Possible Channels for Distribution of HIV Oral Self-Test Kits in Kenya

Jerry Okal, Population Council, Nairobi, Kenya
Francis Obare, Population Council, Nairobi, Kenya
Waimar Tun, Population Council, Washington, DC
James Matheka, Population Council, Nairobi, Kenya

Grantee Final Report

Accepted by 3ie: June 2014

International Initiative for Impact Evaluation

About 3ie

The International Initiative for Impact Evaluation (3ie) was set up in 2008 to meet growing demand for more and better evidence of what development interventions in low- and middle-income countries work and why. By funding rigorous impact evaluations and systematic reviews and by making evidence accessible and useful to policymakers and practitioners, 3ie is helping to improve the lives of people living in poverty.

About the HIV Self-Testing Thematic Window

Thematic Window 2 on HIV self-testing in Kenya is structured under two phases—phase 1, which funded formative research and phase 2, which will be informed by results from the first phase and will fund pilot interventions and their impact evaluations. 3ie identified key questions related to HIV self-tests by reviewing relevant literature and by meeting with key stakeholders in Kenya. 3ie and Kenya's National AIDS and STI Control Programme selected six of these questions in a request for applications under phase 1. The call was open to organisations implementing HIV and AIDS programmes in Kenya.

About this report

This report has been submitted in partial fulfilment of the requirements of a grant issued under the HIV Oral Self-Testing Thematic Window. 3ie is making this final report available to the public as it was received without any further changes. All content is the sole responsibility of the authors and does not represent the opinions of 3ie, its donors or its board of commissioners. Any errors and omissions are the sole responsibility of the authors. All affiliations of the authors listed in the title page are those that were in effect at the time the report was accepted. Any comments or queries should be directed to the corresponding author, Jerry Okal at jokal@popcouncil.org.

Suggested citation: Okal, J, Obare, F, Tun, W and Matheka, J, 2014. *Possible Channels for Distribution of HIV Oral Self-Test Kits in Kenya, 3ie Grantee Final Report.* Washington, DC: International Initiative for Impact Evaluation (3ie).

Funding for this thematic window was provided through the generous support of the Bill & Melinda Gates Foundation.

Possible Channels for Distribution of HIV Oral Self-Test Kits in Kenya

Jerry Okal[1], Francis Obare[1], Waimar Tun[2], James Matheka[1]

[1]Population Council, Nairobi, Kenya
[2]Population Council, Washington, DC, USA

June 17, 2014

ACKNOWLEDGEMENTS

The project was funded by the International Initiative for Impact Evaluation (3ie) and implemented by the Population Council through technical and logistical support from the National AIDS and STI Control Programme (NASCOP) in the Ministry of Health. The study further received logistical support from the local administration including chiefs, assistant chiefs and village elders.

The successful completion of the study was made possible by a team of research assistants that included Masudi Abiola, Owuor Thomas, Maureen Yienya, Laura Kisivuli, Aduke Kisera, Pauline Nthenya Muindi, Derrick Kamadi, Laura Akinyi Okhungu, Teresa Atieno Bange, Evans Omulo, Erick Waga, Geoffrey Oguya, Fredrick Odhiambo, Lydia Mauko, Meble Birengo, Esther Nthambi Nthuku, Dennis Adipo, Florence Thungu, Mathews Ogutu, Kaluki Oketch, Linet Changtoek Cherono, Esibanze Stanley Okanga, Rosemary Wangui, Lucy Anziya, Grace Muthike, Edith Jebichii Maina, Jacqueline Mutere, Jelagat Toroitich, Isaac Mwangi, Grace Magomere, Joan Mitei, and Tom Saria.

Norah Omenda of the Population Council provided administrative support for the project while Brian Mdawida, also of the Population Council, programmed the Personal Data Assistants (PDAs).

The Population Council's Institutional Review Board (IRB), the Ethics and Research Committee of Kenyatta National Hospital/University of Nairobi, and the National Commission for Science, Technology and Innovation (NACOSTI) granted ethical and research clearance for the study.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
APDK	Association for the Physically Disabled of Kenya
ART	Antiretroviral Treatment
BCC	Behavior Change Communications
CBD	Community-based Distributor
CBO	Community-based Organization
CCC	Comprehensive Care Center
CHW	Community Health Worker
DASCO	District AIDS and STIs Coordinator
FP	Family Planning
FSW	Female Sex Workers
HAART	Highly Effective Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
HOYMAS	Health Options for Young Men on HIV, AIDS and STIs
HTC	HIV Testing and Counseling
IDU	Injecting Drug Users
IEC	Information, Education and Communication
IRB	Institutional Review Board
KAIS	Kenya AIDS Indicator Survey
KDHS	Kenya Demographic and Health Survey
KEMSA	Kenya Medical Supplies Agency
KNASP	Kenya National HIV/AIDS Strategic Plan
KNBS	Kenya National Bureau of Statistics
MARPs	Most At Risk Populations
MCH	Maternal and Child Health
MOPHS	Ministry of Public Health and Sanitation
MSM	Men who have Sex with Men
NACC	National AIDS Control Council
NACOSTI	National Commission for Science, Technology and Innovation
NASCOP	National AIDS and STI Control Programme
NGO	Non-governmental Organization
NOSET	Nairobi Outreach Services Trust
PASCO	Provincial AIDS and STIs Coordinator
PDA	Personal Data Assistant
PMTCT	Prevention of Mother-to-Child Transmission
PSI	Population Services International
STI	Sexually Transmitted Infection
SWOP	Sex Worker Outreach Program
TB	Tuberculosis
TBA	Traditional Birth Attendant
UNAIDS	Joint United Nations Programme on HIV/AIDS
VCT	Voluntary Counseling and Testing

EXECUTIVE SUMMARY

In response to the growing burden of the HIV epidemic in sub-Saharan Africa, HIV testing and counseling has proven to be one of the most effective HIV prevention interventions because of its potential to alter individuals' behaviors to reduce the risk of HIV transmission to others as well as its role in enhancing early diagnosis and initiation of treatment, care and support. However, coverage and uptake of HIV testing and counseling in sub-Saharan Africa remains relatively low. A recent policy change in Kenya, which recognizes HIV self-testing, presents an opportunity to improve

testing and counseling services using a technology that can confer confidentiality and promote proactive healthcare-seeking decisions. The use of self-testing kits has not been adopted as a national testing algorithm due to lack of information regarding their effective and efficient distribution.

The overall goal of the study was to generate evidence to inform the design and evaluation of programs using HIV oral self-tests in Kenya. The specific objectives were to: examine the possible outlets and/or networks for the distribution of HIV oral self-tests to potential users in Kenya; explore how the distribution of HIV oral self-tests through various channels can be organized to better meet the needs of potential users; and examine the possible linkages to counseling and care for users of HIV oral self-tests given the choice of the distribution outlet. The study used a cross-sectional exploratory design involving quantitative and qualitative data collection. The quantitative data collection included: (1) a community survey among 969 adult women and 467 adult men aged 18-64 years; and (2) structured face-to-face interviews with a total 317 service providers aged 20-65 years from public and private health facilities, voluntary counseling and testing (VCT) centers, private pharmacies and communities (community health workers, traditional birth attendants, and shop/supermarket owners). Qualitative data collection, on the other hand, involved 27 key informant interviews with representatives of community-based groups, key stakeholders and opinion leaders. All three components of the study asked hypothetical questions about the oral self-test kit after demonstration of use. Data collection was undertaken from mid to end of October 2013 in Kisumu, Uasin Gishu, Nyandarua, Kilifi, and Nairobi Counties in Nyanza, Rift Valley, Central, Coast and Nairobi provinces respectively. Analysis of the quantitative data entailed simple frequencies and cross-tabulations while the qualitative data were transcribed, translated into English (for interviews that were conducted in Kiswahili), typed in Word and analyzed for content.

Key findings

- **High level of acceptance of oral self-test kits:** There was near-universal acceptance of the use of HIV oral self-test kits among survey respondents and nearly all service providers and key informants noted that their clients would use the kits. The potential use of the test kits among survey respondents who had never been tested for HIV was also high.

- **Many advantages to oral self-test kits:** The most commonly cited advantages associated with the use of the HIV oral self-test kits were ease and convenience of use and increased confidentiality and privacy. Other advantages that were mentioned include possibility of doing the test at home, potential to save time and money spent on seeking services, and that the fact that an oral test would be less invasive (i.e., no blood samples or pricking involved) and painful.

- **Response to the oral self-test may vary in different population sectors:** There are variations in the way different segments of the population may respond to HIV oral self-test including women, men, married individuals, adolescents and young people, men who have sex with men (MSM), female sex workers (FSWs) and injection drug users (IDUs). Most respondents felt that the oral self-test kits would be embraced by: i) young persons and women because these groups take on innovations and change easily, ii) men because they often do not like to go to health facilities; and iii) MSM and FSWs because they would not have to reveal their illicit behaviors. However, key informants felt that IDUs would not likely use it because of their impaired

judgment and mental state, and that married men may not use it in the presence of their partners as they would have to disclose their status.

- **Public health facilities may be the most effective mode of distribution:** Study participants reported that public health facilities were the most preferred channels for distributing the test kits. Besides public health facilities, other most commonly mentioned distribution channels included private pharmacies, local administration, private health facilities, and local shops or supermarkets. The choice of this distribution channel was most dependent on distance to the outlet, followed by cost of the service. Within health facilities, comprehensive care centers were the most preferred units from where to obtain the test kits while other units that were also mentioned included the pharmacy, laboratory, maternal and child health (MCH), and family planning units.

- **High level of willingness to distribute oral self-test kits:** Nearly all service providers and key informants were willing to give information on or distribute HIV oral self-test kits. However, the reasons given for readiness to give information on or distribute the kits varied by the type of outlet or provider (for example, whether the provider was based in a public health facility, private health facility, stand-alone VCT center, private pharmacy or the community). The variations reflected differences in the capacity of the providers in terms of available human, financial, technical, and infrastructural resources and clientele.

- **Challenges to distribution vary by type of outlet:** There were variations in challenges providers are likely to face in giving information on or distributing the test kits by type of outlet or provider, also reflecting differences in the capacity of the providers in terms of available human, financial, technical, and infrastructural resources and clientele. There were also variations in the type of support that providers would need to give information on or distribute HIV oral self-test kits by type of outlet or provider, again reflecting differences in the capacity of the providers in terms of available human, financial, technical, and infrastructural resources and clientele. For instance, the need for financial support was highest among community health workers and traditional births and lowest among those based in shops or supermarkets.

- **Capacity building, reasonable price structures, and quality assurance critical for successful distribution:** Service providers and key informants mostly felt that the following were important for ensuring that the distribution system adequately meets the needs of clients using the kit: conducting community sensitization, conducting provider training or updates, providing the test kits free of charge or at affordable cost, allocating sufficient financial resources for distribution, certifying institutions selected to distribute the kits, putting in place standards and guidelines for distribution and storage, and developing robust monitoring and evaluation systems.

- **The likelihood of potential oral self-test kit users seeking counseling is high with public health facilities being the most preferred source of counseling:** Most survey respondents who would use the test kits would go for counseling before or after testing and seek other services as well. Most service providers also indicated that potential users of the oral self-test kits would seek counseling and other services. Public health facilities were the most commonly

mentioned outlets where clients would seek counseling and other services before or after performing HIV self-test.

- **Seeking of counseling and other services is likely to be influenced by different factors:** There were significant variations in the proportions of survey respondents who reported that they would seek counseling or other services before or after testing by certain background characteristics such as age and education level. In addition, key informants noted that the uptake of counseling and care services as well as the choice of place to seek services could be influenced by factors such as availability of services, health-seeking behaviors of individuals, cost of services, social support, available information on oral self-test kits, education level, accuracy of the test, proximity to the facility, staff attitudes, quality of services offered, age of provider, familiarity with the provider, and waiting time at the facility.

Implications

- The high potential for use of the HIV oral self-test kits by survey respondents – including those who had never been tested before - is likely to contribute to increased HTC coverage in the country by bringing in new testers.

- Although public health facilities were considered as the most appropriate distribution outlet for HIV oral self-test kits, the fact that other distribution channels were also identified—each with its unique advantages and challenges—suggests that HIV oral self-test programs will need to consider multiple distribution channels and specific ways to address their unique challenges in order to reach different segments of the population.

- The finding that response to HIV oral self-test may vary among different segments of the population suggests the need for appropriate information, education and communication (IEC) campaigns targeting specific groups to accompany the distribution of the test kits in the country.

- The fact that in most cases the findings were consistent across survey respondents, service providers and key informants suggest that they might reflect the actual experiences of HIV oral self-test clients and therefore provide useful insights into the opportunities and challenges for distributing HIV oral self-test kits in the country.

BACKGROUND

HIV/AIDS Situation in Kenya

Kenya has a population of approximately 40 million people, 60% of whom are under 35 years of age and 52% are women (Kenya National Bureau of Statistics [KNBS] 2010; Population Reference Bureau 2012). The national HIV prevalence among adults aged 15-64 years was 6% as of 2012 representing an estimated 1.2 million people (NASCOP 2013). Three types of epidemics co-exist in the country: (1) generalized epidemic—driven by couple discordance, multiple concurrent partners and low rates of male circumcision; (2) concentrated epidemic—sex workers, prisoners, truckers, men having sex with men, intravenous drug users and fishing communities; and (3) geographically-differentiated epidemic—higher prevalence in Nyanza compared to other regions and in the urban compared to rural areas (KNBS and ICF Macro 2010; National AIDS Control Council [NACC] 2009a; NASCOP 2013). Gender disparities also exist with higher HIV prevalence among women compared to men (KNBS and ICF Macro 2010; NASCOP 2013). Table 1 presents HIV prevalence in Kenya by gender, region, and place of residence as of 2007.

Table 1: HIV prevalence in Kenya by socio-demographic characteristics, 2012

Gender	
Women (15-64 years)	6.9%
Men (15-64 years)	4.4%
Region	
Nyanza	15.1%
Nairobi	4.9%
Coast	4.3%
Rift Valley	3.7%
Western	4.7%
Eastern	3.7%
Central	3.8%
Place of residence	
Urban	6.5%
Rural	5.1%

Source: NASCOP (2013)

Nationally, most new infections (44%) occur in couples who engage in heterosexual activity within a union or regular partnership (NACC 2009a). Men and women who engage in casual sex, on the other hand, contribute 20% of new infections, sex workers and their clients 14%, men who have sex with men and prison populations 15%, injecting drug users contribute 4%, and health facility-related infections 3% (NACC 2009a). The socio-economic and health impact of HIV/AIDS in Kenya, as in other sub-Saharan African countries affected by the epidemic, arise from the cost of illness and death among the most productive members of society as well as the high co-morbidities such as tuberculosis (TB) and malaria which are a further drain on healthcare resources (Letamo 2011).

National Response to HIV/AIDS

Since the first case of HIV was diagnosed in Kenya in 1984, the Government's response to the epidemic has expanded considerably both in terms of policy formulation and supporting the implementation of appropriate services. For instance, the Government established the National AIDS and STI Control Programme (NASCOP) in 1987 to oversee the Ministry of Health's interventions in the fight against HIV/AIDS. The Government further formulated the *Policy Guidelines for HIV and AIDS* in Sessional Paper No. 4 of 1997, declared HIV epidemic a national disaster in 1999, and created NACC to coordinate a multi-sectoral response to the epidemic. In addition, the Government developed a series of national strategic plans—the *Kenya National HIV/AIDS Strategic Plans* (KNASP) of 2000-2005, 2005/06-2009/10, and 2009/10-2012/13 — to provide a framework to address the challenges posed by HIV/AIDS (NACC 2000, 2005, 2009b).

In terms of service provision, several strategies have been adopted by the Government and non-governmental actors in the fight against HIV/AIDS in the country. These include behavior change communications (BCC), HIV testing and counseling (HTC), provision of antiretroviral treatment (ART) including prevention of mother-to-child transmission (PMTCT) services, as well as provision of care and support services to individuals affected and infected by the disease (Marum et al. 2008; NASCOP/ Ministry of Public Health and Sanitation [MOPHS] 2008, 2010). HTC, in particular, is one of the most effective HIV prevention interventions because of its potential to alter individuals' behaviors to reduce the risk of HIV transmission to others as well as its role in enhancing early diagnosis and initiation of treatment, care and support (World Health Organization [WHO] 2012). Early diagnosis and access to care and treatment has, in turn, been shown to reduce transmission of HIV (Juusola et al. 2011; Cleary et al. 1991). Early treatment with highly effective antiretroviral therapy (HAART) also leads to reductions in viral load and reduced infectivity and likelihood of HIV transmission to others (Ambrosioni et al. 2011).

In Kenya, HTC has expanded from only three voluntary counseling and testing (VCT) sites established in government health facilities in 2000 to 4,438 HTC sites by 2010 (WHO 2011). The need to improve access to HTC services in the country has seen various models being introduced including stand-alone VCT centers, mobile, 'moonlight', door-to-door, and provider-initiated HTC (NASCOP/MOPHS 2010). It has also been reflected in the Government's efforts to improve uptake. Kenya was, for example, one of the first countries in sub-Saharan Africa to develop a policy guideline on HTC (WHO 2011). In 2008, the Government issued the *National Guidelines for HIV Testing and Counseling in Kenya* for the provision of HTC services in the country which were revised in 2010 (NASCOP/MOPHS 2008, 2010). In addition, one of the targets set in 2005/06-2009/10 KNASP was to test two million Kenyans for HIV annually (NACC 2005).

Problem Statement and Justification

Despite efforts to improve HTC uptake in the country, national estimates show that the proportion of individuals who have been tested for HIV and obtained test results remains low. According to the 2012 Kenya AIDS Indicator Survey (KAIS), for instance, more than half (53%) of adults aged 15-64 years who were HIV-positive were not aware of their sero-status (NASCOP 2013). The possible reasons for the low uptake of HTC are the inconvenience of or general aversion to visiting a health facility, fear of stigma as well as the cost associated with accessing HTC services (Negin et al. 2009; WHO 2012). Although HTC approaches such as work place and mobile HIV-testing services overcome some of these challenges, issues of confidentiality and convenience may still hinder many people from using the services. Many people may, for example, not want to be tested and counseled by someone they know. Perception of low risk of HIV infection is another reason for not testing (Republic of Kenya 2009). Ease of access to tests and confidentiality of testing may be more important to this group than testing related services such as HIV counseling and linkages to care.

Advances in HIV testing technologies provide solutions to overcoming confidentiality and convenience barriers associated with accessing facility-based HTC services (of various kinds) (Greenwald et al. 2006). Rapid tests enable HIV antibody status to be determined quickly, efficiently and less invasively than previous forms of testing (Blake et al. 2011). The test assays can detect antibodies from different body fluids including blood from a finger-prick, plasma, urine, or saliva and can be done in both clinical and nonclinical settings. Rapid test assays have good accuracy, sensitivity, and specificity averaging between 99.8% and 100% (Greenwald et al. 2006). The Oraquick® ADVANCE test, for example, is a simple, user-friendly, accurate and convenient point-

of-care HIV test for use on oral fluid, blood and plasma specimens, with the possibility of obtaining test results within 20 minutes (Greenwald et al. 2006).

Self-testing has several advantages including: (1) offering individuals a chance to know their HIV status in the privacy of their homes thus ensuring confidentiality; (2) empowering and promoting proactive healthcare-seeking decisions; (3) overcoming the issue of stigma and visibility in public settings; (4) providing early diagnosis of sero-status; (5) potentially aiding future prevention of HIV transmission; and (6) providing possible public health benefits by modifying the trajectory of the HIV epidemic (Pai and Klein 2008).

The basic principle of self-testing is to be sufficiently simple (and reliable) for an individual to test oneself in privacy, without the intervention of a provider. This principle has been used before for other non-invasive tests such as pregnancy tests (Blake at al. 2011; NASCOP/MOPHS 2010). In all these situations, individuals can access test kits from pharmacies and other approved suppliers. Studies in Kenya and elsewhere in Africa have shown that self-testing is acceptable among healthcare workers and the general population (Corbett 2007; Kalibala et al. 2010; Khumalo-Sakutukwa et al. 2008; Lee et al. 2007; Negin et al. 2009). A study that provided HIV self-testing to healthcare workers in Kenya, for example, reported high demand for self-testing, appreciation of the privacy and confidentiality, and ease of use (Kalibala et al. 2010). In Malawi, a feasibility study involving HIV self-testing demonstrated that the approach produced highly accurate test results and was widely accepted by the community (Choko et al. 2011).

Although the Kenya Government has approved oral self-test kits, their use has not been adopted as a national testing algorithm due to lack of information on how best to distribute the kits including the most effective channels and how to best organize services through such channels (NASCOP/MOPHS 2010).

STUDY GOAL AND OBJECTIVES

The overall goal of the study was to generate evidence to inform the design and evaluation of programs using HIV oral self-tests in Kenya. The study responds to the Ministry of Health goal of achieving universal access to HTC through innovative approaches such as door-to-door testing, self-testing, and national testing campaigns (NACC 2005; NASCOP/MOPHS 2010). The study further responds to WHO framework for the expansion of HTC models of service delivery beyond health care facilities to increase access to and coverage of services and to maximize efficiency, impact and equity, as well as to the Joint United Nations Programme on HIV/AIDS (UNAIDS) call to expand access to HTC as a prevention strategy (UNAIDS 2007; WHO 2012).

The specific objectives of the study were:

1) To examine the possible outlets and/or networks for the distribution of HIV oral self-test kits to potential users in Kenya.
2) To explore how the distribution of HIV oral self-test kits through various channels can be organized to better meet the needs of potential users.
3) To examine the possible linkages to counseling and care for users of HIV oral self-test kits given the choice of the distribution outlet.

METHODOLOGY

Research Design

The study used a cross-sectional exploratory design involving quantitative and qualitative interviews with individuals from communities in Kisumu, Uasin Gishu, Nyandarua, and Kilifi counties in Nyanza, Rift Valley, Central and Coast provinces respectively as well as individuals from organizations implementing HIV programs, key stakeholders and opinion leaders in the four counties and in Nairobi county. The study sites were selected based on the fact that they reflect diverse cultures, have varied levels of HIV prevalence, were a mix of rural and urban communities, and the Population Council had previously conducted studies in the settings. The study also involved explaining to participants the purpose of HIV oral self-test kits and demonstrating how they are used. The interviewers were trained on the use of the test kits so that they could demonstrate to respondents before posing questions about potential use of the kits and possible distribution outlets.

Data Collection

Data collection took place from mid to end of October 2013 and involved three components:

1) Community-based survey,
2) Service provider interviews, and
3) Qualitative interviews.

Community-based survey

The community-based survey entailed structured face-to-face interviews with 969 adult women and 467 adult men aged 18-64 years in four counties (Kisumu, Uasin Gishu, Nyandarua and Kilifi) against a target of 995 women and 495 men representing a response rate of 97% and 94% respectively. This is meant to reflect potential users of the oral self-test kits. The sample size for men was determined based on the ratio of two to one, that is, one man for every two women interviewed, given the challenges of recruiting men in most household surveys in developing countries (Wilks et al. 2007). In each county, a two-stage cluster sampling process was used. In the first stage, 10 sub-locations (the smallest administrative unit in Kenya) were randomly sampled from the list that was provided by KNBS. In the second stage, three enumeration areas (each comprising an average of 100 households) were randomly sampled from each sub-location. Interviewers worked with the District Statistical Officers and the local administration (chiefs, assistant chiefs and village elders) to identify the boundaries of each of the sampled enumeration areas.

