

**FACTORS ASSOCIATED WITH POSTNATAL CARE SERVICE UTILIZATION  
AMONG POSTNATAL MOTHERS ATTENDING MITOOMA HEALTH CENTRE IV.  
A CROSS-SECTIONAL STUDY.**

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## **Abstract**

### **Background**

The utilization of postpartum services is a major concern worldwide due to the great impact it has on infant and maternal mortality. The majority of perinatal deaths occur during the postpartum period. Postpartum services are those services offered to the mother and her baby during the first six weeks following delivery and it is a critical time for the mother and the baby. In Uganda, 74% of childbirths are attended by skilled health personnel, and 44% of postnatal mothers do not receive postnatal care (PNC) within 2 days after.

### **Methods**

A cross-sectional study was conducted using a quantitative approach. Three hundred eighty-four (384) nursing students participated in the study and were selected by simple random sampling method. Data was collected through research-administered questionnaires. Data were checked for completeness, cleaned, and entered in SPSS for further analysis. Data analysis was conducted using descriptive statistics and a chi-square test to show the association between variables.

### **Results**

374 participants responded to the study yielding a response rate of 97.4%. There was a significant association between characters of age (p value= 0.003), religion (p value= 0.000), age of your partner (p value= 0.003), level of education (p value= 0.000), number of children (p value= 0.000), ANC attendance (p value= 0.000), times of ANC (p value= 0.000), place of delivery (p value= 0.000), mode of delivery (p value= 0.000), transport to hospital (p value= 0.015), paid for ANC (p value= 0.000) and amount paid for ANC (p value= 0.000) with PNC utilization.

### **Conclusion**

Several factors influence mothers to seek postnatal care, especially the socioeconomic factors.

### **Recommendations**

Qualitative studies should be done to understand in-depth the significant factors affecting postnatal care utilization in this study area.

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**Keywords:** *Postnatal care utilization, Postpartum period, Infant, postnatal mother, puerperium.*

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### **Background**

According to WHO (2015), the utilization of postpartum services is a major concern worldwide due to the great impact it has on infant and maternal mortality. The majority of perinatal deaths occur during the postpartum period as stated by WHO (2015) and UNICEF (2018). Postpartum services are those services offered to the mother and her baby during the first six weeks following delivery and it is a critical time for the mother and the baby (Juma et al, 2017).

The post-natal period is a dangerous time for both mother and newborn infants. More than 500,000 postnatal mothers

die each year due to complications of pregnancy and childbirth in developing countries, most deaths occur during or immediately after childbirth (WHO, 2016). The World Health Organization (WHO) has identified maternal postnatal care services such as antenatal care (ANC), institutional delivery, and postnatal care (PNC) as essential components of intervention needed to reduce maternal and child mortality (WHO, 2016). Postpartum services are an important component of obstetrics and neonatal care aimed at preventing and managing any complications that may endanger the survival of the mother and the baby (WHO, 2011). During this

period, not only is the mother vulnerable to physical complications but also psychological disturbances which may be aggravated by adverse social circumstances such as a lack of understanding of their situation and lack of emotional support from the partner and their family (King, 2017). Recently, the WHO recommended pregnant postnatal mothers should have at least 8 contacts during their pregnancy (Hugos et al., 2014). Therefore, the provision of a quality continuum of maternal postnatal care services (quality care during pregnancy, access to skilled delivery and emergency obstetric care, and early postnatal care) is pivotal for the reduction of maternal deaths (King, 2017).

In addition, the WHO recommends that a woman and her baby should be assessed by health professionals within one hour of birth and again after discharge from a facility. The first visit should be during the first 24 hours after delivery and follow-up contacts are recommended at 2-3 days, 6-7 days, and 6 weeks (WHO, 2016). It has been reported that knowledge of pregnancy danger signs, place of delivery, and delivery complications are significantly associated with PNC utilization by postnatal mothers (Hugos et al., 2014; Hey et al., 2018). Other factors influencing maternal postnatal care services utilization include the educational status of the postnatal mothers/partners, household wealth, residence/distance to health facilities (Dahiru et al., 2015 and Dickson et al., 2018). Perceived quality of services, inconsistent availability of medical supplies and unethical approaches, or unavailability of trained care providers adversely affect the choice of place for maternal postnatal care services (Kacho et al., 2017). It has been recognized that infant and maternal mortality is a major public health problem that needs priority action (WHO, 2018). However, there are efforts by member countries to reduce maternal and infant mortality ratios by three quarters between 1990 and 2015 as stipulated in the sustainable development goals to which Uganda is a signatory. Despite the efforts made to improve postpartum coverage in Uganda is still below the national target which is 80% (Babughirana et al., 2020). The study documents the Factors associated with PNC utilization among postnatal mothers attending Mitooma Health Center IV

## **METHODS**

"The methodology described is similar to the one published by (Nuwagaba & Natwijuka, 2024)

### **Study design**

This was a health facility-based cross-sectional study that employed quantitative methods of data collection.

