Published in final edited form as:

AIDS. 2014 January 14; 28(2): 227–233. doi:10.1097/QAD.0000000000000025.

'If I am given antiretrovirals I will think I am nearing the grave': Kenyan HIV serodiscordant couples' attitudes regarding early initiation of antiretroviral therapy

Kathryn Curran^{a,b}, Kenneth Ngunjiri^{b,e,f}, Bettina Shell-Duncan^{b,c}, Sophie Vusha^f, Nelly R. Mugo^{b,g}, Renee Heffron^b, Connie Celum^{a,b,f}, and Jared M. Baeten^{a,b,d}

^aDepartment of Epidemiology, University of Washington, Seattle, Washington, USA

^bDepartment of Global Health, University of Washington, Seattle, Washington, USA

^cDepartment of Anthropology, University of Washington, Seattle, Washington, USA

^dDepartment of Medicine, University of Washington, Seattle, Washington, USA

^eJomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

^fKenyatta National Hospital, Nairobi, Kenya

^gKenya Medical Research Institute, Nairobi, Kenya

Abstract

Objectives—Early initiation of antiretroviral therapy (ART) – that is, at higher CD4⁺ cell counts (>350 cells/μl) – is a potent HIV prevention strategy. The WHO recommends ART initiation by all HIV-infected individuals in HIV serodiscordant relationships to prevent HIV transmission, yet the acceptability of early ART among couples has not been well studied.

Design—Qualitative study exploring HIV serodiscordant couples' attitudes toward early initiation of ART.

Methods—We conducted eight focus group discussions and 20 in-depth interviews with members of heterosexual HIV serodiscordant couples in Kenya. Investigators iteratively applied inductive and deductive codes, developed matrices to identify patterns in codes, and reached consensus on key attitudes (motivations and barriers) related to early ART and one central, emerging theme.

Results—Most participants expressed interest in early initiation of ART, with maintaining health and preventing HIV transmission as key benefits. However, many identified personal concerns and potential barriers to wider community acceptance, including side-effects, adherence to life-long treatment, and stigma. The meaning of ART emerged as a fundamental consideration, with

© 2013 Wolters Kluwer Health | Lippincott Williams & Wilkins

Correspondence to Kathryn Curran, Department of Global Health, University of Washington, 325 Ninth Avenue, Box 359927, Seattle, WA 98104, USA. Tel: +1 206 520 3811; kgcurran@uw.edu.

There are no conflicts of interest.

These data were presented in part at the 2013 International HIV Treatment as Prevention Workshop, Vancouver, Canada, in April 2013 (Oral abstract #4019).

initiating therapy perceived as emblematic of the final stage of AIDS, when one was 'nearing the grave.' One particular challenge was what early ART might signify for someone who looks and feels healthy.

Conclusion—HIV serodiscordant couples recognized the potential benefits of early ART, but ART was frequently viewed as signifying AIDS and approaching mortality. Potential implementation of early ART presents challenges and an opportunity to reorientate individuals toward a new image of ART as health-preserving for patients and partners.

Keywords

antiretroviral therapy; HIV serodiscordant couples; Kenya; prevention; qualitative

Background

Initiation of antiretroviral therapy (ART) by HIV-infected persons – that is, at higher CD4⁺ cell counts (>350 cells/μl) – is a potent HIV prevention strategy [1,2]. The WHO recommends ART initiation irrespective of CD4⁺ cell count for HIV-infected members of HIV serodiscordant couples [3]. Studies from a variety of settings have reported that some HIV-infected individuals are not willing to initiate ART [4–7], but few studies have directly explored early ART initiation. Among 181 HIV-infected Kenyan individuals with CD4⁺ cell counts higher than 350 cells/μl and known HIV-uninfected partners, approximately 40% reported reluctance to consider early ART, citing side-effects, stigma, pill burden, and ART resistance [8]. In the control arm of HIV Prevention Trials Network (HPTN) 052, nearly 20% of HIV-infected participants declined ART when offered after the trial demonstrated HIV protection – many stating that they were not ready to begin ART or believed their CD4⁺ cell count was too high [9]. Recent studies have suggested that higher CD4⁺ cell counts are associated with delayed ART initiation or refusal [10–12].

