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“Our hands are tied up”: Current state of safer conception services suggests the need for an integrated care model

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Abstract

We conducted in-depth interviews with a variety of healthcare providers (n=33) in Uganda to identify current services that could support and barriers to the provision of safer conception counseling (SCC). Consistent with their training and expertise, providers of all types reported provision of services for people living with a diagnosis of HIV or AIDS (PLHIV) who desire a child. Important barriers including a lack of service integration, poor communication between stakeholders and the absence of policy guidelines were identified. Drawing on these data, we propose a model of integrated care that includes both prevention of unplanned pregnancies and SCC services.

Researchers have identified the lack of safer conception counseling as a glaring gap in the current state of services for people living with HIV/AIDS (PLHIV) across Africa. The lack of accessible supportive services negatively impacts HIV-infected women's ability to make informed reproductive health decisions and reduces the likelihood that HIV-infected men will employ risk reduction methods with their uninfected female partners. It also leads to delays and thereby reduces the efficacy of preventing mother to child transmission of HIV. In this paper, we provide data on what services Ugandan providers are currently offering and what barriers they encounter for the provision of safer conception counseling. We present data on the complicated dynamics of providing these services as well as the drivers of regular provision and uptake of safer conception methods. Our findings have the potential to inform both service and policy level efforts to bring these services to the people who need them. Drawing on our rich data from a variety of providers, we offer a new model of

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integrated care that addresses the most critical barriers for PLHIV and providers of all types. We believe that our findings will be of use to a wide variety of professionals who are engaged in improving service provision and international health policy.

The availability of antiretroviral therapy (ART) has significantly improved the health and lives of people living with a diagnosis of HIV or AIDS (PLHIV) and led to an increase in desires to bear children (Nattabi et al., 2009; Finocchiaro-Kessler et al. 2012). Recently researchers in sub-Saharan Africa have found that 28–73% of PLHIV express a desire to have a child (Snow et al. 2013; Wanyenze et al., 2011; Heys et al., 2009). Fertility desires are greatest among young PLHIV (15–24 years; Beyeza-Kashesya et al., 2011), likely reflecting cultural norms to have a family and the likelihood that they had not yet begun or completed their family when they acquired HIV. Data from Ugandan studies corroborate these findings and indicate growth in the number of Ugandan PLHIV who desire to have children from a low of 7% in early 2003 (Homsy et al., 2009) to 30–59% in 2009 (Kakaire et al., 2010; Beyeza-Kashesya et al., 2010). PLHIV are acting on these desires, with 30% of discordant couples reporting that they have had a child after they knew of their discordant status (Beyeza-Kashesya et al., 2010) and one-third of women who initiated ART becoming pregnant during a four-year follow-up period (Myer et al., 2010). Given that 90% of newly infected Ugandans are of reproductive age (Wabwire-Mangen et al., 2009), these trends are likely to continue. Left unassisted, the quest of PLHIV for childbearing has the potential to increase the rate of HIV transmission not only to unborn children, but also uninfected partners. As such, effective safer conception services for those who wish to conceive are urgently needed.

Innovations in the prevention of vertical or mother to child transmission (MTCT) have reduced rates of MTCT from a high of 30% with no intervention to around 1–2% if timely antiretroviral prophylaxis and replacement feeding are provided (UNAIDS, 2009). Similarly, horizontal transmission to uninfected partners can be significantly reduced through the use of established safer conception methods (SCM; Matthews & Mukherjee, 2009). Methods include timed unprotected intercourse during the female's fertile period, manual insemination if the male partner is negative, and assisted reproductive technology such as sperm washing for HIV-infected male clients, although this latter option is not accessible or affordable in most low resource settings (Matthews et al., 2012). There are also several methods that are not specific to the context of conception, but which greatly reduce sexual transmission risk. ART (and a resultant undetectable viral load more specifically) has been shown to reduce infections in serodiscordant couples by 96% (Cohen et al., 2011), diagnosis and treatment of STIs greatly reduces risk (Gray et al., 2001), and medical male circumcision decreases the risk of transmission among men by 51% (Gray et al., 2007). In addition, pre-exposure antiretroviral prophylaxis (PrEP) for the uninfected partner may reduce risk during conception attempts (Vernazza et al., 2011; Thigpen et al., 2012), but its efficacy in this context has not been established, nor is it widely available in Uganda or other sub-Saharan countries at the present time. Unfortunately persistent barriers prevent most couples from receiving safer conception counseling (SCC) where they could learn about and receive assistance to employ these prevention strategies.

