

Ethiopia
National Health
Facility
Survey 2005

Ethiopia National Health Facility Survey 2005

Investigators

Damen Haile Mariam
Fasil Tekola
Ahmed Ali
Abera Kumie
Assefa Semie
Yilma Melkamu
Gaddisa Lemecha
Assegid Woldu
Wuleta Lemma
Shabir Ismail
Jelaludin Ahmed
Yetemgeta Iyayu
Tewedros Gebre Michael
Endalamaw Abera

LIST OF ACRONYMS

ABBREVIATION	DESCRIPTION
AAU	Addis Ababa University
AFB	Acid Fast Bacillus
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ARC	AIDS-related Complex
ART	Anti-retroviral therapy
ARV	Anti-retroviral
ARVD	Anti-retroviral drugs
BCC	Behavior Change Communication
CBW	Community Based Workers
CDC	Center for Disease Prevention and Control
CPT	Co-trimoxazole Preventive Therapy
CSA	Central Statistical Authority
CT	Counseling and Testing
DACA	Drug Administration and Control Authority
DCH	Department of Community Health
DK	Don't know
DOTS	Direct Observed Treatment Short course
EHFS	Ethiopian HIV/AIDS-Related Health Facility Survey
ELISA	Enzyme-Linked Immunosorbent Assay
ENT	Ear-Nose-Throat
EPI	Expanded Program on Immunization
FBO	Faith Based Organization
FDRE	Federal Democratic Republic of Ethiopia
FMOH	Federal Ministry of Health
FP	Family planning
FPS	Fortified Protein Supplementation
FU	Follow-up
GH	General Hospitals
GPS	Geographic Positioning System
GYN	Gynecology
HAPCO	HIV/AIDS Prevention and Control Office
HC	Health Centers
HF	Health Facility
HFS	Health Facility Survey
HLD	High Level Disinfection
HMIS	Health Management Information System
HPC	Higher Private Clinics
HWI	Health Worker Interview
IMCI	Integrated Management of Childhood Illness
IPD	In-patient Department
IPT	Isoniazid Preventive Therapy
KS	Kaposi's sarcoma
LAB	Laboratory

MOH	Ministry of Health
MS-Excel	Micro soft Excel
M & E	Monitoring and Evaluation
NA	Not available
NSF	The National Strategic Framework
NGO	Non-Governmental Organization
OBS	Obstetrics
OGO	Other Governmental Organization
OIs	Opportunistic infections
OPD	Out-patient Department
OVC	Other vulnerable children
PCP	Pneumocystis carinii pneumonia
PCR	Polymerase Chain Reaction
PDA	Personal Digital Assistant Computer
PEP	Post-Exposure Prophylaxis
PEPFAR	President's Emergency Fund for Accelerated Response to HIV/AIDS
PGL	Progressive generalized lymphadenopathy
PLHA	People living with HIV/AIDS
PMTCT	Prevention of mother-to-child transmission
QRE	Questionnaire
RH	Regional Hospitals
RHB	Regional Health Bureau
RVI	Retroviral infection
SOPs	Standard Operating Procedures
SPA	Service Provision Assessment
SPSS	Statistical Package for Social Sciences
TAG	Technical Advisory Group
TB	Tuberculosis
TLC	Total lymphocyte count
TST	Time-Steam-Temperature indicator
VCT	Voluntary Counseling and Testing
VC	Vulnerable Children
WHO	World Health Organization
YFS	Youth Friendly Services
ZH	Zonal Hospitals
YFS	Youth Friendly Services

ACKNOWLEDGEMENTS

PREFACE

Ethiopia is one of the countries hardest hit by the HIV/AIDS epidemic. This is especially significant as the country is the second largest population in sub-Saharan Africa, resulting in high magnitude HIV-infected population

In response to the spread of the epidemic, the government has come up with various policies and interventions, some of which were started in the early years of the epidemic. A National Task Force of Prevention and Control of HIV Infection and AIDS was established as early as in 1985, and the National AIDS Control Program was established in 1988 when the new National AIDS Policy was also issued. The National AIDS Council that was established in 2000 was transformed into the HIV/AIDS Prevention and Control Office (HAPCO), which is charged with the implementation a Strategic Framework to Respond to HIV/AIDS, a series of strategic plans (the first being the 2001-2005 and the second, the 2004 – 2008 is currently under implementation. At operational levels, several measures are also being taken in terms of HIV/AIDS prevention and control both within the health sector facilities as well as at grass root community)levels. In addition, the multi-sectoral nature of the prevention and control program has made it necessary that the responses to the epidemic be mainstreamed across all sectors of the government as well as through non-government and civil society organizations.

Furthermore, the Government has developed the National Monitoring and Evaluation (M&E) Framework for the Multi-Sectoral Response to HIV/AIDS in Ethiopia, in order to assess progresses made towards minimizing the spread of the disease and its impact on PLWHA, their families and the society. One of the tools put forward as part of the Monitoring and Evaluation Component of the Ethiopian Government's Strategic Framework to Respond to HIV/AIDS is the National Health Facility Survey. As a tool for monitoring and evaluation, the survey is mainly meant to assess at baseline the capacity of health facilities in providing basic and advanced care to PLHA and other related health problems like TB and STIs. It is also considered helpful in generating database on the structural parameter of quality of services at national level, and in the long run, as a signal for improvements in the efficiency of the services at the various levels. At programmatic level, the regular conduct of the National Health Facility Survey, coupled with the tools in place for monitoring outcome and impact (the Behavioral Surveillance and the ANC as well as DHS based Sero-prevalence Surveys), is expected to help policy makers and planners keep track of the achievements brought about by the government and other stakeholders through the national effort.

Therefore, it is timely that the result of the first round National Health Facility Survey is released in this monograph. As shown in the results, the first round survey has demonstrated the scale of the capacity gap for providing basic and advanced level care for HIV/AIDS and related health problems. It has also further outlined useful directions for bridging the gap.

Finally, it is our hope that with the concerted and sustained efforts of the government, the community, partners, health workers as well as other stakeholders, significant progress will be made in the overall response to the problems of HIV/AIDS, TB, STI as well as our other health problems.

The Study Team
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TABLE OF CONTENTS

1.0. INTRODUCTION AND BACKGROUND	1
1.1. Introduction	1
1.2. Background.....	1
1.2.1 National context.....	1
1.2.2 Status of the HIV/AIDS epidemics and national response.....	3
1.2.3 Tuberculosis in Ethiopia.....	5
1.2.4 STIs in Ethiopia	6
1.3. Rationale for the Health Facility Survey	7
2.0. OBJECTIVES OF THE SURVEY	8
2.1. General Objectives.....	8
2.2. Specific Objectives	8
2.3. Expected Outcomes.....	8
3.0. METHODOLOGY.....	9
3.1. Method of Sampling the Health Facilities and the Timing for the Survey.....	9
3.1.1 Sample size calculation	9
3.2. Planning and Preparing for Conducting the Survey.....	10
3.3. <i>Indicators Used</i>	11
3.4. Recruiting and Training Personnel.....	13
3.5. Pre-testing Survey Instruments and Making Necessary Adjustments	13
3.6. Conducting and Supervising the Survey.....	14
3.7. Study Subjects	14
3.8. Method of Data Analysis	15
3.9. Scoring Indices for Comparing Capacity of Health Facilities	15
4.0. GENERAL OVERVIEW OF THE SURVEYED FACILITIES	17
4.1. Number and Types of Surveyed Facilities	17
4.2. Availability of Basic Infrastructure within Surveyed Facilities.....	18
4.2.1 Regular water supply	19
4.2.2 Electricity	19
4.2.3 Client latrine, waiting area and cleanliness	19
4.2.4 Telephone, computer and internet.....	20
4.2.4 Working hours.....	20
4.3. Management Systems to Support and Maintain Quality of Services	20
4.3.1 Management meetings.....	20
4.3.2 Quality Assurance (QA).....	20
4.3.3 Referral systems.....	21
4.3.4 Supervision by external staff.....	21
4.3.5 Community representation at facility meetings	21
4.4. Systems for Infection Control	22
4.4.1 Capacity for adherence to quality standards, sterilization or high-level disinfection processes.....	22
4.4.2 Appropriate storage conditions for processed items.....	23
4.4.3 Adequate disposal of hazardous waste	23

5.0. AVAILABILITY OF HIV/TB/STI RELATED SERVICE RESOURCES	24
5.1. General Service Availability	24
5.2. HIV Counseling and Testing	25
5.3. Prevention of Mother to Child Transmission (PMTCT)	27
5.4. Universal Precaution (UP) and Post Exposure Prophylaxis (PEP).....	28
5.5. ART and TB Treatment	29
5.5.1 Anti-Retroviral Treatment (ART).....	29
5.5.2 Tuberculosis treatment	30
5.6. Management of Sexually Transmitted Infections (STI)	31
5.7. HIV/AIDS Care and Support.....	32
5.8. Monitoring and Evaluation – Health Management Information System (HMIS)	32
6.1. Provider characteristics.....	34
6.1.1 Staffing pattern of the health facilities	34
6.2. Staff training.....	35
6.2.1 HIV testing system.....	35
6.2.2 ART	37
6.2.3 PMTCT.....	37
6.2.4 HMIS	38
7.0. ASSESSMENT OF ADHERENCE TO PROPER LABORATORY AND SAFETY GUIDELINES.....	40
7.1. HIV Testing and Services.....	40
7.2. ART.....	41
7.3. HMIS.....	42
7.4. Infection Prevention.....	42
7.5. STI.....	42
7.6. TB.....	42
7.7. PMTCT	43
7.8. Laboratory and Safety Guidelines.....	43
8.0. ASSESSMENT OF ABILITY TO MANAGE SEXUALLY TRANSMITTED INFECTIONS (STI)	45
8.1. STI as a Component of YFS.....	45
8.2. STI Service Provision on Individual Basis.....	45
8.3. Laboratory Tests for STI	46
8.3.1 Syphilis tests.....	46
8.3.2 Gonorrhoea tests	46
8.3.4 Chlamydia test.....	46
8.4. Drugs for Treatment of STI.....	46
8.5. Guidelines in STI	48
8.6. Pre-service or in-service training in STI.....	48
9.0 ASSESSMENT OF THE BURDEN OF HIV/AIDS/STI/TB ON FACILITY RESOURCES	49
10.0. COMPARISONS OF SCORES AND INDICATORS RELEVANT TO NATIONAL M&E .	52
10.1. Scores on Specific Services.....	52
11.2. Results Relevant to National M&E Indicators	52
11.0. DISCUSSION AND CONCLUSIONS	53

11.1. Relevance of the National Health Facility Survey	53
11.2. Highlighting the Major Findings of the Survey	53
11.3. Strengths and Limitations of the Survey	56
11.4. Conclusions and Recommendations	57
11.4.1 Conclusions	57
11.4.2 Recommendations.....	58
REFERENCES	59
ANNEXES	61
Annex II Questionnaire Items Used for Developing Scores.....	68
Annex III Results Relevant to National Monitoring and Evaluation Indicators (EHFS, 2005).....	79
Annex IV List of Data Collectors and Coders (EHFS, 2005)	82
Annex V List of Health Facilities Surveyed (EHFS, 2005)	84
Annex VII GPS Maps showing distribution of Surveyed Health Facilities (EHFS, 2005).....	106

List of Tables	Page
Table 3.1 Confidence Interval Considerations for the Survey (EHFS, 2005)	10
Table 4.1 Regional Distribution of Surveyed Facilities (EHFS, 2005)	16
Table 5.1 HMIS Personnel	31
Table 6.1 Median number of health workers actually in post in different types of health facilities	32
Table 8.1 Availability of items necessary to conduct syphilis tests in the laboratory units	44
Table 8.2 Percentage of health facilities with medicines to treat STIs with no stock-out in the past 6 months	45
Table 8.3 Proportion of outpatient units that possess different STI treatment guidelines	46
Table 8.4 Percentage of health workers that were trained in STI diagnosis and treatment	46

List of Figures	Page
Figure 4.2 Ownership of Surveyed Facilities	17
Figure 4.3 Services and facility infrastructure to support quality 24-hour emergency services	18
Figure 4.4 Highest level of sterilization for which there is functioning equipment in each type of facility	21
Figure 5.1 Proportion of Surveyed Facilities Providing Services to HIV Patients	23
Figure 5.2 Proportion of health facilities providing HIV testing services	24
Figure 5.3 Proportion of Surveyed Facilities Conducting HIV Test by Type	25
Figure 5.4 Proportion of Surveyed Facilities Conducting HIV Test by Managing Authority	25
Figure 5.5 Proportion of health facilities providing PMTCT services	26
Figure 5.6 Proportion of Facilities with Post Exposure Prophylaxis	27
Figure 5.7 Number of Facilities with ART	28
Figure 5.8 Number of Facilities with TB Service Units	29
Figure 5.9 Proportion of Service Units Managing STI	30
Figure 6.1 Pattern of trained staff on HIV test counseling, confidentiality and disclosure of results by region	34
Figure 6.2 Pattern of trained staff on HIV test counseling by type of health facility	34
Figure 6.3 Proportion of VCT units that provide pre-test and follow up counseling for HIV/AIDS	35
Figure 6.4 Percentage of counselors in PMTCT unit trained for both pre and post-test counseling by region	36
Figure 6.5 Most recent training in HMIS or reporting on health statistics by managing authority	37
Figure 7.1 Proportion of VCT units with guidelines or protocols related to HIV test counseling	38
Figure 7.2 Observed complete guidelines or protocols for HIV/AIDS services or care for HIV/AIDS in inpatient units	39
Figure 7.3 Proportion of health facilities with the indicated guidelines/protocols related to ART	39
Figure 7.4 Proportion of health facilities with the indicated HMIS guidelines by type of health facility	40
Figure 7.5 PMTCT units in different types of health facilities that possess guidelines related to PMTCT	41
Figure 7.6 Guidelines and protocols on SOPs in the laboratory area-as proportion of those that have any guideline	42
Figure 8.1 Proportion of health workers that provide diagnosis and treatment of STI with syndromic approach training	43
Figure 8.1 Percentage of facilities that have at least one medicine to treat STIs with no stock out in the past six months	45
Figure 9.1 Proportion of Staff Time Spent on HIV/AIDS Related Activities	47
Figure 9.2 Proportion of Staff Time Spent on HIV/AIDS Related Activities by Managing Authority	47
Figure 9.3 Proportion of health workers involved in HIV/AIDS/TB/STI services as part of their work for the health facility	48

EXECUTIVE SUMMARY

1. This is a report of the results of the Ethiopian National Health Facility Survey that was carried out between November and December 2005 with the principal objective of obtaining information about the operating capacity of the health care facilities as well as to measure the capacity of the health care infrastructure in Ethiopia to respond effectively to the burden of HIV/AIDS epidemic and to assess its ability to implement national HIV/AIDS intervention strategies in terms of current practices and available resources.

The survey was conducted among all the hospitals, as well as a sample of health centers and higher private clinics in the country. In addition to describing the basic characteristics and infrastructure of the surveyed facilities, the survey findings describe the availability and extent of HIV/AIDS/TB/STI related resources and activities within the facilities.

Primarily, the National Health Facility Survey provides baseline data and subsequently generates the required indicators for the National Monitoring and Evaluation Framework for HIV/AIDS/TB and STI activities. Furthermore, the survey findings provide useful operational information in terms of describing basic characteristics of national level health facilities and in elucidating regional and facility type related variations in operating capacity and in the availability and extent of the surveyed health services.

The Federal Democratic Republic of Ethiopia is located in the eastern horn of Africa covering a land surface area of 1.1 million square kilometers and a population size of 73 million projected for 2005. Administratively, the country is sub-divided into nine regional states and two administrative councils, in addition to further sub-divisions to Wereda (district) and Kebele (village) levels.

About 67% of the adult population (15-49 years age) is illiterate. Geographic access to basic health care has reached to 72.1% for public facilities, with an increase to 82.9% when services of private facilities are included. Even though it is still one of the poorest countries in the world, Ethiopia was among those countries that had registered sustained economic growth in 2006.

Ethiopia is among the countries that have high magnitude of people living with HIV/AIDS. The 2005 ANC surveillance based HIV prevalence among the general adult population was estimated at 3.5% (10.5% for urban and 1.9% for rural areas. Results of the 2005 Ethiopian Demographic and Health Survey (EDHS 2005), on the other hand, indicated a national level adult prevalence rate of 1.4%.

Ethiopia is also among the world's 22 high burden countries for tuberculosis, and high prevalence of HIV/AIDS is among the factors that have aggravated the tuberculosis problem. The prevalence of Sexually Transmitted Infections (STIs), especially those of ulcerative ones is also associated with HIV infection in Ethiopia

The Government of Ethiopia has taken several measures to respond to the HIV/AIDS problem. In addition, more recently, it has developed the Strategic Framework for the National Response to HIV/AIDS in Ethiopia for 2001-2005. The National Strategic Framework (NSF) focuses on

reducing the transmission of HIV and associated morbidity and mortality, and its impact on individuals, families and the society at large. Furthermore, the Government has developed the National Monitoring and Evaluation (M&E) Framework for the Multi-Sectoral Response to HIV/AIDS in Ethiopia, in order to assess progresses made towards minimizing the spread of the disease and its impact on PLWHA, their families and the society. Therefore, the National Health Facility Survey is part of the Monitoring and Evaluation Component of the Ethiopian Government's Strategic Framework to Respond to HIV/AIDS.

2. The National Health Facility Survey was basically meant to generate baseline data for the "National Monitoring and Evaluation Framework for the Multi-Sectoral Response to HIV/AIDS in Ethiopia. More specifically, the objectives of the survey included:
 - To assess the availability of resources for the appropriate diagnosis, counseling, referral and/or treatment of HIV/AIDS/STI/TB cases;
 - To assess the quality and extent of training of health facility staff;
 - To assess the adherence to proper laboratory and safety guidelines;
 - To assess the ability to manage sexually transmitted infections; and
 - To assess the burden of HIV/AIDS/STI/TB on health facility resources.
3. The method of data collection used was a health facility inventory survey on HIV/AIDS/TB and STI related resources. A modified form of a standard questionnaire developed by WHO for this purpose was applied on a census of all functional hospitals and higher private clinics and a random sample of health centers in the country.

The HIV/AIDS/TB/STI-related services that were assessed (using individual modules for each) include: Overview of capacity as well as staffing of facilities, Health Management Information System (HMIS), Medications and Supplies, Laboratory Services, HIV/AIDS Outpatient Care, HIV/AIDS Inpatient Care, Anti-Retroviral Therapy (ART), Voluntary Counseling and Testing (VCT) , Prevention of Mother-to-Child Transmission (PMTCT) and Tuberculosis (TB) Treatment.

4. Overall, the survey was conducted within 362 health facilities. These consist of 121 hospitals (11 specialized referral, 8 regional, 39 zonal and 63 general), 187 health centers and 54 higher private clinics) throughout the country. In terms of managerial authority, the surveyed facilities were classified as health facilities managed by the Ministry of Health (262, Other Governmental Organization (17), Non-Governmental Organization (9), Private (70) and Faith-Based Organization (4).

Regarding basic facilities within the surveyed facilities:

- The most commonly used source of water by the majority (89.2%) of the health facilities was pipe;
- Only 18.0% of the health facilities had a regular supply of electricity during the times when client services are provided;
- The majority (95.3%) had a latrine in functioning condition that is available for client use;
- About 93.0% had a waiting area for clients where they are protected from sun and rain.
- Only 66.8% had a telephone;
- About 50% reported having a functioning computer;

- Access to internet was possible among 19.3% of the facilities;

With regard to management system, 92.2% of the health facilities had systematic routine meetings at least every six monthly, and about 80.0% of the health facilities had at least monthly meetings. In addition, about 69% of the facilities reported that they had received a supervisory visit from authorities external to the facility during the past six months.

With regard to quality assurance, about 38.4% of the health facilities indicated that they carried out quality assurance activities, and for 22.4% of the facilities, the quality assurance system was reported to be implemented throughout the facility.

For infection control, about 72% of the health facilities had functioning equipment for sterilizing, and 15.5% had functioning equipment for steaming or boiling.

5. The results of the survey on the availability of HIV/AIDS/TB/STI services and resources indicate that 93% of the surveyed facilities were providing some kind of outpatient services in these disease areas.

When we look at the types of services that were being provided by these outpatient service units, about 21.8% were providing counseling services for HIV tests and about 65.8% were prescribing/referring clients for HIV tests. On the other hand, it was only 3.3% of the outpatient units that were providing PMTCT services at the time of the survey. Furthermore, among the 362 surveyed facilities, 247 (68.2%) were found to provide inpatient services with a total of 460 inpatient service units and 71.5% of these units were giving some kind of clinical care and support services to clients known/suspected of HIV/AIDS.

Availability of Voluntary Counseling and Testing (VCT) - HIV testing was available in 72.9% of the surveyed facilities, and among the laboratories that conduct HIV test, 64.2% conduct the test for client diagnosis, 32.2% for blood screening and 6.2% as part of employment related medical examinations. About 20% of the laboratories of the surveyed facilities screen blood for infectious diseases during transfusions, and 79.7% of these were screening for HIV.

Availability of Prevention of Mother to Child Transmission (PMTCT) – Only 20% of the surveyed facilities (all except one belonging to government) were offering PMTCT services, and 81.3% among these were using ARV for PMTCT. The proportion of inpatient units that were providing PMTCT services (3.7%) was particularly very low.

Availability of Post Exposure Prophylaxis - Access to post exposure prophylaxis by staff of the surveyed health facilities was also very low (8.8%). The proportion of inpatient units that were prescribing PEP for exposed workers (0.65%) was particularly almost negligible.

Availability of Anti-Retroviral Therapy (ART) - The number of surveyed facilities that were providing ART services at the time of survey was 63. With some number of facilities having more than one site, the total ART sites were 79.

Tuberculosis Related Services - Regarding tuberculosis related services, 33.5% of the surveyed facilities were prescribing treatment for TB while 57.4% of them were making the diagnosis. On the other hand, 58.3% of the inpatient service units were providing TB diagnosis and 45.9% were also prescribing TB treatment or follow up.

Sexually Transmitted Infections (STIs) Related Services - With regard to care for sexually transmitted infections (STIs), 78.6% of the 758 surveyed outpatient and 72% of the 460 surveyed inpatient units were offering the services.

Care and Support - Care and support services were being offered by 48% of the 312 assessed VCT units, while 1.7%, 6.5% and 2.2% of the surveyed facilities were providing home-based care, legal and financial supports respectively.

Health Management Information System (HMIS) - About 62% of the surveyed facilities had Health Management Information Systems (HMIS), even though it was only in 5.9% of the facilities that a statistician was responsible for the task. HIV/AIDS activities were being reported monthly or more often among 63.3% of the facilities with HMIS.

6. Assessment of quality of services was made by looking at structural and process parameters of health services quality. Accordingly, some of the highlights of the assessment include:

The number of health workers supposed to be present in the health facility to meet the existing client load (the 'staffing norm') was not met in many health facilities, as on average, health officers, nurses, pharmacists, and laboratory technicians were scanty in almost all the health facilities. In addition, disproportionately high numbers of medical specialists were found in private clinics while they are comparatively fewer at the other categories of health institutions.

About 70.0% (proportion being lower among private institutions) of the facilities have health workers with HIV/AIDS related training within their VCT units.

More than 87.0% of the ART service provision sites had one person (general practitioner in 65.6% of cases) particularly in-charge of the service.

The PMTCT units of the majority (87.6%) of health facilities had a counselor who has been trained for both pretest and post test counseling.

Among the health facilities that had HMIS system (61.9% of total), the most dominant qualification of personnel in charge of the unit were nurses (32.4%).

7. Assessment of adherence to proper laboratory and safety guidelines is considered to reflect process quality of the provision of the assessed services. The following are among some of the highlights in this regard:

About 40% of the facilities offering VCT had a complete official guideline or protocol on the particular service, even though only 12.2% had official institutional guideline or protocol on confidentiality and disclosure of HIV test results or client HIV status.

Only 35.4% the facilities with ART had policy on antiretroviral drug supplies and use of the Federal Democratic Republic of Ethiopia, while 62.4% them had guidelines to use of antiretroviral drug in Ethiopia.

Among the facilities with HMIS, 28.6% had reporting guidelines (in the form of protocols or formats) while 15.2% had the national technical guideline for integrated disease surveillance and response, and 4.0% had national HIV/AIDS reporting guidelines.

Only 3.8% and 5.2% of the outpatient and inpatient service units respectively had a complete guideline on infection prevention for health care facilities in Ethiopia.

Complete guidelines for the management of STIs were found within 6.2% and 1.5% of the outpatient and inpatient service units respectively, while national guidelines on the management of TB were found among 26.3% of the service units that provide TB related services.

Only 11.3% and 30.0% the PMTCT units had the National Guideline on PMTCT of HIV in Ethiopia and a written guideline or protocol for administration of ARV prophylaxis for PMTCT, respectively

Standard operating procedures for blood safety were available in 12.9% of the surveyed laboratory units.

8. Assessment of ability to manage STIs was also done as part of structural as well as process quality assessment, and the highlights of the findings were:

Only 13 health facilities were found providing specific youth friendly services with almost all of them dealing with STI as a component of their service package.

The provision of pre-service or in-service training on syndromic approach to diagnosis and treatment of STI seemed to be biased towards high level health workers with the highest proportion of mid-level and front-line health workers not receiving this particular training.

With regard to laboratory services for STIs, about 75.0% of the laboratory units were reported to have the capacity to test for syphilis, 75.1% for gonorrhea, and 46.6% for chlamydia.

Regarding availability of drugs for treating STIs, metronidazole (for trichomoniasis) followed by doxycycline (for chlamydia and syphilis) were the most commonly available drugs with no stock-out over the six months preceding the survey.

9. Assessment of the burden of HIV/AIDS/TB and STI on health facility resources was partly made by estimating the proportion of time spent by facility personnel on the specific services. Accordingly, time spent by facility staff on HIV/AIDS related activities alone amounted to 21.3%.

10. According to the comparative analysis through the indices that were developed by scoring the point scales used to assess the resources and activities within the surveyed facilities, health facilities in Addis Ababa had a better service provision capacity in terms of laboratory, HMIS and HIV/AIDS related in-patient care. The Amhara region was at a better status with regards to VCT and TB services and the Tigray region had a better capacity in terms of HIV/AIDS related outpatient care. These services were poorly available in the emerging regions. Generally, health centers and hospitals were better in the provision of HIV/AIDS related services compared to higher clinics.
11. When the collected and analyzed data within the health facility survey were explored in relation to the indicators for the Monitoring and Evaluation Framework for the strategic framework for the national response to the HIV/AIDS problem, there were relatively lower values for indicators of services to prevent HIV infection in women and children as well as for those of basic HIV/AIDS test and clinical care. In addition, relevant values for indicators on provision and referral for care and support services as well as for prevention of nosocomial transmission of HIV were found to be very low.
12. In conclusion, the most commonly provided services in the surveyed facilities were tuberculosis treatment (in 95%), HIV testing (in 91%) and VCT services (in 73%). On the other hand, some other services were provided within very low proportion of facilities. Among these latter services were: post-exposure prophylaxis (PEP) to staff (only in 8.8%), home-based care (in 1.7%), support to PLWHA (in 2%), support for orphans and other vulnerable children (in 5%), legal support (in 6.5%) and financial support (in 2.2%). Regarding Anti-Retroviral Therapy (ART), it was being provided by 13% of the facilities surveyed at the time.

Regarding regional distribution of services, relatively very low proportion of the facilities in the Emerging Regions of Afar, Gambella and Somali were found to offer most of the services. On the other hand, Addis Ababa, Amhara, Oromia, and SNNP regions were found to be offering a relatively wider range of services. Availability of services was also relatively better in government managed facilities than those run by NGOs, FBOs or the private sector. For instance, no NGO or FBO owned facilities were involved in ART service provision at the time of the survey. In terms of facility type, some services such as ART were found to be offered almost exclusively by hospitals, with only less than 1% of health centers and about 2% of the higher clinics being involved.

Overall, the results of the National Health Facility Survey provide baseline information on the capacity of the formal health sector in the country to provide both basic and advanced level HIV/AIDS services. In addition, it helps to avail data necessary for the Monitoring and Evaluation Component of the Ethiopian Government's Strategic Framework to Respond to HIV/AIDS.

Amongst the recommendations that can be forwarded include that more should be done to enhance the involvement of the private-for-profit as well as the private-not-for-profit sector facilities in ART as well as other HIV/AIDS/TB/STI related services. In addition, every effort should be made to address the regional disparities observed in the distribution of services.

1.0. INTRODUCTION AND BACKGROUND

1.1. Introduction

This report presents the results of the Ethiopian National Health Facility Survey that was carried out between November and December 2005 among health facilities that were functioning in the country at the time of survey. The principal objective of the survey was to obtain information about the operating capacity of the health care facilities as well as to measure the capacity of the health care infrastructure in Ethiopia to respond effectively to the burden of HIV/AIDS epidemic and to assess its ability to implement national HIV/AIDS intervention strategies in terms of current practices and available resources. The survey included all the hospitals, as well as a significant number of health centers and higher private clinics in the country.

The design, planning and implementation of the survey was multi-institutionally coordinated by: the Federal Ministry of Health; HIV/AIDS Prevention and Control Office (HAPCO); Department of Community Health, Faculty of Medicine, Addis Ababa; the US Centers for Diseases Control, Ethiopia Office; World Health Organization, and Engender Health.

The results of the survey describe the basic characteristics of HIV/AIDS/TB and STI components of the supply of health services at the time that the survey was carried out. Furthermore, the survey provides useful information to health authorities that allows them to identify problems occurring in the provision of HIV/AIDS/TB/STI related services, and therefore, to direct interventions to improve these particular services. Additionally, the results of this survey permit examination of the availability and conditions of basic infrastructure within the health facilities during the time of the survey. In addition to the major findings presented within the main text, this report includes annexes that provide results detailing the major findings as well as those that are additional to these findings.

Besides complementing HIV/AIDS/TB/STI related data that are collected through regular facility reports as well as through various periodic surveys on the particular health problems, the conduct of the National Health Facility Survey will have tremendous importance in serving as baseline as well as in subsequently generating the required indicators for the National Monitoring and Evaluation Framework for HIV/AIDS/TB and STI activities. Furthermore, this survey provides information about regional and facility type related variations in the operating capacity of health facilities as well in the availability and extent of the surveyed health services. Such information is helpful in identifying problems of regional equity in the distribution of resources and activities related to the surveyed health services.

1.2. Background

1.2.1 National context

Ethiopia is located in the eastern horn of Africa with a total surface area of 1.1 million square kilometers. It shares borders with Djibouti, Eritrea, Sudan, Kenya and Somalia. It has a projected population of 73,044,000 for 2005 (CSA, 1998¹) and a total area of approximately one million square kilometers. Administratively, the country is a Federal Democratic Republic with bicameral parliament: the House of Representatives and the House of Federation.

¹ Central Statistical Authority. The 1994 Population and Housing Census of Ethiopia: Results at Country Level (Volume 1: Statistical Report). 1998. Addis Ababa, Ethiopia.

Administrative boundaries are composed of nine regional states - Tigray, Afar, Amhara, Oromia, Somali, Benshangul-Gumuz, Southern Nations Nationalities and Peoples Region (SNNPR), Gambella and Harari - and two administrative councils (Addis Ababa and Dire Dawa). These are again sub-divided into 75 zones and 560 Weredas (districts). The Weredas represent the basic units of planning and political administration. Below the districts are Kebeles representing urban dwellers associations in towns and peasant associations in rural villages, which number approximately 15,000.

With projected population figures of more than 73 and 75 million for 2005 and 2006 respectively, Ethiopia is currently the second populous country in Sub-Saharan Africa. The population has grown by two million persons per year between 2000 and 2005 registering an annual growth rate of 2.73 percent. About 84% the country's population lives in rural areas. The population is also relatively young with 44 percent under the age of 15 years and 64 percent under the age of 25².

Ethiopia is the site of one of the world's ancient civilizations as evidenced by the many ancient recordings, obelisks and earliest sites of Christianity. It is culturally rich and diverse with over 80 language groups and many changes in customs and traditions visible as one travels within the country. Christianity and Islam are the main religions, with 51% Orthodox Christians, 33% Muslims, and 10% Protestants, while the rest of the population follows a diversity of other faiths.

With regard to access to sanitation facilities and safe water supply, 21.8% of the rural and 72.5% of the urban population have access to at least pit latrines, while about 35.9% has access to clean drinking water. Geographic access to basic health care has reached 72.1% for public facilities, with an increase to 82.9% when services of private facilities are included³. About sixty-seven percent of the adult population is illiterate, the rate being 67% in females and 52% in males⁴.

Economically Ethiopia remains one of the poorest third world countries with an annual per capita income of around US\$110. Even though it is recently registering sustained economic growth⁵, it has registered no significant growth over half a century. Its economy is largely dependent on the agriculture sector, which also provides about 85% of employment. Although the country is endowed with a lot of potential resources, it has not yet had the capability or the opportunity to develop and utilize them for furthering its economic development. This situation is even more aggravated and the country is impoverished by the recurrent famine and civil strife that have been the main signifying characteristics of the country in the recent past. In addition to the sluggish growth in productivity particularly in the agricultural sector, rapid population growth has been the major contributing factor for the country's poverty. The fact that the Ethiopian population is young (with 44% under the age of 15 years) and rapidly growing results in a high dependency ratio, in addition to putting pressure on cultivable lands and contributing to environmental degradation thereby worsening the level of poverty⁶.

² CSA. The 1994 Population and Housing Census of Ethiopia, Addis Ababa, 1998.

³ Ministry of Health. Health and Health Related Indicators. 1997 (2004/2005). Planning and Programming Department, Addis Ababa, Ethiopia.

⁴ Central Statistical Authority. Ethiopia Demographic and Health Survey. 2005. Addis Ababa, Ethiopia

⁵ The World Bank. Africa Development Indicators, 2006. The World Bank, Washington, DC.

⁶ The World Bank. Ethiopia: A country status report on health and poverty. 2004. The World Bank Africa Region Human Development and Ministry of Health, Addis Ababa, Ethiopia.

