

# UPTAKE OF HIV SELF-TESTING AT THE WORK PLACE; A CASE OF HOMABAY COUNTY

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**Declaration**

This dissertation is my original work and has not been presented for a degree in any other university.

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Registration No: W82/89460/2016

Signature.....

Date: .....

This dissertation has been submitted for examination with my approval as university supervisor.

University Supervisor: Dr. Anne Wang’ombe

Signature: .....

Date: .....

### **Dedication**

To my wife Dr. Purity Kiunga for her moral and financial support, daughters Cheryl and Chanel and my parents, Mr. David Mogaka and Mrs. Teresah Kerubo for having instilled in me the spirit of hard work and giving me a good foundation.

## **Acknowledgement**

Special gratitude goes to my supervisor from Nairobi University; Dr. Anne Wang'ombe and the Institute of tropical and infectious diseases for their guidance, timely review of my work and financial support to complete the studies.

I want to thank my participating local partners at Homabay County Department of vector borne and neglected tropical diseases and the entire health workers in Homabay County for their willingness and support for this project.

I want to sincerely thank my wife Dr. Purity Kiunga for her encouragement and understanding throughout this work.

My sincere gratitude also goes to the administrative authorities at Homabay County Health department, Homabay County Teaching and Referral hospital; The Subcounty Medical Officers of Health for their cooperation during this project.

Many thanks also goes to Kenyatta National Hospital for their donation of HIV self test kits.

May God bless you all!

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## **List of Abbreviations and Definition of Terms**

AIDS	Acquired Immune Deficiency Syndrome
CASCO	County AIDS and STI Coordinator
CDC	Centres for Disease Control
CHAs	Community Health Assistants
CHEWs	Community Health Extension Workers
CHMT	County Health Management Team
CRH	County Referral Hospital
HC	Health Centre
HIV	Human Immunodeficiency Virus
HIVST	Human Immunodeficiency Virus Self Testing
HQ	Headquarters
HTS	HIV Testing Services
KAIS	Kenya AIDS Indicator Survey
KDHS	Kenya Demographic and Health Survey
M & E	Monitoring and Evaluation
NACC	National AIDS Control Council
OPD	Outpatient Department
PLP	Participating Local Partner
PMTCT	Prevention of Mother to Child Transmission
SCH	Subcounty Hospital
SCHMT	Subcounty Health Management Team
WHO	World Health Organization
WOFAK	Women Fighting Aids in Kenya

## Project Summary

HIV self testing is a process where an individual collects their own sample, conducts an HIV test, and interprets their own result in an easy, safe and confidential manner. The importance of knowing one's HIV status cannot be overemphasized and self testing now offers everyone an opportunity to know their status on their own. Self testing can be used by anyone that suspects exposure to the infection.

The Kenyan Ministry of Health has approved two types of kits to be used for self testing and these are now readily available in both public and private health facilities, as well as in private pharmacies. The first is **ORAQUICK** HIV kit which uses oral fluid (saliva) as the test sample, while the second is **Insti** HIV kit which uses blood as the test sample. These kits are currently retailing at about 500 Kenya shillings each.

The rollout of HIV self test kits and guidelines offers an innovative approach for Kenya to move closer to the ambitious 95:95:95 targets set out by the United Nations. The self test kits contribute towards the country achieving the first 95, which targets 95% of the population knowing their HIV status by the year 2030.

According to the Kenya Aids Indicator Survey done in 2012, 72% of the respondents in the survey indicated that they were willing to perform the HIV self-testing if provided with the relevant equipment. It should be noted that in case of a positive self-test, it is important that one gets a confirmatory test done at their nearest health facility.

When a person has knowledge of their HIV status, they are better placed to make informed choices about their health and lifestyle. Kenyans are encouraged to know their HIV status by using HIV testing services at their nearest health service provider or by buying a HIV self test kit.