### **Study setting**

The study was conducted at Mitooma Health Center IV. Mitooma Health Center IV is a government

Facility situated in the Mitooma district along Mitooma - Ishaka road. It started was 1962 during Dr. Apollo Milton Obote's regime as a foundation of European Missionaries. It was later taken up by the Ministry of Health under the local government for the implementation of better services up to date. Mitooma HC IV is located approximately 25 km by road, southwest of Bushenyi. It is also about 15 km from Ishaka town – Rukungiri route, opposite Mitooma district headquarters, and serves as the district hospital. It has the following departments; OPD, MCH, IPD, theatre, dental, and special clinics like; TB/HIV, Diabetes, and HT among others. The postnatal ward has 18 beds and is managed by seven (7) midwives. On average every month 500 pregnant mothers attend antenatal care and 340 postnatal mothers attend their postnatal care services

### **Study Population**

The study population comprised postnatal mothers aged 15-49 within 6 weeks following childbirth.

### **Inclusion Criteria**

All postnatal mothers aged 15-49 years of age within 6 weeks of childbirth attending Mitooma Health Center IV were included in the study.

### **Exclusion Criteria**

Postnatal mothers who were critically ill or with unsound mental status were excluded from participating.

### **Sampling Technique**

The participants were selected using consecutive sampling, a non-probability sampling technique, whereby all the postnatal mothers taking the children to the clinic within 6 weeks after childbirth months were selected.

### **Sample Size Calculation**

The sample size was estimated by Kish and Leslie's standard formula (1965),

$$N = Z^2PQ/E^2$$

Where N is the sample size,

Z scored responding 95% of the confidence interval which is 1.96,

P is the percentage of postnatal mothers who were successively using PNC services in a study that was done by Geoffrey (2017) was estimated to be 44.4%.

$$Q = 1 - P = 1 - 0.444 = 0.556$$

E=Level of error expected which is 0.05  $N = (1.96)^2 \times 0.444 (0.556) / 0.05^2$ ,  $N = 378$  participants

Thus 384 postpartum postnatal mothers will be considered.

## **Variables**

### **Dependent Variable**

The dependent variable is the particular event or phenomenon under investigation. This is the variable that is caused or influenced by the independent variable. They are affected by the causative determinants. In this study, the dependent variable is postnatal care services utilization.

### **Independent Variable**

This is a variable that stands on its own and is not dependent on any other. It causes changes in the dependent variables. In this study, the independent variables are; Age, Marital status, Residence, Education level, Knowledge Data Collection Methods and Tools

The researcher administered a questionnaire comprising closed and open-ended questions to obtain qualitative information.

### **Validity**

Validity is a measure of how well a test measures what it is supposed to measure McClung (1978). Any validity errors in this research were eliminated by the supervisor reviewing the work before approving it. Furthermore, it was achieved by pre-testing the questionnaire with at least 10 subjects. The questionnaire was translated into Runyankore which is the common language used by the postnatal mothers in the area, and back translation in English was done. The errors in phrases and sentences were corrected to make them precise before collecting data.

### **Reliability**

The reliability of any given measurement refers to the extent to which it is a consistent measure of a concept and Cronbach's alpha is one way of measuring the strength of that consistency. Cronbach's alpha of >0.70 from previous studies was used (Suparna, 2010) Cronbach's alpha Of 0.7 was used to assess the reliability or internal consistency, of a scale that was used to assess factors associated with postnatal care service utilization.

## **Data Management**

The data collected was carefully checked for completeness before safety storage, and attempts were made to ensure the complete filling of the questionnaires. Only the researcher and the assistants had to access them.

## **Data Analysis Technique**

Data was entered into Excel and then transferred to Statistical Program Statistical Package for Social Sciences version 20 (SPSS) for analysis of a Univariate level where categorical data will be described and summarized using frequency, distribution, and percentages, a bivariate level which involves the examination of two variables simultaneously here independent variables shall be cross-tabulated with the dependent variable. Data was analyzed mainly with Chi-square distribution. Then Significant variables were run under multivariate analysis in the multiple logistic regression models to generate odds ratios (OR).

