and children.

Keywords: health facilities, human development, maternal health, maternal mortality, poverty, Sokoto State

Introduction

Human development encompasses more than just the rise or fall of national incomes. Human development disperses the concentration of the distribution of goods and services that underprivileged people need and centre its ideas on human decisions. The most basic capabilities for human development are: to lead long and healthy lives, to be knowledgeable (e.g: to be educated), to have access to the resources and social services (such as health services) needed for a decent standard of living, and to be able to participate in the life of the community. In view this, the Millennium Development Goals were set and goals 4 and 5 target to reduce under five mortality by two-thirds by 2015 and reduce the maternal mortality ratio by three-quarters between 1990 and 2015 respectively. These can be indicated by low under-five and infant mortality rate, low maternal mortality ratio and proportion of births attended by skilled health personnel (MDGR, 2004).

World Health Organisation defines health as a state of complete physical, mental and social well-being of the individual, the family and the community not merely the absence of diseases or illness (Oloriegbe, 2008). Therefore, personal health is dependent on several factors, many of which include poverty and culture in any society. In line with this, poverty can be viewed as a way of life characterized by low calorie intake, inaccessibility to adequate health facility, low quality educational system, low life expectancy, high maternal and infant mortality, low income, unemployment and underemployment, and

inaccessibility to various housing and societal facilities. The Millennium Development Goals Reports 2004 affirms that poverty hinders access to health facilities and there is lack of adequate provision of health care services in many parts of Nigeria including Sokoto state. Nigeria is divided in to six geopolitical zones- North Central (NC), North East (NE), North West (NW), South East (NE), South-South (SS) and South West (SW) (Adamu, 2011).

This paper examines the relationships of poverty and maternal health of a very important segment of the community- *our women* in Sokoto State of Nigeria. Poverty is the condition where individual lack the means to satisfy the basic needs necessary for survival (Oloriegbe, 2008). The most common attribute of poverty include, but are not limited to the following: low income resulting from unemployment and underemployment, poor state of health and living condition, low level of literacy, political apathy, among others (Onibokun, 1996). Incidentally, at the end of 2012, the National Bureau of Statistics has shown that Sokoto State remained the poorest state in Nigeria, with 81.2% poverty rate. While state with the lowest poverty rate was Niger, NC with 33.8% followed by Osun (37.9%) and Ondo (45.7%) all from the SW.

Similarly, health facilities assessment and provision of services in the state shows that there is a concentration in the state capital, local government capitals and district headquarters while there is scarcity of the facilities in rural local government areas and communities. This trend results in the yearly records of maternal and child deaths from these areas. Maternal mortality rate by residence (urban/rural) as reflected in the Sokoto State MDG reports shows that the rural LGA's areas and communities records over twice as high as the state capital (SSG, 2012). This stimulates the need for review of poverty prevalence and trends in Sokoto state in order to understand how it influences maternal health in the state.

Some years ago, poverty studies in different states of Nigeria have provided interesting insights into the poverty situation at the grassroots level in different states of the federation. Of the six states covered by the Human Development Reports 1998 study namely, Sokoto, Bauchi, Ondo, Cross-River, Enugu and Kaduna; the first two are among the poorest states in Nigeria, while Ondo, Cross River, Enugu and Kaduna are among the fairly well-to-do states (HDR, 1998). Presently, the national bureau of statistic's website, shows states with over 70% poverty rate include Katsina 74.5%, Adamawa 74.2%, Gombe 74.2% Jigawa 74.1%, Ebonyi 73.6%, Bauchi 73% Kebbi 72% and Zamfara 70.8%. Generally, the average poverty rate of the states in the North-West geopolitical zone remained the highest at 71.4%. Coincidentally, the NDHS, 2008 reports equally show that there is high maternal death in the same North-West region. Hence, this study looks at poverty as a target to improve maternal health service delivery so as to recommend ways of reducing the rate of maternal and child deaths in the study area.

Source of data

In this study, data were obtained from various sources that include government agencies such as Sokoto State ministry of budget and economic planning project coordinating unit, national poverty eradication programme, national bureau of statistics of the federal government of Nigeria and the United Nations development programme among others. Also literatures on related study have been reviewed from text books, journals and unpublished studies from educational institutions. It has been established that high rate of poverty, socio-economic and attitudinal factors, and inefficient poor quality of health facilities are obstacles to maternal health services delivery in the study area.