1.2.2 Status of the HIV/AIDS epidemics and national response

The first evidence of HIV infection in Ethiopia was recognized in the early 1980s with the first two cases being reported in 1986. Since then, the disease has spread at an alarming rate. By 1989, HIV prevalence among the general adult population was estimated at 2.7%, increasing to 7.1% in 1997 and to 7.3% in 2000, and declining to 6.6% in 2001 and 4.4% in 2003. Based on projections from ANC surveillance sites, the estimated adjusted national HIV prevalence for 2005 was 3.5%, 10.5% for urban areas (9.1% among males and 11.9% among females) and 1.9% for rural areas (2.2% among females and 1.7% among males). The estimated total number of PLWHA in 2005 was 1,320,000 (634,000 rural and 686,000 urban), and there were at least 384,020 AIDS orphans⁷. Results of the 2005 Ethiopian Demographic and Health Survey (EDHS 2005⁸) indicate that 1.4% of Ethiopian adults age 15-49 years are infected with HIV (prevalence among women was nearly 2% while that among men was just under 1%). Evidences show the adverse effects of HIV/AIDS on life expectancy. HIV/AIDS has resulted in decrease in life expectancy (46 years instead of 53 years) in 2001. In addition, according to ANC data, the group with the highest HIV prevalence in the country is women aged 15 to 24, while data from blood donors, visa applicants, and police and army recruits indicate that HIV prevalence among men peaks between ages 25 and 29 years. As the most affected groups are people in their prime productive and reproductive years, this has resulted in loss of the country's human capital. Heterosexual transmission is responsible for the majority of infections followed by mother-to-child transmission route.

The Government of the Federal Democratic Republic of Ethiopia has taken several measures to fight the disease and mitigate its impact. In 1985 (before the first AIDS case had been officially diagnosed), it established a national HIV/AIDS task force and issued the first AIDS control strategy. In 1987, it established an HIV/AIDS department within the Ministry of Health, and in 1988, an HIV surveillance system was established with a major effort to conduct sero-surveys in Addis Ababa and other major urban centers among core transmitter groups. In 1989, the MOH drafted a four-point policy statement on AIDS prevention, and the first draft of a national policy was created in 1991, though not approved until 1998. The policy has the overall objective of providing an enabling environment for the prevention and mitigation of HIV/AIDS. Its specific objectives are to: establish effective HIV/AIDS prevention and mitigation strategies to curb the spread of the epidemic; promote a broad, multi-sectoral response to HIV/AIDS, including more effective coordination and resource mobilization by government, NGOs, the private sector, and communities; encourage government sectors, NGOs, the private sector, and communities to take measures to alleviate the social and economic impact of HIV/AIDS; support a proper institutional, home-, and community-based health care and psychological environment for PLWHA, orphans, and surviving dependents; safeguard the human rights of PLWHA and avoid discrimination against them; empower women, youth, and other vulnerable groups to take action to protect themselves against HIV; and promote and encourage research activities targeted toward preventive, curative, and rehabilitative aspects of HIV/AIDS⁹.

7 Federal Ministry of Health. HIV/AIDS in Ethiopia. 6th Report. 2006. Epidemiology and Diseases Prevention Department, Addis Ababa, Ethiopia.

8 CSA and ORC Macro. Ethiopia Demographic and Health Survey 2005. 2006. Central Statistical Authority, Addis Ababa, Ethiopia and ORC Macro, Calverton, Maryland, USA.

9 Federal Democratic Republic of Ethiopia. Policy on HIV/AIDS of the Federal Democratic Republic of Ethiopia. Addis Ababa, August 1998.

Following the enactment of the National HIV/AIDS Policy, the Ministry of Health coordinated a process of strategic planning and program development in Ethiopia's nine Regions and two city administrations. This process involved National and Regional governmental institutions, the major regional sector offices, NGOs, religious organizations, and other key stakeholders. It resulted in the five-year Federal Level Multi-Sectoral HIV/AIDS Strategic Plan and accompanying Regional Multi-Sectoral HIV/AIDS Strategic Plans. Together, these plans were synthesized into the Strategic Framework for the National Response to HIV/AIDS in Ethiopia for 2001-2005¹⁰. The National Strategic Framework (NSF) focuses on reducing the transmission of HIV and associated morbidity and mortality, and its impact on individuals, families and the society at large. The strategy is built on four issues: multi-sectoralism, participation, leadership, and efficient management (including adequate monitoring and evaluation). The originally proposed intervention areas within the NSF were: Behavior Change Communication (BCC); condom promotion and distribution; blood safety; management of Sexually Transmitted Infections (STIs); Voluntary Counseling and Testing (VCT); Prevention of Mother to Child Transmission (PMTCT); universal precautions and Post-Exposure Prophylaxis (PEP); care, support and treatment; legal and human rights; surveillance and research; mainstreaming; and capacity building in-order to implement the various interventions.

The National AIDS Prevention and Control Council was established in 2000 by Proclamation Number 276/2002 as an autonomous federal government organ having its own legal personality and charged with implementing the Strategic Framework for the National Response to HIV/AIDS in Ethiopia for 2000-2004. The council, chaired by the president of Ethiopia and comprising members from government, NGOs, religious bodies, and civil society, has declared HIV/AIDS a national emergency. In addition to acting as the Secretariat for the National HIV/AIDS Prevention and Control Council, the objective of HAPCO is to coordinate and direct the implementation of the Country's HIV/AIDS policy. All Regional States have also established Offices mandated to coordinate HIV/AIDS activities in their own Regions. Ethiopia's response is constrained by extremely limited human, financial, technical, material, and management capacities. The country's health care infrastructure is massively under-equipped to address HIV/AIDS, particularly outside Addis Ababa. The country's size and poor transport infrastructure are also key factors. Bureaucratic constraints are also impeding the response. The Ministry of Health's ability to absorb and manage new funding has been problematic. That the HIV/AIDS program is so highly dependent on donors also raises concerns about its sustainability.

Over the last few years, there have been some achievements in the area of HIV/AIDS prevention and control activities. In addition to the production and dissemination of various guidelines, the Ethiopian strategic plan for intensifying multi-sectoral HIV/AIDS response and Accelerating Access to ART have been launched. Nationwide, the number VCT sites has increased several folds.

The ART program in Ethiopia was launched in July 2003. The current ART delivery model is hospital-based and largely run by physicians. Only trained physicians and pharmacists are allowed to prescribe and dispense ARV drugs. There are plans to extend the program to all regions and all hospitals countrywide. There are a number of initiatives that are working to expand the availability of ART in Ethiopia, including the Global Fund (GF) and the President's Emergency Plan for AIDS Relief (PEPFAR), and Ethiopian Red Cross Society initiatives, of which those of the GF and PEPFAR are the largest.

¹⁰ Ministry of Health. Summary Federal Level Multisectoral Plan 2000-2004. Ministry of Health, Addis Ababa, 1999.

In terms of guidelines, the Ministry of Health has issued guidelines for the use of antiretroviral drugs¹¹ and voluntary HIV counseling and testing¹², as well as a handbook on HIV/AIDS home care¹³ and a policy on antiretroviral drugs supply and use¹⁴, to facilitate the use of proper procedures and drug regimens and for training health workers in patient treatment and care. The National Guideline on Prevention of Mother-to-Child Transmission was also published by MOH in 2001.

Ethiopia has also adopted home-based care as a strategy and issued national guidelines to help organize these services and has also prepared a training manual. The demand for such care emanated from the rapidly increasing number of AIDS cases in Ethiopia and the over occupancy of hospitals. Adequate, appropriate and sustainable home based care and support services involve mainly families and faith-based institutions, NGOs and private institutions. It is also being advocated and envisaged to reorganize that health service in such a model that provides integrated and comprehensive prevention, as well as treatment and care services.

1.2.3 Tuberculosis in Ethiopia

In Ethiopia, TB has become a disease of major public health importance, and is among the leading causes of morbidity and mortality in the country. With a WHO estimated incidence of all cases at 370/100,000, Ethiopia is classified as one of the world's 22 high burden countries for tuberculosis. MOH estimates for the tuberculosis burden, on the other hand, amounts to 292/100,000 and 196/100,000 for 2002 and 2003 respectively¹⁵. The chronic high rates of malnutrition (worsened by recent, severe droughts), overcrowding, physical stress, emotional anxiety, and high prevalence of HIV/AIDS have created a formidable environment in which tuberculosis has and will continue to proliferate.

The ongoing HIV-epidemic may be an important contributing factor in the growing caseload, taking into account the disproportional increase of reported "smear-negative pulmonary" and "extra-pulmonary" cases.

The catastrophic association between HIV and TB has now been well identified, although the underlying causal mechanisms and immunological aspects are not yet fully understood. Latent TB-infection in HIV-positive persons reactivates at a higher rate than among HIV-negative persons¹⁶. HIV-positive persons are also prone to re-infection with new strains of TB from the community and drug resistance may occur more frequently. TB is often the first opportunistic infection in HIV-infected persons, and active TB has been shown to induce viral replication, thus accelerating the progression from latent HIV-infection to clinical stages of AIDS. TB is the commonest HIV co-infection in Ethiopia. HIV prevalence is more than eight-fold among pediatric patients with TB

11 Ministry of Health. Guidelines for Use of Antiretroviral Drugs in Ethiopia. Ministry of Health, Disease Prevention and Control Department in collaboration with HIVC/AIDS Prevention and Control Office (HAPCO) and Drug Administration and Control Authority (DACA), February 2003

12 Ministry of Health, Disease Prevention and Control Program. National Guidelines for Voluntary HIV Counseling and Testing in Ethiopia. Addis Ababa, April 2002.

13 Ministry of Health. HIV/AIDS Home Care Handbook: Supporting Primary Care Givers in Ethiopia. Ministry of Health, Addis Ababa, January 2002.

14 Ministry of Health. Policy on Antiretroviral Drugs Supply and Use. Addis Ababa, July 2002.

15 Ministry of Health. Proposal for the 4th round of GFATM (TB Component). 2004. CCM, Addis Ababa, Ethiopia.

16 Harries AD, Maher D. TB/HIV: A Clinical Manual. World Health Organization, Geneva, 1996

when compared with controls¹⁷. Adverse reaction to anti-TB drugs is more frequent among HIV-positive patients than in the general population and drug resistant TB is becoming a major challenge.

The TB Control Program in Ethiopia is organized in a hierarchical fashion with varying responsibilities. The TB and Leprosy Diseases Prevention and Control Team (TLCT) at the Federal Ministry of Health is responsible for matters related to TB and Leprosy control activities¹⁸. The objective of tuberculosis programs is the control of tuberculosis in society by interrupting the transmission of tuberculosis infection through the proper implementation of DOTS, leading to the eventual eradication of the disease¹⁹. The control activities are fully integrated into the general health service of the country and the TLCP is aiming at implementation of DOTS for TB as part of the general health services in the country. TB control activities are operational in large parts of the country and effectively implemented control programs reduce the period of infectiousness of smear positive cases. TB cases are diagnosed and treated in the general health services. Doctors, health officers, and nurses at the Hospitals and Health Centers are responsible for the management of TB patients. Hence, the TB service delivery is fully integrated into the general health service system while specialized managerial functions exist at the different levels of the health care system.

1.2.4 STIs in Ethiopia

Numerous epidemiologic and biologic studies are in agreement that STIs, both ulcerative non-ulcerative, enhance HIV transmission and that both infections share similar epidemiologic determinants. The prevalence of genital discharge syndrome, syphilis, genital warts, pelvic abscess in females, genital chlamydial infections, and *Herpes simplex* Type 2 infection were all associated with HIV in Ethiopia²⁰.

STIs have enormous social and economic consequences as antimicrobial treatment places a heavy financial burden on families, communities and the country at large. This is largely because antimicrobial resistance of several sexually transmitted pathogens has been increasing in Ethiopia and most other parts of the world and this has rendered some low-cost regimens ineffective.

Traditionally, STI control efforts have focused on diagnosis and treatment in the clinic setting. However, on the basis of these and other recent developments with regard to STI especially its potential serious effects and linkages to HIV, the MOH has adopted an effective prevention and control of STI to have the greatest community impact, it is necessary to implement prevention activities and to find and treat cases as early as possible. It has been promoting the syndromic approach using the generic WHO STI management guidelines until 2001 and using its own guidelines to serve as national STI management since then²¹. Syndromic management of STIs comprises identification of consistent groups of symptoms and easily recognized signs and symptoms (syndromes) and the provision of treatment that will deal with the majority of or the most serious organisms responsible for producing a syndrome. Education of the patient, condom supply,

17 Palme B, Gudetta B, Degefu H et al. A controlled estimate of HIV infection in Ethiopian children with tuberculosis. *Epidemiol Infect* 2001;127:517-525.

18 Manual, Tuberculosis and Leprosy Prevention and Control Program, Disease Prevention and Control Department, FMOH, Ethiopia. 1997 and 2002.

19 Enarson DA. Model National TB Programmes. *Tuberc Lung Dis* 1995;76:95-99.

20 Wolday D. Prevalent infectious diseases in patients with HIV/AIDS in Ethiopia. *Ethiop Med J* 2003;41:189-203

21 AIDS Control and Prevention (AIDSCAP) Project/Family Health International. Control of Sexually Transmitted Diseases: A Handbook for the Design and Management of Programs, Addis Ababa.

counseling and notification and management of sexual partners²², as well as voluntary counseling and testing for HIV are also included, provided that counselors and testing facilities are available.

1.3. Rationale for the Health Facility Survey

Establishment of an effective monitoring and evaluation system is basic to assess progresses made towards minimizing the spread of the disease and its impact on PLWHA, their families and the society. HAPCO, together with its stakeholders, has developed the National M&E Framework for the Multi-Sectoral Response to HIV/AIDS in Ethiopia. The priority intervention areas outlined above are the basis for identifying the indicators in this M&E Framework.

Therefore, the National Health Facility Survey is part of the Monitoring and Evaluation Component of the Ethiopian Government's Strategic Framework to Respond to HIV/AIDS. As a tool for monitoring and evaluation, the output of the survey: creates a baseline inventory of resources for monitoring the inputs and processes for responding to the HIV/AIDS problem. It can also be considered as generating database on the structural parameter of quality of services at national level, and as a benchmark for periodic evaluation of progress after program implementation.

The results of the National Health Survey describe the basic characteristics of an important component of the supply of HIV/AIDS/TB/STI related services at the time of survey. Additionally, as a baseline, this survey permits examination of changes in the conditions of the HIV/AIDS/TB/STI public health facilities that take place. Furthermore, the survey results provide useful information to health authorities that allows them to identify problems occurring in the provision of these services, and therefore, to direct interventions to improve these respective services.

22 WHO. Guidelines for the Management of Sexually Transmitted Infections. WHO, Geneva, 2003:72.

2.0. OBJECTIVES OF THE SURVEY

2.1. General Objectives

The general objective of the National Health Facility Survey was to measure the capacity of the health care infrastructure in Ethiopia in order to respond effectively to the burden of the HIV/AIDS epidemic and to assess the potential of the Health Service to implement national HIV/AIDS intervention strategies in terms of current practices and available resources.

2.2. Specific Objectives

The specific objectives of the survey included:

1. To assess the availability of resources for the appropriate diagnosis, counseling, referral and/or treatment of HIV/AIDS/STI/TB cases;
2. To assess the quality and extent of training of the health facility staff;
3. To assess the adherence to proper laboratory and safety guidelines;
4. To assess the ability to manage sexually transmitted infections; and
5. To assess the burden of HIV/AIDS/STI/TB on the health facility resources.

2.3. Expected Outcomes

As the scope of the survey was national, it included all hospitals, higher clinics and most of the health centers in the country. Within the surveyed health facilities, the services and resources outlined in the National Strategic Framework were assessed using modules designed for the respective services.

More specifically, it was to provide baseline information on the capacity of health service outlets to

1. Provide basic level preventive, diagnostic, care and support services for HIV/AIDS;
2. Provide advanced level care and support services;
3. Provide safe injections; and
4. Maintain record keeping systems for monitoring HIV/AIDS preventive, diagnostic, care and Support services.

3.0. METHODOLOGY

3.1. Method of Sampling the Health Facilities and the Timing for the Survey

The survey was undertaken between the months of November and December 2005. The study took a census of hospitals and higher private clinics (excluding Addis Ababa and Oromia), and a probability sample of all health centers in the nation and higher private clinics in Addis Ababa and Oromia. All census and sampling facilities were stratified by region.

The sampling frame for the health centers and higher private clinics included in the survey consisted of the comprehensive listing of health facilities (disaggregated by region and facility type) that was compiled by the Ministry of Health in 2004²³. A random sample was selected from the sampling frame using the SURVEYSELECT procedure in SAS Version 9, statistical analysis software.

Sample selection was done in two stages. First, health facilities were stratified by region. The sample was then apportioned to each strata in such a way that a pre-specified level of precision can be obtained for each stratum estimate.

3.1.1 Sample size calculation

Sample size determination was based on estimation of a proportion under stratified random sampling. The following formula was used for determining sample size²⁴ (Levy and Lemeshow, 1991):

$$n \leq \frac{0.25 \times \frac{z_{1-\frac{\alpha}{2}}^2 T_{\phi} / \Phi}{P_y^2}}{\epsilon^2 + 0.25 \times \frac{z_{1-\frac{\alpha}{2}}^2 T_{\phi} / \Phi}{N \times P_y^2}}$$

Where n = Required sample size
 N = Total population of facilities
 P = Estimated proportion of facilities with necessary resources
 0.25 = Correction factor
 ϵ = precision factor

Consequently, total sample size was determined by a combination of census values and random samples. Because hospitals are targets of key interventions, and because of their importance in measuring the success of these interventions, all hospitals were included in the survey. At the time of the survey, there are 126 hospitals (including specialized, zonal, district, OGA, NGO and private facilities) and 451 health centers (list was not complete initially). Based on this total and the corresponding stratum (regional totals) the anticipated sample sizes for obtaining confidence interval widths of less than 0.20 and 0.10 were 119 and 244 facilities respectively.

At the time of the survey (and also currently), private higher clinics were distributed unevenly throughout the regions. Some regions had no private higher clinics and some had only a few. In those regions, every higher clinic was sampled. In Addis-Ababa and Oromiya, on the other hand, sample private higher clinics were included.

²³ Federal Ministry of Health. Health and Health Related Indicators. 1996 EC (2004/2005). 2005. Planning and Programming Department, Addis Ababa, Ethiopia.

²⁴ Levy P, Lemeshow S. Sampling of Populations: Methods and Applications, Second Edition, Wiley Series in Probability and Mathematical Statistics, John Wiley & Sons, Inc., 1991.

Table 1 shows upper bounds of the expected widths of the confidence intervals of the estimates of region-level proportions for various total sample sizes.

Table 3.1 *Confidence Interval Considerations for the Survey (EHFS, 2005)*

Width of Confidence Interval	Total Sample Size for Health Centers	Total Sample Size for Higher Private Clinics
0.10	244	91
0.11	221	84
0.13	200	78
0.14	182	72
0.15	166	67
0.16	152	62
0.18	140	58
0.19	129	54
0.20	119	50

Based on these considerations, the expected number of health facilities was between 297 to 463 health facilities, depending on the chosen precision levels. As a census of all hospitals was taken, it is worth noting that hospital data do not have any sampling or estimation error. Additionally, all the other sampling estimates were expected to be smaller than the upper bounds shown in Table 3.1. Therefore, initially, a sample size of 300 was considered as satisfactory for the survey. Accordingly, 405 health facilities were planned to be included in the survey. However, as some of the facilities were not functional and as some were incorrectly classified in the initial list (health stations to health centers and lower clinics to higher clinics), the final number of surveyed facilities was 362 (187 health centers, 54 higher clinics and 121 hospitals) (see Annex V for the list of surveyed health facilities). This number was quite enough to meet the requirements of the sample size calculation and of the present survey. Proportionally, 96.0%, 91.0%, and 73.5% of the sampled hospitals, higher clinics and health centers, respectively were covered by the survey.

3.2. Planning and Preparing for Conducting the Survey

The survey adopted a health facility inventory questionnaire from the International Health Facility Survey questionnaire published by WHO that was earlier pilot tested within health facilities in Addis Ababa. The English versions of the questionnaire and the training manual were edited by the Technical Advisory Group (TAG) based on the suggestions given during the first workshop. After incorporating comments, the questionnaire was submitted to Addis Ababa University Printing Press for duplication in different colours. Moreover, the English version of the questionnaire was translated into Amharic, edited, computerized and duplicated to an amount that would be enough for the training and data collection.

As mentioned above, the Health Facility Survey questionnaires were designed to obtain information on the capacity and conditions of HFS to provide care and support services and referral linkages between services, including the availability of basic equipment, supplies, and medications and on the functioning of certain key systems such as record-keeping, supervision and so on.

There are eleven questionnaire sections (modules) (sections A-L). The first 10 modules are part of the “inventory” of HFS (sections A-J), and the last 2 are health worker interview questionnaire

(sections K). More specifically, the modules used for the survey can be grouped according to the services they were designed to assess:

1. Overview of HIV/AIDS services (section A): The Overview of HIV/AIDS services questionnaire is designed to collect information on all of an HFS's HIV/AIDS services and practices. This instrument helps the data collector to identify the various HIV/AIDS outpatient and inpatient service sites where data collection will be required.
2. HIV/AIDS Outpatient Care (section B) and HIV/AIDS Inpatient Care (section C): The Outpatient Care and Inpatient Care questionnaires are each designed to obtain information for each outpatient or inpatient clinic or unit where any counseling, testing, clinical care and/or support services related to HIV/AIDS provided. The questionnaires collect information on the following aspects of service:
 - Type of HIV/AIDS-related services offered in the clinic/unit;
 - Types of HIV/AIDS-related services provided through client referral, either to another location inside the HFS or outside the HFS, and the system for referral;
 - Availability of guidelines and protocols for HIV/AIDS-related care and support services;
 - The availability of necessary medicines, supplies and other HIV/AIDS-related items to health providers working in the clinic/unit;
 - Service delivery conditions, including infection control and universal precautions; and
 - Health Management Information System (HMIS) data that is collected and available in the inpatient or outpatient clinic/unit/unit.
3. Health Management Information System (section D): The HMIS questionnaire was utilized to collect information on the HFS practices related to collecting and reporting HIV/AIDS-related data for the services provided to patients through the HFS.
4. Laboratory and other Diagnostics (section E), and Medication and Supplies (section F): Those questionnaires helped to collect specific information on HIV/AIDS-related laboratory resources, and drugs and supplies available to providers and patients in the HFS;
5. Tuberculosis Treatment (section G), Counseling and Testing (section H), Antiretroviral Therapy (section I), and Prevention of Mother-to-child-transmission services (section J): Those questionnaires were envisaged to gather specific information on each of those specialized services and were required in addition to OPD or IPD questionnaires for a clinic/unit if the clinic/unit providing the services. Those were also used to survey stand-alone sites that provide those special services.
6. Health Worker Interview (section K): Health service providers were interviewed to collect information on their work experience and pre- and in-service training on the care and support of people living with HIV/AIDS.

In addition, there was a "Checklist" module that served as a basis for determining by the data collectors which of the above modules were need to be filled before they started the survey at a given health facility.

3.3. Indicators Used

More specifically, the intention of soliciting for indicators was to collect data on the following health indicators as defined in the "National Monitoring and Evaluation Framework for the Multi-Sectoral Response to HIV/AIDS in Ethiopia":

1. STI comprehensive case management: Percentage of patients with sexually transmitted infections at health-care facilities, who were appropriately diagnosed, treated and counseled (by age, sex and region).
 - Guideline used: National STI Service Guidelines (on history-taking, examination, diagnosis, treatment, counseling, partner notification, condom use, HIV testing).
2. STI drug availability: Percent of health facilities providing STI care that had a current supply of essential STI drugs and reported no stock outages lasting longer than six months in the preceding 12 months (region).
 - Guideline used: List of essential drugs for STI management.
3. Health facilities providing service to prevent HIV infection in women and Children: Percentage of all possible public, private, missionary and workplace health facilities (family planning and primary health care clinics, ANC/MCH, and maternity hospitals) providing the minimum package of services to prevent HIV infection in women and infants in the past 12 months (by region).
 - Guideline used: WHO guidelines on services to prevent HIV infection in women.
4. Prevention of nosocomial transmission of HIV: Percentage of health facilities that had guidelines to prevent nosocomial transmission of HIV, adequate sterilization procedures, and protective materials and equipment such as syringes, gloves, antiseptics in stock at the time of the survey (by region).
 - Guideline used: Written guidelines on procedures, necessary equipment, proper training.
5. Health facilities providing or referring for care and support services: Percentage of health facilities that either provides comprehensive care and support services onsite for people living with HIV/AIDS or through an effective referral system (by region).
 - Guidelines used: Medical services, psychological services, social/legal support, support for OVC, referral directory, referral form, contact names and numbers, register where referrals are recorded.
6. Health facilities that provided basic HIV test and clinical management: Percentage of health facilities that had the capacity and conditions to provide basic level HIV testing and HIV/AIDS clinical management (by region). Health facilities were assessed regarding whether there was (were):
 - Guideline used: WHO indicator.
7. Health facilities that can provide advanced level care and support services for PLWHA: Percentage of health facilities that have the capacity and conditions to provide advanced level care and support services for PLWHA, including provision and monitoring of ART (by region).
 - Guideline used: WHO indicator.

Assessment of the capacity of health facilities to provide quality care to clients for different components of HIV/AIDS related and STI services was made using two of the three parameters (structural and process components) developed by Avis Donabedian²⁵ for assessing health care quality. Therefore, the components used for quality assessment in the survey were:

1. Structural quality – Availability of resources (personnel type and composition as well as pre- and post service training, type of infrastructure, equipment, drugs supplies and ranges of services); and Process quality – Organization and arrangement of the provision of the

25 Donabedian A. The Quality of Care: How can it be assessed? Journal of the American Medical Association 1988; 260: 743-1748.

services - These also include management practices (documentation, supervision, systems for addressing management issues and community input) as well as availability of various official guidelines and protocols.

Furthermore, assessments of the capacity to provide STI services were separately presented.

3.4. Recruiting and Training Personnel

Public health physicians, general practitioners, public health officers and baccalaureate nurses were trained and deployed as interviewers and data coders with appropriate computer training background entered the data from the questionnaires to Personal Digital Assistant (PDA) software. Overall, a total of 78 interviewers (8 public health physicians, 31 general practitioners, 26 MPH and 13 baccalaureate nurses) were deployed during the process of data collection. In addition, 21 data coders were involved in the data entry (the list is outlined in Annex IV).

The interviewers' main responsibility was to use the survey questionnaires to collect information that is as accurate as possible through asking questions of the appropriate respondents, observing material items used in service provision, reviewing records and protocols for information, and interviewing providers about their training and experience. In addition to interviewer responsibilities, team leaders in each team were also responsible for travel and lodging logistics, obtaining permission to conduct the survey at facilities, organizing data collection each day, checking for completeness of the set of questionnaires at the end of the day, and reporting any problems to field supervisors.

Interviewers and data coders were trained on the subject matter of the survey and use of the instruments in two phases-one intensive training in Debre Zeit between May 11 and 22, 2005 and a second refresher training in Nazareth between September 21 and 25, 2005. During the training sessions, survey personnel were instructed on how to identify the appropriate service sites in a facility, where data must be collected, and the appropriate respondents to interview at each service site. In addition, they were instructed on how to gather information from service providers working in facilities, and on how to complete the questionnaire. Background technical information on national/regional or health facility level protocols and guidelines, types of laboratory tests and medicines used to provide care and support for people living with HIV/AIDS in the country were also reviewed during the training sessions.

Survey personnel were also provided with a training manual that provided detailed explanations and definitions for each question in each section of the questionnaire to provide a uniform understanding of the meaning of each question and response choices, and to improve the consistency of the data collected by different data collectors in different facilities.

3.5. Pre-testing Survey Instruments and Making Necessary Adjustments

Survey personnel also practiced on how to conduct interviews with other trainees and had practical experience in collecting data in some selected facilities.

The survey questionnaires were then adapted based on the results of the pre-testing for use in administering the proper part of the survey.

3.6. Conducting and Supervising the Survey

The Health Facility Survey in Ethiopia was undertaken by the Federal Ministry of Health in collaboration with WHO and CDC Country Offices, as well as Engender Health, Ethiopia. The administration of the survey was undertaken by the Department of Community Health, Faculty of Medicine, Addis Ababa University. Financial support for the survey was obtained from the Global Fund through HAPCO (the principal recipient of the Global Fund in Ethiopia).

The health facilities included in the survey were grouped in teams. Tentative routing of the facilities was prepared; facilities were coded; data collection materials (questionnaires, training manuals, stationeries, and finance) were mobilized; letter of cooperation was prepared and handed to all teams by the FMOH. Renting of vehicles needed for the data collection was handled by the HAPCO and was also closely followed up by the Addis Ababa University. A total of 17 field vehicles were rented for the purpose.

Then the survey personnel were deployed divided into a total of 18 teams to all regions of the country at the end of September 2005. Each team consisted of 5 people (four interviewers, at least two of them having MPH degree, and one data coder) and worked for 1-2 months depending on the number of facilities assigned to them and geographic area of assignment. Supervision of the data collection was conducted by staff of the Department of Community Health as well as Engender-Health.

The collected data were checked for completeness of all files periodically during the survey. Grossly missing data were identified in seven health facilities for the different sections of questionnaire. To fill those data deficiencies, three teams of data collectors were organized and deployed to the different regions including Addis Ababa to collect and complete the missed data items.

3.7. Study Subjects

The heads of the health facilities were interviewed regarding the general overview of their respective health facilities. The main questions addressed in this section were organization of the facilities, infrastructure and resources available. At times when the in-charge couldn't respond to any question he/she directed the team to the most knowledgeable person with regards to the specific question or set of questions. Each of the remaining sections was responded by the health facility staffs that were believed to be the most knowledgeable about the specific services offered by the clinic/unit.

Health worker interviews were conducted among health workers who were directly involved in giving care to clients. For the purposes of this survey, a health service provider was defined as anyone who provides clients services such as counseling, taking history, curative or diagnostic services, or laboratory services. The providers to be interviewed were selected from a list of all service providers who were present the day of the survey. Therefore, in each clinic/unit where information was gathered, all health service providers who were present on the day of the survey were listed on the Staff Listing Form. A representative sample of health workers was interviewed to understand their qualifications and training in providing HIV/AIDS services. In general, each preventive clinic/unit included in the survey had one provider interviewed. We wanted 1 ANC provider, 1 Family planning service provider, and 1 child health provider (EPI or Growth

monitoring). In addition, providers with responsibility for providing special HIV/AIDS-related services including HIV testing and counseling, PMTCT, ART, TB and delivery services were interviewed.

3.8. Method of Data Analysis

Personal Digital Assistant computers (PDAs) were used for data management. Data analysis programs such as SAS, SPSS and EPIINFO were utilized for analysis. Proper consideration was given to variance calculation and weighting of estimates to account for the complex sample design. Descriptive statistics and multivariate analysis of key indicators by region and health facility type were the key outputs. Data was entered on Geographic Information Systems (GIS) and assistance was given by WHO Geneva and CDC on data analysis and report writing.

The following general procedures were adopted during the data cleaning process:

1. Each of the modules was explored by running frequencies for each variable in SPSS and filtering values in SPSS and MS-excel. Frequencies were run for all variables to check completeness and consistency by comparing the recorded responses with the expected;
2. Magnitude of missed values was determined for each variable. Those variables having >5% missed values were separated for further checking in the hard copies;
3. Skip patterns were checked using the multiple auto-filter system in MS-excel and inconsistency was corrected by locating errors; and
4. An output frequency file was prepared which shows all the steps employed in the data cleaning process, problems identified, measures taken, percentage of missed values, inconsistencies and suggestions. Then the appropriate cleaning procedures were made on records that were found deficient or discrepant.

3.9. Scoring Indices for Comparing Capacity of Health Facilities

To compare the extent of availability of the various services and resources between the surveyed facilities, a method of scoring was used whereby the facilities were categorized into two based on the points given to the levels of resources and activities across the various modules. This was computed after transforming the various points given to the levels of resources and activities within the modules to a 0 or 1 scale (unit transformation). The scores were summed up to form a single score value for each HIV/AIDS related service and the median value was used as a cut off to categorize the relative service provision capacity of facilities in to two. Service provision capacity score levels below the cut-off level were labeled as 'relatively poor' and those above the cut-off level were termed 'relatively good'.

The items of scores for each service (the specific items used for scoring) are annexed. Information on scoring is presented according to:

- The extent of the services provided;
- The level of expertise of the personnel involved;
- The availability of guidelines and protocols;
- Availability and maintenance of records/registers for clients;
- Availability of items useful for infection prevention;
- Provision of care and support services for HIV/AIDS clients and families;
- Provision of youth friendly services;
- Prescription of ART drugs, TB and STI treatment drugs;

- Availability of PEP for staff in the service unit; and
- Presence of standard operating procedures and tests for laboratory services.

The cumulative score indices were then regressed (through univariate as well as multi variate regression analyses) on region, facility type as well as managing authority for making comparisons across these variables. To increase the sample size in the cells thereby enhancing stability of the predicting power of the regression models, type of health facilities was merged and recoded into three: all hospitals, health centers and private higher clinics; managing authority into two levels: governmental (which includes MOH and OGO owned facilities) and non-governmental (that includes NGOs, FBOs and private for profit health facilities). In all the regression models Addis Ababa was used as a reference for regions, private higher clinic (except in PMTCT service where health centers were used instead) for type of authority and non-governmental organizations for managing authority.

Those regions that have very small sample sizes resulting in non-significant crude odds ratios with extremely wide confidence intervals were removed from the logistic model. The regression models were further evaluated by Iteration History, Omnibus Tests of Model Coefficient, measures of goodness of fit and Correlation Matrix in SPSS²⁶.

²⁶Hosmer W and Lemeshow S. Applied Logistic Regression, Textbook and Solutions Manual, 2nd Edition 2001, Wiley Publishers, NY, USA.

4.0. GENERAL OVERVIEW OF THE SURVEYED FACILITIES

4.1. Number and Types of Surveyed Facilities

The EHFS identified and surveyed a total of 362 health facilities (187 health centers, 54 higher clinics and 121 hospitals) all over the country (62 facilities more than the minimum required based on sample size calculation). If it were not for the fact that some of the facilities were not functional and some were incorrectly classified in the initial list (health stations to health centers and lower clinics to higher clinics), the survey would have included well above 362 facilities.

