

**Acceptability and Barriers of the Home-Based Voluntary  
Counseling and Testing Model in the First Six Months of Service in  
Three Rural Sites in Amhara, Ethiopia**

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**Abstract**

**Acceptability and Barriers of the Home-Based Voluntary Counseling and Testing Model in the First Six Months of Service in Three Rural Sites in Amhara, Ethiopia**

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**Specific Aims:**

The objective of this research was to evaluate a home-based HIV counseling and testing (HBVCT) pilot implemented in three Ethiopian sites during the first six month of implementation (January 1, 2011 to June 30, 2011). This study sought to document the experiences and challenges from the community voluntary counseling and testing (VCT) counselors providing the HBVCT service as well as specific challenges and barriers faced by ever-married community members.

**Setting:**

The pilot HBVCT program was implemented in eight sites in four regions of Ethiopia. The three sites in the Amhara Region were selected for this study. These sites (and rural *kebeles*) are Bahir Dar (Tis Abay, Andasa), Dessie (Addis Mender, Habru 01), and Gondar (Loza Mariam, Tekele Hymenot). These sites were selected because they are in the Amhara National Regional State.

**Methods:**

Secondary counseling and testing reports were collected from each site to analyze the clients' demographic information and testing results. In-depth interviews were conducted with the community VCT counselors and the senior VCT counselors in all three sites. Male and female focus group discussions were held in each community for ever-married men and women age 18 to 59 years old. Counselors were asked about the challenges of providing home-based services and their experience during the first six months of implementation. The focus group participants were asked about the community's perception of the HBVCT program, benefits, and barriers to acceptance.

**Results:**

6,757 clients were tested in the Amhara Region during the first six months of implementation. In all sites, 59.26 percent of clients were female, the age of clients ranged from less than one year to over 99 years of age, 45.37 percent were illiterate, and 79.38 percent reported never before being tested.

The qualitative interview and focus group data revealed three major themes: acceptance, challenges and barriers to testing, and benefits of HBVCT. Acceptance included both the general acceptance of the service and the acceptance of the locally selected VCT counselors. Challenges faced by clients were primarily related to understanding and fear of stigma or discrimination. Challenges faced by the counselors were mostly regarding the logistical challenges of providing home-to-home service and the technical challenges of providing counseling service. Benefits of the home-based service included reduction of traditional barriers to counseling and testing and normalization of VCT, making it easier and more socially acceptable to receive testing.

**Conclusions:**

HBVCT may provide an important avenue for testing Ethiopia's rural population. In this pilot, 79.38 percent of the Amhara clients had never before been tested for HIV, higher than other reported findings, highlighting the need for an alternate testing model (1).

Through this study, the HBVCT model was found to be accepted by community members in the three Amhara sites. In addition, community members were comfortable and reported a sense of increased confidentiality when receiving VCT services in their homes, even with a local community VCT counselor.

Acceptability and normalization of counseling and testing were strengthened by community-based HIV and VCT education or promotion activities. This occurred by reducing some challenges faced by the HBVCT counselors as well as increasing acceptability among the community. The logistics and discussion of HIV counseling and testing remains a barrier for couples. However, HBVCT can act as a catalyst for couples to discuss and receive testing, especially for couples with low levels of education and for those who reside in rural communities.

As the only qualitative and quantitative evaluation of a HBVCT program in Ethiopia, further research is needed to better understand the cost and prevention benefits of home-based service.

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## Acronyms and Definitions

ARHB	Amhara Regional Health Bureau
ART	Antiretroviral Therapy
CDC	Center for Disease Control and Prevention
EDHS	Ethiopian Demographic and Health Survey
EPHA	Ethiopian Public Health Association
EPP	Estimate and Projection Package
HAPCO	HIV/AIDS Prevention and Control Office
HBVCT	Home-Based Voluntary Counseling and Testing
HCT	HIV Counseling and Testing
HEP	Health Extension Program
HEW	Health Extension Worker
<i>Idir</i>	Traditional association
IRB	Institutional Review Board
<i>Kebele</i>	Neighborhood administration
MVCT	Mobile Voluntary Counseling and Testing
OSSA	Organization for Social Services for AIDS
PICT	Provider Initiated Counseling and Testing
SNNPR	Southern Nations and Nationalities People's Republic
UNAIDS	Joint United Nations Programme on HIV/AIDS
UW	University of Washington
VCT	Voluntary Counseling and Testing
vCHW	volunteer Community Health Worker
<i>Woreda</i>	District administration
WHO	World Health Organization

## **Background**

HIV counseling and testing is required for initiation of antiretroviral treatment (ART) for HIV infection as well as for prevention activities. As effective HIV/AIDS treatment, care, and support programs are becoming more widely available in sub-Saharan Africa, HIV counseling and testing as a means of early HIV detection is becoming increasingly important. This is reinforced by recent studies demonstrating the benefits of early ART initiation, which include reduced tuberculosis co-infection, reduced HIV related hospitalizations, reduced HIV transmission, and increased life expectancy (2) (3) (4) (5) (6) (7). The advantages of early ART initiation are pooled with the known benefits of HIV counseling and testing—increased preventive behaviors, condom use, and reduction of risk behaviors after HIV counseling and testing—make HIV counseling and testing critically important for curbing the epidemic (8) (9). These benefits have the greatest impact when counseling and testing and ART are initiated early. Although ART and voluntary counseling and testing (VCT) services are expanding and uptake is improving, there are still many people living with HIV who do not know their status. According to the Joint United Nations Programme on HIV/AIDS (UNAIDS), an estimated 7.5 million people worldwide are eligible for treatment, but are not accessing antiretroviral therapy because they are unaware of their HIV status (10).

Ethiopia has an estimated overall adult HIV prevalence rate of 1.5 percent or approximately 800,000 adults living with HIV<sup>1</sup> (1) (11). A total of 333,434 people had ever started ART, but only 249,174 adults and approximately 16,000 children were currently on treatment at the end of 2011. This represents a high ART coverage rate; approximately 86 percent of eligible adults and 20 percent of eligible children were receiving ART care in 2011 (11). This can be related to the dramatic scale up of health facilities offering ART services between 2009 (550 facilities) and 2011 (743 facilities). The primary method of HIV testing in Ethiopia is health facility-based testing (11). Use of provider-initiated counseling and testing (PICT) has increased testing in Ethiopia; however, in a comparison study in Uganda it was found that PICT captured the HIV positive population with low CD4 counts or a high World Health Organization (WHO) stage (9). While this is an important safety net for catching critically ill patients, PICT has less impact on prevention and transmission reduction (12). In December 2011, there were 2,309 public and private VCT facilities for a population of nearly 90 million; however, this is a dramatic scale up from 2004, when there were only 658 counseling and testing sites (11) (13). As Ethiopia's primary service delivery method, facility-based testing has many identified barriers, including

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<sup>1</sup> Using the Joint United Nations Programme on HIV/AIDS (UNAIDS) Estimation and Projection Package (PPE) /Spectrum Estimate 2011

time and cost involved in traveling to testing facilities, stigma associated with testing at a clinic, clients' low perceived risk of HIV/AIDS, concerns about confidentiality, and fears of being seen (14).

Facility-based testing has been shown in other African countries to create social inequalities in testing programs, leading to inequalities in care and treatment programs (15). Health facilities offering VCT services tend to be located in urban areas, clients self-select for testing based on demographic characteristics; however, as the HIV epidemic has spread from urban areas to rural areas, HIV testing services have not decentralized as quickly, leaving the rural population potentially exposed to HIV without access to VCT and ART services. Weinreb (2005), in a study looking at inequalities in HIV testing, found urban women were nearly twice as likely to be tested compared to rural women, and testing uptake increased with educational attainment and wealth (15). In addition, several studies have shown that facility-based testing services reach only a fraction of the population, primarily the more educated, male, urban, and wealthy populations (16) (17) (18).

These same trends and barriers to facility-based testing are reflected in Ethiopia. The most recent review of Ethiopia's HIV testing services indicated that 9.4 million (approximately 11 percent of the population) was tested in 2010-2011. This was an increase from 2009-2010 when approximately 6.7 percent of the population was tested (11). Results from the 2005 Ethiopia Demographic and Health Survey (EDHS) showed very low testing rates among both urban and rural populations. Only 8 percent of urban women and 15.2 percent of urban men had ever been tested for HIV, while only 1 percent of rural women and 4 percent of rural men had ever been tested (18). According to the 2011 EDHS, the testing rate has improved with over 63.8 percent of urban women, 58.6 percent of urban men, but still only 30.9 percent of rural women, and 36 percent of rural men (1). An analysis of the EDHS data found that previously untested men and women are more likely to be infected than their previously tested counterparts (19). HIV testing continues to be a critical entry point for care and treatment, as well as a prevention method to reduce new HIV infections and high-risk sexual behaviors. Low uptake of VCT among some populations impedes timely diagnosis and treatment, resulting in poor health outcomes for people living with HIV/AIDS and continued transmission rates.

Home-based or door-to-door HIV counseling and testing (HBVCT) eliminates several of the traditional barriers to VCT as well as social inequalities related to receiving VCT services. Wolff (2005) and Obare (2009) found that the HBVCT model eliminated barriers such as, time, transportation, and cost, thereby increasing uptake of VCT, especially among women and those with lower educational attainment (8) (20). Another study found that HBVCT led to reduced uptake variations based on individual characteristics such as educational attainment, age, gender, and residential category (16).

