IMPLEMENTATION EVALUATION OF TUBERCULOSIS AND HUMAN IMMUNO DEFIECIENCY SYNDROME COLLABORATIVE ACTIVITIES AT HEALTH FACILITY LEVEL IN JIMMA ZONE, SOUTH WEST ETHIOPIA

BY

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EVALUATION THESIS SUBMITTED TO JIMMA UNIVERSITY, COLLEGE OF PUBLIC HEALTH AND MEDICAL SCIENCES, DEPARTMENT OF HEALTH SERVICES MANAGEMENT AS PARTIAL FULFILMENT OF THE REQUIREMENT OF THE DEGREE OF MASTERS OF SCIENCE IN HEALTH MONITORING AND EVALUATION

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Abstract

Background: Worldwide about 11.1 million adults are co-infected with tuberculosis and human immune deficiency syndrome. Seventy percent of co-infected people are living in sub-Saharan Africa, 20% in South East Asia, 4% in Latin America and the Caribbean. In Ethiopia routine data from 44 sites in the year 2005/6 showed 41% of tuberculosis patients were Human Immune virus positive. Another routine data collected in 2006/7 showed that the co-infection was 31% from Federal Minister of Health. These figures show the severity of the co-infection in the Country.

Evaluation Objectives: To identify gaps in creating linkage among Tuberculosis and HIV/AIDS collaborative activities in Jimma zone, Southwest Ethiopia, 2010.

Methods*:* The Evaluation was conducted in selected health facilities of Jimma zone. It was facility based descriptive Cross sectional Implementation Evaluation. It was conducted in eight of the 15 health facilities who implemented tuberculosis and human immune deficiency syndrome collaborative activities. The dimensions were Compliance and Availability. The approach was Formative aimed at improving the program with the involvement of stakeholders. The focus was Process by assessing the Availability of inputs and linkage. The data collection methods were the combination of expert interview, observation and document review. Supervisors and data collectors were Tuberculosis and Human Immune Deficiency virus collaborative activity trained health professionals which were previously trained at their work health facility. The analysis was done on SPSS 16 version and descriptive analysis was done.

Results: Of the total 8 selected health facilities in Jimma zone 68% of health facilities had inputs through out 2010 and of the total 1427 clients in Jimma zone 70% of the clients were linked.

The overall achievement of availability and Compliance dimensions were 68% and 70% respectively. The resources recommended by the Guideline were available except trained Human resource, Anti retro viral medication, Cotrimaxzole and Isoniazed drugs in some health facilities.

Conclusion and Recommendations: From the study even if the over all achievement was good HIV and tuberculosis is very sensitive and creates social, economical and political crisis on the country it needs special attention and it should followed critically.

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List of Acronyms and Abbreviations

AFB: Acid Fast Bacilli

AIDs: Acquired Immune Deficiency Syndrome

ANC: Antenatal Care

ART: Anti Retroviral Therapy

CDC: Centers for Disease Control and Prevention

CPT: Cotrimaxzole Prophylactic Therapy

Dr: Doctor

EPTB: Extra Pulmonary Tuberculosis

FCE: Facilitator for Change Ethiopia

FHAPCO: Federal HIV/AIDS Prevention and Control Office

HIV: Human Immuno Deficiency virus

FMOH: Federal Ministry of Health

HPPD: Health Program Provisional Department

i.e.: That is

IPT: Isoniazed Prophylactic Therapy

JU: Jimma University

KM: Kilo Meter

MDR: Multi Drug Resistance

MSH: Management Science for Health

NGOs: Non Governmental Organizations

OI: Opportunistic Infection

OSSA: Organization for Social Service for AIDS

PLWH: People Living with HIV

Pro TEST: Promotion of Human Immuno Deficiency Virus test

PSA: Pharmaceutical Supply Agency

SNNPR: South Nations, Nationalities and Peoples Region

SOPs: Standardized Operating Procedures

SPS: Strengthening Pharmaceutical System

SSA: Sub Saharan Africa

STI: Sexually Transmitted Infection

TB: Tuberculosis

TB/HIV: Co-infection of Tuberculosis and Human Immuno Deficiency virus

THAC: Tuberculosis and Human Immuno Deficiency virus Advisory Committee

TLCP: Tuberculosis and Leprosy Control Program

UNAIDS: United Nation Program on Acquired Immuno Deficiency Syndrome

VCT: Voluntary Counseling and Testing

WHO: World Health Organization

Chapter 1- Back ground

1.1- Magnitude of the problem

1.1.1- Global situation

TB is still a major cause of death worldwide, but the global epidemic is on the threshold of decline, except Sub-Saharan Africa (SSA). There were an estimated 8.8 million new TB cases in 2007, (of which 11% were under 15 children) 7.4 million in Asia and sub-Saharan Africa. A total of 1.6 million people died of TB, including 195, 000 patients infected with HIV[1]. Globally the number of people living with HIV (PLWH) continues to grow as does the number of deaths from HIV/AIDS. According to UNAIDS report, a total of 33.2 million people were living with HIV in 2007. This figure includes the estimated 2.1 million adults and 420,000 children who were newly infected with HIV in 2007. There were 2.1 million deaths as a result of HIV in the year 2007. Sub Saharan Africa continues to bear the burden of the global epidemic. A total of 22.5 million (67.7%) of the global people were living with HIV in 2007 in the sub-Saharan Africa and an adult prevalence of 5% was reported. Worldwide about 11.1 million adults are co-infected with TB and HIV. Seventy percent of co-infected people are living in sub-Saharan Africa, 20% in South East Asia and 4% in Latin America and the Caribbean [1].

1.1.2- National situation

Ethiopia stands 8th in the global rank by estimated number of TB cases. The incidence of TB in Ethiopia is estimated at 152 and 341 per 100,000 populations for new smear positive pulmonary and all forms of TB respectively. The prevalence of Tuberculosis of all forms in the same period was estimated at 546 per 100,000 populations[2].

In Ethiopia the adult prevalence of HIV was estimated to be 2.2% in 2007. The prevalence among the urban and rural populations during the same period was estimated at 7.7% and 0.9%, respectively[2]. The total number of PLHIV in the same period was estimated to be 1,037,267 adults and 68,136 children. The number of new adult HIV infection for 2008 was estimated to be 125,147 for adults and 14 093 new pediatric infection because of vertical transmission. The number of deaths due to AIDS for the same period was estimated to be 58,290 for adults and 9,284 among children. The number of PLWH who need to be started on ART in 2008 was estimated at 289,734 for adults and 17,274 for children under the age of 14 years. In Ethiopia

routine data from 44 sites in the year 2005/6 showed 41% of TB patients were HIV positive. Another routine data collected in 2006/7 showed that the co-infection was 31% [3].

Ethiopia is among the countries most heavily affected by the Human immunodeficiency Virus (HIV) and tuberculosis (TB). There are an estimated 1.3 million people living with the virus and roughly 68,136 of them were children under 15 years. The World Health Organization (WHO) has classified Ethiopia 7th among the 22 high burden countries with TB and HIV infection in the world. The annual TB incidence of Ethiopia is estimated to be 341/100,000. TB mortality rate is 73/100,000 and the prevalence of all forms TB is estimated to be 546/100,000. About 40-70% of HIV patients in Ethiopia are co-infected with TB[4].

1.1.3- Local situation

A total of 40779 cases of TB in 2006/2007 by health facilities in Oromia Region. The incidence of TB was higher in urban areas compared to rural areas. A total of 29,590 individuals living in Oromia Region were reported to be seropositive for HIV infection in 2006/2007. Similar to tuberculosis, HIV infection had a higher reported prevalence in urban areas compared to rural areas[5].

The incidence of TB and prevalence of HIV infection using a 2006/7 data from Oromia Region Health Bureau, suggesting that the prevalence of HIV infection is associated with up to 47% of the variance in tuberculosis infection at the regional level[5].

A cross sectional study done in three hospitals in Ethiopia including Jimma university referral hospital that found in Jimma zone on the synergy between TB and HIV confection on perceived stigma in Ethiopia says that a total of 591 participants were included in the study of whom 124(20.9%) were co infected with TB and HIV. The stigma items were highly reliable and strong inter dimension correlations. Respondents who were co infected with TB and HIV were more likely to have perceived stigma compared to non co infected HIV patients[6].

1.2- Statement of the problem

HIV pandemic presents a massive challenge to the control of Tuberculosis (TB) at all levels. The synergy between TB and HIV is strong i.e., in high HIV prevalence population, TB is the leading cause of morbidity and mortality, and HIV is driving the Tuberculosis epidemics in many countries, especially in sub Saharan Africa. HIV increases susceptibility to infection with mycobacterium Tuberculosis, the risk of progression to TB disease, and the incidence and prevalence of TB. The annual risk of developing TB in peoples who is co-infected with Myco

bacterium Tuberculosis ranges from 5 to 15% as compared to 5 to 10% life time risk for HIV negative individuals. It also increases the likely hood of re-infection and relapse of TB. TB increases HIV replication, which leads to increased viral load. These results in more rapid progression of HIV disease, TB increases occurrence of OI s in HIV patients, the management of TB and HIV co-infected individuals is challenging because of pill burden, increase adverse effect and drug to drug interaction[7]. Because of this problem the program was started but from some literatures done after the program implementation on TB/HIV co-infection the prevalence is not decreasing as expected.

1.3- Interventions to avert the problem

Based on the lesson learnt from the protest model of WHO's project piloted and used VCT as entry point in three countries of SSA with high HIV prevalence and TB burden, WHO made call to four countries of sub Saharan Africa (SSA) including Ethiopia with high prevalence and TB burden to introduce and implement TB/HIV collaborative activities by the end of 2001. Because of the call and the high prevalence of the problem Ethiopia start interventions to avert the problem.

These main interventions done to avert the problem were; Establishment of TB /HIV advisory committee by 2002 which includes key stake holders from the TLCP/FMOH and HPPD/FHAPCO(the HIV/AIDS and STI team),major multi- and bilateral donor organizations, research institutions ,academic institutions and professional associations; TB/HIV sensitization workshops targeting stakeholders; Assessment of site; Recruitment of TB /HIV coordinator; Training of health workers and provision of drugs and supplies; Launching TB/HIV collaboration; Initiation of ART; Carrying out of advocacy, communication and social mobilization activities; Developing guidelines and standard operational procedures to standardize TB/HIV prevention ,care, treatment and support service[8].

1.4- Overview of the program

1.4.1- Program description

The association between HIV and TB has now become more and evident in general. TB is often the first opportunistic infection in HIV infected persons and active TB has been shown to induce HIV virus replication, thus accelerating progression of AIDs .It has also been found that latent infection in HIV positive persons reactivate at a rate of 10 percent per year (as opposed to

5-10 percent) over a life time for HIV infection with new strain of TB from the community and drug resistance may occur more frequently[9]. Because of increasing burden of TB and HIV on TB Ethiopian ministry of health in collaboration with WHO and other stakeholders was started TB/HIV collaboration activities program at national level and it comes down ward to regional state and Jimma zone was started in 2006 in collaboration with SPS and MSH in all Woredas. The program has 3 main components and 12 sub components. These are;

1) Establish the mechanisms for the collaboration with 4 sub components(set up a coordinating body for TB/HIV activity effective at all levels, conduct surveillance of HIV prevalence among tuberculosis patients, carry out joint TB/HIV planning and conduct monitoring and evaluation)[1].

2) Decrease the burden of tuberculosis in peoples living with HIV/AIDS with three sub components (establish intensified Tuberculosis case – finding, introduce Isoniazed preventive therapy and ensure Tuberculosis infection control in health care and congregate setting[1].

