MATERNAL HEALTH CARE IN FIVE SUB-SAHARAN AFRICAN COUNTRIES

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ABSTRACT

This paper examines inequalities in access to maternal health care services and identifies demographic and socio-economic factors associated with poor maternal health outcomes using data from five Demographic and Health Surveys conducted in Ghana (2003), Kenya (2003), Nigeria (2003), Uganda (2000-2001) and Zambia (2001-2002). The six maternal health care indicators show that rural women are more disadvantaged than urban women. Home deliveries comprise more than half of total births. In general, Nigerian women experience poorer maternal health outcomes than women in the other four countries. Level of education, type of place of residence and partner's occupation emerge as the most important predictors of inadequate antenatal care, institutional delivery and current use of any contraceptive method. Female education, at least, beyond secondary level holds the key to human and sustainable socio-economic development. Equitable distribution of infrastructure, social amenities and health facilities will enhance maternal health and care particularly of rural women.

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1. Introduction

Poor maternal health remains a major reproductive health concern in most parts of the less developed world, including sub-Saharan Africa. Compared with achievements in the reduction of fertility and infant mortality in the last few decades, relatively less progress has been made in the area of maternal health (Magadi et al., 2003). Insufficient maternal health care is largely responsible for the appalling annual toll of maternal deaths that are preventable. Maternal mortality ratios are still unacceptably high in developing countries, particularly in sub-Saharan Africa. It has been estimated that in sub-Saharan Africa, the lifetime risk of maternal death is 1 in 16, while for developed countries it is only 1 in 2,800. This excessive mortality is a sheer waste of human lives. The tragedy of the situation is that there are simple and relatively inexpensive strategies such as giving pregnant women tetanus toxoid injections during pregnancy as well as antenatal and postnatal care, which can be put in place to combat excessively high maternal mortality. Reducing maternal mortality means helping mothers to live to participate effectively in the development process. Because women comprise more than half of the total population of most sub-Saharan African countries poor maternal health and care constrain human and sustainable socio- economic development.

The Millennium Summit in 2000 like previous several international conferences also identified maternal health as an urgent priority. The fifth Millennium Development Goal (MDG) is to improve maternal health and this is to be achieved by reducing maternal mortality ratio by three-quarters between 1990 and 2015. An assessment of inequalities in access to maternal health care in Ghana, Kenya, Nigeria, Uganda and Zambia will give an indication of the progress made towards attainment of goal 5.

Previous studies have shown a fairly consistent relationship between some of the demographic and socio-economic factors such as maternal age, parity, maternal educational attainment, place of residence, ethnicity and institutional delivery as well as early antenatal care use (Tawiah, 1998; Magadi et al., 2000; Overbosch et al., 2002; Magadi et al., 2003; Magadi et al., 2004; Ram and Singh, 2006).

The aim of the paper is two-fold (i) to examine variations in inequalities in access to maternal health care in Ghana, Kenya, Nigeria, Uganda and Zambia and (ii) to identify demographic and socio-economic factors associated with poor maternal health outcomes in each country.

2. Data and Methods

The data for this paper are derived from five Demographic and Health Surveys (DHSs) conducted in Ghana (2003), Kenya (2003), Nigeria (2003), Uganda (2000-2001) and Zambia (2001-2002) whose sampling designs are described elsewhere (Ghana Statistical Service, Noguchi Memorial Institute for Medical Research and ORC Macro, 2004; National Population Commission and ORC Macro, 2004; Central

Bureau of Statistics [Kenya], Ministry of Health [Kenya] and ORC Macro, 2004; Uganda Bureau of Statistics and ORC Macro, 2001 and Central Statistical Office [Zambia] and ORC Macro, 2003). These surveys collected detailed information on fertility, family planning, infant and child mortality, maternal and child health and nutrition and HIV/AIDS related knowledge, attitudes and behaviour. In addition, they collected information on the person who has final say on respondent's own health care as well as respondent's perception of problems in accessing health care for themselves when they are sick.

In order to collect information on antenatal care, tetanus toxoid injections, place of delivery, assistance at delivery and postnatal care, eligible women were asked a number of questions about the survival status of each birth in the past five years before the survey namely; (i) last birth and (ii) next-to-last birth. A total of 3,639 births had occurred to 2,645 women in Ghana, 6,219 births to 3,911 women in Nigeria, 6,102 births to 4,052 women in Kenya, 7,672 births to 4,489 women in Uganda and 6,649 births to 4,402 women in Zambia in the five years preceding the survey.

One or two points about data limitation can be mentioned. A useful distinction has been made between factors related to the supply of services ("service factors") and those related to utilization ("user factors") (Leslie and Gupta, 1989). The analysis is handicapped by lack of data on service availability and interpretation of results should be done with extreme caution. The crucial influence of service availability on utilization can hardly be overstressed. The second limitation is that some of the observed covariates relating to the characteristics of the woman refer to the time of the survey and not the time when a particular birth took place. The relationships should not therefore be considered causal but rather mere associations.

The six maternal health care indicators employed to describe women's access to maternal health care services are receipt of tetanus toxoid injection during pregnancy, type of antenatal care, type of assistance at delivery, place of delivery, type of postnatal care and contraceptive use.

Bivariate analysis was used to describe inequalities in access to maternal health care services in the five countries. Three forward stepwise logistic regression models were run for each country to identify demographic and socio-economic factors associated with (i) inadequate antenatal care, (ii) institutional delivery and (iii) current use of any contraceptive method. The results of the logistic regression analysis are given as regression coefficients, odds ratio (if greater than unity, the probability of institutional delivery is higher than that of non-institutional delivery), and p values, to assess the relative statistical significance of the selected variables.

3. Results

Maternal health outcome

Care during pregnancy is essential for diagnosing and treating complications that could threaten the lives of mother and child. Although most life threatening obstetric complications cannot be prevented through antenatal care (ANC), care

during pregnancy is an important opportunity to deliver interventions that will improve maternal health and survival during the period immediately preceding and after birth. If the antenatal period is used to inform women and families about danger signs and symptoms and about the risks of labour and delivery, it may provide the route for ensuring that pregnant women deliver with the assistance of a skilled health care provider. ANC is a potentially important way to connect a woman with the health system, which, if functioning, will be critical for saving her life in the event of a complication.

Table 1 shows percentage distribution of women who have a live birth in the five years preceding the survey by antenatal care provider during pregnancy for the most recent birth, number of antenatal care visits, timing of first antenatal check and tetanus toxoid injection. As expected, in all the five countries rural women are less likely to receive antenatal care than urban women. The rural-urban disparity in access to antenatal care is more pronounced in Ghana than in the other countries. In Ghana, rural women are 7.7 times less likely to make ANC visit than urban women compared to Kenya where it is two times. Although the percentage of women who do not receive antenatal care is highest in Nigeria (36.9 percent) it is interesting to note that Nigeria also has the largest percentage of doctors providing ANC (21.3 percent). Zambia has the least percentage of medical doctors providing ANC (2.3 percent). In all countries, nurses/midwives/auxiliary midwives are the largest group of antenatal care providers followed by medical doctors.

