Title: Access to and utilization of antenatal care services in Uganda

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Abstract

The question of why women are still deprived of access to life saving essentials and obstetric emergency care lies within some of the conservative, economic, socio-cultural, religious and political forces which continue to frustrate the implementation and expansion of effective reproductive and sexual health rights. This paper examines the challenges women face in accessing and utilizing antenatal care services using the 2006 Uganda Demographic and Health Survey data. In built, is the concept that utilization of health care services is more of attitudinal and behavioural issue. The study does not only consider physical but also the cost, quality and women's autonomy relating to access to and utilization of antenatal care services. Less than half (48 percent) made four or more antenatal visits during pregnancy for their most recent births and less than 40 percent were assisted by skilled providers. The rural-urban differential in access and utilization of antenatal care services was significant and rural women were more disadvantaged than their urban counterparts. Age of the mother, number of living children a woman had, educational level, type of place of residence and region of residence were all significant predictors for the use and non-use of antenatal care services. Difficulty in getting money for treatment was the most outstanding problem women encountered, followed by distance to the health facilities and decision making regarding health care seeking in Uganda was still poor accounting for less than 30 percent of women who made independent decision about their own health care. Policy and programmes should target those who are marginalized, vulnerable and hard to reach.

Keywords: Access, utilization, antenatal care services

Introduction

Maternal mortality reduction remains a great concern, for nearly all developing countries with broad-based population pyramids, Uganda in particular (MoH, 2004). In most rural areas of sub-Saharan Africa, poor maternal health remains a major issue since health facilities do not provide a full range of primary health care services, undermining access to reproductive health services,

including basic and comprehensive Emergency Obstetric Care (EmOC) services (Tawiah, 2011; Magadi et al., 2003; Monir et al., 2009; Pearson et al., 2005; Lester et al., 2010). For instance, approximately all Level II health centres (located at Parish level to promote, provide preventive and curative services. Antenatal care services may be available) in Uganda do not provide maternity services. Many women lose their lives in the process of procreation. Every year, more than half a million women die from pregnancy-related causes and majority of these deaths occur in sub-Saharan Africa. Every minute, at least one woman dies from pregnancy and childbirth globally (WHO, 2003; UNICEF, 2005; Awusi et al., 2009). On average, in developing countries, a pregnancy is 18 times more likely to end in the women's death than in developed countries. Mekonnen, (1997) in a study in Southern Ethiopia postulated that the high levels of maternal mortality and morbidity in developing countries emphasized the need for antenatal care and availability of trained health personnel to all women during pregnancy, labour and delivery.

In Uganda, approximately 1.2 million women become pregnant every year, 15.0 percent (180,000) of these results in complications that may lead to a pregnancy or fetal loss. Although Uganda has witnessed a decline of maternal mortality ratio of 505 to 435 per 100,000 live births, respectively from 2002 to 2008 (PRB, 2006, 2008; UBOS, 2000/01; MoH, 2010), compared to 540 in Ghana, 1,000 in Kenya, 800 in Nigeria and 750 in Zambia in Tawiah's, (2011) citing the WHO, UNFPA and UNICEF estimates for the year 2000 which might have also declined. These levels are still unacceptably high compared to those in the developed countries whose rates are below 20 deaths per 100,000 live births. High maternal mortality ratios has severe repercussion on the health system through increased infant and childhood morbidity and mortality which will further exert pressure on already meagre resources for health care.

In Uganda, pregnancies occurring within 15 months of a previous birth and first pregnancy have the highest risk of pregnancy loss or early neonatal death (59 and 51 pregnancy losses, or early deaths per 1000 pregnancies) respectively. The safest pregnancy interval is between 27-28 months (UBOS, 2001; MoH, 2004). The risk is highest during too early (under 20years) and too late ages over 40 years (47 and 51 per 1000 pregnancies) respectively. Global trends in infant and neonatal mortality have been mirrored: for Uganda in particular, neonatal mortality rates (NMR) reduced from 33 per 1000 live births in 2000 to 29 by 2006. Deaths in the newborn period are now responsible for 38 percent of all deaths occurring under the age of one year. The perinatal mortality rates (PNMR) in Uganda are estimated to be between 43 and 70 per 1000 live births

(Tann et al., 2007). Most maternal deaths are due largely to lack of or limited access to maternal health services.

To demonstrate an understanding of the inadequate utilization of health care services and antenatal care in particular, an assessment of some selected demographic and socio-economic, socio-cultural factors which have shown to be significant predictors of maternal health care services (Elo, 1992; Magadi et al., 2003; Tawiah, 1998) have been reviewed for further analysis.

Access, coverage and quality of antenatal care services

Myriad studies in Uganda and elsewhere in sub-Saharan Africa (SSA) have identified physical or geographical access to health care as a major barrier affecting health care seeking behaviours of patients generally, and women's reproductive health care seeking specifically (Kasolo et al., 2000; MoH, 2004; GMOH, 1999). In developing countries including Uganda, several factors impede accessibility, including cost of services, distance to health services, lack of available transportation, high transportation costs, poor road conditions and uneven distribution of health care facilities and lack of independence by women to make decision on matters that directly affect their health (Tawiah, 2011; Magadi et al., 2003; Anarfi and Ahideke, 2006). All of these factors increase travel time and the difficulty in accessing health service facilities. In rural Uganda, physical accessibility and acceptability remains a significant challenge to health care service delivery.

Yakong's, (2008) study of rural Ghanaian women, posited that economic ability to access health is a major factor affecting health care seeking behaviours in general and reproductive health care of women in particular. For example, in Ghana, the majority of women have limited control over family property and household financial resources and limited access to credit from financial institutions. In (Tawiah, 2011; Atuyambe et al., 2005; Kasolo et al., 2000; Obemeryer, 1993; Birungi et al., 2006; Pearson et al., 2005), it is noted that women's financial dependence on their husbands affect their decision making because health care options must be supported by husbands. Women lack the power to spend money on health care without their husbands' permission. Collated findings exist elsewhere in Nigeria, Burkina Faso, Kenya, Ethiopia, Philippines, India, and Pakistan (Abdool-Karim et al., 1994; Mekonnen, 2003; Wong et al., 1987; Bhatia, 1995; Awusi et al., 2009; Negi et al., 2010; Babar et al., 2004).

Asiimwe, (2010), found out that in western Uganda, the ability of a woman to afford antenatal care (ANC) services has a significant association to the number of ANC visits she is likely to make. This resonates with studies elsewhere that women having to take transport to ANC facility, high fees for necessary but costly laboratory fees, drugs and consultation fees in case of private centres not serviced by government hospitals are deterrence to the utilization of maternal services as highlighted by Atuyambe et al., (2005). Although in their study, there was no significant relationship between affordability and utilization of antenatal care, these associations indicates the unwillingness by mothers to pay for ANC services.

