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Maternal and Child Survival Program

Community-Based HIV Testing and Counseling in the Health Extension Program

Evaluation of a Pilot Program Integrating HIV Rapid Testing into the National Health Extension Program in Engela District, Ohangwena Region, Namibia

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MCSP is a global USAID initiative to introduce and support high-impact health interventions in 24 priority countries with the ultimate goal of ending preventable child and maternal deaths (EPCMD) within a generation. MCSP supports programming in maternal, newborn, and child health, immunization, family planning and reproductive health, nutrition, health systems strengthening, water/sanitation/hygiene, malaria, prevention of mother-to-child transmission of HIV, and pediatric HIV care and treatment. MCSP will tackle these issues through approaches that also focus on household and community mobilization, gender integration, and eHealth, among others.

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Front cover:
Health extension worker, Bernadine, stands next to the MCSP car after completing outreach in one of her catchment areas. Photo taken with permission.

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Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ANC	antenatal care
ART	antiretroviral therapy
CBHTC	community-based HIV testing and counseling
CHW	community health worker
DALY	disability-adjusted life year
DBS	dry blood spot
HCT	HIV counseling and testing
HEP	Health Extension Program
HEW	health extension worker
HIV	Human Immunodeficiency Virus
HTC	HIV testing and counseling
HTS	HIV testing services
IPV	intimate partner violence
MCH	maternal and child health
MCSP	Maternal and Child Survival Program
MoHSS	Ministry of Health and Social Services
NAPPA	Namibia Planned Parenthood Association
NIP	Namibian Institute of Pathology
NHTC	National Health Training Centre
OVC	orphans and vulnerable children
PEP	post-exposure prophylaxis
PITC	provider-initiated testing and counseling
PLHIV	people living with HIV
QA	quality assurance
SSV	supportive supervision visit
SOP	standard operating procedure
VCT	voluntary counseling and testing

Executive Summary

Morbidities associated with immunosuppression make HIV/AIDS one of the leading causes of death in Namibia, and HIV is ranked as the number one reason for years of life lost.[1] Testing for HIV is the gateway for clients to receive appropriate care and treatment and thus an important and life-saving intervention. In light of the Joint United Nations Programme on HIV/AIDS (UNAIDS) 90-90-90 goals, providing HIV testing services (HTS) is a vital first step to ensure that, ultimately, 90% of people living with HIV receive treatment, and 90% of those are virally suppressed.

Nationally, Namibia has a generalized HIV epidemic, with 14% of the 15–49-year-old population living with HIV.[2] HIV, which is estimated to have been responsible for 2,545 deaths in 2016, is the leading cause of death among adults in the country and the sixth leading cause of death among children under 5 years of age.[3] Among adults (>15 years), women bear a disproportionate burden of the HIV epidemic, with a prevalence of 16.9% compared to 10.9% for men. An estimated 1.3% of children under 15 years of age are HIV positive.[2]

Namibia has meticulously implemented HTS with progressive national HIV testing guidelines (first edition 2006). Initial approaches revolved around client-initiated, facility-based services and provider-initiated testing for pregnant mothers as well as TB and sexually transmitted infection (STI) patients. Provider initiation has since been expanded beyond specific clinical indications, leading to an estimated 76% of people living with HIV (PLHIV) in the country being diagnosed. However, because many Namibians live in isolated and otherwise hard-to-reach communities, community-based testing has been required to complement facility-based activities. To date, this has mostly been provided by government partners. In response, the United States Agency for International Development (USAID)-funded Maternal and Child Survival Program (MCSP) is currently implementing a multifaceted project to support the Ministry of Health and Social Services (MoHSS) in delivering community-based HIV testing and counseling through the national Health Extension Program (HEP). This initiative is aimed at capacitating the MoHSS with regard to community-based HTS by reducing its reliance on partners. Starting in March 2016, the HEP pilot program rolled out HIV rapid test training to 62 health extension workers (HEWs) at nine clinics in the Engela district of the Ohangwena region of northern Namibia. Implementation by HEWs began in July 2016.

Using various quantitative and qualitative data collection tools, this evaluation aims to attain the following key objectives:

- Describe and assess the feasibility of a targeted community-based HIV testing and counseling (CBHTC) program by trained HEWs to inform national scale-up of CBHTC.
- Ascertain the training and supportive supervision needs of HEWs to perform targeted CBHTC.
- Calculate the costs associated with integrating targeted CBHTC in the HEP.
- Describe the best approaches to integrate targeted CBHTC into the current HEW workload.
- Describe the feasibility of offering HIV testing and counseling (HTC) for partners (partner tracing) and children of newly diagnosed HIV infected individuals identified in CBHTC.

The purpose of this report is to share findings from the Engela district CBHTC pilot program with Namibia's MoHSS and USAID to inform national program scale-up.

Quantitative and qualitative data was used to evaluate the CBHTC program. Quantitative testing data was taken from Hamukoto Wakapa, Odibo, and Ongha clinics through HTC registers and monthly summary forms. These three sites started implementing before the others and were the only ones to have accumulated enough data at the time this report was compiled. Qualitative data came from key informant interviews with 13 HEWs from eight different clinics.

From July to October 2016, HEWs at Hamukoto Wakapa, Odibo, and Ongha health facilities provided CBHTC to 1,050 clients using rapid test kits. Of those tested, more than two-thirds (67.7%) were female. A total of 24 clients tested positive for HIV, resulting in a testing yield of 2.3% for the CBHTC program between July and October. The highest positivity yield (6.9%) was recorded among clients aged 35–39 years, but this was among the least tested age groups with only 73 tests conducted. The two most tested groups were 2–14 years and over 49 year olds (186 and 192 tests); these two groups also had the lowest yields (0.5%). The majority of the 1,050 clients tested by HEWs at Hamukoto Wakapa, Odibo, and Ongha clinics were first-time testers (not tested in the preceding 12 months). Linkage to care was high, with 84% of referred clients documented as having been seen at the receiving facility.

HEWs and HEW supervisors reported feeling well prepared to implement CBHTC after training. HEWs reported that CBHTC was well received by the community, and that the program was feasible to implement. One challenge identified was inconsistent access due to suboptimal stock management and forecasting practices at the facility level.

Total CBHTC startup costs for 60 HEWs in Engela district were NAD 1,101,008 (USD 78,643).

Proposed recommendations for program scale-up are:

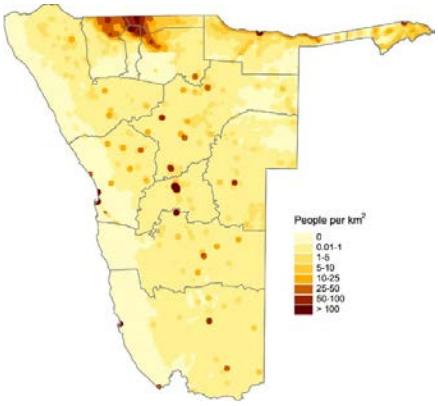
- Increase prominence of integration of CBHTC services in the HEP promotion package to routinely generate demand for HTS by the community within the HEP package of services. The current health promotion package was developed for HEP services without community-based HTS provision.
- Develop and implement a risk assessment tool to improve targeted HIV testing among children younger than 15 and adults older than 50 to improve testing approaches with these populations.
- Strengthen the index client tracing approach by reviewing HEW implementation strategies and increasing facility staff awareness and involvement in the approach.
- Train HEWs in youth- and adolescent-friendly service provision. A significant proportion of HTS was provided to this age group and the current training package can be improved for adolescent-specific approaches.
- Adopt and display data dashboards at CBHTC implementing clinics to facilitate data-driven discussions and decision-making. Dashboards can also provide the same effect for other functions, including other HEP priority activities and facility-based HTS.
- Formulate and adopt a method for HEWs to document results on a client-kept record. This is particularly important for clients who test negative and do not have an outpatient health passport.

Background

Namibia Population

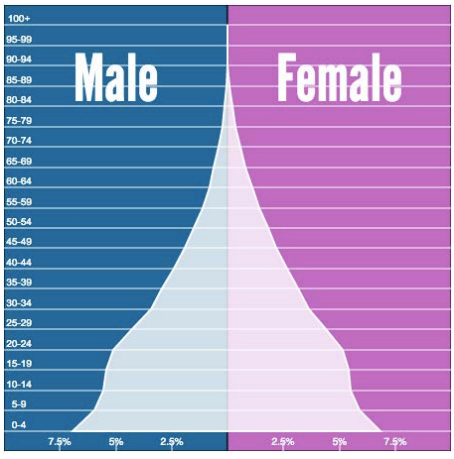
More than half (55%) of Namibia's 2.5 million inhabitants live in rural areas.[4] Namibia's large physical size and small population result in a low overall population density (Figure 1). Density increases in major cities, such as in Windhoek, the centrally located capital city, and along the Atlantic coast in Swakopmund and Walvis Bay. Following the central B1 highway north from Windhoek leads to the Angolan border and to Namibia's most densely populated regions: Omusati, Oshana, Ohangwena, and Oshikoto.

Figure 1. Population density in Namibia.[5] The country's most densely populated areas are in the north, near its border with Angola, and in its major cities.



Median age in Namibia is 21 years, and 36% of the population is under the age of 15, while only 5% is older than 60 years of age.[4] Figure 2 depicts the current population pyramid of Namibia, with a wide base and a steep decline in population as the population ages. This structure portrays the aftermath of the HIV epidemic in Namibia, where mortality due to HIV is high among older men and women, leaving behind a very young population.

Figure 2. Population pyramid of Namibia (2015). The majority of the population is under age 21, with 36% under age 15 and only 5% over age 60.[6]



HIV in Namibia

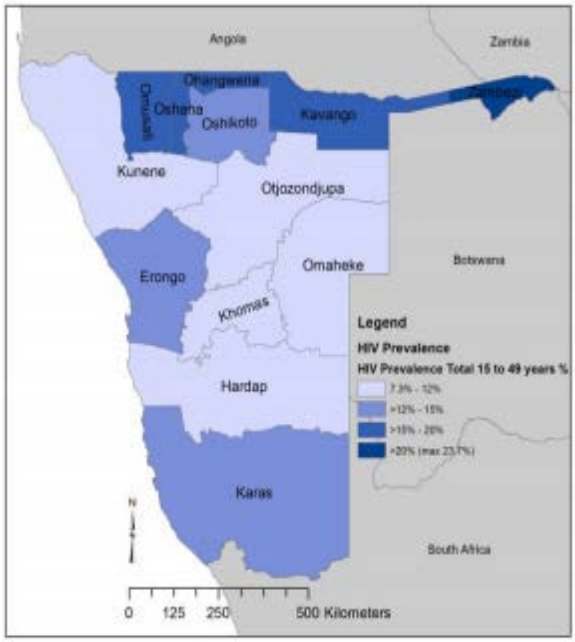
HIV/AIDS has been the leading cause of death in Namibia since 1996,[5] accounting for about one-quarter (25.4%) of all mortality in the country.[4] Morbidities associated with immunosuppression due to HIV/AIDS also account for the largest disease burden in Namibia, where the majority of disability-adjusted life years

(DALYs) lost are due to HIV/AIDS, TB, and malaria. The estimated prevalence of HIV is 14% among adults of reproductive age, although this prevalence varies by age, gender, risk group, and place of residence.[2]

HIV prevalence in Namibia is highest among adults aged 35–39 (30.9% for women, 22.6% for men), and lowest among young adults aged 15–24 (2.5–6.4% for women, 2.0–3.4% for men).[2] Prevalence among people of reproductive age is higher among women (16.9%) than among men (10.9%).[2] HIV in Namibia is primarily transmitted through heterosexual contact,[2] which accounts for the higher prevalence in adults. Transmission of HIV from mother to child accounts for the 3,350 new HIV infections in infants per year.[5]

Female HIV prevalence is higher in rural (19.3%) than in urban (15.0%) areas, whereas male HIV prevalence is lower in rural (10.1%) than in urban (11.5) areas.[6] Average HIV prevalence in the Ohangwena region is 15.6%, but varies dramatically by gender. Female HIV prevalence is 22.1% in this region, whereas prevalence in Ohangwena is 6.6% among males. The Zambezi region has the highest average HIV prevalence of all the regions in Namibia (23.7%), followed by Omusati region (17.4%) and Kavango region (17.0%) (see Figure 3).[2,7] Ohangwena region is the fifth most HIV prevalent region in Namibia.

Figure 3. HIV prevalence by region.[7]



The 2013 Namibia Demographic and Health Survey (DHS) states that "the Namibian response to HIV/AIDS has been aggressive and persistent."[2] In Namibia, antiretroviral therapy (ART) is available to 85% of Namibians who test positive for HIV and need treatment.[5] To access ART, however, patients must first be aware of their serostatus. In 2011, data from the Ministry of Health and Social Services (MoHSS) indicated that only 29% of women and 18% of men had been tested for HIV within the past year, and only 5% of those tested participated in couples testing.[5]

Thus, to be aggressive, the national response to the HIV epidemic must include scaling-up HIV testing.[5] Although coverage of HIV testing increased drastically in the six years between DHS reports (from 55% of women and 34% of men age 15–49 in the 2006–2007 NDHS survey to 81% and 63%, respectively, in 2013), rates of traditional and routine HIV testing can still be improved.[2,5] HIV testing is especially hard to access for people living in rural areas, and many Namibians live in isolated and otherwise hard-to-reach communities. Further compounded by social factors, such as stigma and discrimination, access to HIV testing and counseling is not equitable across populations in Namibia.

Since the 2006–2007 DHS report, accepting attitudes toward people living with HIV decreased markedly. The most recent DHS report, published in 2013, indicated a 10% drop in the number of people who reported they would be willing to "care for a family member with AIDS in their own home," "buy fresh vegetables from a shopkeeper with HIV," "allow an HIV-positive female teacher to continue teaching," and that they "would not want to keep the HIV-positive status of a family member a secret."[2] This increase in stigma surrounding HIV is a substantial barrier to accessing HIV testing services (HTS) for key populations, making it especially difficult for Namibia to achieve the UNAIDS target of having 90% of all people living with HIV knowing their HIV status by 2020.

In Namibia, HTS are provided through health facility-based self-referral, antenatal clinic (ANC) and TB programs, stand-alone voluntary counseling and testing (VCT), private health facilities, and mobile/community-based programs. Namibia experiences gender and age disparity in HTS with reduced access to facility-based HTS for orphans and vulnerable children (OVC), adolescents, men, couples, and key populations. In 2015, Namibia's HTS program tested 280,000 and diagnosed 17,360 persons.[7] Forty-nine percent of women and 38 percent of men aged 15–49 were tested for HIV in 2012. Men in urban areas (71%) are much more likely than those in rural areas (53%) to have ever been tested for HIV.[2] Although coverage of HIV testing has shown a remarkable increase between 2006 and 2013 (55% of women and 34% of men aged 15–49 in 2006–2007 compared to 81% and 63%, respectively, in 2012–2013), much work remains to ensure that 90% of all HIV-positive individuals know their status by 2020. The pending ART national guidelines recommend a test-and-treat strategy in Namibia, which, coupled with a robust HIV testing strategy, will allow for newly diagnosed individuals to start treatment immediately, allowing for better clinical outcomes and less risk of HIV transmission to their partners.

According to current estimates, there are approximately 237,000 people living with HIV in Namibia and 76% of them have been diagnosed. This leaves a gap of about 56,000 HIV-positive people that are not aware of their status. Of the estimated 71% of people with HIV that have been enrolled in ART, the largest treatment gaps by volume are among males and females aged 20–24 years. To reach the 90-90-90 targets despite limited health facilities in many areas, the program uses high-quality, efficient, innovative, and targeted HTC strategies in rural and vulnerable communities to find HIV-positive persons and link them to treatment. In response, the MoHSS, with support from the United States Agency for International Development (USAID), is piloting a program to bring HTS to people's homes, in the hopes of removing the barriers that exist with traditional facility-based HTS. This model, delivered by trained health extension workers (HEWs), encourages testing of hard-to-reach populations including men, couples, women, adolescents, and children. In addition, the pilot model utilizes an index partner tracing approach to ensure that individuals that have been exposed to HIV are reached and offered testing—a vital component to increase efficiency in HTS by diagnosing individuals early with appropriate linkages to care.