Socially constructed perceptions of HIV are important to understand refusal, uptake, and adherence to HIV treatment and prevention. In high-income settings, the social definition of HIV has been shifted from a universally fatal disease to a chronic, manageable illness because of the advent of highly effective ART [13,14]. The reconceptualization of HIV as a treatable disease has a profound social and psychological impact: restored hope, a return to normalcy, and potentially reduced stigma [14,15], but also the burden of managing an ongoing, unpredictable illness and adhering to treatment [13,14,16]. It is hypothesized that the transition of HIV to a chronic illness will reduce stigma, an important barrier to engagement in HIV services, as HIV-infected individuals on ART can remain healthy and maintain a 'normal' identity and life, concealing their HIV status and avoiding potential negative reactions from others. Less has been described about reconceptualization of HIV as a chronic, treatable illness in Africa, where ART availability is more recent and is generally initiated at low CD4⁺ cell counts. Particularly unknown is the conceptualization of earlier initiation of ART. This qualitative study explored HIV serodiscordant couples' attitudes toward the early initiation of ART.

Methods

Between February and April 2012, eight focus group discussions (FGDs) and 20 in-depth interviews (IDIs) were conducted with members of HIV serodiscordant couples in Thika, Kenya. Couples were participants in the Partners PrEP Study, a randomized trial of preexposure prophylaxis (PrEP) for HIV prevention [17]. Thika is a periurban and farming community approximately 25 miles from Nairobi. Participants were engaged in HIV prevention and care through the study clinic, including couples counseling, condom distribution, and HIV primary care. HIV-infected participants received WHO staging every 3 months, CD4⁺ cell counts every 6 months, co-trimoxazole (Septrin) prophylaxis, multi-vitamins, and referral to ART care centers when eligible by Kenyan guidelines (i.e., ART initiation at CD4⁺ cell counts <350 cells/μl or at 350 cells/μl with WHO stage III or IV).

HIV serodiscordant couples in which the HIV-infected partner had not initiated ART were eligible for this qualitative study. A Kenyan female ethnographer not otherwise involved in study clinic activities (S.V.) invited eligible individuals to participate in the study. Two FGDs of five to eight participants each were conducted according to sex and HIV status: HIV-uninfected women, HIV-infected women, HIV-uninfected men, and HIV-infected men, for a total of eight focus groups. In addition, 10 couples were interviewed individually, five in which the woman was HIV-infected and five in which the man was HIV-infected. FGDs and IDIs were semistructured, based on a standardized guide, and conducted in Kiswahili or English. After first exploring general attitudes toward ART, the facilitator described the HPTN 052 study results, including the magnitude of prevention benefit and concurrent clinical benefit, and asked about attitudes toward starting ART early. Three HIV-infected women were discovered to have recently initiated ART after commencing the focus group; their data were included.

S.V. translated and transcribed all audio recordings into English. K.C., K.N., and S.V. read all transcripts and agreed on a codebook. Investigators followed an iterative process of reading transcripts, applying inductive and deductive codes, and comparing and revising codes in ATLAS.ti (version 7.0, Berlin, Germany). Consensus was reached on key attitudes (motivations and barriers) related to early ART and one central, emerging theme. Matrices were used to identify patterns in attitudes across FGDs and IDIs as well as by sex and HIV status. Results were validated through the use of multiple independent coders, triangulation of emerging codes, themes, and patterns across interviews and focus groups, and the search for negative cases [18,19].

The University of Washington Human Subjects Review Committee and the Kenyatta National Hospital Ethics Review Committee approved the study protocol. All participants provided written informed consent.

Results

A purposeful sample of 68 volunteers (32 men, 36 women) participated (Table 1). All participants were aware of ART and some recalled drastic improvements when ART was introduced into their communities: 'the death rates reduced and people were uplifted' (HIV +

man, FGD). The research was initiated with an intention of describing motivations for and barriers related to early ART. In addition, one important theme emerged in review of the data: the meaning of ART initiation.

Motivations for early antiretroviral therapy initiation

Most participants expressed interest in the concept of early initiation of ART and described maintaining health and HIV prevention as important motivators. Some HIV-infected individuals were eager to start immediately; almost all HIV-uninfected men and women were in favor of their partners starting ART early. Many participants reasoned that initiating ART while healthy would allow one to keep the body strong, preserve immunity, and control the virus.