The importance of ANC in preventing adverse pregnancy outcomes when it is sought early in the pregnancy and continued through to delivery can hardly be overemphasized. Respondents were asked whether they saw anyone for ANC for their most recent birth. The World Health Organisation (WHO) recommends a minimum of four visits per pregnancy to ensure proper care. Uganda is worse off than any other country. The percentages of women who have at least the minimum of four visits are 41.9 in Uganda, 47.4 in Nigeria, 66.7 in Kenya, 69.4 in Ghana and 71.6 in Zambia as depicted in Figure 1.

The proportions of urban and rural women who receive ANC for the most recent birth during the first trimester differ substantially. Early use of ANC is considerably higher among urban than rural women. It is seen in Table 1 that few women receive ANC in the first trimester, particularly in Kenya, Zambia, Uganda and Nigeria (see for example, Magadi et al., 2003). Among women who receive ANC, 11.1 percent make their first ANC visit during the first three months of pregnancy in Kenya, 14.3 percent in Zambia, 14.4 percent in Uganda, 16.7 percent in Nigeria and 46.4 percent in Ghana. Table 1 shows that except in Nigeria (43.4 percent), Kenya (47.8 percent) and Uganda (49.3 percent), more than three out of four women in Ghana (81.1 percent) and two out of three women in Zambia (66.7 percent) receive ANC during the first five months of pregnancy. The findings seem to suggest that safe motherhood initiatives should focus more on rural women by encouraging them to seek ANC early in the pregnancy to forestall any adverse outcomes.

Tetanus toxoid immunization is given pregnant women to protect the new born against neonatal tetanus, a major cause of death among infants. Tetanus toxoid coverage is lowest in Nigeria (50.7 percent) and highest in Kenya (85.4 percent). It is recommended that for full antenatal protection, a pregnant woman should receive two

doses of tetanus toxoid. It is seen that half of the women in Ghana and Kenya have received two or more injections, while in Nigeria it is four out of 10 women. Zambia has the smallest proportion (26.7 percent) of women who have received two or more injections.

Table 1 about here
Figure 1 about here

Some of the factors associated with delivery outcome include place where a mother delivers a baby and the hygienic practices associated with such delivery as well as type of assistance received during delivery. One important way to reduce the health risks of mothers and children is to increase the proportion of babies delivered under medical supervision. Table 2 and Figure 2 show the percentage distribution of live births in the five years preceding the survey by place of delivery, the person who provided assistance during delivery, type of place of residence and country. With regard to place of delivery, it is seen that more than one out of two births take place at home. Magadi et al., (2000) found that more than half of deliveries in Kenya in 1993 took place at home. The proportion of births delivered at home varies from 53.4 percent in Ghana to 66.4 percent in Nigeria. Once again, rural births are more disadvantaged. Except in Nigeria, rural births are more than twice likely to be delivered at home, than urban births. The percentages of rural births delivered at home are 65.5 in Kenya, 67 in Uganda, 69.7 in Ghana, 71.3 in Zambia and 75.1 in Nigeria. Having more than half of births delivered at home has implications for reducing the risk of complications and infections that cause the death or serious illness of the mother and baby.

The level of assistance received by a woman during delivery can reduce maternal and child deaths and related complications. The proportion of deliveries with a skilled attendant reflects coverage of care for women at the time of delivery. Table 2 shows that the proportions of births assisted by doctors, nurses or midwives are 35.2 percent in Nigeria, 39 percent in Uganda, 41.6 percent in Kenya, 43.4 percent in Zambia and 47.1 percent in Ghana. This is an indication that the level of medically assisted deliveries is low in the five countries. Except in Ghana, relatives who may not be as skilled as medically trained providers assist more than one out of five births. It is interesting to note also that no one compared to 2.2 percent in Ghana assists 16.9 per cent of births in Nigeria. The corresponding percentages are 6.7 in Zambia, 8 percent in Kenya and 14.7 in Uganda.

Table 2 about here
Figure 2 about here

Postnatal care

Postnatal care is one of the important safe motherhood initiatives aimed at reducing maternal deaths and improving the health status of the mother and child. It does not only provide an opportunity for the mother and the child to treat complications arising from delivery but also provide the mother with important information on how to care for herself and her child (National Population Commission, 2004). Timing of first postnatal checkup is crucial for effective management of post-delivery complications. The percentage distribution of women

who have a non-institutional live birth in the five years preceding the survey by timing of postnatal care for the most recent non-institutional birth by type of place of residence and country is shown in Table 3. The percentages of women who give birth outside a health facility and receive postnatal care are 46.4 in Ghana, 28.2 in Nigeria, 22.8 in Zambia, 19 in Kenya and 7.6 in Uganda. The expected pattern of greater proportion of urban women receiving postnatal care is shown for the five countries. Rural women are less likely to receive postnatal check up than urban women.

Coverage of postnatal care is much lower than that of prenatal care in the five countries. In Uganda, 5.8 percent of women who give birth outside a health institution receive postnatal care within two days of delivery compared to one in four women in Ghana. It is seen in Table 3 that a smaller proportion of women receive postnatal care after two days of delivery. It may well be that women think that the first two days after delivery are the most crucial period after which the risk of illness or death is more or less negligible. This is more pronounced in Nigeria where 5 percent of women receive postnatal care between three and 41 days after delivery.

Table 3 about here

Contraceptive use

The ability to plan the number, spacing and timing of births has been defined as a fundamental right of couples in the agreements reached at several key international meetings including the 1990 World Summit for Children, the 1994 International Conference on Population and Development (ICPD) and the 1995 Fourth World Conference on Women. Access to a range of contraceptive methods and information, and high quality family planning services are crucial for ensuring that women and men can plan their births.

Excessive childbearing in sub-Saharan Africa tends to predispose women to higher risk of maternal death. One of the strategies to curb unacceptably high levels of maternal deaths is to make family planning accessible and affordable particularly to rural women. Table 4 provides information on current contraceptive use by method type by women who have births in the five years preceding the survey. The five countries are characterised by the phenomenon of low contraceptive prevalence and there is a substantial variation in current use of contraception among the countries. Contraceptive use level is higher in East than West Africa. It varies from 14.2 percent in Nigeria to 34.9 percent in Zambia. Nigeria has the lowest percentage of women using modern methods of contraception (see Figure 3). Once again, rural women are more disadvantaged. In Ghana and Kenya, rural women are almost twice less likely to use modern contraception. It is noted that use of inefficient methods (folkloric methods) is very low (less than 1 percent) in Ghana, Nigeria, Kenya and Uganda, while the percentage is relatively high in Zambia (3.4 percent).

Table 4 about here
Figure 3 about here

Final say on health care

Women's empowerment which was highlighted by the 1994 ICPD is one of the building blocks for the attainment of the Millennium Development Goals (MDGs) particularly Goal 5 which aims at improving maternal health. The extent to which women have final say on their health care can be used as a rough indicator of their empowerment. The person who has the final say on a mother's health care has a role to play in the strategy to help women off the road to death. Respondents were asked to indicate who in their households usually has the final say on their own health care. Table 5 shows that less than half of respondents have final say on their own health care. Nigerian women are worse off than women in the other four countries. The percentages of women who have final say on their own health care are 12.8 in Nigeria, 33.1 in Zambia, 36.7 in Ghana, 38.8 in Kenya and 45.3 in Uganda. It is worthy of note that in Nigeria, for almost three out of four women, the husband/partner alone has final say on the woman's health care. In both Kenya and Zambia, it is four out of 10 women.

