

Immediate Postpartum Family Planning Preferences Among Couples in Rwanda

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ABSTRACT

INTRODUCTION: Improving access to modern methods of contraception and decreasing the unmet need for contraception are important in working toward decreasing the rates of unintended pregnancy. This study was designed to obtain a greater understanding of desire for contraception among women and their partners in Rwanda and assess factors associated with uptake of contraception in the immediate postpartum period.

METHODS: The cross-sectional, family planning attitude and practices survey was conducted among postpartum women and their partners prior to discharge from the hospital. The study was conducted at two large referral hospitals providing maternity care in Rwanda. Data was aggregated and we performed comparison on postpartum contraception attitude and practices among women and partners and logistic regression.

RESULTS: One hundred and five patients and thirty-one partners of patients completed the questionnaire. Immediately postpartum, 47.6% of women desired contraception, while only 11.4% received postpartum family planning (PPFP) prior to discharge. Factors associated with a patient receiving PPFP immediately postpartum include: discussing PPFP with provider during antenatal care ($p = 0.02$), discussing with partner immediately postpartum ($p = 0.003$), and discussing with provider immediately postpartum ($p = 0.01$).

CONCLUSION: These findings indicate a gap in postpartum contraception counseling and uptake in Rwanda.

Keywords: Postpartum contraception; Rwanda; Maternity care; Family planning

INTRODUCTION

Throughout the world, there is a significant unmet need for contraception. In 2012, 40% of pregnancies worldwide were unintended; of these, half ended in induced abortion and 38% resulted in unplanned birth [1]. According to a report by Guttmacher Institute in 2017, 885 million women, about half of reproductive age women living in developing regions, wanted

to avoid pregnancy, but of these women only 25% were using any method of contraception. Sub-Saharan Africa has the highest proportion of women with an unmet need for modern contraception at 21%. In addition, the 214 million women with an unmet need for contraception account for 84% of all unintended pregnancies in developing regions [2]

Improving access to and decreasing the unmet need for modern methods of contraception are important in working toward

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decreasing the rates of unintended pregnancy and its consequences. In Rwanda, improving access to and providing modern contraceptives are priorities in working toward the goals of curbing population growth and decreasing maternal and infant mortality. The Ministry of Health of Rwanda set a goal of achieving a Contraceptive Prevalence Rate (CPR) of 90% by the end of 2017 [3].

Postpartum women have among the highest unmet need for contraception, but frequently do not receive services to promote longer birth intervals or reduce unintended pregnancy [4]. According to a study on postpartum contraceptive use and fertility intention among women in 5 low-income countries, 91% of women who planned on having more children wished to delay pregnancy for at least a year, yet 70% were not using contraception at 6 weeks postpartum. One in five women in this study wanted to prevent any future pregnancies, but almost half were not using contraception at 6 weeks postpartum [5].

Preventing unintended pregnancies has a positive impact on women, children, and nations. According to data from Guttmacher Institute, maternal deaths would decline from 308,000 to 84,000 per year and newborn deaths from 2.7 million to 538,000 per year if full care for all pregnant women and newborns was combined with fulfilling unmet need for modern contraceptive services [2]. Pregnancies within the first year postpartum can result in increased risk of adverse outcomes for mother and baby, including preterm birth, low birth weight, and small for gestational age infants [4]. It is estimated that if all couples waited at least 24 months to conceive again, under-five mortality would decrease by 13% and if couples waited 36 months, it would decrease by 25% [6].

The postpartum period is underutilized as an opportunity to provide contraception; postpartum women are often engaged in healthcare services and may be uniquely motivated to avoid or delay another pregnancy. In analysis of Demographic and Health Survey (DHS) data from 17 countries, women in a union often resume sexual activity in the postpartum period without a modern family planning method. In Ethiopia, 73.4% of women had resumed sexual activity at 6 months postpartum, while only 7.9% were using a modern method of family planning. In Nigeria, 62% of women had resumed sexual activity at 6 months postpartum with only 10.2% using a modern family planning method [7]. These studies highlight the need to close the gap in immediate postpartum contraception.

Although couples and healthcare providers have considered family planning a woman's issue, male partners may also play a role in the decision on when and which contraceptive methods are used [8]. Pregnancy and the postpartum period are opportunities to engage male partners in family planning; evidence suggests that men may be more interested in their partners' health than at baseline because of their shared role in producing a healthy child [9].

