The Ethiopian Public Health Institute

Report on National TB/HIV Sentinel Surveillance

(April 2010 - June 2015)

December 2015
Addis Ababa

NATIONAL TB/HIV SENTINEL SURVEILLANCE ANNUAL REPORT

(July 2014 — June 2015)

Ethiopian Public Health Institute (EPHI)

Ministry of Health (MOH)

IN COLLABORATION WITH CENTER FOR DISEASE PREVENTION AND CONTROL (CDC)

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Table of Contents

LIST OF TABLES and FIGURES

Acronyms and Abbreviations

AFGH	Armed Force General Hospital
ART	Antiretroviral Therapy
CD4	Cluster of differentiation 4
CDC	Centre for Diseases Control
CPT	Cotrimoxazole Prophylaxis Treatment
DNA	Deoxyribonucleic Acid
DOTS	Directly Observed Therapy Short course
EPHI	Ethiopian Public Health Institute
EPTB	extra-pulmonary TB
FMOH	Federal Ministry of Health
HIV/TB	Human Immunodeficiency Virus/Tuberculosis
HIV-1	Human Immunodeficiency Virus type 1
HMIS	Health Management Information System
IPT	Isoniazid Preventive Therapy
IRB	Institutional Review Board
MOH	Ministry of Health
PCR	Polymerase Chain Reaction
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PH	Police Hospital
PICT	Provider initiated HIV counselling and Testing
SERC	Scientific and Ethical Review Committee
TB	Tuberculosis
WHO	World Health Organization

Acknowledgements

The Federal Ministry of Health and the Ethiopian Public Health Institute (EPHI) would like to acknowledge Centres for Disease Control and Prevention –Ethiopia and Atlanta in technically and financially supporting the design, implementation, analysis and report writing of the STI syndromic case surveillance. This surveillance has been supported by the President's Emergency Plan for AIDS Relief (PEPFAR) through center for disease control and prevention (CDC) under the Ethiopian Public Health Institute (EPHI) Cooperative Agreement No. 1U2GGH001178. We want to express our gratitude for study participants, data collectors and supervisors in the surveillance. The FMOH and EPHI would also like to extend their appreciations to the Surveillance Technical Working Group members-HAPCO, CSA, CDC-Ethiopia, WHO-Ethiopia, USAID-Ethiopia, UNAIDS, Tulane University and all other stakeholders for their contributions. **All regional health bureaus and staffs who participated in this surveillance are acknowledged for their contribution and active participation**.

Disclaimer

The findings and conclusions in this report are those of the authors and do not necessarily represent the official views of the Centres for Disease Control and Prevention/ the Agency for Toxic Substances and Disease registry

Summary

The human immunodeficiency virus (HIV) pandemic presents a massive challenge to the control of tuberculosis (TB) at all levels. In settings where the prevalence of HIV is high, tuberculosis is often the commonest infection to develop among people living with HIV (PLHIV). Tuberculosis and HIV therefore make up a deadly synergy. This unprecedented scale of the epidemic of HIV-related tuberculosis demands concerted and urgent action.

Therefore, this TB/HIV sentinel surveillance was aimed to generate information on all the seven core indicators and avail more information on TB/HIV co-infection for better program planning and decision-making.

This report is produced from the one year data (from July 2014 to June 2015) collected from a total of 70 health facilities, on quarterly basis, selected from all regions, including Armed Force and Federal police Hospitals and contains the trends of the specified indicators over time.

Out of the total 7,411 newly enrolled clients in HIV pre-ART care, the majority 7113 (96%) of them were screened for TB at initial visit and active TB was detected on 9.2% of them. However, only 18.2% of those with no clinical symptoms for TB received IPT. Out of the total 8594 all TB patients registered for TB DOT treatment during the reporting period 8216 (91.8%) of them were screened for HIV, and 17.6% were found positive for HIV. Moreover, CPT uptake in the TB/HIV patients was 84.4%. The surveillance has also showed 70% of TB/HIV co-infected patients have started or continued the previously initiated ART during the course of their TB treatment.

In summary, this surveillance report showed that the majority of PLHIV who are in care, received TB screening at least on their initial visit to pre-ART clinic. On the other hand, IPT was given for only 18.2% of the eligible patients, which is a very low figure. Though the performance on TB screening is promising, more importantly programs should work towards ensuring that appropriate action follows the screening process and increase the IPT uptake to reduce the burden of TB among people living with HIV. Furthermore, the report also shows the percentage of HIV-positive TB patients who has started CPT reached 84% and programs need to still work to increase the CPT uptake close to 100%. Moreover, there is a need to assess the adherence of patients on CPT to have a complete picture about the situation.

The current finding also showed that only 70% of TB/HIV co-infected patients have started or continued previously initiated ART during the course of their TB treatment, which shows a progress compared to the previous round and still need to provide due attention to ensure 100% ART uptake as per the recommendation on the national guideline.

When the trend of TB Screening among HIV positive individuals is analyzed it showed increment from 85.8% in 2010 to 96% in 2015. Nevertheless, active TB cases detection and IPT uptake was irregular across years.

There is a slight decrement in the number of New TB patients screened for HIV infection in the 2015 report (89%) compared to that of 2014 report (90.3%). When we compare the last two reports (2014 and 2015), the trends in HIV prevalence among new TB patients shows somewhat similar pattern at national level (16.6% - 15.4%, respectively). Even though, trend in CPT Uptake for TB/HIV co-infected patients was different from regions to region, nationally it shows a regular pattern from April 2010 to June 2014.

The trend in ART coverage for TB/HIV co-infected patients showed an overall increment from April 2010 (41.1%) to June 2015 (70%) at national level.

Overall, the TB/HIV surveillance has been a great information source for TB/HIV program, and thus it is very essential to strengthen the surveillance program to generate more information on the status of the TB/HIV collaborative activities in the country.

1. Background

In high HIV prevalent countries, HIV related TB continues to be increasing even in well-established TB program. This implies that asserting a very good TB program with effective implementation of DOTS would not be sufficient to control TB (1).

As the HIV/AIDS and TB epidemics have progressed, surveillance has become widely recognized as a critical activity in understanding the trends of the epidemics and in enabling sound strategies to be developed for responding to both. The importance of HIV surveillance in TB patients would be to provide comprehensive HIV care, treatment and support (2).

TB is a major public health problem throughout the world. About a third of the world's population is estimated to be infected with tubercle bacilli and hence at risk of developing active disease. According to the WHO Global TB Report 2012, there were an estimated 8.7 million incident cases and 12 million prevalent cases of TB globally, of which 1.1 million (13%) were among people living with HIV. About 26% of TB incident cases occurred in Africa in 2011. The proportion of TB cases co-infected with HIV is the highest in African countries; overall, the African region accounted for 79% of TB cases among people living with HIV.

According to WHO report of 2014 on TB program in Ethiopia, Ethiopia is one of the 22 high burden countries (HBCs) and TB remains one of the leading causes of mortality due to communicable diseases in the country. The prevalence and incidence of all forms of TB are 211 and 224 /100,000 population, respectively. Excluding HIV related deaths, TB mortality was estimated to be 32 per 100,000 population in 2013. Among estimated all new TB cases, 13% are HIV co-infected. Moreover, Ethiopia is also one of the high TB/HIV and multi-drug resistant TB (MDR TB) burden countries. According to the recent national TB drug resistance surveillance report, 2.3% of new TB cases and 17.8% of previously treated TB cases were estimated to have MDR. In addition, 2.3% of new TB cases and 17.8% of previously treated TB cases were estimated to have MDR (3).

In 2011, an estimated 990,000 deaths occurred among HIV negative TB cases of which 0.30 million deaths were among women. In addition, there were an estimated 0.43 million deaths among incident TB cases that were HIV positive. As a result, approximately 1.4 million people

died of TB in 2011, making the number of TB deaths per 100,000 populations 20.Of the 8.7 million annual TB cases in 2011, about 0.5 million occur in children under 15 years of age. Nevertheless Ethiopia is one of the nine high-burden country halving the TB prevalence, incidence and mortality by 2015 compared to the 1990 value.

According to the 2005 EC (2013) health and health related indicators of the FMoH, tuberculosis is the third leading cause of death in Ethiopia. According to this report, 130,614 new TB cases were detected nationally, and the case detection rate was 58.9%, the TB treatment success rate and cure rate was 91% and 70% respectively. Earlier report of the FMOH, in 2003E.C (2011) showed that a total of 159,017 TB cases were notified in Ethiopia. Among these 151,866 (95.5%) were new cases of TB, all forms. The proportion of new smear-positive, smear negative and extrapulmonary TB (EPTB) among all new cases is 32.7%, 34.8%, and 32.5% respectively. Re-treatment cases represent about 2.9% of all TB cases notified (4).