Whether the person who has final say is the respondent alone or husband/partner alone, rural women are more disadvantaged than urban women. The proportion of cases where a joint decision is made is less than 20 percent. It is relatively low in Nigeria (8.3 percent), Zambia (9.2 percent), 13.1 percent in Kenya, 16.2 percent in Uganda and 19.4 percent in Ghana (see Figure 4).

Table 5 about here
Figure 4 about here

An analysis was done to examine the relationship between the person who has final say on respondent's health care and the respondent's educational attainment as well as religious affiliation. To a large extent a woman's educational attainment is positively related to final say on her health care. In all the countries except Nigeria, more than 50 percent of women with higher education have final say on their own health care. In Nigeria, among women with higher education, the percentage is 23.4 compared with 51.9 percent for women whose husband/partner has final say on respondent's health care (figures not shown). Among uneducated women, a larger proportion has husband/partner taking the decision except in Uganda where the reverse is the case. In Nigeria, husband/partner takes decision on health care for 84.9 percent of uneducated women.

With regard to religious affiliation, the analysis shows that a larger proportion of Muslim women have husband/partner deciding on their health care in Nigeria, Kenya and Zambia. The Muslim influence is more pronounced in Nigeria than in the other two countries. Among Muslim women in Nigeria, 85.1 percent have their husband/partner making the decision on health care compared to 7.9 percent of the respondents themselves (figures not shown). In Uganda, the percentages among Muslim women are 52.8 and 34.3 for respondent alone and husband/partner respectively. Obviously, the situation in Nigeria has serious implications for maternal health care.

Problems in accessing health care

Information on women's perceptions of problems in accessing health care is important for programme design and health planning. Many different factors prevent women from getting medical advice or treatment for themselves. Except in Kenya, all women were asked whether they had problems with knowing where to go, getting permission to go, getting money for treatment, distance to a health facility, availability of transport, not wanting to go alone, lacking a female health provider and negative attitude of health provider. Table 6 presents information on women's perceptions of problems in accessing health care for themselves. Clearly, women have problems in accessing health care services. Nigeria has the least percentage of women citing any of the specified problems, 46.6 percent compared with 68.2 percent in Ghana, 77.3 percent in Zambia and 85.2 percent in Uganda.

With regard to the type of problem encountered in accessing health care, "getting money for treatment" stands out as the most prominent problem followed by "distance to a health facility" and "having to take transport". The distance effect on health care utilization has been reported elsewhere (Muller et al., 1998; Magadi et al., 2000; Overbosch et al., 2002). The percentages of women who report that getting money for treatment is a big problem range from 30.4 in Nigeria to 66.4 in Zambia. As expected, a greater proportion of rural than urban women have difficulty in getting money for treatment for them. The disparity is more pronounced in Nigeria where twice as many rural women have difficulty in getting money for treatment. This finding seems to suggest that poverty reduction particularly among rural women holds the key to positive health seeking behaviour. It is noted that negative attitude of health care provider is the fourth most important problem affecting women's access to health care in Uganda.

Table 6 about here

Predictors of inadequate antenatal care

One logistic regression model was run for each country using the forward stepwise method with five independent variables namely; type of place of residence, birth order, age at birth, highest educational level and partner's occupation and inadequate antenatal care as the dependent variable. Inadequate antenatal care is defined as less than four antenatal visits during pregnancy with the first visit taking place late, during the last trimester (Magadi, 2000). As shown in Table 7, all the five independent variables attain statistical significance in Kenya, while birth order and age at birth are significant in Nigeria and Uganda respectively. In both Ghana and Zambia, birth order and age at birth are not significant. Type of place of residence, highest educational level and partner's occupation stand out as significant predictors of inadequate antenatal care in all the five countries. Urban and rural women in Ghana experience the largest disparity in inadequate antenatal care. Rural women in Ghana are three times more likely to have inadequate antenatal care than their urban counterparts. In Zambia, the corresponding value is 1.2 times.

With regard to inadequate antenatal care, Table 7 also shows that uneducated women are worse off particularly in Nigeria and Kenya. Uneducated women in Nigeria are five times more likely to have inadequate antenatal care (OR = 5.4) than

women with higher education. In Uganda, it is women with primary school education who are most disadvantaged. Partner's occupation, which may be a proxy for household resources to finance health care, is an important predictor of inadequate antenatal care in all the five countries. It is more dominant in Ghana where mothers whose partners are in unskilled manual occupations are three times more likely to have inadequate antenatal care than their counterparts whose partners are in professional, technical, managerial and clerical occupations. In Nigeria, women whose partners are in agriculture are two times more likely to have inadequate antenatal care, compared with mothers whose partners are in professional, technical, managerial and clerical occupations.

Table 7 about here

Predictors of institutional delivery

Table 8 presents predictors of institutional delivery by country. For each country six independent variables, namely, age of mother at birth, birth order, type of place of residence, level of education, religion and partner's occupation were run in each model. It is only in Nigeria where all the six independent variables attained statistical significance. In Kenya, five of the six independent variables are significant compared to four in Ghana, Uganda and Zambia. The probability of institutional delivery increases with increasing maternal education. This finding confirms that of Magadi et al., 2003, which examined delivery care in urban sub-Saharan Africa in the 1990s. Except in Ghana, the disparities in institutional delivery among educational groups are more pronounced in Kenya, Nigeria, Uganda and Zambia. In Kenya, women with higher education are 10 times more likely to deliver in a health facility than their uneducated counterparts. As expected, type of place of residence is a predictor of institutional delivery. Urban women are more likely to deliver in a health facility than rural women. Mothers in urban areas in Ghana are five times more likely to deliver in health facility like government hospital, government health centre, private hospital/clinic and maternity home, (OR = 5.13) than mothers in rural areas. The disparity is least in Nigeria (OR = 2.22).

Religious affiliation is a significant predictor of institutional delivery in Ghana, Kenya and Nigeria where Christian mothers are three times more likely to deliver in an institution (OR = 3.24) than Muslim women after controlling for age at birth, birth order, type of place of residence, level of education and partner's occupation. In all the five countries, partner's occupation emerges as a significant predictor of institutional delivery. Women whose partners are in agricultural occupational are more disadvantaged, while women whose partners are in professional, technical, managerial and clerical occupations are better off.

Table 8 about here

Predictors of current use of any contraceptive method

The predictors of current use of any contraceptive method are shown in Table 9. Level of education is a significant predictor of current use of any contraception in all the countries. Largest disparities in current use of any contraception are

experienced in Nigeria and Kenya where women with higher education are almost nine times more likely to use any contraceptive method (OR = 8.7) than their uneducated counterparts.   Discussion of family planning with partner is also a significant predictor of current use of any contraceptive method in Ghana and Nigeria, whereas it is husband's approval of family planning in Kenya and Uganda.   In Nigeria, women who discuss family planning with their partners more often are almost four times more likely to use any contraceptive method (OR = 3.8) than women who never discuss family planning with their partners.   As expected, husband's approval of family planning is a significant predictor of current use of any contraceptive method in Kenya and Uganda as shown in Table 9.   The odds ratio for women whose husband approve family planning is 3.3 compared with corresponding values of 2.0 and 2.0 for Ugandan and Zambian women respectively.