Weinreb found that increases in HIV testing and testing sites were not related to increases in testing equality. Using a model where all household members in the clients' homes being tested and with all households in a community being visited, there developed a level of normalization, increased confidentiality, and reduced stigma associated with testing. In another study, HBVCT provided an opportunity for disclosure for HIV positive clients who had been afraid to disclose to their families (21). HBVCT may also provide a unique opportunity for couples counseling and testing, which could be crucial for Ethiopia. The 2011 EDHS found that, of couples that tested positive, the majority were discordant; of 6,000 cohabitating couples tested, .6 percent of couples were both HIV positive, 1.1 percent of the tested couples were discordant (0.4 percent male was positive, 0.7 percent female was positive) (1). This highlights the need for socially acceptable couples HIV counseling and testing in Ethiopia.

There have been few studies that have reviewed barriers and challenges associated with HBVCT from the management and VCT counselor perspective or barrier specific to couples testing using the HBVCT model. In addition, most HBVCT studies are carried out in areas with a high HIV prevalence rate. This study aimed to evaluate the HBVCT model in three rural sites in the Amhara Region of Ethiopia, where the adult HIV prevalence is estimated to be 1.6 percent (1). This study sought the opinion of the community VCT counselors, senior VCT counselors, and the community members in three rural sites in the Amhara Regional National State.

### **Research Objective**

The objective of this research was to evaluate a HBVCT pilot program implemented in three Ethiopian sites targeting rural kebeles<sup>2</sup>. This study had two primary aims:

1. Analyze the outcome of HBVCT in three rural sites in Amhara Region Ethiopia, and
2. Identify barriers and challenges to couples counseling and testing using HBVCT in the Amhara region.

### **Ethics Statement**

This research was reviewed and approved by the Ethiopian partner organization, and the Amhara National Regional State Health Bureau (ARHB). Furthermore, the proposed research was approved by the Ethiopian Public Health Association (EPHA) Institutional Review Board (IRB) and approved as exempt from institutional review by the University of Washington (UW) IRB.

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<sup>2</sup> A rural *kebele* is considered fewer than 5,000 people.

## Methods

### Study Setting

Ethiopia has the second largest population in sub-Saharan African, with approximately 90 million people (13). The national adult HIV prevalence rate of Ethiopia is relatively low in comparison to other African countries. As the epidemic has matured, the majority of transmissions are the result of low risk heterosexual contact. The epidemic has stabilized and begun to decrease in urban areas. However, the Ethiopian epidemic remains heterogeneous; in rural areas, the transmission rate continues to increase. This is concerning for Ethiopia, where over 83.5 percent of the population lives in rural areas and there is limited health infrastructure in many rural areas (11).

Organization for Social Services for AIDS (OSSA) began a pilot home-based voluntary counseling and testing program in December 2010 in eight sites in four regions of Ethiopia. The regions (and sites) were Amhara (Bahir Dar, Dessie, and Gondar), Oromia (Adama, Harar<sup>3</sup>, and Nekempte), Southern Nations and Nationalities People's Region (Hawassa), and Tigray (Mekelle). At each site, two to three rural *kebeles* were identified and selected by the local OSSA branch office, the *Woreda* Health Bureau, and the *Woreda* HIV/AIDS Prevention and Control Office (HAPCO). The identified *kebeles* received targeted VCT promotion and HBVCT services.

Three sites were selected for this study. These sites (and rural *kebeles*) were Bahir Dar (Tis Abay, Andasa), Dessie (Addis Mender, Habru 01), and Gondar (Loza Mariam, Tekele Hymenot). These sites were selected because they are all in the Amhara National Regional State. Amhara is 91.35 percent ethnic Amhara, with a mix of Ethiopian Orthodox Christians and Muslims and a minority of Catholics and Christian Protestants (22).

### ***Bahir Dar (Tis Abay, and Andasa Kebeles)***

Bahir Dar is the Amhara regional capital and a popular destination for Ethiopian and international tourists. Approximately 30 kilometers from Bahir Dar, Tis Abay *Kebele* is located at the entrance of the Blue Nile Falls Park and home to a large hydroelectric dam. The population is primarily Ethiopian Orthodox, but there is also a Muslim population.

Andasa *Kebele* is located closer to Bahir Dar than Tis Abay, on the same unpaved road. Like Tis Abay, the population is primarily Ethiopian Orthodox. There are several public buses each day from Tis Abay to Bahir Dar servicing the *kebeles*. The closest health center is in Tis Abay. At the time of this research, Tis Abay Health Center was not offering ART or pre-ART services. The closest facility offering ART service was in Bahir Dar.

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<sup>3</sup> Harar Town is an independent city administration, but the rural *kebeles* targeted were located in the Oromia Region.

### ***Dessie (Harbu 01 and Addis Mender)***

Although these sites are managed by the Dessie Branch office, the *kebeles* are located over 40 kilometers from Dessie Town in the Kalu *Woreda*, between the towns of Kombolcha and Kemise. Kombolcha is home to a large military base, and Kemise is well known as an Oromia enclave within the Amhara region. These rural *kebeles* are located in a low elevation area where the population is predominately Muslim. Harbu 01 *Kebele* is close to a small urban area. Addis Mender is very sparsely populated with no adjacent urban center. Both areas are located on the main road which connects northern Ethiopia to the capital city, Addis Ababa. There is a health center in Harbu Town, but according to focus group participants, there were no ART services offered during the time of this study.

### ***Gondar (Loza Mariam and Tekele Hymenot)***

Tekele Hymenot is located about 15 kilometers from Gondar Town on a newly paved road with little public traffic and about 5 kilometers from Azezo Town. The population is predominately Ethiopian Orthodox Christian.

Loza Mariam is located about 30 kilometers from Gondar Town and 15 kilometers from Azezo Town. Loza Mariam borders a recently paved road that connects Gondar Town and Sudan. This road is used extensively by long haul truck drivers transporting agricultural goods. There is limited public transportation on this road. Both Loza Mariam and Tekele Hymenot are near to Azezo Town, which has a large military base. Azezo Health Center has been offering ART service for adults for several years and recently started offering pediatric ART services.

### **Description of HBVCT Program Plan**

This HBVCT pilot was one component of a larger VCT program titled, "Increasing Access of Voluntary Counseling and Testing Services to the Urban-Rural Hotspots & Increasing Access of Care and Support at Community Level." The HBVCT aspect of this intervention had three key actors. First, each branch office has a senior VCT counselor who oversaw the general management of the program, including budgeting, supply management, and supervision of the community VCT counselors and community VCT promoters. The senior VCT counselor was generally an experienced nurse or health officer with extensive experience with HIV and VCT programs. The community VCT counselors were less experienced. At a minimal level, each community VCT counselor had completed grade six. However, some community VCT counselors had extensive experience working with community health promotion programs and had very personal motivations for being involved in the program. None of the community VCT counselors interviewed had a clinical background or previous experience providing VCT. The program selected community members and trained them as lay community VCT counselors. By design, the community VCT counselors were selected from the targeted *kebeles*; branch offices worked with the

local *kebele* to select the individuals to make sure that they had a good social standing in the community. Some sites did not follow this model, their community VCT counselors were selected using similar criteria, but from nearby urban centers not the targeted *kebeles*. The branch office also worked closely with the local *kebele* administration to find three community VCT promoters from each *kebele*. These volunteers were only required to have a good standing in their community, have an interest in health and community mobilization. The community VCT promoters did the majority of community- and home-based education about HIV and VCT. These volunteers worked with local leaders and the local government to maintain positive support for the program. In addition, they acted as key informants to the senior and community VCT counselors about the attitudes of the community towards the HBVCT service, identified households eager for VCT, and identified the potentially challenging households for VCT service.

### Selection of Study Subjects

The population base for this study included people living in the rural *kebeles* selected by OSSA in the Amhara Region and the staff at the Amhara branch offices implementing the HBVCT program. In-depth interviews were conducted at each branch office with the community VCT counselors and senior VCT counselors approximately nine months after the start of the HBVCT service. All senior VCT counselors (three) and community VCT counselors (six) were willing to share their experiences with the HBVCT program.

Focus group participants were recruited by community VCT promoters at the *kebele* level, with guidance from the senior VCT counselor and the primary investigator. Recruitment script and study details were provided to each community VCT promoter. To be eligible for the focus group, participants were between 18 and 59 years old, ever-married, and lived in one of the *kebeles* receiving HBVCT service from OSSA.<sup>4</sup> There was no requirement for the participants to have been tested by the HBVCT service or any previous relationship with the program. The focus groups were conducted separately for men and women.

**Table 1. Demographics of Focus Group Discussion Members**

Site	Sex	Age Range	Number of Participants	Received HBVCT	Currently Married
Bahir Dar					
<i>Andasa</i>	Female	20-35	12	58.33%	16.67%
<i>Tis Abay</i>	Male	19-58	8	63%	25%

<sup>4</sup> The original design for the focus group discussion was for participants to be ever-married between age of 18 and 59 years old. During one focus group a participant age 74 attended and it was decided to be culturally inappropriate to ask him to leave, and may have affected the participation of other community members.