In each selected enumeration area, systematic sampling was used to identify households for inclusion in the study. A total of 8 to 9 households were targeted in each enumeration area. Beginning from the east and moving westwards in each enumeration area, interviewers selected every tenth household for inclusion in the study. Interviewers then undertook listing of members of the selected households, including basic demographic information. In each selected household, a female member aged between 18-64 years was requested to participate in the study. In case the selected household did not have an eligible female member, the interviewers substituted the household with the next available one having an eligible member. In every second household that a female member was interviewed, the interviewers further requested a male member aged between

18-64 years to participate in the interviews. In households where there was more than one eligible female or male participant, a Kish grid[1] was used to select one member for interview.

The interviews were conducted using hand-held personal data assistants (PDAs). Information was captured on individual background characteristics (age, sex, education level, religious affiliation, marital status, urban-rural residence, and household assets and amenities); preferred outlets from where respondents who are likely to use HIV oral self-tests would be comfortable obtaining the kits and the reasons for such preference; and whether and where respondents would seek counseling and care before and after self-testing. The interviews were conducted in English, Kiswahili or the local language.

Service provider interviews

A total of 317 service providers aged 20-65 years were interviewed against a target of 406 representing a response rate of 78%. The providers were identified from public health facilities (hospitals, health centers and dispensaries), private/faith-based/non-governmental health facilities (hospitals, maternity/nursing homes, and dispensaries/ clinics), stand-alone VCT centers, private pharmacies, and from the community (community health workers, traditional birth attendants-TBAs, and owners of local shops/supermarkets) in five counties (Kisumu, Uasin Gishu, Nairobi, Nyandarua, and Kilifi). In each country, public and private health facilities were randomly sampled based on the 2013 Kenya Master Health Facility List. Sampling was stratified by facility level (hospitals, health centers/ maternity/nursing homes, and dispensaries/ clinics) and ownership (public and private). In each of the sampled facilities, two service providers (one from VCT/ART unit and another from MCH/FP unit) were targeted for individual interview. In case a health facility did not have VCT/ART unit, two providers from the MCH/FP unit were approached for individual interview as they are likely to handle clients' sexual and reproductive health issues.

Given the disproportionate location of stand-alone VCT centers in Nairobi based on the 2013 Kenya Master Health Facility List (33% of all stand-alone VCT centers were located in Nairobi), 8 were randomly sampled for inclusion in the study. By contrast all stand-alone VCT centers in Kisumu (1 center), Uasin Gishu (1 center), and Kilifi (2 centers) counties were targeted for inclusion in the study. In each VCT center, two service providers were targeted for interview. Private pharmacies were, on the other hand, randomly sampled based on the 2013 list of pharmacies licensed by the Pharmacy and Poisons Board with six pharmacies being targeted in each county. In each pharmacy, one provider (pharmacist or pharmacy assistant) was approached for individual interview. Interviews with community-based service providers were conducted in the four counties where the community survey was carried out (Kisumu, Uasin Gishu, Nyandarua and Kilifi). The target in each was six community health workers, six traditional birth attendants, and six shop/supermarket owners. Community-based providers were purposely identified with the help of the local administration and community members.

Structured face-to-face interviews were conducted with health facility-based and community-based service providers using PDAs. Information on: background characteristics (such as sex, age, type of outlet or provider, education and duration of work in current position and outlet); services provided at the outlet; possible channels for distributing HIV oral self-test kits to potential users and the perceived advantages and limitations of the channels; providers' readiness (willingness and ability) to

[1]A Kish grid is a method for selecting members within a household using a table of random numbers to aid in selection.

give information on and distribute the self-test kits to potential clients including the challenges they are likely to face and the kind of support they would need; key program design features needed to ensure that the distribution of the test kits better meets clients' needs; and the respondents' perceptions of whether and where users of oral self-tests would seek counseling and care.

Qualitative interviews

Qualitative data collection involved key informant interviews with representatives of community-based groups, key stakeholders and opinion leaders. A total of 27 key informants were interviewed (which was the number that was targeted). The key informants were purposely identified and included opinion leaders (chiefs and assistant chiefs), representatives of community-based organizations (CBOs), District AIDS and STIs Coordinators (DASCO), Provincial AIDS and STIs Coordinators (PASCO), NASCOP, Population Services International (PSI) and Radbone Clark (which carry out social marketing activities), Marie Stopes Kenya, Association for the Physically Disabled of Kenya (APDK), Kenya Medical Supplies Agency (KEMSA), Sex Worker Outreach Program **(**SWOP), Health Options for Young Men on HIV, AIDS and STIs **(**HOYMAS), and Nairobi Outreach Services Trust (NOSET), which is an agency that works with injection drug users.

The interviews were conducted by research assistants with training in qualitative data collection. With permission from participants, the interviews were audio-taped using digital decoders. A two-page key informant interview guide was used to steer the discussion. Informants were asked about their perceptions and opinions regarding how community members are likely to respond to the issue of HIV oral self-testing, including counseling and care; the readiness (willingness and ability) of their agencies to provide information on and distribute the self-test kits to potential clients including the challenges they are likely to face and the kind of support they would need; how HIV oral self-test kits can be distributed in the community with a focus on key program design features that are necessary to ensure that the distribution system better meets clients' needs.

Data Management and Analysis

The quantitative data from community survey and service provider interviews were downloaded into computers and exported into STATA for cleaning and analysis. Analysis of the data entailed simple frequencies and cross-tabulations with Chi-square tests to determine if there were significant differences by respondents' background characteristics in the distribution of individuals who would use oral self-tests, preferred outlets for obtaining the kits, the reasons for the choice of particular distribution outlets, and possible linkages to counseling and care.

Analysis of data from interviews with service providers also involved simple frequencies and cross-tabulations with Chi-square tests to determine if there were significant differences by type of outlet or provider in the suggested outlets for distributing the oral self-test kits, the advantages and limitations of the outlets, providers' readiness to give information on or distribute the kits, as well as perceptions about possible linkages to counseling and care for users of oral self-tests. The results are compared with those from the community survey to determine if there are consistencies in the suggested possible distribution outlets and linkages to counseling and care from both the supply (service providers) and demand (survey participants) side. It was anticipated that consistencies in the findings from community-based and service provider interviews would give strong evidence of the channels that should be used to distribute HIV oral self-test kits in the country, how the distribution channels could be organized, and linkages to counseling and care for users of oral self-tests.

Data from key informant interviews were transcribed, translated into English (for interviews that were conducted in Kiswahili), typed in Word and analyzed for content using NVIVO software. Analysis entailed coding the data, developing a list of emerging themes, categorizing the themes within a hierarchical framework of main and sub-themes, looking for patterns and associations between the themes, and comparing and contrasting within and between the different groups of participants.

Ethical Considerations

Written informed consent was obtained from all participants (community survey, service providers and key informants) before conducting the interviews. The study also obtained ethical and research clearance from the Population Council's Institutional Review Board (IRB), the Ethics and Research Committee of Kenyatta National Hospital/University of Nairobi, and the National Commission for Science, Technology and Innovation (NACOSTI).

FINDINGS

Characteristics of Respondents

Table 2 presents the distribution of participants in the community survey by background characteristics. More than half of the respondents were aged below 35 years (56% of female and 51% of male respondents) and more than half of the respondents had primary level education (58% of women and 54% of men). Nearly three-quarters (74%) of women and two-thirds (65% of men) were Protestants or other Christians while 78% of the women and 73% of the men were married or living with someone at the time of the survey. Female respondents were significantly more likely than male respondents to be younger, have lower education, and married or formerly married.

The distribution of respondents in the study by background characteristics was similar to that of women and men from Nyanza, Central, Coast and Rift Valley regions (where Kisumu, Nyandarua, Kilifi and Uasin Gishu counties are respectively located) that were interviewed in the 2008-2009 Kenya Demographic and Health Survey (KDHS), although survey participants were slightly older and more likely to be married or formerly married. In particular, estimates from the 2008-2009 KDHS show that the majority of women and men from the four regions were aged below 35 years (73% of women and 68% of men), had primary level education (58% of women and 52% of men), were Protestants or other Christians (71% of women and 65% of men), were married at the time of the survey (59% of women and 54% of men), and were from rural areas (78% of women and a similar proportion of men).

Table 2: Percent distribution of survey respondents by background characteristics

Characteristics	Women (%)	Men (%)	Both sexes (%)
County	p=0.09		
Kisumu	24.8	23.8	24.4
Nyandarua	26.0	25.9	26.0
Kilifi	24.2	25.7	24.7
Uasin Gishu	25.1	24.6	24.9
Age group (years)	p<0.05		
18-24	20.1	17.8	19.4
25-34	36.0	33.0	35.0
35-44	25.8	23.8	25.1
45-64	17.4	25.3	20.0
Don't know	0.6	0.2	0.5
Highest education level	p<0.01		
No schooling/pre-unit/nursery	11.9	4.7	9.5
Primary	57.9	53.5	56.5
Secondary	24.5	33.6	27.4
College/university	5.8	8.1	6.6
Religious affiliation	p<0.01		
Catholic	15.7	21.0	17.4
Protestant/other Christian	74.0	64.5	70.9
Muslim	5.3	6.9	5.8
No religion	5.1	7.7	5.9
Marital status	p<0.01		
Never married	11.4	24.8	15.7
Married/living together	78.0	73.0	76.4
Formerly married[a]	10.6	2.1	7.9
Household wealth index	p=0.99		
Poorest quintile	19.7	19.7	19.7
Poorer quintile	20.1	19.7	20.0
Middle quintile	19.9	19.9	19.9
Richer quintile	20.1	19.7	20.0
Richest quintile	20.1	21.0	20.4
Type of place of residence	p=0.84		
Rural	87.2	87.6	87.3
Urban	12.8	12.4	12.7
All respondents	100.0	100.0	100.0
Number of respondents	969	467	1,436

Notes: [a]Divorced/widowed/separated; Percentages may not sum to exactly 100 due to rounding; p-values are from Chi-square tests of differences in the distribution of female and male respondents.

The distribution of service providers by background characteristics is presented in Table 3. Most of the providers were based in rural outlets (55%), from public health facilities (43%), aged 30-39 years (41%), had college or university level education (79%), and had worked in their positions (42%) and at the outlets (67%) for less than five years. Female providers were significantly more likely than male providers to be based in rural outlets, public health facilities, and work as community health workers and traditional birth attendants.

Table 3: Percent distribution of providers by background characteristics

Characteristics	Women (%)	Men (%)	Both sexes (%)
County	p=0.64		
Nairobi	13.9	14.6	14.2
Kisumu	22.2	20.3	21.5
Nyandarua	21.7	15.5	19.2
Kilifi	20.6	24.4	22.1
Uasin Gishu	21.7	25.2	23.0
Location of provider	p<0.05		
Rural	59.3	48.0	54.9
Urban	40.7	52.0	45.1
Type of outlet/provider	p<0.01		
Public facility	45.4	39.8	43.2
Private facility	27.8	24.4	26.5
Stand-alone VCT center	2.6	7.3	4.4
Private pharmacy	4.1	12.2	7.3
CHW/TBA	16.5	2.4	11.0
Shop/supermarket	3.6	13.8	7.6
Age group (years)	p=0.54		
20-29	30.4	30.1	30.3
30-39	41.2	41.5	41.3
40-49	13.9	17.1	15.1
50-65	12.4	11.4	12.0
Don't know	2.1	0.0	1.3
Highest education level	p=0.06		
Secondary or lower	24.2	15.5	20.8
College/university	75.8	84.6	79.2
Duration worked in position	p=0.96		
<5 years	41.2	42.3	41.6
5-9 years	29.9	28.5	29.3
10 or more years	27.8	27.6	27.8
Can't remember	1.0	1.6	1.3
Duration worked at outlet	p=0.49		
<5 years	66.5	67.5	66.9
5-9 years	17.0	13.8	15.8
10 or more years	14.4	13.8	14.2
Can't remember	2.1	4.9	3.2
	100.0	100.0	100.0
Number of respondents	194	123	317

Notes: Percentages may not sum to exactly 100 due to rounding; VCT: Voluntary counseling and testing; CHW: Community health worker; TBA: Traditional birth attendant; p-values are from Chi-square tests of differences in the distribution of female and male respondents.

Prior HIV Testing among Survey Respondents

A significantly higher proportion of women compared to men had ever tested for HIV (93% and 79% respectively; p<0.01; Table 4). There were no significant differences in the proportions of women that had ever been tested for HIV by county, education level, household wealth status or place of residence (Table 4). Nonetheless, the proportion of women that had ever tested for HIV

was lowest among those aged 45-64 years (86%) and highest among those aged 25-34 years (97%; p<0.01). Similarly, the proportion of women that had ever tested for HIV was lowest among those who never married (86%) and highest among those who were married or living with someone at the time of the survey (94%; p<0.01). Among men, the proportion that had tested for HIV significantly differed by county (lowest in Nyandarua and highest in Kisumu) but not by the other characteristics including age, education level, religious affiliation, marital status, household wealth index and place of residence.

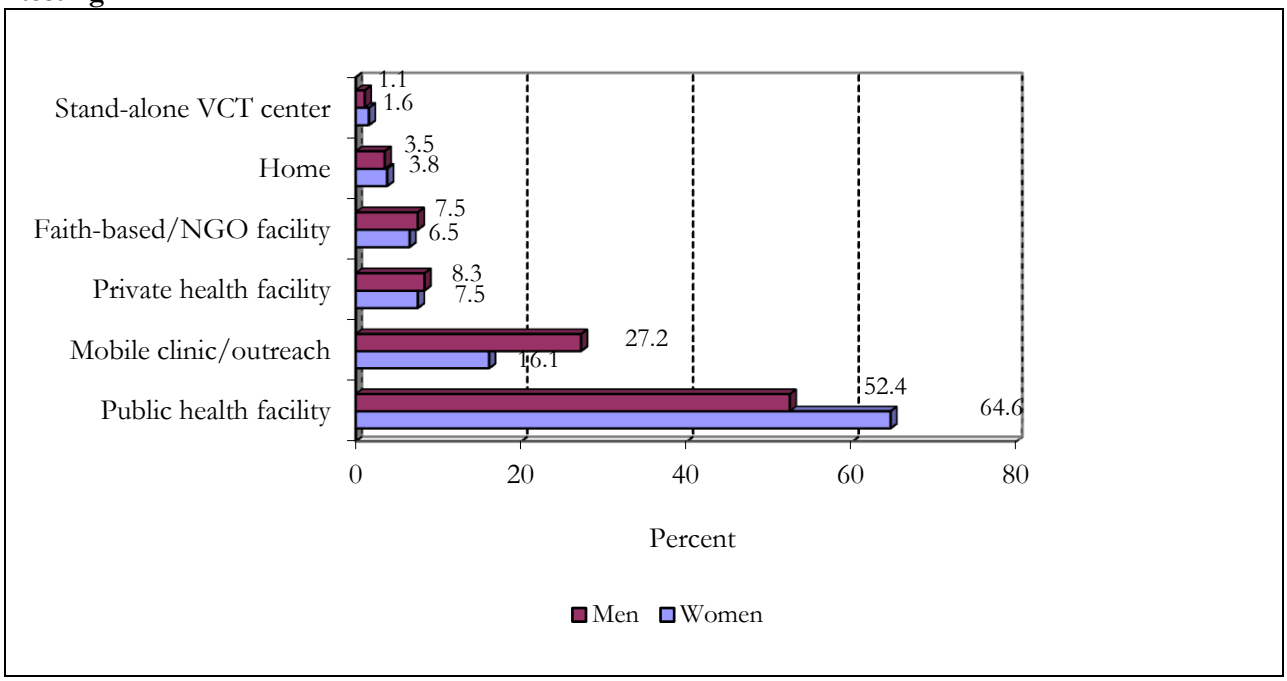
Table 4: Percent distribution of survey respondents who had ever tested for HIV by background characteristics

	Women			Men	
Characteristics	Percent	*N*		Percent	*N*
County	p=0.60			p<0.01	
Kisumu	92.5	240		87.4	111
Nyandarua	92.1	252		68.6	121
Kilifi	94.9	234		78.3	120
Uasin Gishu	93.8	243		82.6	115
Age group (years)	p<0.01			p=0.21	
18-24	92.8	195		70.0	83
25-34	97.4	349		79.2	154
35-44	92.4	250		82.9	111
45-64	86.4	169		81.4	118
Don't know	100.0	6		100.0	1
Highest education level	p=0.47			p=0.21	
No schooling/pre-unit/nursery	91.3	115		81.8	22
Primary	92.9	561		77.6	250
Secondary	95.4	237		77.7	157
College/university	92.9	56		92.1	38
Religious affiliation	p=0.11			p=0.41	
Catholic	92.7	152		77.6	98
Protestant/other Christian	92.6	717		80.1	301
Muslim	98.0	51		84.4	32
No religion	100.0	49		69.4	36
Marital status	p<0.01			p=0.10	
Never married	85.5	110		72.4	116
Married/living together	94.4	756		80.9	341
Formerly married[a]	93.2	103		90.0	10
Household wealth index	p=0.68			p=0.55	
Poorest quintile	91.6	191		77.2	92
Poorer quintile	93.3	195		80.4	92
Middle quintile	92.2	193		75.3	93
Richer quintile	94.4	195		84.8	92
Richest quintile	94.9	195		77.6	98
Type of place of residence	p=0.37			p=0.95	
Rural	93.0	845		79.0	409
Urban	95.2	124		79.3	58
All respondents	93.3	969		79.0	467

Notes: [a]Divorced/widowed/separated; p-values are from Chi-square tests of differences in the proportions of respondents that had ever tested for HIV by background characteristics.

Among respondents who had ever tested for HIV, about two-thirds (65%) of the women and one-half (52%) of the men were last tested in a government health facility (Figure 1). Similarly, 16% of the women and 27% of the men who had ever tested had their last test in a mobile clinic or through outreach services. In all cases (both women and men), the test involved taking blood samples.

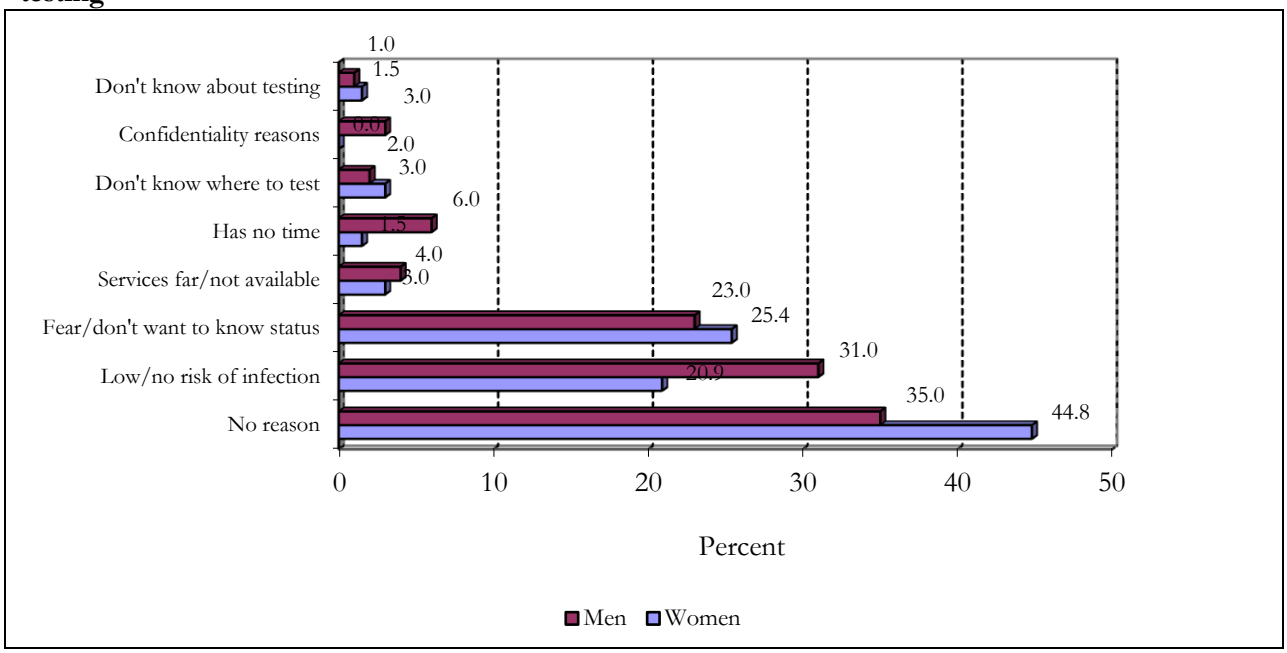
Figure 1: Percent distribution of women and men who had ever been tested for HIV by place of last testing



Notes: VCT: Voluntary counseling and testing; NGO: Non-governmental organization.

Among survey respondents who had never tested for HIV, most indicated that they did not have a reason for not testing (45% of the women and 35% of the men; Figure 2). In addition, 25% of the women and 23% of the men indicated that they feared or did not want to know status while 21% of the women and 31% of the men reported that they had low or no risk of being infected with HIV.

Figure 2: Percent distribution of women and men who had never tested for HIV by reasons for not testing



Notes: Question allowed for multiple responses.

Potential Use of HIV Oral Self-Test Kits

Level of potential use

Table 5 presents the distribution of survey respondents by whether they would use HIV oral self-test kits. Nearly all respondents indicated that they would use the kits with no significant difference between women and men (94% in both cases). However, the proportion of women who would use the kits significantly differed by county, education level, and whether they had ever been tested for HIV. In particular, the proportion of women who would use the kits was lowest in Uasin Gishu (90%) and highest in Nyandarua County (99%; $p<0.01$). Similarly, the proportion of women who would use the kits was lowest among those with no education (84%) and among those who had never been tested for HIV (86%). By contrast, the proportion of women who would use the kits was highest among those with primary level education (96%) and among those who had previously been tested for HIV (94%). It is, however, worth noting that the majority of women and men who had never tested for HIV (more than 80%) reported that they would use the test kits.

Table 5: Percent distribution of survey respondents who would use HIV oral self-test kits by background characteristics

	Women			Men	
Characteristics	Percent	*N*		Percent	*N*
County	p<0.01			p=0.10	
Kisumu	94.2	240		95.5	111
Nyandarua	99.2	252		95.0	121
Kilifi	91.9	234		96.7	120
Uasin Gishu	89.7	243		89.6	115
Age group (years)	p=0.66			p=0.96	
18-24	94.4	195		94.0	83
25-34	94.8	349		94.2	154
35-44	94.0	250		95.5	111
45-64	91.1	169		93.2	118
Don't know	83.3	6		100.0	1
Highest education level	p<0.01			p=0.70	
No schooling/pre-unit/nursery	84.4	115		90.9	22
Primary	96.1	561		93.6	250
Secondary	92.8	237		94.9	157
College/university	94.6	56		97.4	38
Religious affiliation	p=0.17			p<0.05	
Catholic	94.1	152		87.8	98
Protestant/other Christian	94.0	717		95.4	301
Muslim	94.1	51		100.0	32
No religion	89.8	49		97.2	36
Marital status	p=0.17			p=0.73	
Never married	90.9	110		94.0	116
Married/living together	94.6	756		94.1	341
Formerly married[a]	91.3	103		100.0	10
Household wealth index	p=0.89			p=0.25	
Poorest quintile	94.2	191		98.9	92
Poorer quintile	93.9	195		92.4	92
Middle quintile	92.8	193		93.6	93
Richer quintile	93.3	195		94.6	92
Richest quintile	94.9	195		91.8	98
Type of place of residence	p=0.30			p=0.11	
Rural	94.2	845		94.9	409
Urban	91.1	124		89.7	58
Ever been tested for HIV	p<0.05			p<0.05	
Yes	94.4	904		95.4	369
No	86.2	65		89.9	98
All respondents	93.8	969		94.2	467

Notes: [a]Divorced/widowed/separated; p-values are from Chi-square tests of differences in the proportions of respondents who would use HIV oral self-test kits by background characteristics.

Interviews with service providers further confirmed that HIV oral self-test would be widely acceptable in the community with 91% of the providers reporting that their clients would use the kits (Data not shown).

