Knowledge, Attitudes and Practices of LARC Methods:
A Survey of Postpartum Kigali Couples

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CHAPTER 1: Introduction

Sub-Saharan Africa has higher fertility rates than any region in the world, with an overall Total Fertility Rate (TFR) of 5.1 children per woman (1). Though some countries have seen an increase in accessibility and uptake of modern contraceptive methods in recent years, progress in this area has been virtually non-existent in other countries. Approximately 24% of married women in Sub-Saharan Africa have an unmet need for family planning, defined as the desire to avoid pregnancy for the next two or more years and not utilizing a modern method of contraception (2). Various factors limit the provision of modern contraceptive methods, especially long-acting reversible methods like the IUD and the contraceptive implant: methods most reliable for limiting fertility in the order of three or more years (3). These factors include but are not limited to knowledge and acceptability; education levels, HIV status; method availability, accessibility and cost; provider competency and the support of male partners (4-9).

Rwanda, the most densely populated country in Africa, has made substantial progress in the provision and uptake of family planning in recent years. The Rwanda Demographic and Health Survey (DHS) cites the decrease from a 38% unmet family planning need amongst married women in 2005 to a 19% unmet need in 2010 (10). This increase in modern method uptake is largely a result of increased use of short-term, user dependent methods including condoms, oral contraceptive pills and injectable contraceptives (11). As of 2010, 92% of contraceptive users access their family planning method from the public sector, an increase from 73% in 2005. This makes public-sector health centers increasingly representative loci to research family planning in Rwanda from various perspectives.

Eighteen percent of unplanned pregnancies in developing countries occur amongst women who are using a modern method of contraception but have difficulty using it consistently or experience method failure (1). Factors contributing to method failure include access to health clinics, availability of methods and adherence problems, among others. Various studies have cited significantly higher rates of contraceptive failure amongst users of hormonal contraceptives (including oral contraceptive pills (OCPs) and injectable contraceptives) than users of LARC methods, largely because they are user-independent and highly reliable (3, 12). LARC contraceptive methods (IUDs and implants) are increasingly offered free of charge at health centers across Rwanda with especially high rates of availability in Kigali. Despite increasing reliability and availability, uptake of the IUD and contraceptive implant in Rwandan women are 0.5% and 6.1% respectively (10).

The HIV epidemic in sub-Saharan Africa is generalized, with high rates of heterosexual transmission (largely amongst cohabitating partners) in combination with high total fertility, making family planning a critical component of reproductive health provision and HIV prevention. The UN's comprehensive approach to the prevention of mother to child transmission of HIV (PMTCT) mandates provisions for the prevention of unplanned pregnancies among people living with HIV (10, 11, 13, 14). The Ministry of Health of Rwanda has instituted PMTCT programming in 85% of the country's health centers as of 2010; as a result 90.6% of women who gave birth between 2008 and 2010 report being tested for HIV during antenatal care, the vast majority of whom are tested with their male partner (10, 15). Outside of the context of antenatal care, rates of Couples Voluntary Counseling and Testing (CVCT) have risen from 13% in 2003 to 84% in 2012 (15). The adoption CVCT in the context of PMTCT provides the

opportunity to prevent mother to child transmission throughout pregnancy and breastfeeding and to direct HIV positive partners to anti-retroviral therapy (ART) and other clinic services.

While family planning is integrated into CVCT counseling and PMTCT, uptake of modern contraceptive methods amongst married women in Rwanda is 45% (10). A 2009 study of post-partum HIV positive and negative women recruited from infant vaccine clinics at health centers in Rwanda found that only 39% of women reported using a modern method of contraception, although HIV-positive women were significantly more likely to report using any method than their HIV-negative counterparts (57% in HIV-positive vs. 33% in HIV-negative) (15). Lower rates of contraceptive coverage in post-partum populations may be attributed to the widespread use of lactational amenorrhea method (LAM) but it is unclear the extent to which return-to-fertility and the timely need for contraception is explained in the context of post-natal care (16). Other Rwanda-based studies have found misconceptions around return-to-fertility and menopause (17).

With a newly emerging emphasis on couple-centered health programming in Rwanda, understanding couples' knowledge, attitudes and practices around family planning and LARC in particular can contribute to better programming around, and uptake of these methods. This survey of 116 Kigali couples recruited from infant vaccination clinics examined the fertility intentions of men and women independently, and their family planning knowledge, attitudes and practices as a dyad. It serves as foundational research for the development and pilot implementation of Couples Family Planning Counseling (CFPC) services, integrated with the provision of CVCT.

The Rwanda Zambia HIV Research Group (RZHRG) based at Emory University in Atlanta, Georgia has been performing HIV research and prevention work in Sub Saharan Africa since 1986. RZHRG pioneered the practice of CVCT in Sub Saharan Africa which is now a standard component of the first antenatal clinic visit in Rwanda government health centers. Projet San Francisco (PSF) is the RZHRG site in Kigali, Rwanda through which more than 17,000 couples have received CVCT services since 1988, with many also receiving STI screening and services specific to discordant couples. In addition to providing onsite CVCT services to Kigali couples during weekends, PSF nurse-counselors operate regularly in government clinics, supporting local CVCT provision and family planning capacity, especially in regards to LARC methods.

Evidence-based research abounds substantiating and calling for the integration of HIV prevention with family planning counseling as a means of preventing vertical transmission of HIV and preventing pregnancy related morbidity and mortality in HIV+ women (11, 13, 18-20). While Ministry of Health-sponsored CVCT provision is now the standard of care for pregnant Rwandan couples, it fails to reach other fertile couples who may benefit from this intervention for the prevention of heterosexual and perinatal HIV transmission. Although decisions about fertility intentions and contraceptive uptake/adherence are made by couples (to varying degrees), clinic-based family planning counseling is delivered to women individually, without systematic consideration of the couples' fertility intentions and relative serostatuses.

PSF is currently in the preliminary research stage of a 5-year long investigation of barriers to integrating intentions-based, serostatus-specific family planning counseling to couples in Rwanda. In addition to a mixed-methods exploration of the views of stakeholders and clinicians and their assessment of LARC provision capacity in Rwanda, this NIH-funded project

entails the pilot integration of CVCT and couples family planning counseling (CFPC) for 1200 Kigali couples, 300 each of HIV M+F+, M+F-, M-F+ and M-F- serostatus combinations, from various types of government health centers (urban/rural, Catholic/non-Catholic). CVCT integrated with CFPC will be provided to these couples, recruited from infant vaccine clinics, in addition to family planning methods and counseling on safer conception, with follow-up assessments over three years. This data contributes to the development of CFPC protocol and messaging by exploring their perspective on contraceptives, particularly LARC, with the goal of improving the quality and relevance of CFPC sessions.

The integration of CVCT and CFPC necessitates access to medical, family planning and laboratory supplies and infrastructure. As clinics are generally too crowded and busy during the week to accommodate this excess patient flow, couples will receive the pilot intervention in clinics during weekends. Survey administration served the dual purpose of eliciting valuable formative data from couples seeking infant vaccination services and pilot-testing an invitation strategy for upcoming study recruitment amongst the same population.

Low levels of modern contraceptive uptake and high rates of HIV amount to a disproportionate burden of reproductive morbidity and mortality for Sub-Saharan African couples. Rwanda has seen significant expansion of CVCT in the context of PMTCT services and as a stand-alone service, demonstrating local acceptability of couples-based reproductive healthcare. As fertility decision-making and contraceptive uptake largely rests in the hands of couples together in this region, delivering family planning education and counseling to women alone may be a sub-optimal standard practice (7, 11, 21). This formative research contributes to the pilot implementation of integrated CVCT and CFPC in Kigali, Rwanda to assess its utility for helping Rwandan couples meet their fertility and reproductive health goals.

CHAPTER 2

Couples and Family Planning in Sub-Saharan Africa

Family planning research and interventions have historically focused on women exclusively, separated from the socio-cultural context in which they live. In recent years, there has been a marked increase in recognition of the complexity of fertility and reproductive health decisions, and an acknowledgement that simply providing women with education and access to family planning methods is not a sufficient catalyst for the demographic transition in developing countries. The 1994 International Conference on Population and Development (ICPD) in Cairo set forth the concept of reproductive health beyond the absence of infirmity, as a fundamental right for both men and women (1). Not only did the ICPD promote a comprehensive view of reproductive health that integrates fertility and family planning with STI and HIV-related services (among others), it expanded the focus of reproductive health programming to encompass males and address gender dynamics. Explicitly, an ICPD action item is to "increase the participation and sharing of responsibility of men in the actual practice of family planning" (22). This conference established the urgent need for increased research on men in family planning, which was largely lacking at the time.

In the twenty years since the ICPD took place, there has been substantial research on men in the realm of fertility and family planning; many studies have attempted to quantify how men's and women's relative knowledge, opinions and behaviors impact a couple's actions and outcomes. In Sub-Saharan Africa, the generalized HIV epidemic adds another layer of complexity to these relationships. In 2008, 70% of new HIV infections worldwide and 90% of the estimated 430,000 new HIV infections among children under 15 occurred in Sub-Saharan Africa (23). The vast majority of HIV transmission in the region occurs between members of a

cohabiting couple during heterosexual intercourse (24). Coupled with a high prevalence of discordance in HIV serostatus, this necessitates the involvement of men in antenatal HIV testing for comprehensive prevention of mother to child transmission of HIV (PMTCT) services (25). While commonly acknowledged as a best practice for the reduction of vertical transmission of HIV, comprehensive couples' testing and counseling programs have yet to be realized in the vast majority of Sub-Saharan Africa. Furthermore, a substantial body of evidence and analysis suggests that family planning education and counseling is more effective when delivered to the couple as a unit, although this practice has yet to be mainstreamed as the standard of care in Sub-Saharan Africa.

Rwanda is somewhat an exception to this trend, as government health clinics there have integrated couples HIV counseling and testing (CVCT) into antenatal care at more than 85% of clinics (15). Despite strides towards normalizing men's involvement in antenatal care, family planning services at the clinic level are attended by women exclusively. An estimated 5615 unplanned pregnancies occur amongst HIV-positive women per year, leading to 1684 unintended HIV-positive births per year in Rwanda (26) . This review will examine the body of knowledge around the intersection of couples' fertility intentions, family planning and HIV in Sub-Saharan Africa. Special attention will be focused on research from Rwanda, where the data from this project comes from, and where high rates of HIV are coupled with high total fertility and low levels of uptake of modern methods of family planning.

Family Planning in the context of the HIV Epidemic

Sub-Saharan Africa is burdened by persistently high fertility rates and the lowest levels of contraceptive use in the world (8, 11, 13, 16, 19). The UN Family Planning Fund (UNFPA)

estimates 222 million women in developing countries experience an unmet need for family planning. In Sub-Saharan Africa in 2012, an estimated 58 million women who wished to end or delay childbearing were using a traditional method or no method at all, accounting for more than 90% of unintended pregnancies in the region (1). Furthermore, up to one third of unplanned pregnancies in Sub-Saharan Africa occur amongst women who are currently using a modern method of contraception but experience challenges to using it consistently and effectively (11).

Much of the recent growth in modern contraceptive use in Sub-Saharan Africa is a result of increased use of condoms, oral contraceptives and injectable contraceptives. These short-term or user dependent methods are relied upon heavily because of their availability in public sector family planning clinics and relative ease of delivery (27). Such methods require consistent daily or quarterly action to be effective, such as the oral contraceptive pill, injectable contraceptives or condoms. A nationally-representative sample of US women found high rates of dissatisfaction and inconsistent use of these methods; additionally 61% of condom users and 38% of oral contraceptive pill users report inconsistent use (28). While condoms are a highly effective method for preventing the transmission of HIV (when used correctly and consistently), they are unreliable as a method of family planning (3, 14).

In Sub-Saharan Africa, HIV-positive women are often counseled to utilize condoms as a means of preventing pregnancy and HIV transmission (14-16). A cross-sectional study of postpartum women in Swaziland found that HIV-positive women were more likely to report a mistimed pregnancy and to be using condoms for contraception than HIV-negative women, although the rates of mistimed/unintended pregnancy were very high overall amongst users of short-term methods (16). According to nationally-representative surveys of clinicians in South Africa and Zimbabwe, the majority of clinics do not offer LARC methods, and fewer than 30%

of clinicians understand their suitability for women who are unmarried, nulliparous or HIV-positive (15). While LARC availability may vary by country, provider-level misconceptions are likely pervasive throughout the region.

