



The Ethiopian Public Health Institute



**Report on the Sentinel Surveillance of
Sexually Transmitted Infections Based on
Syndromic Case Reporting**

(July 2014 — June 2015)

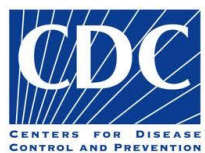
**December 2015
Addis Ababa**

REPORT ON THE SENTINEL SURVEILLANCE OF SEXUALLY TRANSMITTED INFECTIONS BASED ON SYNDROMIC CASE REPORTING.

(July 2014 — June 2015)

**ETHIOPIAN PUBLIC HEALTH INSTITUTE
FEDERAL MINISTRY OF HEALTH**

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



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List of Abbreviations/Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ART	Anti-Retroviral Treatment
CDC	Centers for Disease Control and prevention
DPCD	Diseases Prevention and Control Department
E. C.	Ethiopian Calendar
EPHI	Ethiopian Public Health Institute
FDRE	Federal Democratic Republic of Ethiopia
FMOH	Federal Ministry of Health
GUD	Genital Ulcer Disease
HAPCO	HIV/AIDS Prevention and Control Office
HCT	Voluntary Confidential Counseling and testing
HIV	Human Immunodeficiency Virus
HIV-	HIV negative
HIV+	HIV positive
HMIS	Health Management Information System
OI	Opportunistic Infection
OPD	Outpatient Department
PEPFAR	Presidential Emergency Plan for AIDS Relief
PID	Pelvic inflammatory disease
QA	Quality Assurance
RHB	Regional Health Bureau
STI	Sexually Transmitted Infections
TOT	Training of Trainers
UNAIDS	The joint United Nations Program on HIV/AIDS
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WHD	Wereda Health Department
WHO	World Health Organization
ZHD	Zonal Health Department

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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.**

Summary

Sexually transmitted infections (STIs), other than HIV, constitute a major public health problem worldwide. Cognizant of these facts, the National HIV/AIDS Policy of Ethiopia identifies STI prevention and control as one of the strategies to prevent and control HIV/AIDS. Nationally there is still considerable underreporting of STI cases.

In order to fill the critical information gap on STI, EPHI has established a national STI surveillance system using selected sentinel sites. The surveillance system will consider all the WHO recommended components of the STI surveillance. In the national HMIS, data on STI is captured at the outpatient department of the health facilities. This STI case surveillance captures additional information on selected demographic and behavioural variables and the HIV status of the STI patient, in addition to the information currently generated using the routine HMIS system, to provide relevant information for the STI/HIV program planning and evaluation. The STI Sentinel sites have been selected by the Regional Health Bureaus in consultation with the Ethiopian Public Health Institute.

In the current surveillance period, from July 2014 to June 2015, a total of 1421 STI cases were reported from twenty sentinel surveillance sites. More than half of the cases were reported from the four facilities in Addis Ababa. Majority (67%) of the STI patients are in the age group 20-34 and more than half (68%) of the STI patients were females. About (66.6%) of the patients had educational status of 8th grade or less and followed by high school education (19.3%). Around 51.3% of the respondents were married and around 15.4% of them were daily laborers

A total of 1509 STI syndromes were diagnosed on 1421 patients. Regarding the proportion of STI syndromes, vaginal discharge takes the highest proportion (52.2%) followed by urethral discharge (25.3%), then lower abdominal pain (13.3%), non-vesicular GUD (4.6%) and vesicular GUD (2.7%).

Regarding the risk behavioral factors of STI patients, majority of the respondents (62.3%) claim to have only one sexual partner and about 14.3% had two or more sexual partners in the last three months. About 17.4% of the patients had sexual encounter with a non-regular

partner in the last three months period and 55.8% of them haven't used condom during the last sexual contact.

HIV status was reported for 1118 (78.7%) out of the 1421 STI patients. Out of those who have HIV information 181 (16.2%) of them were found to be HIV positive (8.4% -males and 19.7% -females).

This surveillance has shown that STIs are among the major public health problems in the selected health care facilities. In our surveillance assessment of the risk behavioral factors of the STI patients showed that a considerable proportion of patients had sexual encounter with a non-regular partner in the last three months period and around more than half of them haven't used condom during the last sexual contact. This finding calls for a need to strengthen our effort in behavioral change communication programs.

The high HIV prevalence among STI patients also calls for a concerted effort between the two programs to reduce burden of HIV among STI patients and viceversa.

This surveillance report shows, there is still a need for strengthening an effective response to the spread of sexually transmitted infections by scaling up the intervention strategies and understanding the transmission dynamics

1. Background

Sexually transmitted infections (STIs), other than HIV, constitute a major public health problem worldwide. It is estimated that more than 340 million new cases of curable sexually transmitted infections, namely those due to *Treponemapallidum*(syphilis), *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Trichomonasvaginalis*, occur every year throughout the world in men and women aged 15–49 years, with the largest proportion in the region of south and south-east Asia, followed by sub Saharan Africa, and Latin American and the Caribbean (1). Millions of viral sexually transmitted infections also occur annually, attributable mainly to HIV, human herpes viruses, human papilloma viruses and hepatitis B virus. Globally, all these infections constitute a huge health and economic burden, especially for developing countries where they account for 17% of economic losses caused by ill-health (2). Moreover, the impact of these diseases is magnified by their potential to facilitate the spread of the human immunodeficiency virus (1).