Discussions with key informants also revealed that a large segment of the population would embrace the use of HIV oral self-test kits. The key informants felt that community members would respond positively to the kits because they provide an easy and convenient way of conducting an HIV test. Self-testing was also seen to provide a huge incentive to potential users who can have the tests done at the comfort of their homes thereby saving them time and money travelling to distant testing centers. A recurrent theme in the discussions was the covert use of the HIV oral self-test, without the knowledge of other people. This was seen as an advantage for individuals who may be less inclined to access health services or among sexual partners who are in relationships where dialogue on health issues was problematic. Other participants reported that HIV oral self-test provided an unseen method of testing, allowing individuals to take control of their own health. The narratives with informants not only highlighted HIV oral self-test's perceived potential to confer privacy and confidentiality, but also its contribution to reduce stigma associated with the current HTC services. Some participants thought the HIV oral self-test would be highly effective in minimizing stigma among potential users of HIV testing services not keen to seek services from the HTC centers. The following excerpts highlight some of these views:

> *"Women would want to do it as a couple, but the men I don't think they would want to do it as a couple. And in fact the men would embrace the self -testing kit more than the women because they like secrecy and privacy."* CBO, Kisumu County.

> *"People will know their status, and through test, that fear of sharing your status in public will be eliminated. Once you know, you can decide to share or not and again this is another way of reducing HIV infection in the country and once they know they are positive they will take care, the negative will reduce their risk practices"* SWOP, Nairobi County.

Informants noted that different segments of the populations would respond differently to HIV oral self-tests. In particular, informants reported that potential use of HIV oral self-test kits may be different among women, men, married individuals, adolescents and young people as well as men who have sex with men (MSM), female sex workers (FSWs) and injection drug users (IDUs). Women were singled out as the more pragmatic and having better health-seeking behavior. Most participants therefore felt that women were more likely to use the kits because they are not resistant to change and can easily take up new health innovations. A number of informants also felt that some men would be attracted to using the oral self-test kits because it would confer privacy to carry out HIV test. Similarly, informants felt that men would be particularly enthusiastic about using the new HIV testing devices because they would not be required to go a health facility given their poor health-seeking behavior. Some informants however reported that use of the kits among married men may be variable and depend on whether their partners were present at home or not. As such, some men may take extra precautions conducting the tests at home due to concerns about disclosing their status to their partners. By contrast, unmarried people were seen as being more likely to embrace the HIV oral self-test because they are not in committed relationships and are therefore not obliged to inform anyone about their intention to test for HIV. Many informants also noted that young men and women are more likely to respond positively to HIV oral self-test than adults because they do not have inhibitions towards trying new things. According to the informants, young people are curious and are always experimenting with things; hence it would be easy to promote the use of oral self-testing devices among them. The following excerpts support some of the views expressed by the informants:

> *'Females are likely to react positively to it unlike male, mostly the married males because if they are put in*

their houses, they will not like it. But when it's put in their offices or somewhere they will like it." Opinion leader, Kisumu County.

"For sure I know the men will be very happy because one thing with them, one thing we have been facing … is men don't want to come to the facility to get tested or to get any other service unless they are very sick...." DASCO, Kilifi County.

"I feel that the unmarried ones may do more self-testing, though surveys have shown that HIV is more prevalent among the married ones. So they can strike a balance between that. You know the unmarried ones have nobody to consult or to bother about but the married ones have a lot of fear that suppose they test themselves and find that they are positive, how do I get to tell my spouse." PASCO, Kisumu County.

"I think the adolescents would embrace it more than the adults, because it is easier to bring in a new product or idea to a younger person, than to bring up a new idea to an older person." CBO, Kisumu County.

With respect to key population groups, informants noted that FSWs and MSM would find oral self-tests convenient in part because of their behaviors which likely put them at increased risk of HIV infection. It was further reported that FSWs and MSM who have previously tested would be more likely to use the kits than those who have not tested before. By contrast, the possibility of use of oral self-test kits among IDUs was reported to be very small. Informants reported that injection drug use interferes with the cognitive functioning leading to poor decision making. The following excepts highlight key informants' views about potential use of HIV oral self-test kits among key populations:

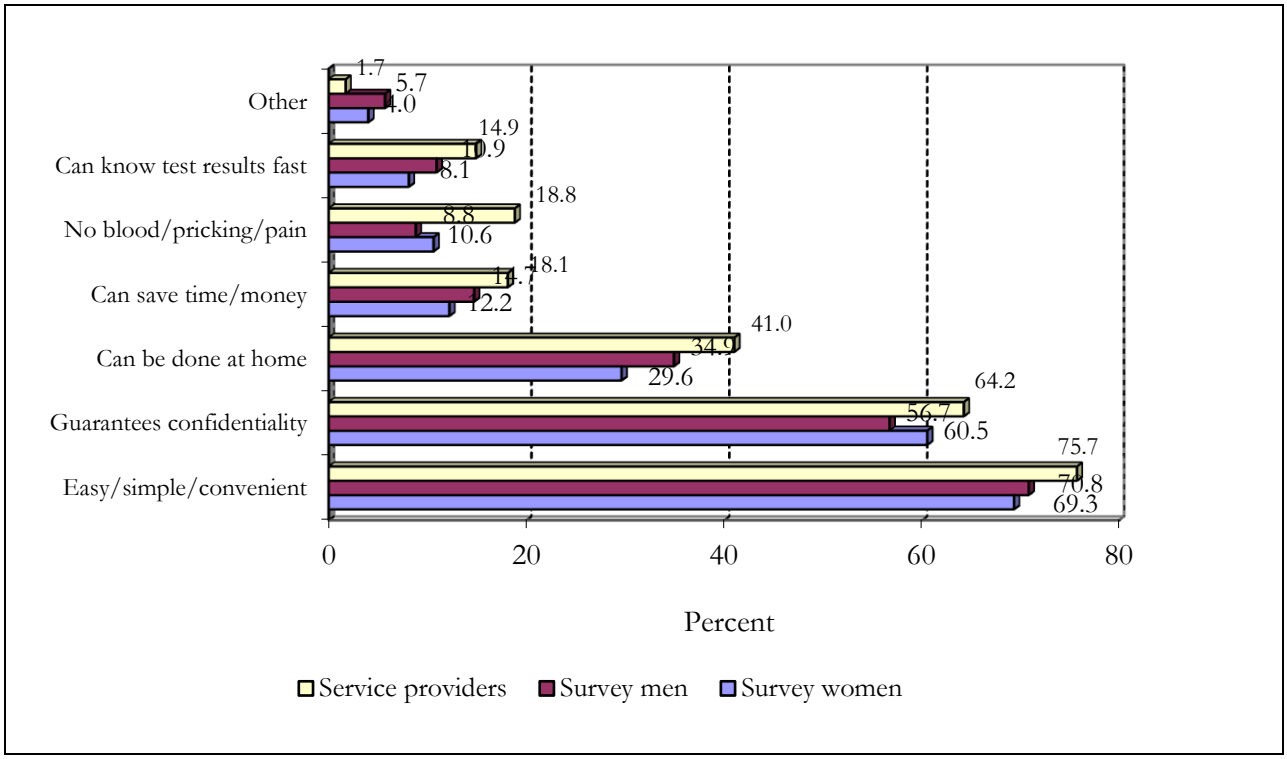
"Based on the community I work with which is the key populations, basically the sex workers, men having sex with men and the people that inject drugs, I think for the sex workers and the men having sex with men, especially those who are doing repeat test, you know for them we usually say they test more frequently than the general population, at least every three months. So for them they will be able to find it more convenient…That is for the MSMs and sex workers. In as far as people who inject drugs, I may not be sure of how they might perceive owing to the unique challenges they have. You know they inject drugs and their mental health status might not be stable…I might not be sure how they might perceive the self-testing." NASCOP, Nairobi County.

"The community we deal with is a special community, which actually if they are considered correctly are people who are sick, mentally socially and other way. So when it comes to them doing it again where they live, where you can get them it's in a very chaotic area, people have no time to sit down and do these things. The decision making mechanism has already been interfered with due to the drug use. I don't know if they will take time to do it themselves and observe whatever is observed and get to the next stage." NOSET, Nairobi County.

Reasons for potential use or non-use

The most commonly cited reasons for potential use of the kit by survey respondents were that it is easy, simple, or convenient to use (69% of women and 71% of men); it guarantees confidentiality and privacy (61% of women and 57% of men); it can be done at home and does not require going to a health facility (30% of women and 35% of men); it can save time and money spent to seek services (12% of the women and 15% of the men); and that there is no taking blood, pricking or pain (11% of the women and 9% of the men; Figure 3). The same reasons were also commonly cited by service providers for potential use of the test kits by clients (Figure 3).

Figure 3: Distribution of survey respondents and service providers by reasons for potential use of HIV oral self-test kits



Notes: Question allowed for multiple responses.

Further analysis showed that among survey respondents who indicated that they would not use the kits, the reasons given were that they have low or no risk of HIV infection (17% of the women and 23% of the men); they have never seen the kit before (17% of women and a similar proportion of men); they fear or do not want to know HIV status (17% of the women and 13% of the men); they don't know how to use the kit or read test results (6% of the women and 3% of the men); there is no care, treatment or support services available in the community (3% of the women and 7% of the men); they do not know how much the kit costs (5% of the women and 3% of the men); they do not know where to get care, treatment or support services if they test positive (3% of the women and a similar proportion of men); they do not know where to get counseling services (7% of the men and none of the women); and that they do not know where to get the kit (3% of the women and none of the men).

Among key informants, the likely reasons for non-use of the kits were the fear of stigma, ability to pay for the kits, and understanding of the testing process as exemplified by the following quotes:

> *"You know the whole idea of… HIV is still stigmatized. We don't have 100% testing because of the stigma associated with it so most guys would like to know it in their bedroom alone. My problem is, after they know it, then what? That is my problem from this side – from a public health point of view."* PASCO, Nairobi County.

> *"It depends; if it will be bought then the poor would not go for it. If it would be free then the rich would not go for it, in my perception, because they will think that it is something that is substandard or it's something that is of poor quality. The rich believe in expensive and the poor believe in things that are for free."* CBO, Kisumu County.

"That I would rather handle with education level. Poor people have lower education level. When it [education level] is lower, understanding what's going on may be a challenge." DASCO, Kisumu County.

Possible Distribution Channels

Preferred distribution channel

Survey respondents who indicated that they would use HIV oral self-test kit were asked where they would most prefer to obtain the kits. Most respondents (63% of the women and 59% of the men) preferred public health facilities (Table 6). Overall, less than 10% indicated they prefer local administration (chiefs, assistant chiefs and village elders), private pharmacies, local shops or supermarkets, and other outlets. The most commonly cited reasons for preference of specific distribution channels were distance to the outlet (73% of the women and 71% of the men); cost of services (24% of the women and 20% of the men); friendliness of the provider (13% of the women and 12% of the men); availability of services (8% of the women and 7% of the men); and confidentiality reasons (8% of the women and a similar proportion of men; Table 6).

Table 6: Percent distribution of survey respondents who would use HIV oral self-test kits by main preferred distribution channels and reasons for preference

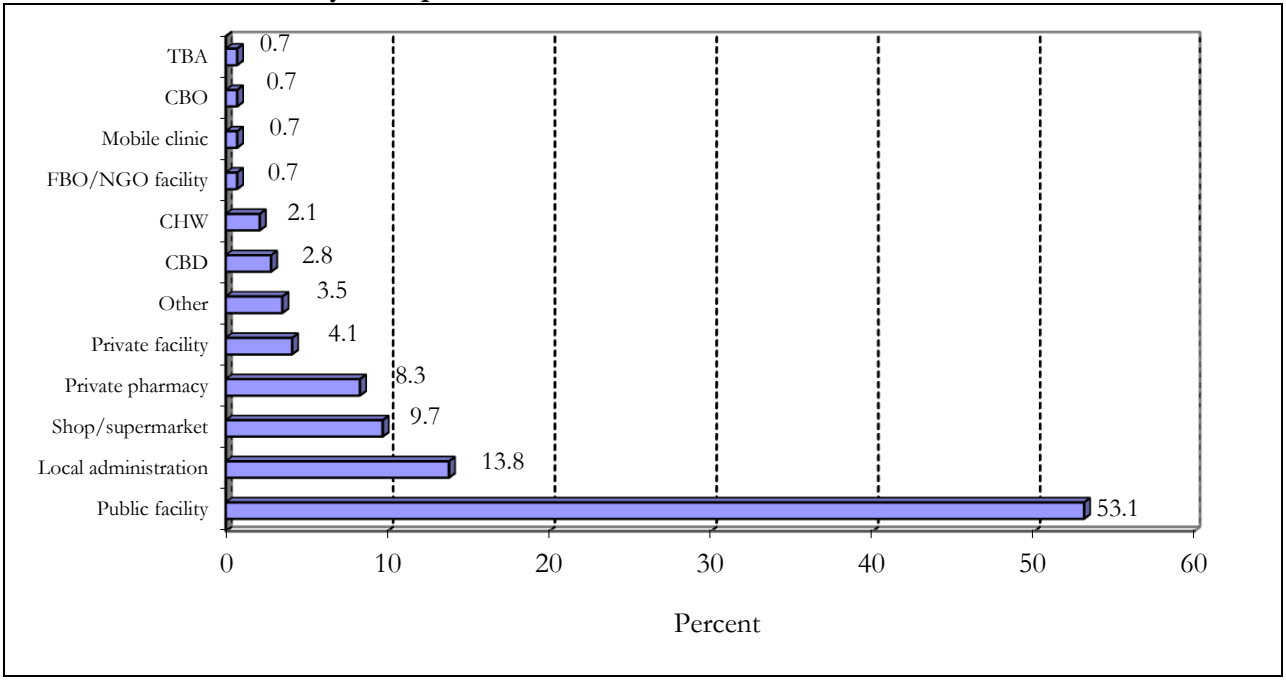
Indicator	Women (%)	Men (%)	Both sexes (%)
Main preferred distribution channel[a]			
Public health facility	63.2	59.0	61.8
Private health facility	4.6	3.0	4.1
Faith-based/NGO health facility	3.0	2.3	2.7
Stand-alone VCT center	0.3	0.0	0.2
Mobile clinic/tent/outreach	2.1	2.0	2.1
Private pharmacy	7.5	5.7	6.9
Community health worker	2.9	2.0	2.6
Community-based distributor	0.9	1.4	1.0
CBO/self-help group	0.3	0.2	0.3
Non-governmental organization	0.0	0.0	0.0
Local administration	6.8	11.3	8.3
Social marketing events	0.2	0.7	0.4
Local shops/supermarkets	4.1	8.2	5.4
Family member/relative/friend/neighbor	0.1	0.2	0.2
Traditional birth attendant	0.2	0.0	0.2
Other	3.9	4.1	3.9
Reasons for preference[b]			
Facility/provider is nearby/no need to travel to get it/one can get it at home	72.7	70.8	72.1
Provider/distributor is always friendly/ understanding	13.2	11.6	12.7
Provider/distributor offers services at affordable/no cost	24.1	19.7	22.7
Provider/distributor treats clients with respect	3.9	3.4	3.7
Provider/distributor is always available whenever one needs services	8.0	7.0	7.7
Provider/distributor is well known/respected in the	4.3	5.2	4.6

Indicator	Women (%)	Men (%)	Both sexes (%)
community			
Services are always available at the facility/ distribution outlet/no stock outs	5.8	7.7	6.4
Waiting time is always reasonable/there are no long queues	5.1	5.0	5.0
Confidentiality/privacy is assured at facility/ distribution outlet	7.8	7.7	7.8
Adequate information is provided to clients at the facility/distribution outlet	5.9	7.7	6.5
Other	3.2	3.4	3.3
Number of respondents	909	441	1,350

Notes: [a]Percentages may not sum to exactly 100 due to rounding; [b]Question allowed for multiple responses; NGO: Non-governmental organization; VCT: Voluntary counseling and testing; CBO: Community-based organization.

Among the surveyed men and women who had never tested for HIV but who would use the oral self-test kit, slightly more than half (53%) indicated that they would be most comfortable obtaining the kits from a public health facility (Figure 4). Another 14% reported that they would prefer to obtain the kits from the local administration, 10% would prefer a shop or supermarket while 8% reported preference for a private pharmacy. The most commonly cited reasons for preference of specific distribution channels among men and women who had never tested for HIV but would use the oral self-test kits were distance to the outlet (66%); cost of services (21%); confidentiality reasons (13%); friendliness of the provider (10%); and the possibility of obtaining adequate information (10%).

Figure 4: Percent distribution of survey respondents who had never been tested for HIV but would use the oral self-test kit by main preferred distribution outlet



Notes: TBA: Traditional birth attendant; CBO: Community-based organization; FBO: Faith-based organization; NGO: Non-governmental organization; CHW: Community health worker; CBD: Community-based distributor.

Similar to survey respondents, more than half (53%) of the service providers reported that public health facilities would be the most convenient place for clients to obtain HIV oral self-test kits (Table 7). There were, however, variations in the recommended distribution channel by type of provider or outlet. For instance, 80% of service providers based in public health facilities reported that their outlets would be the most convenient for clients to obtain HIV oral self-test kits. By contrast, the proportion of providers recommending public health facility as the most convenient distribution channel was much lower among those based in a private facility (35%), stand-alone VCT center (29%), private pharmacy (4%), and shop or supermarket (26%). Other most commonly recommended distribution channels were private pharmacy (14%) and private health facility (9%).

Table 7: Percent distribution of providers by suggested channels for distributing HIV oral self-test kits

	Type of outlet/provider						
Suggested channel	Public facility (%)	Private facility (%)	VCT center (%)	Private pharmacy (%)	CHW/ TBA (%)	Shop/super market (%)	All outlets (%)
Public health facility	80.3	35.1	28.6	4.4	54.6	26.3	53.1
Private health facility	1.6	28.6	0.0	4.4	0.0	5.3	9.0
Faith-based/NGO facility	0.0	18.2	7.1	0.0	0.0	0.0	5.2
Stand-alone VCT center	4.1	3.9	28.6	4.4	0.0	0.0	4.5
Mobile clinic/outreach	0.8	0.0	0.0	0.0	6.1	5.3	1.4
Private pharmacy	4.9	10.4	28.6	78.3	3.0	10.5	13.5
Community health worker	2.5	1.3	0.0	0.0	30.3	0.0	4.9
CBD	0.8	1.3	0.0	4.4	0.0	10.5	1.7
CBO/self-help group	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NGO	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Local administration	0.0	0.0	0.0	0.0	3.0	0.0	0.4
Social marketing events	0.8	0.0	0.0	0.0	0.0	5.3	0.7
Local shop/supermarket	1.6	0.0	0.0	0.0	0.0	36.8	3.5
Family member/relative/ friend/neighbor	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Traditional birth attendant	0.8	0.0	0.0	0.0	0.0	0.0	0.4
Other	1.6	1.3	7.1	4.4	0.0	0.0	1.7
Number of respondents	122	77	14	23	33	19	288

Notes: VCT: Voluntary counseling and testing; CHW: Community health worker; TBA: Traditional birth attendant; NGO: Non-governmental organization; CBD: Community-based distributor; CBO: Community-based organization.

Most key informants also noted that public health facilities should be the primary distribution points for the HIV oral self-test kits. First, public health facilities were viewed as having a well-developed infrastructure and trained personnel that can cope with the additional tasks of distributing oral self-test kits. The facilities were also seen as being well equipped to distribute the kits because the health personnel are trained and can easily pass information on how to use the kits including provision of counseling and referral services. Besides, the facilities were viewed as already having large clientele that can be easily reached with the kits as well as having a well-developed data capturing system that would ensure accurate information on HIV is collected. The following quotes support some of these views:

> *"Hospitals are even busy because different people with different diseases visit them; when they come for treatment they can be given the kit. Entire families will be reached, like for myself if I am walking into a government hospital and I am given, I can also take more so that I supply to my family members or friends." APDK, Nairobi County*

> *"One, I think there is accountability because you know you have delivered a thousand and then from the health centers, if they are going to give the Community Health Workers, like maybe fifty, he/she will have to do the returns. Two, I think also the issue of accessibility, because if can distribute them the way we do with condoms, that each and every (inaudible) has a disseminating point that one gets the kit from, then there will be misuse, so due to accountability, the health center will be more appropriate and if possible, maybe thereafter*

we can do an introduction to chemists but from the chemists, the issue of amount and buying will come in, but the best would be the health center because of accountability." Opinion leader, Nyandarua County.

"Government facilities will ensure that many people access them because they are widely spread, the disadvantage again will be that the discussion around HIV/AIDS will not be administered anymore." SWOP, Nairobi County.

Other distribution channels

Survey respondents were further asked where else they would prefer to obtain the kits if they were not available at their main preferred channel. Table 8 presents top five other preferred channels among respondents whose main preferences were public health facility, local administration and private pharmacy (the three main channels preferred by 62%, 8% and 7% of the respondents respectively as shown in Table 6). Other preferred distribution channels for respondents whose main preference was public health facility include private health facility (25% of the women and 22% of the men); private pharmacy (23% of the women and 22% of the men); local administration (16% of the women and 19% of the men); mobile clinic or outreach (16% of the women and 14% of the men); and local shops or supermarkets (11% of the women and 13% of the men).

Table 8: Percent distribution of survey respondents who would use HIV oral self-test kits by other preferred distribution channels apart from the main one mentioned

Other distribution channels	Women (%)	Men (%)	Both sexes (%)
Other channels apart from public health facility	(N=574)	(N=260)	(N=834)
Private health facility	24.7	21.5	23.4
Mobile clinic/tent/outreach	16.0	13.9	15.4
Private pharmacy	23.2	21.5	22.7
Local administration	15.7	18.9	16.7
Local shops/supermarkets	11.0	13.1	11.6
Other channels apart from local administration	(N=62)	(N=50)	(N=112)
Public health facility	58.1	54.0	56.3
Faith-based/NGO health facility	8.1	4.0	6.3
Community health worker	8.1	16.0	11.6
Local shops/supermarkets	14.5	10.0	12.5
School/church/mosque	6.5	8.0	7.1
Other channels apart from private pharmacy	(N=68)	(N=25)	(N=93)
Public health facility	60.3	52.0	58.1
Private health facility	19.1	16.0	18.3
Stand-alone VCT center	4.4	4.0	4.3
Community health worker	5.9	8.0	6.5
Local shops/supermarkets	32.4	32.0	32.3

Notes: Question allowed for multiple responses; NGO: Non-governmental organization; VCT: Voluntary counseling and testing.

Results in Table 8 further show that for respondents whose main preferred channel was local administration, other possible channels include public health facility (58% of the women and 54% of the men); local shops or supermarkets (15% of the women and 10% of the men); community health workers (8% of the women and 16% of the men); schools, churches or mosques (7% of the women and 8% of the men); and faith-based or NGO facility (8% of the women and 4% of the men). For

respondents whose main preferred channel was private pharmacy, other possible choices were public health facility (60% of the women and 52% of the men); local shops or supermarkets (32% of the women and a similar proportion of men); private health facility (19% of the women and 16% of the men), community health worker (6% of the women and 8% of the men); and stand-alone VCT center (4% of the women and a similar proportion of men).

Similar patterns are noted from interviews with service providers. For instance, providers who reported that public health facilities were the most convenient distribution channels mostly mentioned private health facility (41%), private pharmacy (38%), stand-alone VCT center (22%), community health worker (20%), and mobile clinic or outreach as other channels for distributing the test kits (Table 9). Providers who mentioned private pharmacies as the most convenient distribution channels also cited public health facilities (72%), private health facilities (54%), stand-alone VCT centers (23%), and local shops or supermarkets (10%) as other channels for distributing the kits. Those who reported that private health facility is the most convenient location also mentioned public health facility (77%), private pharmacy (35%), stand-alone VCT center (15%), and community health worker (12%) as other possible channels for distributing the kits (Table 10).