US-based studies show that one in eight users of short-term contraceptive methods will have a contraceptive failure in the first year of use, and that the risk of contraceptive failure among users of the oral contraceptive pill and other hormonal methods was 20 times that of long-acting reversible contraceptive methods (3). This explains, in part, the ubiquitous reference to contraceptive effectiveness in terms of "perfect use" versus "typical use" (29). Most evaluations of contraceptive reliability are carried out in developed countries where many supply-side contraceptive barriers don't exist, such as the insufficient healthcare infrastructure, inadequate and unreliable contraceptive supply, and limitations on access to services that can be observed in Sub-Saharan Africa (13, 19). A Zambia-based cohort study of HIV-positive couples showed over 20% of oral contraceptive pill users and 26% of condom users became pregnant at some point during follow-up (11). These findings are exceptional in a research setting in which method provision and consultation were provided free of charge, on a regular basis, a standard of care that is not available to most couples in Zambia. The high rate of pregnancy amongst contraceptive users suggests that levels of effectiveness for user-dependent methods are even lower in Sub-Saharan Africa, where demand-side issues are exacerbated by social, cultural and economic barriers to family planning.

The prevention of unplanned pregnancy amongst HIV-positive women is one of four key strategies that comprise PMTCT, although it has received considerably less attention than the other aims (including PMTCT interventions and preventing HIV infection among people of childbearing age). The nature of HIV and other high-prevalence STI's necessitates the testing

and treatment of both sexual partners to be effective and prevent reinfection (30). Numerous studies and program evaluations cite the need for increased information on men and increased integration of family planning and sexual/reproductive health services, some to the extent of advocating for the integration of HIV/STI screening with family planning counseling sessions for couples (4, 7, 14, 18, 20, 29, 31, 32) . Not only is this strategy very cost-effective compared to other efforts to prevent vertical transmission of HIV, the integration of HIV and STI testing and treatment into family planning programs allows for access to cohabiting couples of childbearing age (a high-risk group) and can contribute pregnancy-related morbidity and mortality amongst HIV positive women and their babies (6, 30).

There are many factors that contribute to fertility intentions, decisions around family size and family planning choices for people living with HIV (PLWHIV); these may evolve with increasing availability of antiretroviral therapy, PMTCT programming, and a decrease in stigma around fertility in this population. Common concerns among HIV-positive women and couples who wish to conceive include the risk of mother-to-child transmission, the impact of pregnancy and breastfeeding on health status, social stigma and having the strength and longevity to provide for the child (20, 33). Several studies of fertility intentions among PLWHIV cite knowledge of positive HIV-status with a desire to end childbearing. This was the case in cross sectional studies of HIV positive and negative women in Northern Malawi and Rwanda, although HIV status was also associated with uptake of modern contraceptives in Rwanda, whereas in Malawi it was not (15, 20).

Even when HIV-affected couples do choose to use a modern family planning method, they are frequently counseled towards condom use, unreliable as a contraceptive. Side effects are a concern for any woman or couple seeking a new method of family planning, but women and

couples living with HIV may have elevated concerns about its impact on their health status (14). Misinformation on the side effects and contraindications of hormonal contraceptives and the IUD on women living with HIV are prevalent among patients and providers (6, 16, 19, 34). Conclusive evidence on the effect of ART on fertility intentions in Sub-Saharan Africa is also lacking: research from Uganda and South Africa observed that women on ART were more likely to desire more children and that desires increased with duration on therapy, while other studies showed no such impact of ART (18, 35, 36).

As the population of young PLWHIV grows in Sub-Saharan Africa, where childbearing is socially desirable, more research is needed into the myriad of factors that influence fertility intentions and family planning in this group. Providers need sensitization as to the clinical guidelines for more effective contraceptive methods, including LARC and the importance of discussing method side effects in the context of HIV. Finally, few studies have investigated the knowledge and attitudes of PLWHIV and clinicians around dual method use, although a Rwanda-based cohort study observed that HIV-discordant couples using a LARC method reported significantly fewer episodes of unprotected sexual intercourse compared to those using condoms to prevent HIV transmission and pregnancy(11).

Predictors and Barriers to LARC Uptake in Sub-Saharan Africa

Despite the fact that LARC methods are extremely effective at preventing pregnancy in the order of years, their uptake is low in Sub-Saharan Africa, even among women whose stated desire is to end childbearing entirely or for more than three years (1, 8, 16, 34, 37). Barriers to uptake of these highly-effective methods include supply-side issues such as method stock-outs and the

absence of qualified providers or necessary clinic infrastructure, as well as misinformation, lack of knowledge and fear of side effects on the demand side. Men's opposition to family planning, or lack of knowledge of their partners' family planning uptake is also widely cited as a barrier to uptake of modern methods (7, 9, 32, 38, 39).

Side effects, ranging from medically accurate concerns to unfounded rumors are pervasive around family planning and LARC methods specifically (6, 15, 32-34). Qualitative research with men and women from Tanzania found fear of legitimate side effects including changes in bleeding and weight, headaches, nausea and dizziness, as well as inaccurate fears of cancer, infertility, birth defects and physical/mental handicaps in children (40). They also found that women had heightened fear of side effects and they viewed their husbands as the gatekeepers for seeking medical care and support for family planning side effects (40).

Inaccurate concerns may be a result of a lack of comprehensive and accurate family planning education, as well as fear of previously unknown methods, and can be exacerbated by positive HIV status (14). Several studies have observed the prevalence of clandestine contraceptive use in Sub-Saharan Africa (11, 40). Side effects are of particular concern for women seeking contraceptives without the knowledge or approval of their male partners. In a study of contraceptive discontinuation amongst Egyptian women, IUD-users were less likely to discontinue use if they reported their husband's knowledge of family planning initiation (9). Increased educational efforts for men and women could help couples understand the range and severity of side effects, and the relative merits of various methods in terms of reliability and side effects, leading to increased rates of method satisfaction and continuation (12). While education is crucial, it is important to note that knowledge of family planning is not sufficient to bring

about uptake in the context of socio-cultural and epidemiological factors that influence reproductive behaviors (14, 15).

A study of fertility goal-based counseling and family planning provision in Rwanda and Zambia found a woman's younger age and HIV-positive status were predictors of LARC uptake, and that they chose the contraceptive implant more often than the IUD (13). Egyptian IUD users also tended to be younger in an examination of family planning uptake (9). A cross-sectional study of South African women found HIV-positive status was associated with interest in future IUD use, although only a small minority reported receiving information about it during family planning counseling (34). A study of women seeking family planning in a hospital in Ghana observed an association between higher parity, and the current use of no modern contraceptive method with LARC uptake (5). Predictors of LARC uptake in Sub-Saharan Africa vary by country and study setting but they show evidence of popularity amongst HIV positive women and younger multiparous women. Overall, the contraceptive implant is the more widely used LARC method in recent years in the region, which could be partially due to widespread misconceptions around the IUD (19, 27).

Family planning clients, their male partners and their socio-cultural context are not the only barriers to LARC uptake; provider-related factors influence method selection from the policy-level down to individual-level guidance and interaction in the counseling session (41). Research amongst American women using contraceptives showed that dissatisfaction with one's clinician or method, and not having a regular clinician was associated with both method discontinuation and inconsistent method use (28). Even when a family planning client is satisfied with their clinician and receive counseling on the full range of family planning options, shortages of trained staff and clinic infrastructure may keep LARC out of the range of options for many

Sub-Saharan African couples (8, 16). Multiple studies have demonstrated an unmet need for LARC options (especially implants) at family planning clinics in Sub-Saharan Africa, with pilot-scale capacity strengthening and increased LARC availability associated with substantial increases in uptake (11, 19, 27).

Men in Family Planning

Family planning research has traditionally viewed men as a barrier to the uptake of modern family planning methods and the realizations of women's fertility intentions, but recent efforts have been made to reframe men's involvement in a more positive and constructive manner. In light of the ICPD recommendations regarding men in reproductive health, the knowledge, attitudes and intentions of men have received more attention in recent years (25, 38, 42-44). Research has shown that while men and women tend to be in agreement around objective fertility events such as births and pregnancies, there is a discrepancy in reports of fertility intentions, attitudes towards family planning and use of contraceptive methods (4, 21, 45). This could be evidence of clandestine contraceptive use by women, as well as an indication of differing perspectives on contraceptive use including condoms and withdrawal: regardless, it indicates an ability to get unique insight on this domain from men when assessing the reproductive and contraceptive goals of a couple.

Further research is needed on the interaction of couples' fertility intentions as a predictor of contraceptive use, but several studies have indicated the relative power of the man's intentions in this domain (17, 39). A study of men's and women's fertility intentions in Kenya showed that a woman's desire to end childbearing does not translate into increased contraceptive use, but that use of modern contraceptives is highest among couples in which both want to end childbearing

(38). This echoes the findings of a meta-analysis of fertility analyses from 18 developing countries: contraception is highest among couples who agree they want no more children and in cases of disagreement, men's preferences had more impact on contraceptive use at lower parities (7, 46). In an Ethiopian study of married couples, modern family planning use was associated with reports of having discussed fertility intentions together, but not with knowledge of family planning methods, which was relatively high overall (47). Fertility desires among both members of a couple have been set forth of determinants of health-seeking behavior and familial support that can impact a child's health and wellbeing (48).

Conclusion

By necessity the domains of LARC uptake, a couple's fertility intentions and HIV are intimately linked and overlapping, with the couple as the unit of action. The reproductive and contraceptive experiences of couples living in Sub-Saharan Africa are tied with a couple's ability to communicate and impacted by their knowledge of their respective serostatuses. This acknowledgement is the foundation for programming that addresses couples as a dyad in services around HIV, other STIs, family planning and reproductive health. Studies observe a knowledge deficit among Sub-Saharan African men in these domains (40, 49). While women have an increased presence in healthcare settings, and more access to accurate information from providers, men tend rely more heavily on word-of-mouth and the media for these facts. Considering the relative power men have over reproductive decision-making in the region, educational and research efforts targeting men should be prioritized so that fully informed decisions can be made at the household level (17).

The integration of CVCT with fertility goal-based couple's family planning counseling has promise for facilitating communication and action around fertility goals, family planning and the reduction of horizontal and vertical HIV transmission. Several frameworks have been set forth to describe the feasibility and benefits of such integration (4, 29, 30). In terms of family planning, men could assist in consistent method adherence and support women in dealing with side effects. The integration of CVCT with family planning counseling would give individuals a safe place to disclose results and strategize HIV transmission prevention. Further research and pilot-scale implementation of this integrated approach is necessary to explore how it would be received and implemented in Sub-Saharan Africa.

CHAPTER 3: Manuscript

Knowledge, Attitudes and Practices of LARC Methods:

A Survey of Postpartum Kigali Couples

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Abstract

Introduction: Couples Voluntary Counseling and Testing (CVCT) for pregnant couples has been integrated into PMTCT programs at the majority of Rwanda clinics. With a newly emerging emphasis on couple-centered health programming in Rwanda, understanding couples' knowledge, attitudes and practices around family planning and LARC in particular can contribute to better family planning programming and the provision of methods in keeping with a couple's fertility intentions.

Methods and Materials: 117 couples were surveyed from 13 government health centers during July and August 2013. Separately, men and women were asked questions about their fertility intentions (number of children and timing) and the intentions of their partners. Together, couples were questioned about demographic characteristics, family planning use and perceptions, safer conception and LARC-specific concerns.

Results: There is a high level of concordance between couples in regards to their personal fertility desires, and accurate predictions of the desires of their partners. High levels of modern contraceptive use were observed, predominantly short term methods. There was a significant difference between Catholic and non-Catholic clinic clients in terms of modern contraceptive uptake.

Discussion: The majority of couples defined as LARC-eligible by their stated fertility desires expressed a willingness to consider LARC methods for their future contraceptive needs. Many participants expressed concerns about the side effects of LARC methods, with high levels of medically inaccurate concerns, especially about the IUD.

Conclusion: The results of this couples-based survey suggest the need for data on the integration of evidence-based family planning counseling and education for men and women as the unit of reproductive decision-making.

Contribution of Student: I designed the survey instrument used in conducting this research with help from the RZHRG team in Atlanta and Kigali, with particular guidance from RZHRG Principal Investigator Dr. Susan Allen. PSF nurse-counselors assisted in the process of survey validation, recruitment and administration. In collaboration with PSF data technicians, I created a Microsoft Access database and data-entered the completed surveys. I performed all data analysis and wrote the manuscript.