Dessie						
<i>Addis Mender</i>	Female	15-45	12	75%	75%	
<i>Harbu</i>	Male	22-50	12	83.33%	66.67%	
Gondar						
<i>Tekle</i>	Female	20-48	8	62.5%	37.5%	
<i>Loza Mariam</i>	Male	35-74 <sup>4</sup>	8	87.5%	100%	

### **Informed Consent**

Both interview and focus group participants were given a consent form written in Amharic that was approved by the UW IRB, ARHB, OSSA, and the EPHA. Before the interview and focus group sessions, the consent form was read to participants and time was given for participants to ask questions. Following this clarification phase, participants either signed the consent form themselves or they were given ink to mark the form with a finger print. This is the same process taken by community VCT counselors during counseling and testing sessions and recommended by Federal HAPCO.

### **Data Collection**

All interviews and focus group discussions were conducted in August and September 2011. Focus groups were conducted in the target *kebele* at either a private residence or a health post. Interviews were conducted at the OSSA branch offices in a private office with the senior VCT counselor and the two community VCT counselors at each site.

The quantitative data were secondary, collected from the database kept by the OSSA Head Office data clerk, The Ethiopia National VCT, Site Data Collection, Analysis and Management System (CDC August 2001).

### **Data Analysis and Quality**

Interviews and focus groups were conducted by the investigator and a translator. The translator was given a short orientation on the research methodology, the interview and focus group guidelines, as well as an overview of interview and focus group facilitation techniques. All interviews and focus groups were conducted and digitally recorded in the local language, Amharic. The interviews and focus groups were transcribed and translated into English by a certified translator, then hand-coded using open coding and grouped into three dominant themes.

Client testing data were recorded by community VCT counselors on the Ethiopia HIV Counseling and Testing Record using a client code that was only given to the client. Community VCT counselors received data collection training during their initial VCT training. The reports were collected weekly by branch offices and entered into a database by a data clerk<sup>5</sup>. Quarterly, or, when possible, the branch office submitted the branch-level data to the head office, where the databases were compiled into the Epi Info

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<sup>5</sup> Gondar Branch Office did not have a data clerk. All data entry was done by the community VCT counselors.

Ethiopia National VCT, Site Data Collection, Analysis and Management System (CDC August 2001) (Epi Info Version 3.5.1, CDC 2008). Secondary data were collected from the OSSA Head Office, translated, and analyzed using Rx64 2.13.0 (Cran Mirror FHCRC, Seattle, Washington). Data were analyzed as aggregate data representing all HBVCT in the Amhara Region, as well as stratified by site to account for site variations. Demographic and social characteristics were generated using proportions (n, %).

## Results

### Characteristics of HBCVT Clients

Testing and counseling report data were available from seven of the eight Ethiopian sites where HBVCT was implemented.<sup>6</sup> In total, the seven sites tested 13,375 clients from January 1, 2011, to July 1, 2011. Of those, 6,757 (50.52%) were tested and counseled in the three Amhara sites.

The clients tested and counseled in Amhara were 59.26 percent female. This varied slightly in the three different sites, the highest being in Bahir Dar 63.16 percent. The median age of clients was 27 years old; the ages of the clients ranged from <1 (n=1) to 99 years old (n=2). The largest age group tested was under the age of 15 years old, 26.94 percent. Although this testing group was high in Dessie and Gondar (40% and 38.1% respectively), there were no counseling and testing sessions reported for children less than 15 years of age in Bahir Dar. The next largest age groups were 50< years (12.62%), 25-29 years (12.30%), 16-19 years (11.29%), and 20-24 years (11.14%).

The target testing areas were classified as rural by Ethiopian standards; however, 8.90 percent of clients reported their residential category as urban. Among the clients tested, 45.37 percent were illiterate, 10.17 percent were able to read, 16.58 percent had completed primary education, 15.42 percent had completed secondary education or above in the new or old curriculum, and 12.52 percent reported other educational experience.<sup>7</sup>

Among those tested, 55.23 percent were ever-married. The number of ever-married clients could reflect the targeted testing for couples, but it should be noted that never-married was 35.66 percent. Of all clients tested, 22.77 percent were tested in couples testing session. Of all married couple clients tested, 49.96 percent were tested as a couple. The two dominant reasons given for seeking testing were “plan for the future” (72.61%) and “other blood/fluid exposure” (16.69%).

Of all the clients, 79.38 percent reported never before receiving counseling or testing for HIV. Of those that had previously been tested, 18.07 percent reported previously testing negative, while 2.40

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<sup>6</sup> Excluding Nekempte, which did not submit testing reports to the head office.

<sup>7</sup> Other educational experience may include religious institution education. Focus group participants mentioned local religious training institutions during focus groups.

percent had a previous HIV positive test. Less than one percent reported previously testing, but had not received results. During counseling, few clients were expecting a positive HIV test result, 0.37 percent, while 47.4 percent expected a negative result and 46.74 percent reported that they did not know what result to expect.

**Table 2. VCT Client Demographics and Results by Site**

<b>Characteristics</b>	<b>Bahir Dar</b> <i>N=2120</i>	<b>Dessie</b> <i>N=2773</i>	<b>Gondar</b> <i>N=1864</i>	<b>Total</b> <i>N=6757</i>
Sex				
Male	36.84	39.20	47.48	40.74
Female	63.16	60.80	52.52	59.26
Age groups				
0-15	0.00	40.03	38.09	26.94
16-19	15.94	8.62	9.98	11.29
20-24	16.18	9.05	8.53	11.14
25-29	19.20	8.65	9.87	12.30
30-34	12.08	6.49	6.81	8.33
35-39	9.91	4.98	6.01	6.81
40-44	7.41	5.63	6.12	6.32
45-49	5.57	3.35	4.08	4.25
50 <	13.73	13.20	10.52	12.62
Marital Status				
Never married	28.40	35.67	43.94	35.66
Ever-Married	70.33	50.23	45.44	55.23
Married	54.39	44.07	42.80	46.96
Divorced/Separated	11.04	3.93	2.05	5.65
Widowed	4.91	2.24	0.59	2.62
Education Status				
Illiterate	50.28	40.06	47.74	45.38
Literate	17.59	10.31	1.42	10.18
Grade1-6	12.45	19.22	17.37	16.58
Grade 7-12	19.15	12.77	14.64	15.29
Vocational	0.00	0.07	0.00	0.03
Tertiary	0.05	0.00	0.00	0.01
Other	0.47	17.56	18.84	12.53
Previously Testing Status				
Never tested	69.10	80.92	89.29	79.38
Tested Positive	0.42	5.12	0.51	2.40
Tested Negative	30.38	13.92	9.81	18.07
Result not given/not taken	0.09	0.00	0.17	0.08
Couple's Counseling and testing				
Tested as couple	22.13	17.74	31.04	22.77
Married couples tested	19.49	17.27	30.64	21.62

## Qualitative Results

The qualitative data revealed three major themes: acceptance, challenges and barriers to testing, and benefits of HBVCT.

### *Acceptance*

There were two areas of acceptance: acceptance of the program and the service being offered in the community and acceptance of the counselors providing the service. Acceptance of counselors was common in all three sites. In two sites, the counselors were recruited from the target *kebeles*, while in the third site; the counselors were recruited from the large urban center about 30 kilometers outside the target *kebele*. This created challenges for the counselors in terms of travel, but did not noticeably alter their acceptance by the community according to the focus group participants.

The counselors were accepted by the communities because of their dedication to work, ability to integrate with the community, being from the community, and their skills as counselors. During interviews, the counselors explained why they took the job. They expressed dedication to or experience working with HIV care and support and prevention programs. One counselor cited their personal HIV status as motivation. The focus groups mentioned the counselor's confidence and openness with being HIV positive as inspiring for community members. This dedication to the work was important in relationship to the workload discussed below.

For all counselors, even those born and raised in the community, the importance of "blending" or community integration was mentioned by both counselors and community members. Clients wanted to identify and feel comfortable with the person they were inviting into their home for a personal counseling and testing process.

*"Health workers should be able to blend in with the community. Although they may dress differently, they should eat and drink what other people in the community eat and drink." (Male Focus Group Participant Bahir Dar)*

The skill levels of the counselors were important to the community members. In one focus group, a community member who knew the counselors doubted that they really received adequate training, but in other cases community members said that they felt more comfortable because counselors were from the local community. Regardless, most community members expressed appreciation for the counselors' knowledge and training. Other key attributes mentioned include the counselors' personalities, communication skills, adaptive/problem solving skills, and abilities to make the client feel at ease.

*"The community knows them from top to bottom and they are perceived as these people who have been trained by the government and have now returned to serve the community. The community likes the idea of being served by their own people. And government bodies here also give them a lot of encouragement and help them find acceptance [within the community]." (Gondar Senior VCT Counselor)*

Acceptance of the program was linked to the community's loss, the level of VCT promotion in the community, local support, trust, and desire for testing. The sense of loss was the community's knowledge of community members who had died in the past, presumably due to HIV or the lack of HIV prevention and treatment service. Community members cited this as an argument for embracing HBVCT in their community.