Table 4.1 Regional Distribution of Surveyed Facilities (EHFS, 2005)

Region		SRH	RH	ZH	GH	HC	HPC	Total
Tigray	Sampled	1	0	5	8	20	4	38
	Total available	1	0	5	8	35	4	53
	% from Total Sample	9.1	0.0	7.9	20.5	10.7	7.4	10.50
	% from Total Available	100	-	100	100	57.1	100	71.7
Afar	Sampled	0	0	1	1	7	0	9
	Total available	0	0	1	1	8	0	10
	% from Total Sample	0.0	0.0	1.6	2.6	3.7	0.0	2.49
	% from Total Available	-	-	100	100	87.5	0	90
Amhara	Sampled	1	2	6	7	35	9	60
	Total available	1	2	6	9	81	9	108
	% from Total Sample	9.1	25.0	9.5	17.9	18.7	16.7	16.6
	% from Total Available	100	100	100	77.8	43.2	100	55.6
Oromia	Sampled	2	3	14	10	44	12	85
	Total available	2	3	14	10	141	12	182
	% from Total Sample	18.1	37.5	22.2	25.6	23.5	7.4	23.5
	% from Total Available	100	100	100	100	31.2	100	46.7
Somali	Sampled	0	0	2	1	5	0	8
	Total available	0	0	3	3	20	0	26
	% from Total Sample	0.0	0.0	3.2	2.6	2.7	0.0	2.2
	% from Total Available	-	-	66.7	33.3	25.0	0	30.8
Benishangul-Gumuz	Sampled	0	0	2	0	7	0	9
	Total available	0	0	2	0	7	0	9
	% from Total Sample	0.0	0.0	3.2	0.0	3.7	0.0	2.5
	% from Total Available	-	-	100	-	100	0	100
SNNP	Sampled	0	0	7	9	40	6	62
	Total available	0	0	7	9	118	6	44.3
	% from Total Sample	0.0	0.0	11.1	23.1	21.4	11.1	17.1
	% from Total Available	-	-	100	100	33.9	100	140
Gambela	Sampled	0	0	1	0	5	0	6
	Total available	0	0	1	0	8	0	9
	% from Total Sample	0.0	0.0	1.6	0.0	2.7	0.0	1.7
	% from Total Available	-	-	100	-	62.5	0	66.7
Harari	Sampled	0	1	1	3	2	2	9
	Total available	0	1	1	3	2	2	9
	% from Total Sample	0.0	12.5	1.6	7.7	1.1	3.7	2.5
	% from Total Available	-	100	100	100	100	100	100
Addis Ababa	Sampled	6	1	0	23	19	18	67
	Total available	6	1	0	23	28	92	150
	% from Total Sample	54.5	12.5	0.0	59.0	10.2	33.3	18.5
	% from Total Available	100	100	-	100	67.9	19/6	44.7
Dire Dawa	Sampled	0.	1	0	2	3	3	9
	Total available	0	1	0	2	3	3	9
	% from Total Sample	0.0	12.5	0.0	5.1	1.6	5.6	2.5
	% from Total Available	-	100	-	100	100	100	100
Total	Sampled	11	8	63	39	187	54	362
	Total available	11	8	64	41	451	128	703
	% from Total Sample	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	% from Total Available	100	100	98.4	95.0	41.5	42.2	54.5

The surveyed facilities consist of specialized referral hospitals, regional hospitals, zonal hospitals, general hospitals, health centers and higher clinics. A further categorization was done by their managing authority. Accordingly, they were classified as health facilities managed by the Ministry of Health (MOH), Other Governmental Organization (OGO), Non-Governmental Organization (NGO), Faith-Based Organization (FBO), and the private system.

Table 4.1 above and figures 4.1 and 4.2 below provide summary information on the regional distribution, types and distribution of the surveyed facilities respectively. Most of the facilities were owned by the government and were distributed within the bigger regions (Oromia, SNNP and Amhara) as well as Addis Administrative Council. About 51% of the surveyed facilities were health centers.

Figure 4.1 - Type of Surveyed Facilities

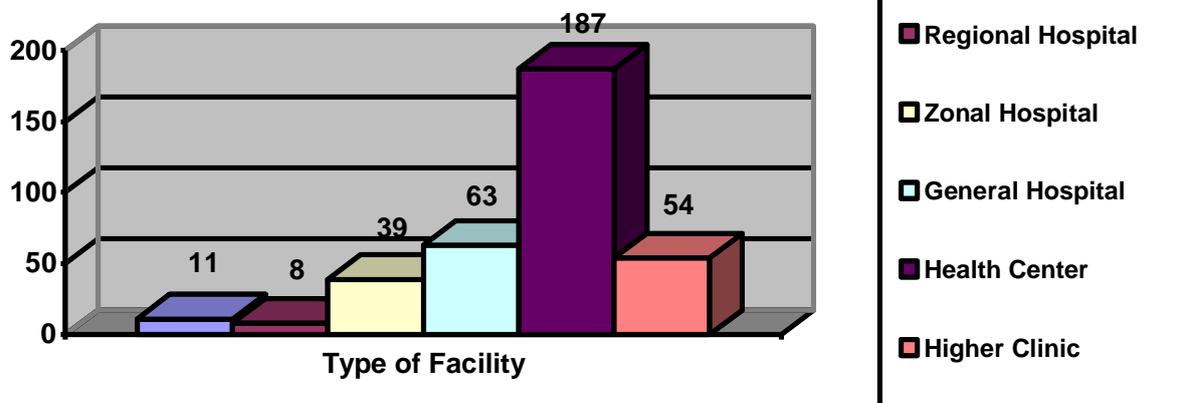
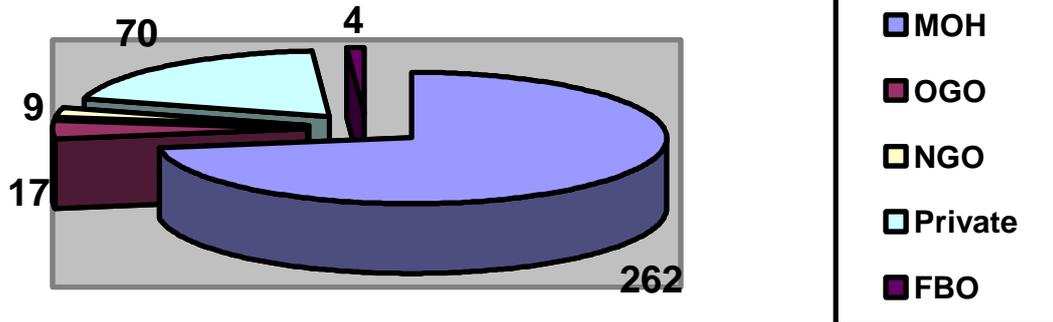


Figure 4.2 - Ownership of Surveyed Facilities



4.2. Availability of Basic Infrastructure within Surveyed Facilities

The presence or absence of some infrastructure items such as electricity, clean water, client toilet are crucial in dictating client's image for the health facility and hence their level of satisfaction.

Furthermore, staff adherence at the facility and ability and willingness to adhere to standard guidelines and protocols is affected by the presence of these items.

4.2.1 Regular water supply

The most commonly used source of water by the majority (89.2%) of the health facilities was piped water. Specialized referral hospitals (72%) compared to other types of health facilities were least likely to have piped water. Amongst the regions, smaller proportion (37.5%) of health facilities in the Somali region had piped water.

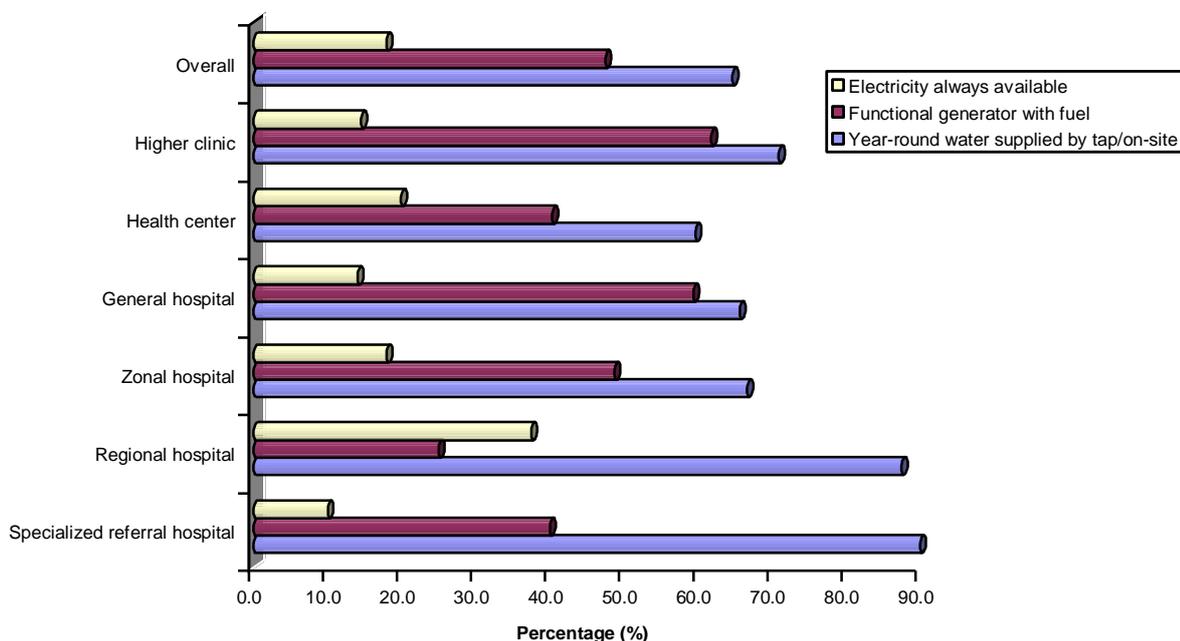


Figure 4.3 Services and facility infrastructure to support quality 24-hour emergency services.

4.2.2 Electricity

Only 18.0% of the health facilities had a regular supply of electricity during the times when client services were provided. Continuous supply of electricity was least reported by specialized referral hospitals (10.0%). A functional back up generator that had fuel at the time of survey was reported by 47.5% of the health facilities. The majority of higher clinics were found to have a back-up generator ensuring reliable source of lightning for client care during the night and consistent source of fuel for operating medical equipment.

4.2.3 Client latrine, waiting area and cleanliness

The majority (95.3%) of health facilities had a latrine in functioning condition that is available for client use. About 93.0% had a waiting area for clients where they are protected from sun and rain.

Amongst the regions, waiting area for clients was least observed among facilities in the Gambela Region (77.8%). The general cleanliness of the facilities was assessed by the interviewers. A facility was said to be clean if the floors are swept and counters and tables are wiped and free of obvious dirt or waste. A facility was labeled unclean if obvious dirt or waste or broken objects are on the floors or counters. About 81.0% of the health facilities were clean. There was variation in the proportion of health facilities that were clean from 100.0% among higher clinics to 71.5% among health centers. In contrast to the majority of health facilities in the remaining regions, only one-third of the health facilities in the Benishangul-Gumuz Region were assessed as clean.

4.2.4 Telephone, computer and internet

Telephone was generally lacking in all types of health facilities. Only 66.8% of the facilities had a telephone. A phone or short wave radio within 5 minutes distance from the facility was available in 11.9% of the health facilities.

Just over half of the health facilities reported to have a functioning computer. Among the different category of health facilities, a smallest proportion of health centers (41.9%) had a functioning computer. Similarly, only one-fourth of the privately managed health facilities had a computer.

Access to internet within the health facility was possible in 19.3% of the surveyed health facilities. There was no internet access in any of the health facilities in the Afar, Benishangul-Gumuz and Gambela regions.

4.2.4 Working hours

The median number of days per week in which the health facilities were open were 5 for each of the following: routine outpatient services (range 4-7), counseling and testing for HIV/AIDS (range 0-7), ART (range 1-7), and PMTCT (range 3-7).

4.3. Management Systems to Support and Maintain Quality of Services

4.3.1 Management meetings

The EHFS assessed health facilities for the presence of routine management meetings that discuss facility level management and administrative matters at least every 6 months. In addition the presence of some official record of proceedings in the form of official record of management meetings was as well explored. The majority (92.2%) of the health facilities had systematic routine meetings at least every six monthly. About 80.0% of the health facilities had meetings monthly or more often. Amongst the regions, such meetings were least common in the Dire Dawa Administrative Council and Harari Region (57.1% and 66.7%, respectively). Compared to other types of health facilities, a smaller proportion of higher clinics (81.5%) had these types of meetings. However an official record (minutes or notes) of management meetings were observed in only 52.5% of the health facilities. Zonal Hospitals and health centers were most likely to have documentation of meetings.

4.3.2 Quality Assurance (QA)

Health facilities were assessed whether they monitor quality of care, i.e. whether they run a routine program for quality assurance, and the extent to which the system was implemented. About 38.4%

of the health facilities indicated that they carried out quality assurance activities. For 22.4% of the facilities, the quality assurance system was implemented throughout the facility.

Amongst the facilities that implement quality assurance, 8.3% reported using and had available supervisory checklist of health system components such as service-specific equipment, medications and records; 6.4% reported using and had available supervisory checklist of health service provision (such as an observation checklist); 6.6% reported using and had available facility-wide review of mortality; and 13.3% had periodic audit of medical records or service registers. Individual staff members that are internal to the facility were the most commonly mentioned group responsible for reviewing findings and taking action regarding quality assurance.

4.3.3 Referral systems

About 85.0% of the health facilities had a printed referral form that was observed at the time of the survey. However, the form had a section to document the reason for referral in only 49.2% of the facilities. None of the facilities in the Afar and Somali regions had a referral form that had space to fill in client information regarding the reason for referral.

4.3.4 Supervision by external staff

Overall, 69.1% of facilities reported that they had received a supervisory visit from authorities external to the facility during the past six months. The three types of health facilities where external supervision was most common during the past six months were higher clinics (81.8%), health centers (72.0%), and specialized referral hospitals (70.0%). External supervision was also relatively better practiced in more than three quarters of the facilities in the SNNP, Amhara, and Oromia regions. A report from the last external supervisory visit was observed in only 11.1% of the health facilities.

Among facilities having received external supervision, 70.4% said that during the supervisory visit official registers or records were checked, 73.8% said that they had discussed problems, 42.0% said that policy issues had been discussed, 62.2% discussed technical matters and about 30% said a staff meeting was held.

Individual level supervision of staff while providing service, by an internal as well as external supervisor, was experienced by 27.9% during the past three months, and by 12.2% during the past 4-6 months. There was minimal variation among different category of health facilities in the experience of individual staff supervision over the past six months.

4.3.5 Community representation at facility meetings

A system which involves participation of community in routine meetings about facility activities or management issues were found in only 12.2% of the health facilities surveyed. There were no routine meetings with community members among all facilities in the Somali, Benishangul-Gumuz and Harari regions. Relatively higher proportion of specialized referral hospitals (20.0%) and none of the higher clinics had a system that involves community participation. Among the facilities that reported routine community participatory meetings, 64.4% gave feedback of its key management decisions to the community during such meetings and 84% had a method to elicit client opinions. The most commonly used methods were suggestion box (61%), and informal discussions with the

community (27.6%). A procedure for reviewing or reporting on client opinions was reported and a report was observed in only 10% of those facilities.

4.4. Systems for Infection Control

4.4.1 Capacity for adherence to quality standards, sterilization or high-level disinfection processes

Five items were assessed to identify capacity of facilities to support consistent quality sterilization or HLD processing. Those were functioning equipment, a power source for heat, an automatic timer that indicates when the required amount of time has elapsed, availability of other means for evaluating quality of the procedure such as temperature indicator tape, and availability of written guidelines for disinfection and sterilization.

About 72% of the health facilities had functioning equipment for sterilizing (a dry heat sterilizer, an electric or non-electric autoclave) (figure 4.4). In addition, 15.5% had functioning equipment for steaming or boiling. All regional hospitals had a functioning dry heat sterilizer or autoclave, whereas only 64.2% of the health centers had this sterilizing equipment.

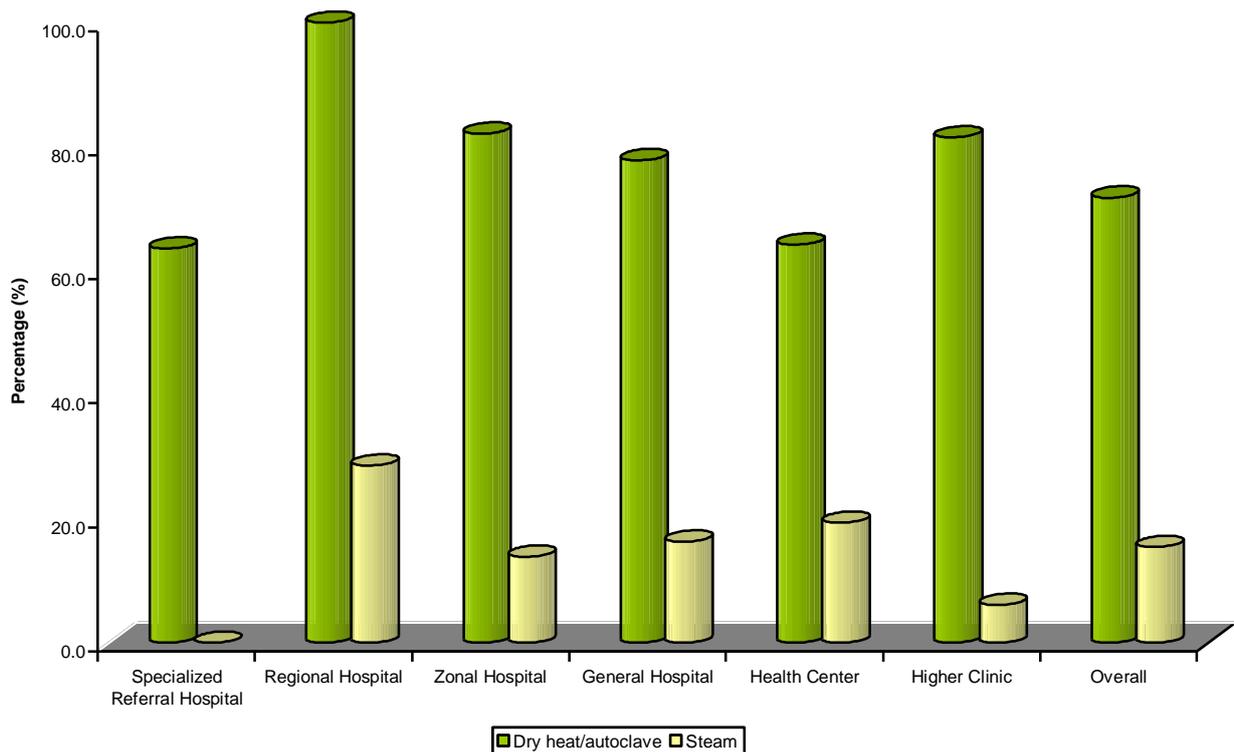


Figure 4.4 Highest level of sterilization for which there is functioning equipment in each type of facility.

Only 35.4% of the facilities had a functioning power source for heating (stove or cooker with fuel or power). An automatic timer that can be set to indicate when the correct processing time has

passed, including automatic timers on machinery, was available in 46.4% of facilities. Availability was highest among specialized referral hospitals and higher clinics (each 60%).

Time-steam-temperature-sensitive (TST) tape that is used to seal wrapped equipment and that indicates equipment has been autoclaved at the correct temperature for a sufficient amount of time was available in less than one-fourth of facilities. It was found mainly in regional and specialized referral hospitals (50% and 40%, respectively), and least frequently in higher clinics (12.7%). Twenty-one percent of the health facilities had written guidelines or protocols for disinfection and sterilization, and a further 7.5% reported that they had guidelines or protocols, but they were unable to show them. The availability varied by region from 40% in specialized referral hospitals to 10.9% in higher clinics. It also varied by region ranging from 40% in Addis Ababa to nil in the Somali region.

4.4.2 Appropriate storage conditions for processed items

Some storage conditions that help to maintain sterility or HLD status were assessed. Overall, about 70% of the facilities stored items in a dry location. This was primarily practiced in the specialized referral hospitals (90%). Date of sterilization was documented in 35.6% of the facilities, with relatively higher proportion (50%) observed in the specialized referral hospitals. Wrapping of storage items either in a sterile cloth sealed with TST tape or in a sterile container with lid that clasps shut was observed in 32.9% of facilities. The practice was observed mostly in the specialized referral and general hospitals (each 46%) and least in health centers (28.3%).

4.4.3 Adequate disposal of hazardous waste

Hazardous waste in health facilities includes used bandages, cotton balls, needles and syringes and is considered infectious if touched.

By far, the most commonly used method for final disposal of hazardous waste was burning in an incinerator (75.5%). Incineration was most commonly practiced in higher clinics (81.8%) and least common in specialized referral hospitals (50%). Amongst the regions, 92.5% of health facilities in Addis Ababa practice incineration of hazardous waste. Burning and burying was practiced by only 13% of the health facilities. When the place used for disposal of contaminated waste or for keeping waste is kept prior to removal offsite was observed, 64.7% had no unprotected contaminated waste present on the day of the survey.

5.0. AVAILABILITY OF HIV/TB/STI RELATED SERVICE RESOURCES

5.1. General Service Availability

To assess the availability of resources for the appropriate diagnosis, counseling, referral and/or treatment of HIV/AIDS/STI/TB cases, the analysis used the national level HIV/AIDS indicators that are relevant to health service facilities as outlined in the National Monitoring and Evaluation Framework²⁷.

In terms of general services, as figure 5.1 below shows, 93.1% of the 362 surveyed facilities were providing some kind of outpatient services. Hospitals as well as health centers and higher clinics were providing these services. In terms of managing authority, all the NGO and FBO facilities were found to provide some kind of outpatient services to clients known/suspected of HIV/AIDS (even though the absolute number of those latter facilities was low), while not all public and private facilities were doing so.

When we look at the specific services provided by the 758 outpatient units, about 21.8% were providing counseling services for HIV tests and about 65.8% were prescribing/referring clients for HIV tests. On the other hand, it was only 3.3% of the outpatient units that were providing PMTCT services at the time of the survey.

Among the 362 facilities surveyed, 247 (68.2%) were found to provide inpatient services with a total of 460 inpatient service units. The proportion of those 460 inpatient units that were giving some kind of clinical care and support services to clients known/suspected of HIV/AIDS was 71.5%.

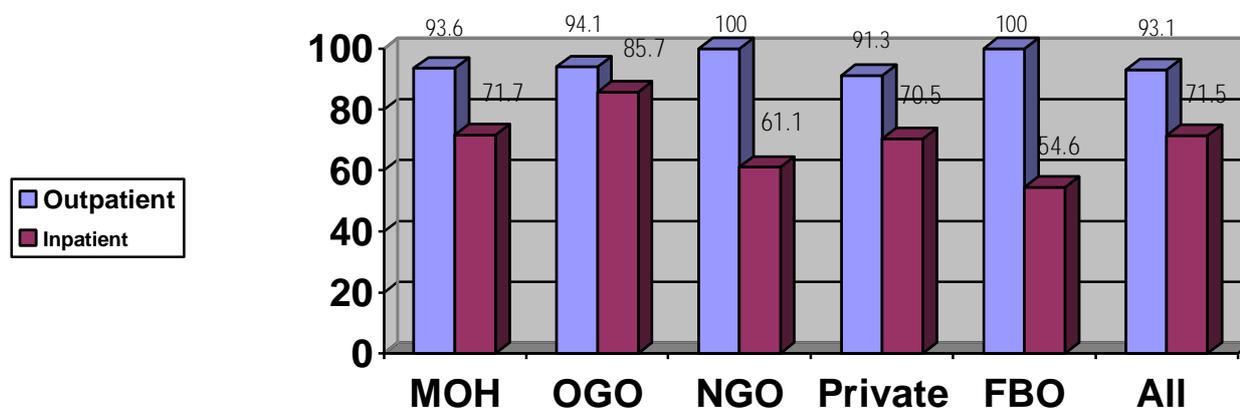


Figure 5.1 - Proportion of Facilities/Units Providing Services to HIV Patients

Regarding the pattern of placement of HIV/AIDS admissions by the surveyed inpatient units, 68.3% were placing HIV patients mixed with other inpatient cases, 0.7% were clustering them in separate parts of rooms with other cases while 2.8% had separate units/rooms for HIV/AIDS cases.

²⁷ National HIV/AIDS Prevention and Control Office (HAPCO). National Monitoring and Evaluation Framework for the Multi-Sectoral Response to HIV/AIDS in Ethiopia. 2003. HAPCO, Addis Ababa.

5.2. HIV Counseling and Testing

The generally accepted definitions for Voluntary Counseling and Testing (VCT) services for HIV is based on the principle that the test must be provided only after an informed consent has been received from the client, and the test must be voluntary. Thus, the client must be assured that test results are confidential and that no one will be told the results without the explicit consent of the client, and therefore s/he must receive pre-test counseling to ensure an understanding of the meaning of the test. In addition, both clients with positive and negative results should be counseled for preventive measures, as well as more thorough counseling related to HIV infection for positive clients.

In the present survey, a facility is considered as offering counseling and testing if clients are:

- 1) Counseled before and/or after testing on the prevention of HIV, testing, transmission, living with HIV/AIDS, care and support and other aspects of the disease; and
- 2) Offered the HIV test, and then either the facility conducts the test or there is a system for the facility to refer clients to external affiliated testing sites for testing and receive results back in order to follow-up clients after testing.

On the other hand, a facility where clients are simply referred elsewhere and it is expected that the other location counsels and follows up on test results, was not considered as offering VCT services.

Accordingly, HIV testing was available in 72.9% of the surveyed facilities, with all of the regional and zonal hospitals and 90.6% of the general hospitals providing the services (figure 5.2).

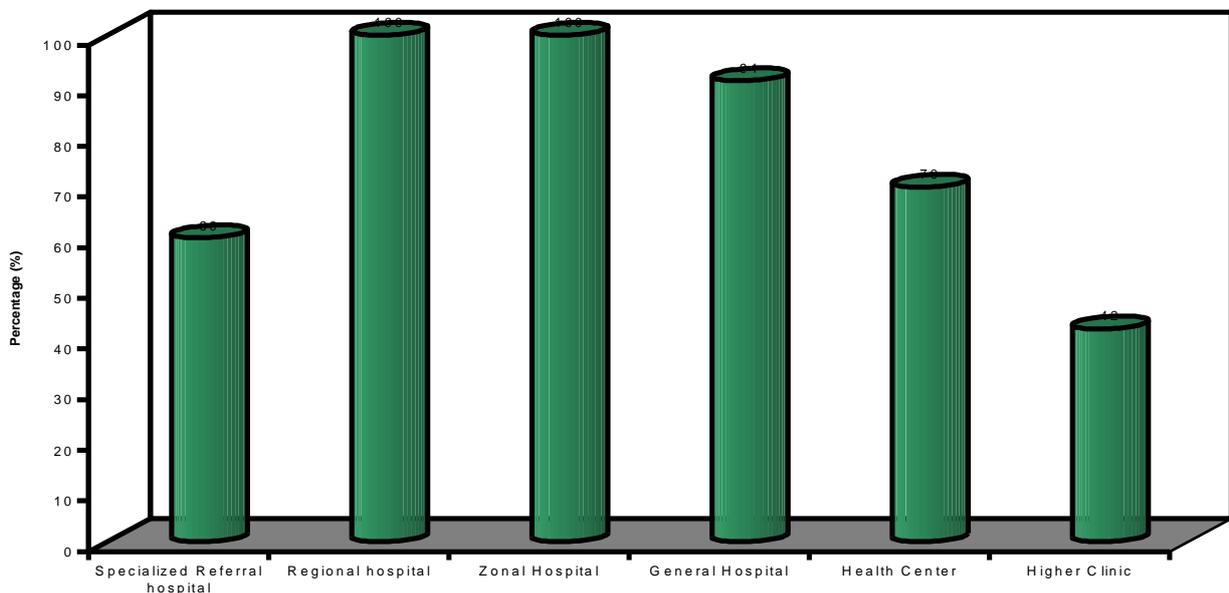


Figure 5.2 Proportion of health facilities providing HIV testing services (EHFS, 2005)

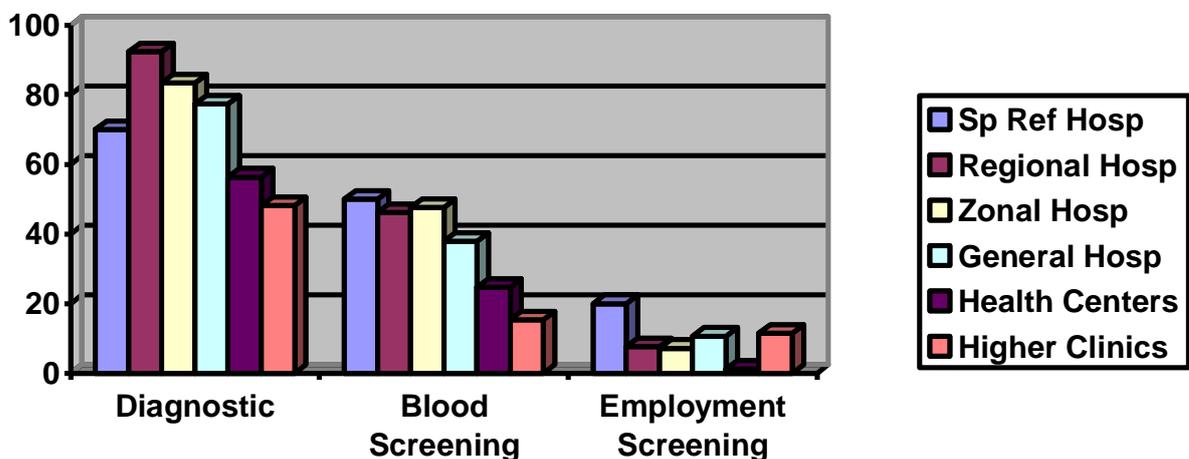
In terms of ownership, 76.2% of the 205 MOH, 82.4% of the 14 OGO, 77.8% of the seven NGO, 51.4% of the 36 private, and 50% of the two FBO facilities surveyed were offering HIV testing.

When one looks at the regional distribution of HIV testing among the surveyed facilities, 53 out of 60 (88.3%) in Amhara, 31 out of 38 (81.3%) in Tigray, seven out of nine (77.8%) in Harari, 47 out of 62 (75.8%) in SNNPR and 61 out of 85 (71.8%) in Oromia were providing the service. On the other hand, only one out of eight (12.5%) of those in Somali and two out of six (33.3%) in Gambella were offering this particular service.

Among all the surveyed facilities, average days of counseling per week and average duration of counseling in a month were 5 and 27 respectively, while average days of testing for HIV per week was 4.6. In addition, in more than 90% of the facilities both pre-test and post-test counseling were always provided by trained counselors.

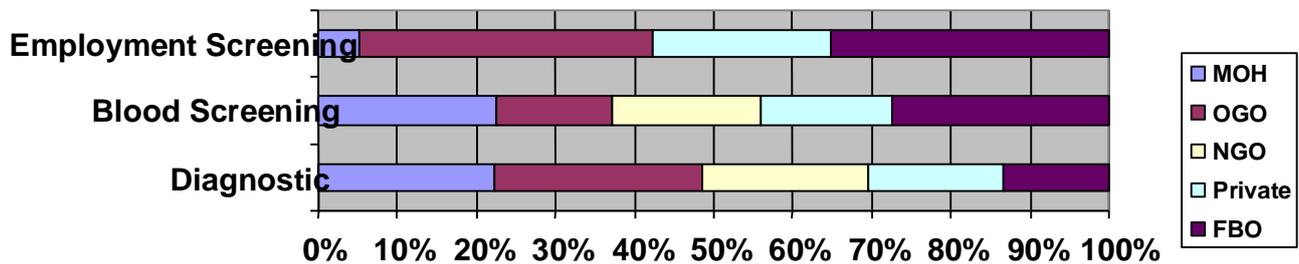
With regard to laboratories that conduct HIV test, as shown in figure 5.3, 64.2% of the facilities conducted the test for client diagnosis, 32.2% for blood screening and 6.2% as part of employment related medical examinations.

Figure 5.3 - Proportion of Surveyed Facilities Conducting HIV Tests by Type



Furthermore, figure 5.4 below depicts the distribution of the facilities conducting HIV test by managing authority. Accordingly, proportionally more testing for employment screening was conducted by OGO and FBO facilities; more testing for blood screening at MOH and FBO facilities; while the distribution of proportions for diagnostic testing seemed to be nearly uniform across the five managing authorities.

Figure 5.4 Proportion of Surveyed Facilities Conducting HIV Test by Managing Authority



Regarding the type of HIV testing equipment used by the laboratories of the surveyed facilities, 34.3% of the laboratories used ELISA reader, 8.8% use flow-cytometer CD4 count, 22.3% washer, 4.7% fax count and 10.9% PCR. More specifically, 73% of the laboratories use rapid test kits, 7% use all reagents and kits for ELISA and only 2.4% use kits for viral load determination.

About 20% of the laboratories of the surveyed facilities screen blood for infectious diseases during transfusions. Among the laboratories that do such screening, 79.7% screen for HIV. Overall, about 91% of the surveyed facilities were having some sort of testing systems. However, it was only about a quarter of health facilities in Somali Region and about two-third of those in Gambella that had HIV testing system.

The other types of HIV/AIDS related services that need to be assessed in relation to VCT or PMCT services were Youth Friendly Services (YFS). These refer to specific program strategies to encourage utilization by adolescents of services with HIV/AIDS components. Assessment of YFS where VCT services were available showed that even though 14% of the VCT units had health education materials targeted to the youth, only 0.6% of them had any specific Youth Friendly Services.

5.3. Prevention of Mother to Child Transmission (PMTCT)

A facility is defined as offering PMTCT services if any activities related to prevention of transmission in the pregnant or recently delivered woman are offered. Services for PMTCT are most often offered in conjunction with antenatal and delivery services and may include a variety of activities such as: pre and post-HIV test counseling, and testing pregnant women for HIV; providing HIV positive women with counseling on infant feeding practices; family planning counseling and/or referral; and provision of prophylactic ARV to HIV positive woman during delivery and to newborns within 72 hours of birth.

Among the 362 surveyed facilities, only 80 (20%) were offering PMTCT services. In addition, all except one (private) were governmental facilities. The types of surveyed facilities in which PMTCT services were provided is shown in figure 5.5 below.