## **Ethical Considerations**

The researcher obtained an introductory letter from the Head of the Nursing Department at Bishop Stuart University. Authority to proceed with data collection was obtained from the district health officer Mitooma district who forwarded us to the Charge of Mitooma Health Center IV who permitted us to continue with the study. Informed consent was sought from respondents and our questionnaire did not capture participants' initials. This assured the confidentiality of the information. Data collected was kept under a locked box and only authorized persons accessed it and this ensured privacy.

## **STUDY FINDINGS**

### **Socio-demographic characteristics**

Study findings indicate the majority of the participants were aged between 36-45 years (48.7%) and more than half of the participants were married (75.9%) nearly half of the participants belonged to the catholic religion (40.1%) and the age their partners were between 36-45 years (48.7%). More than a quarter of the participants attended tertiary education (39.8%) and had two children (39.8%). More than half of the participants were self-employed (84.5%) (Table 1)

**Table 1: Socio-demographic characteristics**

Variable	Category	Frequency (N)	Percentage (%)
<b>Your Age</b>	18-24	24	6.4
	25-35	163	43.6
	36-45	182	48.7
	Above 45	5	1.3
<b>Marital Status</b>	Single	47	12.6
	Married	284	75.9
	Divorced	43	11.5
<b>Religion</b>	Moslem	24	6.4
	Catholic	150	40.1
	Protestant	148	39.6
	Born Again	28	7.5
<b>Age of your partner</b>	SDA	24	6.4
	18-24	24	6.4
	25-35	163	43.6
	36-45	182	48.7
<b>Educational Level</b>	Above 45	5	1.3
	Primary	68	18.2
	Secondary	143	38.2
	Tertiary	149	39.8
<b>Occupation</b>	None	14	3.7
	Self-Employed	316	84.5
	Casual laborer	14	3.7
<b>Number of children</b>	Formal Employment	44	11.8
	1	24	6.4
	2	149	39.8
	3	148	39.6
	4	28	7.5
	5 and above	25	6.7

**Maternal factors**

Study findings indicate that most participants attended ANC (78.6%), attended 2-3 times (71.4%), delivered from gov't hospital (58.6%), delivered normally (58.3%), and were

delivered by a health professional (69.5%). Most of the participants stayed between 6-15km (66.6%) from home to the hospital, paid 5000-10000 (34.5%) for transport, did not pay for ANC (54.5%), and those who paid <10,000 (40.6%) (Table 3)

**Table 3: Maternal factors**

Variable	Character	Frequency (N)	Percentage (%)
Attended ANC	Yes	294	78.6
	No	80	21.4
Times of ANC attendance	Once	50	13.4
	Two times	138	36.9
	Three times	129	34.5
	Four times and above	24	6.4
	None	33	8.8
	Place of delivery	Gov't hospital	219
	Private Hospital	90	24.1
	Clinic	58	15.5
	At home	7	1.9
Method of delivery	Normal delivery	218	58.3
	Cesarean section	156	41.7
Delivery conducted by	Health Professional	260	69.5
	TBA	48	12.8
	Friend/Relative	66	17.6
Distance from home to hospital	1-5km	63	16.8
	6-10km	130	34.8
	11-15km	119	31.8
	16km and above	62	16.6
Transport cost	<5000	121	32.4
	5000-10000	129	34.5
	>10000	99	26.5
Paid for ANC	No	204	54.5
	Yes	170	45.5
Amount paid	<10000	152	40.6
	10000-20000	82	21.9
	>20000	17	4.5
	NONE	123	32.9

**Bivariate analysis of factors associated with PNC service utilization**

Study findings indicate that there was a significant association between characters of age  $X^2(df=3)=13.769$ , p value 0.003, religion  $X^2(df=4)=130.814$ , p value 0.000, age of your partner  $X^2(df=3)=13.769$ , p value= 0.003, level of education  $X^2(df=3)=21.712$ , p value= 0.000, number of

children  $X^2(df=3)=126.710$ , p value= 0.000, ANC attendance  $X^2(df=1)=155.444$  p value= 0.000, times of ANC  $X^2(df=4)=320.519$ , p value= 0.000, place of delivery  $X^2(df=3)=30.389$ , p value= 0.000, mode of delivery  $X^2(df=1)=39.687$ , p value= 0.000, transport to hospital  $X^2(df=3)=10.419$ , p value= 0.015, paid for ANC  $X^2(df=1)=22.263$ , p value= 0.000 and amount paid for ANC  $X^2(df=3)=22.876$ , p value= 0.000 with PNC utilization.