In Rwanda, DHS data shows similar unmet need for contraception with 94.3% of women in a union resuming sexual activity at 6 months postpartum and only 5.4% using a modern family planning method [7]. The purpose of this research is to obtain

greater understanding of desire for postpartum family planning among women and their partners immediately postpartum and assess factors that may be associated with desire for and uptake of family planning in the immediate postpartum period.

METHODS

Study Setting: The study was conducted at Kigali University Teaching Hospital (KUTH) and Muhima District Hospital (Muhima), two large referral hospitals providing maternity care in Rwanda, from January to June 2015. KUTH is the largest tertiary care hospital in Rwanda with approximately 2,500 deliveries annually. Muhima is a large district hospital in Kigali providing maternal/child healthcare services with approximately 9,000 deliveries per year. Midwives attend uncomplicated vaginal deliveries, while physicians perform operative vaginal deliveries and cesarean sections. Postpartum family planning services available at both hospitals include: postpartum tubal ligation and immediate postpartum LARC insertion (IUD and progesterone implant). Progesterone only pills and Depo-Provera are available at Muhima. Patients with uncomplicated vaginal deliveries are discharged 6 hours postpartum.

Participant recruitment: This study was reviewed and approved by the Institutional Review Board at KUTH. Participants were enrolled after delivery, but prior to discharge from the hospital, as women do not return routinely for postpartum visits. Postpartum women and their partners, when present, were approached individually and invited to participate by study personnel. The informed consent document and the survey were translated in Kinyarwanda and English. Survey data was kept confidential and participation was voluntary and without compensation. Participants completed a structured questionnaire in a private, separate from their partner. Study personnel were available to clarify questions and verbally conduct the survey if needed in English or Kinyarwanda.

Family Planning Needs Survey: The cross-sectional, family planning attitude and practices survey was designed to collect information across multiple domains, including detailed demographic information. Consultations with local physicians and midwives and literature review were utilized to develop the questionnaire. The survey included questions regarding prior contraceptive use, family planning counseling in prenatal care and postpartum, fertility intention, and the methods of PFP discussed and/or initiated immediately postpartum. For example, a question assessing a woman's and her partner's intention for family planning was, "Do you want to be on birth control before leaving the hospital? If yes, which method? Was your husband involved in the choice of birth control you wanted to be on after delivery?"

Statistical analysis: Analyses were performed using STATA 13.0 software (StataCorp, College Station, Texas). Demographic characteristics were tabulated for women and partners, along with reproductive history for patients. Desire for and receipt of PFP immediately postpartum and desired inter-pregnancy interval were reported for both women and partners. Univariate logistic regression was conducted to assess patients' attendance of WHO recommended 4 or more prenatal visits, prior contraceptive use,

and discussions with their partner and provider about PFP. These factors were compared to the desire for PFP during antenatal care (ANC) and immediately postpartum, as well as to receipt of PFP immediately postpartum. Categorical variables are presented as frequencies with percentages, where appropriate. For all logistic regression analyses, an alpha level of less than 0.05 was considered statistically significant.

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RESULTS

A total of 105 women and 31 partners were enrolled in the study (Figure 1). The average age of women was 29 years old while the average age of partners was 35 years old. Average number of

previous pregnancies was 2.5, with a range from 1 to 9 pregnancies. In this study population, 34 women (33%) underwent cesarean section. More than half of women (51.4%) attended 4 or more prenatal visits; 52.5% of women reported a desire for PFP during ANC. Among male partners, 20 (64.5%) reported desiring PFP during ANC. The majority of women (82.5%) and partners (86.2%) reported their current pregnancy was planned.

Approximately two thirds of the women in this study reported using contraception in the past, with 24% of women reporting prior LARC use. Immediately postpartum, 50 (47.6%) women desired PFP, while only 12 (11.4%) received PFP at the time of discharge. Among male partners, 41.9% were unaware of whether their partner had received a PFP at the time of discharge (Table 1).

