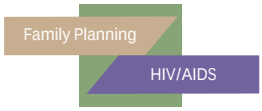

Study of Family Planning and HIV Integrated Services in Five Countries

Final Report

Susan Adamchak, Barbara Janowitz, Jennifer Liku, Emmanuel Munyambanza, Thomas Grey, and Emily Keyes

Family Health International

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Family Health International
P.O. Box 13950
Research Triangle Park, NC 27709 USA
Telephone: 919.544.7040
Fax: 919.544.7261
Web: www.fhi.org

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Acronyms

ACIPH	Addis Continental Institute of Public Health
AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral therapy
ARV	Antiretroviral
CA	Cooperating agencies
CBS	Central Bureau of Statistics (Kenya)
CNLS	National Committee in the Fight against AIDS (Rwanda)
CSA	Central Statistical Agency (Ethiopia)
CT	Counseling and testing
C&Tx	Care and treatment
DCI	Data collection instruments
DHS	Demographic and Health Surveys
DOH	Department of health
FHI	Family Health International
FP	Family planning
HIV	Human immunodeficiency virus
HREC	Human Research Ethics Committee (South Africa)
IEBCC	Information, education, and behavior change communication
IERB	Institutional Ethical Review Board (Ethiopia)
INS	Institut National de la Statistique (Rwanda)
IRB	Institutional review board
IUCD	Intrauterine contraceptive device
KEMRI	Kenya Medical Research Institute
LAPM	Long-acting and permanent methods (of contraception)
M&E	Monitoring and evaluation
MOH	Ministry of Health
NEC	National Ethics Committee (Rwanda)
NGO	Nongovernmental organization
PEPFAR	President's Emergency Plan for AIDS Relief
PHSC	Protection of Human Subjects Committee
PITC	Provider-initiated HIV testing and counseling
PLWHA	People living with HIV or AIDS
PMTCT	Preventing mother-to-child transmission (of HIV)
SDP	Service delivery point
STI	Sexually transmitted infection
TRAC*Plus*	Center for Treatment and Research on AIDS, Malaria, Tuberculosis and other Epidemics (Rwanda)
UBS	Uganda Bureau of Statistics
UNCST	Uganda National Council for Science and Technology
USAID	U.S. Agency for International Development
VCT	Voluntary counseling and testing

Executive Summary

In the past several years, there has been a growing international dialogue on the feasibility and desirability of providing integrated family planning (FP) and HIV services. The reasons for offering joint, complementary services are many. Adding FP services to counseling and testing might provide an opportunity to reach populations that do not typically attend FP clinics, such as the sexually active young and unmarried, men, and members of high-risk groups such as sex workers. Adding FP services to care and treatment might facilitate the uptake of contraception by HIV-positive individuals, helping to maintain their health, plan safer pregnancies, and reduce the rate of mother-to-child transmission of HIV. Including HIV services, particularly counseling and testing, in FP services would allow earlier diagnosis and referral to care and treatment.

This study was undertaken to provide a "snapshot" of early integration efforts, in order to provide the U.S. Agency for International Development (USAID) and national programs with information needed to improve integrated services.

Specifically, the research examined the following:*

- The percentage of women in need of FP services or HIV services
- The preparedness of clinics and service providers to provide services to meet need
- The level of integrated service provision offered by providers to clients
- The availability of service data used to monitor integration

Three models of integrated HIV and FP services were included in this study: family planning in counseling and HIV testing (FP-CT), family planning in HIV care and treatment services (FP-C&Tx), and HIV services (particularly counseling and testing) into family planning (HIV-FP).

Methodology

Following a review of literature and program reports, we selected five countries for inclusion in the study: Ethiopia, Kenya, Rwanda, South Africa, and Uganda. The study used a case study design, with each model (FP-CT, FP-C&Tx, and HIV-FP) considered a "case."

Programs were included if they had:

- A deliberate strategy that defines the implementation of integrated services
- An integrated delivery of services for a minimum of three months
- Three or more facilities implementing integrated services

Individual facilities were selected based on the recommendation of program managers. Twenty-one program implementers, many in collaboration with local ministries of health, agreed to have Family Health International (FHI) conduct the study at their service sites.

More than 100 policymakers, stakeholders, donor agency staff, representatives of people living with HIV or AIDS, and public and private program managers participated as key informants during in-depth guided interviews. Managers, providers, and clients at 102 clinics were interviewed using structured questionnaires. A structured observation was conducted at each clinic, including the monitoring of provider time use. Data collection took place between October 2007 and May 2008.

Family Health International, either through its local offices or through subcontracted research organizations, was responsible for all field activities in four of the five countries: Kenya, Rwanda, South Africa, and Uganda. Macro International was responsible for engaging a local field team in Ethiopia. Field work was carried out between August 2007 and June 2008.

The components of the integration framework are expressed by selected indictors using an array of variables. The table on page 7 lists the primary indicators, variables, and data collection methods used to assess each model of integration. Each of the indicators covers an important domain ranging from client need for services, the preparedness of clinics and providers to meet those needs, the attitudes of providers that affect what FP or HIV messages they give to clients, the services that providers report that they deliver and that clients report that they receive, and the systems established to monitor and evaluate program efforts. Specifics about variables used in the study and data collection instruments are also provided in the table.

Analysis largely consists of simple bivariate statistics and summary measures, including calculation of percentages, means, and medians.

* A fifth objective was to determine the resources used by programs to introduce integrated services. Data were obtained from too few sites to reach firm conclusions about resource needs, thus those results are excluded from this report.

Study Indicators, Variables, and Data Collection Methods

Indicator	Variables	Data Collection Methods
Client unmet need		
Client need for integrated services	• Client age, marital status, parity, sexual activity • Current contraceptive use • Fertility intentions • Condom use	• Client exit interview using structured questionnaire
Clinic readiness		
Facility and service organization to support integrated services, including demand creation and provider time use	• Provider offers multiple services • Reports of FP commodity, drug and HIV-test kit stock outs • Availability of IEBCC materials • Provider time use	• Manager interview • Clinic structured observation • Time use observations (3 times per day) • In-depth interviews with policymakers, program managers, advocacy groups, and donor organizations
Provider preparation		
Provider training, professional background, and supervision	• Professional designation • Training • Frequency of supervision • Benefits of supervision	• Provider interview using structured questionnaire
Provider attitudes		
Provider knowledge and attitudes	• Attitudes regarding condoms, hormonal contraceptives • Best contraceptives for HIV-positive and HIV-negative women	• Provider interview using structured questionnaire
Services delivered and received		
Actual integrated service delivery provision, as reported by providers and clients	• Provider offers services • Provider makes referrals • Client received services • Client referred for service	• Provider interview using structured questionnaire • Client exit interview using structured questionnaire
Monitor, evaluate, improve		
Monitoring and evaluation	• Client record forms are used in clinic • Form records delivery of new integrated service	• Manager interview using structured questionnaire

Findings

Family Planning in Counseling and Testing

Unmet need for FP among CT clients varied across countries from a high of 46 percent in South Africa to a low of 17 percent in Ethiopia. Need varied for two reasons. Either high percentages of women were pregnant (as some were tested during antenatal care visits), intended the pregnancy (Ethiopia and Rwanda), and thus were not in need, or high percentages were using contraception (Kenya and Uganda).

Readiness of clinics to provide services needs improvement. Not all providers offer multiple services, and not all are trained to do so. Most countries had experienced some stock outs of HIV-test kits, condoms, and injectables during the prior six months. About two-thirds of the CT sites displayed posters about HIV testing, but far fewer had posters or brochures about the integrated FP services.

Clinics are not too busy to offer integrated services. In no case did CT providers seem overworked and rushed, though providers were busiest in the late morning in most sites. Adding new services might require reorganization of workloads.

Provider readiness to offer integrated services needs improvement. Most sites have only one or two providers to offer CT services, many are not clinically trained, and with the exception of Kenya and Uganda, most indicate that they have not participated in FP training, nor are they aware of integration guidelines. With just a few exceptions, half of the providers reported having job aids to facilitate delivery of integrated services. Providers indicated that supervisors did not help them to integrate services.

Provider knowledge and attitudes to offer integrated services need to be improved. Providers make a sharp distinction between contraceptive methods that are best for HIV-positive and HIV-negative women. The majority of CT providers in all countries but Rwanda said that condoms were the best method for HIV-positive women to use. CT providers in South Africa indicated that condoms were the best method for HIV-negative women to use. Few providers correctly defined "dual method use" or "dual protection."

Client and provider reports of service provision often varied. Though sites were selected because they were supposed to have integrated services, only in South Africa did more than one-half of the CT providers report that they spoke with a client about FP on the day of the interview, and no more than two-thirds in all countries reported having referred a client for FP during the prior week. A substantial percentage of providers reported that they provided both condoms and pills to clients, although the percentage reporting that they provided condoms was generally higher. In three of the five countries, a considerable percentage of providers said that they provided injectables.

To determine need for FP services, providers must ask clients about their sexual activity, fertility desires, and contraceptive use. They need not be asked all three questions. For example, if a client says yes to a question about using contraception, she need not be asked whether she is sexually active. Even taking into consideration that clients do not have to be asked all three questions to determine need, our results show that the percentages of clients asked these questions are not high. For example, all women should be asked about current contraceptive use, but no more than 70 percent were asked this question. No more than a third was asked about fertility desires.

Except for clients in South Africa, fewer than 40 percent of women in CT services indicated that they discussed contraceptive methods other than condoms. Very few clients reported having received or being referred elsewhere for a method. Thus, the reports of clients are at variance with those of providers.

With regard to **monitoring and evaluation (M&E),** most CT managers, with the exception of Rwanda, reported that forms were available to record client services. However, few said the form included any indicators about contraceptive services.

Family Planning in Care and Treatment

Because C&Tx services are new, sites from only three of the five countries participated in this part of the study: Kenya, Rwanda, and Uganda.

Unmet need for FP was lower among clients in C&Tx than in CT. Fewer than 20 percent of women in C&Tx have unmet need for FP, due mostly to a lower proportion of women in C&Tx who reported that they are sexually active. Among the 33 percent to 43 percent of women using contraceptives, 40 percent to 50 percent reported condoms as their primary method of contraception.

With regard to **clinic readiness,** over two-thirds of providers reported that they provide multiple services. As was the case in CT services, most C&Tx clinics had only one or two providers on duty. Many of these providers indicated that they did not have FP training. Stock outs of HIV supplies and contraceptive commodities were generally not common. However, only about half of the sites displayed posters about HIV testing, and fewer displayed posters or pamphlets about FP services.

Providers are not too busy to offer integrated services. Providers are generally busiest in the late morning. Taking advantage of provider availability at other times of the day could result in changes to provider workloads.

Not all providers are ready to provide FP. As already noted, not all are trained in FP. Less than half of the providers reported that they had integration guidelines, and many did not have job aids, such as samples of FP methods, flip charts, and method checklists. As with CT providers, providers did not mention integration as being a component of meetings with supervisors.

Provider knowledge and attitudes need to be improved in order to encourage better performance in FP services. No provider thought that using hormonal methods would make women sicker or that the condom was the only method that HIV-positive women should use. However, like their counterparts in CT, most C&Tx providers in Kenya (but not in Rwanda) believed condoms are the best method for HIV-positive women to use. In contrast, providers generally thought that other methods were best for HIV-negative women. The low

proportion of providers who thought that hormonal methods are best for HIV-positive women might imply that they were unfamiliar with World Health Organization (WHO) contraceptive eligibility criteria or that their primary concern was with preventing transmission of HIV from infected to uninfected persons rather than protecting uninfected women.

Client and provider reports of FP service provision were not always consistent. Providers in Rwanda were more likely than those in Kenya to report talking with a client about FP on the day of the assessment and to report having referred a client for FP in the prior week.

Clients in C&Tx were more likely than those in CT to report that they were asked questions to determine unmet need, including those about their sexual activity, desire for pregnancy, and contraceptive use. Women were least likely to be asked about their fertility desires.

The percentage of women who reported that they discussed with providers a method other than condoms varied substantially and was highest in Rwanda. Only a minority of clients reported that a provider helped them start a method, and that method was the condom. Referrals were rare.

With regard to **monitoring and evaluation,** the majority of managers reported having forms for clients that prompt them to record FP indicators.

HIV Services in Family Planning

Unmet need for testing is difficult to determine. If need for HIV testing is based solely on reports of multiple partners and no or inconsistent condom use with these partners, then the percentage determined to be at risk of HIV would be very low. However, if those at risk were to include women who report that they have one partner and either do not use condoms or use them inconsistently, then the percentage at risk would include almost all women. Given that we do not know about their partners' behaviors regarding other partners and condom use with those partners, we cannot determine the risk status of most women seeking FP services.

The majority of women relied on injectable contraceptives, and condom use or dual method use was low. As is typical among women attending family planning clinics, condom use was low because clinics are typically not the primary source of condoms.

Clinic readiness to provide integrated services is generally highest in this setting. At least half of the managers reported that providers offered multiple services. Although some stock outs occurred during the prior six months, they were less frequent than in HIV services. With the exception of South Africa, most clinics displayed posters about FP services, and more than half had client brochures. However, half or less had visible posters about HIV testing, and except for Uganda, most lacked informational brochures for clients.

As with the other models, **clinics do not appear too busy** to provide HIV services. How providers spend their time was similar to that reported in other services, with providers busiest in the late morning.

As for **provider readiness,** most providers had some training in the integrated service, in contrast to providers in the other models. With the exception of Rwanda, at least two-thirds of providers were aware of guidelines for integration. However, as with the other models, many providers lacked job aids.

Provider knowledge and attitudes need improvement. While providers generally had some positive beliefs about contraceptive methods for HIV-positive women, such as disagreeing that hormonal contraceptives can make HIV-positive women sicker, a significant minority believed that oral pills and intrauterine contraceptive devices (IUCDs) are not appropriate for these women.

Provider and client reports of service provision varied. With the exception of South Africa, not more than 40 percent of providers said they had advised a client on the day of the interview to be tested for HIV. However, a higher percentage reported that they had made referrals for testing in the prior week. No more than 40 percent said they had tested the last client that they had advised to be tested.

Risk screening, discussion about modes of transmission and prevention, and HIV testing or referrals constitute the elements of integrated HIV services expected in FP service delivery points. Providers were generally more likely to discuss HIV transmission, a relatively neutral and factual subject, than risk behaviors and testing. About half of the women reported being screened for sexual activity, not surprising if one assumes that sexual exposure underlies the need for contraceptive services. No more than one-third reported that they discussed risk reduction with their provider, and only a minority of women also reported that they were encouraged to use condoms, alone or with another method.

A higher percentage of women in Kenya and South Africa than in the other three countries reported that they

discussed having an HIV test with the provider that day. Only in Kenya did the percentage tested approach 20 percent. However, in three countries, approximately two-thirds of the FP clients reported having been tested previously.

With regard to **monitoring and evaluation,** most FP managers in Rwanda, South Africa, and Uganda reported having an M&E form for clients, but fewer than half reported that the monitoring forms recorded data about HIV services.