Socio-cultural belief systems, values, and practices also shape an individual's knowledge and perception of health and illness/disease, and health care seeking practices and behaviours (de-Graft Aikins, 2005; Caldwell and Caldwell, 1987; MoH, 2004; UNICEF, 2005). These shared norms guide self-care practices, and the use of traditional healers, both of which may support some healthy behaviours and contribute to unmet health needs (Adongo et al., 1998; GMOH, 1999). In dominant patriarchal cultures such as those found in Uganda and other parts of sub-Saharan Africa, men play an important role in determining what counts as a health care need for women; men are in control of almost all the resources in the family (Kasolo et al., 2000; Yakong, 2008; Bawah et al., 1995; Assfaw, 2010). Men and women, young and old, who are often inclined to customary beliefs, object to their wives going for antenatal care especially under skilled health providers. In Kasolo et al, (2000), perception of men and women depict their agitation to deny their wives or for that matter daughters in law from seeking antenatal care, "*For us men, we are not supposed to see. It is very shameful. How do you look at a woman's genitals?"* Old man – Masindi. That "*Private parts should only be looked at by your husband when having sexual intercourse"* Young women -Masaka. Most women prefer Traditional Birth Attendants (TBAs) to doctors/nurses since TBAs do not see private parts during attendance, except they just feel by a touch which is more common in the rural parts of the country.

In a study that examined women's health behaviour in Ghana with respect to hygiene, malaria prevention and responsible sexual conduct, observed that factors that affect health behavior include the roles of education, rural-urban residence, self determination, gender role norms with respect to women's rejection of domestic violence, and social support networks. Collated research on urbanization in developing countries (Adomako-Ampofo et al., 2004; Benefo, 2006; Coast, 2006; Dodoo, 1995; Dodoo et al., 2003; Dodoo, Zulu & Ezeh, forthcoming) suggest that when women living in urban areas gain in reproductive self determination and also in financial

autonomy over their reproductive and family health decisions, it improves women's health care seeking behaviour and well being.

They further argue that increased self determination may well occur through a transformation of traditional attitudes to modern ones which endorse small family size and women's rights, in this case reproductive and sexual health rights. It is also likely to be affected by changing social support networks and attitudes about women's self determination encouraged in those networks. Likewise, traditional norms associated with gender and power which favour male dominance, even to the point of endorsing domestic violence against women and requiring them to seek permission from their husbands to access reproductive health services, should change as women enjoy the benefits of education and the modernization generally associated with urban living as noted by Coast, (2006)

Poor utilization of quality reproductive health care services continues to contribute to maternal morbidity and mortality in developing countries. Understanding the different forms of social representations from which individuals or group members of a society draw meanings from the different social milieu and other external factors that may influence their preferences will help to identify policy gaps and develop strategies that will improve utilization of skilled obstetric services and thereby reduce unnecessary loss of lives (Abdool-Karim et al., 1994; Lockwood, 1995; Cook et al., 2009; Milliez, 2009). Despite the progress in some countries, the global number of maternal deaths per year estimated at 529,000 or one every minute during the year 2000 has not changed significantly since the 1994 International Conference on Population and Development (ICPD), and also according to recent estimates by World Health Organization (WHO), United Nations Children's Fund (UNICEF) and United Nations Population Fund (UNFPA). Most women survive but later suffer from illness and disability related to pregnancy and childbirth (WHO, 2003; Zeine et al., 2009).

It is against this background that the study sets out to explore the inequalities and identify the socio-economic and demographic factors associated with inadequate and poor quality utilization of antenatal care (ANC) services. A framework adapted from Kroeger's, (1983) health care utilization model, has three sets of explanatory variables that guide the use of health care services; predisposing factors (characteristics of subject), enabling factors (disorder/illness and peoples' perception as well as the characteristics of health service system such as accessibility, acceptability, affordability and availability) that make a logic sequence to predict health care

service use. The need factors represent the most immediate cause of safe motherhood service utilization.

Given the presence of predisposing and enabling factors, a woman must perceive illness (pregnancy adjoined to the fear of pregnancy related complications or adverse outcome) or its possibility to invoke the use of safe motherhood services (Fiedler, 1981). Even though pregnancy is not an illness, its possibility of adverse outcome is treated as a symptom for higher need for health care services, ceteris paribus. This was a built up from a socio-behavioural model (Andersen and Newman, 1973) which was specifically developed to investigate the use of biomedical health care services. Because the data do not provide adequate information about the enabling factors that determine antenatal care service use, explanation of findings was done with extreme caution to examine the mechanisms through which the independent variables (predisposing factors) predict and explain the dependent variables (utilization of antenatal care) directly or through the enabling factors.

Methodology

The data for this paper were derived from the 2006 Uganda Demographic and Health Survey (UDHS). The sample size was 5,035 women of reproductive ages 15-49 years, who had a live birth in the five years prior to the survey which in this case was the population of interest for this study. Data for analysis were extracted from a set of questionnaires which asked several questions about background characteristics and on access to general health care of individual women who had a live birth in the five years preceding the survey. Women were asked “whether or not” each of the barrier factors such as getting permission to go for treatment, getting money for treatment, distance to health facility or having to take transport would pose a “big problem” or “not a big problem” in seeking care. They were also asked about who usually makes decision about health care utilization for them: they themselves or someone else. Because of this, interpretation of results was done with some caution.

The study used two indicators of antenatal care: number of antenatal care visits and persons providing assistance during antenatal care. It is imperative to note that it may be unacceptable to exclude other indicators such as tetanus toxoid injections (TTI), duration of pregnancy during first antenatal visit, voluntary counselling and testing (VCT) of STIs, malaria treatment and management, iron folate supplements and blood pressure. It must be stated however, that these other services are usually provided as part of the antenatal care. Therefore, antenatal attendance is

assumed to be a proxy for the provision of TTI and the other services. According to Villar and Kanh-Neelofur, (2001), tetanus immunization during pregnancy can be life-saving for both mother and infant. Immunization against tetanus is effective for preventing neonatal tetanus (NNT), which causes approximately half a million deaths/year and maternal tetanus, which is estimated to cause 30,000 deaths annually.

In this study, access is defined as the extent to which antenatal care services may be obtained at a level of effort and cost that is both acceptable to and within the means of the population. Access may be defined operationally in terms of the presence or absence of any ANC services, or preferably of a package of services that is likely to satisfy the need and preference of the target population.

Rarely does one study exhaustively provide all information about a subject and this as well is a potential pitfall in this study. This survey, like in any other survey, is affected by sampling and non-sampling errors. The analysis is handicapped by lack of data on service availability. The interpretation of results should be done with some caution. The crucial influence of service availability on utilization can hardly be overstressed. The third 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. These limitations notwithstanding the study provide results that are relevant for future research and policy as indicated in the conclusion.

Results

Despite the extensive civil societal pressure, in September 2005 in the outcome document of the World summit universal access to reproductive health was added as a subsequent target in monitoring the Millennium Development Goals (MDGs), paving way for faster progress. It is therefore, essential that care for pregnant mothers be a priority as well for diagnosing and treating of any complications that may be of threat to the life of both the mother and unborn child. Although most “at risk” complications occur during period shortly before and after births are preventable, antenatal care alone may not be sufficient enough to prevent such precarious critical time worth to save the life of both the mother and child. However, this is seen as a means to improve maternal health.

Number of antenatal care visit by women's background characteristics

Respondents were asked about how many times they had received antenatal care for their most recent births in the five years preceding the survey. Table 1 shows the percentage distribution of women aged 15-49 years who had a live birth five years preceding the survey for number of antenatal care visits by background characteristics. Having more than 50.0 percent of antenatal care visits or assistance by skilled provider has implication for reducing the risk of maternal complications that may cause death or disability due to serious illness of both the mother and child. Respondents were asked how many times they received antenatal care during their most recent births (last birth, next-last birth and second-from last birth), where they went and whom they saw when they went for antenatal care during pregnancy.

