

Experiences of ANC Women with Distributing HIV Self-Testing Kits to Male Partners in Eswatini

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**Elizabeth Glaser
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Fighting for an AIDS-free generation



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COLLABORATING INSTITUTIONS

Ministry of Health, Mbabane, Eswatini

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ACRONYMS AND ABBREVIATIONS

ANC	Antenatal care
ART	Antiretroviral therapy
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
HIV	Human immunodeficiency virus
HIVST	HIV self-testing
HTS	HIV testing services
ICF	Informed Consent Form
IPV	Intimate partner violence
PMTCT	Prevention of mother-to-child transmission (of HIV)
WHO	World Health Organization

EXECUTIVE SUMMARY

INTRODUCTION

Late diagnosis of HIV remains a major public health concern, and many who are at risk for acquiring HIV do not seek HIV testing services (HTS) (1). It is estimated that globally, in 2019, 19% of HIV-infected individuals remained unaware of their HIV status (2). Men are consistently less likely to ever test for HIV compared to women (3, 4). In 2019, about 16% of men living with HIV (aged 15 years and above) in Eastern and Southern Africa did not know their HIV status compared to 9% of women living with HIV of the same age. In Eswatini, a household based HIV incidence measurement survey found that lifetime HIV testing and testing in the prior 12 months were higher among females (91.4% and 55.3%, respectively) than among males (81.9% and 47.2%, respectively) (5) .

Distribution of HIV self-testing (HIVST) kits to ANC women to share with their male partners is a promising strategy for reaching men for HIV testing (6). The purpose of this study was to explore experiences of ANC women, their providers, and men accessing services at selected facilities to inform implementation of secondary distribution of HIVST kits as the program is scaled up in Eswatini.

METHODS

This was a qualitative, exploratory study using semi-structured in-depth interviews with conveniently selected ANC women, men and healthcare providers in six public health facilities from both urban and rural areas in Hhohho and Shiselweni regions in Eswatini. All 6 study sites were piloting secondary distribution of HIVST kits. Data was collected between October and December 2019. Interviews were audio recorded, and transcribed and translated verbatim. Transcripts were analyzed using both inductive and deductive content analysis approaches.

RESULTS

In-depth interviews were conducted with 51 ANC women (25 received HIVST kits for the first time and 26 received kits during a previous ANC visit), 19 men and 24 health care providers. The median age of the ANC women was 24 years; most had secondary education or higher. All the 26 ANC women who had received a HIVST kit during a previous clinic visit reported sharing the HIVST kits with male partners; 21 reported their partner used the kit. Men's median age was 34 years and most had high school or tertiary education. Nine men had ever used an HIVST kit, three of whom used the kit with their partner, and seven had disclosed test results to their partner. Most of the health care providers were female 83.3% (20), had attained tertiary education 83.3% (20), and were midwives 37.5% (9) or HTS counselors 29.2% (7).

Most Participants (ANC women, men, and health care providers) noted that it is acceptable for women to deliver HIVST kits to male partners. Many ANC women reported that they liked the idea of distributing HIVST kits to their male partners and accepted the HIVST kits to share with the male partners. The ANC women said that distributing the HIVST kits to male partners provides them with the means to introduce HIV testing to their male partners and allows them to learn their

male partners' HIV status in cases where they did not know it. Many ANC women reported that their male partners accepted the HIVST kit and even used the kit in their presence. Only a few women said their male partners refused the HIVST kit, citing as reasons that the male partners did not want to be forced or were not sick or already knew their HIV-negative status. No women reported intimate partner violence (IPV) due to delivering HIVST kits to male partners, except for once incident of IPV reported by a health care provider.

Study participants said that some women may dislike distributing the HIVST kits due to fear of possible negative reactions by male partners, including quarreling, physical violence, verbal abuse, or being kicked out of their homes. Additionally, participants said men may not like receiving the HIVST kits due to the belief that the man is the head of the household and that any issues related to sexual matters and HIV testing should be introduced by the man and not the woman. Participants also said that they had concerns with the accuracy of the HIVST kit as it uses saliva and not blood. Health care providers said the main challenge with the distribution of HIVST kits by women is confirming whether the kits are being used and whether they are used by the designated male partners as used kits are not being returned to health facilities and few men visit health facilities for a confirmatory test. Other challenges include lack of materials to demonstrate use of the HIVST kit during counseling and frequent test kit stock-outs. Health care providers also reported that some women delayed ANC visits and changed sites to avoid receiving the HIVST kits.

CONCLUSION

ANC women, men, and health care providers generally had positive experiences with secondary distribution of HIVST kits and recommended expanding access to the kits. The findings suggest the need for improved support to health care providers in counseling ANC women, mitigation of partner violence, and addressing gender roles favoring men's influence on decisions to use HIVST kits.

INTRODUCTION

BACKGROUND AND RATIONALE

Late diagnosis of HIV remains a major public health concern, and many who are at risk for acquiring HIV do not seek HIV testing services (HTS) (1). It is estimated that globally, in 2019, 19% of HIV-infected individuals remained unaware of their HIV status (2). Men are consistently less likely to ever test for HIV compared to women (3, 4). In 2019, about 16% of men living with HIV (aged 15 years and above) in Eastern and Southern Africa did not know their HIV status compared to 9% of women living with HIV of the same age. A cross-sectional, population-based survey among women and men between 18-25 years of age in South Africa showed that men tested less frequently than women, with 43.7% of men and 78.7% of women reporting having tested in the last 12 months (7). In Eswatini, a household based HIV incidence measurement survey found that lifetime HIV testing and testing in the prior 12 months were higher among females (91.4% and 55.3%, respectively) than among males (81.9% and 47.2%, respectively) (5).

HIV testing is even lower among male partners of pregnant women. A cross-sectional study in Nigeria showed that only 2% of male partners of pregnant women attending prevention of mother-to-child transmission (PMTCT) of HIV clinics had an HIV test (8). In Kenya, a study examining male HIV disclosure in couples who attended an ANC clinic, only 15% of male partners of ANC women had tested for HIV (9). Whilst the authors could not find specific information on male partners testing within ANC clinics, available information about men's utilization of sexual health and HIV testing services offered within a health facility suggest that the percentage of male partners testing with ANC clinics would be less than 30%. In a household survey conducted in Manzini region in Eswatini, only 33% of 503 men has used sexual health in the 12 months, and a majority had used HIV testing (28%) services (10).