Issues of Concern across All Services

1: The unmet need for family planning services is higher for CT than for C&Tx clients, because a higher percentage of CT than C&Tx clients are sexually active. A higher percentage of women attending both of these services uses condoms than does the general population. However, condom use was sometimes reported as being inconsistent. Measures of unmet need should be revised to consider inconsistent condom use. There is no standard way to assess risk of HIV infection and, therefore, unmet need for testing among FP clients. Need is low if the measure is restricted to those with multiple partners and no or inconsistent condom use but high if all women who do not use condoms are included.

2: There were some weaknesses in the capacity of programs to deliver the original service, which might compromise the ability to successfully introduce the new service. Government officials and program managers must consider whether the base service is strong enough to absorb the newly integrated service. If it is not, they must determine the resource needs and costs to improve the base service. These include resources for training, materials, infrastructure, and supervisory support.

3: In general, providers have a reasonable amount of "non-busy" time during the day, when they presumably can offer the newly integrated services. It will be a challenge to increase the volume of new services unless the workload of providers is more evenly distributed throughout the day. Health officials need to implement practical strategies to modify work patterns and encourage clients to seek services throughout the day.

4: Providers have insufficient training to offer integrated services, and do not have the job aids and supportive supervision needed to facilitate service delivery. Programs should calculate the cost of improving services and prioritize interventions for training, materials provision, and improved supervision.

5: Providers are apparently unaware of recently updated WHO medical eligibility criteria regarding contraceptive use by HIV-positive women. There is significant misunderstanding about methods such as pills and IUCDs. While providers advocate condoms for HIV-positive women, they are less likely to encourage condom use among HIV-negative women. Training to ensure that providers are knowledgeable in key concepts related to their base service and the integrated service, particularly WHO medical eligibility criteria, is necessary. This goal can be met by introducing systematic pre-service and in-service training to ensure that (1) providers are knowledgeable about and ready to accept WHO medical eligibility criteria for various contraceptive methods, and (2) that they promote condoms both to reduce transmission from infected partners and to protect uninfected partners.

6: Many clients are not being systematically screened for unmet need for FP. Screening efforts need to be increased in order to improve the provision of FP counseling and methods. While providers said that they make methods available to clients, few clients in either CT or C&Tx received a method. Providers in C&Tx were more likely than those in CT to discuss family planning. Providers should provide a method to women in need if possible or make a referral if necessary. Women relying on condoms should be counseled to consider using a second method to meet their pregnancy prevention needs.

7: As to integration of HIV services into FP, the percentage of women who said that their provider discussed various HIV topics was disappointing. The percentage of reports of discussions of such topics as condom use and risk reduction strategies is so low that it is of concern. However, in three of four sites for which we had data, a high percentage had been previously tested prior to the current visit, possibly indicating that information and counseling on HIV testing is widespread. Family planning providers might need to give a higher priority to talking with clients about the risks of HIV and to promoting testing. Clients not previously tested within a conventionally recognized time frame should be tested again to update their status.

8: Without routine data collection, it is difficult to measure the successful implementation of integrated services and the effect on contraceptive uptake or increased HIV testing. Consensus must be reached on a few standard indicators of integration, and they should be added to health information systems in order to track the delivery and effect of integrated services.

Introduction

Integrated services are those that meet several health needs simultaneously. Providers screen clients for unmet needs and provide the additional service only to those demonstrating need. Services might be offered by the same provider, by another provider in the same facility, or through referrals to another facility. While the term "linked services" is sometimes used to refer to the latter model, increasingly "linkages" is understood to refer to the collaboration and harmonization that is required at the policy and program level among the different agencies responsible for providing the base services, in order to deliver integrated health services.

The idea of integrated services is not new. There are decades of experience in offering diagnosis and treatment of sexually transmitted infections in family planning (FP) services, in offering FP in postnatal care, and in screening for diseases such as tuberculosis as an element of HIV treatment programs. However, as HIV care and treatment services have become more widely available and we have developed a greater understanding of the characteristics of the populations attending both FP and HIV services, stakeholders recently have begun to recognize the potential value of offering integrated FP-HIV services, and identifying the possible synergies to be gained by doing so.

In the past several years, there has been a growing international dialogue on the feasibility and desirability of providing integrated FP and HIV services. The reasons for offering joint, complementary services are many. Adding FP services to counseling and testing might provide an opportunity to reach populations that do not typically attend FP clinics, such as the sexually active young and unmarried, men, and members of high-risk groups such as sex workers. Adding FP services to care and treatment might facilitate the uptake of contraception by HIV-positive individuals, helping to maintain their health, plan safer pregnancies, and reduce the rate of mother-to-child transmission (PMTCT) of HIV. Contraceptive use among HIV-positive women might also contribute to fewer child deaths, avert orphanhood, and reduce maternal mortality. Including HIV services, particularly counseling and testing, in FP services would allow earlier diagnosis and referral to care and treatment.

Prevention of unintended pregnancies among HIV-positive women is one of the four elements considered essential in a comprehensive strategy to prevent HIV infections in infants. Indeed, there is broad international consensus that the goal of preventing mother-to-child transmission of HIV cannot be met without increasing access to FP services (Sweat et al., 2004; UNFPA, 2004). This is perhaps the integration strategy for which early evidence shows greatest potential for a significant public health impact. Stover and colleagues modeled the potential benefits of adding FP to PMTCT programs in 14 countries (Stover et al., 2004). They demonstrated that FP added to PMTCT services averts 71,000 child HIV infections compared to the 39,000 HIV-positive births averted with only a nevirapine intervention among HIV-positive women. Another study demonstrated that meeting the unmet need for contraception in the general population was more cost-effective in preventing HIV-positive births than the current programmatic emphasis on HIV counseling and testing coupled with nevirapine provision (Reynolds et al., 2006).

While the rationale for integration is strong, we lack studies that provide insight into how to best implement integrated services and whether any integrated models are effective at reasonable costs (Askew and Maggwa, 2002; Mark et al., 2007). To date, only a handful of studies have systematically evaluated integrated programs (Adamchak et al., 2007; Reynolds et al., 2006), although additional studies are under way (Mullick, 2007; Mullick et al., 2006; Kidanu et al., 2006). In a study of the effectiveness and costs of integrating FP and voluntary counseling and testing (VCT) services, results were mixed (Reynolds et al., 2006). While 29 percent of clients had unmet FP need, following the intervention it was found that only 12 percent of these clients had received a method. Though providers had been trained to distribute pills and make referrals for other methods, they only distributed condoms. In an evaluation of an effort to train providers at two antiretroviral (ART) clinics in Ghana to include FP counseling and services, only 10 percent of female clients reported that providers discussed FP services with them, and only 10 percent of these women received contraceptives or referrals (Adamchak et al., 2007).

Despite the dearth of evidence on how to operationalize integrated programs, the dual FP-HIV needs of both family

planning and HIV clients are clear. Several studies in Haiti, Kenya, Tanzania, and Zimbabwe have documented levels of unmet FP need[1] ranging from 14 percent to 67 percent among VCT clients (Reynolds, 2005), and from 9 percent to 14 percent among ART clients in Ghana (Adamchak et al., 2007). Moreover, levels of unintended pregnancies among HIV-positive women appear to be even higher: 51 percent to 99 percent of HIV-positive women reported pregnancies as unintended in studies in Côte d'Ivoire, Rwanda, South Africa, and Uganda (Rochat et al., 2006; Bangendanye, 2008; Desgrées-du-Loû et al., 2002; Smart, 2006). In a study testing the feasibility and acceptability of adding counseling and testing (CT) services in FP clinics, researchers found that only 23 percent of FP clients perceived themselves to be at high risk of HIV, although 17 percent had multiple partners and 40 percent did not use condoms at last intercourse (Mullick, 2007).

Some programs have already responded by integrating FP and HIV services. These efforts are frequently underfunded, uncoordinated, and undocumented. Program structures and functions vary because there is no single accepted model of integrated services, and integrated services might include different combinations of FP and HIV services, including counseling, testing, service provision, and referrals.

There is no consensus regarding what FP service components are necessary or sufficient to include in integrated programs in order to increase contraceptive use or what HIV information and services added to FP services might increase uptake of HIV services (such as risk screening, method counseling, method provision, counseling and testing, or linking components via a referral system). An overarching objective of integrated services is to improve uptake of both services. Depending on the model, integrated services might improve uptake of either FP or HIV services or both. In today's dynamic service delivery context, in which countries are rapidly rolling out ART services, promoting widespread testing to know one's status, mandating universal HIV testing as an element of antenatal care, and encouraging provider-initiated testing and counseling, it is impossible to know yet which model is more likely to improve service uptake.

It is not sufficient to merely consider the service delivery characteristics of an integrated program itself to understand its effect. Given the complex and varied settings within which such programs are offered, it is important to view programs within their political, social, and epidemiological context. The nature and scope of the AIDS pandemic and the subpopulations most affected within a country shape the array and distribution of services offered. National and local health policies, as well as program operational policies, can facilitate or hinder service delivery. Strong FP programs might be better positioned to incorporate new HIV-related services than weaker programs hampered by systemic resource constraints. Organizational barriers related to funding streams, personnel resources, physical infrastructure, and other factors might impede successful integration. Stigmatizing attitudes and personal inhibitions among providers might block the actual provision of services, regardless of organizational goals. Finally, sociocultural factors, such as gender relations and the educational and economic status of women, might affect an individual's ability to access services or to act upon decisions regarding FP or HIV service use.

It is particularly important to be cognizant of the capacity and functioning of the base system to which new services are added. Many of the countries hardest hit by the AIDS pandemic are in sub-Saharan Africa and have weak public health systems. Contraceptive prevalence is typically low to moderate, and systems face the challenges of insufficient staff resources, inadequate funding, unstable supply chains, and few materials to promote client education and to generate demand for high-quality services. HIV services, particularly those offering care and treatment, are relatively new. In the rush to provide services as broadly as possible, programs are often started without much funding and are quickly overwhelmed by the growing numbers of new and continuing clients. In many cases, programs rely on donor funding to underwrite some or all of the services offered and are in peril of having to release staff or discontinue services if funding is lost. Program managers need to be realistic about the prospect of success for integrated services if the initial service itself is challenged to operate consistently and with good quality. While some have argued that the expansion of AIDS-related health services has the potential to strengthen health systems by routinizing contact with patients, developing ancillary services such as laboratories and pharmacies, and ensuring consistent commodity supplies, this assumption has not yet been tested and remains to be monitored (el Sadr and Abrams, 2007).

[1] The definition of unmet need for contraception used by these studies is modeled on the definition used by the Demographic and Health Surveys (Sonfeld, 2006). Generally, a woman is considered as having unmet need for contraception if she is sexually active, not currently using a method to prevent pregnancies but does not want a pregnancy for at least two years, or currently pregnant but the pregnancy is mistimed or unwanted.

Study Rationale

Integrating services is still in initial stages, and scale-up is anticipated. Recognizing that we are early in the process of learning what works, it is important to document the experiences of existing programs to provide guidance for other countries. Therefore, this study examined programs delivering integrated services in five countries in an effort to describe and understand the key elements of these programs. In addition, the expectation that integrated models of service delivery will be replicated and expanded provides the rationale for the collection of data on the cost of introducing integrated services.

Service Integration Models

Three models of integrated HIV and FP services were included in the study: family planning in HIV counseling and testing (FP-CT), family planning services in care and treatment services (FP-C&Tx), and HIV services (particularly CT) in family planning (HIV-FP).[2] These models were selected a priori because they have the potential to:

- Increase access to FP services for clients who do not use traditional FP services (FP-CT)
- Increase uptake of contraception among women with HIV (FP-C&TX)
- Increase access to HIV services such as CT and referrals for treatment among clients of reproductive age (HIV-FP)

Further, these service delivery models respond to trends in HIV programs that are increasingly focused on two services: (1) HIV care and treatment resulting in a growing number of HIV-positive women in care; and (2) counseling and HIV testing services that guarantee that a large number of people know their HIV status.

The FP-C&Tx model has the greatest potential per woman reached to prevent HIV infection in infants. Moreover, because ART services require repeated contacts with clients, FP-C&Tx increases the likelihood that clients exposed to repeated counseling will decide to accept a method, allows for method resupply, and might increase adherence to contraceptive methods.

On the other hand, FP-CT will reach clients who are both HIV-negative and HIV-positive. Because of the relatively high coverage of CT programs, this model will reach more potential contraceptive users. This model also has the potential to reach clients not typically accessing health services, such as men and unmarried youth. Although FP-CT lacks ongoing contact with clients, and, therefore, the opportunity to reinforce messages and provide continuing services, it might provide an opportunity to reach clients who are receptive to contraceptive uptake. For clients wishing to prevent pregnancy, offering FP counseling and methods during the CT session might result in earlier adoption of contraception.

Counseling and testing models are undergoing dramatic and rapid change. At the time this study was designed, stand-alone VCT services were the norm. However, countries are quickly moving to new strategies, including provider-initiated testing and counseling (PITC) in which all people exhibiting symptoms that could indicate HIV infection are screened for risk and offered testing (WHO, 2007). Another strategy is opt-out testing during antenatal care. As a result, some of the findings of this study might not be applicable to these new models.

Integrating HIV services into FP services has the potential to increase uptake of HIV services, particularly CT, among family planning clients. It also has the potential to create new contraceptive users if HIV services attract clients who do not typically access FP services but will use these facilities because HIV services are "camouflaged" (Boonstra, 2004).

In all three models, knowing the client's HIV status allows providers to tailor contraceptive counseling to any unique concerns the client's status might pose. However, in any of these models, the addition of new services has the potential to degrade the quality of the base service, especially if the base service is fundamentally weak (e.g., is overcrowded, lacks adequate supplies, experiences contraceptive or drug stock outs, has insufficient or poorly trained staff) or is not strengthened prior to integration (Fajans and Huntington, 2006).

A Framework to Describe Integrated Services

To standardize our examination of different service models, we consider the components of integrated services in a framework that specifies program resources and performance. The section below explains the common components of each service integration model, the indicators used to represent the components, and the data collected to measure them.

In presenting the framework, we start with the need for the services, operationalized as clients' unmet need for the new service—either family planning or HIV counseling

[2] PMTCT models were not included because FP counseling most often takes place during prenatal care, while women are still pregnant. Typically, only limited contraceptive uptake occurs immediately after birth, and women are often lost to follow-up or are referred to other services once the child is born.

and testing. Once we describe client need, we turn to the supply of services. We proceed to address elements of clinic readiness including commodities, promotional materials, and presence of trained providers.

Among providers, we examine their preparation to offer integrated services and their attitudes regarding condoms and other contraceptive methods. To the extent possible, we consider indicators of the base service and the new service. Both clinic readiness and provider preparedness incur costs and require resources in order to plan and implement integrated services.[3]

Next we report the services delivered by providers and received by clients. These include both counseling about and delivery of the new service. Finally, we review activities to monitor, evaluate, and improve integrated services.

Unmet Need for Modern Contraception or HIV Services

The rationale for integration of FP into HIV programs relies on the premise that women who seek such services have an unmet need for modern contraception. Thus, HIV services provide an opportunity to reach women in need who are not accessing services at FP service delivery points (SDP). Also, some FP clients are at risk of HIV and in need of HIV risk assessment, counseling, and testing but fail to seek such services. Thus, adding CT services to FP offers another means to reach these women.