Cognizant of these facts, the National HIV/AIDS Policy of Ethiopia identifies STI prevention and control as one of the strategies to prevent and control HIV/AIDS (4). However, much remains to be done in strengthening the STI prevention and control program in the country. One of the most outstanding problems in STI prevention and control program is the lack of information on the status and trends of STIs in the country.

Nationally there is still considerable underreporting of STI cases. Underreporting has been due primarily to use of an excessively long list of reportable diseases, concerns about confidentiality, provision of treatment by the informal sector, the asymptomatic nature of some STIs and the fact that there is no strong Syndromic Case Management Program in all the regions of the country and Ethiopia has adopted the syndromic approach to manage STI cases. Although routine syphilis screening among pregnant women is recommended by the MOH, syphilis serology results are rarely compiled and analyzed except for the data collected in the time of ANC-HIV surveillance, which is done at only selected sites over a short time period every two years.

The existing STI surveillance systems have largely failed to provide a clear epidemiological picture of the STI situation and thus have offered limited information for planning, implementing and eventually evaluating STI and HIV programmes.

In addition to its importance in providing a clear picture of the STI situation in the country, STI surveillance can act as an early warning system of behaviour change pertinent to HIV control and planning. In mature HIV epidemics, STI surveillance may act as an evaluation tool for HIV prevention programs as well as an early warning system for the possible emergence of HIV in new populations or new geographical areas. STI surveillance is therefore considered a key component of second-generation HIV surveillance

According to the WHO STI surveillance guideline (1) STI surveillance of a country is recommended to include the following components:

- STI case reporting (through a universal reporting system or sentinel surveillance sites)
- STI prevalence assessment and monitoring in the general population or in special groups
- Assessment of STI syndromic aetiologies
- Monitoring anti-microbial resistance of causative organisms

In order to fill the critical information gap on STI, EPHI has established a national STI surveillance system using selected sentinel sites. The surveillance system will consider all the WHO recommended components of the STI surveillance. This protocol is designed to focus on the first component which is STI/ HIV surveillance through case reporting from sentinel health facilities. The other very important component, the STI etiologic agent assessment and monitoring of antimicrobial resistance, is being dealt with in a separate protocol.

In the national HMIS, data on STI is captured at the outpatient department of the health facilities. The STI information captured using the HMIS, is number of each STI syndromes (urethral discharge, genital ulcer, vaginal discharge, lower abdominal pain, scrotal swelling, inguinal bubo, neonatal conjunctivitis and neonatal herpes) managed at the facility by age and gender disaggregation.

This proposed STI case surveillance will capture additional information on selected demographic and behavioural variables and the HIV status of the STI patient, in addition to the information currently generated using the routine HMIS system, to provide relevant information for the STI/HIV program planning and evaluation. . Moreover, the surveillance will show the trend of the key STI/HIV reportable indicators and assess the performance of the STI and HIV programs.

The recent review meeting on the syndromic surveillance (which was held on August) discussed on the importance of the surveillance and regions have agreed to increase their sentinel sites from 9 to 26 in 9 regions and 2 city administration of the country.

1.2. Objectives

1.2.1. General Objective

To estimate the trend in the six priority reportable STI syndromes, i.e. urethral discharge, genital ulcer, vaginal discharge, lower abdominal pain, scrotal swelling and inguinal bubo in the selected sentinel sites and provide information for planning, implementation and evaluation of STI and HIV programmes.

1.2.2. Specific Objectives

- To assess the burden of STIs in selected sentinel sites using the of reportable STI syndromes.
- To estimate the magnitude of STI/ HIV co- infection rates in sentinel sites.
- To assess the association between STI syndromes, HIV status, risk behaviors and socio-demographic variables.

2. Methodology

2.1. Sampling – Health facility level

2.1.1. Selection of sentinel sites:

The STI Sentinel sites have been selected among all Health Centres and Hospitals in the country by the Regional Health Bureaus in consultation with the Ethiopian Public Health Institute. The initial list of selected sites appears as Annex v. The selected sites will not be dropped from the system, while new sites added. The sites were selected based on the following criteria.

Selection Criteria for Sentinel STI surveillance Sites

- Site already provides STI and HIV counselling and testing service in the OPD or other departments.
- Site already routinely uses the national STI syndromic diagnosis and treatment approach to manage STI cases.
- Site evaluates a minimum average of 25 STI syndromes per month excluding vaginal discharge.
- EPHI together with the RHB must be able to frequently supervise the sites and provide regular logistic support.

The sites included in the survey are selected and determined through consensus between EPHI and the Regional Health Bureaus based on the selection criteria mentioned above and availability of resources and manpower.

The surveillance for FY 2007 EC (July 2014-June 2015) was rolled out only in twenty health facilities from different area of the country. The surveillance system will continue for five years. Assessment of the activity will be made at the end of the five years to decide on future direction of the system, or to incorporate modifications.

2.2. Sampling – patient level

2.2.1. Inclusion criteria

Any client, who is newly diagnosed and/or treated in the sentinel health facility as a case of STI (in the general OPD, in the STI unit, In ART room, and in the youth friendly service unit) was included in the surveillance.

2.2.2. Exclusion criteria

Those clients who have already visited the facility and are coming back for a return visit were excluded if the symptoms from the previous STI episode has not been resolved after treatment, with the assumption that this could be a persistence.