You should start ARVs [antiretrovirals] immediately so that your CD4 can be maintained there. Because this issue of waiting until the CD4 goes down, the body loses its strength. –HIV+ man, FGD

I usually see those+who start when they have 150 [CD4+], they come when they are very weak. So now I feel when your CD4 is high the body will have strength. – HIV+ woman, IDI

Some believed that starting ART when the body was weak might exacerbate one's illness, even leading to death. Several participants noted that, once infected with HIV, the virus was 'still in the body' and early ART could 'prevent the virus [from] multiplying.'

In addition, many participants stated that early initiation of ART would help avoid negative HIV-related health consequences: opportunistic infections and stigma from appearing ill and thus being 'known.'

I have never been sick, if I start now there is no way that people will ever come to know the way I am...it is good to start early. –HIV+ woman, FGD

When you go somewhere, when you pass they laugh ... and you know it is about you. When someone has HIV [he] is usually recognized if he is not using those drugs... when someone is using the drugs they can't know very fast. –HIV– man, IDI

Finally, the ultimate benefit of good health was the ability to 'live and work normally,' including taking care of children. Although all were told of the prevention benefits of ART during previous routine counseling in the trial and at the time of the interview, only a small number emphasized that early ART would be beneficial for preventing HIV transmission to partners.

Barriers to early antiretroviral therapy initiation

Most participants also identified personal concerns and potential barriers to wider community acceptance of early ART, including side-effects, life-long adherence, and stigma. ART side effects posed a significant concern in two ways—physical discomfort and inadvertent disclosure of HIV status to others.

Let's say I have started using [ART] and I have never had rashes or pimples, then I have that effect, now that way one can know how our status is. –HIV+ woman, FGD

Sometimes your body doesn't adjust to the ARVs... it is better you don't take the ARVs... There is [a] side effect like itching, maybe your body had not become weak to use those drugs... the main fear is of that person's skin changing, you see your skin changes until you are not able to recognize yourself... –HIV+ woman, IDI

In interviews and all FGDs, except among HIV-uninfected men, life-long adherence to ART was raised as a concern, particularly for HIV-infected individuals initiating at higher CD4⁺ cell counts.

Starting ARVs early when your CD4 is still high is something that is very hard, because when you start that way the ARVs you know that you have already signed a contract forever, there is no day you are going to stop. –HIV+ man, FGD

I could say monotony, because [he] will take them for a very, very long time that is life time, so when he starts early when the CD4 is high, I think it will be too early... and maybe he gets bored along the way which is not good in terms of his health. –HIV– woman, IDI

Likewise, some participants remarked on the potential difficulty of ART adherence if one had initiated when healthy, without ever experiencing HIV-related problems. For these reasons, some HIV-infected men in FGDs and women in IDIs declared they preferred taking co-trimoxazole to stay healthy.

HIV-related perceived stigma emerged as a central challenge to initiating ART early. Participants discussed how fear and shame—of being seen carrying ART, taking drugs, or accessing HIV services—were major barriers to ART initiation.

People talk a lot of things until you even feel ashamed. It can prevent you from taking the drugs... They say she was doing this, she was moving out with other people's husbands. –HIV+ woman, IDI

Many participants believed public disclosure of HIV would lead to gossip, judgment, isolation, and discrimination – threatening their social and work identities, as well as those of their family. While a few viewed stigma as a barrier to early ART, many described strategies to avoid stigma: keeping their ART use secret and traveling to clinics farther from their home where they would not be recognized.

The meaning of antiretroviral therapy initiation and 'nearing the grave'

A recurring theme that was discussed in FGDs and IDIs, across HIV status and sex, was a reluctance to start ART early due to its meaning as the final stage before dying. Participants highlighted a widespread community belief that the initiation of ART signals the last stage of disease – 'the last lap' or when 'your life has come to an end.'

Respondent #4: Now if you start and you haven't reached 350 [CD4+], you will feel like you have reached another stage.

Respondent #3: You know the mentality that is there when you take the ARVs, it means you are at the lowest stage and that is why people fear ARVs.