Except in Nigeria, type of place of residence is also a significant predictor of current use of any contraceptive method.   This finding is more of a reflection of availability of health facilities and contraception in urban areas and not urban residence per se.   The relatively low contraceptive use in Nigeria (14.2 per cent) may partly explain why type of place of residence is an insignificant predictor.   It is seen that larger disparities are characteristic of Uganda and Zambia.   The odds ratios for urban women in Uganda and Zambia are 2.3 and 1.8.

Table 9 about here

4.   Summary and Discussion

This paper has examined maternal health care measures in Ghana, Nigeria, Kenya, Uganda and Zambia.   There are wide variations in inequalities according to the six maternal health care measures among the countries.   In general, rural women are much worse off than urban women with regard to the six maternal health care indicators.   For example, in Nigeria, the proportion of rural births that does not receive any antenatal care is 46 per cent compared to 15 per cent for urban births. Home deliveries are more in rural than urban areas.   They account for 65.5 per cent of rural births in Kenya, 67 per cent of rural births in Uganda, 69.7 per cent of rural births in Ghana, 71.3 per cent of rural births in Zambia and 75.1 per cent of births in Nigeria.   Delivering more than half of total births at home has serious implications for reducing the risk of pregnancy complications and infections that cause the death or serious ill health of the mother and baby.

The rural-urban differences in the maternal health care indicators are due in part to physical inaccessibility of health services in many rural areas of these countries.   The urban bias in the allocation of and concentration of public and private health care resources should give way to equitable distribution of infrastructure and other social services such as education, health, housing and potable water.

The interesting finding that less than half of women have final say on their own health care is a serious indictment and shows that these countries have not made much headway in respect of women's empowerment since 1994 ICPD and the 1995 World Conference on Women.   The analysis strongly suggests that maternal educational attainment and religion make a world of difference as to who has final say on the respondent's own health care.   In all countries except Nigeria, more than half

of women with higher education have final say on their own health care. With regard to religious affiliation, the analysis shows that a larger proportion of Muslim women have husband/partner deciding on respondent's own health care in Nigeria, Kenya and Zambia. The Muslim religion as a way of life seems to be more pervasive in Nigeria than in Kenya and Zambia. Among Muslim women in Nigeria, 85.1 per cent have their husband/partner making the decision on respondent's own health care compared to 7.9 per cent of respondents who decide for themselves.

"Getting money for treatment" stands out as the most important problem women have in accessing health care. The other two related problems are "distance to health facility" and "having to take transport". This finding corroborates that of Magadi et al., (2003) which suggests that poverty is possibly a hindrance to receiving adequate maternal health care. Poverty reduction strategies are likely to play a critical role in improving maternal health care particularly among rural women who are more disadvantaged.

Maternal educational attainment, type of place of residence and partner's occupation stand out in all the models as the critical variables to be manipulated in any attempt to improve maternal health care. Lower maternal educational attainment is consistently associated with poorer maternal health outcomes. In Kenya, women with higher education are 10.6 times more likely to deliver in a health facility than their uneducated counterparts, while in Nigeria uneducated women are 5.4 times more likely to have inadequate antenatal care than women with higher education. Partner's occupation, which can be used as a proxy for household income and socio-economic status, is associated with antenatal care and institutional delivery. For example, in Ghana women in unskilled manual occupations are three times more likely to have inadequate ANC than their professional, technical, managerial and clerical counterparts.

The fact that more than half of total births take place at home coupled with low modern contraceptive use seem to suggest that not much progress has been made in respect of the attainment of MDG 5 by 2015 which is only eight years from now. The maternal health care indicators suggest that Ghana and Kenya are the pacesetters, while Nigeria trails behind.

Two policy measures that emerge from the analysis are that conscious efforts should be made by governments in these countries to promote female education up to at least secondary level coupled with general improvement of the standard of living of majority of the people.

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Table 1. Percentage distribution of maternal health outcomes (antenatal care) by type of place of residence and country

Maternal health indicator	Ghana			Nigeria			Kenya			Uganda			Zambia		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Antenatal care provider															
Doctor	20.9	33.7	13.7	21.3	38.5	14.2	17.9	22.5	16.7	9.4	25.5	7.1	2.3	4.6	1.1
Clinical Officer										7.0			7.0	1.4	10.0
Nurse/Midwife/ auxiliary midwife	71.0	64.2	74.9	36.7	44.2	33.6	70.2	70.7	70.1	83.0	71.3	84.7	84.0	91.6	80.0
Community health extension worker			2.1	0.3	2.8										
TBA/other	1.2	0.4	1.6	2.8	1.6	3.3	1.8	1.0	2.0	1.3	0.1	0.5	2.3	0.1	3.4
No one	6.3	1.2	9.2	36.9	15.0	46.0	9.6	5.4	10.6	6.1	2.9	6.6	4.1	1.9	5.2
Missing	0.6	0.6	0.6	0.1	0.2	0.1	0.6	0.3	0.6	0.2	0.1	0.2	0.3	0.4	0.2
Number of antenatal care visits															
None	6.3	1.2	9.2	36.9	15.0	46.0	9.6	5.4	10.6	6.1	2.9	6.5	4.1	1.9	5.2
1	4.0	0.9	5.7	2.6	2.8	2.5	4.2	2.5	4.7	7.7	2.7	8.4	2.0	1.2	2.4
2 – 3	16.7	8.3	21.3	11.0	8.4	12.1	31.3	22.1	33.7	42.3	24.7	44.8	19.8	14.6	22.5
4+	69.4	84.3	61.0	47.4	71.1	37.6	52.3	66.7	48.6	41.9	66.3	38.2	71.6	79.6	67.5
Don't know/missing	3.7	5.3	2.8	2.1	2.7	1.8	2.6	3.3	2.5	2.1	3.4	2.1	2.5	2.7	2.3
Timing of first antenatal check															
<4	46.4	56.0	41.0	16.7	23.4	13.9	11.1	15.8	9.9	14.4	21.4	13.5	14.3	16.3	13.2
4 – 5	34.7	34.4	34.9	26.7	38.1	22.0	36.7	38.4	36.3	34.9	34.5	35.0	52.4	52.6	52.3
6 – 7	10.7	7.7	12.4	16.6	20.4	15.0	37.1	36.2	37.3	37.6	36.4	37.8	26.7	26.6	26.8
8+	1.2	0.5	0.8	2.1	2.3	2.1	4.9	3.3	5.3	6.7	4.4	7.0	1.9	1.9	1.9
None	6.3	1.2	9.2	36.9	15.0	46.0	9.6	5.4	10.6	6.1	2.9	6.5	4.1	1.9	5.2
Don't know/missing	0.7	0.5	0.8	1.0	0.8	1.0	0.7	0.9	0.6	0.3	0.4	0.2	0.6	0.6	0.5
Tetanus toxoid injection															
None	14.3	5.6	19.1	47.3	24.7	56.6	13.7	8.4	15.1	29.9	18.4	31.6	24.2	20.6	26.0
One injection	33.1	33.8	32.6	10.5	12.7	9.6	33.5	32.6	33.7	27.8	25.6	28.1	48.1	45.5	44.8
Two or more injections	50.4	56.8	46.8	40.2	60.7	31.8	51.9	57.2	50.6	41.7	55.6	39.8	26.7	23.8	28.1
Don't know/missing	2.3	3.7	1.4	2.0	2.0	2.0	0.8	1.8	0.6	0.5	0.4	0.6	1.1	1.1	1.1

Sources: Ghana Statistical Service et al., 2004; National Population Commission and ORC Macro, 2004; Central Bureau of Statistics et al., 2004; Uganda Bureau of Statistics and ORC Macro, 2001; Central Statistical Office and ORC Macro 2003.