Policy Environment and Clinic Readiness

Integrated services require a supportive policy environment, standard guidelines that operationalize service delivery and stipulate responsibilities and lines of authority, and systems that support regular supplies of commodities. They also frequently require collaboration among different services or branches of the health system that normally function autonomously.

Clinics need adequate space (which might require reconfiguring existing areas); assured stocks of contraceptives, HIV-test kits, and other commodities; and appropriate materials such as posters and pamphlets in order to make clients aware of the services and to generate demand. Providers must be appropriately trained and able to offer services efficiently and effectively and have adequate time to provide services. And, supervisory systems should be in place to provide regular feedback to improve the quality of services.

The delivery of integrated services might be affected by the quality of the base service. An underlying assumption in the provision of integrated services is that the base service is strong and functioning smoothly. If providers are unable to implement their base service well, it will be a challenge to successfully introduce a new service.

Provider Preparation, Knowledge, and Attitudes

Providers must be prepared to provide services. Training alone is not sufficient for providers to deliver integrated FP-HIV services. Trained staff also need job aids that they are comfortable using and supportive supervision that reinforces the knowledge gained in training.

Providers must have adequate knowledge of both FP and HIV to deliver integrated services, including accurate and up-to-date information about medical eligibility criteria and the low risk of interactions between hormonal contraceptives and antiretroviral drugs. Finally, providers must be free of bias and misconceptions about their clientele and the contraceptive methods or HIV services to be provided.

Provider and Client Reports of Service Provision

The ultimate goal of integration is to increase service provision through considering client needs and offering the new service on site or by referral. This can be measured through provider or client reports of services. Because providers might overstate service provision either through response biases or thinking of their experience in ever offering the service, clients in this study were also asked about received services.

Monitoring, Evaluation, and Research

A basic monitoring system is an important component of a strong service delivery program. Indicators need not be complex, and are usually most useful when they are simple to record, summarize, display, and interpret. Providers and staff need a place to record basic information so that it can be easily retrieved on a routine basis, and they need to be trained to use the system. We present some data on recording client service information that would form a basic component of a monitoring system.

[3] One objective of the study was to determine the resources used by programs to introduce integrated services. But data were obtained from too few sites to reach firm conclusions about resource needs, and those results were excluded from this report.

Study Goals and Objectives

Goal

The goal of this study was to provide the U.S. Agency for International Development (USAID) and national programs (public, private, or nongovernmental [NGO]) with information needed to improve integrated services in order to maximize impact and optimize the potential for scale-up where justified and where data indicate the potential for success.

Objectives

For each model of integration, the following objectives apply:

- To determine the percentage of women who are in need of family planning services or HIV services, particularly counseling and testing
- To determine the preparedness of clinics and service providers to meet that need
- To determine the level of integrated service provision, including counseling and provider-supplied contraceptive methods
- To identify the availability of service data that can be used to monitor service integration

Methodology

Study Design

As a first step in determining where to conduct fieldwork, we did a desk review of all focus countries in the President's Emergency Plan for AIDS Relief (PEPFAR) to ascertain the scope of integration activities in each. Information was collected on: donor, partner, and government support for integrated services; national policies or guidelines that support integration; program documentation about scale, services offered, and target populations; and the local environment, to include the health sector, the strength of the national FP program, and the national response to the AIDS pandemic. Using these data, five countries were selected for inclusion in the study: Ethiopia, Kenya, Rwanda, South Africa, and Uganda.

To provide context and depth, this study uses a multiple-case study design. A unique strength of the case study is its use of a variety of data collection methods, including document review, interviews, observations, and surveys.

Each integration model (FP-CT, FP-C&Tx, and HIV-FP) is considered a case. Each case illustrates a different strategy for delivering integrated services, and our analysis emphasizes a cross-case design and logic.

Programs were included if they met the following criteria:

- Programs have a deliberate strategy that defines the implementation of integrated services (to avoid inclusion of iconoclastic programs driven by a single, charismatic individual).
- Integrated services have functioned for a minimum of three months (to ensure that systems existed to support providers in adequately delivering the new service and to allow time for clients to learn that integrated services are available).
- Three or more facilities implement services (to avoid focusing on "boutique" programs with a large infusion of external funds that might not be sustainable or scaleable).

Individual facilities were selected through the recommendation of program managers who identified high performers, i.e., those facilities that objectively met the programs' own criteria of successful implementation of integrated services. This purposive selection was necessary given the recent introduction of integrated FP-HIV services, and the relatively few sites offering such services. While this approach limits the generalizability of the findings, the results nevertheless provide an important "snapshot" of integrated services in an early stage of development.

Study Sample

In collaboration with local implementing partners, we identified the following for individual interviews: high-level national policymakers, key stakeholders, donor agency staff, representatives of people living with HIV or AIDS (PLWHA), public and private program managers, and donors as key informants. The number of people approached differed in each country, but an effort was made to interview individuals occupying comparable positions.

Twenty-one program implementers, many in collaboration with local ministries of health, agreed to have FHI

conduct the study at their service sites (see Appendix 2 for a list of participating organizations). A summary of the study sample is presented in Table 1. The number of health clinics per program varied widely, from one to more than 100. Three to six clinics from each program were identified for data collection. In each clinic, managers of the integrated services were interviewed, as well as all providers working in the integrated services on the day of data collection. (Managers were often responsible for more than one service, and might be listed more than once in the table; their distributions add to more than the total.) Interviews were conducted with all female clients between 18 to 45 years of age, until a quota of 17 to 28 clients was achieved for each site. In addition, a structured observation of each clinic was completed to assess physical infrastructure; crowding; availability of information, education, and behavior change communication (IEBCC) materials; client flow; and provider time use. Table 1 summarizes the sample sizes by country.

Refusal to participate, by either an organization or individual, was uncommon. Only one organization declined. Two others were undergoing administrative change and restructuring during the study period and were unavailable for inclusion.

Data Collection

Data Collection Instruments

Given the wide array of data sources, eleven data collection instruments were developed. Eight data collection instruments were used for the quantitative survey data collection, two for the qualitative key informant interviews, and one for the cost and resource data.

Three model-specific instruments were designed for providers and clients. That is, separate instruments were used for those providing counseling and testing, care and treatment, and FP services, as well as for those receiving each of these services. Most of the questions included were identical or captured similar concepts, but additional questions were tailored to the specific service.

A single questionnaire, with appropriate skip patterns, was used for clinic managers, regardless of service. We also used only one instrument to guide the structured observation of the clinics.

Two interview guides were developed for key informants. One was used with government personnel, such as those working for a ministry of health (MOH) or national AIDS control program. The second was used with program

Table 1: Distribution of Study Participants (N)

	Ethiopia	Kenya	Rwanda	South Africa	Uganda
Programs	**2**	**6**	**6**	**2**	**4**
Clinics	**13**	**30**	**26**	**11**	**22**
Managers	**14**	**42**	**22**	**12**	**21**
CT	13	19	22	11	20
C&Tx	6	13	11	3	7
FP	8	27	22	11	17
Providers	**15**	**91**	**61**	**28**	**57**
CT	4	37	25	15	25
C&Tx	0	13	11	1	7
FP	11	41	25	12	25
Clients	**292**	**592**	**499**	**217**	**361**
CT	204	115	185	54	155
C&Tx	0	107	68	7	91
FP	88	370	246	156	115

managers representing the parent organization sponsoring the service, and with slight modification, with representatives of AIDS advocacy organizations. Most interviews took place face-to-face, but several were conducted by telephone due to scheduling or distance constraints.

Summary of Study Indicators, Variables, and Data Collection Methods

The components of the integration framework are expressed using selected indicators, operationalized using an array of variables. Table 2 lists the primary indicators used to assess each model of integration and the variables used to measure the indicators and data collection methods.

Research Ethics

This study required approval from seven institutional review boards (IRBs): the Protection of Human Subjects Committee (PHSC) of FHI, one each in Ethiopia, Kenya, South Africa, and Uganda, and two in Rwanda, each with

Table 2: Study Indicators, Variables, and Data Collection Methods

Indicator	Variables	Data Collection Methods
Client unmet need		
Client need for integrated services	• Client age, marital status, parity, sexual activity • Current contraceptive use • Fertility intentions • Condom use	• Client exit interview using structured questionnaire
Clinic readiness		
Facility and service organization to support integrated services, including demand creation and provider time use	• Provider offers multiple services • Reports of FP commodity, drug, and HIV-test kit stock outs • Availability of IEBCC materials • Provider time use	• Manager interview • Clinic structured observation • Time use observations (3 times per day) • In-depth interviews with policymakers, program managers, advocacy groups, and donor organizations
Provider preparation		
Provider training, professional background, and supervision	• Professional designation • Training • Frequency of supervision • Benefits of supervision	• Provider interview using structured questionnaire
Provider attitudes		
Provider knowledge and attitudes	• Attitudes regarding condoms, hormonal contraceptives • Best contraceptives for HIV-positive and HIV-negative women	• Provider interview using structured questionnaire
Services delivered and received		
Actual provision of integrated service delivery, as reported by providers and clients	• Provider offers services • Provider makes referrals • Client received services • Client referred for service	• Provider interview using structured questionnaire • Client exit interview using structured questionnaire
Monitor, evaluate, improve		
Monitoring and evaluation	• Client record forms are used in clinic • Form records delivery of new integrated service	• Manager interview using structured questionnaire

their own submission requirements.[4] All efforts were made to maintain study comparability across countries while respecting the requests of the IRBs. One modification, which had little impact on the inclusion of clients, was the requirement in Rwanda that respondents aged 18 had to be married (unmarried 18-year-olds require parental permission to participate).

Oral informed consent was requested of all participants. After reading the consent form aloud as the participant (if literate) read his or her own copy, the interviewer signed the consent form on behalf of the participant, separated the consent form from the questionnaire, and placed it in a manila envelope later submitted to the team leader.

All interviews were conducted in private, except for several with key informants who invited colleagues to participate. Interviewers were instructed to ensure auditory privacy and to make an effort to achieve visual privacy as well. This topic was covered during the interviewer training, and strategies were discussed based on different scenarios for clinic layouts and crowdedness.

Training and Fieldwork

Family Health International, either through its local offices or through subcontracted research organizations, was responsible for all field activities in four of the five countries: Kenya, Rwanda, South Africa, and Uganda. Macro International was responsible for engaging a local field team in Ethiopia. With the exception of those conducted in Ethiopia, virtually all key informant interviews were carried out by the principal investigator of the study. In all, nearly 100 interviews were completed.

Field teams comprised 16 to 20 individuals, working in teams of four with one person designated as the team leader. All field staff participated in a week-long training course in which they learned about the overall plan of the study, discussed interview techniques, reviewed all data collection instruments, and practiced them in role-plays. The training curriculum included an abbreviated version of FHI's Research Ethics Training Curriculum. Training also served to clarify and correct local translations of the instruments.

Field work began in Uganda with key informant interviews in August 2007, followed soon after by the training of the field team and start of site visits in October. Kenya followed, starting field work in November 2007. Data collection in Ethiopia was carried out between January and February 2008. Rwanda began site visits in February 2008, and South Africa began in early April 2008.

Data Management and Analysis

Quantitative data were entered by the local team in each country. Data were double entered by at least two data entry clerks using EPI-Info DOS, version 6.04d, except for Ethiopia, which used EPI-Info for Windows, version 3.2.2. All data sets were then verified by analysts at FHI headquarters in North Carolina using SAS, version 9.1 and STATA, version 9.2. Queries were sent back to the local teams for resolution. Responses to open-ended questions and those having "Other" as a code option were entered in Excel spreadsheets.

Extensive notes were taken during interviews with key informants, the majority of which were completed by the principal investigator and were attended by at least one other member of the field team. Oral debriefings were held shortly after the interviews to validate the messages conveyed in the meetings.

Analysis largely consisted of simple bivariate statistics and summary measures including calculation of percentages, means, and medians. The emphasis of the study was to cover multiple countries, with many programs, sites, and respondents. While, in the aggregate, this resulted in a large volume of data collected, in some cases there were small sample sizes for some categories of respondent (particularly among providers). In several tables that follow there were insufficient cases to include. We decided to calculate percentages even though the denominators were often quite small in some tables, in order to facilitate comparisons across the countries.

Data from the key informant interviews were clustered by theme. They were used to inform and elaborate the findings from the quantitative analysis and to illustrate challenges that were common across the programs in the different countries.

[4] The IRBs included the Institutional Ethical Review Board (IERB) of the Addis Continental Institute of Public Health (Ethiopia), the Kenya Medical Research Institute, the National Ethics Committee (NEC) and and the Center for Treatment and Research on AIDS, Malaria, Tuberculosis and other Epidemics (TRACPlus) in Rwanda, the Human Research Ethics Committee (HERC) of the University of Witwatersrand in South Africa, and the Uganda National Council for Science and Technology (UNCST).

Calculation of Unmet Need for Family Planning or HIV Services

Women were divided into three categories of need. Those having no need for contraceptive services included women who were currently pregnant and had intended the pregnancy, wanted a child in the next two years, or had not been sexually active in the prior three months. Women currently using a modern method of contraception were considered to have "met need." Those with unmet need included sexually active women who either used no FP method or used a traditional method and did not intend to become pregnant, or included pregnant women for whom the current pregnancy was unintended or mistimed.[5]

The standard definition of unmet need for contraception does not take into account the consistency of condom use among women using this method. Given the high proportion of condom users often seen among clients accessing HIV services, combined with the concern that inconsistent condom use puts women at risk of unintended pregnancies, we intended to amend the definition to add inconsistent condom use to the calculation of unmet need. However, sample sizes were too small to take the consistency of condom use into consideration.

The need for HIV services in family planning is more challenging to capture. There is no standard definition to determine unmet need for HIV counseling and testing in order to know one's status. However, having sex with multiple partners and non-use or inconsistent use of condoms are recognized as indicators of risky behavior and might be considered proxy indicators of need to learn one's status through CT services. Researchers have documented that marriage is a risk factor for HIV transmission for some women, particularly in the African context (Dunkle et al., 2008). Without knowing the behavior of husbands and whether they are exposed to HIV through contact with multiple partners, or the sexual behavior of women either prior to entering the marriage or during its course, it is not possible to accurately determine whether married women are in need of counseling and testing services. Nevertheless, several of the countries included in the study are promoting strategies for universal testing so that all adults know their HIV status, making FP services an attractive venue to reach sexually active women.

Study Limitations

Several limitations to this study are acknowledged. Some are country-specific, and some pertain to the study as a whole.

Even with approval from the national IRB in South Africa, we were unable to obtain approval from one province in time to conduct field work there. As South Africa was the last country in which data were collected, we decided to terminate data collection after the work in other provinces was complete, rather than prolong fieldwork for an additional six weeks to reach just a few sites.