*"We have previously lost a lot of our children, relatives, and fellow community members behind closed doors before we knew about this disease. There are a lot of people that we have lost because they did not receive any treatment, because they didn't get tested, and because they didn't take any medication. Any that is something that we regret a lot today." (Female Focus Group Participant Gondar)*

Community promotion was a key aspect of service acceptance, as well as making VCT easier for counselors. According to counselors interviewed, acceptance increased with the level of VCT promotion, making the community VCT promoters a crucial feature in the provision of HBVCT. Community VCT promotion was linked to the community's trust of the service.

*"These [community VCT promoters], by the way, are trend setter and their job is to pave the road [for HBVCT]. They are the ones who provide the initial information necessary for the whole process." (Gondar Senior VCT Counselor)*

Focus group participants expressed their demand for HBVCT by requesting expansion of the program to additional *kebeles*, complaining when households were unintentionally skipped, requesting that counselors come soon and additional services added such as home-based anti-retroviral therapy and economic support.

*"It should not stop here. It should be sustainable because we are benefitting from it and it should continue in the future as well. That's what people are saying- that it should not stop here." (Male Focus Group Participant Gondar)*

### ***Challenges and barriers to home-base voluntary counseling and testing***

Challenges and barriers to HBVCT services arose in three categories: challenges and barriers for clients to receive testing, for counselors to provide counseling and testing services, and for couples receiving counseling and testing services.

The challenges and barriers for clients included reasons for refusing counseling and testing, lack of understanding, poor quality of service, and fear of gossip, stigma, discrimination, testing positive, loss of status, and suicide. According to community members, some felt they did not need testing based on some characteristic or status level. According to interviews and focus groups, these groups included youth, more educated community members, elderly, and wealthy community members.

*"Young adults, especially young men, they think they know everything. They even make it difficult for other to get tested when they are around, so young men are difficult." (Bahir Dar Community VCT Counselor)*

Community members mentioned that there was little benefit to getting tested if they had limited or low access to ART services. Others had already been tested. Barriers for some households included concerns about having to reveal their risk behavior during counseling. This was specifically mentioned as a barrier for youth and couples.

*“But what I do when I test spouses is that I would respect their privacy and I wouldn’t try to dig into their past. But when it comes to their future, it is important that they get tested and know their status in order to be able to have children and ensure the family’s survival.” (Bahir Dar Community VCT Counselor)*

There were a number of barriers mentioned related to the quality of the home-based service model, including perceptions that there were not enough counselors providing home-based service, counselors trying to manage too many households at one time, or counselors being in too much of a hurry during counseling sessions. Other barriers included perceived quality issues that concerned the community, but did not actually have an impact on quality, such as lack of electricity for a medical test, lack of running water, and equipment inferiority. These factors should not impact the quality or validity of the testing process, but the community did not understand how the test kits worked in comparison to the facility-based testing where a laboratory was available. Many clients believed there was no way that the test performed in a rural setting without water or electricity could be the same quality as a HIV test done in a facility setting.

*“But sometimes, the problem is related to the test results. And what I mean when I say this is that some people tend to think that the test results offered at health facilities-health cater and hospital- are more accurate. For instance, here at Tis Abay, there was a guy, without knowing. There are some people who refuse to accept it when they are told their results. And that is because they think that the equipment [at health facilities] are better and they also think that the accuracy of the result increase with the title of the health worker.” (Male Focus Group Participant Bahir Dar)*

There were a number of anecdotes about community members testing positive after HBVCT, but testing negative a second time at a nearby facility. Focus group members dismissed this as community members trying to hide their true HIV status.

*“I decided to go again and get tested again because people told me that they were incompetent and they said I should go to a hospital and get tested there. I went to the hospital but they confirmed that I had HIV. But I got my child tested here with them and they told me she was [HIV] negative. I then took her to a hospital and also told me she was negative.” (Female Focus Group Participant Bahir Dar)*

Fear was another issue that clients mentioned as a barrier to receiving counseling and testing. Clients stated that there was fear related to gossip about their HIV status because of a HBVCT visit, gossip about weight change being a sign of HIV status, fears of being seen testing alone, and the fear of loss of status if they tested positive. Youth were said to be afraid of being accused of having risky

behaviors or being disowned by family. These fears were also mentioned as issues with facility-based counseling and testing service.

The challenges and barriers that counselors face are related to the client population, referrals, counseling and results, training need, VCT promotion, and workload. Different client groups presented different challenges to counselors. Counselors interviewed mentioned children, couples, and large household size as client-specific challenges. Household size had an impact on the length and challenge of counseling. Counselor explained that the pre-counseling sessions took more time in large households because household members had differing ideas about HIV and VCT, and the counseling were forced to take time to get all household members to the same level of understanding. Counselors also had issues with finding household members. This was an issue for counselors as well as for couples counseling. *“Well, different people think differently. So because people do not think alike, when people get tested in groups, they may disagree about something.” (Female Focus Group Participant Dessie)*

There was an emotional challenge with counseling stated, especially when giving clients a positive result. Other challenges regarding counseling included negotiation of results, risk reduction counseling, and dealing with other health issues. Negotiation of results was mentioned as a challenge for both counselors and clients. During the counseling session, the counselor must determine how the results will be shared, either with the entire family or individually. This was specifically an issue in large households, during couples testing, and when parents were tested with their adult children. The parent wanted to know the result, but the child might prefer to hear the test result alone.

*“There is a negotiation which takes place from the outset during pre-test counseling...But the issue of how results should be disclosed and how clients should be informed would be settled early on during pre-test counseling. And then after that, the same thing would be repeated to them when they come for post-test counseling.” (Gondar Senior VCT Counselor)*

Counselors discussed the challenges of their workload. Risk reduction counseling was mentioned as challenging skill to develop, because of the sensitive nature of getting clients to disclose their risk behaviors honestly without infringing on their desire for privacy. Clients often expected counselors to be able to deal with other non-VCT health issues. Similarly, counselors were expected to listen to many stories about family and community members who had died.

*In addition, the salary and incentives were very low, but counselors were expected to provide counseling and testing for large area, without laboratory support, and travel from house to house primarily on foot. “One challenge that they face is that the program, as you know, is home-based and going door to door to each house can be exhausting. They travel all day carrying their tools in a bag and as you can see, the weather is very hot here.” (Dessie Senior VCT Counselor)*

Counselors mentioned other challenges such as dogs that were intentionally or unintentionally left out to scare counselors and uncomfortable homes for counseling and testing.

*“They don’t even keep their dogs in cages when we come we ask them to please put them into the cages and after we enter there may not be chairs to sit in so we sit on our scarf or if we have papers we sit on the so there are different kinds of problems.” (Bahir Dar Community VCT Counselor)*

The most common challenge of HBVCT couples testing was when one spouse was absent. In most cases, it was the male who was absent because males generally work outside the home while women work in the home or stay at home to care for children.

*“One challenge in that regard is that the community is agrarian and although Tis Abay may be considered a town, its residents spend their days [farming] in rural areas around the town. And because they are farmers, we often have trouble finding them at home when we go to their house in the mornings, especially the men. However, once they find out that their wife has been tested, they would seek us and come to us on their own and they tell us that they had missed us the last time because they were at work.” (Bahir Dar Senior VCT Counselors)*

Both focus group participants and counselors acknowledged that couples had more to fear when it came to HIV counseling and testing. These additional fears included discordance in test results, being accused of bringing the disease into the relationship, domestic violence, divorce, abandonment, and care for children.

A spouse may have refused testing for many reasons, they already knew their status, preferred to test alone, or perceived that they were HIV positive or at high risk and feared testing. Clients and counselors explained that with some couples, it was the male that decided the couple would be tested or not and the female had little say in the matter. Counselors said that it was challenging in some cases to convince the male to be tested instead of only having his wife receive the test. Trust in the marriage appeared to be a key component for testing. Clients say that they sought testing when they did not trust their partner, but some sought testing when they did trust their partner or wanted to build trust in their relationship.

*“Well, we have a culture in these rural areas when it comes to married couples where the husband goes to the city for the market or what have you. And when the men go there, their wives should have suspicions about their husbands.” (Male Focus Group Participant Gondar)*

There were still many misconceptions regarding HIV in couples. This was a challenge for counselors and community VCT promoters to explain the more technical aspects of HIV infection in couples. Specifically, it was difficult to explain to the community how discordance can be possible, the risks related to discordance and concordance, timing related to pre-marital testing, and mother to child transmission. These misconceptions or differing levels of understanding also affected the couple’s acceptance of HBCVT service.

When focus group participants were asked about discussing HIV and VCT with their partner, female participants said they could not discuss without risk of being accused of exposing or insulting their

partners. Community members felt that only educated couples would be able to discuss these types of issues. Some couples mentioned not having the opportunity or motivation to discuss before being presented with the opportunity to be tested.

*“The thing is, if the husband is a farmer and the wife is a housewife, they wouldn’t care about whether they have HIV or not and they wouldn’t say “Let’s get tested and know our status.” (Female Focus Group Participant Bahir Dar)*

### **Benefits of HBVCT**

During focus groups and interviews, participants mentioned several areas that made the home-based service stand out from other VCT services. These included areas that saved clients effort or resources, sharing results, normalizing VCT service, protecting family, quality of service, and barriers to facility testing. Clients discussed how VCT services being offered in the home prevented them from having to spend more time outside of the home, eliminated travel, reduced the challenge of receiving VCT with small children, and provided VCT access for those who had no previous access. In addition, clients mentioned that HBVCT eliminated money needed for food, transport, or medical fees required to access facility-based VCT services.

