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Understanding Barriers to Scaling Up HIV Assisted Partner Services in Kenya

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Abstract

Assisted partner services (APS) are more effective than passive referral in identifying new cases of HIV in many settings. Understanding the barriers to the uptake of APS in sub-Saharan Africa is important before its scale up. In this qualitative study, we explored client, community, and healthcare worker barriers to APS within a cluster randomized trial of APS in Kenya. We conducted 20 in-depth interviews with clients who declined enrollment in the APS study and 9 focus group discussions with health advisors, HIV testing and counseling (HTC) counselors, and the general HTC client population. Two analysts coded the data using an open coding approach and identified major themes and subthemes. Many participants reported needing more time to process an HIV-positive result before providing partner information. Lack of trust in the HTC counselor led many to fear a breach of confidentiality, which exacerbated the fears of stigma in the community and relationship conflicts. The type of relationship affected the decision to provide partner information, and the lack of understanding of APS at the community level contributed to the discomfort in enrolling in the study. Establishing trust between the client and HTC counselor may increase uptake of APS in Kenya. A client's decision to provide partner information may depend on the type of relationship he or she is in, and alternative methods of disclosure may need to be offered to accommodate different contexts. Spreading awareness about APS in the community may make clients more comfortable providing partner information.

Keywords: Africa, assisted partner services, attitude, HIV, qualitative research

Introduction

Increasing the proportion of people living with HIV who know their serostatus is critical to curbing the African HIV epidemic. Of the estimated 1.2 million people living with HIV in Kenya, ~53% are unaware of their HIV-positive status.[1,2] Assisted partner services (APS) are a public health strategy used to prevent the transmission of HIV through testing and treating the sexual partners of infected index cases. As a form of contact tracing, APS provides assistance to index HIV cases in notifying and testing their partners.

Prior studies in the United States have found APS to be effective in identifying and testing sexual partners of HIV-positive index cases.[3] The Centers for Disease Control and Prevention (CDC) strongly recommend that all people newly diagnosed with HIV receive partner services with active health department involvement.[4] Studies in sub-Saharan Africa have also found active partner notification to be more effective than passive referral in finding and testing partners for HIV.[5,6] Passive referral leaves index cases responsible for notifying their partners of HIV exposure. There is not currently an HIV APS program in Kenya, and their current standard is passive referral. Assisted Partner Notification Services to Augment HIV Testing, Counseling, Treatment, and Prevention in Kenya is a multi-center, cluster randomized controlled trial aimed at determining the effectiveness of APS in Kenya.[7]

There is a dearth of information on the barriers to HIV APS uptake in Kenya. Some qualitative studies in low-resource settings and in the United States have found that common

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barriers to HIV/sexually transmitted infection (STI) partner notification services are embarrassment, fear of relationship dissolution, fear of stigma, fear of losing financial support, and fear of violence.[8–13] Additionally, studies have found that lack of trust in healthcare workers and concerns about maintaining confidentiality pose barriers to partner notification.[9,13] This study aimed to qualitatively explore the client, community, and health system barriers to the implementation of APS in Kenya within the cluster randomized trial.

Methods

Study design

This qualitative study was conducted in 2015 in Nairobi and Kisumu County health facilities that were offering APS through the cluster randomized trial. It consisted of in-depth interviews (IDIs) and focus group discussions (FGDs). The IDIs explored client barriers to enrollment in APS, and FGDs addressed the knowledge and attitudes about partner notification in the community and the implementation challenges the health system faces.

Subjects

In-depth interviews. Subjects who declined enrollment in the APS study were selected purposively using quota selection, stratifying on HIV testing site and gender. The experiences of the participants were postulated to be different in urban and rural settings, and we aimed to get a balanced sample from Nairobi and Kisumu Counties. We also aimed to get a roughly equal distribution of males and females since gender may influence the reasons for declining to participate. To be eligible for the IDIs, the subjects had to be at least 18 years old and newly diagnosed as being HIV-positive.