Table 2.   Percentage distribution of maternal health outcomes (delivery care) by type of place of residence and country

Maternal health indicator	Ghana			Nigeria			Kenya			Uganda			Zambia		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Place of delivery															
Public sector	36.3	61.0	24.0	18.2	28.5	4.0	26.1	44.9	21.8	36.6	79.2	31.5	34.5	67.2	20.0
Private sector	9.4	17.6	5.3	14.4	25.6	9.8	14.0	25.3	11.4				9.1	11.8	7.9
Home	53.4	20.4	69.7	66.4	44.8	75.1	58.7	29.2	65.5	61.9	19.6	67.0	55.7	20.6	71.3
Other	0.4	0.4	0.3	0.4	0.5	0.3	0.8	0.4	0.9	0.9	0.8	0.9	0.4	0.0	0.5
Missing	0.6	0.6	0.6	0.7	0.5	0.7	0.3	0.2	0.3	0.6	0.4	0.7	0.3	0.3	0.3
Assistance at delivery															
Doctor	6.6	14.6	2.6	6.6	14.1	3.5	11.4	24.0	8.5	3.8	14.3	2.5	3.2	7.2	1.5
Clinical officer													1.3	0.6	1.7
Nurse/midwife/ auxiliary midwife	40.5	65.1	28.3	28.6	44.4	22.2	30.2	48.0	26.0	35.2	66.2	31.5	38.9	71.2	24.4
Community health extension worker				**1.1**	**0.3**	**1.4**									
TBA	31.0	12.1	40.3	20.4	11.6	23.9	28.0	12.5	31.6	17.7	4.3	19.3	11.5	3.4	15.1
Relative/other	19.1	6.2	25.5	25.6	17.9	28.7	22.1	11.1	24.6	28.3	10.6	30.4	38.2	14.4	48.8
No one	2.2	1.5	2.5	16.9	10.6	19.4	8.0	4.2	8.9	14.7	4.4	15.9	6.7	3.0	8.3
Don't know/missing	0.7	0.6	0.7	0.9	1.0	0.8	0.3	0.1	0.4	0.2	0.4	0.2	0.2	0.2	0.2

Sources: Ghana Statistical Service et al., 2004; National Population Commission and ORC Macro, 2004; Central Bureau of Statistics et al., 2004; Uganda Bureau of Statistics and ORC Macro, 2001; Central Statistical Office and ORC Macro 2003.

Table 3. Percentage distribution of women who had a non-institutional live birth in the five years preceding the survey by timing of postnatal care for the most recent non-institutional birth by type of place of residence and country

Characteristic	Ghana			Nigeria			Kenya			Uganda			Zambia		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Timing of first postnatal check up															
Within 2 days of delivery	25.1	26.3	24.9	23.2	31.3	21.3	10.0	9.3	10.1	5.8	12.7	5.5	11.9	23.0	10.3
3 – 41 days after birth	21.3	33.4	19.2	5.0	7.9	4.2	9.0	11.8	8.7	1.8	4.6	1.7	10.9	24.5	8.8
Don't know/missing	0.4	0.9	0.4	0.6	0.4	0.6	0.2	0.0	0.2				0.1	0.3	0.1
Did not receive postnatal check up	53.2	39.4	55.5	71.3	60.4	73.9	80.8	78.9	81.0	92.4	82.7	92.8	77.2	52.5	81.0
Number of women	1,384	200	1,184	2,566	498	2,068	2,311	225	2,086	2,776	110	2,666	2,370	313	2,057

Sources: Ghana Statistical Service et al., 2004; National Population Commission and ORC Macro, 2004 ; Central Bureau of Statistics et al., 2004; Uganda Bureau of Statistics and ORC Macro, 2001; Central Statistical Office and ORC Macro 2003.

Table 4. Percentage distribution of current contraceptive use by method type by women with births in the five years preceding the survey according to type of place of residence and country

Characteristic	Ghana			Nigeria			Kenya			Uganda			Zambia		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Method type															
No method	74.7	64.3	79.8	85.8	77.2	89.3	67.7	56.3	70.4	77.5	55.5	80.2	65.1	54.3	69.9
Folkloric method	0.9	0.1	1.4	1.5	0.4	1.9	0.8	1.0	0.7	0.8	0.1	0.8	3.4	1.5	4.2
Traditional method	5.5	7.6	4.5	3.2	6.2	2.0	7.0	5.9	7.3	3.4	3.9	3.4	6.9	3.7	8.3
Modern method	18.9	28.0	14.4	9.5	16.2	6.7	24.5	36.9	21.7	18.3	40.9	15.6	24.6	40.5	17.6

Sources: Ghana Statistical Service et al., 2004; National Population Commission and ORC Macro, 2004 ; Central Bureau of Statistics et al., 2004; Uganda Bureau of Statistics and ORC Macro, 2001; Central Statistical Office and ORC Macro 2003.

Table 5. Percentage distribution of women who had a live birth in the five years preceding the survey by who has final say on respondent's own health care, type of place of residence and country

Characteristic	Ghana			Nigeria			Kenya			Uganda			Zambia		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Final say on own health care															
Respondent alone	36.7	40.3	34.9	12.8	15.9	11.5	38.8	49.1	36.5	45.3	59.7	43.6	33.1	39.0	30.4
Respondent and husband/partner	19.4	19.0	19.7	8.3	11.4	7.0	13.1	13.2	13.0	16.2	12.9	16.6	9.6	6.2	11.1
Respondent and other person	1.4	1.7	1.2	0.3	0.2	0.3	0.9	0.4	1.0	0.5	1.0	0.5	1.2	1.3	1.2
Husband/partner alone	34.1	29.4	36.4	74.2	68.1	76.7	40.0	30.3	42.3	34.8	23.4	36.1	39.6	33.7	42.2
Someone else	8.4	9.6	7.9	4.3	4.0	4.4	6.9	6.8	7.0	2.7	2.8	2.7	16.3	19.4	15.0
Decision not made/ not applicable	0.0	0.4		0.2	0.4	0.1	0.3	0.3	0.3	0.5	0.2	0.6	0.2	0.3	0.2

Table 6. Percentage of women who reported they have big problems in accessing health care for themselves when they are sick, by type of problem, type of place of residence and country