According to the 2014 TB/HIV Surveillance report, 91.2% of HIV infected clients newly enrolled in HIV Care were screened for TB; of these 8.6 % were found to have active TB. According to the same report 87% of TB patients have undergone HIV test and 19.7% were HIV positive. About 78.2% and 49.2% of HIV positive TB patients were enrolled on CPT and ART, respectively (5).

Surveillance of HIV among TB patients is increasingly seen as important, as the HIV epidemic has continued to fuel the TB disease and as new solutions have emerged to tackle this developing situation.

Cognizing to the fact, continuing a national TB/HIV surveillance system would be a key information source for strengthening collaborative TB/HIV activities. HIV surveillance among TB patients focuses on promoting a high uptake of routine diagnostic HIV testing in the TB care setting, linked to a package of care for TB patients who are found to be HIV positive. The HIV and TB data generated by this approach is used for improvement of TB/HIV program and the TB program at large.

The Ethiopian Federal Ministry of Health has been implementing a standard Health management information system (HMIS) throughout the country. In this HMIS, all Health Centers and

Hospitals providing both TB and HIV/AIDS Services in the country were expected to report nationally two key TB/HIV indicators for ease of reporting and minimizing the work load on health professionals. The national TB/HIV surveillance was started by EPHI in 2010, with the intention of filling the information gap, by capturing additional five TB/HIV indicators which were not reported by the HMIS. For the last five years, this surveillance has collected, analyzed and disseminated information on all TB/HIV collaborative indicators from about 79 sentinel health facilities throughout the country and made it available for programs. Recently revision is made on the nationally reportable HMIS indicators and all core TB/HIV collaborative indicators are included under the nationally reportable indicators. However, since rolling out of the inclusion of indicators in HMIS will take some time it was agreed by the stakeholders to continue the current surveillance system for few quarters until the indicators are adequately captured by the routine HMIS reporting. In due course, EPHI in collaboration with the FMOH will revise this surveillance system to shift its focus to other WHO recommended TB/HIV indicators which can provide information mainly on the program quality and also on key program indicators which are not captured in the updated HMIS reportable indicator list.

1.2. Objectives

1.2.1 General Objective

To strengthen the National TB/HIV integrated interventions by analyzing and disseminating dynamic information on the core TB/HIV collaborative activity indicators from routine health service data in the health facilities.

1.2.2 Specific Objective

- To increase political, professional and public awareness on the TB/HIV co-epidemic.
- To provide information for effective TB/HIV program planning including the quantification of the need for ART, Opportunistic Infection drugs and other supplies to TB/HIV co-infected patients.
- To monitor the burden of HIV among TB patients and vice versa.
- To monitor and assess the effectiveness of joint strategies aimed at reducing the TB/HIV burden.
- To follow up trends of the TB/HIV co infection over time

2. Methodology

2.1. Surveillance sites

Data for this report was collected from a total of 79 health facilities selected from all regions, including Armed Force and Federal police Hospitals, in consultation with the regional health bureaus and based on following selection criteria's,

- Sites providing services for TB and HIV care in the outpatient departments or other specialised clinic.
- Representation of different geographic areas of the country and different population groups, including urban and rural populations.
- Inclusion of sites with a large number of TB cases.
- The inclusion of sites that cover "sentinel populations" such as high-risk areas.
- Sites that the National surveillance unit of the EPHI in association with Regional Health Bureaus are able to supervise effectively and to provide regular logistic back up and support.

A one year data (from July 2014 to June 2015) was collected on quarterly basis from most sites of different regions of Ethiopia (Table 1) using standard TB/HIV surveillance reporting form. This report includes four quarters data from the TB/HIV surveillance sites.

Table 1: TB/HIV sentinel surveillance sites in different regions of Ethiopia July 2014-June 2015

Regions	TB/HIV Hospital sites	TB/HIV Health Center sites
Tigray (6)	Axum (St.Marry)	Adigrat
	Alamata	Mekele
	Humera(Kahesay Abera)	Meqoni
Afar (4)	Dupti	Asayta
		Awash
		Werer
Amhara (11)	Felegewot	Woreta
	Debremarkos	Chagne

	Dessie	Kombolcha
	Gonder	Kemissie
	Metema	
	Debretabor	
	Woldia	
Oromia (16)	Bisidimo	Haromaya
	Nekemet	Holeta
	Fiche	Ziway
	Adama	Jimma
	Shashamane	Bedele
	Ambo	Arsi Robe
	Chiro	Agaro
	Goba	Moyale
Somali(5)	Karamara	Aisha
	Gode	Togowuchale
	Kebredahar	
Benishangul Gumuz (5)	Assosa	Bambasi
	Pawi	Bulen
		Kamashi
SNNPR (10)	Mizan Aman	Sodo
	Arbaminch	Teppi
	Dilla	Halaba
	Yirgalem	
	Butajira	
	Shishinda HC	
	Hossena {Negist Eleni}	
Gambella (5)	Gambella	Metti
		Abobo
		Itang
		Pugndo
Harari (2)	Hiwot Fana	Arategna
Addis Ababa (5)	Zewiditu	Kolfe
	Minilik	Kirkos
		Gulele
Dire Dawa (6)	Dilchora	Legehare
		Sabian HC
		Melka Jebdu HC
		Addis Ketema HC
		Gende Kore HC
Federal police (2)	Federal PH (A.A)	
	Federal PH (Harar)	
Armed Force (1)	AFGH	
Total (79)	40	39

2.2. Data Collection

As part of their primary responsibility in the health facility, health workers work at the TB clinic routinely records patient data on the HMIS unit TB register; and in the same way the health care provider working in the ART follow up clinics (or the data clerk as appropriate), registers client information on the Pre-ART/ART registers. The assigned TB/HIV surveillance focal person, at the sentinel site, extracts the necessary information from both registers and fills out TB/HIV surveillance reporting form. The sentinel sites directly send the filled surveillance format quarterly to the regional health bureaus and the RHB surveillance unit sends the formats to the EPHI within 15 days of end of every quarter, where data were entered, analyzed.

To standardize the TB/HIV surveillance system across all the sites a guideline was developed and circulated to all the regional health bureaus and surveillance sites. Moreover, a Training of Trainers was organized in two rounds for all the TB/HIV focal persons, and surveillance officers at Regional and federal level to create a common understanding on the TB/HIV surveillance system. Subsequently, a cascaded training was also provided for all sentinel site TB unit and ART unit staff, with the objective of introducing the TB/HIV surveillance guideline with focus on the surveillance rationale, the surveillance reporting format and data flow.

Reported TB/HIV collaborative indicators

The Sentinel surveillance sites reported on all the 7 core TB/HIV indicators using the surveillance format (i.e. report additional 5 indicators other than those required by the HMIS from 1-7 below).

1) **TB Screening for PLHIV** : Screened for TB symptoms out of Newly enrolled for HIV care in the quarter
2) **Active TB among HIV Positives:** New TB cases diagnosed out of HIV positives screened for TB symptoms (TB suspected HIV Positive cases)
3) **Isoniazid Preventive Therapy (IPT) for eligible HIV positives:** Given INH Preventive Therapy out of Newly enrolled HIV positives in the quarter (excluding those with active TB)

4) **HIV testing for TB patients:** Tested for HIV out of New and all TB cases registered in the quarter
5) **HIV Positives among TB Patients**: HIV-positive: out of new and all TB patients tested for HIV.
6) **Cotrimoxazole Prophylaxis Treatment (CPT) for TB/HIV patients**: Receive (at least one dose of) co-trimoxazole preventive therapy (CPT) during their TB treatment out of New HIV Positives registered in the quarter.
7) **ART for TB/HIV patients**: Started on ART or continue previously initiated ART, during or at the end of TB treatment out of HIV positives,

3. Result and Discussion

Out of the 79 selected TB/HIV sentinel sites one year complete data was obtained on quarterly basis from 70 (88.6%) sentinel sites starting from July 2014 to June 2015.

3.1. TB Screening for HIV Positive individuals

This is a process indicator for an activity intended to reduce the impact of TB among people living with HIV. TB status assessment identifies HIV-positive clients who show no evidence of active TB by symptom screening and would benefit from treatment with isoniazid for prevention of TB disease among HIV positives. It reveals the extent of implementation of the recommendation that people living with HIV be at least screened for TB at the HIV diagnosis/enrollment in care and at most at every follow-up visits. In this surveillance we used the baseline TB screening status as a proxy measure since it is the only available information on the registers we used. Follow up visit screening would have given information on the quality of TB screening and care for HIV positives. However, the current pre ART/ART registers capture only the baseline TB screening.