Through prior contact with sites, field teams attempted to determine what days the clinics were most heavily utilized and to plan the field calendar to capitalize on days of high volume. Nevertheless, there were "best performing" sites included by programs that in fact had very limited client flow. There was also variation in client utilization of services within programs, across countries. For example, women accessing services from Marie Stopes clinics in Uganda and Kenya came primarily for contraceptives and for counseling and testing, while those in South Africa were more likely attending for pregnancy termination services, thus limiting the pool of potential respondents there.

Only a small number of programs were identified as integrating FP into C&Tx services. In Ethiopia, no C&Tx sites were included. In South Africa, one program included C&Tx services, but too few managers, providers, and clients were interviewed to be included in the tables. In Uganda, there were sufficient clients to include but not managers or providers. In Ethiopia, too few FP providers were interviewed to include in the analysis.

Observations of provider time use were made by members of the field teams. While four of the five teams were trained by the principal investigator and the lead analyst, it is possible that each team brought a different perception of "busy" to the observation, affecting cross-national comparisons.

Finally, due to the purposive selection of study sites, and varying stages of implementation of the programs, the results of this study apply to the clinics included and are not generalizable to integrated programs as a whole.

[5] While the DHS definition of unmet need does not take into account the specific method used, in this report we classify users of traditional methods as having unmet need. The purpose of integrating FP-HIV services is to promote and provide modern methods.

Results

The results are organized in three sections, one for each model of FP-HIV integration. Results are presented following the framework described above: for each model, we first report the unmet need for services followed by the preparedness of clinics and providers, the services delivered, and the monitoring of activities.

1. Family Planning Services in Counseling and Testing (FP-CT)

Unmet need for family planning

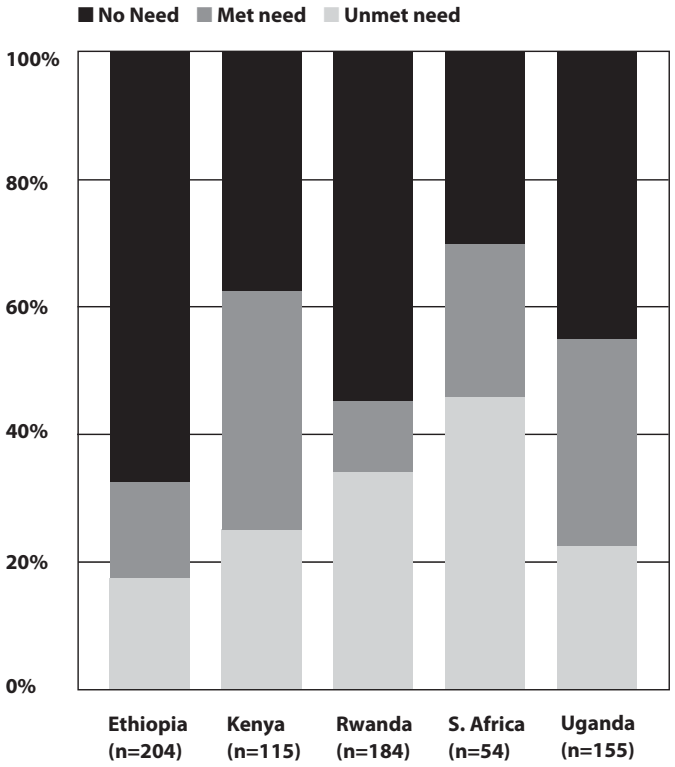
In order to measure unmet need, we first examined client characteristics. Similar patterns emerged across countries (Table 3). Counseling and testing clients were generally young: mean age was less than 30 years in all countries. In line with the young age of clients, we also found low rates of childbearing and a low percentage who were married (although overall, at least 79 percent were married or had a sexual partner). Nearly half of the women attending CT in Ethiopia, Kenya, and Uganda had not yet had a child. Not surprisingly, very few indicated that they had not been sexually active in the prior three months; the comparatively low reports of sexual activity among women in Ethiopia and Rwanda were due to the inclusion of women accessing CT services during antenatal care. Finally, with the exception of Ethiopia, about two-thirds of these women had been tested for HIV prior to their current visit.

The percentage of women in need of contraception varies from a high of 46 percent in South Africa to a low of 17 percent in Ethiopia (Figure 1). Need varies for two reasons. In Ethiopia, a very high percentage of women was not in need due to pregnancy, while in Kenya and Uganda, a relatively high percentage of women was using contraception. In part, these differences reflect the reasons that women sought services. In Ethiopia and Rwanda, some women received CT services as part of antenatal/PMTCT care.

Table 3: Characteristics of Counseling and Testing Clients

	Ethiopia (n=204)	Kenya (n=115)	Rwanda (n=185)	South Africa (n=54)	Uganda (n=155)
Mean age (years)	23	26	29	28	27
Age					
18-24	65	49	35	39	51
25-29	20	26	27	15	21
30 or older	15	25	38	46	28
Number of living children					
0	50	46	36	30	45
1-2	31	27	36	44	27
≥ 3	19	28	29	26	27
Marital status					
Married	63	43	68	22	39
Has partner	25	47	11	71	51
Has no partner	12	10	21	7	10
Sexually active in prior 3 months	50	73	69	87	94
Previously tested for HIV	32	70	70	65	69

Figure 1: Percentage of Counseling and Testing Clients According to Their Need for Family Planning



Women using modern contraception (those with met need) ranged from 12 percent to 37 percent (Figure 1). In Ethiopia, South Africa, and Rwanda, injectables were the most used method of contraception. In Kenya and Uganda, the condom was the method reported most (Figure 2). No contraceptors in South Africa reported that they used condoms.

For women who rely on condoms for contraception, it is important to know if they use them consistently and are, therefore, protected from pregnancy. We had sufficient cases to estimate consistent condom use for Uganda only. Fewer than half (44 percent) of the condom users there indicated that they used condoms consistently, indicating that unmet need might be higher than measured.

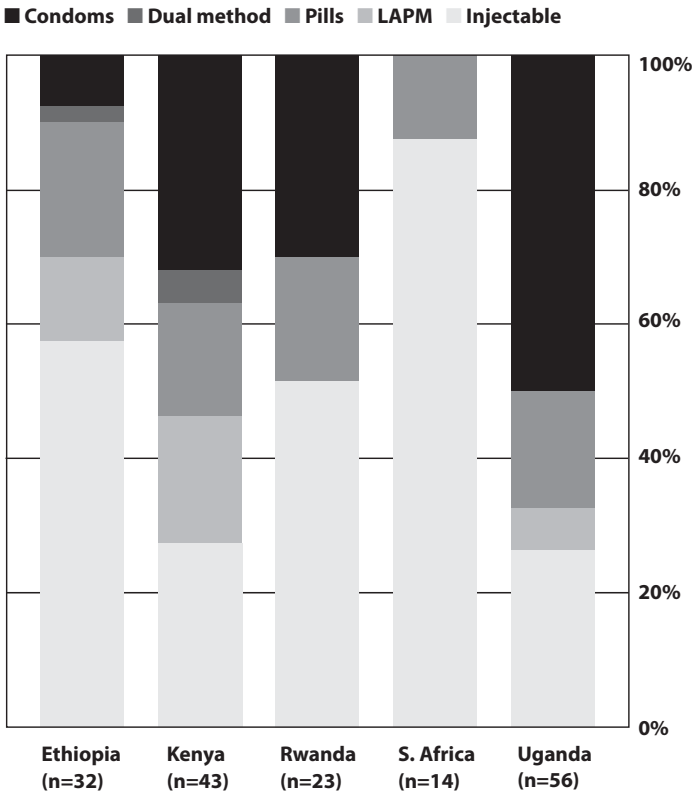
Clinic Readiness

Clinics need basic preparation in order to introduce a new service. First, the original service must be reliable and of good quality. Otherwise, the newly added service is likely to compromise the base service and not be well implemented itself. Several basic indicators of clinic readiness are considered in this section, including availability of providers, reliability of the commodity system, and presence of information and education materials.

While the CT sites were identified as being integrated, not all providers offered multiple services. This was especially the case in Ethiopia and Rwanda. In Kenya, South Africa, and Uganda, 68 percent to 82 percent of providers offer more than one service (Table 4, page 22).

It is not sufficient to know whether providers are offering multiple services. We also need to understand whether there are sufficient providers to meet the client load and whether they have been trained to provide the new

Figure 2: Percentage of Modern Contraceptives among Contraceptors in Counseling and Testing Services



services. Most countries have only one or two providers available and not all have been trained to offer integrated services. In Kenya, one clinic manager lamented the staffing shortages, saying that "Level-2 facilities are supposed to have four nurses, but many have only one or two."

Stock outs, while not widespread, occurred in each country in the prior six months. Nearly half of the managers in

Table 4: Readiness of Counseling and Testing Clinics to Offer Integrated Services

	Ethiopia	Kenya	Rwanda	South Africa	Uganda
Manager reports (percentage)	**(n=13)**	**(n=19)**	**(n=22)**	**(n=11)**	**(n=20)**
Provider specialization					
Same provider offers multiple services	46	68	36	82	75
Base service					
Stock outs of HIV-test kits in prior 6 months	46	16	9	9	10
Stock outs of condoms in prior 6 months	23	26	9	0	5
New service (FP)					
Stock outs of injectables in prior 6 months	23	26	5	0	30
Clinic observations (median and percentage)	**(n=13)**	**(n=23)**	**(n=25)**	**(n=11)**	**(n=20)**
Providers on duty					
Median number of providers on duty	1	2	1	1	4
Median number of providers trained to offer FP services	1	1	0[1]	1[1]	3[4]
Base service					
Posters about HIV test displayed	69	65	64	27	68[1]
Pamphlets about HIV test available for clients	31	57	56	18	60
New service (FP)					
Posters about FP displayed	31	45[1]	20	9	59[3]
Pamphlets about FP available for clients	15	48	32	9	61[2]

[1] 1 missing case; [2] 2 missing cases; [3] 3 missing cases; [4] 5 missing cases

Ethiopia indicated that they had experienced shortages of HIV-test kits during the prior six months. About one-quarter of the managers in Ethiopia and Kenya reported stock outs of condoms, typically a key component of CT services, indicating that the base service is weak. Two-thirds of the CT centers (though only one-fourth in South Africa) displayed posters to promote HIV testing; somewhat fewer had informative pamphlets available for clients.

What are the prospects for the new, integrated service in terms of clinic readiness? During the prior six months, Ethiopia, Kenya, and Uganda experienced stock outs of injectable contraceptives, the method most commonly used by women in these countries according to recent Demographic and Health Surveys (DHS) (CSA and ORC Macro, 2006 [Ethiopia]; CBS et al., 2004 [Kenya)]; UBS and Macro International, 2007 [Uganda]). Key informant interviews reported the status of other contraceptive methods. For instance, several informants in Uganda reported that Norplant, the contraceptive implant, was not available. The local supply had been exhausted, and shipments of its replacement, Implanon, were not expected until February 2008. Similarly, many key informants in Kenya reported problems with commodity flow.

> *Supplies are an issue at the center level. Test kits have been having some problems. Implants and COCs [combined oral contraceptives] are sometimes short. Flow is an issue. (Provincial MOH official, Kenya)*

> *Commodities are sporadic. We run out a lot. Implants have been out for quite a long time, and injectables and POPs [progestin-only pills] run out fast. (Program manager, Kenya)*

Making the new service known to clients is another indicator of preparedness to offer the service. Few CT sites displayed posters or had pamphlets to inform clients about the availability of contraceptive services.

This situation limited their opportunity to advertise and promote the new service.

In general, the new commodity and IEBCC services appear to be functioning at a level comparable to the original service in Kenya and Uganda. In the other countries, it is much weaker.

Provider Time Use

Determining how busy providers are and at which times of the day helps to decide if method provision is possible or if programs should rely on referrals or task shifting to lower-level workers (who might need to be hired).

There are some times of the day when providers are very busy, but at other times they are far less so. In no case did observers report a majority of providers appearing overworked and rushed (Table 5). While there are differences among the countries, generally providers were most busy during the late morning and far less busy by mid-afternoon. Providers might spend the early morning hours preparing the clinic for services, then serve clients during the later morning hours. The late afternoon hours might be free of clients because providers have already seen their quota of clients or because clients choose not to seek services at that time. Other more intensive studies that have observed providers also show similar patterns of time use (Janowitz, 2007). Thus, in order to add new services, it may be necessary to reorganize the workload of providers so that their time with clients is more evenly distributed throughout the day.

CT services might be delivered through different models, which has implications for time use. For example, providers in some locations are limited in the number of clients they counsel each day. The assumption is that about one hour is needed in order to adequately prepare someone for testing. According to a donor representative in Kenya, "VCT counselors here are supposed to see six people if they talk about FP also." A representative of the Kenyan

Table 5: Percentage of Time Use by Counseling and Testing Providers and Median Number of Clients Seen Daily

	Ethiopia	Kenya	Rwanda	South Africa	Uganda
Clinic observations					
At 9 a.m., providers appeared:	**(n=13)**	**(n=23)**	**(n=25)**	**(n=11)**	**(n=18)**
Overworked and rushed	0	4	0	27	6
Reasonably busy	54	35	80	27	44
Underworked, a lot of free time	46	57	16	36	39
None observed	0	4	4	9	11
At 11 a.m., providers appeared:	**(n=13)**	**(n=23)**	**(n=18)**	**(n=11)**	**(n=18)**
Overworked and rushed	8	17	6	9	22
Reasonably busy	62	57	83	55	50
Underworked, a lot of free time	31	22	11	27	28
None observed	0	4	0	9	0
At 3 p.m., providers appeared:	**(n=13)**	**(n=23)**	**(n=18)**	**(n=11)**	**(n=16)**
Overworked and rushed	0	9	6	0	0
Reasonably busy	38	35	61	27	56
Underworked, a lot of free time	62	52	28	64	25
None observed	0	4	6	9	19
Provider reports	**(n=11)**	**(n=37)**	**(n=25)**	**(n=15)**	**(n=25)**
Median number of clients seen daily	10	7	20	7	15

National AIDS Control Program reported, "VCT counselors should see eight clients per day, to allow one hour for each." If counselors indeed see only eight clients each day, they would be reasonably busy throughout the day (assuming eight clients are present). In actuality, variations occur in the reported number of clients seen daily in these countries, with the median ranging from 7 to 20. Yet, even in the countries reporting higher median number of clients seen daily—Rwanda and Uganda—we see that most providers are not overworked.

Provider Readiness

Three commonly accepted indicators of the essentials needed to achieve service quality are training in the new service, the availability of job aids, and supervision. Many of the CT providers interviewed were not clinically trained. Between 45 percent and 89 percent identify themselves as "counselors," and most of the remaining providers are nurses (Table 6). With the exception of Kenya and Uganda, most CT providers indicated that they have not participated in FP training, and even fewer were aware of integration guidelines. Progress is being made in integration. But,

Table 6: Percentage of Counseling and Testing Providers Prepared for Family Planning Service Delivery

	Ethiopia (n=11)	Kenya (n=37)	Rwanda (n=25)	South Africa (n=15)	Uganda (n=25)
Provider designation					
Professional nurse/midwife	55	3	64	53	24
CT counselor	45	89	24	47	56
Other*	0	8	12	0	20
Training					
Had any FP training	36	57	36	47	76
Integration guidelines					
Aware of FP-CT guidelines	9	54	24	67	63[1]
Job aids					
Samples of available FP methods	18	62	56	80	75[1]
FP flip chart available	9	41	44	47	83[1]
Checklist that includes FP methods	0	49	60	33	54[1]
Supervision					
Meet with supervisor weekly	82	59	84	47	56
Supervisor's assistance to provide services**					
Provides supplies	0	14	10[2]	34	32
Arranges training or workshops	0	22	43[2]	27	32
Nothing	73	43	19[2]	0	8

* Includes doctor, clinical officer, social worker, psychologist; ** Only responses equal to or exceeding 10 percent of cases reported. [1] 1 missing case; [2] 4 missing cases

considering that these are the "best of the best" sites for the programs included, it is unclear how they are able to conduct adequate screening for FP needs.