*“So pregnant women and mothers would go and get tested but the husbands would stay behind. But when home-based [VCT] come, husbands also got tested and little children also got tested as well. So because [the husbands] would refuse to go, home-based [VCT] is better. (Female Focus Group Participant Gondar)*

Sharing results was found to become common and acceptable when VCT was offered together in the home, especially during couples’ or group counseling and testing sessions. The community cited the support and reduced transmission as benefits of the home-based service and sharing results.

*“One big advantage that I see in getting tested as a family is that if I go to a health center alone, get tested there and test positive, I would be very afraid to come back home and tell my family that I tested positive. So getting tested at home would remove a lot of worrying, embarrassment and fear.” (Male Focus Group Participant Dessie)*

Clients expressed that there was no reason to feel fear, stigma, or discrimination associated with HBVCT because the services were offered openly to all community members regardless of demographics or risk behaviors, and the service provider is seeking the client rather than a client seeking the service. Seeking health services at a clinic makes community members assume that the client has perceived illness or risk behaviors. Clients mentioned that they could receive HBVCT testing without the other community members assuming they must be ill if they were seeking counseling and testing. Clients mentioned feeling that if they refused testing they would be subjected to gossip from recently tested neighbors who had already accepted the service.

*“If a women goes to a health center or elsewhere to get tested, it would give the impression that she suspects that she might have HIV and that she hasn’t been faithful [to her husband]. But if she does at home, it wouldn’t have any such consequences because she wouldn’t be the only person who would get tested and all her neighbors would also get tested.” (Bahir Dar Community VCT Counselor)*

According to community members, VCT provided protection, allowing families to plan for the future and protecting the health of children or future children. The idea of protection was used to explain how VCT could preserve a marriage or insure a good marriage through premarital counseling and testing. Accepting counseling and testing also protects through knowing one’s status, learning more about prevention, preventing unnecessary worry about HIV status, and increasing confidence through HBVCT. These reasons were not unique to HBVCT, but they were made more accessible to community members. Male focus group members mentioned this more frequently than women and frequently and in the context of their paternal responsibility to protect the family.

*“It is a God given opportunity and our constitutional right [to eliminate] this indelible and untreatable disease of our times. Family comes first and the first thing you have to do to save your family. We are advising our children to beware of this fair and to advise their friends to do the same.” (Male Focus Group Participant Gondar)*

Quality of service was considered better with the HBVCT service than mobile or facility-based services. The counselors were said to be in less of a hurry because there was no line of waiting patients. In all three sites, clients shared anecdotes about a client testing again in the health center after receiving the home-based service and receiving the same result both times. The majority of clients felt that confidentiality of HBVCT service was better than their local facility-based service. Fewer people could witness the client seeking testing if they did not leave the home. Especially important to respondents was that there were fewer witnesses to a client’s reaction to his or her test results. At a health center, the clients would need to take time to compose themselves before leaving the testing room where they could be seen, and they would feel rushed if the clinic was busy. When testing in their own homes, they could take as much time as they needed to process the results. Community members also acknowledged that the confidentiality was only as good as the individual health professional, and they felt comfortable with the confidentiality of the community VCT counselors. Few clients expressed concern that the counselors would share the results with the community VCT promoters or concern that the promoters might not be able to keep their secrets.

*“We wouldn’t be concerned about these things. We know that even if we go to Kombolcha and get tested there, they would test us using the same tools so we wouldn’t doubt the accuracy of the results when we voluntarily get tested.” (Female Focus Group Participant Dessie)*

The barriers to facility testing were also considered to be benefits of HBVCT. Barriers to facility-based VCT included gossip, they believe only sick people go to the health center, time, travel, money required, and it is difficult for married couples to set aside time to go to the clinic together.

## **Discussion**

This study aimed to assess the barriers and challenges to HBVCT for the community as well as barriers specific to couples. In addition, this study sought to record the experiences and challenges from the community VCT counselors providing HBVCT.

From all clients tested, 79.38 percent reported never before receiving HIV counseling and testing. This is higher than first time testers found in other Ethiopian studies (11) (1). The 2011 Demographic Health Survey found 62.9 percent of women and 56.5 percent of men in the Amhara Region and 69.10 percent of rural women and 64 percent of rural men in Ethiopia had never before been tested.

A study of couples testing among clients in Addis Ababa found that 62.5% were seeking VCT for pre-marital testing (23). Couples tested using the HBVCT model primarily reported “planning for the future” or “exposure to fluids” as the reason for testing; 71.43 percent of those tested as a couple. There were only a small number of clients who said they presented for pre-marital testing. Premarital testing is an important testing opportunity for unmarried couples, but this shows the potential of HBVCT to reach already married couples who remain at risk and untested.

The HBVCT program was accepted by the target communities just as similar services have been found acceptable in other African countries (24) (25) (16). Acceptability in Ethiopia and other locations was strengthened with the addition of community promotion for VCT (7) (26). A barrier to acceptance identified by focus group participants, community counselors, and in published literature is lack of awareness of community members (26) (27). The community VCT promoters provided basic HIV and VCT knowledge to community members, making the workload of the community VCT counselors easier when they began the counseling process. Community promoters served a key role in assisting the community VCT counselors by providing insight into the community’s level of understanding, willingness, and resistance to the HBVCT service. By providing this information, the VCT counselors can target VCT counseling appropriately for challenging groups or households and counselor at a level appropriate to the community’s understanding.

HBVCT has been shown to benefit clients by reducing the time commitment, financial cost, and travel involved in visiting a health facility for HIV counseling and testing (26) (8) (27). These conveniences benefit the entire community, but were considered most beneficial to women, women with children, and rural community members who are disabled or bed-ridden. Beyond these conveniences, community members expressed that HBVCT increases their sense of confidentiality. First, being able to

be tested in the home where there are fewer witnesses and no one will see them going to or coming from the health center. This advantage was also found in Uganda, where the fear of walking home after receiving results was a barrier to receiving results in a health facility setting (8). In Tanzania, home-based couples counseling was more acceptable because couples preferred not to be seen walking together to the health center (26). Second, clients can be tested with family members, allowing the opportunity to share results and reducing the barriers to HIV status disclosure. The family is considered more trust worthy with such an important secret if the test result is positive. By offering VCT to every community household, the stigma associated with the process of counseling and testing is reduced. Focus group participants revealed that this normalizing effect made the HBVCT service socially acceptable. In some cases, clients felt that the households who refuse testing had something to hide, leaving them open to gossip. This normalizing effect is an important benefit of HBVCT, but stigmatization and discrimination of community members who refuse testing should be avoided and prevented. Similar normalizing trends were found in a home-based couples counseling program in Northern Tanzania and Uganda (26) (28). In Malawi stigmatizing attitudes were found to be associated with fear of becoming positive, but not associated with past testing or the decision to be tested (29).

Similar to published research, counselors and clients reported that youth had fear related to their family learning that they are HIV positive, losing support from family, and regarding privacy of their risk behaviors (8). In a randomized trial comparing acceptability of facility and HBVCT in Uganda among family member of HIV positive index clients, youth age 15 to 24 were least likely to be tested using the home-based service (30). A similar qualitative review of a annual serosurvey in a population-based cohort study in Uganda, found that youth did not feel HBVCT was appropriate for youth still living with their parents (8). However, it is important to note the potential variation in acceptability based on cultural context. In Zambia, a population-based survey showed that youth aged 15 to 24 found HBVCT service to be highly acceptable, because traditionally youth would consult their older family members on health issues (16). Acknowledging the potential impact of culture is important, it should not be assumed that the HBVCT results from the Amhara Region can be directly applied to other country or even regions in Ethiopia.

Barriers to couples testing are both logistical and cultural. In these rural communities, the dominant livelihood is farming. Farming takes men away from the home during the day, making it challenging for community VCT counselors to find both partners at home for testing. The burden of testing then falls to the women, who are expected to coordinate with the counselors and keep their male partners at the house until the counselor arrives. Counselors tried to compensated for this barrier by setting appointments, arriving early in the morning before men leave for the fields, visiting on holidays or holy days.

Couples find it challenging to discuss HIV counseling and testing with their partner and face difficulties dealing with the disproportionate input in the decision making process. Focus group participants reported that the husband sometimes agree to test and then refuse during counseling, suggesting that his wife should be tested, applying the results to both partners. Similarly, there were also reports of women be forbidden from being tested. If testing is completed and one or both test positive, women fear accusation, domestic abuse, and divorce. This highlights a challenging area for couples and testing counseling- for the clients as well as for the counselors. Discussing VCT and HIV with a partner was considered to be something that only the most educated community members could manage. Partners fear insulting the other partner or inviting accusation of exposure or risk behavior. Similar results were found that suggestion VCT counseling can be seen as equivalent to admitting infidelity (23). However, with HBVCT the provider is seeking the couples for testing; the counselor becomes a catalyst for dialogue and reduces opportunity for accusations. Other studies have similarly revealed discussion and decision making as a barrier to couples testing (26). The effect of HBVCT being a catalyst for testing is especially applicable for couples testing, for those who could not otherwise discuss the issue. Senior VCT counselors pointed to cases where both husband and wife were HIV positive and receiving ART care, but had not informed one another. They mentioned other cases where couples opted to be tested and counseled, but had not previously discussed testing together.