Poverty trends in Sokoto State

Poverty according to the Advanced Learners dictionary by Hornby et al. (1963) is the state of being poor. The poor can be defined as those individuals and families whose resources overtime falls seriously short of the resources commanded by the average individual or family in the community in which they live.

There are two levels of poverty, which are usually defined in either absolute or relative terms (NAPEP, 2001). Absolute poverty denotes a condition in which a person or group of persons are unable to satisfy their most basic and elementary requirements of human survival in terms of good nutrition, clothing, shelter, footwear, energy, transport, health, education and recreation. Relative poverty on the other hand, is defined as the minimum economic, social, political and cultural goods needed to maintain an acceptable way of life in a particular society (NAPEP, 2001).

Sokoto State is one of the 36 States that make up the Federal Republic of Nigeria. It was created from the former North Western region in 1976. The development of Sokoto is traceable to the Fulani Jihad of the early 19th Century. Presently Sokoto is one of the seven states that constitute the North West geopolitical zone of Nigeria and has an estimated population of over 4 million people in 2012. Despite this number population studies have shown that there is high rate of poverty and maternal deaths among in different local government areas of the state.

The proportion of people living in relative poverty in Sokoto State increased from 37.9% in 1992 to 83.9% in 1996 but declined to 76.81 % in 2004. The proportion of those living in absolute poverty was 70.54% during the same period (SSG, 2012). These figures are huge enough to suggest the need for the state government to take necessary steps to reduce poverty in Sokoto state. In fact, the prevalence of poverty in in Sokoto (76.81%) was higher than the national average of 54% in 2004 (SSG, 2012). This situation constrains utilizations of maternal health care services. Thereby, puts the state's maternal mortality ratio high at 900/100,000. Further studies on poverty have revealed that in Sokoto State, 13 out of 23 local government areas have more than half of their population living in poverty (Table 1).

Table 1. Sokoto State: Percentage of poor, non-poor and extreme poor household by L.G.A

S/No.	L.G.A	Poor	Non-poor	Extreme poor
1.	Binji*	59.1	41.9	41.9
2.	Bodinga*	57.1	42.1	26.3
3.	Dange Shuni	46.4	53.6	37.5
4.	Gada	50.0	50.0	17.5
5.	Goronyo*	90.0	10.0	65.0
6.	Gudu	75.0	25.0	57.5
7.	Gwadabawa	11.9	88.1	4.8
8.	Illela	20.0	80.0	10.0
9.	Isa	27.5	72.5	10.0
10.	Kebbe	40.0	60.0	20.0
11.	Kware*	51.0	42.9	33.0
12.	Rabah	55.0	45.0	47.5
13.	SabonBirni	40.0	60.0	17.5
14.	Shagari	30.0	70.0	15.0
15.	Silame	53.7	46.3	34.1
16.	Sokoto North	44.6	55.4	17.6
17.	Sokoto South	30.7	49.3	10.7
18.	Tambuwal	54.8	45.2	29.0
19.	Tangaza	97.5	2.5	92.5
20.	Tureta*	60.0	30.0	30.0
21.	Wamakko*	71.2	28.8	40.7
22.	Wurno	72.5	27.5	50.0
23.	Yabo	68.3	31.7	43.8
24.	State	51.7	48.3	31.8

Source: Shamaki, 2006
Note: Indicates (*) LGA Have greater % of poor

Sokoto state is one of the least urbanized states in the country and the overwhelming majority of its poor are rural people (HDR, 1998; Shamaki, 2006). Indeed, Sokoto city is the only urban centre in the state with high concentration of basic facilities. And as table 1 shows, 31.8 percent of the households are extremely poor–the poorest of the poor. From this, therefore it is possible to categorise poverty perception into two categories namely rural community perception and urban community perceptions.