1. Introduction

Sub-Saharan Africa has higher fertility rates than any region in the world, with an overall Total Fertility Rate (TFR) of 5.1 children per woman (1). Approximately 24% of married women in Sub-Saharan Africa have an unmet need for family planning, defined as the desire to avoid pregnancy for the next two or more years and not utilizing a modern method of contraception (2). Various factors limit the provision of modern contraceptive methods, especially long-acting reversible methods like the IUD and the contraceptive implant, including knowledge and acceptability; education levels, HIV status; availability, accessibility and cost; provider competency and the support of male partners (4-9).

Rwanda, the most densely populated country in Africa, has made substantial progress in the provision and uptake of family planning in recent years. The Rwanda Demographic and Health Survey (DHS) cites the decrease from a 38% unmet family planning need amongst married women in 2005 to a 19% unmet need in 2010 (10). As of 2010, 92% of contraceptive users access their family planning method from the public sector, an increase from 73% in 2005. This makes public-sector health centers increasingly representative loci to research family planning in Rwanda from various perspectives. In Kigali, Rwanda's capital, public health center oversight is split between the Rwanda Ministry of Health and the Archdiocese of Kigali. While modern family planning methods outside of condoms are not provided in Catholic clinics, these methods are systematically available at nearby tertiary health posts in Kigali, with expanding availability elsewhere in the country.

Various studies have cited significantly higher rates of contraceptive failure amongst users of short term methods (including condoms, oral contraceptive pills and injectable

contraceptives) than users of long-acting reversible contraceptive (LARC) methods (IUDs and contraceptive implants), largely because they are user-independent and highly reliable (3, 12). LARC contraceptive methods are increasingly offered free of charge at health centers across Rwanda with especially high rates of availability in Kigali. Despite increasing availability, uptake of the IUD and contraceptive implant in Rwandan women is 0.5% and 6.1% respectively (10).

Although family planning information is integrated into couples voluntary counseling and testing (CVCT) and prevention of mother-to-child transmission (PMTCT) programs which are received by up to 90% of pregnant couples, uptake of modern contraceptive methods amongst married women in Rwanda is 45% (10, 15). With a newly emerging emphasis on couple-centered health programming in Rwanda, understanding couples' knowledge, attitudes and practices around family planning and LARC in particular can contribute to better programming around family planning and the provision of methods in keeping with a couple's fertility intentions. This survey of 116 Kigali couples recruited from infant vaccination clinics serves as foundational research for the development and pilot implementation of Couples Family Planning Counseling (CFPC) services, integrated with the provision of CVCT.

2. Methods and Materials

2.1 The Rwanda Zambia HIV Research Group

The Rwanda Zambia HIV Research Group (RZHRG) based at Emory University in Atlanta, Georgia has been performing HIV research and programming in Rwanda since 1986. RZHRG pioneered the practice of CVCT in Sub-Saharan Africa, now a standard component of the first antenatal clinic visit in Rwanda government health centers. Projet San Francisco (PSF) is the

RZHRG site in Kigali, Rwanda through which more than 17,000 couples have received CVCT services since 1988, with many also receiving STI and HIV-related services. In addition to providing onsite CVCT and family planning services to couples on weekends, PSF nurse-counselors provide mentorship in government clinics, strengthening local CVCT provision and family planning capacity, especially in regards to LARC methods. Although decisions about fertility intentions and contraceptive uptake/adherence are made by couples, clinic-based family planning counseling is delivered to women individually, without systematic consideration of the couple's fertility intentions and relative serostatuses.

PSF is currently in the preliminary research stage of a longitudinal investigation of barriers to integrating fertility intention-based, serostatus-specific family planning counseling to couples in Rwanda. In addition to a mixed-methods exploration of the views and capacity of stakeholders and clinicians, this NIH-funded project entails the pilot provision of integrated CVCT and couple's family planning counseling (CFPC) for 1200 Kigali couples of all serostatus combinations. CVCT and CFPC will be provided to these couples, recruited from infant vaccine clinics, in addition to family planning methods and counseling on safer conception, with follow-up assessments over three years. This survey served as a pilot implementation of the recruitment of couples from infant vaccine clinics and contributes to the development of CFPC messaging by exploring couple's perspective on contraceptives, particularly LARC, with the goal of improving the quality and relevance of CFPC sessions.

2.2 Study Population

PSF nurse counselors distributed oral and paper invitations to participate in the KAP survey to women attending infant vaccination services at 13 government health centers between July 9 and August 9, 2013. Counselors were given 10 invitations per survey administration date and asked to distribute them at their discretion to women attending infant vaccine services. Invitation recipients were asked to return at a specific time during the upcoming weekend with their male partner to be surveyed. The result of 150 distributed invitations was a purposive sample of 117 couples from all 13 clinics (4 Catholic, and 9 non-Catholic) in which surveys took place. Couples had to be present together in order to complete the survey. One couple's survey was left out of analysis as the woman was already pregnant (n=116).

2.3 Data collection

The questionnaire was developed with support from RZHRG/Emory staff, based on formative qualitative research. It was translated from English to Kinyarwanda and validated by PSF staff in Kigali. PSF nurse-counselors were trained in the administration of the questionnaire including skip patterns, quality control and standardized notation. In turn, they delivered this information to select government clinic staff, who served as survey administration assistants at their respective clinics.

Separately, men and women were asked questions about their fertility intentions (number of children and timing) and the intentions of their partners. Together, couples were questioned about demographic characteristics, family planning use and perceptions, safer conception and LARC-specific concerns. Education was recorded as the highest level attained by either member of a couple, and couples were asked to spontaneously list specific concerns they would have

about using the IUD or implant, to be categorized by surveyors. A subset of 94 of 116 couples were classified as potential LARC candidates, defined as a couple in which both the man and the woman would like to end fertility or wait 3 or more years to conceive. A focused analysis of LARC perceptions and barriers was carried out on this subset of couples. For analysis purposes, modern method use is defined as the use of a non-traditional family planning method including condoms, hormonal methods (oral contraceptives or injectables) and LARC methods.

2.4 Data analysis

Data was entered in Microsoft Access (2010 edition) onsite at PSF as the surveys were completed. Surveys were enumerated and cross-tabulated using SAS version 9.3. The Chi-square test for association between variables was employed using a p value <0.05 as the threshold for significance.

2.5 Ethical considerations

Participants signed written informed consent that was read aloud to participants in Kinyarwanda. The PSF IRB is Republique Du Rwanda, National Ethics Committee/Comite National D'ethique (Human Research Protection assurance: FWA00012684).

Results

Demographics

Almost all participants reported speaking Kinyarwanda at home and all couples reported having at least one child, observations to be expected from a group recruited while seeking infant vaccination services at government clinics, which are intended for infants through 11 months of age (50). A slight majority of the couples surveyed classified their primary residence as rural

(54%, 63 couples) rather than urban, and participants had an average of 2.8 children (including all children currently living in their residence). More than half of all couples cited primary school as the highest level of education attained by either the man or woman, with most couples claiming to make between 20,000-50,000 RWF (approximately $30-$74 US) per month. This is significantly lower than the per-capita GDP of approximately 85,000 RWF ($125 US) per month(51). Demographic characteristics are outlined in detail, by modern contraceptive uptake in Table 1.

Family Planning

Knowledge of STI prevention was highly accurate in this group, with most couples correctly identifying condoms as the most effective way to prevent STI transmission (Fig. 6). There were considerably more varied results when couples were asked about effective pregnancy prevention; notably, injectable contraceptives were classified as extremely effective, while the IUD was ranked lower than male/female condoms (Fig. 5). When asked the most important considerations they face when selecting a contraceptive method, the most common considerations cited were "reliability for preventing pregnancy", "side effects and health risks", and "ease of practice/adherence," in that order (Fig. 4). Sixty-six percent of couples (77) were currently using a modern form of contraception; participants recruited from Catholic clinics were significantly less likely to report use of a modern method (Table 5). Only 28% (32) of couples reported currently using a LARC method, despite the fact that 81% (94) of couples expressed a desire to end fertility or space childbearing for 3 years or more. Of these LARC candidate couples, 55% (64) report using a modern method of contraception with the majority (46, 72%) using short term, user-dependent methods (Table 2; Fig. 1).

Sixty-five percent of those who report the current use of any family planning method (52 couples) state they experience no problems using their chosen method effectively. Among the 25 problems cited, the most common were “side effects”, “transportation to the clinic”, and “spontaneity”. Of those who cited side effects as an issue, the majority (71%) reported using a LARC method; conversely of those who cited transportation to the clinic as an issue, the majority (83%) reported using a short-term user dependent method. The most important considerations for couples seeking family planning included reliability, side effects and ease of adherence, in that order among modern family planning users. Non-users of modern methods cited side effects more often than reliability (Fig. 4).

Couples’ Fertility Desires

There is a high level of concordance between couples in regards to their personal fertility desires, as well as highly accurate predictions of the desires of their partners. This finding is substantiated by the fact that when asked independently, 74% of women and 77% of men reported discussing their fertility goals with their partner “a lot”. Ninety seven (86%) couples report the same personal fertility desires as their partners, while 74% of women and 66% of men perceive their partner’s desires accurately (Table 3).

LARC perceptions

Current use of a modern family planning method was significantly associated with a willingness to consider LARC uptake in the future, but not with other factors including women’s individual reports of discussing fertility with their partners “a lot” (Table 5). IUD and Implant-specific concerns were elicited from couples and coded based on the medical accuracy of the concern stated. They are presented in Tables 4 and 5 by the LARC eligibility and current modern

contraceptive use. Legitimacy of LARC concerns did not vary significantly by LARC eligibility, and misconceptions were high for both methods. There were substantially more medically inaccurate concerns, and more overall concerns stated about the IUD than the contraceptive implant (Tables 4 and 5).

Discussion

Amongst survey participants, LARC method use and modern method use in general was highest amongst couples who agreed on their desire to end or limit fertility for the next three years or more. This is in agreement with multiple studies that have found higher rates of contraceptive use and adherence among couples that agree to end or delay fertility (7, 9, 38, 47). As questions about contraceptive method uptake were delivered to the man and woman together, there could be no assessment of clandestine contraceptive use, though its prevalence has been suggested by other Rwanda-based and regional studies (11, 18, 21).

The significance of clinic type (Catholic versus non-Catholic) on modern family planning uptake suggests that although tertiary health posts make modern methods available, they may not sufficiently meet the unmet need for family planning among those who attend Catholic clinics and it is unclear to what extent nurses in Catholic clinics refer clients to the health post per clinic protocol. This could also speak to the importance of a provider's perspective and values on family planning method selection. It also takes a higher level of resolve and self-efficacy to go to a second location for the purpose of accessing family planning, which could have an effect on uptake (52). More research on differences in service delivery and education at Catholic and Non-Catholic clinics in Kigali is needed to properly understand this finding.

Couples had exceptionally high levels of agreement on fertility intentions, even beyond their knowledge, as both men and women perceived more disagreement over fertility intentions than there was in actuality. This may speak to the benefits of the increased involvement of men in antenatal care through CVCT, where some family planning education is delivered to couples. Seventy-four and 78% of women and men respectively reported discussing their fertility intentions with their partner "a lot." High levels of agreement on fertility intentions may be the result of high levels of communication, socio-cultural and economic factors.

While couples expressed high levels of agreement around fertility desires and high levels of modern method uptake in general compared to national averages (66% in our sample versus 45% overall according to DHS), the reliability of their method choice was not reflective of their stated fertility desires (10). A high proportion of LARC candidates currently use short-term methods, traditional methods or none at all which echoes the findings of many studies from Sub-Saharan Africa which indicate low overall contraceptive rates and method choice not consistent with fertility intentions (15, 16, 19, 27). A limitation of this study was the inability to disaggregate method non-use from the use of lactational amenorrhea method (LAM), as time-since-delivery was not captured. It is unclear the extent to which return-to-fertility and the timely need for contraception is explained in the context of post-natal care, as other Rwanda based studies have found misconceptions around return-to-fertility and menopause in postpartum populations (16, 17).

Survey results indicate a high level of concern in this population around side effects, which has been observed in Rwanda-based studies before (11). While the IUD is shown to be as safe and effective as the implant for women in all reproductive life stages, respondents ranked it below condoms in terms of reliability to prevent pregnancy and frequently cited reliability as a

concern about the IUD (28). IUD-specific misinformation has been documented by other studies amongst clients and providers, highlighting the need for well-informed family planning education and the provision of a full range of contraceptive options (8, 34, 40, 53, 54). When asked about problems they experienced with family planning, the majority of couples who reported side effects as a problem were LARC users. This may have to do with the fact that surveyed couples are relatively new or returning users of LARC methods, and side effects (especially menstrual changes) are most pronounced in the first several months after uptake (9).