Researchers (*name deleted to maintain the integrity of the review process*; Schwartz et al., 2011; Wagner et al., 2012) have noted numerous client and provider level barriers for the regular provision of SCC. Client barriers include: cultural norms impacting the acceptability of SCC methods, clients' low health literacy, and lack of male partner involvement. Provider barriers to the provision of SCC include their longstanding focus on prevention of pregnancy, which makes providers uncomfortable with suggesting any form of unprotected sex to clients and results in negative attitudes toward PLHIV having children (Beyeza-Kashesya et al., 2010). Another important barrier for both clients and providers is HIV-stigma, which interacts with preexisting stigma associated with sexuality, gender, race and poverty, and has a negative impact on care (Feyissa et al., 2012; Banteyerga et al., 2005). In fact, the judgmental attitudes of some providers' about their clients' fertility desires was a contributing factor to the widespread stigmatization of childbearing among PLHIV (Steiner, Finocchiaro-Kessler et al., 2013; Wagner et al., 2012; Cooper et al., 2009; Agadjanian & Hayford, 2009; Myer et al., 2006). Ironically, instead of reducing births among PLHIV, this stigmatization has paradoxically been associated with increasing the likelihood that HIV-infected women will continue to have children (Cooper et al., 2007; Craft et al., 2007; Aka-Dago-Akribi et al., 1999). While provider attitudes have begun to change in light of improved client health outcomes and the recognition that significant proportions of PLHIV continue to have children and have a right to make their own fertility decisions (e.g., Barroso & Sippel, 2011; Baryamutuma & Baingana, 2011; WHO UNFPA 2011), residual concerns persist and manifest themselves in mixed messages that undermine any support that providers may offer clients. Just as these attitudes inhibit providers' behavior, clients have also internalized this stigma (Wagner & Wanyenze, 2013; Cooper 2009; Nduna & Farlane, 2009), increasing their reluctance to communicate with providers about their childbearing desires. These delays prevent the opportunity to benefit from safer conception counseling and hamper early initiation of PMTCT.

These client and provider level barriers are important considerations for the development of effective interventions; however, to date few inquiries have examined the issue from a systems level perspective. As such we know little about what is currently being done that could support and/or hamper efforts to make SCC available to those who could benefit from it. To address this gap, we draw on the perspective of HIV, family planning and traditional health providers to examine: 1) what services are currently being offered by different provider types that could support SCC and 2) what individual and system level barriers will need to be addressed. Drawing on these data, we propose a model of integrated care that includes both prevention of unplanned pregnancies and SCC services for those who desire pregnancy.

Methods

Study Setting

This study was conducted in collaboration with The AIDS Support Organization (TASO) sites in Kampala and Jinja, Uganda between July and September of 2012. Founded in 1987, TASO is now one of the largest indigenous non-governmental organizations in Uganda

providing comprehensive HIV prevention, care and support services for over 100,000 HIV infected and affected Ugandans annually.

The Kampala TASO site is located next to the Mulago National Referral Hospital Complex and is the main and oldest branch that serves over 6700 active HIV-infected patients. The Jinja TASO site is located 45 miles east of Kampala within the Jinja Regional Referral Hospital and provides HIV primary care to over 8000 clients. In addition to ART and counseling services, TASO provides family planning and contraception services.

Sample

We conducted in-depth, semi-structured individual interviews with HIV care providers (i.e., medical/clinical officers, nurses, counselors, and expert clients; [HIV]), Family Planning counselors (FP), and Traditional Health providers (TH), to explore: 1) what services they are currently providing related to safer conception among HIV-infected clients, 2) what additional trainings they desire related to safer conception, and 3) barriers they perceive for the regular provision of support for safer childbearing among HIV clients. We sought to interview a varied group of providers from the participating HIV and family planning clinics and within the community. Providers were identified from the hospital settings in which the HIV clinics are housed, and the TH providers were identified from the communities surrounding the clinics. Providers were approached by a member of the study team and asked if they would be willing to share their thoughts and experiences with treating HIV-infected clients who are interested in having a child. Interviews averaged 30–45 minutes and consistent with local norms, all providers were offered 20,000 Ush (~\$8) for participating. All providers gave verbal informed consent, at which time we stressed that their responses were not linked to payment and would not be shared with their employer. The study protocol was reviewed and approved by the appropriate Institutional Review Boards at each participating site.