3) Decrease the burden of HIV in Tuberculosis patients with 5 sub components(provide HIV testing and counseling, introduce HIV prevention methods ,introduce Cotrimaxzole preventive therapy, ensure HIV/AIDS care and support).The collaborative activities done in all three clinics(VCT,ART and TB clinic)[1].

1.4.1.1- Program Theory

Program theory of TB/HIV collaborative activities program which is the theoretical assumptions of the national TB/HIV collaborative activity program. Based on the theoretical assumption to decrease the burden of HIV on TB and the reverse to decrease the burden of TB on HIV the program should be performed based on the following theoretical assumptions;

To decrease the burden of HIV among TB patients routine HIV testing and counseling for TB patients and suspects in TB clinic by TB/HIV trained health professionals to link to ART, CPT for those HIV positive TB patients; by linking to Cotrimaxzole preventive therapy (CPT) at ART clinic or TB clinic those patients who are HIV positive and TB positive according to the health facility infrastructure to prevent other opportunistic infections; by linking all HIV patients to ART for those HIV patients who eligible ART[8].

To decrease the burden of TB among people living HIV (PLHIV) by routine offer of TB screening for all HIV positive clients to link to CPT and anti TB drug; by linking all HIV positive TB negative clients to INH therapy (IPT) at ART clinic[8]. In addition to the above One

of the aims of TB/HIV program is to organize TB/HIV service as a part of general health service to the community. For this community TB/HIV care supporter has very important[5]. All HIV infected who are TB negative person is only eligible if she/he is motivated and willingness to take IPT (after appropriate counseling for adherence) .All HIV infected person who are TB positive is only eligible if she/he is motivated and willingness to take CPT (after appropriate counseling for adherence) [4]

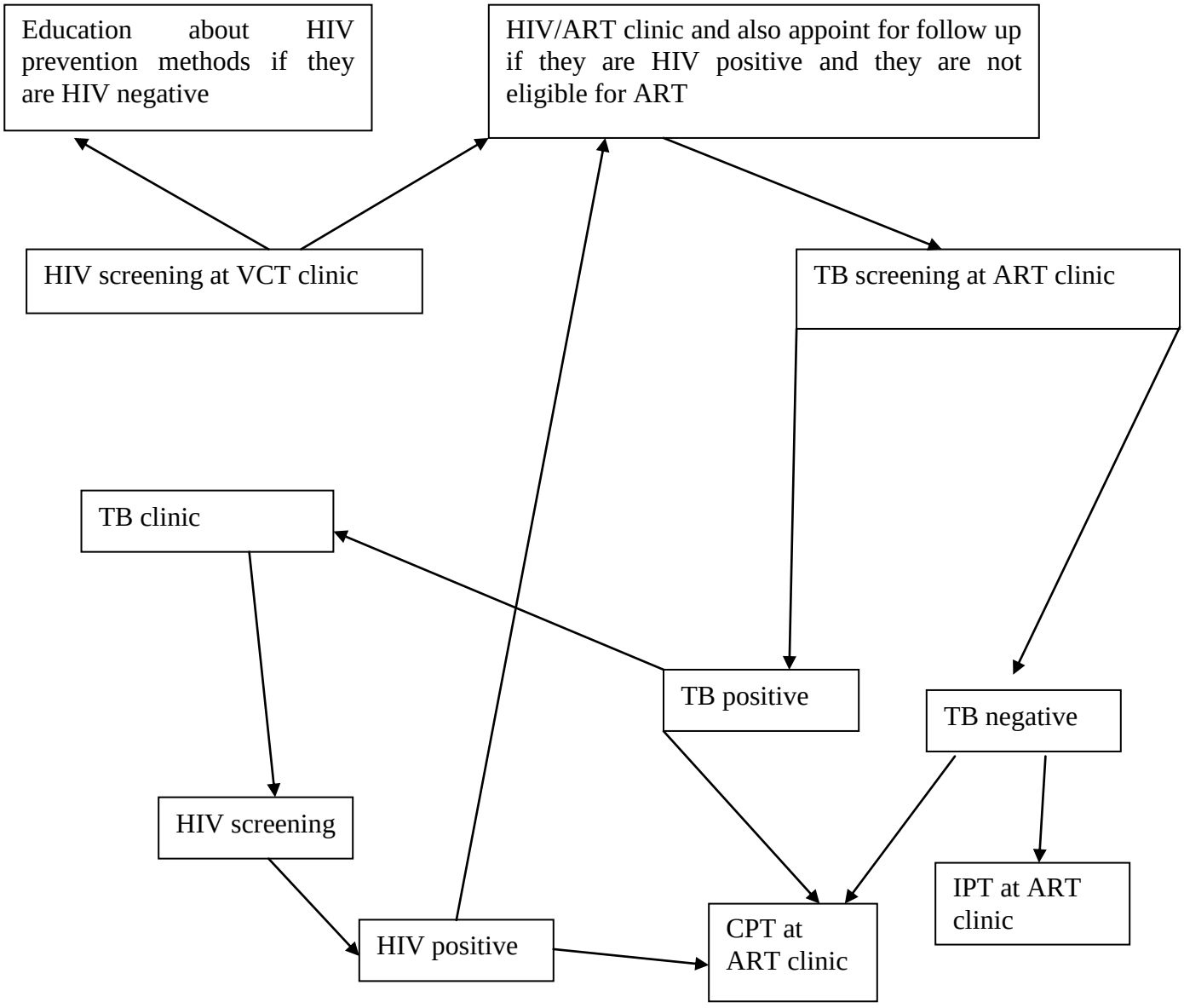


Figure 1: linkage flow chart of TB/HIV collaborative activity program [8].

1.4.1.2- Objectives of the intervention

Objectives of the intervention were from the national TB/HIV implementation guideline because the evaluation uses the national guideline as a standard; to establish mechanisms for collaboration between TB and HIV programs, to decrease the burden of tuberculosis amongst PLWHA, to decrease the burden of HIV amongst TB patients[8].

1.4.1.3 - Program context

Economically Jimma is highly coffee productive zone and trade center for all over Ethiopia. Most of travelers arrive in Jimma from different parts of the country. These may affect the prevalence of HIV. Religion also may affect the implementation. Most of the peoples are orthodox Christian and Muslim followers. Like other parts of the country most of the peoples believes the disease come from the devil even if currently community awareness changes but the believe still there in some parts.

The problem of TB/HIV co infection in Jimma zone has of multi-dimensional impact. Government and non Government organizations are operating in Jimma zone to minimize and control the effect of co infection.

There is some initiation from Jimma zone social affairs office , to establish government and non government organizations forum for systematic and coordinated efforts to decrease burden of TB/HIV co infection and The alarming confrontation of mankind with mounting drug resistant strains including TB seriously affected quality of life in developing countries mainly in sub-Saharan Africa. This scenario is escalated predominantly after the advent of the HIV virus that is allegedly considered as a culprit for the deterioration of the Human Immune defense mechanism.

A declining immune system would be felicitous for a robust invasion and proliferation of opportunistic infections like TB that causes remarkable morbidity and mortality. The worth of detecting HIV infections in suspected TB patients would be two fold for the regional HIV prevention activities. The former is early detection of the HIV infection and this contributes a lot for the control of the spread of the virus and the later is ruling out multiple infections is an propitious signal for an improved diagnostic outcome and improved quality of life to the patient. The same is true for detection of TB infections in PLWHA.

A routine screening of TB in PLWHA superbly improves patient management activities and this would in-turn is a positive approach for TB control activities. Therefore linkage of the two programs is an upright advance for the betterment of the patient.

Due to the generalized HIV epidemic the challenge facing the TB program is becoming increasingly difficult. Rising TB incidence among PLWHA affects quality of care and jeopardizes the life of the patient, causes increased morbidity and mortality, creates heavy burden to the health system, the economy, and results social crises.

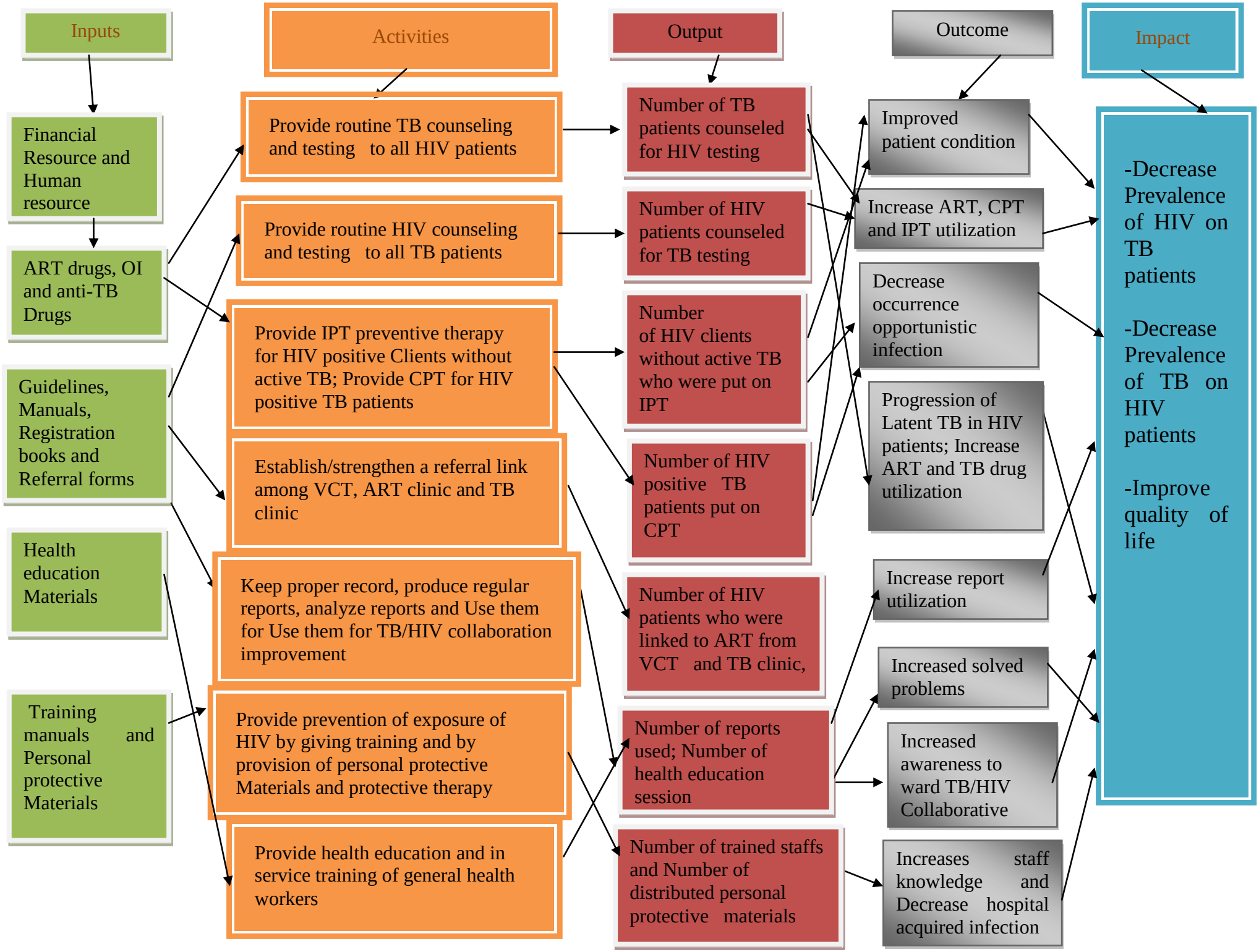
1.4.1.4- Program logic model

Logical model of the program was prepared by stakeholders and by the evaluator based on the national implementation guideline.