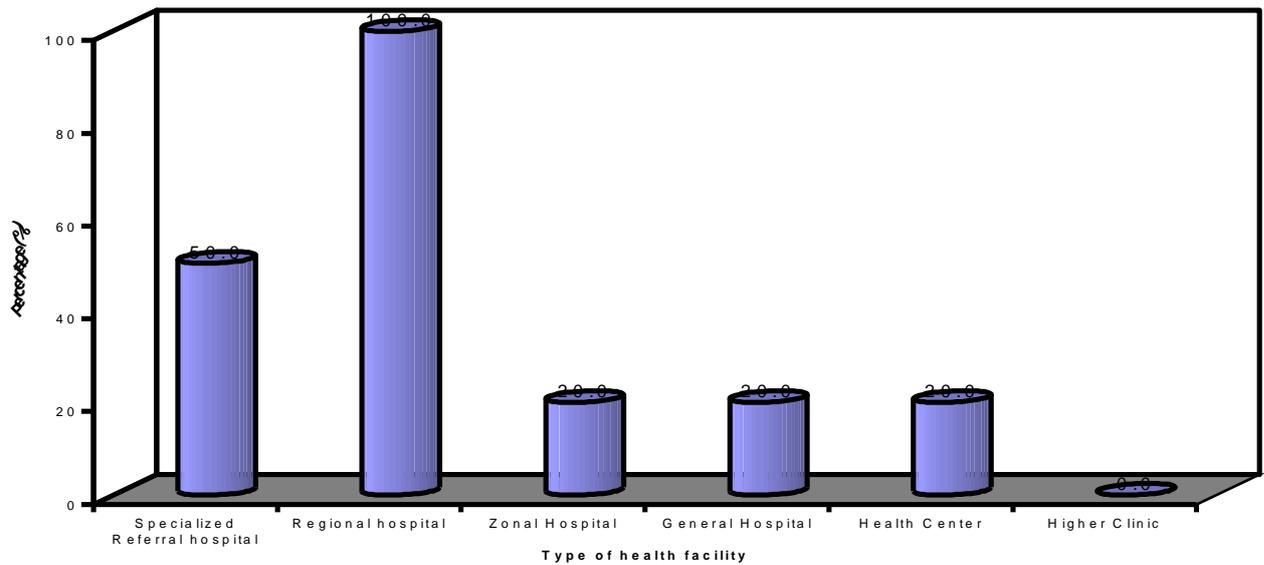


Figure 5.5 Proportion of health facilities providing PMTCT services (EHFS, 2005)

With regard to the organization of PMTCT services, 28.8% of the facilities had separate VCT/PMTCT units within ANC service areas, 11.3% of the facilities had separate VCT/PMTCT units within maternity services areas, 51.3% of the facilities had PMTCT units integrated within ANC clinics, while 10% of them had the units integrated with family planning. On the other hand, the proportion of inpatient units that provide PMTCT (3.7%) was very low.

On average, the PMTCT services were available five days a week in the facilities where these services were found to be available. In addition, 5% of the service units were making the tests for newborns of all HIV+ women, while 1.3% of them were doing the test for facility deliveries only.

Regarding the use of ARV for PMTCT, 81.3% of the service PMTCT sites were using ARV (nevirapine) for PMTCT

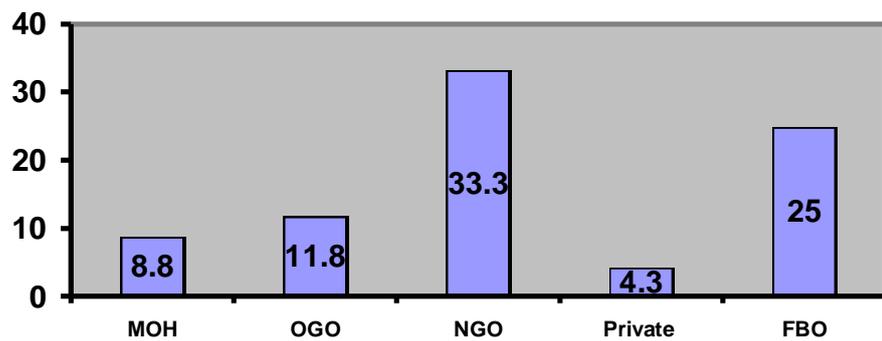
5.4. Universal Precaution (UP) and Post Exposure Prophylaxis (PEP)

Post-exposure prophylaxis (PEP): This refers to provision of ARV medicines for prevention of infection, for persons who have been exposed to contaminated surfaces or body fluids and are at risk of being infected with HIV. PEP should be available not only to health service providers who are at risk of exposure to HIV, but also to the public at risk due to inadvertent exposure (such as rape victims). Even facilities that do not officially offer HIV/AIDS-related services should have access to PEP, since it is frequently not known which clients may be infected with HIV. Exposure to blood, including needle sticks, puts the provider at risk.

Regarding PEP, it was only in 8.8% of all the surveyed facilities that staff had access to the service. In addition, relatively higher proportions of staff within NGO and FBO facilities had access to PEP (figure 5.6). Among the regions, Dire Dawa and Harari, staff in the relatively metropolitan regions with high density of facilities were found to have no access to PEP.

About 1.3% of the VCT units were prescribing Post-Exposure Prophylaxis to exposed workers, while only 0.6% of the 341 laboratory units of the assessed facilities had providers that prescribe Post-Exposure Prophylaxis regimen. The proportion of inpatient units that prescribe PEP for exposed workers (0.65%) was also negligible.

Figure 5.6 - Proportion of Facilities with PEP

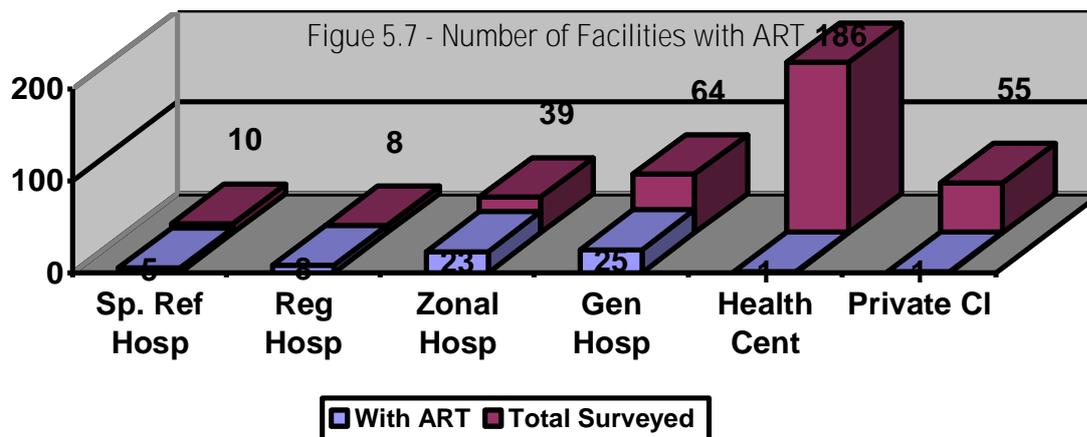


5.5. ART and TB Treatment

5.5.1 Anti-Retroviral Treatment (ART)

Antiretroviral therapy (ART) refers to providing antiretroviral (ARV) medicines for treatment of the HIV infected person. Provision of ART to HIV/AIDS clients require trained health personnel and regular monitoring of their condition, in order to ensure that an effective antiretroviral regime is being implemented and for properly managing side effects. Other issues that important for providing quality ART services include: availability of protocols and guidelines for relevant care and support services, consistent supply of ARV drugs and record systems so that ARV compliance can be monitored.

Among the 362 surveyed facilities, only 63 (24%) were providing ART services at the time of survey. With some number of facilities having more than once site, the total ART sites were 79. Figure 5.7 below shows the types of facilities that were providing ART. With regard to ownership of the facilities that were providing ART, 46 were MOH, 9 were OGO and 8 were privately owned.



With regard to personnel in charge of ART services, the majority of the ART service sites (65.6%) had general practitioners as responsible for the services.

In terms of laboratory follow up, about 65% of the ART always conducted Total Lymphocyte Count (TLC) (53% in the facility, 6% by sending clients elsewhere and the rest 6% by sending blood elsewhere). In addition, 67 of the 79 ART sites always ensure the conducted CD4 count prior to starting ART. Among these 67 sites, 60% were doing CD4 in their own facilities, 6% were making clients to go elsewhere for the test while about 34% were sending blood elsewhere for the test. On the other hand, only 0.8% of the ART service sites (7 out of 79) were ensuring the conduct of RNA viral load count prior to starting ART.

When one looks at the condition of ART drugs, 19.3% of the sites were found to stock ART during the survey. Among the facilities that store ART drugs, 42.9% had at least one ART drug at the time. Furthermore, 62.9% of the facilities had ART stock cards out of which 72.7% were reported to be updated daily.

Out of the 79 ART sites, 18 (23%) reported as having any link with Community Based Health Workers (CBHWs) at the time of the survey.

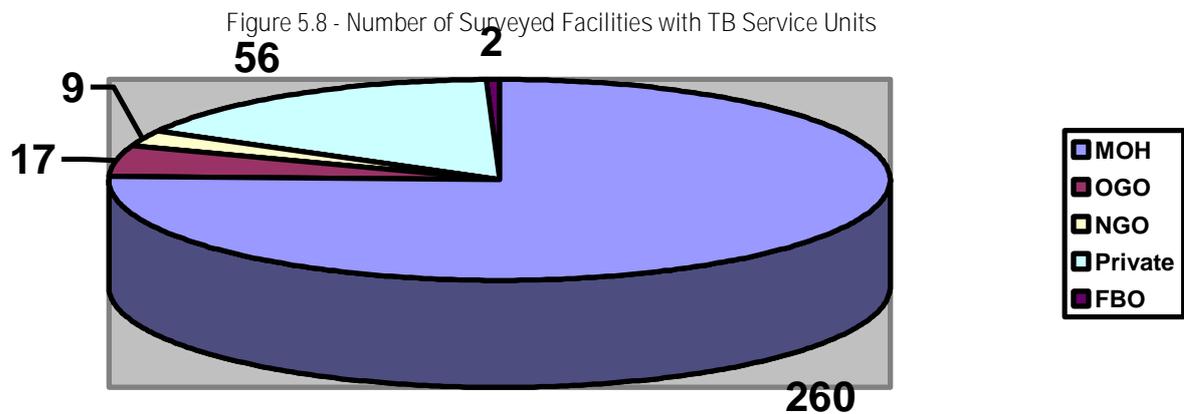
5.5.2 Tuberculosis treatment

TB is one of the most common opportunistic infections associated with HIV/AIDS and is one of the leading causes of death in people infected with HIV. People who are HIV positive and infected with TB are up to 50 times more likely to develop active TB in a given year than people who are HIV negative. Therefore, TB diagnosis and treatment is considered an essential component of care for HIV/AIDS clients.

In addition to providing quality treatment for diagnosed cases of TB, it is advocated that all newly diagnosed HIV infected persons be screened for TB (and that all newly diagnosed TB patients be screened for HIV). Preventive treatment for TB, using Isoniazid (INH) in PLHA who might not yet have TB but who may have been infected is also advocated in some instances.

Regarding the provision of tuberculosis treatment by outpatient units, about a third (33.5%) of the surveyed facilities were prescribing treatment for TB while 57.4% of them were making the diagnosis.

Among the facilities surveyed, 95% provide some kind of TB related services within 344 service units. Among those latter services units, 76.5% were included in the National DOTS Program. Furthermore, 9.3% of these units referred all TB cases for HIV counseling while 32.5% of them refer only suspected cases. Among these 344 service units, 6 were within specialized referral hospitals, 8 were within regional hospitals, 39 were within zonal hospitals, 63 were within general hospitals, 180 were within health centers and 48 were within higher clinics. Figure 5.8 below shows the distribution of tuberculosis service giving facilities by managing authority.



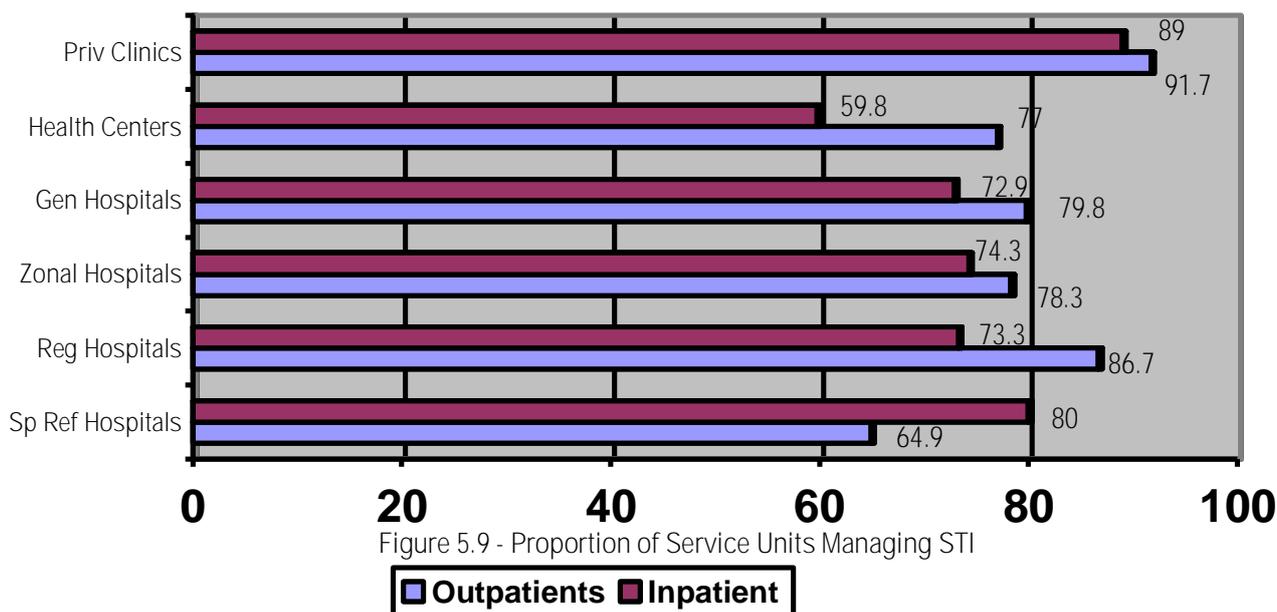
Among the 344 TB service giving units above, 6 were found within specialized referral hospitals, 8 within regional hospitals, 39 within zonal hospitals, 63 within general hospitals, 180 within health centers and 48 within higher private clinics.

With regard to inpatient service units, among the 460 such units, 58.3% were providing TB diagnosis while 45.9% were also prescribing TB treatment or follow up.

5.6. Management of Sexually Transmitted Infections (STI)

Regarding the provision of services for STI by outpatient units, about 78.6% of the 758 surveyed units were prescribing treatment for STI, while 72% of the 460 inpatient units were offering such services.

In terms of ownership, the proportions that were managing STI were 77.7% outpatient 71.1% inpatient for MOH, 82.8% outpatient and 71.4% inpatient for OGO, 81.3% outpatient and 61.1% inpatient for NGO, 84.1% outpatient and 76.9% inpatient for private, while it was 60% outpatient and 81.8% for FBO facilities.



5.7. HIV/AIDS Care and Support

Care and support services (CSS) services include any services that are directed toward improving the life of an HIV infected person. These most often include treatment for opportunistic infections (OIs), including treatment for illnesses commonly associated with, or worsened by HIV infection. Other care and support services may include palliative care, socioeconomic, educational and psychological support services.

Accordingly, 48% of the 312 assessed VCT units were giving care and support services for clients suspected of having HIV/AIDS. With regard to social support and educational services, 1.7% of the facilities were providing home-based care, 2% had PLWHA support groups, 5% were providing support for orphans and other vulnerable children, 6.5% provide legal and 2.2% financial support.

The distribution of the proportion of VCT units offering care and support across managing authority showed that comparatively more of the non-MOH VCT units were providing the particular services (11.1% within MOH, 41.7% within OGO, 28.6% within NGO, 27.3% within private and 16.6% within FBO).

5.8. Monitoring and Evaluation – Health Management Information System (HMIS)

With regard to Health Management Information System (HMIS), as shown in table 5.1, about 62% of the surveyed facilities had the system. However, the qualification of personnel responsible for the system was statistician only in 5.9% of the facilities. Statistics clerks were deployed in 24.8% cases and health statistics technicians were deployed in 1.4% of the surveyed facilities. Other types of personnel that were responsible for HMIS included health assistants in 9.5% cases and nurses in 32.4% of the cases.

With regard to the pattern of frequency of reporting on HIV/AIDS for facilities with HMIS, the majority (63.3%) were reporting monthly or more often.

Table 5.1 HMIS Personnel (EHFS, 2005)

Type	Surveyed Facilities	Number with HMIS	%
Specialized Referral Hospital	10	6	60.0
Regional Hospital	8	11	72.7
Zonal Hospital	39	31	79.5
General Hospital	64	38	59.5
Health Center	186	125	67.2
Higher Clinic	55	13	23.6
Managing Authority			
MOH	262	186	71.0
OGO	17	7	41.2
NGO	9	5	55.6
Private	70	22	31.4
FBO	4	4	100.0
Total	362	224	61.9

6.0. ASSESSMENT OF QUALTY AND EXTENT OF TRAINING HEALTH STAFF

6.1. Provider characteristics

6.1.1 Staffing pattern of the health facilities

Amongst the surveyed health facilities, 24.0% had staff from other health facilities that work on either full or part-time basis or seconded to the health institutions. The median number of health workers of different qualification who were officially assigned to the health facilities or work routinely (either full or part-time) without official assignment is outlined in table 6.1. Although medical specialists (assigned either officially or non-officially) are not common at different levels of hospitals, there was disproportionately high number of them in private higher clinics. Of further interest was that many of the medical specialists in private higher clinics were assigned non-officially working on a part-time or full-time basis. On average, health officers, nurses, pharmacists, and laboratory technicians are also scanty in almost all the health facilities. Furthermore, the number of health workers supposed to be present in the health facility to meet the existing client load (the 'staffing norm') was not met in many health facilities. The additional number of health workers presumed to be necessary varies amongst the regions.

Table 6.1 Median number of health workers actually in post in different types of health facilities.

Type	Assignment to the health facility	General practitioner	Obstetrician/ gynecologist	Internist	Surgeon	Pediatrician	Radiologist
Specialized Referral Hospital	Official	2	0	0	0	0	0
	Not official ²⁸	0.5	0	0	1	0	0
Regional Hospital	Official	2	0	0	0	0	0
	Not official	0	0	0	2	0	0
Zonal Hospital	Official	2	0	0	0	0	0
	Not official	0	0	0	0	0	0
General Hospital	Official	1	0	0	0	0	0
	Not official	0	0	0	0	0	0
Health Center	Official	0	0	0	0	0	0
	Not official	0	0	0	0	0	0
Private Higher Clinic	Official	1	0	0	0	0	0
	Not official	1.5	1	1	1	0.5	1

Table 6.1(cont'd) Median number of health workers actually in post in different types of health facilities.

Type	Assignment to the health facility	Psychiatrist	Midwife nurse	Clinical/public nurse	Health officer	Pharmacist	Pharmacy technician
Specialized Referral Hospital	Official	0	2	14	0	0	0
	Not official	0	0.5	0	0	0	0
Regional Hospital	Official	0	2	11.5	0	0	0
	Not official	0	0	0	0	0	0
Zonal Hospital	Official	0	2	13.5	0	0	0
	Not official	0	0	0	0	0	0
General Hospital	Official	0	1	7.5	0	0	0
	Not official	0	0	0	0	0	0
Health Center	Official	0	1	6	0	0	0
	Not official	0	0	0	0	0	0
Private Higher Clinic	Official	0	0	1	0	0	0
	Not official	0	0	1	0	0	0

²⁸ Non-official staff refers to people who are not officially assigned to the facility but who work routinely (either full or part-time) and who provide client services, including seconded staff from other organizations or volunteers.

Table 6.1(cont'd) Median number of health workers actually in post in different types of health facilities.

Type	Assignment to the health facility	Laboratory technologist	Laboratory technician	Health assistant	Ophthalmologist	ENT	Anesthesiologist
Specialized Referral Hospital	Official	1	0	2	3	0	0
	Not official	0	0	0	0	0	0
Regional Hospital	Official	2.5	0	3	8	0	0
	Not official	0	8	8	8	8	8
Zonal Hospital	Official	2	3	0	0	3	4
	Not official	0	0	0	0	0	0
General Hospital	Official	1	0	2	4	0	0
	Not official	0	0	0	0	0	0
Health Center	Official	2	0	2	2	0	0
	Not official	0	0	0	0	0	0
Private Higher Clinic	Official	0	0	1	1	0	0
	Not official	0	0	1	0	1	0.5

Table 6.1(cont'd) Median number of health workers actually in post in different types of health facilities.

Type	Assignment to the health facility	Environmental health worker	Social worker	HIV/AIDS counselor	Other counselor	Anesthetist	Statistical clerk	Other staff
Specialized Referral Hospital	Official	0	1	0	0	0	1	1
Regional Hospital	Not official	0	0	0	0	0	0	0
	Official	0	1	0	0	0	1	0
Zonal Hospital	Not official	8	8	8	8	8	8	8
	Official	4	0	3	4	5	3	1
General Hospital	Not official	0	0	0	0	0	0	0
	Official	0	1	0	0	0	0	0
Health Center	Not official	0	0	0	0	0	0	0
	Official	0	1	0	0	0	0	0
Private Higher Clinic	Not official	0	0	0	0	0	0	0
	Official	0	0	0	0	0	0	0

6.2. Staff training

6.2.1 HIV testing system

Facilities that reported having HIV testing system were further asked whether they had any staff that has been trained in both pre and post test counseling for HIV/AIDS (figures 6.1 and 6.2). The results indicated that about 70.0% of the facilities had the respective staff. While relatively good number of hospitals and health centers had trained staff, private higher clinics didn't (only 36.4%). Training or instructing of new staff who work with HIV/AIDS clients on the protocols of confidentiality and disclosure of HIV test result was practiced in 39.2% of the health facilities. The practice was most common among facilities in the Amhara Region (78.3%), and not at all practiced in the Benishangul-Gumuz Region and in the Dire Dawa Administrative Council.

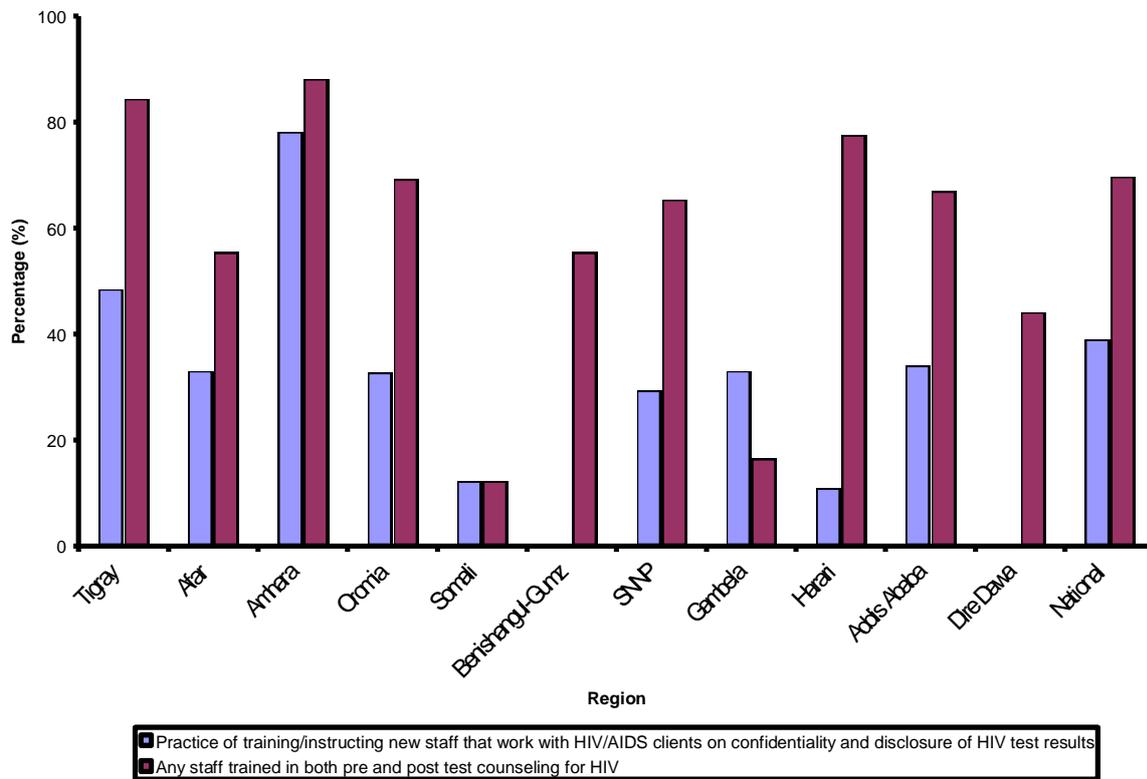


Figure 6.1 Pattern of trained staff on HIV test counseling, confidentiality and disclosure of results by region.

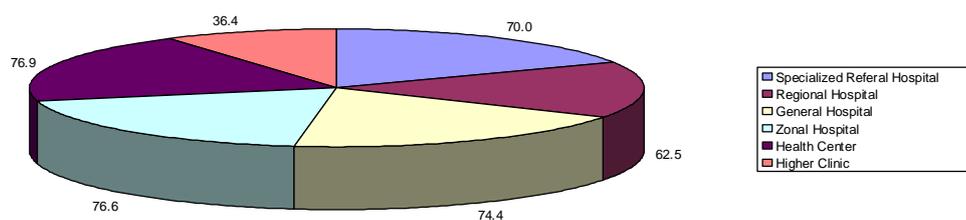


Figure 6.2 Pattern of trained staff on HIV test counseling by type of health facility.

Accordingly, more than 90.0% of VCT service units provided their pre-test counseling, post-test counseling for positive and negative results always by a trained HIV counselor. The practice of

follow-up counseling of HIV/AIDS clients always by a trained counselor was relatively less common (73.4%) compared to pre and post test counseling for HIV (figure 6.3).

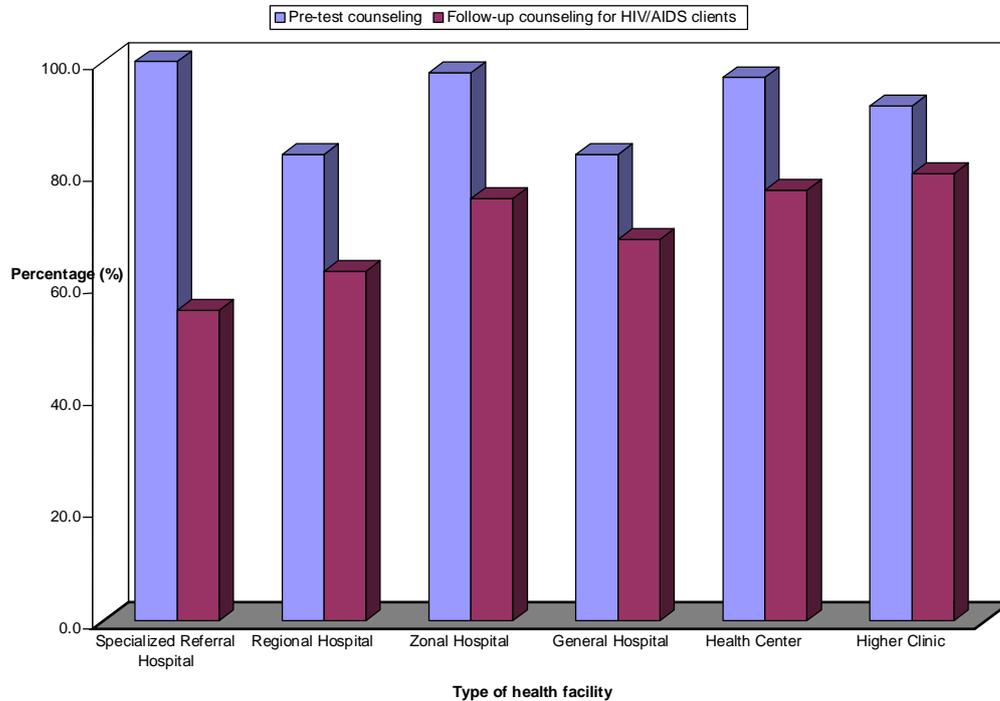


Figure 6.3 Proportion of VCT units that provide pre-test and follow up counseling for HIV/AIDS clients.

6.2.2 ART

More than 87.0% of the ART service provision sites had one person particularly in-charge of the service. The posts were mainly staffed by general practitioners (65.6%). Amongst health facilities that provide ART adherence counseling service, a considerable proportion (96.0%) had counselors trained on ART adherence counseling. Unlike the remaining regions where the majority of health facilities have trained counselors in this regard, in the Afar Region none of the counselors received the training.

6.2.3 PMTCT

The PMTCT units in the majority (87.6%) of health facilities had a counselor who had been trained for both pretest and post test counseling. Most of the regions had consistently proportionally high number of trained counselors (see figure 6.4). All of those counselors were working for public health facilities.

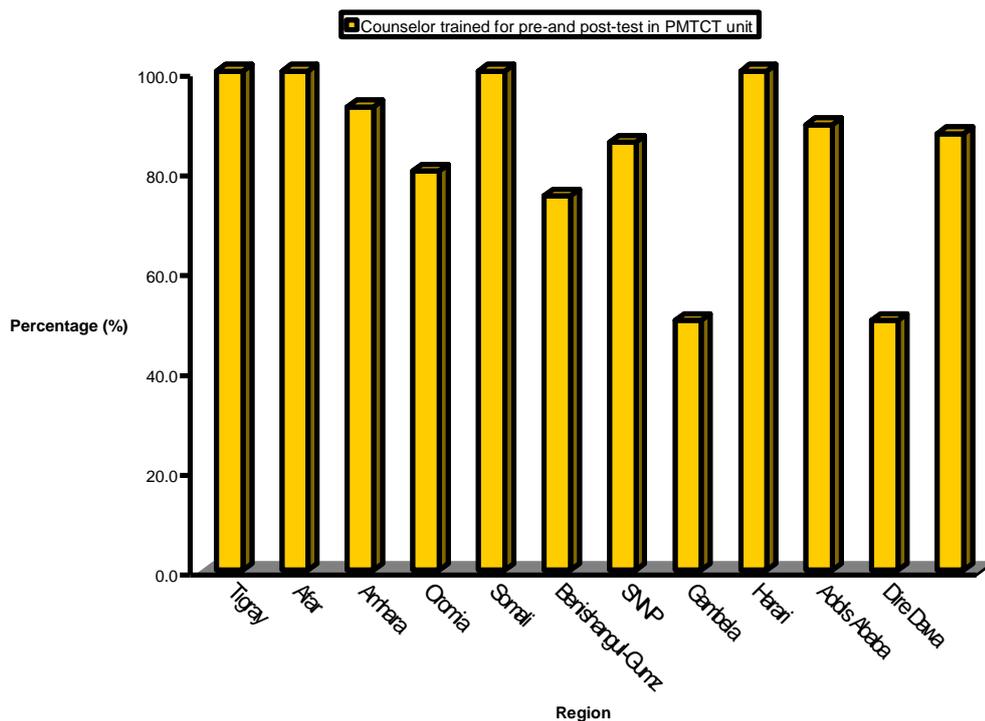


Figure 6.4 Percentage of counselors in PMTCT unit trained for both pretest and post-test counseling by region.

6.2.4 HMIS

Out of the facilities that had HMIS system (61.9% of total), the most dominant qualification of personnel in charge of the unit were nurses (32.4%). There was no health statistics technician at the post for health facilities of all regions except for Tigray (3.7%) and Addis Ababa (4.9%).

A few of the facilities with the system were staffed with personnel that have had special formal (31.3%) and informal (7.1%) training in recording systems or reports for health information such as HMIS. Comparatively, a smaller proportion of privately owned higher clinics had staff with formal training. Furthermore, the majority of specialized referral hospitals and NGO owned health facilities had trained HMIS personnel in-charge of the unit. The duration of training was less than one month for a significant majority (>80.0%), 1-6 months for 10.7%, and 8 months for only 1.5%. The most recent training of personnel in HMIS was less than a year ago for 13.2%, and 1-3 years ago for 11.2% of health facilities with HMIS. The majority of health facilities that had the system had had recent staff training 3 years ago.

Disaggregating the analysis by type of health facility, higher clinics ranked the least in the proportion of staff trained within the past 3 years. The most salient finding in figure 6.5 is that NGO owned health facilities had more proportion of relatively recently trained HMIS staff than health facilities owned by other bodies.

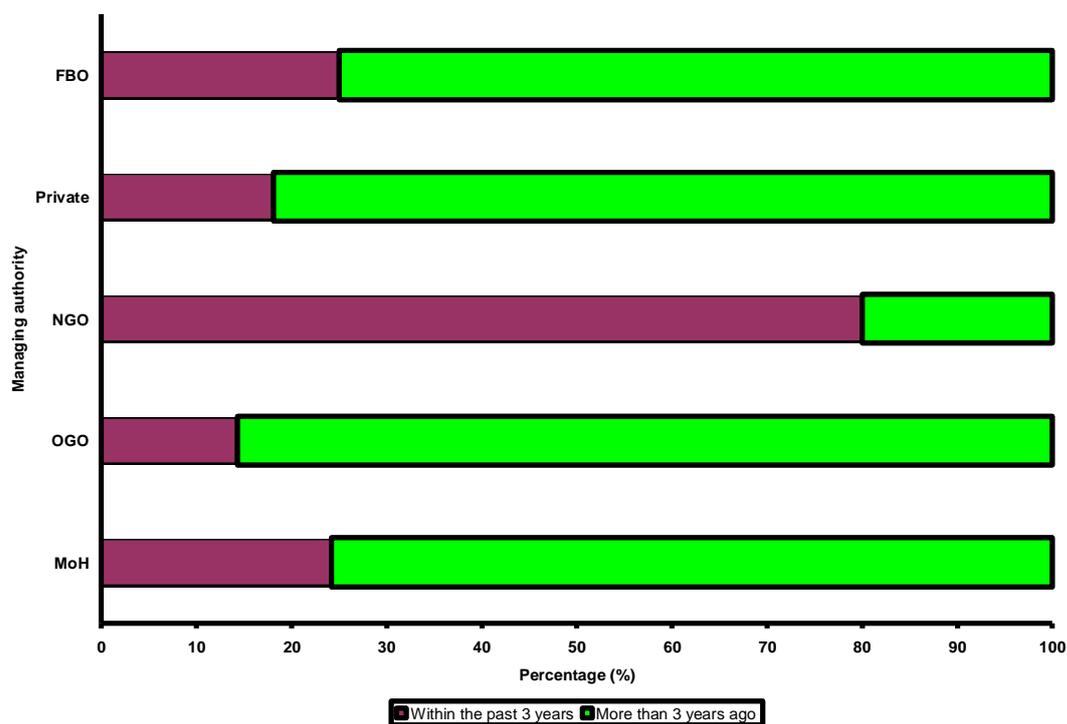


Figure 6.5 *The most recent training in HMIS or reporting on health statistics by managing authority.*

The average duration of experience of the in-charge in the unit in carrying out responsibilities for HMIS records/reports in the surveyed facilities was 3 years and 3 months. Regional variations in the duration of service in the respective jobs were reflected ranging from 5.3 years in Addis Ababa to 1.1 year in the Harari Region. On the same line, the longest year of service was reported in specialized referral hospitals (13.25 years) and the shortest in health centers (3.25 years).

