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## **Quality Blood Sampling Techniques and Influence of Socio cultural Factors among ARVs Forces Community in Seeking Healthcare**

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### **Abstract**

Project monitoring and evaluation (M/E) determines resource accountability and its impact to various stakeholders. Plenary project success requires holistic community participation and empowerment. However, this approach remains unexplained in developing countries to ascertain the relevance, effectiveness, efficiency, outcome and sustainability of Donor initiated

projects. It was these reasons that M/E study was carried out in Forces ARVs clinic, to evaluate the trend uptake of quality blood sampling techniques, and influence of socio-cultural factors in seeking healthcare. Globally over 44 million projects initiated by developing partners are not evaluated to determine their future sustainability. In Kenya few private sectors do evaluation to measure project achievements. Furthermore 80% of projects initiated by Donors at community in our society, underscore in profits due to low uptake of community participation and appropriate technology utilization. By formal survey and rapid appraisal methods, data was collected based on problem based learning and community based education feedbacks on importance of quality blood sampling technique, Patient initiated counseling, testing approach and positive social change, determined by qualitative and quantitative sampling tools . Over 80%, positive impacts on project was noted with greater social change formulation concepts towards health seeking behaviors among ARVs households, due to consistence improved quality blood sampling techniques and overall healthcare that decreased the ill health and poverty in vicious cycle.

**Key words:** Appropriate technology, Monitoring & evaluation, Community participation, Sampling technique, Social change, Socio cultural

## **Introduction**

Monitoring and evaluation plans are developed based on thorough assessment process from entry point, feedback workshop, community based education by involves all relevant stakeholders, community and Development partners in order to promote positive impact, efficient, effectiveness, relevance and sustainability strategy measures on projects like evaluating the trend uptake of quality blood sampling techniques, (Carol, W., 1998), which tends to improves the social change on most socio-cultural factors and decrease negative impacts of the increased TICH model vicious cycle due to poverty and ill-health among the trapped ARVs households in Forces [1].

Forces CCC facility is located on Mbagathi road near Mbagathi county facility to serve as

a referrals to military society. The facility works in collaboration with KDOD, Water Reed Project and KEMRI. Globally above 73% of all pregnant women living with HIV globally received medicines that prevent transmission to their babies, 1.9 million people were newly enrolled on antiretroviral treatment in 2014, with 32% of children in need received treatment compared to 41% for adults, pointing to a larger gap between services for adults and children living with ARV disease , the management of ARV patients is determined by well equipped laboratory with quality standards of blood sampling techniques to enhance relevancy and efficiency result, that determine which best baseline drug regime to give ARV clients [2,3].

It was this reason that during the need assessment with CCC clinic community came to realize the need to improve blood collection using correct vacutainers , because most patient were being removed blood but it clot immediately before the test required is carried out or has been put in wrong vacutainers, hence this delayed drug administration and defaulter . During SWOT analysis in partnership feedback workshop became evidence, for plenary need of community to have community based education (CBE) on problem based learning (PBL) on how to collect whole blood for blood purple vacutainer and clotted blood in red capped vacationers besides explaining the importance of patient initiated counseling approach (PITC) [4], as the way forward for manage and sustain the ARVs community in Forces. It was for these reasons on which, we find the need, to evaluated the trend uptake of quality blood sampling techniques and determine the influence of socio-cultural factors in seeking healthcare among ARVs community in forces CCC clinics, Nairobi.

### **Blood Sampling for ARV Patients in Forces Clinic, Nairobi**

Anti retroviral drugs set road maps for health policy formulation to promote quality health care among PLWHAs which is determined by proper blood sampling and testing to provide result which act as indicators for ARVs drug management that enhance sustainable

livelihood in the community. ARV Medication contain 3 or 4 types of drug combination taken, two forms Highly Active antiretroviral therapy (HAART) which have severe side effects, that minimize the chances of drug compliance in most ARV patients. Community linkages and interactions promote health seeking behaviors that add values to CBHC/PHC to patients' therapy choice; recommendations analyze risks and potential benefits to patients against patient signs and symptoms [5].

