

Introducing Family Planning Services into Antiretroviral Programs in Ghana: An Evaluation of a Pilot Intervention

**Susan E Adamchak, PhD
Thomas E Grey, BA
Conrad Otterness, MPH
Karen Katz, M.Sc., MPA
Barbara Janowitz, PhD**

Family Health International

September 2007

EXECUTIVE SUMMARY

This report documents the assessment of a family planning (FP) training program for providers to enable them to offer family planning counseling and methods, and make referrals where needed as part of antiretroviral therapy (ART) services in Ghana. This effort was a joint project of the Ghana Health Service, the ACQUIRE Project of EngenderHealth, and Family Health International.

In December 2005, five master trainers of the Ghana Health Service participated in a week-long training session. Subsequently, 32 providers drawn from the FP and ART service areas (16 each from Korle Bu Teaching Hospital and Atua Government Hospital) were trained in groups of eight, in five day-long sessions during January and February 2006. Topics covered in the training included contraceptive technology updates, integration of FP in HIV care and treatment services, professional and personal comfort with providing condoms to ART clients, and WHO recommendations on the use of contraception by HIV-positive women. Providers were trained to offer clients oral and injectable contraceptives on site, and to make referrals to the hospitals' family planning clinics if clients desired other methods. Existing job aids and IEC materials were adapted to reflect new content from the module and produced by EngenderHealth.

The goal of the evaluation is to provide information to the Ministry of Health in Ghana to help it to improve programs to deliver family planning services to women enrolled in ART programs.

The objectives are:

- To identify the fertility desires and contraceptive needs of HIV-positive women who are enrolled in an ART program; and
- To determine whether trained providers are meeting the family planning needs of HIV-positive women.

During May and June 2006, interviews were conducted with 368 female clients of the two ART clinics. Ninety-five client-provider interactions were observed, and six supervisors participated in in-depth interviews.

RESULTS

The results focused on the factors affecting a woman's decision to want additional children and the provision of family planning services during an ART clinic visit.

Client survey

- Women who participated in the study were on average 35 years old and had 2.1 children. Only 36 percent were married or living with a partner but 48 percent reported they were in a relationship.
- Two thirds of the clients were currently on ART. Over three-fourths described their health as good to excellent. Between 10-15 percent said that their health affected their social and physical activities "quite a bit."

- Knowledge of transmission of HIV to babies during pregnancy, delivery and breastfeeding was mixed. Most were aware that HIV could be passed to a baby during pregnancy and delivery (83 percent) while fewer women knew that a medicine exists to prevent mother to child transmission (62 percent). In addition, many women had incorrect knowledge. For example, the probability of perinatal transmission was often overestimated and 60 percent believed all or half of the babies born to HIV-positive women will be HIV-positive.
- Fifty-six percent said they wanted to have a child in the future. Women currently in relationships were more likely to want one compared to women not in relationships (68 percent vs. 46 percent). Nearly all women who did not have a child wanted one in the future regardless of relationship status. The proportion wanting an additional child decreased as the number of children increased. Women currently on ART were also more likely to want more children compared to women not on ART. Finally, women who knew their partner was HIV-positive were less likely to want a child compared to women whose partners were negative or who did not know their partners status.
- Overall, 36 percent of the clients reported they were currently using a family planning method although 74 percent of those currently in a relationship were using a method. Male condoms were the only method being used except for one woman who reporting using oral contraceptives. Seventy one percent reported they had used a method in the past.
- Unmet need for family planning was calculated as 9 percent for women not wanting a child within the next two years and in a relationship. If we take inconsistent condom use into account then unmet need rises to 14 percent.
- Only 20 percent of clients reported that a provider asked them if they wanted more children and 10 percent reported that family planning was discussed.

Client provider observations and supervisor interviews

- While only three months had elapsed between the time of the training and the data collection, many of the trained providers had left the facilities and of the 28 providers observed, only 13 had received the FP-ART training.
- There was little discussion with clients about fertility intentions, family planning methods and transmission of HIV from mothers to babies. While trained providers performed somewhat better than untrained providers in providing family planning services and information, the overall performance by both groups was poor.
- Supervisor interviews suggest that providers are supportive of providing family planning information in principle, but constraints to implementation include transfers of trained personnel, insufficient time, workload and lack of compensation.

DISCUSSION

The study shows that for the most part family planning information and methods are not being provided in these ART clinics. The reproductive health/FP aspects of ART services need to be improved so that women can better plan their reproductive lives. While unmet need for FP was relatively low, this need could increase as more women feel healthier

and enter into relationships but want to delay or avoid having another child. However, some women will want to have additional children. At a minimum, women need to be asked about their fertility desires, and providers need to give contraceptive counseling and services or information on vertical transmission so that women can fulfill their choices.

RECOMMENDATIONS

The training intervention should be strengthened to include a greater focus on the appropriateness of an array of family planning methods for HIV+ individuals.

Condom promotion should continue, with clearer messages about consistent use, dual protection and dual method use.

Providers should ascertain whether their patients are aware of the risks of mother to child transmission, and provide appropriate counseling to ensure women understand the possible consequences of a pregnancy.

Attention should be given to the related skills and logistic challenges that are needed in order to offer integrated services.

ACKNOWLEDGEMENTS

Our appreciation is extended first to the clients of the ART clinics at both Korle-Bu Teaching Hospital and Atua Government Hospital. Collectively, they have contributed far more than they realize to a better understanding of the reproductive health needs and fertility desires of HIV-positive women.

We also thank the many providers: doctors, nurses, counselors, psychologists, who work daily in the clinics to offer essential services to their patients, both female and male. During the period that fieldwork was carried out, doctors and nurses across the country were under a strike action. Nevertheless, both clinics opened their doors as scheduled and compassionate providers met clients following the routine plan to provide essential services.

Each clinic relies heavily on records clerks to track patient flow, and to ensure that the correct files are available. These same clerks facilitated the selection of clients from the daily registration logs, and we could not have drawn our sample of interviewees without them.

The young women who conducted the interviews and observations are also commended. During their training for the data collection, there were many discussions about their preconceived ideas about people with HIV, their fears, and their stereotypes. During data collection, they comported themselves with respect, thoughtfulness, and kindness, while ensuring that each participant felt comfortable and returned for the second part of the interview. We hope that this experience has also been a small step in reducing stigma for those with HIV in Ghana.

ACRONYMS AND ABBREVIATIONS

ACQUIRE	Access, Quality and Use in Reproductive Health Project
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral
AGH	Atua Government Hospital, Odumase-Krobu
CPI	Client Provider Interaction
CTR	Contraceptive Technology and Research
DfID	Department for International Development
EH	EngenderHealth
ERCRIHS	Ethical Review Committee on Research Involving Human Subjects
ESA	East and Southern Africa
FITS	Field Information and Technical Services
FHI	Family Health International
FP	Family Planning
GDHS	Ghana Demographic and Health Survey
GEE	Generalized Estimation Equation
GHS	Ghana Health Service
HAART	Highly Active Antiretroviral Therapy
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HSR	Health Services Research
IEC	Information, Education and Communication
IFH	Institute for Family Health
IRB	Institutional Review Board
IMPACT	Implementing AIDS Prevention and Care Project
KATH	Komfo Anokye Teaching Hospital, Kumasi
KBTH	Korle Bu Teaching Hospital, Accra
MOH	Ministry of Health
OI	Opportunistic Infections
PNA	Participatory Needs Assessment
PHSC	Protecting Human Subjects Committee
PMTCT	Preventing Mother to Child Transmission of HIV
RI	Research International, Ltd.
STI	Sexually Transmitted Infection
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing

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I. INTRODUCTION

According to Shelton and Peterson (2004), an “ambitious initiative is under way to provide antiretroviral therapy (ART) to millions in the developing world, especially in Africa, very quickly”. The authors outline the health and social system challenges to supplying antiretrovirals (ARVs), including stigma, ensuring adherence to treatment, and providing continuing medical, psychological and social care and support.

Many countries starting up ART programs have low rates of contraceptive use and high levels of “unmet need” for contraception. According to the Demographic and Health Surveys, about 20-25 percent of women are at risk of unintended pregnancy in sub-Saharan Africa. Moreover, several recent studies have pointed to unintended pregnancy as a problem for HIV-positive women: 51 percent to 99 percent of HIV-positive women had unintended pregnancies in studies in Côte d’Ivoire, South Africa, and Uganda (Rochat, et al., 2006; Desgrées-du-Loû, et al., 2002; Smart, 2006). However, contraception is an often overlooked element of HIV prevention and care, especially among women who are taking ARVs and/or antibiotics to prevent or treat opportunistic infections (OIs).

Provision of contraceptives in the context of ART services is warranted for several reasons. First and foremost, all women, regardless of their HIV status, have the right to effective, quality family planning services so they may choose the number and timing of their pregnancies. Second, drugs commonly used in different antiretroviral therapy (ART) regimens are potentially harmful to the developing fetus (Fundaro et al., 2002), and some ART programs suspend drug therapy during a woman’s first trimester of pregnancy. Third, some research suggests poor infant outcomes (e.g., low birth weight) and increased risk of maternal mortality and morbidity among HIV-infected women compared to those uninfected (Shelton, 2004; Shelton and Peterson, 2004; Fuchs, 2005). HIV-positive women should be empowered with information about these potential health risks and have access to appropriate family planning and prevention of maternal-to-child transmission (PMTCT) services.

Avoiding unintended pregnancies can contribute to PMTCT efforts by averting HIV-positive births. Recent research by FHI demonstrated that meeting the unmet need for family planning in the general population was more cost-effective in preventing HIV-positive births than the current emphasis on HIV counseling and testing during antenatal care coupled with provision of nevirapine (Reynolds, et al., 2006). Using data from 14 countries, Stover and colleagues modeled the potential effect over five years of adding family planning to PMTCT programs (Stover, et al., 2007). In addition to the positive effects such as averting child deaths, avoiding orphans, and reducing maternal mortality, the authors calculated that family planning added to PMTCT services averts 71,000 child HIV infections compared to the 39,000 averted by PMTCT alone.

In addition to understanding ART client demand and need for family planning services, it is also important to understand how to add these services. Up to this point, there is no study that has examined this issue. In fact, very little information is even available on how to add family planning to voluntary counseling and testing (VCT) services. One study does suggest some of the difficulties faced in adding this service. While 29% of VCT clients had unmet need, at post-intervention only 12% of those with unmet need clients received a method. All methods distributed were condoms even though providers had been trained to distribute pills and make referrals for other methods (Reynolds, Liku, Kimani, et al., 2006). From this study, recommendations for improving FP-VCT integration included to increase providers’ routine

screening for risk of unintended pregnancy, increase providers' discussions of dual protection including using two methods, and ensure coverage of trained providers and supportive supervision.