Goal– To reduce the burden of TB/HIV through collaboration by involving all partners at all levels[4].

Statement of the problem- The association between TB and HIV has now become more and evident in general. TB is often the first opportunistic infection in HIV infected persons and active TB has been shown to induce HIV virus replication, thus accelerating progression of AIDs. It has also been found that latent infection in HIV positive persons reactivate at a rate of 10 percent per year (as opposed to 5-10 percent over a life time) for HIV infection with new strain of TB from the community and drug resistance may occur more frequently[4].

Figure 2: Program Logical model of TB/HIV collaborative activity Program


Inputs
Activities
Output
Outcome
Impact
Financial Resource and Human resource
ART drugs, OI and anti-TB Drugs
Guidelines, Manuals, Registration books and Referral forms
Health education Materials
Training manuals and Personal protective Materials
Provide routine TB counseling and testing to all HIV patients
Provide routine HIV counseling and testing to all TB patients
Provide IPT preventive therapy for HIV positive Clients without active TB; Provide CPT for HIV positive TB patients
Establish/strengthen a referral link among VCT, ART clinic and TB clinic
Keep proper record, produce regular reports, analyze reports and Use them for Use them for TB/HIV collaboration improvement
Provide prevention of exposure of HIV by giving training and by provision of personal protective Materials and protective therapy
Provide health education and in service training of general health workers
Number of TB patients counseled for HIV testing
Number of HIV patients counseled for TB testing
Number of HIV clients without active TB who were put on IPT
Number of HIV positive TB patients put on CPT
Number of HIV patients who were linked to ART from VCT and TB clinic,
Number of reports used; Number of health education session
Number of trained staffs and Number of distributed personal protective materials
Improved patient condition
Increase ART, CPT and IPT utilization
Decrease occurrence opportunistic infection
Progression of Latent TB in HIV patients; Increase ART and TB drug utilization
Increase report utilization
Increased solved problems
Increased awareness to ward TB/HIV Collaborative
Increases staff knowledge and Decrease hospital acquired infection
-Decrease Prevalence of HIV on TB patients
-Decrease Prevalence of TB on HIV patients
-Improve quality of life

1.4.2- Level of program development

Based on lessons learnt from the Protest model WHO's project piloted and used VCT as entry point in three countries of Sub Saharan Africa (SSA) with high HIV prevalence and TB burden, WHO made a call to four countries of SSA including Ethiopia with high HIV prevalence and TB burden to introduce and implement TB/HIV collaborative activities by the end of 2001. After an expressed commitment of FMOH of Ethiopia to WHO's Call, FMOH coordinated the establishment of a TB/HIV Advisory Committee (THAC) in 2002, which includes key stakeholders from the TLCP/FMOH and HPPD/FHAPCO (HIV/AIDS and STI Team), major multi and bilateral donor organizations, research institutions, academic institutions and professional associations. The selected 9 pilot sites had served as important testing grounds to develop training materials, recording and reporting formats, referral systems, TB/HIV Implementation Guidelines. As part of phased expansion, TB/HIV collaborative activities are being implemented in 138 hospitals and 280 health centers and private clinics with ART services as of August 2007. Jimma zone also started in 2007. It is in Implementation stage.

This being the fact the regional health bureau along other stakeholders intensified activities especially in health facilities in-terms of integrating HIV testing and counseling in TB clinics and TB screening service for PLWHA. The TB/HIV collaborative activities are implemented in all public hospitals and health centers under the administration. Based on the national targets regional targets are prepared. The regional target is dispersed to sub-cities.

Chapter 2- Rationales for the Evaluation

HIV and TB have socio economic impact world wide on the population especially in SSA[8]. Ethiopia is one of the SSA country that highly affected by HIV and TB[8]. These socioeconomic impact increasingly enhanced by poverty and impact of HIV on TB and impact of TB on HIV clients[8].

To minimize these impact and prevalence TB/HIV co infection Ethiopian starts TB/HIV collaborative activity program with the collaboration of non governmental organizations. But from the literature review the prevalence of TB/HIV co infection had no significantly improved and also from the reports in Jimma zone and from the stakeholders the linkage not satisfactory based on the stakeholders assumption even if the program was implemented in global to national[10].

The stake holders want to assess the linkage because they say from the previous reports the linkage components of TB and HIV collaborative activity had gaps[10].

So that to know if the implementation was performed according to the national guide line or not and if it was not performed according to the national guideline to know the reasons and to inform the gaps for the stakeholders and to take correction for these gap. Implementation Evaluation is necessary that why these evaluation is selected with the consensus of stake holders.

Chapter 3- Stakeholder description

3.1- List of stakeholders

The following are main stakeholders of Jimma zone health department for this program;

Regional health bureau which helps for the program implementation by coordinating training and supplying drugs and other supplies like reagents[10];

Woreda health office and health centers of each Woreda which are the implementer of the program; MSH which helps for the program implementation by technical mentoring and by supplying drugs and supplies like reagent; SPS which helps for the program implementation by supplying drugs like ART drugs, OI drugs and anti TB drugs[10];

OSSA which helps for the program implementation by referral linkage and by awareness creation; Medan act which helps for the program implementation by awareness creation; Women and child affair and Youth and sport office which helps for the program implementation by problem identification and by problem solving by meeting with the implementers of the program[10];

Community which helps for the program implementation by using the program and awareness creation by communicating each other each other; Keble leaders and Religious leaders which helps for the program implementation by awareness creation; Jimma University specialized hospital which helps by referral linkage for CD4 count and for chronic cases; FCE which helps for the program implementation by awareness creation with local non governmental organizations like edir[10].

(See table 1)

Because of distance regional health bureau did not attend for the meeting other stakeholders were attend three meeting sessions including final evaluation presentation.

3.2- Stakeholder analysis

Table 1: Stakeholder analysis of TB/HIV collaborative activity program in Jimma zone health department

Stakeholders	Role in program	Role in evaluation	Interest or perspective in evaluation	Means of communication	Level of importance
Jimma zone health department	Coordinate of TB/HIV collaboration	Evaluation users ,describe the program, data dissimilation , define evaluation question, source of data	Positive towards program improvement	Formal letter , telephone communication, meeting informal interview	high
Woredas health office	Coordinate TB/HIV collaboration with stakeholders, source of fund	Source of data, describe the program, evaluation users ,data dissimilation ,define evaluation question	Positive –by using for planning purpose	Formal letter , telephone communication, meeting informal interview	high
MSH	Drug and other resource supply, minter the program	Evaluation users	Positive-improving quality of TB/HIV collaboration	Telephone communication meeting	high
OSSA	Referral link for care and support	Evaluation users	Positive-to improve care and support	Telephone communication, meeting	Medium

	,awareness creation				
SPS	Drug supply	Evaluation users	Positive-to improve drug supply	Telephone communication, meeting	High
Women and child affaire	Awareness creation ,problem identification and problem solving with meeting	Evaluation users	Positive-toward using for awareness creation	Telephone communication, meeting	Medium
Jimma university specialized hospital	Referral for CD4 count and for other purpose	Evaluation users, source of data	Positive-towards using for service improvement	Telephone communication, meeting	Medium
Youth and sport office	Awareness creation , problem identification and problem solving with meeting	Evaluation users	positive ward using for awareness creation	Telephone communication, meeting	Medium
FCE	Awareness creation	Evaluation users	Positive-towards using for awareness creation	Telephone communication, meeting	medium

Regional health bureau	Coordinate training, drug and other resource	Evaluation users	Positive-towards using for resources supply	Telephone communication, meeting	high
Community	Beneficiaries of the program	Evaluation users , beneficiaries	Positive-involved for evaluation by giving information	Telephone communication, meeting	High
Keble leaders	Awareness creation	Evaluation users	Positive- towards using for awareness creation	Telephone communication ,meeting	Medium
Religious leaders	Awareness creation	Evaluation users	Positive-towards using for awareness creation	Telephone communication, meeting	Medium

Chapter 4- Literature Review

Even if there was no published evaluations literature done on TB/HIV collaborative there were other related studies that show magnitude of the problem and Rational of the evaluation. There were also literatures that show linkage.

A Meta analysis done in Mainland China by reviewing published studies from Medline and Chinese biomedical literature data base, on prevalence of HIV infection among TB patients and on the prevalence of TB among HIV/AIDS populations until 15 April 2010 says that In total, 29 studies were included in this review, with consistently homogeneous results. TB patients, for whom the summary prevalence of HIV infection was 0.9% (0.6%–1.4%) in Mainland China, were found to be a potential target population for HIV screening. The prevalence of TB among HIV/AIDS population was 7.2% (4.2%–12.3%), but this was much higher when the analyses were restricted to AIDS patients (22.8%). Significantly higher prevalence was observed for males and hospital-based studies[11].

A cross sectional study done in the National Tuberculosis reference laboratory of Nigeria institute of medical research on the prevalence of Tuberculosis and Human Immuno Deficiency virus (TB/HIV) co infection amongst patients with broncho pulmonary disorder in Lagos says between march 2007 and June 2008 , 1280 patients with broncho pulmonary disorder were studied. In the study there was slightly more females (54.1%) than males (45.9%). For both sexes, 3% were in the age group 10-20 years, while majority of the patients (89.9%) were within the age group 21 -50 years and 7.1% belongs to the age group 51 and above. From data generated from clinical records of patients showed that 1037(81%) of 1280 patients were positive for HIV while 243 (19%) were negative. In this study, a patient was diagnosed as a case of Tuberculosis when one or all the sputum samples were positive for AFB by microscope, culture or both. From 1280 patients screened 318(24.8%) were positive for AFB. Among these 318 confirmed cases of TB 145(45.6%) and 173(54.4%) were males and females respectively. In this study the age group 21- 40 years had the highest TB cases while the age group 61 years and above had the lowest TB cases. In this study it was observed that 236 of the study population had TB and HIV co infected and this gave a prevalence rate of 18.4% of all the patients diagnosed of TB, 74% (236/318) were HIV positive[12] .

A cross sectional study done in three hospitals in Ethiopia on the synergy between TB and HIV co infection on perceived stigma in Ethiopia says that a total of 591 participants were included in the study of whom 124(20.9%) were co infected with TB/HIV. The stigma item was highly reliable and

strong inters dimension correlations. Respondents who were co infected with TB and HIV were more likely to have perceived stigma compared to non co infected HIV patients[13].

A cross sectional study done in the Southern Nations, Nationalities and Peoples Region(SNNPR) of Ethiopia on the rate of TB/HIV co infection depends on the prevalence of HIV infection in the community says that out of 1308 TB patients enrolled ,226(18%) were HIV positive. The rate of HIV infection was higher in TB patients from urban 25 %(73 /298) than rural areas 16% (149 /945).Of the 4199 pregnant women's attending ANC, 155(3.8%) were HIV positive. the rate of HIV infection was higher in pregnant women from urban (7.5%)(80/1066) than rural areas (2.5%)(75/3025) [14].

In southern India there was a retrospective evaluation from 1 march to august 30, 2007 in three districts of primary health care unit that provides ART, TB and VCT service. From 7,752 patients registered on the program records 1 march to august 30, 2007, 734(9.5%) were identified as HIV infected.

710(97%) of the 734 known HIV infected TB patients were initiated on CPT during evaluation period.