Instrument

We used semi-structured interviews to elicit themes as well as to determine how common or salient these themes were among an array of respondents. An interview guide was developed for providers which included mostly open-ended questions, but also semi-structured follow-up questions and probes. After eliciting basic demographic and background related information, the interview covered several areas related to the childbearing needs of HIV-infected clients and the support services available to meet these needs; however, our analysis here focused specifically on the portion of the interviews related to what providers were currently doing related to SCM, what additional training they desired, and what barriers they saw for provision of these services going forward.

Study interviewers: had a Master's degree in social sciences, experience conducting qualitative interviews, received specific training for this study and were native Luganda speakers. Providers were asked to choose which language (Luganda or English) they preferred for the interview. Luganda interviews were conducted by the study interviewers and English interviews were conducted by the senior investigators of the study.

Analysis

Interviews were digitally recorded, translated into English (when conducted in Luganda) and transcribed verbatim. Data were entered in *Atlas.ti*. The initial coding scheme was developed by three team members using a grounded theory approach, which informed the development of a thematically organized codebook. Thereafter, coding was conducted by two team members with review by the third team member, an anthropologist with extensive experience in qualitative data coding. Where there was disagreement, a secondary review achieved consensus and changes to the coding were made accordingly (Bernard & Ryan, 2010). Topical codes were used to index provider interviews in order to compare their perspectives and experiences. Results were aggregated to identify common themes, patterns and key factors related to provider experiences addressing client fertility needs and knowledge and use of SCM. Key themes for this analysis included: client-provider interactions, provider attitudes, provider concerns, SCM, current services provided, and structural challenges.

Results

Sample description

The sample included 33 providers (17 from Kampala and 16 from Jinja), including 18 HIV (4 medical/clinical officers, 3 nurses, 7 counselors, 4 expert clients), 10 FP (7 midwives, 1 nurse, and 2 doctors), and 5 TH (3 herbalists, 2 traditional birth attendants) providers. Nine of the providers were male, and all but five had been providing client care for at least four years.

What services do providers currently offer for HIV clients who want a child?

When asked to describe their consultations with HIV-infected clients who want to have a child, all providers reported focusing on the clients' health first, stressing the importance of ensuring optimal health and getting CD4 cell counts (a key measure of immune functioning) above 400 before attempting pregnancy. All providers, including TH providers, encouraged clients who want to conceive to engage in health behaviors such as adherence to allopathic treatment, regular blood work, antenatal care, prevention of maternal to child transmission (PMTCT), good nutrition and clean water, planning for delivering in a qualified health facility and consistent use of condoms until ready to conceive. While there was considerable overlap in what different providers encouraged clients to do, they offered unique services consistent with their training and expertise (See Table). For example, providing screening and treatment for sexual transmitted infections (STI) were routinely reported by qualified HIV and FP providers.

So for those ones [who want children] we always teach, educate them, when [is] the proper time to have a child. We advise them, we teach them, about their CD4 counts and viral load. Then if both, if the husband and the wife, are accessing care with us, we start treating them as a couple. Because we have to treat for any STI, anything, especially that by the time they conceive, everything is as normal as we want it. And we tell them once you conceive, we want you to use condoms

throughout because we don't want our baby to get the virus. So most of them understand. [female, HIV nurse, rural]

Some HIV and FP providers reported offering fertility counseling including teaching clients to use the SCM of timed unprotected intercourse. Three providers described assisting clients to use manual self-insemination. One FP provider reported that she had heard of another provider using Pre-exposure Prophylaxis (PrEP) with a sero-discordant couple.

This, I didn't do it myself but G did it and it worked. There is a discordant couple where the lady is HIV negative and the man is positive so when the lady was exposed she was given PrEP and then she conceived. She gave them some fertility drugs which the lady swallowed and she conceived while she took the PrEP for 1 month. She has a 7 month old baby boy now. We monitored her until she gave birth. [female, family planning nurse, rural]

Consistent with their belief system, TH providers offered counseling and herbs they felt would address infertility, HIV symptoms and ART side effects, boost CD4 cell counts and promote a healthy pregnancy, but nearly all reported urging clients to seek allopathic care as well.