Maternal health

The health of women during pregnancy, childbirth and postpartum periods is regarded to be maternal health while maternal mortality or maternal death is an important indicator of the well-being of women as well as the performance of any state's health system (Oloriegbe, 2008; Galadanci, et al, 2010; Okwaraji, et al., 2012). More than 500,000 women die every year in childbirth or from pregnancy-related causes. Virtually all (99%) of the maternal deaths occur in low-income countries (Parazzolo, 2010). The response to maternal mortality in some states of Nigeria is weak and differs from what occurs in some states. The regions of the northern and southern parts have distinctly different socioeconomic, cultural and religious practices and these accounts for differences in the utilisation of maternal and health care services (MHCS) across the country.

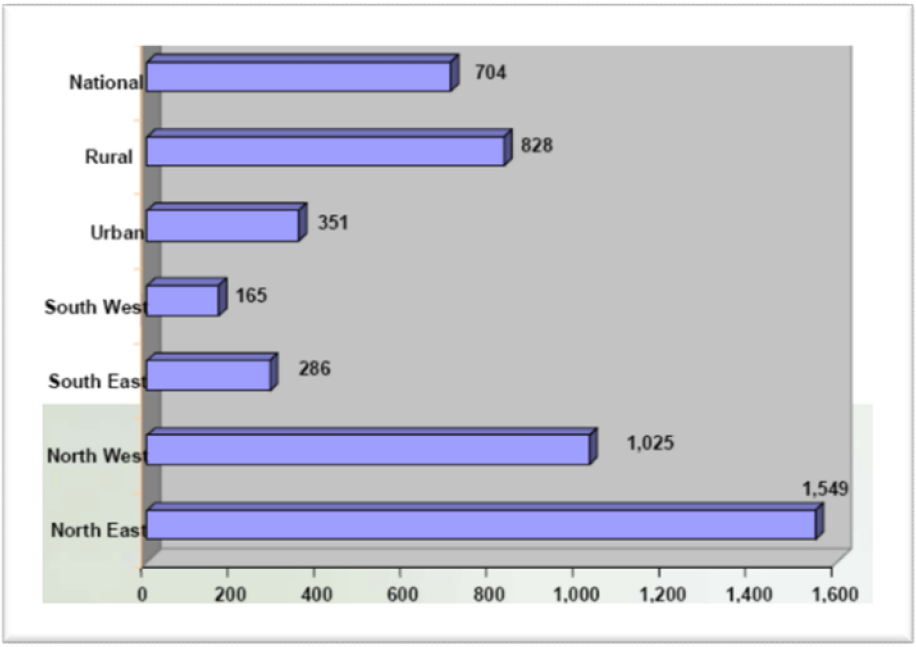
Earlier study by Shehu (1992) identified that the major causes of maternal death at the Usmanu Danfodiyo University Teaching Hospital (UDUTH) are eclampsia (13.04%), obstructed labour (13.04), anaemia (7.60), hemorrhage (9.78%), puerperal sepsis (5.43%), death due to CS (9.78%), retained placenta (5.47%), ruptured uterus 14.13%) and prolonged labour (3.26%). Age groups 13-19 accounted for 31% of the total deaths, which are all primigravidas. The remaining 69% are multi-parous.

Looking at the causes, it is clear that some of these obstetric complications have something to do with poverty. For instance high deaths due to Eclampsia are associated with lack of antenatal care attendance which is associated with poverty. Anaemia and sepsis are also related to poverty. This is confirmed by another earlier study in rural Kano which is within the same geo-political and cultural region with Sokoto State. For instance, Adamu (2003) explained that in rural Kano State, majority (44.8%) attribute their inability to go for antenatal services to financial constraints. The major occupation for the people in the study area is subsistence farming, although some of the people cultivate crops like cassava, groundnuts and vegetables for community purposes. The women are solely dependent and most are not involved in any income generation activity. The women as well as the male eat mainly carbohydrates foods from sorghum, maize and millet (although they also contain some percentage of proteins) as such many do not eat foods that are rich in protein like beans, fish, and beef because they could not afford it. Although some of them produce beans, it is produced to generate income not for consumption at home. The money realised from their sales are used for ceremonies and other day-to-day activities. Going to the hospital involves money (for travel and drugs) there is also the fear that new things might be diagnosed which will involve spending money (which they do not have). All these, make them to shy away from hospital unless it is necessary.