These findings were echoed in several interviews. According to a program manager in South Africa, "Nurses are proscriptive and they don't counsel, and lay counselors are not trained in family planning." An AIDS official in Kenya reported, "Every VCT site stocks condoms, and after training they are supposed to have pills. But non-clinical officers are not confident to initiate."

Few CT providers reported having job aids that would assist them in delivering integrated services. The situation in Ethiopia is especially bleak. Some providers reported having samples of contraceptives vis-à-vis other job aids, yet in no place did this reach 100 percent. Even fewer sites had flip charts or checklists that include FP.

Table 7: Percentage of Counseling and Testing Providers with Selected Knowledge and Attitudes

	Ethiopia (n=11)	Kenya (n=37)	Rwanda (n=25)	South Africa (n=15)	Uganda (n=25)
Using hormonal methods will make HIV-positive women sicker (disagree)	45	70	76[3]	100	68
Condom is only method HIV-positive women should use (disagree)	27	70	76	60	64
HIV-positive women should have children if they want (agree)	91	97	60	67	88
Best method for HIV-positive woman to use					
Condoms (male or female)	82	65	44	60	80
Injectables	9	5	8	27	4
Implants	0	5	24	0	4
Other[1]	9	25	24	13	12
Best method for HIV-negative woman to use					
Condoms	9	16	0[3]	73	40
Pills	9	5	8[3]	0	12
Injectables	18	14	17[3]	27	8
Implants	9	11	17[3]	0	8
What woman wants	55	41	38[3]	0	16
Other[2]	0	13	17[3]	0	16
Knows correct definition of dual method use	18	46	64	80	44
Knows correct definition of dual protection	55	27	80	33	44
Believes integration improves services	36	76	52[4]	93	88

[1] Methods are coded as "other" if they did not achieve at least 10 percent in any country. "Other" includes pills, IUCD, tubal ligation, dual method use, "what women want" and "don't know;" [2] Includes abstinence, "don't know;" [3] 1 missing case; [4] 4 missing cases

Although one-half or more of the providers in four countries met with their supervisor weekly, providers did not indicate that supervisors helped them improve service delivery. Instead, providers mentioned that the supervisors delivered supplies or arranged for training. In Ethiopia and Kenya, many respondents said their supervisor did nothing to help them offer services. Given that there is such regular contact with supervisors, they might be an underutilized resource in strengthening and supporting the capacity of CT providers to deliver integrated services.

Provider Knowledge and Attitudes

In order to counsel women on a range of contraceptive methods, providers must have accurate knowledge and unbiased attitudes. For example, providers should know that using hormonal contraceptives will not cause HIV-positive women to become sicker. Yet, only in South Africa did all the CT providers interviewed understand this (Table 7, page 25). In Table 6, we saw that many providers were not clinically trained, most had not been trained in FP, and few had job aids. Without effective training that conveys correct information, providers will not feel comfortable counseling clients about injectables, pills, and implants.

CT providers draw a sharp distinction between contraceptive methods that are best for HIV-positive and HIV-negative women (Table 7). Overwhelmingly, they believe that condoms (either male or female) are the best method for HIV-positive women, to the exclusion of nearly all other methods. At the same time, most providers (except in Ethiopia) disagreed that condoms are the only method for HIV-positive women. It is compelling that far fewer providers said that condoms were the best method for HIV-negative women, seeming to indicate a distinction in the role of condoms in preventing transmission from an infected woman, compared with preventing transmission to an uninfected woman. This is particularly ironic as this is the method most often associated with CT services.

Only in Kenya did any providers indicate that HIV-positive women should use their method of choice (data not shown). In contrast, one-third to one-half of the CT providers in Ethiopia, Kenya, and Rwanda responded that HIV-negative women should use the method they desire.

With the exception of providers in South Africa, few were able to correctly define dual method use, that is, using condoms with a second method of contraception. A similar pattern is observed when providers were asked to define dual protection, the concept that condoms offer protection from both pregnancy and sexually transmitted infections (STIs), including HIV. However, providers in Rwanda were more knowledgeable than their counterparts elsewhere.[6] Perhaps the terms are not those used in discussing these concepts during provider training, but providers must be better prepared to appreciate and convey the multiple uses of condoms in the context of HIV/AIDS.

Beliefs that integration improves services were mixed across the countries. The majority of providers in Kenya, South Africa, and Uganda considered integrated services positively, while those in Ethiopia and Rwanda were much less likely to hold this attitude. Providers mentioned that services had improved because it was convenient to provide information at one place, and more CT clients were seeking FP services (data not shown). Providers who did not see improvements as a result of integration noted that there was no coordination between FP and HIV services, and while some integration had taken place, it was insignificant (data not shown).

Provider Reports of Services Offered

The counseling and testing sites included in the study were those in which integrated services had already been introduced. Yet, we see in Table 8 only limited evidence that these new services are in place. Only in South Africa do more than half of the providers say that they spoke with a CT client about contraception on the day of the interview, and no more than about two-thirds reported having referred a client for FP during the past week. Of course, we acknowledge that not all providers might have had the opportunity to talk with clients about FP on the day of their interview.

According to one program manager in Uganda, "Family planning knocks them (counselors) off their track. VCT is highly scripted, and it is an enormous step to look at individual needs."

In all countries except Ethiopia, the condom is the method most providers reported offering CT clients. In both Rwanda and Uganda, most CT providers also offered oral contraceptives and injectables. Few providers in Kenya offered any other method besides condoms. While the number of providers reporting in Ethiopia is very small, more reported offering oral contraceptives than condoms.

[6] Providers also did not specify other approaches to achieve dual protection, such as abstinence, mutual monogamy with an uninfected partner, and dual method use.

Table 8: Percentage of Counseling and Testing Providers Talking about Family Planning, Making Referrals, and Offering Methods

	Ethiopia (n=11)	Kenya (n=37)	Rwanda (n=25)	South Africa (n=15)	Uganda (n=25)
Talked to CT client today about FP	27	38	48	53	32
Referred CT client for FP in last week (including today)	18	54	68	60	40
Methods provider offers[1]					
Condoms	36	84	80	87	92
Pills	55	32	76	47	88
Injectables	9	5	80	67	75
Other	9	3	68	27	46
None	9	16	0	7	4

[1] More than 1 response permitted

Interviews with key informants in just one country revealed widely varying views on whether counselors could offer FP services, yielding additional perspective on the performance indicated by these data.

> *We need decentralization of job descriptions [to ensure that people know that VCT counselors can provide FP]. Right now, we struggle with cadres saying they are not authorized. (Program manager, Kenya)*

> *We have a strict policy. Nonmedical staff cannot provide. VCT counselors need to refer to nurses. (Provincial MOH official, Kenya)*

> *Initially VCT clients were referred for FP. Now providers are trained and can offer condoms and pills. If nurses are present, they can offer Depo, but most nurses are not taking time in VCT. Rather, they offer curative services. (Program manager, Kenya)*

Client Reports of Services Received

The most basic element of integrated services is screening clients for their need of the complementary service. In this case, women attending CT services should be asked if they are sexually active; if yes, whether they wish to become pregnant; and if not, whether they are currently using a contraceptive method. If the answer to the last question is "no," then appropriate methods should be discussed.

According to client reports, no more than 68 percent of CT clients had ever been screened for sexual activity (Table 9, page 28). If providers assume that all women seeking CT services are sexually active (and most are) but do not explicitly ask about this, then all women should be screened for their fertility desires, especially if providers find that the clients are not using contraception. Yet, no more than one-third of the women were screened for fertility desires, and only in Kenya and South Africa were more than half asked about current contraceptive use. These data indicate that basic screening for unmet need is not occurring. The low percentages of screened clients reported in Rwanda and Ethiopia might be affected in part by the inclusion of CT services that were testing pregnant women as part of antenatal care services. But, that explanation does not hold for the other countries.

With the exception of clients in South Africa, fewer than 40 percent of the respondents indicated that they discussed contraceptive methods other than condoms, leading us to question how the integration of FP services differs from the original counseling model.

Table 9: Percentage of Counseling and Testing Clients Reporting Screening for Unmet Need, Counseling, and Services Received

	Ethiopia (n=204)	Kenya (n=115)	Rwanda (n=185)	South Africa (n=54)	Uganda (n=155)
Screening for unmet need					
Ever screened for sexual activity	55	68	39[1]	59	38
Ever screened for fertility desires	6	30	19[1]	35	28
Ever screened for current method use	23	57[1]	21[1]	70	46
Added FP counseling topics					
Discussed contraceptive method today	25	43	29	56	39
Discussed contraceptive method besides condoms today	14	36	30[2]	61	40
Added FP services received					
Received contraceptive method	<1	11	2	24	14
Referred for contraceptive method	2	6	2	24	5

[1] 1 missing case; [2] 2 missing cases

In view of the low proportions screened for sexual activity or for fertility desires, it seems that providers might be considering the client in isolation, rather than as a member of a sexual dyad. As such, discussions about contraceptive use might only arise if the CT client presents with her partner. As noted by a program manager in Rwanda, "I can't say that family planning is integrated in VCT. Maybe in couples' VCT, or in premarital counseling."

Very few clients reported having been referred elsewhere to obtain a contraceptive method, though about one-fourth of the clients in South Africa reported being referred. Only in South Africa did more than 14 percent of women report receiving a contraceptive method, raising questions about the providers' reports of methods they offer. While the time frame for the questions differed slightly, with providers reporting whether they had referred "in the prior week including today," there is a large difference in provider and client reports.

Monitoring and Evaluation

Routine monitoring of service provision requires recording essential data that can be reviewed periodically to determine performance and service uptake. Fewer than half of the CT managers in Rwanda reported that client record forms existed in their services, while 80 percent to 100 percent of those in the other countries indicated the forms were available (Table 10).

Table 10: Percentage of Counseling and Testing Managers Reporting Use of Client Report Form and Inclusion of Family Planning Indicators

	Ethiopia (n=13)	Kenya (n=19)	Rwanda (n=22)	South Africa (n=11)	Uganda (n=20)
CT client has report form	85	79	41	100	80
Form records FP indicators	36	33	33	82	94

The number reporting is small; few managers in Ethiopia, Kenya, or Rwanda said the forms included any indicators about contraceptive services. Rates were higher in South Africa and Uganda. There, most of the forms had indicators about family planning, typically whether the client was counseled about contraceptives and the method that the client accepted (data not shown).

Among the responses offered when asked how the data on the forms were used, managers mentioned monitoring services, strategic planning, and preparing reports.

The lack of data about contraceptive use hinders the monitoring of implementation and change for these integrated services, as well as the ability to accurately forecast supply and commodity needs. The challenges inherent in nonfunctioning data systems were recognized by many of the key informants.

Another aspect of quality is data collection. Each service has a different form, and they may be repetitive. Providers keep filling forms, with no sense of "why"—it is a black hole. (Donor representative, Kenya)

We don't have a method of recoding integration. Records are still separate by FP and HIV. We can't come up with our own recording system. (Program manager, Kenya)

Change is starting to take place. For example, one key informant reported that as part of a donor-supported program in Kenya, the CT client card was revised to include indictors of clients' fertility desires in the next two years, whether they use condoms, and what FP method was provided.

Table 11: Characteristics of Care and Treatment Clients

	Kenya (n=107)	Rwanda (n=68)	Uganda (n=91)
Mean age (years)	32	35	32
Age			
18-24	9	6	10
25-29	31	18	26
30 or older	60	76	64
Number of living children[1]			
0	7	6	8
1-2	58	48	37
≥ 3	35	45	55
Marital status			
Married	61	62	50
Has partner	16	7	17
Has no partner	23	31	33
Sexually active in prior 3 months	64	41	46

[1] 4 missing cases each in Rwanda and Uganda

2. Family Planning Services in Care and Treatment (FP-C&Tx)[7]

Unmet Need for Family Planning

Tailoring services to meet client needs requires an understanding of a basic client profile. Several indicators show that clients utilizing C&Tx services differ from their counterparts in other services. Clients enrolled in C&Tx services are slightly older and have more children, compared with those in CT (Table 11, page 29). They are more likely to report having no partner (due to widowhood and divorce, data not shown). In line with these findings, the proportion reporting that they are sexually active is far lower than among women in counseling and testing.

Figure 3: Percentage of Care and Treatment Clients According to Their Need for Family Planning

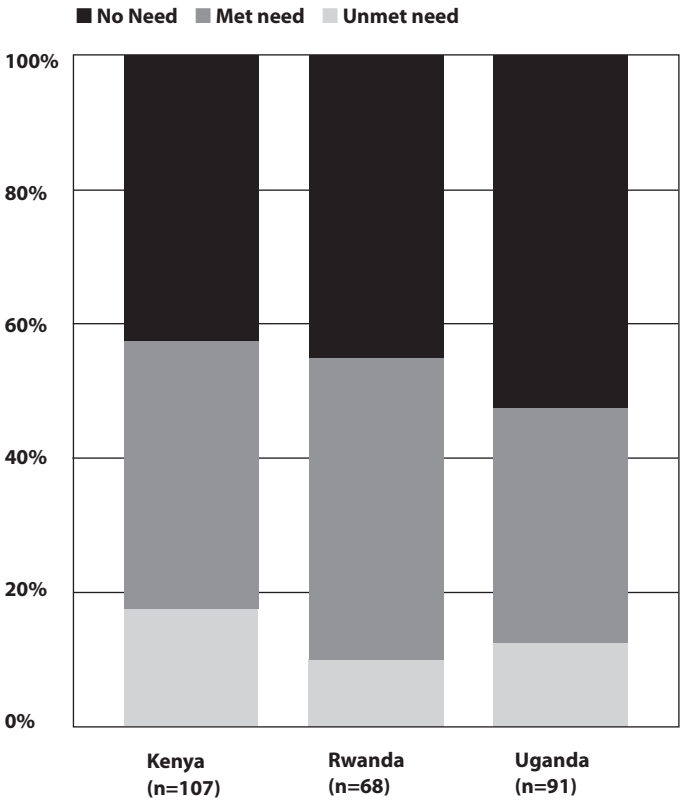
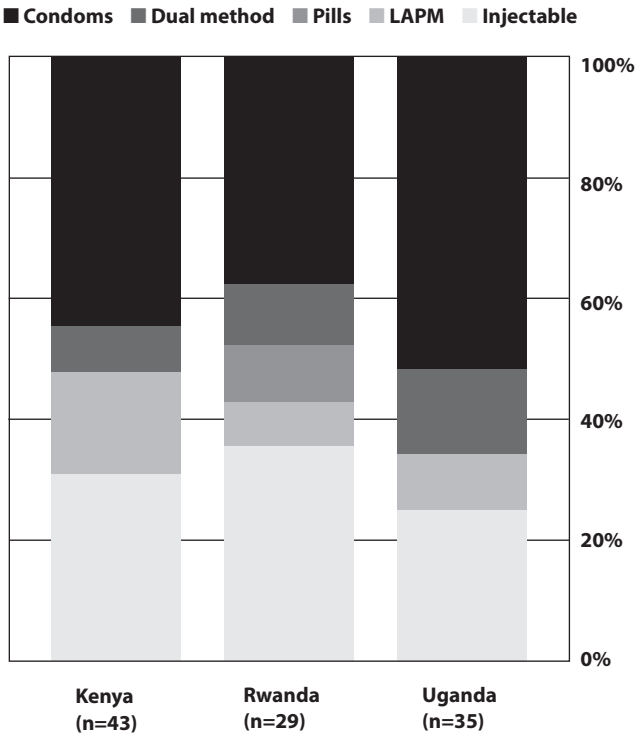


Figure 4: Percentage of Modern Contraceptives among Contraceptors in Care and Treatment Services



The unmet need for FP is never above 18 percent among women in C&Tx (Figure 3), substantially less than the level of unmet need seen among women in CT. This is due to the high proportion of women who reported no need of FP because they are not sexually active, as well as some who wish to become pregnant or desired their current pregnancy. Moreover, a higher percentage of women in C&Tx used a modern contraceptive method (from a low of 33 percent in Uganda to a high of 43 percent in Rwanda) compared with women in CT.