Confounding efforts to provide contraceptive services to HIV-positive individuals are the biased attitudes of many providers. Rutenberg and Baek (2005) document the perceived competing priorities of public health and reproductive rights. In some cases, providers "actively discourage" HIV-positive women from becoming pregnant. Wesley, et al. (2000) found that women reported negative reactions to providers who focused only on their HIV status, and less on their needs as a whole. Paiva, et al. (2002, 2003) found both Brazilian men and women who were HIV-positive complained that providers were not receptive to discussions about sexuality or childbearing.

Before making a big investment to add family planning to ART programs, it is important to determine the need for family planning services. The first step is to understand the fertility desires of women with HIV and how these desires are affected by ART programs, although little is known about how the availability of ART may affect the fertility desires and intentions of women and men living with HIV/AIDS (Wesley, 2000; Myer, et al., 2005; Deschamps, et al., 2004 cited in Shelton and Peterson, 2004). The little information that exists suggests that HIV status is associated with the intention to prevent pregnancies, although some pregnancies are desired. A qualitative study conducted in South Africa (Cooper, et al., 2005) found that while many men and women strongly affirmed the desire to have no children, there was a competing belief that children gave meaning to their lives. In a study among PMTCT clients living in two urban slums in Nairobi, Kenya, 82 percent of HIV-positive women did not plan to have another child, while about one third of HIV-negative women and those of unknown status reported not wanting another (Baek and Rutenberg, 2005). In in-depth interviews with 24 HIV-positive women, 22 said they did not want to have more children, and all the women stated that having HIV negatively affected their desire for more children (ibid.). A longitudinal observational study yielded similar results. Among newly discovered HIV + women the authors found that women's desire for pregnancy decreased from 33 percent prior to knowing their HIV status to 14 percent after HIV-positive status and remained about 15 percent over the next year. (Hoffman I, Chanza H, Martinson F, Chilongozi D, Powers K, Dziza E, et al., 2006).

What is still needed is to learn how the initiation and continued use of ART affects fertility desires. It has been hypothesized that as health status improves with ART, some individuals may resume or increase sexual activity and wish to have children, while others may not want to become pregnant. In the South African study, individuals using ART "overwhelmingly experienced positive effects on their health and some felt that being on ART would alter attitudes toward childbearing" (Cooper, et al., 2005:2). Documenting fertility intentions among individuals receiving ART can inform HIV programs about appropriate strategies to incorporate family planning into their services.

In 2002, the Government of Ghana and FHI's IMPACT Program launched the START Program. With funding from USAID and subsequently from the United Kingdom's Department for International Development (DfID), the START Program operated in four sites in Ghana to provide prevention, care and treatment for people living with HIV/AIDS.¹ These sites include Ghana's two teaching hospitals, Korle Bu (KBTH) and Komfo Anokye (KATH), located in

¹ Transfer of responsibility for the ART programs to the Ghana Health Service took place in early 2006.

Accra and Kumasi, respectively, and two district level hospitals, Atua Government Hospital and St. Martins de Porres Catholic Hospital, both in Ghana's Eastern Region.²

Sentinel surveillance data from Ghana in 2005 show an HIV prevalence level of 2.7 percent among antenatal care (ANC) and sexually transmitted infection (STI) clients (NACP/GHS, 2006a). With a population of 20 million, these prevalence rates suggest that more than 500,000 people are infected with HIV. As of late 2005, about 9400 individuals were enrolled in ART treatment programs, and just over 40 percent were taking antiretroviral drugs (NACP/GHS, 2006b). Specifically, 5487 women and men had been enrolled in the START program as of May 2005 and 2635 were using ART.

Description of the Intervention

In recent years, increased attention has focused on the opportunities and synergies to be realized by integrating family planning and other health services, notably those offered through HIV/AIDS counseling, treatment, care and support programs. In part this orientation is driven by assumptions about the best standard of care available to address the unmet needs for family planning among HIV-positive women and men.

A global leadership priority of EngenderHealth's ACQUIRE Project is to promote the integration of family planning into HIV/AIDS prevention, treatment, and care programs in order to develop innovative approaches that are sustainable and can be scaled up. In the case of Ghana, the ACQUIRE Project was asked to plan, implement and evaluate an FP-ART integration project in collaboration with FHI., with the goal of providing family planning with HIV care and treatment services.

ACQUIRE conducted a performance needs assessment (PNA) in mid-2005 at Korle-bu Teaching Hospital, Accra, (KBTH) and Atua Government Hospital, Odumase-Krobu to determine the current capacity to provide family planning services (Aglah, Bonku and Wolfhart, 2005). A PNA is a rapid diagnostic process that involves meeting with stakeholders to define desired services and performance; gathering data on actual performance (including client group discussions, client interviews, direct observation of practices, and facility audit). Working in collaboration with stakeholders, performance gaps are identified, root causes are analyzed, and solutions—in this case, refinement of the project's interventions--are made.

The purpose of the PNA was to provide baseline information on:

The current provision of family planning counseling and services to HIV-positive men and women attending the HIV and family planning clinics;

The knowledge and skills of health workers at these clinics to provide quality FP counseling and services to HIV-positive women and women; and

The needs of the hospitals and health workers to enable them to provide these services (Aglah, Bonku and Wolfhart, 2005:2).

ACQUIRE used the PNA results to refine the project interventions to train providers to offer family planning counseling, provide limited services (selected FP methods), and make referrals. In addition, the training emphasized the rights of HIV-positive individuals to realize their fertility

² The program was introduced in January 2002 on a small scale in Atua and Saint Martin's. Korle Bu and Komfo Anokye began screening patients in late 2003. For a comprehensive description of program development, refer to Ritzenthaler, 2005.

desires, and aimed to reduce stigma and discrimination among providers (ACQUIRE, et al., 2006).

In December 2005, five master trainers of the Ghana Health Service participated in a week-long training. Subsequently, 32 providers (16 each from KBTH and Atua) trained in groups of eight in five day sessions during January and February 2006. Sixty percent of the providers (n=21) worked in the ART clinics, while the remaining trainees represented family planning, VCT and PMTCT services. In addition to topics such as family planning in HIV care and treatment services, contraceptive technology updates, professional and personal comfort with condoms, and WHO recommendations on the use of contraception by HIV-positive women, providers from the ART clinics were trained to offer clients oral and injectable contraceptives on site, and to make referrals to their colleagues at the family planning clinics if clients desired other methods. Existing job aids and IEC materials were adapted to reflect new content from the module and produced by EngenderHealth. Dual protection and dual method use was emphasized.³

Goal, Objectives, and Outcomes

The goal of the evaluation is to provide information to the Ministry of Health in Ghana to help it to improve programs to deliver family planning services to women enrolled in ART programs.

Objectives of this study are:

- To identify the fertility desires and contraceptive needs of HIV-positive women who are enrolled in an ART program; and
- To determine whether trained providers are meeting the family planning needs of HIV-positive women.

II. DATA COLLECTION AND METHODOLOGY

Study Population and Participant Recruitment

This study was conducted using three populations involved in the ART programs at KBTH and Atua: ART service providers, including doctors, nurses, and counselors; female ART patients; and supervisors of the service providers. All providers who worked on a routine basis at the ART clinic were eligible for observation of their interaction with clients, to determine whether and how well they are using their new counseling and service delivery skills.

There were two inclusion criteria for female survey participants: age, and enrollment in the ART program. Women aged 18 through 45 currently enrolled in the ART program were eligible to participate. Duration of enrollment was not a selection factor. That is, women may have been in the program since its inception (approximately three years), or newly enrolled within the prior few months. Similarly, it was sufficient that women were enrolled in the program; current treatment with ARVs was not required.

In addition, six supervisors, four at Korle Bu Teaching Hospital and two at Atua, participated in in-depth interviews about their supervisory practices and their views on the introduction of the new service.

³ Results of a PNA conducted in June 2005 show that providers generally do not have clear understanding of the concepts of dual protection and dual method use. This will be addressed in training.

ART Patient Survey

The hospitals offer ART clinic services two (Atua) and three (KBTH) days per week. On each clinic day, Atua and KBTH register approximately 80 and 200 patients, respectively. Among these patients, about 64 percent and 59 percent are female at each hospital, and among them, 78 percent and 76 percent are in the 18-45 year age range. Thus, about 40 and 90 female patients are eligible for random selection on each clinic day (based on data through May 2005).

The first of every six eligible female patients entered in the registration list in each ART clinic was selected for interview. After selection from the register, women were approached in the waiting area and invited to participate in the interview. If they agreed, they were asked their age; those who did not meet the age criteria were thanked and excused. After obtaining written consent, patients were interviewed in a secluded area using a structured questionnaire. Interviews lasted about 15 minutes. Following their visit with a doctor, nurse or counselor, the patient was again interviewed, to determine whether family planning counseling or services were provided during their interaction. This second segment of the interview took about ten minutes.

This resulted in approximately eight to 18 interviews per clinic day in Atua and KBTH, respectively, and a total of 368 interviews in 6 weeks. If a patient refused or was unable to participate, the next eligible patient was selected. Refusal rates were low; only 19 women declined participation, mostly due to physical condition (n = 14). Eighty-nine women were excluded once selected from the register due to age: four were younger than 18, and 85 were older than 45.

Observation of Client-Provider Interaction

All providers were asked to participate in the observations of client-provider interaction. One hundred observations across the study period were planned, and 95 were achieved with 28 providers. One interaction per provider per clinic day was observed during a six-week period. Between one and five observations per provider were achieved during the study period. Four providers declined to be observed.

Data Collection and Instruments

FHI sub-contracted with a Ghanaian survey research organization, Research International, Ltd. (RI), to carry out the client-provider observations, and to conduct the survey among female patients. Eight female interviewer-observers conducted the fieldwork, and each team of interviewers was supervised by a fieldwork coordinator. Data was collected throughout May and June 2006.

FHI and RI staff jointly conducted training during five days in February-March 2006 at the RI offices in Accra, Ghana. Training included a complete review of data collection instruments, consent forms, and participant selection procedures. Interviewers and observers participated in an abbreviated review of the FHI *Research Ethics and Training Curriculum*, with special emphasis placed on issues of confidentiality and privacy. Furthermore, the training plan included extensive coverage of the HIV/AIDS context in Ghana, features of the ART program, and opportunities for the data collection team to discuss personal concerns about participating in the research, in order to dispel any misgivings or stigmatizing attitudes. Interviewers and observers practiced their skills during role-plays and rehearsals, and a practice session was conducted at a local hospital site. Training materials were prepared to facilitate accurate and common comprehension of the data collection tools.