Baseline survey tests for HAARTS forms a critical point in assessing immune system of patient and before is started CD4 count must be below 200 cell/microliter CD4 are glycoproteins on surface of T- helper cells, regulatory T-cells, monocytes, macrophage and dendric cells help to form and boost immunity of the body. CD4 cells are also used to monitor therapeutic efficacy and efficiency of ARVs [6].

In the process of need assessment on entry period, we discovered the need to explore a SWOT analysis among both facility stakeholders and PLWHAs and usually attends ARVs clinic in Forces to elucidate persistence drug defaulters and marked with high mortality and morbidity rates in HIV patients, despite dispensation of quality HAARTs supply in the clinic [7,8].

After several interviews with HIV positive community using a 'SWOT' analysis and came out with a number of opportunities, strengths weakness and treats facing community and the society at large, we appraised and did pair wise ranking of the weakness through participatory planning meeting to find long term solution to problems affecting ARV community using resources at hand resources, then date for feedback workshop and participatory processing involving TICH Facilitator and other stakeholders was agreed upon.

In feedback workshop / participatory processing priorities agreed on were planned for community based education (CBE) on problem based learning (PBL) on the following

indicators:

- 1) How to collect blood samples for various test of ARVs profile,
- 2) Failure to revive the collapsed HIV positive clubs and collapsed tea break programs with the
- 3) Brainstorm the impacts and outcome of the prolonged bad practices of socio-cultural factors hindering the sustainability of ARVs positive clubs in Forces CCC clinic.

### **Patient involvement in ARVS Drugs Management**

Patient initiated testing and counseling (PITC) approach built confidence in ARVs community on HAART uptake, and builds trust among PLWHAs at both micro and macro levels, to allow the ownership and sustainability of activities at HHS, using appropriate technology owned. Advocacy for couples attendance CCC clinic and reversing of positive club aimed to restore the lost glory of positive clubs the enabled the community of PLWHAs to own problem and forge a head to sustain health goals. In discussion with developing partners we recognized one main weakness of not providing supplement diet, breakfast and snacks during a focus group discussion as one of the factor contributing to HAART defaulters; hence we agreed to re-energize the supplement of nutrient diet again to all ARVs community attending CCC clinic. Citing stigma from the society, due to isolation of their clinics from the main facility block was discussed in FGD and was resolved by future plans to integrate, with others clinic such as MOPC, GOPC, SKIN being run at similar dated and hours [9.10].

### **New methods learnt, new Revelation and concepts to be explored**

Problem based training workshop carried out via a community based education; so that it could provides competence based learning opportunities to most ARVs community with a wide range of HAART options to reduce the rate of drug defaulters in Forces society, through synergistic partnership to improve challenges and live future better lives.

After six months of the workshop, statistics indicate low outcome, 35% prevalence in drug defaulters and resistance among ARVs households. Clinicians also learnt in CBE the roles

played by psychosocial counseling and patient initiated testing and counseling (PITC) approach in plenary management of PLWHAs as an option of managing ARVs Forces community. Most health service providers appreciated the need for diagnostic testing and counseling before initiating HAART as away to sustain the efficacy and efficiency of patient drug management. Also noted how improved synergistic partnership influences the relevancy of therapeutic intervention of ARVs, besides involving communities of PLWHAs in decision making.

### **Situation analysis and needs assessment**

Integrated care clinic in Forces Nairobi, consist of service provider working in collaboration with health sector, KDOD, Water reed, project and others from the sector wide approach. During entry process, met elites and beneficiaries of the clinic, identified area of highly active antiretroviral treatments (HAART), drug defaulters as the first priority / concern and employed the SWOT analysis to reveal other areas that needed urgent attention [11].