2.2.3. Sampling frame and period

Sampling was consecutive for eligible clients attending the selected sentinel sites throughout the study period. All new clients to the sentinel health facilities and return visitors who come with new infections (i.e. 1. the patient received treatment for the prior STI, 2. the symptoms from the previous STI episode resolved after treatment, and 3. the patient was potentially re-exposed (i.e. they engaged in sexual activity since the last STI syndrome resolved) were included in the surveillance system.

2.2.4. Data Collection

The Reporting Format appears as Annex I. The data variables include the following:

- Region
- Sentinel Health Facility
- Patient Card Number
- Date of Diagnosis
- Age
- Gender
- Education status
- Marital/relationship Status
- Occupation
- Patient's Syndromic Diagnosis

- Patient's pregnancy status
- Number of sexual partners in past three months
- Tested for HIV during this visits or previously
- HIV test result during this visit or most recent test
- Whether had sex with a non-regular sex partner during the last three months
- (If patient had sex with a non-regular partner) Condom use during last sex with non-regular partner.

STI case management and case reporting is based on the syndromic approach. This proposed STI surveillance introduced STI surveillance data collection tool (Annex 1), which was filled for every STI case, by all health professionals managing an STI client at outpatient level in the selected sentinel health facilities. The data collection tool captures information on the selected demographic and behavioural variables and question on the HIV status of the STI patient. The Ministry of health VCT guideline recommends routine HIV testing for all STI clients on provider Initiated testing and counseling bases. Therefore, this surveillance captures the HIV status of the STI patients from this routine service.

Only patients presenting for the first visit with the current episode of STI were reported. If a patient is diagnosed with more than one syndrome, each syndrome was recorded on the surveillance data collection tool. If the patient has presented with the same STI syndrome(s) previously, we included the patient's current episode of STI as a new infection if: 1. the patient received treatment for the prior STI, 2. the symptoms from the previous STI episode resolved after treatment, and 3. the patient was potentially re-exposed (i.e. they engaged in sexual activity since the last STI syndrome resolved).

2.2.5. Data collection Procedure and Data flow

The Data on the STI case surveillance was collected by the health professional working in the general OPD, in the STI clinic or in the youth friendly service unit, if any, or in any other departments in the sentinel health facility and who is engaged in STI patient management. The health personnel complete the required information on the STI case surveillance data collection form for every new consecutive STI patient in the reporting period.

Data was collected using the annexed STI case surveillance data collection form (Annex I). The form was filled in one copy. The facility head in the sentinel sites sent all the filled forms to the regional health bureau, STI/HIV program coordinator, within five days after the end of each month. The RHB sent the double checked STI case surveillance forms of the sentinel sites quarterly, within 15 days after the end of every quarter to the surveillance unit in EPHI. The RHB made photocopies of the reporting forms for independently following up their programs. Data was entered at national level by the Surveillance and Surveys Unit at EPHI. Data entry was made in CS-pro designed data base and exported to SPSS for analyzes. The Data Flow Diagram Appears as Annex IV.

2.2.6. Data collection Period

Data was collected from July 2014 to June 2015 continuously in the selected twenty sentinel STI Surveillance sites in the country

2.2.7. Data entry, analysis and dissemination

Data was entered using CSPRo software that has range check and skip rules. Tabulation of data was made using SPSS analysis software. Estimation was made on the annual proportion of HIV-positive STI cases from the total number of STI cases seen in the sentinel sites. Detailed list of major indicators appears as Annex III.

Regular feedback was provided to Regions, Zones, Woreda's and health facilities. Moreover, annual reports will be produced and disseminated to stakeholders and findings may be disseminated in oral or written form nationally or internationally.

2.2.8. Ethical considerations

Before the completion of the data collection Form, the professional needs to first obtain verbal consent that appears at the back of the Reporting Form. Similar consent was obtained from adults as well as those below age 18. Patients aged below 18 years who seek STI treatment do not usually arrive at the clinics accompanied by parents or guardians. The information from these patients has been included in the surveillance system, and seeking consent from parents/guardians will invade the privacy of the minor and potentially adversely affect the data.

Since the data will not indicate personal identifiers, there will be minimal risk to the patients. Annex II includes the consent forms. Any client information will be confidential throughout the processes. Reporting formats and patient registers were kept in locked rooms and the health professionals who are involved in the data collection and compilation were trained on confidential handling of data. Moreover, personal identifier information, like names, was not registered on the surveillance-reporting format.

Patient Card Numbers were recorded on the Reporting Forms. These numbers assist in linking the Reporting Forms to the information in the Cards in the facilities. These numbers will also assist facilities to identify STI patients that have complete Reporting Forms. However, the Patient Card Numbers were not entered into the computer during data entry at the EPHI. These numbers were replaced by running numbers that start from one, and will be unique to the facility during the calendar month. These new serial numbers were recorded at the top of the Reporting Form, and served as the link between the soft copy and the Reporting Form during the analysis. It will not be possible to link the information in the soft copy of the database with client card numbers based on the row data used for analysis. Moreover, the section of the questionnaire that records the patient card number is torn off, and discarded before data entry is done.

All Clients were requested a verbal consent to respond to the additional questions on the surveillance format and have their HIV status recorded on the form. HIV testing was done at the sentinel sites on Provider Initiated Testing and Counseling (PITC) bases as per the national VCT guideline as part of the routine STI service offered by all facilities. Those HIV-positive STI cases were referred to free pre- ART unit for further treatment and follow-up care (as is the case in all health facilities in the country).