Overall, Table 1 indicates that less than half (48.2 percent) of the women in Uganda made a minimum of four antenatal visits almost relatively proportionate to those who made between 1-3 visits (47.3 percent). Only about 4.5 percent were non-users antenatal care services. This was a slight improvement from 42.0 percent in 2000/01 for women who made a minimum of four antenatal visits and slight decrease by 2.0 percent for those who did not seek antenatal care at all. In Uganda, on average every woman visited antenatal care service at least 4.7 times during their entire pregnancy period. Also, 95.5 percent of the women in Uganda receive antenatal care at least once during their pregnancy close to 94 percent as reported in UBOS, 2000/01 and MoH, (2004).

There was no significant variation between younger mothers aged less than 20 years and those 35 years and above who made the recommended four antenatal visits in the proportion of 46.9 percent and 48.6 percent respectively. However, the proportion of non-users was relatively larger (5.9 percent) among older mothers presumed as those 35 years and above compared to 3.2 percent among mothers less than 20 years. Adetunji, (1998a, 22) postulates that a woman's age determines her biological and social maturity as well as her preparedness for responsibilities for childbearing.

As expected, as number of living children born to a woman increases, the less likely she is to make the recommended four antenatal visits. Results indicate that 55.7 percent of women with only a child made a minimum of four antenatal visits compared to 45.1 percent of those with six or more children. This corroborates Obermeyer's (1993) findings in Tunisia and Morocco that greater number of children increases the non-use of maternal health care services.

The rural-urban disparity in access to antenatal care is clearly pronounced in Uganda. Sixty two percent of urban women compared to 46.1 percent for their rural counterparts made a minimum of four visits and so is the non-use indicating 1.8 percent of urban women compared to 4.9 percent of the rural women did not make any visit during pregnancy for their most recent births. This suggests that rural women are more disadvantaged than their urban counterparts when accessing health care confirming studies by Blanc et al., (1996).

Also, the proportions of those with higher education is approximately two times more than those with no education who made a minimum of four antenatal visits (75.5 percent compared to 41.9 percent respectively). In addition, 8.2 percent are non-users among mothers with no education compared to only 1.4 percent among mothers with higher education. This is slightly dissimilar to what Tawiah, (2011) found in the 2000/01 UDHS, that women in Uganda with primary education were the most disadvantaged.

With regards to region of residence, approximately two-thirds (65.2 percent) of women in Kampala and West Nile (60.9 percent) compared to less than half of those in Eastern (39.7 percent), Southwest (41.5 percent), Western (45.1 percent), East central (45.2 percent) and the north (48.3 percent) made a minimum of four antenatal visits during pregnancy for their most recent births. Because Kampala is the most urbanized region in Uganda with a relatively large number of health facilities, more educated populace, better job opportunities and subsequently higher incomes than other regions, the above results are not surprising.

Results in Table 1 further indicate marked disparity by mother's occupational status. For instance, a larger proportion of women in the sales and service occupations (75.9 percent and 65.2 percent respectively) made a minimum of four antenatal visits compared to (43.6 percent) of those who were not working at the time of the survey. This is so because better occupations are associated with higher incomes, access to resources and therefore, increasing the use of health facilities. It is interesting to note that a relatively larger proportion of slightly more than half (51.4 percent) of women who were not working made between 1-3 visits to antenatal facilities.

Antenatal care service usage is still inadequate as indicated by findings in Table 1. Less than half (48.2 percent) of the women in Uganda made a minimum of four antenatal visits. The average number of times women in Uganda reported to have made during antenatal visits for their most recent births was approximately 4.7 times. The average age of the women in the study was 28.7

years. Majority of whom reside in rural areas (86.7 percent), 62.7 percent with primary education, a mean number of 4.5 living children per woman and 69.2 percent self employed/employees in the agricultural occupations (Tables not shown).

Table 1: Percentage distribution of women aged 15-49 years who had a live birth five years prior to the survey for number of antenatal care visits by background characteristics, Uganda 2006

Background characteristics	**Number of antenatal care visits**				
Current age of the mother	None	1-3	4+	Total	Number
Under 20 years	3.2	49.9	46.9	100	371
20-34	4.2	47.2	48.6	100	3553
35 years and above	5.9	46.7	48.6	100	1110
Number of living children					
1	2.2	42.1	55.7	100	819
2-3	4.6	47.0	48.4	100	1388
4-5	4.2	48.5	47.3	100	1144
6+	5.6	49.2	45.1	100	1684
Type of place of residence					
Urban	1.8	36.1	62.1	100	668
Rural	4.9	49.0	46.1	100	4367
Mother's educational level					
None	8.2	49.9	41.9	100	1088
Primary	3.8	49.9	46.3	100	3157
Secondary	2.2	35.4	62.4	100	649
Higher	1.4	23.1	75.5	100	143
Region of residence					
Central 1	5.0	38.4	56.5	100	497
Central 2	5.1	42.8	52.1	100	428
Kampala	2.3	32.4	65.2	100	299
East Central	4.3	50.5	45.2	100	509
Eastern	3.3	57.0	39.7	100	755
North	5.0	46.7	48.3	100	872
West Nile	0.7	38.4	60.9	100	289
Western	4.8	50.1	45.1	100	771
Southwest	6.7	51.9	41.5	100	615
Mother's occupational status					
Agric self employed/employee	3.9	37.4	58.7	100	3625
Not working	5.0	51.4	43.6	100	408
Professional/technical/managerial/clerical	3.2	40.4	56.4	100	145
Sales	1.4	22.8	75.9	100	409
Household & Domestics	0.0	44.8	55.2	100	29
Services	3.0	31.7	65.2	100	164
Skilled/Unskilled manual	3.2	39.4	57.4	100	251
Missing/Don't Know	0.0	50.0	50.0	100	4
Total	**4.5**	**47.3**	**48.2**	**100**	**5035**
$\rho<0.05$ (2-tailed)					

Source: Uganda Demographic and Health Survey (UDHS), 2006

Note: 1. 4+ (recommended number of antenatal care visits as per the WHO, 2005)
2. Primary (P1-P7)
3. Secondary (S1-S6)

Persons providing antenatal care by women's background characteristics

Respondents were asked about whom they saw when they went for antenatal care. Table 2 presents antenatal care providers categorized as skilled attendants (medical doctors, nurses/midwives and medical assistants/clinical officers) and unskilled attendants (Traditional Birth Attendants (TBA), relatives/friends, other and no one) by the women's background characteristics.

Overall, Table 2 indicates that slightly more than one-third (37.0 percent) of women were assisted by skilled provider where medical doctors formed 1.3 percent, nurses/midwives (35.1 percent) with the larger proportion and only 0.6 percent received assistance from medical assistant/clinical officers. Assistance by unskilled antenatal care providers contributed the majority of services offered with 29.5 percent who have been assisted by relatives/friends slightly higher than those who received pregnancy care from Traditional Birth Attendants (TBAs) (20.6 percent). Interestingly, about 11.8 percent reported that they were assisted by no one. An overall 63.0 percent assistance from unskilled provider which clearly indicates inadequate utilization of antenatal care services in Uganda as mentioned earlier. Reports from the Uganda Bureau of Statistics (UBOS, 1995 and 2000/01) indicate a much higher proportion of assistance by at least a skilled provider about 92.0 and 93.0 percents respectively.