This project did a passive surveillance of hospital inpatient and outpatient HIV testing rates and found them to be 68% and 87% respectively while among healthcare workers the rate was 38%. The project then sensitized and rolled out self testing using OraQuick kits at Homabay county health offices, Homabay county referral hospital and all 8 sub counties namely Homabay town, Mbita, Suba, Ndhiwa, Rangwe, Karachuonyo, Kabondo and Kasipul. OraQuick was used due to ease of administration (Insti HIV kit uses blood sample). The project brainstormed with the relevant staff on the necessary public health action to take to improve the testing rates. Availing and training staff on self test kits as implemented in this project aimed to improve on the HIV testing rates.

## **Introduction**

### **Background Information**

Homabay County bears a large portion of the HIV/AIDS scourge in Kenya according to Kenya HIV estimates report of 2015 released by National Aids Control Council. The HIV prevalence is 26% (2015 estimate) for this county.

Of the estimated 1.6 million people living with HIV/AIDS in Kenya in 2015, 10% or 158,077 were from Homabay and so was 3307 deaths or 10% of the national mortality attributed to Aids-related complications. In 2015 the county accounted for 15% and 14% of the National total of new infections among children and adults respectively.

The Kenya Demographic and Health Survey of 2014 showed that 15% of males and 6% of females had never tested for HIV. It recommended adoption of innovative strategies to improve on HIV testing and counseling to bridge the unmet gaps.

In the first Homabay Multisectoral Aids Strategic Plan (2014/2015-2018/2019), it's noted that the main drivers of HIV/AIDS in its 8 subcounties (Homabay town, Mbita, Suba, Ndhiwa, Rangwe, Karachuonyo, Kabondo and Kasipul) are cultural practices, poverty, sexual attitude and behavior, lifestyle factors, networks in the fishing industry, health risk behavior and profession related issues.

When a person has knowledge of their HIV status, they are better placed to make informed choices about their health and lifestyle. This project was identified after a discussion with the HIV Testing Services providers in the hospital revealed that most of their staff rarely tested for HIV. This was confirmed by the Homabay county nurse in charge of health promotion in 2018.

## **Statement of the Problem**

Self testing was launched in Kenya but as at October 2019 is yet to be rolled out in most public hospitals, Homabay included. Currently, it is mostly found in private pharmacies/chemists at about Ksh500 although the government plans to roll it out possibly in public PMTCT clinics. In addition, HIV testing among health care workers and indeed the rest of the county government employees is a big challenge and the same is evident in Homabay County.

Therefore, the project introduced HIV self testing to Homabay county health staff. This service is sustainable through county funding after completion of my project and is unlikely to conflict with what the government may escalate country wide.

This approach can also be escalated to other counties and also be integrated in the community strategy by involving health extension workers/community health units to expand coverage to the community.

## **Problem Objectives**

### **Goal:**

To contribute towards achievement of the 95-95-95 HIV strategies set by UN.

### **Purpose:**

To strengthen HIV testing surveillance and increase HIV testing in Homabay County health department.

### **Specific Objectives:**

1. To strengthen inpatient and outpatient HIV testing rates in Homabay County.
2. To sensitize Homabay county health staff on HIV self testing using OraQuick.

3. To determine the uptake and consumption rate of HIV self testing at the work place.
4. To determine barriers to uptake of HIV self test and special needs of the health workers.

### **Outputs:**

1. Surveillance report on HIV testing in Homabay CRH and 8 sub-county facilities.
2. Homabay county health staff sensitized on HIV self testing using OraQuick.
3. Uptake of HIV self-testing by the Homabay county health staff.
4. Consumption rate of HIV OraQuick kits per month by the Homabay health staff.
5. Barriers to uptake of HIV self testing and special needs among the health workers.

### **Projected Impact**

It's important for everyone to know their HIV status and self testing now provides an opportunity for us to achieve this. Of the estimated 1.6 million people living with HIV/AIDS in Kenya in 2015, 10% or 158,077 were from Homabay and so was 3307 deaths or 10% of the national mortality attributed to Aids-related complications. In 2015 the county accounted for 15% and 14% of the National total of new infections among children and adults respectively.