When an HIV+ person comes here in need of treatment, I always counsel and encourage the person that whereas I am going to give my medicine, the immune booster, I ask you to first go for check up from the biomedical doctors or in big hospitals like Mulago, Rubaga, Nsambya, Kibuli, Namirembe -- those big hospitals or go to the counselor. I let them first take a blood test to confirm whether they are HIV positive or negative. After confirming that he/she is positive, I start counseling him/her to go and get drugs called ARVs from the biomedical hospitals because it does cost anything there unlike our herbal medicine that we charge. ... I encourage them to go and get ARVs as well as more counseling from the experienced medical doctors so as to receive full treatment. [female, herbalist, urban].

Challenges to providing safer conception services

Beyond challenges noted in prior research, providers highlighted important individual and system level barriers to the provision of SCC including a lack of service integration, poor communication between all stakeholders and the absence of policy guidelines.

Lack of service integration—A major structural barrier that came up in varied ways for different HIV and FP providers were challenges associated with the lack of integration of reproductive health, including SCC, and HIV care. A family planning provider noted that,

We actually need to work under one roof. We really need to integrate all these together [safer conception, PMTCT, FP, ART care] because they are all very important. And sometimes you see a client comes to clinic and then has another appointment to come to family planning, and then has another appointment to go to another clinic. It's not nice. If we make everything in one day and then we provide all the services, even if they spend a longer time in the hospital but they will have gone home with all the services, the better. [female, FP nurse, rural]

Providers also noted that a lack of time, adequate private space in family planning clinics, administrative support, and a systematic way to know if clients follow through with referrals and get needed services were barriers to provision of SCC. An HIV counselor at the rural site noted,

...we are not providing a holistic maternal health package, because we are lacking the antenatal care and even when we refer, there are challenges of follow-up. Like you may not know that a mother has gone and actually, even when we refer [for care], there is no feedback...Sometimes they don't reach the other service center where we sent them, they come back for six month regular [visit] but they have not started the [PMTCT] process. [male, HIV counselor, rural]

Poor communication between all stakeholders

Providers and clients: Most providers indicated infrequent discussion with clients about childbearing prior to pregnancy was the norm. Some providers noted this is in part due to a generalized reluctance in the culture to discuss matters regarding sex. As one HIV provider put it, "*Eeh, sex here is still taboo.*" [female, HIV counselor, urban] When such communication occurred, two thirds of providers indicated it was the client who usually initiated discussions about their childbearing desires whereas only a third of providers reported they routinely initiated these discussions. Most providers reported female clients were more likely to raise childbearing with providers than male clients and these discussions most often occurred after a client was already pregnant. Most of these clients told providers they became pregnant "by mistake" and most had not previously discussed childbearing desires with their provider or partners.

Some they just find themselves pregnant. So once we detect that someone is pregnant then we enroll them into our PMTCT services. But others, they inquire first. But those are the minorities. Majority are like they just find themselves pregnant. [female, HIV nurse, urban site].

Half of the sample reported that clients now felt "free" to discuss childbearing with their providers, speculating this was because some providers who used to tell clients not to have children were now saying it was okay if they are in good health. Nevertheless, the other half of the sample believed clients were still apprehensive to inquire about planning a pregnancy as some providers told them they already had enough children, communicated their disapproval by speaking harshly, or simply anticipated a negative response from their provider who was always urging condom use and pregnancy prevention.

There is a group that is well informed that having children is okay, what you need to do as a medical worker is to see this lady is healthy and you support her. But there is a group that is lagging behind due to lack of evidence based information and they discriminate against these women and still see it as so bad. And this is a group that forces women out of the clinics. They get pregnant and stay out without coming for care, and even for PMTCT. [female, family planning doctor, urban site].

Providers frequently referred to clients' reproductive rights to make their own childbearing decisions and described their role as providing the necessary information for their clients to make informed decisions.

According to what I see, the availability of PMTCT programs coupled with if the woman and her husband are ready and prepared to care for the child, they have a right to have a child. [female, HIV expert client, rural]

Nevertheless, many providers' descriptions of what they thought about HIV-infected clients having children and what they say to clients revealed considerable ambivalence about supporting clients' desires to have children. Citing the cultural importance of having children, many providers expressed support for clients without children to have at least one child. However, providers' description of what they usually say to clients revealed two thirds generally discouraged clients from having children, and most were less likely to support clients' desires to have children when clients already had "enough" children.