Focus group discussions. Our focus groups consisted of three categories of stakeholders. One category was the health advisors who are HIV testing and counseling (HTC) counselors trained in partner notification and involved in the APS study. Another was the HTC counselors who were not involved in the APS study, but worked as HTC service providers in the study's HIV testing sites. Our final category was walk-in clients accessing HTC services. All health advisors were included in the focus groups. HTC counselors and HTC general clients were sampled purposively using quota sampling by gender and site.

Institutional review boards at Kenyatta National Hospital and the University of Washington approved the study, and all participants provided written informed consent.

Data collection

The interviews and focus groups were conducted in Kiswahili, Luo, or English by a trained Kenyan researcher experienced in qualitative data collection. The interviews took place at the clinic or the client's home, depending on the client's preference. The researcher used semistructured guides, and the interviews and focus groups were taped using a digital recorder. The same researcher transcribed IDIs and FGDs in their original languages, translated them into English, and back-translated them to verify an accurate translation.

Data analysis

English transcripts were analyzed by two coders: the analyst (M.G.) and the interviewer (M.O.). The analyst created a start list of themes that were hypothesized to be influential *a priori* (fear of stigma, state of mind after test results, confidentiality issues, fear of intimate partner violence, and fear of relationship dissolution). Both coders read through all of the transcripts independently and added additional salient themes to the code list using open coding. The analyst compiled the two code lists to create a master codebook, and the two coders discussed the codebook to come to an agreement about each code. Both coders independently coded the data. The analyst used ATLAS.ti, version 7.5.9 (Berlin, Germany), and the interviewer used Microsoft Word and Excel. The analyst compared all coded transcripts, and the analyst and interviewer resolved any conflicts in coding. After coding, the two coders selected quotes that best represented each theme and subtheme. The quotes that were selected by both coders were included as representative.

Results

Participant characteristics

A total of 20 individuals, 8 in Nairobi County and 12 in Kisumu County, participated in IDIs. They had a median age of 40 (interquartile range: 30–47), 8 (40%) were male, and 11 (55%) had an education level of primary school or less. Demographic characteristics of the IDI participants are presented in Table 1. A total of 86 individuals participated in 9 FGDs, consisting of 17 health advisors, 45 HTC counselors, and 24 general HTC clients. The demographic characteristics of the counselor FGD participants are presented in Table 2 and those of the general HTC clients are presented in Table 3.

Table 1. In-Depth Interview Participant Characteristics

	IDI participants (N = 20), n (%) or median (IQR)
Age (years)	40 (30–47)
Sex	
Male	8 (40)
Female	12 (60)
Primary school or less education (≤8 years)	11 (55)
Marital status	
Never married	4 (20)
Widowed	3 (15)
Divorced	2 (10)
Married	11 (55)
Site	
Nairobi	8 (40)
Kisumu	12 (60)
Number of sex partners in last 3 years	
0	2 (10)
1	6 (30)
2+	12 (60)
HIV-positive	20 (100)

IDI, in-depth interview; IQR, interquartile range.

Table 2. Focus Group Discussion Health Advisor and HIV Testing and Counseling Counselor Characteristics

Focus group No.	*No. of participants*	*Title*	*Site*[a]	*Age, median (IQR)*	*Male,* n *(%)*	*Tertiary education or higher,* n *(%)*	*No. of months working, median (IQR)*
1	9	Health advisor	KNH[b]	29 (28–30)	5 (56)	9 (100)	24 (13–24)
3	13	HTC counselor	KNH[b]	35 (32–41)	6 (46)	13 (100)	84 (48–120)
6	11	HTC counselor	Kombewa	30 (26–35)	3 (27)	10 (91)	4 (2–18)
7	8	Health advisor	Kisumu	36 (35–40)	4 (50)	8 (100)	13 (12–25)
8	8	HTC counselor	Kiambu	35 (27–46)	3 (38)	8 (100)	28 (12–42)
9	13	HTC counselor	Kisumu	26 (22–29)	4 (31)	13 (100)	15 (3–41)

[a]Site locations: KNH and Kisumu are urban; Kombewa and Kiambu are periurban.
[b]Kenyatta National Hospital in Nairobi, Kenya.
HTC, HIV testing and counseling.