The KDHS of 2014 showed that 15% of males and 6% of females had never tested for HIV. It recommended adoption of innovative strategies to improve on HIV testing and counseling to bridge the unmet gaps. The rollout of HIV self test kits and guidelines offers an innovative approach for Kenya to move closer to the ambitious 95:95:95 targets.

HIV self testing offers a confidential and private way for health care workers in Homabay County facing various barriers to the routine testing methods. This latest option has potential for

high uptake at local community level if it can be supervised and safely linked to counseling and care.

This project explored ways of successfully introducing HIV self testing at the work place. When used to augment the available HIV testing methods, the HIV testing rates in the health facilities in Homabay were expected to increase.

## **Project Implementation Methods and Management Plan**

### **Key Issues**

This project introduced HIV self testing for health workers in Homabay County. Preliminary discussion with the HIV and STI coordinator in the county indicated that there may be special needs or barriers to effective HIV testing and follow up services for health care providers. This project put in place measures to overcome these barriers and ensure health care providers have acceptable access to the HIV testing services they offer.

The project also strengthened the passive HIV testing surveillance in the facilities in Homabay County by comparing testing rates before, during and after introduction of HIV self testing in the selected facilities. This will determine the effects of introducing HIV self testing on the outpatient testing rates.

### **Activities and Roles**

The project sought the relevant approvals from the University of Nairobi and CDC before beginning the project. Once these were granted, the fellow informed the county health authorities and shared with them the project plans through the PLP mentors. The fellow successfully requested NASCOP and other willing partners, through the university, for a donation of 125 HIV self testing kits. The fellow then purchased a lap top and 5 bags for the HIV kits and proceeded to the PLP to undertake the following activities according the timelines below;

**Table 1: Activities and Responsibilities**

DATE	ACTIVITY	RESPONSIBLE PERSON	RESOURCES
Week 1 April 2019	1.Sensitized & trained 4 HTC officers as project assistants and issued airtime  2.Sensitized County health department and issued HIV self test kits	Fellow, PLP mentors  Fellow, PLP mentors, Project assistants	Kits, airtime, venue, lunch, transport, laptop
Week 2	1.Sensitized CRH & issued kits  2.Sensitized subcounty heads & issued kits	Fellow, PLP mentors, Project assistants	Kits, airtime, venue, lunch, transport, laptop
Week 3	Sensitized 4 subcounty facilities and issue kits	Fellow, PLP mentors, Project assistants	HIV kits, airtime, venue, lunch, transport, laptop
Week 4	1.Sensitized 3 subcounty facilities and issued kits  2.Routine M&E on Fridays	Fellow, PLP mentors, Project assistants	HIV kits, airtime, venue, lunch, transport, laptop, android phone
Week 5 May 2019	1.Sensitized Sena HC staff and issued kits (Mfangano Is.)  2. Joint monthly M&E on Tuesday  3. Routine M&E on Fridays	Fellow, PLP mentors, Project assistants	HIV kits, airtime, venue, lunch, transport laptop, android phone
Week 6 and 7	1.Routine M&E Fridays  2. Data analysis & interpretation	Fellow, PLP mentors, Project assistants	HIV kits, airtime, venue, lunch, transport, laptop, android phone
Week 8	1.Report writing  2.Dissemination in joint meeting	Fellow, PLP mentors, Project assistants.	HIV kits, airtime, venue, lunch, transport, laptop, android phone

The team of five implementers (Fellow, two PLP mentors and 2 HTS providers) carried out sensitization of the HIV self testing services between March and May 2019 at the CHMT offices, Homabay CRH and for 8 other selected facility heads and planned for roll out with them.

The 5 implementers then implemented the roll out plan formulated in the earlier sensitization meeting with facility heads.