Data collection instruments were adapted from previously tested tools. The client-provider observation instrument mainly consists of close-ended items that the observer could quickly check off during a client visit; only an English version was used.

The interview guide for supervisors consisted of 12 questions developed to detect changes in supervisory systems resulting from their training and the introduction of the new intervention. Interviews were tape recorded and subsequently transcribed by Research International.

The questionnaire for the ART clients was modeled on previously tested instruments used by FHI, EngenderHealth and other research organizations. It was translated into Ga, Twi and Dangbe, and Ewe by Research International prior to data collection.

Key topics included on the questionnaire were:

- Socio-demographic characteristics
- Current contraceptive use
- Unmet need for family planning
- Past fertility: children ever born, children living
- Fertility intentions: timing of future children
- Disclosure of HIV status to family or friends
- Comprehension of prevention of mother to child transmission
- Recent health status
- Exposure to family planning counseling and services in current consultation

Data management was carried out by Research International, in close collaboration with FHI. Data were entered as observation checklists and questionnaires were returned daily to RI's office in Accra, using SPSS software. Data from the supervisor's in-depth interviews was transcribed in individual Word files.

Ethical Review and Informed Consent

The research protocol was reviewed by both the Protection of Human Subjects Committee (PHSC) of FHA and the Ethical Review Committee on Research Involving Human Subjects (ERCRIHS) of the Ghana Health Service. Approval was obtained from PHSC in February, and from ERCRIHS in April 2006. Written consent was obtained from study participants prior to beginning the data collection; separate forms were used for providers, clients, and supervisors

Study Limitations

Findings of the study are potentially affected by two limitations. First, only three to four months elapsed between the time most providers had completed their training and data collection. This had two effects: 1) staff turnover had already occurred, such that a number of the providers working in the ART clinics were relatively new, and had not participated in the training; and 2) those trained may not have had enough time or opportunity to consolidate their new knowledge into their daily practice. The second limitation is that client-provider observations were conducted within a pool of women who had been attending the clinic for varying lengths of time, and who consequently were at different stages in the counseling and treatment process. Many of the topics that should ideally be covered in counseling sessions may have been discussed prior to the particular interaction observed.

III. RESULTS

A. CLIENT SURVEY

1. Socio-demographic characteristics of female clients

The clients were on average 35 years of age with 56 percent 35 or older (Table 1). They had on average 2.1 children. The majority of women had completed no more than junior secondary school. Less than 20 percent of women had completed secondary school or higher. Half of the women reported their occupation as “trader”, and nearly 20 percent said they were unemployed. Fewer than ten percent indicated that they were in a salaried occupation (data not shown). Thirty- six percent were either married or living with a partner. However, 48 percent said that they were in a relationship, and presumably sexually active, and this group included some women who were divorced, widowed, or never married.

Table 1: Mean age and percent distribution by age, completed schooling, marital status, current relationship status and partner's HIV status and place of service

	All Clients
Mean Age (years)	35
Age	%
18 – 29	21
30 – 34	23
35 – 39	28
40 or older	28
Total %	100
Mean Number of Children	2.1
Highest Level of School Completed	
Did not attend	20
Primary	23
Middle/JSS	39
Secondary/SSS	12
Post secondary	5
Total %	100
Marital Status	
Married	33
Live with male partner	3
Never married	19
Divorced, separated	22
Widowed	22
Total %	100
Relationship (have a husband, boyfriend, fiancé or partner)	
Yes, currently in a relationship	48
No, not currently in a relationship	52
Total %	100
Place of Service	
Korle-Bu Teaching Hospital = 292	79
Atua Government Hospital = 76	21
Total%	100
Total N	368

Totals may not add to 100% due to rounding.

Note: There were too few cases at Atue for separate analysis. However, there were no significant differences in the characteristics of ART clients in the two hospitals.

2. Factors affecting fertility desires

Many factors will influence a woman's decision to want additional children. The factors considered here include the woman's health status, her HIV treatment status, her partner's HIV status, her knowledge of transmission of HIV from a mother to a child and her current family size.

Health status

Women who are HIV-positive may not be currently interested in having more children because of concerns about their own health. As shown in table 2, two thirds of the women attending the ART clinics were currently taking ARVs. Across the various health indicators, about 75 percent or more gave responses indicating that their health status was good and that it did not greatly

interfere with normal activities. Only 15 percent felt that pain interfered with normal work activities “quite a bit” or “a lot”. Even fewer women indicated that their physical or emotional state had interfered with their social life during the prior four weeks. Of those that did work, 22 percent reported that they had to miss work in the past four weeks because of their physical health (data not shown). Almost 40 percent of the clients currently in a relationship did not know the HIV status of their partner, of those who did, about half said their partner was positive.

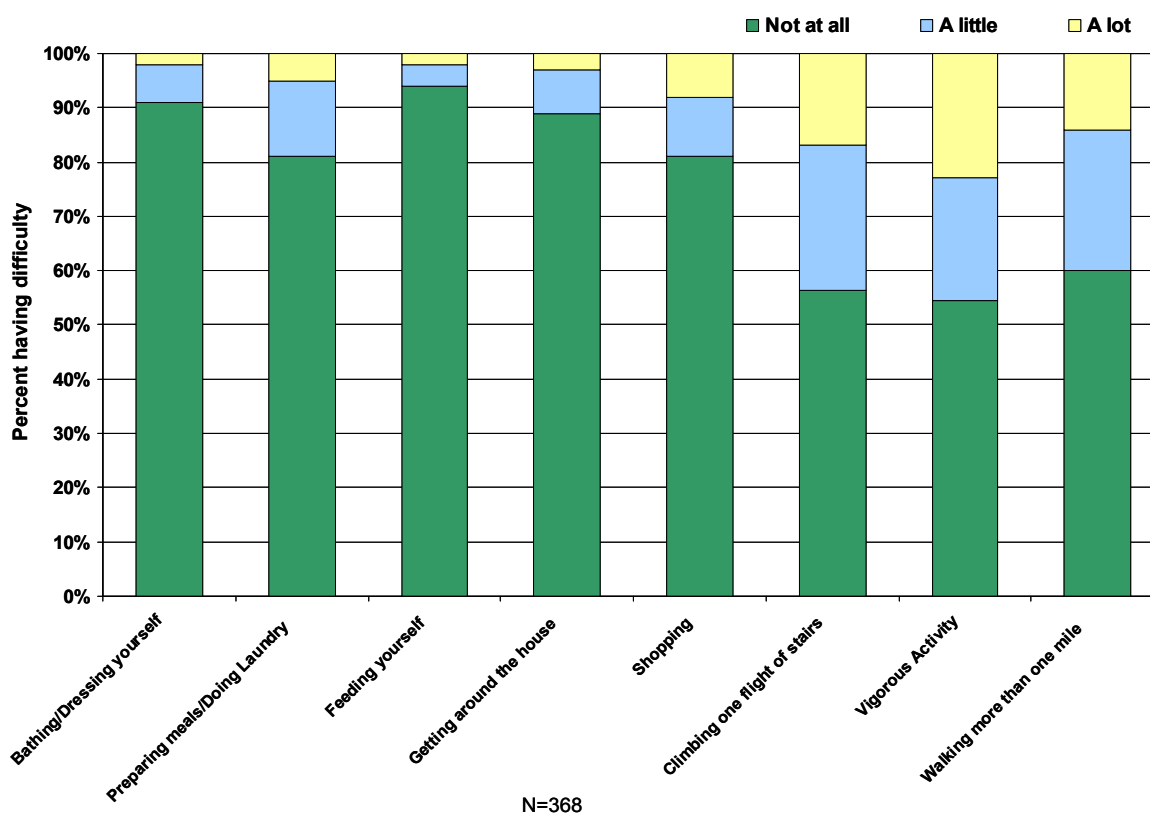
Table 2: Current use of ARVs and indicators of general health status of client and their partners

Indicator	%
Percent of clients currently taking ARVs	66
Client describes health in past four weeks as...	
Very good / Excellent	52
Good	27
Fair	15
Poor	5
Total %	100
During past four weeks, client had much pain that interfered with normal work (both outside of the house and housework)	
Not at all	50
A little bit	24
Moderately	11
Quite a bit / A lot	15
Total %	100
During past four weeks, client physical health or emotional problems interfered with normal social activities with family, friends, neighbors or groups.	
Not at all	68
A little bit	15
Moderately	7
Quite a bit / A lot	10
Total %	100
Total N	368
HIV status of partner, of those clients currently in a relationship	
Partner is HIV positive	31
Partner is HIV negative	30
Do not know/Did not disclose status of partner	39
Total %	100
Total N	175

Totals may not add to 100% due to rounding.

Women also reported little difficulty performing common personal or household tasks due to their health (Figure 1). Only for some demanding tasks were they likely to report “a lot” of difficulty, such as lifting heavy objects (23 percent); climbing stairs, which may not even be in their normal routine, (17 percent); or walking more than one mile (14 percent). Few women reported problems caring for their needs; the majority was able to eat, bathe, and move around their own homes independently with little or no difficulty.

Figure 1: Percent of women who have had difficulty doing various activities in the past month



Knowledge of Mother to Child Transmission

How women perceive the likelihood of transmission of their infection to their offspring, including how the use of drugs reduces transmission, is another factor that may affect their desire for additional children. The results show that many women do not have correct knowledge, or in some cases, any knowledge of the particulars of mother to child transmission. More than four in five women were aware that HIV can be transmitted from mother to child during pregnancy and delivery (Table 3), however that still leaves a surprising 17 percent who were unaware of this fact. However, most women over-estimated the probability of peri-natal transmission. While about 30 percent of babies born to an HIV infected mother will become infected, 25 percent of women believed that all babies will be born with HIV, and 35 percent believed that about half will be infected (De Cock, K. et al., 2000). Moreover when asked about drugs to reduce transmission, almost 40 percent said that they had never heard of any such drugs. Even with those who knew of the medicine to reduce the risk of transmission, many women overestimated the percent of babies that would be infected. While up to 15 percent might be infected, 42 percent of women reported that the baby would definitely be infected (Guay LA, et al., 1999). Given that these women are in an ART clinic, these results are surprising. Three quarters of these women have had children and some of them may have been enrolled in a PMTCT program. Therefore, it is surprising that the topic of transmission of infection to the baby was either not adequately discussed or not understood by so many women.