Limitations to this study included the non-random sample of infant vaccine service attendees and their male partners. Respondents self-selected in that they decided whether to return to the clinic for the scheduled survey; some women who received invitations and expressed interest in participation may not have been able to convince their male partner to participate. This is an important factor when gender attitudes have been positively linked to contraceptive use (31). Social desirability bias is a factor as surveys were delivered by clinicians at health clinics. Language barriers prevented uniform trainings on survey administration; as a result it is not clear whether surveys were administered in an entirely uniform manner. Finally, several demographic variables should have been asked separately to men and women, especially the highest level of education. A woman's education level has been independently associated with contraceptive use in some studies (28, 34).

Conclusion

Couples in this sample had very high concordance with one another in terms of fertility intentions. A majority of couples defined as LARC-eligible by their fertility intentions report a willingness to utilize LARC for future planning needs, but medically- accurate and inaccurate concerns about these methods are widespread. Concerns around LARC were more abundant for

the IUD than the implant, many couples questioned the reliability of the IUD for preventing pregnancy. While the majority of couples surveyed possessed accurate information on preventing STI transmission, perceptions were less accurate in terms of the most effective methods for pregnancy prevention. These findings all speak to a need for increased family planning education for men and women, and the opportunity for men and women to seek couple's family planning counseling together. Couples seem receptive to increased family planning education efforts, as almost all surveyed participants agreed that couples family planning counseling would be beneficial for them.

Table 1.

	Use of Modern Contraceptive Methods by Demographic Characteristics						
	Yes	**%**	**No**	**%**	**Total**	%	**p value**
Residence Characteristic							
Rural/Village	42	56%	21	51%	63	54%	
Urban/Town	32	43%	19	46%	51	44%	
Missing	1	1%	1	2%	2	2%	0.6627
Highest Level of Education							
Primary or None	51	68%	24	59%	75	65%	
Secondary and Higher	22	29%	17	41%	39	34%	
Missing	2	3%	0	0%	2	2%	0.2217
Household Income (monthly)							
Less than 20,000 RWF ($29.40 US)	19	26%	10	25%	29	25%	
20,000-50,000 RWF ($29.40- $73.60 US)	26	36%	11	28%	37	32%	
50,000+ RWF ($73.60+ US)	28	38%	19	48%	47	41%	
Missing/Refused	2		1		3	3%	0.5916
Number of children living in the Household							
2 or fewer children	42	57%	22	54%	64	56%	

3 children		13	18%	9	22%	22	19%	
4 or more children		18	24%	10	24%	28	24%	
Missing		1	1%	0	0%	1	1%	0.8588

Table 2.

Current Contraceptive Use		Fertility Desires					
		Both want no more or to wait 3+ years (%)		One or both want a child in <3 years		Total Couples	**% of total couples**
LARC methods		**18**	**19%**	**7**	**33%**	25	**22%**
IUD		6				6	
Implant		12				19	
Short-Term/User Dependent Methods		**46**	**49%**	**6**	**29%**	**52**	**45%**
Condoms		13				15	
Oral Contraceptive Pills		14				15	
Injectable Contraceptives		19				22	
Periodic Abstinence/No Method		**30**	**32%**	**8**	**38%**	**38**	**33%**
Periodic Abstinence		4				5	
No Method		26				33	
Total		**94**		**21**		**115**	

Table 3.

	F wants					F thinks M wants					
M wants	No more	>=3 years	<3 years	Total (M)		No more	>=3 years	<3 years	Don't Know	Total	
No more	27	4	0	31		24	5	0	1	30	
>=3 years	8	53	7	68	agree	6	53	5	6	70	agree
<3 years	1	6	7	14	77%	1	5	7	1	14	74%
Total (F)	36	63	14	**113**		31	63	12	8	**114**	
M thinks F wants				Total							
No more	20	2	0	22							
>=3 years	10	46	5	61	agree						
<3 years	5	9	9	23	66%						
Don't Know	1	6	0	7							
Total	36	63	14	**113**							

Table 4.

IUD-specific Concern	LARC Candidate				Total	
	YES n=93	%	NO N=23	%		%
Accurate	26	24%	7	27%	33	24%
Inaccurate	47	43%	12	46%	59	44%
Both Accurate/Inaccurate concerns	16	15%	3	12%	19	14%
Other	14	13%	2	8%	16	12%
Don't Know	6	6%	2	8%	8	6%
None	0	0%	0	0%	0	0%
Implant-specific Concern	**LARC Candidate**				**Total**	
	YES n=93	%	NO N=23	%		%
Accurate	31	34%	5	19%	36	27%
Inaccurate	30	33%	9	35%	39	30%
Both Accurate/Inaccurate concerns	12	13%	3	12%	15	11%
Other	8	9%	3	12%	11	8%
Don't Know	9	10%	0	0%	9	7%
None	15		6	23%	21	16%

Table 5.

Consider LARC?	Current User of modern family planning method? YES n=93	%	NO N=23	%	Total	%	p value
Yes (would consider using a LARC method)	71	95%	28	76%	99	88%	
No (would *not* consider using a LARC method)	4	5%	9	24%	13	12%	0.0032
Catholic Clinic?							
Catholic Clinic	17	23%	19	46%	36	31%	
Non-Catholic Clinic	58	77%	22	54%	80	69%	0.0084
Woman report of fertility discussions?							
"A lot"	55	73%	31	78%	86	75%	
"Somewhat" or "Not at All"	20	27%	9	23%	29	25%	0.6241
IUD-Specific Concerns							
Accurate	20	23%	13	27%	33		
Inaccurate	39	45%	20	42%	59		
None/Not Specified	28	32%	15	31%	43		0.8465
Implant-Specific Concerns							
Accurate	22	31%	14	28%	36		
Inaccurate	29	41%	10	20%	39		
None/Not Specified	10	14%	22	44%	32		
Other/Don't Know	10	14%	4	8%	14		0.2196

Figure 1. Current family method use and attitudes towards LARC methods of LARC-eligible couples.

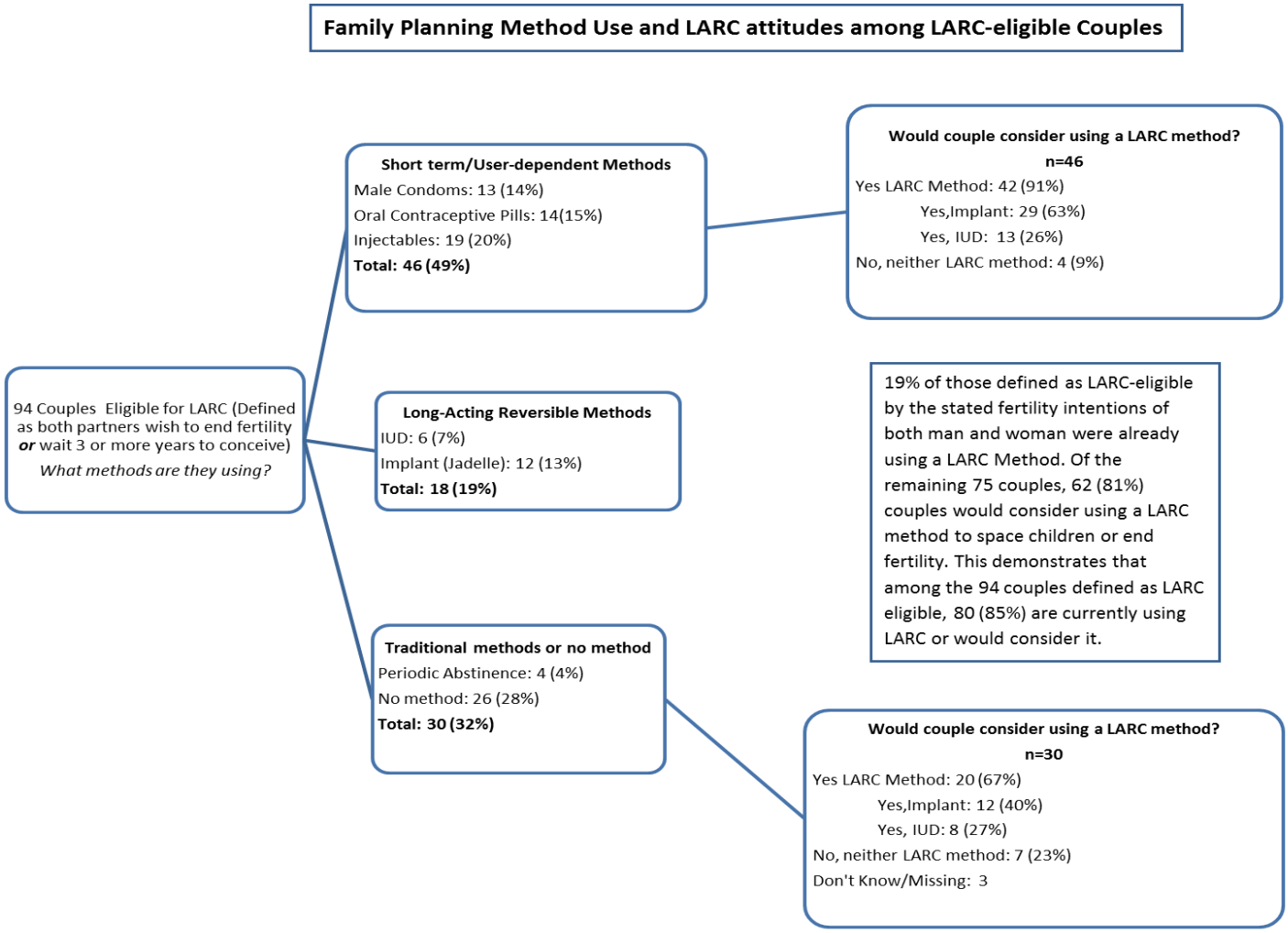


Figure 2.