Multiple barriers for men to access HIV testing have been identified in the literature. Inaccessible facilities, inconvenience, inflexible operating hours, concerns about confidentiality and HIV testing messaging more tailored for women (e.g., prevention of mother-to-child transmission [PMTCT]) could deter men from testing for HIV (11). Additional barriers to testing by men included perceptions related to gender roles and what constitutes "masculinity", concerns about stigma, and difficulty in wives' ability to negotiate and persuade their partner to be tested (12, 13).

A promising strategy for reaching men for HIV testing is to distribute HIV self-testing (HIVST) kits to ANC women to share with their male partners (6). HIV self-testing (HIVST) is a HIV screening approach in which a person collects his or her own specimen (oral fluid or blood) and then performs an HIV test and interprets the result, often in a private setting, either alone or with someone he or she trusts (14, 15). Secondary distribution of HIVST kits through ANC women to male partners has been evaluated in a number of settings and found feasible, acceptable and has the potential to substantially increase uptake of HTS among men either as individuals or as couples (15-20). In a three-arm randomized control study in eastern and central Kenya, in the self-testing study arm 79% (334/422) of the women reported that their partner tested for HIV as part of a couple, compared with 27% (110/406) in the standard-of-care arm; and 35% (136/387) in the 'improved information on male testing' arm (17). HIV negative ANC clients in Kenya delivered HIVST kits to their male partners resulting in all 53 male partners testing for HIV and 51% testing as a couple

with their female partner (20). In a randomized clinical trial conducted in Kisumu, Kenya, testing among partners of ANC clients was higher in the HIVST group (90.8%, 258/284) compared to the standard of care group (51.7%, 148/286); and couples testing was also higher in the HIVST group than in the standard of care group (21).

However, secondary distribution of HIVST kits to men through their female partners may confront social and structural challenges in the Sub-Saharan African (SSA) region (15, 22). It may be hypothesized that in SSA patriarchal societies characterized by women with limited power and subalternity in the household will not favor any HIV testing strategy that uses a woman to recruit her male partner for HTS (13, 23). A qualitative study in Eastern Uganda found that wives due to their inferior status had less influence on men testing for HIV compared to friends and work colleagues who discussed frankly about HIV risk and testing (13). The study also found that very often men tended to resent their wives and were quick to silence them if they attempted to discuss HIV testing (13). From six HIVST implementation studies carried out in Malawi between 2011 and 2017 some women reported experiencing social harms, including verbal or physical abuse and economic hardship, when distributing HIVST kits to their male partners (15).

The World Health Organization (WHO) 2016 recommendations on HIVST were fully adopted in Eswatini in 2018 (24). HIVST in Eswatini includes both directly assisted and unassisted models with several modes of distributing the HIVST kits both at health facility and community levels. Among facility-based approaches, ANC women are provided HIVST kits to share with their male partners as a secondary distribution strategy to reach men. However, the extent to which female partners are ready to receive and distribute HIVST kits to their male partners, and the extent to which men are ready to accept and use HIVST kits distributed to them through their female partners are not well known in the Eswatini context. The purpose of this study was to explore acceptability of and experiences with secondary distribution of HIV self-test kits among ANC women, health care providers and men accessing services at selected facilities to inform implementation of secondary distribution of HIVST kits as the program is scaled-up in Eswatini.

STUDY OBJECTIVES

- 1.** To describe experiences of ANC women in study sites with distributing HIVST kits to their male partners.
- 2.** To understand barriers, motivators, attitudes, and preferences about HIVST and secondary distribution of HIVST kits by ANC women among men who may or may not be male partners of ANC women in areas around the study facilities.
- 3.** To identify barriers and facilitators among health workers in study facilities for providing HIVST kits to ANC women.

STUDY DESIGN AND METHODS

STUDY DESIGN

We conducted a cross-sectional qualitative study to explore acceptability of and experiences with secondary distribution of HIV self-test kits among ANC women, men, and health care providers in public health facilities piloting secondary distribution of HIVST kits. Interviews were conducted between October and December 2019.

STUDY SITES

Six public health facility sites were purposefully selected (Mbabane Hospital, Pigg's Peak Hospital, Dvokolwako Health Center, Emkhuzweni Health Center, Hlathikhulu Hospital, and Matsanjeni Health Center) in the Hhohho and Shiselweni regions (Annex 1). Site selection was based on sites piloting secondary distribution of HIVST kits through pregnant women at ANC clinic visits; high patient volume; and diversity of patient population from both rural and urban areas. Only those facilities receiving support from the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) were selected to facilitate data collection.

PARTICIPANT RECRUITMENT

ANC women were conveniently recruited with the assistance of health care providers providing HIVST kits in the study sites. Health care providers informed ANC women of the study and objectives and referred interested women to research assistants to conduct eligibility screening, obtain written informed consent, and conduct interviews at the facility site. ANC women were eligible to participate in the study if they were receiving ANC services at study sites, were offered and accepted HIVST kits to distribute to a male partner, and were aged 18 years and older (Table 1).



TABLE 1. Study Participants' Inclusion and Exclusion Criteria

Target group	Inclusion	Exclusion criteria
ANC women, both HIV-positive and HIV-negative, in study sites; those receiving HIVST kits for the first time and those returning at follow-up visits after delivering HIVST kits to male partners	<ul style="list-style-type: none"> • Receiving ANC services at study sites • Offered and accepted a HIVST kit to distribute to a male partner • Age 18 years and older • Able and willing to provide informed consent • Able to speak one of the study languages 	
Men who may or may not be male partners of women receiving ANC services at study sites	<ul style="list-style-type: none"> • May or may not have a female partner receiving ANC services in the study sites • May or may not have received an HIVST kit through a female partner receiving ANC services in the study sites • Age 18 years and older • Able and willing to provide informed consent • Able to speak one of the study languages 	<ul style="list-style-type: none"> • Receiving HIV services outside of Eswatini • Residing outside of Eswatini for an extended period of time (one month or more)
Health care workers (HCWs) who have been providing HIV services after the introduction of self-testing in study sites	<ul style="list-style-type: none"> • Working in a unit within the study sites that provides HIV self-testing services to ANC women • Should have provided HIVST kits to ANC women for a minimum of three months prior to data collection • Willing to give informed consent for study participation • Able to speak one of the study languages 	<ul style="list-style-type: none"> • HCWs who work within project sites but do not provide HIVST kits to ANC women • HCWs working in non-project sites

Male partners were conveniently recruited through ANC women who participated in the study, and other men were conveniently recruited with the assistance of health care providers in outpatient departments at the participating study sites. ANC women participating in the study were offered invitation letters to introduce the study to male partners. Interested male partners would then call a study coordinator contact number and set up a time to come to the participating facility site, where a research assistant would conduct screening, obtain informed consent, and conduct the interview. Men were eligible if they were at least 18 years old. Men were included regardless of having a female partner attending the ANC clinic at the study facility or having received an HIVST kit from a female partner (Table 1).