Similarly, many women over-estimated the risks of vertical transmission. Nearly three-fourths of the women believed it was extremely likely that HIV would be transmitted to a baby during breastfeeding while the true rate is about 10-15 percent.

Table 3: Knowledge of mother to child transmission of HIV

	All Clients
If some pregnant women have HIV, how likely is it that their babies will become infected during pregnancy and delivery?	
All babies will be born with HIV	25
About half the babies will have HIV	35
Just a few babies will have HIV	15
Not sure/do not know	8
Unaware HIV can be passed from mother to baby during pregnancy/delivery	17
Total %	100
If a pregnant woman has HIV/AIDS, and she has her baby take the medicine, will the baby be HIV- or is there a chance the baby will be HIV-positive?	
Baby will definitely be HIV-	42
Chance that the baby could be HIV-positive	14
Do not know	7
Unaware there is medicine to reduce the chance of HIV transmission to baby during pregnancy/delivery	38
Total %	100
How likely is it that HIV can be passed from a mother to her baby during breastfeeding?	
Extremely likely	72
Somewhat likely	17
Not at all likely	2
Do not know	9
Total %	100
Total N	368

Totals may not add to 100% due to rounding.

Current Family Size

One of the most important factors that affects women's desire for additional children is their current number of children. As already noted, women had on average 2.1 children. Over one quarter had no living children and over one quarter had three or more living children. The distribution of living children is similar for women who are and are not currently in a relationship (Table 4).

Table 4: Number of living children by whether a woman is currently in a relationship

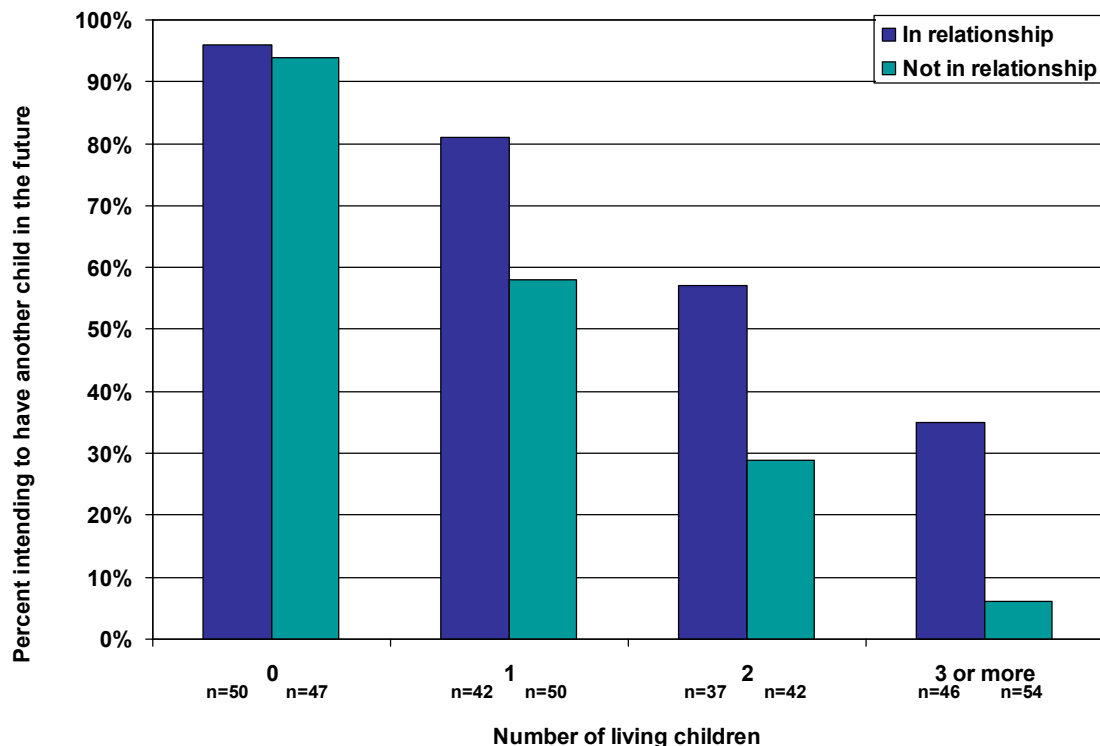
Number of living Children	All Clients	Current relationship status	
		In relationship	Not in relationship
0	26	29	24
1	25	24	26
2	21	21	22
3 or more	27	26	28
Total %	100	100	100
Total N	368	175	193

Totals may not add to 100% due to rounding.

3. Desire for additional children

Women's desire for additional children was strongly associated with their current number of children and their current relationship status (Figure 2). Overall, 56 percent of all women intended to have another child sometime in the future, with women currently in a relationship more likely intending to have another child than women not currently in a relationship (68 and 46 percent respectively). These represent slightly higher proportions than seen among the HIV+ women interviewed during the PNA. Among those women, six of twenty (30 percent) reported that they were thinking of having a child in the future (Aglah, Bonku and Wolfhart, 2005:9). Except among women who had no children, where virtually all women wanted to have a child, women in a current relationship were more likely to say that they wanted an additional child than were women not currently in a relationship. Moreover, as expected, the greater the number of children that a woman had, the less likely she was to say that she intended to have another child.

Figure 2: Intentions for a/another child in the future by current relationship status and number of living children



Of those who intended to have another child, considerations of health dominated their decision when to have the child. Thus, over one third responded that they would wait until they are healthy or when they were cured before having another child. One in five would like to have the child within the next two years and the proportion is higher among those currently in a relationship (Table 5).

Table 5: Timing of next pregnancy for women who intend to have another child

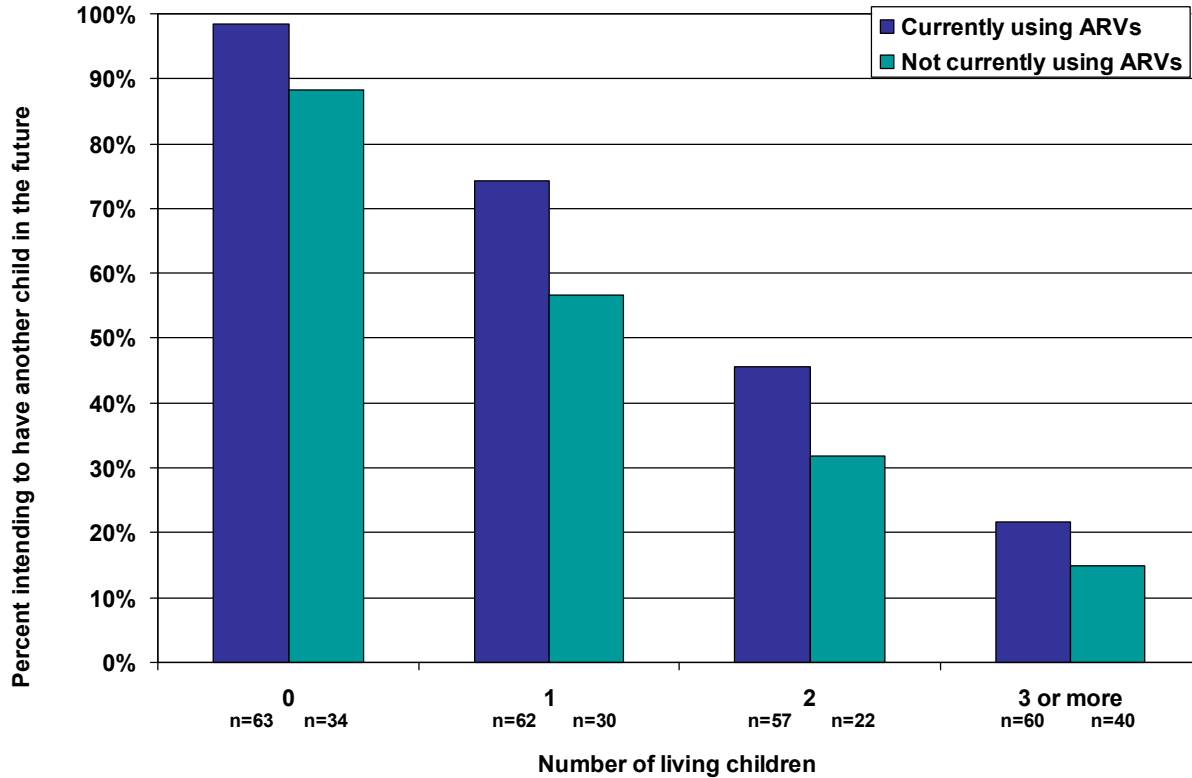
Timing of next child	Current relationship status		
	All Clients	In relationship	Not in relationship
		%	%
When I am healthy	24	26	22
When I am cured	12	11	13
When God wills it	23	17	32
Within 2 years	22	29	13
After 2 or more years	9	11	7
Other	10	6	15
Total %	100	100	100
Total N	207	119	88

Totals may not add to 100% due to rounding.

HIV treatment status

Controlling for the number of living children, women who are taking ARVs are more likely to want another child than women not on ARVs. Presumably women on ARVs are feeling healthier and better able to care for a child than women not currently taking ARVs (Figure 3).

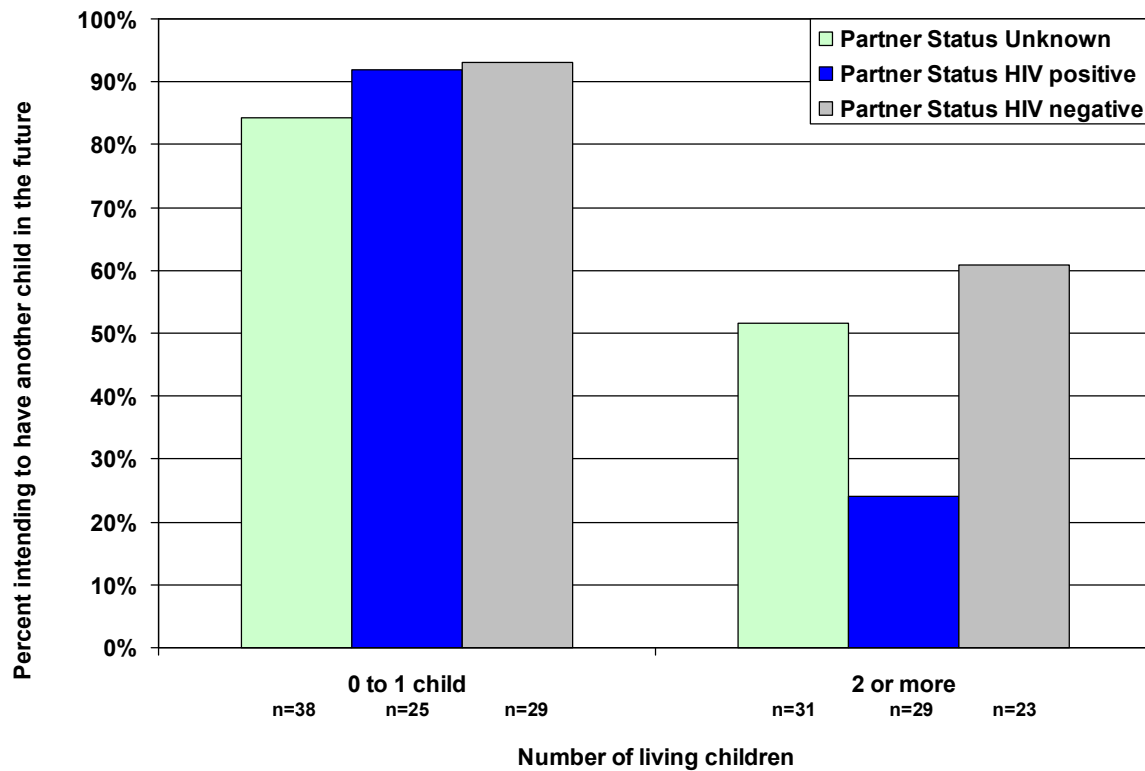
Figure 3: Intentions for a/another child in the future by client's current ARV use and number of living children



HIV status of partner

As shown in Figure 4, the HIV status of the woman's partner affects her intentions to have more children. Once women have at least two children, the proportion who wants another child is much lower among those with a known negative partner.