Results show that a larger proportion of women less than 20 years who had a live birth in the five years prior to the survey received antenatal care from nurses/midwives (49.9 percent) compared to less than one-third (27.0 percent) for those 35 years and above. However, what Atuyambe et al., (2005) found in a qualitative study conducted to find out experiences of pregnant adolescents-voice from Wakiso district in central part of Uganda do not support the above results. They found that medically, adolescents are more prone to complications during pregnancy, delivery and the period after. The few who seek for medical care are often intimidated by health providers which demoralizes them from seeking quality maternal health care. For instance, *"When I come here for ANC and the nurses start examining me, they abuse me and even blame me for getting pregnant at a young age, yet I got pregnant without knowing [laughter]. They say "What were you looking for you young girl? Now you are going to die innocently". The end result of this is that I am not going back for ANC as I fear the health workers".* [FGD adolescent mothers, Wakiso]. This often negates them from returning for the service. Results further show a pathetic less than 2.0 percent across all age groups received assistance from medical doctors. There was no significant variation in the proportions of those women assisted by TBAs across all age groups. It is also interesting to

note that a relatively larger proportion (21.3 percent) of mothers 35 years and above received assistance from no one, an indication of how far we are from achieving MDG-5 by 2015 with only four years left.

As expected, parity has a positive relationship with quality antenatal care service usage. A relatively larger proportion of approximately six out of ten (62.1 percent) of those with only a child received pregnancy care from skilled attendants in the proportion of 59.0 percent by nurses/midwives, 2.6 percent by medical doctors compared to two out of ten (24.9 percent) for mothers with six or more children. Also, 20.7 percent of women with six or more living children received antenatal care from no one compared to 1.8 by those with only a child alive These findings confirm those of Atuyambe et al., (2005), Kasolo et al., (2000), and Tawiah, (2011) study of five sub-Saharan African countries of Ghana (2003), Kenya (2003), Nigeria (2003), Zambia (2001/02) and Uganda (2000/01).

The rural-urban differentials was quite significant with more than three-quarters (78.6 percent) of the urban women had been assisted by skilled attendants with 73.4 percent of these proportion received care from nurses/midwives. Conversely, only about one-third (30.5 percent) of rural women were assisted by skilled attendants. Table 2 further indicate a larger proportion of the women in rural areas received assistance from either relatives/friends (32.3 percent), TBA (22.8 percent) or no one (13.0 percent).

As the educational level of the mother rises, the more likely she is to receive care from skilled providers. Results indicate a larger proportion of those with higher education (80.6 percent) compared to 20.0 percent of those with no education reported to have received care from skilled personnel (medical doctors, nurses/midwives and clinical officers). Twenty two percent and 38.9 percent of those with no education were assisted by TBA and relatives/friends respectively. This may be attributed to the fact that a well educated woman may have a better job and earn more money, which improves her economic access to resources and reinforces the effect of access to adequate information. This is similar to what Benefo, (2006), Wong et al., (1987) and Awusi et al., (2009) found in Ghana, the Philippines and Nigeria respectively indicating that education has a strong positive impact on the choice of maternal health care facilities.

Regional disparities are significantly different with about nine out of ten (90.0 percent) of the women in Kampala received pregnancy care from skilled providers with 82.3 percent of these are provided by nurses/midwives compared to a slightly less than one-third (31.8 percent) of mothers

in the north. An overwhelming proportion of women in the north still receive pregnancy care from unskilled providers with 40.5 percent who were assisted by TBAs. It is possible that most private and governmental/public referral health units are located in Kampala.

With regards to mother's occupational status, approximately three-quarters (75.2 percent) of women in professional/technical/managerial/clerical occupations reported to have received assistance during pregnancy from skilled attendants compared to less than one-third (27.0 percent) of those in agricultural self employed/employees. It is interesting to note that seven out of ten (73.3 percent) of the women in household and domestic occupation received care from nurses/midwives. However, it is imperative to note that these results may not be sufficient enough to justify the usage and non-use of quality antenatal care services due to few numbers of women reported in these occupational categories. In Uganda, results show that nurses/midwives are the largest group of antenatal care providers and yet assistance from relatives/friends and TBA remains unacceptably high especially among the high risk older mothers aged 35 years and above and also those 20-34 years of age.

Table 2: Percentage distribution of women aged 15-49 years who had a live birth in the five years prior to the survey for antenatal care providers by background characteristics , Uganda 2006

Background characteristics	**Antenatal care provider**								
	Medical doctor	Nurse/ midwife	Medical assistant/ clinical officer	TBA	Relative/ friend	Other resp	No one	Total	Number of women
Current age of the mother									
Under 20 years	1.1	49.9	0.8	21.1	24.7	0.5	1.9	100	369
20-34	1.3	36.1	0.5	20.5	30.6	1.2	9.9	100	3545
35 years and above	1.2	27.0	0.6	20.9	27.5	1.4	21.3	100	1111
Number of living children									
1	2.6	59.0	0.5	14.2	21.6	0.2	1.8	100	815
2-3	1.9	37.7	0.6	21.7	30.7	1.2	6.2	100	1386
4-5	0.5	31.5	0.6	20.9	32.4	1.3	12.7	100	1141
6+	0.5	23.9	0.5	22.6	30.2	1.5	20.7	100	1683
Type of place of residence									
Urban	4.3	73.4	0.9	6.4	10.9	0.0	4.0	100	668
Rural	0.8	29.2	0.5	22.8	32.3	1.4	13.0	100	4357
Mother's educational level									
None	0.5	19.2	0.3	22.2	38.9	0.6	18.4	100	1086
Primary	0.8	32.9	0.4	22.6	30.0	1.4	11.9	100	3153
Secondary	3.1	65.5	1.7	10.6	15.6	1.1	2.5	100	643
Higher	9.7	68.8	2.1	9.0	9.0	0.0	1.4	100	144
Region of residence									
Central 1	2.0	44.9	0.6	22.7	20.0	1.8	7.9	100	494
Central 2	0.9	44.5	0.7	18.4	23.1	0.9	11.5	100	425
Kampala	6.4	82.3	1.3	3.3	3.7	0.0	3.0	100	299
East Central	0.4	47.9	1.4	11.5	19.6	2.4	16.8	100	505
Eastern	0.4	31.1	0.9	17.1	36.6	1.6	12.3	100	755
North	0.1	25.3	0.3	40.5	25.4	0.8	7.6	100	871
West Nile	0.0	31.0	0.7	17.4	30.3	0.0	20.6	100	287
Western	1.8	20.2	0.0	24.2	38.9	0.5	14.4	100	772
Southwest	1.5	26.6	0.0	9.6	47.1	2.1	13.1	100	616
Mother's occupational status									
Agric self employed/employee	0.4	26.1	0.5	23.5	33.8	1.5	14.2	100	3626
Not working	3.9	62.7	1.3	10.3	16.4	0.5	4.9	100	407
Professional/technical/managerial/clerical	6.9	68.3	1.4	9.0	12.4	0.0	2.1	100	145
Sales	3.3	55.9	0.5	14.4	18.6	0.8	6.4	100	408
Household & Domestics	0.0	73.3	0.0	3.3	23.3	0.0	0.0	100	30
Services	3.0	67.1	0.0	11.0	14.6	0.0	4.3	100	164
Skilled/Unskilled manual	1.3	43.6	0.9	20.4	24.4	0.0	9.4	100	250
Missing/Don't Know	0.0	0.0	0.0	66.7	33.3	0.0	0.0	100	3
Total	**1.3**	**35.1**	**0.6**	**20.6**	**29.5**	**1.2**	**11.8**	**100**	**5035**
ρ<0.05 (2-tailed)									

Source: Uganda Demographic and Health Survey (UDHS), 2006

1. TBA-Traditional Birth Attendants
2. A skilled attendant is any acredited health professional-such as nurses/midwives, medical doctors or clinical officers-who has been educated and trained to proficiency in the skills needed to manage pregnancies, child birth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborn (WHO, 2003)

Problems encountered when accessing health care

A set of selected multiple responses were analyzed. Respondents were asked about factors that would prevent them from getting medical advice or treatment for themselves such as getting permission to go for treatment, getting money for treatment, distance to health facility or having to take transport were a "big problem" or "not a big problem". Presented throughout this paper is only the proportion of women who reported that they encountered "big problems" in accessing health care.