A more recent study by Adamu, (2011) indicates that the percentage of births attended to by a skilled professional range from a high of 81.8% in the SE to a low of 9.8% in Sokoto NW including Sokoto. Similarly, 90.1% of women in the Sokoto NW are more likely to give birth at home compared to 22.5% in the SW.

Recent researches reveal that maternal mortality is one of the greatest sources of disparity between low income and high income countries. Whenever a maternal death occurs in Sweden, it is regarded as a national tragedy for which an inquiry would be instituted (Oloriegbe, 2008). While in the developing countries such death is neglected hence the rates are on the increase. In fact, in Nigeria it is considerably higher in rural than urban areas and worse in the Northeast and the Northwest geopolitical zones than in the Southwest and Southeast zones (Figure 1). When looking at poverty as a cause of maternal death, Oloriegbe (2008) confirms that a woman's lack of access and control of resources in the household,

limited access to education, lack of decision making power and inaccessibility to regular transport facilities, especially in the rural areas where more than 80% of the women live all aggravate maternal mortality. Such a situation is the same in Sokoto state. Oloriegbe (2008) further described poverty as a cause of maternal mortality under six factors that include access, user fees, nutrition, family planning, cancer of reproductive organs and education and employment of women.



Source: Oloriegbe, 2008

Figure 1. *Comparison of maternal mortality ratios per 100 000 total births by Zones in Nigeria*

The relationship between poverty and health services delivery

Geography and health are intrinsically linked (Dummer, 2008). Where we are born, live, study and work directly influences our health experiences: the air we breathe, the food we eat, the viruses we are exposed to and the health services we can access. Concerns about social and spatial polarization (especially with socio-economic inequalities, inequities and poverty) have prompted research that explores the determinants and consequences of health variations, including issues related to poverty, health care access and public health (Dummer, 2008). The identification of persistent inequalities in health between rich and poor people and between rich and poor communities has provided evidence that can support policies to address the underlying causes of health problems.

It is obvious in Nigeria poverty manifests itself in a variety of ways including the fact that poor family are unlikely to afford treatment and medicines in good hospitals, especially when it involves referral cases requiring movement from one particular location to another (MDGR, 2004, Ebeniro, 2012). Poor pregnant women die more disproportionately than those who are more financially stable (Ebeniro, 2012). This problem is more pronounced in the rural areas, where there is less provision and access to good health care services and the population is predominantly poor. Poverty creates the conditions for inadequate, inaccessible and costly maternal health services in poor and underserved areas of Sokoto state. That is evident in the high rates of maternal deaths recorded in the rural local government areas and communities (SSG, 2012). The rating of poverty in Nigeria by the National Bureau of Statistics in the end

of 2012 has shown that the state was the highest. This surely affects the delivery of health services which also increases the rates of maternal and child mortality.

Health, like food, shelter and clothing, is a basic human need. Good health, therefore constitute an essential of socio-economic development since it is a major component of the quality of as well as a prerequisite for high levels of productivity (Onokerhoraye, 1994). The availability of different types of health care delivery systems in any region is a reflection of the socio-economic development of that region. Thus, concentration of health facilities in Sokoto metropolis reflects its relative growth and urbanization at the detriment of rural areas. Onokerhoraye, (1994) asserts that it is well known that there is a strong association between population and health services in any community.

The major causes of ill-health and deaths among infants and children in Africa are malnutrition, intestinal parasitism, measles and a variety of communicable diseases. Thus, government has to provide the funds needed for the provision of the health facilities that are necessary for the reduction of morbidity and mortality among women and children. In fact the vast majority of African countries are not able to meet the rising demand for health services in response to population growth and structure. As a result, most of them lag behind in terms of providing the basic minimum health requirement (Onokerhoraye, 1994).