Health care providers were purposively selected from study facility sites if they provided HIVST kits to ANC women directly (Table 1). If there were more health care providers eligible than the number of interviews selected for that facility, each health care provider was assigned a number and selected at random by lottery.

DATA COLLECTION PROCEDURES

Six research assistants were hired and trained to conduct in-depth interviews with the study population. Research assistants had a university degree and had previous experience in conducting in-depth interviews, were bilingual in English and SiSwati, and were familiar with the local context and culture. The research assistants were also trained on human subjects' protections, the study protocol, and qualitative methods. Semi-structured interview guides developed specifically for the study were used to guide interviews. The interview guides covered topics including attitudes toward HIVST and secondary distribution; experiences with secondary distribution of HIVST kits; motivations and barriers for sharing HIVST kits with a partner; preferences for accessing HIVST services; strategies to optimize uptake of HIVST; and participants' recommendations for improving implementation of secondary distribution of HIVST kits. We also collected sociodemographic data for study participants.

The interview guides were pre-tested with three ANC women and one HCW in a clinic providing HIVST in the Hhohho region. Pilot-testing the interview guide helped the researchers to refine the interview questions and also familiarize the research assistants with the study methods, interview questions and conducting the interviews.

All interviews were held in private rooms at the participating study facilities. Interviews were conducted either in English or SiSwati depending on study participant preference and lasted between 45 minutes to one hour 30 minutes. Interviews were digitally recorded with the permission of the participants. The audio recordings of the interviews were simultaneously transcribed and translated by the research assistants who conducted the interviews. To maintain confidentiality, an appropriate ID replaced patients' names during transcription, and their identity was not disclosed at any time.

DATA ANALYSIS

The audio-recordings of the in-depth interviews were simultaneously transcribed and translated to English by the research assistants who conducted the interviews. The study coordinator re-checked all the transcripts for completeness and correctness, and the study investigators re-checked a sample of the transcripts per participant group for completeness and correctness by concurrently reading the transcript and listening to the corresponding audio at the same time. Feedback was discussed with the transcribing and translating team to improve quality of transcripts.

Thematic content analysis was used to analyze the data. The transcripts were uploaded and coded in the qualitative software program MAXQDA V18. Both inductive and deductive approaches, using pre-identified themes and being open to new themes emerging in the data, were used to develop codes. Study investigators read through the transcripts thoroughly for familiarization and to identify recurring themes in the transcripts. Two transcripts per study participant group were sampled by two investigators for initial coding. Notes were made from the selected transcripts to refine

themes and generate the initial codes. Investigators discussed their independent codes identifying similarities and differences through a discursive process. Using the initial codes codebooks were developed. Codes with similar ideas were clustered to form sub-themes.

The transcripts were coded by three research staff at EGPAF who were part of the study implementation after being trained on coding qualitative transcripts by the authors. To develop a standardized approach for coding among the team, first, a few transcripts were collectively coded using the codebook and discussed by the team. Second, a small subset of transcripts coded individually was reviewed by the study coordinator and study investigators, and the feedback was discussed collectively. Questionable segments of coded text were resolved among the coders with assistance of study investigators. After coding was complete, data were summarized through descriptive, text-based summaries and tables organized by codes and categories (e.g. motivations to use HIVST, experiences sharing HIVST kits with a partner, etc.) by study investigators and three post-graduate public health students from The George Washington University Milken Institute School of Public Health after receiving training. The coded text was then synthesized according to themes and findings relevant to study objectives by the authors. Study participants' sociodemographic data were entered in a Microsoft Excel spreadsheet, and percentages, medians, and range were calculated to summarize the data.

ETHICAL CONSIDERATIONS

This study protocol, including supporting documents (informed consent forms, interview guides, and male partner/men invitation letter) and confidentiality measures were reviewed and approved by the Eswatini Health and Human Research Review Board and Advarra Institutional Review Board in the U.S. The study was authorized by the Ministry of Health of Eswatini at national (Eswatini National AIDS Program) and regional (Regional Health Management Teams) levels, received approval from study sites senior management.

Research Assistants conducting in-depth interviews provided the participants with an Informed Consent Form (ICF) in SiSwati or English (depending on the language the participant was most comfortable with), and read-out loud and explained the contents of the ICF to the participants. For a participant who could not read, the informed consent procedure was conducted in the presence of a witness who was either a health care provider in the study site or a relative chosen by the participant, but not anyone who was part of the study team. Written consent was obtained from all participants and interviews were only conducted for participants who signed the ICF. Research Assistants also digitally recorded verbal statement of consent at the beginning of each interview after obtaining permission from participants.

All interviews were conducted in a private place within the study sites. The study team avoided coercion of patients by emphasizing voluntary informed consent and assuring participants that medical services and employment in the study sites were independent of their participation in the study. No incentives were provided for being part of this study. Male partners who had to travel to study sites for the purpose of study were reimbursed for transport cost. All participants were provided with a beverage and biscuits for the time they spent participating in study activities. To enhance confidentiality study participants were assigned unique study identification numbers to identify and link study records, and Research Assistants did not use participants' names during the interviews and transcription. At no point during the study was participants' identity disclosed

RESULTS

CHARACTERISTICS OF PARTICIPANTS

Table 2 and Table 3 shows selected characteristics for study participants. Interviews were conducted with 51 ANC women (25 received HIVST kits for the first time and 26 received kits during a previous ANC visit), 19 men, and 24 health care providers. The median age of the ANC women was 24 years; most had secondary education or higher. All the 26 ANC women who had received an HIVST kit during a previous clinic visit reported sharing the HIVST kits with male partners; 21 reported their partner used the kit. Only five of the 51 ANC women had ever used an HIVST kit themselves. Men's median age was 34 years and most had high school or tertiary education. Nine men had ever used an HIVST kit, three of whom used the kit with their partner, and seven had disclosed test results to their partner. Most of the health care providers were female (20/24), had attained tertiary education (20/24), and were midwives (9/24) or HTS counselors (7/24).