Community-Based HIV Testing and Counseling

Overall global uptake of HTC increased by 33% between 2009 and 2013,[8] but many countries still fall well short of the UNAIDS goal of 90% of people living with HIV (PLHIV) knowing their status. This increase does not, however, indicate that all PLHIV are accessing HTC. Men are less likely than women to know their HIV status, and adolescents and key populations have low uptake of HTC. Fewer than 1 in 5 adolescent girls know their HIV status.[8] Testing in many countries is still limited to ANC visits, and thus does not necessarily reach key populations. HTC is usually coupled with other reproductive health services, which are generally targeted toward women. Thus, interventions increasing HTC need to be scaled up among key populations, including men, couples, and adolescents.

Community-based HIV testing and counseling (CBHTC) is one way to increase testing among these populations. CBHTC is "highly acceptable and effective in reaching large numbers of first-time testers, diagnosing people living with HIV sooner after they acquire HIV infection and linking them to care."[4] CBHTC has shown acceptance, feasibility, rapid test efficacy, and cost-effectiveness in multiple low-resource settings in North America, the Caribbean, and Africa. A meta-analysis using data compiled from 117 studies of CBHTC programs found that community-based approaches significantly increased HTC uptake (relative

risk [RR] = 10.65) and the proportion of first-time testers (RR = 1.23) compared to facility-based approaches.[9] Home-based testing also resulted in better linkage to care than facility-based testing in Haiti and the United States.[10,11]

Compared to testing in facilities, community-based approaches identify PLHIV earlier, when they have a higher CD4 count. Those who tested in the community-based setting compared to in a clinic were significantly less likely to have AIDS (AOR = 0.04).[12] Thus, early community-based testing can reduce AIDS-related morbidities and mortalities and link the newly diagnosed to care and treatment for better clinical outcomes. However, home-based testing tends to identify a lower prevalence of HIV compared to the population-level prevalence.[8,13] In the meta-analysis of CBHTC, community-based testing had a significantly lower positivity rate than facility-based testing (RR = 0.59).[8]

The World Health Organization (WHO) recommends "community-based HIV testing and counseling for key populations in all HIV epidemics, with linkage to prevention, care and treatment services."[8] Home-based testing is especially effective in targeting vulnerable populations such as adolescents,[14,15] and is an effective way to identify first-time testers—especially first-time testers from low-income brackets.[16] Home-based testing has also been shown to be an effective method to increase male uptake of testing,[8] whereas couples testing may not be an effective way to target men for testing.[17] Additionally, one study at Katutura Health Centre in Namibia indicated that implementing community-based testing on weekends as opposed to weekdays increased male participation in HIV testing programs and produced a higher positivity rate among men.[18]

Stigma and fear can keep people from wanting to know their status.[8] Rural areas tend to have higher perceived stigma toward PLHIV; barriers to accepting CBHTC include fear of stigmatization and a perceived lack of confidentiality of services provided.[19] Mediating factors against these barriers include increasing staffing and improving HCT training for community health workers.[19]

Effective CBHTC programs include robust quality assurance (QA) measures to ensure rapid testing with high sensitivity.[12,20,21] Programs using a serial testing algorithm instead of parallel testing are cheaper and equally effective in testing for HIV in rural communities. In rural Malawi, switching to a serial testing algorithm from a parallel algorithm cut the cost of testing per HIV-positive test by more than half.[12] Implementing CBHTC is safe for community health workers.

Health Extension Program and CBHTC in Namibia

In response to a chronic shortage of healthcare workers, the MoHSS developed the Health Extension Program (HEP). This program focuses on five key areas: 1) promotion of health practices and referral to services, 2) community health census/planning, 3) systematic household visitation to serve vulnerable populations, 4) integration of high-impact maternal and child health (MCH) and communicable disease interventions, and 5) community-based health data collection and analysis. The HEP program was always a platform for HIV and TB screening, supportive and preventative services with HEWs providing support for PLHIV, and referring at-risk clients for testing. The HEP scope did not include the provision of HIV testing services (HTS) in its preliminary stage.

Currently, the MoHSS has trained and deployed 1,649 HEWs to 27 health districts in 13 regions in Namibia. Each HEW is responsible for a catchment area, where the MoHSS deploys one HEW for every 100 households. The MoHSS aims to improve coverage to include all districts of Namibia by 2018 by increasing HEP program size to 4,113 HEWs. Although HIV care in the community has been a core component in the HEP program since its inception, the original platform revolved around HEWs focusing on counseling, ART adherence support, and referrals with linkages to care. With the need to increase testing in rural areas and meet UNAIDS 90-90-90 goals, the MoHSS hopes to harness the power of this trained cohort of individuals to deliver CBHTC to populations across Namibia to ensure that individuals are diagnosed and linked to care and treatment services.

Supported by development partners, the MoHSS embraced the provision of home-based HTS by CHWs in 2013. However, this approach depends heavily on facility infrastructure since testing commodities must be collected each morning from the fixed facility sites and returned by CHWs at the end of each day. This dependence on daily visits to the facility could be negatively impacting program reach and failing to serve the hardest-to-reach communities. In response, USAID's Maternal and Child Survival Program (MCSP)—in collaboration with the MoHSS—rolled out a community-based HIV rapid test pilot program using a phased approach in March 2016.

The original cohort consisted of 23 HEWs linked to three clinics in the Engela district in northern Namibia. One HEW was suspended from testing during the pilot due to lack of adherence to the national testing algorithm; final cohort size was 22 HEWs. Because of delays in the national HTC algorithm finalization, the 22 HEW cohort began offering CBHTC services in July 2016. An additional 39 HEWs attained HTS proficiency later, and started testing in September 2016. Engela district was selected for the pilot due to its high HIV prevalence and relative lack of community-based HIV testing. From July to October 2016, the original cohort of 22 HEWs tested more than 1,050 individuals for HIV at the community level.

This report details findings from the HEP CBHTC pilot program evaluation using the original cohort of 22 HEWs linked to the three clinics in the Engela district. It also provides recommendations that could be used to support a national program scale-up to deliver CBHTC services through the HEP.

Pilot CBHTC Program Description

Goal

The aim of implementing CBHTC through the national HEP is to expand access to HTS throughout Namibian communities to further progress toward the goal of ensuring that 90% of PLHIV know their HIV status and are appropriately linked to care by 2020.

Objectives

- To increase accessibility of HTC to the general population
- To facilitate active referrals to HIV treatment and care services for HIV-positive individuals
- To promote HIV risk reduction among HIV-negative individuals
- To promote couples HTC
- To promote family HTC
- To promote HTC for men, adolescents, young adults, and other populations poorly reached through facility-based testing
- To reduce HIV-related stigma at the community level[23]

Target Population

By taking HIV rapid testing from the facility into the community, HEWs aim to expand access to testing for populations particularly at risk for HIV. Using a provider-initiated testing and counseling approach (PITC), HEWs reach these key populations (children over the age of 18 months, adolescents, and adults) during their day-to-day community work activities in the field.

Based on recent and compelling evidence on the efficiency and effectiveness of index partner tracing, the HEP CBHTC program has integrated an index partner tracing approach into the model. Newly diagnosed individuals, or those with partners that have not received HTS within 12 months, can voluntarily consent to list current and previous sexual partners as well as any potentially exposed children with the HEW. The HEW then works collaboratively with the index client to ensure that these individuals are counseled and offered HIV testing. HEWs' target population therefore also includes these sexual partners and children of PLHIV.

Infants between 0 and 18 months of age are not tested through CBHTC. HIV rapid testing kits diagnose HIV by identifying HIV antibodies, and because infants born to HIV-positive mothers may carry maternal antibodies for up to 18 months, this type of testing may produce false positive results. In lieu of community-based testing, infants between the ages of 0 and 18 months are referred to local clinics for antigen-based testing, in accordance with Namibia's national guidelines on early infant diagnosis.

Along with maintaining confidentiality, providing quality testing, respecting individual human rights, and following codes of ethics, obtaining consent is a pillar of Namibia's HTS. HEWs must recognize that consent requires that 1) the client understands the benefits, implications, and consequences of testing; 2) the client understands that he/she can withdraw consent at any time; and 3) adults with any form of impairment may not be capable of consenting.[5] Declining or withdrawing consent to HTS should never diminish the quality of care delivered by HEWs.

Community-based testing of children over the age of 18 months requires informed parental consent. Testing adolescents aged 10–13 years requires both informed parental consent and informed adolescent assent. Children under age 10 can be tested with parental consent but without individual assent. Anyone over age 14 can individually consent for testing per Namibian National Guidelines.

Involving adolescents in the assent process is an important component of HTC, and aids in postdiagnosis treatment and care for adolescents who test positive for HIV. Proper counseling is also important for adolescents who test negative, as it provides an opportunity for education and stigma reduction.

Mature minors are adolescents allowed to independently access HTC with individual assent to HIV testing but without parental consent. These minors are only allowed to test at the facility level, and present unique exceptions to parental consent guidelines. Any mature minor is an individual under 14 years of age who is pregnant, already has a child, currently has a sexually transmitted infection (STI), or is engaging in risky behaviors that put him or her at risk for contracting an STI. Classification of a mature minor is left to the judgment of health care providers at the facility level. Minors who do not meet these criteria, but who display acceptable maturity levels, may also be classified as mature minors. Any HEW who encounters a minor wishing to access HTC without parental consent should refer the client to a health facility.

Key Stakeholders

The CBHTC pilot program is implemented with funding from the US President's Emergency Plan for AIDS Relief (PEPFAR) through USAID and in collaboration with USAID, MCSP, and the MoHSS. Training was conducted by staff from MCSP, MoHSS, ITech, Namibia Planned Parenthood Association (NAPPA), and Namibia Institute of Pathology (NIP).

Activities

HEW PITC Training

HEP national standards require that all HEWs achieve a minimum of 24 points in grade 10 in Namibia, and a D or better in English. The National Health Training Centre (NHTC) then trains HEWs in a six-month course, which includes training in conducting a health census, integrating MCH interventions into care, HIV prevention counseling, medication adherence support, and screening for TB (among other core competencies). PITC training builds upon these already established skills.

Starting March 7, 2016, the HEP pilot program rolled out training to HEWs attached to nine clinics in Engela district in northern Namibia. These nine clinics were Hamukoto Wakapa Clinic, Odibo Health Center, Ongha Health Center, Endola Clinic, Omundudu Clinic, Omungelume Clinic, Onamukulo Clinic, Ondombe Clinic, and Ongenga Clinic. HEWs are divided into CBHTC clusters by clinic and according to geographical distribution of households within their catchment areas. Cluster size ranges from one to five HEWs per cluster, where HEWs determined their clusters cooperatively during CBHTC training. A cluster focal person was chosen for each cluster by group consensus on the basis of location convenience and willingness to play the role. The cluster focal person houses all the CBHTC supplies for the cluster. A total of 28 community clusters was formed from the nine participating sites.

HIV Rapid Testing Certification

To become a HEP CBHTC provider, a HEW must 1) attend the six-day national PITC and rapid testing training facilitated by the MoHSS in its entirety; 2) score 80% or higher on the written post-test, 80% or higher on part one of the rapid testing practical examination, and 100% on part two of the rapid testing practical exam; and 3) carry out 10 HIV rapid tests at the facility and send samples of those 10 tests to NIP for re-testing and confirmation. After successfully completing all three of these requirements, a HEW is certified to begin CBHTC in his or her catchment area.

The national HIV testing guidelines changed after the training in March, so in May the original cohort of HEWs attended a refresher training to learn a new serial testing algorithm in a two-day workshop. Once proficient in the new algorithm, HEWs returned to their home clinics to begin supervised testing. Each HEW tested 10 different clients under the supervision of a certified rapid tester in the clinic setting; samples from these first 10 clients were sent to NIP for re-testing and confirmation. HEWs from three sites (Hamukoto

Wakapa Clinic, Odibo Health Center, and Ongha Health Center) were certified by NIP as rapid testers before the May training. They began testing in the field in July and constitute an initial cohort.

An additional cohort of HEWs at six clinics in the Engela district of northern Namibia (Endola Clinic, Omundudu Clinic, Omungelume Clinic, Onamukulo Clinic, Ondombe Clinic, and Ongenga Clinic) began offering CBHTC in September 2016 after meeting NIP certification requirements.

HEW Supervisor Training

Training HEW supervisors is essential to ensuring high-quality CBHTC through HEP. In most clinics, HEW supervisors are head RNs. At the end of HEW supervisor training, participants should be able to:

- Describe the challenges of CBHTC
- Understand the supportive supervision model for CBHTC
- Understand the role of cluster to facility visits
- Describe QA measures for CBHTC
- Understand the provisions for testing children in the community
- Describe index client HTC
- Use the intimate partner violence (IPV) screening tool (Appendix B)
- Understand the consent protocol for index client HTC
- Use the index listing form
- Describe personal infection-control measures
- Describe community-level infection-control measures
- Understand waste disposal procedures in the community
- Understand post-exposure prophylaxis (PEP) and its applicability

PITC Model and HIV Rapid Testing

HEWs work throughout their communities providing various health care services. The PITC model encourages HEWs to offer HIV testing as a standard of care to all clients they reach during their regular work day.

PITC does not apply to anyone who is known to be HIV positive, or to someone who was tested in the previous six months without recent risky behavior or possible exposure. The HEW should offer PITC to any client referred to the health care facility, as well as any client matching key characteristics on the HEP screening tool, including:

- All pregnant women who have not been tested during the current pregnancy
- Any malnourished patient
- Any client with a disability
- All children exhibiting poor growth and/or developmental delays
- All adults and children presenting with symptoms of ANY illness
- Any person with substance abuse problems
- All clients accessing condoms from HEWs[23]

In this pilot program, HEWs follow Namibia's HIV serial testing algorithm, using Determine, Unigold, and ClearView rapid test kits. Determine is used as an initial screening test, where any negative results are immediately reported. If HIV antibodies are detected with Determine, UniGold is used as a confirmatory test.

If UniGold also detects HIV antibodies, a positive diagnosis is given to the client. In the case of discordant results, ClearView is used as a tie-breaker.

Clients receive post-test counseling based on their results. For clients that test positive, a referral counter-referral form is given to link the client to the nearest care and treatment site. The HEW will then follow up with the client every seven days, on at least three occasions, to support a successful linkage to care. For clients that test negative, appropriate counseling is given on HIV prevention methods.

Index Client Tracing Model

To ensure the individuals at highest risk of HIV exposure are offered HTS, this pilot program employed index client tracing in conjunction with PITC. This approach to finding undiagnosed individuals makes for efficient use of time and resources and also may increase the yield of HIV-positive results, which is typically quite low in Namibian's CBHTC (4%).[7] The index client tracing approach involves HTS service providers from both clinics and the field to identify and test any partner or child of an infected person who may have been exposed to HIV.

With the consent of the index client, health care providers at clinics record any partners of newly diagnosed clients or children in the case of newly diagnoses HIV-positive mothers. The HEW then conducts outreach to find and test the exposed child or partner. Any partner or child who then tests positive for HIV is appropriately linked by the HEW to care and treatment services.

In line with an index partner tracing approach, the following steps outlined by MCSP and MoHSS should be assessed and followed by HEW for any newly diagnosed HIV-positive client tested in the community[23]:

1. Determine whether the index client has a partner or children
2. Discuss the index client approach and other options to enable HTC for the partner and children
3. Ask whether the client is prepared to facilitate this process
4. Explore and discuss the client's fears, screen for IPV (Appendix B)
5. Administer informed consent for the home-based HTC in the clients' choice of language and ensure that it is documented (Appendix A)
6. Complete index HTC listing form (Appendix H)
7. Ask client whether he or she wants to be identified as having been tested already or not
8. Role play possible scenarios with patient until the patient is comfortable
9. Agree on possible home-based HTC dates and time

Consent and privacy are central pillars to this model. HEWs provide a consent form for partner tracing to the client (Appendix A). Furthermore, HEWs assess for possible IPV using a screening tool (Appendix B) to rule out unsafe disclosure. The index client approach promotes targeted testing and addresses key populations. It also promotes testing among men.