Table 9: Percent distribution of providers by other suggested channels for distributing HIV oral self-test kits apart from the main one mentioned

Other distribution channels	Percent
Other channels apart from public health facility	(N=153)
Private health facility	41.2
Stand-alone VCT center	22.2
Mobile clinic/tent/outreach	15.0
Private pharmacy	37.9
Community health worker	20.3
Other channels apart from private pharmacy	(N=39)
Public health facility	71.8
Private health facility	53.9
Stand-alone VCT center	23.1
Community health worker	7.7
Local shops/supermarkets	10.3
Other channels apart from private health facility	(N=26)
Public health facility	76.9
Stand-alone VCT center	15.4
Mobile clinic/tent/outreach	3.9
Private pharmacy	34.6
Community health worker	11.5

Notes: Question allowed for multiple responses.

Key informants also identified other possible distribution channels as VCT centers, CHWs, entertainment places (bars, restaurants and hotels), churches/mosques, NGOs, learning institutions, private pharmacies, private health facilities, as well as shops and supermarkets. Table 10 summarizes the distribution channels mentioned by key informants and the advantages and limitations of each channel.

Table 10: Advantages and limitations of distribution channels based on key informant interviews

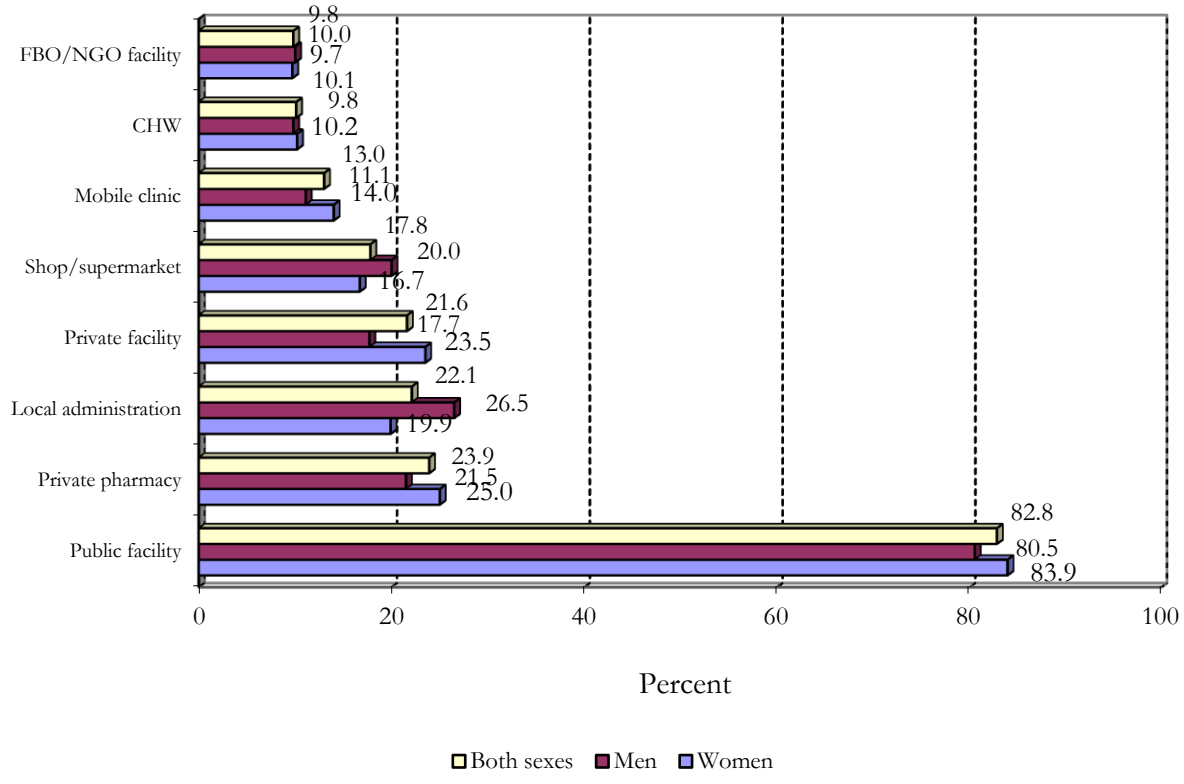
Distribution channel	Advantages	Limitations
Public health facilities	1) Well-developed infrastructure and health personnel 2) Trained health personnel that can easily counsel and/or refer clients 3) Large clientele already seeking services that can be easily reached with the kits 4) Well-developed data capturing systems to ensure accurate information	1) Red tape and bureaucracy may delay distribution 2) Stigma and lack of privacy in public health facilities 3) Inadequate staff and lack of training 4) Long waiting time at public health facilities
Voluntary counseling and testing centers	1) Countrywide networks 2) Trained staff 3) Well known by clients	1) May not reach those who are unwilling to visit health facilities 2) People may not have clear distinction between normal VCT services and oral self-test kits
Community health workers	1) Quick coverage of services in the catchment areas 2) Can offer counseling services, make prompt follow-ups, refer clients and keep records 3) Well-regarded in the community; hence may increase acceptability	1) Lack of units to operate from 2) Lack of motivation due to voluntary nature of CHW's work 3) Fear of breach of confidentiality by clients due to familiarity with CHWs 4) Some CHWs may engage in illegal activities like selling the kits that are meant to be distributed for free
Entertainment places (bars, restaurants and hotels)	1) Likelihood of reaching a large number of people	1) Risk of those who are inebriated misusing the kits or use them without complying with instructions 2) Targeting can be cumbersome as individuals visiting such places may be difficult or decline to use the kits
Places of worship (churches/mosques)	1) Target different people—poor, rich and those intending to marry	1) Clergy may resist distributing kits in places of worship
NGOs and CBOs	1) Spread across the country 2) Have links to specific population groups 3) Have effective strategies for reaching clients e.g. door-to-door visits, client follow-ups and referrals	1) Challenges with sustainability of programs due to reliance on donor funding 2) Some strategies e.g. door-to-door and client follow-ups are expensive
Learning institutions	1) Many young people can be reached with testing services	1) Potential for misuse of the kits 2) Possible opposition from principals
Private pharmacies	1) Geographical spread in the country 2) Different segments can be reached (adolescents, married individuals and key population groups such as MSM and FSWs)	1) Providers may lack necessary training 2) Layout and the busy nature may compromise confidentiality 3) May charge higher prices given that they are profit-making entities
Private health facilities	1) Clients are assured confidential and prompt services	1) Groups in low socio-economic strata may not access services due to user fees

Distribution channel	Advantages	Limitations
Shops and supermarkets	1) Easily accessible to many people 2) Possibility of stigmatization is low given that the outlets are visited by people of different backgrounds	1) Improper storage of the kits 2) Possibility of untrained attendants dispensing the kits 3) Clients may not receive counseling and referral services

Notes: NGO: Non-governmental organization; CBO: Community-based organization; CHW: Community health worker; VCT: Voluntary counseling and testing..

Further analysis showed that more than four-fifths (83%) of survey respondents mentioned public health facility as either the main or alternative source of HIV oral self-test kits with no significant difference between women and men (84% and 81% respectively; Figure 5). Similarly, 24% of the respondents mentioned private pharmacy as the main or alternative source of the test kits (25% of the women and 22% of the men). The other most commonly mentioned channels as either the main or alternative source of HIV oral self-test kits included local administration (20% of the women and 27% of the men), private health facilities (24% of the women and 18% of the men), and local shops or supermarkets (17% of the women and 20% of the men; Figure 5).

Figure 5: Percent distribution of survey respondents by the most commonly mentioned distribution channels as either the main or the alternative source of HIV oral self-test kits



Notes: Question allowed for multiple responses; FBO: Faith-based organization; NGO: Non-governmental organization; CHW: Community health worker.

Choice of distribution channel

Key informants noted that several factors might influence a client's choice of a particular distribution channel. These include the age of the distributor, availability of the kits, distance to the distribution outlets, awareness about the kits, cost and confidentiality concerns. The age of the distributor was reported to be important especially for young people who in most cases would prefer to be served by a younger service provider. Informants also reiterated that demand for the kits would be determined by available stock and distance to distribution points. In particular, erratic supplies might discourage potential use while long distances to the distribution outlet might cost money and time. The level of awareness in the community about the kits could also have an impact on usage of the kits with individuals who have appropriate information about the oral self-test kits having a higher chance of using them. Potential clients may decide to use the kits or not depending on whether they are provided for free or at a fee. Confidentiality was, on the other hand, reported to be the mainstay of oral self-test kits and clients will have to make this important consideration at the distribution outlet and at the point where they are doing the test.

> *"Confidentiality. Sure. More so the males. The other groups I would be wrong to speak on behalf of the females, but from experience, women do not fear much and they would want to access private services. But for men it has to be very confidential…The other thing is that the cost will also influence. Cost in terms of, if I have to travel to get it from this place, then I would rather get it from this place…Yes, the type of education and mobilization done on it, when all these things have been demystified, when all these challenges that are facing it have been demystified then even people that would want to go to particular places, they will think they can now start…There are people who will be willing to spend to go and get it in a different place, so they don't cut across."* CBO, Kisumu County.

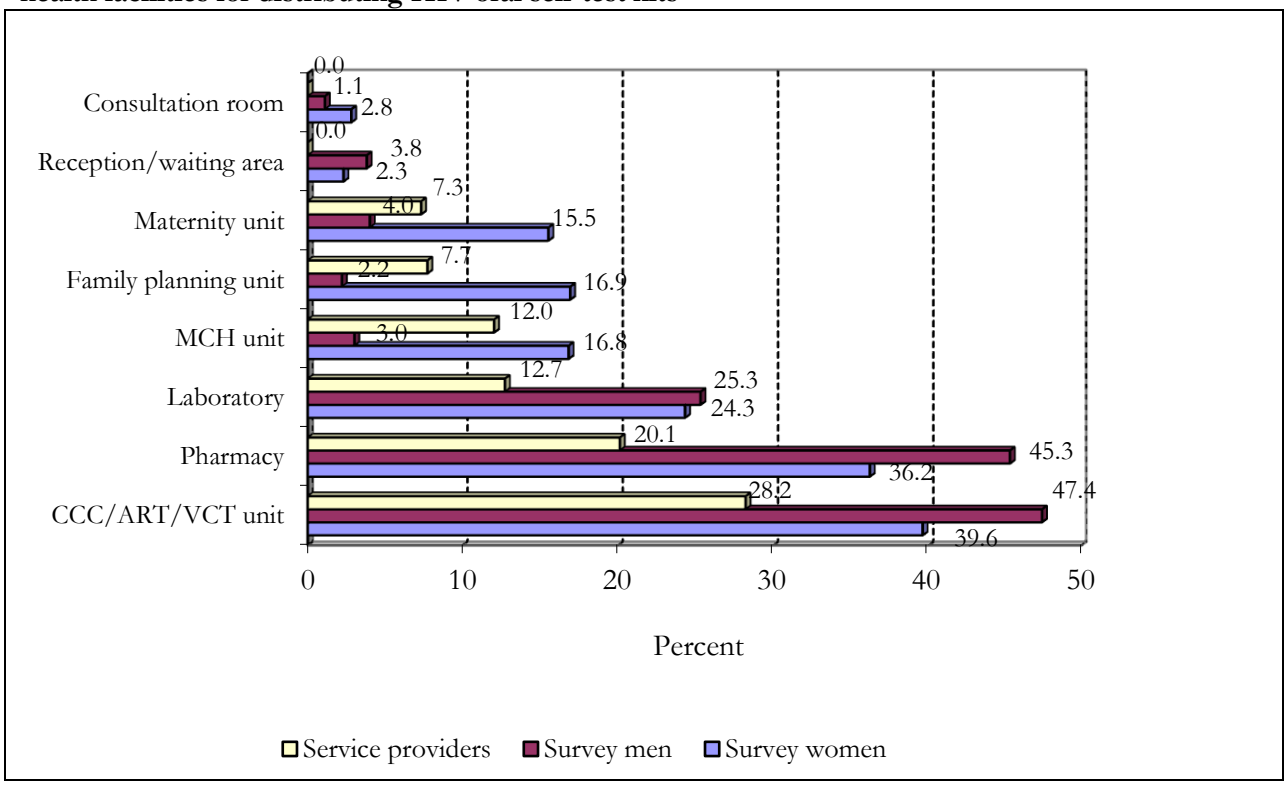
> *"Talking about all those channels, it depends on what is nearer and what is more affordable because I would assume that maybe government facilities would provide it free. Maybe pharmacies may want to recover something minimal to recover their cost. So it would depend on first the cost, the ease of accessibility of those sites, and what is the mode of referral."* NASCOP, Nairobi County.

> *"For the hospitals, all people go there at some point so we are targeting everyone who goes to hospital and the markets can target the old mothers who sell there."* Opinion leader, Kisumu County

Preferred distribution units within health facilities

Survey respondents who mentioned a health facility (public, private, faith-based or NGO) as the main or other preferred distribution channel were asked which specific units within the facility they would be comfortable obtaining the test kits from. Comprehensive care center/ART/VCT unit was the most preferred (40% of the women and 47% of the men) followed by pharmacy (36% of the women and 45% of the men); and laboratory (24% of the women and 25% of the men) in that order (Figure 6). A higher proportion of women than men also preferred to obtain the kits from maternal and child health, family planning and maternity units. The recommended specific units within health facilities for distributing the test kits among service providers were similar to those of survey respondents (Figure 6).

Figure 6: Percent distribution of survey respondents and service providers by preferred unit within health facilities for distributing HIV oral self-test kits



Notes: Question allowed for multiple responses; MCH: Maternal and child health; CCC: Comprehensive care center; ART: Antiretroviral treatment; VCT: Voluntary counseling and testing.

Readiness to Provide Information and Distribute Kits

Provider readiness

Service providers were asked whether they were willing to: i) provide information on HIV oral self-test kits; and ii) distribute HIV oral self-test to potential clients. The results are presented in Table 11. Nearly all providers reported that they would provide information or distribute the kits (97% and 93% respectively). However, there were significant differences in the distribution of providers who indicated that they would provide information on the test kits by type of outlet or provider (lowest among those based in shops or supermarkets), age (lowest among those who indicated that they do not know their age, which could be an indication of illiteracy), education level (lowest among those with lower levels of education), and duration of work at the outlet (lowest among those who had worked at the outlet for 10 or more years). By contrast, there were no significant differences in the distribution of providers who reported that they would distribute the kits by most of the background characteristics except county (lowest in Kilifi County).

Table 11: Percent distribution of providers by willingness to provide information on HIV oral self-tests and distribute the kits

Characteristics	Willing to provide information (%)	Willing to distribute kits (%)
County	p=0.35	p<0.05
Nairobi	97.8	97.8
Kisumu	97.1	94.2
Nyandarua	100.0	91.8
Kilifi	92.9	87.1
Uasin Gishu	97.3	97.3
Sex of provider	p=0.33	p=0.77
Female	97.9	93.3
Male	95.2	93.5
Location of provider	p=0.08	p=0.80
Rural	98.9	93.1
Urban	94.4	93.7
Type of outlet/provider	p<0.01	p=0.08
Public facility	100.0	95.6
Private facility	100.0	94.1
Stand-alone VCT center	100.0	85.7
Private pharmacy	91.3	87.0
CHW/TBA	94.3	97.1
Shop/supermarket	75.0	83.3
Age group (years)	p<0.05	p=0.95
20-29	96.9	93.8
30-39	97.7	93.9
40-49	95.8	91.7
50-65	97.4	92.1
Don't know	75.0	100.0
Highest education level	p<0.05	p=0.43
Secondary or lower	90.9	90.9
College/university	98.4	94.0
Duration worked in position	p=0.06	p=0.98
<5 years	97.0	93.9
5-9 years	100.0	93.6
10 or more years	93.2	92.1
Can't remember	100.0	100.0
Duration worked at outlet	p<0.01	p=0.18
<5 years	98.1	93.9
5-9 years	100.0	98.0
10 or more years	86.7	84.4
Can't remember	100.0	100.0
All respondents	96.9	93.4
Number of respondents	317	317

Notes: VCT: Voluntary counseling and testing; CHW: Community health worker; TBA: Traditional birth attendant.

The major reasons that the providers gave for their readiness to give information on the test kits were that they had adequate human resources (52%), adequate infrastructure (35%), large clientele

(34%), and appropriate training (28%; Table 12). In addition, the major reasons given for readiness to distribute the actual kits were that the providers had large clientele (59%), distribution does not require huge amounts of resources (26%), and that they had adequate human resources (25%) as well as adequate infrastructure (24%). There were, however, variations in reasons given for readiness to provide information or distribute the kits by type of outlet or provider. For instance, the proportion of providers reporting that they had adequate human resources to give information was highest among those based in private outlets and lowest among community health workers and traditional birth attendants (58% and 30% respectively). Similarly, the proportion of providers that reported that they had large clientele to distribute the kits to was highest among providers from stand-alone VCT centers and lowest among those based in private pharmacies (75% and 55% respectively).

Table 12: Percent distribution of providers by available resources to provide information on HIV oral self-test and distribute the kits

Available resources	Public facility (%)	Private facility (%)	VCT center (%)	Private pharmacy (%)	CHW/ TBA (%)	Shop/super market (%)	All outlets (%)
Providing information[a]	N=137	N=84	N=14	N=21	N=33	N=18	N=307
Adequate human resources	53.3	58.3	57.1	52.4	30.3	44.4	51.8
Appropriate training	29.2	35.7	42.9	42.9	0.0	5.6	28.0
Adequate financial resources	7.3	15.5	7.1	23.8	0.0	11.1	10.1
Adequate infrastructure	40.2	34.5	50.0	33.3	21.2	16.7	35.2
Large client volume	42.3	28.6	35.7	19.1	33.3	11.1	33.9
Other	5.8	6.0	14.3	14.3	30.3	27.8	10.8
Distributing test kits[a]	N=131	N=79	N=12	N=20	N=34	N=20	N=296
Does not require huge amounts of resources	26.0	29.1	0.0	25.0	29.4	20.0	25.7
Adequate human resources	21.4	31.7	50.0	35.0	11.8	25.0	25.3
Appropriate training	18.3	13.9	16.7	30.0	2.9	5.0	15.2
Adequate financial resources	0.8	6.3	8.3	15.0	0.0	5.0	3.7
Adequate infrastructure	26.7	26.6	41.7	25.0	11.8	10.0	24.3
Large client volume	59.5	57.0	75.0	55.0	55.9	60.0	58.8
Other	8.4	6.3	0.0	5.0	14.7	5.0	7.8

Notes: [a]Questions allowed for multiple responses; VCT: Voluntary counseling and testing; CHW: Community health worker; TBA: Traditional birth attendant.

Similar to service providers, nearly all key informants reported that their agencies are well equipped to provide information on HIV oral self-test kits. Various agencies reported having varying degree of resources to support the provision of information on the kits. However, the capacity to provide information appeared to be closely linked with the organization type (i.e. government facilities, NGOs, CBOs, private entities and individuals such as CHWs), infrastructure, personnel, as well as access to digital platform such as internet, Facebook, twitter and short message service. Informants from the public sector as well as large NGOs were especially confident in their ability to provide information on oral self-test kits. Representatives of social marketing agencies reported that they can draw on their experience marketing various products to formulate appropriate messaging and delivery of information on HIV oral self-test kits. Informants noted that potential clients could learn about the availability of kits in the public health facilities and other distribution channels through public announcements and sensitization workshops in churches, community meetings, work places, print and electronic media, social media, public health talks, community outreaches as well as posters and information, education and communications (IEC) materials. The following excerpts highlight the views of key informants regarding the readiness of their agencies to give information on and/or distribute the kits:

> *"I don't foresee a challenge so long as everything has been worked out. As long as we have clear guidelines on, 'after you test this is what will happen' test kits are located here, this is the person mandated to give out the test kits, how do we do the returns – accountability, because right now if we have free test kits for which we are not charging the patients, there is bound to be some pilferage or something. Yeah, so long as all that is clear before we start, then I don't foresee challenges. Maybe only healthcare workers on that story of change but we can work on that and reporting and accountability."* PASCO, Nairobi County.

> *"We have well established static facilities, we have established outreached and we work with massive numbers of private sector through our social franchising project…then the other thing is the distribution which is all over the country including some areas which are hard to reach. So I think in terms of resources we are well placed."* Marie Stopes, Nairobi County.

> *"We being the distributors we don't work with agencies, it's our principles, so we have our own in-house marketing departments what we can provide as a part of this education campaign can be that advice, or recommend to which stores to start with and put up displays and discuss, we can help you source promoters who can talk to potential users on how this can be used and can help you monitor them and also promotion."* Radbone Clark, Nairobi County.

Potential challenges with distribution

Service providers were further asked about the challenges they would face in giving information on or distributing HIV oral self-test kits. The most commonly cited challenges associated with providing information were lack of IEC materials (39%), lack of appropriate training or technical capacity (36%), inadequate financial resources (33%), inadequate human resources (25%), and lack of acceptance by clients (25%; Table 13). The most commonly cited challenges for distribution were irregular supplies or stock-outs (53%), inadequate financial resources (33%), inadequate technical capacity (31%), and inadequate human resources (24%). There were also variations in reported challenges with giving information or distributing the kits by type of provider or outlet. For instance, the proportion of providers reporting inadequate financial resources for giving information or

distributing the kits was highest among community health workers and traditional birth attendants and lowest among those based in shops or supermarkets (Table 13).

Table 13: Percent distribution of providers by challenges likely to be faced in providing information on HIV oral self-test and distributing the kits

Challenges	Public facility (%)	Private facility (%)	VCT center (%)	Private pharmacy (%)	CHW/ TBA (%)	Shop/super market (%)	All outlets (%)
Providing information[a]	N=137	N=84	N=14	N=23	N=35	N=24	N=317
Inadequate human resources	24.8	29.8	21.4	21.7	17.1	25.0	24.9
Lack of appropriate training	39.4	29.8	14.3	39.1	37.1	45.8	36.0
Inadequate financial resources	37.2	32.1	21.4	21.7	45.7	16.7	33.4
Inadequate infrastructure	15.3	21.4	7.1	17.4	5.7	12.5	15.5
Lack of IEC materials	47.5	28.6	42.9	34.8	42.9	29.2	39.4
Lack of acceptance by clients	24.8	28.6	14.3	21.7	34.3	4.2	24.6
Other	11.0	17.9	21.4	21.7	8.6	20.8	14.5
Distributing test kits[a]	N=137	N=84	N=14	N=23	N=35	N=24	N=317
Inadequate human resources	25.6	33.3	7.1	21.7	11.4	16.8	24.3
Inadequate technical capacity	36.5	31.0	21.4	13.0	25.7	33.3	31.2
Inadequate financial resources	38.7	27.4	14.3	21.7	48.6	12.5	32.5
Inadequate infrastructure	10.2	4.8	0.0	8.7	5.7	4.2	7.3
Irregular supplies/stock-outs	59.9	50.0	42.9	52.2	40.0	50.0	53.0
Inadequate clientele	4.4	7.1	0.0	13.0	5.7	8.3	6.0
Fear of HIV testing	20.4	17.9	14.3	13.0	22.9	0.0	17.7
Lack of treatment/ support	5.1	9.5	0.0	13.0	11.4	16.7	8.2
Other	14.6	14.3	35.7	26.1	8.6	8.3	15.1

Notes: [a]Questions allowed for multiple responses; VCT: Voluntary counseling and testing; CHW: Community health worker; TBA: Traditional birth attendant; IEC: Information, education and communication.