TABLE 2. Characteristics of ANC women and men

Variables	ANC Women received HIVST kits for the first time (N=25)	ANC Women received HIVST kits in previous ANC visit (N=26)	Men (N=19)
Age (median, range)	23 (18-36)	25 (18-40)	34 (21-40)
Education			
Primary	7 (28.0%)	4 (15.4%)	1 (5.3%)
Secondary	2 (8.0%)	9 (34.6%)	2 (10.5%)
High school	11 (44.0%)	8 (30.8%)	11 (57.9%)
Tertiary	3 (12.0%)	4 (15.4%)	5 (26.3%)
No formal schooling	2 (8.0%)	1 (0.3%)	0 (0.0%)
HIVST use			
Shared HIVST kit with partner	—	26 (100.0%)	—
Partner used delivered HIVST kit	—	21 (80.8%)	—
ANC woman and partner tested as a couple	—	1 (4.8%)	—
Ever used HIVST kit	2 (8.0%)	3 (11.5%)	9 (47.4%)
Ever used HIVST kit with partner	0 (0.0%)	1 (33.3%)	3 (15.8%)
Disclosed HIVST result to partner	1 (4.0%)	3 (100.0%)	7 (36.8%)

TABLE 3 Characteristics of Health Care Providers

Variable	Total health care providers interviewed (N = 24)
Gender	
Female	20 (83.3%)
Male	4 (16.7%)
Education	
High school	4 (16.7%)
Tertiary	20 (83.3%)
Health cadre	
Midwife	9 (37.5%)
HTS counselor	7 (29.2%)
Expert client	4 (16.7%)
Senior/general nurse/lab technician	4 (16.7%)



Muzie Yende/EGPAF, 2021

WILLINGNESS TO RECEIVE HIVST KITS BY ANC WOMEN AND MEN

Many ANC women were generally happy to receive the HIVST kits, and many ANC women who received the kit for the first time expressed an intention to share the kit with a male partner, regardless of whether they thought he would refuse.

- *Most of the time, it [HIVST kit] is easily accepted. It [HIVST kit] is so easily accepted. Women easily receive it [HIVST kit]. They are always saying, “Thank-goodness, he never wanted to come to the clinic.” Yah [Expression of self-concurrence]. So, in terms of acceptability to the women [thumbs-up]. (General nurse, female, 39 years old)*
- *Yes, I will give him. I am willing to give him, for him to know his [HIV] status, and I should know. (ANC woman, 24 years old, had just received HIVST kit from health care worker)*

A common motivation to accept the HIVST kit among these ANC women was their desire to know their male partner’s HIV status so that they can protect themselves from acquiring HIV and prevent transmission of HIV to their babies. The ANC women saw the HIVST kit as helpful in getting their partner to test. Many of the women reported their male partners were reluctant to test for HIV. Some ANC women said their male partners reported having tested already and were negative but had never shared proof of the test result, as one ANC woman described:

- *There is nothing better than that I need to protect my child, so that [the baby] can be born free from sickness [HIV] [ANC client laughed]. (ANC woman, 21 years old, had just received HIVST kit from health care worker)*
- *It is good because, I will give an example, they will ask at the hospital, “Has your male partner tested for HIV?” Then we respond and say, “He said he tested,” yet you [ANC client] do not know the last time he [male partner] got tested for HIV, yet if they [health care providers] are going to offer us the HIVST kits, he will test. Then I will give the health care worker an answer that I am also sure about. (ANC woman, 27 years old, delivered HIVST kit)*

Many women did not see an immediate concern in sharing the test kit with their partner because they had a good relationship, discussed health matters together already, their partner “listened to their opinion,” at home they were able to talk openly about HIV-related matters, or they had enough information about HIVST.

- *I think what might make it [delivering HIVST kit to male partner] easier is to know the kind of person he is and the way he talks to me and to know his views about testing. (ANC woman, 19 years old, had just received HIVST kit from health care worker)*

Although many women saw no issues with sharing the test kits with a partner, a few women were explicit about the potential for physical violence.

- *If I come to him and say at the health facility they gave me this kit to test you, then he says I do not want this thing of yours, thereafter he beats me. (ANC woman, 24 years old, had just received HIVST kit from health care worker)*

Women who were less keen on receiving HIVST kits from health care workers were less confident about whether their partner would accept the test kit, and a few overtly said their partner would refuse the kit, or would not agree to test in their presence. As one participant expressed:

■ *He will keep his thick-headed self or test someone else and not test himself... He would not, I do not see him accepting it... Seriously I do not see him accepting it. (ANC woman, 24 years old, had just received HIVST kit from a provider)*

Providers said that when ANC women were offered the HIVST kit, they wanted to know how the test functions, how to read the test result, why the HIVST kit uses saliva when they have previously been taught that HIV cannot be found in saliva, how to store the HIVST kit, the accuracy of the HIVST kit test, and why providers always talk about HIV when the women had come only for ANC or other health services.

A few providers said that ANC women initially reacted to HIVST by “asking each other questions” or coming out of the service rooms to “sit on the bench outside and chat.” There they talked about how they would introduce the test kit to their partner and strategized together on how they might overcome partner refusals.

Men did not oppose women providing test kits to male partners and men in general, and some men said it is best that HIVST kits be delivered by the women to men. Several men said that women know their partners best and know how to convince them with respect and support, as this man explained:

■ *They [men] can get the HIVST services from the health facility, they can also get them from their female partners because taking for instance my partner offers me HIVST kit and ask me to test; it will be easy since she knows how to convince me. (Man, 25 years old)*

Some men reported that it all depends on the individual man and his attitude toward staying healthy, supporting his family, and plans for the future. However, men felt ANC women should be well educated by health providers first. Having enough information about HIV in general and about HIVST kits was important to several men, as illustrated by this man’s comment:

■ *I think it is mostly knowledge. If there could be enough knowledge and understanding of HIV, as a person it would not be difficult to test for HIV because HIV will affect you and [you will] be critically sick. So, if you are a man you need to have strength, work, and support your family. With those reasons I saw it a need for me to test for HIV. (Man, 38 years old)*

HYPOTHETICAL AND ACTUAL STRATEGIES TO INTRODUCE HIVST KITS TO MALE PARTNERS

For those ANC women who had accepted an HIVST kit but had not yet shared it with a male partner, hypothetical strategies to introduce kits to male partners and to overcome associated barriers were discussed, such as cooking their partner a special meal to get him into a “good mood,” using affection to get his attention, and using deception by tricking him into using the kit without telling him that it was an HIV test.