Among the 734 HIV infected TB patients 559(93%) were referred to ART clinic on the registration during the evaluation period[15].

A retrospective study on assessing the accessibility of HIV care packages among tuberculosis patients in the North West region, Cameron in public and private hospitals. The study uses records as a data collection method.

From 1220 HIV positive TB patients 614(50.3%) were enrolled for ART. From 1220 HIV positive TB patients 573(47%) were enrolled for CPT[16].

Chapter 5- Evaluation questions and objectives of the evaluation

5.1- Evaluation questions

During stakeholders discussion different concerns were raised and consensus was reached based on the time and resource of evaluation. The interests of stakeholders were on the table for further discussion and question were merged and rephrased for the purpose of simplicity and focus. Based on the discussion held with stakeholders this specific implementation evaluation aims to respond to two major questions.

- Is TB/HIV program activity linkage being performed according to the national implementation guide line? If not why? If yes how?
- Are all necessary inputs available according to the national implementation guideline? If not why? If yes how?

5.2 - Objectives of evaluation

5.2.1 - General Objective

- To identify gaps in creating linkage among Tuberculosis and HIV/AIDS collaborative activities in Jimma zone, Southwest Ethiopia, 2010.

5.2.2- Specific objectives

1. To verify the availability of resources (inputs) required for the implementation of HIV/TB collaborative activities
2. To assess the conduct of HIV/TB collaborative activities according to the national guideline

Chapter 6- Evaluation methods

6.1- Evaluation design

Facility based descriptive cross sectional study was conducted.

6.2- Study area and Study period

The study was done in Jimma zone which is found in south west Ethiopia in Oromia regional state 335 km from Addis Abeba. Jimma zone is bordered on the south by the SNNPR, on the north east by Illubabor zone, on the north by west Wollega and on the north east by east Shewa. Based on figure from the central statically agency in 2007, this zone has an estimated total population of 2, 486,155 of whom 1, 250,527 were males and 1, 235,628 were females. The area has been a dwelling and a destination centre for a large number of peoples being one of the top coffee producers.

Jimma zone has 17 woredas and one town administration. Jimma zone have 566 health facilities with one hospital, 53 health centers and 512 health posts Of the 53 health centers 15 health centers and 1 hospital start TB/HIV collaborative activities. The study was conducted on those health facilities that were start TB/HIV collaborative activity.

The study was done on sampled health facilities which were Limu genet hospital, Yebu health center, Serbo health center, Agaro health center, Limu genet health center, Atnago health center, Assendabo health center, Sokoro health center.

The study period was january 15, 2011 up to january 30, 2011 which was the data collection period.

6.3 - Source population

The source populations were all health facilities providing TB/HIV collaborative service, all health workers TB/HIV trained and providing TB/HIV collaborative services in the zone, registers for TB/HIV collaborative services in all health facilities providing TB/HIV collaborative service in the zone through out 2010 and all TB/HIV/AIDS individual cards in selected health facilities providing TB/HIV collaborative service in the zone through out 2010.

6.4 - Study population

The study populations were selected health facilities providing TB/HIV collaborative service in the zone, all health workers TB/HIV trained and providing TB/HIV collaborative services in

selected health facilities, registers for TB/HIV collaborative services in selected health facilities providing TB/HIV collaborative service through out 2010 and all TB/HIV/AIDS individual cards in selected health facilities providing TB/HIV collaborative service in the zone through out 2010.

6.5 - Sample size and sampling technique

First Health facilities were stratified as hospital and health centers. There were 1 hospital and 53 health centers. The study selects health centers that start TB/HIV collaborative activity. From those 53 health centers there were 15 health centers that start TB/HIV collaborative activity.

Due to cost and time the study sample 50 % of health centers which were 7 and 1 hospital totally 8 health facilities were sampled.

For in-depth interview purposive sampling that are information rich experts were sampled from each health facilities that means TB/HIV trained health professional for compliance and pharmacy professional for availability one from each health facility were interviewed in-depth. 1 TB/HIV trained professionals and 1 pharmacy professionals for each health facilities were selected totally 8 TB/HIV trained professionals and 8 pharmacy professionals were interviewed.

For document review one year client card and registration books from January 1, 2010 to December 30, 2010 were reviewed which is most recent.

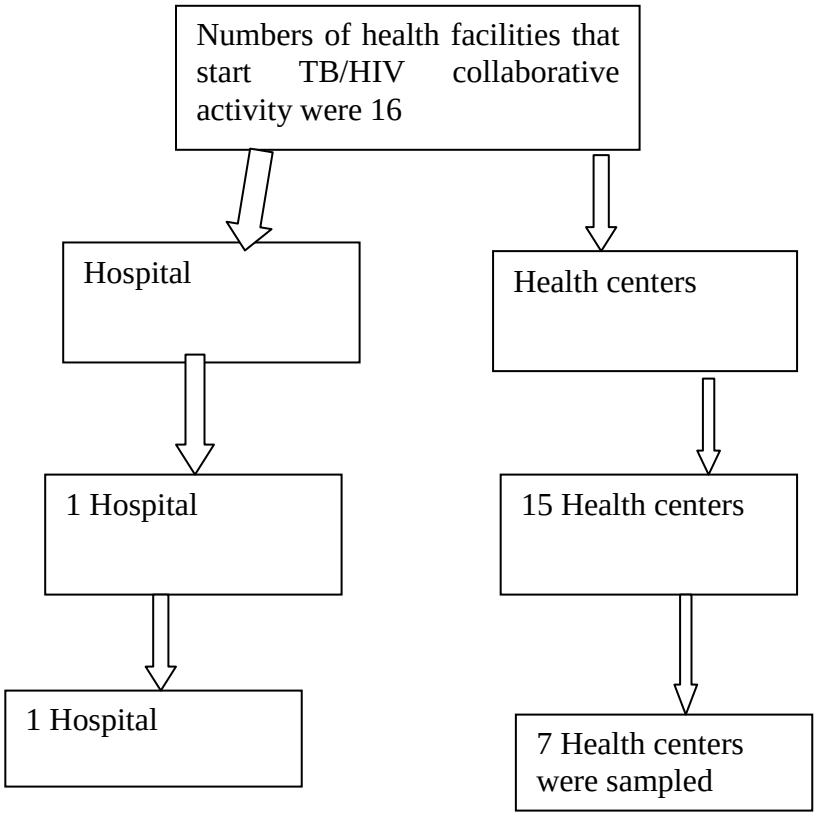


Figure 3: Sampling technique health facilities in Jimma zone

Table 2: Sampling technique TB/HIV collaborative activity program evaluation in Jimma zone

	Sampling technique
Health facilities	By stratified health facilities as Hospital and Health centers. From 15 health centers 7 of them were selected by simple random sampling technique.
Document review	One year 2010 registers and client personal client cards were reviewed. Registers and client cards were sampled one year documents.
In-depth interview	Selected purposively Information rich experts were selected. 1 pharmacy professionals for each health facility and 1 TB/HIV trained professionals for each health facility totally 8 pharmacy professionals and 8 TB/HIV trained professionals were interviewed.

strata	List of health facilities	Sampled health facilities	Sampling technique of health facility
Hospital	Limu genet hospital	Limu genet hospital	One Hospital in Jimma zone sampled because only one Hospital in Jimma zone.
Health centers	Limu shayi – distance 45 km Shabee health center – distance 50km Yebu health center – distance 20km Serbo health center – distance 22 km Seka health center – distance 17km Agaro health center – distance 45km Sheki health center – distance 18km Chira health center – distance 97km Assendabo health center – distance 55 km Limu genet health center – distance 75km Toba health center – distance 70 km Sigimo health center – distance 130km Atnago health center – distance 110km Aku health center – distance 90 km Sokoro health center – distance 100km	Yebu health center Serbo health center Agaro health center Limu genet health center Atnago health center Assendabo health center Sokoro health center	Because of time and cost 50% of health centers were selected by simple random sampling technique.

Table 3: Number of client card reviewed each health facility in Jimma zone, 2010.

Health facility	VCT registration (number of reviewed client cards)	TB unit registers(number of reviewed client cards)	ART registers(number of reviewed client cards)
Limu genet hospital	32	157	161
Agaro health center	91	152	159
Assendabo health center	16	66	23
Atnago health center	4	69	0
limu genet health center	4	28	0
Serbo health center	9	156	24
Sokoro health center	20	52	43
Yebu health center	14	112	34

6.6- Study unit

The study units were TB/HIV client cards, forms and registers drugs, supplies and human resource, health facilities and also TB/HIV trained health workers.

6.7- Inclusion and exclusion criteria

Inclusions criteria

All health workers TB/HIV trained and providing TB/HIV collaborative services in selected health facilities register for TB/HIV collaborative services in selected health facilities providing TB/HIV

collaborative service through out 2010 and all TB/HIV/AIDS individual cards in selected health facilities providing TB/HIV collaborative service in the zone through out 2010.

Exclusion criteria

All TB/HIV/AIDS individual cards in selected health facilities that were not legible for CPT through out 2010 and all TB/HIV/AIDS individual cards in selected health facilities that was not legible for IPT through out 2010, all TB/HIV/AIDS individual cards in selected health facilities that were not complete.

6.8- Evaluation focus

The focus of this evaluation was process.

6.9- Evaluation approach

The approach of the evaluation was formative evaluation.

6.10- Evaluation dimensions

Dimensions were Compliance to the national TB/HIV implementation guideline (linkage) and Availability of inputs.

Compliance - is a state of practice in accordance with established guidelines, SOPs and specifications among TB and HIV care providers in relation to linkage[17].

From a health provider's viewpoint, in order for effective linkage to have their desired effects, complying or conforming to linkage for care and treatments is absolutely necessary. The concept of medication management reflects this idea that the provider is responsible and in control, whiles the consumer is a docile body who is incapacitated by disease or condition. From the perspective of health consumers, adherence to medical care and treatment is enhanced when there is established good health care referral linkage and when consumers openly share their health beliefs and experience of illness with their provider.

Availability – measures the extent to which the provider has the requisite resources, such as personnel and technology, to meet the needs of the client[18].

The study will be assessing availability of the required resources like trained health personnel on the management of TB/HIV co-infected patients, required human resource, drugs and supplies and IEC materials displayed. Like other programs TB/HIV collaboration also encounters formidable challenges with regard to supply. Even though there is unprecedented opportunity of resources the collaboration is still struggling for sustenance as a result of frequent stock outs of HIV test kits, reagents, drugs and other supplies.

6.11- Definition of indicators

The indictors used in this study were prepared from the national guide line and based on the objectives of the evaluation by the evaluator and the stake holders.

6.11.1- Compliance indicators

1) Proportion of HIV positive individuals at VCT clinic who were linked to ART clinic in 2010

   Denominator – All HIV positive individuals in VCT registration book and personal individual card.

   Numerator – All HIV positive individuals who were referred to ART clinic on VCT register book and personal individual card.

2) Proportion of HIV individuals who were screened for TB in ART clinic in 2010.

   Denominator - All HIV individuals in ART clinic (both those on ART and pre-ART individuals) in ART register book, pre ART registers book and also personal individual card.

   Numerator – All TB screened HIV individuals in ART register book, pre ART registers book and also personal individual card.

3) Proportion of TB positive HIV individuals who were linked to TB clinic in 2010.

   Denominator - All TB positive HIV individuals in ART Registers book, pre ART registers book and personal individual card.

   Numerator – All TB positive HIV individuals who were referred to TB clinic from ART register book, pre ART register book and also personal individual card.