If they already have children, I advise them not to have more children. If they have no children I advise them to have a child. [female, traditional herbalist, urban]

Many providers revealed attitudes that highlighted the real conflict they find themselves in between supporting HIV-infected clients' desires to have children and the risk of new HIV transmissions that it presents. Not surprisingly, many of these providers would prefer that clients not have children.

Actually, you tell them about the risk for transmitting HIV, which is first and foremost, because you like may never know, maybe this one time you're going to try to have the child is when you're going to contract the virus. And you may not stop them because if they really are determined to have the child, they will go ahead anyway...So you give them the information then the decision is entirely theirs and really when it's at the end of the day if they have a safe-if HIV is not transmitted at that time, then that is very good. If the HIV is transmitted at that very moment when they are trying to get their baby, you will not be the one to blame. They will have themselves. They take responsibility it's not like we did not tell them like-we were told about it so we went into it knowing the consequences, so like that, because you cannot make these clients feel they have the right to have their child as they need. [female, HIV counselor, rural]

Allopathic Providers and Traditional Health Providers—TH providers reported treating clients who cannot afford or do not want to attend allopathic clinics and those who have had or fear negative reactions from allopathic providers (e.g., those who have been raped, single parents, or are HIV-infected and pregnant). Given their reach to clients who do not always access allopathic care, TH providers felt that integrating allopathic services with traditional services would be useful to facilitate better communication and improved client care.

This [interaction between providers] prevents being suspicious of each other and wishing bad for each otherIt helps in mutual communication and consultations because now the medical doctor can't come to consult me and when I

go to consult him he doesn't want to tell me. [female, traditional birth attendant, urban]

Lack of policy guidelines addressing safer conception counseling—Several HIV and FP providers explained that the lack of a clear policy from the Ministry of Health encouraging the provision of safer conception services and clarifying ARV treatment guidelines for clients who want to conceive was another significant barrier.

The only way it can be really modified, it is maybe by the Ministry [of Health] to come up with a policy in relation to HIV specifically. That's when the service providers will have [their] blessing to make sure they get the information to break the cultural barriers. But otherwise, without a policy...our hands are tied up. [male, HP doctor, urban]

Discussion

Consistent with their training and expertise, providers of all types reported provision of some form of services for PLHIV who desire a child. Given providers' unique skills and varied cultural prominence, this study provides important data to inform the development of an effective model of safer conception service provision that integrates all providers and addresses multiple barriers to care. This focus on provider and system-level opportunities and barriers responds to calls to advance implementation science for HIV and safer preconception counseling (Steiner, Dariotis et al., 2013).

We present our findings to offer further evidence that most providers have shifted away from strong prohibition of childbearing among PLHIV (Agadjanian 2009; Cooper 2009; Nduna 2009) to accepting the validity of PLHIV desiring to bear children. Despite this shift, providers and their clients rarely communicate about childbearing desires prior to pregnancy. This is in part due to providers' residual concerns about transmission risks associated with childbearing and inadequate training that diminishes their self-efficacy. Contributing to providers' reluctance to explore their clients' fertility desires is a lack of basic knowledge (*name deleted to maintain the integrity of the review process*) and confidence in their ability to impart useful information about SCM to their clients. Providers in our study uniformly reported the desire for more training in SCC skills for use with clients and their partners. Expert clients and traditional health providers also desired additional training covering basic HIV disease management and prevention information. Many HIV and FP providers also pointed out the need for clear policy guidance from the Ministry of Health. Wide spread training tailored to providers individual expertise, scope of practice and client population would clearly increase the provision of quality SCC and likely enhance PMTCT and other important health practice as well. Equally as important as the provision of these types of basic educational trainings is the need to assist providers in exploring their own thoughts and biases about SCC.