Every Friday was used for monitoring and evaluation activities and for exit surveys where the participants were requested to give any challenges in HIV self testing and possible areas of improvement to increase uptake of the same. The individuals issued with kits were tracked using batch numbers and reminders sent on the 5<sup>th</sup> day with the final reminder and request for return of unused kits on the 10<sup>th</sup> day.

Results were captured using a structured tool loaded onto an android phone using Microsoft excel application. National guidelines on HTS were adhered to.

Two joint monthly M & E meetings for the 9 facilities and County health HQ were done. This report was made and disseminated with emphasis on ownership and sustainability of the project by the county and possible up scaling to the community in Homabay and other counties. The facility heads and PLP mentors showed commitment to continue coordinating the HIV self testing in Homabay and involve other HIV partners in the project.

### **Risks and Assumptions**

The project assumed that there would be cooperation from NASCOP on donating HIV test kits and the county health staff too as opposed to having industrial action by health workers.

The project hoped that all stakeholders would be in good health to carry out the project and that the political atmosphere would be conducive for project implementation.

The project depended on good linkage and referral system for those who tested positive and in need of confirmatory laboratory tests and further care as appropriate.

### **Project Monitoring and Evaluation**

During implementation of the project, the number of Homabay county staff sensitized on HIV self testing using OraQuick and issued with the same was captured and the uptake and consumption rate of the self testing kits was monitored. This was based on the expected or projected rate based on the staff numbers. Tracking was done in each facility using kit batch numbers. Every Friday was reserved for monitoring and evaluation activities.

The staff members issued with kits were followed up for up to two weeks after which the kits were returned, if unused, and a survey done to determine barriers and/or special needs of the staff members. The test kit consumption results were also be captured in the national database using the government tools/registers. The tools were captured and filled using mobile phones via Microsoft excel application. The facility HIV testing rates were analyzed for the trend before and during the project.

### **Ethical Issues**

The project commenced after approval had been received from Nairobi University and CDC. The aim and purpose of all components of the project were discussed and agreed on with the hospital management teams and other relevant county staff and informed consent obtained from the authorities. The HIV testing was done according to the WHO and national HTS guidelines and relevant follow up done as necessary. Confidentiality of the information obtained was guaranteed to the participants.

## Results

During the project implementation in March and April 2019 100 inpatient files were sampled as they were in the wards. Sixty eight of these clients had been tested while 32 were known patients on care. This gives an apparently low HIV testing rate of 68% but actually all inpatient clients were offered HTS.

In the Outpatient Department, a similar number of patients were sampled and 87% noted to have been tested for HIV. This is partly due to the facility's policy of testing all OPD clients. The 13% were thus not eligible for testing since they were of known status. In addition, people who accompany clients to the wards as caregivers are offered HTS and their data is captured in the OPD register. It is worth noting that HR capacity and availability of commodities were good enablers for HTS.

Nevertheless, it was not possible to know the testing rate among the staff members from the existing records. The project thus embarked on asking the health workers whether they had been tested/known their status in the last 6 months. Thirty eight percent responded affirmatively. Interestingly, all those who had tested themselves used the Determine test kits at home or had a colleague test them but outside the usual facility based HTS environment.

The fellow and PLP mentors then embarked on sensitization of healthcare workers at Homabay County Referral Hospital on the HIV self testing services and informed them of the availability of the same at the hospital specifically for staff. A few selected senior staff members at the facility were issued with the kits and their permission sought to allow other staff members to be sensitized and issued with the test kits too. Fifty six health workers who turned up were

sensitized at HCRH and 48 issued with the kits. The other 8 were not eligible since they had known their status in the last 6 months.