Out of the total 7,411 newly enrolled in HIV pre-ART care, the majority 7113 (96%) of them were screened for TB at initial visit. This screening has shown almost similar trend with the previous report (95.9%).The screening rate shows regional variation, ranging from 88% in somali to 100% in Harari. This finding shows that Ethiopia is line with the Global plan to stop TB which is 100% screening for all HIV positive patients (15). The graph below shows the number of clients screened for TB in different regions.

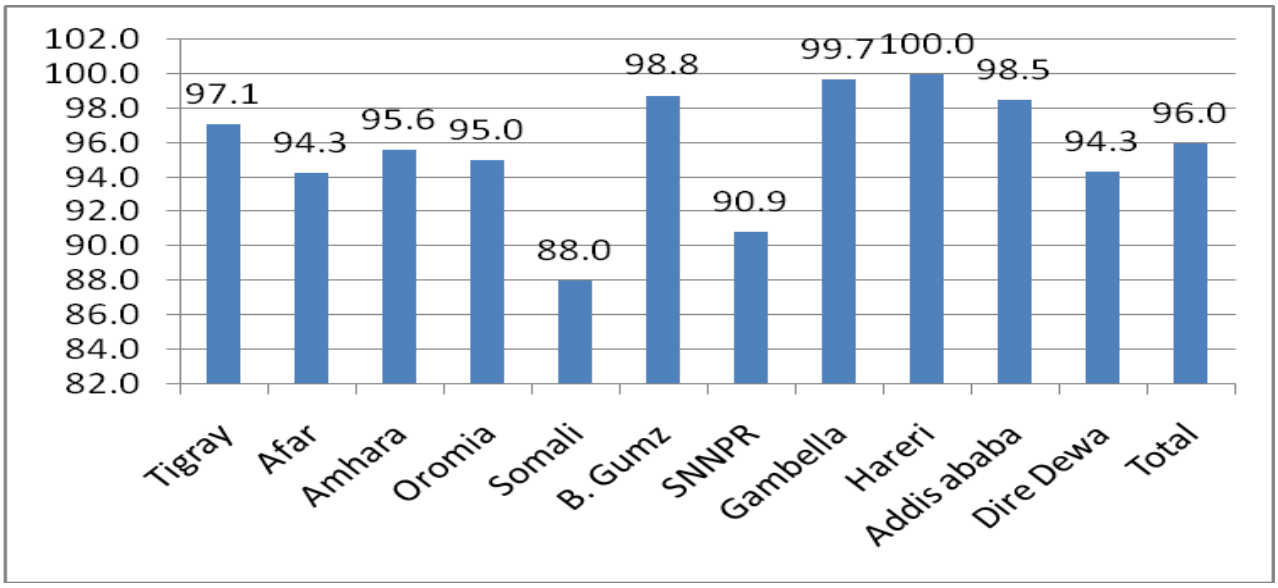

Figure 1a: Percent of clients screened for TB among newly enrolled for HIV care by Region July 2014 to June 2015

The figure below shows the trend of TB screening for HIV positive individuals since the starting of the surveillance. The trend shows similar pattern as the previous years but there are some regional variations, Screening for TB among HIV positive individuals increased from 85.8% in 2010 to 96% in 2015 at national level.

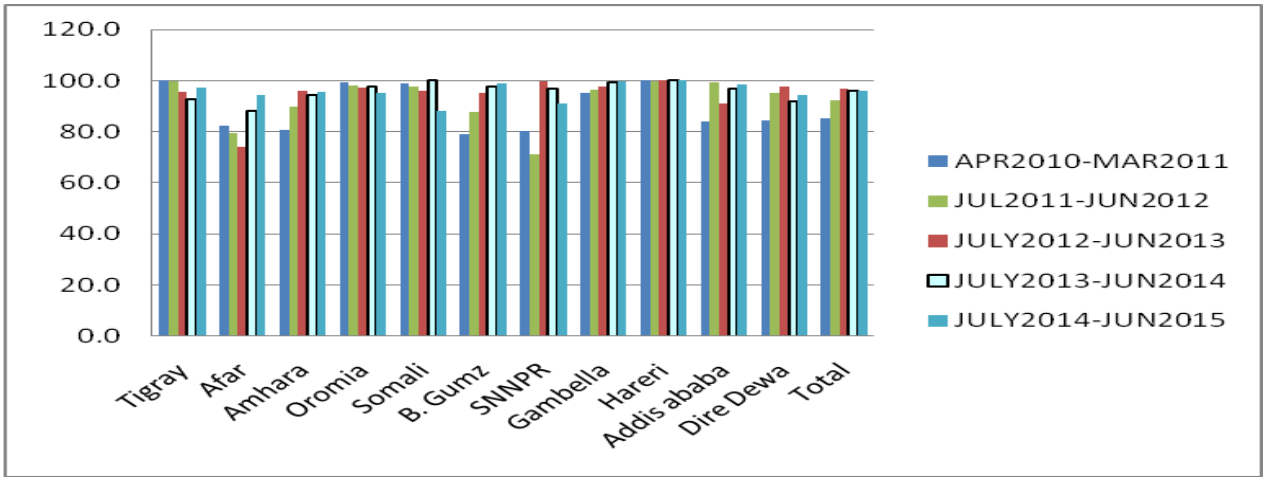

Figure 1b: trend of clients screened for TB among newly enrolled for HIV care by Region from April 2010 to June 2015

3.2. Active TB among HIV Positives

This indicator measures the burden of known TB co-morbidity among people in HIV care. This indicator is important for demonstrating the intensified TB Case finding effort as part of the TB/HIV collaborative activities thereby reducing the burden of TB in people living with HIV and their communities and contributing to the overall TB case-detection at national level. It may be used in drug supply planning for ART drug substitution in people treated for TB.

Of the total HIV positive clients, who were screened for TB at initial visit, active TB was detected on 9.1% of them, the active TB prevalence after enrollment in HIV care ranges from 5.0% in Afar to 14.2% in Harari. This is a higher figure when compared to the finding on the recently conducted TB/HIV DOT assessment survey done in 2013, which showed 4.5%. The graph below shows the proportion of TB cases detected out of the total HIV positive clients by region.

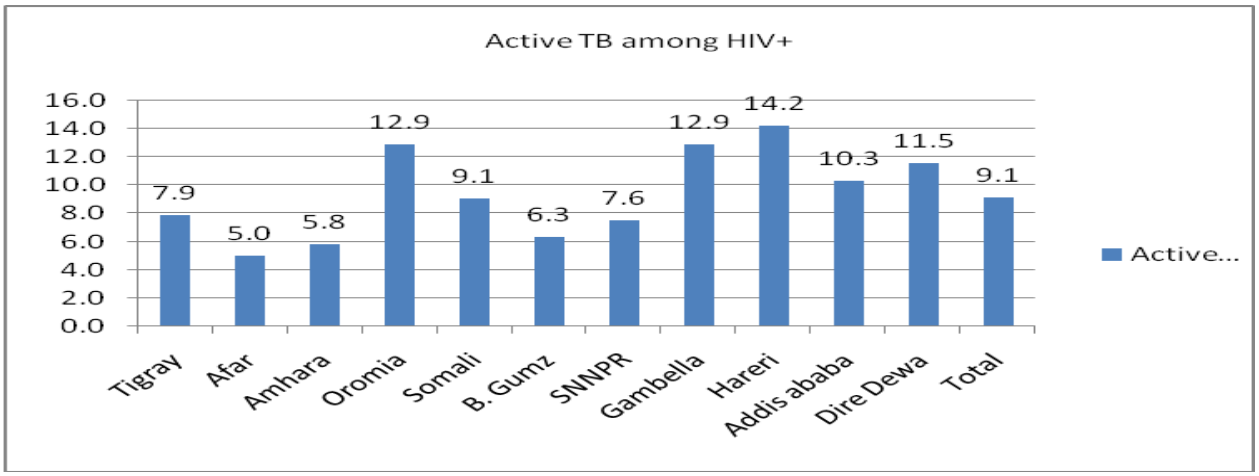

Figure 2a: percent of active TB cases detected among HIV positives by Region July 2014 to June 2015.

The figure below shows the trend of active TB cases among HIV positive patients from April 2010 to June 2015. The percent of active TB cases detected was 10.4% in 2010, 7.2% in 2014 and 9.1 in 2015 fluctuating from year to year.