Similar challenges were identified by key informants with respondents from various agencies–big and small alike–reporting cross cutting themes on probable challenges offering information to clients. A key challenge is funding, which was deemed essential to facilitate training on HIV oral

self-test and hiring of additional staff. Other anticipated challenges include inconsistent supply of oral test kits, resistance from the target community, language barrier, questions about the validity of the test kit, referral and linkage to care as well as data capture on the usage of the kits. With respect to distribution, informants mentioned such challenges as obtaining certification from the Ministry of Health to distribute the kits, funding, inaccessibility and long distance to some outlets, lack of monitoring and evaluation systems, lack of training on HIV oral self-tests, low utilization of services, challenges with procurement of the kits, resistance from some community members, erratic supply of the kits, pilferage, limited storage capacity and increased workload for health care workers. The following quotes highlight some of the challenges:

> *"As I have told you the channels we are using all this channels they need money. If I am going to send the field worker to talk to the women they need money, I need to provide them with transport and whatever it is, money is one of the challenges…"* CBO, Kilifi County.

> *"…because we will find quite a good number will need to understand the whole thing very well then you translate it to mother tongue, for them to understand because without that kind of translation, a lot of people might float so some few challenges will arise here and there but not all that much."* Opinion leader, Nyandarua County.

> *"As with any challenges, some would sell them, and issues of recording, we don't have a record or system for that, we also don't have a system for follow-up of clients, how many people will be reached…That might be a limitation"* HOYMAS, Nairobi County.

Organization of Distribution Channels

Support needed for distribution

Service providers were asked about the type of support they would need if they were to give information on or distribute HIV oral self-test kits. The most commonly mentioned types of support needed to provide information were training or updates on self-test (71%), adequate IEC materials (64%), community sensitization (52%), additional financial resources (47%), and additional human resources (33%; Table 14). For distribution, the most commonly mentioned types of support needed were training or updates on self-test (54%), reliable supplies (52%), community sensitization (51%), adequate IEC materials and additional financial resources (47% each). There were also variations in the types of support needed to give information or distribute the kits by type of outlet or provider. For instance, the need for additional financial resources to give information or distribute the kits was highest among community health workers and traditional births and lowest among those based in shops or supermarkets (Table 14).

Table 14: Percent distribution of providers by type of support needed to provide information on HIV oral self-test and distribute the kits

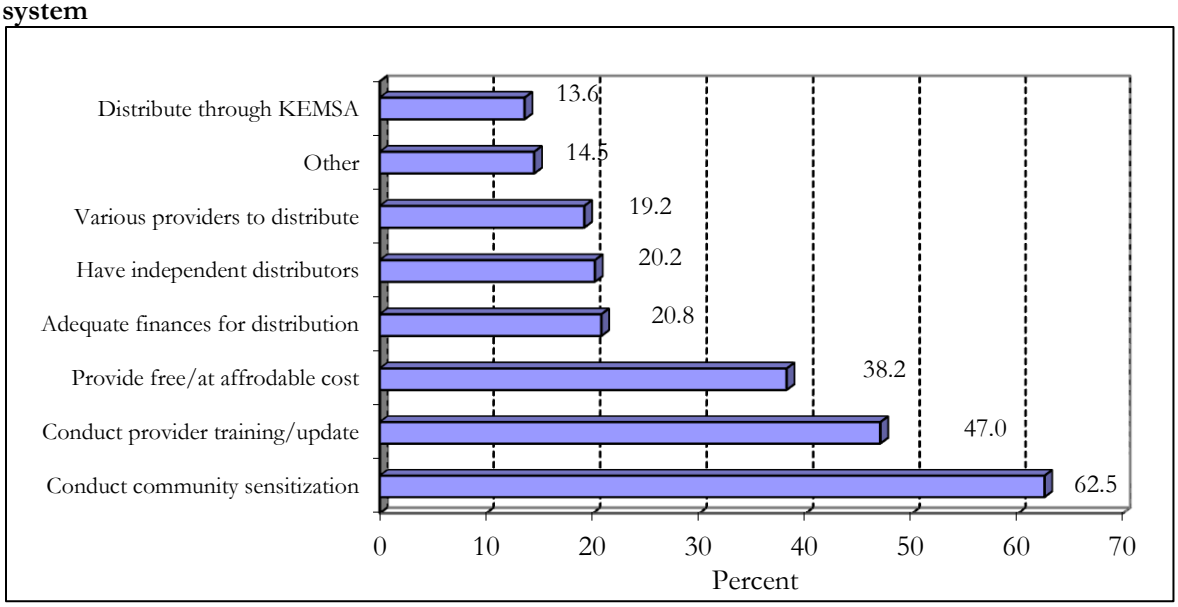
Type of support needed	Public facility (%)	Private facility (%)	VCT center (%)	Private pharmacy (%)	CHW/ TBA (%)	Shop/super market (%)	All outlets (%)
Providing information[a]	N=137	N=84	N=14	N=23	N=35	N=24	N=317
Additional human resources	40.9	38.1	7.1	21.7	22.9	16.7	33.4
Training/updates on self-tests	75.2	71.4	78.6	65.2	62.9	58.3	71.0
Additional financial resources	56.2	40.5	28.6	26.1	62.9	20.8	46.7
Additional infrastructure	11.7	6.0	7.1	4.4	5.7	8.3	8.5
Adequate IEC materials	66.4	63.0	57.1	78.3	57.1	54.2	64.0
Community sensitization	54.0	59.5	35.7	30.4	57.1	41.7	52.4
Other	1.2	6.0	0.0	8.7	11.4	8.3	8.5
Distributing test kits[a]	N=137	N=84	N=14	N=23	N=35	N=24	N=317
Additional human resources	36.5	32.1	7.1	17.4	20.0	0.0	28.1
Training/updates on self-tests	60.6	59.5	35.7	52.2	34.3	37.5	53.9
Additional financial resources	54.0	44.1	28.6	26.1	62.9	25.0	47.0
Additional infrastructure	12.4	13.1	0.0	0.0	8.6	8.3	10.4
Adequate IEC materials	52.6	42.9	42.9	52.3	34.3	50.0	47.3
Community sensitization	51.8	51.2	42.9	30.4	77.1	37.5	51.4
Reliable supplies	59.9	47.6	57.1	65.2	37.1	33.3	52.4
Other	2.2	9.5	0.0	4.4	2.9	0.0	4.1

Notes: [a]Questions allowed for multiple responses; VCT: Voluntary counseling and testing; CHW: Community health worker; TBA: Traditional birth attendant; IEC: Information, education and communication.

Key informants mentioned similar forms of support needed if their agencies were to effectively provide information on and/or distribute HIV oral self-test kits. In particular, they mentioned funding to support training on HIV oral self-test, community outreach and sensitization among stakeholders, development of IEC materials, storage facilities, establishment of call centers, additional human resource capacity and provision of tools to capture data on self-testing. Getting the support of the political class was also seen as a necessary first step to gain acceptance of the kits and access in the community.

Service providers were further asked about programmatic actions that should be undertaken to ensure that the distribution of HIV oral self-test kits better meets the needs of clients. The most commonly mentioned actions were conducting community sensitization (63%), conducting provider training or updates on self-test (47%), providing the test kits free or charge or at affordable cost (38%), and ensuring adequate financial resources for distribution (21%; Figure 7). Besides these programmatic actions, key informants identified the need to certify institutions selected to distribute the kits, put in place standards and guidelines for distribution and storage, and develop robust monitoring and evaluation system.

Figure 7: Percent distribution of providers by suggested ways of ensuring efficient distribution system



Linkage to Counseling and Care

Seeking counseling services

Table 15 presents the distribution of survey respondents who would use HIV oral self-test kits and whether they would seek counseling services before and after the test. More than 70% of women and men indicated that they would seek counseling services before or after performing HIV self-test although the proportion was significantly higher among women than among men (77% and 71% respectively before testing; $p<0.05$; 83% and 79% respectively after testing; $p<0.05$). There were also significant differences in the distribution of women who would seek counseling services before testing by county, age, education level and religious affiliation. In particular, the proportion of women who would seek counseling before testing was lowest in Uasin Gishu (55%) and highest in Kilifi County (87%; $p<0.01$). Similarly, the proportion of women who would seek counseling before testing was lowest among those aged 25-34 years (72%), those with college/university level education (70%), and among Catholics (72%). By contrast, the proportion of women who would seek counseling before testing was highest among those aged 18-24 years (82%), those with no education (80%), and among Muslims (83%).

Table 15: Percent distribution of survey respondents who would use HIV oral self-test kits and whether they would seek counseling services before and after testing by background characteristics

	Women			Men	
Characteristics	Before testing	After testing		Before testing	After testing
County	p<0.01	p<0.01		p<0.01	p<0.01
Kisumu	84.5	80.5		84.0	77.4
Nyandarua	80.0	85.2		69.6	80.9
Kilifi	86.5	91.6		91.5	89.7
Uasin Gishu	55.1	75.2		36.9	64.1
Age group (years)	p<0.01	p<0.01		p=0.15	p=0.59
18-24	82.1	83.7		74.4	83.3
25-34	72.2	82.2		65.5	80.0
35-44	75.7	86.4		77.4	77.4
45-64	81.2	80.5		71.2	74.8
Don't know	80.0	60.0		0.0	0.0
Highest education level	p<0.01	p<0.01		p=0.34	p=0.55
No schooling/pre-unit/nursery	80.4	79.4		76.2	81.0
Primary	78.5	85.2		74.8	77.8
Secondary	72.3	81.4		67.8	79.2
College/university	69.8	77.4		59.5	78.4
Religious affiliation	p<0.01	p<0.01		p=0.30	p=0.32
Catholic	72.0	77.6		76.7	76.7
Protestant/other Christian	77.3	84.4		67.3	77.0
Muslim	83.3	85.4		84.4	81.3
No religion	75.0	79.6		77.8	91.7
Marital status	p=0.07	p<0.05		p=0.33	p=0.96
Never married	74.0	72.0		66.1	77.1
Married/living together	75.9	84.2		73.0	78.9
Formerly married[a]	85.1	87.2		70.0	80.0
Household wealth index	p=0.48	p=0.85		p=0.55	p=0.94
Poorest quintile	76.1	82.8		71.4	78.0
Poorer quintile	75.4	83.1		69.4	76.5
Middle quintile	79.3	83.2		65.5	77.0
Richer quintile	80.2	84.6		76.1	80.7
Richest quintile	72.4	82.2		73.3	80.0
Type of place of residence	p=0.19	p=0.24		p=0.23	p=0.46
Rural	77.9	83.7		72.5	78.9
Urban	71.7	79.7		61.5	75.0
Ever been tested for HIV	p=0.73	p<0.05		p=0.13	p=0.51
Yes	76.8	83.9		71.0	77.8
No	75.0	71.4		71.9	80.9
All respondents	76.7	83.2		71.2	78.5
Number of respondents	909	909		441	441

Notes: [a]Divorced/widowed/separated; p-values are from Chi-square tests of differences in the proportions of respondents who would seek counseling services by background characteristics.

The proportion of women who would seek counseling services after performing HIV self-test was significantly higher than the proportion that would do so before testing (83% and 77% respectively; p<0.01; Table 15). In addition, the proportion of women that would seek counseling services after

testing significantly differed by all the background characteristics considered except household wealth index. Variations by county and religious affiliation are largely similar to the distribution of those who would seek counseling services before testing. Moreover, the proportion of women who would seek counseling services after testing was significantly higher among those who had ever tested than among those who had not (84% and 71% respectively; $p<0.05$), among those who were formerly married than among never married women (87% and 72% respectively), and among women with college/university level education than among those with primary level education.

The proportion of men who would seek counseling after performing HIV self-test was significantly higher than the proportion that would seek the services before testing (79% and 71% respectively; $p<0.01$; Table 16). There were, however, no significant differences in the proportion of men that would seek counseling before or after testing by most of the background characteristics considered except by county. In both cases (before and after testing), the proportion of men that would seek counseling services was lowest in Uasin Gishu and highest in Kilifi County. The results further show that the majority of women and men who had never tested for HIV but would use the test kits (more than 70%) reported that they would seek counseling before or after performing HIV self-test.

From the perspectives of service providers, 62% and 71% felt that clients would seek counseling services before and after performing HIV oral self-test respectively (Table 16). However, the proportion of providers that reported that clients would seek counseling before testing significantly differed by county (lowest in Uasin Gishu and highest in Kilifi: 51% and 74% respectively). Similarly, the proportion of providers that reported that clients would seek counseling services after testing significantly differed by county (lowest in Kisumu and highest in Nairobi: 60% and 84% respectively) and by duration of work at current outlet (increases with more years at current outlet).

Table 16: Percent distribution of providers who believe clients would seek counseling and other services before and after performing HIV self-test

Characteristics	Clients would seek counseling before testing (%)	Clients would seek counseling after testing (%)	Clients would seek other services after testing (%)
County	$p<0.01$	$p<0.01$	$p<0.01$
Nairobi	57.8	84.4	86.7
Kisumu	70.6	60.3	86.8
Nyandarua	52.5	72.1	85.3
Kilifi	74.3	72.9	80.0
Uasin Gishu	50.7	71.2	68.5
Sex of provider	$p=0.47$	$p=0.62$	$p=0.93$
Female	59.8	69.6	80.9
Male	64.2	74.0	80.5
Location of provider	$p=0.65$	$p=0.12$	$p=0.47$
Rural	62.6	67.2	78.7
Urban	60.1	76.2	83.2
Type of outlet/provider	$p=0.72$	$p=0.17$	$p<0.05$
Public facility	62.0	67.2	78.8
Private facility	67.9	83.3	89.3
Stand-alone VCT center	57.1	78.6	71.4
Private pharmacy	52.7	65.2	78.3
CHW/TBA	62.9	71.4	82.9
Shop/supermarket	45.8	54.2	66.7

Characteristics	Clients would seek counseling before testing (%)	Clients would seek counseling after testing (%)	Clients would seek other services after testing (%)
Age group (years)	p=0.51	p=0.17	p=0.40
20-29	59.4	67.7	80.2
30-39	58.0	69.5	80.2
40-49	70.8	79.2	83.3
50-65	65.8	79.0	81.6
Don't know	75.0	50.0	75.0
Highest education level	p=0.20	p=0.57	p<0.01
Secondary or lower	68.2	72.7	78.8
College/university	59.8	70.9	81.3
Duration worked in position	p=0.45	p=0.13	p=0.37
<5 years	57.6	72.7	83.3
5-9 years	64.5	74.2	82.8
10 or more years	64.8	68.2	76.1
Can't remember	50.0	25.0	50.0
Duration worked at outlet	p=0.12	p<0.01	p<0.01
<5 years	58.5	68.4	80.2
5-9 years	64.0	78.0	86.0
10 or more years	68.9	80.0	82.2
Can't remember	80.0	60.0	60.0
All respondents	61.5	71.3	80.8
Number of respondents	317	317	317

Notes: VCT: Voluntary counseling and testing; CHW: Community health worker; TBA: Traditional birth attendant; p-values are from Chi-square tests of differences by background characteristics.

Key informants, on the other hand, held different views as to how potential clients would respond to the issue of seeking counseling and care before or after performing HIV oral self-test. There were those who felt that some people would outright not accept to be counseled or seek care following an oral self-test because such groups maybe hidden and stigmatized population groups. As such, they might be reluctant to come out in the open to access health services. Other informants noted that clients with poor health-seeking behavior or those having doubts about the validity of the tests may naturally be inclined to reject linkage to counseling and care services. At the same time, some individuals decline seeking counseling and care due to their inability to deal with the HIV test results. Other informants felt that there would not be any problems getting people who have tested themselves using the HIV oral self-test kits to access counseling and care because almost everybody is aware that those who test positive should be linked to health services. The following excerpts highlight the mixed opinions among key informants:

> *"Varied or kind of ways because there are others who are like I have known something about myself, I can easily go and ask someone, so I need more information, I need more support. But there are others who may lock themselves not speaking out, suffer on their own. Today I believe majority would just speak out."* DASCO, Kisumu County.

> *"It will depend if I get I am negative, I will not need, there are those who will need it if they are positive, but also the other dimension was that if I take this kit two or three times in my house and find that am positive, naturally I will want to go to the hospital."* HOYMAS, Nairobi County.

"I think the communities at the moment, the response will be very good because people are already aware that if you test positive, you need to have access to care. And one of the care is treatment – ART (antiretroviral treatment). So they will respond…I would think people would want to go for counseling, even post-test counselling much more…particularly for those who test positive." Marie Stopes, Nairobi County.

Seeking other care services

More than 80% of survey women and men who would use HIV oral self-test kits would seek other services (including prevention, treatment, support and information) after testing (83% of the women and 82% of the men; Table 17). However, the proportion of women who would seek other services after testing significantly differed by county, marital status, household wealth index and prior testing. The proportion was lowest among those from Uasin Gishu County (68%), among never married women (75%), among women from households in the middle wealth quintile (79%), and among those who had never tested for HIV (79%). By contrast, the proportion of women who would seek other services after testing was highest in Nyandarua County (95%), among Muslims (85%), among those formerly married (92%), among those from the richest households (91%), and among those who had tested for HIV before (84%). Among men, the proportion that would seek other services after testing significantly differed by county (lowest in Uasin Gishu and highest in Nyandarua) and education level (lowest among those with college/university level education and highest among those with secondary education; Table 17).

Table 17: Percent distribution of survey respondents who would use HIV oral self-test kits and seek other services by background characteristics

	Women			Men	
Characteristics	Percent	*N*		Percent	*N*
County	p<0.01			p<0.01	
Kisumu	78.3	226		77.4	106
Nyandarua	94.8	250		94.8	115
Kilifi	90.2	215		90.6	117
Uasin Gishu	68.4	218		62.1	103
Age group (years)	p=0.08			p=0.90	
18-24	80.4	184		78.2	78
25-34	83.1	331		80.7	145
35-44	84.7	235		84.9	106
45-64	85.7	154		82.9	111
Don't know	60.0	5		100.0	1
Highest education level	p=0.15			p<0.05	
No schooling/pre-unit/nursery	80.4	97		76.2	21
Primary	83.5	539		82.1	234
Secondary	84.1	220		85.2	149
College/university	83.0	53		70.3	37
Religious affiliation	p=0.15			p=0.16	
Catholic	79.0	143		79.1	86
Protestant/other Christian	84.1	674		80.8	287
Muslim	85.4	48		90.6	32
No religion	81.8	44		88.9	36
Marital status	p<0.05			p=0.49	
Never married	75.0	100		78.0	1109
Married/living together	83.4	715		82.6	322

	Women			Men	
Formerly married[a]	91.5	94		100.0	10
Household wealth index	p<0.05			p=0.66	
Poorest quintile	81.1	180		76.9	91
Poorer quintile	85.3	183		78.8	85
Middle quintile	78.8	179		82.8	87
Richer quintile	80.2	182		85.2	88
Richest quintile	90.8	185		85.6	90
Type of place of residence	p=0.10			p=0.83	
Rural	84.1	796		82.3	389
Urban	77.9	113		78.9	52
Ever been tested for HIV	p<0.05			p=0.62	
Yes	83.6	853		81.0	352
No	78.6	56		85.4	89
All respondents	83.3	909		81.9	441

Notes: [a]Divorced/widowed/separated; p-values are from Chi-square tests of differences in the proportions of respondents who would seek other services after performing self-test by background characteristics.

Results from interviews with providers regarding seeking other services after testing were also consistent with those from survey respondents. In particular, 81% of the providers reported that clients would seek other services after testing with no significant difference by location of outlet, age of provider or duration of work in current position (Table 17). There were, however, significant differences in the distribution of providers who reported that clients would seek other services after testing by county (lowest in Uasin Gishu and highest in Kisumu and Nairobi), type of outlet or provider (lowest among those based in shops or supermarkets and highest among those in private health facilities), education level (higher among those with college or university level education than among those with lower levels of education), and by duration of work at current outlet (lowest among those who could not remember; Table 17).

Source of counseling and care services

Public health facilities were the most preferred sources of counseling services before or after testing among survey women and men (Table 18). In particular, 75% of the women and 71% of the men who would seek counseling services before testing mentioned public health facility as the most convenient place to go for the services. Similarly, 79% of the women and 76% of the men who would seek counseling services after testing mentioned public health facility as the place where they would go for the services.

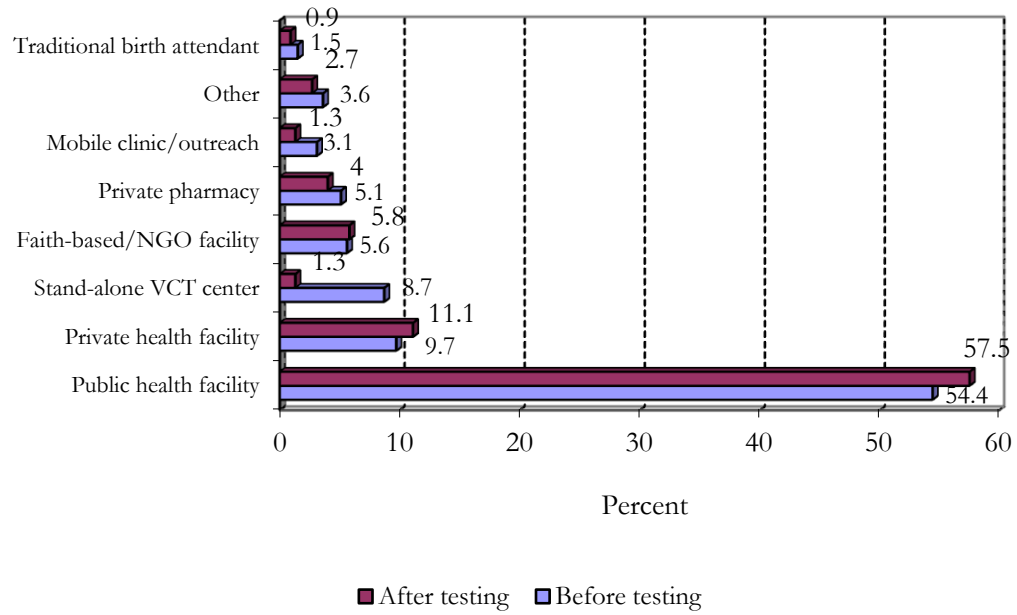
Table 18: Percent distribution of survey respondents who would use HIV oral self-test kits and seek counseling by preferred source of services

Indicator	Women (%)	Men (%)	Both sexes (%)
Preferred source of counseling before testing	(N=756)	(N-346)	(N=1,102)
Public health facility	75.0	71.3	73.9
Private health facility	4.5	2.6	3.9
Faith-based/NGO health facility	2.4	4.1	3.0
Stand-alone VCT center	1.3	3.8	2.1
Mobile clinic/tent/outreach	0.7	3.2	1.5
Private pharmacy	1.3	1.6	1.4
Community health worker	7.3	7.6	7.4
Community-based distributor	0.7	0.6	0.7
CBO/self-help group	0.3	0.3	0.3
Non-governmental organization	0.0	0.0	0.0
Local administration	1.6	2.9	2.0
Social marketing events	0.0	0.0	0.0
Local shops/supermarkets	0.0	0.0	0.0
Family member/relative/friend/neighbor	1.7	0.6	1.4
Traditional birth attendant	1.0	0.0	0.7
Other	2.2	1.3	1.9
Preferred source of counseling after testing	(N=756)	(N-346)	(N=1,102)
Public health facility	79.2	76.3	78.3
Private health facility	4.2	2.3	3.6
Faith-based/NGO health facility	4.0	5.8	4.5
Stand-alone VCT center	1.5	2.0	1.6
Mobile clinic/tent/outreach	0.8	2.6	1.4
Private pharmacy	0.8	0.9	0.8
Community health worker	4.4	4.9	4.5
Community-based distributor	0.5	0.0	0.4
CBO/self-help group	0.1	0.0	0.1
Non-governmental organization	0.0	0.3	0.1
Local administration	0.9	2.6	1.5
Social marketing events	0.0	0.0	0.0
Local shops/supermarkets	0.0	0.0	0.0
Family member/relative/friend/neighbor	1.7	0.9	1.5
Traditional birth attendant	0.8	0.0	0.5
Other	1.1	1.5	1.2

Notes: Percentages may not sum to exactly 100 due to rounding; NGO: Non-governmental organization; VCT: Voluntary counseling and testing; CBO: Community-based organization; p-values are from Chi-square tests of differences between female and male respondents.