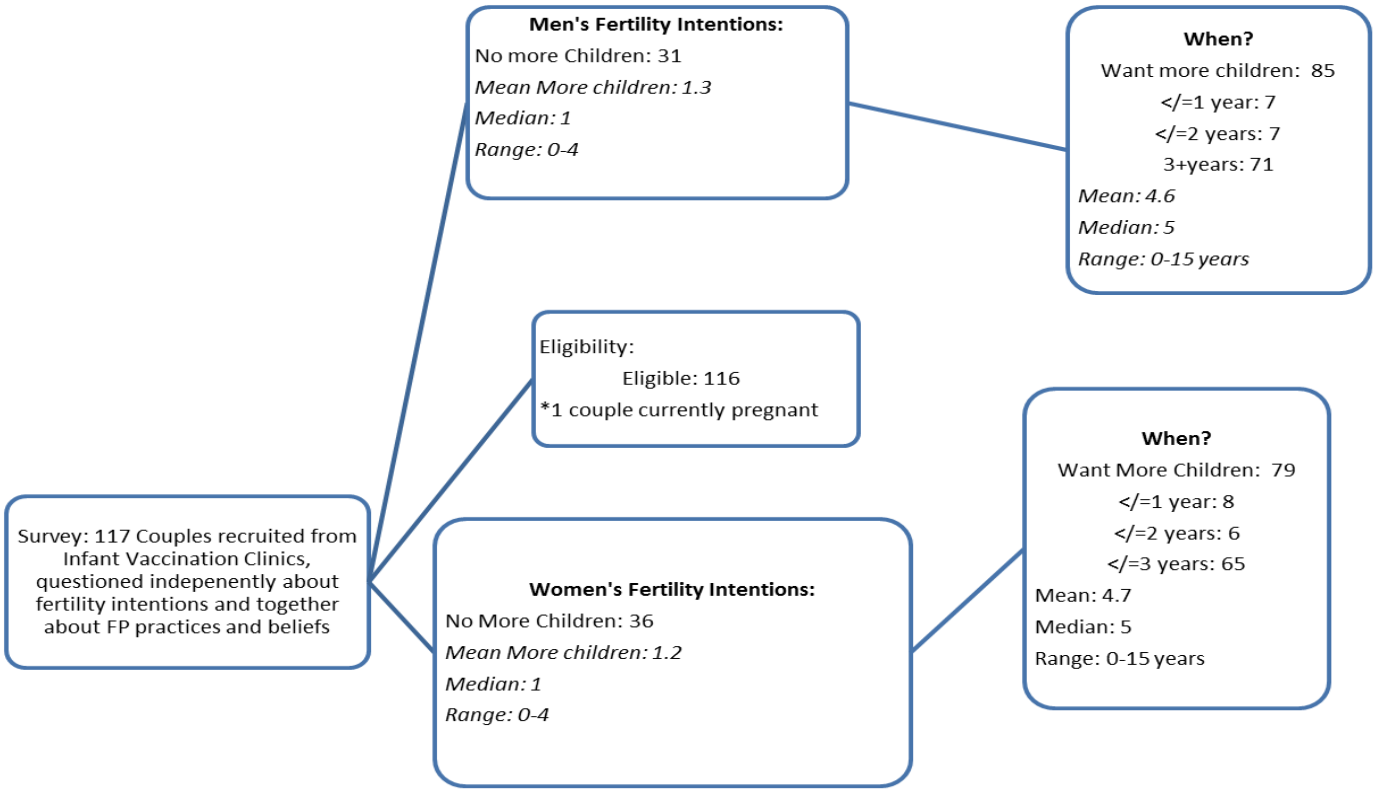

Survey: 117 Couples recruited from Infant Vaccination Clinics, questioned indepenently about fertility intentions and together about FP practices and beliefs
Men's Fertility Intentions:
No more Children: 31
Mean More children: 1.3
Median: 1
Range: 0-4
When?
Want more children: 85
</=1 year: 7
</=2 years: 7
3+years: 71
Mean: 4.6
Median: 5
Range: 0-15 years
Eligibility:
Eligible: 116
*1 couple currently pregnant
Women's Fertility Intentions:
No More Children: 36
Mean More children: 1.2
Median: 1
Range: 0-4
When?
Want More Children: 79
</=1 year: 8
</=2 years: 6
</=3 years: 65
Mean: 4.7
Median: 5
Range: 0-15 years

Figure 3.

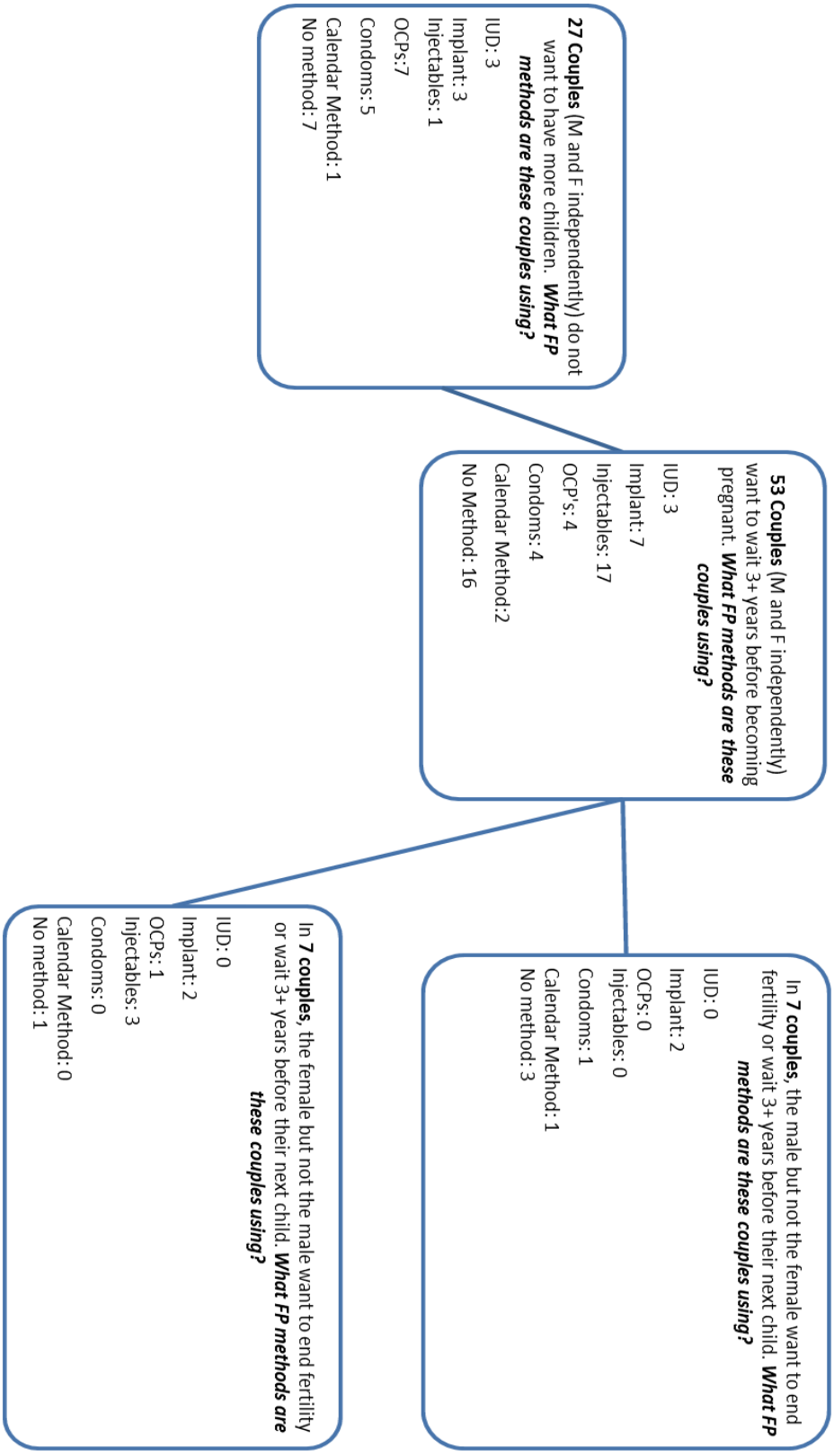

27 Couples (M and F independently) do not want to have more children. ***What FP methods are these couples using?***
IUD: 3
Implant: 3
Injectables: 1
OCPs:7
Condoms: 5
Calendar Method: 1
No method: 7
53 Couples (M and F independently) want to wait 3+ years before becoming pregnant. ***What FP methods are these couples using?***
IUD: 3
Implant: 7
Injectables: 17
OCP's: 4
Condoms: 4
Calendar Method:2
No Method: 16
In **7 couples**, the male but not the female want to end fertility or wait 3+ years before their next child. ***What FP methods are these couples using?***
IUD: 0
Implant: 2
OCPs: 0
Injectables: 0
Condoms: 1
Calendar Method: 1
No method: 3
In **7 couples**, the female but not the male want to end fertility or wait 3+ years before their next child. ***What FP methods are these couples using?***
IUD: 0
Implant: 2
OCPs: 1
Injectables: 3
Condoms: 0
Calendar Method: 0
No method: 1

Figure 4. Couples' concerns when considering a family planning method

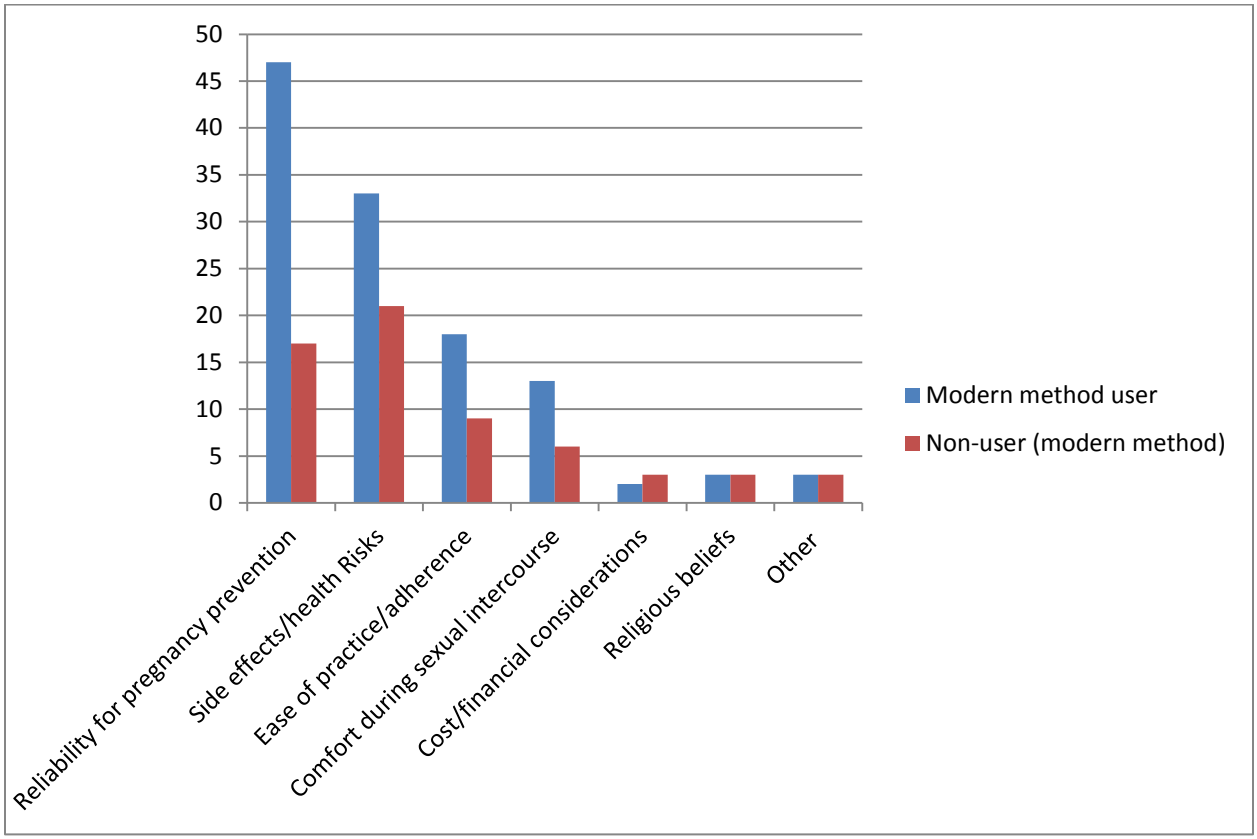


Figure 5. Couples' perceptions of the family planning methods most effective for preventing pregnancy.