4) Proportion of TB positive HIV individuals who were given CPT Prophylaxis in 2010.

   Denominator – All TB positive HIV individuals in ART and pre ART individuals plus all HIV positive TB patients in TB register book and personal client card.

   Numerator – All individuals who were on CPT at CPT register book and personal client card.

5) Proportion of TB negative HIV individuals who were linked to IPT prophylaxis in 2010.

   Denominator – All HIV individuals who were TB negative after screening in ART register book, pre ART register and also personal individual card.

   Numerator – All individuals who were on IPT at IPT register book and personal client card.

6) Proportion of TB patients who were linked for HIV screening in 2010.

   Denominator – All TB patients at TB clinic in TB register book and personal client card.

   Numerator – All TB patients who were screened for HIV in TB register book and personal client card.

7) Proportion of HIV positive TB patients who were linked to CPT Prophylaxis in 2010.

   Denominator – All HIV positive TB patients in TB register book and personal client card.

   Numerator – All HIV positive TB patients who were referred to CPT in TB register book and personal client card.

8) Proportion of HIV positive TB patients who were linked to ART in 2010.

   Denominator – All HIV positive TB patients' in TB register book and personal client card.

   Numerator – All HIV positive TB patients who were linked to ART in TB register book personal client card.

6.11.2- Availability indicators

1) Number of health facilities that had all forms and registers through out 2010.
2) Number of health facilities that had INH through out 2010.
3) Number of health facilities that had ART all drugs through out 2010.
4) Number of health facilities that had anti TB drugs through out 2010.
5) Number of health facilities that had Cotrimaxzole through out 2010.
6) Number of health facilities that had supplies and testing kits through out 2010.
7) Number of health facilities that had trained human resource through out 2010.

6.12- Relevance matrix

6.12.1- Relevance matrix for Compliance

Table 4: Relevance matrix for compliance of TB/HIV collaborative activities linkage in Jimma zone in 2010.

Dimensions	Program component (activity)	Indicators	Weight	Percent (%)	Data source	Reason for giving the weight
Compliance	Linking all HIV positive clients to ART clinic at VCT clinic	Proportion of HIV patients at VCT clinic who were linked to ART clinic.	RRRR	12.5	VCT registration book and client personal card	To give the value the evaluator and stakeholders were set based on the value of program implementation. For example forms and registers have no that much effect on program implementation that means absence of forms and registers have no significant effect. But other imputs have equal effect on program
	Linking all HIV positive patients for TB screening	Proportion of HIV patients who were screen for TB at ART clinic	RRRR	12.5	ART and pre ART registration books and client personal card	
	Linking all TB positive HIV patients to TB clinic	Proportion of TB positive HIV patients who were linked to TB clinic	RRRR	12.5	ART and pre ART registration book and client card	
	Linking all TB positive HIV patients to CPT prophylaxis	Proportion of TB positive HIV patients who were linked CPT prophylaxis	RRRR	12.5	ART , pre ART and CPT registration books and client card	
	Linking all TB negative HIV patients to IPT prophylaxis	Proportion of TB negative HIV patients who were linked to IPT prophylaxis	RRRR	12.5	ART , pre ART and IPT registration books and client card	

	Linking all TB patients for HIV screening	Proportion of TB patients who were linked for HIV screening	RRRR	12.5	TB registration- TB registration book and client card	implementation
	Linking all HIV positive TB patients to ART clinic for ART	Proportion of HIV positive TB patients who were linked to ART clinic for ART	RRRR	12.5	TB registration book and client card	
	Linking all HIV positive TB patients to CPT prophylaxis	Proportion of HIV positive TB patients who were linked to CPT prophylaxis	RRRR	12.5	TB registration book and client card	
	Total		32R	100		

6.12.2- Relevance matrix for availability

Table 5: Relevance matrix for Availability inputs TB/HIV collaborative activity program in Jimma zone, 2010.

Dimension	Program component (Inputs)	Indicators	Weight	Percent(%)	Data source	Reason for giving the weight
Availability	Forms and registers	Number of health facility that had all forms and registers through out 2010.	RR	8	expert in-depth interview and observation of bin card and inventory	To give the value the evaluator and stakeholders were set based on the the value of program implementation. For example forms and registers have no that much effect on program implementation that means absence of forms and registers have no significant effect. But other imputs have
	INH	Number of health facility that had INH through out 2010.	RRRR	15	expert in-depth interview and observation of bin card and inventory	
	ART Drug	Number of health facility that had all ART drugs through out 2010.	RRRR	15	expert in-depth interview and observation of bin card and inventory	
	Anti TB Drug	Number of health facility who had all anti TB drugs through out 2010.	RRRR	15	expert in-depth interview and observation of bin card and inventory	

	Cotrimaxzole	Number of health facility that had Cotrimaxzole through out 2010.	RRRR	15	expert in-depth interview and observation of bin card and inventory	equal effect on program implementation
	Supplies for testing	Number of health facility that had all supplies and testing kits through out 2010.	RRRR	15	expert in-depth interview and observation of bin card and inventory	
	Trained Human resource	Number of health facility that had all human resource through out 2010.	RRRR	15	expert in-depth interview and observation of human resource registration books	
Total			26R	100		

Table 6: Relevance matrix of TB/HIV collaborative activity program evaluation in Jimma zone, 2010.

Dimensions	Weight (%)	Reason for weight	Judgment parameter	Reason for setting judgment parameter
Availability	50	Because if inputs were not available there no work	≥85% Excellent 75-84% Very good 60-74% Good 40-59% Poor <40% Critical	The judgment parameter was prepared from the national guide line by the stakeholders and by the evaluators by considering the context
Compliance	50	Because if there was no work. availability of inputs had no value		
Over all achievement	100			

6.13- Data collection technique

Data collection techniques were:

In-depth interview with TB/HIV trained health professional and pharmacy professionals about the Availability and Compliance of TB/HIV linkage respectively.

Document review of 2010 registered documents by reviewing of registered clients on registration books and personal client cards and also by cross checking if they were performing accordingly.

Observation was done by observing availability of inputs bin cards at pharmacy and observing human resource registration books if availability of drugs, supplies and human resource were there through out 2010.

For expert interview the study uses closed ended and open ended to make uniform question for all respondents by using this interview guide.

- For Compliance dimension- data collection techniques were document review of 2010 registration books, client card review and also in-depth interview of TB/HIV trained experts.
- For Availability dimension - data collection technique were in-depth interview of pharmacy professionals, inventory of inputs and also observation of bin cards in 2010.

6.14- Data collection instruments

To conduct in-depth interview one expert interview guide with observation for availability and compliance were used.

Data collection instruments were prepared by the evaluator based on the combination of evaluation objective, evaluation question, the content of TB/HIV national guideline, logic model of the evaluation and indicators of the evaluation.

- For Compliance the study uses document review guide which was used as to review registration books and client card and standardized open ended expert interview guide to interview TB/HIV trained experts.
- For Availability the study uses standardized open ended expert interview guide with observation check list to interview pharmacy professionals and to observe bin card and human resource registration books.

6.15- Data collection and field work

Data collectors were 7 TB/HIV trained nurse data collectors one for each health facility which were recruited from out of selected health facilities in Jimma zone and there were 3 TB/HIV trained health officer field supervisors one supervisor for 2 health facility. The reason for selecting TB/HIV trained nurses as data collector and TB/HIV trained health officers as supervisor was because they know the program so they can understand and communicate with the experts easily especially expert interview needs understanding and somewhat probing so TB/HIV trained professionals were the right person to collect.

There was three day training of data collectors and supervisors about the terms and how to collect the data by TB/HIV trained physician from Jimma University specialized hospital and by the evaluator. There were pretesting of data collection tools in Jimma town health center and Jimma town administration health office which is out of the study area to check relevance consistency and appropriateness of the tools. The data collection was take 6 days for data collection and two day transportation totally it takes 8 days for field work and data collection.

6.16- Data management and analysis

There was analysis of quantitative and qualitative data separately. Quantitative data was analyzed by computer analysis and uses SPSS version 16 and the analysis was descriptive analysis and also uses narratives, graphs, tables and pie chart to present the data.

For qualitative data First data were checked for completeness after data collection if there is missing during data collection then data were grouped thematically and also the data were presented in combination with the quantitative data by supplementing the quantitative data. The result, discussion and conclusion were made by supplementing document review data with in-depth interview and also there was cross check of in-depth interview. The result was presented by narratives.

6.17- Data quality control

Data quality assurance was maintained with the undertakings of the following:

A standardized observation check list was prepared by the evaluator and stake holders from the national TB/HIV implementation guide line and from the logic model of the evaluation to the context to reduce inter- observer bias ;

A three days training was given by the evaluator and by TB/HIV trained physician for data collectors and the supervisors about the content of the data collection instrument to make clear the data collection instruments to avoid data collector bias ;

Instruments were pre-tested in one of the Jimma health center to check consistency;

Daily data entry and cleaning was done by the principal investigator to avoid data loss.

6.18- Operational definitions

- Linkage - A connection or relation; an association between VCT clinic, TB clinic and ART clinic in the health facilities.
- Edir- non governmental organization that consists of peoples in the same village and which helps peoples in some circumstances like great problems and death.
- All human resource - all expected human resource on national TB/HIV collaborative activity guideline. (TB/HIV collaborative activity trained health officer or physician and TB/HIV collaborative activity trained nurse[1]).

- Availability - Measures the extent to which the provider has the requisite resources, such as Personnel and technology, to meet the needs of the client to accomplish TB/HIV collaborative service.[16]
- Compliance***:*** The state in which the TB/HIV collaborative linkage is in accordance with established guidelines
- All forms and registers – all expected forms and registers on national TB/HIV collaborative activity guideline.
- All ART drugs - all expected ART drugs on national TB/HIV collaborative activity guideline.
- All anti TB drugs - all expected anti TB drugs on national TB/HIV collaborative activity guideline.
- All supplies and testing kits - all expected supplies and testing kits on national TB/HIV collaborative activity guideline.

6.19- definitions of terms

- Logic model - Is a graphic depiction of the program (Centers for Disease Control and Prevention [19]
- Indicators - Are criteria that was used to judge the program[18]
- Stakeholders- The persons or organizations that are those involved in program operations, those Served or affected by the program, Primary users of the evaluation[20]
- Context – Environmental, cultural, political, and socio-economic factors external to the program[21]
- Inputs – Are basic resources, necessary policies, peoples, money and equipment[21]
- Process – Are program activity, training, logistic, management, IEC/BCC[21]
- Output – Are results at the program level (measures of program activities), services, service use and Knowledge[21]
- Out come –Results at level of target population, behaviors, and safer practices[21]
- Impact – Ultimate effect of program in long term TB incidence, HIV prevalence, morbidity, Mortality[21]
- Evaluation - the rigorous, scientifically-based collection of information about program/intervention activities and characteristics that determine the merit or worth of the program/ intervention[22]
- Process evaluation - a type of evaluation that focuses on program/intervention implementation, including, but not limited to access to services, whether services reach the

intended population, how services are delivered, client satisfaction and perceptions about needs and services, management practices[22]

6.20- Matrix of analysis and judgment matrix

Judgment matrix was formulated by the investigator and by the stakeholders based on the national guideline and based on the stakeholder's agreement. The stakeholder agreed the judgment Para meter as;

Table 7: Matrix of analysis and judgment matrix of TB/HIV collaborative activity program in Jimma zone, 2010.

achievement	Judgment
≥ 85%	Excellent
75-84.9%	Very Good
60-74.9%	Good
40-59.9%	Poor
<40%	Critical

6.21- Ethical issues

Ethical clearance was obtained from Jimma university college public health and medical science then formal letter of cooperation was written to Jimma zone. Response of respondents was unnamed and data collectors had been informed to respondents that they had full right to discontinue or refuse to participate in the study. A letter of agreement was attached to interview guide to obtain the oral consent of each respondent. Respondents were clearly told about the study and the variety of information needed from them. They were given the chance to ask any thing about the study and were free to refuse or stop the interview at any moment as they want if this was their choice. Incomplete and ambiguity client cards were not selected.