2.2.9. Quality Assurance

a. Capacity building

- Standardized training manuals were used to provide TOT and site level trainings on surveillance data collection, handling, reporting and feedback.
- Capacity building trainings were provided to regional and site level STI Program coordinators on surveillance data management every year.

- The reporting formats were printed and distributed by EPHI to Regional Health Bureaus which then distributed to facilities based on yearly estimations and projections of client flow.

b. Routine Check-ups on data registers and formats

- Data registers and formats were checked for their completeness by Health Care Providers after finishing filling out individual patient records.
- Data registers and formats were re-checked by site level STI program coordinators and the feedback was communicated to Health Care Providers whenever they observe major errors or incomplete forms either orally or in written notes.
- Data reporting forms were re-checked and feedbacks was communicated to site level staff by Regional level HIV/AIDS and STI program coordinators regularly.

c. Supervisions

- Regular supervisions of sites were made by groups from EPHI and CDC to monitor data quality, timely transmission of the forms, and availability of adequate number of blank forms.
- Regular feedbacks were provided to site, and Regional level authorities on findings and recommendations on quality of data and timeliness of transmission of the forms.

STI Syndromic Case Definitions- according to the National STI treatment guideline

1. Urethral Discharge Syndrome (men):- Urethral discharge in men with or without dysuria

2. Genital Ulcer Diseases –Vesicular (men and women):- A vesicular, recurrent and multiple ulcers on the penis, scrotum or rectum in men and on the labia, vagina or rectum in women, with or without inguinal lymphadenopathy.

3. Genital Ulcer Diseases – Non-Vesicular (men and women):- A non-vesicular, solitary and non-recurrent ulcer on the penis, scrotum or rectum in men and on the labia, vagina or rectum in women, with or without inguinal lymphadenopathy.

4. Vaginal Discharge syndrome (women):- A change in the amount, color and odor of the vaginal discharge.

5. Lower Abdominal Pain syndrome (PID) (women):- women only: Bilateral lower abdominal or pelvic pain, or lower abdominal and adnexal tenderness together with cervical excitation tenderness, or a tender pelvic mass together with fever, nausea, or vomiting.

6. Scrotal swelling syndrome (men):- The onset and presence of pain, no history of trauma and history of concomitant urethral discharge

7. Inguinal bubo syndrome (men and women):- Presence of pain, ulceration, discharge and the location of swelling.

2. Results

Burden of STI's and Socio-demographic characteristics of the respondents

In the current surveillance period, from July 2014 to June 2015, a total of 1421 STI cases were reported from twenty sentinel surveillance sites. More than half of the cases were reported from the four facilities in Addis Ababa. Table1 shows the distribution of reported STI cases by each sentinel site.

Sentinel HFs	Frequency	Percent (%)
Aykel	49	3.4
Felege	218	15.3
Shash	58	4.1
Bishof	113	8.0
Zewd	21	1.5
Arada	153	10.8
RasDesta	37	2.6
Kirkose	58	4.1
Dupti hos	16	1.1
Awash	19	1.3
Dechatu Hc	52	3.7
Karamara Hos	64	4.5
Alamata Hos	21	1.5
Gambella Hos	9	0.6
Assosa Hos	9	0.6
Pawe Hos	192	13.5
Legarie HC	61	4.3
Degahabour	184	12.9
Kombolcha HC	72	5.1
Hiwane HC	15	1.1
Total	1,421	100.0

Table 1: Number of STI cases reported per sentinel site, July 2014 – June 2015

Regarding the socio-demographic characteristics of the participants, majority (62.8%) of the STI patients are in the age group 20-34 and more than half (68.2%) of them were females. About (66.6%) of the patients had educational status of 8th grade or less and followed by high school education (19.3%). Only a small proportion (7.2%) attended above 12th grade.

Around 51.3% of the respondents were married and 31.5% of them were never married. Regarding the occupational status of the patients, around 15.4% of them were daily laborers and other possible high-risk occupations constitute a small proportion (Commercial sex workers - 3.9%, mobile merchants-4.3%, drivers-3.7% and uniformed peoples- 2.8%) Table 2, shows the socio-demographic characteristics of the STI patients.

characteristics	Frequency	Percent (%)
Age		
< 19	130	4.8
20-24	382	9.1
25-29	381	26.9
30-34	191	26.8
35-39	132	13.4
40-44	61	9.3
45-49	29	4.3
50+	47	2.0
Missing	68	3.3
Total	1,421	100.0
Sex		
Male	441	31.0
Female	968	68.1
Missing	12	0.8
Total	1,421	100.0
Educational status		
No Formal	387	27.2
Grade 1-4	262	18.4
Grade 5-8	298	21.0
Grade 9-12	274	19.3
Higher	103	7.2
Total	1,324	93.2
missing	97	6.8
Total	1,421	100.0
Marital status		
Never Married	447	31.5
Currently Married	729	51.3
Widowed	49	3.4
Divorced/ Separated	111	7.8
Unknown	9	0.6
Total	1,345	94.7

missing	76	5.9
Total	1,421	100.0
Occupation		
Sex Worker	38	3.9
Military	27	2.8
Vehicle Driver	36	3.7
Daily Laborer	148	15.4
Mobile Merchant	41	4.3
Farmer	136	14.1
Gov't Employee	106	11.0
Self Employed	97	10.1
Other Occupations	335	34.8
Total	964	67.8
Missing	457	32.2
Gross Total	1421	100

Table 2: Socio-demographic characteristics of the STI patients, July 2014- June 2015

Pattern of reported STI syndromes

A total of 1509 STI syndromes were diagnosed on 1421 patients, majority of the patients had only one syndromic diagnosis and 88 patients were diagnosed with 2 syndromes. Regarding the proportion of STI syndromes, vaginal discharge takes the highest proportion (52.2%) followed by urethral discharge (25.3%), then lower abdominal pain (13.3%), non-vesicular GUD (4.6%) and vesicular GUD (2.7%).