Seven major themes were identified in the analyses, and our results are presented below by salient theme.

State of mind after receiving an HIV-positive result

The client's state of mind after receiving an HIV-positive test result affected his or her decision to accept APS in that moment. Sixty percent of clients reported experiencing shock or denial after receiving an HIV-positive result, and some expressed needing more time to process their results before providing partner information. As described by some IDI participants:

> ''When I saw the results, I was very shocked, and at that time, I did not want to talk to anyone. My mind was confused that I didn't know what to do and telling my wife or having someone tell her was not in my mind at that time.'' (IDI, male, age 30)

> ''I think the main reason [for declining APS] is the one I had mentioned earlier that I had just been found positive and I still had a lot of questions to answer within myself. I was living in denial …'' (IDI, male, age 51)

Trust between client and HTC counselor

The relationship between the client and HTC counselor acted as a facilitator or barrier to APS enrollment. When counselors showed empathy to the clients, 25% of clients reported that it was easier for them to accept their results:

> ''He counseled me and told me not to be scared because I will not be the first or the last to test positive. I gained courage after the talk and tested positive. I asked if my state was so bad and I was about to die, but he told me that I am not doing bad … that I was still very strong. He told me to start medication and make sure I adhere to the doctor's instructions to the letter, and that I will even bury so many people who will be dying from other diseases not necessarily HIV, and I felt I was calm and ok with the results. So, I am continuing with drugs.'' (IDI, female, age 38)

> ''For me, I was so nervous when I entered the room and my business was I don't want to be asked questions. I just wanted the test to be done and know the result. But the person [HTC counselor] was not in a hurry to even do the test, so he asked first, 'Hey, where do you come from, how many partners do you have?' To some extent, I relaxed. I even started giving some stories. And I saw 'so, it is not a big thing to know one's status' … when it came to the test, I was so much relaxed.'' (FGD 2, female, age 27)

Some individuals did not feel comfortable participating in APS due to a lack of trust in the HTC counselor. Without a strong rapport between the HTC counselor and client, 50% of clients who declined to participate worried about a breach of confidentiality. As described by a participant:

> ''I think it [declining APS] is because of trust. I thought that by giving them the names and contacts of my partners, they would tell them that I am the one who gave their contacts because I tested HIV-positive.'' (IDI, male, age 30)

A couple of participants expressed that good counseling may help clients to provide partner information:

> ''I think what should be done is proper counseling to the clients. When I am properly counseled, I will be able to provide the contacts of my partners so that they are notified or I come with him.'' (IDI, female, age 36)

To create a strong rapport and trust between the client and HTC counselor, more than a third of the health advisors suggested that it is important that the same counselor tests, enrolls, and elicits partners:

Table 3. Focus Group Discussion General HIV Testing and Counseling Client Characteristics

Focus group No.	*No. of participants*	*Site*[a]	*Age, median (IQR)*	*Male,* n *(%)*	*Tertiary education or higher,* n *(%)*	*Married,* n *(%)*	*No. of sex partners in last 3 years, median (IQR)*	*HIV+,* n *(%)*
2	8	KNH[b]	28 (23–30)	5 (63)	7 (88)	3 (38)	2 (2–3)	0 (0)
4	8	Abidha	35 (28–46)	2 (25)	0 (0)	6 (75)	1 (1–1)	8 (100)
5	8	Kombewa	24 (18–25)	2 (25)	1 (13)	2 (25)	1 (1–2)	5 (63)

[a]Site locations: KNH is urban, Abidha is rural, and Kombewa is periurban.
[b]Kenyatta National Hospital in Nairobi, Kenya.

> ''The one that I tested myself is easier because … it is a client you have initiated and have created a rapport with. So, when introducing the study, you will not have a difficult problem because you have been working with him/her. So, it is like walking with the client throughout, you are the same person from testing to study initiation.'' (FGD 1, male, age 40, Health Advisor)

When clients were referred to counselors, the counselors described having a more difficult experience with APS enrollment:

> ''The one we handled from HTC first and then you proceed with the rest … is easier to manage because already you've gained the rapport, so it is just the continuation of what you had started. So, it used to go smoothly compared to this person who you have been referred because with this person you have to explain confidentiality to win her. So, you have to reaffirm confidentiality several times before this person opens up.'' (FGD 7, female, age 42, Health Advisor)

Many feared that if confidentiality were broken, they would experience stigma in the community and create conflict in their relationships.