HEWs also can play a key role in supporting index partner tracing at the facility level. Clinic staff list the names and contact details of newly diagnosed clients that have been tested at the site as part of facility-based HTS. HEWs review the list during their clinic visits and record index clients that fall within their catchment areas. HEWs then follow up with the index clients to initiate conversations around partner/child testing. The following steps should be followed for any newly diagnosed HIV-positive client tested at the facility[23]:

1. Determine whether the index client has a partner or children
2. Discuss the index client approach and other options to enable HTC for the partner and children
3. Ask whether the client is prepared to be linked to a HEW to facilitate this process

4. Enter the client's details onto the facility index listing form (Appendix H)
5. Hand over the client's details to the appropriate cluster representative at that cluster's next facility visit

Supportive Supervision and Mentorship

Overall HEP program support at the health facility level is provided by the facility nurse in charge. During the pilot, twice a month, a team from MCSP visited HEWs at their home clinics to assist with data collection, provide the HEWs with new materials, and address any issues that arose within the two-week window. HEWs are visited quarterly in the field by MCSP, MoHSS, and NIP staff to evaluate HEW rapid testing performance using a national tool (Appendix C).

HEW CBHTC activities are monitored every two weeks through a cluster to facility visit record (Appendix D), which ensures that each cluster is performing the following activities: 1) correctly carrying out negative and positive control tests using valid rapid test kits bimonthly, 2) correctly reading and recording the temperature chart for their assigned cooler box daily, 3) successfully replenishing the cooler box with ice packs bimonthly, 4) correctly disposing of biohazard waste and sharps after every HIV test, and 5) correctly carrying out index client tracing.

Supportive supervision visits (SSV) led by MCSP during the pilot was resource intensive and time consuming. The costs associated with SSV flights and time are reported in Appendix O. Appropriate supervision and mentorship, however, is central to successful program scale-up and implementation. The majority of SSV time was spent assisting with data quality and reporting, which was done manually by the HEWs. Implementing tablets to collect and report data may help alleviate this issue.

Data Management

Any PITC conducted by a HEW is recorded in an HTC rapid test logbook (national tool), HTC register (small version of the national tool), the client's health passport (when applicable, national tool), and the HEW integrated daily activity register (national tool). Patients who test positive are also recorded on a referral/counter-referral form (national tool), and index client HTC listing form (pilot tool).

Monitoring and evaluation (M&E) tools for CBHTC in HEP include:

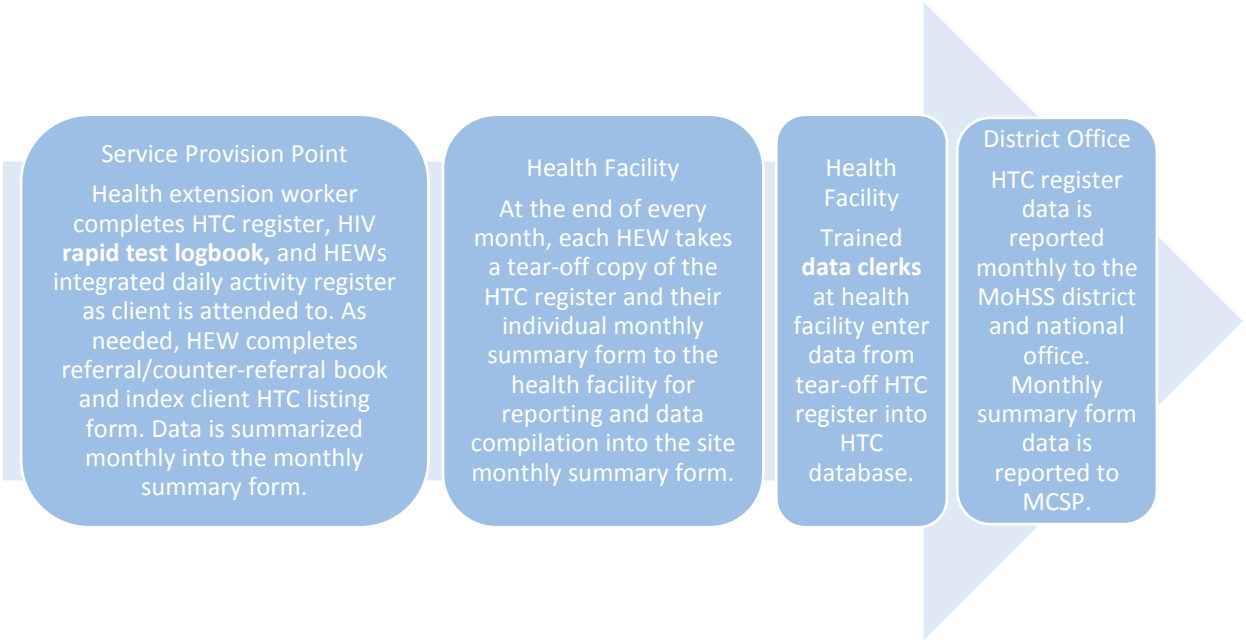
- HTC register (Appendix E)
- HIV rapid test logbook (Appendix F)
- Referral/counter-referral forms (Appendix G)
- Index client consent forms (Appendix A)
- Index client HTC listing form (Appendix H)
- Monthly summary form (Appendix I)
- Cluster to facility visit record (Appendix D)
- Temperature chart (Appendix J)
- HEW integrated daily activity register

These logbooks and registers are carried by the HEWs in the community during daily activities. When not in use, logbooks are stored at the residence of the cluster lead in a locked room, in a locked cabinet. Only HEWs and their supervisors have access to the data included inside the logbooks. All HEWs were trained in the importance of data security.

Figure 4 depicts the data flow from the HEW to the national office.[23] HEWs complete register forms and bring the tear-out copy pages with them to the facility. Data are extracted from these forms and entered into

the national HTC database. MCSP will pilot tablet data collection for HEWs in 2017, so this data flow is subject to change.

Figure 4. Data flow from individual HEWs to the national office.[23]



CBHTC data is compiled monthly by each HEW using the HTC monthly summary form (Appendix I) and is provided to the clinic for aggregation and drawing together of a site-level HEP CBHTC summary, using a standard compilation sheet. The monthly summary form provides a crude number of HIV tests performed, disaggregated by gender, age, and serostatus.

Quality Assurance

Adequate QA measures are essential to a successful CBHTC program. This pilot utilizes multiple QA mechanisms in line with national QA standards, both internal and external, implemented throughout the program to ensure the quality of rapid test services and their results.

Rapid Tests

The serial testing algorithm employed by Namibia's MoHSS includes three rapid test kits: Determine, Unigold, and ClearView Complete. Each test has a built-in QA measure, where the absence of the control line when running a rapid test indicates possible kit damage. HEW cluster representatives return to their home clinics twice monthly to run control tests on all three kits using known control samples from NIP. Expired or faulty kits are disposed of at the facility level.

Dry Blood Spot

To provide external QA, at least 5% of clients tested through CBHTC are re-tested by NIP through dry blood spot (DBS) samples. HEWs collect DBS samples from every 20th client tested and every client who tests positive for HIV antibodies. DBS filter paper is sent to the facility at their next visit. These DBS samples are run by NIP to confirm the accuracy of results given by HEWs at the community level.

Proficiency Testing

Every quarter, NIP distributes a selection of "unknown" samples to facilities for testing. HEWs test these samples in the field using their stock of test kits. CBHTC in this instance is supervised by an evaluator, and

rapid test results are reported to NIP. Any concerns with regard to testing procedures, test results, or test kit quality are evaluated at this time by MCSP, MoHSS, and NIP.

Logistics

HEWs are supervised at the facility level by nurses, and cluster representatives return to the facility every two weeks for data reporting, control tests on rapid test kits, and exchange of ice packs.
The facility-level HEP focal person is also the HEP referral contact person. This person is responsible for

- facilitating the functionality of the referral system by ensuring that clinic staff and HEWs follow set procedures,
- providing support to HEWs when facility-based documents are required to confirm referral completion, and
- monitoring referral completion rates.

HEWs are responsible for collecting and returning testing commodities from/to the residence of the cluster focal person who provided insulated backpacks. In accordance with CBHTC standard operating procedures, cluster leads must keep the following materials with them in their household (see Appendix K):

- HIV test kit temperature monitoring log, commodity log
- HIV test kits and related accessories
- insulated transport bags
- thermometers (max and min)
- cool packs
- alcohol swabs, cotton wool
- sharps disposal containers
- antibacterial hand rub
- male and female condoms
- job aids
- DBS kits (with filter paper, desiccant, and humidity indicator)
- testing board (plastic)
- cooler bags
- lockable cabinet
- clean exam gloves and aprons
- biohazard waste bags
- disinfectant
- countdown timers[23]

Timeline

Appendix L details the evaluation timeline for this pilot program. Although HEW training was conducted in March and May 2016, implementation commenced in July due to the changes to the rapid testing algorithm and the need to retrain HEWs in the new algorithm. Countrywide transfer pipette shortages also delayed HEW certification. Since July, qualitative and quantitative evaluation data has been collected throughout clinics in Engela district on a bimonthly basis. This evaluation focuses on the HEWs performing CBHTC and the HTC data collected between July and October 2016 from Hamukoto Wakapa, Odibo, and Ongha. These three sites started implementing CBHTC before the other six sites.

Evaluation Methods

Program M&E from Engela district is crucial to refine program implementation as the pilot program expands to other districts with hopes for national scale-up.

To evaluate this pilot program, the MoHSS and the MCSP team developed five objectives to measure program success. Appendix M outlines the M&E structure used to evaluate objectives 1–5.

Evaluation Objectives

1. Describe and assess the feasibility of a targeted community-based HIV testing and counseling program by trained HEWs to inform national scale-up of CBHTC
2. Ascertain the training and supportive supervision needs of HEWs to perform targeted CBHTC
3. Calculate the costs associated with integrating targeted CBHTC in the HEP
4. Describe the best approaches to integrate targeted CBHTC into the current HEW workload
5. Describe the feasibility of offering HTC for partners (partner tracing) and children of newly diagnosed HIV infected individuals identified in CBHTC

Methods and Tools

Quantitative Data

At bimonthly MCSP-led SSVs, various quantitative and qualitative data tools were used to capture different indicators. The **HTC register** and **HTC monthly summary** forms both detail the number of clients tested for HIV, and disaggregate data by serostatus, age, and gender. The **partner tracing log** details any clients who tested positive, and—with client permission—lists their children or sexual partners.

The **cluster to facility visit record** and **supportive supervision tools** help evaluators assess HEW performance in the field over the course of the prior two weeks. These tools also assess commodities necessary for rapid testing, where the **temperature chart** tracks cooler box temperature—and thus possibility of rapid test kit damage—and the **cluster to facility visit record** tracks test kit expiry dates and any stock outs.

The NIP also conducts independent assessment of HEW performance on a quarterly basis by evaluating HEW rapid HIV testing performance on samples of unknown serostatus. **NIP reports** serve as a guide to gauge HEW testing proficiency and program quality.

HEW knowledge of PITC was assessed both during training and in the field. At training, **baseline and endline training test results** indicate understanding of CBHTC practices. **Feedback forms** from trainers, as well as **training reports** and **training evaluation forms** indicate trainer feedback of HEW group performance. The **PITC skills checklist**, used at training and in the field, assesses an individual HEW's ability to practically perform rapid testing.

Qualitative Data

Key informant interviews were also used in the field to get feedback from HEWs and HEW supervisors about the CBHTC pilot program feasibility and effectiveness. Appendix N details the questions used in the interviews. Questions were written to give information on the key objectives of the evaluation. HEWs were informed that all conversations were confidential and voluntary, and that they could stop the interview at any time.

Three different interviewers visited eight sites during SSV from November 14–16, 2016, to interview a voluntary sample of at least 10% of HEWs. HEWs attending SSVs that week were cluster representatives, which notably limited the sample pool. HEW supervisors were unavailable for interviews in all but two clinics (Omundudu and Ongenga). Most HEW supervisors did not attend the SSV visit, and were presumably busy attending to other responsibilities. (Implications of the limited availability of HEW supervisors are discussed in the findings and recommendations section.) Instead of limiting data collection to the three sites of quantitative data collection, interviews were conducted at multiple sites throughout the district to better understand overall HEW program feedback. In total, 13 of 62 HEWs (21%) were interviewed, but no HEW supervisors were interviewed because of their unavailability.

Findings, Conclusions, and Recommendations

The following section presents findings from both quantitative and qualitative data. Quantitative data from the three focus facilities is also presented for comparison. Conclusions and recommendations follow for national program scale-up.

Findings

Objective 1: Describe and assess the feasibility of targeted community-based HIV testing and counseling program by trained HEWs to inform national scale-up of CBHTC

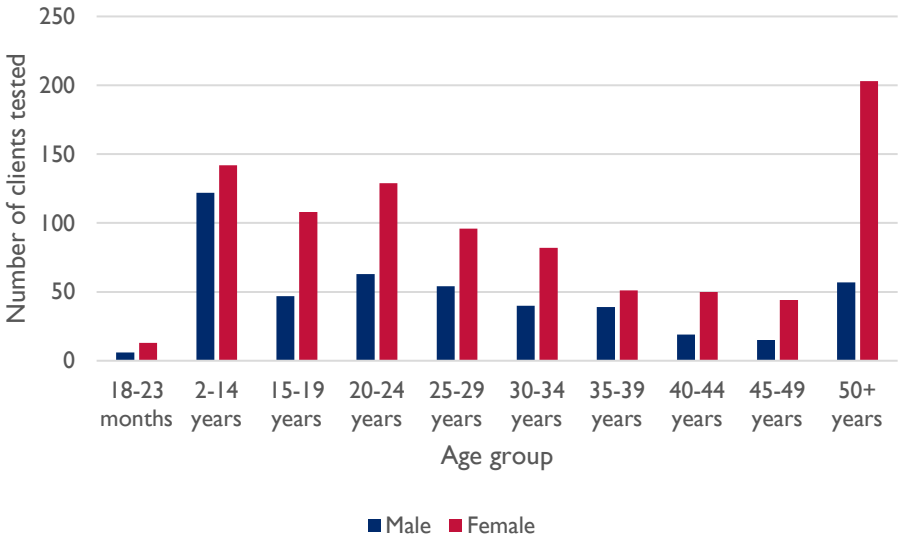
Demographics

From July 25 to October 31, 2016, 23 HEWs from Hamukoto Wakapa, Odibo, and Ongha health facilities tested a total of 1,380 clients for HIV in their communities. Table 1 lists the breakdown by age and HIV status, and Figure 5 shows the breakdown of clients tested by age group and gender.

Table 1. Clients testing positive for HIV through CBHTC rapid testing from July 25 to October 31, 2016, at Hamukoto Wakapa, Odibo, and Ongha by age and gender.