Figure 4: Intentions for a/another child in the future by HIV status of partner and number of living children, among clients who are currently in a relationship



Reasons for not intending to have additional children

The reasons why women do not intend to have any more children illustrate how the factors described above have influenced their decision making. Forty-four percent of the women reported that they do not intend to have any more children and the main reason they gave was that they had enough children (57 percent).

Health considerations also played an important role in affecting reasons for not wanting another child among women who did not indicate that they thought they had enough children. For example, 61 percent said that they were concerned that the baby would be HIV-positive (Table 6). As noted earlier, women tend to over-state the risks of vertical transmission, and here we can see that this inaccurate belief results in women saying that they do not want additional children. Counseling could be important in conveying correct information to these women about the risk of vertical transmission as well as the role of drugs in reducing that risk so that they can make informed decisions about future childbearing. Moreover, even though we have seen that women’s health is generally good at this time (Table 2), about half of the women are apparently concerned about their current and future ability to care for their children. While these women are either using or will use ART, they may not perceive that it has long-term benefits.

Table 6: Reasons given for not wanting additional children among women who do not report that they have enough children

Reason	%
Have concerns about your/your partners health	52
Have concerns that your health might not be good enough in the future to take care of a/another child	48
Have concerns that your child will be HIV-positive	61
Total N	69

Multiple responses allowed.

4. Family Planning Use

Contraception is generally a familiar concept to the women interviewed; 71 percent had ever used a method of family planning (Table 7). The percent that had ever used a method is far higher among those that report that they are currently in a relationship. The condom is the method most frequently mentioned with about half saying they had used them. Ever use of hormonal methods was low; for example just 21 percent reported that they had ever used the pill.

Table 7: Ever use of contraception and method used

	All Clients	Current relationship status	
		In relationship	Not in relationship
Methods client has ever used	%	%	%
Male condom	48	74	25
Female condom	6	8	5
Pill	21	23	19
Injectable	14	15	12
IUD	6	7	5
Implant	1	1	1
Natural FP	12	11	12
Foaming tablet or spermicide	2	3	2
Used any method	71	87	58
Not used any method	29	13	42
Total N	368	175	193

Multiple responses allowed.

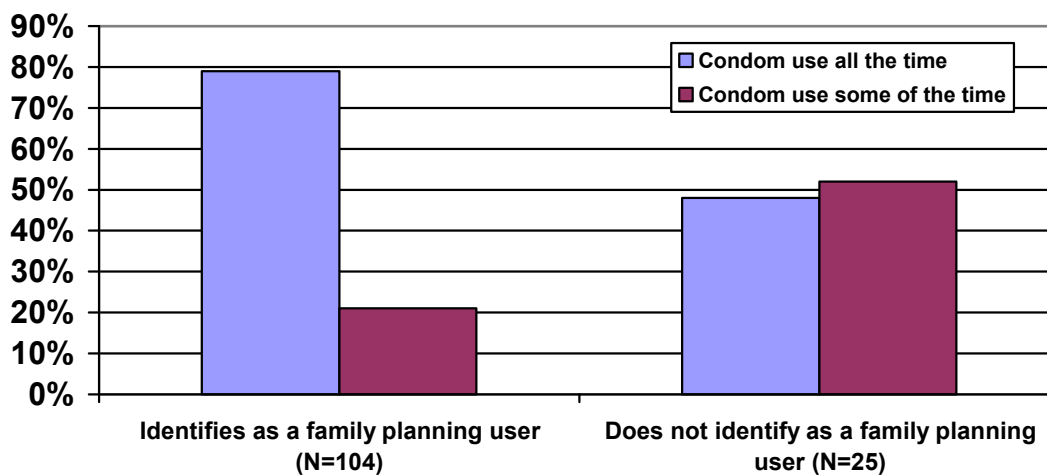
Thirty-six percent of all women, and 74 percent of those in a current relationship, were using a method of contraception (Table 8). This total includes women who self-identified themselves as using a method to prevent pregnancy as well as women who said that they were using condoms but who didn't identify themselves as family planning users. Virtually all contraceptive users relied on condoms, particularly the male condom. Less than one percent reported using any other method of contraception, despite their collective prior experience with a variety of methods. Only one percent of women not in a current relationship reported using contraception. It is possible that these HIV-positive women were counseled to use condoms to reduce HIV transmission and they may have also been told that condoms provided needed protection against pregnancy. As a result, use of methods other than condoms is virtually nil.

Table 8: Current use of contraception and method used

	All clients	In relationship	Not in relationship
	%	%	%
Currently using a family planning method	36	74	1
Male condoms only	24	50	1
Male and female condoms only	3	6	-
Male condoms and other methods	1	3	-
Only other methods (pills)	<1	1	-
Using male condoms, but did not identify as using family planning	7	14	-
Not currently using family planning	64	26	99
Total %	100	100	100
Total N	368	175	193

Among the women in relationships who self-identified as FP users, 79 percent reported using condoms all the time, and 21 percent reported using them some of the time (Figure 5). In comparison, among women who use condoms but do not self-identify as FP users, inconsistent condom use is much higher with 52 percent reporting using condoms only some of the time and only 48 reporting that they use condoms all of the time.

Figure 5: Consistency of condom use according to whether a woman self-identifies as a family planning user, among women currently in a relationship



Unmet need for family planning

A critical issue in deciding whether to include FP services in an ART program, particularly in conditions of constrained resources, is the level of need for contraception expressed. We used two definitions to calculate unmet need for family planning, progressively decreasing the level of restrictiveness for inclusion. In definition 1, women are classified as having unmet need if they are not currently using a contraceptive, are in a relationship, and report that they do not wish to have children in the next two years. Definition 2 includes those classified as in need in definition 1, plus those who report inconsistent condom use. Using the most restrictive criteria and the one closest to that generally used in the literature (Table 9), definition 1 shows a relatively low level of unmet need in this sample: only nine percent of women in a relationship demonstrate an unmet need for contraception. This translates to 32 individuals. Given the high level of condom use in this population, this result is not surprising. Including women who report inconsistent condom use in the definition increases unmet need to 14.4 percent. The increase reflects the fact that a substantial minority of condom users do not use them consistently. Moreover, if women are over-reporting the consistency of condom use, need would be higher.

Table 9: Percent of women with unmet need under various assumptions

Description of in need population	Percent in need	Increase in percent	Cumulative number in need
Definition 1: No contraceptive use, in a relationship, and “Don’t want” ¹	8.7	--	32
Definition 2: No contraceptive use or inconsistent condom use, in a relationship, and “Don’t want” ¹	14.4	5.7	53

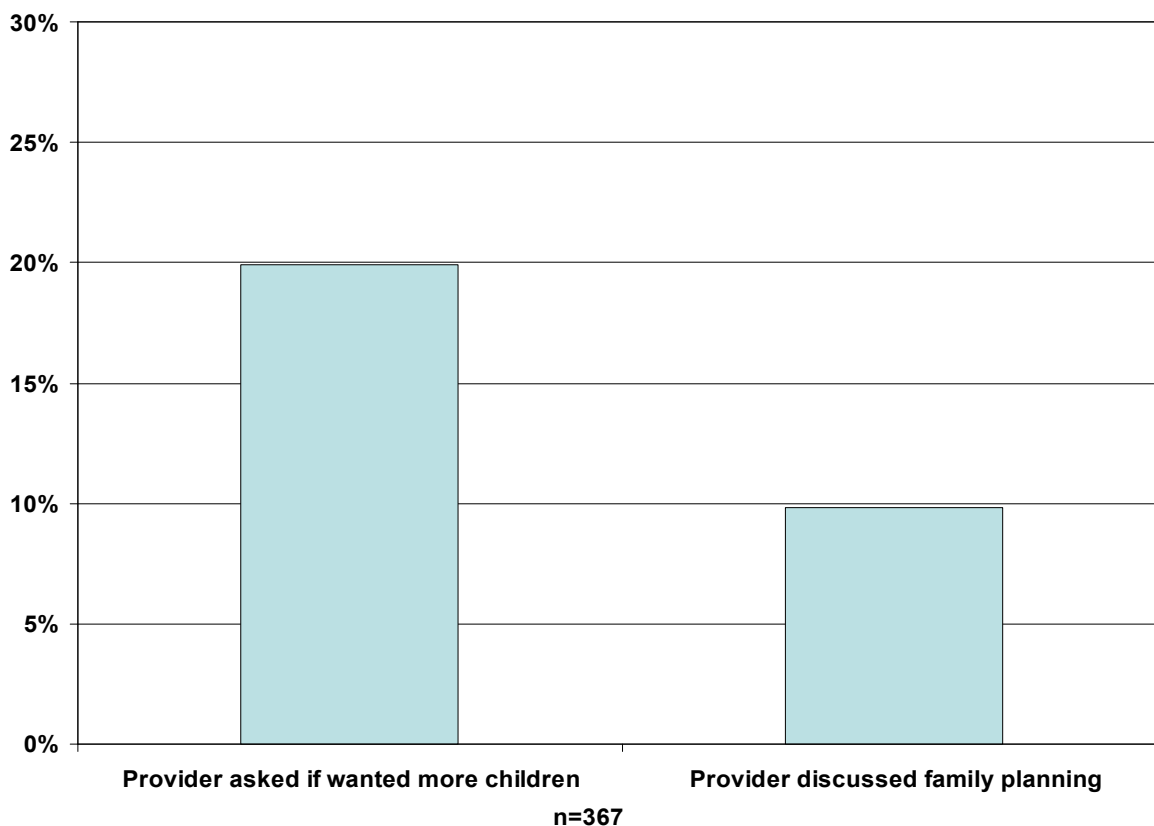
¹ Don’t want another child within the next 2 years/soon

Among women currently not using a contraceptive, about two thirds say they do not plan to use contraception in the future or they are undecided. In line with these findings of low interest in using contraception among non-users, we also found that only about one third of the non-contraceptors wanted the provider to discuss family planning with them (data not shown).