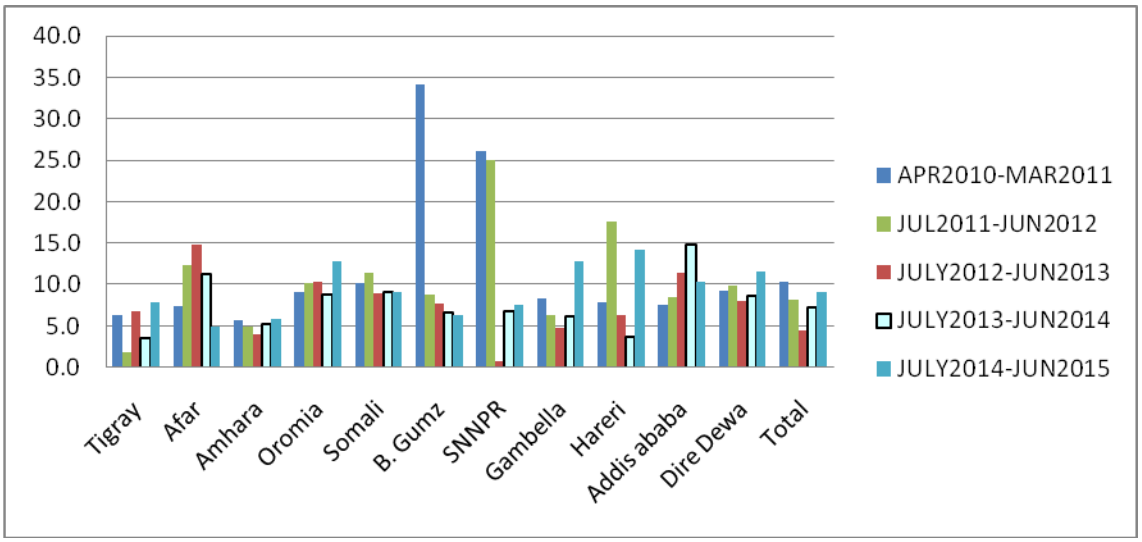

Figure 2b: Trend of active TB cases detected among HIV positives by Region from April 2010 to June 2015.

3.3. Isoniazid Prophylaxis Treatment (IPT) for eligible HIV positives

This indicator measures TB/HIV program effort to ensure that eligible HIV-positive individuals [defined for the surveillance purpose as HIV positive persons in care not found to have active TB by the baseline screen] are receiving treatment for latent TB infection (INH Preventive Therapy/IPT) to reduce the incidence of TB in people living with HIV. The Ethiopian TB/HIV implementation guideline recommends that HIV-positive individuals should be screened for TB (15). Those who are found to have no evidence of active TB will be offered IPT. All clients receiving at least the first monthly dose of INH should be recorded and reported.

This surveillance revealed that, out of the total clients newly enrolled in HIV care, for which active TB was ruled out, only 18.2% of them received IPT. The figure ranges from 5.6% in SNNPR to 55.9% in Harar. The graph below shows the IPT provision status by Region. This is very low in general but has shown improvement when compared with the previous rounds. The national TB-DOT survey has revealed that the attitude of health professional's towards giving IPT also contributed to this poor performance. This very important performance indicator shows with TB prevention intervention through chemoprophylaxis to prevent TB associated morbidity and mortality among PLHIV enrolled in care. However, even though it has shown little

increment in this round, the implementation of this activity is not showing improvement as expected and seems to be neglected.

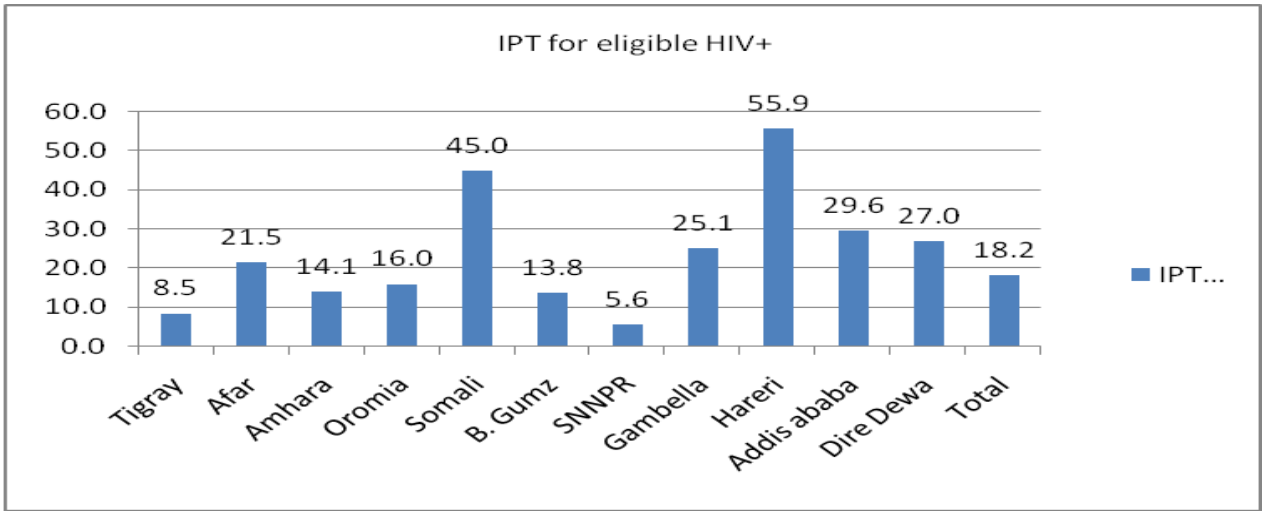

Figure 3a: percent IPT provision status for newly enrolled HIV positives by Region from July 2014 to June 2015.

The figure below shows the trend of IPT uptake among eligible HIV positive patients by region. This trend shows a decrease in IPT uptake from 2010 (20%) to 5.5% in 2013, 8.4% in 2014 and 18.2 in2015 surveillance reporting period.

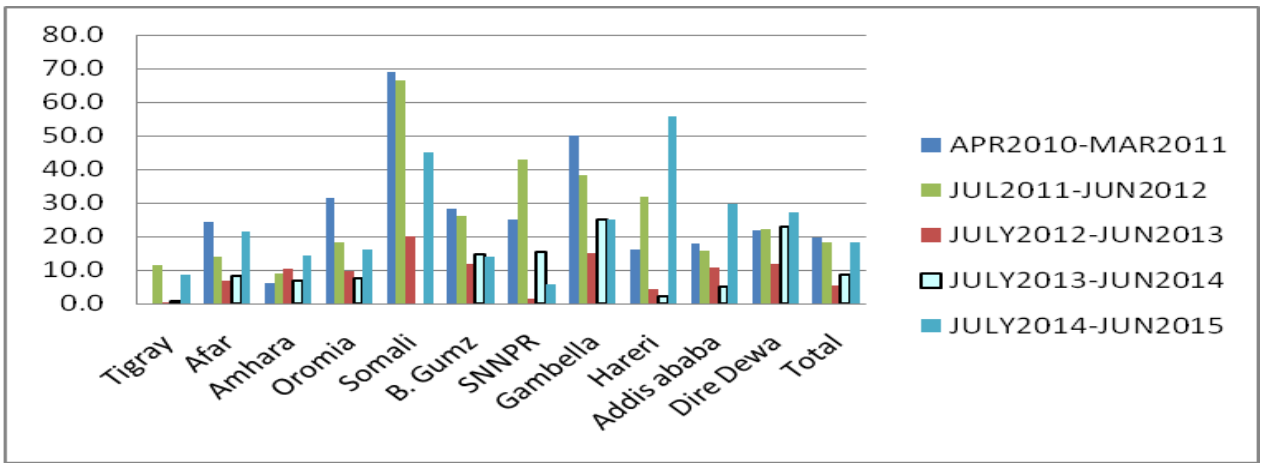

Figure 3b: Trend of IPT provision status for newly enrolled HIV positives by Region from April 2010 to June 2015.

3.4. HIV testing and counseling for TB patients

This indicator measures the TB/HIV program effort in offering routine Provider Initiated HIV Counseling and testing service (PITC) to all TB patients. The national TB/HIV implementation guideline recommends offering routine HIV testing for all TB patients (14). TB clinics are the commonest entry points to HIV care and treatment services at health facilities. Routine HIV testing of TB patients is a high yield intervention enabling early identification of co-infected cases and linkage to comprehensive HIV prevention, treatment, and care and support services. Trends over time demonstrate progress towards achieving national and international targets. This indicator measures the extent that TB patients are targeted for HIV testing with intention of timely identifying those affected by the co-morbidities for TB/HIV co-management through integrated service delivery. A high proportion of TB patients knowing their status provide a sufficiently robust estimate of the true HIV prevalence among TB patients for surveillance purposes (1). It also forms the basis for more in-depth prevention efforts (e.g. condoms, partner testing).

In this surveillance, out of the total 8594 all TB patients registered for TB DOT treatment during the reporting period 8216 (91.8%) of them were tested for HIV. This percentage is in line with the target of the Global Plan to Stop TB which is, 85% of the TB patients to be tested for HIV. Most of the regions had achieved the global plan >85% except Tigray (73.4%) and Addis Ababa (79.1%) (Graph 4a). The data shows consistency with the previous year data (93.1%). The HIV testing figure varies from one sentinel site to another.