	Total HIV positive/tested (%)	Total HIV-positive males/tested (%)	Total HIV-positive females/tested (%)
Total positive	**31/1,380 (2.2%)**	**14/462 (3.0%)**	**17/918 (1.9%)**
18–23 months	0/19 (0%)	0/6 (0%)	0/13 (0%)
2–14 years	1/264 (0.4%)	0/122 (0%)	1/142 (0.7%)
15–19 years	1/155 (0.6%)	0/47 (0%)	1/108 (0.9%)
20–24 years	8/192 (4.2%)	1/63 (1.6%)	7/129 (5.4%)
25–29 years	5/150 (3.3%)	3/54 (5.6%)	2/96 (2.1%)
30–34 years	3/122 (2.5%)	3/40 (7.5%)	0/82 (0%)
35–39 years	5/90 (5.6%)	4/39 (10.3%)	1/51 (2.0%)
40–44 years	1/69 (1.4%)	1/19 (5.3%)	0/50 (0%)
45–49 years	2/59 (3.4%)	2/15 (13.3%)	0/44 (0%)
50+ years	5/260 (1.9%)	0/57 (0%)	5/203 (2.5%)

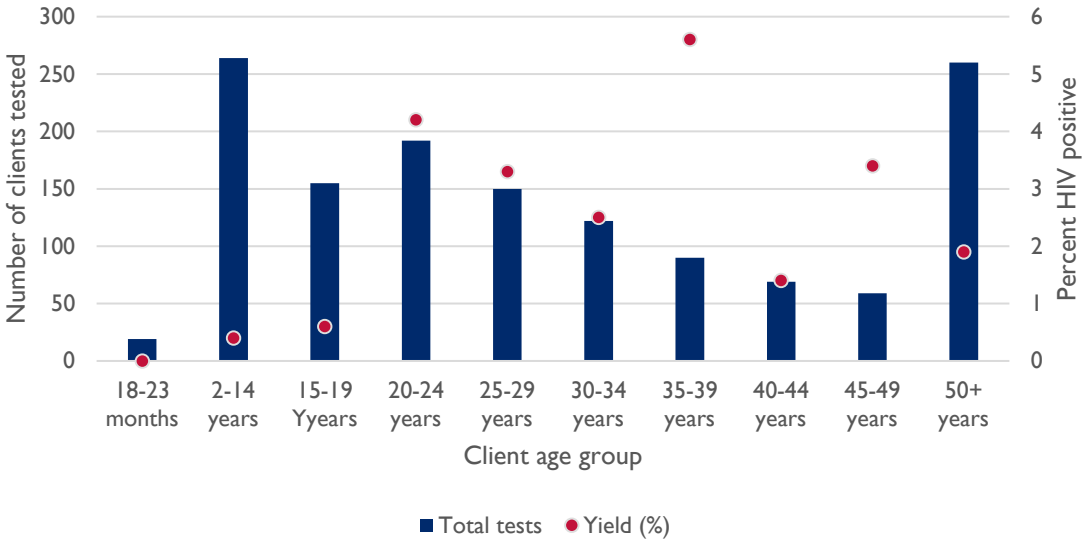
Figure 5. HTS volume by age and gender.



Of the 1,380 clients tested, 67% were female. Across all age groups, more females than males were tested, including among infants where gender-related health-seeking behavior differences are least expected. Gender disparities were most marked above the age of 15 years. More than a third of the tests (39%) were conducted on persons outside the 15–49 age group. One-quarter of the HIV tests were among youth, 15–24 years of age.

HIV yield by age and gender

Figure 6. HTS volume and yield by age group.

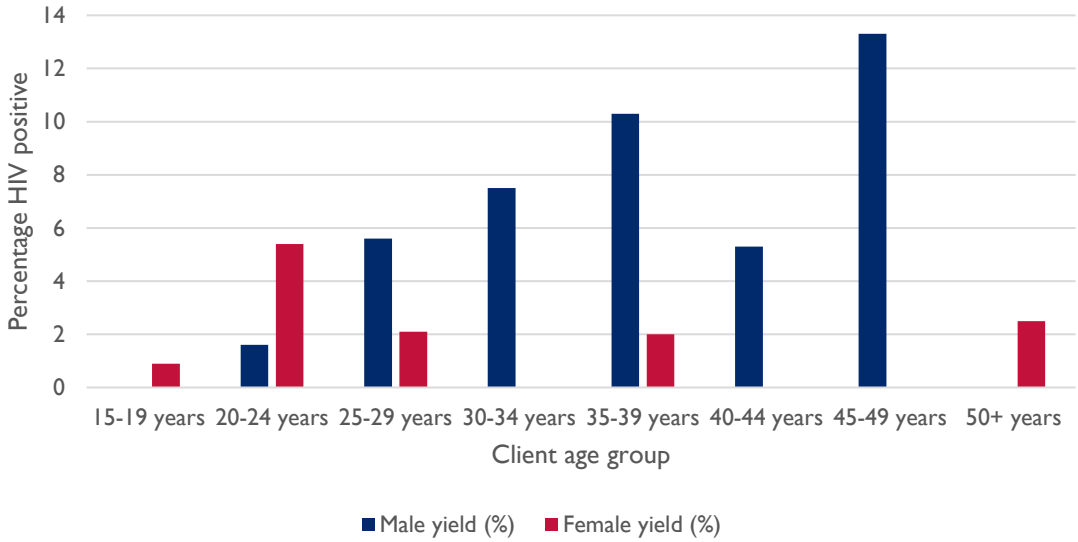


As Figure 6 shows, yield was greatest among 35–39 year olds, which is in line with national DHS data. This age group was among the least tested as only 90 tests were conducted. The lowest yields were observed below the age of 20 years.

The overall testing yield by gender was 3.0% and 1.9% for males and females, respectively. For the 15–49 age group, the difference was even more conspicuous as positivity rate in men was more than double that seen in women (5.1% vs. 2.0%). This finding is contrary to DHS data, in which the HIV prevalence in Ohangwena

region for men aged 15–49 (6.6 %) is 3 times lower than for their female counterparts (22.2%). Figure 7 provides further detail on positivity rate by age.

Figure 7. Positivity yield analysis by age and gender (15–49 years).



The higher HIV positivity rate in males over females is consistently reflected across all age groups from 25–49 years. However, yields for adolescent girls and young women aged 15–24 are more than 3 times greater than their male counterparts (3.4% vs. 0.9%). This is in keeping with national prevalence data.

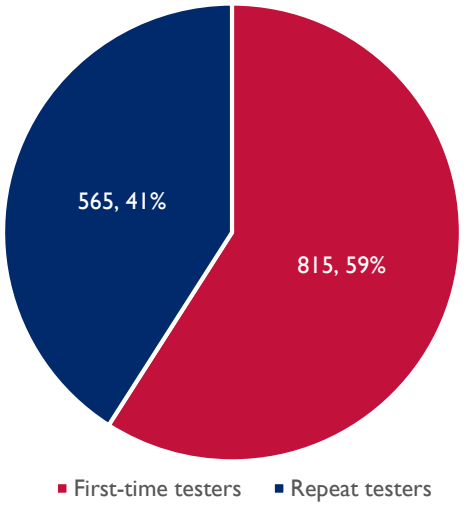
The most striking gender disparities were observed between the ages of 30–39 years. Among 30–34 year olds, 7.5% of males were positive compared to none of their female counterparts, whereas for 35–39 year olds, case finding rates were 5 times greater in men than in women (10.3% vs. 2%). DHS reports a 30.9% national prevalence for women and 22.6% for men in this age group. For the 40–44 and 45–49 years age bands, male vs. female yield was 5.3% vs. 0% and 13.3% vs. 0%, respectively.

Although the HEP pilot sample size is small, the reversed case finding rates across the 25–49 year olds may reflect a distortion of case finding rates by gender due to previous gender-biased HTS access. A larger proportion of HIV-positive women than HIV-positive men may be aware of their status due to HIV diagnostic services that have historically served them better. HTS may be nearer to saturation in female adults than in males. An alternative explanation is that the higher positivity rate among men (25–49 years) is a result of higher incidence among men than among their female counterparts. The same line of thinking applied to the 15–24 age group suggests that female incidence is much higher there than in adolescent boys and young men. Intergenerational sexual partnering between female youth and older men might be occurring. As reported by de Oliveira et al.[22] in a Kwazulu-Natal phylogenetic study in South Africa, older men might be transmitting HIV to their young partners after acquiring it from their female age mates. Viral genetic analysis is beyond the scope of this report and this theory cannot be qualified further.

First-time tester in 12 months

Over half (59%) of the 1,380 clients tested by HEWs at Hamukoto Wakapa, Odibo, and Ongha clinics were tested for the first time in the last 12 months (Figure 8). Any client with an HIV test result from within the past 12 months was defined as a repeat tester.

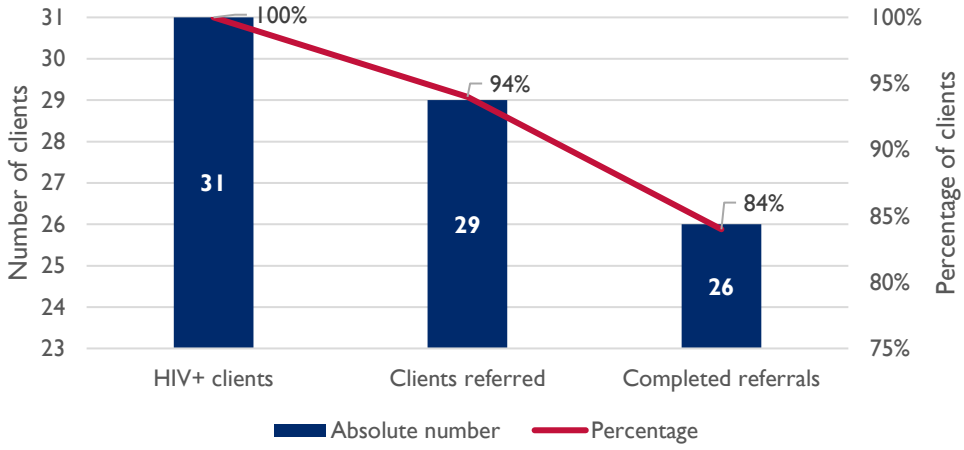
Figure 8. Percentage of first-time and repeat testers between July and October 2016 in Hamukoto Wakapa, Odibo, and Ongha clinics.



HIV-positive clients successfully linked to care

Clients testing positive for HIV in the community are referred to the health facility for enrollment into HIV treatment and care services. HEWs follow up with clients to provide support and record the number of clients who are successfully linked to care. Any client who visits the health facility within 30 days for enrollment in HIV care is counted as a successful referral, whereas those who fail to do so in the 30-day window are documented as lost to follow-up. Between July and October, 31 HIV-positive clients were identified. Of these, 29 were referred to a clinic and two refused referral (one refusal resides in Angola). Of the 29 referred clients, 26 were successfully linked to care (Figure 9). HEWs followed up with these clients at least three times before documenting them as lost to follow-up. Lost to follow-up was often attributed to client mobility across the border with Angola. Linkages to care in other districts might therefore be stronger where mobility across borders occurs less often.

Figure 9. Linkages to care for clients testing HIV positive between July and October 2016 in Hamukoto Wakapa, Odibo, and Ongha clinics. Crude number of clients within the cascade of care is depicted on the left axis, and percentage of clients within the cascade is depicted on the right. Percentage is calculated by making a proportion of one variable over the first variable in the cascade.



Facility HTS at Hamukoto Wakapa, Odibo, and Ongha clinics

Facility data from Ongha, Odibo, and Hamukoto Wakapa clinics from July 1 to September 30, 2016 was as shown in Table 2.

Table 2. HTS data for Odibo, Ongha, and Hamukoto Wakapa facilities.

	Total HIV positive/tested (%)	Total HIV-positive males/tested (%)	Total HIV-positive females/tested (%)
Total positive	**123/2,006 (6.1%)**	**44/504 (8.7%)**	**79/1,502 (5.2%)**
< 2 years	2/85 (2.4%)	0/38	2/47 (4.3%)
2–14 years	7/118 (5.9%)	4/52 (7.7%)	3/66 (4.5%)
15–19 years	5/200 (2.5%)	0/30	5/170 (2.9%)
20–24 years	19/376 (5.1%)	2/53 (3.8%)	17/323 (5.2%)
25–49 years	78/1,062 (7.3%)	34/261 (13%)	44/801 (5.5%)
50+ years	12/165 (7.3%)	4/70 (5.7%)	8/95 (8.4%)

Comparisons were made with HEP pilot findings. Selected data elements are displayed in Table 3.

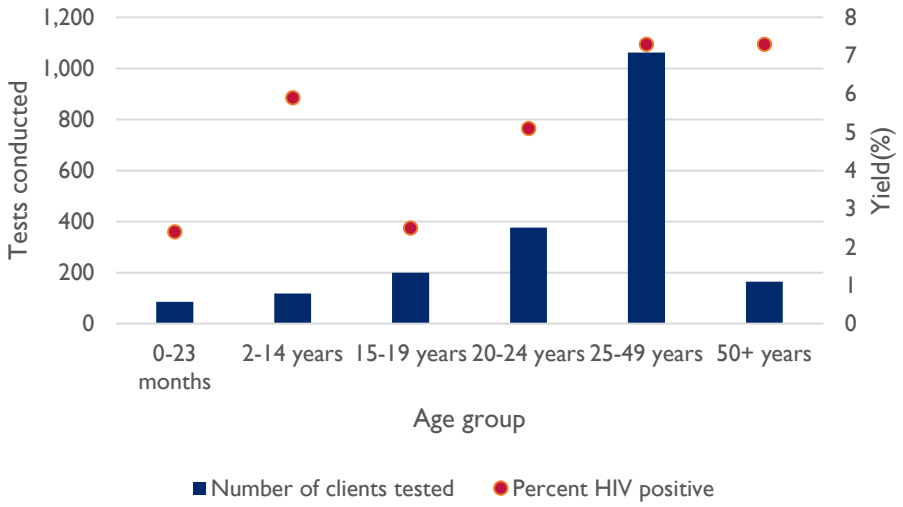
Table 3. Comparison of CBHTC to facility-level data.

	CBHTC (July 25–October 31, 2016)	Facility HTC (July 1–September 30, 2016)
Number of tests conducted	1,380	2,006
Average yield	2.2%	6.1%
First-time testers	59%	27%*
Male proportion (15 years +)	30%	23%
Proportion aged 15–45 years	61%	82%

*For this parameter, data from only one facility (Ongha) was available at the time this report was finalized.

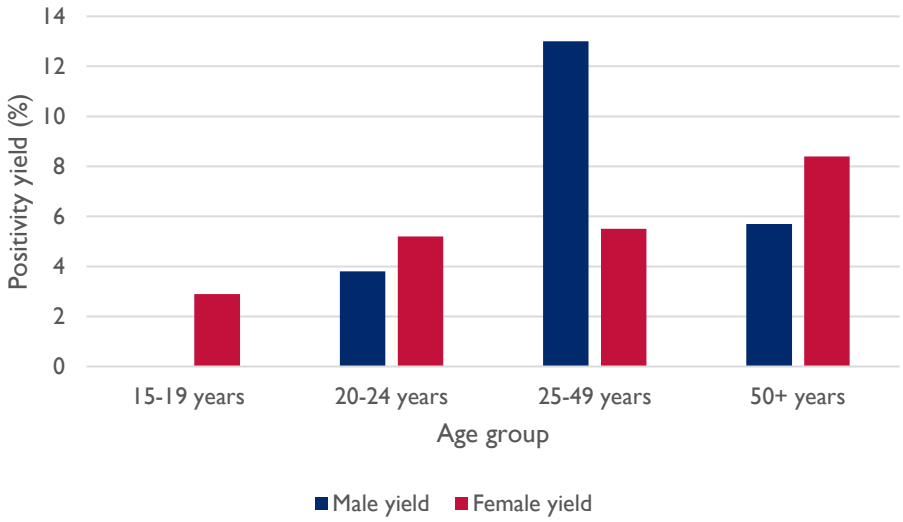
The positivity yield from facility-based testing was much higher (triple) than the rate observed through the HEP. This was expected since clients presenting to health facilities with clinical conditions are more likely to be found positive than those found in their homes. Remarkably, HEP HIV testing had more than double the proportion of first-time testers than facility-based testing. Unfortunately, for this parameter, data from only one facility (Ongha) was available at the time this report was finalized. This number is assumed to be representative. For clients over age 15, HEWs also managed to test a larger proportion (by 7 percentage points) of males than their clinic-based counterparts. However, facility-based services appeared better placed to serve clients aged 15–45 years. This vital age group contributed 82% of the total testing volume in comparison to 61% in the HEP pilot.

Figure 10. Facility HTS volume and yield by age group.



Facility-based data was aggregated differently from HEP data and fine comparisons using smaller age bands were not possible between the ages of 25–49 years. It is worth noting, however, that much higher yields were recorded for clients under age 14 through facility-based HIV testing than seen in the HEP (Figure 10).

Figure 11. Facility HTS yield by age and gender.



In line with HEP findings, Figure 11 shows that facility HTS had much higher yields among men aged 25–49 years than their female counterparts (more than double). However, the disparity was not as large as observed in the HEP, where male yield was 8 times greater than in females. Also in line with HEP data (and national prevalence statistics), female yield was more than male yield for the 15–24 age group. Above the age of 50 years, female yield was also greater than for males; again, this was consistent with the HEP pilot.