Consequently, government has failed to respond to the education and health service's needs, of the poor. The social services in Nigeria are generally inadequate and of poor quality; these inadequacies are especially prevalent particularly in poor communities (i.e. urban and rural). The poor are concentrated in poor communities which are poorly served, with limited or no health clinics, schools or roads to reach them (HDR, 1998, Galadanci, et'al, 2010). This situation increases inaccessibility of health services delivery thereby causing maternal deaths. Hence, poverty is a contributory factor to maternal morbidity and mortality, and the latter in turn plays an important role in perpetuating poverty. Poor people are caught therefore in a vicious cycle: their poverty breeds ill health; and ill health in turn conspires to keep them poor. The linkage between poverty and maternal health cannot be overemphasized, as poor women in Sokoto are:

i. less likely to afford nutritious food that aid health development of the girl child and progression of pregnancy not likely to afford the cost of transportation to health facilities from ANC to postnatal stages;
ii. less likely to afford the out-of-pocket costs charged by health facilities during ANC, delivery and post natal check-ups;
iii. less likely to afford the cost of emergency treatment for complications that may arise during pregnancy or delivery.

Availability of health centers in the Sokoto Metropolis

The availability of different types of health care delivery system in any country is a reflection of the socioeconomic development of that country (Onokerhoraye, 1994). But this has contradicted the finding of the researcher as it does not translate to any socioeconomic development rather the poverty is increasingly spreading. Similarly, there is poverty of access to health services even though these basic facilities are located within the area of residence by some people. Such people depend only on traditional or herbal medicines because they cannot afford to go to the available modern health centres (Table 2). They cannot go to the health centres because they are absolutely poor. These types of people can be found in Minanata, Birni, Gwiwa village and Kwassai village of Danbuwa unit, all within Sokoto metropolis (Shamaki, 2006).

Although, the types and numbers of health centres located in different areas of Sokoto metropolis(see Table 2 and Figure 2) were categorized into five different morphological units, the analysis of accessibility and availability shows that, there are only two General Hospitals (Specialist and Maryam Abacha) and one Teaching Hospital (UDUTH) located in T/wada and GRA respectively (Shamaki, 2006).

Similarly, there are a total of 37 clinics distributed in different regions and 17 dispensaries located all over the areas (Table and Figure 2). However, it is observed that majority of the populace 36% attends clinics whenever they (or any member of the family) falls sick. 20% attend teaching hospital irrespective of the distance of their house from it, 18.6% attends general hospital (specialist hospital), 19.7% attend dispensary and 8.7% of the respondents do not attend any health centre when themselves any household member falls sick due to their inability to pay for the services.

Table 2. Type and number of health centres in Sokoto metropolis by location

Area/location	G/hospital	T/hospital	Clinic	Dispensary
T/wada	1(specialist)	-	10	4
GRA	-	1	6	5
Birni	1(M/Abacha)	(UDUTH)	10	3
Danbuwa	-	-	6	2
Gwiwa	-	-	5	3
Total	2	1	37	17