Fear of stigma

The fear of stigma was mentioned in terms of the fear of isolation, fear of losing work, and fear of being the subject of gossip. Thirty percent of IDI participants worried that no one would want to associate with them if other people knew they were HIV-positive. As described by a participant:

> ''If they know, they will start discriminating against me and they will not want to be close to me or even associate with me.'' (IDI, male, age 39)

A couple of participants feared that the community knowing their status would affect their livelihoods:

> ''In my farming job, there are certain things I sell to people, like bananas and vegetables, and being that if the word is out that I am HIV-positive, no one will ever want to buy anything from me.'' (IDI, male, age 48)

Another common fear among 65% of IDI participants was being the topic of gossip in the community:

> ''Friends like talking about each other and when they hear that I am HIV-positive, they will be happy to discuss that with some of my friends. I will be the topic of discussion.'' (IDI, female, age 35)

Fear of creating conflict in relationship(s)

The fear of creating conflict in relationships was the most frequent theme expressed by participants as a barrier to APS. Sixty percent of IDI participants feared violence from their partners:

> ''He always has problems with me, and this will be a reason for him to accuse me. APS program is good, but what I fear is violence at home as a result of that.'' (IDI, female, age 46)

Seventy-five percent of IDI participants feared the dissolution of their relationship as a result of their partner knowing their HIV-positive status:

> ''If she knows that I am positive, I will lose her.'' (IDI, male, age 51)

A couple of female IDI participants feared losing financial support:

> ''I am living with him and he is the one supporting me financially. So, if I tell him that, he will leave me.'' (IDI, female, age 35)

Additionally, there was a common fear of being blamed for bringing HIV into the relationship among 65% of IDI participants:

> ''I don't want my husband to know. He will start blaming me for infecting him with HIV. And he will definitely know that I am the one who gave his number and the problem will get back to me. My husband is tough headed.'' (IDI, female, age 46)

Type of relationship

The stability of the client's relationship arose as an important factor that affected the client's comfort level in participating in APS. As described by an HTC counselor:

> ''The ones who were very comfortable were those in stable and nonabusive relationships. They were like, 'I am testing HIV-positive today and if it is disclosed to my husband, he will do ABCD'. But the ones in unstable and abusive relationships were not comfortable because of the unknown eventualities.'' (FGD 9, female, age 39, HTC Counselor)

There were also varying levels of responsibility felt to partners depending on the type of relationship. Thirty percent of IDI participants reported not feeling as much responsibility to their partners if they were not their spouses:

> ''If he was my husband and the father of my children, I would have definitely notified him or even held his hands and come with him to the hospital. You know this one is different. He is just my lover and I don't know where he comes from.'' (IDI, female, age 38)

A few did not feel responsibility to partners who were one-time partners:

> ''If it is a one-time partner, to hell with him. He can go and die for all I care. I will not have ways of telling him. But if it is a regular partner, I would tell him.'' (FGD 2, female, age 27, General HTC Client)

Twenty-five percent of IDI participants also expressed less responsibility to partners from relationships that had been terminated:

> ''My mistress got married and lately when I call her she tells me she is married in Nairobi. I never told her about my HIV status because she is already gone.'' (IDI, male, age 30)

Additionally, several participants expressed a fear of a breach in confidentiality if they know they are their partner's only partner. As a participant described:

> ''I know I have only one sexual partner and I am told that your sexual partner is positive, of course I will know it is him. This is why you hear of some scandals where someone has been killed … so, it is good to ask more to establish whether this partner has one partner or more before doing the notification.'' (FGD 8, female, age 44, HTC Counselor)

Alternative methods of notification

Just as the level of responsibility and comfort in disclosure may vary based on the type of relationship the client is in,

some participants expressed preferring other disclosure methods to APS. About a third of participants preferred to bring their partner in for couples testing and pretend that it was their first time learning their results:

> ''When I test positive, you can just come to my house and pretend that you have never seen me. Don't tell him that I have been to the VCT. Pretend you have never seen me and test us afresh. So, he will see my status and I will also see his.'' (FGD 2, female, age 30, General HTC Client)

Several participants expressed a desire to disclose before their partners were notified:

> ''Let me be the one to notify him first and when he says no and becomes difficult, then I will give you his number to talk to him. He can suspect that I am the one who gave you his contacts. Let me be the one to tell him first before you can come in when he doesn't accept.'' (IDI, female, age 38)

Community awareness about APS

The theme of lack of understanding of APS at the community level was a barrier to implementation. The lack of awareness may make clients feel less comfortable giving partner information. As described by a participant:

> ''People are still not aware about the program, so maybe if proper marketing or advertising can be done, then it may be ok because people will know that something like that exists and will not be shocked when they are called or notified.'' (IDI, male, age 30)

Discussion

While APS was generally well accepted in the Kenya study, this qualitative study identified key barriers to the implementation of APS in Kenya. Many of these barriers are consistent with the findings of qualitative studies in other settings; several new ideas also emerged.

The idea that clients may need more time to digest their test results before being willing to provide partner information was not presented as a major theme in prior studies. This theme may have arisen in our study since some of the IDIs were done with individuals who had declined enrollment in APS months before. They were able to process their results and reflect on why they initially declined. While some clients experience shock and denial, effective counseling may help them to accept their results.

Counselors showing empathy and developing a rapport with clients often facilitated acceptance of results and elicitation of partners. Developing a rapport with clients was reported to be easier when the same counselor tested, enrolled, and elicited partners, as opposed to getting the client through a post-test referral. Understanding that partner elicitation could be more difficult if the counselor did not do the testing will have important implications for the scale up of the program. It will be valuable to determine methods of establishing client trust and confidence in the counselor to facilitate APS.

Lack of trust in the HTC counselor prevented some individuals from participating in APS. Mistrust in health workers and concerns about maintaining confidentiality were found to be barriers to partner notification in other settings as well.[9,13,14] If confidentiality is broken, many clients expressed a fear of stigma in the community and creating conflict in relationships. These fears are consistent with those found in other settings.[8–13] When HIV status is disclosed involuntarily, individuals have been found to experience increased perceived stigma from others.[15] To avoid fears of stigma and relationship conflicts, it is important that the client understands and trusts that confidentiality will be maintained.

The type of relationship each client has may influence his or her comfort level in participating in APS, and clients may prefer alternate methods of notifying partners. Partner notification preferences varying based on type of relationship have been found in other settings. Other studies have found that notifying transient partners is often thought to be less important than notifying a regular partner.[8,10,13,16] Additionally, the lack of community awareness about APS may make individuals feel less comfortable naming partners.

This study had a number of important strengths. First, the triangulation of perspectives of declining clients, health workers, and the community allowed for a fuller picture of the barriers to the APS program. Second, this study had IDIs with clients who actually declined APS, as opposed to those who hypothetically declined. Third, the person who completed the interviews, transcription, and translation was also a coder of the data. This assures that the context of the conversations was not lost in the analyses.

This study was not without limitations. While we sampled a roughly equal distribution of gender and study site, we were not able to capture the variation of responses in other demographic characteristics such as age or socioeconomic status. Our small sample size and nonrandom sample limit generalizability, but our results add to the knowledge about barriers to the implementation of APS in sub-Saharan Africa. Additionally, interviewing some of the declining clients months after they declined could make our results susceptible to recall bias.

In the process of implementing the APS program in Kenya, it is important to understand and address the barriers the program may face. Encouraging stronger relationships between the client and HTC counselor may elevate trust and increase the uptake of APS in Kenya. A client's decision to provide partner information may depend on the type of relationship he or she is in, and alternative methods of disclosure may need to be offered to accommodate different contexts. Spreading awareness about APS in the community may make clients more comfortable with the process of providing partner information.