“ *Maybe, you know your person that when you put him here and kiss him he will listen to me well when I am talking. (ANC woman, 29 years old, had just received HIVST kit from health care worker)*

Similar strategies were used by women who had experienced sharing the HIVST kit with a male partner. These women described how they talked at length to explain the importance of HIV testing by passing along knowledge they had received at the health facility. Some ANC women took the approach of telling their partner that the test was sent by the health facility or that the male partner was being directed to test by the facility. A few ANC women explained that they had tested at the facility and now the partner should test at home. Waiting for men to be in a good mood to bring up the topic, using phrases from the provider, and explaining politely how the HIVST kit worked and why testing is important were approaches used by ANC women. Some women said they began introducing the kit by asking their partner when he had tested or if he knew his HIV status. As illustrated by this ANC woman, multiple strategies were used to introduce HIVST kits to their partners:

“ *I took it home and waited for him to be in his good moods. Then when I saw that he was happy I decided to tell him about the HIVST kits—that I got them from the health facility, they taught us how to use it and you can use it to test for HIV. He did not believe me at first but after a while he saw me taking the test kit out of my handbag since I have been keeping them there. I told him that these are the test kits for testing HIV and I showed him how to use it. Then I first tested with my test kit and showed him my results and he got excited. After that I gave him his test kits. Then after reading my test results, he tested himself because he saw it from me. I think what motivated him to test is that he saw my test results and he saw that his wife is negative, then he trusted the HIVST kit. (ANC woman, 24 years old, delivered HIVST kit)*

MALE PARTNER REACTIONS UPON RECEIVING HIVST KITS FROM ANC WOMEN

Many ANC women said that their partners did not resist at all to taking the test once it was presented and explained to them. These women said there were no disagreements, were no questions, was no anger, and was no refusal. One woman explained that she had expected her partner to get angry with her for delivering the HIVST kit, but he accepted the test.

“ *I was expecting him to get angry at me that I have come to test him for HIV, but he was cool, he just took it and we did everything. After that I read his results and took them back to the hospital. (ANC woman, 27 years old, delivered HIVST kit)*

Although ANC women were fearful of their partners' negative reactions, and a few women said that men may shout or become angry or even “abuse” women, no cases of physical violence were reported by the women interviewed. Similarly, most providers said they had no direct report of physical partner violence as a result of ANC women offering a test kit to their male partner. The type of violence reported by women to providers was shouting or bullying. One case of physical violence was reported to a provider, and a second was said to have occurred but was not reported directly to a provider interviewed for the study.

“No one came back personally and said to me that when I give him the test kit he beat me, it’s either he refused, or he does not want. They don’t say he came back and beat me. (Midwife, female, 32 years old)

Another provider described an incident in which an ANC woman was denied access to her home by her male partner after she shared the self-test kit with him. According to another provider, intimate partner violence (IPV) was a “big challenge,” and women come back reporting being beaten after introducing the HIVST kits.

“There is a big challenge because some women who came back after distributing the kits to their male partners reported that they have been beaten by their male partners because of bringing the kits at home. They said, “You are unfaithful where did you take this thing from?” That is how males are. (HTS counselor, female, 50 years old)

A few ANC women reported a general refusal by their partner without anger or violence, and a few ANC women said their partner’s response was to ask if he was not trusted. Other ANC women said their partners had questions or fears about the HIVST kits: those partners were suspicious about what the provider would do with the result, questioned the accuracy of the test since it uses saliva and not blood, wondered about getting a false positive result, voiced a preference for facility-based testing, or wondered what the ANC woman may have said during the clinic visit to prompt the HIV test. One woman said that her partner had tested before but was still nervous and scared. His reluctance to go to the hospital and test as a couple made her doubtful, because she had disclosed her HIV status to him. Several women said they had to “motivate” their male partners to use the test kit.

“It is a good thing because, because...you give him the HIVST kits to do it, but sometimes he refuses, he will not easily accept it, he gives you problems. . . He first refused it until I told him that today is the deadline of returning the HIVST kit back, then he agreed yesterday to use it. (ANC woman, 27 years old, delivered HIVST kit)

Men in general liked that self-testing enabled them to test when they were ready, and not under pressure from a health provider or partner, confidentially and conveniently at home.

“It is very nice, and I found it easier for me because we men are busy working but the time for relaxing and eating would be used to attend to the kit and do the right thing for me to know my HIV status than going to a clinic the whole day, my job would stand still. (Man, 22 years old)

CHALLENGES WITH SECONDARY DISTRIBUTION OF HIVST KITS TO MALE PARTNERS

According to ANC women, men, and providers, a major challenge to accepting, delivering, and using an ANC-woman-delivered HIVST kit could be conceptualizations of masculinity. Study participants said men are traditionally the head of the household; “men issue the orders,” and a woman cannot bring something home without the man knowing or giving permission.

- *They say the man is the one to talk... is the head of the family, so at times you may find that when you come with the kit he will tell you he will not use it, he won't be told by you because you are the wife. (ANC woman, 30 years old, delivered HIVST kit)*

Men shared the view that some men are “hard-headed” and will not accept information coming from their wives; and some men will think women are undermining men’s authority or power as head of household or trying to “suppress men” if they introduce HIVST at home.