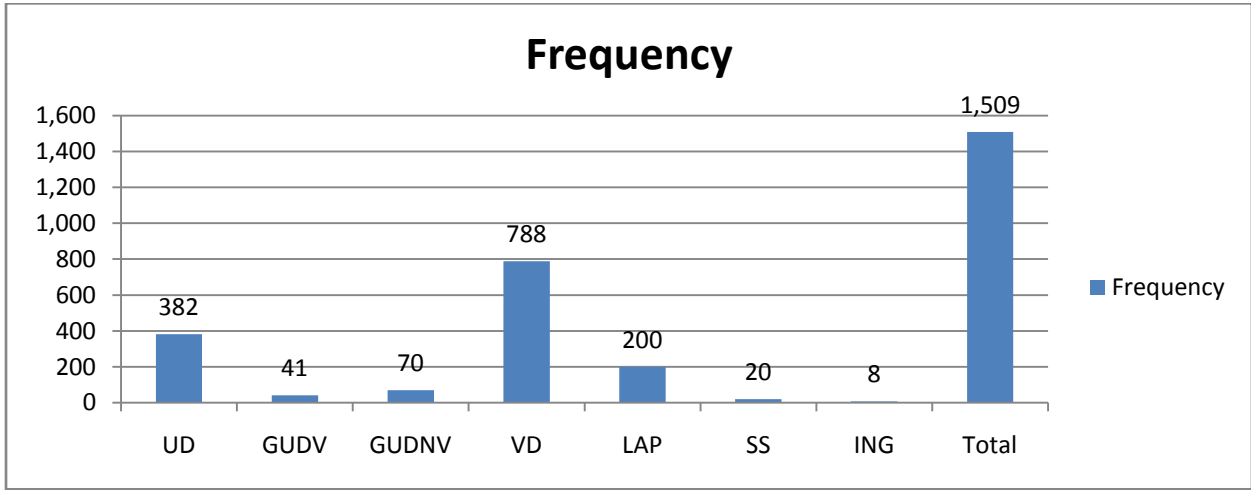


Figure 1: Total Number of STI cases reported by each syndromic diagnosis, July 2014 - June 2015.

Analysis of the STI cases and HIV positivity with disaggregated age groups, showed that majority of STI cases (42.3%) fall under the 24-34 age category. The HIV prevalence also showed the same demographic pattern with larger proportion of HIV positive STI cases (51%) lay between the age group of 24-34.

		<24		24-34		>34		Total
		Frequency	%	Frequency	%	Frequency	%	
UD	Yes	137	38	163	45	65	18	365
GUDV	Yes	15	39	16	42	7	18	38
GUDNV	Yes	26	38	29	43	13	19	68
VD	Yes	303	41	295	40	148	20	746
LAP	Yes	51	27	90	48	48	25	189
SS	Yes	6	30	10	50	4	20	20
ING	Yes	3	38	4	50	1	13	8
HIV result	Positive	23	13	88	51	60	35	171

Table 3. STI cases and HIV status categorized by Age Group, July 2013- June 2014

STI patients with pregnancy status

Out of the 946 female STI patients whose pregnancy status was checked, 64 (6.8%) reported that they are at some stage of pregnancy

Risk behavioral factors of STI patients

Regarding the risk behavioral factors of STI patients, majority of the respondents (62.3%) claim to have only 1 sexual partner and about 14.3% had two or more sexual partners in the last three months. About 17.4% of the patients had sexual encounter with a non-regular partner in the last three months period and 55.8% of them have not used condom during the last sexual contact. Table 4, shows the response on risk behavioral factors of STI patients.

Risk behaviors	Male	Female	Total	Percent
Number of sexual partners				
0	82	217	299	23.4
1	222	573	795	62.3
More than 1	97	85	182	14.3
Total	401	875	1,276	
sex with non-regular partners				
Yes	143	96	239	17.4
No	282	849	1,131	82.6
Total	425	945	1,370	

condom use during last sex with non-regular partner				
Not Used Condom	78	52	130	55.8
Used Condom	60	43	103	44.2
Total	138	95	233	

Table 4: Risk Behavioural factors of STI patients, July 2013 – June 2014

Prevalence of HIV among STI patients

The HIV status of STI patients was captured on the surveillance report from the PICT registry and HIV status was reported for 1118 (78.7%) out of the 1421STI patients. Out of those who have HIV information181 (16.2%) of them were found to be HIV positive and the sex disaggregation shows that 8.4% of males and 19.7% of females were HIV positive. (Figure 2). Out of 1118 patents with documented HIV status, 461 of them were asked whether their HIV status is Known before the survey or newly tested positive during the data collection time. From these 462 patients 107 of them were HIV positives, and out of these88 (82.2%) were known HIV positives and 19(17.8%) were newly tested positives.