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Authors' Contributions

C.F., P.C., D.B., A.N., and B.M.W. developed and implemented the APS trial protocol. B.M.W., M.G., and C.F. designed the qualitative study. B.M.W., P.M.M., D.B., A.N., and C.F. created the interview and FGD guides. B.M.W. and F.A.O. coordinated data collection. M.O. conducted participant interviews and focus groups, and M.O. transcribed and

translated the data. M.G. and M.O. analyzed the data, and M.G. drafted the article. All authors contributed to editing of the article and approved submission of the final draft for publication.

Author Disclosure Statement

No competing financial interests exist.

References

1. NASCOP. Kenya AIDS Indicator Survey 2012: Final Report. Nairobi: Ministry of Health, Kenya, 2014.
2. Waruiru W, Kim AA, Kimanga DO, et al. The Kenya AIDS Indicator Survey 2012: Rationale, methods, description of participants, and response rates. J Acquir Immune Defic Syndr 2014;66:S3–S12.
3. Hogben M, McNally T, McPheeters M, Hutchinson AB. The effectiveness of HIV partner counseling and referral services in increasing identification of HIV-positive individuals: A systematic review. Am J Prev Med 2007;33(2 Suppl.):S89–S100.
4. CDC. Recommendations for partner services programs for HIV infection, syphilis, gonorrhea, and chlamydial infection. MMWR Morb Mortal Wkly Rep 2008;57:1–63.
5. Henley C, Forgwei G, Welty T, et al. Scale-up and case-finding effectiveness of an HIV partner services program in Cameroon: An innovative HIV prevention intervention for developing countries. Sex Transm Dis 2013;40:909–914.
6. Brown LB, Miller WC, Kamanga G, et al. HIV partner notification is effective and feasible in sub-Saharan Africa: Opportunities for HIV treatment and prevention. J Acquir Immune Defic Syndr 2011;56:437–442.
7. Wamuti BM, Erdman LK, Cherutich P, et al. Assisted partner notification services to augment HIV testing and linkage to care in Kenya: Study protocol for a cluster randomized trial. Implement Sci IS 2015;10:23.
8. Alam N, Chamot E, Vermund SH, Streatfield K, Kristensen S. Partner notification for sexually transmitted infections in developing countries: A systematic review. BMC Public Health 2010;10:19.
9. Adams OP, Carter AO, Redwood-Campbell L. Understanding attitudes, barriers and challenges in a small island nation to disease and partner notification for HIV and other sexually transmitted infections: A qualitative study. BMC Public Health 2015;15:455.
10. Nuwaha F, Faxelid E, Neema S, Eriksson C, Hojer B. Psychosocial determinants for sexual partner referral in Uganda: Qualitative results. Int J STD AIDS 2000;11: 156–161.
11. Netsanet F, Dessie A. Acceptance of referral for partners by clients testing positive for human immunodeficiency virus. HIV AIDS (Auckl) 2013;5:19–28.
12. Reed JL, Huppert JS, Gillespie GL, et al. Adolescent patient preferences surrounding partner notification and treatment for sexually transmitted infections. Acad Emerg Med 2015;22:61–66.
13. Wang AL, Peng R-R, Tucker JD, Cohen MS, Chen X-S. Partner notification uptake for sexually transmitted infections in China: A systematic literature review. Sex Transm Infect 2012;88:386–393.
14. Edelman EJ, Cole CA, Richardson W, Boshnack N, Jenkins H, Rosenthal MS. Opportunities for improving partner notification for HIV: Results from a community-based participatory research study. AIDS Behav 2014;18:1888–1897.
15. Lyimo RA, Stutterheim SE, Hospers HJ, de Glee T, van der Ven A, de Bruin M. Stigma, disclosure, coping, and medication adherence among people living with HIV/AIDS in Northern Tanzania. AIDS Patient Care STDS 2014;28: 98–105.
16. Sabidó M, Gregg LP, Vallès X, et al. Notification for sexually transmitted infections and HIV among sex workers in Guatemala: Acceptability, barriers, and preferences. Sex Transm Dis 2012;39:504–508.

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