7.0. ASSESSMENT OF ADHERENCE TO PROPER LABORATORY AND SAFETY GUIDELINES

7.1. HIV Testing and Services

Amongst facilities in which HIV testing was conducted, 40.4% have a complete official guideline or protocol on VCT, and 39.2% had a written complete guideline for a routine pre and post test counseling for HIV testing. Only 12.2% had official institutional guideline or protocol on confidentiality and disclosure of HIV test results or client HIV status.

Of further interest was to know the proportion of VCT service areas that have any guidelines or protocols related to HIV test counseling (figure 7.1). Accordingly, 32.4%, 24.7% and 12.5% had national guidelines for voluntary HIV counseling and testing in Ethiopia, national HIV/AIDS counseling training manual, and policy on HIV/AIDS of the FDRE, respectively. The proportion of VCT units in different category of health facilities that had each of these guidelines was comparable. On the other hand, differences were noted among facilities managed by different bodies, and especially FBO managed health facilities' VCT units have none of these guidelines.

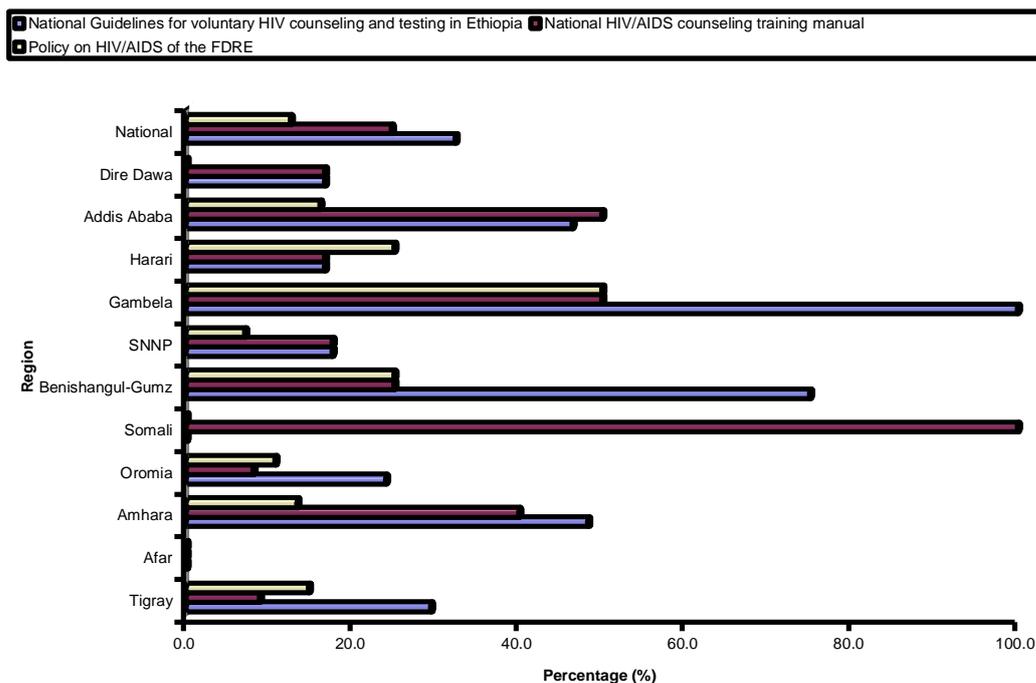


Figure 7.1 Proportion of VCT units with guidelines or protocols related to HIV test counseling.

In addition, many guidelines or protocols for HIV/AIDS services or care for HIV/AIDS clients were lacking in many in-patient service units that provide clinical care or support services for clients diagnosed or suspected as having HIV/AIDS (see figure 7.2 below).

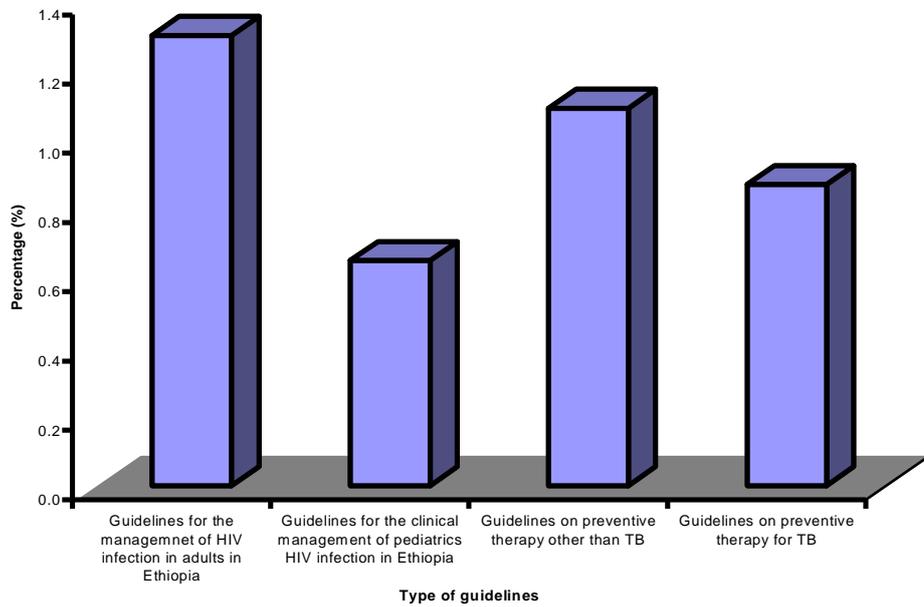


Figure 7.2 Observed complete guidelines or protocols for HIV/AIDS services or care for HIV/AIDS clients available in inpatient units.

7.2. ART

The ART service sites were investigated whether they have a complete guideline or protocol for different aspects of ART. Data showed that 35.4% have the policy on antiretroviral drug supplies and use of the Federal Democratic Republic of Ethiopia, and 62.4% have guidelines to use of antiretroviral drug in Ethiopia (figure 7.3).

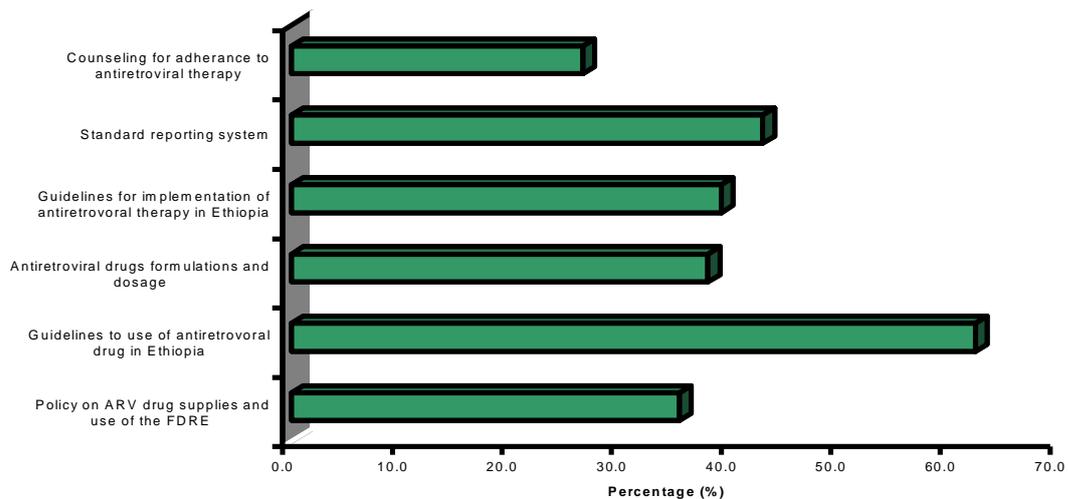


Figure 7.3 Proportion of health facilities with the indicated guidelines/protocols related to ART.

7.3. HMIS

Amongst health facilities that had an HMIS system, 28.6% had HMIS reporting guidelines (in the form of protocols or formats), 15.2% had the national technical guideline for integrated disease surveillance and response, and 4% had national HIV/AIDS reporting guidelines.

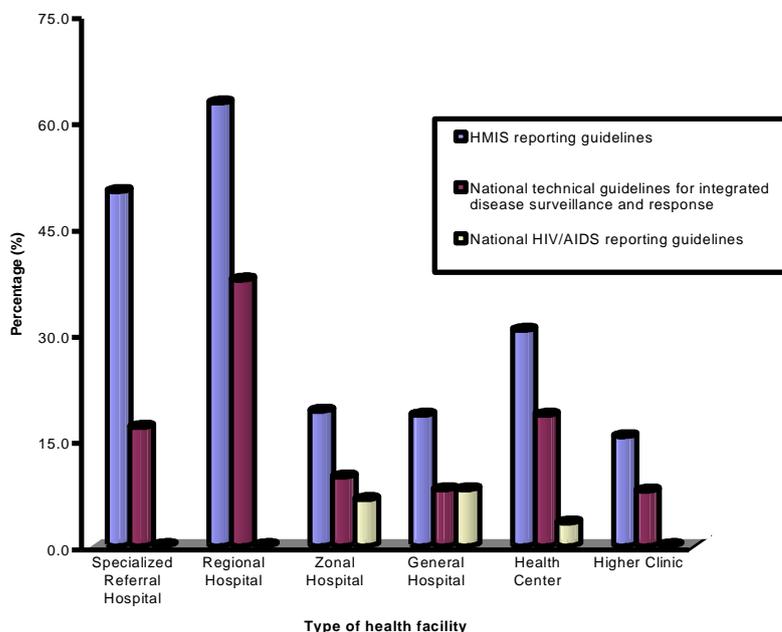


Figure 7.4 Proportion of health facilities with the indicated HMIS guidelines/protocols by type of health facility.

7.4. Infection Prevention

Out of outpatient and inpatient service units in the health facilities, only 3.8% and 5.2%, respectively had a complete guideline on infection prevention for health care facilities in Ethiopia. Comparison by type of health facility showed that the highest proportion was found among the specialized referral and regional hospitals and that none of the private higher clinics had this guideline.

7.5. STI

A complete National guideline for the management of STIs using the syndromic approach was observed in 6.2% of outpatient units and very few (1.5%) inpatient service areas. WHO guidelines for the management of STIs were not also observed in the majority of those units.

7.6. TB

Out of the total service areas that gave services to TB patients, only 26.3% had the National guideline for diagnosis and treatment of TB. More proportion of public owned health facilities tended to have this guideline compared to health facilities owned by NGOs, FBOs and private institutions. Those guidelines were possessed only by a few of the private higher clinics.

7.7. PMTCT

The majority of PMTCT units didn't have guidelines or protocols for PMTCT services. Only 11.3% and 30.0% had National Guideline on the PMTCT of HIV in Ethiopia and a written guideline or protocol for administration of ARV prophylaxis for PMTCT, respectively. The fraction of PMTCT units in different category of health institutions that possessed each of those guidelines is compared in the figure below. The most important finding is that health centers ranked the least with respect to possession of both guidelines (figure 7.5).

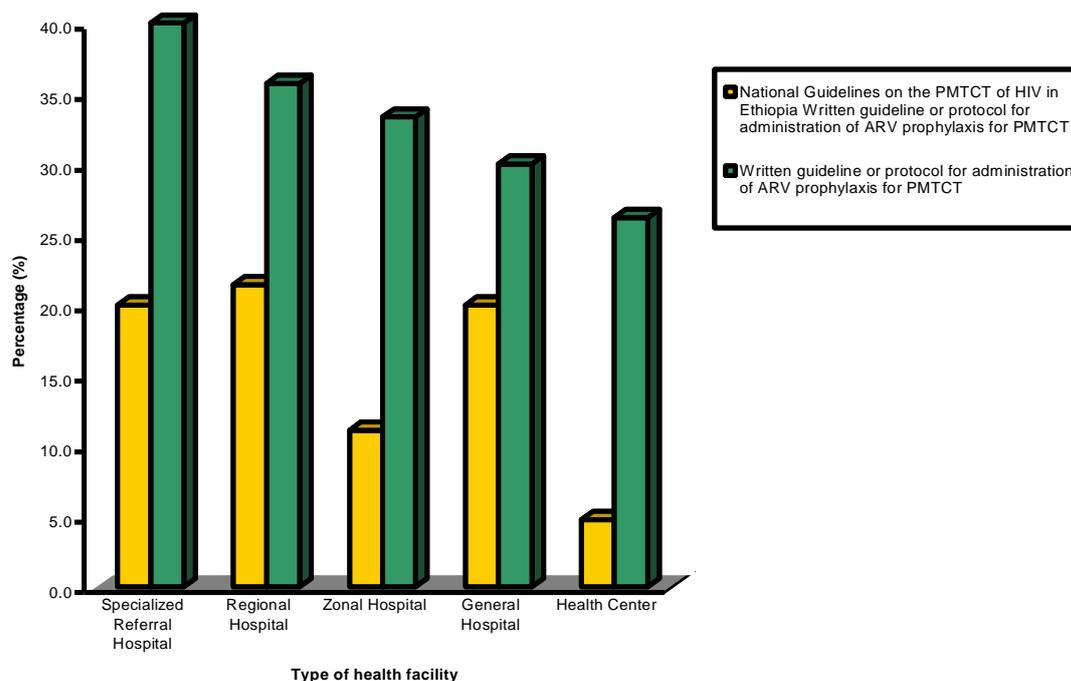


Figure 7.5 PMTCT units in different types of health facilities that possess guidelines related to PMTCT.

7.8. Laboratory and Safety Guidelines

Among the laboratory units surveyed, the majority didn't have any laboratory guidelines or protocols. Standard operating procedures for blood safety was available in 12.9% of them; National guidelines for laboratory HIV testing in blood safety, surveillance, VCT and ARV use was observed in 14.7%; infection prevention guidelines for health care facilities in Ethiopia was observed in 5.9%; TB laboratory manual for technicians was found in 32.0%; and guideline for PEP for health care workers in only 2.6% of the laboratory units (figure 7.6).

Laboratory service units in which guidelines or protocols and SOPs on HIV tests are available were further investigated whether they have some related specific safety guidelines or protocols. The majority had written SOPs on HIV testing procedures (84.2%), whereas only 21.6% have written SOPs on confidentiality and disclosure of HIV test results. Figure 7.6 shows the proportion by type of health facility.

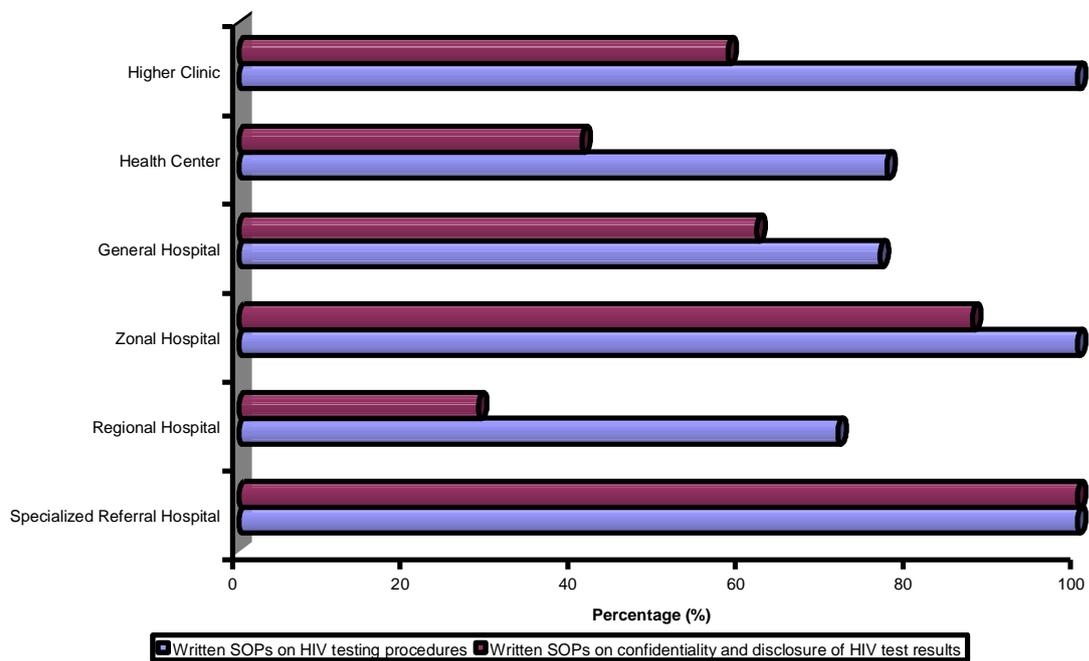


Figure 7.6 Guidelines and protocols on SOPs in the laboratory area-as proportion of those that have any guideline.

8.0. ASSESSMENT OF ABILITY TO MANAGE SEXUALLY TRANSMITTED INFECTIONS (STI)

8.1. STI as a Component of YFS

There were only 13 health facilities that provided specific youth friendly services. There were no written policies or guidelines at any of these health facilities about YFS. Still, STI was one of the key components of the YFS that were offered in the clinic/unit for all of these units but one (92.3%). In each of these health facilities there were at least one of the four (flip chart, brochures/pamphlets, posters or audiovisual) educational materials on the STI topic.

8.2. STI Service Provision on Individual Basis

Health providers were asked whether they do diagnosis and give treatment of STIs to clients in the health facility. The majority of general practitioners and health officers did provide the services. The next figure illustrates the proportion of different category of health workers who were personally involved in the provision of the services. In line with this, significant majority of obstetricians/gynecologists received pre-service or in-service training on syndromic approach to diagnose and treat STI during the previous three years (figure 8.1). It seems that the highest proportion of mid-level and front-line health workers was not receiving this particular training, and this raises question on their ability to effectively provide the service. In almost all the regions, significant majority of those health workers that provide diagnosis and treatment of STIs had no training during the previous three years. The lowest proportion was found among private higher clinics owned by private bodies (6.3%).

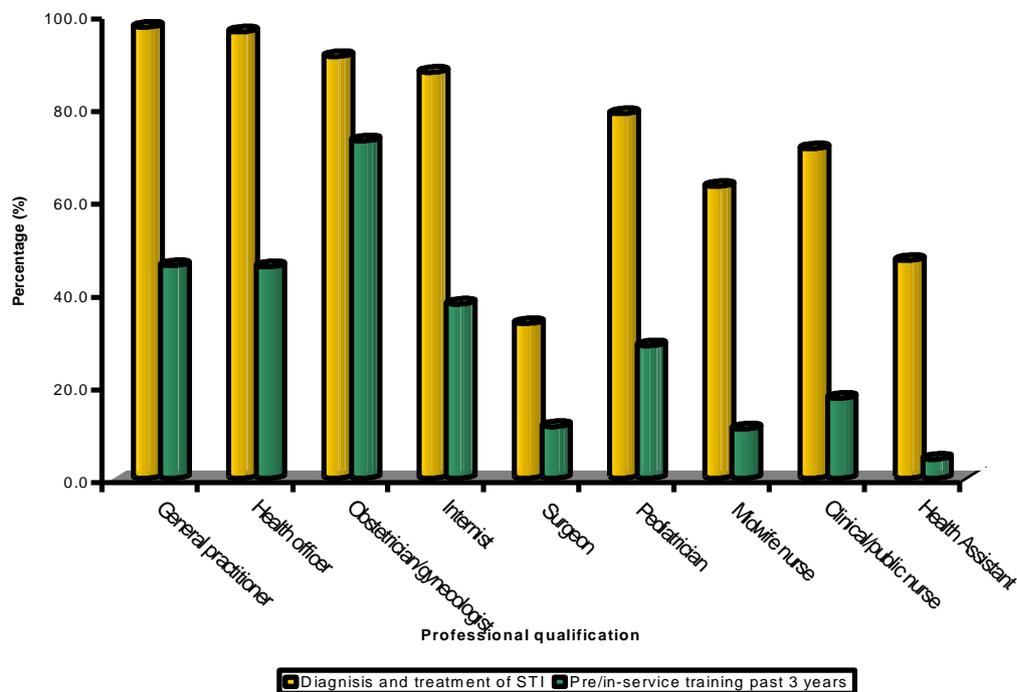


Figure 8.1 Proportion of health workers that personally provide diagnosis and treatment of STI and those that received syndromic approach training during the past 3 years.

8.3. Laboratory Tests for STI

8.3.1 Syphilis tests

About 75.0% of the laboratory units had the capacity to test for syphilis. Laboratory service areas were observed for the presence of different types of items required for syphilis tests at time of survey. The majority of the units had reactive protein reagen (RPR) (53.7%), 39.9% had VDRL and 31.7% had rotator or shaker. On the other hand, the other items were found in less than 4.0% of the laboratory service areas. Variations were noted among the regions with regards to possession of each of the items. The differences among different category of health facilities are outlined in table 8.1 below.

Table 8.1 Availability of items necessary to conduct syphilis tests in the laboratory units.

	Number (Percent)						
	Specialized Referral Hospital	Regional Hospital	Zonal Hospital	General Hospital	Health Center	Higher Clinic	Overall
VDRL	8 (80.0)	6(46.2)	14(33.3)	41(62.1)	28(17.7)	39(75.0)	136(39.9)
Rotator or shaker	7(70.0)	7(53.8)	22(52.4)	34(51.5)	26(16.5)	12(23.1)	108(31.7)
Reactive protein reagen test	8(80.0)	8(61.5)	29(69.0)	45(68.2)	49(31.0)	44(84.6)	183(53.7)
FTA-ABS	0(0.0)	0(0.0)	1(2.4)	5(7.6)	1(0.6)	4(7.7)	11(3.2)
TPHA	1(10.0)	0(0.0)	0(0.0)	2(3.0)	0(0.0)	3(5.8)	6(1.8)
Dark field microscope	1(10.0)	0(0.0)	1(2.4)	6(9.1)	1(0.6)	1(1.9)	10(2.9)

8.3.2 Gonorrhoea tests

Capacity to conduct gonorrhoea tests was observed in 75.1% of the laboratory units. During the survey, gram stain was observed in 64.5% and chocolate agar (culture medium) in only 6.2% of the units, mainly in specialized referral hospitals in Addis Ababa. The availability of items needed to conduct gram stain was also analyzed. Crystal violet was observed in 73.0%, lugol's iodine in 70.7%, acetone in 67.2%, and neutral red, carbol-fuchsin or other counter stain in 73.3% of the laboratory service units.

8.3.4 Chlamydia test

The test was conducted in 46.6% of the laboratories in the health facilities surveyed. Giemsa stain for conducting the test was observed in only 1.5% of the units at time of the survey.

8.4. Drugs for Treatment of STI

The presence of at least one of the recommended medicines for treatment of trichomoniasis, gonorrhoea, Chlamydia, and syphilis was considered essential for providing quality STI treatment. The drug(s) of choice is(are) metronidazole for trichomoniasis; ceftriaxone or ciprofloxacin for gonorrhoea; doxycycline, tetracycline or erythromycin for chlamydia; and doxycycline, tetracycline, erythromycin, benzathine penicillin or procaine penicillin for syphilis.

Table 8.2 shows that metronidazole (which covers trichomoniasis) is the most commonly available drug which was present with no stock out over the past six months. This was followed by doxycycline (which covers chlamydia and syphilis) and procaine penicillin (which covers syphilis). Overall ceftriaxone is the least available drug. The alternative drug for treatment of gonorrhoea is not also widely available in most of the health facilities of any type. A medicine to treat all of the

above STIs was available in 26.5% of the health facilities. Specialized referral hospitals and private higher clinics had relatively higher capacity to treat all of the four STIs in terms of availability of medicines. Furthermore, nystatin suppositories for treating candidiasis were available in the majority of the health facilities except in health centers.

Table 8.2 Percentage of health facilities with medicines to treat STIs with no stock-out over the past 6 months by type of facility.

	Percentage by type of health facility						Overall
	Specialized Referral Hospital	Regional Hospital	Zonal Hospital	General Hospital	Health Center	Higher Clinic	
Metronidazole (trichomoniasis)	77.8	52.9	69.5	84.3	71.5	71.4	72.9
Ceftriaxone (gonorrhoea)	0.0	0.0	1.7	4.3	1.0	14.3	1.9
Ciprofloxacin (gonorrhoea)	55.6	47.1	35.6	48.6	25.0	42.9	33.4
Doxycycline (chlamydia, syphilis)	88.9	70.6	69.5	71.4	72.5	71.4	72.1
Tetracycline (chlamydia, syphilis)	22.2	0.0	0.0	4.3	3.5	14.3	3.6
Erythromycin (Chlamydia, syphilis)	11.1	17.6	30.5	30.0	42.5	14.3	35.6
Penicillin, benzathine (syphilis)	33.3	29.4	18.6	21.4	15.5	0.0	18.0
Penicillin, procaine (syphilis)	77.8	58.8	74.6	71.4	70.0	71.4	70.7
All medicines for STI*	44.4	29.4	28.8	38.6	20.0	42.9	26.5
Nystatin suppository (candidiasis)	88.9	58.8	59.3	61.4	33.5	71.4	46.4

* At least one medicine for treating trichomoniasis, gonorrhoea, chlamydia and syphilis.

The highest percentage in the availability of at least one medicine was seen in Addis Ababa (49.0%), and none of the facilities in the Somali and Gambela regions had the drugs. There were no major regional differences in the availability of drugs for treating STIs. While the majority (85.7%) of health facilities owned by NGOs had at least one drug for treating the STIs, none of those managed by FBOs have (see figure 8.1).

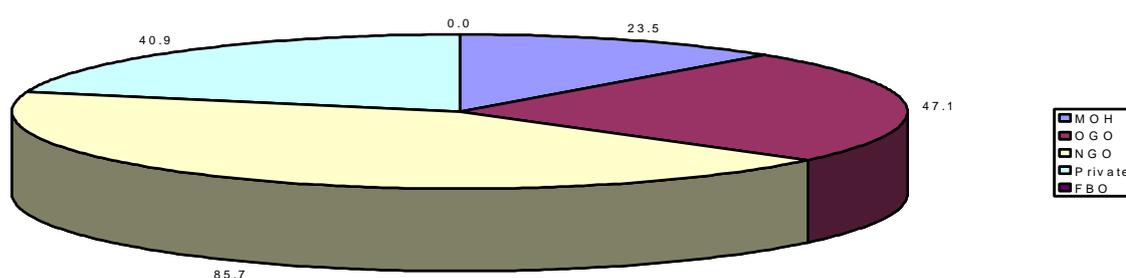


Figure 8.1 Percentage of health facilities that have at least one medicine to treat all four STIs with no stock out over the past six months by managing authority.

8.5. Guidelines in STI

Quite a majority (more than 93.0%) of the outpatient service units and more than 98.0% of inpatient service units did not have a complete National guideline for the management of STIs using the syndromic approach and the WHO guideline for the management of STI. The National Guideline was available relatively better in outpatient units of general hospitals and health centers and not at all available in any of the specialized referral and regional hospitals (Table 8.3).

Table 8.3 Proportion of outpatient units that possess different STI treatment guidelines by type of facility

	Percent			
	Outpatient		Inpatient	
	National	WHO	National	WHO
Specialized Referral Hospital	2.7	2.7	0.0	3.3
Regional Hospital	3.3	3.3	0.0	0.0
General Hospital	8.7	2.6	1.8	1.8
Zonal Hospital	4.8	0.0	0.8	0.8
Health Center	6.9	3.1	2.7	0.0
Private Higher Clinic	3.3	5.0	2.2	2.2

8.6. Pre-service or in-service training in STI

Amongst the health workers interviewed, 9.7% had received pre or in-service training in syndromic approach to diagnosis and treatment of STIs, and 4.6% had received training in other diagnosis and treatment of STIs other than HIV/AIDS during the previous 12 months. Table 8.4 shows the proportion of health workers of different category that had received pre-service or in-service training during the previous 1 year or 2-3 years preceding the survey.

Table 8.4 Percentage of health workers that were trained in STI diagnosis and treatment

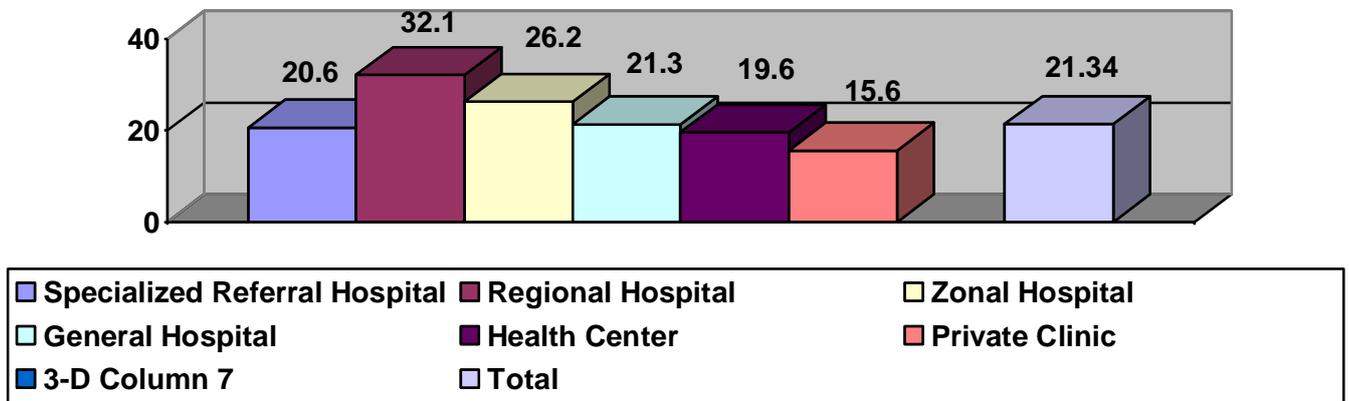
		Percent									Overall
		General practitioner	Health Officer	Health Assistant	Obstetrician/gynecologist	Internist	Surgeon	Pediatrician	Midwife nurse	Clinical/public nurse	
Syndromic Approach	past 1 year	31.0	29.1	2.0	54.5	12.5	11.1	14.3	3.0	7.8	9.7
	past 2-3 years	14.8	16.5	2.0	18.2	25.0	0.0	14.3	7.6	9.4	7.6
Other diagnosis & treatment of STI	past 1 year	17.6	11.4	0.7	27.3	6.3	0.0	14.3	0.8	3.6	4.6
	past 2-3 years	12.5	12.7	0.0	27.3	12.5	0.0	7.1	5.3	6.0	5.3

9.0 ASSESSMENT OF THE BURDEN OF HIV/AIDS/STI/TB ON FACILITY RESOURCES

As the current survey did not collect data pertaining to financial expenditures on health service activities, the assessment of the burden of HIV/AIDS/STI/TB on facility resources was based on the percentage of health workers involved in these activities and estimation of the proportion time spent by facility personnel dedicated to dealing with these particular diseases.

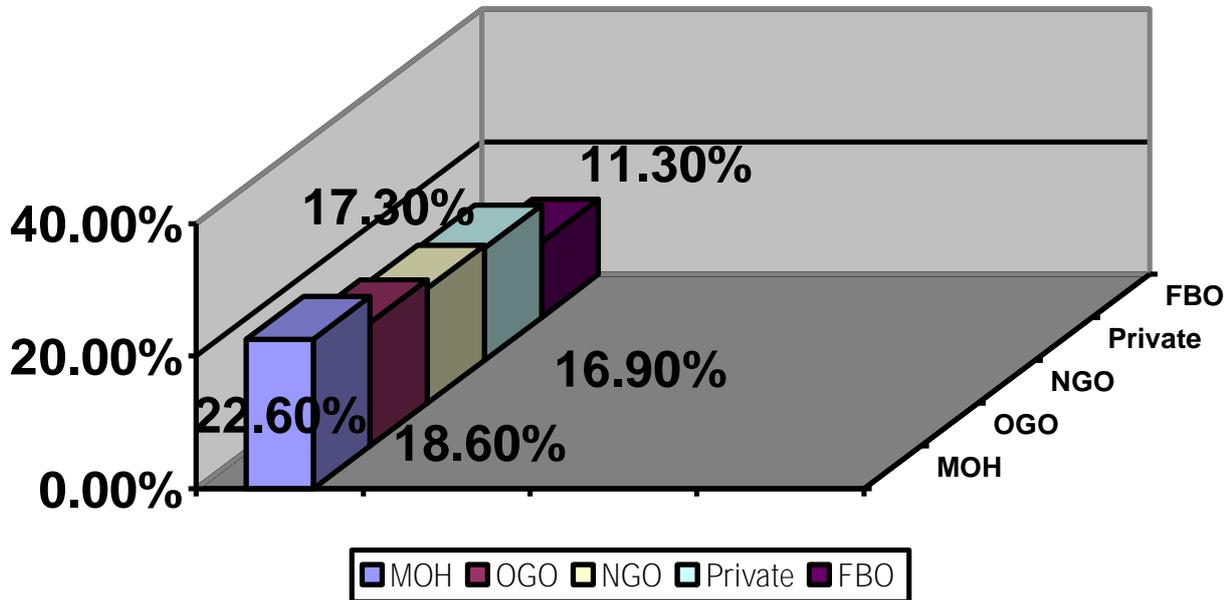
Figure 9.1 below shows the average weekly proportion of time spent by health workers on HIV/AIDS tasks.

Figure 9.1 - Proportion of Staff Time Spent on HIV/AIDS Activities



In terms of managing authority, the proportions of staff time dedicated to HIV were: 22.6% at MOH, 18.6% at OGO, 17.3% at NGO, 16.9% at private and 11.3% at FBO facilities (figure 9.2).

Figure 9.2 Proportion of Staff Time Spent on HIV/AIDS Activities by Managing Authority



Therefore, considering only time spent by facility staff, the burden of HIV/AIDS related activities alone amounted to 21.3%.

As part of their work for the health facility 54.7% of the health workers provided a range of services related to HIV/AIDS including counseling or testing, clinical care, care and support services such as social services, home care, or any other type of service for HIV/AIDS clients. The fraction of health workers involved in such activities was highest in the Tigray (76.2%), Harari (72.5%) regions and Dire Dawa administrative council (66.7%), and among government owned health facilities (61.2% in OGO and 56.5% in MOH owned facilities). The lowest percentage was found in the Somali region (32.3%).