Respondent #6: Like me, if I am given the ARVs I will think I am nearing the grave. –HIV+ women, FGD

ART initiation was strongly associated with images of graves or very ill individuals on their deathbed, a reminder of HIV as a highly stigmatized terminal illness. An HIV-infected man described how this visual imagery originated from HIV treatment campaigns and the profound, positive health benefits from ART as well as the internalized connotation of ART initiation as indicative of the 'last stage' when someone is extremely sick:

The way in which our minds have been fed since we started these drugs [co-trimoxazole], we were told ARVs is the last stage and we see billboards drawn showing someone who was wasted and when they start taking the ARVs their bodies become good. –HIV+ man, FGD

In contrast, co-trimoxazole was considered a medication for an earlier, less serious stage of HIV. One HIV-infected woman described how people did not think of themselves as HIV-infected until they started ART:

You know when you take Septrin and multivitamin, you don't count yourself among the people who have HIV but those ones [ART], aah, you feel like you are inside it. –HIV+ woman, FGD

A shift in HIV care from daily co-trimoxazole prophylaxis to ART represented a profound change in identity – how one perceived their own illness and reactions from others.

When you take this Septrin you consider yourself to be in another stage, you have not reached the final stage of the ARVs and we know when you start ARVs, it is a lifetime engagement... Now if these stages are brought forward and then I start taking them here, you see this person will know now I am in the last stage. So even the benefits... which is very good, but then we will have the negative effect, the psychological effect. That I am now heading to the grave. –HIV+ man, FGD

Furthermore, HIV-infected participants expressed concerns in how their partners would react when they heard that they were now at the stage of ART, a powerful reminder that they were 'sick.'

He could react in a different way from what I know, he is a good person, maybe when he sees me take Septrin he sees it is normal because other people are taking them, but if I start things like those [ART] maybe he will feel it is true this person is sick. –HIV+ woman, IDI

This participant acknowledged her partner's acceptance of co-trimoxazole since it was 'normal' medication used by people without HIV, yet she was worried that her partner would react differently to her, and, in a sense, her HIV status if she started ART. In FGDs, HIV-infected women raised concerns about their partners' reactions to early ART and the emotional burden their ART initiation would bring.

He feels like you are almost going [to die]. –HIV+ woman, FGD

Sometimes he goes with you to the clinic, he has heard ...when your CD4 goes below 350 you will start ARVs. When you start he will feel, 'Right now, let me plan myself because I can see she is going [to die]'...he knows ARVs are taken when people are too sick. –HIV+ woman, FGD

Finally, some participants felt that the negative connotation of ART as the 'final stage' could be amended with revised counseling messages:

We could change people's thinking, they should be told it is not that they are in the last stage, but we are trying to protect your body...it needs counseling and counseling should start early. –HIV+ man, FGD

Discussion

This qualitative study improves understanding of attitudes toward initiation of ART at higher CD4⁺ cell counts and highlights important incentives, concerns, and potential barriers to acceptance. Among Kenyan HIV serodiscordant couples who were well informed about HIV prevention, many expressed interest in early initiation of ART, with a focus on health benefits but considerable attention to possible side-effects, inadvertent HIV disclosure, and stigma. A novel, important barrier to early ART was the significance of ART initiation as the last stage of disease, for use when one is close to dying. There is an opportunity to modify messages regarding ART initiation in order to appropriately emphasize the personal benefits of earlier initiation, acknowledge concerns, and ultimately change community perceptions about the meaning of ART.

HIV-infected participants commonly articulated willingness to initiate ART at a CD4⁺ cell count higher than 350 cells/μl for the sake of maintaining good health, avoiding opportunistic infections, and protecting children and HIV-uninfected partners, although many expressed reservations and a small number conveyed resistance to early ART. There were not substantial sex differences in attitudes toward ART, compared to previous literature that suggests men are more likely to delay ART initiation [11], which may reflect the motivated population of clinical trial participants. The near-universal support of HIV-uninfected partners suggests a potentially important role of partner involvement in couples' decisions to initiate treatment.

Consistent with previous literature, ART side-effects, stigma, and adherence emerged as primary concerns for early ART [4,8,20,21]. A fear of unintended disclosure, from visible side-effects or being seen accessing HIV services, underscored how perceived stigma in the community motivates HIV-infected individuals to hide their HIV status, ultimately influencing HIV care behaviors [22–27]. Notably, concerns about visible side-effects were voiced related both to not initiating ART (signs of disease progression) and to initiating ART (as a side-effect). Early ART was more acceptable when it enabled HIV-infected individuals to conceal their HIV status and minimize stigma and discrimination. Importantly, participants were concerned that life-long adherence to ART would be more challenging when initiated early.