5. Family Planning Counseling and Services

While the training emphasized providing family planning counseling and methods to HIV clients, only 20 percent of women reported that the provider asked whether they planned to have more children and only ten percent reported that the provider discussed family planning with them (Figure 6). This is a slight improvement over the findings of the PNA, in which 40 percent of female clients attending the HIV clinic would have liked the nurse or doctor to have talked with them about FP during their consultation, but none did (Aglah, Bonku and Wolfhart, 2005:9).

Figure 6: Percent of women who indicated that the provider discussed family planning



Of those 36 women who reported discussing family planning with a provider, dual protection was the topic reported discussed most often (Table 10). Only between one third and 44 percent reported discussing with the provider the risks for STI, risks for pregnancy and HIV, dual method use, and family planning methods. The male condom was the method discussed most often, followed by the female condom (data not shown). Among the 90 percent of women who did not discuss family planning with a provider, one third reported that they would have liked to have done so (data not shown).

The heavy reliance on condoms was observed in the interviews among providers conducted during the PNA. While both clinics offer condoms to patients, most HIV clinic staff stated that ‘their clinic does *not* offer FP services’, reflecting the common bias held by health workers that ‘condoms are for disease prevention only’, and that condoms play no role in preventing pregnancy. There appears to have been a shift among some health workers, with the discussion of dual protection becoming slightly more common during counseling.

Table 10: Percent of women with whom the provider discussed the following family planning and HIV topics, among women who had family planning discussed with them

Topics discussed	%
Dual protection	61
Risks for STI	36
Risks of pregnancy and HIV	44
Dual method use	33
Described various family planning methods	39
Referred to another family planning clinic	3
Received a family planning method	11
Total N	36

B. CLIENT-PROVIDER OBSERVATIONS

Provider Characteristics

Twenty-eight providers were observed during the study. Their distribution, by job title and training status, is reported in Table 11. Underscoring the effect of staff turnover, nine of the medical officers observed at KBTH joined the facility in May 2006, several months after the training was offered. The two trained medical officers working at Atua were members of the FHI staff, who provided clinical care as well as technical support to the ART program. The single medical assistant was added to the program on detail from another hospital, to prepare for the end of clinical services provided by FHI.

Thirteen of the providers were observed five times during the study period: nine at KBTH and four at Atua. The remaining providers were observed four times or fewer.⁴ Four providers declined to be observed.

Table 11: Distribution of observed providers (numbers)

All providers		Hospital			
		KBTH		Atua	
		Trained	Not Trained	Trained	Not Trained
Medical Officers	15	4	9	2	0
Medical Assistants	1	0	0	0	1
Others (Nurses, psychologists)	12	3	5	4	0
Total	28	7	14	6	1

The clients observed during the consultations were slightly older than those interviewed; the mean age of those observed was 36, compared with 35 among those interviewed. Both groups had a mean of 2.1 children (data not shown). Presumably their fertility and family planning needs are similar to those observed in the larger sample.

Most of the observations completed were between a doctor and client: 59 percent, compared with 19 percent between a nurse or midwife and client, or 15 percent between a psychologist and client. Two thirds of the observations included a female provider, and 42 percent of the observations were of trained providers.

Type of consultation and provider behavior

Three quarters of the consultations were for routine visits by the regular clients (Table 12). One half of the clients are already using ARVs, and one quarter are registered with the clinic but are

⁴ While it is possible to average the responses of each provider rather than present the results of each observation, little variation would be observed given the distribution of observations.

not yet clinically eligible to begin using the anti-retroviral therapy. Thirteen percent of the consultations were for adherence counseling. The median duration of visits was 13 minutes, ranging from a minimum of four minutes to a maximum of 48 minutes (data not shown).

Table 12: Type of consultation

	All Observations	Was provider trained in FP-ART integration	
		Yes	No
Routine maintenance, client on ARV	52	53	50
Routine maintenance, client not yet on ARV	24	24	25
Diagnosis or treatment of opportunistic infection	1	2	0
Initial visit, recently learned HIV status	9	7	13
Adherence counseling	13	13	13
Post-test counseling	1	2	0
Total %	100	100	100
Total N	95	40	55

The following tables report indicators for which a “yes/no” response was checked on the observation form. For ease of review, only the positive, or “yes” responses are included in the tables.

Table 13 summarizes provider behavior during the consultation; the differences in behavior by training status are slight. At least two thirds of providers greeted clients warmly, encouraged questions or asked about changes in the client’s condition. Reflecting the cramped conditions at both sites, only 45 percent of observations took place under conditions of visual and auditory privacy. Physical layout of the clinics also means that clients often share the counseling room with another patient; this was observed more often at KBTH than at Atua. Confidentiality was assured in just over one third of consultations. While routine confirmation of confidentiality is an important element of good quality of care, providers may not feel the need to reassure the client of confidentiality issues on each visit as regular clients become familiar. Also, given the physical layout of the clinics within the hospital structure, particularly at Atua, clients are mixed with the larger outpatient population, and confidentiality may be breached by their mere presence in the waiting room.

Table 13: Observation of provider behaviors

	Percent All Observations	Was provider trained in FP-ART integration	
		Yes	No
Greets client respectfully, warmly	93	90	95
Ensures visual and auditory privacy for client	45	48	44
Client is the only patient in the counseling room	44	43	45
Encourages questions	74	78	71
Asks about changes in condition since last visit	69	68	71
Assures confidentiality	39	38	40
Total N	95	40	55

HIV and condom counseling

There are few differences between trained and untrained providers regarding HIV and condom discussion topics and messages. While trained providers are somewhat more likely to deliver HIV counseling messages, overall, the results show that the information about family planning

use by HIV+ women included in the provider training is not being conveyed by the trained providers.

Providers discuss the client’s sexual activity in just over half of the consultations, regardless of training status (Table 14). Only one fourth asked if a client had multiple partners and discussion of status disclosure was observed in 45 percent of sessions. With the exception of fidelity or partner reduction, most messages about HIV transmission are mentioned in fewer than 20 percent of the consultations. Given the low level of knowledge already reported about HIV transmission during pregnancy, delivery and breastfeeding, these messages are especially important to convey. These findings need to be interpreted with some caution. While virtually all the topics listed should be discussed with all clients at first visit, they may not be obligatory in some follow-up visits, which may be the reason they were not observed.

Table 14: HIV topics discussed and counseling messages delivered

Topics/messages discussed	Percent all observations	Provider trained in FP-ART integration	
		Yes	No
Topics discussed			
Client’s current sexual activity	53	53	53
If client has multiple sexual partners	24	18	29
Disclosing HIV status with spouse, family, friends	45	43	47
Messages delivered			
HIV transmission can be prevented by being faithful/reducing the number of sexual partners	27	33	24
HIV transmission can be prevented by abstaining from any sexual intercourse	17	23	13
HIV can be transmitted from mother to babies during pregnancy	17	20	15
HIV can be transmitted from mother to babies during delivery	18	23	15
HIV can be transmitted from mother to babies by breastfeeding	19	23	16
HIV can be transmitted from mother to babies, time of transmission not specified	3	5	2
Total N	95	40	55

Similarly, condom counseling appears to be weak in the majority of sessions, although the trained providers perform better than the untrained providers in certain areas (Table 15). About half the providers asked if a client was using condoms and 43 percent mentioned that they prevent HIV transmission. Far fewer discussed that condoms can prevent transmission of other STIs and pregnancy or how to negotiate condom use with partners. Demonstrations of male or female condom use were infrequent though more likely among trained providers. Virtually none of the untrained providers and few of the trained ones offered male or female condoms to the clients. As noted above, providers may have discussed these topics on earlier occasions with clients, and not perceive the need to review them on every visit.

Table 15: Condom counseling

	Percent all observations	Provider trained in FP-ART integration	
		Yes	No
Discussion topics			
Condoms prevent transmission of HIV	43	45	42
Condoms prevent transmission of STIs, other than HIV	24	28	22
Condoms prevent pregnancy	21	30	15
Negotiating condom use with partner	13	18	9
Whether client uses condoms	49	55	45
Demonstrations			
Condom use demonstrated with penis model	8	15	4
Female condom use demonstrated with hand	16	30	5
Asks client to repeat condom demonstration (male or female)	5	10	2
Provider offers			
Provider offers client male condoms	5	13	0
Provider offers client female condoms	7	15	2
Client accepts			
Client takes male condoms	3	8	0
Client takes female condoms	4	8	2
Total N	95	40	55

One of the performance standards identified in the PNA is that all providers offer FP information to all HIV+ clients on their first and subsequent visits. The target goal was 80 percent; the observed during the PNA was 10 percent. Condoms were discussed as a means to prevent pregnancy in 21 percent of the observed interactions, and in 30 percent of the interactions with trained providers.

Family planning counseling and services

Only rarely did clients initiate a discussion about family planning, despite 32 percent having said that they would like the provider to discuss this topic with them (data not shown). Providers initiated the discussion in just over one quarter of the observed sessions; this was observed more frequently among the trained providers (35 percent) than the untrained providers (22 percent, Table 16). Dual method use and dual protection, topics addressed in the provider training, were discussed in less than 20 percent of the observed sessions.

Less than half of providers asked about clients' family size and fertility intentions. They were most likely to ask about numbers of children and pregnancies, but only one third asked if a client desired more children and few asked about the timing of a future pregnancy. While once again it is possible that these topics were discussed in earlier, non-observed interactions, both condom use and fertility intentions are likely to change over time, and are topics that should be routinely assessed. Numerous studies have documented the inconsistent use of condoms among HIV+ individuals; consistent and correct use is an important message to reinforce. There is also a growing body of evidence documenting the desire for future pregnancies among HIV+ women, implying that fertility intentions should also be routinely assessed.