Characteristic	Ghana			Nigeria			Uganda			Zambia		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Type of problem												
Knowing where to go for treatment	11.3	8.9	13.6	13.7	5.1	18.3	6.8	4.5	7.3	7.0	5.2	8.1
Getting permission to go for treatment	9.0	7.5	10.3	9.9	4.0	13.0	8.1	5.3	8.6	4.0	3.0	4.7
Getting money for treatment	54.7	43.6	65.2	30.4	16.9	37.6	63.1	45.4	66.6	66.4	58.5	71.6
Distance to health facility	32.7	16.8	47.7	24.4	9.5	32.2	43.9	14.3	49.8	45.5	25.2	59.1
Having to take transport	33.1	16.1	49.2	23.8	8.5	31.8	43.4	18.2	48.5	47.3	28.0	60.3
Not wanting to go alone	20.8	16.4	25.0	14.3	6.0	18.6	21.5	14.4	22.9			
Concern there may not be a female health provider	16.0	12.9	18.9	17.2	7.8	22.1	16.6	16.3	16.7			
Negative attitude of health care provider									42.0	39.8	53.1	
Any of the specified problems	68.2	56.1	79.6	46.6	25.6	57.6	85.2	73.2	87.5	77.3	66.2	84.8
Number of women	**5,961**	**2,755**	**2,936**	**7,620**	**2,629**	**4,991**	**7,246**	**1,207**	**6,039**	**7,658**	**3,073**	**4,585**

Sources: Ghana Statistical Service et al., 2004; National Population Commission and ORC Macro, 2004; Uganda Bureau of Statistics and ORC Macro, 2001; Central Statistical Office and ORC Macro 2003

Table 7. Logistic regression of inadequate antenatal care by selected characteristics of women and country

Characteristic	Ghana 2003 Logistic coefficient	Odds ratio	P value
Type of place of residence			
Urban (RC)		1.000	
Rural	1.108	3.028	0.000
Partner's occupation			
Prof. tech. manage, clerical (RC)		1.000	
Sales and services	0.019	1.019	0.952
Agriculture	0.905	2.472	0.000
Skilled manual	0.793	2.210	0.002
Unskilled manual	1.120	3.065	0.064
Level of education			
No education	0.320	1.377	0.013
Primary	0.191	1.210	0.183
Secondary and higher (RC)		1.000	

Constant   -2.887
Model X^2 185.079
Df   7
N   2330

	Nigeria 2003		
Age at birth			
Under 20 years	0.295	1.343	0.067
20 – 34 years (RC)	-0.258	0.772	0.081
35 years and over			
Type of place of residence			
Urban		1.000	
Rural	0.334	1.397	0.011
Level of education			
No education	1.686	5.398	0.000
Primary	1.113	3.043	0.002
Secondary	0.464	1.590	0.194
Higher (RC)		1.000	
Partner's occupation			
Prof. tech. manage, clerical (RC)		1.000	
Sales and services	0.380	1.463	0.015
Agriculture	0.741	2.097	0.000
Unskilled manual	0.211	1.235	0.397

Constant   -2.529
Model X^2 203.228
Df   9
N   1723

	Kenya 2003		
Age at birth			
Under 20 years	0.355	1.426	0.005
20 – 34 (RC)		1.000	
35 years and over	0.065	1.067	0.593

Table 7 Contd.

Characteristic	Logistic coefficient	Odds ratio	P value
Birth order			
1	-0.513	0.599	0.000
2 – 5 (RC)		1.000	
6 – 14	0.085	1.089	0.431
Type of place of residence			
Urban (RC)		1.000	
Rural	0.469	1.599	0.000
Level of education			
No education	1.036	2.818	0.000
Primary	0.991	2.695	0.000
Secondary	0.723	2.060	0.000
Higher		1.000	0.004
Partner's occupation			
Prof. tech. manage. clerical (RC)		1.000	
Sales and services	0.476	1.609	0.001
Agriculture	0.538	1.712	0.000
Domestic service	0.944	2.570	0.003
Skilled manual	0.355	1.426	0.095
Unskilled manual	0.599	1.821	0.000

Constant   -1.959
Model X^2 157.534
Df   13
N   3071

Uganda 2000 - 2001

Characteristic	Logistic coefficient	Odds ratio	P value
Birth order			
1	-0.366	0.693	0.000
2 – 5 (RC)		1.000	
6 – 13	-0.129	0.879	0.095
Type of place of residence			
Urban (RC)		1.000	
Rural	0.700	2.014	0.000
Level of education			
No education	1.112	3.042	0.000
Primary	1.158	3.182	0.000
Secondary	0.429	1.536	0.150
Higher		1.000	
Partner's occupation			
Prof. tech. manage. clerical (RC)		1.000	
Sales and services	0.204	1.226	0.172
Agriculture	0.591	1.806	0.000
Manual	0.529	1.697	0.000

Constant   -1.681
Model X^2 238.415
Df   9
N   3664

Table 7 Contd.

Characteristic	Logistic coefficient	Odds ratio	P value
	Zambia 2001 – 2002		
Type of place of residence			
Urban (RC)		1.000	
Rural	0.217	1.242	0.049
Level of education			
No education	0.567	1.764	0.000
Primary	0.448	1.565	0.000
Secondary	-0.974	0.377	0.085
Higher (RC)		1.000	
Partner's occupation			
No work	-0.116	0.891	0.720
Prof. tech. manage. clerical (RC)		1.000	
Agriculture	0.584	1.794	0.027
Domestic service	0.477	1.612	0.102
Sales and services	0.349	1.418	0.212
Manual	0.195	1.215	0.480

Constant   -2.010
Model X^2 117.071
Df   9
N   3827
RC is reference category

Table 8. Logistic regression of institutional delivery by selected characteristics of women and country

Characteristic	Ghana 2003 Logistic coefficient	Odds ratio	P value
Type of place of residence			
Urban	1.635	5.128	0.000
Rural (RC)		1.000	
Level of education			
No education		1.000	
Primary	0.185	1.203	0.179
Secondary and higher	0.842	2.321	0.000
Religion			
No religion	0.125	1.133	0.621
Catholic	0.136	1.146	0.471
Christian	0.445	1.560	0.003
Moslem (RC)		1.000	
Traditional	-0.376	0.687	0.304
Partner's occupation			
Prof. tech. manage. clerical	1.035	2.816	0.000
Sales and services	1.126	3.083	0.000
Agriculture (RC)		1.000	
Manual	0.359	1.432	0.004

Constant   -1.549
Model X^2 684.368
Df   10
N   2328

	Nigeria 2003		
Age at birth			
Under 20 years	-0.728	0.483	0.001
20 – 34 years (RC)		1.000	
35 years and over	0.502	1.652	0.004
Birth order			
1	0.544	1.723	0.005
2 – 5 (RC)		1.000	
6 – 13	-0.551	0.576	0.001
Type of place of residence			
Urban	0.799	2.222	0.000
Rural (RC)		1.000	
Level of education			
No education (RC)		1.000	
Primary	0.634	1.886	0.000
Secondary	1.163	3.198	0.000
Higher	1.907	6.730	0.000
Religion			
Christian	1.176	3.240	0.000
Islam (RC)		1.000	
Traditional	0.718	2.050	0.129

Table 8 Contd.