- *There is only one belief “mam” [informal address to an older female person] and we have been talking about it over again since we started our conversation. A man does not like things to come through a woman at home. Even if he understands that thing but because it will come through a woman he would act as if he does not understand it. I think it is because of pride in a man that he is the head of the family, everything comes through him. So, if things come through you [the woman] here at home as if you are wiser than him, he feels like you are taking his powers and everyone in the home listens to you and does what you say. Even if it is helpful and the children are happy about it, but the man would not be happy that everyone is happy for what you say, because you may find that when the man brings something or says something at home, the children would complain and not listen to him. Then when the woman comes with something the children get very excited, therefore, because that the man would see everything wrong just because it came through the woman. He feels like the woman is taking away his power as a man and she is making herself the smartest person within the homestead. (Man, 38 years old)*

Another challenge was a concern about serodiscordant results. Both men and women discussed a general fear of abandonment, of being rejected or “dumped” by a partner, or of having misunderstandings that would lead to separation. Men feared that their partner would judge them for prior risky behavior and blame them for bringing HIV into the relationship.

- *What would have made it easier for me is that I believed that we would test together not separately because if I test alone I would be scared about finding that I have HIV or when he tests [alone] he finds that he is positive, and I am negative. Then he becomes scared or ashamed or finds that we have difficulties to accept and understand each other, then end up separating. (ANC woman, 24 years old, delivered HIVST kit)*
- *I might talk to my partner, maybe she also does not know her status, then she jumps over with arguments and accuses me of bringing HIV into our lives. Then you [male partner] find that with the arguments and disagreements you end up not getting tested together or her getting tested for HIV or me knowing her HIV results. At times the person [male partner] would just leave you [woman], maybe he came to you knowingly, but he is scared that he has discovered that he is HIV positive and you would get angry and blame him for that HIV status. So, most of the time with testing for HIV we [male partners] fear blame that would be directed to us. Maybe in my life I have done lot of mistakes than her, so she would hold that against me or I myself would always remember those mistakes I did in the past. So, it would be difficult for*



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me to disclose that I have tested for HIV because I am known of my past life. I think that is the other barrier I have. (Man, 38 years old)

A few women and men expressed a preference for health facility–based HIV testing—wanting to be tested by a health professional and have the results “clearly explained” and to have adequate privacy from family members.

■ *I would not [recommend HIVST] because I do not trust the HIVST kit. I want to be tested by a doctor and have it clearly explained to me. (ANC woman, 18 years old, had just received HIVST kit from HCW)*

■ *I do not find the test kits to be good because they can give us, and we throw them on the way, it is better that when you come to the health facility they just test you. It is hard to test yourself whereas it is better when you are being tested in the hospital. Even here we are grounded by our pregnancy, we do not just come test we are compelled to do it when we come for ANC visits that is when we go test. Now they are saying I must go test for cancer. They took my card if they had not taken it I would have left without testing for cancer, so when they have given you the test kit you will find that you are keeping it at home and not using it. No, honestly you would not just come to test but you are compelled when you come to the clinic. I do not know because I will not lie but you do not just decide to go test, we test because we have come to the clinic. (ANC woman, 21 years old, delivered HIVST kit)*

Several women felt they had not been provided enough information or instructions on how to use the kit to be able to explain it confidently to a partner, and another woman felt that many providers were not aware of HIVST.

■ *No, it was never enough [information from the provider]. The information I got was that you do it at home like this and this and this. Like the steps is what you will find inside when you open the kit, I never got that, I got it after I used it at home. (ANC woman, 23 years old, had just received HIVST kit from a provider)*

Participants also discussed confirmation of HIVST results as a challenge, with some ANC women saying that their male partners did not want to go to health facilities for a confirmatory test, particularly if the HIVST result was negative. Some ANC women said nurses demanded a physical self-test kit when confirming results at a clinic. However, some ANC women said they were able to easily be seen at health facilities and verify the results for themselves or their partners. Similarly, providers said that male partners testing positive for HIV at home did not go to the health facility for confirmatory testing, even when called by health facility staff to visit the health facility.

■ *No, nobody has ever come for a confirmatory test ever since I have started providing HIVST, they just come back and tell me that they have done it and they sometimes come with the used test kit then we dispose it. The one who tested positive went to another hospital and we phoned to confirm if he was initiated. He did the confirmatory test at that hospital. (HTS counselor, female, 33 years old)*

Providers also expressed concern that there was no way to verify whether ANC women were providing correct information about usage of the kit. ANC women could lie about the person who tested, about the test result, and about delivering the kits to male partners.

“ I am now worried if the ANC women do deliver the HIVST kits to their male partners to test for HIV or maybe they use it to their cousins. I am not sure whether she is giving me her cousin’s results I will not know. When you call her, she will give me a response that, “He is HIV negative two lines appeared.” That is why I cannot really believe if the male partner really tested [baby crying...people talking outside]. So, I think it is better that we test our women. Yes, because we get the “positives” here at the health facility only a few comes from outside [baby crying outside]. (HTS counselor, female, 33 years old)

A few providers were worried that making it compulsory for ANC women to accept and distribute self-test kits to male partners has had a negative effect on ANC clinic attendance. The providers said that some ANC women delay coming to the facility until later in their pregnancy or have switched to a new facility for care to avoid receiving the test kit and any additional follow-up that it may entail.

“ Okay, another thing that I have observed is that the ANC women, when they find that they have not done what you said they must do they opt out to go to another facility. Because when I said that I am giving you this, you are supposed to come back with it. When the partner refused the woman is not going to come back here, she is going to go to another facility to continue with the services there. (Midwife, female, 29 years old)

A few providers mentioned that women would accept the test kits from the provider during the ANC visit, but later the provider would find the kits in the dustbin at the facility or the women would bring back an open but unused kit.

“ In some cases, you find that the woman will take the kit just to impress you but when she gets outside she throws it into the dustbin. Then we find the test kits in the dustbin. Some women would just tell you that I know my male partner he would not use the HIVST kit. So, in such cases you just see that there is no other way to accept the kit. Or she would just tell you that he will test when he has come into agreement with his heart since he clearly does not want to test. (Expert client, female, 37 years old)

A few providers said women do not always share their challenges with providers. However, one provider said they do not give test kits to women who are currently experiencing partner violence.

“ They are scared even to open up to you [health care worker], that okay I have a problem with sharing this thing [HIVST kit]. They just do what they think is right and take decisions on their own. (Midwife, female, 29 years old)

“ Once she says he is violent we do not give her the kit but request her to go and talk to her partner first and find out if he would love to use the kit. (Midwife, female, 41 years old)

Providers also felt that the program requires a lot of documentation but that some of the important information cannot be captured in the current registers. Some providers said sometimes the electronic client information system malfunctions and providers cannot offer HIVST kits to women because there is no way to record the distribution of the kits.