Half of the health workers provided tuberculosis services that include diagnosis and laboratory testing.

The burden was highest in the Benishangul-Gumz and Gambela regions where 71.2% and 64.7% of the health workers were involved in these activities, and among MOH managed health facilities where 54% of health workers were engaged in tuberculosis services as part of their work. The lowest percentage was found in Addis Ababa (24%).

About 60 % provided client services on diagnosis and treatment of STIs. The three regions that had the highest number of health workers that do STI services to clients as part of their work were Tigray (76.6%), Somali (76.3%) and Afar (71.7%) and among MOH managed health facilities (64.6%). The lowest percentage was found in Addis Ababa (31.4%). The proportion of health workers involved in the above three activities disaggregated by type of health facility is displayed by figure 9.3.

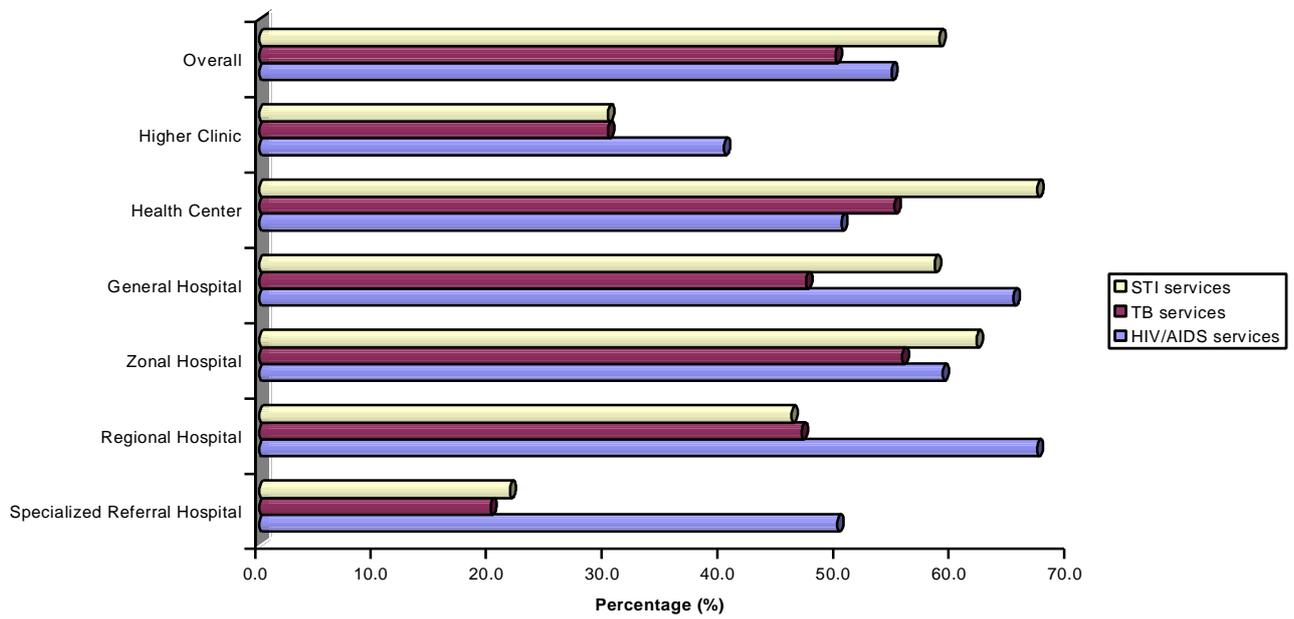


Figure 9.3 Proportion of health workers involved in HIV/AIDS/TB/STI services as part of their work for the health facility

10.0. COMPARISONS OF SCORES AND INDICATORS RELEVANT TO NATIONAL M&E

10.1. Scores on Specific Services

The different tables showing the results of uni-variate and multi-variate analyses based on scores are annexed.

Adjusted odds ratios of logistic regression indicate that the laboratory service provision capacity of Amhara, Oromia and SNNP regions was significantly below that of Addis Ababa; and that health centers have significantly lower capacity as compared to private higher clinics. Counseling and testing services were significantly better in Amhara and worse in Harrari region compared to Addis Ababa. In addition government health facilities were about seven times better in providing HIV counseling and testing services compared to non-governmental organizations.

With regards to HIV/AIDS related inpatient services, Amhara, Oromia, SNNP and Dire Dawa regions had significantly lower capacity compared to Addis Ababa, and health centers lower than private higher clinics. The status of HMIS was also grossly inadequate in Amhara, Tigray and Oromia regions compared to Addis Ababa. Tuberculosis related services were significantly better in Amhara and poor in Oromia as compared to Addis Ababa, and better in hospitals and health centers compared to private higher clinics and government owned health facilities compared to non-government owned ones. HIV/AIDS related outpatient services were better in Tigray and poor in other regions when compared to Addis Ababa. In addition, private higher clinics were significantly better than both hospitals and health centers in terms of their service provision to HIV/AIDS clients at outpatient level. On the other hand, both hospitals and health centers were about six times better with regard to provision of general HIV/AIDS related services than private higher clinics.

No significant difference was detected among regions, types of health facilities and managing authorities with respect to PMTCT and ART services.

11.2. Results Relevant to National M&E Indicators

As the magnitude and diversity of the interventions within the strategic framework for the national response to the HIV/AIDS problem require a coherent and well-structured framework for monitoring and evaluation for generating reliable data for tracking progress and effective decision-making, indicators were identified in the key intervention areas. The priority intervention areas for the Strategic Framework for the National Response to HIV/AIDS in Ethiopia for 2001-2005 are the basis for identifying the indicators in this M&E Framework. These intervention areas include: Behavior Change Communication (BCC); condom promotion and distribution; blood safety; management of Sexually Transmitted Infections (STIs); Voluntary Counseling and Testing (VCT); Prevention of Mother to Child Transmission (PMTCT); universal precautions and Post-Exposure Prophylaxis (PEP); care, support and treatment; legal and human rights; surveillance and research; mainstreaming; and capacity building

Exploratory analyses of the collected data that are relevant to the national M&E indicators showed that relatively lower values (less than 20%) for indicators of services to prevent HIV infection in women and children. Furthermore, values were shown to be very low (less than 3%) for indicators on provision and referral for care and support services as well as for prevention of nosocomial transmission of HIV (tables annexed).

11.0. DISCUSSION AND CONCLUSIONS

11.1. *Relevance of the National Health Facility Survey*

The conduct of the National Health Facility Survey, along with the other sources of information for the indicators of the National M&E Framework²⁹, is instrumental for generating data that will:

- ⊖ Serve as a baseline before program implementation begins;
- ⊖ Serve as a benchmark for periodic evaluation of progress after program implementation;
- ⊖ Serve as a research tool to compare quality of care in the various areas of implementation;
- ⊖ Help examine the changes that have occurred with health facilities;
- ⊖ Signals for resources improvements at various levels for improving efficiency of health services;
- ⊖ Creates opportunities for on-the-job feedback and immediate problem solving,
- ⊖ Creates insight to health staff involved for making program decisions and taking appropriate actions

11.2. *Highlighting the Major Findings of the Survey*

As shown in the results section, the majority (93%) of the facilities were providing services for patients suspected/known to have HIV/AIDS at the time of the survey. Almost equal proportions of the surveyed hospitals as well as health centers and higher clinics were providing these services. Among the commonly offered HIV/AIDS related services was HIV-testing, that was provided in 91% of the surveyed facilities. The other most commonly offered services include tuberculosis treatment (95%) and VCT services (73%). On the other hand, post-exposure prophylaxis (PEP) to staff (8.8%), home-based care (1.7%), support to PLWHA (2%), support for orphans and other vulnerable children (5%), legal support (6.5%) and financial support (2.2%) were provided with very small proportion of the surveyed facilities. In addition, among the inpatient service units (available within 68% of the surveyed facilities), only 3.7% were providing PMTCT (3.7%) and 0.7% were prescribing PEP for exposed workers

Among the 341 laboratory service units 64.2% of the facilities conduct HIV test for client diagnosis, 32.2% for blood screening and 6.2% as part of employment related medical examinations. Even though ELISA reader was reported to be available in 34% of the laboratory units only 7% of the units had all the reagents necessary, and thus the majority (73%) the laboratory units were using rapid test kits for HIV. Viral load determination was performed only in 2.4% of the laboratory units. In addition, even though it was only 20% of the laboratory units that were screening blood for infectious agents, it was encouraging to observe that about 80% of these were doing screening for HIV.

Regarding ART, only 19% of the facilities were stocking ART at the time of survey. Relatively higher proportion of the facilities in Amhara (34.5%) and Addis Ababa (31.4%) regions were found to have ART stocks, while no facilities in Gambella and Somali regions had ART stocks at the time of survey.

29 HIV/AIDS Prevention and Control Office. (HAPCO). National Monitoring and Evaluation Framework for the Multi-Sectorial Response to HIV/AIDS in Ethiopia. 2003, HAPCO, Addis Ababa, Ethiopia.

Similarly, even though VCT service was being provided within 73% of the surveyed facilities, the proportions of facilities that provide this service in these two emerging regions were comparatively low (33.3% for Gambella and 12.5% for Somali). All these indicate that there is some level of inequity in the distribution of ART services, and that there is a need for addressing the reasons for these disparities.

More than 90% of the VCT service units were found to provide counseling services with trained counselors. On the other hand, it was only 48% of the VCT units that were found to provide care and support services for clients that were suspected of having HIV/AIDS. Furthermore, there were no VCT service units that were providing care and support to HIV/AIDS clients within the emerging regions of Afar, Gambella and Somali, indicating still more regional disparity in services.

It is evidently a positive development to observe that 95% of the surveyed facilities as having TB service units, with 75.6% of these having been included in the National DOTS program. As it is evident, it was only 17% the TB service units within the private facilities and only 6% of those within higher clinics that were included in the National DOTS Program. This calls for the development and implementation of a strategy by the National Tuberculosis and Leprosy Control Team for enhancing the involvement of the private sector in the National DOTS Program.

Youth-friendly services seem to be rarely found, with less than 1% of the facilities offering them. These latter were also offered only in few health centers in Addis Ababa and SNNP regions.

Post Exposure Prophylaxis (PEP) is a service that should be available both to health workers as well as members of the general public that may be at risk due to inadvertent exposure (including rape victims). As such, the provision of the services should not be limited to units that provide HIV/AIDS-related services. However, it was only 8.8% of the surveyed facilities and less than 1% of the laboratory units that were found to provide PEP for their health workers that are at risk.

As expected, most of the facilities that were offering ART services were hospitals, with only less than 1% of health centers and about 2% of the higher clinics being involved. In addition, no NGO or FBO owned facilities were involved in ART service provision at the time of the survey. In term of regional distribution, again, it was facilities in the three major regions (Amhara, Oromia and SNNP) and in Addis Ababa that had relatively higher involvement in ART service provisions. There were little variations among sites providing ART on the number of days they were offering the service (about five days per week). On average, ART services were started one year preceding the survey. In terms of investigations for ART, even though about half of the ART sites were having CD4 count capability, it was only 3.8 of them that were doing RNA viral load count.

PMTCT services were less widely available than services such as VCT, being provided only in 20% of the surveyed facilities. Overall, PMTCT services seemed to be provided only in government facilities with very little involvement of NGOs, FBOs as well as private facilities.

The Ethiopian health facility survey has also assessed capacity of health facilities to provide quality care to clients for different components of HIV/AIDS related and STI services. The assessment adopted the model developed by Avis Donabedian for parameters in assessing health care quality. Donabedian has described three quality elements: structure (the environment in which health care is

provided), process (the method by which health care is provided), and outcome (the effect or consequence of delivered service). The first two elements contain indirect measures that influence the third direct element, outcome. All elements are linked with each other, therefore insight into just one of the three is insufficient to measure and evaluate integral quality³⁰.

Since patient satisfaction or any other outcome related data were not collected in the current survey, the assessment used only two of the three parameters advanced by Donabedian for assessing health care quality. However, one should note that even though outcome indicators seem to give the best view of quality performance but, process indicators are much more sensitive and unequivocal in the measurement of changes in quality values.

Therefore, the components used for quality assessment were:

1. Structural quality – that includes availability of resources (personnel type and composition as well as pre- and post service training, type of infrastructure, equipment, drugs supplies and ranges of services); and
2. Process quality – that reflects the organization and arrangement of the provision of the services. Process parameters of service quality also include management practices (documentation, supervision, systems for addressing management issues and community input) as well as availability of various official guidelines and protocols.

Based on the above assessment, the structural quality of the surveyed facilities with regard to the number and types of human resources for health was found to be suboptimal. The number of health workers supposed to be present in most health facilities was below the nationally set norm, and disproportionately high numbers of medical specialists were found in private than in public as well as in urban than rural institutions. This is actually a reflection of the national situation where even though the magnitude of high level health personnel has increased over the past decade, the proportion working within the public sector has actually decreased³¹. On the other hand, the proportion of health facilities that were having health personnel with HIV/AIDS/TB/STI related training was higher within public compared to private health facilities. This is, obviously, due to the fact that services related to these health problems are dominantly of public good nature that are provided freely or at subsidized nominal fees leaving minimal incentives for involvement by the for-profit private sector. In addition, it should be noted that prevailing guidelines require that some of these services be exclusively provided within public sector facilities.

Some HIV/AIDS services seem to have health personnel with the right qualification and training dedicated to them. These services include PMTCT where properly trained counselors were available in about 88% of the cases, and ART where general practitioners were assigned in about two-thirds of the cases. This is largely a reflection of the PEPFAR-Global Fund supported initiative to accelerate the provision of ARV related services since the last few years.

The assessment of adherence to proper laboratory and safety guidelines, as a dimension of process quality in the provision of services, seems to have indicated low level values in almost all the indicators used. Such low levels of findings in this area seem to be a bit hard to explain in view of

30 Donabedian A. The Quality of Care: How can it be assessed? *Journal of the American Medical Association* 1988; 260: 743-1748.

31 FMOH. Health and health related indicators. 1997 EC (2004/2005), 2006. Planning and Programming Department, Addis Ababa.

the fact that guidelines and protocols have been developed or adopted from international sources for most of the assessed services, not to mention the various trainings given in the use of them.

With regard to ability of the assessed facilities in managing STIs as reflection of structural as well as process quality, the structural findings were somewhat satisfactory in terms of availability of drugs and laboratory services. On the other hand, findings on the process of adopting the syndromic approach to diagnosis and treatment of STI seemed to be biased towards high level health workers with most of the mid-level and front-line health workers not having trainings on the approach.

The assessment of the burden of HIV/AIDS/TB and STI on health facility resources is constrained by the fact that not enough data were collected for comprehensively estimating this impact of the health problems. However, the fact that time spent by facility staff on HIV/AIDS related activities alone was about 21% indicates the magnitude of burden of all the diseases on overall health facility resources is quite considerable. Recent reports have also indicated increase in workload and skill demands as being the most important dimension through which the condition of HIV/AIDS has created severe burden on health facility human resources both in Ethiopia and elsewhere^{32 33}.

In addition to comparative analyses through indices developed by scoring the point scales used to assess the resources and activities within the surveyed facilities, exploration of the collected data was made as relevant to the national M&E indicators. According to the latter exploration, values were relatively very low (less than 20% of facilities offering most of the indicator services) for all services with values for the provision of curative, referral and supportive care being particularly very low (less than 3% of the facilities offering the indicator services). As the M&E framework consists of indicators to assess progresses made on HIV/AIDS/TB/STI services at national level³⁴, the findings indicate that there is still a lot that should be done in addressing these health problems.

11.3. Strengths and Limitations of the Survey

The Ethiopian National Health Facility Survey has collected and analyzed a huge set of dataset on HIV/AIDS/TB/STI related resources and services within the health institutions at national level. The survey, analysis and write up of this report has several strong points that are worth mentioning at this juncture. These include:

1. The survey was conducted with the collaboration various national and international institutions with the relevant expertise for the undertaking. The frequent consultations and discussions among these collaborators has resulted important synergy for enhancing the quality of the survey as well as the report;
2. The survey has utilized international level instruments that have been adapted the national situation;
3. The survey has included all hospitals and significant proportion of the health centers and private higher institutions in the country;

32 Van Damme W, Kober K and Laga M. The real challenges for scaling up ART in sub-Saharan Africa. *Editorial Note AIDS (Editorial Note)* 2006; 20:653 – 656.

33 Banteyirga H, Kidanu A, Bennet S and Stillman K. The system-wide effect of the Global Fund in Ethiopia: Baseline study report. 2005. Miz-Hassab Research Center, Partners for

Health Reform-plus and Abt. Associates Inc. Addis Ababa.

34 HIV/AIDS Prevention and Control Office. (HAPCO). National Monitoring and Evaluation Framework for the Multi-Sectorial Response to HIV/AIDS in Ethiopia. 2003, HAPCO, Addis Ababa, Ethiopia.

4. The survey has deployed high level health professionals that were given series of orientation training in the administration of the survey instruments; and
5. The data entry process has employed PDAs that can be considered state of the art technology in this particular area.

On the other hand, the survey process was constrained with few limitations that should be taken into consideration in the interpretation and use of this report. These limitations include:

1. Some national and climatic situations have adversely affected the conduct of the survey within the originally planned timeframe;
2. As the Ethiopian health system was (and still is) in dynamic transition, there were some changes in the number and classification of health facilities between the planning and implementation periods of the survey;
3. Due to reasons logistics as well as initial design, data collected were not sufficient for fully and properly assessing service burden as well as outcome quality.

Nevertheless, the survey has generated a wealth of data set for describing the type and magnitude of health sector resources and services for addressing the problems of HIV/AIDS/TB/STI at national level. It has also attempted to assess the quality of these particular resources as well as the burden on health facilities imposed by the target health problems. In addition to comparative analyses made on the magnitude and quality of the assessed services (across regions, facility types and facility ownership), assessment of the level of coverage by these services in relation to the national M&E indicators was made

11.4. Conclusions and Recommendations

11.4.1 Conclusions

In conclusion, the level of HIV/AIDS/TB/STI related services and resources within the health facilities of the country seems to be still at very low level of the capacity required for optimum service provision. Even though there seem to be indications that the necessary requirements are being in place for the provision of HIV/AIDS/TB/STI related services within the surveyed facilities, the proportions of facilities offering the various indicator services included within the National M&E Framework were very low (way below a fifth of the facilities for most of the indicator services). More specifically, referral and curative HIV/AIDS services were being provided within very few health facilities at national level, with no significant difference detected in the service capacity scores of these services across regions, types of health facilities and managing authorities.

In addition, there seem to be regional disparities in the distribution of all the inventoried services and resources within the facilities that disfavor the emerging regions. Health facilities in Addis Ababa seemed to have better capacity in most of the services than those in other regions, even though facilities in Amhara and Harari Regions were found to significantly excel those in Addis Ababa in counseling and testing services. In addition, the regional distribution of capacity of assessed services and resources seemed to disfavor the emerging regions. All these findings seem to be reflections of the trend in the distribution of the health infrastructure that is historically biased towards major urban centers than rural areas.

With regard to managing authority, in general government facilities were having better capacity of services and resources compared to those of non-governmental ones, even though there were

instances where non-government facilities excelled the government ones (e.g. private higher clinics were found to have significantly higher laboratory service capacity than government health centers, and non-government facilities were better in integrating care and support services within their VCT units). The level of involvement of non-governmental health facilities in the provision of the assessed services also seemed to be less optimal. These are obviously the results of the tendency for preventive and health promotive services (that are the major components of HIV/AIDS/TB/STI services) to be limited and concentrated within public rather than private health institutions.

In general and obviously, hospitals were having higher capacity in most of the assessed service than health centers and private higher clinics, even though private higher clinics were found to be significantly better than both hospitals and health centers in terms of HIV/AIDS related outpatient services.

11.4.2 Recommendations

Overall, considering this findings on the situation of HIV/AIDS/TB/STI service provision, the indication is that there is a need for a lot of effort for reaching a level where the health facilities would be providing optimum services.

Therefore, every effort should be made to:

1. Expand the services and resources across all facilities. For instance health centers and higher clinics should be made to start offering services that were limited to hospitals;
2. Address the regional disparities currently observed in the distribution of these services and resources;
3. Enhance the roles of non-governmental health facilities in the provision of the inventoried services. For instance, it seems high time that contractual arrangements be made to involve private as well as NGO and FBO facilities in the provision of services that are hitherto exclusively offered within public sector facilities; and
4. Conduct the health facility survey as well as the other sources of data for the indicators (DHS, BSS, Sentinel Surveillance as well as routine health sector and special surveys) regularly with the proper and the set frequencies.

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ANNEXES

Annex I Results of the Bi-variate and Multi-variate Analysis of Services Based on Composite Scores

The effect of region, type of health facility and managing authority on good HIV/AIDS counseling and testing service provision capacity (EHFS, 2005)				
Variables	Good (1)	Poor (0)	Crude OR [95% CI]	Adjusted OR [95% CI]
Region				
Tigray	21	13	1.86 [0.78, 4.44]	1.66 [0.66, 4.17]
Amhara	40	20	2.31 [1.09, 4.89] *	2.03 [0.92, 4.48]
Oromia	35	40	1.01 [0.50, 2.02]	0.77 [0.37, 1.61]
SNNP	25	32	0.90 [0.43, 1.89]	0.62 [0.28, 1.37]
Harrari	2	10	0.23 [0.05, 1.15]	0.16 [0.03, 0.81]*
Addis Ababa	26	30		
Type of facility				
Hospital	66	69	1.59 [0.65, 3.89]	0.39 [0.11, 1.44]
Health Center	74	61	2.02 [0.83, 4.94]	0.37 [0.09, 1.52]
Higher Clinic	9	15		
Managing Authority				
Government	135	109	3.18 [1.63, 6.20]*	6.94 [2.35, 20.48]*
Non-government	14	36		

* p<0.05 (statistically significant)

The effect of region, type of health facility and managing authority on good ART service provision capacity (EHFS, 2005)

Variables	Good (1)	Poor (0)	Crude OR [95% CI]	Adjusted OR [95% CI]
Region				
Tigray	1	3	0.41 [0.04,4.43]	0.51 [0.05,5.62]
Amhara	7	6	1.44 [0.39,5.34]	1.77 [0.45,6.94]
Oromia	9	6	1.85 [0.52,6.55]	2.21 [0.61,8.04]
SNNP	4	6	0.82 [0.19,3.54]	0.99 [0.22,4.37]
Addis Ababa	13	16		
Type of facility				
Hospital	32	37	0.00 [0.00,1.03E+28]	0.00 [0.00,9.94E+27]
Health Center	1	0	1.00 [0.00,1.34E+44]	1.25 [0.00,1.7E+44]
Higher Clinic	1	0		
Managing Authority				
Government	29	33	0.70 [0.17,2.87]	0.80 [0.17,3.72]
Non-government	5	4		

* p<0.05 (statistically significant)

The effect of region, type of health facility and managing authority on good HIV/AIDS inpatient service provision capacity (EHFS, 2005)

Variables	Good (1)	Poor (0)	Crude OR [95% CI]	Adjusted OR [95% CI]
Region				
Tigray	41	17	1.30 [0.63,2.71]	1.65 [0.72,3.75]
Amhara	23	35	0.35 [0.18,0.72]*	0.36 [0.16,0.79]*
Oromia	53	84	0.34 [0.19,0.61]*	0.37 [0.19,0.69]*
Somali	4	6	0.36 [0.09,1.39]	0.38 [0.09,1.58]
Benishangul Gumz	4	7	0.31 [0.08,1.15]	0.49 [0.12,2.08]
SNNP	19	55	0.19 [0.09,0.38]*	0.19 [0.09,0.41]*
Gambella	6	5	0.65 [0.18,2.32]	2.02 [0.49,8.37]
Harrari	7	6	0.63 [0.19,2.06]	0.48 [0.14,1.66]
Dire Dawa	1	8	0.07 [0.01,0.57]*	0.05 [0.01,0.43]*
Addis Ababa	50	27		
Type of facility				
Hospital	162	140	0.81 [0.43,1.53]	0.73 [0.31,1.68]
Health Center	21	91	0.16 [0.08,0.35]*	0.12 [0.04,0.34]*
Higher Clinic	27	19		
Managing Authority				
Government	150	203	0.58 [0.37,0.90]*	0.90 [0.47,1.69]
Non-government	60	47		

* p<0.05 (statistically significant)

The effect of region, type of health facility and managing authority on good HMIS service provision capacity (EHFS, 2005)

Variables	Good (1)	Poor (0)	Crude OR [95% CI]	Adjusted OR [95% CI]
Region				
Tigray	4	23	0.12 [0.04,0.42]*	0.09 [0.03,0.33]*
Amhara	13	24	0.38 [0.15,0.96]*	0.29 [0.11,0.77]*
Oromia	10	36	0.20 [0.08,0.50]*	0.15 [0.05,0.40]*
SNNP	24	23	0.74 [0.32,1.72]	0.62 [0.25,1.51]
Addis Ababa	24	17		
Type of facility				
Hospital	29	47	2.06 [0.52,8.10]	2.29 [0.46,11.47]
Health Center	43	66	2.17 [0.57,8.35]	1.83 [0.34,9.90]
Higher Clinic	3	10		
Managing Authority				
Government	65	102	1.34 [0.59,3.02]	2.08 [0.70,6.20]
Non-government	10	21		

* p<0.05 (statistically significant)

The effect of region, type of health facility and managing authority on good HIV/AIDS outpatient service provision capacity (EHFS, 2005)

Variables	Good (1)	Poor (0)	Crude OR [95% CI]	Adjusted OR [95% CI]
Region				
Tigray	56	15	2.19 [1.13,4.25]*	1.97 [0.99,3.89]*
Afar	1	10	0.06 [0.01,0.47]*	0.06 [0.01,0.45]*
Amhara	29	69	0.25 [0.14,0.43]*	0.22 [0.12,0.41]*
Oromia	83	103	0.47 [0.30,0.74]*	0.49 [0.31,0.78]*
Somali	3	15	0.12 [0.03,0.42]*	0.10 [0.03,0.37]*
Benishangul Gumz	7	9	0.46 [0.16,1.30]	0.41 [0.14,1.19]
SNNP	37	142	0.15 [0.09,0.25]*	0.16 [0.10,0.27]*
Harrari	6	6	0.59 [0.18,1.91]	0.55 [0.16,1.83]
Dire Dawa	1	8	0.07 [0.01,0.60]*	0.04 [0.01,0.37]*
Addis Ababa	92	54		
Type of facility				
Hospital	158	148	0.57 [0.32,1.02]	0.49 [0.24,1.01]*
Health Center	128	264	0.26 [0.15,0.46]*	0.24 [0.11,0.52]*
Higher Clinic	39	21		
Managing Authority				
Government	258	391	0.41 [0.27,0.63]*	1.10 [0.62,1.97]
Non-government	67	42		

* p<0.05 (statistically significant)

The effect of region, type of health facility and managing authority on good general HIV/AIDS related service provision capacity (EHFS, 2005)

Variables	Good (1)	Poor (0)	Crude OR [95% CI]	Adjusted OR [95% CI]
Region				
Tigray	24	15	1.97 [0.88,4.41]	1.74 [0.75,4.02]
Amhara	38	22	2.13 [1.04,4.34]*	2.02 [0.96,4.29]
Oromia	36	49	0.91 [0.48,1.73]	0.82 [0.41,1.64]
SNNP	19	42	0.56 [0.27,1.15]	0.48 [0.22,1.03]
Harrari	1	8	0.15 [0.02,1.30]	0.15 [0.02,1.28]
Addis Ababa	30	37		
Type of facility				
Hospital	55	48	4.27 [1.98,9.22]*	6.13 [2.21,17.01]*
Health Center	82	84	3.64 [1.75,7.56]*	6.25 [2.02,19.34]*
Higher Clinic	11	41		
Managing Authority				
Government	119	124	1.62 [0.96,2.74]	0.65 [0.27,1.59]
Non-government	29	49		
* p<0.05 (statistically significant)		64		

The effect of region, type of health facility and managing authority on good tuberculosis related service provision capacity (EHFS, 2005)

Variables	Good (1)	Poor (0)	Crude OR [95% CI]	Adjusted OR [95% CI]
Region				
Tigray	48	80	0.94 [0.56,1.58]	0.65 [0.37,1.14]
Amhara	75	43	2.74 [1.61,4.66]*	1.89 [1.05,3.40]*
Oromia	88	154	0.90 [0.57,1.42]	0.57 [0.35,0.95]*
Somali	10	14	1.12 [0.46,2.74]	0.66 [0.26,1.66]
Benishangul Gumz	9	20	0.71 [0.29,1.69]	0.43 [0.17,1.05]
SNNP	63	63	1.57 [0.94,2.62]	0.98 [0.56,1.71]
Gambella	7	15	0.73 [0.28,1.94]	0.44 [0.16,1.22]
Harrari	8	13	0.97 [0.37,2.52]	0.60 [0.22,1.64]
Dire Dawa	5	6	1.31 [0.38,4.54]	1.08 [0.28,4.20]
Addis Ababa	44	69		
Type of facility				
Hospital	176	235	11.60 [4.14,32.49]*	4.99 [1.56,15.94]*
Health Center	187	180	16.09 [5.74,45.14]*	5.80 [1.77,19.06]*
Higher Clinic	4	62		
Managing Authority				
Government	352	373	6.53 [3.73,11.44]*	3.56 [1.79,7.05]*
Non-government	15	104		

* p<0.05 (statistically significant)

The effect of region, type of health facility and managing authority on good laboratory service provision capacity (EHFS, 2005)

Variables	Good (1)	Poor (0)	Crude OR [95% CI]	Adjusted OR [95% CI]
Region				
Tigray	24	13	0.76 [0.33,1.77]	0.84 [0.33, 2.13]
Amhara	27	28	0.40 [0.19,0.83]*	0.43 [0.19,0.98]*
Oromia	30	51	0.24 [0.12,0.48]*	0.23 [0.11,0.48]*
SNNP	12	44	0.11 [0.05,0.25]*	0.11 [0.05,0.27]*
Addis Ababa	51	21		
Type of facility				
Hospital	78	36	1.69 [0.84,3.37]	1.11 [0.41,3.01]
Health Center	39	100	0.30 [0.15,0.60]*	0.17 [0.05,0.27]*
Higher Clinic	27	21		
Managing Authority				
Government	98	121	0.63 [0.38,1.06]	2.17 [0.87,5.45]
Non-government	46	36		

* p<0.05 (statistically significant)

The effect of region, type of health facility and managing authority on good PMTCT service provision capacity (EHFS, 2005)

Variables	Good (1)	Poor (0)	Crude OR [95% CI]	Adjusted OR [95% CI]
Region				
Tigray	1	5	0.27 [0.03,2.59]	0.18 [0.02,1.90]
Amhara	8	6	1.78 [0.49,6.50]	1.67 [0.44,6.29]
Oromia	4	6	0.89 [0.20,3.87]	0.66 [0.14,3.08]
SNNP	1	6	0.22 [0.02,2.10]	0.18 [0.02,1.80]
Addis Ababa	12	16		
Type of facility				
Hospital	13	15	1.60 [0.59,4.36]	2.31 [0.75,7.11]
Health Center	13	24		
Managing Authority				
Government	26	38	337.04 [0.00,2.88E+21]	684.62 [0.00,5.91E+21]
Non-government	0	1		

* p<0.05 (statistically significant)

Annex II Questionnaire Items Used for Developing Scores

PMTCT SERVICES			
Q. No.	Question	Score values	
		1	0
1009_01	Offer HIV testing?	Yes, in the clinic	Else
1009_03	Offer individual HIV pre-test info/counseling?	Yes, in the clinic	Else
1009_04	Offer individual HIV post-test counseling?	Yes, in the clinic	Else
1009_05	Offer couple counseling for women who are HIV positive?	Yes, in the clinic	Else
1009_06	Offer counseling on infant feeding options for HIV positive women?	Yes, in the clinic	Else
1009_07	Offer counseling on maternal nutrition to HIV positive women?	Yes, in the clinic	Else
1009_08	Offer counseling on family planning?	Yes, in the clinic	Else
1009_10	Offer ARV prophylaxis for women?	Yes, in the clinic	Else
1009_11	Offer ARV prophylaxis for newborn?	Yes, in the clinic	Else
1009_12	Offer breast feeding substitutes for newborns of HIV positive women?	Yes, in the clinic	Else
1009_13	Offer follow up counseling for HIV positive women?	Yes, in the clinic	Else
1009_14	Offer therapy for eligible HIV positive women?	Yes, in the clinic	Else
1009_15	Offer ARV therapy for eligible family members of HIV positive women	Yes, in the clinic	Else
1009_16	Offer women-to-women support groups	Yes, in the clinic	Else
1009_17	Offer treatment for STI	Yes, in the clinic	Else
1010	Have any guidelines or protocols for PMTCT services?	Yes	No
1021	Have a trained counselor on both pre and post-test counseling?	Yes , present today/not present today	No
1031	Newborns of HIV positive women routinely tested for HIV as soon as possible after birth?	Yes, for all HIV positive women Yes, for facility deliveries Routinely tested at other time(18 months after birth)	No
1034	Written guideline or protocol for administration of ARV prophylaxis for PMTCT?	Yes, observed	Else
1059	Have record of HIV positive ANC clients who received the ARV prophylaxis for PMTCT during the past 12 months?	Yes, observed	Else
1067	Have a register or record of the time women received PMTCT services?	Yes, observed	Else
1075	Routinely determine HIV sero-status for all women who deliver in the facility?	Client history, client ANC record, testing, other method	No
1076	Written policy/guideline for providing ARV prophylaxis for PMTCT to HIV positive women who deliver in the facility?	Yes, observed	Else
Total number of score points		23	

ANTI-RETROVIRAL THERAPY(ART) TO PLWHA

Q. No.	Question	Score values	
		1	0
908	Is there one person specifically in charge of ARV services?	Yes, in the clinic/another clinic	No
923	Have all individuals who provide counseling for ART medicines been trained in counseling for adherence to ART?	Yes	Else
926_01	Have national guidelines for VCT in Ethiopia?	Yes, observed complete	Else
926_02	Have policy on ARV drug supplies and use of the FDRE?	Yes, observed complete	Else
926_03	Have guidelines to use of ARV drug in Ethiopia?	Yes, observed complete	Else
926_04	Have ARV drugs formulations and dosage?	Yes, observed complete	Else
926_05	Have guidelines for implementation of ARV therapy in Ethiopia?	Yes, observed complete	Else
926_06	Have guidelines for standard reporting system?	Yes, observed complete	Else
926_07	Have guidelines for counseling for adherence to ART?	Yes, observed complete	Else
926_08	Have other guidelines or protocols for ART?	Yes, observed complete	Else
940	Is an individual client chart or record maintained for all ART clients?	Yes, observed	Else
941	Have a recording system for making individual client appointments for follow-up?	Yes, observed	Else
Total number of score points.....		12	