**Table 4: Bivariate analysis of factors associated with PNC service utilization**

Variable	Category	Attended PNC clinic during the 6 weeks after the child was born		X <sup>2</sup>	df	P value
		Yes N (%)	No N (%)			
<b>Age</b>	18-24	24(7.1)	0(0.0)	13.769 <sup>a</sup>	3	0.003*
	25-35	154 (45.8)	9 (23.7)			
	36-45	153 (45.5)	29 (76.3)			
	Above 45	5 (1.5)	0 (0.0)			
<b>Marital Status</b>	Single	45(13.4)	2(5.3)	2.212 <sup>a</sup>	2	0.331
	Married	252(75.0)	32(84.2)			
	Divorced	39(11.6)	4 (10.5)			
<b>Religion</b>	Moslem	24(7.1)	0(0.0)	130.814 <sup>a</sup>	4	0.000*
	Catholic	147(43.8)	3(7.9)			
	Protestant	141(42.0)	7(18.4)			
	Born Again	15(4.5)	13(34.2)			
<b>Age of your partner</b>	SDA	9(2.7)	15(39.5)	13.769 <sup>a</sup>	3	0.003*
	18-24	24 (7.1)	0(0.0)			
	25-35	154 (45.8)	9(23.7)			
	36-45	153(45.5)	29(76.3)			
<b>Educational Level</b>	Above 45	5(1.5)	0(0.0)	21.712 <sup>a</sup>	3	0.000*
	Primary	67(19.9)	1(2.6)			
	Secondary	134(39.9)	9(23.7)			
	Tertiary	121(36.0)	28(73.7)			
<b>Occupation</b>	None	14(4.2)	0(0.0)	0.210 <sup>a</sup>	2	0.900
	Self-Employed	284(84.5)	32(84.2)			
	Casual Laborer	13(3.9)	1(2.6)			
	Formal Employment	39(11.6)	5(13.2)			
<b>Number of children</b>	1	24(7.1)	0(0.0)	126.710 <sup>a</sup>	4	0.000*
	2	146(43.5)	3(7.9)			
	3	141(42.0)	7(18.4)			
	4	15(4.5)	13(34.2)			
	5 and above	10(3.0)	15(39.5)			
<b>Attended ANC</b>	Yes	294(87.5)	0 (0.0)	155.444 <sup>a</sup>	1	0.000*
	No	42(12.5)	38(100.0)			
	Once	48(14.3)	2(5.3)			

<b>ANC attendance times</b>	Two times	137(40.8)	1(2.6)			
	Three times	127(37.8)	2(5.3)			
	Four times and above	24(7.1)	0(0.0)			
	None	0(0.0)	33(86.8)			
<b>Place of delivery</b>	Gov't hospital	210(62.5)	9(23.7)	30.389 <sup>a</sup>	3	0.000*
	Private hospital	78(23.2)	12(31.6)			
	Clinic	44(13.1)	14(36.8)			
	At home	4(1.2)	3(7.9)			
<b>Mode of delivery</b>	Normal delivery	214(63.7)	4(10.5)	39.687 <sup>a</sup>	1	0.000*
	Cesarean section	122(36.30)	34(89.5)			
<b>Delivered by</b>	Health professional	234(69.6)	26(68.4)	0.025 <sup>a</sup>	2	0.988
	TBA	43(12.8)	5(13.2)			
	Friend/relative	59(17.6)	7(18.4)			
<b>Distance from home to hospital</b>	1-5km	55(16.4)	8(21.1)	6.332 <sup>a</sup>	3	0.097
	6-10km	116(34.5)	14(36.8)			
	11-15km	113(33.6)	6(15.8)			
	16KM and above	52(15.5)	10(26.3)			
<b>Transport cost to the hospital</b>	<5000	101(30.1)	20(52.6)	10.419 <sup>a</sup>	3	0.015*
	5000-10000	121(36.0)	8(21.1)			
	>10000	89(26.5)	10(26.5)			
<b>Paid for ANC</b>	No	197(58.6)	7(18.4)	22.263 <sup>a</sup>	1	0.000*
	Yes	139(41.4)	31(81.6)			
<b>Amount paid</b>	<10000	76(22.6)	16(42.1)	22.876 <sup>a</sup>	3	0.000*
	10000-20000	51(15.2)	13(34.2)			
	>20000	12(3.6)	2(5.3)			