Table 3 indicates that out of the total 5,035 women who responded to each reason specified for not attending health facilities, getting money for treatment was the most outstanding problem in accessing health care with slightly more than two-thirds (65.3 percent) of the women reported so and followed by distance to health facility with more than half (54.5 percent) and then having to take transport (48.9 percent). The above results can be supported by results from a qualitative study in Uganda by Kasolo et al., (2000) which indicated women reporting that, "*Sometimes pregnant women may lack money to transport them to the health facilities and that to be paid as fees*." Young woman-Kasese. Further still, "*Health facilities are sometimes located in long distances which discourage pregnant mothers*". Young man-Kamuli.

Practically, urban women are more advantaged than their rural counterparts in accessing health care services (Monir et al, 2009; Hardee, 1994). Table 3 further indicate that less than 30.0 percent of the urban women reported that they have a big problem in accessing medical care and treatment for themselves except getting money for treatment (54.3 percent) was a big problem. Whereas getting money for treatment and distance to health facility for rural women was a big problem in accessing health care (67.5 and 60.3 percentages respectively) compared to (54.3 and 26.1 percentages) by their urban counterparts, less than 10.0 percent in both urban and rural reported that they encountered a big problem in getting permission to go for treatment. Also slightly more than half (54.0 percent) of the rural women reported having to take transport was a big problem compared to only 23.9 percent by their urban counterparts. This is attributed to the inequalities in access to resources with rural people more disadvantaged, also the urban concentration of health facilities reducing long distances with available and affordable transport fare.

Table 3: Percentage distribution of women who reported they encountered big problems in accessing health facilities by type of place of residence.

Background characteristics	**Reasons for not attending health facility**				
Type of place of residence	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Having to Take transport	Number of Women
Urban	6.5	54.3	26.1	23.9	668
Rural	8.4	67.5	60.3	54.0	4,357
Total	**8.1**	**65.3**	**54.5**	**48.9**	**5,035**

Source: Uganda Demographic and Health Survey (UDHS)

Note: Results indicate only those who reported the above problems as "a big problem"

Table 4 indicate that, although circumstances may seem challenging in terms of difficulties in getting permission to go for treatment, getting money for treatment, distance to health facility and having to take transport as factors that prevent women from accessing health care services, a larger proportion of women approximately 95.0 percent received antenatal care service at least once during pregnancy. Less than 10.0 percent of the women who had a live birth in the five years preceding the survey, who reported at least one of the problems encountered, did not go for antenatal care for their most recent births. In addition, less than half of those who reported at least one of the problems made a minimum of four antenatal visits as recommended. There are no significant variations for all reasons specified by all types of problem encountered who attended to pregnancy care four or more times. The above results suggest that unless health facilities are evenly distributed across all regions specifically targeting the rural populace with emphasis on availability and affordability. In addition, improved referral systems while improving roads and educating men, would allow their wives attend health facilities, would make tremendous contribution to increasing access and utilization of health services. In comparison with findings by Tawiah, (2011) and Monir et al., (2009), the challenges above recorded a slight rise in the proportion of women who reported to have encountered big problems in accessing health care. This leaves us with the question of what could have happened five years prior to 2006.

It becomes more challenging to receive assistance from a skilled providers if getting permission to go for treatment, getting money for treatment, distance to heath facility and having to take transport were a big problem as further depicted in Table 4 below. Results indicate that more than two-thirds (63.0 percent) of the women, who reported at least one of the problems they encountered, received assistance from unskilled providers varying between (65-75 percent). Conversely, approximately less than 40.0 percent of those who reported at least one of the

problems that they have encountered were assisted by skilled providers. The more challenging a situation is; such as getting permission, getting money for treatment, distance to health facility or having to take transport, the more women are compelled or likely to receive assistance from unskilled providers and vice versa also significant variation at ($p<0.05$). It is important to note that the above reasons alone may not explain why women do not attend health care facilities from qualified medical personnel. As reported in Atuyambe et al., (2005), among adolescents on the experiences that often medical staffs have poor receptions with such intimidating mentality that would deter one form returning for health care service at a health facilities or receive assistance from skilled attendants but would rather prefer TBAs.

Table 4: Percentage distribution of women aged 15-49 years who had a live birth in the five years preceding the survey, who reported that they encountered big problems in accessing health care for themselves when they sick by number of antenatal care visits and antenatal care providers

	Number of antenatal visits				**Antenatal care providers**		
Reasons for not attending health facility	None	1-3	4+	Total	Skilled attendants	Unskilled attendants	Total
Getting permission to go for treatment	6.2	50.2	43.6	100	26.7	73.3	100
Getting money for treatment	4.8	48.8	46.4	100	32.4	67.6	100
Distance to health facility	4.8	50.2	45.0	100	29.1	70.9	100
Having to take transport	5.0	49.9	45.1	100	28.4	71.6	100
Total	**4.5**	**47.3**	**48.2**	**100**	**37.0**	**63.0**	**100**
Number of women	**225**	**2381**	**2429**	**5035**	**1856**	**3169**	**5035**

Source: Uganda Demographic and Health Survey (UDHS)

Final say on health care

Women were asked about who usually makes decisions about their health care. Table 5 indicate that, although the proportion of women who reported that they jointly decided with their husbands/partners about their health care when they were sick was 39.1 percent, only about 40.0 percent reported their husbands/partners alone or someone else decided for them with no significant variation in these proportions. Conversely, only about 20.8 percent reported they made independent decisions pertaining to their own health care. This supports Tawiah's, (2011) and Kasolo et al's., (2000), key findings that there is little communication between couples during pregnancy in relation to antenatal care, especially on when to start and where to have it, the place of delivery and who would assist her.

Table 5 further indicate that there was no significant variation between urban and rural women (21.0 percent compared to 20.8 percent respectively) who reported that they made independent

decisions about their health care. Although urban women reported that their husbands/partners alone decide for them about their health care were slightly less than their rural counterparts (37.2 percent compared to 40.1 percent for rural women), the variation is not so distinct. Also, a relatively larger proportion of urban women (41.4 percent) compared to 38.8 percent of their rural counterparts reported they would decide jointly with their husband/partner about their health care. These are attributed to the fact that there are relatively more educated women in urban areas compared to the rural areas, urban women also have better jobs with better pay, which then translates into improved status which allows them to have a voice in health matters concerning them and the family at large.