To facilitate mutual participation among PLWHAs and during the discussions ‘SWOT’ analysis tool was used to capture deep rooted ideologies and hidden problems affecting the community. Weakness of ARVs community and service providers were given appraisals and ranks using prevalence and pair wise ranking methods. Community participation was involved in series of discussions at various levels with stakeholders to come up with following:

### **STRENGTHS**

- i. Prevailing support from mother units and other inter-collaborated partners
- ii. Prevailing support from service providers attached to the CCC clinic (clinician, paramedic and community health workers).
- iii. Availability of sufficient drugs supply and quality health care

### **WEAKNESS**

- i. Insufficient HAART management in clinic using direct identification testing and

- ii. counseling (DITC) ( patients are admitted with a different condition /disease but only to diagnosed, HIV test positive, hence, HAART are prescribed , before counseling or getting informed consent from patient ,thus main cause drugs defaulter may be
- iii. Failure to revive tea break program in triage and supply nutrient supplement to those who attended CCC clinic
- iv. Failure to reinstate brainstorming / discussion and HIV positive clubs/regular counseling project in triage

### **Opportunities**

- i. Sufficient supply of antiretroviral drugs and nutrient supplements in CCC clinic
- ii. Job guarantee and security maintained
- iii. Present of efficiency and effective centralized quality health care

### **Threats**

- i. Isolation to participate in UN peace keeping among those tested positive
- ii. Limited, access to essential drugs, healthcare and community capacity building after retirement due to widening gap of poverty trends
- iii. Citing community and society stigma and vertical transmission to unborn children
- iv. Socio- economic injustice and stagnant future developments sero positive society

### **Feedback Workshop**

During the CCC participatory planning and feedback workshop, climate setting was prepared and weakness of medical importance were read three times for validation and made aware in openness. Appraisal, need assessment were made through prevalence, pair wise ranking, an priorities were set based on resources available. All members agreed to work as a synergistic team in the implementation; evaluation and preplanning in areas where need arise for future sustainability , participants also agreed to solve most problems emerged in discussions based on the order of ranking with minimal resource requirement first, then follow with those that need glossily funds.



**Logical frame work action (LFA)**

The logical frame work on project monitoring and evaluation on implementation process

<i>Narrative summary</i>	<i>Objective verification Indicators (OVIs)</i>	<i>Means of verification(MOVs)</i>	<i>Important / Critical Assumptions</i>
<p><b>Goals</b></p> <p>Reduce morbidity by promoting PITC approach</p> <p>Increase number of HIV positive clubs and mental health and education</p> <p>Increase budget allocation for tea break program</p>	<p>Number of VCT sites and sensitize inpatient clinicians on importance of mental health</p> <p>No. of drug compliances</p> <p>Number of qualified mental professionals</p> <p>No of VCT sessions/day</p> <p>Number of new kitchen and cookerries in the community</p> <p>No. of cooks raised to 4</p>	<p>Visit in triage sites and get reports</p> <p>Pharmacy records</p> <p>New mental health employees and books</p> <p>Visit the site</p> <p>Tender report invoice</p>	<p>Inpatient clinicians will comply</p> <p>ARTS drugs will be plenty</p> <p>All HIV households will join the clubs ,participate and brainstorm effectively</p> <p>Funds will be available</p>
<p><b>Outcome</b></p> <p>Reduced morbidity and mortality rate in CCC</p> <p>Increased mobilization and sensitization in positive clubs and brainstorming sessions</p> <p>Increased budget allocation tea breaks and cookerries</p>	<p>Number of VCT sessions attendants raised from 10 to 45 households per week</p> <p>No of morbidity/mortality rates reduced</p> <p>Number of mental health professions raised from 3 to 12</p> <p>Number of participants raised</p> <p>No. of ARTS defaulters reduce</p> <p>No. Budget items allocation per annum</p>	<p>Records of attendants</p> <p>Weekly turnout</p> <p>Records of new staffs</p> <p>Strategic plan for continuation education</p> <p>Financial records</p> <p>Procurement records</p> <p>Tender reports</p>	<p>All essential resources will be available to motivate the community</p> <p>Stakeholders will provide good package salary and allowances to staffs</p> <p>Water Reed project will fund the program</p> <p>KDOD will fund</p>