Interviews with service providers further confirmed that public health facilities would be the most convenient source of counseling services before and after performing HIV oral self-test (54% and 58% respectively), followed by private health facilities (10% and 11% respectively), and stand-alone VCT centers (9% and 11% respectively; Figure87). Similar sentiments were expressed by key informants who noted that most clients would prefer accessing services in public health facilities. However, they also mentioned NGOs, VCT centers as well as churches and professional counseling centers as other sources of counseling and care.

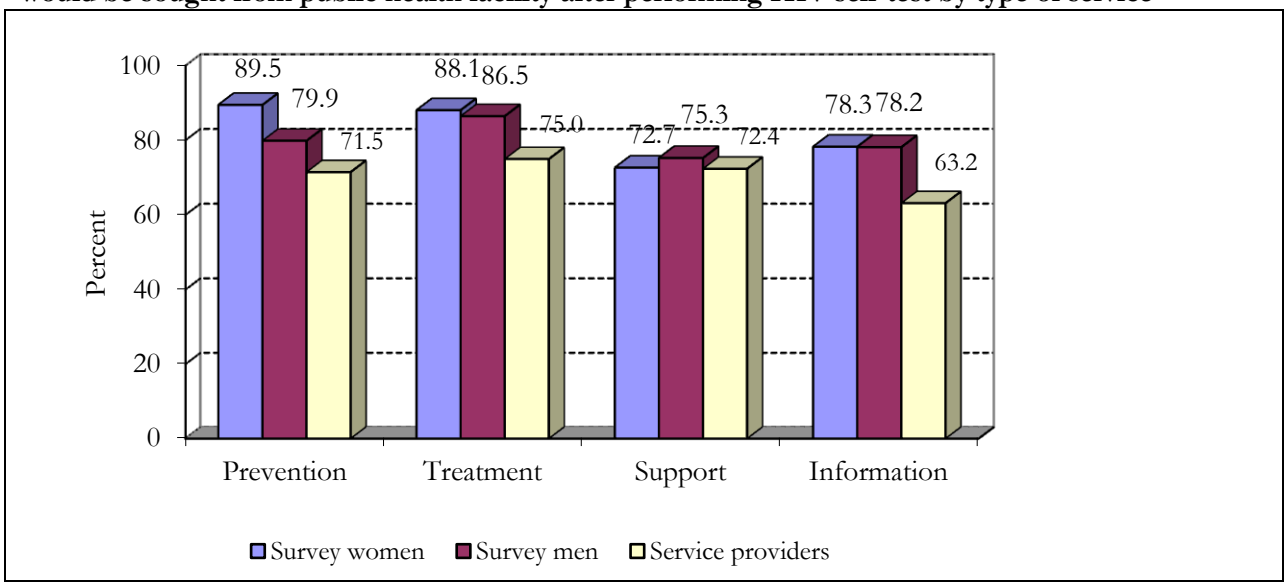
Figure 8: Percent distribution of providers by perceived source of counseling services for clients before and after performing HIV oral self-test



Most survey respondents who would seek other services after performing HIV self-test mentioned treatment (80% of the women and 84% of the men) and prevention services (43% of the women and a similar proportion of men). Much lower proportions of respondents mentioned support (26% of the women and a similar proportion of men) or information services (28% of the women and 22% of the men). Results from interviews with service providers regarding other services clients would seek after performing HIV self-test were also consistent with those from survey respondents. In particular, the proportion of providers that mentioned that clients would seek treatment, prevention, support or information services were 92%, 56%, 45%, and 34% respectively (not shown).

Similar to counseling services, most survey respondents (more than 70%) mentioned public health facility as the place where they would go for prevention, treatment, support or information services (Figure 9). Similarly, the proportion of providers that reported that clients would seek prevention, treatment, support or information services from public health facilities were 72%, 75%, 72%, and 63% respectively (Figure 9).

Figure 9: Percent distribution of survey respondents and service providers by whether other services would be sought from public health facility after performing HIV self-test by type of service



Choice of counseling and care services

Key informants noted that several factors might influence the uptake of counseling and care services. These include: availability of services, health-seeking behaviors of individuals, cost of services, social support, available information on oral self-test kits, education level, accuracy of the test, proximity to the facility, staff attitudes and quality of services offered. In addition to these factors, informants noted that the choice of places for counseling and care for clients who perform HIV oral self-test might be influenced by the age of the counselor (most young people would prefer a younger provider), familiarity with the provider (most people may opt not to receive services from people they know), and waiting time at the facility. The following quotes highlight some of the factors:

> *"A good number of things, accessibility, where the clients can stop, of course finances- does the person have the money to travel to that place, and there is also the element of peer pressure, there is the element of let's say the attitude of the staff or counselor…Like if you know, you can be attended to very fast in a facility and go and tell a friend, definitely that would make that place favorable and generally the perception about the facility. The other thing is the other additional services available."* DASCO, Uasin Gishu County.

> *"Fifty, yes, for those who will have accepted themselves, for those who can say yes I have turned positive I need to access but for some due to stigma and discrimination they will not come to the facilities and they will stay at the community. So fifty of them will definitely come for care and fifty might not depending on the level of stigma and discrimination in a particular area. Yes, family support, if at all I turn positive and my family will be able to support me despite me being HIV positive, that can really help a person to either come for care or not. Then the other thing is (clears throat) can I say peers who are also HIV positive and maybe you know that they are positive and they have come openly to say that they are positive and that they are living with the disease, those are also some factors that people look into before they come to the facility. The other one is the accessibility of the facility itself, if it is very far nobody can be able to maybe afford to go to a facility."* DASCO, Kilifi County.

"Availability of the test kits will determine the usage. Because when something is there, it's not like when it's not there. We have witnessed this, like the issue of condoms, until there comes a time when you feel you need the condoms, why don't you just have it because you may require it when you don't have it so even for the test kit, what I have noted is that sometimes even here in town, you take the services to the people, you go with the tents, the counselors with the test kits, people tend to seek the services but when you stay here, they don't come. This means the people need the services only that they are away from their vicinity." DASCO, Nyandarua County.

Reasons for not seeking care

Further analysis showed that among survey respondents who would use the kits but would not seek any service (counseling, prevention, treatment, support or information) before or after testing, the most common reasons given were that it would not make a difference (40% of the women and 53% of the men); it would take more time to get the needed services (24% of the women and 18% of the men); it would make them sad or worried (7% of the women and 12% of the men); other people might get to know (11% of the women and 3% of the men); and that it would cost more (4% of the women and 6% of the men).

SUMMARY OF FINDINGS AND IMPLICATIONS

- **There was near-universal acceptance of the use of HIV oral self-test kits among survey respondents and service providers:** Nearly all survey respondents (94% of the women and a similar proportion of men) indicated that they would use HIV oral self-test kit. The potential for use was also high among those who had never tested for HIV before (86% of the women and 90% of the men who had not previously tested for HIV). Similarly, 91% of the service providers reported that their clients would use HIV oral self-test kits while key informants noted that most of their clients would use the kits. Although the potential for use was higher among survey respondents who had previously tested for HIV (94% of women and 95% of men who had tested before), use of the kits by many of those who had never tested is likely to contribute to increased HTC coverage in the country by bringing in new testers.

- **There were several advantages associated with the use of HIV oral self-test kits:** Survey respondents mentioned that the test kit is easy, simple, or convenient to use (69% of women and 71% of men); it guarantees confidentiality and privacy (61% of women and 57% of men); it can be done at home and does not require going to a health facility (30% of women and 35% of men); it can save time and money spent to seek services (12% of the women and 15% of the men); and that there is no taking blood, pricking or pain involved (11% of the women and 9% of the men). The same reasons were also commonly cited by service providers as well as key informants for potential use of the test kits by clients.

- **There are expected variations in the way different segments of the population may respond to HIV oral self-test:** The proportion of survey women who would use the kits was significantly lower in Uasin Gishu county, among those with no education, and among those who had never tested for HIV before. Similarly, the proportion of survey men who would use the kits was significantly lower among Catholics and among those who had never tested for HIV before. Key informants also noted that different segments of the populations would respond differently to HIV oral self-tests including women, men, married individuals, adolescents and

young people, men who have sex with men (MSM), female sex workers (FSWs) and injection drug users (IDUs). The finding suggests the need for appropriate IEC campaigns targeting specific groups to accompany the distribution of the test kits in the country.

- **Public health facilities were the most preferred channels for distributing the test kits:** Most survey respondents (63% of the women and 59% of the men) mainly preferred to obtain the test kits from public health facilities. For these respondents, other major options in the absence of the test kits from public health facilities included private health facility, private pharmacy, local administration (chiefs, assistant chiefs and village elders), mobile clinic or outreach, and local shops or supermarkets. Moreover, for survey respondents who preferred local administration or private pharmacy as the main distribution channels, other major options that were mentioned in the absence of these outlets included public health facilities, private health facilities, local shops or supermarkets, community health workers, and schools, churches or mosques. Similar patterns were noted among service providers and key informants regarding the most convenient as well as other channels for distributing the kits to potential clients, with each channel having its unique advantages and challenges. Apart from public health facilities, other most commonly mentioned distribution channels as either the main or alternative source of the kits included private pharmacies, local administration, private health facilities, and local shops or supermarkets. The finding suggests that HIV oral self-test programs will need to consider multiple distribution channels in order to reach different segments of the population.

- **Preference for specific distribution channels was largely informed by distance, cost and quality of care:** The major reason cited by survey respondents for preferring specific distribution channels was distance to the outlet (73% of the women and 71% of the men). Other reasons included cost of services (24% of the women and 20% of the men); friendliness of the provider (13% of the women and 12% of the men); availability of services (8% of the women and 7% of the men); and confidentiality reasons (8% of the women and a similar proportion of men). These reasons were also commonly cited by service providers. Preference for public health facilities by most survey respondents could be further attributed to the fact that among those who had tested for HIV before, the majority had their last test in a public health facility (65% of the women and 52% of the men). Besides these factors, key informants noted that the choice of distribution channels might be influenced by the age of the distributor, availability of and awareness about the kits.

- **Within health facilities, comprehensive care centers were the most preferred units to obtain the test kits:** Most survey respondents mentioned comprehensive care center/ART/VCT unit as the most preferred for obtaining the test kits within a health facility (40% of the women and 47% of the men). This was followed by pharmacy (36% of the women and 45% of the men); and laboratory (24% of the women and 25% of the men). More women than men also preferred to obtain the kits from maternal and child health (17%), family planning (17%) and maternity units (16%). Service providers also mentioned comprehensive care center/ART/VCT unit (28%), pharmacy (20%), and laboratory as convenient units within health facilities for distributing the kits.

- **Nearly all service providers and key informants were willing to give information on or distribute HIV oral self-test kits for various reasons depending on the type of outlet or provider:** Although public health facilities were the most preferred distribution channel for HIV oral self-test kits among survey respondents providers alike, nearly all providers reported that

they would give information on (97%) or distribute the test kits (93%). The major reasons given for willingness to provide information on the test kits were that the providers had adequate human resources (52%), adequate infrastructure (35%), large clientele (34%), and appropriate training (28%). Similarly, the major reasons given for readiness to distribute the kits were that the providers had large clientele (59%), the distribution does not require huge amounts of resources (26%), and that they had adequate human resources (25%) as well as adequate infrastructure (24%). However, the reasons given for readiness to provide information or distribute the kits varied by type of outlet or provider (for example, whether the provider was based in a public health facility, private health facility, stand-alone VCT center, private pharmacy or the community) reflecting differences in the capacity of the providers in terms of available human, financial, technical, and infrastructural resources and clientele.

- **There were variations in challenges providers are likely to face in giving information on or distributing the test kits by type of outlet or provider:** The most commonly cited challenges that providers mentioned they are likely to face in providing information on HIV oral self-test were lack of IEC materials (39%), lack of appropriate training or technical capacity (36%), inadequate financial resources (33%), inadequate human resources (25%), and lack of acceptance by clients (25%). Similarly, the most commonly cited challenges providers are likely to face in distributing the test kits were irregular supplies or stock-outs (53%), inadequate financial resources (33%), inadequate technical capacity (31%), and inadequate human resources (24%). There were, however, variations in reported challenges with giving information or distributing the kits by type of provider or outlet, which was also a reflection of differences in the capacity of the providers in terms of available human, financial, technical, and infrastructural resources and clientele.

- **There were variations in the type of support that providers would need to give information on or distribute HIV oral self-test kits by type of outlet or provider:** The most commonly mentioned types of support that providers needed to give information on HIV oral self-test were training or updates on self-test (71%), adequate IEC materials (64%), community sensitization (52%), additional financial resources (47%), and additional human resources (33%). Similarly, the most commonly mentioned types of support that the providers needed to distribute the kits were training or updates on self-test (54%), reliable supplies (52%), community sensitization (51%), adequate IEC materials (47%) and additional financial resources (47%). However, there were variations in the types of support that were considered priority in order to give information or distribute the kits by type of outlet or provider, again reflecting differences in the capacity of the providers in terms of available human, financial, technical, and infrastructural resources and clientele.

- **Various programmatic actions are needed to ensure efficient distribution system:** Service providers and key informants felt that the following were key to ensuring that the distribution system adequately meets the needs of clients using the kit: conducting community sensitization, conducting provider training or updates, providing the test kits free of charge or at affordable cost, allocating sufficient financial resources for distribution, certifying institutions selected to distribute the kits, putting in place standards and guidelines for distribution and storage, and developing robust monitoring and evaluation systems. It is, however, worth noting that all the suggested programmatic actions considered together require adequate financial resources to ensure seamless distribution system.

- **Most clients who would use the test kits would go for counseling before or after testing and seek other services as well:** Among women who would use the test kits, 77% would seek counseling services before and 83% after testing. The corresponding proportions for men are 71% and 79% respectively. The results show that for both women and men, a higher proportion would seek counseling services after than before testing. In addition, a large proportion of women who had never tested before and who would use the kits would seek counseling before (75%) and after testing (71%). For men, the proportions are 72% and 81% respectively. Moreover, 83% of the women and 82% of the men who would use the kits would seek prevention, treatment, support or information services after testing. Among respondents who had never tested before and would use the kits, 79% of the women and 85% of the men would seek these services after testing. From the perspectives of providers, 62% reported that their clients would seek counseling services before testing, 71% indicated that clients would seek the services after testing while 81% noted that clients would seek prevention, treatment, support or information services after testing. Key informants, on the other hand, had mixed views regarding whether clients who perform HIV oral self-tests would seek counseling and care.

- **Public health facilities were the most commonly mentioned outlets where clients would seek counseling and other services before and after performing HIV oral self-test:** Similar to preferred distribution channels, most survey respondents mentioned public health facility as the place where they would seek counseling services before (75% of the women and 71% of the men) or after testing (79% of the women and 76% of the men). Similarly, most respondents who would seek other services mentioned public health facilities as the place where they would go for prevention (90% of the women and 80% of the men), treatment (88% of the women and 87% of the men), support (73% of the women and 75% of the men), and information (78% of the women and a similar proportion of men). A similar pattern was noted among service providers with the proportion reporting that public health facilities would be the most convenient for clients to seek services being 54% for counseling services before testing, 58% for counseling services after testing, 72% for prevention, 75% for treatment, 72% for support, and 63% for information services. Similar sentiments were expressed by key informants who noted that most clients would prefer accessing service in public health facilities but also mentioned other sources such as NGOs, VCT centers as well as churches and professional counseling centers.

- **There were significant variations in the proportions of survey respondents who would seek counseling or other services before and after testing by certain background characteristics:** The proportion of women who would seek counseling services before testing was significantly lower in Uasin Gishu county, among women aged 25-34 years, among those with college or university level education, and among Catholics. Similarly, the proportion of women who would seek counseling services after testing was significantly lower in Uasin Gishu county, among those with college or university level education, Catholics, never married individuals, and those who had never tested for HIV. A similar pattern was noted for variations in the proportions of women who would seek other services (prevention, treatment, support or information) after testing. Among men, the proportion that would seek counseling services before or after testing was significantly lower in Uasin Gishu county. Similarly, the proportion that would seek other services was significantly lower in the county and among those with college or university level education. Again, the finding suggests the need for appropriate IEC campaigns targeting specific groups to accompany the distribution of the test kits in the country.

- **Several supply and demand factors could influence clients' uptake of counseling and care services before or after performing HIV oral self-test:** Key informants noted that clients' uptake of counseling and care services could be influenced by availability of services, health-seeking behaviors of individuals, cost of services, social support, available information on oral self-test kits, education level, accuracy of the test, proximity to the facility, staff attitudes and quality of services offered. In addition to these factors, informants noted that the choice of places for counseling and care for clients who perform HIV oral self-test might be influenced by the age of the counselor (most young people would prefer a younger provider), familiarity with the provider (most people may opt not to receive services from people they know), and waiting time at the facility.

CHALLENGES AND LIMITATIONS

Each study component, including community-based surveys, service provider interviews and key informant interviews, had their own challenges. The main challenge during the community-based survey was the distance covered in some of the areas selected. Some enumeration areas were larger than anticipated; this made it difficult to complete survey activities in the allocated time in some areas. Also, as anticipated, finding men at home proved to be a difficult task. The more limited sample target for men was still difficult to achieve. This resulted in a lower power to detect significant differences between sub-groups among males. For service provider interviews, research assistants had to make numerous trips to the facilities to secure an interview. This was mainly attributed to the busy schedule of the service providers. In other cases, some sampled facilities had closed down by the time of data collection and had to be replaced. As per the usual survey practice, research assistants made up to three attempts to interview service providers in the sampled facilities. Cases were considered as non-response after the interviewer made three unsuccessful visits to the facilities. The main challenge with key informant interviews, on the other hand, was that of securing appointments with those selected to participate in one-on-one interviews; it took several visits to secure the interviews.

One limitation of the study is that it was largely based on hypothetical scenarios after explaining and demonstrating to the respondents the use of HIV oral self-test kits. It could therefore be argued that the findings might not reflect actual experiences regarding use and distribution of HIV oral self-test kits as well as counseling and care seeking behavior among clients using the kits. However, the approach was adopted because the test kits are still not widely available in the country. Moreover, given that in most cases the findings were consistent across survey respondents, service providers and key informants suggest that they might reflect the actual experiences of HIV oral self-test clients. The findings therefore provide useful insights into the opportunities and challenges for distributing HIV oral self-test programs in the country.

REFERENCES

Ambrosioni J, Calmy A, Hirschel B. 2011. "HIV treatment for prevention." *J. Int AIDS Soc.* 14:28.

Blake H, Leighton P and Sharma S. 2011. *Saliva Testing as a Practical Tool for Rapid HIV Screening*. Rijeka: InTech Publishers.

Choko AT, Desmond N, Webb EL, Chavula K, Napierala-Mavedzenge S, et al. 2011. "The Uptake and Accuracy of Oral Kits for HIV Self-Testing in High HIV Prevalence Setting: A Cross-Sectional Feasibility Study in Blantyre, Malawi." *PLoS Med* 8(10): e1001102. doi:10.1371/journal.pmed.1001102.

Cleary P, VanDevanter N, Rogers T, et al. 1991. "Behavior changes after notification of HIV infection." *American Journal of Public Health* 81:1586–1590.

Corbett EL. 2007. *Health worker access to HIV/TB prevention, treatment and care services in Africa: situational analysis and mapping of routine and current best practices*. London, London School of Hygiene and Tropical Medicine, WHO/HIV department, WHO/TB department, Global Health Workforce Alliance.

Greenwald JL, Burstein GR, Pincus J, Branson B. 2006. "A rapid review of rapid HIV antibody tests." *Curr Infect Dis Rep* 8(2):125-31.

Juusola JL, Brandeau ML, Long EF, Owens DK, Bendavid E. 2011. "The Cost- Effectiveness of Symptom-Based Testing and Routine Screening for Acute HIV Infection in Men Who Have Sex with Men in the United States." *AIDS* 2011, 25:00-00. [Epub ahead of print].

Kalibala, Sam, Waimar Tun, William Muraah, Peter Cherutich, Erick Oweya and Patricia Oluoch. 2011. *'Knowing myself first': Feasibility of self-testing among health workers in Kenya.* Nairobi: Population Council.

Kenya National Bureau of Statistics (KNBS) [Kenya]. 2010. *2009 Kenya Population and Housing Census*, vol. 1A & 1C. Nairobi: KNBS.

Khumalo-Sakutukwa G et al. 2008. "Project Accept (HPTN 043): a community-based intervention to reduce HIV incidence in populations at risk for HIV in sub-Saharan Africa and Thailand." *Journal of Acquired Immune Deficiency Syndromes* 49:422–431.

Lee, V.J. et al. 2007. "User acceptability and feasibility of self-testing with HIV rapid tests." *Journal of Acquired Immune Deficiency Syndromes* 45:449–453.

Letamo, G. (ed.). 2011. *Social and psychological aspects of HIV/AIDS and their ramification*. Rijeka: Intech Publishers.

Marum, E. et al. 2008. "Using mass media campaigns to promote voluntary counseling and HIV-testing services in Kenya." *AIDS* 22(15):2019-2024.

National AIDS and STI Control Programme (NASCOP)/Ministry of Health [Kenya]. 2013. *Kenya AIDS Indicator Survey 2012: Preliminary Report*. Nairobi: NASCOP/Ministry of Health.

National AIDS Control Council [NACC]. 2009a. *Analysis of HIV prevention response and modes of HIV transmission analysis*. Nairobi: NACC.

National AIDS Control Council [NACC]. 2009b. *Kenya National HIV and AIDS Strategic Plan 2009/10 – 2012/13*. Nairobi: NACC.

National AIDS Control Council [NACC]. 2005. *Kenya National HIV/AIDS Strategic Plan 2005/06-2009/10*. Nairobi: NACC.

National AIDS Control Council [NACC]. 2000. *Kenya National HIV/AIDS Strategic Plan 2000-2005*. Nairobi: NACC.

Negin J et al. 2009. "Feasibility, acceptability and cost of home-based HIV testing in rural Kenya." *Tropical Medicine and International Health* 14(8): 849–855.

National AIDS and STI Control Programme (NASCOP)/Ministry of Public Health and Sanitation [Kenya]. 2010. *National Guidelines for HIV Testing and Counselling and Kenya*. Nairobi: NASCOP

National AIDS and STI Control Programme (NASCOP) /Ministry of Public Health and Sanitation [Kenya]. 2008. *National Guidelines for HIV Testing and Counselling in Kenya*. Nairobi: NASCOP.

Pai, Nitika Pant and Marina B Klein. 2008. "Are we ready for home-based, self-testing for HIV?" *Future HIV Therapy* 2(6):515-520.

Population Reference Bureau. 2012. *2012 World Population Datasheet*. Washington, DC: Population Reference Bureau.

Republic of Kenya. 2009. *Kenya AIDS Indicator Survey, KAIS 2007: Final Report*. Nairobi: Republic of Kenya.

UNAIDS Reference Group on HIV and Human Rights. 2007. *Statement and recommendations on scaling up HIV testing and counselling*. Geneva: UNAIDS. Available at: http://data.unaids.org/pub/ExternalDocument/2007/20070905_rghr_statement_testing_en.pdf. Accessed March 1, 2013.