COUNSELING AND TESTING SERVICES

Q. No.	Question	Score values	
		1	0
809_01	Pretest counseling routinely provided	Always by trained counselor	Else
809_02	Post-test counseling for positive results	Always by trained counselor	Else
809_03	Post-test counseling for negative results	Always by trained counselor	Else
809_04	Follow-up counseling for HIV/AIDS clients	Always by trained counselor	Else
809_05	Follow-up risk reduction counseling for negative results	Always by trained counselor	Else
810	Have guidelines and protocols related to HIV test counseling in the unit?	Yes	No
811_01	Have national guideline for VCT in Ethiopia?	Yes, observed complete	Else
811_02	Have national HIV/AIDS counseling training manual?	Yes, observed complete	Else
811_03	Have policy on HIV/AIDS of the FDRE?	Yes, observed complete	Else
813	Have a counselor trained on HIV/AIDS counseling?	Yes, present/not present today	No
818	Have records or registers that provide numbers of clients receiving pre and post test counseling?	Yes	No
823	Room for counseling related to HIV/AIDS is private room with visual and auditory privacy?	Yes	No
834	Is an individual client chart or record maintained for all HIV positive clients?	Yes, observed	Else
Total number of score points.....		13	

TUBERCULOSIS TREATMENT

Q. No.	Question	Score values	
		1	0
706	Does the clinic use any method for diagnosing TB?	Yes, sputum/x-ray/clinical symptoms/any combination of these	Else
710_01	Have national guideline for diagnosis and treatment of TB?	Yes, observed complete	Else
710_02	Have other guidelines for diagnosis and treatment of TB?	Yes, observed complete	Else
717	Have record or register of clients who are currently receiving DOTS?	Yes, observed	Else
722	Provide routine follow-up for nay clients who are placed on Tb treatment?	Yes, intensive/full treatment	Else
723	Have individual client charts or records for clients receiving TB treatment?	Yes, observed	Else
728	Have a register or record that shows the treatment outcome for clients who received treatment from the clinic/unit?	Yes, observed	Else
729	Are newly diagnosed cases of TB (or cases followed up by this clinic/unit), referred for an HIV test or for counseling about HIV/AIDS?	Yes, all referred	Else
735_01b	Routinely provide TB preventive therapy (IPT) always for all clients with HIV/AIDS?	Yes	Else
735_02b	Routinely provide OI preventive therapy such as CPT always for all clients with HIV/AIDS?	Yes	Else
Total number of score points.....		10	

OUT PATIENT CARE TO HIV/AIDS CLIENTS

Q. No.	Question	Score values	
		1	0
219_01	Prescribe treatment for TB or provide follow-up treatment?	Service offered in the clinic/other clinic in the facility	Else
219_02	Diagnose TB?	Service offered in the clinic/other clinic in the facility	Else
219_03	Prescribe treatment for STI?	Service offered in the clinic/other clinic in the facility	Else
219_04	Prescribe treatment for malaria?	Service offered in the clinic/other clinic in the facility	Else
221	Provide any care or support services for clients diagnosed or suspected as having HIV/AIDS?	Yes	No
223_01	Providers in the clinic prescribe treatment for any OI or symptoms related to HIV/AIDS?	Service offered in the clinic/other clinic in the facility(1 or 2)	Else
223_02	Provide palliative care for terminally ill HIV/AIDS patients, such as symptom or pain management or nursing care	Service offered in the clinic/other clinic in the facility(1 or 2)	Else
223_03	Provide nutritional rehabilitation services with client education and diet supplementation	Service offered in the clinic/other clinic in the facility(1 or 2)	Else
223_04	Provide fortified protein supplementation	Service offered in the clinic/other clinic in the facility(1 or 2)	Else
223_05	Prescribe or provide follow-up for ARV therapy in the facility or community based?	Service offered in the clinic/other clinic in the facility(1 or 2)	Else
223_06	Provide care for pediatric HIV/AIDS patients?	Service offered in the clinic/other clinic in the facility(1 or 2)	Else
224_01	Test or screen for TB?	Service offered routinely by providers in the clinic/other clinic in the facility/ referred to clinics in the facility	Else
224_02	Provide preventive treatment for TB (INH)?	Service offered routinely by providers in the clinic/other clinic in the facility/ referred to clinics in the facility	Else
224_03	Primary preventive treatment before the client is ill such as CPT?	Service offered routinely by providers in the clinic/other clinic in the facility/ referred to clinics in the facility	Else
224_04	Micronutrient supplementation such as vitamins or iron?	Service offered routinely by providers in the clinic/other clinic in facility/ referred to clinics in facility	Else
224_05	Provide family planning services for HIV/AIDS clients?	Service offered routinely by providers in the clinic/other clinic in facility/ referred to clinics in facility	Else
224_06	Provide condom distribution for preventing further transmission of HIV?	Service offered routinely by providers in the clinic/other clinic in facility/ referred to clinics in facility	Else

INPATIENT CARE TO HIV/AIDS CLIENTS

Q. No.	Question	Score values	
		1	0
315	Does the clinic provide any clinical care or support services for clients diagnosed or suspected as having HIV/AIDS?	Yes	No
318_01	Prescribe treatment for any OI or symptoms related to HIV/AIDS?	Service offered by providers of the unit	Else
318_02	Provide systemic IV treatment of specific fungal infections such as cryptococcal meningitis?	Service offered by providers of the unit	Else
318_03	Provide palliative care for terminally ill HIV/AIDS patients?	Service offered by providers of the unit	Else
318_04	Provide nutritional rehabilitation services with client education and diet supplementation?	Service offered by providers of the unit	Else
318_05	Provide fortified protein supplementation?	Service offered by providers of the unit	Else
318_06	Prescribe Antiretroviral Therapy (ART)?	Service offered by providers of the unit	Else
318_07	Provide care for pediatric HIV/AIDS patients?	Service offered by providers of the unit	Else
319_02	Provide preventive treatment for TB (INH)?	Service offered routinely by providers in the clinic/other clinic in the facility/ referred to clinics in the facility	Else
319_03	Primary preventive treatment before the client is ill such as CPT?	Service offered routinely by providers in the clinic/other clinic in the facility/ referred to clinics in the facility	Else
319_04	Micronutrient supplementation such as vitamins or iron?	Service offered routinely by providers in the clinic/other clinic in the facility/ referred to clinics in the facility	Else
320	Have any guidelines or protocols for HIV/AIDS services or care for HIV/AIDS clients in the clinic?	Yes	No
322_01	Provide home based care services for PLHA and their families?	Service available in the facility	Else
322_02	PLHA support group?	Service available in the facility	Else
322_03	Provide emotional/spiritual support?	Service available in the facility	Else
322_04	Provide support for orphans or other VC?	Service available in the facility	Else
322_05	Provide social support such as food, material, income generating projects and fee exemption for PLHA and their families?	Service available in the facility	Else
322_06	Provide legal services?	Service available in the facility	Else
322_07	Provide education on HIV care for patients and their families?	Service available in the facility	Else
322_08	Provide community support?	Service available in the facility	Else
322_09	Provide financial support?	Service available in the facility	Else

INPATIENT CARE TO HIV/AIDS CLIENTS (Cont'd)

Q. No.	Question	Score values	
		1	0
350_01	Have private room (visual and auditory privacy)?	Yes, observed	Else
350_04	Have running water?	Yes, observed	Else
350_06	Have soap?	Yes, observed	Else
350_07	Have single use hand drying towels or functioning electric hand-drier?	Yes, observed	Else
350_08	Have sharps container?	Yes, observed	Else
350_09	Have disposable examination gloves?	Yes, observed	Else
350_11	Have heavy duty gloves?	Yes, observed	Else
350_12	Have chlorine-based de-contamination solution?	Yes, observed	Else
350_13	Have condoms?	Yes, observed	Else
350_14	Have spinal tap kit?	Yes, observed	Else
350_15	Have rapid test kits for HIV?	Yes, observed	Else
350_16	Have disposable needles?	Yes, observed	Else
350_17	Have disposable syringes?	Yes, observed	Else
350_18	Have examination table?	Yes, observed	Else
350_19	Have penile model?	Yes, observed	Else
350_20	Have apron?	Yes, observed	Else
350_21	Have goggle?	Yes, observed	Else
350_22	Have dust bin?	Yes, observed	Else
Total number of score points.....		39	

OUT PATIENT CARE TO HIV/AIDS CLIENTS (cont'd)

Q. No.	Question	Score values	
		1	0
227_01	Provide home based care services for PLHA and their families?	Service available in the facility	Else
227_02	PLHA support group?	Service available in the facility	Else
227_03	Provide emotional/spiritual support?	Service available in the facility	Else
227_04	Provide support for orphans or other VC?	Service available in the facility	Else
227_05	Provide social support such as food, material, income generating projects and fee exemption for PLHA and their families?	Service available in the facility	Else
227_06	Provide legal services?	Service available in the facility	Else
227_07	Provide education on HIV care for patients and their families?	Service available in the facility	Else
227_08	Provide community support?	Service available in the facility	Else
227_09	Provide financial support?	Service available in the facility	Else
254_01	Have private room (visual and auditory privacy)?	Yes, observed	Else
254_04	Have running water?	Yes, observed	Else
254_06	Have soap?	Yes, observed	Else
254_07	Have single use hand drying towels or functioning electric hand-drier?	Yes, observed	Else
254_08	Have sharps container?	Yes, observed	Else
254_09	Have disposable examination gloves?	Yes, observed	Else
254_11	Have heavy duty gloves?	Yes, observed	Else
254_12	Have chlorine-based de-contamination solution?	Yes, observed	Else
254_13	Have condoms?	Yes, observed	Else
254_14	Have spinal tap kit?	Yes, observed	Else
254_15	Have rapid test kits for HIV?	Yes, observed	Else
254_16	Have disposable needles?	Yes, observed	Else
254_17	Have disposable syringes?	Yes, observed	Else
254_18	Have examination table?	Yes, observed	Else
254_19	Have dust bin?	Yes, observed	Else
Total number of score points.....		42	

LABORATORY AND OTHER DIAGNOSTIC CAPACITY

Q. No.	Question	Score values	
		1	0
504_01	Have standard operating procedures (SOPs) for blood safety?	Yes, observed complete	Else
504_02	Have national guidelines for laboratory HIV testing in blood safety, surveillance, VCT and ARV use	Yes, observed complete	Else
504_03	Have guideline for PEP for health care workers?	Yes, observed complete	Else
504_04	Have infection prevention guidelines for health care facilities in Ethiopia?	Yes, observed complete	Else
504_05	Have TB laboratory Manual for technicians?	Yes, observed complete	Else
505_01	Does this laboratory conduct any tests for HIV?	Yes	No
506_01	Have written SOPs on HIV testing procedures?	Yes, observed complete	Else
506_02	Have written SOPs on confidentiality and disclosure of HIV test results	Yes, observed complete	Else
506_03	Have laboratory SOPs for HIV testing?	Yes, observed complete	Else
507_01b	Have ELISA reader in working order?	Yes	No
507_02b	Have flow cytometer-CD4 count in working order?	Yes	No
507_03b	Have washer in working order?	Yes	No
507_04b	Have fax count in working order?	Yes	No
507_05b	Have PCR in working order?	Yes	No
508_01	Have rapid test kits for HIV?	Yes, observed	Else
508_02	Have all reagents and kits for ELISA for HIV?	Yes, observed	Else
508_03	Have kits for viral load determination?	Yes, observed	Else
509	Have any record of HIV test results for tests conducted in the laboratory/	Yes	No
513	Is there an established system for external quality control for HIV tests conducted by laboratory?	Yes, routine	Else
521_01b	Have microscope in working order?	Yes	No
521_02b	Have refrigerator in working order?	Yes	No
521_03b	Have incubator in working order?	Yes	No
521_04b	Have clinical chemistry analyzer?	Yes	No
521_05a	Have test tubes?	Yes, observed	Else
521_06a	Have glass slides and covers?	Yes, observed	Else
524_01a	Have VDRL for syphilis test?	Yes, observed	Else
524_02a	Have rotator or shaker for syphilis test?	Yes, observed	Else
524_03a	Have reactive protein reagen test (RPR) for syphilis test?	Yes, observed	Else
524_04a	Have FTA-ABS for syphilis test?	Yes, observed	Else
524_05a	Have TPHA for syphilis test?	Yes, observed	Else
524_06a	Have dark field microscope for syphilis test?	Yes, observed	Else
525_01a	Have gram stain for gonorrhoea tests?	Yes, observed	Else
525_02a	Have chocolate agar (culture medium) for gonorrhoea test?	Yes, observed	Else

LABORATORY AND OTHER DIAGNOSTIC CAPACITY (Cont'd)

Q. No.	Question	Score values	
		1	0
527_01a	Have giemsa stain for Chlamydia test?	Yes, observed	Else
528_01a	Have AFB or Zehl-Neelson test, with stain, such as methyl blue for tuberculosis test?	Yes, observed	Else
528_02a	Conduct culture for tuberculosis test?	Yes, observed	Else
543	Are reports compiled on the number of newly diagnosed HIV cases?	Yes	No
555_01	Have running water?	Yes, observed	Else
555_03	Have soap?	Yes, observed	Else
555_04	Have single use hand drying towels or functioning electric hand-drier?	Yes, observed	Else
555_05	Have sharps container?	Yes, observed	Else
555_06	Have disposable examination gloves?	Yes, observed	Else
555_08	Have heavy duty gloves?	Yes, observed	Else
555_09	Have chlorine-based de-contamination solution?	Yes, observed	Else
555_10	Have disposable needles?	Yes, observed	Else
555_11	Have disposable syringes?	Yes, observed	Else
555_12	Have anti-septic (swabs)?	Yes, observed	Else
Total number of score points.....		47	

HEALTH MANAGEMENT INFORMATION SYSTEM (HMIS)

Q. No.	Question	Score values	
		1	0
404	Does HMIS officer have special training in recording systems or reports for health information such as training in HMIS?	Yes, formal	Else
406	HMIS officer has been trained recently in the past three years?	Yes, in the past three years	Else
410_01	Have HMIS reporting guidelines or protocols?	Yes, observed	Else
410_02	Have national technical guidelines for integrated disease surveillance and response?	Yes, observed	Else
410_03	Have national HIV/AIDS reporting guideline?	Yes, observed	Else
412	Receive or compile reports of deaths in the facility attribute to HIV/AIDS?	Yes, observed	Else
Total number of score points.....		6	

INFRASTRUCTURE AND MANAGEMENT

Q. No.	Question	Score values	
		1	0
112	Does the facility have any specific youth Friendly Services?	Yes, separate/with other services	No
113	Any written policies or guidelines for YFS?	Yes, observed complete	Else
114	Have a staff member who had specific training for providing YFS?	Yes, present/not present today	No
125	Does facility have routine meetings for reviewing managerial or administrative matters?	Yes	No
133	Does facility monitor quality of care?	Yes	No
148	Facility have functional backup generator?	Yes, with fuel/no fuel	No
149	Does facility ever obtain electricity from a source other than a back-up generator?	Yes, central supply/solar/other source	No
152	Most commonly used source of water for the facility?	Piped from protected source offsite/piped from offsite unprotected source/piped from offsite source unknown	Else
198	Does facility ever order or refer clients for HIV/AIDS testing?	Yes, facility conducts/facility has affiliated external lab/clients referred externally to other site	Else
200	Is there an official guideline or protocol on VCT in this facility?	Yes, observed complete	Else
201	is there a written guideline or protocol for a routine pre and post test counseling for HIV testing?	Yes, observed complete	Else
202	Is there an official institutional guideline or protocol on confidentiality and disclosure of HIV test results or client HIV status?	Yes, observed	Else
203	Is there any written policy that specifies that no one, including family, can be informed of the HIV status without the client's consent?	Yes, observed	Else
204	Are new staffs who work with HIV/AIDS clients in any capacity, routinely trained or instructed on the protocols for confidentiality and disclosure of HIV test results or client status?	Yes	No
205	Have any staffs that have been trained in both pre and post test counseling for HIV/AIDS?	Yes, trained counselor in the facility	No
207	Do staffs in the facility have access to PEP?	Yes, PEP in facility	Else
211	Is the PEP regimen prescribed by a provider in the clinic/unit, that is, where the medicines are stored?	Yes	No
Total number of score points.....		17	

Annex III Results Relevant to National Monitoring and Evaluation Indicators (EHFS, 2005)

Prv19: Health Facilities Providing Services to Prevent HIV Infection in Women & Children

Indicator	EHFS Results (%)
VCT (CT) for all women	19.2
ARV prophylaxis for HIV positive women	18.8
Counseling of HIV positive women on infant feeding	19.5
Counseling HIV positive women on risk reduction	17.3
Referral to or provision of FP for contraception for HIV positive women	18.0
Referral to or provision of attended safe delivery services to HIV positive women	18.7 ³⁵
Referral to or provision of FP for post-partum contraception & prevention of future HIV infection for HIV negative women (i.e. counseling on dual protection)	26.8 ³⁶
<i>Prv22: Prevention of Nosocomial Transmission of HIV</i>	
Availability of written guidelines for avoiding transmission of HIV	
Infection prevention guidelines for health care facilities in Ethiopia	3.8
Standard Operating Procedures (SOPs) for blood safety-lab	14.4
National guidelines for laboratory HIV testing in blood safety, surveillance, VCT and ARV use	15.2
Conformity of sterilization practices to existing guidelines	
Processed items wrapped in sterile cloth, sealed with TST tape	23.8
Processed items stored in sterile container with lid that clasps shut	60.5
Processed items stored unwrapped inside an autoclave or dry heat sterilizer	14.4
Processed items stored on tray, covered with sterile cloth or wrapped without TST sealing tape	25.7
Processed items stored in container with disinfectant or antiseptic	14.1
Processed items stored in any one or more of the five practices mentioned above	76.0
Storage location for processed items dry and clean	69.9
Date of sterilization written on packet or container with processed items	35.6
Adequate trained personnel on UP and PEP	
Universal Precaution (UP)	13.4
Post-exposure Prophylaxis (PEP)	6.6

³⁵ Refers to any one or a combination of the following safe delivery practices for HIV positive women: no routine episiotomy, minimize instrument delivery, hibitane vaginal cleansing, minimize vaginal exam, minimize artificial rupture of membrane, and/or caesarean section.

³⁶ The figure refers only to condom distribution for preventing further transmission of HIV/AIDS.

Results Relevant to National M&E Indicators (cont.)

CST4: Health Facilities Providing or Referring for Care and Support Services

Proportion of health facilities providing service or effectively referring PLWHA to essential comprehensive care and support services (medical services, psychological services, social/legal support, and support for OVC) ██████████

PLHA support group	1.1
Emotional or spiritual care	13.9
Support for orphans or other VC	2.0
Social support & fee exemption for PLHA & families	2.4
Legal services	2.6
Education on HIV care for patients and their families	27.8
Community support	1.1
Financial support	1.5

CST5: Health facilities that can provide basic HIV test and clinical care

Proportion providing system for testing and providing results for HIV/AIDS ██████████

All necessary supplies to conduct any one test for diagnosis of HIV	72.9
An observed written policy or guideline on informed consent	19.9
An observed written policy or guideline on confidentiality of disclosure for client test results	11.0
An up-to-date register/other records that provide information on HIV/AIDS tests conducted	87.9
Observed documentation for provision of test results to the client ³⁷	2.0

Proportion having systems and qualified staff for pre and post-test counseling ██████████

A written observed guideline/protocol for a routine pre-& post test counseling for HIV testing	35.6
Any staff trained in both pre and post test counseling for HIV/AIDS	69.9
A register/other records that document counseling and test results	74.4
Counseling conducted in an area where visual and auditory privacy are provided	87.1

Proportion providing specific medical services relevant to HIV/AIDS, and resources and supplies for providing these services ██████████

Test or screen for tuberculosis on outpatient basis	34.1
Preventive therapy for TB (INH) at outpatient basis	10.0
Primary preventive treatment for OIs such as CPT on outpatient basis	34.8
Micronutrient supplementation such as vitamins or iron on outpatient basis	34.0
Family planning services for HIV/AIDS clients on outpatient basis	28.4
Condom distribution for preventing further transmission of HIV on outpatient basis	27.4
Test or screen for tuberculosis on inpatient basis	47.4
Preventive therapy for TB (INH) at inpatient basis	15.5
Primary preventive treatment, that is, before the client is ill, for OIs such as CPT on inpatient basis	41.8
Micronutrient supplementation such as vitamins or iron on inpatient basis	37.2
Family planning services for HIV/AIDS clients on inpatient basis	29.4
Condom distribution for preventing further transmission of HIV on inpatient basis	26.8

³⁷ Refers to documentation in the laboratory area

Results Relevant to National M&E Indicators (cont.)	
Proportion providing elements for prevention of nosocomial infections	
Functioning electric dry heat sterilizer	32.9
Functioning electric autoclave (pressure and wet heat)	58.6
Functioning non-electric autoclave	4.4
Functioning pot with cover (for steaming or boiling)	20.7
Functioning heat source for steaming, boiling, or using a non-electric autoclave	35.4
Functioning automatic timer	46.4
Functioning TST indicator strips	23.5
Written guidelines for disinfection and sterilization	21.0
Chemical decontaminant	43.6
Chemical High Level Disinfectant (HLD)	11.3
Proportion having trained staff and resources for providing basic interventions for prevention and medical treatments for HIV infected persons	
Trained counselor for pre-test counseling	69.1
Trained counselor for post-test counseling for positive results	68.8
Trained counselor for post-test counseling for negative results	66.6
Trained counselor for follow-up counseling for HIV positive clients	49.4
Providers trained in counseling for adherence to ART medicines	96.0
<i>CST6: Health Facilities Providing Advanced Level Care & Support Services for PLWHA</i>	
Proportion providing systems and items to support management of OIs and provision of palliative care for advanced care of PLWHA	
Prescribe treatment for any OIs or symptoms related to HIV/AIDS on outpatient basis	61.9
Provide palliative care for terminally ill HIV/AIDS patients on outpatient basis	38.5
Prescribe treatment for any OIs or symptoms related to HIV/AIDS on inpatient basis	65.4
Systemic intravenous treatment of specific fungal infections such as cryptococcal meningitis	33.9
Provide palliative care for terminally ill HIV/AIDS patients on inpatient basis	60.1
Proportion with Systems and items to support advanced services to care for HIV-infected clients	
Nutritional rehabilitation services with client education and diet supplementation on outpatient basis	14.5
Fortified protein supplementation on outpatient basis	4.6
Prescribe/ provide follow-up for ARV therapy in the facility or community based on outpatient basis	12.9
Care for pediatric HIV/AIDS patients on outpatient basis	21.1
Nutritional rehabilitation services with client education and diet supplementation on inpatient basis	27.1
Fortified protein supplementation on inpatient basis	12.6
Prescribe Antiretroviral Therapy (ART) on inpatient basis	23.9
Care for pediatric HIV/AIDS patients on inpatient basis	31.5
Proportion with systems and items to support ART services	13.0
Proportion providing conditions to support home care services	
Home-based care services for PLWHA and their families	1.6
Link with community-based health workers to provide home care	4.4
Proportion providing post-exposure prophylaxis	8.8

Annex IV List of Data Collectors and Coders (EHFS, 2005)

No.	NAME OF PARTICIPANT	TEAM	RESPONSIBILITY
1	ABDULETIF MOHAMMED (MD,MPH)	ADDIS ABABA	Interviewer
2	ABIY AREFAYNE (MD)	ADDIS ABABA	Interviewer
3	AMSALE DEGEFA (Nurse)	ADDIS ABABA	Interviewer
4	ASHENAFI AYELE (MD)	ADDIS ABABA	Interviewer
5	EPHREM TEFERA (MD)	ADDIS ABABA	Team Leader
6	FREHIOT ESHETU (MD,MPH)	ADDIS ABABA	Team Leader
7	KIDIST TESFAYE (Nurse)	ADDIS ABABA	Interviewer
8	LISAN ATNAFE (Nurse)	ADDIS ABABA	Interviewer
9	MELAKU BERHANU (MD)	ADDIS ABABA	Team Leader
10	MESELECH ASSEGID(MPH)	ADDIS ABABA	Team Leader
11	SENAIT MANTEGAFTOT(MPH)	ADDIS ABABA	Interviewer
12	TESFAYE NEGASA (Nurse)	ADDIS ABABA	Interviewer
13	TIGIST TSEGAYE (Nurse)	ADDIS ABABA	Interviewer
14	TIGIST ZEWDIE (Nurse)	ADDIS ABABA	Interviewer
15	WORKU TEFERA (MPH)	ADDIS ABABA	Team Leader
16	WUBALEM BEDILU (MD)	ADDIS ABABA	Interviewer
17	YOHANNES GETU (Nurse)	ADDIS ABABA	Interviewer
18	YORDANOS BELAYNEH (BSC)	ADDIS ABABA	Interviewer
19	TESFAYE ENDRIAS (MD,MPH)	ADDIS ABABA & SNNPR	Team Leader
20	AGAZI G/MARIAM (MD)	AFAR	Interviewer
21	MELAKU TAYE (MD)	AFAR	Team Leader
22	MELKAMU FANTA (MPH)	AFAR	Interviewer
23	SAMUEL HAILU(MPH)	AFAR	Interviewer
24	ABEL TEKA (MD)	ASSOSA	Team Leader
25	GUDINA EGATA (MPH)	ASSOSA	Interviewer
26	MULUGETA ALEMAYEHU(MPH)	ASSOSA	Interviewer
27	YADETA AYANA (MPH)	ASSOSA	Interviewer
28	GETACHEW WORKU (MPH)	BALE	Interviewer
29	KEREMUDIN MUBAREK (MD,MPH)	BALE	Team Leader
30	MEKDIM ABIY (MD)	BALE	Interviewer
31	MEKONNEN TESFAMARIAM (MPH)	BALE	Interviewer
32	ALEMAYEHU MESFIN (MPH)	DOLLO	Interviewer
33	BERUK ASSEGED (MD)	DOLLO	Interviewer
34	EDRIS ALI (MD)	DOLLO	Interviewer
35	GEMECHIS HUNDESSA (MD)	DOLLO	Team Leader
36	TILAHUN NIGATU (MPH)	E. GOJJAM & SNNPR	Team Leader
37	GIRMAY HAGOS (MD)	EAST GOJJAM	Interviewer
38	HAILEMARIAM GETNET (MD)	EAST GOJJAM	Team Leader
39	TOMAS BOGALE (MD)	EAST GOJJAM	Interviewer
40	DANIEL DEJENE (MD)	GAMBELLA	Team Leader
41	GETANEH FANTA (Nurse)	GAMBELLA	Interviewer
42	GOBEZE TEFERRA (MD)	GAMBELLA	Interviewer
43	JOHN OBONG (Nurse)	GAMBELLA	Interviewer
44	ALEMAYEHU GELMESSA (MPH)	HARRAR	Interviewer
45	MEZGEB GEDEFE (MD)	HARRAR	Team Leader
46	ZEBIDERU ZEWDIE (MPH)	HARRAR	Interviewer
47	ZENEBU YIMAM (MPH)	HARRAR	Interviewer
48	MULETA DUGUMA (MD)	ILLUBABOR	Team Leader
49	SOFONIAS GETACHEW (MD,MPH)	ILLUBABOR	Interviewer

50	TESFAYE LEMMA (MD)	ILLUBABOR	Interviewer
51	TESFAYE TILAYE (MPH)	ILLUBABOR	Interviewer
52	ABU MEKONNEN (MD)	JINKA	Interviewer
53	FISSEHA BERHE (MPH)	JINKA	Interviewer
54	KINFE ZERU (MPH)	JINKA	Interviewer
55	YONAS TADIOS (MD, MPH)	JINKA	Team Leader
56	DEMELASH ADDIS (MD)	MEKELLE	Team Leader
57	HADUSH W/HAWARIAT (Nurse)	MEKELLE	Interviewer
58	HELINA WORKU (MD)	MEKELLE	Interviewer
59	KIROS WEREDE (Nurse)	MEKELLE	Interviewer
60	SHITAYE MAMO (Nurse)	MEKELLE	Interviewer
61	ALEMNEH ASCHENAKI (MPH)	NORTH GONDAR	Interviewer
62	BEKELE CHAKA (MPH)	NORTH GONDAR	Interviewer
63	BELAY MOREDA (MD)	NORTH GONDAR	Team Leader
64	JEMAL ALIY (MD, MPH)	NORTH GONDAR	Interviewer
65	AREGA AWEKE (MPH)	SNNPR	Interviewer
66	BRUK GETACHEW (MD, MPH)	SNNPR	Team Leader
67	ESHETU WASSIE (MD, MPH)	SNNPR	Interviewer
68	HENOK SEIFE (MD)	SNNPR	Interviewer
69	KENENI GUTEMA (MPH)	SNNPR	Interviewer
70	SEIFU HAGOS (MPH)	SNNPR	Interviewer
71	AGAZI TIRUNEH (MD)	SOMALI	Interviewer
72	ESUBALEW HAILE (MD)	SOMALI	Team Leader
73	GETACHEW GEZAHEGN (MPH)	SOMALI	Interviewer
74	YOHANNES BERHANU (MD)	SOMALI	Interviewer
75	ASAMNEW ABAYNEH (MPH)	TIGRAY	Interviewer
76	FIREW TAFESSE (MPH)	TIGRAY	Interviewer
77	GETNET ABERA (MD)	TIGRAY	Interviewer
78	GIRMAY TEWELDEMEDHIN (MD)	TIGRAY	Team Leader
79	ADMASWORK MAMO	----	Data clerk
80	BAZEN ADDIS	----	Data clerk
81	BIRUK KIFLU	----	Data clerk
82	BIZUNESH HABTE	----	Data clerk
83	DAWIT MESELE	----	Data clerk
84	DIDLIDIL YOHANES	----	Data clerk
85	FASIKA MULAT	----	Data clerk
86	FITSUM ABEBE	----	Data clerk
87	FREHIOT GIDEY	----	Data clerk
88	GIZACHEW YAREGAL	----	Data clerk
89	KALEAMLAK GUTEMA	----	Data clerk
90	KIDIST AWGICHEW	----	Data clerk
91	MERON BABUSH	----	Data clerk
92	MESERET ENEDEG	----	Data clerk
93	MICHAEL DINBERU	----	Data clerk
94	MULUALEM BELAY	----	Data clerk
95	MULUNESH DERECHA	----	Data clerk
96	PAULOS SEBSISB	----	Data clerk
97	ROBEL DANIEL	----	Data clerk
98	TADIOS TAREKENG	----	Data clerk
99	WOINSHET GETACHEW	----	Data clerk

Annex V List of Health Facilities Surveyed (EHFS, 2005)

No	Name of health facility	Region	Type of health facility
1	Abiadi Hospital	Tigray	General Hospital
2	Abomsa Health Center	Oromia	Health Center
3	Adaba Health Center	Oromia	Health Center
4	Adama Hospital	Oromia	Regional Hospital
5	Addiet Health Center	Amhara	Health Center
6	Addis Hiwot Higher Clinic	Amhara	Private Higher Clinic
7	Addis Hiwot Hospital	Addis Ababa	General Hospital
8	Addis Hospital	Addis Ababa	General Hospital
9	Addis Ketema Health Center	Addis Ababa	Health Center
10	Addis Zemen Health Center	Amhara	Health Center
11	Adigrat Hospital	Tigray	General Hospital
12	Adiremetse Health Center	Tigray	Health Center
13	Adishahu Health Center	Tigray	Health Center
14	Adola /Kibremengist/ Health Center	Oromia	Health Center
15	Adwa Health Center	Tigray	Health Center
16	Adwa Hospital	Tigray	General Hospital
17	Africa No 6 Higher Clinic	Addis Ababa	Private Higher Clinic
18	Air Force Hospital	Oromia	General Hospital
19	Ajjee Health Center	Oromia	Health Center
20	Akaki Health Center	Addis Ababa	Health Center
21	Alamata Health Center	Tigray	Health Center
22	Alamata Hospital	Tigray	Zonal Hospital
23	Aldina Higher Clinic	Addis Ababa	Private Higher Clinic
24	Alert Hospital	Addis Ababa	General Hospital
25	Amanual Hospital	Addis Ababa	Specialized Referral Hospital
26	Ambo Hospital	Oromia	Zonal Hospital
27	Amdework Health Center	Amhara	Health Center
28	Amede Higher Clinic	Addis Ababa	Private Higher Clinic
29	Ameya /Ela Amaya/ Health Center	SNNP	Health Center
30	Anbessame Health Center	Amhara	Health Center
31	Anfilo Health Center	Oromia	Health Center
32	Arba Minch Hospital	SNNP	Zonal Hospital

33	Arbaminch Health Center	SNNP	Health Center
34	Arbaya Health Center	Amhara	Health Center
35	Armed Forces General Teaching Hospital	Addis Ababa	General Hospital
36	Asasa Health Center	Oromia	Health Center
37	Asossa Health Center	Benishangul-Gumz	Health Center
38	Asossa Hospital	Benishangul-Gumz	Zonal Hospital
39	Assela Health Center	Oromia	Health Center
40	Assela Higher Clinic	Oromia	Private Higher Clinic
41	Assela Hospital	Oromia	Zonal Hospital
42	Ataye Health Center	Amhara	Health Center
43	Atinago Health Center	Oromia	Health Center
44	Atsbi Health Center	Tigray	Health Center
45	Attat Hospital	SNNP	General Hospital
46	Awash Higher Clinic	Oromia	Private Higher Clinic
47	Awash Sevat Kilo Health Center	Afar	Health Center
48	Awassa Army Hospital	SNNP	General Hospital
49	Awassa Haik Poly Clinic	SNNP	Private Higher Clinic
50	Awelia Health Center	Addis Ababa	Health Center
51	Axum St. Mary hospital	Tigray	General Hospital
52	Ayira Guliso Health Center	Oromia	Health Center
53	Ayira Hospital	Oromia	General Hospital
54	Aysaita Health Center	Afar	Health Center
55	B.G.M Hospital	Addis Ababa	General Hospital
56	B.Sacore Higher Clinic	Oromia	Private Higher Clinic
57	Babile Health Center	Oromia	Health Center
58	Bahirdar Health Center	Amhara	Health Center
59	Balcha Hospital	Addis Ababa	General Hospital
60	Bambesi Health Center	Benishangul-Gumz	Health Center
61	Bati Higher Clinic	Amhara	Private Higher Clinic
62	Beddesa Health Center	SNNP	Health Center
63	Bedeno health Center	Oromia	Health Center
64	Bedesa Health Center	Oromia	Health Center
65	Bella Hospital	Addis Ababa	Specialized Referral Hospital
66	Belle Health Center	SNNP	Health Center
67	Betelhem Solidarity Higher Clinic	SNNP	Private Higher Clinic
68	Bethel Higher Clinic	SNNP	Private Higher Clinic