The meaning of ART initiation as the last stage before the end of life emerged as a barrier unique to early ART. All HIV-infected participants were engaged in pre-ART care and they and their partners viewed taking co-trimoxazole, a prophylactic medicine with non-HIV indications, as helpful and positive. Thus, while daily pill use was acceptable, ART initiation itself was a 'psychological' challenge because it symbolized proximity to the end of health, normalcy, and life. Initiation of ART marked a transition from living a normal life to being sick and potentially stigmatized. This perception of ART as the final stage may be an unintended consequence of HIV guidance to promote 'positive living' to encourage HIV-infected individuals to adopt healthy behaviors to prevent disease progression and thus delay ART initiation. Among HIV-infected adults in Uganda, internalized stigma declined after ART initiation but did not disappear [28]. HIV-infected individuals have been stigmatized in the absence of visible symptoms [13] and efforts to lead a 'normal' life are dependent on reliable access to ART, social support, and financial stability [16].

HIV/AIDS has long been described by metaphors of death. Before ART, HIV was defined as a fatal acute illness and diagnosis was seen as a 'death sentence' [13]. ART has saved lives and offers a return to health, hope, and normalcy [22,29], described by some as 'coming back from the dead' [16]. ART could potentially counteract HIV-related stigma through lengthening life expectancy and drastically improving the appearance of HIV-infected individuals—by making HIV a 'manageable chronic condition rather than a terminal illness' [14,22]. Alternatively, the image of visibly ill, near-death individuals starting ART and the nature of ART as life-long treatment as opposed to a cure may impede this transition. In a qualitative study in rural Tanzania, ART was known as 'life prolonging drugs' and recognized for a return to health, yet AIDS was still referred to as 'six by six,' the dimensions of a grave because there was no cure [30]. Similarly, study participants viewed ART as a way to remain physically healthy and conceal one's HIV status, yet also a reminder that they or their partners were in fact infected with a life-threatening illness. They appreciated the hope and normalcy that ART provides, but they have not completely overcome the perception of HIV as a death sentence.

There are limitations to this study. Questions about early ART were hypothetical since Kenyan guidelines did not include ART for asymptomatic persons with higher CD4⁺ cell counts. Participants enrolled in a clinical trial of PrEP that included ongoing HIV risk reduction counseling may have been more likely to support early ART for prevention and limit generalizability. This is balanced by the strength of using a sample of HIV serodiscordant couples who were well informed about HIV prevention, mutually disclosed, and engaged in pre-ART care.

Conclusion

In this qualitative study among Kenyan HIV serodiscordant couples, most had positive attitudes and interest in early ART. However, many participants' description of ART as the final stage before death, regardless of the reason for initiation, revealed a profound view of HIV and ART in this Kenyan community. The implementation of early ART for HIV prevention presents an opportunity to re-orientate conversations to the benefits of early ART, emphasizing the role of ART in maintaining health and HIV prevention, capitalizing

on positive attitudes of partners regarding earlier ART, and portraying a new image of individuals on ART.

Acknowledgments

We thank the study participants and Partners PrEP Study staff in Thika, Kenya for all their time and efforts.

K.C. wrote the manuscript. J.M.B. was the principal investigator of this study and oversaw manuscript preparation. S.V. conducted all interviews and focus group discussions. K.C., K.N., S.V., and B.S.D. analyzed the data. All authors reviewed and provided comments on the study protocol, results, and final manuscript.