Program feasibility

Based on the quarterly cluster evaluations conducted by NIP in October 2016, all but one HEW passed the evaluation.[24] The NIP report suggests a refresher training for the one HEW who could not conduct the rapid test without verbal assistance. The other 19 HEWs were all either partially or fully eligible for accreditation/certification based on their assessment scores (two HEWs were unavailable at the time of SSV).

The report states: "The Health Extension Program is well implemented and comprehended by the health extension workers (HEWs) in Ohangwena region on the selected clusters."[24]

Similarly, overall feedback from key informant interviews with 13 HEWs was very positive. Unprompted, nine of the interviewed HEWs mentioned that they love their jobs because they can help people in their communities. The average HEW had one to two years of experience working in the HEP, but had no prior experience with HIV rapid testing. Many of the HEWs spoke to their role as health promoters in the community as previously limited to discussing the benefits of HIV testing with their clients. The new responsibility of HIV rapid testing was seen as a gift, rather than an additional burden. About the addition of rapid testing, one HEW stated: "Now I can be more helpful, help the people in my community more."

All but one HEW described the HEP CBHTC program as well received by the community. HEWs highlighted different existing barriers to facility-based testing—including fear of the health facility environment and travelling distances—as reasons why they expected the HEP program to be a successful alternative. Three HEWs also mentioned that their clients had requested home-based HIV testing in the past. After program implementation, all but one HEW stated that community members were happy with the CBHTC program. The one HEW who felt that the program was not as well received as she had expected stated that community members, "reacted differently because some didn't want to be tested." Although other HEWs also support this notion that not all clients want CBHTC, 10 of the 13 HEWs interviewed stressed the overwhelming community acceptance of the program. One such HEW explained, "I expected them to welcome the initiative. It turned out that people welcomed it more than I had anticipated." Another HEW said she expected to meet resistance from some clients, but that they are "good and comfortable" with testing.

When asked about how to improve the CBHTC program overall, HEWs suggested introducing a community HIV testing client card, expanding community health promotion to highlight the benefits of HIV testing, and training more HEWs to increase coverage of index client tracing and to decrease catchment area size in some large villages. All HEWs felt very strongly that the CBHTC program should be scaled up throughout Namibia. In one HEW's words, "It is a very good program. It is going well and needs to be continued."

CBHTC supplies and stock outs

MCSP supported the supply of HIV rapid testing kits and related consumables to HEWs at pilot inception. These commodities were sourced from an Engela district pharmacy after the sites indicated that they did not keep enough stocks to satisfy the new HEP demands. Feedback from SSV and data from key informant interviews showed issues with maintaining stock for rapid testing at site level. Stock outs of gloves, pipettes, lancets, aprons, and chase buffer were experienced. The supply of these commodities to HEWs by their affiliated sites was inconsistent during the pilot and at times led to a disruption of services. At times the district pharmacy was adequately stocked with a particular commodity yet the site(s) did not have enough to supply HEWs.

DBS antibody testing is a cornerstone of the QA mechanisms built into this program. DBS samples were collected from every 20th client and every client who tested positive for HIV antibodies. Samples were sent to NIP for confirmatory testing but were yet to be processed at the time of report compilation. NIP does not currently have the capacity to process DBS antibody samples.

Objective 2: Ascertain the training and supportive supervision needs of HEWs to perform targeted CBHTC

Quality of PITC services

A total of 62 HEWs from Engela district in Ohangwena region were trained in two groups from March 7–10 and 14–17, 2016. Training materials included participant manuals and counseling cue cards, and the main mode of instruction included PowerPoint presentations. The training was conducted in English, but Oshiwambo was used intermittently to clarify key points.

Pre- and post-tests were used to evaluate HEW understanding of CBHTC. The pre-test was administered on the first day of the workshop, and a post-test on the third day. Tests included multiple choice, true/false, and short answer questions to assess participant knowledge before and after the rapid test components of the training. Participants were allowed 45 minutes to complete the test in both instances. The standard pass mark for PITC precertification is 80%. Participants who did not achieve this score were allowed a second attempt, in which one of the facilitators translated and read out each question in Oshiwambo.

Of the 62 HEWs, 30 passed the written post-test on their first attempt (Table 4). The average post-test score (first try) was 84%, which was on average an improvement of about 48% from the pre-test (Table 4). With a second attempt on the post-test, 30 of the 32 HEWs passed the oral exam. Thus, only two of the original 62 HEWs failed the testing and were recommended for retraining.[25]

Table 4. Pre- and post-test data from HEW training.[24]

	Pre-test	Post-test	Oral post-test
Total tests	62	62	18
Passed (>80%)	0	44	16
Failed (<80%)	62	18	2
Highest	74%	96%	91%
Lowest	11%	67%	67%
Average	35%	84%	85%

Participants also sat for a practical examination at the end of the third day. The practical test was administered in two parts. Part 1 examined participants' finger prick skills, and part II assessed appropriate use of the national HTC algorithms. All 62 participants passed the practical. There was no practical pre-test.

Training appropriateness

The training report indicates that all but two HEWs felt "well prepared" to provide CBHTC services after the training.[24] In the overall course evaluation, all HEWs rated the training materials and methodology as either "good" or "very good." Generally, HEWs felt that the course content and participant handbook could be improved.[24]

Facilitator feedback from the training suggested increasing the time allotted to practical sessions, giving the HEWs practice in using cue cards and filling out M&E forms. Facilitators also suggested including examples specific to CBHTC throughout the curriculum and employing simplified language to explain difficult topics.[24]

When asked about the CBHTC training in key informant interviews, all HEWs said they enjoyed the training. All 13 of the HEWs interviewed stated that they felt prepared to practice rapid testing in the community after the week of training. Favorite sessions from the training included practical scenarios finger pricking, and HIV and counseling theory. Only two HEWs mentioned training areas needing improvement: the counseling session, and pipette and finger pricking skills.

Training of supervisors

Through HEP, HEWs are supervised at the facility level by the registered nurse in charge. Training was rolled out in March and June 2016 to orient head nurses at pilot facilities on the duties of supervising HEWs during CBHTC.

On March 4, 2016, four supervisors were trained from Endola, Ongenga, Odibo, and Hamukoto Wakapa clinics. On June 21, six different supervisors were trained from Endola, Ongenga, Ondobe, Onamukulo, Omungwelume, and Ongha clinics. In July, additional supplemental training was provided by MCSP onsite for any clinic that did not have a trained representative present at the March or June trainings; seven

additional providers were trained through this method. The 17 trained supervisors ranged in title, and included health assistants, enrolled nurses, registered nurses, and senior registered nurses.

Overall training feedback from supervisors was positive, with 90% of supervisors reporting they felt well prepared to supervise HEWs at the facility level. Supervisors reported in feedback forms that they enjoyed learning about index client tracing, although many expressed that one day of training was not enough time to cover the materials.

Objective 3: Calculate the costs associated with integrating targeted CBHTC in the HEP

Procurement needs

Appendix K details the cost breakdown of commodities necessary to sustain CBHTC. Commodities are generally procured at the district level, and cost quotations were taken from district pharmacies and other local vendors. The procurement needs of HEWs evolved over the course of the pilot. For example, SSV data indicated that the cooler boxes were not keeping ice packs within the necessary temperature range to sustain rapid test kits over the course of two weeks. Procuring blankets alleviated this issue; wet blankets are wrapped around cooler boxes to slow the melting process through evaporative cooling. Additionally, data indicated that initial backpacks ordered for HEWs were too small to hold the HTC register book. Appendix K details the final list of commodities, which includes a larger backpack and a blanket for the cooler.

Implementation costs

The Engela district pilot provided an opportunity to conduct some crude cost analysis of the integration of CBHTC services into the HEP program (see Appendix O for detailed costing breakdown). We gathered the following cost-related information related to training and successfully deploying HEWs to provide community-based HTS:

- **Startup supplies.** We included items that are needed to initiate CBHTC services in the HEP but do not need to be replenished frequently. This includes supplies needed to set up the clusters (and not currently stocked by MoHSS) including ice packs, coolers, backpacks with relevant supplies, etc. We costed these as initial startup costs and anticipate most items will need replacement approximately every two years.
- **Training.** We included the cost of training the HEWs and HEW supervisors in CBHTC.
- **Supportive supervision.** As noted earlier in the report, we included the intensive supportive supervision that was conducted for the first three months of the pilot since these SSVs are essential to the success of launching CBHTC services within the HEP. For long-term sustainability, SSVs should and will be conducted by the health facilities so this SSV is primarily related to startup costs.
- **Monitoring and evaluation.** We included the cost of printing national tools as well as HEP-specific CBHTC tools in this analysis. We anticipate the M&E tools will last for approximately one year. Also included are the initial intensive M&E-related SSV support costs.

The following assumptions were used to calculate the costing:

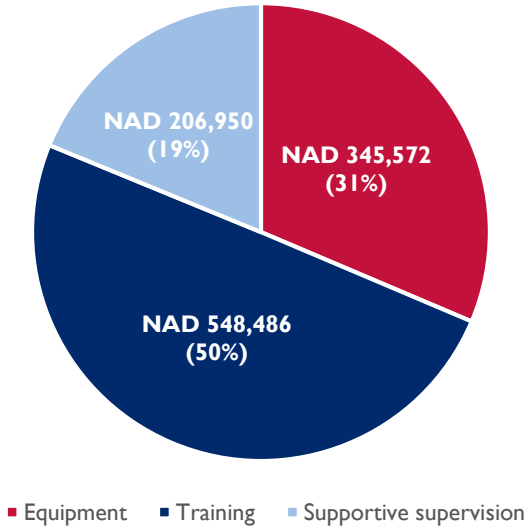
- an exchange rate of NAD 1: USD 14
- an average of two HEWs per cluster
- an average of four clusters per health facility, 30 clusters for the district

The following are some limitations to the costing analysis (Figure 12):

- This costing is for Engela district, where we used the average number of HEWs per cluster and the number of tests per HEW per month. There may be variance on both of these assumptions in other districts.

- We did not include costs of NIP QA activities.
- Costs for regular HTS consumables, currently used and stocked by MoHSS, were not included.
- This analysis does not include human resource costs on the part of the HEWs, HEP supervisors, and MCSP staff.

Figure 12. Cost analysis.



Startup supplies:

- The cost for startup supplies needed for each cluster to begin CBHTC services was NAD11,519.05 (USD 822.79). This equates to NAD 46,076.20 (USD 3,291.16) for each health facility.
- The cost for startup supplies needed for the Engela district pilot (30 clusters) was NAD 345,571.50 (USD 24,683.69).

Training:

- The cost for training each HEW on PITC was NAD 7,173.00 (USD 512.38).
- The cost for training each supervisor on supervision of CBHTC was NAD 5,188 (USD 370.57).
- Total startup training costs (62 participants for HEW PITC training and 20 participants for supervisor training) for the Engela district CBHTC pilot was NAD 548,486 (USD 39,177).

Supportive supervision:

- Supportive supervision for the implementation of the CBHTC pilot cost NAD 206,950 for the district startup activities (three months of intensive SSV). This mostly covered travel and accommodation for Windhoek-based MCSP support staff.

Total costs:

- Total startup costs for CBHTC implementation by 60 HEWs in 30 clusters (using all costs listed above) for integrating CBHTC in Engela district were NAD 1,101,008 (USD 78,643).
- The cost for every new HEW trained, certified, and equipped to implement in Engela was NAD 17,758.

- Total cost of ongoing implementation (includes biannual refresher training, consumables, and replacement of supplies every two years, and omits all other startup costs) is estimated at NAD 322,981 (USD 23,070) every two years.

Objective 4: Describe the best approaches to integrate targeted CBHTC into the current HEW workload

Program integration

During key informant interviews, all HEWs agreed that adding PITC duties to their established responsibilities as a HEW was feasible. HEWs explained that they test on specific days of the week, which helps with feasibility. Of the 13 HEWs interviewed, five tested between one and two days a week, and six tested three or more days a week. HEWs explained that because they are already in people's homes, adding one more service does not cause a burden. Most HEWs test around 20 people in a month. Three HEWs felt that the HIV testing volumes they were providing were not enough to meet community demand. One HEW stressed that since testing was only conducted in people's homes, most beneficiaries tended to be women, the elderly, and young children. Men are not usually available at home during typical HEW working hours.

Objective 5: Describe the feasibility of tracing and offering HTC for partners and children of newly diagnosed HIV infected individuals identified in CBHTC

Index client tracing

During key informant interviews, six HEWs reported a lack of index client tracing, while seven reported conducting partner tracing. Four of the HEWs stressed the difficulty of tracing clients who reside outside of their assigned catchment area. Other HEWs mentioned that some of their HIV-positive clients were children of HIV-positive mothers, or were elderly community members who did not have any sexual contacts to trace.

Twenty-nine of the 31 positive clients were above the age of 18 years and eligible for contact tracing. By the time of report compilation, 18 (62%) had consented to participate as index clients. Twenty-four partners were listed for follow-up but only four had been tested. Twenty-eight child contacts were recorded, of which seven were tested. All 11 contacts tested were HIV negative.

Couples testing

Of the 1,380 clients tested by HEWs from Hamukoto Wakapa, Odibo, and Ongha, 76 were tested with their partner. Of these 38 couples tested, one couple was concordant positive and the rest were concordant negative. There were no discordant couples.

Conclusions

The HEP CBHTC pilot satisfied most of its set objectives. CBHTC in rural settings by HEWs is feasible and HIV testing may be practically integrated into the current HEP service package. Training for the CBHTC pilot was adequate and HEWs were eager and able to provide accurate HIV rapid testing and counseling services. Findings from this pilot highlight some opportunities for improvement during national program scale-up.

Training

Overall, HEWs reported feeling prepared for testing in their communities after a week of training. Assessments used to evaluate readiness also indicated that HEWs had a sound theoretical understanding, as well as a good grasp of the practical aspects of how to conduct rapid testing at the community level. NIP feedback from quarterly assessments suggested that HEWs had a sustained retention of skills acquired during training. The training conducted in Engela adequately prepared participants for their new roles as rapid testers; the curriculum used for training, however, should be tailored to the needs of community-based

workers. Pre- and post-tests should perhaps be translated. Translating job aids into Oshiwambo could also help HEWs better serve their clients. Furthermore, updating materials used for training to reflect the current serial testing guidelines would reduce confusion (e.g., the video used to visually demonstrate the testing process depicts a parallel testing algorithm in English).

Integration

Adding rapid testing to the already established duties of HEWs within the HEP did not cause difficulties for HEWs. Given that many HEWs were already counseling patients and recommending facility-based testing to their clients, the addition of rapid testing was welcome. In SSVs and key informant interviews, HEWs reported feeling proud of their new responsibilities as HIV rapid testers. Qualitative data through key informant interviews showed that HEWs would like to document HIV tests in either the client's health passport (with a stamp) or in a client testing card. HEWs also felt that the HEP health promotion package could be strengthened with regard to HTC so as to increase uptake and acceptance of testing, especially among men.

At the facility level, the lack of supervision of HEWs by site supervisors is a major weakness. Without supervision, the link between the CBHTC program and the facility presents issues with procurement of supplies, index client tracing, and data quality. MCSP staff provided intensive support throughout the pilot. To be sustainable, HEW CBHTC supervision should be shifted from the head nurse to the facility-based health assistants. Overall programmatic support can still be overseen by the facility nurse in charge, but health assistants based at the facility can provide HEWs with mentorship and rapid testing support both at the facility and in the field, as well as provide supportive supervision at the facility using structured tools. Thus, both health assistants and head nurses should be trained in the HEW CBHTC program, as well as in supervision responsibilities. Building staff capacity to lead supervision activities will be an important step for program scale-up. Supporting collaboration between clinic and community staff through shared goal-setting or team meetings could also help strengthen ties between staff based at the facility and staff working in the field.

Testing

Overall, the majority of clients tested in CBHTC were women. More than a third of the clients tested were below the age of 15 or older than 49 years of age. HEWs reported in qualitative interviews that the populations found in homes during field visits were usually young children and older women, which explains the lower rates of testing among men and clients between the ages of 30 and 45 years of age in general.