In addition to barriers preventing clients from seeking testing, the counselors themselves experienced challenges when providing the service. By having the counselors based in and selected from the community, their travel is reduced making transportation easier, and potentially making the service more cost-effective. In this pilot, the counselors are still expected to cover a large area and a large number of households primarily on foot. In addition, the counselors from one *kebele* were expected to support the service in another rural *kebele*, and the senior counselor had to travel from the urban center to provide supportive supervision to both rural *kebeles'* community VCT promoters and community VCT counselors.

Counseling can be a difficult job. The negotiation process that happens in group or couples counseling is challenging and requires practice and experience. The counselor must decide with the clients who will be tested and how results will be shared. This can be a delicate conversation to facilitate. Counselors working with couples or groups need to discuss risk behaviors and a risk reduction plan, but when working with more than one client the counselor must be careful not to disclose clients' risk behaviors to other family members.

Clients expected counselors to offer more than just counseling and testing. They expected that the counselors will make them feel at ease and not prioritize the counseling and testing process over a relationship. In other words, counselors are expected to stay and visit with clients in a culturally

appropriate way. This could be a regionally specific challenge presented by the rural and traditional Amhara culture. Counselors reported that this social obligation was a challenge, clients expected more than simple counseling and testing, especially when clients are not ready for testing and follow up counseling was needed, or, similarly, when clients tested positive and follow up counseling was needed to encourage enrollment in a pre-ART program.

Early ART initiation is considered an important strength of the HBVCT model (2) (15). A referral and follow-up system for clients who test positive is essential. Counselors reported that they had no way to know if clients who tested positive ever visited a health facility for care and treatment. A referral system is needed to ensure that early detection, obtainable through HBVCT, is followed by early enrollment into treatment and care services in order to garner the benefits of reduced transmission and the other benefits of early HIV detection and treatment.

### **Limitations of Study**

It was not possible during this study to interview counselors and community members for all eight sites involved in the pilot. Due to financial, logistic, and capacity restraints the study was limited to interviews with only community VCT counselors and included only the Amhara region sites. The small sample size prevented stratified analysis of interview responses that could otherwise have directed future research. It should be noted that the level of HBVCT acceptance and types of barriers could vary within Ethiopia.

All data collection tools were translated from English to Amharic and the qualitative data was translated from Amharic to English. Although the focus groups and interviews were translated by a certified translator and the author has training in Amharic, there are still both subtle insights and crucial details lost during any translation process.

### **Areas for Future Research**

Additional research is needed to explore the difference in HIV positive detection rates, early diagnosis, and the costs of providing different models of VCT delivery in Ethiopia. There have only been a few studies looking at the cost effectiveness of the HBVCT model. Cost effectiveness studies have found the HBVCT model to be effective for early case detection; however, these studies did not include the cost of VCT counselor training and were completed in Kenya and Uganda where the HIV prevalence is known to be significantly higher than in rural Ethiopia (9) (28) (2) (21). Furthermore, there are other special considerations for HBVCT application in Ethiopia that will affect the cost effectiveness, such as the low rural and national HIV prevalence rates, the large population, and the high proportion of the population living in rural areas with low health service access. These practical challenges to HBVCT implementation need to be evaluated for Ethiopia.

Secondly, research is needed in order to determine who could best implement HBVCT in Ethiopia. In 2004, the Federal Ministry of Health (FMoH) graduated 7,136 community health extension workers (HEW) as part of the Ethiopian Health Extension Program (HEP). By 2010, there were 30,578 HEW working with the local government to provide disease prevention, family health, environmental hygiene and sanitation, and health education to every household across the country. In addition, the HEW work with several volunteer Community Health Workers (vCHW) to manage rural health posts and provide community education packages to individual households. The HEW are expected to spend 70 percent of their time on household visits and each household may receive up to 96 hours of training. In some regions and urban areas HEW have started offering HBVCT. One of the biggest challenges for the HEW has been the integration with other development programs within the HEP, increasing the workload of the HEW. This is believed to be adding to the burnout of HEW and resistance from vCHW (31). The HEW would be a good fit for offering HBVCT to rural and urban households. The HEW are already in the homes and perhaps stigma associated with their visits could be eliminated because the HEW focus on all health issues not only HIV/AIDS. However, it should first be assessed if the HEW and vCHW have the capacity to add this service to their already heavy workload. Furthermore, this study represented community VCT counselors who provided one service, HBVCT. It should be assessed if the HEW implementation of HBVCT would alter the acceptability, benefits, and barriers to HBVCT.

## **Conclusion**

HBVCT may provide an important avenue for testing Ethiopia's rural population. The home-based counseling and testing model in this study was found to be widely accepted by community members in the three Amhara sites. In addition, community members were comfortable and reported a sense of increased confidentiality testing in their homes, even with a local community VCT counselor.

Acceptability and normalization of counseling and testing is strengthened by community-based HIV and VCT education or promotion activities. These activities reduce some challenges faced by the HBVCT counselors, as well as increase acceptability of VCT among the community. The logistics and discussion of HIV counseling and testing remains a barrier for couples. However, HBVCT can act as a catalyst for couples—especially for couples with low levels of education and in rural communities—to discuss and receive testing. As one of the only qualitative and quantitative evaluations of a home-based counseling and testing program in Ethiopia, further research is needed to better understand the cost and prevention benefits of home-based counseling and testing.

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## **Appendices**

### **Appendix A. Focus Group Guideline**

#### **Ethiopian Rural HBVCT Client Focus Group Topic Guide**

As participants arrive, each one is given an Amharic version of the Focus Group Consent Form. The participants are asked to review this form.

#### **Introduction**

When all participants have arrived, the investigator and research assistant will explain the background of the study and the expectation of the participants during the focus group.

Facilitator: “Welcome to this discussion. Thank you for choosing to participate. Today we will be discussing a new service that is being offered by Organization for Social Services for AIDS (OSSA). Since January, OSSA has been providing home to home HIV counseling and testing service in your community. Providing HIV counseling and testing like this is a new way to provide this service.

Today we are we want to hear about your experience as men/women, and another day we will meet with a group or women/men to get another perspective from the community.

Today we would like to hear about your experiences, experiences of your community, and your opinions of this model for providing HIV counseling and testing. OSSA is interested in continuing and expanding this service. The information you provide us today will help OSSA to make a program that is effective for you and your community. First, we will review this form to be sure that you understand what we are doing and if you would like to participate and stay for the discussion today.”

The facilitator will read the form, in Amharic, stopping after each section for questions. After the entire form has been read and the participants are given the opportunity to ask questions, the participants are asked to sign the consent form and submit the copy to the researchers. The clients are offered another copy of the form for their records.

#### **[Collect All Focus Group Discussion Consent Forms]**

#### **Introductions**

The primary investigator and the research assistant introduce themselves. Afterwards, the participants will be asked to introduce themselves by their first name.

Facilitator: “Now we would like each of you to introduce yourselves by first name. We want you to feel comfortable during this discussion. So, if you like you can only use your first name or another name if you like.”

#### **Discussion rules**

Facilitator: “We have a few rules for this discussion to make sure that everyone feels safe and everyone can be heard. Here are the rules we have in mind. If you have other suggestion we will add them to the list.

1. Information that is shared in this group is confidential. Please do not tell other people what we discussed today.
2. To make the record of our conversation clear and to be polite to one another, only one person talks at a time.
3. If another person makes a comment you would like to comment on please feel free to agree, disagree, or provide an example from your or your community's experience.
4. You do not have to talk about your own personal experiences you can talk about things that are general knowledge, opinion, or experience of another person.
5. We would like to hear all the different ideas and opinions in the group. Please be supportive and respectful of other people's ideas.
6. Please turn off your cell phones.

Are there any other ground rules you would like added to this list? Can everyone agree to follow these guidelines?"

Add any additional ground rules to the list. When everyone has agreed to try to follow these rules. Ask again if anyone has additional questions.

Facilitator: "Before we begin, this discussion should take approximately 30-60 minute. Does anyone have any final questions? Ok, we are going to start the recording device now. Is everyone ok with that?"

### **[Turn On Recording Device]**

\*\*This is a guide for a semi-structure focus group discussion. These questions do not all need to be asked. It is better if topic progress naturally. The facilitator should ask probing question based on the conversation at hand and the guideline question below.\*\*

#### **Topic 1: VCT Perception**

\*\*Questions should refer to the experience of the community not the individual. This increases the comfort level of participants and maintains participant privacy\*\*

- 1.1 How do people in this community feel about receiving HIV counseling and testing?
- 1.2 What prevents people in this community from being tested for HIV/AIDS?
- 1.3 How does the community feel about HIV counseling and testing being offered in their homes?
  - 1.3.1 What prevents someone from being tested and counseled for HIV/AIDS in their home by a community VCT counselor?
  - 1.3.2 What prevents a couple from being tested and counseled for HIV/AIDS in their home by a community VCT counselor?
  - 1.3.3 How does the community feel about HIV counseling and testing being offered in their home to other family members (offer to their children, spouse, and other household members)?
- 1.4 Do people in your community feel more comfortable being tested and counseled for HIV in their homes or in a health facility? Why?
  - 1.4.1 How does being tested and counseled for HIV at home change your sense of confidentiality?
  - 1.4.2 How does being tested and counseled for HIV at home change your fear of stigma or discrimination?