6.22- Dissemination and Utilization of Results

The evaluation thesis findings will be disseminated to program owners and stakeholders through evaluation finding presentation at Jimma zone health office and final report dissemination will be to stakeholders (Jimma zone health office, sampled health facilities and Jimma university hospital and also Final reports will be submitted to Jimma university college public Health and medical science department of Management. Lastly, the research will be sent to for publication if possible.

Chapter 7- Result of the Evaluation

7.1 - Availability

For availability 8 pharmacies 1 per health facilities were interviewed and stock out of drugs and supplies through out 2010 was seen during the interview of pharmacy professionals. The respondent answer was mach with observation bin card and human resource registered books.

Availability results of hospital and health centers

Forms and registers

The Hospital found to have all types of forms and registers except CPT register. Similarly all health centers have TB/HIV quarterly report format, TB/HIV referral forma, TB/HIV Supervisory checklist, sputum smear request form. Whereas from 7 health centers ---of them have CPT registers, Regarding respondents 5 respondents said all forms and registers were available the remaining 3 respondents says not all forms and registers were not available. From 3 respondents Atnago health center and Limu genet health center respondents were said CPT registers, IPT registers, ART registers and ART registers were not available. According to the respondents the possible reasons for not available was absence of ART clinic in the health facilities. Limu genet hospital respondent said only CPT registers was not available and he said because we

register clients who were on CPT on ART register books. (See table 8).

Table 8: forms and registers availability results of hospitals and health centers in Jimma zone, 2010.

Registres	Health facilities			
	Health centers(n=7)		Hospital (n=1)	
	Available	Not available	Available	Not available
TB/HIV quarterly report	7	0	1	0
TB/HIV supervisory check list	7	0	1	0
TB/HIV referral form	7	0	1	0
Sputum smear request form	7	0	1	0
CPT register	5	2	0	1
IPT register	3	4	1	0
TB register	7	0	1	0
ART/HIV register	7	0	1	0
VCT register	7	0	1	0

Drugs

From 8 health facilities 4 had all TB/HIV collaborative activity drugs the remaining 4 had no all TB/HIV collaborative activities drugs. Atnago and Limu genet health center had no ART drugs, Cotrimaxzole and INH drugs. According to them the reasons were because of no ART service. Assendabo and Yebu health center respondents said they had no INH drug with the reason because of no INH supply. (See table 9)

Table 9: drug availability results of hospitals and health centers in Jimma zone, 2010.

drugs	Health facilities			
	Health centers(n=7)		Hospital (n=1)	
	Available	Not available	Available	Not available
Cotrimaxzole	5	2	1	0
ART drugs	5	2	1	0
Anti TB drugs	7	0	1	0
INH	3	4	1	0

Supplies and reagents

All 8 health facilities had supplies and reagents throughout 2010. (See table 10)

Table 10: supplies and reagents availability results of hospitals and health centers in Jimma zone, 2010.

Supplies and reagents	Health facilities			
	Health centers(n=7)		Hospital (n=1)	
	Available	Not available	Available	Not available
HIV test kits	7	0	1	0
AFB equipment for test	7	0	1	0
Gloves	7	0	1	0
needles	7	0	1	0

Human resource

All 8 health facilities had no all TB/HIV collaborative activity trained human resource. From 8 health facilities 7 health facilities had no TB/HIV trained health officer, physicians and pharmacy professional. According to the respondents the reasons for not available was there was no training opportunity for health officer, physicians and pharmacy professionals. Only Assendabo health center had TB/HIV collaborative activity trained health officer but they had no TB/HIV collaborative activity trained nurse and pharmacy professional. According to the respondent the possible reasons were no TB/HIV training opportunity. Respondent answer was mach with inventory of inputs and observation bin card. (See table 11)

Table 11: supplies and reagents availability results of hospitals and health centers in Jimma zone, 2010.

Human resource	Health facilities			
	Health centers(n=7)		Hospital (n=1)	
	Available	Not available	Available	Not available
TB/IV trained health officer or physician	1	6	1	0
TB/HIV trained nurse	6	1	1	0
TB/HIV trained pharmacist	0	7	1	0

Table 12: Judgment matrix for availability Of Inputs of TB/HIV collaborative activity in Jimma zone, 2010

Dimension	Program Components (Inputs)	Indicators	Expected weight (%)	Achieved Weight (%)	Judgment parameter
Availability	Forms and registers	Number of health facilities that had all forms and registers through out 2010.	8%	7%	≥85% Excellent 75-84% Very good 60-74% Good 40-59% Poor <40% Critical
	INH	Number of health facilities that had INH in 2010.	15%	9%	
	ART Drug	Number of health facilities that had all ART drugs throughout 2010.	15%	11%	
	Anti TB Drug	Number of health facilities that had all anti TB drugs throughout 2010.	15%	15%	
	Cotrimaxzole	Number of health facilities that had Cotrimaxzole throughout 2010.	15%	11%	
	Supplies for testing	Number of health facilities that had all supplies and testing kits throughout 2010.	15%	15%	
	Trained Human resources	Number of health facilities that had all human resource throughout 2010.	15%	0%	
		Total	100%	68%	

In the above judgment matrix the achievement zero does not mean no trained human resource available. One of the expected human resources was available but based on the national guide line and from the study operational definitions to give full the health facility should avail all expected trained human resource.

7.2- Compliance

For compliance to collect the data TB/HIV collaborative service registers and personal client cards were used because all information on the document review guide were not available on the registers.

Compliance results of each clinic in Jimma zone

VCT clinic

From 190 clients in VCT clinic who were HIV positive in voluntary testing 149(78.4%) were linked to ART clinic. (See table 13)

Table 13: Compliance results of VCT clinic in Jimma zone throughout 2010.

Clinic	Category	frequency	Percentage (%)
VCT clinic(n=190)	linked	149	78.4
	Not linked	41	21.6

TB clinic

From 792 in TB clinic who were TB patient's 726(91.7%) of the clients were screened for HIV. From those 726(91.7%) patients who were screened 86(11.8%) was HIV positive. From those 86(11.8%) HIV positive TB patient's 44(51.2%) and 46(54.1%) were linked to ART clinic and CPT Prophylaxis respectively. (See table 14)

Table 14: Compliance results of TB clinic in Jimma zone throughout 2010

Clinic	Program Activities	Category	frequency	Percentage (%)
TB clinic(n=190)	HIV screened (n=792)	Screened	726	91.7
		Not screened	66	8.3
	HIV positive TB patients linked to ART clinic (n=86)	Linked	44	51.2
		Not linked	42	48.8
	HIV positive TB patients linked to CPT (n=86)	Linked	46	54.1
		Not linked	40	45.9

ART clinic

From 444 in ART clinic who were on ART and pre ART 386(86.9%) were screened for TB. From those 386(86.9%) clients who were screened for TB 65(16.8%) of them were TB positive the remaining 279(72.2%) were TB negative. From those 65(16.8%) TB positive clients 50(76.9%) and 49(75.4%) were linked to TB clinic and CPT prophylaxis respectively and also from those 279(72.2%) TB negative HIV clients 146(52.3%) were not linked to IPT. (See Table 15)

Table 15: Compliance results of ART clinic in Jimma zone through out 2010

Clinic	Program Activities	Category	frequency	Percentage (%)
ART clinic(n=190)	TB screened (n=444)	Screened	386	86.9
		Not screened	58	13.1
	TB positive HIV patients linked to TB clinic (n=65)	Linked	50	76.9
		Not linked	15	23.1
	TB positive HIV patients linked to	Linked	50	76.9

	CPT (n=65)	Not linked	15	23.1
	TB negative HIV patients linked to IPT (n=279)	Linked	133	47.7
		Not linked	146	52.3

From 1427 clients 91.9% of the clients received pretest counseling to screen for HIV and TB at ART clinic, TB clinic and VCT clinic. The remaining 88% of the clients received post test counseling.

Based on qualitative study for the above quantitative the following were the reasons for not linked. Majority clients had almost similar answer except some questions. In general out of 8 respondents 6 of the respondents says they linked all HIV positive patients at VCT clinic to ART clinic the remaining 2 of the clients said they did not link all HIV positive patients at VCT to ART clinic because there is no ART clinic in those health facilities and some clients think as they become stigmatized even if the communities does not stigmatize ; all 8 clients says they screen all TB patients for HIV at TB clinic but because of fear of stigma and fear of peer after screening there was challenges to accept the result.

From the clients in Limu genet health centers ; 6 of the clients says they link to ART clinic those clients who are HIV positive from TB clinic the remaining 2 clients says they did not link to ART clinic because there is no ART clinic.

In two health centers that have no ART clinic the respondent says they refer to the recent health facilities who start TB/HIV collaborative program. for those health facilities who have ART clinic there was challenges to accept the result because of fear of stigma and fear of peers ; 6 of the clients says they can link to CPT those clients who were HIV positive from TB clinic the remaining 2 of the clients says they did not link to CPT because there is no ART clinic and no Cotrimaxzole supply ; 6 respondents says they screen for TB in ART clinic the remaining two respondents says we did not screen all for TB because their health facility did not have ART clinic.

Table 16: **linkage of TB/HIV collaborative activity in Jimma zone, 2010 (n=1427)**

Program Activities	Category	Frequency	Percentage (%)
HIV clients linked to ART clinic from VCT clinic (n=190)	Linked	149	78.4
	Not linked	41	21.6
HIV screened at TB clinic (n=792)	Screened	726	91.7
	Not screened	66	8.3
HIV positive TB patients linked to ART clinic (n=86)	Linked	44	51.2
	Not linked	42	48.8
HIV positive TB patients linked to CPT (n=86)	Linked	46	54.1
	Not linked	40	45.9
TB screened at ART clinic (n=444)	Screened	386	86.9
	Not screened	58	13.1
TB positive HIV patients linked to TB clinic at ART clinic (n=65)	Linked	50	76.9
	Not linked	15	23.1
TB positive HIV patients linked to CPT at ART clinic (n=65)	Linked	49	75.4
	Not linked	16	24.6
TB negative HIV patients linked to IPT at ART clinic (n=279)	Linked	133	47.7
	Not linked	146	52.3

Table 17: Judgment matrix of Compliance TB/HIV collaborative activities in Jimma zone, 2010

Dimension		Program components (Activities)	Indicators	Expected Weight (%)	Achieved Weight(%)	Judgment Parameter
Compliance	VCT clinc	Linking all HIV positive clients to ART clinic at VCT clinic	Proportion of HIV patients at VCT clinic who were linked to ART clinic.	12.5	9.4	≥85% Excellent 75-84% Very good 60-74% Good 40-59% Poor <40% Critical
	ART CLINIC	Linking all HIV positive patients for TB screening	Proportion of HIV patients who were screened for TB at ART clinic	12.5	11.3	
		Linking all TB positive HIV patients to TB clinic	Proportion of TB positive HIV patients who were linked to TB clinic	12.5	9.1	
		Linking all TB positive HIV patients to CPT prophylaxis	Proportion of TB positive HIV patients who were linked CPT prophylaxis	12.5	9	
		Linking all TB negative HIV patients to IPT prophylaxis	Proportion of TB negative HIV patients who were linked to IPT prophylaxis	12.5	6	
	TB clinic	Linking all TB patients for HIV screening	Proportion of TB patients who were linked for HIV screening	12.5	12	
		Linking all HIV positive TB patients to ART clinic for ART	Proportion of HIV positive TB patients who were linked to ART clinic for ART	12.5	7	
		Linking all HIV positive TB patients to CPT prophylaxis	Proportion of HIV positive TB patients who were linked to CPT prophylaxis	12.5	6	
		Total		100	70	