There is a high reliance on condoms as the primary method of contraception. Forty percent to 50 percent of contraceptors reported condoms as their method of pregnancy prevention (Figure 4), and the level is even greater if those reporting dual method use are included. The second most commonly used method is the injectable contraceptive.

Among women using condoms as their method of contraception, consistent use was reported by 83 percent of those in Kenya and 64 percent of those in Uganda (data not show). Thus, some women using condoms are at risk

[7] As mentioned earlier, the assessment reached fewer C&Tx programs than CT and FP. In this section, data are reported for clients from three countries (Kenya, Rwanda, and Uganda), and for programs and providers from two (Kenya and Rwanda).

of an unintended pregnancy, reinfection with a different strain of the virus, or possibly transmitting HIV to an uninfected partner.

Clinic Readiness

Many C&Tx centers were only recently organized to ensure the rapid roll-out of antiretroviral treatment. As noted earlier in this report, as C&Tx services became established and assessed their clients, they recognized that many women were presenting pregnant, and it became clear that contraceptive services needed to be included as part of the basic package of care for women who did not intend to become pregnant.

Two-thirds to three-fourths of the C&Tx providers offer multiple services, implying a capacity to offer integrated services (Table 12).

A reliable supply of HIV and contraceptive commodities is essential in offering integrated services. Of the clinics included here, only one in Kenya and one in Rwanda experienced stock outs of HIV tests in the prior six months, and two reported outages of condoms. Nevertheless, programs continue to face challenges. According to one researcher in Kenya, "Adequate procurement is still a problem. Distribution is a challenge. There is plenty at the central stores, but stocks at the district are virtually zero."

In most sites, there were only one or two providers on duty in the C&Tx centers on the days of observation, and not all were trained to offer FP services.

In addition to having providers available and commodities on hand, clinics need to inform clients about the availability of new and existing services in order to generate demand. About half of the sites displayed posters about HIV testing. Also, about half had materials about HIV testing for clients. Fewer had FP posters or pamphlets. In all, it appears that efforts to generate demand for contraceptive services among HIV-positive clients are limited.

Table 12: Readiness of Care and Treatment Clinics to Offer Integrated Services

	Kenya	Rwanda
Manager reports (percentage)	**(n=13)**	**(n=11)**
Provider specialization		
Same provider offers multiple services	77	64
Base service		
Stocks outs of HIV-test kits in prior 6 months	15	9
Stock outs of condoms in prior 6 months	31	18
New service (FP)		
Stock outs of injectable in prior 6 months	23	0
Clinic observations (median and percentage)	**(n=16)**	**(n=13)**
Providers on duty		
Median number of providers on duty	2	1
Median number of providers trained to offer FP services	1	0
Base service		
Posters about HIV test displayed	53	50
Pamphlets about HIV test available for clients	40	54
New service (FP)		
Posters about FP displayed	40	23
Pamphlets about FP available for clients	33	25

Table 13: Percentage of Time Use of Care and Treatment Providers and Median Number of Clients Seen Daily

	Kenya	Rwanda
Clinic observations		
At 9 a.m., providers appeared:	**(n=15)**	**(n=13)**
Overworked and rushed	13	0
Reasonably busy	40	85
Underworked, a lot of free time	40	15
None observed	7	0
At 11 a.m., providers appeared:	**(n=15)**	**(n=9)**
Overworked and rushed	33	0
Reasonably busy	53	89
Underworked, a lot of free time	13	11
None observed	0	0
At 3 p.m., providers appeared:	**(n=15)**	**(n=8)**
Overworked and rushed	20	0
Reasonably busy	40	75
Underworked, a lot of free time	40	13
None observed	0	13
Provider reports	**(n=13)**	**(n=11)**
Median number of clients seen daily	20	11

Provider Time Use

The pattern of time use for C&Tx providers in Kenya is similar to that observed for CT providers in all countries except Rwanda (Table 13). Providers are busiest around 11 a.m., but a high percentage has free time early and late in the day. C&Tx providers in Rwanda generally appeared reasonably busy throughout the day, although they reported seeing a lower median number of clients than did providers in Kenya.

Provider Readiness

As with CT providers, we consider three supporting functions of quality of care to assess readiness to offer integrated services in C&Tx clinics: training, job aids, and supervision. The majority of C&Tx service providers have been clinically trained (Table 14), which is very different from the pattern seen among CT providers. Programs rely heavily on clinical officers, nurses, and medical assistants to provide care. While the programs claimed to offer integrated services, and these are meant to be the best performing sites, many providers we interviewed had not been trained in FP.

> *What can a person manage regarding method provision? For example, are they capable of providing an IUCD? They need training. This has not happened because the family planning aspect of our HIV programs is not well emphasized. Now we are moving forward. (Donor representative, Rwanda)*

Another challenge to offering integrated services in C&Tx is the lack of FP job aids for providers. No more than two-thirds reported having flip charts, checklists, or method samples.

Again, we note that supervisors are mainly valued for their facilitation of the delivery of needed supplies, and

Table 14: Percentage of Care and Treatment Providers Prepared for Family Planning Service Delivery

	Kenya (n=13)	Rwanda (n=11)
Provider designation		
Clinical officer	46	9
Professional nurse/midwife	31	36
Auxiliary nurse/nurse aide	--	9
Medical assistant	--	9
ART counselor	15	27
Other	8	9
Training		
Had any FP training	62	18
Integration guidelines		
Aware of FP-C&Tx guidelines	46	45
Job aids		
Samples of available FP methods	46	55
FP flip chart available	54	64
Checklist that includes FP methods	46	64
Supervision		
Meet with supervisor weekly	54	91
Supervisor's assistance to provide services		
Provides supplies	32	55
Arranges training or workshops	20	15
Nothing	20	15

to a lesser extent, for arranging workshops and training. A small percentage of providers felt that their supervisors did nothing to help them conduct integrated services.

Provider Knowledge and Attitudes

Care and treatment providers have multiple concerns about contraceptive use among their patients: safe timing of pregnancies, preventing mother-to-child transmission of HIV, possible interactions with antiretroviral drugs, and changing treatment regimens while pregnant to avoid possible harm to the fetus. Thus, it is important that these providers be familiar with appropriate methods for HIV-positive women.

None of the providers believed that using hormonal contraceptives will make HIV-positive women sicker. These providers are more likely than their CT counterparts to indicate that methods such as injectables and implants are best for HIV-positive women, though it is still only a

Table 15: Percentage of Care and Treatment Providers with Selected Knowledge and Attitudes

	Kenya (n=13)	Rwanda (n=11)
Using hormonal methods will make HIV-positive women sicker (disagree)	100	100
Condom is the only method HIV-positive women should use (disagree)	100	100
Best method for HIV-positive woman to use		
Condoms	54	9
Pills	8	0
Injectables	15	36
Implants	8	46
What woman wants	0	9
Other	15	0
Best method for HIV-negative woman to use		
Condoms	0	9
Pills	0	9
Injectables	46	27
Implants	0	36
What woman wants	54	18
Knows correct definition of dual method use	77	91
Knows correct definition of dual protection	39	73
Believes integration improves services	61	64

minority who believe so (Table 15). The data imply that providers, particularly in Rwanda, are not familiar with WHO medical eligibility criteria regarding contraceptive use by HIV-positive women and have substantial reservations against methods that are in fact appropriate. WHO medical eligibility criteria do not preclude HIV-positive women from using highly effective methods such as pills or an IUCD (Best, 2005; Network 2007; Shelton 2005; Reinhart 2004; WHO 2008). Ideally, providers should be aware that all methods can be used by HIV-positive women, except in very specific cases related to particular drug regimens, clinical stage of the disease, or risk of sexually transmitted infections.

The majority of providers in Kenya noted that condoms are the best method for their clients, though none agreed that it is the only method HIV-positive women should use. An AIDS advocate in Kenya offered the opinion, "The medical fraternity is still naïve to the changes in HIV care and support. For them it is unthinkable that HIV positives had sex, or had sex without a condom."

Rwandan providers have similar perspectives for both HIV-positive and HIV-negative women, and do not emphasize condoms for HIV-positive women. They favor condoms but are not proscriptive that it is the sole method to be used. Given the dominance of injectables

Table 16: Percentage of Care and Treatment Providers Talking about Family Planning, Making Referrals, and Offering Methods

	Kenya (n=13)	Rwanda (n=11)
Talked to C&Tx client today about FP	38	82
Referred C&Tx client for FP in last week (including today)	62	100
Methods provider offers	62	45
Condoms	62	27
Pills	54	54
Injectables	23	9
IUCD	23	45
Other	15	18
None		

in both countries' national method mix, it is not surprising to see that method mentioned by many providers as the best one for HIV-negative women.

Providers are more likely to know the definition of dual method use than dual protection. While most C&Tx providers were familiar with the concept of dual method use, they gave less accurate responses when asked to define dual protection, particularly in Kenya.

Nearly two-thirds of the C&Tx providers indicated that they believe integration improves services, mainly because they perceive that more women are accepting family planning, and fewer are becoming pregnant (data not shown).

Provider Reports of Services Offered

Integrated C&Tx services may follow several models, including referral elsewhere for FP services, or on-site provision of select methods. Table 16 shows that Rwandan providers are more likely than their Kenyan counterparts to report speaking with C&Tx clients about FP themselves, or to make referrals for services elsewhere. This might be because they see a smaller median number of clients each day (Table 13, page 32).

Providers in Kenya were most likely to offer condoms, oral contraceptives, or injectables to their clients, while those in Rwanda were more apt to offer injectables or condoms.

Client Reports of Services Received

To determine unmet need for family planning, and hence for the integrated service, providers need to ask clients about sexual activity, fertility desires, and method use. Screening in the context of C&Tx also has a second purpose, as providers worry about the possible reduced efficacy of oral contraceptives among women using some antiretroviral drugs. Comprehensive screening to determine unmet need is higher among C&TX clients. Most, but not all, women reported having ever been screened for sexual activity. This is a key concern both for contraceptive need and risk of HIV transmission or reinfections (Table 17, page 36). Reasonably high levels of women reported having been screened for contraceptive use. Because contraceptive use implies that women are sexually active, it perhaps negates the need to ask explicitly about sexual behavior. As with those using CT services, more women reported being screened for current method use than for their fertility desires. It may be that providers are screening using different sequences of

questions, asking women first if they are currently using a method and then asking non-users about their wish to become pregnant.

Clients reporting ever discussing contraceptive methods other than condoms with providers ranged from 42 percent in Kenya to 81 percent in Rwanda. However, only one-fourth to just more than one-third of these women received help in starting a method in C&Tx services. If, as we see, screening is not taking place, it appears that discussions about FP are client driven. According to an AIDS advocate in Rwanda, "Services are really only offered if a client requests."

Among the few clients who had assistance in starting a method, most reported that they started using condoms rather than hormonal methods, though this is also an extremely small percentage of the women. Virtually no women reported being referred for contraceptive services. It is of concern that, in addition to the uncertainty about whether providers are consistently screening women for unmet contraceptive needs, much of the discussion is taking place around condoms rather than other contraceptive methods.

Monitoring and Evaluation

Monitoring and recording a woman's contraceptive use when in C&Tx is important to time healthy pregnancies, avoid unwanted births, and be alert for possible interactions with antiretroviral drugs.

All of the managers in Rwanda, and most in Kenya, reported having a report form for each C&Tx client (Table 18). Two-thirds to three-fourths of the forms recorded information about FP.

As one Kenyan clinic manager remarked, "We don't have a tool to track uptake." According to another informant, "Treatment centers don't report on FP, so we don't know if women drop off family planning when they are diagnosed" (UN representative, South Africa).

3. HIV Services in Family Planning (HIV-FP)

Unmet Need for HIV Services

Women accessing FP services present different characteristics from those using CT or C&Tx services. In each country except South Africa, FP clients are older than those in CT services and younger than those in C&Tx

Table 17: Percentage of Care and Treatment Clients Reporting Screening for Unmet Need, Counseling, and Services Received

	Kenya (n=107)	Rwanda (n=68)	Uganda (n=91)
Screening for unmet need			
Ever screened for sexual activity	76	85	69
Ever screened for fertility desires (pregnant in next 2 years)	38	49	60
Ever screened for current method use	63	90	67
Added FP counseling topic			
Discussed contraceptive method besides condoms	42	81	65
Added FP services received			
Ever received help starting method contraceptive method	25	38	30
Provider helped start using condoms	20	16	19
Provider ever referred for method	5	3	0

Table 18: Percentage of Care and Treatment Managers Reporting Use of Client Report Form and Inclusion of Family Planning Indicators

	Kenya (n=13)	Rwanda (n=11)
C&Tx client has report form	85	100
Form records FP indicators	73	64

(Table 19). Nearly all are married or indicated that they have a regular sexual partner. The pattern of parity closely resembles that of the women in C&Tx, yet we see in South Africa and Ethiopia comparatively large percentages of women who have not yet started childbearing. As expected among FP clients, virtually all reported being sexually active during the prior three months.