Addressing Provider Ambivalence

Assisting providers to develop counseling skills that include holding their biases in check as they work with clients would reduce the associated stigma and encourage clients to be

forthcoming about their fertility desires. Unfortunately, many of the providers we interviewed seemed unaware that their own negative beliefs about PLHIV having children were obvious in their descriptions of how they counseled clients. This lack of insight is likely a product of providers' SCC knowledge deficits, historic singular focus on preventing new infections, low perceived self-efficacy for their ability to effectively assist clients with SCC, coupled with feeling external pressure to support clients' fertility desires. Not surprisingly, many feel obligated to outwardly express support for their clients' desires to have a child while harboring personal reservations about their role in actually supporting their clients to have children. Educational trainings alone will not adequately address these issues. Provider trainings will need to go beyond simple education and employ strategies to assist providers in not only developing empathy but a full understanding of the perspectives of PLHIV who want to have children (Weiss et al., 2006; Logie & Gadalla, 2009).

Grounding the provision of SCC in a harm reduction framework that encourages and supports the provider's role in ensuring PLHIV have children in a manner that reduces both horizontal and vertical transmission risk will likely enhance providers' ability to embrace a supportive stance. Helping providers to shift from feeling responsible for the potentially negative outcomes of SCC (i.e., horizontal transmission, vertical transmission, inability to care for the child long term) to focusing on their responsibility to arm their clients with the best information so clients can make an informed decision is the goal. Similar framing is routine for issues like breastfeeding in HIV care (WHO, 2013). Developing a cadre of providers with expertise in providing in-depth SCC and on-going support that providers can refer interested clients to, will also likely enhance providers' buy-in. Ultimately, if providers develop the knowledge, requisite empathy, and embrace the role of experts assisting PLHIV to make an informed decision, better outcomes and reduced stigma will follow. On-going booster trainings for providers should include the sharing of successful SCC stories to further reduce stigma and reinforce the importance of providers' role in appropriate SCC. Careful selection of stories that highlight couple's ability to overcome barriers that providers have cited (e.g., male partner involvement, couple's ability to practice safer sex outside of fertile window, successful use of manual insemination, etc.) will continue to reinforce the important role that providers can play in SCC.

Bridging HIV Prevention Efforts Among Providers

Significant differences in underlying belief systems about the nature of health and disease as well as healthcare provision have produced a longstanding cultural divide between allopathically trained and TH providers that also contributes to poor SCC provision. This divide manifests itself in poor communication between HIV/FP and TH providers and a lack of recognition by many allopathic providers of the role that TH providers already play in the healthcare system. Vastly outnumbering doctors and residing in the same communities as clients, TH providers are far more accessible for many. Accordingly, four of five Ugandans seek care from a TH provider each year (Aboo, 2011). TH providers also welcome clients who cannot afford or do not want to attend allopathic clinics because they have had or fear negative reactions from providers. Clients learn not to tell either type of provider that they are receiving services from the other which can have devastating health effects (e.g., toxic interactions between some traditional herbal treatments and antiretrovirals, Mills et al.,

2005). There is a need to view TH providers as being able to play a complementary role to allopathic care. Results of this study indicate that many TH providers encourage clients to seek allopathic care and provide services to HIV-infected clients who are trying to get pregnant. As such, TH providers should be included in comprehensive model of SCC provision. TH providers desire and will need education and training, but could play a vital role in encouraging their HIV-infected clients to access SCC prior to getting pregnant.

Integrated Model of HIV Safer Conception Counseling

Based on the findings of this study, existing literature and international policy guidelines (Bekker et al., 2011), we propose an integrated model for SCC provision. Our hope is that this model will stimulate future research to evaluate impact on clients and providers. As depicted in the Figure, in this new model of integrated care all provider types make meaningful contributions consistent with their expertise and the types of clients they treat. Critical to the success of this model will be enhancing linkages between services provided to PLHIV and communication across provider categories as well as communication between providers and clients. As such, we urge starting as early as possible by introducing the existence of family planning and SCC services during HIV counseling and testing. While this is an extremely stressful time when clients have much to think about, informing clients' that support to start/continue their family or ensure that conception is prevented exists may assist clients in accepting and proactively dealing with their new diagnosis. In most settings, newly diagnosed clients will be assigned an HIV counselor who can play an important role in normalizing clients' fertility desires and questions and reinforcing the existence of family planning and SCC services. TH providers who treat newly diagnosed clients can play an important role by encouraging their clients to seek allopathic care and practice safer sex until they have talked with their providers about their fertility desires.