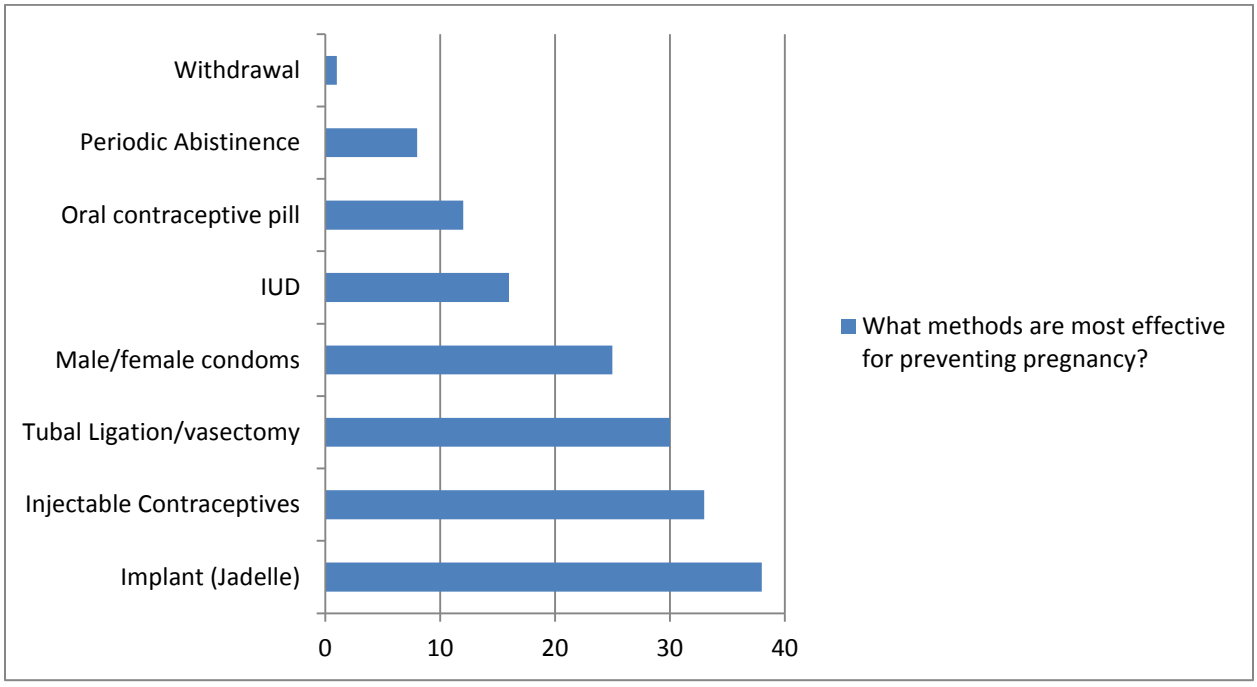
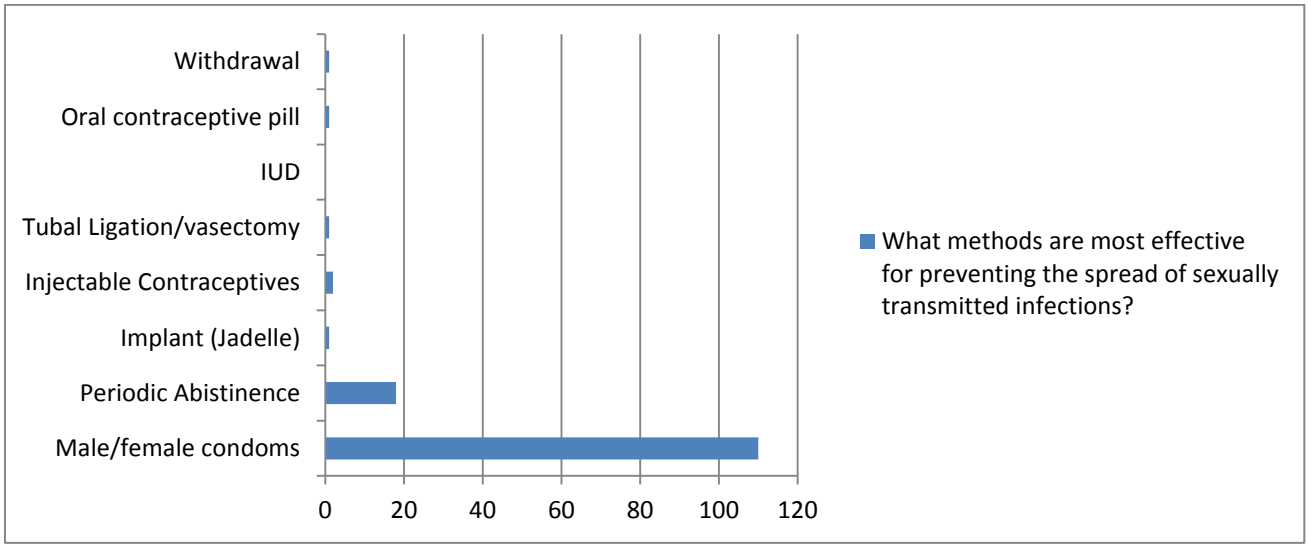


Figure 6. Couples' perceptions of the family planning methods most effective for preventing sexually transmitted infections.



CHAPTER 4: Conclusions and Recommendations

Couples-based reproductive health studies in Sub-Saharan Africa tend to find high levels of agreement between men and women on objective reproductive health events and more disagreement around family planning attitudes and fertility intentions (7, 21). While they were not questioned independently about family planning practice and attitudes, participants in this Kigali-based survey had very high levels of agreement regarding whether or not they wanted to bear children in the next three years. Numbers were small for participants who agreed they wanted to bear children sooner than three years, or in which the man and woman disagreed upon when or whether to bear children (n=21), so meaningful conclusions cannot be drawn from the actions of this group. It is important that family planning programs are culturally competent in the local context; while more research is needed to substantiate this finding, survey participants reported very high levels of communication around their fertility and a near-universal willingness to participate in CFPC.

A very high overall level of modern contraceptive uptake (66%) was observed among study participants, however short-term user dependent methods accounted for the majority of contraceptive use. Paired with the fact that the majority of couples wanted to end fertility or wait three or more years to conceive, the widespread use of these less effective methods suggests a disconnect between fertility intentions and method choice (11, 16). Often, clients are steered towards the methods that providers prefer or have available rather than receiving information about all methods and making an informed decision (41). The Contraceptive Choice Project, a US-based study, demonstrated the merits of providing comprehensive education on the full range of contraceptive methods in order of effectiveness to women of all ages, and found high rates of LARC method adoption as well as method continuation (55). This project has been especially

instrumental in dispelling perceptions of barriers to LARC methods amongst young, nulliparous women and their healthcare providers. Although LARC methods are currently available at most Kigali clinics, the discrepancy between method choice and fertility intentions amongst survey participants demonstrates that such a program of systematic education may be beneficial in this community. It is unclear to what extent Kigali providers understand the suitability of LARC amongst young women, nulliparous women and women with HIV, but misconceptions amongst providers have been outlined in other studies (8) .

There is a significant difference in willingness to consider a LARC method in the future between those who do and do not currently use a modern contraceptive method (Fig 5). This finding is not surprising, as modern method users are more likely to have received counseling from family planning providers on their various contraceptive options. Furthermore, users of short-term, user independent methods are likely acquainted with the challenges of short-term method adherence, such as consistent condom use and taking oral contraceptive pills on schedule. Finally, survey participants who are not currently using modern contraceptive methods may not desire to start for religious or cultural reasons. It is important to note, however that in this population of post-partum couples at different stages post-delivery, some women may be using lactational amenorrhea as a method of family planning. Therefore, a lack of modern method use does not indicate an aversion to modern methods in general among these couples.

In keeping with many studies, the use of a modern family planning method was most common amongst participant couples in which the man and the woman both agreed to end or delay childbearing for three or more years (7, 32, 38). This suggests that efforts to encourage or facilitate couple's discussions of fertility and family planning may be beneficial. In the context of CFPC, trained counselors may help couples productively discuss their desires and make

family planning choices based on common goals. Meanwhile, despite the fact that high levels of agreement about ending or delaying fertility were observed, method choice was not often in concordance with stated fertility desires, this has also been found in many studies in the developing world, and Sub-Saharan Africa specifically (13, 16, 27, 54).

As mentioned previously, LARC methods (IUDs and Implants) are the most effective reversible methods for delaying childbearing for three or more years, but they are under-used in Sub-Saharan Africa due to a myriad of provider and client-centric barriers (1, 3, 12). This study found high levels of inaccurate perceptions of LARC methods, with particularly notable levels of misconception about the IUD. "Fear of side effects" was the second most frequently cited concern by surveyed couples when choosing a contraceptive method (Fig. 4). A high level of concern about side effects was observed in another Rwanda-based study of contraceptive knowledge and attitudes among sero-discordant couples (14).

In addition to inaccurate information about side effects of all LARC methods, couples seemed to suspect the reliability of the IUD for preventing pregnancy and its capacity to cause other deleterious health effects. IUD-specific misconceptions have been observed in other research in the region (40, 54). Such misconceptions speak to a need for an increase in the provision of comprehensive and medically-accurate education on family planning options. By extension, efforts should be made to expand method choice and the capacity to provide LARC methods, so they are increasingly available at all Rwandan health centers. In addition, providers need to be trained on the clinical guidelines of LARC methods so they don't inadvertently perpetuate LARC misinformation (8).

Serostatus information was not collected for participants in this survey, although it can be speculated that the majority of men and women were aware of their serostatus, given the high proportion of couples tested during pregnancy. Studies from Sub-Saharan Africa cite contradictory findings on the association of knowledge of HIV status, fertility intentions, and contraceptive use (11, 16, 33, 35, 36). While some research suggests that HIV diagnosis is linked to a desire to end fertility, others find that with the increasing availability of PMTCT programming and anti-retroviral therapy, the desire to bear children is positively associated with duration on ART. Some studies have found higher levels of modern contraceptive use amongst HIV-positive women, others have found no significant difference in uptake by serostatus (14-16, 20). The high prevalence of condom use amongst people living with HIV as both an HIV transmission and pregnancy prevention method has been well-documented in other research as well (14, 15, 34). Further research is needed to assess the impact of serostatus on fertility intentions, and the respective impact of diagnosis on men and women in the context of family planning.

A substantial number of Kigali health centers are under the control of the Kigali Archdiocese. Service provision at these health centers is generally identical to those run by the Rwanda Ministry of Health outside of the family planning department. Clients of Catholic health centers are counseled onsite on periodic abstinence (also known as the Standard Days method), and provided with condoms. For family planning needs beyond these methods, they are referred to nearby tertiary health posts, designed to supplement the family planning needs of Catholic clinic clients.

Our survey found a significant difference between levels of uptake modern contraceptive methods amongst Catholic and non-Catholic health center clients (Fig. 5). This could be a result

of the predominant views and orientations of clinicians and clients in these contexts, although the routine presence of PSF mentors (who are knowledgeable and experienced in family planning and LARC method provision) in Catholic clinics may shift the dynamic substantially. The number of Catholic clinic clients in this sample was low (n=36), but the findings may speak to an unmet family planning need in this population. Our access to this population was further limited by permission of clinic in-charges to host survey administration days on the weekends.

While tertiary health posts are designed to be convenient and accessible, it still takes a greater level of resolve and self-efficacy to visit a second stand-alone location for one's family planning needs (52). Additionally, the integration of family planning into CVCT, antenatal care and PMTCT programming in non-Catholic clinics may provide meaningful linkages between relevant services, sometimes provided by the same clinicians. More research is needed to understand how service availability and provision differ between clinics, and to assess the functionality of the referral system for tertiary clinics. If it is feasible and acceptable, tertiary clinics could increase community education, advocacy and collaboration with health centers in the family planning realm.

Our findings suggest a widespread desire for more information on family planning in the postpartum Kigali community. The need is elevated for men who have been traditionally left out of these conversations, despite recent progress in male involvement around reproductive health. High levels of reported communication and concordance between couples on the subject of fertility intentions substantiate the utility and appropriateness of couple's family planning counseling. Furthermore, the results of this couples-based survey suggest the timeliness of further serostatus-specific longitudinal research on family planning amongst postpartum Kigali couples, which PSF is preparing to undergo. Selection of participating couples from urban, rural,

Catholic and non-Catholic clinics will determine the significance some of the trends observed amongst couples from this sample.

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Appendix 1. Men's and Women's Individual Questionnaire.

Counselor Initials:___ [COUPLESID]
Clinic:_____ [CLINIC]
Date: _____ [DAY/MONTH/YEAR]

[TIMESTART] Time Interview Started:__:__
[TIMEFIN] Time Interview Completed: __:__
[COUNSINI] Couples ID: _____

Rwanda Zambia HIV Research Group
LARC Couples Survey: Summer 2013
Women

Amabwiriza ku uwubaza:

- Ibi bibazo bigenewe gusa umugabo/umugore babana.
- Hari ibibazo bigenewe kubazwa umwe/umwe mu bashakanye imbere yo kubahuriza hamwe.
- Shaka ahantu h 'ibanga ubariza ku buri wese ku buryo yisanzura
- Abashakanye bakagombye kwemeranywaho ku bisubizo batanga nk'umuryango uburyo bwose babishoboye.Igisubizo kirenze kimwe kirashoboka.
- Andika mu mwanya wateguwe"NOTE"uko abashakanye bageze ku mwanzuro w'igisubizo.
- Ntusome ibisubizo keretse aho bisabwa kandi babyanditse,tanga akanya gahagije kandi ubashishikarize kuvuga uko babyumva.
- Hitamo ibisubizo bijyanye nibyo abashakanye bashubije
- Shyiraho akaziga ku mubare uri mu tuzitiro cyangwa kuri yego /Oya bihuye n'igisubizo cyatanzwe.

Interview Instructions:
Couples should be separated and asked the first "Individual" questions separately before carrying out the rest of the survey with the couple together.
Please find a private area to ask the "Individual" questions to each partner, so that their spouse cannot hear their answers.
Please keep spouse from reading their partner's answers to the "Individual" Questions.
Please use the "Notes" section to record information about how the couple reached an agreement on specific questions.
Surveys are to be administered to male/female couples only.
Couples should come to an agreement on each response to the best of their ability in the couples section of the survey. More than answer is also possible for most questions.
Do not read the couples their answer options unless instructed. If answer choices are meant to be read, the question will say this. Otherwise, please allow the couple to answer with their own ideas.
Select the response option that best fits the couple's answer.
Circle the [bracketed box] or Yes/No option next to the best answer.