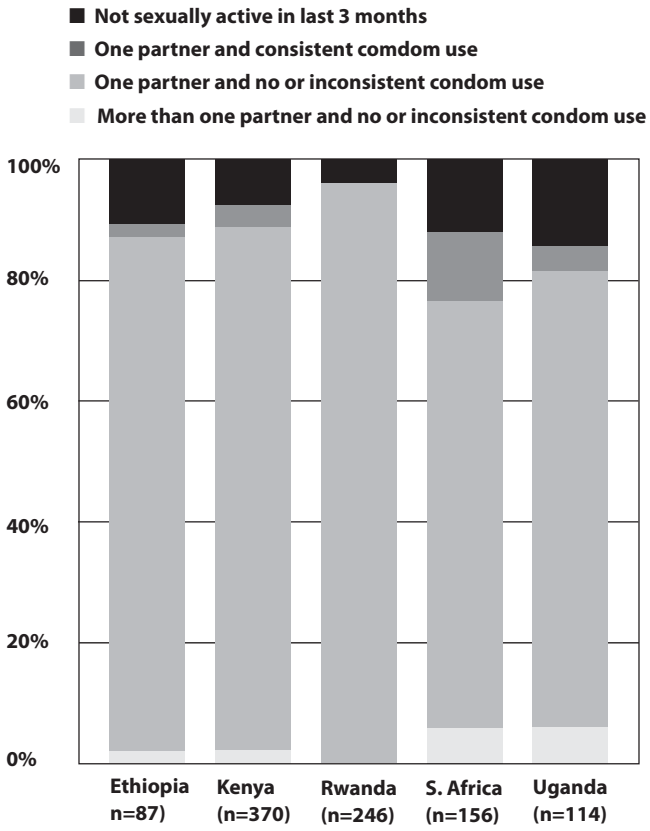
In each country, the majority of women reported having one partner and using condoms inconsistently or not at all (Figure 5, page 38). Without knowing the behavior of their husbands and partners, we cannot determine the level of risk of HIV transmission that these women face. These results might also underestimate need for testing among women with long-standing infections.

Recent data from Uganda underscore this situation. A modes-of-transmission analysis showed that approximately 43 percent of new HIV infections were estimated to occur among "low-risk" discordant couples, which

Table 19: Characteristics of Family Planning Clients

	Ethiopia (n=88)	Kenya (n=370)	Rwanda (n=246)	South Africa (n=156)	Uganda (n=115)
Mean age (years)	27	28	30	26	29
Age					
18-24	45	34	19	46	23
25-29	26	31	32	25	37
30 or older	28	35	49	29	39
Number of living children					
0	16	2	0	22	4
1-2	52	60	41	64	43
≥3	31	38	59	13	53
Marital status					
Married	91	90	98	24	91
Has partner	8	9	2	70	10
Has no partner	1	1	<1	6	0
Sexually active in prior 3 months	88	91	96	96	87

Figure 5: Percentage of Family Planning Clients According to Number of Partners and Condom Use



emphasizes the need to focus prevention efforts on people in marriages or long-term relationships (Government of Uganda, 2008).

The method mix among women attending FP services reflects those seen in national profiles. In each country, injectables are most frequently used. Figure 6 shows the method mix among women who are continuing users; it excludes those women visiting the clinic that day to start a method for the first time. We would not expect to see more women using long-acting and permanent methods (LAPMs), as these require little or no contact with the health facility once initiated. Nevertheless, use of LAPMs is low in these countries, as shown in DHS data for each country.

Condom use among FP clients, including as part of dual method use, does not exceed 20 percent in any country. Modest percentages of women report using dual methods, ranging from only 2 percent in Kenya to 8 percent in Uganda. As is typical among women attending FP services, provider-supplied condom use alone is low (condoms are most frequently obtained from pharmacies, social marketing programs, or other commercial vendors); it varies from 0 percent to 11 percent.

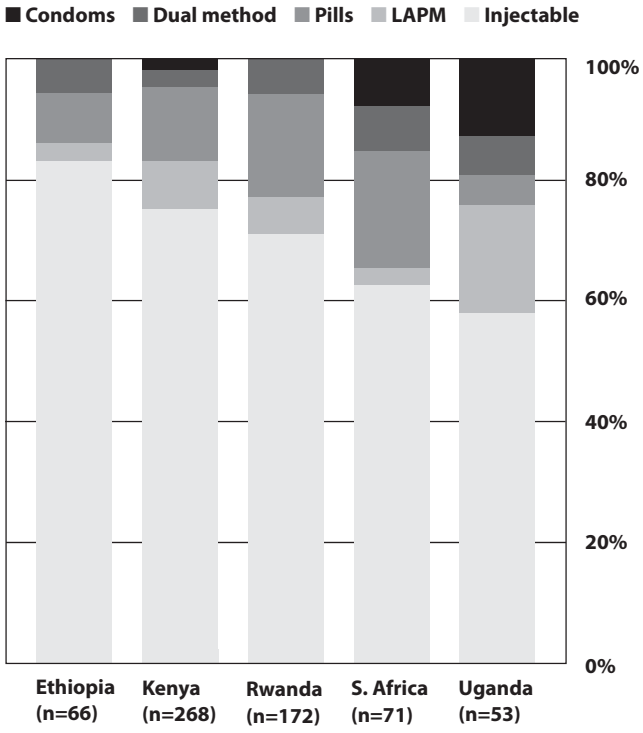
Clinic Readiness

As noted earlier, services must have the capacity to offer a good-quality base service before they can adequately offer a new, integrated service. As with the other services, indicators of the quality of the base service include commodity supply and IEBCC materials promoting the original service.

In Kenya and South Africa, the majority of providers offer multiple services (Table 20). Facilities typically have only one or two FP staff available. With the exception of South Africa, three-fourths or more of the FP services displayed posters about FP, and one-half to three-fourths had pamphlets for clients.

With the exception of Kenya and Uganda, programs reported low levels of stock outs of contraceptives. Uganda had changed from a push to a pull system of

Figure 6: Percentage of Modern Contraceptives among Contraceptors in Family Planning Services



commodity distribution shortly before the study was done, and the system was experiencing some challenges in implementation.

> *The health centers don't place their orders, and they run out. They are staffed by untrained health workers who cannot make reasonable projections. (Program manager, Uganda)*

> *Drugs are present at the NMS [National Medical Stores]; they are expiring because people don't order them. Also, NMS won't honor the order [if it is completed incorrectly], and doesn't feed back to say it is wrong. (Donor representative, Uganda)*

> *Clinics don't get a range of methods. They should have at least five types at each service delivery point. Sometimes you find just two or three. Method mix is usually a frustration, especially for those continuing. (Program manager, Kenya)*

In theory, all services should be available in health centers every day in each of these countries. In reality, that is still often not the case. According to a program manager in Rwanda, "Family planning is offered in some centers every day; in some, it is still on designated days." Another manager echoed the same, "Traditionally, family planning is not offered every day. The National Policy calls for it, but it is not always done." If both services are not available on the same day, clinics might lose some clients who are unable or unwilling to make a return visit.

In Ethiopia, Rwanda, and Uganda, providers are able to offer multiple services; this is less often the case in Kenya and South Africa. According to a program manager in Kenya, "The verticalness of initial programs prohibits people from being a jack of all trades. There is also segregation across professional cadres that leads to segmentation. We need to have an adequate number of providers. If there is only one, how can they do a range of services?

Table 20: Readiness of Family Planning Clinics to Offer Integrated Services

	Ethiopia*	Kenya	Rwanda	South Africa	Uganda
Manager reports (percentage)	**(n=8)**	**(n=27)**	**(n=22)**	**(n=11)**	**(n=17)**
Provider specialization					
Same provider offers multiple services	--	88	50	100	76
Base service					
Stock outs of injectables in prior 6 months	--	33	5	0	24
Stock outs of condoms in prior 6 months	--	26	9	0	6
New service (HIV)					
Stock outs of HIV-test kits in prior 6 months	--	15	9	9	12
Clinic observations (median and percentage)	**(n=13)**	**(n=28)**	**(n=26)**	**(n=11)**	**(n=22)**
Providers on duty					
Median number of providers on duty	1	2[1]	1	2	2[3]
Median number of providers trained to offer HIV services	1	1	1[1]	1	2[4]
Base service					
Posters about FP displayed	92	79	84[1]	9	73
Pamphlets about FP available for clients	54	64	63[2]	9	75[2]
New service (HIV)					
Posters about HIV test displayed	38	50	19	27	55[2]
Pamphlets about HIV test available for clients	31	21	20[1]	18	50[2]

* Only 8 FP managers were interviewed in Ethiopia, too few to report. [1] 1 missing case; [2] 2 missing cases; [3] 5 missing cases; [4] 7 missing cases

Our training institutions need to reassess specialization versus integration."

Few sites (19 percent to 55 percent) had posters promoting the availability of HIV tests, and fewer still had educational brochures about HIV testing for clients. Few sites experienced stock outs of HIV-test kits in the prior six months.

Provider Time Use

Family planning providers in Ethiopia, Kenya, and South Africa show similar time use patterns from those observed in the other services. That is, there is an inverse U-shaped pattern, with providers less busy early and late in the day, compared with the late morning (Table 21).

As seen previously, providers in Rwanda appeared busy throughout the day, and the majority of those in Uganda rarely seemed busy. The median number of clients seen is highest among the Kenyan providers.

The number of people seen during the day does not appear to correspond to a particular time use pattern. For example, providers in both South Africa and Uganda reported seeing a median of 12 clients daily. Yet, a majority of Ugandan providers were observed to be underworked throughout the day, while the same number of clients kept South African providers reasonably busy. Although the methodology used to assess time use might be too subjective to attain consistent cross-national patterns, the overall trends still indicate that most providers are not busy early and late in the day.

Table 21: Percentage of Time Use by Family Planning Providers and Median Number of Clients Seen Daily

	Ethiopia	Kenya	Rwanda	South Africa	Uganda
At 9 a.m., providers appeared:	**(n=13)**	**(n=28)**	**(n=26)**	**(n=11)**	**(n=18)**
Overworked and rushed	0	4	0	18	0
Reasonably busy	46	43	77	45	44
Underworked, a lot of free time	54	46	19	36	56
None observed	0	7	4	0	0
At 11 a.m., providers appeared:	**(n=13)**	**(n=28)**	**(n=26)**	**(n=11)**	**(n=20)**
Overworked and rushed	0	39	0	0	5
Reasonably busy	77	50	74	73	40
Underworked, a lot of free time	23	11	26	27	55
None observed	0	0	0	0	0
At 3 p.m., providers appeared:	**(n=13)**	**(n=28)**	**(n=26)**	**(n=11)**	**(n=16)**
Overworked and rushed	15	4	6	0	6
Reasonably busy	23	46	65	45	25
Underworked, a lot of free time	62	50	29	55	63
None observed	0	0	0	0	6
Provider reports		**(n=41)**	**(n=25)**	**(n=12)**	**(n=25)**
Median number of clients seen daily	N/A[1]	20	15	12	12

[1] Ethiopia had too few FP providers to report

Provider Readiness

The majority of FP providers in Kenya and Rwanda, and in Uganda to a lesser extent, are professional nurses (or the local equivalent) or midwives (Table 22).[8] In South Africa, a lower-level cadre, auxiliary nurses, or nurse aides, are largely responsible for delivering FP services.

Three-fourths or more of the providers reported having any training in HIV, evidence of far more cross-training taking place in this service than in CT and C&Tx. Two-thirds of the providers in Kenya and Uganda were aware of integration guidelines, compared with only about one-quarter of the providers in Rwanda.

[8] Ethiopia had too few FP providers to report.

Table 22: Percentage of Family Planning Providers Prepared for HIV Service Delivery

	Kenya (n=41)	Rwanda (n=25)	South Africa (n=12)	Uganda (n=25)
Provider designation				
Doctor	--	--	--	8
Clinical officer	2	4	--	8
Professional nurse/midwife	78	80	33	52
Auxiliary nurse/nurse aide	10	12	58	4
Medical assistant	0	0	8	12
Other	10	4	0	16
Training				
Had any HIV training	93	76	75	84
Integration Guidelines				
Aware of any FP-HIV guidelines	68	24	92	68
Job aids				
Penile model or sample contraceptives	76	44	67	88
CT counseling guide	44	28	75	68
Checklist that includes HIV testing	39	32	67	52
Supervision				
Meet with supervisor weekly	32	80	42	48
Supervisor's assistance to provide services				
Provides supplies	13	25	17	33
Arranges training or workshops	23	5	50	12
Provides what is needed	38	--	17	16
Nothing	8	30	--	13

Table 23: Percentage of Family Planning Providers with Selected Knowledge and Attitudes

	Kenya (n=41)	Rwanda (n=25)	South Africa (n=12)	Uganda (n=25)
Using hormonal methods will make HIV-positive women sicker (disagree)	90	92	100	76
Condom is the only method for HIV-positive women (disagree)	93	76	50	64
I am not able to convince most clients to use condoms (disagree)	72	88	78	88
HIV-positive women should have children if they want (agree)	95	64	83	84
Methods that are not appropriate for HIV-positive women				
Pills	22	44	16	24
Injectables	10	12	8	12
Implants	7	8	0	4
IUCD	29	20	0	28
Knows correct definition of dual method use	68	76	58	48
Knows correct definition of dual protection	46	80	25	52
It is very important to offer HIV services	100	72	100	92
Believes integration improves services	73	60	58	76

There is large variation in the availability of job aids to support providers in doing their jobs. No more than 75 percent had a counseling guide, and fewer still had screening checklists that include HIV testing.

As was seen in the other services, supervision appears to be a weak link in the service delivery system. Many providers reported that supervisors are most helpful in obtaining supplies and in arranging training opportunities.

Provider Knowledge and Attitudes

A primary goal of integration is to ensure that HIV-positive women have access to a full range of effective contraceptive methods, in order to best meet their fertility desires. Many of the FP providers thought that pills were not suitable for HIV-positive women (though most did not believe that using hormonal contraceptives would cause HIV-positive women to become sicker), and 20 percent to 30 percent thought IUCDs are not appropriate (Table 23).

A program manager in Rwanda said, "I don't think provider bias is an issue, but some providers worry about interactions of hormonal contraceptives with ARVs." A similar point of view was offered by a researcher in South Africa, who said, "Providers felt disempowered. They didn't feel they know enough about family planning and ARV interactions."

Most providers in Kenya disagreed that condoms are the only method that HIV-positive women should use. Providers in South Africa and Uganda were more equivocal in their responses. The majority of providers thought they were able to convince clients to use condoms.

One component of integrated services often discussed is the promotion of dual method use, or use of condoms to offer dual protection. When asked to define these two concepts, a surprisingly large proportion of the FP providers were unable to correctly define either, though providers in Rwanda were consistently more knowledgeable than those in other countries.

Nearly all providers in Kenya, South Africa, and Uganda believed it is important to offer HIV services to women attending FP clinics, and about 60 percent to 75 percent believed integration improves services. Reasons cited for the benefits of integrated services included that more women can access HIV information and services and that the availability of additional services brings more women into the clinics (data not shown).

Provider Reports of Services Offered

Family planning providers reported having been trained in HIV, yet they have limited job aids, and the clinics lack informational materials that might drive demand for services. In this context, what do providers tell us regarding their implementation of integrated services?