Once clients have initiated care, HIV providers should repeatedly initiate discussions about clients' fertility desires and stress the availability of family planning services, SCM and PMTCT. Starting this conversation early and having it repeatedly will significantly reduce stigma and encourage clients to openly discuss their fertility goals. In most settings, HIV counselors and expert clients will have significant contact with clients during routine care. As such, they can play a key role in normalizing fertility desires, reducing stigma, increasing awareness of SCM, and encouraging clients to share their fertility intentions with their providers. TH providers can do the same and should really stress the importance of talking to HIV providers when HIV-infected clients contact them for help with infertility. Encouraging and facilitating repeated conversations with a host of different providers will reduce stigma and allow clients to make their best decision. As the literature indicates, not talking about it leads to stigma that drives clients out of care, but doesn't prevent pregnancies. These conversations will sometimes result in clients deciding that they do not wish to conceive and providers should refer them to well-established family planning services that can assist them in that goal. When clients decide that they do wish to conceive, providers need to work with clients to ensure that their health is sufficient to support their conception desires and stress the importance of SCM. They should refer to other providers who have the expertise and time to work with clients and their partners to provide high quality SCC.

HIV counselors would be ideal for providing SCC as they already assist clients with difficult issues, have sufficient time to spend educating clients, have training in related and necessary matters like disclosure, and are most often co-located with HIV primary care providers so care can be integrated. FP providers are also ideal candidates for provision of SCC as they have considerable expertise in providing reproductive health counseling for HIV-infected clients including teaching women about their monthly cycles and how to identify their peak ovulation period. FP providers are also comfortable with discussing sex with clients and have educational tools to assist in client education. However, engaging FP providers in SCC would require a significant shift in orientation from their current singular goal of preventing pregnancies to adoption of a harm reduction model where clients are urged to limit risk as much as possible. Most importantly, FP providers are not often co-located in HIV clinic settings and would therefore require clients to travel to another setting to receive services. This would reduce the likelihood that SCC could be fully integrated into routine HIV care where it would have its largest positive impact. In the end, the determination of which provider will offer in-depth SCC should be determined by what will make it easiest for clients to access services.

Traditional health providers could play a key role in reaching clients that might not otherwise engage allopathic care until they are already pregnant. They could also help to spread the word that there are safer conception options available and play an important role throughout care by encouraging their clients to: seek allopathic care, talk to their providers about their fertility desires, practice safer sex until they have a plan for conceiving that has been informed by SCC, and adhere to regular care, ART, PMTCT and safer conception strategies.

Once clients conceive, HIV providers can facilitate and encourage clients to take care of their health [e.g., ART adherence, regular visits], their baby's health [e.g., prenatal care, PMTCT, early infant diagnosis] and their partners' health [e.g., revert to practicing safer sex all of the time, HIV testing for partners]. Ensuring that clients are referred and make it to appropriate OB-GYN prenatal care is also critical. HIV counselors and FP providers can also reinforce the importance of maintaining everyone's health.

Limitations

This study it is not without its limitations including a relatively small sample of providers, particularly with regard to the number and type of TH providers. Allopathic care providers were drawn from two different sites within the same non-governmental organization so their perspectives and service provision may be different than other providers. Further, as an organization TASO has already embraced a progressive view of PLHIV fertility rights and inculcated that into their internal policies and service provision models. Nevertheless, providers in this study still evidenced ambivalence, misconceptions, low self-efficacy and the desire for more training that would likely be echoed by non-TASO providers. Finally, while we have demonstrated the need for an integrative model for the provision of safer conception services, we have not yet tested the proposed model.

Conclusion

We provide novel data on the types of services offered by different types of providers in regards to PLHIV fertility desires and the system level barriers to implementation of SCC. Progress has been made in shifting providers' perspective from a nearly uniformly negative appraisal of PLHIV having children to a more open and accepting stance. Nevertheless, providers of all types still harbor concerns that interfere with their ability to effectively counsel their clients. Additional training and behavioral intervention to addresses providers' lingering reservations will greatly enhance the provision of SCC. Insights gained in this study were used to propose a new integrated model of care that enlists all providers in the support for and provision of SCC. Future studies exploring the utility of many of the observations, service provision suggestions and the proposed model are needed.