<p><b>Output</b></p> <p>Employ more staffs and put mechanisms of career progressive in place</p> <p>Increment of salary to all staffs</p> <p>Increase stalk of ARTS</p> <p>New development on compound</p>	<p>Number of staffs increased from 20 to 41 basing on inter-secterol collaboration</p> <p>39% Basic salary raised</p> <p>No. of annual supplies raised from 150 tons to 200</p> <p>No of buildings in compound</p>	<p>List from the numerical registers</p> <p>Current pay slips</p> <p>Procurement records</p> <p>Invoice</p> <p>Visit site</p> <p>Construction reports</p>	<p>Water will fund the program</p> <p>Water Reed Project will fund the program</p> <p>HIV positive households will consume drugs</p> <p>Resources will be available</p>
<p><b>Activities</b></p> <p>TOT of clinician on mental health</p> <p>Mobilization of HIV positive clubs in the community participation</p> <p>Facilitate CBE/ CBHC among the households</p> <p>Preparing improved diet and tea</p>	<p>No of Voucher</p> <p>No of positive clubs registered</p> <p>No of HIV positive household attending clinics</p> <p>No. of session per day raised</p> <p>No of households consuming snacks and tea</p>	<p>Payment vouchers</p> <p>List of HIV facilitators</p> <p>Visit site</p> <p>Records</p> <p>Records returns</p> <p>List of participants</p> <p>records</p>	<p>Money resource will be available for payments</p> <p>Project will prosper and be sustained</p> <p>Resources will be available</p> <p>Funds will be available</p> <p>Resources will be available</p>

**Establish the Impact of Socio Cultural Factors on Trend uptake, of Antiretroviral Community on Seeking Healthcare**

Project monitoring and evaluation on change of Knowledge, Attitude and Practice (KAP) and believes among seropositive households on many socio-cultural practices such as poverty of vicious cycle, wife inheritance, and fear of stigma from the community has drastically decreased through informed social change, information, education and communication. Such forums provide positive focus group discussions to enhance households on improved health seeking behaviors [12,13].

Visiting VCT with sexual partners for screening and HIV checkup are paramount of importance. These have resulted to all identified positive to take control and avoid spreading disease[14].The role of partnership progress has also help HIV positive households to understand that HIV/Aids disease is like others and success is determined by persons themselves realizing that is part of them and many have suffered and are still alive because the accepted the situation.

Statistics also show that most CCC clients have turned to small micro business and other projects of investment for their next kins as formative evaluation on what they learnt in the competence based learning. (Positive club desk review) and to break the linkage of poverty and ill- health in the community and enhance social capita and decentralized the service to other forces units to ensure accessibility, acceptability and accountability of drugs consumption

**Blood Sampling for ARV Profile Testing**

Blood sampling are performed for various tests and functions, (Global health, 2013) for instance, urea and electrolytes are dispensed in green capped vacutainers. Squeezing of blood through the needle spoils the cell architecture and causes blood haemolysis with time. Forceful mixing of blood may cause negative impacts to outcome results. Storing of CD4, CD8 in cold room reduce cell count being evaluated [15]. Storing of blood count and Serum tests

samples in the room temperature for more than 4 hours may provide an impact variation on tests [16].

### **Common Samples for HAART**

- i. CD4,CD8
- ii. Viral load and sputum
- iii. Fulhaemogram- blood count
- iv. Liver function test
- v. Urea ,Creatinine ,electrolytes

### **Color Coded Caps**

<b>Code</b>	<b>Sample required</b>	<b>Quantity blood mls</b>	<b>Test</b>	<b>Shelf Life at correct temperature specification</b>
Purple	Whole blood	4	Fulhaemogram ,/ESR	4hrs form the time of bleeding At 6c*
Dark -green	Whole blood	4	CD4,CD8	7days because of stabilization in the preservatives at room temperature
Purple	Whole blood	6	CD4,CD8	48 hrs at room temperature
White purple-red with gel	plasma	5	Viral load	1 month in freezer
Red	serum	5	Liver function test, urea electrolytes, creatinine	4 hrs at 6c*

Source, (UNDP, Global health, 2013)

**Note-** Prolonged pressing of the tourniquet forms stasis which cause a negative impact on test results

### **Standard Procedures of Specimen Collection**

#### **Whole Blood (Purple Caps) and Plasma (White-Red Purple Cap)**

- i. Control tourniquet in a short period to avoid stasis and adhere to all aseptic techniques