Characteristic	Logistic coefficient	Odds ratio	P value
Partner's occupation			
Prof. tech. manage. clerical	0.617	1.853	0.000
Sales and services	0.251	1.285	0.108
Agriculture (RC)		1.000	
Unskilled manual	0.899	2.457	0.000

Constant   -1.820
Model X^2 504.053
Df   13
N   1720

Kenya 2003

Characteristic	Logistic coefficient	Odds ratio	P value
Birth order			
1	0.949	2.583	0.000
2 – 5 (RC)		1.000	
6 – 13	-0.514	0.598	0.000
Type of place of residence			
Urban	1.310	3.707	0.000
Rural (RC)		1.000	
Level of education			
No education (RC)		1.000	
Primary	0.654	1.924	0.000
Secondary	1.594	4.923	0.000
Higher	2.360	10.589	0.000
Religion			
Christian	0.376	1.457	0.031
Muslim (RC)		1.000	
No religion	-0.190	0.827	0.531
Partner's occupation			
Prof. tech. manage. clerical	0.939	2.559	0.000
Sales and services	0.486	1.625	0.000
Agriculture (RC)		1.000	
Domestic service	0.434	1.543	0.179
Skilled manual	0.443	1.557	0.025
Unskilled manual	0.292	1.340	0.006

Constant   -2.000
Model X^2 800.145
Df   13
N   3065

Uganda 2003

Characteristic	Logistic coefficient	Odds ratio	P value
Birth order			
1	0.612	1.844	0.000
2 – 5 (RC)		1.000	
6 – 13	0.070	1.072	0.410

Table 8 Contd.

Characteristic	Logistic coefficient	Odds ratio	P value
Type of place of residence			
Urban	1.555	4.737	0.000
Rural (RC)		1.000	
Level of education			
No education (RC)		1.000	
Primary	0.739	2.093	0.000
Secondary	1.629	5.101	0.000
Higher	1.803	6.068	0.000
Partner's occupation			
Prof. tech. manage. clerical	0.716	2.046	0.000
Sales and services	0.680	1.975	0.000
Agriculture (RC)		1.000	
Manual	0.637	1.891	0.000

Constant   -   -1.748
Model X^2 -   740.756
Df   -   9
N   -   3650

Zambia 2001 – 2002

	Logistic coefficient	Odds ratio	P value
Birth order			
1	0.369	1.446	0.001
2 – 5 (RC)		1.000	
6 – 13	0.011	1.011	0.907
Type of place of residence			
Urban	1.489	4.433	0.000
Rural (RC)		1.000	
Level of education			
No education (RC)		1.000	
Primary	0.639	1.894	0.000
Secondary and higher	1.761	5.819	0.000
Partner's occupation			
No work	0.657	1.928	0.004
Prof. tech. manage. clerical	1.675	5.339	0.000
Agriculture (RC)		1.000	
Domestic service	0.552	1.737	0.000
Sales and services	1.115	3.050	0.000

Constant   -1.930
Model X^2 1310.220
Df   9
N   3781
RC is reference category

Table 9. Logistic regression of current use of any contraceptive method by selected characteristics of women and country

Characteristic	Ghana 2003 Logistic coefficient	Odds ratio	P value
Age at birth			
Under 20 years	-0.664	0.515	0.003
20 34 years (RC)		1.000	
35 years and over	-0.072	0.930	0.654
Type of place of residence			
Urban	0.421	1.524	0.000
Rural (RC)		1.000	
Level of education			
No education (RC)		1.000	
Primary	0.635	1.886	0.000
Secondary and higher	0.679	1.972	0.000
Number of living children	0.185	1.203	0.046
Desire for more children			
Wants within two years (RC)		1.000	
Wants after 2+ years	0.394	1.483	0.041
Wants, unsure timing	-0.232	0.793	0.658
Undecided	0.439	1.551	0.233
Wants no more	-0.050	0.951	0.813
Infecund/never had sex	1.472	4.360	0.000
Husband approves f.p.			
Disapproves (RC)		1.000	
Approves	0.634	1.885	0.002
Don't know	0.050	1.051	0.864
Discussed f.p. with partner			
Never (RC)		1.000	
Once or twice	0.900	2.460	0.000
More often	1.505	4.504	0.000
Respondent approves f.p.			
Disapprove (RC)		1.000	
Approves	0.983	2.672	0.003
Don't know	0.622	1.863	0.365

Constant   -4.280
Model X^2 368.755
Df   17
N   2155

	Nigeria 2003		
Level of education			
No education (RC)		1.000	
Primary	0.803	2.232	0.000
Secondary	0.999	2.715	0.000
Higher	1.821	6.179	0.000

Table 9 Contd.

Characteristic	Logistic coefficient	Odds ratio	P value
Number of living children	0.202	1.224	0.026
Visited by f.p. worker last 12 months			
No (RC)		1.000	
Yes	0.501	1.650	0.005
Visited health facility last 12 months			
No (RC)		1.000	
Yes	-0.294	0.745	0.028
Desire for more children			
Wants within two years (RC)		1.000	
Wants after 2+ years	0.432	1.540	0.008
Wants, unsure timing	0.408	1.503	0.219
Undecided	-0.273	0.761	0.577
Wants no more	0.458	1.580	0.027
Husband approves f.p.			
Disapproves (RC)		1.000	
Approves	0.608	1.836	0.001
Don't know	-0.119	0.888	0.646
Discussed f.p. with partner			
Never (RC)		1.000	
Once or twice	0.648	1.911	0.000
More often	1.334	3.796	0.000
Respondent approves f.p.			
Disapprove (RC)		1.000	
Approves	1.199	3.316	0.000
Don't know	-0.907	0.404	0.176

Constant   -4.419
Model X^2 552.661
Df   16
N   2147

Kenya 2003

	Logistic coefficient	Odds ratio	P value
Age at birth			
Under 20 years	-0.462	0.630	0.005
20 – 34 years (RC)		1.000	
35 years and over	0.218	1.243	0.163
Birth order			
1	0.042	1.043	0.770
2 – 5 (RC)		1.000	
6 – 14	-0.657	0.518	0.000

Characteristic	Logistic coefficient	Odds ratio	P value
Type of place of residence			
Urban	0.377	1.457	0.001
Rural (RC)		1.000	
Level of education			
No education (RC)		1.000	
Primary	0.846	2.331	0.000
Secondary	1.484	4.409	0.000
Higher	2.163	8.699	0.000
Religion			
Christian	0.624	1.866	0.005
Muslim (RC)		1.000	
No religion	0.732	2.078	0.052
Number of living children	0.283	1.328	0.001
Desire for more children			
Wants within two years (RC)			
Wants after 2 + years	0.231	1.260	0.169
Wants, unsure timing	0.231	1.259	0.572
Undecided	-0.876	0.417	0.011
Wants no more	0.271	1.311	0.126
Husband approves f.p.			
Disapprove (RC)		1.000	
Approves	1.186	3.275	0.000
Don't know	-0.669	0.512	0.001
Partner's occupation			
Prof. tech. manage. clerical	0.445	1.560	0.006
Sales and services	0.239	1.270	0.050
Agriculture (RC)		1.000	
Domestic service	0.557	1.745	0.115
Skilled manual	0.213	1.237	0.306
Unskilled manual	0.271	1.312	0.021

Constant   -3.566
Model X^2 636.867
Df   22
N   2686

Uganda 2000 – 2001

Characteristic	Logistic coefficient	Odds ratio	P value
Type of place of residence			
Urban	0.840	2.316	0.000
Rural (RC)		1.000	
Level of education			
No education (RC)		1.000	
Primary	0.266	1.305	0.029
Secondary	1.806	2.963	0.000
Higher	1.579	4.852	0.000
Number of living children	0.377	1.458	0.000

Table 9 Contd.