Conflicts of interest The National Institute of Nursing Research of the US National Institutes of Health (grant R21 NR012663) and the Bill and Melinda Gates Foundation (grant OPP47674) provided financial support for this study. K.C. was a scholar in the International AIDS Research and Training Program, supported by the Fogarty International Center of the National Institutes of Health (grant D43 TW000007) and in the University of Washington STD/AIDS Research Training Program, supported by the National Institute of Allergy and Infectious Diseases (grant T32 AI007140). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

References

1. Cohen MS, Chen YQ, McCauley M, Gamble T, Hosseinipour MC, Kumarasamy N, et al. Prevention of HIV-1 infection with early antiretroviral therapy. *N Engl J Med*. 2011; 365:493–505. [PubMed: 21767103]
2. Anglemyer A, Rutherford GW, Baggaley RC, Egger M, Siegfried N. Antiretroviral therapy for prevention of HIV transmission in HIV-discordant couples. *Cochrane Database Syst Rev*. 2011:CD009153.
3. WHO. Antiretroviral treatment as prevention (TASP) of HIV and TB: programmatic update. WHO Press; Geneva, Switzerland: 2012.
4. Katz IT, Essien T, Marinda ET, Gray GE, Bangsberg DR, Martinson NA, et al. Antiretroviral therapy refusal among newly diagnosed HIV-infected adults. *AIDS*. 2011; 25:2177–2181. [PubMed: 21832935]
5. Rosen S, Fox MP. Retention in HIV care between testing and treatment in sub-Saharan Africa: a systematic review. *PLoS Med*. 2011; 8:e1001056. [PubMed: 21811403]
6. Karcher H, Omondi A, Odera J, Kunz A, Harms G. Risk factors for treatment denial and loss to follow-up in an antiretroviral treatment cohort in Kenya. *Trop Med Int Health*. 2007; 12:687–694. [PubMed: 17445136]
7. Govindasamy D, Ford N, Kranzer K. Risk factors, barriers and facilitators for linkage to antiretroviral therapy care: a systematic review. *AIDS*. 2012; 26:2059–2067. [PubMed: 22781227]
8. Heffron R, Ngure K, Mugo N, Celum C, Kurth A, Curran K, et al. Willingness of Kenyan HIV-1 serodiscordant couples to use antiretroviral-based HIV-1 prevention strategies. *J Acquir Immune Defic Syndr*. 2012; 61:116–119. [PubMed: 22595872]
9. Batani, J.; Brum, T.; Calvet, G.; Dusara, P.; Dhayarkar, S.; Gamble, T., et al. 20th Conference on Retroviruses and Opportunistic Infections. Atlanta, GA: 2013. Acceptance of ART in the delay DRM after notification of interim study results: data from HPTN 052.
10. Guthrie BL, Choi RY, Liu AY, Mackelprang RD, Rositch AF, Bosire R, et al. Barriers to antiretroviral initiation in HIV-1-discordant couples. *J Acquir Immune Defic Syndr*. 2011; 58:e87–e93. [PubMed: 21826010]
11. Geng EH, Bwana MB, Muyindike W, Glidden DV, Bangsberg DR, Neilands TB, et al. Failure to initiate antiretroviral therapy, loss to follow-up and mortality among HIV-infected patients during the pre-ART period in Uganda. *J Acquir Immune Defic Syndr*. 2013; 63:e64–e71. [PubMed: 23429504]
12. Mujugira, A.; Celum, C.; Thomas, KK.; Mugo, N.; Katabira, E.; Bukusi, E., et al. 7th IAS Conference on HIV Pathogenesis, Treatment and Prevention. Kuala Lumpur, Malaysia: 2013. Delay in antiretroviral therapy initiation is common among East African HIV-infected individuals in serodiscordant partnerships.