From the chart the prevalence of TB on HIV patients in 2010 was 14.8%

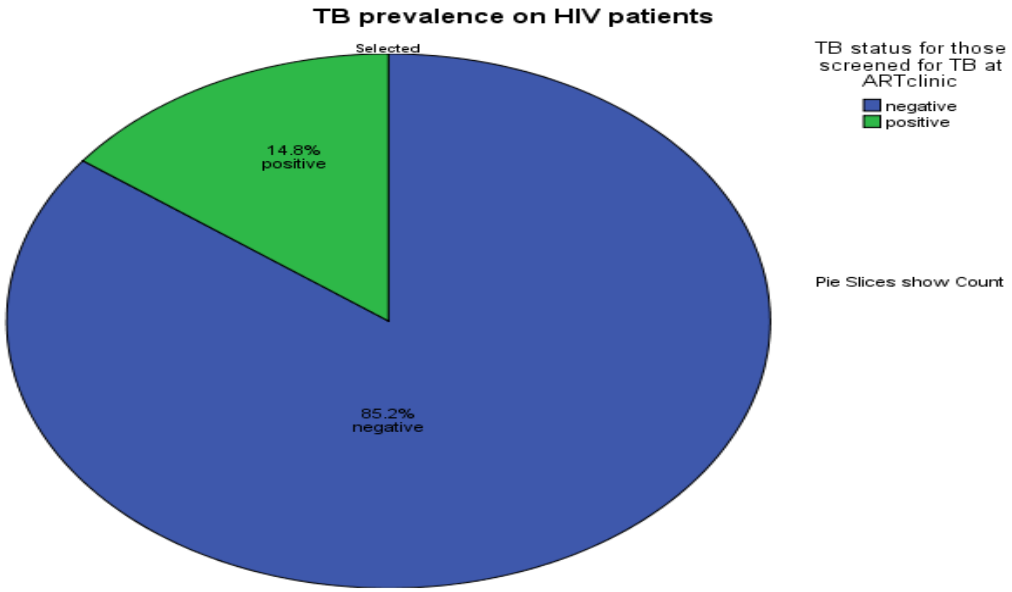


Figure 4: the prevalence of TB on HIV patients in Jimma zone, 2010.

From the chart the prevalence of HIV on TB clients in 2010 was 11.8%

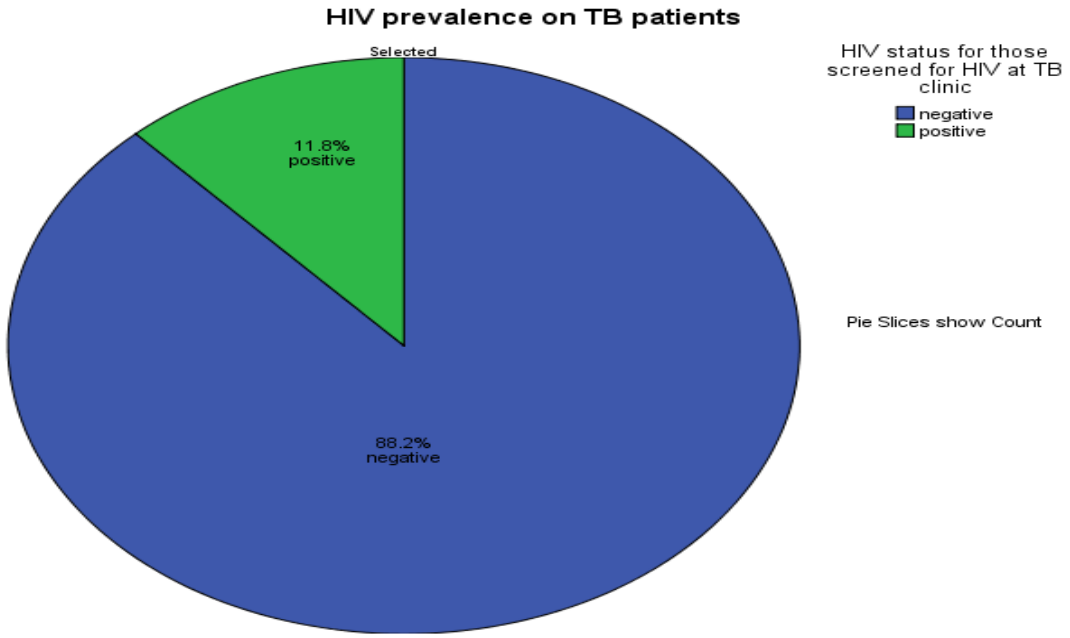


Figure 5: the prevalence of HIV on TB clients Jimma zone, 2010

7.3 - Demographic characteristics of clients and patients

From 1427 records and client cards in TB clinic, ART clinic and VCT clinic majority of the clients were >32 and 18-32 age groups which accounts 41.2% and 39.8% respectively. Majorities were Muslims which accounts 68.0%. Majorities were females in sex which accounts 56.6% and Oromo in Ethnicity which accounts 79.6%.

56.6% and 52.7% of the clients were rural in place of residence and married in marital status. 58.0% and 67.5% were illiterate in their educational level and employed in their employment status respectively. (See Table 18)

Table 18: Characteristics of patients/clients at TB, VCT and ART clinics in health facilities of Jimma zone (n=1427)

Variables	Category	Frequency	Percentage (%)
Age	<18	271	19.0
	18-32	568	39.8
	>32	588	41.2
Sex	Male	619	43.4
	Female	808	56.6
Religion	Orthodox	356	24.9
	Muslim	971	68.0
	Protestant	100	7.0
Ethnicity	Oromo	1136	79.6
	Amhara	207	14.5
	Garage	65	4.6
	Tigray	11	0.8
	Others	8	0.6
Place of	Rural	907	63.6

residence	Urban	520	36.4
Marital status	Single	461	32.3
	Married	752	52.7
	Separated	99	6.9
	Divorced	84	5.9
	Widowed	31	2.2
Educational status	Illiterate	828	58.0
	Primary	353	24.7
	Secondary	231	16.2
	Tertiary	15	1.1
Employment status	Employed	963	67.5
	not employed	464	32.5

Chapter 8- Discussion

There was no evaluation done on TB/HIV so the comparisons were done with the national TB/HIV collaborative activity implementation guide line and the possible reasons were explored from TB/HIV trained experts in-depth interview not from the client.

The qualititative data were used to supplement the quantitative data. Every effort was made to allow for minimal bias and there were clear communication with stakeholders about the purpose of the evaluation to avoid response bias of in-depth respondents and there was diplomatic approach with the health experts.

Tuberculosis and human immune deficiency virus is sensitive and have significant effect in socio economical effect on the country so even the result was not mach on the agreed judgment Para meters. Most of the reasons were minimized by strong collaboration and commitment of the health professionals and TB/HIV collaborative coordinators.

In the compliance the denominator depends on the indicator that means to measure each indicator which was derived from the national guideline and based on the objective of the evaluation.

Some clients (21.6%) in VCT clinic were not linked to ART clinic which is out of the national guide line it says all clients in VCT clinic who were positive in voluntary counseling should linked to ART clinic[1]. The possible reasons from expert interview for not linked ART clinic were absence of ART clinic, fear of stigma and fear of peers by the clients even if the community did not stigmatized.

Some clients (8.3%) were not screened for HIV in TB clinic which is out of the guide line it says all TB clients in TB clinic should be screened for HIV[1]. The possible reasons for not screened for HIV were from the qualitative result fear of stigma and fear of peers by the clients even if there was no stigma by the community.

From HIV positive clients in TB clinic 51.2% were linked to ART clinic which is out of the national guide line it says all clients in TB clinic who were HIV positive should linked to ART clinic[1].The possible reasons for not linked to ART clinic from the qualitative result were absence of ART clinic in some health facility and fear of stigma and fear of peers even if there is no stigma in the community. In southern India a retrospective evaluation from 1 march to august 30, 2007 in three districts of primary health care unit that provides ART, TB and VCT service the linkage of HIV infected TB patients to ART was 93%[15].

From HIV positive clients in TB clinic 54.1% were linked to CPT clinic which is out of the national guide line it says all clients in TB clinic who were HIV positive should linked to ART clinic[1].The possible reasons for not linked to ART clinic from the qualitative result were absence of ART clinic in some health facility and fear of stigma and fear of peers even if there is no stigma in the community. In southern India a retrospective evaluation from 1 march to august 30, 2007 in three districts of primary health care unit that provides ART, TB and VCT service the linkage of HIV infected TB patients to CPT was 97%[15].

Some of the clients (23.1%) who were TB positive HIV clients were not linked to TB clinic which is out of the guide line it says all TB positive HIV clients should be linked to TB clinic[1]. The possible reason for not linked to TB clinic from qualitative results was negligence of health workers. Some of the clients(24.6%) were not linked to TB CPT which is out of the national guide line it says all TB positive HIV clients should linked to CPT if they are legible for CPT but those who are eligible for CPT already excluded. From the study the possible reasons from the qualitative result was negligence of health professionals to prescribe CPT. Majority of the clients(52.3%) were not linked to IPT which is out of the national guide line it says all TB negative HIV clients should be linked to IPT if they are legible for IPT but the eligible clients already excluded in the study[1].The possible reasons were from the qualitative study result negligence clients for prescribing of INH and in one health facility TB/HIV collaborative coordinator said because of diagnostic material problem we face difficulty in excluding those who had active TB.

In general the findings in in-depth interview show all health facilities were link all clients except two health facilities (Atnago health center and Limu genet health center) who had no ART clinic in 2010 but document review guide shows some clients in all health facilities and clinics were not linked. Even if it was difficult to know the possible reasons may be either the document was not complete or the experts were not answer the right answer and also different health facilities had different result. So see the result part.

Each health facilities experts were interviewed and observation of stock cards and inventory was done. Except anti TB drugs other inputs were not 100% available which is out of the national guide line and standard that says all TB/HIV collaborative activity inputs should available at any time. The reasons according to the respondents were no supply of inputs from the Regional health bureau and from the zone. If inputs are not available the activities of TB/HIV collaborative program had a problem these may lead drug resistance and occurrence of opportunistic infections. Since TB/HIV are serious problems and may leads to socio

economical impact availability of inputs should be considered as a major activity because other activity of the program depends on the availability of inputs such as drugs, trained human resource and supplies and testing reagents.

In availability the in-depth interview result matches with inventory of inputs and observation of bin cards through out 2010.

Different health facilities had different results on availability of inputs and reasons for not available but majority of the health facilities had almost similar answers except those two health facilities (Atnago health center and Limu genet health center) that had no ART clinic. Because of unavailability ART clinic ART drugs and Cotrimaxzole were not available through out in the year 2010.

According to expert respondents some health facilities were made direct contact with non governmental organizations that was their good strength to get inputs from non governmental organizations when there was stock out of drugs from governmental organizations such as regional health bureau and zonal health office. This strength may also helps for other health facilities to get inputs from non governmental organizations when there is stock out of inputs in governmental organizations.