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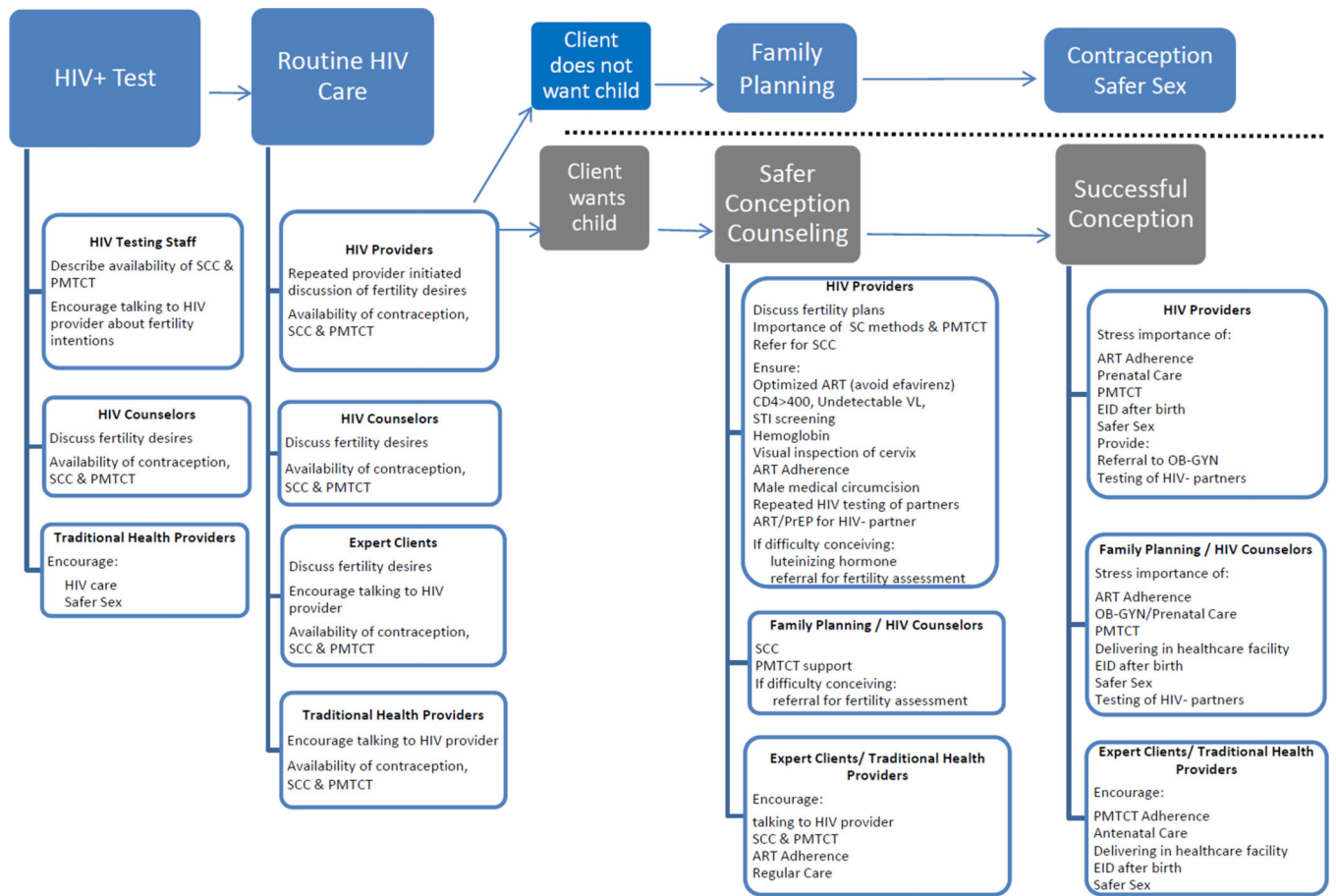


Figure 1.
Integrated care model.

Table 1

Unique services currently offered to clients who want to have a child.

HIV care provider	Family planning provider	Traditional provider (herbalist or birth attendant)
HIV primary care	Diagnosis/treat STIs	Infertility counseling
Blood work	Fertility counseling	Herbs for:
ART	<i>Safer conception counseling</i>	infertility
Diagnosis/treat STIs	Educate about PMTCT	symptoms/side effects
PMTCT	Postnatal care	increaseCD4s
<i>Antenatal care</i>		healthy pregnancy

Note. Services in italics were mentioned, but not routinely offered. PMTCT = Prevention of Mother to Child Transmission.