A few providers questioned the accuracy of the test kit because it uses saliva and not blood, and many providers said ANC women expressed doubts about the accuracy of a saliva-based test. One provider said it was a source of confusion for ANC women because for so many years they have been saying that HIV is not detected in saliva, but now they are asking people to use this HIVST kit that uses saliva to test for HIV.

“Okay at first, I panicked....It was confusing because all along we had been saying HIV is found in blood, the method we are accustomed to . . . we test HIV using blood, only. So, with the self-test kit, we asked ourselves, how do we then explain to the ANC women that now HIV can be found in saliva because, previously, we were saying it is about zero point zero point zero [emphasis that HIV quantities in saliva are insignificantly small] that you can find the virus, HIV, in the saliva. So now we have changed, and we want to test them for HIV using saliva. So, it was so confusing, but then with the help of the other HCWs I think we got the courage to continue to give [HIVST kits] to them [ANC women] with good answers. (HTS counselor, female, 35 years old)

PARTICIPANT RECOMMENDATIONS FOR SCALING UP

Both ANC women and men generally thought that distributing HIVST kits through ANC women should continue as it was a good way to reach more men with HIV testing. Many commented that educating or counseling men about the self-test kits before women introduce the kits would reduce some of the challenges women face in sharing the kits with their partner, particularly in the context of norms upholding men’s status as head of household. A few ANC women and one man felt that the facility was really the best place to distribute HIV self-test kits.

“It would be better for everyone to go to the health facility for the HIVST kits because the health care workers would not just give the HIVST kits without informing you on how to use it. Then you can also read the instructions to remind yourself. Demonstration is not easily forgotten. Therefore, the health facility and health care workers should distribute HIVST kits and make sure that people are given all the necessary information about it. (Man, 32 years old)

Men suggested the use of special functions—such as soccer tournaments preceded by testing or occasions providing refreshments, gifts, or money—to reach men about HIVST. One man said that being given a gift like a watch for getting confirmatory testing would also give men an opportunity to brag to other men about going to the hospital with their female partner. Given men’s reluctance to go to health facilities, some men suggested setting up tents would be an effective way to reach men who have feelings of fear and shame and would be an easy way for men to overcome “feeling scared in your heart.” Other strategies mentioned were door-to-door testing, educational outreach to reach families in communities and not focus solely on women, and using the Royal Kraal [a venue by tradition where chiefs in the communities or the king at national level hold meetings with the people] as a venue for promoting HIVST. Using media such as radio, television, and print materials and peer educators was mentioned by both ANC women and men.

Providers also felt that the secondary distribution of HIVST kits to ANC women should be scaled up nationally to reach more men who are not accessing testing in facilities. However, providers

suggested program improvements, such as in-service training, that would better support ANC women. Trainings could focus on explaining how the test kit works, what specifically women can say to their male partners when introducing the test kits to them at home, how to store the test kits, and what providers should do if the test kits are not returned to the facility for providers to see test results. Providers also expressed the need for improved materials for teaching ANC women—such as a short video, posters, or small cards demonstrating the steps in how to use the kit. A few providers said that strategies used for condom distribution should be used for HIVST kits but with controls to ensure misuse and waste are avoided.

■ *Anywhere just like how condoms are made available to people. We know that some people can tend to misuse them, like taking 5 test kits to use them even where not applicable or find that the person would test himself today and tomorrow just wasting the HIVST kit. But the test kit should be made available anywhere where people can best reach them. Also, there should be person monitoring how people are taking the test kits. (Expert client, female, 37 years old)*

Providers liked making kits available but noted that improved supply systems are needed to ensure inventory as knowledge about the HIVST kits spreads and demand for them increases.



DISCUSSION

Our study shows that ANC women are willing to accept HIVST kits from providers to share with male partners and that men are willing to receive and use HIVST kits delivered to them by their female partners. Similar findings from other studies conducted in Uganda (25), Malawi (26), Kenya (17, 19, 20, 27), and South Africa (27) demonstrate secondary distribution as an acceptable strategy. However, the role of men's influence in the decision to use HIVST is an important consideration in the Eswatini context. Our results indicate that providers in such programs need more extensive support, such as instruction in counseling ANC women on how to discuss HIVST with male partners, help in ensuring that the information ANC women give providers about the test kits, including test results, is appropriate and accurate, and supplemental materials, such as videos, that can be used to demonstrate to women how to use the test kits. We also find that the reconceptualization of negative masculine stereotypes (e.g., men should be strong; men do not get sick; men possess all the knowledge) into more positive ideas that emphasize men's positive role as family caregiver and provider could be reflected in the design of a health communication strategy for the scale-up of women-delivered HIVST kits to male partners.

ANC women employed various strategies to introduce the HIVST kits including, for example, passing on to their partner the health education received at the facility, telling the partner that the facility has asked him to self-test, and demonstrating how to use the test kit on herself first and then offering her partner the opportunity to self-test. In a study conducted in Malawi (26), respondents suggested bedtime as the best time for introducing HIVST kits. Relationship quality, timing of introducing the kits, and having enough information about HIV in general and HIVST kits in particular are all important factors in women's ability to share the kits with male partners. This highlights the need for strengthening support to health care providers as they counsel women on how to introduce the kits, taking into consideration both strategy and timing and providing adequate information and demonstration of how to use the kits.

ANC women were fearful that their partner would react negatively, and some did report refusals and verbal violence or threatening behavior on the part of their partners. Except for one provider's account, no physical violence was reported by ANC women to providers in our study. Studies conducted in other settings—Uganda (25), Malawi (26), and Kenya (20)—similarly found that secondary distribution of HIVST did not increase the incidence of violence against women who shared HIVST kits with male partners. However, ANC women's fears about how their partner may react call for careful monitoring of all forms of IPV as the program is scaled up nationally. Providers' recommendations for improved educational materials for ANC women could make it easier for ANC women to introduce the test kits and respond to male partners' questions and concerns. But given the potential for IPV, IPV screening and prevention services (such as engaging social welfare) should be included in HIVST programs.