IIBIBAZO BIGENEWE UMUNTU UMWE /UMWE
Hari ibibazo ngiye kukubaza wenyine mbere yuko dukomezanya na mugenzi wawe.
Individual Section
I will ask you several questions independently before bringing you together to complete the survey with your partner.

Individual 1. Individual 1.Wifuza kubyara abandi bana bangahe na mugenzi wawe mubana? How many more children would you like to have with your spouse? [WMORECHLD]	_____

Individual 2. Umugabo)Ni ryari wifuza ko madamu wawe yakwongera gusama? When would you like to become pregnant with your next child? [WYRTILPREG]	_____
Individual 3. Utekereza ko mugenzi wawe yifuza abandi abana bangahe? How many more children do you think your partner would like to have? [WPARTMORECHLD]	_____
Individual 4. Ni ryari madamu wawe yifuza kwongera kubyara undi mwana? When would your partner like you to become pregnant with your next child? [WPARTYRTILPREG]	_____
Individual 5. Ni kangahe mwaganiriye kuri gahunda z'imyororokere? How much have you discussed your fertility goals with your partner? [WMUCHDISCFERT]	Kenshi [1] A lot Gake [2] Somewhat Nta na rimwe [3] Not at all
Individual 6. Wemeranya cyangwa ntiwemeranywa n'iyi nteruro:"kuboneza urubyaro ni uruhare rw'abagore mu mibanire y'abashakanye." Agree or disagree: "Family planning is the responsibility of women in sexual relationships." [WFPWOMSRESP]	Ndabyemera [1] Agree Simbyemera [2] Disagree Ntacyo mbiziho [3] Don't know

Appendix 2. Couple's Questionnnaire

Counselor Initials:___ [COUPLESID]
Clinic:_____ [CLINIC]
Date: _____ [DAY/MONTH/YEAR]

[TIMESTART] Time Interview Started:__:__
[TIMEFIN] Time Interview Completed: __:__
[COUNSINI] Couples ID: _____

Rwanda Zambia HIV Research Group

LARC Couples Survey: Summer 2013

Amabwiriza ku uwubaza:

- Ibi bibazo bigenewe gusa umugabo/umugore babana.
- Hari ibibazo bigenewe kubazwa umwe/umwe mu bashakanye imbere yo kubahuriza hamwe.
- Shaka ahantu h 'ibanga ubariza ku buri wese ku buryo yisanzura
- Abashakanye bakagombye kwemeranywaho ku bisubizo batanga nk'umuryango uburyo bwose babishoboye.Igisubizo kirenze kimwe kirashoboka.
- Andika mu mwanya wateguwe"NOTE"uko abashakanye bageze ku mwanzuro w'igisubizo.
- Ntusome ibisubizo keretse aho bisabwa kandi babyanditse,tanga akanya gahagije kandi ubashishikarize kuvuga uko babyumva.
- Hitamo ibisubizo bijyanye nibyo abashakanye bashubije
- Shyiraho akaziga ku mubare uri mu tuzitiro cyangwa kuri yego /Oya bihuye n'igisubizo cyatanzwe.

Interview Instructions:

Couples should be separated and asked the first "Individual" questions separately before carrying out the rest of the survey with the couple together.
Please find a private area to ask the "Individual" questions to each partner, so that their spouse cannot hear their answers.
Please keep spouse from reading their partner's answers to the "Individual" Questions.
Please use the "Notes" section to record information about how the couple reached an agreement on specific questions.
Surveys are to be administered to male/female couples only.
Couples should come to an agreement on each response to the best of their ability in the couples section of the survey. More than answer is also possible for most questions.
Do not read the couples their answer options unless instructed. If answer choices are meant to be read, the question will say this. Otherwise, please allow the couple to answer with their own ideas.
Select the response option that best fits the couple's answer.
Circle the [bracketed box] or Yes/No option next to the best answer.

Introduction:
Mwaramutse,Nitwa_____.nkora mu mushinga San Francisco ukorera I Kigali.
Mu bufatanye bw'ibigo bikora ubushakashatsi kuri Virusi itera Sida mu Rwanda,Zambia na Kaminuza ya Emory ,hagenderewe gukora ubushakashatsi ku myumvire n'imikoreshereze y'uburyo bwo kuboneza urubyaro ku bashakanye;Ubwo bushakashatsi bugamije kunoza porogaramu yo gutanga inama zo kuboneza urubyaro. Ibitekerezo biva muri ibi bibazo tuganiraho bizongerera PSF kumenya uko harushaho kunozwa gahunda zikorerwa abashakanye.Ubwo rero mwisazure ,mutubwire uko mubyumva ku bibazo bike turi bubabaze mwibuke ko ibyo musubiza byose ari ingirakamaro. Ntaho twandika ibiranga uwo twaganiriye kuri ibi biganiro ibitekerezo byose utanga bibikwa mw' ibanga .Kujya muri bene ibi biganiro ni ubushake icyo wumva udashaka gusubiza wacyihorera ntacyo bitwaye.
Ibi bibazo biramara byibura nk'iminota 20.Murumva twakomeza nta kibazo?
Yego----------komereza ku masezerano asonbanuye imbere yo kubaza ibibazo.
Oya----------Rekera aho.(Bashimire ku bw'igihe cyabo)

Hello, my name is _____. I work for Projet San Francisco here in Kigali. Through Rwanda-Zambia HIV Research group and Emory University, we are doing a couples-based survey about knowledge and practices of Kigali couples around contraceptives. We are performing this survey in an effort to improve our family planning counseling program. We hope the knowledge gained from the survey will make PSF programs more relevant and helpful to couples like you, so your opinions are very important to us. We are interested to know what couples think, so please consider each of these questions and come up with the best answer you can, as a team. Of course participation is entirely voluntary, and you are welcome to stop the survey at any time or choose not to answer a question. We will not be taking your names or any identifying information about you, so your answers are completely confidential. The survey should take about 20 minutes to complete.
Are you willing to participate in the RZHRG LARC Couples Survey?

Yes----------Proceed to the Informed Consent form before beginning questionnaire.
No----------End of Survey. <Thank participant for their time.>

II. IBIBAZO BIGENEWE BOMBI
Couples Section
Mbere na mbere nifuzaga kubabaza ibibazo byihariye birebana n'umuryango wawe.
First, I would like to start out by asking you a few basic questions about your home and family.

1. Ni zihe ndimi muvuga mu rugo? What language do you primarily speak at home? [LANGPRIM]	Kinyarwanda...[1] Kiswahili [2] French...[3] English...[4] Other...[88]
2 Ese wagereranya ute aho mutuye? Ni --- (Soma ibisubizo) How would you describe your primary place of residence? *(Please read answer selections)* [RESDPRIM]	Rural...[1] Village...[2] Town...[3] Urban...[4]
3. Ni ubuhe buryo bw'ibanze mukoresha mu gutwara abantu n'ibintu? What is your primary means of transportation? [TRANSPRIM]	Bus[1] Walking[2] Bicycle[3] Motorcycle[4] Car[5] Other [88]

4.Ni kihe cyiciro cyo hejuru cy'amashuri warangije? What is your highest level of education? [HIGHESTEDU1]	None[1] Primary [2] Secondary [3] Vocational/Technical [4] University [5]
5. Winjiza amafaranga angahe mu kwezi? What is your household income range? [HHINCOME]	0-20.000 [1] 20.000-50.000 [2] 50.000-75.000 [3] 75.000-100.000 [4] 100.000+[5]
6. Ese hari abana mwaba mufite? Do you currently have any children? [CURRCHLD] Niba ari Oya,jya kuri 6b. If No, please skip to Question 6b.	Yes [1] No[2] Don't Know/Refused [99]
6a. C.1.Abana mubana mu rugo rwanyu ni bangahe?Muri abo bose ni bangahe: How many children do you two currently have living in your home? Of these, how many are: a. Musangiye mwembi? Your children together [CHLDTOG] b. Ab'umugabo hamwe n'undi mugore Man's children with another woman [CHLDMAN] c. Ab'umugore hamwen'undi mugabo. Woman's children with another man [CHLDWOM] d. Abandi bo mu miryango cg impfubyi. Other/extended family/orphan [CHLDOTHER] e. How many children is this total, living with you? [CHLDTOT]	a._____ b._____ c._____ d._____ e._____
6b.Ubusanzwe,mwifuza kugira abana bangahe bose hamwe? Ideally, how many children would you like to have in total? [CHLDIDEAL]	1[1] 2[2] 3-4[3] 5-7[4] 7+[5]

III.KUBONEZA URUBYARO
Ubu,noneho nifuza kubabaza ibibazo byerekeye uburyo bwo kuboneza urubyaro,mwakoresheshejee,cyangwa mwumvise bavuga.
Family Planning
Now I would like to ask you a few questions about Family planning methods you have used, or heard of.

7. Ese hari uburyo bwo kuboneza urubyaro mukoresha muri kino gihe?ndashaka kuvuga uburyo ubwari bwo bwose umuntu akoresha ngo yirinde gusama? Do you currently use any contraceptive method? By contraceptive method, I mean anything a couple does to prevent pregnancy from having sex. [CURRFP] Niba ari oya,jya ku 10. IF No, please skip to question 10.	Yes[1] No[2] Don't know/Refused[99]
8.Ni ubuhe buryo muri gukoresha ubu mu kwirinda gusama? What contraceptive method(s) do you currently use? (Hitamo ibisubizo byose.igisubizo kirenze kimwe kirashoboka) (Select all that apply. More than 1 answer is possible) [CURRFPTYPE]	Ibinini [1] Birth Control Pill *(Skip to 8a.)* Gufunga burundu ku bagore/ku bagabo [2] Tubal Ligation/Vasectomy Agakingirizo k'abagabo [3] Male Condoms Agakingirizo k'abagore[4] Female Condoms Urushinge[5] Injectable Contraceptives(ex. Depo-Provera, Lunelle) *(Skip to 8a.)* Agapira ko mu mura[6] IUD (Intra-Uterine Device) Agapira ko mu kuboko[7] (Contraceptive Implant ex. Jadelle, Implanon) Kalendari,urunigi, kwifata[8] Calendar Method or Periodic Abstinence (Ex.Beads) Kwiyakana[10] Withdrawal Ibindi[88] Other
NIBA BASHUBIJE KO BAKORESHA IBININI CYANGWA URUSHINGE: IF RESPONDENTS USE Birth Control Pills or Injectable contraceptives, such as Depo-privera: 8a.Ese buri gihe ukurikiza gahunda yo gufata ibinini cyangwa urushinge? How consistently do you adhere to this contraceptive method? [ADHMIX]	Buri munsi cyangwa amezi atatu nkuko bisabwa [5] Every day or 3 months as prescribed Ni nkaho ari buri munsi cg amezi atatu [4] Almost every day or 3 months Rimwe na rimwe hari ubwo ntafata ibinini cg urushinge [3] Sometimes miss pills or injections Kenshi ntabwo mfata ibininicg urushinge [2] Often miss pills or injections Buri gihe ntabwo mfata ibinini cg urushing [1] Always miss pills or injections

9. Ni ibihe bibazo(Niba bihari), uhura nabyo kubera uburyo wahisemo gukoresha? What problems (if any) do you face in using your contraceptive method of choice? [FPPROB] (Hitamo ibisubizo bishoboka.) (Select all that apply. More than 1 answer is possible)	Uburyo kwo kugera kw'ivuriro [1] Transportation to Clinic Kubura kw'ibikoresho kw'ivuriro [2] Supply Problems at Clinic Ibibazo by'imibereho [3] Financial Issues Kutabyemeranywaho n'umuryango [4] Family Disagreements Kubura igihe [5] Time Constraints Kubura ibikoresho mu rugo [6] Supply Issues at Home Gutinda gutangira imibonano[7] Spontaneity Ntabyo[8] None Ibindi [88] Other
10. Ni ubuhe muri ubu buryo bwizewe kurusha ubundi mu kurinda gusama ? (Basomere ubu buryo; igisubizo kirenze kimwe kirashoboka) Which of these methods are the most effective for preventing pregnancy? (Interviewer: Please reread list if necessary. Select all that apply, more than 1 answer possible.) ***Ibinini*** ***Gufunga burundu ku bagore*** ***Gufunga burundu ku bagabo*** ***Agakingirizo k'abagabo*** ***Agakingirizo k'abagore*** ***Urushinge*** ***Agapira ko mu mura*** ***Agapira ko mu kuboko*** ***Kalendari,urunigi,kwifata*** [EFFPREVPREG]	Ibinini [1] Birth Control Pill Gufunga burundu ku bagore/ku bagabo [2] Tubal Ligation/Vasectomy Agakingirizo k'abagabo [3] Male Condoms Agakingirizo k'abagore[4] Female Condoms Urushinge[5] Injectable Contraceptives(ex. Depo-Provera, Lunelle) Agapira ko mu mura[6] IUD (Intra-Uterine Device) Agapira ko mu kuboko[7] (Contraceptive Implant ex. Jadelle, Implanon) Kalendari,urunigi, kwifata[8] Calendar Method or Periodic Abstinence (Ex.Beads) Kwiyakana[10] Withdrawal Ibindi[88] Other Don't Know [99]