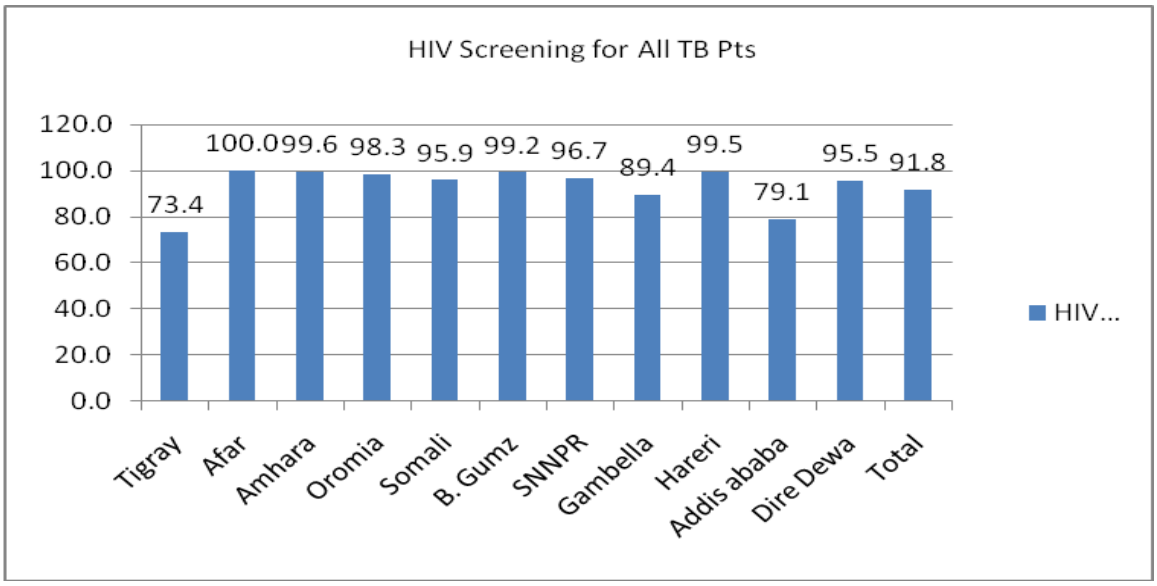

Figure 4a : Percentage of all TB patients tested for HIV by Region from July 2014 to June 2015.

Moreover, among 8392 new TB patients registered for TB DOT treatment during the reporting period, 7468 (89.0%) of them were tested for HIV. Most of the Regions have tested more than 90% of new TB patients for HIV except Tigray (61.4%) and Addis Ababa (77.5%).

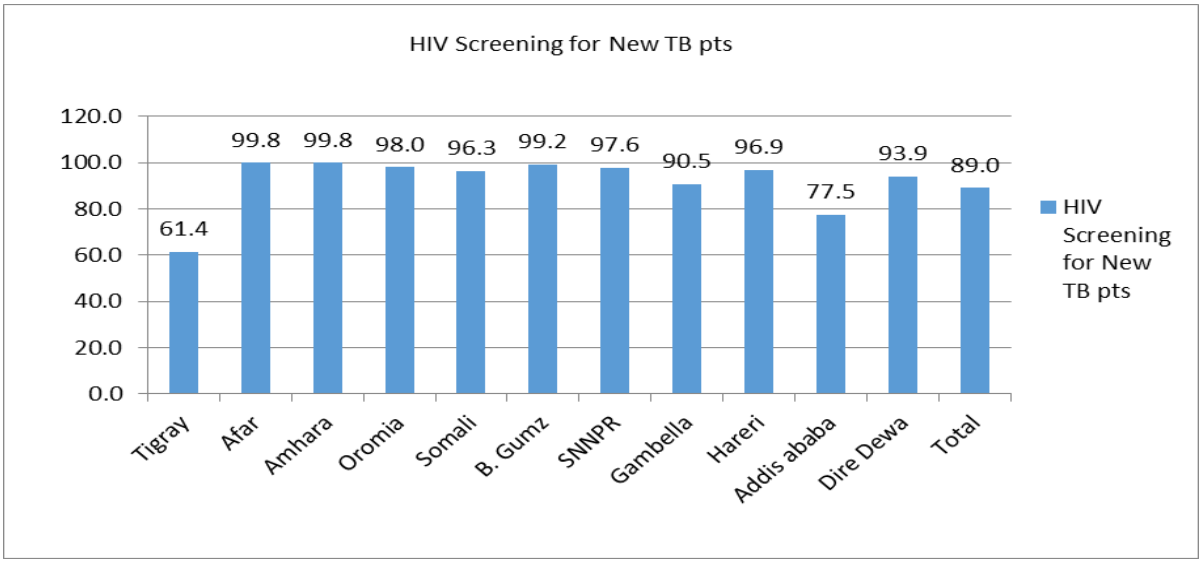

Figure 4b: Number of New TB patients tested for HIV by Region from July 2014 to June 2015.

The figure below shows the trend overtime of New TB patients screened for HIV, there is a general decrease in the number of New TB patients screened over the last three years of the report (2005, 2006, and 2007EC) respectively.

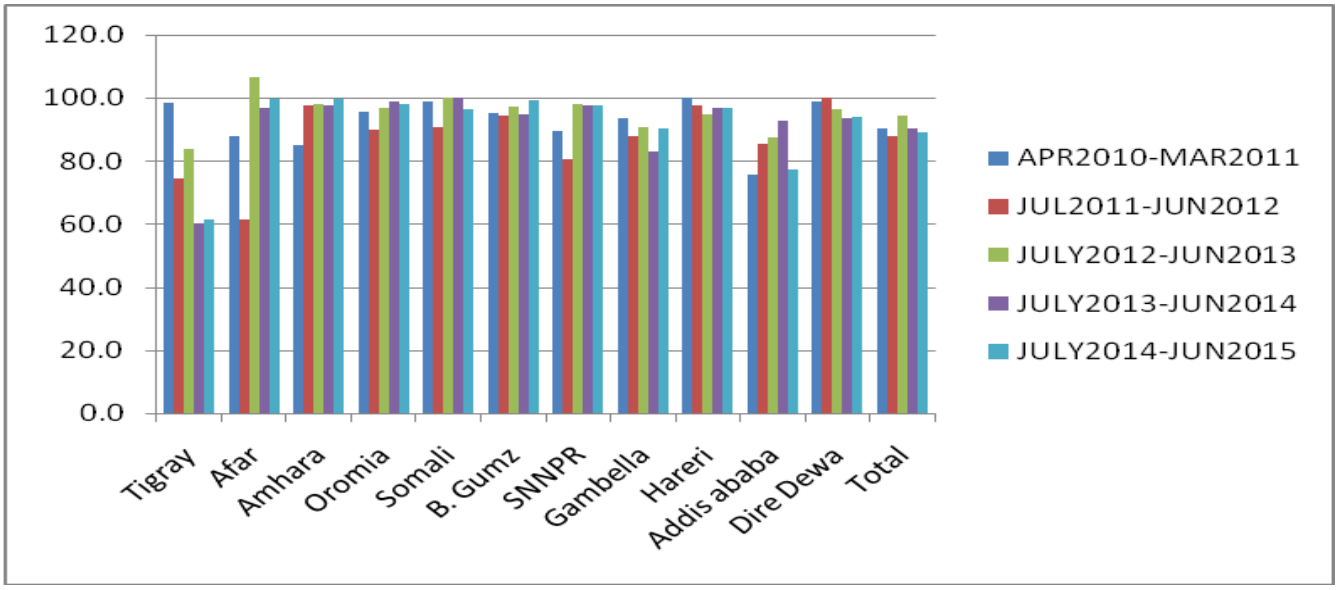

Figure 4c: Trends in the Number of New TB patients tested for HIV by Region from April 2010to June 2015.

3.5. HIV Positives among TB Patients

This indicator assesses the prevalence of HIV among TB patients. This defines an important population for specific interventions, such as CPT and ART, aimed at reducing the burden of HIV among TB patients and their communities,. It will also be used as the denominator for indicators that measure the uptake of these interventions. Measuring the proportion of HIV-positive TB patients gives important information for targeting of resources, strategic planning of activities, and monitoring the effectiveness of HIV prevention, care and treatment interventions over time.

As shown on graph 5a, of the total TB patients registered during the reporting period and screened for HIV (7987), 17.6% (1403) of them were positive for HIV. Higher HIV prevalence among all TB patients was found in Addis Ababa (34.2%) followed by Afar (31%) and Gambella

(24.7%). On the other hand, the lowest prevalence was observed in Somali (2.6%) and Harari (5.2%).