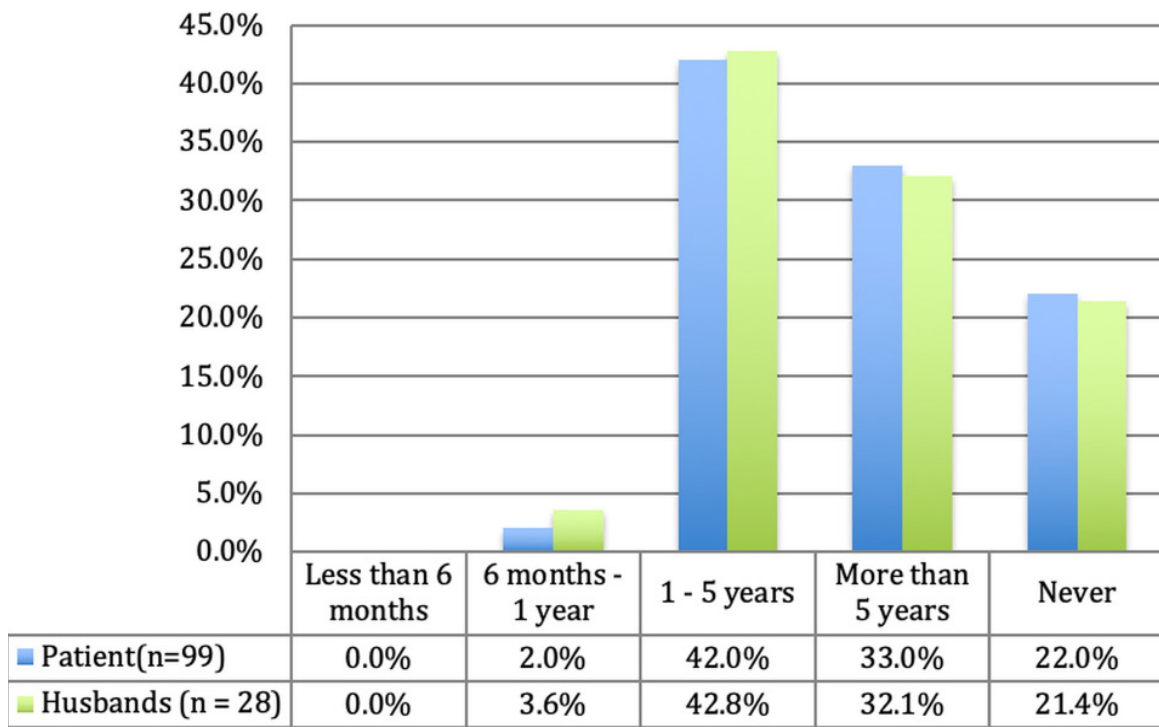


Figure 1. Fertility Intention

Forty-two women (40.3%) recalled discussing PFP with a health care provider, of which LARC methods were the most common method discussed. Twenty-seven women (64.3%) reported discussing progesterone implant and 18 women (42.9%) reported discussing IUD. In addition, 12 (28.6%) women discussed tubal ligation with their health care provider.

Among the 50 women who reported desire for PFP immediately postpartum, 26 (52%) desired LARC method and 5 (10%) desired tubal ligation (Table 2). At the time of discharge, 8 received a LARC method and 2 received tubal ligation. Among women in this study, 28.7% reported that their partner was involved in their choice of desired postpartum contraceptive method. Nineteen (76%) male partners who responded to the study question, reported they thought it was important for their partner to receive a method of contraception prior to discharge from the hospital.

Ninety-nine of the 105 women (94%) and 28 of the 31 partners (90%) in this study reported their fertility intention (Figure 1). Ninety eight percent of women and 96% of partners reported wanting more children, but not for at least 1 year. The mean number of future children desired among women and partners was the same, 1.6 children. The range of desired number of future children was 0 to 5 for women and 0 to 4 for partners. Twenty-three women (24.0%) and 7 men (27.0%) did not desire to have any future children; 2 of these women obtained tubal ligation prior to discharge from the hospital. Twenty-two of the 23 women without desire for any future children also responded to the question about parity, the mean number of pregnancies was 4.6 (range=2-9) and the mean number of births was 3.9 (range=2-8).

A woman having attended 4 or more prenatal visits during this pregnancy was not associated with desire for PFP during ANC,