\*Significant variables  $p$  values <0.05

### Multivariate analysis of significant socio-demographic characteristics

Study results indicate that variable religion (0.001) and age of your partner (0.000), attended ANC during the last

pregnancy (0.000), number of ANC attendance times (0.000) and method of delivery (0.000) had their coefficients statistically significantly after multivariate analysis. Other variables were not statistically significant ( $p$  values > 0.05)

**Table 6: Multivariate analysis of factors associated with PNC service utilization**

Variable	Coefficients		t	Sig.	95.0% Confidence Interval for B		
	Unstandardized Coefficients	Standardized Coefficients			Lower Bound	Upper Bound	
	B	Std. Error	Beta				
Religion	0.279	0.086	0.869	3.254	0.001*	0.111	0.448
Age of your partner	-0.219	0.032	-0.460	-6.859	0.000*	-0.282	-0.156
Highest educational level you attended	0.019	0.019	0.051	0.996	0.320	-0.019	0.057
Number children	-0.019	0.084	-0.060	-0.228	0.820	-0.185	0.146
Attended antenatal clinics during the last pregnancy	0.307	0.028	0.417	10.795	0.000*	0.251	0.363
Number of ANC attendance times	0.108	0.010	0.385	10.394	0.000*	0.087	0.128
Place of Delivery	0.019	0.014	0.052	1.366	0.173	-0.009	0.047*
Method of delivery	0.146	0.020	0.238	7.282	0.000*	0.107	0.185
Transport cost	0.009	0.011	0.027	0.768	0.443	-0.014	0.031*
Payment made for ANC services	0.035	0.025	0.057	1.415	0.158	-0.014	0.083
Amount paid for ANC services	-0.010	0.008	-0.043	-1.213	0.226	-0.026	0.006*

\*Significant variables p values <0.05

**DISCUSSION**  
**Factors associated with PNC utilization among postnatal mothers attending Mitooma Health Center IV**

Given the different factors influencing the practices of PNC services in the study area, an attempt was made to examine the associations between various explanatory variables and the outcome variables. Study findings indicate that there



was a significant association between socio-demographic characteristics of age, religion, age of your partner, level of education, and number of children with utilization of PNC. In terms of age, partners who were between the ages categories of 25-45 years had a higher chance of utilizing PNC as compared to other age categories. This study's findings are contrary to the study findings of (Yoseph et al., 2021) which revealed that younger mothers whose age was below 25 years were 3.2 times more likely to practice PNC services when compared with older ones. However, this study finding was in line with previous findings from Farta district, south Gondar Zone in Tanzania (Mohan et al., 2015) and Ethiopia (Sisay et al., 2019)

According to religious affiliation, being a catholic gave someone higher odds of PNC utilization. This study finding is contrary to the results of a study by (Sisay et al., 2019) which revealed no significant association between religious affiliation and PNC utilization. In addition, study results by (Ayele et al., 2019) revealed that mothers who follow the Orthodox Christian religion were more likely to utilize PNC at a health facility when compared with women of other religions. This was due to differences in health facility access among the Orthodox Christian followers compared to other religious groups. Though we could not find any reference to explain this finding, a possible reason but religious centers like churches and mosques play a bigger role in sensitizing the public about different government

projects which include health. Thus this explains the varying results found in this study.

In this study, the level of education showed a strong statistical association with PNC service usage. Mothers who had no education were less likely to use PNC services than educated women. This study finding is similar to the results from a study by (Sisay et al., 2019) which revealed that mothers who had no education were about 45% times (AOR=0.55) less likely to use PNC service than educated (above secondary) women. This can be explained by the fact that education has a valuable input in enhancing female autonomy and helping them to develop greater confidence and capability to make decisions about their health. Therefore, literate women go for higher-quality health services and use healthcare inputs that offer better health outcomes.

More so, several children showed a strong statistical association with PNC service usage. Mothers who had between 2-3 children had a higher percentage of attending to PNC. This study's results are contrary to the results of (Julius, 2013) who found out that mothers with only 1 child showed the highest percentage of PNC attendance at 11.5%, followed by those with 2 children with 6.9% and those with more than 2 children had the least level of PNC attendance with 4.6%. The reason for this discrepancy may be because the majority (64%) of the study group had 1-2 children only. Regarding culture, many

women are expected to take part in several home activities in addition to taking care of the children and it may be concluded that with an increasing number of children, the burden increases and some things including PNC attendance become excluded, especially if there are no motivating events such as illness, thus the low percentage of attendance among the mothers with more children.