Chapter 9- Conclusions and recommendations

9.1- Conclusion

- 70% for over all compliance dimension which was good based on the judgment matrix which was formulated by the stake holders and the evaluators and adapted from the national TB/HIV collaborative activity implementation guideline.
- 68% for over all availability dimension which very good based on judgment matrix which was formulated by the stake holders and the evaluators and adapted from the national TB/HIV collaborative activity implementation guideline.
- Even if it is good and very good for compliance and availability respectively because of HIV is sensitive it needs a lot of improvement. The in-depth result and document result had a gap.

Table 19: Over all judgment matrix of TB/HIV collaborative activity program in Jimma zone 2010.

Dimensions	Expected	Achieved	Judgment	Judgment parameter
Availability	50%	34%	Very good	>85% Excellent 75-84% Very good 60-74% Good 40-59% Poor <40% Critical
Compliance	50%	35%	Good	
Over all achievement	100%	69%	Good	

9.2- Recommendations

Even if it was good and very good for compliance and availability respectively because of HIV is sensitive it needs a lot of improvement. The in-depth result and document result had a gap so the program managers should see what is going on For Jimma zone and those health facilities that had no ART clinic try to communicate with other stakeholders and try to start ART for that health facility that had no ART service during the study and in 2010.

- For Jimma zone and Oromia region try to arrange training to health professionals especially for Health Officers or physicians because majority of the health centers had no trained health officer or physician during the study and in 2010.
- For the Woreda health office and health facilities try to arrange community mobilization about stigma and discrimination and give education about stigma because one of the reason not linked was fear of stigma by the clients even if there was no stigma by the community when there is community mobilization the clients will aware about at the time get education.
- For the Zonal health office , Woreda health office and the head of the health facility try to accomplish Supportive supervision because even if other conditions are full fill but all clients are not linked as expected this was because of health professional's negligence.
- For Zonal health office, Woreda health office and the health facility in some health facilities they had no TB diagnosis materials to rule out active TB try to fulfill TB diagnosis materials like X.RAY because if there is no TB diagnosis materials clients may get INH without real confirmation. These may risk INH resistance and may lead to MDR TB.
- For Health facilities for temporarily until ART clinic started try to follow those clients who were referred to other health facility for ART whether they start or not but these is not permanent solution for permanent as mentioned above try to start ART clinic.
- For health facilities even if there is no ART clinic try to start CPT because cotrimaxzole can access like any other drugs.
- For researchers try to do research MDR TB related to standardize TB diagnosis instrument to rule out active TB and INH administration.

9.3- Limitation of the study

The data was not complete and precise enough, or too disorganized in case of document review and because health facilities staff might want to “prove” that the program was working, their interview responses might be biased. Responses from program participants could also be biased due to their stake in the program or for a number of other reasons. Every effort was made to design a data collection effort, create instruments, and conduct interviews to allow for minimal bias and there were clear communication with stakeholders about the purpose of the evaluation to avoid response bias of in-depth respondents and program participants. There was diplomatic approach with the health facility staffs to get relevance registration books and personal client cards from the health facilities.

Chapter 10- Meta evaluation

According to CDC (2005) any program evaluation should fulfill four standards to meet its objectives. These are: utility, feasibility, propriety, and accuracy. Therefore, the proposed evaluation fulfilled these standards.

Utility: The evaluation was participatory all stakeholders were identified. The stake holders were consulted before the beginning of the study. Hence, they will use the findings of the evaluation for informed decision making and the report is clear and short. Evaluation users can understand easily.

Feasibility: The evaluation had been conducted in limited time with minimum cost. The data collectors and supervisors were recruited from the locality. Overall the evaluation was conducted with limited time, money and human resource. Stake holders were so much cooperative and they select the topic by themselves during evaluability assessment.

Propriety: The evaluation tried to protect the rights of subjects and TB/HIV coordinators included in the study. Ethical clearance was obtained from Jimma university and other concerned organizations. In addition consent had been obtained from each subject. Therefore, the evaluation didn't have negative effect on the organization as well as the study subjects. The evaluations will disseminate to the stakeholders.

Accuracy: The evaluation was use different data collection methods like document review, expert interview and observation was done. The information obtained had been supplemented document review by in-depth interview to make it more accurate. Therefore, the findings were believed to be appropriate and relevant and also during evaluability assessment the context were assessed with the program owners.

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Annexes

Annex 1-In-depth expert interview guide on Compliance on linkage and Availability of inputs.

Jimma University

School of public health

English version

In-depth expert interview guide for data collection on Compliance on linkage at Jimma zone on sampled Health facilities those who were started TB/HIV collaborative activity program.

Identification

Name of the institution----------

Verbal Consent form before Conducting the Interview

Greetings:

Hello, how are you?

My name is s/r----------. I am currently a member of data collectors for the evaluation research which is conducted by School of public health I would like to interview on availability of inputs and linkage of TB/HIV collaborative. The objective of the evaluation is to identify gap of TB/HIV collaborative activity focused on linkage and availability. Your collaboration and willingness for the interview is very helpful in identifying the gaps related to the issue. Your name will not be written in the form and I assure you that all information that you give will be kept strictly confidential. Your participation is voluntary and you are not obliged to answer any question you do not wish to answer. If you are not still comfortable with the interview, please feel free to stop it any time you like. Do I have your permission to continue?

1 – If yes, continue to the next page 2 – In no, skip to the other participant

Thank you

Section 1 – Compliance questions

Section 1.1 - at VCT clinic

1) Does all HIV positive clients linked to ART clinic

1. Yes 2.no

2) If yes is there challenges to perform and how you solve it.....
.....
.....
.....

3) If no what do you think the reasons
.....
.....
.....
.....

Section 1.2 - At TB clinic

1) Do you screen all TB patients for HIV?

1. Yes 2.no

2) If yes is there challenges to perform and how you solve it.....
.....
.....
.....

3) If no what are reasons not screening.....
.....
.....
.....

4) Do you link all HIV positive TB patients to ART clinic?

1. Yes 2.no

5) If yes is there challenges to perform and how you solve it.....

.....

.....

.....

6) If no what do you think the reasons

.....

.....

.....

.....

7) Do you link all HIV positive TB patients to CPT Prophylaxis are?

1. Yes 2.no

8) If yes is there challenges to perform and how you solve it.....

.....

.....

.....

9) If no if no what do you think the reasons

.....

.....

.....

.....

Section 1.3 - At HIV/ART clinic

1) Do you screen all HIV clients for TB?

1. Yes 2.no

2) If yes is there challenges to perform and how you solve

it.....

.....

.....

.....

3) If no what are reasons not starting

TB/HIV.....

.....

.....

.....

4) Do you link all TB positive HIV patients to TB clinic?

1. Yes 2.no

5) If yes is there challenges to perform and how you solve

it.....

.....

.....

.....

6) If no what do you think the reasons

.....

.....

.....

.....

7) Do you link all TB positive HIV patients to CPT prophylaxis?

1. Yes 2.no

8) If yes is there challenges to perform and how you solve

it.....

.....

.....

.....

9) If no if no what do you think the reasons

.....

.....

.....

.....

10) Do you link all TB negative HIV patients to INH prophylaxis?

1. Yes 2.no

11) If yes if yes is there challenges to perform and how you solve it.....

.....

.....

.....

12) If no if no what do you think the reasons

.....

.....

.....

.....

Section 2 – Availability questions and observation questions

1) Does forms and registers currently available(TB/HIV quarterly report, TB/HIV supervisory check list, TB/HIV referral form, Sputum smear request form, CPT register, IPT register, TB register, ART/HIV register, VCT register?

1. Yes 2.no

2) If no which form and register (write it

.....

.....

.....

Why it is not available.....

.....

.....

(Observe and write the form and register which is not available

.....

.....

3) Does drugs currently available (Cotrimaxzole, ARV drugs, Anti TB drugs)

1. Yes 2. No

4) If no which drug is not currently available (write it

).....

.....

.....

Why it is not available

.....

.....

(Observe and write the drugs which are not

available.....

.....

5) Does supplies and reagents currently (HIV test kits, AFB equipment for test, Gloves, needles)

1. Yes 2.no

6) If no which supplest and reagents is not currently available (write it

).....

.....

.....

Why it is not

available.....

.....

.....

.....

.....

(Observe and write the supplies and registers which is not available.....

.....

7) Does human resource currently available (TB/IV trained health officer or physician, TB/HIV trained nurse and pharmacist)

1. Yes 2.no

8) If no which human resource is not currently available (write it

).....

.....

.....

Why it is not available

.....

.....

.....

(Observe and write the human resource which is not available.....

..... 9) Does forms and registers were stock out in the last one year (TB/HIV quarterly report, TB/HIV supervisory check list, TB/HIV referral form, Sputum smear request form, CPT register, IPT register, TB register, ART/HIV register, VCT register?

1. Yes 2.no

10) If yes which form and register (write it?)

.....

.....

.....

For how long it was stock out

.....

.....

Why it is stock out

.....

.....

(Observe the bin cards and registers and write it the form and register which was stock out

.....

.....

11) Does drugs stock out in the last one year (Cotrimaxzole, RAV drugs, Anti TB drugs)

1. Yes 2.no

12) If yes which drug were stock out (write it

).....

.....

.....

For how long it was stock

out.....

.....

Why it is stock

out.....

.....

(Observe bin card and registers and write the drugs which were stock

out.....

.....

13) Does supplies and reagents were stock out in the last one year (HIV test kits, AFB equipment for test, Gloves, needles)

1. Yes 2.no

14) If yes which supplies and registers were stock out (write it

).....

.....

.....

For how long it was stock out

.....

.....

Why it was stock out

.....

.....

.....

.....

(Observe and write the supplies and reagents which are stock out

.....

.....

15) Does human resource were not available in the last one year (TB/HIV trained health officer, TB/HIV trained nurse and pharmacist)

1. Yes 2.no

16) If yes which human resource were not available (write it).....

.....

.....

For how long it was not available.....

.....

Why it was not available

.....

.....

.....

(Observe registers and write the human resource which was not available.....

.....

Annex 2- Document review guide

Document review guide

Question number	Questions		Skip
1	Woreda	----------	
2	Health facility name	----------	
3	Age	----------	
4	Sex	Male female	
5	Religion	Orthodox Muslim Protestant Catholic others	
6	Ethnicity	Oromo Amhara Gurage Tigray others	
7	Place of residence	Rural urban	
8	Marital status	Single Married Separated Divorced Widowed	

9	Educational status	Illiterate Primary school Secondary school Tertiary and above	
10	Employment status	employed not employed	
11	Received pretest counseling	Yes No	
12	Received post test counseling	Yes No	
At TB clinic			
13	Does the client screened for HIV	Yes No	If no skip to q -
14	If Q 13 is yes what is HIV status	Negative positive	If negative skip q-
15	If Q is positive does the client linked to ART	Yes No	
16	If Q 14 is positive does the client linked to CPT	Yes No	
At ART clinic only			
17	Does the client screened for TB	Yes No	If no skip to q

18	If Q 17 is yes does the client TB positive or negative	Positive negative	If negative skip to q
19	In Q 16 If the client is positive does he/she linked to TB clinic	Yes No	
20	In Q 16 If the client is positive does he/she linked to CPT	Yes No	
21	In Q 16 if the client is negative does he linked to IPT	Yes No	
At VCT clinic only			
22	Does HIV positive client linked to ART clinic	Yes No	