Table 1. Demographic & Reproductive History Characteristics

		Patients (Total = 105)		Partners (Total = 31)	
		n (mean)	% (range)	n (mean)	% (range)
Age		(29)	(17-44)	(35)	(22-48)
District	Urban	97	94.2	25	80.7
	Rural	6	5.8	6	19.4
Marital status	Married	97	93.3	29	100.0
	Unmarried	7	6.7	--	--
Age at marriage		(24)	(16-32)	(30)	(21-43)
Religion	Catholic	49	52.1	10	38.5
	Protestant	36	38.3	14	53.9
	Muslim	7	7.5	1	3.9
	Other	2	2.1	1	3.9
	None	0	0	0	0
Previous pregnancies		(2.5)	(1-9)	--	--
Previous births		(2.1)	(1-8)	--	--
Planned this pregnancy	Yes	85	82.5	25	86.2
	No	17	16.5	4	13.8
Prenatal visits attended	<4	51	48.6	9	29.0
	>4	54	51.4	22	71.0
Mode of Delivery	Vaginal	69	67.0	--	--
	C-section	34.0	33.0	--	--
Prior birth control use	Ever	70	67.3	26	83.9
	Never	34	32.7	5	16.1
If ever, method	Depo-Provera	26	25.0	6	19.4
	Birth control pills	20	19.2	6	19.4
	Progesterone implant	13	12.5	4	12.9
	IUD	12	11.5	5	16.1
	Condoms	7	6.7	1	3.2
	Tubal ligation	2	1.9	1	3.2
	Other	17	16.4	9	29.0
Desired PPF during ANC*	Yes	53	52.5	20	64.5
	No	48	47.5	11	35.5
Desired PPF immediately PP*	Yes	47	46.1	--	--
	No	55	53.9	--	--
Received PPF immediately PP*	Yes	11	10.9	7	22.6
	No	90	89.1	11	35.5
	Don't know	--	--	13	41.9

desiring PPF immediately postpartum, or receiving a PPF immediately postpartum (Table 3). Prior contraceptive use was associated with desire for PPF during ANC (OR 3.47, 95% CI 1.26-9.55, $p=0.02$), but not associated with desire for or receiving PPF immediately postpartum. Discussing PPF with health care provider during ANC was associated with desire for PPF during ANC (OR

14.44, 95% CI 4.18-49.85, $p<0.001$), desire for PPF immediately postpartum (OR 3.29, 95% CI 1.45-7.47, $p=0.004$), and receiving PPF immediately postpartum (OR 6.86, 95% CI 1.31-35.82, $p=0.02$).

Discussing PPF with their partner immediately postpartum was associated with desiring (OR 4.13, 95% CI 1.33 -12.80, $p=0.01$)

Table 2. PFP Desired & Received Immediately Postpartum

	Desired PFP Immediately Postpartum		Received PFP Immediately Postpartum	
	Patients (N=50)	Partners (N=12)	Patients (N=12)	Partners (N=9)
Birth Control Pills	2 (4%)	0 (0%)	0 (0%)	0 (0%)
Depo-Provera	10 (20%)	1 (8.3%)	1 (8.3%)	2 (22.2%)
Progesterone implant	18 (36%)	6 (50%)	6 (50%)	4 (44.4%)
IUD	8 (16%)	2 (16.7%)	2 (16.7%)	1 (11.1%)
Condoms	5 (10%)	1 (8.3%)	1 (8.3%)	1 (11.1%)
Tubal ligation	5 (10%)	2 (16.7%)	2 (16.7%)	1 (11.1%)
Other	2 (4%)	0 (0%)	0 (0%)	1 (11.1%)

and receiving (OR 12.56, 95% CI 2.34-67.31, $p=0.003$) PFP immediately postpartum. Discussing PFP with a provider immediately postpartum was associated with desiring (OR 4.34, 95% CI 1.41-13.38, $p=0.01$) and receiving (OR 8.52, 95% CI 1.86-39.08, $p=0.01$) PFP immediately postpartum.

DISCUSSION

Almost half of women and two-thirds of partners in this study desired postpartum family planning (PFP) prior to discharge from the hospital, while only 11% of women received PFP prior to discharge. This study is unique in that there are no published studies in East Africa that assess desire for PFP among women and their partners after delivery and prior to discharge from their health facility. This is of significance in Rwanda as postpartum visits are not routine, and if women do not obtain contraception prior to discharge, they will have an unmet need for family planning and increased risk of unintended pregnancy. Identifying and closing this gap is important in meeting the Rwandan Ministry Health goal of achieving a Contraceptive Prevalence Rate (CPR) of 90% by the end of 2017 [3].

Three quarters of women and partners in this study wanted to delay pregnancy for at least 1 year. In addition, 22% of women and 21.4% of partners did not desire any future pregnancies. Pasha et al. examined fertility intention among 37,000 women at 42 days postpartum in five low-income countries. One in five women wanted to prevent all future pregnancies, but almost half were not using contraception. Among the 65% of women who did desire more children, 91% wished to delay pregnancy by at least one year, but 70% were not using a modern contraceptive method [5].