Although younger adolescent testing rates are hard to determine due to a lack of disaggregation in age among clients tested between 2 and 14 years, overall detected yield in the pilot was low among this population. Disaggregating data to better analyze younger adolescent HIV positivity yield would strengthen programming. Furthermore, testing children who are not at risk for HIV dilutes program resources; increasing targeted testing among clients aged 2 to 14 years would conserve resources and reduce unnecessary testing of children.

Likewise, although the pilot was relatively successful in reaching older adolescents, testing outside of normal hours would help target school-age adolescents and out-of-school youth who are working, but may be at risk for new HIV infection. Training HEWs in adolescent-friendly service delivery would help with targeted testing. Additionally, the data indicate that HIV yield was highest among clients aged 15–49 years, but a significant volume of testing occurred outside this age band, resulting in low yield. Testing should be refocused to target more people between the ages of 15 and 49 years. Testing during weekends could provide an opportunity for HEWs to test more people from high-yield age groups, particularly men. Alternatively, complimentary mobile services (non-HEP) can be provided to target workplaces and other places frequented by men.

Targeted testing using the index client approach was documented with high positivity yield among identified contacts, but this was not the case in Engela. No new diagnoses were made through contact tracing and the project appreciates the need to review current procedures. Qualitative data suggested that many HEWs failed to complete contact tracing because the contacts of index clients lived outside of HEW catchment areas. Improving the link between index clients identified in the field, as well as clients identified at the facility level,

would strengthen contact tracing to better track and follow up with any person potentially exposed to HIV. Because contact tracing is time-sensitive, communication between the HEWs and their home facility is vital to finding and testing patients potentially at risk for infection. Increased training on index client contact tracing for HEWs and health assistants at the facility level could help with this problem. Additionally, the expansion of the CBHTC program to cover the whole of Engela district, Ohangwena region, and beyond will provide an opportunity for tracing contacts that reside in communities other than that of the index client. With an increased network of HEWs across Namibia, contact tracing may be possible using telephone communication between facilities.

Another possible intervention to increase targeted testing is to implement a risk assessment tool to determine HIV risk among populations with low prevalence. For example, among clients over the age of 50 and under the age of 12, key parameters (including sexual activity, HIV-positive parent, history of drug use, blood transfusion, etc.) could help HEWs determine if an HIV test is necessary.

The majority of clients tested through this CBHTC pilot were tested for the first time in 12 months. Failure to link HIV-positive clients to care was reported at 16% of facilities. Mobility across the border with Angola was a recurring theme, pointing to a potentially vulnerable group requiring targeted interventions.

Commodities

Community commodity storage met quality requirements and cooler box temperatures were successfully maintained at 2–27 degrees Celsius. Sharps and other biohazard waste were also stored temporarily and safely at the community level while awaiting disposal at the facility level.

Stock issues with gloves, pipettes, lancets, and chase buffer for Determine rapid tests were common due to a lack of appropriate forecasting by the clinics on the needed supplies for CBHTC. The CBHTC program relies on the availability of these materials from the pharmacy at the local clinic for HEW use. However, HEWs had difficulty procuring stock bimonthly. Increasing communication between the Engela district pharmacy and local clinics could help HEWs with continuous resource supply.

Tie-breaker tests are rarely used in the field, but control tests are conducted on ClearView kits twice a month as per pilot standard operating procedures (SOP). This use of resources is not cost-effective. A cost-effective alternative is to refer any client needing a tie-breaker test to the facility.

Limitations

Key informant interviews were meant to provide an opportunity for HEWs to highlight any other issues relevant to program evaluation. There was a potential bias based on the use of a voluntary sampling method. HEW supervisors were not interviewed, which limits the utility of the qualitative analysis with regard to planning and supervision perspectives.

HIV testing data only covers three districts in one district and therefore may not be generalizable to the rest of the district or other districts. Although the evaluators are confident that many of the key findings will be applicable to Namibia in general, some findings may be specific to Engela district only.

Recommendations

1. Increase prominence of integration of CBHTC services in the HEP health promotion package to routinely generate demand for HTS by the community within the HEP package of services. The current health promotion package was developed for HEP services without community-based HTS provision.
2. Develop and implement a risk assessment tool to improve targeted HIV testing among children younger than 15 and adults older than 50 years of age to improve testing approaches with these populations.
3. Strengthen the index client tracing approach by reviewing HEW implementation strategies and increasing facility staff awareness and involvement in the approach.

4. Train HEWs in youth- and adolescent-friendly service provision. A significant proportion of HTS was provided to this young group and the current training package can be improved for adolescent-specific approaches.
5. Adopt and display data dashboards at CBHTC implementing clinics to facilitate data-driven discussions and decision-making. To achieve the same effect, dashboards should also be used for other functions, including other HEP priority activities and facility-based HTS.
6. Formulate and adopt a method for HEWs to document results on a client-kept record. This is particularly important for clients who test negative and do not have an outpatient health passport.

Case Study

Starting in July 2016, the HEP pilot program rolled out HIV rapid test training to 60 HEWs at three clinics in the Engela district of northern Namibia. Since training, Bernadine (pictured on the cover)—a HEW stationed in Engela district—has tested 209 clients in her community for HIV. Of those tested, 11 tested positive for HIV antibodies. Of those who tested positive, nine were successfully linked to care and initiated on ART. Bernadine has tested more individuals and identified more PLHIV than other trained HEWs conducting CBHTC.

The case study presented here was conducted to better understand how Bernadine's successes in the field might be applied to other field sites and adopted by other HEWs.

Background

At the time of the interview in October 2016, Bernadine was 38 years old and lived in Oshikango village. She covered three locations and was responsible for the health of people in 93 households. Her passion for helping others began long before her career as a HEW. As a young girl in school, Berna dreamed of becoming a nurse. At home, she was always the caretaker. From 2009 to 2013, she volunteered with the elderly and with PLHIV to help them with personal projects. After studying health at the Good Samaritan College, she began her work as a HEW in December 2014.

"When I saw the advert [to become a HEW], I knew this was my job because I had the heart to do it."

On Integrating HTC into Her Daily Work

Bernadine had never conducted HIV rapid testing prior to the HTC training. She explained that integrating HTC into her established role as a HEW made her job "easier." For example, before the training, she was already screening her clients for TB and referring to the clinic. Patients, however, would return from the clinic with a negative TB result but a persistent cough. Now that Berna can test her clients for HIV, she said she can now also rule out HIV, which puts her in a better position to serve her clients' needs.

"Now I can be more helpful, [I can] help the people in my community more."

On Community Acceptance of HTC

Bernadine found that community members were very accepting of HTC. By listening to community members and providing them with information about HIV testing, counseling, and treatment, she reported that the initial fear of testing dissipated among her clients. Berna said that many people were scared of testing because they did not know their status, and had never been tested before. Misconceptions and stigma—especially surrounding taking medication—were pervasive. Berna worked hard to counsel clients about these fears before testing. Bernadine reported that after testing, all of her clients felt "free." She gave them information with a smile because she respected herself and respected her clients immensely. Even after giving a positive result, she did not feel discouraged, because she knew she was helping others.

On Challenges in the Field

Bernadine only encountered one refusal in the field. The man who did not want to get tested was a part of a couple, where the woman wanted to be tested. The husband, who is a police officer, was never home when Berna visited the household. When the husband returned from work, the wife would call Bernadine to request testing, but as soon as Berna arrived at the home, the husband would be gone. Bernadine suspected the man did not want to be tested. In this family, all of the children were tested for HIV, but the wife did not want to get tested without her husband.

Index client testing also posed a challenge in the field. Testing the children and partners of clients who tested positive was difficult because many contacts lived far away. Tracing these contacts was difficult, as many clients regularly crossed the border into Angola.

Bernadine also encountered one serodiscrodant couple. The two clients decided to test individually, and only told Berna of their relationship after they had both been tested for HIV. She counseled the two clients individually, and referred the HIV-positive client for ART.

On Care Post-HIV Diagnosis

The majority of clients tested by Bernadine were in their 20s and 30s, most of whom she met in homes while conducting home visits. Bernadine believed these were the people most at risk for HIV, while these same clients did not have a high perceived personal risk for HIV. After counseling, many clients changed their minds and wanted to get tested.

Bernadine stated that providing accurate information was very important to proper HTC. Counseling men was also very important; although Bernadine felt women were "free to accept the information," she found that men needed more time to decide about HIV testing. In the pre-testing counseling, she always explained the implications of a positive test, so that the client was ready for either result.

"Positive or negative, they feel free. They accept their results."

None of the clients who tested positive were visibly sad or depressed by their results. Bernadine counseled them and supported them with important information about how and where to access ART services, how to visit the hospital, and the importance of safer sex.

Conclusions

Bernadine is a highly motivated HEW. She is trusted and well-known throughout the communities she serves. Although her understanding of her communities could contribute to her success in identifying clients with HIV, the overall prevalence of HIV is also higher closer to the border with Angola. Her successes in the field could thus be attributed both to her work ethic and to the higher prevalence of HIV in her coverage area.

Other HEWs and community health workers in general conducting CBHTC could learn from Bernadine's patience with her clients. Her stress on pre-test counseling ensures that clients are prepared for their results, and therefore successfully linked to care. Bernadine also mentioned that if she does not have adequate supplies for rapid testing, she still counsels her clients on HIV testing. That way, the next time Bernadine enters a client's home, the client has had time to consider HIV testing. She then provides additional counseling if the client chooses to test.

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Appendix A: Index Client Consent Form

Introduction

Given your HIV-positive status, it is important to identify partners and/or children that may have been exposed to HIV infection. It is beneficial for anyone who is infected with HIV to access early treatment and the first step is to ensure that anyone exposed to the virus is given an opportunity to know their status. I would like to work with you to ensure that your partner(s) and children get to know their HIV status and if necessary, connect with care and treatment services.

Since a person can transmit the infection to others before they are aware of their own infection it is important to identify both past and current sexual partners so they can be aware of their potential exposure to HIV. I would like you to work with us in getting your past and current sexual partners tested for HIV, so that they can know their status as well as benefit from care and treatment if found to be HIV positive. In addition, if you were pregnant with a child and did not receive HIV testing during pregnancy it is important that we test your child for HIV. If you agree to participate in this exercise, we will request you to list all your past and current sexual partners with their contact information so that they can be contacted and offered an HIV test. We can also facilitate testing for your children.

There are two options for contacting and inviting any of your listed sexual partners for HIV testing. You may either contact or invite your partner yourself or myself or my colleague may do it for you. If you are comfortable contacting and inviting your partner by yourself, our team will give you a referral/invitation card to give to your partner(s) for them to get tested. In this case, since it is you giving your partner the card, the partner will know that it's you who recommended him/her to get tested for HIV. If you are not comfortable tracing any of your listed sexual partners, with your permission, myself or a colleague will contact the person and advise them that they might be at risk of exposure to HIV and offer them HIV testing. In this case, we will not identify you.

If you decide to contact and invite your partner yourself, we can schedule an appointment for them to be tested. If after two weeks we do not hear from you or your partner, we will assume that you were not able to successfully refer them and myself of a colleague will try to contact them. In that case, the person traced will NOT be told your name or that you recommended that they be tested. The person WILL be told that someone who has a confirmed HIV infection recommended that they be tested. However, we will not initiate tracing of any of your partners without your permission.

Participant rights

Your participation in this process is completely voluntary and you may decide not to mention any partner if you feel uncomfortable doing so. You will also be asked if any of your partner(s) is likely to or may possibly hurt you physically or emotionally or put you in danger, and if so, we will not ask you to trace them. The names of your partners and children will be kept confidential.

Verbal consent and agreement

Do you understand everything about this process? Do you have any questions? (Let the participant ask any questions they have.)

Do you agree to participate in this activity?

☐ Agrees to participate
☐ Does NOT agree to participate

Name of client				
Name of service provider				
Provider signature:		Day	Month	Year

Appendix B: IPV Assessment Tool

IPV SCREENING FORM: INDIVIDUAL SEXUAL PARTNERS

Conduct this for every listed sexual partner and exclude from tracing if the index case answers "yes" to question nos. 1 to 4, or "c" to question no. 5.

1. Has [partner's name] ever hit or physically hurt you in any way?
    a. YES
    b. NO
2. Has [partner's name] ever threatened to hurt you?
    a. YES
    b. NO
3. Do/did you generally feel unsafe in your relationship with [partner's name]?
    a. YES
    b. NO
4. Do/did you feel afraid of [partner's name] in any way?
    a. YES
    b. NO
5. Every couple has conflicts—what does/did [partner's name] do when you have/had a disagreement?
    a. WE JUST ARGUE AROUND
    b. HE/SHE SHOUTS AT ME
    c. HE/SHE HIT ME
    d. HE/SHE LEAVES ME AND WALKS AWAY
    e. WE RESOLVE THE CONFLICT THROUGH TALKING
    f. OTHER (SPECIFY) _____

OFOOLOMA YOKUNINGA OMAKONAKONO: OOKAUME VOPAMILELE PAUHANDIMWE

Yadekela kaume womomilele keshe e li momusholondodo omu ndee to fiye po ava tava kongwa ngeenge momusholondodo omwa shangwa "heeno" komapulo 1 fiyo 4 ile "c" kepulo 5.

1. [Edina lakaume womomilele] okwe ku dengele ile e ku yehameka kolutu komukalo keshe?
    a. HEENO
    b. AHOWE
2. [Edina lakaume womomilele] okwe ku ningilile omatilifo oku ku yehameka kolutu?
    a. HEENO
    b. AHOWE
3. Oho kala u udite ino amenwa ngeenge to I momilele na [Edina lakaume womomilele]?
    a. HEENO
    b. AHOWE
4. Oho kala u udite wa tila [Edina lakaume womomilele]?
    a. HEENO
    b. AHOWE
5. Ovaholafani aveshe ohava tanguna omafimbo amwe [Edina lakaume womomilele] oha kala e udite ngahelipi ngeenge mwa tanguna?
    a. OPO TWA TANGUNA
    b. OHA HANYENE NGE
    c. OHA DENGE NGE
    d. OHA FIYE NGE PO NDEE TA I
    e. OHATU KANDULA PO OUPYAKADI NGEE TWA POPI
    f. IKWAO (KONDADALUNDE) _____

Appendix C: Cluster Assessment Form

HEP Cluster Code (mother facility name, cluster number)	
District	
Region	
Cluster Focal Person	
Date of Visit	
Assessor(s)	

Rapid Tester Profile: Attach Copies

Name & Surname	Designation (Title)	Full-time	RT certificate	Counselling Certificate

Information Regarding HIV Testing Kits in Use

Kit Name	Lot No.	Expiry Date
Determine™ HIV-1/2		
Unigold™ HIV		
Clearview® Complete HIV1/2		

Monthly Statistics

Month	Total	Month	Total	Month	Total

COMMENTS :

Assessment score sheet

Section	Total
Facility organization	/4
Standard operating procedures	/7
Personnel	/5
Quality control	/4
Testing algorithm and results records	/8
External quality assurance (EQA)	/5
Storage and condition of kits	/5
Commodity supply	/2
Safety and infection control	/7
Total Score	/47

LEVEL 0 <40%	LEVEL I 40-59%	LEVEL 2 60-79%	LEVEL 3 80-89%	LEVEL 4 >90%

Categorization according to assessment scores

Levels	% Score	Interpretation
Level 0	Less than 40%	Site needs improvement in all areas and immediate remediation
Level I	40-59%	Site needs improvement in specific areas
Level 2	60-79%	Partially eligible for accreditation/certification
Level 3	80-89%	Close to site accreditation/certification
Level 4	> or =90%	Eligible for accreditation/certification

Yes = 1 mark

Partial =½ mark

No =0 marks

General Requirements

Item		Questions	Yes	Partial	No
I		Facility Organisation			
	a	Is the storage cabinet neat and tidy?			
	b	There are no domestic items stored in the cooler container or storage cabinet			
	c	Is the storage cabinet locked?			
	d	Is the cooler container and storage cabinet kept in a room with controlled access?			
2		Standard Operating Procedures (SOP)			
	a	Is the HIV RT SOP available?			
	b	Is the CBHTC SOP available?			