With the exception of South Africa, no more than 41 percent of the FP providers reported that they advised a client to be tested for HIV on the day of the visit, although more indicated that they referred clients for testing during the prior week (Table 24). This percentage exceeds that of CT or C&Tx providers reporting that they offer FP services and is consistent with remarks made by several key informants:

> *Our policy is that each service is an entry point for others. Providers are expected to give information about other services.* (Program manager, Kenya)

> *We talk to clients as if we will never see them again—we talk about VCT, condom as dual protection, suggest a PAP smear.* (Clinic manager, Kenya)

One-third to two-thirds of the providers reported referring clients for HIV services in the prior week. While many said that they conduct HIV tests (two-thirds of the providers in Kenya, South Africa, and Uganda so reported), far fewer actually tested the last client they advised to be tested. This implies that frequently clients must go elsewhere, even within the facility, to be tested.

Table 24: Percentage of Family Planning Providers Offering HIV Services, Referrals, Counseling Topics, and Messages for HIV-Positive Women

	Kenya (n=41)	Rwanda (n=25)	South Africa (n=12)	Uganda (n=25)
HIV services and referrals				
Advised client today to be tested for HIV	41	25[1]	75	24
Referred FP client for HIV service in last week	35[1]	52	67[2]	64
Conducts HIV tests	68	20	67	68
Did test for last client advised to be tested	39	8	17	21[1]
HIV counseling topics				
HIV transmission	61	76	42	80
HIV risk assessment	44	60	58	64
HIV testing	49	52	33	56
Messages for HIV-positive women				
Do not get pregnant	27	60	17	44
Use condoms	59	64	75	56
Dual protection or dual method use	61	36	42	20

[1] 1 missing case; [2] 2 missing cases

It is emerging that we are being a burden on clients by referring them elsewhere. We need a one-stop shop. The challenges to this kind of thinking are many. (AIDS advocate, Kenya)

When asked about specific topics that they discuss with clients, it appears that FP providers are most likely to discuss HIV transmission, a relatively neutral and factual subject. Fewer providers mentioned discussing risk assessment, a topic requiring more intimate inquiries about a client's sexual behavior and possible risky behaviors. Even fewer providers discussed HIV testing itself. This might be a reasonable progression of topics, in that if a woman is screened for risk of HIV and is determined to be at low risk, her need for an HIV test might be low.

Only in Rwanda did a majority of providers say that they advise HIV-positive women not to get pregnant. Most said that they tell HIV-positive women to use condoms, though with the exception of Kenya, few advised using condoms in conjunction with another method.

Client Reports of Services Received

The primary elements of integrated HIV services expected in FP service delivery points include risk screening, discussion about modes of transmission and prevention, and HIV testing or referrals. Only about half of the women reported having been screened for sexual activity (Table 25), not surprising if one assumes that sexual exposure underlies the need for contraceptive services. No more than one-third of the women reported discussing risk reduction with providers, and they were not encouraged to use condoms, alone or with another method.

In Kenya, half of the women discussed having an HIV test with the provider that day. No more than 40 percent of clients in the other countries discussed testing. Few

Table 25: Percentage of Family Planning Clients Reporting HIV Screening, Counseling, and Services Received

	Ethiopia (n=88)	Kenya (n=370)	Rwanda (n=246)	South Africa (n=156)	Uganda (n=115)
Screening for HIV risk					
Ever screened for sexual activity	42	49[2]	45	40	54
Discussion of HIV topics					
Discussed risk reduction	13	29[1]	23	33	34
Discussed condom use	9	12	36	21	30
Discussed dual method use	5	15[2]	24	40	19[1]
Discussed having an HIV test	16	54	27	40	25
HIV testing					
Had an HIV test today	1	18	1	5	6
Referred for testing today	9	24	3	16	15
Ever tested for HIV	61	59	21	67	n/a[3]

[1] 1 missing case; [2] 2 missing cases; [3] data not available

Table 26: Percentage of Family Planning Managers Reporting Use of Client Report Form and Inclusion of HIV Indicators

	Kenya (n=27)	Rwanda (n=22)	South Africa (n=11)	Uganda (n=17)
FP client has report form	70	100	91	94
Form records HIV service indicators	37	14	45	41

women were actually tested on the day of their interview: 1 percent in Ethiopia and Rwanda, 5 percent in South Africa, and 6 percent in Uganda. Kenya was the exception, with nearly one in five FP clients having an HIV test that day. A higher proportion of women in Kenya also reported having received a referral for testing, compared with those in the other countries. However, more than half of the women in Ethiopia, Kenya, and South Africa reported having been previously tested for HIV.

Monitoring and Evaluation

As with the other services, FP services should screen clients for their need for the alternative service and record that information, as well as document the services they deliver. Most managers in Rwanda, South Africa, and Uganda reported having an M&E form for clients (Table 26). Fewer than half reported that the forms record data about HIV services. There is no consistent pattern about what is recorded; most often the forms indicate whether the client received counseling or whether the client was tested (data not shown).

When asked how the monitoring data are used, managers mentioned evaluating performance, planning, and enrolling clients in ART.

Discussion and Key Emerging Issues

We are mopping a leaking house. (MOH official, Kenya)

Client Need for Services

The unmet need for FP services is higher for CT than for C&Tx clients. The primary reason for this finding is that a higher percentage of CT than C&Tx clients are sexually active. While unmet need for FP is currently low among women in C&Tx, it might increase as more women are diagnosed through testing during antenatal care visits, provider-initiated testing and counseling expands, and C&Tx services expand. Moreover, as the health of HIV-positive women improves and a higher percentage become sexually active, there might be increased need for FP services. On the other hand, more women might want children, increasing the need for safer pregnancy services.

We used a modification of the traditional definition of unmet need in our calculations. Because a considerable percentage of women in CT and especially in C&Tx were using condoms, we attempted to determine if the need for contraception was actually higher because condom use was not consistent. We did find that condom use was often not consistent, and thus need is likely higher than indicated by our estimates. But, the small number of condom users on which these findings are based makes it too preliminary to modify our estimates of need. However, it is important to make adjustments in the measurement of need in that overstatement of consistent use has been documented frequently (Rose et al., 2009).

There are no comparable measures of unmet need for HIV testing as there are for family planning. If need is limited to those women reporting that they have multiple partners and no or inconsistent condom use, then need would be low. If, however, need is defined to include all of those who are sexually active , then the vast majority of women reporting that they have one partner and either do not use condoms or use them inconsistently would be defined as being in need. Without information on the sexual relationships and condom use of the partners of these women, it is not possible to evaluate their need for testing. However, in most African countries where HIV is most frequently transmitted through heterosexual sex, it has emerged that being married puts women at risk. Moreover, there might be little incentive to evaluate risk more accurately as programs move toward provider-initiated testing.

> **Issue 1:** Measures of unmet need should be revised to take into consideration inconsistent condom use. There is no standard way to assess risk of HIV infection and therefore unmet need for testing among FP clients. Need is low if the measure is restricted to those with multiple partners and no or inconsistent condom use, but need is high if all women who do not use condoms are included.

Clinic Readiness

In order to provide services, facilities need an adequate staff of trained providers, a reliable supply of commodities, and informational materials to generate demand and educate clients. There must be sufficient providers trained in the new service, stocks of the new commodities, and IEBCC materials. None of the models in any of the countries had secure base systems, and they were similarly challenged in introducing the new, integrated service. While it is not easy to be definitive, since few clinics were included in this assessment, it is apparent that there are substantial variations in both the functioning of the base service and the readiness to introduce the new services. Some countries appeared better prepared than others, yet virtually all services in all countries had experienced stock outs of essential commodities and many lacked IEBCC materials related to the original service.

Not all providers offered multiple services. Moreover, not all providers were trained in the complementary service. This is a problem because of the low number of providers on duty in many clinics.

The limited availability of IEBCC materials for the new service, including posters and brochures to let clients know of its availability, implies that demand creation and advertising for the integrated services lags its implementation.

> **Issue 2:** Government officials and program managers must consider whether the base service is strong enough to absorb the newly integrated service, and if it is not, they must determine the resource needs and costs to improve the base service. These include resources for training, material, infrastructure, and supervisory support.

Provider Time Use

Providers have quite a bit of non-busy time during the day, when they presumably can offer the newly integrated services.[9]

However, given that delivery of base services is concentrated in a few hours in the late morning, it will be a challenge to increase the volume of new services unless the workload is more evenly distributed throughout the entire day. Reorganization of daily time use will require persuading clients to attend services at other times of the day as well as ensuring that providers are available during those times.

> **Issue 3:** While providers have a reasonable amount of non-busy time during the day, it will be a challenge to increase the volume of new services unless the workload of providers is more evenly distributed throughout the day. Health officials need to implement practical strategies to modify work patterns and encourage clients to seek services throughout the day.

Provider Readiness

The support functions that help increase and sustain quality of care—training, job aids, and supervision—are not adequate to offer the newly integrated services. In general, providers in C&Tx and FP services tend to be clinically trained; they include doctors, clinical officers, nurses, and midwives. In contrast, those offering CT services mostly include counselors without training in family planning. While training alone is not sufficient to prepare providers to offer integrated services, it is an essential component. Providers must have accurate and up-to-date information that allows them to screen, counsel, refer, and offer services.

All services lack basic job aids to support providers in their work. Providers need checklists, flip charts, and sample contraceptives to support service delivery, and there is a need for wider dissemination of these tools.

Across all services, supervisors do not appear to be helping providers to do their jobs. This is a lost opportunity for job coaching. Supervisors need to help providers to understand the value of integrated services. Supervisory skills need to be addressed as a complement to provider training and support.

> **Issue 4:** Programs should calculate the cost of improving integrated service provision and prioritize interventions for training, materials provision, and improved supervision.

Provider Knowledge and Attitudes

Clinicians and counselors are apparently unaware of recently updated WHO medical eligibility criteria regarding contraceptive use by HIV-positive women. Training on the current guidelines is needed, and providers must believe and trust the content of the guidelines if they are to use them when counseling clients. Providers need to have up-to-date knowledge about the appropriate use of oral contraceptive pills and IUCDs for HIV-positive women. There is significant misunderstanding about these methods and an apparent reluctance to offer them. Similarly, the strong orientation to promote condoms is likely to conflict with the promotion of pills or IUCDs. And, if providers have been persuaded that condoms are the best method for women living with HIV, they might hesitate to counsel clients to use other methods, for fear that the clients will reduce condom use.

While providers have reservations about HIV-positive women using hormonal methods and IUCDs, there is a strong and consistent pattern of support advocating condom use for HIV-positive women. Paradoxically, this support is not translated into a parallel orientation to encourage condom use among HIV-negative women to reduce their risk of infection. If condom use is to be a cornerstone of risk reduction, frank debate needs to take place to develop strategies to destigmatize condom use among HIV-negative women.

Many providers did not correctly define the key concepts of dual protection and dual method use. However, they might have been confused about the language used in the survey questions, rather than uninformed about the multiple advantages of condoms. In view of the centrality of condom promotion as an HIV prevention strategy, efforts should be made to clarify these concepts for providers so that counseling for condom use can be strengthened.

> **Issue 5:** Training to ensure that providers are knowledgeable in key concepts related to their original service and the integrated service, particularly about WHO medical eligibility criteria, is necessary. This goal can be met by introducing

[9] The estimates of time use among Rwandan providers are remarkably consistent across all three models of service integration, with providers being busier throughout the day than their counterparts in other countries. This consistency makes it difficult to determine if the providers are in fact busy or if the observers differed from those in other countries in their perception of "busyness."

systematic pre-service and in-service training to ensure that (1) providers are knowledgeable about and ready to accept WHO medical eligibility criteria for various contraceptive methods, and (2) that they promote condoms both to reduce transmission from infected individuals and to protect those not infected.

Services Delivered and Received

Many clients are not being systematically screened for unmet FP need or their risk of HIV, fundamental elements of integrated services. Screening for unmet need is apparently weaker in CT than in C&Tx services. While women might not need to be asked all three questions (sexual activity, desire for a birth, contraceptive use) to ascertain their need for contraception, the percentages reporting that they were asked each of the questions appears low, particularly in CT, suggesting that screening needs to be improved.

While providers say that they make methods available to clients, few clients in either service received a method. Providers in C&Tx were more likely than those in CT to discuss family planning.

As to integration of HIV services into FP, the percentage of women who said that their provider discussed various HIV topics was disappointing. While it is possible that, in some cases, these topics were discussed on a previous visit, the percentages for some countries is so low that it is of concern. However, in three of four countries for which we had data, a high percentage of clients had been tested prior to the current visit, possibly indicating that information and counseling on HIV testing is widespread.

Issue 6: Screening efforts need to be increased in order to improve the provision of FP counseling and methods in HIV programs. Providers should provide a method to women in need if possible or make a referral if necessary. Women relying on condoms should be counseled to consider using a second method to meet their pregnancy prevention needs.

Issue 7: Family planning providers should give a higher priority to talking with clients about HIV risks and to promoting testing. Clients not previously tested within a conventionally recognized time frame should be tested again to update their status.

Monitoring and Evaluation

Even if a clinic has a client form or register in which to record data for M&E (and many do not), few have been updated or revised to include information about the newly added service. It will be impossible to monitor performance, service uptake, and routine follow-up of clients without such data.

Issue 8: Consensus must be reached on a few standard indicators of integration, and they should be added to health information systems in order to track the delivery and effect of integrated services.

Conclusion

In reviewing these findings, we find that much remains to be done to offer fully integrated family planning and HIV services and to develop effective, scaleable models. As yet, we have little evidence to indicate that one model offers strong advantages over another. In fact, it is quite likely that the mode of service delivery should be tailored to the specific situation in which each clinic functions.

Administrators of FP and HIV programs must take into account the human and financial resources available to them and make rational decisions based on local data. The characteristics of their clients and local availability of complementary health services should drive the particular components included in integrated services.

In summary, the comments of several key informants are illuminating. For these managers and researchers, who work with the rhetoric and reality of integration every day, there are challenges.

Some integration is taking place through necessity rather than through design. (Researcher, South Africa)

Most that takes place is integration of convenience. (MOH official, Kenya)

Integration is still novel. The national Department of Health is thinking integration is there, but 'disintegration' is still the norm. (Program manager, South Africa)

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Appendix 2. Participating Organizations by Country

Ethiopia

Family Guidance Association of Ethiopia

Pathfinder International*

Kenya

APHIA II (Coast, Rift Valley)*

Family Health Options of Kenya

Marie Stopes International

Ministry of Health

Nairobi City Council

Population Council*

Rwanda

Association Rwandaise pour le Bien-Être Familial

Capacity Project/IntraHealth*

Family Health International-Rwanda*

HCSP/IntraHealth*

Partners in Health*

Twubakane/IntraHealth*

South Africa

Management Sciences for Health*

Marie Stopes International

Pathfinder International*

Uganda

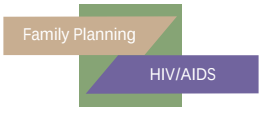
AIDS Information Centre*

Family Planning Association of Uganda

Marie Stopes International

Quality Assurance Project*

* In collaboration with local ministries of health



Family Health International
P.O. Box 13950
Research Triangle Park, NC 27709 USA

Telephone: 919.544.7040
Fax: 919.544.7261
Web: www.fhi.org