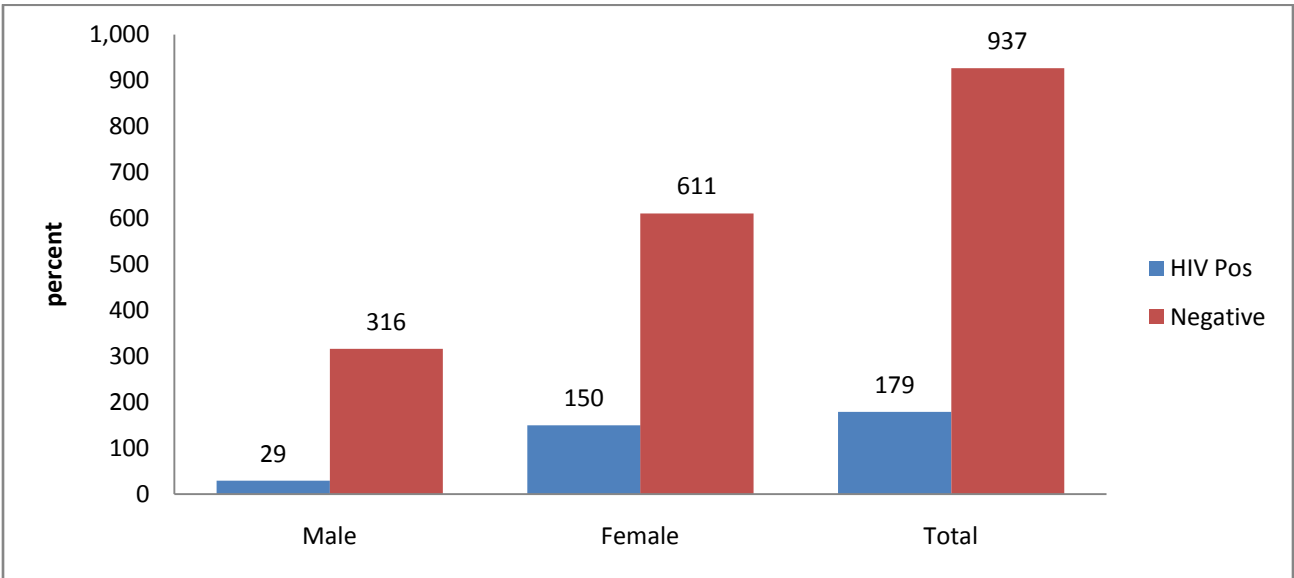


Figure 2: HIV status of STI patients by Sex,July 2013 – June 2014

STI syndrome with HIV status

When HIV status is categorized by STI type, higher HIV prevalence was observed among vesicular GUD (32%), ING (28%).

STI Type	HIV result	
	frequency	Prevalence
UD	23	7.8
GUDV	12	32.4
GUDNV	10	17.9
VD	121	18.9
LAP	21	13.7
SS	2	11.1
ING	2	28.6
Total	115	

Table 5: STI syndrome with HIV status, July 2014 – June 2015

3. Discussion

This surveillance has showed that STIs are among the major public health problems in the selected health care facilities. This finding is in agreement with the survey by Beyene *et al.*, Where 35.8% of outpatient attendees had complained of one or more of the STIs symptoms (9).

In fact, reported STIs represent only the “tip of the iceberg” because most infections—typically more than half of any specific diagnosis regardless of bacterial or viral etiology—are entirely asymptomatic and/or unrecognized. This is especially true for women. This obviates that the actual situation in the study area could even be worse as only symptomatic cases came to the clinic. There could also be unreported symptomatic cases due to stigma and discrimination, fear of potential conflict with sexual partner especially in the married group, self-prescription of medicines from pharmacies, preference to traditional healers, and because of the general poor health seeking behaviour of the community.

In 1999, the WHO reported a global estimate of 340 million new cases of four curable STI (syphilis, gonorrhoea, Chlamydia infection and trichomoniasis) in adults aged 15 - 49 years (1). Another study shows that young age (15-24) make up for only 25% of the sexually active population but represent almost 50% of the new acquired STI's (17). This surveillance system also found out that young people, in the age group 20-34 yrs are the highly affected ones, with a larger proportion of females. Our result is in agreement with the report by Klouman *et al.* in Tanzania [11]; Getu Kassa *et al.* in SNNPR (16) and with the previous year report too where they found the highest rate of STIs among 25–34 age groups of female and male (10). The difference in the gender proportion can be explained by difference in vulnerability attributable to biological susceptibility and due to gender differentials in power inequalities, and behavioural factors including sexual practices, health-care seeking behaviour, and in some settings, poor access to care and low levels of education. In addition, considerable proportion of STI patients was daily labourers' and had educational status of 8th grade and less.

In this study, the most frequent STI syndromes reported were vaginal discharge and urethral discharge; this is consistent with the study done by Getu Kassa *et al.* in SNNPR (16) and Beyene *et al.* in Gondor town (9), where the most frequent STIs were vaginal discharge (55.7%),

(38.38%) respectively and urethral discharge (25.8%), (13.58%) respectively. The reason for higher proportion of vaginal discharge could be due to the fact that majority of the participants were females. The majority of STI causing organisms be it fungal, bacterial and/or protozoal has also manifestations of vaginal discharge in women.