Table 5: Percentage distribution of women aged 15-49 years who had a live birth in the five years preceding the survey who reported on who has final say on health care when they are sick by type of place of residence

	Type of place of residence		
Final say on health care	Urban	Rural	Total
Respondent alone	21.0	20.8	20.8
Respondent and husband/partner	41.4	38.8	39.1
Husband/partner alone	37.2	40.1	39.7
Someone else	0.4	0.3	0.3
Total	**100**	**100**	**100**
Number of women	**505**	**3,668**	**4,173**

Source: Uganda Demographic and Health Survey (UDHS)

Note: Total number of women did not reach 5,035 because quite a huge proportion (17.1 percent) did not answer questions on final say on health care (not included in the table)

Women are empowered if they have the mandate to decide on when to go, how often and whom to see about their health care in case they are sick, consequently improving their health status. Table 6 shows that more than three-quarters (78.6 percent) of the women who responded someone else decide for them to go for treatment when they are sick made 1-3 antenatal visits. Approximately 50.2 percent of the women, who reported that they jointly with their husbands/partners decide about their health care, made a minimum of four antenatal visits compared to less than half of those whose husbands/partners alone or the women themselves or someone else decide for them. On average, less than 5.0 percent of the women who reported on who has final say about their health care did not go for antenatal care during pregnancy for the most recent births in the five years preceding the survey.

The Table below reveals that more than two-thirds (69.7 percent) of the women who reported that they made independent decisions about their health care received assistance from unskilled providers during antenatal care compared to 64.3, 62.9 and 78.6 percents for those who reported that they made joint decisions or husbands/partners alone or someone else decided for them respectively. In addition to this, overall results indicate that less than 40.0 percent of the women who reported on who usually decide about their health care when they are sick were assisted by skilled providers compared to assistance from unskilled providers. (See example in Yakong, 2008 and Awusi et al., 2009).

Table 6: Percentage distribution of women aged 15-49 years who had a live birth in the five years prior to the survey that reported on who has final say on health care by number of antenatal visits and antenatal care providers

	Number of antenatal care visits				**Antenatal care providers**			
Final say on own health care	None	1-3	4+	Total	Skilled attendants	Unskilled attendants	Total	Number of women
Respondent alone	3.8	48.8	47.4	100	30.3	69.7	100	868
Respondent and husband/partner	4.4	45.4	50.2	100	35.7	64.3	100	1632
Husband/partner alone	4.6	49.0	46.4	100	37.1	62.9	100	1650
Someone else	0.0	78.6	21.4	100	21.4	78.6	100	14
Total	**4.5**	**47.3**	**48.2**	**100**	**37.0**	**67.0**	**100**	**4164**

Source: Uganda Demographic and Health Survey (UDHS)

In summary, there is under utilization of antenatal care services in Uganda since less than 50.0 percent of the women still make less than the recommended number of visits (4 and above) and also attendance by skilled providers is way below standard (less than 40.0 percent). Also decision making about health care is still poor with nearly invariable improvement realized over the past years. This is attributed to the numerous challenges namely, financial, physical/ geographical and also issues pertaining to decision making or permission which influences health seeking behaviour in general. However, it may be a grave mistake to underestimate the influence of confounding factors such as indiscriminate government policies, political, cultural, individual attitudes and experiences among others.

Some determinants of antenatal care service utilization

The dependent variables are dichotomous. For instance, number of antenatal care visits was coded as “1” representing women who made a minimum of four visits as the reference point, and “0” for women who made less than four visits (inadequate antenatal care), whereas antenatal care

provider was categorized as "1" for women who received assistance during antenatal care from skilled providers (reference category) and "0" for those who were assisted by unskilled provider (inadequate antenatal care) as reflected in Magadi, (2000).

Predictors of number of antenatal care visit

Mothers less than 20 years of age are 1.3 times more likely than those 35 years and above to make the minimum of four antenatal visits. For instance in Nigeria by Awusi et al., (2009), in western Uganda by Asiimwe, (2010) and Obemeryer's, (1993) findings in Tunisia and Morocco, which observed that as mother's age increases, their likelihood of receiving adequate antenatal care reduces. Although the few number of women in the youngest age group (less than 20 years) make it a bit difficult to draw a firm conclusion.

Women with six or more living children are 27.8 percent less likely than those with only one living child to make the recommended four antenatal visits although there was no significant difference in the likelihood for those with more than a child alive. This confirms findings in Ghana by Appiah-Kubi, (2004), in western Uganda by Asiimwe, (2010) and in Bangladesh by Ahmed et al., (2002), greater number of children is associated with high levels of non-use of health care services. Further evidence from a qualitative study in Uganda by Kasolo et al., (2000) which recorded women reporting that they need to get someone to stay with the older children, and cook for the husband before they go to the health facility to deliver.

Also, the rural-urban differentials indicate that urban women are 1.2 times more likely than their rural counterparts to make at least four antenatal visits. This confirms Tawiah's, (2011) findings that in Ghana rural women were 7.7 times less likely than their urban counterparts to make antenatal care visits and that the rural-urban disparities were more pronounced in Ghana than in Nigeria, Kenya, Zambia and Uganda further suggesting that rural women are more disadvantaged than their urban counterparts.

A woman's educational level has a positive impact on her use of health care services. Results from the model indicate that mothers with higher education are 2.3 times more likely than those with no education to make at least four antenatal visits during pregnancy for their most recent births. In addition, those with primary and secondary education are 1.2 and 1.9 times respectively, more likely than those with no education to make at least four antenatal visits (OR=1.19 and 1.88 respectively).

It is interesting to note than women from all other regions are less likely than those from the north to make the recommended four antenatal visits except West Nile (one and half times) and Central 1 (1.1times) more likely than women from the north. This may further explain the regional variation in accessibility and utilization of antenatal care services.

As expected, women in professional/technical/managerial/clerical occupations are 2.2 times more likely than those in agricultural self employed/employees to make a four or more antenatal visit. It is also interesting to note that even women who were not working at the time of the survey are 1.2 times more likely than those in the agricultural self employed/employees to have made at least four antenatal visits during pregnancy for the their most recent births in the five years preceding the survey. As found in Nigeria, that women in agricultural occupations were 2.0 times more likely than those in professional occupations to make inadequate antenatal care whereas in Ghana those in the unskilled manuals occupations are 3.0 times more likely than those in professional occupations to make inadequate antenatal care (see Tawiah, 2011; Appiah-Kubi, 2004; Awusi et al., 2009; Kasolo et al., 2000).

Predictors of antenatal care provider

Younger mothers aged less than 20 years and those 20-34 years are 1.1 times and one and half times more likely than those 35 years and above to receive pregnancy care from skilled attendants with a statistical significance at $p<0.05$ only for mothers aged 20-34 years. This confirms numerous studies elsewhere which found that age exhibited a positive influence on utilization of health care as in Awusi et al., (2009), Ahmed et al, (2002) and Atuyambe et al., (2005). This is because young mothers are assumed to lack experience in child bearing and the fact that it may be the first pregnancy they ever had, puts a lot of fear in them such that they are compelled to visit a medical personnel more often (Mondal, 1997).

In addition, older mothers are not willing to stay long at health facilities and also not ready to travel long distance due to some other responsibilities such as other younger children left home with no one to take care of them. This was contrary to Bhatia's (1995) and Asiimwe's, (2010) finding in India and western Uganda respectively that non-use was highest among young adolescent mothers (under 20years) than mothers aged (20-34 years). For instance in Uganda, pregnant adolescents feared to go for antenatal care because often they are intimidated or receive poor reception by health care provider (Kasolo et al., 2000; Tann et al., 2007). As far as policy is concerned, age appears to have no significant relationship, thus it defines the complexity in

considering age in predicting health care outcome (Addai, 2000; Appiah-Kubi, 2004; Wong et al., 1987).