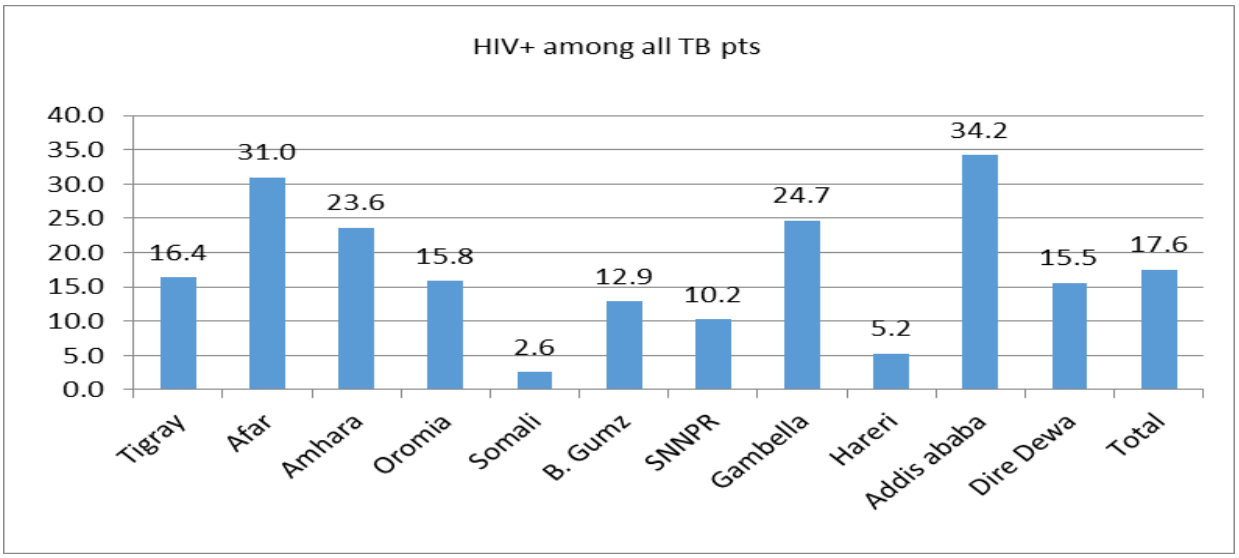

Figure 5a: HIV prevalence among all TB patients by Region from July 2014 to June 2015.

Furthermore, in this surveillancethe HIV prevalence among new TB patients was 15.4%, which comparable with the WHO report in 2014 which was 13% (3). The slight difference could be because most of our surveillance sites are located in urban or peri-urban settings. Figure 5b, shows the HIV prevalence per region ranges from 1.4% in Harari to 30.6% in Afar. Higher HIV prevalence among New TB patients was found in Afar (30.6%) followed by Addis Ababa (26.8%) and Gambella (23.7%) regions. On the other hand, the lowest prevalence was observed in Harari (1.4%) and Somali (1.9%).

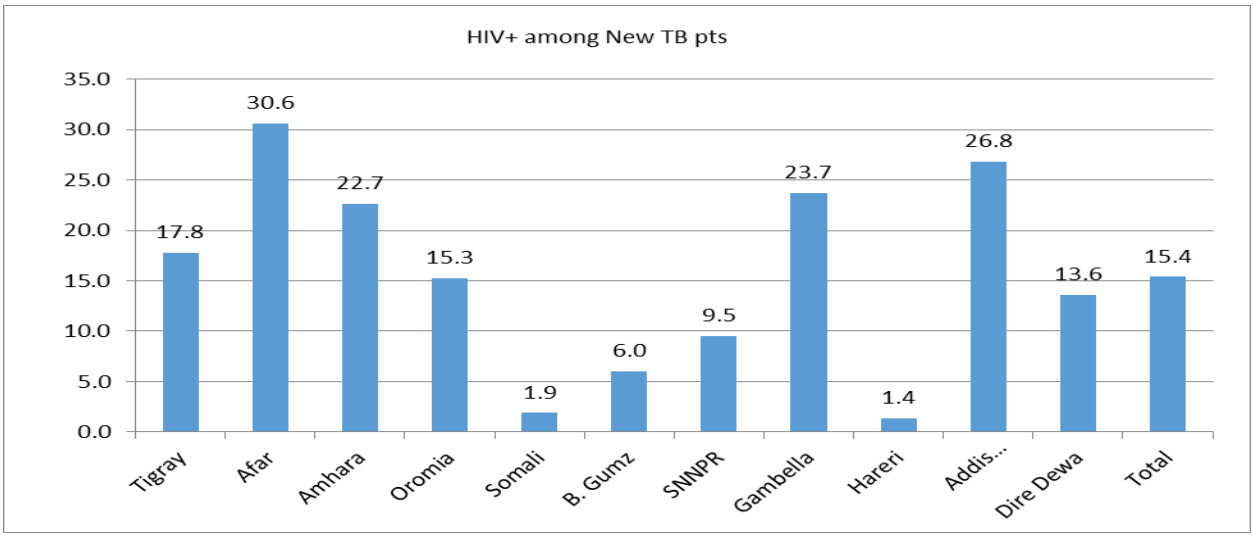

Figure 5b: HIV prevalence among New TB patients by Region from July 2014 to June 2015.

Figure 5c, shows the trend of HIV prevalence among New TB patients was analyzed. When we compare the last three year reports, the trends in HIV prevalence among New TB patients shows somewhat similar pattern at national level with a very small decrement (16.5, 16.6, 15.4) respectively.

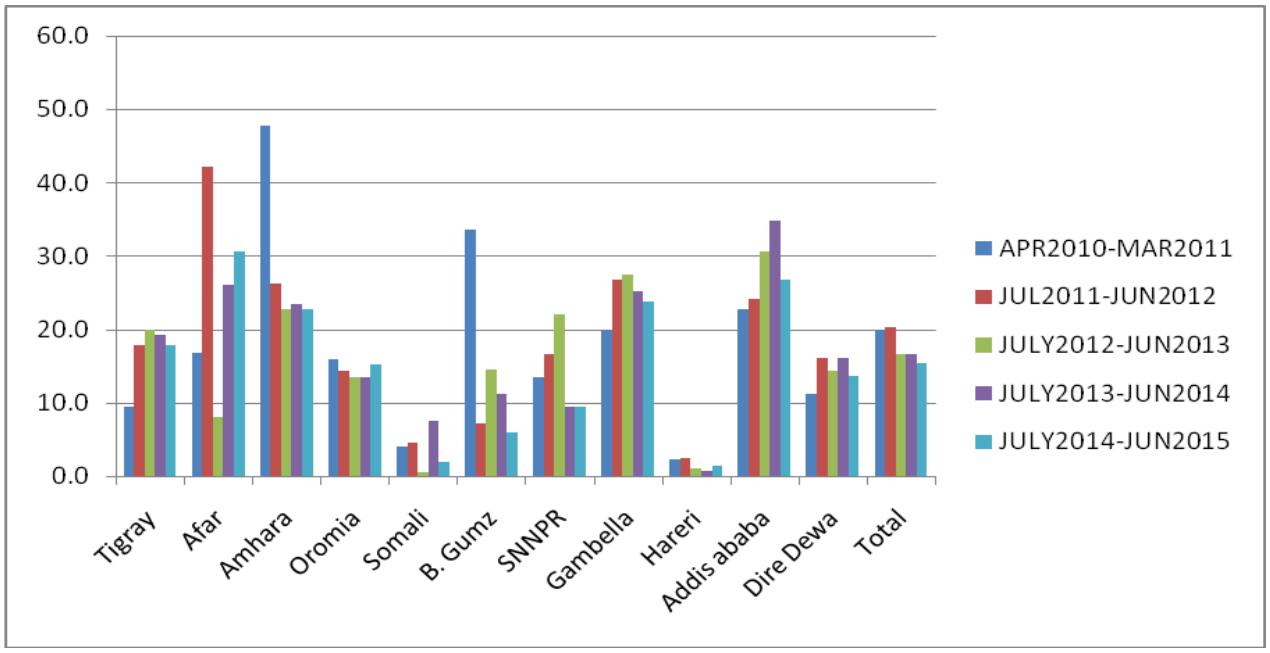

Figure 5c: Trends in HIV prevalence among New TB patients by Region from April 2010 to June 2015.

3.6. Cotrimoxazole prophylaxes treatment for TB/HIV patients

This indicator helps to monitor commitment and capacity of programs to provide CPT to TB/HIV co-infected patients. The national TB/HIV implementation guideline recommends provision of CPT to all TB/HIV co-infected individuals irrespective of CD4 status. It is important for programs to know the proportion of HIV-positive TB patients who receive this preventive therapy to reduce the incidence of Opportunistic Infections. The use in the definition– that patients be given at least one dose of CPT is intended to capture all patients who have been assessed and started on treatment. However, It does not imply that one dose of CPT is sufficient.