Characteristic	Logistic coefficient	Odds ratio	P value
Husband approves f.p.			
Disapproves (RC)		1.000	
Approves	0.708	2.029	0.000
Don't know	-0.314	0.731	0.063
Discussed f.p. with partner			
Never (RC)		1.000	
Once or twice	-0.088	0.915	0.488
More often	0.333	1.395	0.015
Respondent approves f.p.			
Disapprove (RC)		1.000	
Approves	0.576	1.778	0.007
Don't know	-0.355	0.701	0.353
Partner's occupation			
Prof. tech. manage. clerical	0.208	1.231	0.213
Sales and services	0.364	1.439	0.004
Agriculture (RC)		1.000	
Skilled manual	0.577	1.780	0.000
Unskilled manual	-0.023	0.978	0.886

Constant   -3.479
Model X^2 493.281
Df   15
N   3154

Zambia 2001 – 2002

Age at birth			
Under 20 years	0.071	1.074	0.555
20 34 years (RC)		1.000	
35 years and over	-0.331	0.718	0.010
Type of place of residence			
Urban	0.582	1.789	0.000
Rural (RC)		1.000	
Level of education			
No education (RC)		1.000	
Primary	-0.137	0.872	0.264
Secondary	0.206	1.229	0.164
Higher	0.370	1.448	0.258
Number of living children	0.422	1.525	0.000
Desire for more children			
Wants within two years (RC)		1.000	
Wants after 2+ years	0.495	1.641	0.000
Wants, unsure timing	-0.081	1.084	0.802
Undecided	-0.615	0.541	0.042
Wants no more	0.108	1.114	0.449

Table 9 Contd.

Characteristic	Logistic coefficient	Odds ratio	P value
Husband approves f.p.			
Disapproves (RC)		1.000	
Approves	0.693	1.999	0.000
Don't know	0.216	1.241	0.237
Discussed f.p. with partner			
Never (RC)		1.000	
Once or twice	0.516	1.676	0.000
More often	0.619	1.857	0.000
Respondent approves f.p.			
Disapprove (RC)		1.000	
Approves	0.716	2.045	0.000
Don't know	0.186	1.204	0.607
Partner's occupation			
No work	-0.806	0.447	0.003
Prof. tech. manage. clerical	0.223	1.250	0.208
Agriculture (RC)		1.000	
Domestic service	-0.032	0.969	0.846
Sales and services	-0.199	0.820	0.165
Skilled manual	0.224	1.251	0.083
Unskilled manual	0.909	2.481	0.033

Constant   -3.285
Model X^2 434.489
Df   23
N   3262
RC is reference category

Figure 1: Percentage of women who make four or more antenatal care visits by type of place of residence and country

Figure 2. Percentage of births in the five years preceding the survey delivered at home by type of place of residence and country
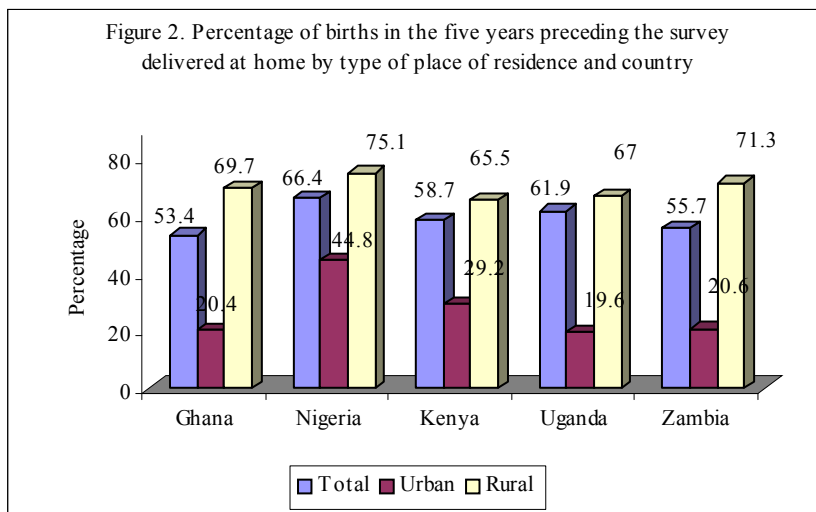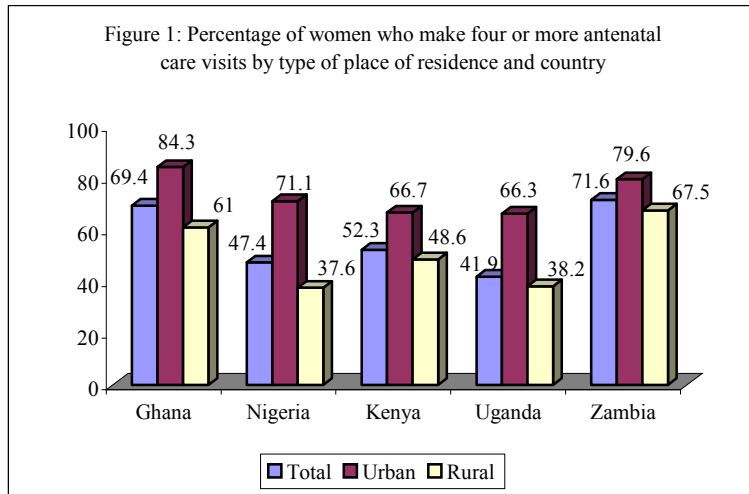
Figure 3. Percentage of women with births in the five years preceding the survey who use modern contraceptive method according to type of place of residence and country

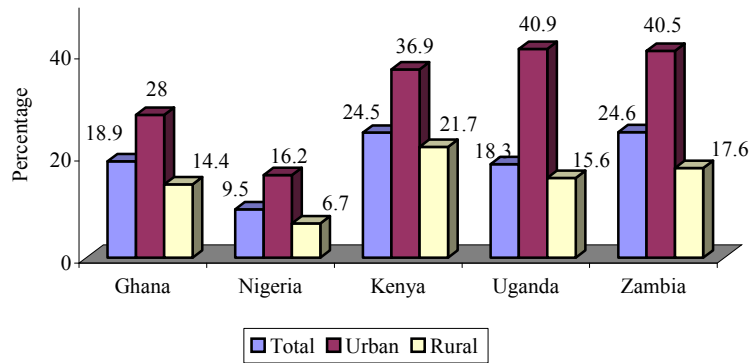| Country	Total	Urban	Rural
Ghana	18.9	28	14.4
Nigeria	9.5	16.2	6.7
Kenya	24.5	36.9	21.7
Uganda	18.3	40.9	15.6
Zambia	24.6	40.5	17.6

Y-axis: Percentage

Figure 4: Percentage distribution of women who had a birth in the five years preceding the survey by who has final say on respondent's own health care and country

Country	Respondent alone	Respondent and husband/partner	Respondent and other person	Husband/partner alone	Someone else	Decision not made/not applicable
Ghana	36.7	19.4	1.4	34.1	8.4	0
Nigeria	12.8	8.3	0.3	74.2	4.3	0.2
Kenya	38.8	13.1	0.9	40	6.9	0.3
Uganda	45.3	16.2	0.5	34.8	2.7	0.5
Zambia	33.1	9.6	1.2	39.6	16.3	0.2

Y-axis: Percentage