There is an inverse association between number of living children a woman has and her choice of health care providers during pregnancy. Table 3 indicates that women with six or more living children are 74.2 percent less likely than mothers with only a child alive to be assisted by skilled attendants during pregnancy. Generally, as a woman's number of living children increases, the less likely she is to receive pregnancy care from a skilled health care provider. This is not different from Obemeryer's, (1993), Awusi et al's., (2009) and Assfaw's, (2010) findings in Morocco-Tunisia, Nigeria and Ethiopia respectively that parity has a negative relationship with antenatal care usage. Reasons ascribed to this attitude include the experience women gain with each succeeding pregnancy and childbirth, and the time and cost pressures associated with larger families, which decrease utilization.

Type of place of residence was found to have a strong statistical significance in predicting the choice of antenatal care providers at $p<0.001$. Women who reside in urban settings are 3.3 times more likely than rural women to receive assistance from skilled providers during pregnancy for their most recent births with odds ratio (OR=3.34). This confirms the notion that rural women are more disadvantaged than their urban counterparts and due to the fact that most health facilities are concentrated in the urban areas creating access to only a minority of the populace as cited in Mekonnen, (2003) in Ethiopia, Bhatia, (1995) in India and Tawiah's, (2011) study in the five sub-Saharan African countries of Ghana, Nigeria, Kenya, Zambia and Uganda. There has been little action by government to make the deployment patterns in favour of rural areas. Most relatively well-equipped hospitals and health units are also found in urban environments. The quality of services provided in the rural areas is far lower compared to the urban facilities as cited in (Asiimwe, 2010; Tann et al., 2007; Mekonnen, 2003).

Mothers with higher and secondary educational levels are 4.7 and 3.2 times more likely than those with no education to be assisted by skilled attendants during pregnancy for their most recent births. This implies that as women's educational level rises, the chance that they would receive assistance from skilled providers also increases. Elo's, (1992) findings in Peru, and findings elsewhere in Ghana and Nigeria postulate that education has a positive impact on health care utilization (Appiah-Kubi, 2004; Awusi et al., 2009; Iyaniwura et al., 2009; Tann et al., 2007). Reasons may be that those with no education could easily be persuaded by significant others such

as grandmothers, in-laws or traditional birth attendants would neither go for antenatal care nor deliver their babies in hospital. Again lack of education can compound a woman's ability to make informed decision about her own health and thus she may not value modern obstetrics care. Higher education is said to be associated with higher income, better occupation (professional) which ideally determines one's ability to afford and access basic and comprehensive health care at a minimal effort (Monir et al., 2009; Kiwuwa et al., 2008) and yet the findings reveal that only 15.7 percent with a minimum of secondary educational level.

Unlike in predicting the number of antenatal visit, women in Kampala and East central regions are 2.9 and two and half times respectively, more likely than those residing in the north to receive assistance from medical doctors, nurses/midwives or clinical officers. Women residing in West Nile, Western and south west Uganda are less likely than those from the North to be assisted by skilled medical personnel during pregnancy care. Regional disparities in access and utilization of health care services may also be influenced by the disproportionate distribution of health facilities and skilled medical personnel, differing proportions of rural and urban women in the region, as well as the different ethnic composition, lineage practices and religious beliefs in the region.

Women in professional/technical/managerial/clerical and service occupations are 2.1 and 2.3 times more likely than those in agricultural self employed/employees to receive pregnancy care under the supervision of skilled attendants. In addition, mothers who were not working at the time of the survey are better off than those in agricultural occupations (OR=1.80). Therefore, empowering the women economically could lead to higher ANC services utilization and impact positively on maternal and child health.

It is important to note that fitting the selected variables into a model produced Chi-square value of 1304.764 at 29 degree of freedom and a Nagelkerke R-square value of 0.312 which shows that approximately 31.2 percent of the variation in the choice of antenatal care providers among mothers aged 15-49 years in Uganda who had a live birth in the five years preceding the survey is explained by the variables entered in the model and the rest (68.8 percent) by other factors which may also deter women from accessing quality antenatal care such as cultural, long waiting time, poor reception and attitudes of medical staffs, role of men in decision making among others.

Table 7:A binary logistic regression for number of antenatal care visits and antenatal care provider by women's background characteristics for their most recent births in the five years prior to the survey, Uganda 2006

Background characteristics	Number of antenatal visit			Antenatal care provider		
Current age of the mother	**β**	**p-value**	**Exp(β)**	**β**	**p-value**	**Exp(β)**
Under 20 years	0.283	0.030*	1.327	0.126	0.384	1.134
20-34	0.418	0.008**	1.519	0.421	0.019*	1.524
35 years and above (RC)	0.000		1.000	0.000		1.000
Number of living children						
1 (RC)	0.000		1.000			1.000
2-3	-0.300	0.004**	0.741	-0.881	0.000***	0.414
4-5	-0.292	0.008**	0.747	-1.133	0.000***	0.322
6+	-0.326	0.005**	0.722	-1.394	0.000***	0.248
Type of place of residence						
Rural (RC)	0.000		1.000	0.000		1.000
Urban	0.179	0.148	1.196	1.207	0.000***	3.343
Mother's educational level						
None (RC)	0.000		1.000	0.000		1.000
Primary	0.175	0.021*	1.191	0.383	0.000***	1.467
Secondary	0.632	0.000***	1.882	1.175	0.000***	3.239
Higher	0.838	0.002**	2.312	1.540	0.000***	4.664
Region of residence						
North (RC)	0.000		1.000	0.000		1.000
Central 1	0.092	0.456	1.096	0.555	0.000***	1.742
Central 2	-0.015	0.903	0.985	0.592	0.000***	1.808
Kampala	-0.107	0.555	0.898	1.068	0.000***	2.908
East Central	-0.271	0.024*	0.763	0.917	0.000***	2.503
Eastern	-0.426	0.000***	0.653	0.268	0.029*	1.307
West Nile	0.372	0.009**	1.451	-0.054	0.744	0.947
Western	-0.157	0.126	0.855	-0.293	0.023*	0.746
Southwest	-0.350	0.001**	0.705	-0.995	0.000***	0.999
Mother's occupational status						
Agric self employed/employee (RC)	0.000		1.000	0.000		1.000
Not working	0.158	0.195	1.171	0.588	0.000***	1.800
Professional/technical/managerial/clerical	0.766	0.003**	2.151	0.725	0.012*	2.064
Sales	0.260	0.030*	1.297	0.463	0.000***	1.589
Household & Domestics	0.198	0.609	1.219	0.619	0.199	1.856
Services	0.513	0.004**	1.671	0.839	0.000***	2.313
Skilled/Unskilled manual	0.308	0.025*	1.360	0.378	0.012*	1.459

Source: Uganda Demographic and Health Survey (UDHS), 2006

1. Nagelkerke R square=0.066, N=5032, Chi-square ($\chi 2$) =254.150, df =29
2. Nagelkerke R square=0.312, N=5032, Chi-square ($\chi 2$) =1304.764, df=29
3. RC=Reference Category *p<0.05 , **p<0.01 , ***p<0.001 (2-tailed)
4. β = Coefficients of beta
5. Exp(β)= Odds ratios (exponents of beta)