13. Scandlyn J. When AIDS became a chronic disease. *West J Med.* 2000; 172:130–133. [PubMed: 10693378]
14. Siegel K, Leks HM. AIDS as a chronic illness: psychosocial implications. *AIDS.* 2002; 16(Suppl 4):S69–S76. [PubMed: 12699002]
15. Swendeman D, Ingram BL, Rotheram-Borus MJ. Common elements in self-management of HIV and other chronic illnesses: an integrative framework. *AIDS Care.* 2009; 21:1321–1334. [PubMed: 20024709]
16. Russell S, Seeley J, Ezati E, Wamai N, Were W, Bunnell R. Coming back from the dead: living with HIV as a chronic condition in rural Africa. *Health Policy Planning.* 2007; 22:344–347. [PubMed: 17646187]
17. Mujugira A, Baeten JM, Donnell D, Ndase P, Mugo NR, Barnes L, et al. Characteristics of HIV-1 serodiscordant couples enrolled in a clinical trial of antiretroviral preexposure prophylaxis for HIV-1 prevention. *PLoS ONE.* 2011; 6:e25828. [PubMed: 21998703]
18. Pope C, Ziebland S, Mays N. Qualitative research in healthcare. *Analysing qualitative data.* *BMJ.* 2000; 320:114–116. [PubMed: 10625273]
19. Corbin, J.; Strauss, A. *Basics of qualitative research.* 3rd ed.. Sage Publications; Thousand Oaks, CA: 2008.
20. Kahn TR, Desmond M, Rao D, Marx GE, Guthrie BL, Bosire R, et al. Delayed initiation of antiretroviral therapy among HIV-discordant couples in Kenya. *AIDS Care.* 2013; 25:265–272. [PubMed: 22866934]
21. Unge C, Johansson A, Zachariah R, Some D, Van Engelgem I, Ekstrom AM. Reasons for unsatisfactory acceptance of antiretroviral treatment in the urban Kibera slum, Kenya. *AIDS Care.* 2008; 20:146–149. [PubMed: 18293122]
22. Russell S, Seeley J, Whiteside A. Expanding antiretroviral therapy provision in resource-constrained settings: social processes and their policy challenges. *AIDS Care.* 2010; 22(Suppl 1):1–5. [PubMed: 20680854]
23. Bond VA. It is not an easy decision on HIV, especially in Zambia': opting for silence, limited disclosure and implicit understanding to retain a wider identity. *AIDS Care.* 2010; 22(Suppl 1):6–13. [PubMed: 20680855]
24. Donahue MC, Dube Q, Dow A, Umar E, Van Rie A. They have already thrown away their chicken': barriers affecting participation by HIV-infected women in care and treatment programs for their infants in Blantyre, Malawi. *AIDS Care.* 2012; 24:1233–1239. [PubMed: 22348314]
25. Izugbara CO, Wekesa E. Beliefs and practices about antiretroviral medication: a study of poor urban Kenyans living with HIV/AIDS. *Sociol Health Illness.* 2011; 33:869–883.
26. Steward WT, Herek GM, Ramakrishna J, Bharat S, Chandy S, Wrubel J, et al. HIV-related stigma: adapting a theoretical framework for use in India. *Soc Sci Med.* 2008; 67:1225–1235. [PubMed: 18599171]
27. Muhamadi L, Nsabagasani X, Tumwesigye MN, Wabwire-Mangen F, Ekstrom AM, Peterson S, et al. Inadequate preantiretroviral care, stock-out of antiretroviral drugs and stigma: policy challenges/bottlenecks to the new WHO recommendations for earlier initiation of antiretroviral therapy (CD<350 cells/microL) in eastern Uganda. *Health Policy.* 2010; 97:187–194. [PubMed: 20615573]
28. Tsai AC, Bangsberg DR, Bwana M, Haberer JE, Frongillo EA, Muzoora C, et al. How does antiretroviral treatment attenuate the stigma of HIV? Evidence from a cohort study in rural Uganda. *AIDS Behav.* May 14.2013 Epub ahead of print.
29. Seeley J, Russel S. Social rebirth and social transformation? Rebuilding social lives after ART in rural Uganda. *AIDS Care.* 2010; 22(Suppl 1):44–50. [PubMed: 20229371]
30. Ezekiel MJ, Talle A, Juma JM, Klepp KI. When in the body, it makes you look fat and HIV negative': the constitution of antiretroviral therapy in local discourse among youth in Kahe, Tanzania. *Soc Sci Med.* 2009; 68:957–964. [PubMed: 19136190]

Table 1

Participant characteristics.

	HIV-infected women (<i>n</i> = 18)	HIV-uninfected men (<i>n</i> = 17)	HIV-infected men (<i>n</i> = 15)	HIV-uninfected women (<i>n</i> = 18)
<i>n</i> (%) or median (range)				
Age	29.5 (20–38)	36 (22–63)	42 (31–60)	40 (24–50)
Married	18 (100%)	17 (100%)	15 (100%)	18 (100%)
Children	2 (1–5)	2 (1–7)	3 (0–5)	3 (1–5)
CD4 ⁺ cell count ^a	637.5 (394–1102)	–	477 (261–1164)	–

^aCD4⁺ cell count from most recent measurement taken at study clinic visit prior to invitation to participate in the qualitative study.