- 1.4.3 How do you think the quality of the counseling and testing service differs between the services at the clinic and home testing services?

## **Topic 2. Perception of counselors**

*Explain the role of community VCT counselors*

- 2.1 What does the community think about the VCT counselors offering VCT to the community home to home?
  - 2.1.1. Are the community VCT counselors believed to be confidential, competent, and professional? Explain.
- 2.2 What do you think are qualities of a good community VCT counselor?
  - 2.2.1. What skills or characteristics would make people in your community feel comfortable?
- 2.3 What are the concerns that community members have when a VCT counselor goes to homes in your community? Explain.  
[Probe: what the neighbors think, the counselors, accuracy test kit, the testing records, quality of the service, etc]

## **Topic 3. Couples counseling and testing**

- 3.1 How do people in this community feel about being tested for HIV with other members of their household?
  - 3.1.1. Explain how this is different with different family member.  
[Probe: Children? Parents? Brothers or sister?]
- 3.1 Do married couples discuss testing? How? What is discussed?  
[Probe: status, testing, concerns]
- 3.2 Why would someone accept HIV counseling and testing in their home?
  - 3.2.1. Why would a couple accept HIV counseling and testing in their home?
- 3.3 Why would someone refuse HIV counseling and testing in their home?
  - 3.3.1. Why would a couple refuse HIV counseling and testing in their home?
- 3.4 What prevents a woman in a relationship in your community from being tested with her husband?
- 3.5 What prevents a man in a relationship in your community from being tested with his wife?
- 3.6 What else might prevent a married couple being tested for HIV together when it is offered in the home?

Facilitator: “Thank you for your participation in this focus group discussion today. Does anyone have any last minute questions or comments?”

**[Turn Off Recording Device]**

## **Appendix B. Community VCT Counselor Interview Guideline**

### **Rural HBVCT Community VCT Counselor Interview Question Guide**

The participants are OSSA employees who have been hired to provide HBVCT to the targeted communities. The community VCT counselors at each of the Amhara branch offices (Bahir Dar, Dessie, and Gondar) will be invited to participate in the study in an in-depth semi-structured interview.

When the counselor arrives for the interview they will be given a blank consent form in Amharic.

#### **Introduction**

Facilitator: “Thank you for coming. As a community VCT counselor with the \_\_\_\_\_ Branch Office you have a unique perspective of the Home-Based Voluntary Counseling and Testing (HBVCT) program. We would like to interview you about your experience, the experience of the community VCT promoters, and the experience of the *kebeles* that are provided the HBVCT service.

The purpose of this study is to better understand the feasibility and acceptability of HBVCT in rural Ethiopia. In addition, we would like to know more about the barriers and challenges of this HBVCT program. During this interview we would like you to tell us in the most detail you can manage about your experience with the program. First we will need you to sign this consent form.”

#### **Consent**

Facilitator reviews the Interview Consent Form and answers participant’s questions. After all questions are answered the participant is asked to sign and submit one copy of the Interview Consent Form.

Facilitator: “Before we begin the interview do you have any questions?” Answer all questions.

Facilitator: “Is it all right if I start the recording device now?” Wait for confirmation.

#### **[Turn On Recording Device]**

#### **Topic 1. Demographics**

Facilitator: “Before we get started, we would like to get to know a little more about you.”

- 1.1 In which *kebeles* do you provide HBVCT?
  - 1.1.1 When you started working for the HBVCT program how familiar were you with this area?
- 1.2 How old are you?
- 1.3 What level of education have you completed?
- 1.4 Do you have any previous health care experience?
- 1.5 How were you selected to be a counselor?
- 1.6 Why did you become a community VCT counselor?

#### **Topic 2. Training**

- 2.4 Describe the counseling training have you received?  
[Probe: training specific to different populations, elderly, children, couples?]
- 2.5 Are there any areas in which you feel you need more training?

#### **Topic 3. Challenges**

- 3.2 Describe the challenges to providing counseling in someone's home?  
[Probe: being in an unfamiliar environment, feeling welcome, safe, clients' concerns about confidentiality, etc]
- 3.3 Which clients are the most challenging to provide counseling and testing to? Explain.  
[Probe: Children, elderly, men, women, multiple clients, etc]
- 3.4 Explain how you work differently with challenging households?
- 3.5 Please describe the challenges of testing multiple household members?  
[Probe: Do all household members seem equally willing to be tested?]  
[Probe: Do all household members appear comfortable being tested with other]
- 3.6 Describe how you maintain confidentiality when testing multiple people?

**Topic 4. Couples Counseling and testing**

- 4.1 Describe your experience counseling and testing couples?
  - 4.1.1. What are the challenges to testing couples?
- 4.2 When you learn a client is married or living with a sexual partner how do you ask about the partners testing status?
  - 4.2.1. Explain the barriers that clients who are married or in a sexual relationship face when being tested for HIV?
- 4.3 How does the time of day the appointment is given affect couples testing?
- 4.4 Do you find men to be willing to be counseled and tested with their partner? Why?
- 4.5 Do you find women to be willing to be counseled and tested with their partner? Why?
- 4.6 In your experience why aren't more couples tested together?
- 4.7 What other factors may affect couples being tested together or at the same time?

Facilitator: “Do you have any other comments or questions before we finish?”

**[Turn Off Recording Device]**

## **Appendix C. Senior VCT Counselor Interview Guideline**

### **Rural HBVCT Senior VCT Counselor Interview Question Guide**

The participants are OSSA employees who have been hired to coordinate the community VCT counselors and the community VCT promoters. The senior VCT counselors at each of the Amhara branch offices (Bahir Dar, Dessie, and Gondar) will be invited to participate in the study in an in-depth, semi-structured interview.

When the senior counselor arrives for the interview they will be given a blank consent form and Amharic.

#### **Introduction**

Facilitator: “Thank you for coming. As the senior VCT counselor for \_\_\_\_\_ Branch Office you have a unique perspective of the Home-Based Voluntary Counseling and Testing (HBVCT) program. We would like to interview you about your experience and the experience of the community VCT counselors, the community VCT promoters, and the experience of the *kebeles* that are provided the HBVCT service.

The purpose of this study is to better understand the feasibility and acceptability of HBVCT in rural Ethiopia. In addition, we would like to know more about the barriers and challenges of this HBVCT program. During this interview we would like you to tell us in the most detail you can manage about your experience with the program. First we will need you to sign this consent form.”

#### **Consent**

Facilitator reviews the Interview Consent Form and answers participant’s questions. After all questions are answered the participant is asked to sign and submit one copy of the Interview Consent Form.

Facilitator: “Before we begin the interview do you have any questions?” Answer all questions.

Facilitator: “Is it all right if I start the recording device now?” Wait for confirmation.

#### **[Turn On Recording Device]**

#### **Topic 1. Training**

Facilitator: “Before we start, we would like to get to know you a little better.”

- 1.1 Describe the training have you received from OSSA for this position.
- 1.2 Describe experience or training you received to counsel health workers.
- 1.3 Do you feel the training you receive was adequate? Explain.
- 1.4 When you started working for the HBVCT program how familiar were you with the service area?
  - 1.4.1 How well did you know the community?

Facilitator: “Now we would like to know more about how the community VCT counselors and the Community Promoters are treated and viewed by the community.”

#### **Topic 2. Community VCT Counselors**

- 2.1 How are the community counselors and community promoters received by the community?
- 2.2 Describe challenges faced by the community counselors?
- 2.3 What issues have clients had with the method that HBVCT is delivered?

- 2.4 Describe the counselor's quality of counseling and testing? Is it sufficient? Are there areas where they need further training?
- 2.5 What kind of support do you provide for the community counselors? Is this sufficient?
- 2.6 During testing sessions, what challenges do the counselors face?
- 2.7 How do these challenges differ in different households? Explain.
  - 2.7.1 How does the size of the household affect the counseling and testing process? How?
  - 2.7.2 What other factor about the clients affect the testing process? How?

**Topic 3. Community promoter**

- 3.1 How are the community promoters received by the community
- 3.2 Describe challenges faced by the community promoters?
- 3.3 What issues are discussed at community promotion coffee programs and community meetings?
- 3.4 Are any groups in particular resistant to HBVCT or provide more challenges for the community promoters?
- 3.5 Are the community promoters qualified and sufficiently trained to carry out their role? Explain.
- 3.6 Describe any problems you have had with managing, counseling, or supporting the community network?
- 3.7 Describe the strengths of the community promoters.

Facilitator: “ Now we are going to ask you about the implementation of the program. We are interested in the management successes and challenge you have faced during the first six months.”

**Topic 4. Management challenges**

- 4.1 What challenges have you faced while coordinating this program? Explain.  
[Probe: transportation, supplies, community resistance]
- 4.2 Which groups are hardest to test or most willing to be tested?  
[Probe: men, women, elderly, Muslims, Orthodox, couples]
  - 4.2.1 Are these groups less willing to be tested? Why?