Discussion

The results have shown that there are marked disparities in terms of the physical, financial and social access to health care services. Results have indicated that getting money for treatment (68.4 percent) stood out to be the most outstanding problem, followed by distance to health facility (58.5 percent), having to take transport (51.9 percent) and getting permission to go for treatment (8.4 percent) in that order, prevent mother's access to health facilities. The results indicate that rural women are more disadvantaged in accessing health care for themselves while their urban counterparts are better off which suggest poverty may be the possible inhibiting factor in receiving adequate antenatal care services. These are evidenced from related findings which argue that the cost of accessing health services is generally high as well for pregnant women, both in terms of time required to get to the facility as well as the fees for maternal services and lack of control of domestic resources by women has been shown to delay decision making about seeking health care (Appiah-Kubi, 2004; Magadi et al., 2003; Tawiah, 2011). Some of the above results may partly be attributed to the fact that in Uganda, before the introduction of free antenatal care services which is a recent phenomenon, charges for these services were extremely high as reported in the Daily Monitor, (16th, October, 2010). This report further indicates that normal birth for a mother is usually not less than Ugandan shillings (UgShs) 50,000 ($20) while caesarean is over UgShs 500,000 ($200).

Northern region has also shown to lag behind in utilization of most antenatal care services. This could be due the fact that the aftermath of the political turmoil in the region saw adverse disruption of several socio-economic development related activities which saw approximately 1.2 million people confined in Internally Displaced People's camps (IDPs), most of whom are women and children and lived in congested and appalling conditions which had no or if any very inadequate health facilities. One had to move long distance before he/she could reach the nearest health facilities. Rehabilitations of these services and resettlement of these communities took a much longer time than it should have to salvage the situation. Most health clinics providing antenatal services are concentrated in urban centres or particular locality. This means that congestions and long waiting lines, or even medical attendants may arrive late and eventually leave early leaving people in despair. Also, it is often noted that medical attendants exhibit arrogant attitudes towards the clients which thus compels one not to make any efforts to return or continue receiving these services (New vision, 05th, January, 2011; Kasolo et al., 2000; Atuyambe et al., 2005).

In addition to the above, distance to health facilities was the second most serious problem women encountered in accessing health care for themselves. However, rural areas and marginalized regions such as the north are more disadvantaged in terms of proximity to health facilities. Transport problems further exacerbate the situation as a large proportion of the women reported it as a big problem due to its related cost or unavailable at the time it is needed most. Also, the fear of transportation in some parts of Uganda may be devastating, especially during rainy seasons due to the poor nature of roads which become muddy, slippery and flooded as supported by similar findings by Fosu, (1994) in Uganda and Togo. Most road networks are poorly constructed with gullies and pot holes making it rugged and bumpy which makes travelling to health facilities a night-mare especially if one is pregnant. This particularly is more pronounced in the rural parts of northern, western and eastern Uganda with poor road networks where more than 80.0 percent of the population in the country lives (UBOS, 2000/01). Bicycles (tandems) are the cheapest means of transportation in the rural areas or else motor cycles (boda-boda) are used since they may easily penetrate through the narrow paths. Whereas certain areas may have access to vehicles like once or twice a week, with exceptions of market days or other important occasions where one has to wait for those particular days of the week before transportation is probable. The implication of these may be fatal especially if a pregnant woman is in critical condition that saving her life or that of the unborn child is impracticable as noted by Asiimwe, (2010). With such prevailing conditions, one would prefer to walk to the nearest TBA or relative who could assist in examining the pregnancy and deliver when the time comes.

Inequalities resulting from poor decision making about women's health care showed marked inequalities with rural areas, uneducated women, younger mothers and among those unemployed or employed in the agricultural sector as more disadvantaged than others accounting for less than 30.0 percent of the women making independent decisions about their health care (results presented only for rural-urban differentials). According to a study by Blanc et al, (1996), women's occupation and ability to earn money were important for their ability to save for maternity care. In general, information sharing between couples about their household incomes in Uganda is still poor, affecting the bargaining power of women when they need to decide with their partners to seek maternal health services (Yakong, 2008; Abou-Zahr et al., 2003; Monir et al., 2009; Tawiah, 2011). This takes the decision making process away from the woman who is directly facing potential pregnancy complications (Mekonnen, 2003; Coast, 2006) meaning that Uganda is still far from achieving the goal of empowering women as stipulated at the 1994 ICPD.

The above may be attributed to societal and familial expectations which may influence women's choice of care, and may lead to delays in seeking essential professional care (Kasolo et al., 2000). Pregnancy and childbirth are perceived as a normal process and in many Ugandan communities, women who deliver in the community with little biomedical assistance are often held in high regard that's why about 63.1 percent still receive assistance from unskilled provider with majority receiving from Traditional Birth Attendants (TBA) and relatives/friends as shown in Table 2 and also similar to Tawiah's, (2011) findings in Ghana and Nigeria. In addition, social responsibilities assigned to women sometimes stand in the way of their using needed services. For example, one of the main reasons for refusing hospital admission during antenatal visits was found to be the need for women to provide for their families and care for young children as results from the qualitative study by Kasolo et al., (2000) indicate. On the other hand, other studies have found that formal education empowers women to know their rights, take appropriate decisions and make healthy personal choices, thereby influencing obstetric performance (van-Eijk et al, 2006; Obaid, 2009) and yet in Uganda 21.6 percent of the women had no education, while a larger proportion (62.7 percent) had primary education (Table not shown). This explains our findings that women with higher education are 66.4 percent more likely to make independent decision about their own health care than those with no education as shown in (Table not shown).

The strong effect of higher educational attainments is consistent with higher usage of maternal health care services which is similar to what other studies have found that education significantly influences the usage of antenatal care services. The mother's occupation in this case would provide a measure of the income or socio-economic status of the women and access to resources. Like other studies among Ghanaian and Nigerian women by Tawiah, (2011), this study also found that women self employed/employees in the agricultural occupations are more disadvantaged than those in professional/technical/managerial/clerical occupations. In summary, the provision of a full package of antenatal care is inadequate. Coupled with poor coverage of four antenatal care visits, the lack of a comprehensive social security system makes the poor more vulnerable in terms of affordability and choice of health care provider. This situation calls for concerted efforts comprehensive enough to improve the attendance and quality of antenatal care.

Conclusion

The women in this study are aware of the need for antenatal care services, although the vexing challenge remains that availability of facilities does not necessarily transform into optimal utilization. This therefore, calls for improvement in the quality of care at facilities with subsequent

innovative approaches to increase demand and utilization. However, the challenges of making pregnancy safer and addressing inequities are not just new technologies or new knowledge about effective interventions but rather how to deliver these services and scale-up the coverage and utilization particularly to those who are vulnerable, hard to reach, marginalized and excluded.

Based on the findings of this study, it is evident that although women faced complex challenges at individual, family and the health care system levels, they managed their health to the best of their ability. But the free antenatal care services introduced in Ghana, and the current voucher system being initiated in Uganda, will further boost utilization of maternal healthcare facilities. This should be done alongside educating women to improve their socio-economic status which will further increase their access to resources. They will then be able to make decisions on matters that directly affect their health.

Further research on women's health should focus on belief systems, attitudes, experiences, also families' and provider's perceptions about care received, and health care delivery at all levels. Information Education and Communication (IEC) programmes should as well target men and involve them in reproductive health matters.

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