In this study, 7.6% of participants received a LARC method (Progesterone implant or IUD), which comprises two thirds of women who received PFP prior to discharge from the hospital. Studies on PFP within East Africa often focus on women 6 weeks postpartum and beyond and the most women are not using LARC methods, which have the lowest failure rates. In a study of 703 women in Ethiopia, within 1 year postpartum, 48.4% were using contracep-

tion: 68.5% injectable, 16.8% oral contraceptive pills. Factors associated with postpartum use included: age less than 24 years old, 7-9 months postpartum, resumption of menstruation, obtaining ANC during the pregnancy, and attending postnatal care [10]. A study of 3298 women in Uganda with a delivery in the preceding 5 years found that higher level of education and socio-economic status, exposure to media, delivery by skilled birth attendant, and postpartum visit were associated with increased use of PFP [11]. Data on contraceptive use among Rwandan women in the immediate postpartum are lacking.

In this study, talking to a provider about PFP during pregnancy and immediately postpartum was associated with receiving PFP prior to discharge. In addition, women discussing PFP with their partner correlates with both desiring PFP during pregnancy and immediately postpartum as well as receiving a PFP prior to discharge. A previous study found that Rwandan women whose partner supported family planning were eight times more likely to use contraception [12]. As pregnancy is a time when women are accessing healthcare services in Rwanda and postpartum visits are not routine, counseling about PFP during pregnancy and immediately postpartum, in addition to ensuring availability of PFP, are important to increasing uptake of contraception and promoting birth spacing.

Most participants in this study are from an urban setting, receiving care at a tertiary care center, which is not representative of most women in Rwanda who live in rural areas and deliver at health centers and district hospitals. The number of male partners participating in this study is low and may not reflect attitudes among male partners who did not join their female partner during the hospital stay. In addition, due to the level of acuity at a referral center, the family planning practices may not appropriately reflect practices across health centers in Rwanda.

The majority of women and partners in this study desired PFP immediately postpartum, but few received a contraceptive method prior to discharge. WHO outlines a strategy for PFP including antenatal care, labor & birth, postpartum care, and

Table 3. Impact of Pregnancy Practices on Desire for and Receiving PPBCM

		n	OR	95% CI	p-value
Desired PPFP During ANC					
WHO Recommended Prenatal Visits (4+)	Yes	52	0.73	0.31 – 1.75	0.48
	No	49			
Prior Contraception Use	Ever	69	3.47	1.26 – 9.55	0.02
	Never	32			
Discussed PPFP with Provider During ANC	Yes	43	14.44	4.18 – 49.85	<0.001
	No	58			
Discussed PPFP with Partner During Pregnancy	Yes	28	19.31	3.72- 100.28	<0.001
	No	74			
Desired PPFP Immediately Postpartum					
WHO Recommended Prenatal Visits (4+)	Yes	53	0.61	0.24 – 1.51	0.28
	No	49			
Prior Contraception Use	Ever	70	2.27	0.82 – 6.25	0.11
	Never	32			
Discussed PPFP With Provider During ANC	Yes	43	3.29	1.45 – 7.47	0.004
	No	59			
Discussed PPFP with Partner Immediately Postpartum	Yes	29	4.13	1.33 – 12.80	0.01
	No	72			
Discussed PPFP with Provider Immediately Postpartum	Yes	31	4.34	1.41 – 13.38	0.01
	No	70			
Received PPFP Immediately Postpartum					
WHO Recommended Prenatal Visits (4+)	Yes	53	1.03	0.26 – 4.01	0.97
	No	48			
Prior Contraception Use	Ever	69	3.85	0.43 – 34.40	0.23
	Never	32			
Discussed PPFP With Provider During ANC	Yes	42	6.86	1.31 – 35.82	0.02
	No	59			
Discussed PPFP with Partner Immediately Postpartum	Yes	28	12.56	2.34 – 67.31	0.003
	No	73			
Discussed PPFP with Provider Immediately Postpartum	Yes	31	8.52	1.86 – 39.08	0.01
	No	69			

well-child care as opportunities to offer PPFP. The findings from this study suggest that improving antenatal and immediate postpartum counseling about family planning may increase uptake of contraceptive methods and further the goals of the WHO strategy and Rwandan Strategic Plan. Areas for further research include the development of interventions to educate women and men about

PPFP during antenatal care and immediately postpartum. Lastly, expanding this research to include health centers and more District Hospitals, where most women in Rwanda are receiving care during pregnancy, would give a more representative sample of the general population. This could improve applicability of these results to the general Rwandan population.

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