Wilks R, Younger N, Mullings J, Zohoori N, Figueroa P, Tulloch-Reid M, Ferguson T, Walters C, Bennett F, Forrester T, Ward E, Ashley D. 2007 "Factors affecting study efficiency and item non-response in health surveys in developing countries: the Jamaica national healthy lifestyle survey." *BMC Public Health* 7:13.

World Health Organization [WHO]. 2012. *Service delivery approaches to HIV testing and counseling (HTC): A strategic HTC programme framework*. Geneva: WHO.

World Health Organization (WHO). 2011. *HIV self-testing among health workers: A review of the literature and discussion of current practices, issues and options for increasing access to HIV testing in sub-Saharan Africa*. Geneva: WHO.

APPENDIX 1: HOUSEHOLD LISTING FORM

Title of Research: Assessment of possible outlets for distribution of HIV oral self-test kits in Kenya

	CODES
IDENTIFICATION	……
COUNTY 1=KISUMU 2=UASIN GISHU 3=KILIFI 4=NYANDARUA	……
COUNTY……	……
DIVISION……	……
SUB LOCATION……	……
ENNUMERATION AREA / VILLAGE……..……	……
PHYSICAL ADDRESS (DESCRIPTION)……...……	……
NO OF ELIGIBLE RESPONDENTS IN HOUSEHOLD	……
18-64 YEARS…… Female	
18-64 YEARS……..Male	……
SAMPLED RESPONDENT :	……
SEX…… 1=MALE 2= FEMALE	……
AGE……..	……
RELATION TO HOUSEHOLD HEAD	……
NAME/ID# OF INTERVIEWER LISTING……...……	

INTERVIEW VISITS	1	2	3	RESULT CODE
DATE & RESULT CODE				

RESULT CODES 1=COMPLETED 2=PARTLY COMPLETED 3=REFUSED 4=NOT AT HOME 5=OTHERS (SPECIFY…….)	**COMMENT ON HHLISTING :**

SUPERVISOR'S SIGNATURE AND DATE……..…….

RESULT OF LISTING 1=ELIGIBLE RESPONDENT 0=NO ELIGIBLE RESPONDENT	**RESULT …….**

Household Listing Form SERIAL NUMBER: 1 0 0 1

Interviewer: List the members of the household who slept in the house the **LAST NIGHT BEFORE LISTING**, are answerable to one household head, and share resources. List household members from oldest to youngest. If more than 8 household members, continue on next listing page.

	First name (optional)	Relation to Head	Age	Sex	Marital Status	Eligible for Interview	Sampled
1				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
2				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
3				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
4				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
5				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
6				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
7				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
8				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
9				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
10				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
11				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	
12				1= male 2= female	0= single/never married 1= married / cohabitating 2= divorced, widowed, separated	**0=No** **1=Yes**	

RELATIONSHIP TO HOUSEHOLD HEAD

1= Head Of Household
2=Spouse Of HH Head
3= Son Or Daughter
4=Son- Or Daughter-In-Law
9=Other Relative
10= Adopted Or Foster Child
11= Employee/Servant
12= Other Non-Relative
13=Parent

KISH GRID:

Interviewer: List the names of all eligible persons from oldest to youngest - in the table below. Using the last digit of the serial number of the questionnaire, find that number along the top row of the table. Follow that number down to the last line where an eligible person is listed. **The number that you come to is the number of the person who should be interviewed.**

Eligible controls (those that match participant) Listed from Oldest to Youngest	Last digit of serial number									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**0**
1	1	1	1	1	1	1	1	1	1	1
2	2	1	2	1	2	1	2	1	2	1
3	3	1	2	3	1	2	3	1	2	3
4	4	1	2	3	4	1	2	3	4	1
5	5	1	2	3	4	5	1	2	3	4
6	6	1	2	3	4	5	6	1	2	3

APPENDIX 2: COMMUNITY SURVEY QUESTIONNAIRE

Serial No. [__|___/___|___/___|___/___]

Assessment of possible outlets for distribution of HIV oral self-test kits in Kenya

IDENTIFICATION		
COUNTY: _____ CODE_____		
SUB-LOCATION: _____ENUMERATION AREA_____		
TYPE OF PLACE OF RESIDENCE	01=RURAL 02=URBAN	[___|___]

INTERVIEW OUTCOMES		
INTERVIEW DATE	(DAY, MONTH, YEAR E.G. 02/02/10	[___|___/___|___/___|___]
INTERVIEW RESULT	01=COMPLETED 02=PARTIALLY COMPLETED 03=REFUSED 04=NOT AT HOME 88=OTHER (SPECIFY)_____	[___|___]
LANGUAGE(S) USED TO CONDUCT INTERVIEW 01=ENGLISH 02=KISWAHILI	03= LOCAL LANGUAGE (SPECIFY)_____ 04= OTHER (SPECIFY)_____	[___|___] [___|___] [___|___]
INTERVIEWER'S NAME		

	SUPERVISOR	**EDITED BY**	**ENTERED BY**
NAME	_____	_____	_____
DATE	_____	_____	_____

TIME INTERVIEW STARTED: [___|___:___|___]
[RECORD TIME IN 24-HOUR CLOCK]

SECTION 1: BACKGROUND CHARACTERISTICS **To begin, I'm going to ask you some background information. This will help us to describe the types of people who use health services**				
NO.	**QUESTION**	**RESPONSE OPTIONS**	**CODES**	**SKIP**
Q100	Sex of respondent	Female	1	
		Male	2	
Q101	In what month and year were you born?	Month	[___|___]	
		Don't know	98	
		Year	_____	
		Don't know year	98	
Q102	How old are you now? **[AGE IN COMPLETED YEARS]**	Age in complete (years)	[___|___]	
		Don't know	98	
Q103	What is the highest level of schooling you attended?	Never attended school	0	
		Nursery/pre-unit	1	
		Primary	2	
		Secondary/'A' level	3	
		College (middle level)	4	
		University	5	
Q104	What is your religion?	Catholic	1	
		Protestant/other Christian	2	
		Muslim	3	
		No religion	4	
		Other (specify) _____	88	
Q105	What is your marital status now?	Never married	0	
		Married/living together	1	
		Divorced/separated	2	
		Widowed	3	
Q106	What is the <u>MAIN</u> source of drinking water for members of your household? [By household I mean a person or group of persons who are related or unrelated, who live together, and share meals] **[DO <u>NOT</u> READ LIST. CIRCLE ONLY <u>ONE</u> RESPONSE]**	Piped water/public tap	1	
		Open well/spring	2	
		Borehole	3	
		River/stream/pond/ dam/ lake	4	
		Rain water	5	
		Bottled water	6	
		Other (specify) _____	88	
Q107	What kind of toilet facility does your household have? **[DO <u>NOT</u> READ LIST. CIRCLE ONLY <u>ONE</u> RESPONSE]**	No facility/bush/field	0	
		Flush toilet	1	
		Ventilated improved pit latrine	2	
		Traditional pit latrine	3	

		Other (specify) _____	88

Q108	Does your household have any of the following in working condition? **[READ OUT RESPONSES & CIRCLE '1' FOR 'YES' TO ALL THAT APPLY; OTHERWISE CIRCLE '2']**		**Yes**	**No**
		a) Electricity	1	2
		b) Radio	1	2
		c) Television	1	2
		d) Telephone/mobile	1	2
		e) Refrigerator	1	2
		f) Solar power	1	2
		g) Lantern	1	2

Q109	Does any member of your household own any of the following in working condition? **[READ OUT RESPONSES & CIRCLE '1' FOR 'YES' TO ALL THAT APPLY; OTHERWISE CIRCLE '2']**		**Yes**	**No**
		a) bicycle	1	2
		b) motorcycle/scooter	1	2
		c) car/truck	1	2
		d) boat with a motor	1	2
		e) boat without a motor	1	2
		f) animal/human drawn cart	1	2

Q110	What type of fuel does your household <u>MAINLY</u> use for cooking? **[DO <u>NOT</u> READ LIST. CIRCLE ONLY <u>ONE</u> RESPONSE]**	No cooking in household	0
		Electricity	1
		LPG/natural gas	2
		Kerosene	3
		Charcoal	4
		Firewood/straw	5
		Animal dung	6
		Other (specify) _____	88

Q111	<u>MAIN</u> MATERIAL OF THE FLOOR. **[OBSERVE & CIRCLE ONE]**	Earth/sand/mud/dung	1
		Wood planks	2
		Parquet/polished wood	3
		Vinyl/asphalt strips (plastic tiles)	4
		Ceramic tiles	5
		Cement	6
		Other (specify) _____	88

Q112	<u>MAIN</u> MATERIAL OF THE ROOF. **[OBSERVE & CIRCLE ONE]**	Grass/thatch/makuti	1
		Iron sheets	2
		Asbestos sheets	3
		Concrete/cement	4
		Tiles	5
		Tin cans	6
		Other (specify) _____	88

Q113	**MAIN** MATERIAL OF THE EXTERIOR WALLS. **[OBSERVE & CIRCLE ONE]**	Grass/thatch/makuti	1
		Mud	2
		Unburnt bricks	3
		Burnt bricks	4
		Timber	5
		Iron sheets	6

		Cement blocks/stones	7	
		Other (specify) _____	88	

SECTION 2: POTENTIAL USE OF HIV ORAL SELF-TESTS AND DISTRIBUTION OUTLETS

Now I would like to ask you about HIV testing

Q200	Have you ever been tested for HIV?	Yes	1	
		No	2	**Go to Q203**
		Refused to answer	3	**Go to Q203**
Q201	The LAST time you were tested for HIV, where did the test take place? **[DO NOT READ LIST. CIRCLE ONLY ONE RESPONSE]**	Govt health facility (hospital/health Center/dispensary)	1	
		Private health facility (hospital/clinic/ maternity and nursing home)	2	
		Faith-based/NGO health facility (hospital/ health Center/dispensary)	3	
		VCT Center (STAND ALONE)	4	
		Mobile clinic/tent/outreach	5	
		Private pharmacy	6	
		At home	7	
		Other (specify) _____	88	
Q202	The LAST time you were tested for HIV, what did the test involve? **[DO NOT READ LIST. CIRCLE ONLY ONE RESPONSE]**	Taking blood samples	1	**Go to Q204**
		Taking urine samples	2	
		Taking saliva samples	3	
		Other (specify) _____	88	

Q203	Why have you never been tested for HIV? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**
		a) Fear/don't want to test/know status	1	2
		b) Services are far away/not available	1	2
		c) Do not know where to get tested	1	2
		d) Confidentiality/others will know	1	2
		e) Low/no risk of HIV infection	1	2
		f) Lack of treatment even if tested	1	2
		g) Do not know about HIV testing	1	2
		h) No reason	1	2
		i) Other (specify) _____	1	2

Q204	**[INTERVIEWER CHECK]** **Interviewer: <u>Show the respondent the HIV oral self-test kit</u>, mention that it is registered in Kenya for use by individuals to perform HIV testing by themselves in settings that are convenient to them, and explain how it is used and how to determine the results of the test before asking the following questions**

Q205	Would you use the HIV oral self-test kit if it is made available in your area?	Yes	1	
		No	2	**Go to Q212**
		Don't know	3	**Go to Q212**

Q206	Why would you use the HIV oral self-test kit? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**
		a) It is easy/simple/convenient to use/ does not need a health provider	1	2
		b) It guarantees confidentiality/privacy/ others will not know	1	2
		c) Do not have to go to a health facility/ can do the test at home	1	2
		d) One gets to know the test results very fast	1	2

		e) It can save time/money spent travelling to seek the services	1	2	
		f) No reason	1	2	
		g) Other (specify) _____	1	2	
Q207	Where would you be MOST comfortable to obtain the HIV oral self-test kit if you need to use it? **[DO NOT READ LIST. CIRCLE ONLY ONE RESPONSE]**	Govt health facility (hospital/health Center/dispensary)	1		
		Private health facility (hospital/clinic/ maternity and nursing home)	2		
		Faith-based/NGO health facility (hospital/ health Center/dispensary)	3		
		VCT Center (STAND ALONE)	4		
		Mobile clinic/tent/outreach	5		
		Private pharmacy	6		
		Community health worker	7		
		Community-based distributor	8		
		Community-based organization/ self-help group	9		
		Non-governmental organization	10		
		Local administration (chiefs/ assistant chiefs/village elders)	11		
		Social marketing events	12		
		Local shops/supermarket	13		
		Family member/relative/friend/ neighbor	14		
		Traditional birth attendant	15		
		Other (specify) _____	88		
Q208	Why do you prefer to obtain the HIV oral self-test kit from [NAME OF PLACE/PROVIDER]? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Facility/provider is nearby/no need to travel to get it/one can get it at home	1	2	
		b) Provider/distributor is always friendly/ understanding	1	2	
		c) Provider/distributor offers services at affordable/no cost	1	2	
		d) Provider/distributor treats clients with respect	1	2	
		e) Provider/distributor is always available whenever one needs services	1	2	
		f) Provider/distributor is well known/ respected in the community	1	2	
		g) Services are always available at the facility/distribution outlet/ no stock outs	1	2	
		h) Waiting time is always reasonable/ there are no long queues	1	2	
		i) Confidentiality/privacy is assured at the facility/distribution outlet	1	2	
		j) Adequate information is provided to clients at the facility/distribution outlet	1	2	
		k) Other (specify) _____	1	2	

Q209	If the HIV oral self-test kit is not available at your MOST preferred place, where ELSE would you prefer to obtain it? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Govt health facility (hospital/health Center/dispensary)	1	2	
		b) Private health facility (hospital/clinic/ maternity and nursing home)	1	2	
		c) Faith-based/NGO health facility (hospital/ health Center/dispensary)	1	2	
		d) VCT Center	1	2	
		e) Mobile clinic/tent/outreach	1	2	
		f) Private pharmacy	1	2	
		g) Community health worker	1	2	
		h) Community-based distributor	1	2	
		i) Community-based organization/ self-help group	1	2	
		j) Non-governmental organization	1	2	
		k) Local administration (chiefs/ assistant chiefs/village elders)	1	2	
		l) Social marketing events	1	2	
		m) Local shops/supermarket	1	2	
		n) Family member/relative/friend/ neighbor	1	2	
		o) Traditional birth attendant	1	2	
		p) Other (specify) _____	1	2	
Q210	**[INTERVIEWER CHECK: Q207 AND Q209]** Government, private, faith-based or NGO health facility is mentioned in **Q207** or **Q209**	Yes	1		
		No	2	**Go to Q300**	
Q211	You mentioned [government/ private/faith-based/NGO] health facility as one of your preferred sources of the HIV oral self-test kit. In which areas within the health facility would you prefer to obtain the self-test kit? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Comprehensive care Center/ART/VCT unit	1	2	
		b) Pharmacy	1	2	
		c) Maternal and child health unit	1	2	
		d) Family planning unit	1	2	**Go to Q300**
		e) Maternity unit	1	2	
		f) Laboratory	1	2	
		g) Other (specify) _____	1	2	
Q212	Why would you not use the HIV oral self-test kit? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Fear/don't want to test/know status	1	2	
		b) Don't know how to use it/read results	1	2	
		c) Don't know where to get counseling	1	2	
		d) Low/no risk of HIV infection	1	2	**Go to Q309**
		e) Don't know where to get care/ treatment/support if positive	1	2	
		f) No care/treatment/support available in the community	1	2	
		g) Have never seen the kit before	1	2	
		h) Don't know where to get the kit	1	2	
		i) Don't know how much the kit costs	1	2	
		j) No reason	1	2	
		k) Other (specify) _____	1	2	

SECTION 3: POSSIBLE LINKAGES TO COUNSELLING AND CARE **Now I would like to ask you about counseling and care**				
Q300	Would you seek counselling services before performing HIV oral self-test?	Yes	1	
		No	2	**Go to Q302**
		Don't know	3	**Go to Q302**
Q301	Where would you be MOST comfortable to obtain counselling services before performing HIV oral self-test? **[DO NOT READ LIST. CIRCLE ONLY ONE RESPONSE]**	Govt health facility (hospital/health Center/dispensary)	1	
		Private health facility (hospital/clinic/ maternity/nursing home)	2	
		Faith-based/NGO health facility (hospital/ health Center/dispensary)	3	
		VCT Center(STAND ALONE)	4	
		Mobile clinic/tent/outreach	5	
		Private pharmacy	6	
		Community health worker	7	
		Community-based distributor	8	
		Community-based organization/ self-help group	9	
		Non-governmental organization	10	
		Local administration (chiefs/ assistant chiefs/village elders)	11	
		Family member/relative/friend/ neighbor	12	
		Traditional birth attendant	13	
		Other (specify) _____	88	
Q302	Would you seek counselling services after performing HIV oral self-test?	Yes	1	
		No	2	**Go to Q304**
		Don't know	3	**Go to Q304**
Q303	Where would you be MOST comfortable to obtain counselling services after performing HIV oral self-test kit? **[DO NOT READ LIST. CIRCLE ONLY ONE RESPONSE]**	Govt health facility (hospital/health Center/dispensary)	1	
		Private health facility (hospital/clinic/ maternity/nursing home)	2	
		Faith-based/NGO health facility (hospital/ health Center/dispensary)	3	
		VCT Center(STAND ALONE)	4	
		Mobile clinic/tent/outreach	5	
		Private pharmacy	6	
		Community health worker	7	
		Community-based distributor	8	
		Community-based organization/ self-help group	9	
		Non-governmental organization	10	
		Local administration (chiefs/ assistant chiefs/village elders)	11	
		Family member/relative/friend/ neighbor	12	
		Traditional birth attendant	13	
		Other (specify) _____	88	
Q304	Would you seek other services after performing HIV oral self-test?	Yes	1	
		No	2	**Go to Q307**
		Don't know	3	**Go to Q307**

Q305	Which <u>other</u> services would you seek after performing HIV oral self-test? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**
		a) Prevention services to avoid infection/re-infection	1	2
		b) Treatment services if test results are positive	1	2
		c) Support services (e.g. support groups/post-test clubs)	1	2
		d) Information on availability of prevention/treatment/ support services	1	2
		e) Other (specify) _____	1	2

Q306

For each of the services you would seek after performing HIV oral self-test, where would you be <u>MOST</u> comfortable to obtain the services?

[CIRCLE ONLY <u>ONE</u> SOURCE FOR EACH OF THE SERVICES THAT THE RESPONDENT WOULD SEEK IN Q305. OTHERWISE RECORD '99' IF RESPONDENT WOULD NOT SEEK THE SERVICE. DO <u>NOT</u> READ SOURCES]

Source of service	**(i)** Prevention services	**(ii)** Treatment services	**(iii)** Support services	**(iv)** Information services	**(v)** Other/ (specify)/ _____
Govt health facility (hospital/health Center/dispensary)	1	1	1	1	1
Private health facility (hospital/clinic/ maternity/nursing home)	2	2	2	2	2
Faith-based/NGO health facility (hospital/ health Center/dispensary)	3	3	3	3	3
VCT Center	4	4	4	4	4
Mobile clinic/ tent/ outreach	5	5	5	5	5
Private pharmacy	6	6	6	6	6
Community health worker	7	7	7	7	7
Community-based distributor	8	8	8	8	8
Community-based organization/ self-help group	9	9	9	9	9
Non-governmental organization	10	10	10	10	10
Local administration (chiefs/ assistant chiefs/village elders)	11	11	11	11	11
Family member/relative/friend/ neighbor	12	12	12	12	12
Traditional birth attendant	13	13	13	13	13
Other source (specify) _____	88 _____	88 _____	88 _____	88 _____	88 _____
Not applicable	99	99	99	99	99

Q307	**[INTERVIEWER CHECK: Q300, Q302 AND Q304]** Respondent would <u>NOT</u> seek counselling or other services before or after HIV oral self-test (**Q300** is '**No**' or **Q302** is '**No**' or **Q304** is '**No**')	Would <u>not</u> seek counselling or other services before or after HIV oral self-test	1	
		Would seek counselling and other services before and after HIV oral self-test	2	**Go to Q309**

Q308	Why would you <u>not</u> seek counselling/other services before/after performing HIV oral self-test? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) It would just make me sad and worried	1	2	
		b) It would not make a difference/ if it is bad, it is bad	1	2	
		c) It would take more time to get the needed services	1	2	
		d) It would cost more to get the needed services	1	2	
		e) Other people might get to know about it and start rumors	1	2	
		f) Don't know where to get counselling/ other services	1	2	
		g) Other (specify) _____	1	2	
Q309	We have now come to the end of the interview. Please give me one or two comments/questions [if any], that you would like to raise regarding what we have talked about _____ _____				

TIME INTERVIEW ENDED: [___|___:___|___]
[RECORD TIME IN 24-HOUR CLOCK]

PLEASE REMEMBER TO THANK THE RESPONDENT

INTERVIEWER'S COMMENTS

_____
_____
_____
_____

APPENDIX 3: SERVICE PROVIDER QUESTIONNAIRE

Serial No. [__|___/___|___/___|___/___]

Assessment of possible outlets for distribution of HIV oral self-test kits in Kenya

IDENTIFICATION		
COUNTY: _____ CODE_____		
LOCATION	01=RURAL 02=URBAN	[___|___]

INTERVIEW OUTCOMES		
INTERVIEW DATE	(DAY, MONTH, YEAR E.G. 02/02/10	[___|___/___|___/___|___]
INTERVIEW RESULT	01=COMPLETED 02=PARTIALLY COMPLETED 03=REFUSED 04=NOT AT HOME/WORK STATION 88=OTHER (SPECIFY)_____	[___|___]
LANGUAGE(S) USED TO CONDUCT INTERVIEW 01=ENGLISH 02=KISWAHILI	03= LOCAL LANGUAGE (SPECIFY)_____ 04= OTHER (SPECIFY)_____	[___|___] [___|___] [___|___]
INTERVIEWER'S NAME		

	SUPERVISOR	**EDITED BY**	**ENTERED BY**
NAME	_____	_____	_____
DATE	_____	_____	_____

TIME INTERVIEW STARTED: [___|___:___|___]
[RECORD TIME IN 24-HOUR CLOCK]

SECTION 1: BACKGROUND CHARACTERISTICS				
NO.	**QUESTION**	**RESPONSE OPTIONS**	**CODES**	**SKIP**
S100	Sex of provider	Female	1	
		Male	2	
S101	Provider is from… **[CIRCLE ONLY <u>ONE</u> OPTION]**	Public hospital/sub-district hospital	1	
		Public health center	2	
		Public dispensary	3	
		Private/faith-based/ NGO hospital	4	
		Private/faith-based/ NGO health center/ maternity/nursing home	5	
		Private/faith-based/ NGO dispensary/ clinic	6	
		Stand-alone VCT center	7	
		Private pharmacy	8	
		Community (CHW)	9	
		Community (TBA)	10	
		Community (shop/supermarket)	11	
S102	How old are you now? **[AGE IN COMPLETED YEARS]**	Age in complete (years)	[___|___]	
		Don't know	98	
S103	What is your highest level of schooling?	Never attended school	0	
		Nursery/pre-unit	1	
		Primary	2	
		Secondary/'A' level	3	
		College (middle level)	4	
		University	5	
S104	What is your professional qualification? **[CIRCLE ONLY <u>ONE</u> OPTION]**	Medical doctor/officer	1	
		Clinical officer	2	
		Registered nurse/ midwife	3	
		Enrolled nurse/ midwife	4	
		Nursing aid/assistant	5	
		Pharmacist	6	
		Pharmacy assistant	7	
		Lab technician/ technologist	8	
		VCT counsellor	9	
		CHW	10	
		TBA	11	
		Shop/supermarket owner/attendant	12	
		Other (specify) _____	88	

S105	How long have you worked in this position? **[RECORD IN YEARS. IF LESS THAN 1 YEAR, WRITE '00']**	Duration worked in complete years	[___|___]	
		Can't remember	98	
S106	How long have you worked in this facility/outlet/community? **[RECORD IN MONTHS OR YEARS AS APPROPRIATE]**	Months	[___|___]	
		Years	[___|___]	
		Can't remember	98	