Proportion of STI patients presenting with vesicular and non-vesicular ulcer is about 7.4%, which is almost similar with the study done in SNNPR that reported around 6% (16). In STI syndrome genital ulcer cases serves as a proxy for important curable bacterial STIs, such as syphilis and chancroid, as well as for incurable viral STIs such as herpes simplex virus. Where most genital ulcer cases are due to curable bacterial STI, strengthening Management of STIs should lead to a decline in rates of genital ulcer cases. Urethral discharge among males is another key indicator, which shows the strength of STI control programs, in countries without strong STI laboratory capacity (12). This surveillance revealed that a significant proportion of STI patients (25.3%) presented with Urethral discharge syndrome, though this number is little bit lower than the proportion of UD patients reported in the previous surveillance year (32%), it still signifies the need for carefully assessing the STI control efforts in the country.

As per WHO guideline, a number of demographic and behavioral risk factors have been frequently associated with STIs. Some of those, which in some settings have been found to be predictive of STIs are: being unmarried; having more than one sexual partner in the previous three months; having a new partner in the previous three months; having current partner with an STI; recent use of condoms by the partner. Such risk factors are, however, usually specific for the population group for which they have been identified and validated, and cannot easily be extrapolated to other populations or to other locations (13). In our surveillance, assessment of the risk behavioral factors of the STI patients showed that (17.4%) of patients had sexual encounter with a non-regular partner in the last three months period and around 55.8% of them haven't used condom during the last sexual contact with a Non-regular partners.. Around 14.3% of the patients had two or more sexual partners in the last three months, which is almost similar with the study done in SNNPR 22% (16). This finding calls for a need to strengthen our effort in behavioral change communication programs

Out of the total female STI patients in this surveillance, about 6.8% of them were at some stages of pregnancy, this finding has showed marked decrement from the previous surveillance year

which was 18%, but still effort should be made to proactively prevent and treat STIs during pregnancy as untreated sexually transmitted infections are associated with congenital and prenatal infections in neonates, particularly in the areas where rates of infection remain high. WHO reported that, in pregnant women with untreated early syphilis, 25% of pregnancies result in stillbirth, 14% in neonatal death and an overall prenatal mortality of about 40%. Up to 35% of pregnancies among women with untreated gonococcal infection result in spontaneous abortions and premature deliveries, and up to 10% in prenatal Deaths (14). Another study done in Mwanza, Tanzania, documented the impact of syphilis on pregnancy outcome, which showed that syphilis was responsible for 50% of the still births in the town, and that pregnant woman with active syphilis had a 49% chance of an adverse pregnancy outcome (25% still birth; 20% premature; 33% low birth weight) (20). This emphasizes the need for effective intervention of STIs institutionally at antenatal care settings

In this surveillance year, the HIV prevalence among STI patients is found to be 16.2%, of which 8.4% were males and 19.7% were females. This prevalence is markedly lower than the prevalence reported last year under the same surveillance system, which was 30%; this difference could be due to the difference in the proportion of STI patients who have documented HIV test result. There were only 60% of STI patients with documented HIV test result last year as opposed to 78% this year, which indicates that the HIV prevalence in the current surveillance period is close to the true picture. A total of 107 HIV positive, STI patients had a documentation if they are known HIV positives or newly diagnosed on the current survey period, about 82% of them are found to be known HIV positive individuals, signifying the need to work on STI prevention, screening and treatment services on HIV positive individuals.

When we look at the type of STI with the prevalence of HIV, patients with visceral genital ulcer take the highest proportion (32.4%) followed by inguinal bobo patients (28.6%). This finding is consistent with the cohort study done in Zimbabwe and many other studies which showed that the role of genital ulcerative conditions in male to female transmission of HIV show that, men who reported a history of genital ulcer disease were significantly more likely to have HIV (RR 1.94) (18). In another study done in Nairobi, in a subgroup of men who only admitted to a single contact with a sex worker, 6 out of 37 of those presenting with an ulcer acquired HIV, compared with none out of the 36 of those with no ulcer (19).

4. Recommendation

1. STI related programs need to design suitable education and services especially to population groups who are carrying a higher STI burden, being particularly vulnerable to sexually transmitted infections, such as young people, females, daily laborers and CSWs and other population groups identified
2. Effective intervention to prevent and early treat sexually transmitted infections among pregnant mothers should be instituted at Antenatal care settings to prevent avoidable stillbirths, prenatal deaths and neonatal blindness
3. Though information was not captured for all HIV positive STI patients, Majority of the HIV positive STI patients are found to be know HIV positive individuals, this indicates the need for strengthening a routine STI screening and treatment and STI prevention service for HIV positive individuals in care.
4. A continuous surveillance that map infection levels, sexual behaviors (e.g. number of sexual partners and rates of partner change), preventive behaviors (e.g. correct and consistent condom use), and health-related behaviors (e.g. treatment-seeking behaviors) in population groups with high rates of infection and in vulnerable groups, as well as in the general population, should be continued to provide valuable information on the transmission dynamics and to determine which interventions for control would be most successful.
5. Expansion of the surveillance sites to make it more representative and address various population groups.