Item		Questions	Yes	Partial	No
	c	Are temperature charts available?			
	d	Are index consent forms available?			
	e	Do the testers adhere to the SOPs?			
	f	Are PEP medications available and not expired?			
	g	Is the Cluster to Facility Visit log book available?			
3		Personnel			
	a	Did the staff performing HIV testing receive specific training on test procedures, interpretation of results and recording? (Check date and place of training.)			
	b	Are they certified by NIP? Check certification.			
	c	Is there a designated supervisor (at facility level) and are the testers aware who the person is?			
	d	Is periodic (i.e., every 2 years) HIV rapid tester refresher training offered for testing personnel?			
	e	Has the personnel with unsatisfactory HIV testing performance been re-trained or decertified?			
4		Quality Control			
	a	Is the Cluster to Facility Visit log chart up to date?			
	b	Is the cluster getting correct results for control tests?			
	c	Are appropriate steps recorded and taken when the QC results are incorrect and/or invalid?			
	d	Is the temperature chart up to date?			
5		Testing Algorithm and Result Records			
	a	Do the testers adhere to the recommended testing algorithm? (*Determine + UniGold and tie-breaker when required)*			
	b	Are test results kept secure as required?			
	c	Are the testing devices properly labelled with client ID during the testing?			
	d	Are timers available and used routinely for rapid testing?			
	e	Are the test results properly recorded in register/logbook?			
	f	Are all the elements in the HIV RT registers/logbook captured (i.e., kit name, lot number, expiration dates, client demographics, tester name, individual device and final HIV results, etc.)?			
	g	Are invalid test results recorded in the registers/logbook and then repeated?			
	h	Are page summaries for all the registers/logbook for all pages compiled accurately			
6		External Quality Assessment (EQA)			
	a	Is filter paper for DBS available?			
	b	Does the cluster participate in EQA DBS re-testing 1 in 20?			
	c	Does the cluster conduct EQA DBS re-testing for all positive results?			
	d	Does the site implement corrective actions in case of unsatisfactory EQA results?			
	e	Does the site have any proof of recommended corrective action done?			

Item		Questions	Yes	Partial	No
7		Storage and Condition of Kits			
	a	Are kits stored in a cooler container with ice packs?			
	b	Are there current and past temperature recording charts? (for monitoring cooler container temperature)			
	c	Are all kits in use and in stock within the expiry date?			
	d	Is the kit storage area secure?			
	e	Are expired kits referred to the pharmacy for proper disposal?			
8		Commodity Supply			
	a	The cluster never experienced a stock-out of HIV testing commodities?			
	b	Does the site have a written duty roster with designated responsibilities to travel to the mother facility for Cluster to Facility Visits?			
9		Safety and Infection Control			
	c	Are gloves available and worn when handling specimens?			
	d	Are lancets/needles discarded safely?			
	e	Does the cluster have portable sharps containers?			
	f	Is all biohazard waste securely kept while awaiting transport to disposal?			
	g	Is soap available?			
	h	Is disinfectant spray available?			
	i	Are aprons available?			

General Comments:

Signatures of Rapid Testers	
1	
2	
3	
4	
5	
6	
Signature of Facility in Charge :	

Date of Assessment	Name of Assessor	Signature of Assessor

For Office Use	
Date Received	**Signature**
CLUSTER ASSESSMENT EVALUATION :	

Appendix D: Cluster to Facility Visit Record

Facility Name: _____ Cluster Code: _____

Date of Visit: _____ Name of HEW: _____

ACTIVITIES UNDERTAKEN (*please tick in box*)

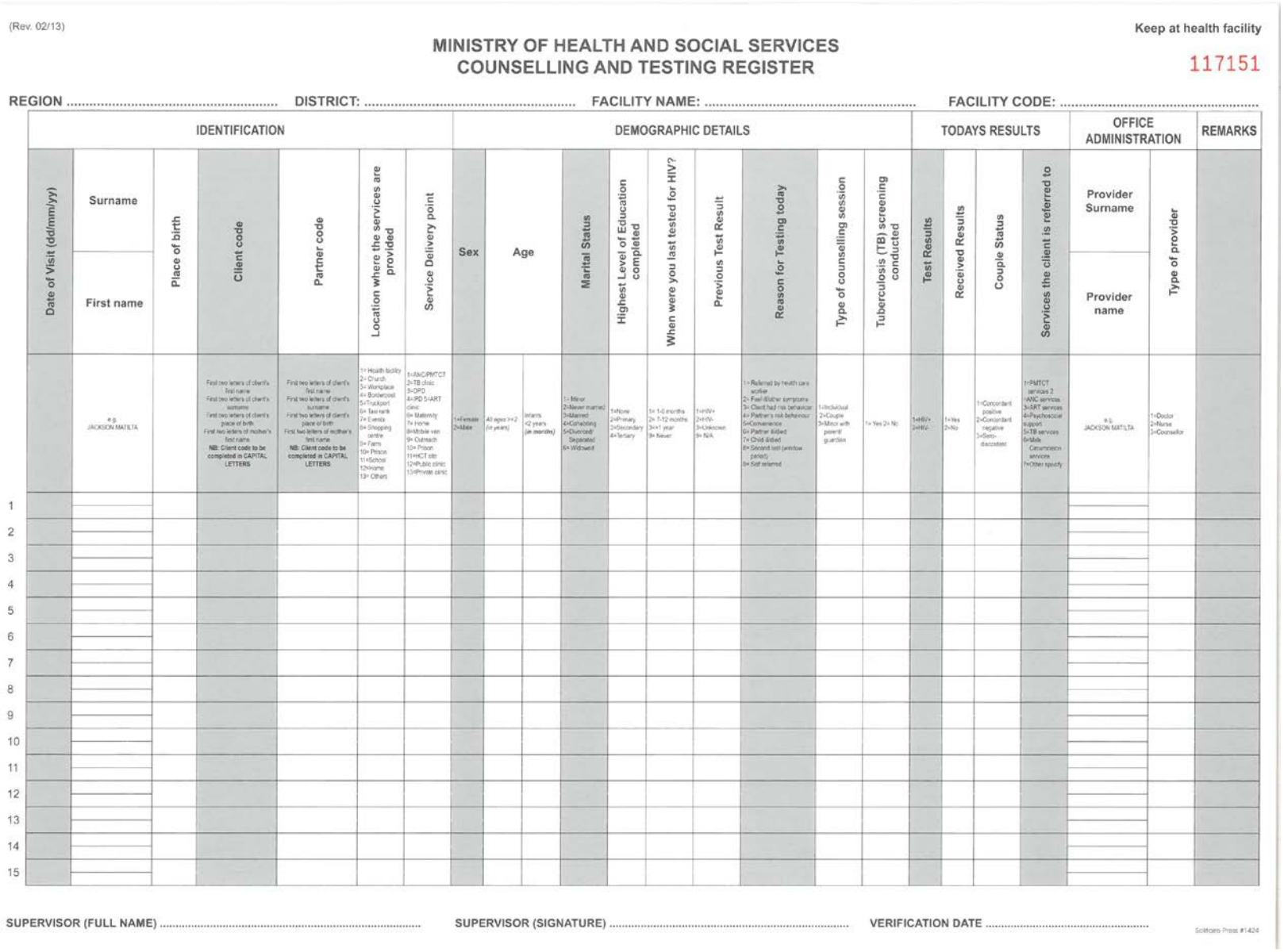
- ☐ Control tests done and correct
- ☐ Cool packs exchanged
- ☐ Temperature chart inspected, temperature maintained at 2–27°C
- ☐ Biohazard waste collected and disposed
- ☐ Facility index list checked, client details shared with cluster representative as indicated
- ☐ Visit conducted on scheduled date

	Determine	Unigold	Clearview
Remaining kits			
Kits discarded			
New kits supplied			
Total stock			
Expiry date			

DATE OF NEXT VISIT _____

Comments (please explain activities not ticked and reasons for discarding kits) _____

Appendix E: HTC Register



(Rev. 02/13)

Keep at health facility

MINISTRY OF HEALTH AND SOCIAL SERVICES
COUNSELLING AND TESTING REGISTER

117151

REGION ..... DISTRICT: ..... FACILITY NAME: ..... FACILITY CODE: .....

	IDENTIFICATION								DEMOGRAPHIC DETAILS									TODAYS RESULTS				OFFICE ADMINISTRATION		REMARKS
	Date of Visit (dd/mm/yy)	Surname / First name	Place of birth	Client code	Partner code	Location where the services are provided	Service Delivery point	Sex	Age		Marital Status	Highest Level of Education completed	When were you last tested for HIV?	Previous Test Result	Reason for Testing today	Type of counselling session	Tuberculosis (TB) screening conducted	Test Results	Received Results	Couple Status	Services the client is referred to	Provider Surname / Provider name	Type of provider	
		e.g. JACKSON MATLTA		First two letters of client's first name; First two letters of client's surname; First two letters of client's place of birth; First two letters of mother's first name. **NB: Client code to be completed in CAPITAL LETTERS**	First two letters of client's first name; First two letters of client's surname; First two letters of client's place of birth; First two letters of mother's first name. **NB: Client code to be completed in CAPITAL LETTERS**	1= Health facility; 2= Church; 3= Workplace; 4= Borderwood; 5=Truckport; 6= Taxi rank; 7= Events; 8= Shopping centre; 9= Farm; 10= Prison; 11=School; 12=Home; 13= Others	1=ANC/PMTCT; 2=TB clinic; 3=OPD; 4=IPD 5=ART clinic; 6= Maternity; 7= Home; 8=Mobile van; 9= Outreach; 10= Prison; 11=HCT site; 12=Public clinic; 13=Private clinic	1=Female; 2=Male	40 ages >=2 (in years)	Infants <2 years (in months)	1= Minor; 2=Never married; 3=Married; 4=Cohabiting; 5=Divorced/ Separated; 6= Widowed	1=None; 2=Primary; 3=Secondary; 4=Tertiary	1= 1-6 months; 2= 7-12 months; 3=>1 year; 9= Never	1=HIV+; 2=HIV-; 3=Unknown; 9= N/A	1= Referred by health care worker; 2= Feel ill/other symptoms; 3= Client had risk behaviour; 4= Partner's risk behaviour; 5=Convenience; 6= Partner ibibed; 7= Child ibibed; 8= Second test (window period); 9= Self referred	1=Individual; 2=Couple; 3=Minor with parent/ guardian	1= Yes 2= No	1=HIV+ 2=HIV-	1=Yes 2=No	1=Concordant positive; 2=Concordant negative; 3=Sero-discordant	1=PMTCT services 2 =ANC services 3=ART services 4=Psychosocial support 5=TB services 6=Male Circumcision services 7=Other specify	e.g. JACKSON MATLTA	1=Doctor 2=Nurse 3=Counsellor	
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
13																								
14																								
15																								

SUPERVISOR (FULL NAME) ..... SUPERVISOR (SIGNATURE) ..... VERIFICATION DATE .....

Solitaire Press #1424

Appendix F: Rapid Test Logbook

HIV RAPID TEST LOGBOOK

Region _____ District _____ Facility name _____ Service delivery point

Serial Number	Date	Client Code	Age	Sex	Test 1 Kit Name ..... Lot Number ..... Exp date..../...../..... (Circle one)	Test 2 Kit Name ..... Lot Number ..... Exp date..../...../..... (Circle one)	Test 3 Kit Name ..... Lot Number ..... Exp date..../...../..... (Circle one)	Final Result (Circle one)	Testers Name & Surname	Mark if sent for EQA retesting	Date Sent	EQA Result (Circle one)
1				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
2				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
3				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
4				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
5				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
6				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
7				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
8				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
9				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
10				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
11				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
12				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
13				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
14				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
15				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
16				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
17				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
18				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
19				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS
20				M F	POS NEG INV	POS NEG INV	POS NEG INV	POS NEG		☐		NEG POS

PAGE TOTAL
Total Positive
Total Negative
Total invalid
Total tests

Supervisor Signature _____

Please Note! Start on a new page when a new test kit lot is opened.

Appendix G: Referral Form

HEP Form 7 **Referral Counter-Referral Form**

[A] REFERRAL
For HEW to fill out and give to the Client / Caregiver to take to the Health Worker

Date: _____

Referred by HEW (name): _____

Community: _____ HH# _____

Name of Client referred: _____

Date of Birth: _____ Sex: _____

Does the client / caregiver agree to be referred (if YES, client/caregiver signs) _____

Client referred to (facility name) _____

Referred for/to (tick all that apply)

First Aid

☐ Broken bones ☐ Burns ☐ Bleeding or Wounds ☐ Bites & Stings ☐ Poisoning ☐ Fever/Pain

Maternal Health

☐ Pregnancy danger signs ☐ ANC ☐ Maternal danger signs ☐ Family Planning

Neonatal Health

☐ Neonatal danger signs ☐ Low birth weight ☐ Breastfeeding complication

Child Health

☐ Child danger signs ☐ Cough/difficulty breathing ☐ Diarrhea ☐ Fever

☐ Immunization ☐ Malnutrition ☐ Lice/Scabies/Worms ☐ Ear/Throat Problems

HIV/TB/Malaria

☐ HCT ☐ ARV defaulter ☐ TB screening/treatment ☐ TB defaulter ☐ Malaria suspect

Social Welfare, Disability and Rehabilitation

☐ Family Violence ☐ Substance abuse ☐ Suicidal behavior ☐ Elder abuse ☐ Parent/child relationship

☐ Social grant ☐ Rehabilitation (Vision, Hearing/speech, Movement) ☐ Mental illness ☐ Assistive device (Vision, Hearing, Movement)

Other (Specify) _____

HEW Signature: _____

tear or cut here

[B] COUNTER-REFERRAL
For the Health Worker to fill out and give back to the client who then shares it with the HEW

Date: _____ Name of Facility _____

Name of Client: _____

Remarks: _____

_____

_____

Service(s) given: _____

Follow up needed by HEW (e.g., home care, revisits): _____

Date of next visit to health facility: _____

Name of Health worker & Signature: _____

Ministry of Health and Social Services, Namibia

Appendix H: Index Listing Forms

Community Index HTC Listing Form

Name of Primary Service Provider: _____

Name of index client & date of birth (check box if referred from facility)	Date of HIV diagnosis DD/MM/YY	Date of consent DD/MM/YY	Name(s) of contacts (P-Partner, C-Child)	Date of HIV test DD/MM/YY
☐				
☐				
☐				
☐				
☐				
☐				
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☐				
☐				
☐				
☐				
☐				
☐				
☐				
☐				
☐				

Facility Index HTC Listing Form

Name of Facility: _____

Name of index client & date of birth	Date of HIV diagnosis DD/MM/YY	Home village (& HEP cluster code)	Client phone number	Date of referral completion DD/MM/YY

Appendix I: Monthly Summary Form

Ministry of Health and Social Services
HIV Counseling and Testing (HCT) Monthly Summary Form

Region: _____ District: _____ Month: _____ Name: _____

		Female	Male	Total
1	Total number of clients registered			
2	Total number of clients received results			
3	Total number of first-time testers			
4	Total number of repeat testers			
5	Total number of clients referred by health care worker (PITC)			
6	Total HIV negative results			
6A	0–23 months			
6B	2–14			
6C	15–19			
6D	20–24			
6E	25–29			
6F	30–34			
6G	35–39			
6H	40–44			
6I	45–49			
6J	50+			
7	Total HIV positive results			
7A	0–23 months			
7B	2–14			
7C	15–19			
7D	20–24			
7E	25–29			
7F	30–34			
7G	35–39			
7H	40–44			
7I	45–49			
7J	50+			
		Sero-discordant	**Concordant positive**	**Concordant negative**
8	Total number of couples tested			

Compiled by: _____ Designation: _____ Date: _____

Supervisor: _____ Designation: _____ Verification Date: _____

Appendix J: Temperature Log

Cluster Code : _____ Month : _____ Year : _____

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
>27°C																															
27°C																															
26°C																															
25°C																															
24°C																															
23°C																															
22°C																															
21°C																															
20°C																															
19°C																															
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11°C																															
10°C																															
9°C																															
8°C																															
7°C																															
6°C																															
5°C																															
4°C																															
3°C																															
2°C																															
<2°C																															