At the county health headquarters, 19 staff members were sensitized and 15 kits issued, 4 were not eligible. Thirty eight members of staff from the Homabay subcounty comprising the SCHMT and facility heads were sensitized and 18 kits issued. Thirteen others were eligible but missed due to limited number of kits. They were referred to Homabay County Referral Hospital PLP mentors office where the kits would be issued from. In Mbita subcounty, 24 health workers from the Subcounty Health Management Team and Mbita SCH were sensitized and 21 self test kits issued. In total, 103 kits were issued and on follow up after 10 days, 77 reported as having used the kits showing a huge demand as given by the high uptake of 74.7%.

Table 2 below tabulates the reasons given by the 26 health workers who had not tested themselves 10 days after being issued with self testing kits;

**Table 2: Reasons for not using HIV self test kits**

<b>Reason for not testing</b>	<b>Percentage (%)</b>
Need second kit to test with their partner	80.8 (21)
Need second kit to do repeat test after 3 months	76.9 (20)
Access to kits in future (cost and availability)	50 (13)
Need for pre/post test counseling/social support system	42.3 (11)
Others:	
Fear of knowing the results	11.5 (3)
Need for training/ demonstration	11.5 (3)
False positive results	7.7 (2)
Loss of job for HTS counselors	3.8 (1)

Nevertheless all the 26 noted that no need to prick was an advantage while 24 mentioned privacy and confidentiality as a positive of the OraQuick self test.

A key informant at the CASCO's office handling health promotion revealed that HIV self test kits had been recently received and distributed to the subcounties. Media houses had done sensitization through media (mostly local radio stations) but not by health workers although a partner (WOFAK) was interested in training the CHAs/CHEWs on it. The consumption rate was about 125 self test kits per month for HCRH, 34 for Rangwe subcounty and between 6 -10for other subcounties. These are mostly used for PMTCT services for couple testing. The main challenge in using the self test kits in the county is getting the results back since the existing tool mostly captures consumption and relies on clients will to bring back results. There was no specific program for giving health workers HTS. The county agreed to allocate 125 kits for the continuation of the project at HCRH with the possibility of escalating to other facilities that had been sensitized namely Mbita, Makongeni, and Sena HC in Mfangano Island.

## **Conclusion**

The high uptake of HIV self testing (74.7%) among health workers is in keeping with other studies done in Kenya. The HIV self testing kits compliments the HTS challenge and strengthens the HIV testing hence contributing to the goal of having 95% of the people knowing their status.

The high uptake and demand for the HIVST kits poses a challenge on how to manage the excess demand when a commodity is given free. Managing this excess demand is easier among health workers when there is a work place HIV control program in place. For the community, they can be controlled by CHAs/CHEWs who will refer any clients who need to confirm their status with the HTS counselors.

It was also noted that most health workers needed to incorporate couple testing using the self test kits and expressed the need to have ready access to the kits for repeat testing after 3 months.

They also desired to have a work place HIV support system especially for those testing positive.

It was also noted that there was need to escalate the HIVST service to other facilities in the county. This would require an increase in supply of the kits. A focal person needs to be identified in each facility to manage the service.

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## Appendix 1: Budget

125 HIV self-test kits	Nascop donation
Monthly airtime 5 persons @ 2000 for 1 month (4 project assistants and fellow)	10,000
Purchase of laptop for monitoring & evaluation	50,000
Purchase of 5 bags for HIV kits @2000	10,000
Surveillance meetings for hospital testing rates at the 8 subcounty facilities@9000 per day for 5 days (4WD vehicle hire and fuel), excludes Homabay and CHMT.	45,000
Sensitization meeting for CHMT (venue 10,000, transport for 10@1000)	20,000
Sensitization meeting facility heads (venue 10,000 , transport for 10@1000)	20,000
Rollout in selected 10 facilities by 5 implementers @ 2500 (transport/logistics)	125,000
Joint monthly M&E meeting/interviews in 8 facilities @ 5000 (transport 1000 x 5implementers but excludes Homabay CRH and CHMT)	40,000
Report printing and dissemination (20 copies@1000,venue 10,000)	30,000
<b>TOTAL Ksh.</b>	<b>350,000</b>

## Appendix 2: Antiplagiarism Report

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