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6. ANNEXE

ANNEXE I.STI case surveillance data collecting form

FEDERAL MINISTRY OF HEALTH ETHIOPIAN PUBLIC HEALTH INSTITUTE STI CASE SURVEILLANCE DATA COLLECTION FORM FOR SNETINEL SITES						4. Patient Card # _____
1 Region _____		2 Health Facility _____		3 Department		1. OPD 2. OTHER: _____
5 Date of Diagnosis (DD/MM/YYYYETH): _____ / _____ / _____			6 Age (Years) _____		7 Sex 1. M 2. F	
8 Education						
1. No Educ		2. Grade 1-4	3. Grade 5-8	4. Grade 9-12	5. Higher	
9 Marital Status						
1. NM	2. CM	3. WID	4. DIVSEP			
10 What is your occupation?						
0 None		1. Sex Worker	2. Unemployed	3. Driver	4. Daily Laborer	5. Mobile Merchant
6. Other Merchant		7. Farmer	8. Govt. Employee	9. Self Employed	10. Others (Specify) _____	
11. Patient's Syndrome Diagnosis (Circle all that apply).						
1. UD	2. GUD-V	3. GUD-NV	4. VD	5. LAP	6. SS	7. INGB
12. Are you currently pregnant?						
1. Y	2. N					
13. HIV test result						
1. Known Positive		2. Tested Positive	3. Tested Negative	4. Unknown		
14. In the past 3 months, how many sexual partners did you have? (is regular plus non-regular partners)						
0	1	2	3	4	5+	
15A. Did you have sex with a non-regular sex partner during the last three months? (if no End Questionnaire)						
1. Y	2. N					
15B. (If patient had sex with a non-regular partner) During last time sex with your non-regular sex partner, did you or your partner use a condom?						
1. Y	2. N					
8. EDUCATION No Educ: No Formal Education Grade 1-4: Completed Grade 1-4 Grade 5-8: Completed Grade 5-8 Grade 9-12: Completed Grade 9-12 (includes 10-11, 10-12, and Preparatory) Higher: Higher Education						
9. MARITAL STATUS NM: Never Married CM: Currently Married WID: Widowed DIVSEP: Divorced or Separated						
11. PATIENT'S SYNDROME DIAGNOSIS UD: Urethral Discharge Syndrome (men) GUD-V: Genital Ulcer Disease-Vesicular (men and women) GUD-NV: Genital Ulcer Disease-Non-Vesicular (Men and Women) VD: Vaginal Discharge syndrome (women) LAP: Lower abdominal pain syndrome (SD) (Women) SS: Scrotal swelling syndrome (men) INGB: Inguinal bubo syndrome (men and women)						
NOTES <ul style="list-style-type: none"> • Complete each sheet for all New STI Patient of all ages. • Forward completed form to Regional Health Bureau for transmission to EPHE • All OPDs (eg. Private OPD, Emergency OPD, MCH OPD) are all considered to be OPD. • Date is recorded as day/month/year (in Ethiopian Calendar) • Months end on the 30th day (similar to the FMES calendar) • Number of Sexual partner: Record "0" for "None", and "5+" for 5 or more. • Questions not relevant for individual patients will be left blank (ex. If 15A is "No", 15B will be blank). • If a patient refuses to answer any of the questions in the form, this will also be left blank. 						

ANNEXE II.Consent Forms

Consent Form for Adults Aged 18+ and Married Minors

Hello. The Regional Health Bureau is collecting information about sexually transmitted infections. We would very much appreciate your participation in this survey. The main aim of the survey is to find out how many people are infected. The information that you provide will help the government to find out ways to prevent people from getting infected. The survey usually takes 2 or 3 minutes to complete. Whatever information you provide will be kept strictly confidential, and will not be shared with anyone other than members of our survey team.

Participation in this survey is voluntary and you can stop the interview at any time. Your decision will not in any way affect services you will get. However, we hope you will participate in the survey since your information is important.

In this survey, we would like to record the results of the HIV test you took as part of your STI treatment service (or the most recent HIV test you had). This will help to identify the magnitude of HIV among the patients.

At this time, do you want to ask me anything about the survey?

May I begin recording the information now?

Signature of interviewer: _____ Date:

RESPONDENT AGREES 1

RESPONDENT DOES NOT AGREE 2

Consent Form for Interview of Minors

Hello. The Regional Health Bureau is collecting information about sexually transmitted infections. We would very much appreciate (NAME'S) participation in this survey. The main aim of the survey is to find out how many people are infected. The information that you provide will help the government to find out ways to prevent people from getting infected. The survey usually takes 2 or 3 minutes to complete. Whatever information (NAME) provides will be kept strictly confidential, and will not be shared with anyone other than members of our survey team.

Participation in this survey is voluntary, and you can stop the interview at any time. Your decision will not in any way affect the services (NAME) will get. However, we hope (NAME) will participate in the survey since the information is important.

In this survey, we would like to record the results of the HIV test (NAME) took as part of the STI treatment service (or the most recent test NAME had previously). This will help identify the magnitude of HIV among the patients.

At this time, do you want to ask me anything about the survey?

May I begin recording the information now?

Signature of interviewer: _____ Date:

GRANTED 1
PARENT/OTHER RESPONSIBLE ADULT REFUSED 2

ANNEXE III.List of Indicators

National Level (Quarterly)

- STI patients by Age group and Sex
- STI patients by Marital Status
- STI patients by Education
- STI patients by Occupation
- Type of STI by Age group and Sex
- STI patients by Number of sexual partners in the past 3 months
- STI patients by HIV status
- STI patients by whether had sex with a non-regular partner during past 3 months
- STI patients by whether used condoms last time they had sex with a non-regular partner during past 3 months

Facility Level (Quarterly)

- Type of STI by Sex

ANNEXE IV: Flow diagram