Table 16: Discussion of family planning needs

	Percent all observations	Provider trained in FP-ART integration	
		Yes	No
Pregnancy and fertility			
Number of children/pregnancies client has had	45	48	44
Whether client desires more children	34	35	33
When client would like to have another child	13	13	13
General Family Planning Discussion			
Provider initiates discussion about family planning	27	35	22
Current use or partner current use of FP methods	15	15	15
Past use or partner past use of FP methods	14	8	18
Client asks about family planning or how to avoid pregnancy	2	3	2
Condoms			
Dual method use	17	23	13
Dual protection	15	20	11
Total N	95	40	55

In most cases, reasons to use family planning were not discussed in the observed sessions (Table 17). It is interesting to note that when the topic arose, pregnancy prevention was not among the main reasons cited for using family planning. Instead, the two most frequent reasons mentioned for using contraception were to protect the client’s health or to prevent STIs.

Table 17: Main reasons why client should use family planning discussed

Family Planning Needs	All Observations	Provider trained in FP-HIV integration	
		Yes	No
	%	%	%
Did client indicate she has a need for FP			
Yes	13	13	13
No	15	13	16
Not discussed	73	75	71
Total %	100	100	100
Discussed reasons to use family planning			
Yes	31	38	25
Protect client health	26	33	22
Want to prevent STIs	17	23	13
Other ¹	15	18	13
No	69	63	75
Total %	100	100	100
Total N	95	40	55

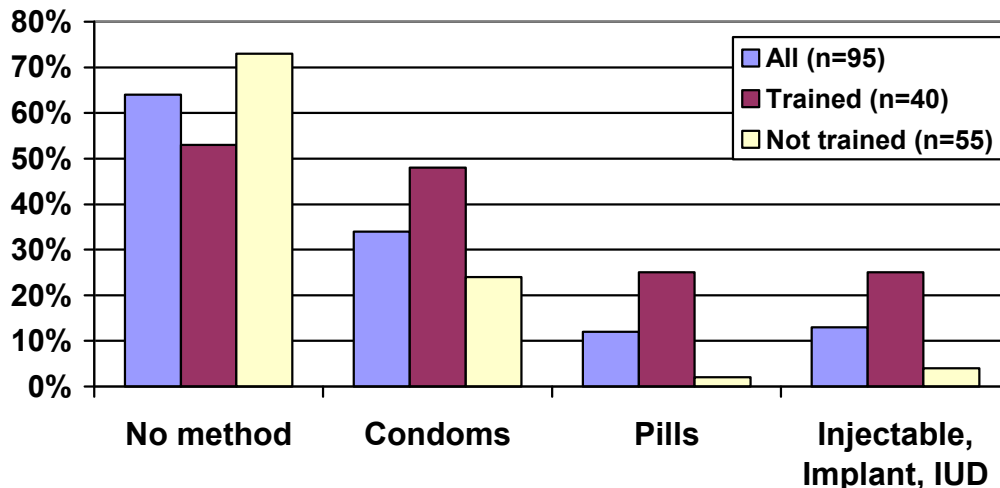
¹ “Other” includes “Ensure continuity of ART”, “Prevent maternal to child transmission”, “Need to care for other living children”, “Irresponsible to have baby if HIV-positive”, and “Want to prevent pregnancy”.

Note: Total percents may not add to 100% due to rounding.

No family planning methods were mentioned in nearly two thirds of the sessions (Figure 7). Condoms were mentioned most frequently; nonetheless they were mentioned in only one third of

all sessions. Pills and other methods (injectables, implants, and the IUD) were discussed in only 12 and 13 percent of interactions, respectively. Providers gave the client a method in nine percent of the consultations, most often condoms (in eight of the nine sessions, data not shown); one client was given OCs.

Figure 7: Contraceptive methods mentioned in counseling



C. SUPERVISOR INTERVIEWS

In-depth interviews with six supervisors provided information that could help explain some of the findings in the client interviews and client-provider observations. Due to time constraints, Facilitative Supervision interventions were not conducted, and so supervisory skills for integrated services were not developed. The lack of dedicated supervision for this task may have affected the delivery of integrated FP-HIV services at both clinics.

Organization of Supervision

Supervisory duties in some cases appear to be somewhat informal, as several of the women were unable to identify precisely the number of persons they supervised, e.g. “*I supervise a lot of providers.*” In at least one case, the supervisor was responsible for only one other person. In other cases, they were responsible for supervising staff in other units at the hospital, and acknowledged that they infrequently observed them.

Supervision appeared to often be ad hoc and opportunistic, as in the case when the supervisor happens to be in the room with the provider she supervises, and is able to observe interactions with clients.

We usually consult together so that any time I get a chance to consult with one of them I listen to what they are saying, observe what they are doing, or sometimes I just pop into their consulting rooms pretending as if I am taking something or chatting with them then I observe what they are doing.

The heavy workload was cited by one supervisor as constraining her ability to supervise the one provider under her.

All the supervisors relied on orally conveying impressions about performance.

Over here we are a family so with tact we communicate with our providers and correct them when they go wrong.

Well, to say that we have actually put something on paper we haven't really done that.

Sometimes there is the need for on the spot supervision and coaching. But sometimes we do it after the close of the day. Once in a month we have monthly meetings.

Barriers to FP services

When asked about barriers to providing family planning services, there was a tendency among the providers to place responsibility on the clients, in particular for their reluctance to disclose their status, or for their ability to pay for contraceptives.

We are having some difficulties which I can say it is the making of the clients. Some have not disclosed it to their partners and if you have not disclosed it to your partner, you cannot ask your partner to use condom.

These things are not costly even if you don't have money, we give it to you, it is just ₺2000 [for an IUD]. The pills and the condoms are even cheap, very cheap, the female ones are ₺300 and the male one, four for ₺100....So I don't see the reason why money should be a barrier for some people from getting family planning.

The greatest barrier we are facing is in the area of finances, where clients are very poor. They don't have even ₺1000 to buy condoms so we always stress on that.

Dual Protection and Dual Method Use

Only two supervisors accurately defined “dual protection” and “dual method use” during their interviews. The others continued to show some confusion when asked to explain the difference.

Okay, the dual protection I know is using the family planning method and then using condoms. When you use the condoms, it has its duties to perform and [the] other method also has its duty to perform so during counseling, we make them understand that using the family planning method is not going to prevent infection.

Dual protection involves the use of the pill and the condom.

Staff Acceptance of Family Planning Services

There was no apparent resistance by supervisors or staff to adding family planning services to the ART clinics, although several mentioned that they would prefer to have more in-service training, informational leaflets, some additional motivation (compensation) for performing additional services, and verbal acknowledgement of their efforts. Time constraints, work load and transfer to other units were all mentioned as factors that impede their ability to offer family planning.

In actual fact, not everybody complained. Those who are very close with the work actually appreciated it because we see most of our clients getting pregnant and with this family planning is going to help them if we only counsel them well for them to understand.

Yes, they agree [to the ART-FP integration] because they know some patients on ART conceive. There are a lot of such cases, and should we have introduced them to family planning before the ART they wouldn't have gotten pregnant and they would have conserved enough energy to work and then later on take seed when they wanted. Some patients conceive when their immune system is not strong enough to take care of a pregnancy.

You know family planning counseling is a whole course and we took just one week to take them through whatever they are doing now. That is why we are encouraging them to read more on the leaflets and pamphlets we have given them so that they will be able to provide the service better.

With the providers... when I ask them they all say they are tired of [the] work load.

I guess because they were trained and because we ourselves have seen the importance of integrating family planning we don't see it as an added responsibility. We think that it is a comprehensive package we are offering and [if] we take away one component of it then you won't be offering a comprehensive package.

The latter comment is an illuminating indicator that some supervisors understand the need to meet the full range of HIV/AIDS and FP needs of the client, and recognize that these services can be “bundled” in such a way that they are available and accessible to those in need.

One supervisor indicated that not all who were trained to do family planning counseling are doing it, because “*They are in other units, unless they change to come here.*”

Family Planning Service Provision

The interviews with supervisors underscored that in actuality, different systems have evolved at each location. As was the case prior to the effort to integrate services, it seems that the Atua clinic continues to rely on referrals to the family planning clinic, and/or calling the family planning nurse to the ART clinic when the need arises. In some small measure, it seems that KBTH is attempting to integrate services, but on a very limited scale. Both sites continue to rely heavily on condom distribution, an integral part of the service since its establishment.

.... At times I will be too busy that the people who want to be initiated in it, I will have the send them there [to the family planning clinic] or I will have to call XXX [nurse from the FP unit], if she is free she will come...

I don't get enough time to counsel the patients on family planning so I take them to the family planning using and ask my other colleagues to counsel them.

... What we do is we talk to them [clients] about family planning, the need for family planning, and then we refer them to the family planning nurses. But they do not do the counseling the same day. What they do is give them an appointment so they can have time to sit on a non-clinic day to sort out things.

But what I have really noticed is they [providers] are really stressing a lot on the condom use. Most clients, after talking to them, you realize that they are not too comfortable with the injections and the pills because they are swallowing a lot of tablets already, but I can say that for condom use they are really stressing on that.

One supervisor at Atua mentioned that when an ART client arrives who may need family planning, she is counseled at the ART clinic and then sent to the family planning unit at the hospital. It is unclear from the interview transcript whether she is referring to an actual case, or the theoretical process that would take place if a woman desired family planning.

IV. DISCUSSION

The results of this study contribute information to several important questions.

- What are the needs of women for counseling about contraception and safe pregnancy in this population of HIV-positive women?
- How might counseling needs change over time?
- What are the limitations in the measure of unmet need?
- What are providers doing to meet the needs for information and counseling about family planning and safe pregnancy?

What are women's current needs for counseling on family planning and safe pregnancy?

The data from the client survey indicate that the need for family planning is not very high among women in current relationships. Although a high percentage of women want to have additional children, especially those with none or one, many of them do not want to get pregnant in the next two years. However, use of condoms in this population is very high resulting in low unmet need. For women who do want to have an additional child soon, information about the risk of vertical transmission is poor including the efficacy of drugs to reduce transmission.

How might counseling needs change over time?

There are several factors that indicate that fertility desires in this population are constrained. With greater use of ART, including a higher duration of use among current users and a higher percentage of women using ART, fertility desires are likely to increase. First, a high percentage of women that want more children say that they are interested in delaying pregnancy because of concerns about health. Presumably, if ART treatment results in improved health status, then a higher percentage of these women will want children sooner. Second, the proportion of women who want more children is higher among those using ARVs. Consequently, with greater use of treatment, a higher proportion of women will want more children. Third, as the information and counseling that women receive about vertical transmission improves, women with concerns about the health of their newborns may decide to have a child. Finally, a high proportion of women were not currently in a relationship. Some of these women will feel healthier and women move into relationships and want more children.