- ii. Disconnect needle from the syringe and dispense blood into container gently by side to retain cellular architecture blood
- iii. Recap and shake very calmly and slowly for a few seconds and you MUST avoid vigorous mixing due to impacts on test results
- iv. Store vacuotainer in its specific temperature
- v. Refer to specific laboratory within the hour of bleeding

### **Red Cap (Serum Samples)**

- i. SOPs for serum blood are done by not mixing blood because we are interested with clotted specimen
- ii. Stored or transported on the rack upright to referral laboratory for serum separation by centrifugation within the 2 hrs of collection.

### **Outcome of Improper blood Specimen Collection / Storage**

- i. Most test results performed from the laboratory are unreliable, non – specific and not precise, hence do not reflect the real clinical history of the patient.
- ii. Haemolysed sample are never processed for any test in laboratory
- iii. Miss-identification of blood specimen or specific test, plenary interferes with test outcome.

### **Impact of Poverty and Stigma among ARVs Population**

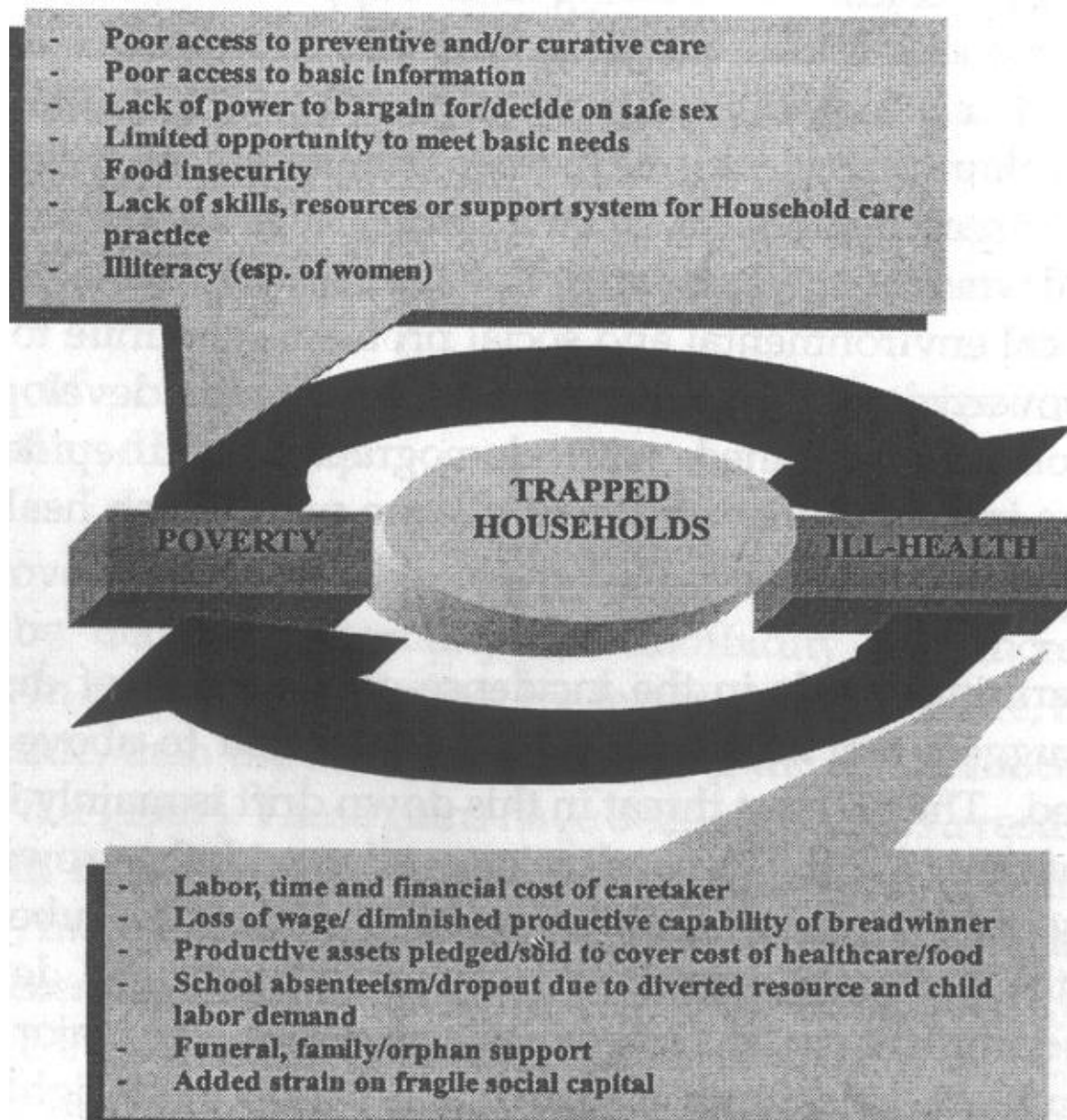
The interaction between ill health and poverty according to Townsend 1889 survey in England showed out that infant mortality among the lower income earner is higher than upper income earners and he recommend for public health policy interventions to correct the imbalances via targeting the disadvantaged population in the community units [1], This picture is depicted also in my partnership site among PLWHs