11. Ni ubuhe muri ubwo buryo, bwafasha kurinda ikwirakwiza ry'indwara zandurira mu myanya ndangabitsina,nka mburugu,imitezi,na virusi itera Sida? Which of these methods are most effective for preventing the spread of Sexually Transmitted Infections (STI's) such as syphilis, gonorrhea or HIV? Baza niba bakeneye ko ubasomera uburyo bwavuzwe haruguru.(Hitamo ibisubizo bishoboka) Interviewer: Please give respondents the option of hearing the list of options again. (Select all that apply. More than 1 answer is possible.) [EFFPREVSTI]	Ibinini [1] Birth Control Pill Gufunga burundu ku bagore/ku bagabo [2] Tubal Ligation/Vasectomy Agakingirizo k'abagabo [3] Male Condoms Agakingirizo k'abagore[4] Female Condoms Urushinge[5] Injectable Contraceptives(ex. Depo-Provera, Lunelle) Agapira ko mu mura[6] IUD (Intra-Uterine Device) Agapira ko mu kuboko[7] (Contraceptive Implant ex. Jadelle, Implanon) Kalendari,urunigi, kwifata[8] Calendar Method or Periodic Abstinence (Ex.Beads) Kwiyakana[10] Withdrawal Ibindi[88] Other Don't Know [99]
12.Mu gihe muhitamo uburyo mukoresha bwo kuboneza urubyaro,ni iki mwibandaho/mwitaho mwembi nk'abashakanye? When making choices about family planning , which considerations are most important to you as a couple? Basomere ibisubizo.(Hitamo ibisubizo byose bashubije.) Interviewer: Please read response options. (Select all that apply. More than 1 answer is possible). [FPCONSID]	Ubushobozi bwo kurinda gusama[1] Reliability for preventing pregnancy Kumererwa neza mu gihe cy'imibonano mpuzabitsina[2] Comfort during Sexual intercourse Bworoshye kubukoresha[3] Ease of Practice/Adherence Igiciro/ikiguzi[4] Cost/Financial considerations Imyemerere y'amadini. [5] Religious Beliefs Ingaruka/ibibazo ku buzima[6] Side Effects/Health Risks Ibindi[7] Other Don't Know [99]
13. Ese muhawe ubujyanama ku kuboneza urubyarohano ki kigonderabuzima byaba bibafitiye inyungu wowe n,uwo mubana Would receiving Family Planning counseling as a couple at the health clinic be beneficial for you and your partner? [CFPCBENF]	Yes[1] No[2] Don't know [99]

14. Ni nde muntu wagombye kugana mu gihe utemeranywa n'uwo mubana ku mubare w,abana mugomba kubyara cyangwa kuboneza urubyaro? Who is the best person to consult when you have a disagreement with your partner over family size or Family Planning? [FPCONSULT]	Umuforomo/umuganga ku kigo nderabuzima [1] Nurse or Doctor at the Health Center Umujyanama w'ubuzima [2] Community Health Worker Abandi bantu bo mu muryango wawe [3] Other family members Abaturanyi[4] Neighbors Umuyobozi mw'idini/umujyanama Religious Leader[5] Counselor Abandi[88] Other Don't Know [99]
15a.Ahantu hibanze abagabo bakura amakuru ajyanye no kuboneza urubyaro ni hehe aho mutuye ? What are the main sources of information on family planning for ***men*** in your community? [MENFPINFO]	Umuvuzi/umuganga [1] Medical Provider/Clinician Umuryango,Inshuti,umuturanyi [2] Family, Friends or Neighbors Televiziyo/Radio n'ibundi bitangamakuru bya guverinoma [3] TV or the Radio (including government messaging) Amatangazo,n'amakuru ku aboneka ku mavuriro [4] Clinic Publications Interineti [5] Internet Ibindi.[88] Other Don't Know [99]
15b. Ahantu hibanze abagore bakura amakuru ajyanye no kuboneza urubyaro ni hehe aho mutuye? What are the main sources of information on family planning for ***women*** in your community? [WOMFPINFO]	Umuvuzi/umuganga [1] Medical Provider/Clinician Umuryango,Inshuti,umuturanyi [2] Family, Friends or Neighbors Televiziyo/Radio n'ibundi bitangamakuru bya guverinoma [3] TV or the Radio (including government messaging) Amatangazo,n'amakuru ku aboneka ku mavuriro [4] Clinic Publications Interineti [5] Internet Ibindi.[88] Other Don't Know [99]
16. Uremeranya cyangwa ntiwemeranya n'iyi nteruro"Nifuza kumenya birushijeho ibyerekeye nibyo twakoresha mu kuboneza urubyaro. Agree or disagree with the following statement: "I wish I knew more about our family planning options." [FPKNW]	Agree[1] Disagree[2] Don't know[99]

17. Ese mu muryango,iyo umwe abana na virusi itera Sida undi ari ntayo,bishoboka ko babyara nta nkurikizi? Can a couple where one person is HIV+ and one is not safely bear children? [SAFECNCPT]	Yes[1] No[2] Don't Know[99]
17 a.Ni zihe mbogamizi umuryango unyuranije ibisubizo by,agakoko gatera Sida uhura nazo mu gihe baba bifuza kubyara? What are the risks faced by a couple where one person is HIV+ and one is not, when they want to have children? [RSKSAFECNCPT]	Kwanduzanya hagati yabo [1] Risk of Partner to Partner Transmission Kwanduza umwana biturutse ku mubyeyi [2] Risk of Mother to child transmission Kubaho igihe kirekire no kwita kubo mu muryango [3] Survival/Longevity to care for family Ibibazo by'imibereho [4] Financial Issues Kubasha gusama we n'ibisubizo [5] Ability to Conceive Ingaruka zo gutwita ko buzima bite [6] Impact of Pregnancy on Health Status Ibindi [88] Other Don't Know [99]
IV. LARC Methods **Ngiye kubabaza ibibazo bike byerekeye uburyo bwo kuboneza urubyaro bw'igihe kirekire agapira ko mu mura na ko mu kuboko.Ubwo buryo ntibusaba kwitwararika cyane kandi bufasha kugera no ku myaka 10** Now, I am going to ask you a few questions about long-term contraceptives such as the IUD or the contraceptive implant (Jadelle). These methods do not require upkeep and are effective for up to 10 years.	
18.Mu gihe waba wifuza kwirinda gusama mu gihe kingana cyangwa kirenga imyaka 2,wumva wakwishimira gukoresha agapira ko mu mura cyangwa ako mu kuboko? If you wanted to prevent pregnancy for 2 years or more, would you consider utilizing a long- acting method like IUD or the contraceptive implant (Jadelle/Implanon)? [CONSIDLARC]	Yes, IUD [1] Yes, Implant[2] Yes, both[3] No, neither[4] Don't Know [99]
19.Hari icyo wumva kitagutunganira kirebana no gukoresheje agapira ko mu mura? Would you have any concerns related to using the IUD? Agapira ko mu mura nkuko izina ribivuga ni uburyo bwo kuboneza bw'agapira kameze nka plastic kariho umuringa bashyira mu mura banyujije mu myanya nganga gitsina yo hepfo. By IUD, I mean an intrauterine device made of copper and/or plastic that is inserted into the uterus by way of the vaginal canal. [CONCIUD]	Yes[1] No[2] Don't Know[99] (If no, skip to question 21.)

20. Ni iki utekereza kitagutunganira mu igihe waba ukoresha agapira ko mu mura? What would be your concerns related to using the IUD? [SPECCONCIUD]	Ibyago byo kugasamiraho [1] Risk of Getting Pregnant Kutisanzura mu gihe cy'imibonanompuzabitsina [2] Comfort during sexual intercourse Kubabara mu kugashyirirwamo [3] Pain at Insertion Kwimuka kakagendagenda mu bindi bice by'umubiri [4] Movement of the device within the body Ibyago bya canceri/ibibyimba [5] Risk of Cancer/Tumors/Abscesses Impungenge zo kwongera kubyara [6] Fertility Concerns Kwiyongera kw'ibiro [7] Weight Gain kKuva mu buryo bukabije [8] Excessive Bleeding Kutabona imihango buri gihe [9] No Menstrual Cycle Kuma,kubura ububobere [10] Vaginal Dryness Ibindi [88] Other Don't Know [99]
21. Hari icyo wumva kitagutunganira kirebana no gukoresha agapira ko mu kuboko? Would you have any concerns related to using the contraceptive implant (Jadelle)? [CONCIMP] Agapira ko mu kuboko,ni gato karahinika,kangana n'umwambi w'ikibititi ugereranije.bakinjiza mu kizigira cy'ukuboko kakavubura imisemburo mike mike ifasha kurinda gusama. The contraceptive implant (like Jadelle) is a small, flexible rod that contains hormones to help prevent pregnancy. They tend to be about 4cm long and are usually inserted under the skin in the upper arm.	Yes[1] No[2] Don't know[99] (If no, skip to question 23.)

22. Ni iki utekereza kitagutunganira mu igihe waba ukoresha agapira ko mu kuboko? What would be your concerns related to using the contraceptive implant (Jadelle)? [SPECCONCIMP]	Ibyago byo kugasamiraho [1] Risk of Getting Pregnant Kutisanzura mu gihe cy'imibonanompuzabitsina [2] Comfort during sexual intercourse Kubabara mu kugashyirirwamo [3] Pain at Insertion Kwimuka kakagendagenda mu bindi bice by'umubiri [4] Movement of the device within the body Ibyago bya canceri/ibibyimba [5] Risk of Cancer/Tumors Impungenge zo kwongera kubyara [6] Fertility Concerns Kwiyongera kw'ibiro [7] Weight Gain kKuva mu buryo bukabije [8] Excessive Bleeding Kutabona imihango buri gihe [9] No Menstrual Cycle Kuma,kubura ububobere [10] Vaginal Dryness Ibindi [88] Other Don't Know [99]
23.Ese gukoresha byombi ,uburyo burambye bwo kuboneza urubyaro nk'agapira ko mu mura,cyangwa agapira ko mu kuboko (Jadelle,Implanon), hamwe no gukoresha agakingirizo,byaba ari amahitamo meza ku miryango inyuranije ibisubizo umwe yanduye Virusi itera Sida undi atanduye? Would a long-acting method like the IUD or the implant (Jadelle, Implanon), ***with condoms*** be a good option for couples where one person is HIV+ and one is not?. [DUALMETH]	Yes[1] No[2] Don't know[99]

Murakoze cyane kwitabira ibi biganiro,Nifuza kubaha ubutumire bwo kuzaza aho umushinga San Francisco ukorera,mugihe waba ufite icyo wifuza gusobanuza,guhabwa service zo kuboneza urubyaro cyangwa ni kindi cyose kirebana n'ubu bushakashatsi.

Thank you for your participation in this RZHRG Couples Survey. I am providing you with a referral card to the Projet San Francisco Family Planning Clinic, should you wish to schedule a consultation. Please also get in touch with them for any further questions or concerns regarding this study.

{For Interviewer Only}

Interviewer: On a scale of 1-5, please rate the overall level of agreement exhibited by this couple in the course of answering the couples-based questions on this survey. [COUNSLEVAGREE]

Bemeranyijwe kuri byose [1]

Totally in agreement with one another

Bemeranyijwe kuri byinshi[2]

Mostly in agreement with one another

Bemeranyijwe ku kigero cya 50%[3]

In agreement about 50% of the time

Bemeranyijwe kuri bike[4]

Little agreement on most questions

Ntabwo bemeranywa kuri byinshi. [5]

Total disagreement on survey questions

Ninde wari ufite ubwiganze mu gusubiza ibibazo?

Who was more dominant in answering questions? [COUNSDOM]

Umugabo [1]

Man

Umugore [2]

Woman

Ntawe [3]

Neither

Notes:
[NOTES]