At the same time, there are other factors that might change in such a way as to increase the need for family planning. If couple communication improves so that more women know the HIV status of their partners, then they will use that information to make decisions about having more children. The data tend to suggest that knowing that one's partner is HIV-positive substantially reduces the desire for a third child. Of course, as couples increase their family size, their desire for additional children will decrease and their need for contraception will increase. Our results show that once women have at least two children, the percentage who want more is substantially reduced.

What are the limitations in the measure of unmet need?

The standard definition of unmet need was originally designed for a population in which women were in stable unions and HIV was not yet a problem. Today the definition of unmet need is being used to determine contraceptive needs of women who may not be in stable unions and who also may need to protect themselves or their partners against the risk of HIV. In this study, virtually the only method of family planning that was being used was condoms. If the definition of unmet need is expanded to define inconsistent condom users as in need, then the percent in need increases but still remains low. It is possible that consistent condom use is over-reported and need is actually higher, but this study does not provide in-depth information on the consistency of condom use. However, some studies have found low or inconsistent condom use with regular or trusted partners suggesting that condom use may be over-reported in this study. Other studies indicate that the use effectiveness of condoms is lower than that of other methods. If that is the case, then unmet need will be higher indicating that family planning counseling must be improved.

What are providers doing to meet contraceptive need?

This study illustrated some problems common to training interventions. Many of the providers who were trained transferred to other health centers or departments. In addition, supervisor interviews highlight some of the constraints to implementing an intervention: heavy workload, limited time and lack of compensation.

Our results indicate that while trained providers generally do a better job counseling clients than do untrained providers, performance by both groups is poor. While it is possible that the counseling program was implemented in group sessions, the bottom line is that, other than condoms, women in this study were not using family planning methods. However, a high percentage of women had prior experience with methods, and while some of that experience may have been unfavorable, it is difficult to believe that negative experiences were the sole reason for the almost non-existent current use of methods other than condoms. One reason that could account for the low use of family planning is that women have been encouraged to use condoms to prevent transmission to their partners. However, as discussed above, some partners are already positive and condom use may not be consistent enough to prevent pregnancy.

Even if women did not need methods at the time of their visit, they should still be asked about their family planning needs and provided with information. Given that many still wanted to have children, there was a surprising lack of knowledge or misinformation regarding HIV transmission during pregnancy, delivery and breastfeeding.

It is extremely important to reach HIV-positive women with correct information on HIV transmission and family planning. To best meet the needs of this population, we need a better understanding of how these various factors affect the desire for more children as well as when children are wanted to help women meet their fertility goals. With the increasing availability of ART this decision making process will be increasingly complex. It will be ever more important to improve on interventions such as this one to find ways to provide family planning and PMTCT counseling and contraceptives to this population.

V. RECOMMENDATIONS

The short duration of training, the informal supervision and attention to contraceptive supply logistics, and staff turnover, as well as the short time that elapsed between training and evaluation, coupled with low demand for services among the female clients interviewed, all

contributed to the intervention having a very limited effect in improving the inclusion of family planning counseling and services in the two clinics studied. That said, the findings highlight the complexity of providing FP services to HIV+ women, and provide some indication that the fertility intentions and contraceptive needs among this population are fluid and may change with improved health status and better partner communication.

The training intervention should be strengthened to include a greater focus on the appropriateness of an array of family planning methods for HIV+ individuals, and to reinforce the concept that HIV+ individuals are sexually active, and may be at risk of pregnancy.

Condom promotion should continue, but providers should be better equipped to convey messages about dual protection and dual method use, rather than focus solely on the use of condoms to avoid infection or re-infection with HIV. Providers must also reinforce the message to use condoms consistently.

In the case of Ghana, many women are entering the ART clinics following the death or illness of their spouse, or diagnosis of HIV in a child, rather than through referrals from PMTCT services. For these women, knowledge of vertical transmission may be poor. Providers should ascertain whether their patients are aware of the risks of mother to child transmission, and provide appropriate counseling to ensure women understand the possible consequences of a pregnancy.

Attention should be given to the related skills and logistic challenges that are needed in order to offer integrated services, such as supportive supervision, acquisition of contraceptive supplies, efficient inventory and report forms, referral systems, and clear lines of responsibility for making monthly or quarterly reports of FP uptake to record keeping systems.

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Appendix 2: Statistical Summary

Sample Size Justification

Separate sample size justifications were prepared to test the feasibility of the intervention with providers and the effect of the intervention on clients.

Feasibility Outcome: Providers

A summary score (ranges from 0-10, the larger the better) that measures the success of service implementation will be derived based on whether accurate and appropriate information is being communicated by providers. Data will be collected using a checklist during observation of client-provider interactions.

Five observations per health care provider for about 20 providers are planned to monitor the feasibility outcome. The precision (the plus and minus value used to create the confidence interval) is 0.79 score points when the intraclass correlation⁵ is 0.7 and the estimated standard deviation of the summary score is 2. Table 1 presents the precision analysis for producing a 95% confidence interval (CI) of the mean summary score when the estimated standard deviation is 1 or 2, and when there are 20 or 25 health care providers at different levels of intra-class correlation.

Standard Deviation of the Summary Score	Intra-class Correlation ⁶ (ρ)	Precision for 5 observations per health care provider	
		20 Providers	25 Providers
1	0.1	0.24	0.21
	0.3	0.30	0.27
	0.5	0.35	0.31
	0.7	0.40	0.36
2	0.1	0.47	0.42
	0.3	0.59	0.53
	0.5	0.70	0.62
	0.7	0.79	0.71

* Precision analysis was implemented using PASS 2002 software after converting the final sample size to the effective sample size. The final sample size took into account the variance inflation due to correlated data within the same health care provider.

Effectiveness Outcome: Clients

A two-part data collection design will be implemented to assess the effectiveness outcome in terms of family planning (FP) uptake after counseling. It was decided not to have a control group since virtually no family planning counseling is now provided to ART clients, and very few referrals to the FP clinic are made. In their report of the PNA results, Aglah et al. note that "...both HIV clinic managers stated that their clinics provide no family planning services (2005:9, emphasis in original). Furthermore, the report states that both hospitals "...lack

⁵ Refers to the correlation of the summary scores from the same health care provider implementing FP.

functional systems for referring people between the HIV and FP clinics (2005:10).⁶ Given that virtually no on-site family planning counseling or services are now taking place, there is little reason to look for differences among sites that provide the service, compared to those that do not. Instead, the interview for women will be administered in two segments: the first, before she has contact with the physician or counselor, and the second, shorter segment, following contact. In the first part she will be asked about current and past family planning use, number of living children, fertility desires and intentions, and related topics. In the second part, she will be asked whether the provider offered family planning counseling, services or referral during her consultation.

At least 300 female ART patients aged 18 to 45 will be interviewed pre- and post-FP counseling. We are interested in estimating the proportion of patients that were not using a FP method before the contact with the physician, but leave with a FP method afterwards. This change can be interpreted as the increase in FP uptake (since it is very unlikely that a patient would use a FP method before the contact and stop using it after the contact). The study size is adequate to ensure that the estimate of the increase in FP uptake is within 9% of the true value for an estimated 20% increase when the intra-class correlation⁷ is up to 0.2. Table 2 presents the precision analysis for producing a 95% CI for 10% and 20% increase in FP uptake when there are 20 or 25 health care providers at different levels of intra-class correlation.

Increase in FP Uptake After Counseling	Intra-class Correlation ⁶ (ρ)	Precision for 300 Interviews	
		20 Providers	25 Providers
10%	0.05	4%	4%
	0.10	5%	5%
	0.15	6%	6%
	0.20	6%	6%
20%	0.05	6%	6%
	0.10	7%	7%
	0.15	8%	7%
	0.20	9%	8%

* Precision analysis was implemented using PASS 2002 software after converting the final sample size to the effective sample size. The final sample size took into account the variance inflation due to correlated data within the same health care provider.

Fertility Desires and Intentions: Clients

The questionnaire for the sample of women includes questions pertaining to their fertility history, desires and intentions. Little is known about the fertility goals of HIV+ women, and the few studies that have investigated this have typically been carried out in the United States or Europe. It is questionable whether the findings of those studies are generalizable to the African context, in which childbearing remains a salient and defining characteristic of women and their status in society. The sample size identified to test the effectiveness of the outcome is sufficient to provide stable descriptive data about fertility desires and intentions, and no additional participants will be recruited.

⁶ In an interview with several providers at KBTH on October 25, 2005, one nurse noted that “about six” women had been referred for family planning since the beginning of the year.

⁷ Refers to the correlation of FP uptake outcome for patients from the same health provider.

Analysis of feasibility outcome

The crude mean score and the corresponding 95% confidence intervals for feasibility will be computed based on the Wald-type statistics via Generalized Estimated Equation (GEE) to account for the correlation among providers. Either the normal distribution or the gamma distribution for the scores will be used for modeling, depending on the real score data. Transformations to the score data for normality may be applied when appropriate. Equal correlation structure will be assumed for the modeling.

In addition, the mean score for each health care provider will be plotted to show the variations between providers. The amount of the variation can be quantified via random effect models (which can be implemented by PROC NLMIXED or PROC MIXED depending on the distribution of the scores) if desired.

Analysis of effectiveness outcome

The effect of the family planning counseling will be determined based on the increased use of FP following the counseling session. Women will be asked before they see a provider whether they are currently using a method of contraception, and if so, what it is. Following the provider contact, the women will be asked whether family planning was discussed, whether the provider offered a method or a referral, and whether she accepted a method or referral. The increase in FP uptake will be measured by the percentage of women who pre-counseling reported not currently using a method and then post-counseling reported adopting a contraceptive method, or accepting a referral to a family planning clinic, with the intention to complete it. The proportion of the FP uptake increase will be computed by GEE to take into account the correlated effect from the same provider. The binomial distribution and logit link function and the equal correlation structure will be used for the modeling. In addition, the proportion of the FP uptake increase will be computed adjusting for age and health care providers.

Analysis of fertility desires and intentions

The analysis of fertility desires and intentions will mainly be carried out using descriptive statistics. Measures of central tendency and dispersion will be computed for continuous variables. Categorical data will be summarized with frequencies and percentages

Other themes included in the relevant data collection instrument will be analyzed if warranted. The analysis will include both descriptive and inferential analysis when applicable. Response rates and interview completion rates will also be reported.