The complexity of poverty in forces CCC is depicted by vicious cycle where the household units are marked with low income; low consumption, low capacity low productivity, and low

income .The cycle continue to trap the HIV households in a regular constant poverty.

Complexity of poverty in the community can be depicted by TICH model of vicious cycle that traps household in constant poverty due to low income, low consumption, low capacity and low income [1],

### **TICH Partnership Model of Vicious Cycle**



## **Methodology & Materials**

### **Evaluation Area**

Monitoring and evaluation indicators on trend uptake of quality blood sampling and socio-cultural influence on ARVs community was carried out in Forces CCC clinic evaluating impact of problem based learning on Community based education, on trend uptake of quality blood sampling and socio-cultural influence ( Stigma, poverty and limited access to quality healthcare) [17].

### **Evaluation Design**

This was cross-sectional and mixed evaluation, formal survey (quantitative) to explore levels of blood sampling and influence of socio-cultural factor on drug compliance by Forces ARVs community. In qualitative data was collected using (Rapid Appraisal methods): focused group discussion (FGD) guide, Key Informants interviews (KII) and Observation, by looking listening and learning during transect mapping, was also explored by using a structured observation checklist during a walk-through health survey.

### **Evaluation Population**

Purposively to ARVs community diagnosed positive for HIV virus, members from Water reed project Kenya (development partner), health professional attached CCC clinic and Community-Owned Resource Persons, (CORPs).

### **Inclusion Criteria**

All development partners, service providers, health professions and ARVs community who have worked or participated CCC clinic for more than three months in Forces CCC clinic

### **Exclusion Criteria**

Service providers and health professions, whose services delivery are not related to providing service in Forces CCC clinic or have come for less than 3 months in the clinic for ARV drug management,

### **Evaluation Design**

Systematic purposive evaluation design by pair ranking of emerging trends on how to solve problem using resources at hand before proceeds to ones that require colossal of money or funds was evaluated. An evaluation frame was developed from CCC community of patients and service providers registers. The facility was evaluated based on the opinion of key informants and on the total number of service provider in relation to CCC clients attending Forces clinic, Upon entry into a health facility, service providers or health profession will be asked to draw a list of staff present and patient attending the clinic for that particular day. Demographic data was recorded and then grouped in number of 8- 12 members of different cohorts and sex. This process was carried out until the required evaluation process was, saturated.

For rapid appraisal methods, focus group discussion (FGD) and key informant interview (KII), questionnaires guides were administered and discussed to saturation [14]. Transect mapping and observation by listening, learning and looking on other related blood sampling and other socio-cultural provided important information not captured before, by chief evaluator's questionnaires.

### **Sample Size Determination**

Since patients who were on ARVs drug management were few in society and made visits for CCC clinic on separate dates of the year, evaluation size for the project was left open to ensure more relevancy and accuracy of data information.