Supervisor Signature (and date) _____ Supervisor Signature (and date) _____

Appendix K: Commodities

Item No	Item Description	Specifications	Qty Ordered	Vendor/Origin	Unit Price (NAD)	Total Price Including Tax (NAD)	Quantity Left Over	Needed for Phase 2	Comments/Same Vendor
1	DBS collection kits	Lasec DBS kits	2,000	AfriMed/Namibia	55.16	126,868.00	10 boxes	40 boxes	40 boxes were ordered last time
2	Sharps containers		1,000	AfriMed/Namibia	36.91	42,446.50	900.00	-	Not needed
3	Plastic boards		120	Crazy Plastics/Namibia	29.99	3,598.80	48.00	10.00	Phase 2 ordered from Game Stores N$149.95 per board
4	Alcohol swabs		75 boxes of 200	NamPharm/ Namibia	27.80	2,400.00	1.00	75 Boxes	Phase 2 ordered from AfriMed N$22.16 per box
5	Antiseptic		120 boxes	NamPharm/ Namibia	1.74	240.00		-	Not used in Engela. Not needed
6	Cotton wool		30 bags	AfriMed/Namibia	132	138,017.54			Not used in Engela. Not needed
7	Insulated backpacks	Should fit HTC registers	100	Perfect Health/US	45.00	4,500.00	39.00	-	Not needed
8	Reusable ice packs	Technilce sheets	250	EREZ Labmed/South Africa	6.60	$1,603.80	26.00	200.00	
9	Thermometer dongles	Thermo-hygro clock	120	NamPharm/ Namibia	1,440	198,720.00	90.00	-	Not needed
10	Locking boxes	Vaultz locking mobile chest - 14.5" x 17.5" x 15.5"	40	Staples/US	60.99	$1,525	11.00	25.00	
11	Medical coolers	Minus 40 Insulated vaccine carrier - 28x21x16.5	25	AfriMed/Namibia	4,801	138,017.54	-	35.00	Second phase, ordered from MedLab unit price N$4,822.00
12	Tablets	Samsung Galaxy Tab 32GB	20	Government Connection	375.30	7,506.00			Not needed
13	Spray bottles	100ml bottles	60	Crazy Plastics/Namibia	45	449.90	-	60.00	100 ml

Item No	Item Description	Specifications	Qty Ordered	Vendor/Origin	Unit Price (NAD)	Total Price Including Tax (NAD)	Quantity Left Over	Needed for Phase 2	Comments/Same Vendor
14	Countdown timers		72	Azure Technologies/ Namibia	142	11,765.90	12.00	50.00	
15	Pocket files	To fit the locking boxes	220	ABC Stationers/ Namibia	16	3,509.00	20.00	200.00	
16	Small safety locks	to lock the medical coolers	30				3.00	30.00	
17	Freezer boxes		5	Game/Namibia	2,499	12,405.00	-	TBD	Facility needs not yet known
19	DBS drying racks	To go with Lasec kits	120	Afrimed/Namibia	562	5,616.30	-	100.00	
20	Noninsulated backpacks	Tough backpacks that can fit registers - not insulated	120	Waltons/Namibia	444	53,220.00	-		
21	Small insulated coolers	To fit in noninsulated backpacks	120	CYMOT/Namibia	115	13,800.00	-		
22	Blankets/sacks	Blankets to keep coolers cool	55	PEP Stores/ Namibia	55	3,024.45	-		
Printings									
1	HTC Register	Needed perforated carbon-copy pages	100	3D Printing/Namibia	75.00	7,500.00		-	
2	HIV Rapid Testing book								
3	Referral book	Needed perforated carbon-copy pages	100	3D Printing/Namibia	140.00	14,000.00		-	
4	Index Client Consent forms		500	3D Printing/Namibia	1.50	750.00		0	
5	SeroDiscordant counseling cards		125	3D Printing/Namibia	4.00	500.00		-	
6	New algorithm training		68	3D Printing/Namibia	171	11,628.00		-	

Appendix L: Timeline of Evaluation

Weeks Since Implementation	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Date	7/25	8/1	8/8	8/15	8/22	8/29	9/5	9/12	9/19	9/26	10/3	10/10	10/17	10/24	10/31	11/7	11/14	11/21	11/28	12/5	12/12	12/19	12/26	1/2
Conduct initial HEW training:	X																							
HEW feedback	X																							
Trainer feedback		X																						
Pre- and post-test data collection	X																							
Compile training report			X																					
Conduct key infomant interviews:																	X							
Analyze feedback from HEWs																		X						
Analyze feedback from HEW supervisors																		X						
Conduct supportive supervision visits		X					X		X		X		X		X			X						
Collect SSV data using national tool		X					X		X		X		X		X			X						
Review HEW temperature logs											X				X									
Review partner tracing log											X				X									
Review cluster to facility visit record											X				X									
Evaluate 12 weeks of HTC data:																								
Collect HTC data																								
Analyze HTC data																								
Evaluate procurement and costing:																			X					
Collect procurement data																			X					
Analyze procurement data																			X					
Draft program evaluation report:																				X				
Finalize report																						X		

Appendix M: M&E Framework for Evaluation

Objective 1: Describe and assess the feasibility of targeted community-based HIV testing and counseling program by trained health extension workers (HEW) to inform national scale-up of CBHTC

Key questions:

1. What are the demographics (sex and age) of clients tested as part of the HEP CBHTC?
2. What is the rate of HIV positives among those tested in the pilot? Number of clients previously testing positive but not linked to care? Couples?
3. Does the program reach first-time testers?
4. What modifications to the approach are needed for it to be feasible for national scale-up?
5. What is the best model for client linkages to confirmatory testing and, for those HIV positive, linkages to care? Can these be scaled up nationally?

Questions	Data Tools	Indicators/Analysis
Demographics (sex and age)	HTC Register and HTC Monthly Summary Form	Disaggregate and graph data by age and sex
HIV prevalence	HTC Register and HTC Monthly Summary Form	Calculate the number of patients testing positive/number of patients tested through CBHTC
Proportion first-time testers	HTC Register and HTC Monthly Summary Form	Calculate number of first-time testers/number of patients tested through CBHTC
Program feasibility	Key Informant Interviews, HTC Register and HTC Monthly Summary Form, Temperature Chart	Assess qualitative data to identify any positive and negative feedback
Proportion of positives successfully linked to care	HTC Register and HTC Monthly Summary Form	Calculate number of positives who visited the clinic within 30 days of community-based HIV diagnosis

Objective 2: Ascertain the training and supportive supervision needs of health extension workers to perform targeted CBHTC

Key questions:

1. Is the modified PITC training for HEP CBHTC appropriate for the HEW training? If no, what modifications are necessary?
2. Are the HEWs capable of achieving competence and conducting high-quality community-based PITC?
3. What type of supportive supervision, mentorship, and other support are needed for the HEW to conduct CBHTC?
4. Are the modified M&E tools appropriate for capturing key data? What modifications are needed?

Questions	Data Tools	Indicators/Analysis
Training appropriateness	Baseline and endline training test results of HEWs (national tool), feedback forms from trainers on national PITC package, training reports, training evaluation forms (national tool), PITC Skills Checklist (national tool)	Pre and post data box plots, any negative feedback from trainers, proportion of HEWs with PITC skills who passed training out of total trained
High-quality PITC	Cluster to facility visit record, supportive supervision tools and data (national tool)	Patterns from SSV; any problems that need to be changed in scale-up
Other support	Key Informant Interviews	Note if HEWs mention needing additional support
M&E tools	Key Informant Interviews	Ascertain from interviews if new M&E tools are easy to use, effective, or need improvements

Objective 3: Calculate the costs associated with integrating targeted CBHTC in the Health Extension Program

Key questions:

1. What logistics/procurements are needed to implement CBHTC through the HEP?
2. What is the overall cost of starting up CBHTC in one district, one region?

Questions	Data Tools	Indicators/Analysis
Procurements needed	Commodity and costs assessment, Key Informant Interviews	Ascertain from interviews if HEWs have enough supplies
Overall cost	Commodity and costs assessment, assessment of supervisor time, Key Informant Interviews	Ascertain from interviews if supplies are adequate and appropriate; calculate program cost

Objective 4: Describe the best approaches to integrate targeted CBHTC into the current HEW workload

Key questions:

1. What are the best approaches for program integration?

Question	Data Tools	Indicators/Analysis
Best approaches	Key Informant Interviews	Ascertain from interviews if HEWs have suggestions for program improvement

Objective 5: Describe the feasibility of offering HTC for partners (partner tracing) and children of newly diagnosed HIV infected individuals identified in CBHTC

Key questions:

1. Is the offer of HTS to partners and children of newly diagnosed HIV infected individuals feasible and acceptable within the Namibia's health system?
2. What is the best approach for collaboration between health facilities and community-based HEWs to trace and test partners and/or children of recently diagnosed HIV positive individuals?

Question	Data Tools	Analysis
Acceptability of index testing	Key Informant Interviews, Partner Tracing Log (national tool)	Ascertain from interviews if HEWs think index tracing is feasible; check Partner Tracing Log and compare against total number of positives identified
Collaboration for index testing	Key Informant Interviews	Ascertain if HEW supervisors have been supporting HEWs with partner tracing of positives identified at the facility

Appendix N: Key Informant Interview Questionnaire

Thank you very much for participating in this discussion. I am very interested to hear about your thoughts, feelings and experiences from participating in the Health Extension Program Targeted Community-Based HIV Testing and Counseling Program. We have developed some questions to guide our conversation. There are no right or wrong answers and you are free to decline to answer any question(s), or stop the interview at any time. I would like to hear both about your experience around the community-based HIV testing and counseling program when you met with our team for the first time, as well as any community-based testing and counseling experience after that. Your opinions are very important to us, and will help us to improve the national community-based testing approach in the future.

Do you have questions before we start the interview? (Let the participant ask questions.)

During the discussion, I will be taking notes to record the main ideas we discuss. However, so that I do not have to worry about getting every word down on paper, I will also be tape recording the whole session. Please do not be concerned about this, our discussion will remain completely confidential and will ONLY be used for this study. Do you agree to have the discussion tape-recorded?

I would like to start by asking you a few questions about your experience before the HIV testing and counseling training:

1. When did you become a health assistant? Tell me about your experience working as health assistant.
2. What was your experience with HIV testing before the training? Please explain.
3. When you heard about the community-based testing approach, did you think it would work?

   [PROBE FOR WHY NOT]: If no, can you tell me why you thought it might not?
4. What did you think of the HTC training? What did you like about the training? What did you not like?
5. After the training, did you feel prepared to offer HIV testing and counseling in your community?

   [PROBE FOR WHY NOT]: If no, can you tell me what should have been included to make you better prepared?

Now I would like to ask some questions about your experience with HIV testing and counseling in the community.

1. How did you think community members would react to community-based testing and counseling? Was this your experience? How was it the same from what you thought? How was it different?
2. Have you had time to add community-based testing and counseling to your regular work as a health assistant?

   [PROBE FOR WHY NOT]: If no, can you tell me why it was difficult to add in CBHTC?
3. Tell me about your average workday as a health assistant. How do you integrate community-based HIV testing and counseling into your day?
4. How many HIV testing and counseling sessions do you have in a normal week? Do you think these are enough sessions to meet the needs of your community?

   [PROBE FOR WHY NOT]: Can you explain what more is needed in the community?

1. Do your clients have questions for you during counseling, screening or referrals? Do you feel prepared to answer their questions?

   [PROBE FOR WHY NOT]: Can you give examples of some of the questions you could not answer? What do you do in these situations?

2. Do your clients believe the results from the rapid tests you do in the community?

   [PROBE FOR WHY NOT]: If they do not, why do you think they feel this way?

3. Have you experienced giving a positive test result in the community? If yes, please tell me about your experience.

4. Have you been conducting partner tracing?

   [PROBE]: If yes, how is it going? If not, why not?

5. How can we change the HIV testing and counseling program to help the community more? Do you have any suggestions?

6. Do you think health assistants in other districts should be trained in HIV testing and counseling? Why or why not?

Appendix O: Budget

PROJECTED ANNUAL ESTIMATIONS 2016-2017

HIV Kit Distribution	
Kit Type	
Determine- box of 100	$1,154
Unigold- box of 20	$750
Clearview Complete- box of 25	$905

PEPFAR Target Breakdown	
CBHTC in HEP	
HTC_TST	6,978
HTC_TST_POS	298
PP_PREV	28,500

Operational considerations		General Assumptions
Number of CBHTC Sites	3	
Number of HEWS per cluster	2	
Number clusters per CBHTC Site	3	
Number of tests per HEW per Mc	24	
HIV prevalence	2.40%	
Number of PP_PREV per HEW per Month		

No	Item	Unit	Cost (NAD)	Quantity per HIV test		Cost per test, cost per quarter/per HEW (72 tests per quarter)	
CONSUMABLE SUPPLIES							
1	Determine	1 test	$11.54	1	Test	$11.54	$830.88
2	Unigold	1 test	$37.48	0.024	Test	$0.90	$64.77
3	Clearview	1 test	$36.19	0	Test	$0.00	$0.00
4	Determine Buffer (1 vile=100 drops)	1 Drop	$0.72	1	Drop per test	$0.72	$51.84
5	DBS Collection Kits	Kit	55.16	0.074	1 per 20 tests + every positive test	$4.08	$293.89
6	Sharps containers (100 tests per container)	Unit	36.91	0.01	container	$0.37	$26.58
7	Alcohol Swabs	Swab	0.278	2	Swab	$0.56	$40.03
8	Antiseptic	Box		1	pc per client	$0.00	$0.00
9	Cotton Wool	Ball	132	1	pc per client	$132.00	$9,504.00
10	Aprons	Unit	0.57	1	pc per client	$0.57	$41.04
11	Gloves	Pair		2	pair per client	$0.00	$0.00
12	Lancets	Unit	1.92	1	pc per client	$1.92	$138.24
13	Male condoms	Unit		0	pc per client	$0.00	$0.00
14	Pipettes	Unit		1	pc per client	$0.00	$0.00
15	Paper napkins	Unit		2	pc per client	$0.00	$0.00
16	Hand sanitizer (100 test per bottle)	Bottle		0.01	bottle	$0.00	$0.00
					SUBTOTAL	$152.66	$10,991.27
	Item	Unit	Cost (NAD)	Quantity per cluster, per year		Cost per cluster, per year	Cost, per district, per year
START UP SUPPLIES							
1	Plastic Boards	Unit	29.99	2		$59.98	
3	Spray bottles	Unit	45	2		$90.00	
4	Backpacks	Unit	626	2		$1,252.00	
5	Reuseable icepacks	Unit	91.86	8		$734.88	
6	Thermometer Dongles	Unit	1,440	1		$1,440.00	
7	Locking boxes	Unit	850	1		$850.00	
8	Medical Coolers	Unit	4,801	1		$4,801.00	
9	Samsung Galaxy Tab 32GB	Unit	5223	1		$5,223.00	
10	Countdown timers	Unit	142	2		$284.00	
11	Pocket files	Unit	16	10		$160.00	
12	Small safety locks	Unit		1		$0.00	
13	Freezer boxes	Unit	2,449	0.1		$244.90	
14	DBS drying racks	Unit	562	2		$1,124.00	
15	Small insulated coolers	Unit	115	2		$230.00	
16	Blankets/Sacks	Unit	54.99	1		$54.99	
17	Hat	Unit		0		$0.00	
18	Umbrella	Unit		0		$0.00	
19	Counseling Cards		4	2		$8.00	
					SUBTOTAL	$16,556.75	
M&E SUPPLIES							
1	HTC Register		75	2		$150.00	
2	HIV Rapid Testing Book		75	2		$150.00	
3	Referral/Counter Referral Book		140	2		$280.00	
4	Index Client Consent Forms		1	7		$7.00	
5	Index Client Listing Form (community)		1	2		$2.00	
6	Index Client Listing Form (facility)		1	2		$2.00	
7	Data Dashboards		250	0.25		$62.50	
8	Monthly Reporting Sheet		1	12		$12.00	
9							
					SUBTOTAL	$665.50	