Both ANC women and men felt that HIVST kits promoted couples testing together compared to conventional testing. Couple testing increases awareness of partner HIV status, an important pillar for HIV prevention. Couple testing has been associated with safer sexual decision making. A study conducted among ANC women and female sex workers in Kenya showed that participants were less likely to engage in sexual intercourse when the sexual partners had self-tested HIV-

positive versus HIV-negative (18% versus 62%, $p < 0.0001$) (20). However, both ANC women and men also expressed fear to deal with HIV discordant results. These findings are similar to those in a community-based HIV self-testing study conducted in Malawi (28) and in Uganda (29) where some individuals had not tested with their partners as a couple due to fear of dealing with HIV-discordant relationships. In addition, several studies have found that there are harmful outcomes to relationships associated with couples testing despite the many benefits it may have. The mutual information availed by couple testing among concordant HIV-positive and discordant couples could be taken as proof of suspected infidelity which could fuel silence and mistrust between couples (28, 30). Knowledge of HIV-positive status among couples could lead to loss of sexual intimacy, in some cases conflict and violence (30). This evidence suggest a need to integrate supportive mechanisms for women in challenging relationships in order to reduce the likelihood of abuse, and to be excluded from the program if required.

In our study, providers reported that few men returned for confirmatory testing. It is possible, as others have pointed out, that men may be prompted by the HIVST experience to seek confirmatory testing at a different facility or voluntary counseling and testing center (31). Several studies document the ongoing challenge of retention in HIV care and treatment services after HIV diagnosis (32). Men who access HIVST to test privately or avoid the potential stigma or other concerns related to living with HIV may delay accessing HIV care and treatment services (12). Data from Uganda comparing linkages to antiretroviral therapy (ART) among men who test in the facility using rapid testing versus men who self-test documented a much higher proportion of men linking to HIV treatment after facility-based testing—66.7% versus 23.1%. Close program monitoring to follow up on how men may be accessing confirmatory testing and linkages to ART would be useful. Both ANC women and men recommended that men receive education before they receive HIVST kits. That strategy may be useful not only to increase men's acceptance of the kits and knowledge of the importance of personal awareness of HIV status, but also to raise awareness of HIV and treatment services and reduce fear of testing.

Healthcare providers also raised challenges on documentation since this was a pilot and not yet included in the national client management information system (CMIS), an electronic system used in health facility to document services provided to patients. Another challenge raised by healthcare was inadequate information to address questions from clients on the accuracy of the oral base HIV test. Several studies show that mistrust of the accuracy of the oral HIVST kit is a barrier to HIVST uptake, particularly among men (25, 33, 34). Both healthcare providers and clients can be supported with provision of clear, contextualized and tested the instructions use and purpose of the HIVST kit (34, 35). The national program should assist healthcare providers in health facilities explore providing pre-test counseling as mentioned in Choko et al.(6) and also through phone, or through a mobile application (34, 36).

The study has several limitations. Men recruited for the study were not necessarily partners of the ANC women interviewed. Difficulty in getting male partners of ANC women to respond to letters of invitation to participate in the study led to alternatively recruiting men attending the study facilities. That limited the analysis of couples' experiences and elicited only the independent views of women and men and their experiences with HIVST kits. In addition, interviews with ANC women who had experience with sharing the HIVST kits received during ANC clinic visits were only conducted with women who did share the HIVST kits with a partner. Women who had received the kits and had ample time to share a kit with a partner but had not done so were not included in the study, thus limiting our understanding of specific reasons why women did share the kits.

CONCLUSION AND RECOMMENDATIONS

The secondary distribution of HIVST kits to men via ANC women was acceptable among ANC women, their health care providers, and men. However, programs should address the challenge of men's refusal to test by strengthening the support provided to health care providers in counseling their ANC women and in providing information about HIVST kits and how to use them. Predominant negative conceptualizations of masculinities and the gender stereotypes they reinforce should be addressed by designing a health communication strategy to accompany the scale-up of women-delivered HIVST kits to male partners. Though intimate partner violence was not prevalent, policymakers should consider including IPV screening and prevention services in HIVST programs to prevent or mitigate potential increases in IPV because of women delivering HIVST kits to male partners.

We further recommend the following strategies based on our study findings:

- Work with the Ministry of Health's Health Promotions Unit and its HTS technical working group to review the HIVST communication strategy that can be shared with the national program and implementing partners.
 - The communication strategy could cover issues such as the following:
 - › Gender norms
 - › IPV
 - › Accuracy of HIVST kits
 - › Improvement of women's feedback to health facilities on how they and their partners are using the HIVST kits (such as ensuring that women know what their feedback responsibility is)
 - › Strategies to empower women to be more assertive in relationships to reduce or impact incidences of IPV
 - › Strategies or means to enforce positive gender norms while diffusing toxic gender norms
- Ensure that all relevant stakeholders, including target populations, are sensitized about the program and the communication strategy.
- Work with other community implementing partners like Kwakha Indvodza and HC4 to reach men with messages on the importance and advantages of HIVST.
- Provide educational and instructional materials in health facilities and for women:
 - Use the Ministry of Health–developed video where it can be shared with women.
 - Set up a hotline women can call to seek guidance.
- Screen ANC women for IPV and put in place strategies and interventions for affected women

- Strengthen the provision of feedback to health facilities on the use of HIVST kits, including confirmatory testing:
 - Strengthen the use of currently available patient follow-up strategies and tools by health care workers, such as calling women, to ascertain whether the HIVST kits are being used by male partners and ensure that men visit health facilities for a confirmatory test.
- Engage regional structures, particularly regional health management teams and nurse supervisors, to strengthen implementation of the HIVST program in health facilities.



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ANNEX

ANNEX 1. Study Sites

Site name	Region	Rural/Urban	Department
Mbabane Public Health Unit	Hhohho	Urban	Public Health Unit
Pigg's Peak Public Health Unit	Hhohho	Urban	Public Health Unit
Hlathikhulu Public Health Unit	Shiselweni	Urban	Public Health Unit
Matsanjeni Public Health Unit	Shiselweni	Rural	Public Health Unit
Dvokolwako Health Center	Hhohho	Rural	Public Health Unit
Emkhuzweni Health Center	Hhohho	Rural	Public Health Unit

While the Elizabeth Glaser Pediatric AIDS Foundation makes effort to use photos which accurately depict the actions, topics, or populations referenced, unless specifically indicated, the photographs in this document do not imply program participation, health status, attitude, behavior, or action on the part of persons who appear therein.

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