### **Selection and Training of Evaluation Assistants**

3 evaluation assistants were trained on monitoring and evaluation techniques, counseling, data collection, recording and handling data. All unforeseen challenges likely to come up during the evaluation were addressed in a de-briefing workshop, organized at the end of every event. The evaluation assistants include CORPs, hospital administrators and CCC staff, who from time to time implemented CCC target



### **Field Data Collection**

Field data collection team comprised of one team leader, who was the principal evaluator, 3 evaluation assistants. The teams were divided into three groups, based on the site of the facility they were working, in order to facilitate answering questionnaires, (KII) and (FGD) discussions. The supervisor of the team upon arrival at the facility was introduced to the person in-charge of the facility to explain the purpose of the evaluation as follow up of project initiated before, in order to obtain consent. Consent was obtained from each respondent, before questionnaires were distributed. After completing the entire task for each clinic, the evaluation teams review their filled tools to ensure its completeness and then summarize before proceeding to the next clinic.

To ensure that quality data is collected, the principal investigator / evaluator was involved throughout the entire process of data collection. This ensured completeness, consistency, and accuracy in data collection, with challenges experienced during data collection in evaluation being discussed at the end of each day.

### **Questionnaire**

Quantitative data was captured through survey, by administering questionnaires. The qualitative data will be collected using an interview and focus group discussion guides. Information to be obtained includes-, demographic profiles, blood sampling test, period on ARVs drugs [9].

### **Key Informants Interview (KII) Guide**

Key informants were used as rapid appraisal method to evaluate in-charge of CCC clinic or the staffs. The KII guides were tailored also to suitable respondents.

### **Focus Group Discussion (FGD)**

A structured group guide was formulated to gather information on knowledge, attitude and practice of both service providers, CCC clients and other health professionals, on quality blood sampling and inquest on the influence of socio-cultural factors on trend of ARVs drug

uptake. Each (FGD) composed of 10 and 12 representative discussants, selected based on gender, age, experience, skills, level of education and appropriate skills and technology acquired. This ensured homogenous, free, fair and active participation. Discussions were moderated by the lead evaluator, while research assistants observe body language and take notes during discussion [14].

### **Transect Walk and Observation Check List for Rapid Appraisal methods**

A check list guided the mapping and observation during a walk-through survey in the clinic by principal evaluator. This provided information on spatial infrastructure presence of sufficiency and serviceable laboratory equipment to enhance efficiency in service delivery.

### **Data Processing and Presentation**

Data was cleaned to ensure that only valid and complete materials were analyzed. All questionnaires were coded to ensure confidentiality of the respondents. In qualitative data processing, discussions were held with (CCC clients and service providers) discussants. FGD guides and exit interviews with CCC clients, health profession and service providers respectively, which were made and conveyed in every session. Emerging themes and sub-themes were discussed to saturation points while taking notes or by audio recording or videotaping to retain verbatim in captions. This was presented in boxes and italic form as caption to describe challenges facing the ARVs community and service provider attached to CCC clinic.

### **Ethical Consideration**

The monitoring and evaluation proposal was receive approval from the Great Lakes University of Kisumu. In addition, permission and clearance were obtained from the relevant offices in the Ministry of Health, Development partners and department of Defense. Evaluation results, remained restricted and confidential, consents were also be sought, from all respondents, before questionnaires are administered. All the information obtained from respondent was treated with confidentiality. The evaluation was flexible to allow any respondent to withdraw

any time. The interviews were based on voluntary participation and only respondents willing to answer questions were recruited. The respondents were not paid or compensated for their participation.

**Dissemination of Results**

Preliminary impacts and findings on the evaluation of quality blood sampling and influence of socio-cultural factor of ARV community in Forces CCC clinic Nairobi, were shared with District Health Management Teams (DHMTs), DOD medical department and Water Reed project in Kenya, create a forum for policy development. Findings will also be made available to the public, through journals portals, and in the GLUK University Library.