SECTION 2: SERVICE PROVISION

S200	Which services do you provide at this facility/ outlet? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER'. OTHERWISE CIRCLE '2']**		**Yes**	**No**	
		a) Maternity services (antenatal, delivery and postnatal services)	1	2	
		b) Child health services (immunization, well-baby services)	1	2	
		c) General outpatient/inpatient services	1	2	
		d) Health information/education	1	2	
		e) Family planning services/methods	1	2	
		f) HIV testing/counselling	1	2	
		g) HIV treatment/prevention/support	1	2	
		h) STI testing/treatment/prevention	1	2	
		i) SGBV counselling/PEP	1	2	
		j) Various kinds of medications	1	2	
		k) Various kinds of health products	1	2	
		l) Various kinds of consumer goods	1	2	
		m) Other (specify) _____	1	2	

S201	**[INTERVIEWER CHECK: S200]** HIV testing is mentioned in **S200**	Yes, mentioned	1	
		No, not mentioned	2	**Go to S300**
S202	Does this facility/outlet provide HIV Rapid <u>testing</u> services?	Yes	1	**Go to S204**
		No	2	

S203	Why does this facility /outlet not provide HIV rapid testing services? **[CIRCLE '1' FOR 'YES' TO ALL THAT APPLY; OTHERWISE CIRCLE '2']**		**Yes**	**No**	
		a) Not licensed	1	2	
		b) No kits	1	2	**Go to S210**
		c) No qualified staff	1	2	
		d) Other (specify) _____	1	2	

S204	When did you start providing HIV rapid testing services at this facility/outlet?	0-6 months ago	1
		7-12 months ago	2
		1 year ago	3
		2 years ago	4
		3 years ago	5
		4 years ago	6
		5 + years ago	7
		Don't know/can't remember	98

S205	For what purpose(s) do you provide HIV rapid testing? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER'. OTHERWISE CIRCLE '2']**		**Yes**	**No**
		a) Prevention services	1	2
		b) Treatment and support services	1	2
		c) Post exposure prophylaxis (PEP)	1	2
		d) Initial screening for diagnosis	1	2
		e) Standard procedure for all patients/clients seen in facility	1	2
		f) Prior to specific procedure	1	2
		g) PMTCT	1	2
		h) Emergency room screening	1	2
		i) Other (specify) _____	1	2

S206	What is the <u>MAIN</u> target population for the HIV rapid testing program at this facility/outlet? **[DO <u>NOT</u> READ LIST. CIRCLE <u>ONE</u> OPTION]**	Any high risk client/patient	1
		Only certain types or categories of high risk clients	2
		Any client/patient requesting an HIV test	3
		Any high school/college student	4
		No specific target population	5
		Other (specify) _____	88

S207	What is the <u>MAIN</u> source of funding for the HIV rapid testing program at this facility/outlet? **[DO <u>NOT</u> READ LIST. CIRCLE <u>ONE</u> OPTION]**	Government of Kenya	1
		CDC	2
		USAID	3
		Private/non-profit organization	4
		Other (specify) _____	88

S208	What test kit(s) do you currently use for HIV rapid testing at this facility/outlet? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER'. OTHERWISE CIRCLE '2']**		**Yes**	**No**
		a) OraSure OraQuick Advance Rapid HIV 1/2	1	2
		b) Antibody Test	1	2
		c) Abbott Determine HIV-1/2	1	2
		d) Trinity Biotech Uni-Gold HIV	1	2
		e) Other (specify) _____	1	2

S209	Who <u>usually</u> performs HIV rapid testing at this facility/ outlet? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER'. OTHERWISE CIRCLE '2']**		**Yes**	**No**
		a) Medical doctor/officer	1	2
		b) Clinical Officer	1	2
		c) Registered nurse/ midwife	1	2
		d) Enrolled nurse/ midwife	1	2
		e) Nursing aid/assistant	1	2
		f) Pharmacist	1	2
		g) Pharmacy assistant	1	2
		h) Lab technician/ technologist	1	2
		i) VCT counsellor	1	2
		j) Community health worker	1	2
		k) Other (specify) _____	1	2

S210	What is your role in routine HIV testing? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER'. OTHERWISE CIRCLE '2']**		**Yes**	**No**	
		a) Management or administrative role	1	2	
		b) Supervise staff conducting HIV testing	1	2	
		c) Conduct HIV testing	1	2	
		d) Provide health care services to clients who have received routine HIV testing/ screening	1	2	
		e) Train other health care providers or students about routine HIV testing	1	2	
		f) No role in routine HIV testing	1	2	
		g) Other (specify) _____	1	2	

SECTION 3: POTENTIAL USE OF HIV ORAL SELF-TESTS AND DISTRIBUTION OUTLETS

S300	**[INTERVIEWER CHECK]** **Interviewer: Show the respondent the HIV oral self-test kit, mention that it is registered in Kenya for use by individuals to perform HIV testing by themselves in settings that are convenient to them, and explain how it is used and how to determine the results of the test before asking the following questions**			
S301	Based on your understanding of the clients that you serve, do you think they would use the HIV oral self-test kit if it is made available in this area/facility?	Yes	1	
		No	2	**Go to S309**
		Don't know	3	**Go to S309**

S302	Why do you think the clients would use the HIV oral self-test kit? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) It is easy/simple/convenient to use/ does not need a health provider	1	2	
		b) It guarantees confidentiality/privacy/ others will not know	1	2	
		c) Do not have to go to a health facility/ can do the test at home	1	2	
		d) One gets to know the test results very fast	1	2	
		e) It can save time/money spent travelling to seek the services	1	2	
		f) No reason	1	2	
		g) Other (specify) _____	1	2	

S303	Where do you think would be MOST convenient for the clients to obtain the HIV oral self-test kits? **[DO NOT READ LIST. CIRCLE ONLY ONE RESPONSE]**	Govt health facility (hospital/health center/dispensary)	1	
		Private health facility (hospital/clinic/ maternity and nursing home)	2	
		Faith-based/NGO health facility (hospital/ health center/dispensary)	3	
		STAND ALONE VCT center	4	
		Mobile clinic/tent/outreach	5	
		Private pharmacy	6	
		Community health worker	7	
		Community-based distributor	8	
		Community-based organization/ self-help group	9	
		Non-governmental organization	10	
		Local administration (chiefs/ assistant chiefs/village elders)	11	
		Social marketing events	12	

		Local shops/supermarket	13		
		Family member/relative/friend/ neighbor	14		
		Traditional birth attendant	15		
		Other (specify) _____	88		
		Other (specify) _____			
S304	Why do you think the clients would prefer to obtain the HIV oral self-test kit from [NAME OF PLACE/PROVIDER]? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Facility/provider is nearby/no need to travel to get it/one can get it at home	1	2	
		b) Provider/distributor is always friendly/ understanding	1	2	
		c) Provider/distributor offers services at affordable/no cost	1	2	
		d) Provider/distributor treats clients with respect	1	2	
		e) Provider/distributor is always available whenever one needs services	1	2	
		f) Provider/distributor is well known/ respected in the community	1	2	
		g) Services are always available at the facility/distribution outlet/ no stock outs	1	2	
		h) Waiting time is always reasonable/ there are no long queues	1	2	
		i) Confidentiality/privacy is assured at the facility/distribution outlet	1	2	
		j) Adequate information is provided to clients at the facility/distribution outlet	1	2	
		k) Other (specify) _____	1	2	
S305	Apart from the place you have mentioned, where <u>ELSE</u> would the clients prefer to obtain the HIV oral self-test kits? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Govt health facility (hospital/health center/dispensary)	1	2	
		b) Private health facility (hospital/clinic/ maternity and nursing home)	1	2	
		c) Faith-based/NGO health facility (hospital/ health center/dispensary)	1	2	
		d) VCT center	1	2	
		e) Mobile clinic/tent/outreach	1	2	
		f) Private pharmacy	1	2	
		g) Community health worker	1	2	
		h) Community-based distributor	1	2	
		i) Community-based organization/ self-help group	1	2	
		j) Non-governmental organization	1	2	
		k) Local administration (chiefs/ assistant chiefs/village elders)	1	2	
		l) Social marketing events	1	2	
		m) Local shops/supermarket	1	2	
		n) Family member/relative/friend/ neighbor	1	2	
		o) Traditional birth attendant	1	2	
		p) Other (specify) _____	1	2	

S306	**[INTERVIEWER CHECK: S303 AND S305]** Government, private, faith-based or NGO health facility is mentioned in **S303** or **S305**	Yes	1	
		No	2	**Go to S400**

S307	You mentioned [government/ private/faith-based/NGO] health facility as one of the clients would prefer to obtain the HIV oral self-test kit from. In which areas within the health facility would the clients prefer to obtain the self-test kit? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Comprehensive care center/ART/VCT unit	1	2	
		b) Pharmacy	1	2	
		c) Maternal and child health unit	1	2	
		d) Family planning unit	1	2	
		e) Maternity unit	1	2	
		f) Laboratory	1	2	
		g) Other (specify) _____	1	2	

S308	What challenges can clients face in obtaining the HIV self-test kits from the places you have just mentioned? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Distance/transportation	1	2	
		b) Inconvenient working hours/ days	1	2	
		c) Lack of money to pay for services	1	2	
		d) Lack of enough providers	1	2	
		e) Lack of qualified providers	1	2	**Go to S400**
		f) Lack of awareness about the test kits	1	2	
		g) Other (specify) _____	1	2	

S309	Why do you think the clients would not use the HIV oral self-test kits? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Clients fear/don't want to test/know status	1	2	
		b) Clients don't know how to use it/read results	1	2	
		c) Clients don't know where to get counseling	1	2	
		d) Clients have low/no risk of HIV infection	1	2	
		e) Clients don't know where to get care/ treatment/support if positive	1	2	
		f) No care/treatment/support available in the community	1	2	
		g) Clients have never seen the kit before	1	2	
		h) Clients may not know where to get the kit	1	2	
		i) Clients don't know how much the kit costs	1	2	
		j) No reason	1	2	
		k) Other (specify) _____	1	2	

SECTION 4: PROVIDER'S READINESS TO DISTRIBUTE SELF-TEST KITS

Now, I would like us to discuss about distribution of Self-Test Kits

S400	If the HIV oral self-test kits are made available, would you/this facility provide information to clients about the use of the kits?	Yes	1	
		No	2	**Go to S402**
		Don't know	3	**Go to S402**

S401	What resources do you/does this facility have to support the provision of information on the use of HIV oral self-test kits to potential clients? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Provider/facility has adequate human resources/personnel to provide information	1	2	
		b) Provider/facility has appropriate training/ technical capacity	1	2	
		c) Provider/facility has adequate financial resources to support information activities	1	2	
		d) Provider/facility has adequate infrastructure to support provision of accurate information	1	2	
		e) Provider/facility serves a large clientele that is receptive to HIV testing/knowing test results	1	2	
		f) Other (specify) _____	1	2	
S402	What challenges are you/is this facility likely to face in providing information on the use of HIV oral self-test kits to potential clients? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Inadequate human resources/personnel to provide information	1	2	
		b) Lack of appropriate training/inadequate technical capacity	1	2	
		c) Inadequate financial resources to support information activities	1	2	
		d) Inadequate infrastructure to support provision of accurate information	1	2	
		e) Lack of adequate/accurate informational materials on self-test kits	1	2	
		f) Lack of acceptance/fear of HIV testing/ knowing test results in the community	1	2	
		g) No challenges	1	2	
		h) Other (specify) _____	1	2	
S403	If you/this facility were to provide information on the use of HIV oral self-test kits to potential clients, what kind of support do you need to effectively carry out this task? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Additional human/personnel resources	1	2	
		b) Training/updates on self-tests	1	2	
		c) Additional financial resources	1	2	
		d) Additional infrastructure	1	2	
		e) Adequate informational materials	1	2	
		f) Community sensitization on HIV testing	1	2	
		g) None	1	2	
		h) Other (specify) _____	1	2	
S404	If the HIV oral self-test kits are made available, would you/this facility distribute them to clients?	Yes	1		
		No	2	**Go to S406**	
		Don't know	3	**Go to S406**	

S405	Why do you think you are/this facility is ready to distribute HIV oral self-test kits to clients? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) It does not require huge amounts of resources (human/financial/infrastructure)	1	2	
		b) Provider/facility has adequate human/ personnel resources	1	2	
		c) Provider/facility has adequate training/ technical capacity	1	2	
		c) Provider/facility has the financial capacity for distribution	1	2	
		d) Provider/facility has the infrastructure for distribution	1	2	
		e) It is likely to attract a large clientele due to its advantages (confidentiality/ease of use)	1	2	
		f) No reason	1	2	
		g) Other (specify) _____	1	2	
S406	What challenges are you/is this this facility likely to face in distributing HIV oral self-test kits to clients? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) In adequate human/personnel resources	1	2	
		b) In adequate technical/training capacity	1	2	
		c) Inadequate financial resources	1	2	
		d) Lack of appropriate infrastructure	1	2	
		e) Irregular supplies/stock-outs	1	2	
		f) Inadequate clientele	1	2	
		g) Fear of HIV testing due to stigma	1	2	
		h) Lack of treatment/care/support services	1	2	
		i) No challenges	1	2	
		j) Other (specify) _____	1	2	
S407	If you/this facility were to distribute HIV oral self-test kits to potential clients, what kind of support do you need to effectively carry out this task? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Additional human/personnel resources	1	2	
		b) Training/updates on self-tests	1	2	
		c) Additional financial resources	1	2	
		d) Additional infrastructure	1	2	
		e) Adequate informational materials	1	2	
		f) Community sensitization on HIV testing	1	2	
		g) Reliable supplies of self-test kits	1	2	
		h) None	1	2	
		i) Other (specify) _____	1	2	
S408	In your opinion, what needs to be done to ensure that the distribution of HIV oral self-test kits better meets the needs of clients? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**	
		a) Distribute test kits through KEMSA	1	2	
		b) Have independent distributors	1	2	
		c) Involve various providers in distribution	1	2	
		d) Ensure adequate finances for distribution	1	2	
		e) Conduct provider training/updates	1	2	
		f) Conduct community sensitization	1	2	
		g) Provide the test kits free/at affordable cost	1	2	
		h) Other (specify) _____	1	2	

SECTION 5: POSSIBLE LINKAGES TO COUNSELING AND CARE				
S500	Do you think clients would seek counselling services before performing HIV oral self-test?	Yes	1	
		No	2	**Go to S502**
		Don't know	3	**Go to S502**
S501	Where do you think would be MOST convenient for clients to obtain counselling services before performing HIV oral self-test? **[DO NOT READ LIST. CIRCLE ONLY ONE RESPONSE]**	Govt health facility (hospital/health center/dispensary)	1	
		Private health facility (hospital/clinic/ maternity/nursing home)	2	
		Faith-based/NGO health facility (hospital/ health center/dispensary)	3	
		VCT center	4	
		Mobile clinic/tent/outreach	5	
		Private pharmacy	6	
		Community health worker	7	
		Community-based distributor	8	
		Community-based organization/ self-help group	9	
		Non-governmental organization	10	
		Local administration (chiefs/ assistant chiefs/village elders)	11	
		Family member/relative/friend/ neighbor	12	
		Traditional birth attendant	13	
		Other (specify) _____	88	
S502	Do you think clients would seek counselling after performing HIV oral self-test?	Yes	1	
		No	2	**Go to S504**
		Don't know	3	**Go to S504**
S503	Where do you think would be MOST convenient for clients to obtain counselling services after performing HIV oral self-test kit? **[DO NOT READ LIST. CIRCLE ONLY ONE RESPONSE]**	Govt health facility (hospital/health center/dispensary)	1	
		Private health facility (hospital/clinic/ maternity/nursing home)	2	
		Faith-based/NGO health facility (hospital/ health center/dispensary)	3	
		VCT center	4	
		Mobile clinic/tent/outreach	5	
		Private pharmacy	6	
		Community health worker	7	
		Community-based distributor	8	
		Community-based organization/ self-help group	9	
		Non-governmental organization	10	
		Local administration (chiefs/ assistant chiefs/village elders)	11	
		Family member/relative/friend/ neighbor	12	
		Traditional birth attendant	13	
		Other (specify) _____	88	

S504	Do you think clients would seek <u>other</u> services after performing HIV oral self-test?	Yes	1	
		No	2	**Go to S507**
		Don't know	3	**Go to S507**

S505	Which <u>other</u> services do you think clients would seek after performing HIV oral self-test? **[DO <u>NOT</u> READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**
		a) Prevention services to avoid infection/re-infection	1	2
		b) Treatment services if test results are positive	1	2
		c) Support services (e.g. support groups/post-test clubs)	1	2
		d) Information on availability of prevention/treatment/ support services	1	2
		e) Other (specify) _____	1	2

S506

For each of the services you think clients would seek after performing HIV oral self-test, where would be the <u>MOST</u> convenient to obtain the services?

[CIRCLE ONLY <u>ONE</u> SOURCE FOR EACH OF THE SERVICES THAT THE RESPONDENT MENTIONS IN S505. OTHERWISE RECORD '99' IF SERVICE IS NOT MENTIONED. DO <u>NOT</u> READ SOURCES]

Source of service	**(i)** Prevention services	**(ii)** Treatment services	**(iii)** Support services	**(iv)** Information services	**(v)** Other (specify)
Govt health facility (hospital/health center/dispensary)	1	1	1	1	1
Private health facility (hospital/clinic/ maternity/nursing home)	2	2	2	2	2
Faith-based/NGO health facility (hospital/ health center/dispensary)	3	3	3	3	3
VCT cent	4	4	4	4	4
Mobile clinic/ tent/ outreach	5	5	5	5	5
Private pharmacy	6	6	6	6	6
Community health worker	7	7	7	7	7
Community-based distributor	8	8	8	8	8
Community-based organization/ self-help group	9	9	9	9	9
Non-governmental organization	10	10	10	10	10
Local administration (chiefs/ assistant chiefs/village elders)	11	11	11	11	11
Family member/relative/friend/ neighbor	12	12	12	12	12
Traditional birth attendant	13	13	13	13	13
Other source (specify) _____	88 _____	88 _____	88 _____	88 _____	88 _____
Not applicable	99	99	99	99	99

S507	**[INTERVIEWER CHECK: S500, S502 AND S504]** Clients would NOT seek counselling or other services before or after HIV oral self-test (**S500** is '**No**' or **S502** is '**No**' or **S504** is '**No**')	Clients would not seek counselling or other services before or after HIV oral self-test	1	
		Clients would seek counselling and other services before and after HIV oral self-test	2	**Go to S509**

S508	Why do you think clients would not seek counselling/other services before/after performing HIV oral self-test? **[DO NOT READ LIST. CIRCLE '1' FOR 'YES' TO ALL THAT APPLY AND PROBE BY ASKING 'ANY OTHER']**		**Yes**	**No**
		a) It would just make them sad and worried	1	2
		b) It would not make a difference/ if it is bad, it is bad	1	2
		c) It would take more time to get the needed services	1	2
		d) It would cost more to get the needed services	1	2
		e) Other people might get to know about it and start rumors	1	2
		f) Clients don't know where to get counselling/ other services	1	2
		g) Other (specify) _____	1	2

S509	We have now come to the end of the interview. Please give me one or two comments/questions [if any], that you would like to raise regarding what we have talked about _____ _____

TIME INTERVIEW ENDED: [___|___:___|___]
[RECORD TIME IN 24-HOUR CLOCK]

PLEASE REMEMBER TO THANK THE RESPONDENT

INTERVIEWER'S COMMENTS

_____
_____
_____
_____

APPENDIX 4: KEY INFORMANT INTERVIEW GUIDE

Assessment of possible outlets for distribution of HIV oral self-test kits in Kenya

Date of interview: [___|___ /___|___/__2_|_0_|__/__]

Time of Interview: Start [___|___:___|___] End [___ |___ :___|___]

Venue of interview: _____

Name of institution: _____

Designation: _____

Sex of informant: Male [___] Female [___]

Introduction:

Thank you for your willingness to take part in the interview. Your responses will be most helpful for understanding aspects of service delivery that are relevant for the provision of HIV and AIDS services in Kenya. We will be asking you questions based on your experience/ knowledge of the community and how community members are likely to respond to the issue of HIV oral self-testing.

INTERVIEWER: [Show the respondent the HIV oral self-test kit, mention that it is registered in Kenya for use by individuals to perform HIV testing by themselves in settings that are convenient to them, and explain how it is used and how to determine the results of the test before proceeding with questions]

1. Based on your experience and understanding of the community:
   - How do you think community members are likely to respond to the idea of performing HIV oral self-tests? Please explain.

     INTERVIEWER: *[Probe for different groups: female and male; adolescents and adults; married and unmarried; poor and better off community members].*

   - What do you think might influence how community members respond to the idea of HIV self-testing in this area? Please explain.

2. AVAILABILITY

   a) If the HIV oral self-test kits are to be made available in the community:

   - Which channel(s) are available that can be used for distributing the kits to potential clients?
   - For selling?
   - For free?

     INTERVIEWER: *[Probe for as many channels as the respondent can mention].*

   - What do you think are the advantages of distributing the test kits through the channel(s) you have just mentioned?

     INTERVIEWER: [P*robe for advantage(s) of each channel that is mentioned].*

- What do you think are the limitations of distributing the test kits through the channel(s) you have just mentioned?

  INTERVIEWER: *[Probe for limitation(s) of each channel that is mentioned]*.

b) If the HIV oral self-test kits are made available through the channel(s) you have just mentioned:

- How would potential clients learn about the availability of the test kits through this/these channel(s)?
- What groups of clients might access the test kits through which channel(s)?
  INTERVIEWER: *[Probe for different groups: female and male; adolescents and adults; married and unmarried; poor and better off clients, MARPS]*.
- What, in your opinion, might influence the choice of distribution channel(s) for the test kits for different groups of clients?

3. COMMUNICATION

Agency's readiness to provide information and/or distribute HIV oral self-test kits to potential clients:

- Would your agency provide information on the use of HIV oral self-test kits to potential clients?
  - ✓ What resources does your agency have to support the provision of information on the use of HIV oral self-test kits to clients?
  - ✓ What challenges would your agency face in providing information on the use of HIV oral self-test kits to clients?
  - ✓ What kind of support would your agency need to effectively provide information on the use of HIV oral self-test kits to clients?

4. DISTRIBUTION

- Would your agency distribute HIV oral self-test kits to clients?
  - ✓ What resources does your agency have to support the distribution of HIV oral self-test kits to clients?
  - ✓ What challenges would your agency face in distributing HIV oral self-test kits to clients?
  - ✓ What kind of support would your agency need to effectively distribute HIV oral self-test kits to clients?

- In your opinion, what needs to be done to ensure that the distribution of HIV oral self-test kits better meets the needs of clients?

  INTERVIEWER: *[Probe for as many ways in which the distribution system can be organized as possible]*.

5. COUSELLING & CARE

For users of HIV oral self-tests in the community:

- How do you think they would respond to the issue of seeking counseling and care? Please explain.
- What factors do you think might influence whether they seek counseling and care?
- For those who would seek counseling and care, what do you think are the places/ providers they are likely to prefer?

- What, in your opinion, might influence the choice of places/providers where they seek counseling and care?

6. ADVANTAGES & DIS ADVANTAGES

In your opinion:

- What do you think are the advantages of performing HIV self-test?
- What do you think are the challenges posed by performing HIV self-test?
- How can the challenge(s) posed by performing HIV self-test be addressed?
- What do you think can be done to overcome the disadvantages?

We have now come to the end of our discussion.

- Do you feel that there is anything we have left out or is there something you would like to mention regarding HIV oral self-tests?
- Is there any other general issue you would like raise?

THANK YOU VERY MUCH FOR YOUR TIME