**Topic 5. Couples testing**

- 5.2 Describe your experience counseling and testing couples?
  - 5.2.1 What are the challenges to testing couples?
- 5.3 When you learn a client is married or living with a sexual partner how do you ask about the partners testing status?
  - 5.3.1 Explain the barriers that clients who are married or in a sexual relationship face when being tested for HIV?
- 5.4 How does the time of day the appointment is given affect couples testing?
- 5.5 Do you find men to be willing to be counseled and tested with their partner? Why?
- 5.6 Do you find women to be willing to be counseled and tested with their partner? Why?
- 5.7 In your experience why aren't more couples tested together?
- 5.8 What other factors may affect couples being tested together or at the same time?
- 5.9 How has OSSA tried to overcome those barriers?

Facilitator: “Do you have any other comments or questions before we finish?”

**[Turn Off Recording Device]**

## Appendix D. Ethiopia HIV Counseling and Testing Record

### ETHIOPIA HIV COUNSELING AND TESTING RECORD

RECEPTION							
Country	Region	Woreda	Site code	Site type		Org. type	Residence
Ethiopia	03		21	Circle one 1 = Free-standing (NGO-based) 2 = Mobile	3 = Primary Health Care 4 = Clinic 5=Home Based 6=Drop In Center 99=Other	Circle one. 1 = NGO 2 = Gov. 3 = Private	Circle one. 1=Urban 2=Rural 99=Other

**Client Code** \_\_\_\_\_ **Return visit** \_\_\_\_\_ **New client code** \_\_\_\_\_ **Age** \_\_\_\_\_ **Sex** \_\_\_\_\_ **Counselor code** \_\_\_\_\_  
*Circle one.* *Circle one.* *Circle one.* *Circle one.* *Circle one.*  
 Date of Visit \_\_\_\_\_ 0=No 0=No \_\_\_\_\_ 1=Male  
 1=Yes 1=Yes \_\_\_\_\_ 2=Female  
 98=N/A  
**Partner code** \_\_\_\_\_  
**Couple code** \_\_\_\_\_

### INITIAL COUNSELING SESSION

Session type	Marital status	Couple type	Education	Employed	Occupation	
<i>Circle one.</i> 1=Individual 2=Couple 3=Group 99=Other	<i>Circle one.</i> 1=Married 2=Never married 3=Separated 4=Divorced 5=Widowed 99=Other	<i>Circle one.</i> 1=Married 2=Premarital 3=Presexual 4=Sex partner 98=N/A 99=Other	<i>Circle one.</i> 0=Illiterate 1=Able to read 2=Primary 3=Secondary 4=Tertiary 99=Other	<i>Circle one.</i> 0=No (Inactive) 1=Yes (Active)	<i>Circle one.</i> 1=Legislators., Sr. Officials, Managers 2=Professionals 3=Technicians, Ass. Professionals 4=Clerks 5=Service, Shop, Market, Sales	6=Skilled Ag. & Fishery workers 7=Crafts & trades 8=Plant/Machine Op., Assembly 9=Elementary occupation 10=Student 99=Other

**Hear of our svcs.** *Circle all that apply.*  
 1=Radio  
 2=Outreach  
 3=Posters  
 4=Other Clients  
 5=Newspaper/magazine  
 6=Health institution  
 7=Telephone hotline  
 8=Anti-AIDS clubs  
 9=APLWH/A  
 10=Friends and family  
 11=CBO  
 12=TV  
 98=N/A  
 99=Other

**Client referred by:** *Circle one.*  
 1=Self – not referred  
 2=Public Health Institution  
 3=Private Health Institution  
 4=Military Health Institution  
 5=Friend or relative  
 6=CBO  
 7=NGO  
 8=School  
 9=Religious Institution  
 10=Client  
 11=APLWH/A  
 99=Other

**Primary reason here** **Circle one.**  
 1=Client Risky/Had risk  
 2=Partner Risky/Had risk  
 3=Not trust partner  
 4=Ill/Symptoms  
 5=Premarital  
 6=Marital reunion  
 7=Family planning  
 8=Visa applicant  
 9=Referred  
 10=2<sup>nd</sup> Test (win.)  
 11=Confirm positive result  
 12=Get results prev test  
 13=Need counseling  
 14=Test before pregnant  
 15=Pregnant, must know  
 16=Plan for future  
 17=Death/illness of partner  
 18=Occupational exposure  
 19=Other blood/fluid exp.  
 20=Sexual assault  
 99=Other

**Previously tested** *Circle one.*  
 0=No  
 1=Yes, HIV+  
 2=Yes, HIV-  
 3=Yes, inconclusive  
 4=Result not given  
 5=Didn't take results  
 99=Other

Date prev. test	Where prev. tested	Ever had sex	Suspected exposure time	Condom use last 3 months	Used condom last sex	History of STI
_____/_____/_____ Month Year	<i>Circle one.</i> 1=NGO 2=Public Health Inst. 3=Private Health Inst. 98=N/A 99=Other	<i>Circle one.</i> 0=No 1=Yes	<i>Circle one.</i> 0=No exposure 1 = < 1 month 2 = 1 to 3 months 3 = 4 to 6 months 4 = over 6 months 97=Don't know 98 = N/A	<i>Circle one.</i> 0=Never 1=Always 2=Sometimes 98=N/A	<i>Circle one.</i> 0=No 1=Yes 97=Doesn't remember 98=N/A	<i>Circle one.</i> 0=No 1=Yes 97=Don't know 98=N/A

**Number of casual partners last 3 mo.** \_\_\_\_\_ **Is client sex worker?** \_\_\_\_\_ **Is client pregnant?** \_\_\_\_\_ **Result client expects** \_\_\_\_\_ **Pre-test partner notification plan** \_\_\_\_\_  
*Circle one.* *Circle one.* *Circle one.* *Circle one.* *Circle one.*  
 0=No 0=No 0=Negative 0=Refused to notify  
 1=Yes 1=Yes 1=Positive 1=Agree to notify  
 2=Counselor believes so 97=Don't Know 97=Don't Know 2=Plan to notify  
 97=Don't Know 98=N/A 98=N/A 3=Unsure  
 98=N/A 98=N/A

**LABORATORY RESULTS**

**HIV result**                      **Syphilis result**  
*Circle one.*                      *Circle one.*  
 0=Negative                      0=Negative  
 1=HIV+                          1=Positive  
 98=N/A                          95=Not given

**SECOND COUNSELING SESSION**

<p><b>Couple discordant</b>  <i>Circle one.</i>                  0=No                  1=Yes                  98=N/A</p>	<p><b>Refused results</b>  <i>Circle one.</i>                  0=No                  1=Yes                  98=N/A</p>	<p><b>Condoms accepted</b>                  0=No                  1=Yes                  96=None available                  98=N/A</p>	<p><b>Number condoms given</b>                  _____</p>	<p><b>SERVICES RENDERED</b>  <i>Circle one.</i>  <b>Refused services</b> 0=No                  1=Yes  <b>Counseled</b> 0=No                  1=Yes  <b>Gave test</b> 0=No                  1=Yes  <b>Received results</b> 0=No                  1=Yes  <b>Referred</b> 0=No                  1=Yes  <b>Condom demonstration</b> 0=No                  1=Yes                  Other: _____</p>
<p><b>Risk reduction plan developed</b>  <i>Circle one.</i>                  0=No                  1=Yes                  98=N/A</p>	<p><b>Post-test partner notification plan</b>  <i>Circle one.</i>                  0=Refused to notify                  1=Agree to notify                  2=Plan to notify                  3=Unsure                  98=N/A</p>	<p><b>Client referred to:</b>  <i>Circle all that apply</i>                  1=Follow-up counseling                  2=Social services                  3=TB Clinic                  4=Hospital                  5=APLWH/A                  6=STD Clinic                  7=Family Planning                  8=Post-test club                  98=N/A                  99=Other</p>		

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Counselor Signature:** \_\_\_\_\_

**Client Consent**

Date \_\_\_\_\_

**በፈቃደኝነት ለማድረግ የኤች.አይ.ቪ ካውንስሊንግና ምርመራ አገልግሎት የፈቃደኝነት ማረጋገጫ**

ዛሬ የኤች.አይ.ቪ የደም ምርመራ ለማድረግ ኤች.አይ.ቪ በደም ውስጥ መኖር አለመኖሩን የማረጋገጥበት ብቸናው መንገድ የደም ምርመራ በማድረግ ስለሆነ በዛሬው አለት ደሜን ሰጥቶ እንድንመረመርና ውጤቱን ለመስማት ፈቃደኛ መሆኔን ይህም ያለምንም አስገዳጅነት ሙሉ በሙሉ በራሴ ፈቃድ አምኛ የወሰንኩት መሆኔን በፊርማዬ አረጋግጣለሁ።

የተገልጋዩ መለያ ቁጥር \_\_\_\_\_ የተገልጋዩ ፊርማ \_\_\_\_\_

(ማስታወሻ :- ተገልጋዩ ስሙን መጻፍ አይጠበቅበትም :: ምልክት ነገር ማስቀመጥ በቂ ነው።)

የካውንስሊሩ ፊርማ \_\_\_\_\_ ቀን \_\_\_\_\_