**Findings and Discussions**

**Task Analysis worksheet**

<b>What has to be done</b>	<b>Why it has to be done</b>	<b>How it has to be done</b>	<b>How well it has to be done ( indicator)</b>
Remove specimen for HAART test With highest degree of excellence	Reduce HAART incompliance and multi- resistances in community in shortest period possible	Training clinicians ,Lab techs and CHW/Ds	Records on precise and reproducibility of result done
Provide plenary counseling session to DITC households before we begin them on HAART.	Allow the household to accept their sero status and live positively while on HAART drugs	Provide regular counseling sessions using psychosocial approach in the CCC by psychologist and counselor nurse	Records on lower cases for in patients

**Results Analysis Worksheet**

<b>Task requirement</b>	<b>Excellent</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>
Bleeding technique	✓			
Correct specimen identification by CODE of the cap container For CD4,CD8,Fulhaemogram,blood urea nitrogen liver function tests Sputum and histopathology	✓	✓		
Correct specimen dispensing in required container with preservative/fixative	✓			
Gently specimen mixing immediately before storage	✓			
When to refer the specimen to the laboratory within the hour of collection		✓		

**Outcome on Impacts of Problem Based Training on Community Based Education Held in Forces Clinic**

- i. Over 80% of staff in phlebotomy section were bleeding patient using the standard guide facilitated by the TCH student. Correct specimen identification by the code of the cap of the container for base line study for HAART was being followed and hence patient specimen turnaround time was greatly effective and efficient.
- ii. Majority of test requested by clinician on ARVs profile were now relevant to Correct dispensed specimen ( *collected in its required container with fixative /preservative*) and results were also SMART,-. Result were specific to clinical history of the patient, measurable, accountable to technologist who did it, realist and time bond thus outreach clinics benefit much from the laboratory service then.
- iii. Haemolysis of patient blood sample had reduce by over 78% due concept of gently specimen mixing immediately after collection/before storage in the correct temperature adapted in CBE training doe by TICH facilitation.

- iv. When and how to refer the Blood specimen to the reference laboratory for second opinion had decreased by 50 % because gradual improvements of service delivery in CCC clinic These result were support by one of the project development partner, Water Reed Project in KII interview who said

*Siku hizi damu haikandi na majibu yacha wakati ufao . Hata patient from Nyanyuki Barracks are treated on that very date wameonnegana kwa daktari, not like zamani when they use to come for results in the next visit. we highly appreciate TICH student from Gluk , (KII interview ,held on May 2015)*

***“ Nowadays patients gets results at correct time, even those from far barracks like Nanyuki are treated on the very date of clinic appointment doctor. It is not like long age where they use to come for treat on their next visit, but sample still some could not get results from lab because of grossly haemolysed samples. We highly appreciate TICH student from Gluk turnaround time is promising, (KII interview ,held on May 2015)***

**Outcome CBE Training On Socio-Cultural Factors (*Poverty, Stigma, Nutrition Supplement*)  
Influence ARV Compliance**

**Measurable Indicators Surveyed**

- i. Direct initiated testing and counseling (DITC), medical approach where HIV test is done to inpatient, those found to be positive for HIV/ AIDS, their CD4 cell are below 200 cell/micro liters are started (HAART) highly active antiretroviral treatment before being counseled.
- ii. Patient initiated testing and counseling (PITC), medical approach where, the patient voluntary built confidence for HIV testing, if found positive and CD4 cells are below thresholds, request for HAART and also goes further to discuss with partner and other

family members to rule out issue of citing stigma.

- iii. Revival of the collapsed HIV positive club health talks/counseling
- iv. Revival of the collapsed tea break program, nutrient supply and food supply [4].

### **Outcome and Impact Of Social Change**

After series of consultation in focused group discussions and KII interviews with Service providers and other health professionals, agreed to involve and facilitate HIV positive patients in PITC approach before initiating the baseline HAART, since this approach has less drug defalters and resistance, compared to DITC approach,

ARVS community agreed regularly sensitize among themselves in triage and their sexual partner on importance to accepting their positive status and avoid spreading HIV disease to unaffected partners/ population.

Development partners and KDOD accepted to continue offering breakfast at 100% waiver on food supplement, even after retirement of the beneficiaries from service.

### **Conclusion**

There is plenary need to organize society efforts from various stakeholders and Development partners involving communities in synergistic community project / program in order to eradicate the widening vicious cycle of TICH model, in modern society.

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