According to Odetola & Salmanu, 2021 decision-making is a vital aspect of women's reproductive life. In an attempt to fulfill the desire to procreate, women's lives are lost especially in developing countries where medical care is still inadequate (Odetola & Salmanu, 2021). These study findings indicate that there was a significant relationship among maternal factors of ANC attendance, times of ANC, place of delivery, mode of delivery, transport to hospital, paid for ANC, and amount paid for ANC with PNC utilization.

In this study, mothers who attended antenatal care between 2-3 times had higher odds of PNC attendance. This is similar to results from a study (Julius, 2013) which indicated that 95% of the mothers who attended antenatal care also attended PNC. According to Safe Motherhood (1998), the WHO recommends that women have at least 4 ANC visits beginning in the first three months of pregnancy, therefore most mothers were within the recommended ANC number of visits. In addition, according to (the Ministry of Health, 2021) antenatal Care (ANC), 4th Visit coverage increased to 48% from 42% achieving the target of 46%. This is also an RBF-incentivized indicator. Efforts have been geared at promoting early first ANC attendance

Place of delivery in this study was noticed as the biggest influencer of PNC. The majority of mothers who delivered from the health facilities had higher odds of PNC attendance. This is in line with a study by (the Ministry of Health, 2021) which revealed that and also Health facility deliveries increased to 64% from 62% though the annual target of 65% was not achieved. Mitooma district where the study was carried out had 4,527 ANC attendance of which 2550 were hospital deliveries, however 2701 attendance PNC. In addition, a study (Julius, 2013) indicated that 92% delivered their babies from the health units attended PNC. This may be due to the increasing consistency in educating the mothers about the benefits of delivering from the hospital, and the dangers of home delivery without professional care versus delivering from the hospital or health facility, for example during ANC attendance. Despite many of the mothers who attended PNC being those who had delivered from the hospital, there still exists a significant number of those who delivered from the hospital but did not turn up for PNC. However, mothers who delivered from home did not fare better, thus inferring that hospital delivery played an important role in improving PNC service utilization.

In this study, lower odds of PNC utilization were noticed among participants who were involved in financial expenditure to seek PNC factors of transport to the hospital, paid for ANC, and amount paid for ANC with PNC utilization. This study's results are in line with the findings of a study by (Ndugga et al., 2020) where mothers who were paying high costs in accessing PNC had low utilization. This could be attributed to many factors, including the fact that high costs of PNC are more likely making mothers economically dependent and consequently unable to access and use maternal health services recommended by health workers. Even though PNC services are free of charge (Ministry of Health, 2021) still costs of transport, laboratory tests, and buying unavailable medications cannot be avoided.

### Conclusion

Several factors influence mothers to seek postnatal care, especially the socioeconomic factors. Postnatal care service provision and implementation is still greatly lagging behind antenatal care services

### Recommendations

For nursing research, qualitative studies should be done to understand in-depth of the significant factors affecting postnatal care utilization in this study area.

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### ABBREVIATIONS

AIDS: Acquired Immune Deficiency Syndrome  
ANC: Antenatal Care  
ANCS: Antenatal Care Services  
HC: Health Centre  
HIV: Human Immunodeficiency Virus  
ICPD: International Conference on Population and Development  
LBW: Low Birth Weight  
MDGs: Millennium Development Goals  
MHC: Maternal Health Care  
MHCS: Maternal Health Care Services  
MMR: Maternal Mortality Ratio  
MoH: Ministry of Health  
PAC: Post-Abortion Care  
PNC: Postnatal Care

PNCs: Postnatal Care Services  
PPC: Postpartum Care  
PPFP: Postpartum Family Planning  
RC: Reference Category  
SPSS: Statistical Package for the Social Sciences  
TBA: Traditional Birth Attendant  
TT: Tetanus Toxoid  
UBOS: Uganda Bureau of Statistics  
UCSF: University of California San Francisco  
UDHS: Uganda Demographic and Health Survey  
UN: United Nations  
UNFPA: United Nations Fund for Population Activities  
UNHS: Uganda National Household Survey  
UNICEF: United Nations International Children's Emergency Fund  
UTI: Urinary Tract Infection  
VCT: Voluntary Counseling and Testing  
WHO: World Health Statistical Information System

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