Source: Shamaki, 2006

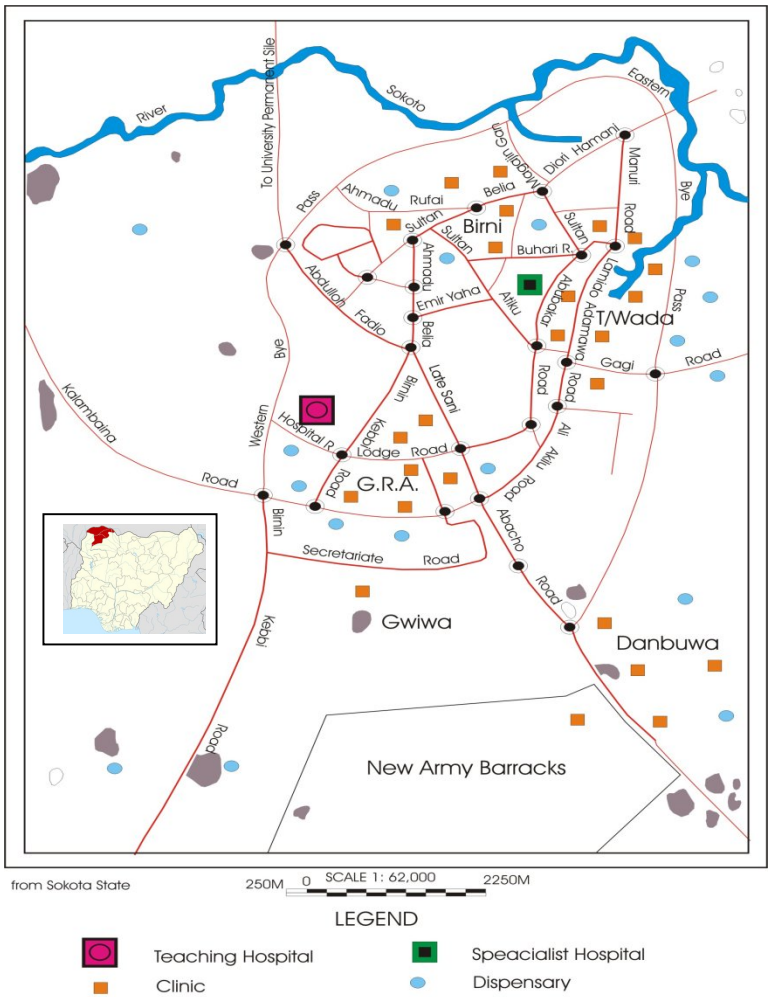


Figure 2. *Sokoto metropolis showing the distribution of health facilities*

Quality of major health centers in Sokoto

Table 3 presents the quality of the health centres in different areas of Sokoto metropolis. Overall, results shows that 30.1% of the health centres are neither good nor poor, 26.1% are good, 17.4% are poor, 15.8% are very good and 10.1% are very poor. This result does not only cover public own but include even the private health centres. It is obvious that most of the clinics which are private are in better condition both in the facilities and manpower, than those of the public in Sokoto state. In fact, the worse of all are the dispensaries which are mostly public own. Most of the public health centres are dilapidated and usually lacks adequate facilities and the services are inefficient which compels the patients to go to the private health centres where services are more efficient but charges are higher e.g. residents of Gwiwa-lowcost (less than or equal 200m distance to public hospital and dispensaries) go to the Sahel clinic in Bello way 5 km away more frequently.

Table 3. Assessing the quality of health centres by the respondents in different regions

Quality	T/wada	GRA	Birni	Danbuwa	Gwiwa	Total	%
Very poor	07	10	16	00	18	51	10.1
Poor	10	8	38	18	14	88	17.4
Neither poor nor good	23	41	20	50	20	154	30.1
Good	42	25	19	26	20	132	26.1
Very good	14	36	14	06	10	80	15.8

Source: Shamaki, 2006

Conclusion

This study establishes that high rate of poverty, socio-economic and attitudinal factors, inadequate spatial distribution of maternal health services and inefficient poor quality of health facilities are obstacles to maternal health services delivery in Sokoto State. And, given the 82.1% poverty rate (highest in the country) and maternal mortality rate of 900/100,000 women in the state, further confirms that the state is seriously confronting poverty problem. Maternal death is more pronounced in rural areas of the state where there is less access to good health care services and the population is predominantly poor. Similarly, woman's lack of access and control of resources in the household, limited access to education, lack of decision making power and inaccessibility to regular transport facilities, especially in the rural areas where more than 80% of the women live all aggravate maternal mortality in the state. Hence, Poverty creates the conditions for inadequate, inaccessible and costly maternal health services in poor and underserved areas of Sokoto state.

In order to achieve the MDG goal 4 and goal 5, there must be improvement in health development and environmental sustainability. To achieve adequate health standards and abolish poverty in Sokoto state , the Government needs to have equity in the spatial distribution of maternal health facilities in both urban and rural areas of Sokoto State. To reduce maternal mortality the level of poverty has to be reduced. Hence, government should introduce women empowerment programme aimed to change the status of women (poverty among women) and enhance their access to maternal health facilities in all areas of the state. Government, international agencies and NGO's should embark on serious education and mobilisation campaign to educate people on issues related to maternal and child care programme and the current mortality rate in the state. Since cultural and attitudinal factors are important in addressing maternal health, husbands in the state should be encouraged to allow their wives attend to maternal health care services by subsidising cost, employing more female health workers and provision of access road to the health facilities among others.

Finally, since most of the health facilities are concentrated in the metropolis and 10% of them are in very poor quality, government should immediately renovate and furnish all the existing facilities to enable provision of adequate and sound maternity services

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