As shown on the graph below, the average CPT uptake in 2007EC was 84.6%, which is lower than the target (95-100%), ranging from 16.7% in Somali to 100% in Harari and BenishangulGumuz. The highest CPT uptake was observed in Harari and Benishangulgumuz (100%) followed by Addis Ababa (98.2%) and Oromia (94.6%).

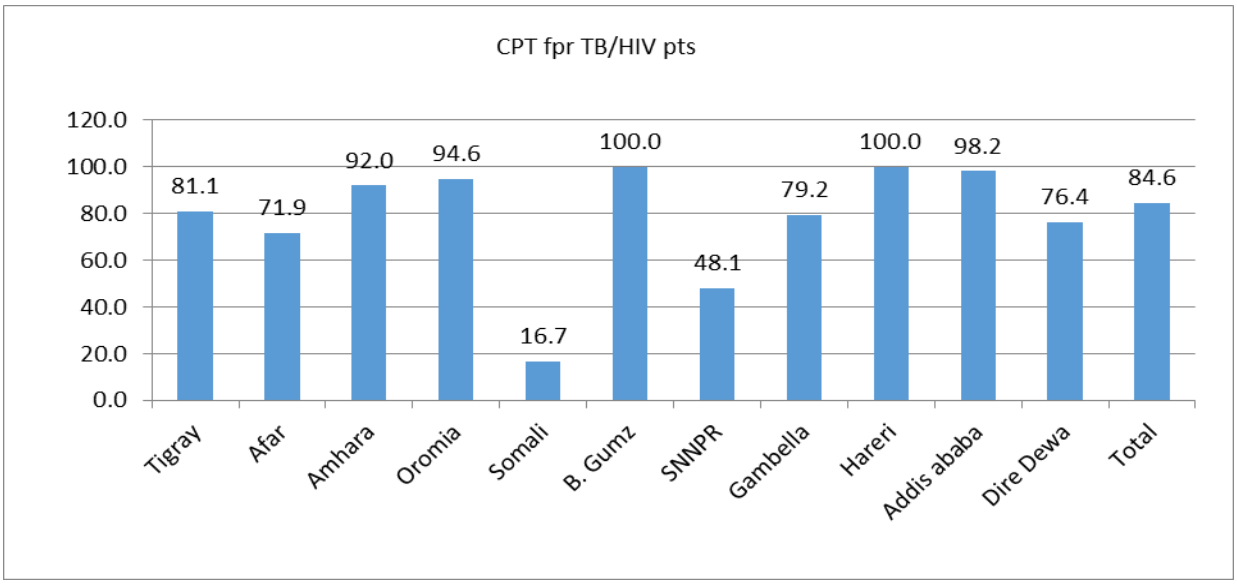

Figure 6a: Average CPT Uptake for TB/HIV co-infected patients by Region from July 2013 to June 2015.

Figure 6b, shows the trend in CPT Uptake for TB/HIV co-infected patients was different from regions to region. As shown in the graph bellow, there is a general CPT uptake increment from April 2010 to June 2015in Amhara, Oromia, Gambela, Hareri, Addis Ababa and Diredawa. In

contrary decreasing trend in CPT uptake was observed in Afar, and SNNPR from April 2010 to June 2014. However similar trend is observed over the past two years but increment shown this year at national level.

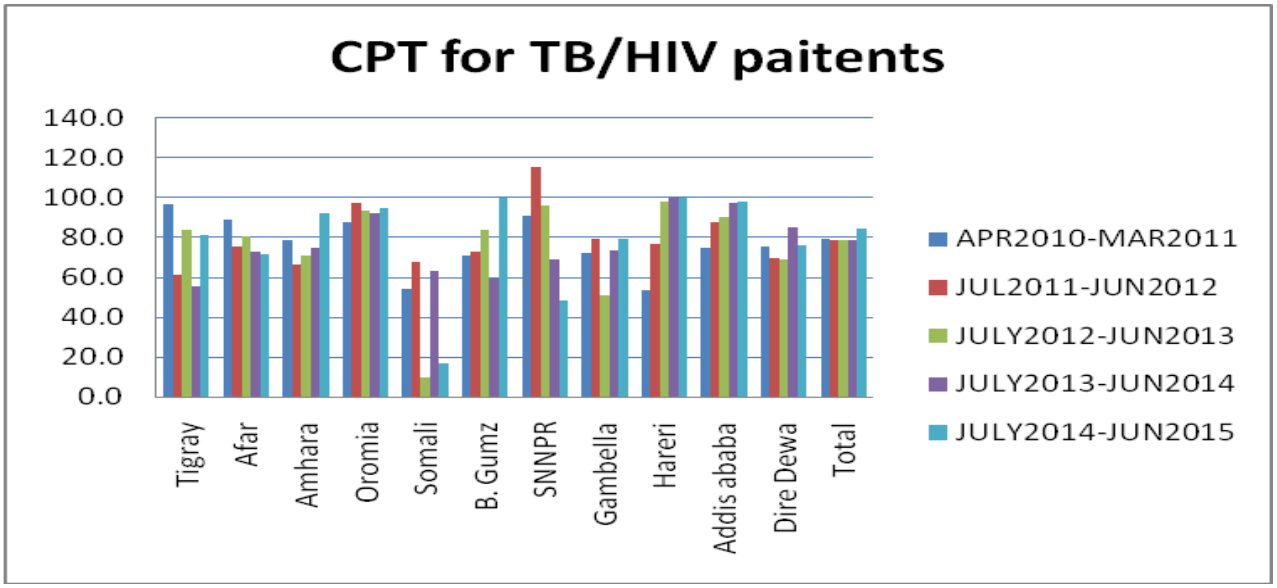

Figure 6b: Trends in CPT Uptake for TB/HIV co-infected patients by Region from April 2010 to June 2015.

3.7. ART for TB/HIV coinfected patients

This is an outcome indicator to measure commitment and capacity of TB services to ensure that HIV-positive TB patients are able to access ART. The national TB/HIV implementation guideline recommends timely initiation of ART for all TB/HIV co-infected individuals irrespective of clinical stage or CD4 status. Documentation of whether or not TB patients are started on ART is important not only for program management but also for individual patient care. TB clinic staff needs to be aware of a TB patient starting on ART so that they can manage drug reactions and interactions appropriately. It also measures the degree to which ART has become a component of the package of care offered to HIV-positive TB patients. It also provides a measure for the accessibility of ART to HIV-positive TB patients, drug availability, the degree to which health-care providers encourage ART as a part of routine care, and the success of TB and ART health services in referring, managing and tracking registered TB patients eligible for ART (i.e. the strength of the referral process).

The surveillance has showed that 70% of TB/HIV co-infected patients, ranging from 42.2% in SNNPR to 100% in Harari, have started or continued the previously initiated ART during the course of their TB treatment. This ART coverage by Region showed relatively lower coverage in SNNPR followed by Gambela (50.4). The higher ART coverage for TB/HIV co-infected was observed in Harari (100%) followed by Oromia (89.8%) and Amhara (74.5%) (Figure7a).

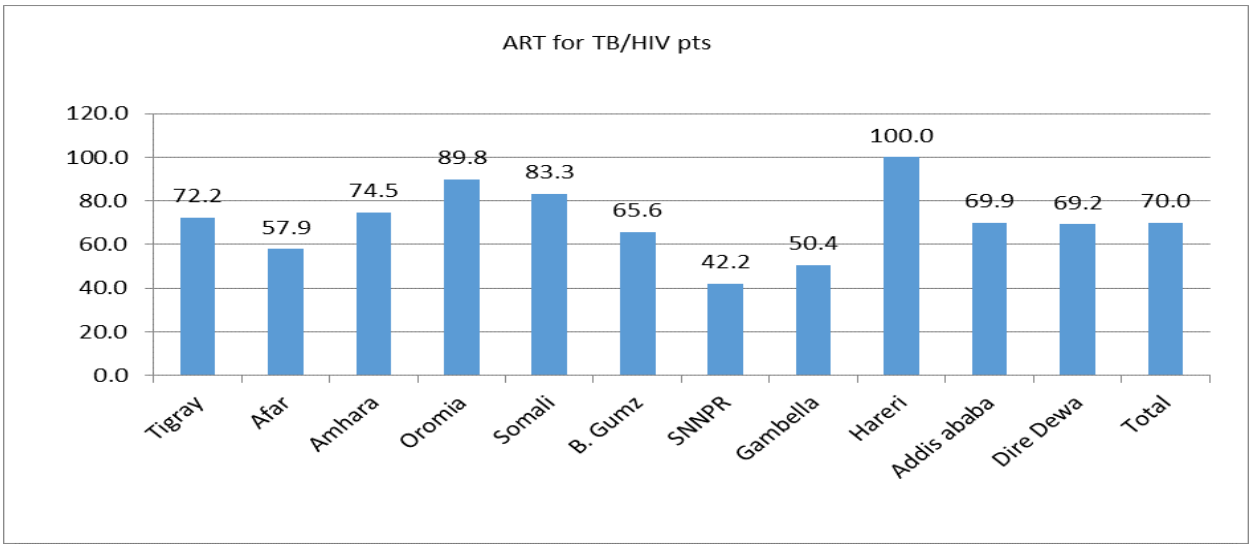

Figure 7a : ART coverage for TB/HIV co-infected patients by Region from July 2013 to June 2015.

Figure 7b, shows the trend in ART coverage for TB/HIV co-infected patients increasing over the years at national level but the increment varies from regions to region. Regions like Tigray, Amhara, Oromia, Somali, Harari and Addis Ababa have shown increment over the past three years. However, SNNPR and Diredawa have shown decrement of ART uptake for TB patients compared to last year. This requires further exploration by the regions, to know if this decrease is because of lack of proper documentation or a problem in the management of TB/HIV coinfected patients.

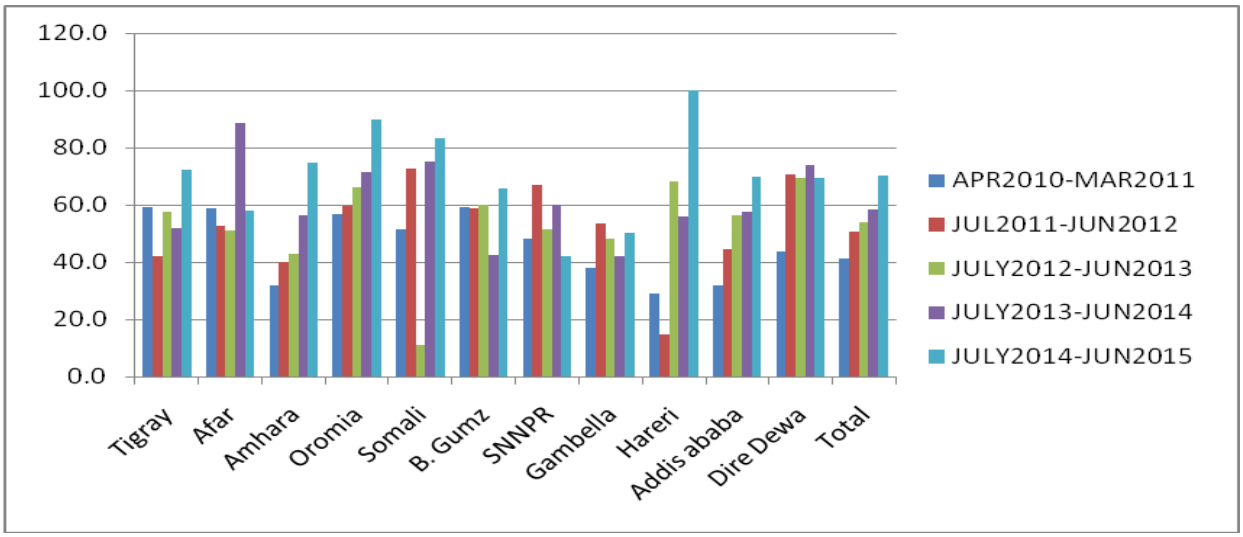

Figure 7b: Trend in ART coverage for TB/HIV co-infected patients by Region from April 2010 to June 2015.

4. Recommendation

- TB status assessment among people living with HIV, followed by prompt diagnosis and treatment, increases the chances of survival, improves quality of life, and reduces transmission of TB in the community. This surveillance revealed around 96% performance on this indicator on most of regions. This figure shows that majority of PLWHA are being screened for TB at initial visit, Programs should aim to continue to reach to 100% but should interpret it in conjunction with the values of indicators 2 and 3, to ensure that appropriate action follows the screening process. The active TB prevalence at enrollment shows a progressive increase in the last three surveillance years. .
- The surveillance report indicates that IPT was given for 18.2% of the eligible patients which is still very low figure. To include individuals who are given at least one dose is relatively easy, even in resource-limited settings. This information is the minimum necessary to ensure that IPT is being offered to HIV-positive individuals without evidence of active TB even though it is not appropriate for monitoring adherence status or treatment completion. Most programs would reasonably aim to provide IPT to more than 60% of eligible clients. Programs should work more in promoting IPT uptake to reduce the incidence of TB disease among people living with HIV. In addition, more data on adherence or completion needs to be captured to have a complete understanding of the performance on this indicator. Furthermore a concerted effort should be given to improve the IPT distribution and consumption.
- Above 90% of TB patients were found to have a documented HIV status showing a good uptake of HIV testing at TB treatment sites and thus early detection of HIV. This indicator together with the CPT and ART status indicators will provide a good picture about the extent of linkage of HIV co-infected TB patients to HIV care and treatment services, as this is one measure of quality of TB/HIV care. The report also shows the percentage of HIV-positive TB patients who were started on co-trimoxazole preventive therapy (CPT) has reached 84%, which shows that the data found from the surveillance sites is consistent with the Global plan to stop TB. However programs should work towards increasing the CPT uptake close to 100% to

bring a reduction on morbidity and mortality among HIV-positive TB patients. Moreover there is a need to assess the adherence of patients on CPT to have a complete picture about the situation.

- This surveillance showed that 70% of TB/HIV co-infected patients have started or continued previously initiated ART during the course of their TB treatment. Recent evidences showed that ART improves treatment outcome of TB/HIV co-infected individuals reduce early mortality from HIV/TB co-infection, and reduce TB transmission when ART is initiated earlier in all individuals with TB and improved management of TB (1). Hence programs need to provide due attention to the quality of TB/HIV care and put all TB/HIV co-infected patients on ART treatment as part of the TB/HIV co-management and as per the recommendation in the national guideline.

5. Limitations

This surveillance system captures TB/HIV data from selected health facilities which do not assume neither Regional nor national representativeness, therefore care should be taken not to generalize this surveillance findings to respective regional or national TB/HIV program performance. There is inconsistency of regions to send the reports to EPHI. Furthermore, lack of timely report and feedback is continually seen as a major challenge from some regions. The surveillance uses registers as a data source, and thus data incompleteness has been a challenge and may affect the performance on some of the indicators.

6. Reference

1. A guide to monitoring and evaluation for collaborative TB/HIV activities, World Health Organization 2009 (WHO/HTM/TB/2009.414).
2. Guidelines for HIV surveillance among tuberculosis patients, Second Edition Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.339).
3. Federal Ministry of Health Health and Health Related Indicators 2005 E.C (2012/2013) Version 2, Oct 2014
4. National TB/HIV surveillance annual report , EPHI and FMOH, 2007 E.C
5. Single Point HIV Prevalence Estimate, Ministry of Health of Ethiopia, June 2007
6. UNAIDS/WHO Working Group on Global HIV/AIDS/STI Surveillance Blood safety and HIV: UNAIDS Technical Update (UNAIDS Best Practice Collection: Technical Update). Geneva: UNAIDS, October 1997
7. UNAIDS/WHO Working Group on Global HIV/AIDS/STI Surveillance Initiating second generation HIV surveillance systems: practical guidelines
8. UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance: Guidelines for Conducting HIV Sentinel Sero-surveys among Pregnant Women and Other Groups, UNAIDS/03.49E (English original, December 2003)
9. Working Group on Global HIV/AIDS/STI Surveillance: Guidelines for effective use of data from HIV surveillance systems. World Health Organization 2004
10. WHO/UNAIDS. Second generation surveillance for HIV: The next decade World Health Organization and Joint United Nations Program on HIV/AIDS, 2000
11. Centers for Disease Control and Prevention, WHO. HIV Testing Technologies in Surveillance: Selection, Evaluation, and Implementation. WHO/UNAIDS, 2001
12. WHO/HIV. Interim who clinical staging of HIV/AIDS and HIV/AIDS case definitions for surveillance African region. WHO, 2005
13. Reported Tuberculosis in the United States, 2006 Centers for Disease Control and Prevention, Coordinating Center for Infectious Diseases, National Center for HIV, STD, and TB Prevention Division of Tuberculosis Elimination, September 2007
14. Tuberculosis Prevalence Survey, EFMOH, July 2011

15. Implementation Guideline for TB/HIV collaborative activities in Ethiopia, FMOH, December 2007
16. The Global Plan to Stop TB, 2011-2015, WHO
17. Global Tuberculosis Report 2012, WHO
18. Global Tuberculosis Report 2014, WHO
19. Global Tuberculosis Report 2015, WHO