69	Bethel Teaching Hospital	Addis Ababa	General Hospital
70	Bethezatha Higher Clinic	Addis Ababa	Private Higher Clinic
71	Bethezatha Hospital	Addis Ababa	General Hospital
72	Betto Health Center	SNNP	Health Center
73	Beza Higher Clinic	Tigray	Private Higher Clinic
74	Bichena Health Cener	Amhara	Health Center
75	Bilal Hospital	Dire Dawa	General Hospital
76	Bishoftu Health Center	Oromia	Health Center
77	Bisidamo Hospital	Oromia	Zonal Hospital
78	Bisuftu Hospital	Oromia	Zonal Hospital
79	Biyo Awale Health Center	Dire Dawa	Health Center
80	Blen Higher Clinic	Oromia	Private Higher Clinic
81	Boke Health Center	Oromia	Health Center
82	Bole Dildiy Higher Clinic	Addis Ababa	Private Higher Clinic
83	Bonga Hospital	SNNP	Zonal Hospital
84	Bonga Refugee Health Center	Gambela	Health Center
85	Boru Meda Hospital	Amhara	General Hospital
86	Brass MCH Clinic	Addis Ababa	General Hospital
87	Brook Higher Clinic	Addis Ababa	Private Higher Clinic
88	Bullen Health Center	Benishangul-Gumz	Health Center
89	Bulshana Health Center	SNNP	Health Center
90	Bure Bulshana	SNNP	Health Center
91	Bure Health Center	Amhara	Health Center
92	Bure Health Center	Oromia	Health Center
93	Burka Health Center	Oromia	Health Center
94	Butajira Hospital	SNNP	General Hospital
95	Central Higher Clinic	Dire Dawa	Private Higher Clinic
96	Chancho Health Center	Oromia	Health Center
97	Cheffa Robit Health Center	Amhara	Health Center
98	Cheiro Hospital	Oromia	Zonal Hospital
99	Chelenko Health Center	Oromia	Health Center
100	Chenca Hospital	SNNP	General Hospital
101	Chifra Health Center	Afar	Health Center
102	Dabat Health Center	Amhara	Health Center
103	Dagim Yilma Higher Clinic	Harari	Private Higher Clinic
104	Dalocha Health Center	SNNP	Health Center

105	David higher Clinic-1	Oromia	Private Higher Clinic
106	David Higher Clinic-2	Oromia	Private Higher Clinic
107	Debark Health Center	Amhara	Health Center
108	Deber Markos Hospital	Amhara	General Hospital
109	Debre Birhan Zonal Hospital	Amhara	Zonal Hospital
110	Debre Tabor Health Center	Amhara	Health Center
111	Debre Tabor Hospital	Amhara	Zonal Hospital
112	Deder Hospital	Oromia	Zonal Hospital
113	Dejen Army Hospital / Mekele	Tigray	General Hospital
114	Dejen Health Center	Amhara	Health Center
115	Dembidolo Health Center	Oromia	Health Center
116	Dembidolo Hospital	Oromia	Zonal Hospital
117	Dera Health Center	Oromia	Health Center
118	Dessie Referral Hospital	Amhara	Regional Hospital
119	Dessle Health Center	Amhara	Health Center
120	Dibate Health Center	Benishangul-Gumz	Health Center
121	Digotsiyon Health Center	Amhara	Health Center
122	Dilchora Hospital	Dire Dawa	Regional Hospital
123	Dilla Hospital	SNNP	General Hospital
124	Dimberwa MCH Hospital	Addis Ababa	General Hospital
125	Dimma Refugee Health Center	Gambela	Health Center
126	Dire Dawa Health Center	Dire Dawa	Health Center
127	Dodola Health Center	Oromia	Health Center
128	Dolo Ado Health Center	Somali	Health Center
129	Dubbo St. Mary Hospital	SNNP	General Hospital
130	Dubti Hospital	Afar	Zonal Hospital
131	Edagaarbi Health Center	Tigray	Health Center
132	Emanuel Higher Clinic	Tigray	Private Higher Clinic
133	Emanuel Higher Clinic	Oromia	Private Higher Clinic
134	Empire Higher Clinic	Addis Ababa	Private Higher Clinic
135	Endeber Health Center	SNNP	Health Center
136	Ener Amanuel Health Center	SNNP	Health Center
137	Enticho Health Center	Tigray	Health Center
138	Entoto Health Center	Addis Ababa	Health Center
139	Errer Health Center (Harari)	Oromia	Health Center
140	Errer Health Center (Oromia)	Somali	Health Center

141	Errer Health Center (Somali)	Harari	Health Center
142	Estie Health Center	Amhara	Health Center
143	Ethio Djibouti Railway	SNNP	Private Higher Clinic
144	Ethio Higher Clinic	Dire Dawa	General Hospital
145	Ethio-Beza Higher Clinic	Amhara	Private Higher Clinic
146	Ethiopian Airlines Clinic	Addis Ababa	Private Higher Clinic
147	Ethiotebib Hospital	Addis Ababa	General Hospital
148	Eyerusalem Higher Clinic	Amhara	Private Higher Clinic
149	Felege Hiwot Regional Hospital	Amhara	Regional Hospital
150	Feresbet Health Center	Amhara	Health Center
151	Filtu Hospital	Somali	General Hospital
152	Finote Selam Hospital	Amhara	Zonal Hospital
153	Fistula Hospital	Addis Ababa	General Hospital
154	Fitche Hospital	Oromia	Zonal Hospital
155	Gambella Hospital	Gambela	Zonal Hospital
156	Gambi Higher Clinic-Bahir Dar	Amhara	Private Higher Clinic
157	Gambo Hospital	Oromia	General Hospital
158	Ganat Health Center	Oromia	Health Center
159	Gandhi Hospital	Addis Ababa	Specialized Referral Hospital
160	Gecha Health Center	SNNP	Health Center
161	Gelemso Hospital	Oromia	Zonal Hospital
162	Gelila Health Center	Oromia	Health Center
163	Gerino Health Center	SNNP	Health Center
164	Gesuba Health Center	SNNP	Health Center
165	Gewanie Health Center	Afar	Health Center
166	Gibe Higher Clinic	Oromia	Private Higher Clinic
167	Gidami Health Center	Oromia	Health Center
168	Gidolle Hospital	SNNP	General Hospital
169	Gimbi Adventist Hospital	Oromia	General Hospital
170	Gimbicho Health Center	SNNP	Health Center
171	Ginde Beret Hospital	Oromia	General Hospital
172	Gindo Health Center	Oromia	Health Center
173	Ginir General Hospital	Oromia	General Hospital
174	Goba Hospital	Oromia	Zonal Hospital
175	Gobesa Health Center	Oromia	Health Center
176	Godeja Hospital	Somali	Zonal Hospital

177	Gondar University Hospital	Amhara	Specialized Referral Hospital
178	Gonder Defense Hospital	Amhara	General Hospital
179	Gondor Health Center	Amhara	Health Center
180	Gore Health Center	Oromia	Health Center
181	Goro Health Center	Oromia	Health Center
182	Hagere Selam Health Center	Tigray	Health Center
183	HagereMariam /Bule Hora/Hospital	Oromia	Zonal Hospital
184	Harar Defense Hospital	Harari	General Hospital
185	Harar Police Hospital	Harari	General Hospital
186	Haromaya Health Center	Oromia	Health Center
187	Hasangay Health Center	Harari	Health Center
188	Hawzen Health Center	Tigray	Health Center
189	Hayat General Hospital	Addis Ababa	General Hospital
190	Hibret Higher Clinic	Oromia	Private Higher Clinic
191	Hidar 11/Akesta/ Hospital	Amhara	General Hospital
192	Hirma Health Center	Afar	Health Center
193	Hiwot Higher Clinic /Hosana/	SNNP	Private Higher Clinic
194	Hiwotfana Higher Clinic	Amhara	Private Higher Clinic
195	Hiwotfana Hospital	Harari	Regional Hospital
196	Hora Higher Clinic	Oromia	Private Higher Clinic
197	Hosana Hospital	SNNP	Zonal Hospital
198	Hossana Health Center	SNNP	Health Center
199	Huruta Health Center	Oromia	Health Center
200	Ibinat Health Center	Amhara	Health Center
201	Inchini Health Center	Oromia	Health Center
202	Itang Health Center	Gambela	Health Center
203	Jacho Health Center	SNNP	Health Center
204	Jaja Health Center	Oromia	Health Center
205	Jarso Health Center	Oromia	Health Center
206	Jarte Health Center	Oromia	Health Center
207	Jatto Health Center	SNNP	Health Center
208	Jeldu Health Center	Oromia	Health Center
209	Jijiga Health Center	Somali	Health Center
210	Jimma Army Hospital	Oromia	General Hospital
211	Jimma Higher Clinic	Oromia	Private Higher Clinic
212	Jimma University Hospital	Oromia	Specialized Referral Hospital

213	Jinka Hospital	SNNP	Zonal Hospital
214	Kahsay Abera Hospital /Humera/	Tigray	General Hospital
215	Kamashi Health Center	Benishangul-Gumuz	Health Center
216	Karamara /Jijiga/ Hospital	Somali	Zonal Hospital
217	Karamara Higher Clinic	Dire Dawa	Private Higher Clinic
218	Karat Health Center	SNNP	Health Center
219	Kasech Asfaw Health Center	Tigray	Health Center
220	Kazanchis Health Center	Addis Ababa	Health Center
221	Kebado /Dara/ Health Center	SNNP	Health Center
222	Kebribayah Health Center	Somali	Health Center
223	Kechene Medhanealem Health Center	Addis Ababa	Private Higher Clinic
224	Kelafo Health Center	Somali	Health Center
225	Kelewan Health Center	Afar	Health Center
226	Keto Health Center	Oromia	Health Center
227	Kidanemihrat Higher Clinic	Amhara	Private Higher Clinic
228	Kidus Gebrel Higher Clinic /Axum/	Tigray	Private Higher Clinic
229	Kirkos Health Center	Addis Ababa	Health Center
230	Kokosa Health Center	Oromia	Health Center
231	Kolabda Health Center	Amhara	Health Center
232	Kon Health Center	Amhara	Health Center
233	Korean Hospital	Addis Ababa	General Hospital
234	Korem Health Center	Tigray	Health Center
235	Kosha Health Center	SNNP	Health Center
236	Koshe Health Centre	SNNP	Health Center
237	Kotebe Health Center	Addis Ababa	Health Center
238	Kuha Hospital	Tigray	Zonal Hospital
239	Lalibela Health Center	Amhara	Health Center
240	Lalibela Hospital	Amhara	General Hospital
241	Lante Health Center	SNNP	Health Center
242	Larre Health Center	Gambela	Health Center
243	Ledeta Health Center	Addis Ababa	Health Center
244	Leku Health Center	SNNP	Health Center
245	Limu Hospital	Oromia	Zonal Hospital
246	Lisana Health Center	SNNP	Health Center
247	Maereg Hospital /Dansha/	Tigray	General Hospital
248	Maichew Health Center	Tigray	Health Center

249	Maichew Hospital	Tigray	Zonal Hospital
250	Maji Health Center	SNNP	Health Center
251	Marie Stops Higher Clinic	Addis Ababa	Private Higher Clinic
252	Markos Higher Clinic	Tigray	Private Higher Clinic
253	Masha Health Center	Amhara	Health Center
254	Masha Health Center	SNNP	Health Center
255	Medhanialem Higher Clinic	Oromia	Private Higher Clinic
256	Mehal Amba Health Center	SNNP	Health Center
257	Mehal Meda Hospital	Amhara	General Hospital
258	Mejo /Aroessa/ Health Center	SNNP	Health Center
259	Mekaneselam Health Center	Amhara	Health Center
260	Mekele Health Center	Tigray	Health Center
261	Mekele Hospital	Tigray	Specialized Referral Hospital
262	Mekoy Health Center	Amhara	Health Center
263	Melge Wondo Health Center	SNNP	Health Center
264	Melka Worer Health Center	Afar	Health Center
265	Menge Health Center	Benishangul-Gumz	Health Center
266	Menilik II Hospital	Addis Ababa	Regional Hospital
267	Merti Hospital	Oromia	General Hospital
268	Mertolemariam Health Center	Amhara	Health Center
269	Mesele Medium Hospital	Tigray	General Hospital
270	Metema Health Center	Amhara	Health Center
271	Metema Hospital	Amhara	Zonal Hospital
272	Meti /Godere/Health Center	Gambela	Health Center
273	Metu Karl Hospital	Oromia	Regional Hospital
274	Midre Genet /Shire/ Hospital	Tigray	Zonal Hospital
275	Misrak Arbegnoch Hospital	Harari	General Hospital
276	Mizan Health Center	SNNP	Health Center
277	Mizan/Aman/ Hospital.	SNNP	Zonal Hospital
278	MMD General Hospital .	Addis Ababa	General Hospital
279	Molale Health Center	Amhara	Health Center
280	Mota Health Center	Amhara	Health Center
281	Mota Rural Hospital	Amhara	Zonal Hospital
282	Mudula Health Center	SNNP	Health Center
283	Mulu Higher Clinic No 1	Addis Ababa	Private Higher Clinic
284	My Semri Health Center	Tigray	Health Center

285	National/Sidhafagi/ Hospital	Afar	General Hospital
286	Nefas Mewcha Health Center	Amhara	Health Center
287	NefasSelk Lafto/Woreda19/Health Center	Addis Ababa	Health Center
288	Negela-Borena Hosipital	Oromia	Zonal Hospital
289	Nekemte Hospital	Oromia	Specialized Referral Hospital
290	Nolekaba Health Center	Oromia	Health Center
291	Olompic Higher Clinic	Addis Ababa	Private Higher Clinic
292	Omochera Health Center	SNNP	Health Center
293	Oraga Health Center/Solema/	Oromia	Health Center
294	Pawe Hospital	Benishangul-Gumz	Zonal Hospital
295	Police Hospital	Addis Ababa	General Hospital
296	Qobo Health Center	Amhara	Health Center
297	Rabie Higher Clinic	Addis Ababa	Private Higher Clinic
298	Ras Desta Hospital	Addis Ababa	General Hospital
299	Sagure Health Center	Oromia	Health Center
300	Sayint Health Center	Amhara	Health Center
301	Selam Higher Clinic	Amhara	Private Higher Clinic
302	Selkleka Health Center	Tigray	Health Center
303	Senaye Higher Clinic	Addis Ababa	Private Higher Clinic
304	Shabe Health Center	Oromia	Health Center
305	Shamboos Hospital	Oromia	General Hospital
306	Shashemena Hospital	Oromia	Regional Hospital
307	Sheraro Health Center	Tigray	Health Center
308	Shire /Endeselasie/ Health Center	Tigray	Health Center
309	Shiromeda health center	Addis Ababa	Health Center
310	Shishidina Health Center	SNNP	Health Center
311	Sodo Government Health Center	SNNP	Health Center
312	Sodo Government Hospital	SNNP	Zonal Hospital
313	Sodo Private Hospital	SNNP	General Hospital
314	St. Gabriel General Hospital	Addis Ababa	General Hospital
315	St. Paul's Specialized Hospital	Addis Ababa	Specialized Referral Hospital
316	St. Peter Hospital	Addis Ababa	Specialized Referral Hospital
317	St.Luke Hospital	Oromia	Zonal Hospital
318	Sunshine Higher Clinic	Addis Ababa	Private Higher Clinic
319	Tatessa Health Center	SNNP	Health Center
320	TB Center Hospital	Harari	Zonal Hospital

321	Teda Health Center	Amhara	Health Center
322	Teferra Hailu Hospital	Amhara	General Hospital
323	Tekur Wuha Medical Center Awassa	SNNP	Private Higher Clinic
324	Tercha /Waka/District Hospital	SNNP	General Hospital
325	Tesfa Higher Clinic	Addis Ababa	Private Higher Clinic
326	Tezena General Hospital	Addis Ababa	General Hospital
327	Tibebu General Hospital	Addis Ababa	General Hospital
328	Tikur Anbesa Specialized Hospital	Addis Ababa	Specialized Referral Hospital
329	Tora Health Center	SNNP	Health Center
330	United Vision Higher Clinic	Addis Ababa	Private Higher Clinic
331	Wagirat Health Center	Tigray	Health Center
332	Wahil Health Center	Dire Dawa	Health Center
333	Walga Health Center	SNNP	Health Center
334	Water Health Center	Oromia	Health Center
335	Wokiye Health Center	SNNP	Health Center
336	Woldiya Hospital	Amhara	Zonal Hospital
337	Wolenchity Health Center	Oromia	Health Center
338	Wollo Higher Clinic	Amhara	Private Higher Clinic
339	Wonbera Health Center	Benishangul-Gumuz	Health Center
340	Wonji Hospital	Oromia	General Hospital
341	Woreda 13 Health Center	Addis Ababa	Health Center
342	Woreda 17 Health Center	Addis Ababa	Health Center
343	Woreda 18 Health Center	Addis Ababa	Health Center
344	Woreda 24 Health Center	Addis Ababa	Health Center
345	Woreda 25 Health Center	Addis Ababa	Health Center
346	Woreda 4/Beletshachew/	Addis Ababa	Health Center
347	Woreda 5 kebele18 Health Center	Addis Ababa	Health Center
348	Woreda 7 Health Center	Addis Ababa	Health Center
349	Woreta Health Center	Amhara	Health Center
350	Wukro Hospital	Tigray	Zonal Hospital
351	Yaye /Arbegona/ Health Center	SNNP	Health Center
352	Yeka Health Center	Addis Ababa	Health Center
353	Yekatit 12 Hospital	Addis Ababa	General Hospital
354	Yemariamwork Higher Clinic	Dire Dawa	Private Higher Clinic
355	Yemoj Higher Clinic /Harrar/	Harari	Private Higher Clinic
356	Yichila Health Center	Tigray	Health Center

357	Yirba Health Center	SNNP	Health Center
358	Yirgalem Hospital	SNNP	Zonal Hospital
359	Yordanos Higher Clinic	Addis Ababa	Private Higher Clinic
360	Zalanbesa Health Center	Tigray	Health Center
361	Zenbaba General Hospital	Addis Ababa	General Hospital
362	Zewditu Hospital	Addis Ababa	General Hospital

Annex VI Availability of some important services at the health facilities surveyed (EHFS,

No	Name of health facility	Region	Any staff trained in both pre- & post test counseling	VCT (CT) for all women	Proportion on with system & iter to supp ART
1	Abiadi Hospital	Tigray	Y	N	N
2	Abomsa Health Center	Oromia	Y	N	N
3	Adaba Health Center	Oromia	Y	N	N
4	Adama Hospital	Oromia	Y	N	Y
5	Addiet Health Center	Amhara	Y	N	N
6	Addis Hiwot Higher Clinic	Amhara	Y	N	N
7	Addis Hiwot Hospital	Addis Ababa	Y	N	N
8	Addis Hospital	Addis Ababa	Y	N	N
9	Addis Ketema Health Center	Addis Ababa	Y	N	N
10	Addis Zemen Health Center	Amhara	Y	N	N
11	Adigrat Hospital	Tigray	Y	N	Y
12	Adiremetse Health Center	Tigray	Y	N	N
13	Adishahu Health Center	Tigray	Y	N	N
14	Adola /Kibremengist/ Health Center	Oromia	Y	N	N
15	Adwa Health Center	Tigray	Y	N	N
16	Adwa Hospital	Tigray	Y	Y	N
17	Africa No 6 Higher Clinic	Addis Ababa	Y	N	N
18	Air Force Hospital	Oromia	Y	N	Y
19	Ajee Health Center	Oromia	Y	N	N
20	Akaki Health Center	Addis Ababa	Y	N	N
21	Alamata Health Center	Tigray	Y	N	N
22	Alamata Hospital	Tigray	Y	N	N
23	Aldina Higher Clinic	Addis Ababa	Y	N	N
24	Alert Hospital	Addis Ababa	Y	N	Y

25	Amanual Hospital	Addis Ababa	Y	N	N
26	Ambo Hospital	Oromia	Y	N	Y
27	Amdework Health Center	Amhara	Y	N	N
28	Amede Higher Clinic	Addis Ababa	Y	N	N
29	Ameya /Ela Amaya/ Health Center	SNNP	Y	N	N
30	Anbessame Health Center	Amhara	Y	N	N
31	Anfilo Health Center	Oromia	Y	N	N
32	Arba Minch Hospital	SNNP	Y	N	Y
33	Arbaminch Health Center	SNNP	Y	N	N
34	Arbaya Health Center	Amhara	Y	N	N
35	Armed Forces General Teaching Hospital	Addis Ababa	Y	N	Y
36	Asasa Health Center	Oromia	Y	N	N
37	Asossa Health Center	Ben-Gumz	Y	N	N
38	Asossa Hospital	Ben-Gumz	Y	N	Y
39	Assela Health Center	Oromia	Y	Y	N
40	Assela Higher Clinic	Oromia	Y	N	N
41	Assela Hospital	Oromia	Y	Y	Y
42	Ataye Health Center	Amhara	Y	N	N
43	Atinago Health Center	Oromia	Y	N	N
44	Atsbi Health Center	Tigray	Y	N	N
45	Attat Hospital	SNNP	Y	Y	N
46	Awash Higher Clinic	Oromia	Y	N	N
47	Awash Sevat Kilo Health Center	Afar	Y	N	N
48	Awassa Army Hospital	SNNP	Y	Y	N
49	Awassa Haik Poly Clinic	SNNP	Y	N	N
50	Awelia Health Center	Addis Ababa	Y	Y	N
51	Axum St. Mary hospital	Tigray	Y	Y	Y
52	Ayira Guliso Health Center	Oromia	Y	Y	N
53	Ayira Hospital	Oromia	Y	N	N
54	Aysaita Health Center	Afar	Y	N	N
55	B.G.M Hospital	Addis Ababa	N	N	N
56	B.Sacore Higher Clinic	Oromia	Y	N	N
57	Babile Health Center	Oromia	Y	N	N
58	Bahirdar Health Center	Amhara	Y	N	N
59	Balcha Hospital	Addis Ababa	Y	N	N
60	Bambesi Health Center	Benl-Gumz	Y	N	N

61	Bati Higher Clinic	Amhara	Y	N	N
62	Beddesa Health Center	SNNP	Y	N	N
63	Bedeno health Center	Oromia	Y	N	N
64	Bedesa Health Center	Oromia	Y	N	N
65	Bella Hospital	Addis Ababa	Y	N	Y
66	Belle Health Center	SNNP	Y	N	N
67	Betelhem Solidarity Higher Clinic	SNNP	Y	N	N
68	Bethel Higher Clinic	SNNP	Y	N	N
69	Bethel Teaching Hospital	Addis Ababa	Y	N	N
70	Bethezatha Higher Clinic	Addis Ababa	Y	Y	Y
71	Bethezatha Hospital	Addis Ababa	Y	N	N
72	Betto Health Center	SNNP	N	N	N
73	Beza Higher Clinic	Tigray	Y	N	N
74	Bichena Health Cener	Amhara	Y	N	Y
75	Bilal Hospital	Dire Dawa	Y	Y	N
76	Bishoftu Health Center	Oromia	Y	N	N
77	Bisidamo Hospital	Oromia	Y	N	Y
78	Bisuftu Hospital	Oromia	Y	N	N
79	Biyo Awale Health Center	Dire Dawa	Y	Y	N
80	Blen Higher Clinic	Oromia	Y	N	N
81	Boke Health Center	Oromia	Y	N	N
82	Bole Dildiy Higher Clinic	Addis Ababa	Y	N	N
83	Bonga Hospital	SNNP	Y	N	N
84	Bonga Refugee Health Center	Gambela	N	N	N
85	Boru Meda Hospital	Amhara	Y	Y	N
86	Brass MCH Clinic	Addis Ababa	Y	N	N
87	Brook Higher Clinic	Addis Ababa	Y	Y	N
88	Bullen Health Center	Ben-Gumz	N	N	N
89	Bulshana Health Center	SNNP	Y	N	N
90	Bure Bulshana	SNNP	Y	N	N
91	Bure Health Center	Amhara	Y	N	N
92	Bure Health Center	Oromia	Y	N	N
93	Burka Health Center	Oromia	Y	N	N
94	Butajira Hospital	SNNP	Y	N	Y
95	Central Higher Clinic	Dire Dawa	N	N	N
96	Chancho Health Center	Oromia	Y	N	N

97	Cheffa Robit Health Center	Amhara	Y	N	N
98	Cheiro Hospital	Oromia	Y	N	N
99	Chelenko Health Center	Oromia	Y	N	N
100	Chenca Hospital	SNNP	Y	N	N
101	Chifra Health Center	Afar	N	N	N
102	Dabat Health Center	Amhara	Y	N	N
103	Dagim Yilma Higher Clinic	Harari	N	N	N
104	Dalocha Health Center	SNNP	Y	N	N
105	David higher Clinic-1	Oromia	Y	N	N
106	David Higher Clinic-2	Oromia	Y	N	N
107	Debark Health Center	Amhara	Y	Y	N
108	Deber Markos Hospital	Amhara	Y	N	Y
109	Debre Birhan Zonal Hospital	Amhara	Y	N	Y
110	Debre Tabor Health Center	Amhara	Y	N	N
111	Debre Tabor Hospital	Amhara	Y	N	N
112	Deder Hospital	Oromia	Y	N	N
113	Dejen Army Hospital / Mekele	Tigray	Y	N	N
114	Dejen Health Center	Amhara	Y	N	N
115	Dembidolo Health Center	Oromia	Y	Y	N
116	Dembidolo Hospital	Oromia	Y	N	N
117	Dera Health Center	Oromia	Y	N	N
118	Dessie Referral Hospital	Amhara	Y	N	Y
119	Dessle Health Center	Amhara	Y	N	N
120	Dibate Health Center	Ben-Gumz	N	N	N
121	Digotsiyon Health Center	Amhara	Y	N	N
122	Dilchora Hospital	Dire Dawa	Y	Y	N
123	Dilla Hospital	SNNP	Y	N	Y
124	Dimberwa MCH Hospital	Addis Ababa	Y	N	N
125	Dimma Refugee Health Center	Gambela	Y	N	N
126	Dire Dawa Health Center	Dire Dawa	Y	N	N
127	Dodola Health Center	Oromia	Y	N	N
128	Dolo Ado Health Center	Somali	N	N	N
129	Dubbo St. Mary Hospital	SNNP	Y	N	N
130	Dubti Hospital	Afar	Y	Y	N
131	Edagaarbi Health Center	Tigray	Y	N	N
132	Emanuel Higher Clinic	Tigray	Y	N	N

133	Emanuel Higher Clinic	Oromia	Y	N	N
134	Empire Higher Clinic	Addis Ababa	Y	N	N
135	Endeber Health Center	SNNP	Y	N	N
136	Ener Amanuel Health Center	SNNP	Y	N	N
137	Enticho Health Center	Tigray	Y	N	N
138	Entoto Health Center	Addis Ababa	Y	N	N
139	Errer Health Center (Harari)	Oromia	Y	N	N
140	Errer Health Center (Oromia)	Somali	N	N	N
141	Errer Health Center (Somali)	Harari	Y	N	N
142	Estie Health Center	Amhara	Y	N	N
143	Ethio Djibouti Railway	SNNP	Y	N	N
144	Ethio Higher Clinic	Dire Dawa	N	N	N
145	Ethio-Beza Higher Clinic	Amhara	Y	N	N
146	Ethiopian Airlines Clinic	Addis Ababa	Y	Y	N
147	Ethiotebib Hospital	Addis Ababa	Y	N	N
148	Eyerusalem Higher Clinic	Amhara	Y	N	N
149	Felege Hiwot Regional Hospital	Amhara	Y	N	Y
150	Feresbet Health Center	Amhara	Y	N	N
151	Filtu Hospital	Somali	N	N	N
152	Finote Selam Hospital	Amhara	Y	N	Y
153	Fistula Hospital	Addis Ababa	Y	N	N
154	Fitche Hospital	Oromia	Y	N	Y
155	Gambella Hospital	Gambela	Y	N	Y
156	Gambi Higher Clinic-Bahir Dar	Amhara	Y	N	N
157	Gambo Hospital	Oromia	Y	N	N
158	Ganat Health Center	Oromia	Y	N	N
159	Gandhi Hospital	Addis Ababa	Y	N	N
160	Gecha Health Center	SNNP	Y	N	N
161	Gelemso Hospital	Oromia	Y	N	N
162	Gelila Health Center	Oromia	Y	Y	N
163	Gerino Health Center	SNNP	Y	N	N
164	Gesuba Health Center	SNNP	N	N	N
165	Gewanie Health Center	Afar	Y	N	N
166	Gibe Higher Clinic	Oromia	Y	N	N
167	Gidami Health Center	Oromia	Y	N	N
168	Gidolle Hospital	SNNP	N	N	N

169	Gimbi Adventist Hospital	Oromia	Y	Y	N
170	Gimbicho Health Center	SNNP	Y	N	N
171	Ginde Beret Hospital	Oromia	Y	N	N
172	Gindo Health Center	Oromia	Y	N	N
173	Ginir General Hospital	Oromia	Y	Y	N
174	Goba Hospital	Oromia	Y	N	Y
175	Gobesa Health Center	Oromia	Y	N	N
176	Godey Hospital	Somali	N	N	N
177	Gondar University Hospital	Amhara	Y	Y	Y
178	Gonder Defense Hospital	Amhara	Y	N	N
179	Gondor Health Center	Amhara	Y	N	N
180	Gore Health Center	Oromia	Y	N	N
181	Goro Health Center	Oromia	Y	N	N
182	Hagere Selam Health Center	Tigray	Y	N	N
183	HagereMariam /Bule Hora/Hospital	Oromia	Y	N	N
184	Harar Defense Hospital	Harari	Y	N	Y
185	Harar Police Hospital	Harari	Y	N	N
186	Haromaya Health Center	Oromia	Y	N	N
187	Hasangay Health Center	Harari	N	N	N
188	Hawzen Health Center	Tigray	Y	N	N
189	Hayat General Hospital	Addis Ababa	Y	N	N
190	Hibret Higher Clinic	Oromia	Y	N	N
191	Hidar 11/Akesta/ Hospital	Amhara	Y	N	N
192	Hirna Health Center	Afar	Y	N	N
193	Hiwot Higher Clinic /Hosana/	SNNP	Y	N	N
194	Hiwotfana Higher Clinic	Amhara	Y	N	N
195	Hiwotfana Hospital	Harari	Y	N	Y
196	Hora Higher Clinic	Oromia	Y	N	N
197	Hosana Hospital	SNNP	Y	N	Y
198	Hossana Health Center	SNNP	Y	Y	N
199	Huruta Health Center	Oromia	Y	Y	N
200	Ibinat Health Center	Amhara	Y	N	N
201	Inchini Health Center	Oromia	Y	N	N
202	Itang Health Center	Gambela	N	N	Y
203	Jacho Health Center	SNNP	Y	N	N
204	Jaja Health Center	Oromia	Y	N	N

205	Jarso Health Center	Oromia	Y	N	N
206	Jarte Health Center	Oromia	Y	N	N
207	Jatto Health Center	SNNP	Y	N	N
208	Jeldu Health Center	Oromia	Y	N	N
209	Jijiga Health Center	Somali	N	N	N
210	Jimma Army Hospital	Oromia	Y	N	N
211	Jimma Higher Clinic	Oromia	Y	N	N
212	Jimma University Hospital	Oromia	Y	Y	Y
213	Jinka Hospital	SNNP	Y	N	N
214	Kahsay Abera Hospital /Humera/	Tigray	Y	Y	Y
215	Kamashi Health Center	Ben-Gumz	Y	N	N
216	Karamara /Jijiga/ Hospital	Somali	Y	N	Y
217	Karamara Higher Clinic	Dire Dawa	N	N	N
218	Karat Health Center	SNNP	Y	N	N
219	Kasech Asfaw Health Center	Tigray	Y	N	N
220	Kazanchis Health Center	Addis Ababa	Y	N	N
221	Kebado /Dara/ Health Center	SNNP	Y	N	N
222	Kebribayah Health Center	Somali	N	N	N
223	Kechene Medhanealem Health Center	Addis Ababa	Y	N	N
224	Kelafo Health Center	Somali	N	N	N
225	Kelewan Health Center	Afar	N	N	N
226	Keto Health Center	Oromia	Y	N	N
227	Kidanemihrat Higher Clinic	Amhara	Y	N	N
228	Kidus Gebrel Higher Clinic /Axum/	Tigray	Y	N	N
229	Kirkos Health Center	Addis Ababa	Y	N	N
230	Kokosa Health Center	Oromia	Y	N	N
231	Kolabda Health Center	Amhara	N	N	N
232	Kon Health Center	Amhara	Y	N	N
233	Korean Hospital	Addis Ababa	Y	N	Y
234	Korem Health Center	Tigray	Y	N	N
235	Kosha Health Center	SNNP	Y	N	N
236	Koshe Health Centre	SNNP	Y	N	N
237	Kotebe Health Center	Addis Ababa	Y	N	N
238	Kuha Hospital	Tigray	Y	N	N
239	Lalibela Health Center	Amhara	Y	N	N
240	Lalibela Hospital	Amhara	Y	N	N

241	Lante Health Center	SNNP	Y	N	N
242	Larre Health Center	Gambela	N	N	N
243	Ledeta Health Center	Addis Ababa	Y	Y	N
244	Leku Health Center	SNNP	Y	N	N
245	Limu Hospital	Oromia	Y	N	N
246	Lisana Health Center	SNNP	Y	N	N
247	Maereg Hospital /Dansha/	Tigray	Y	N	Y
248	Maichew Health Center	Tigray	Y	N	N
249	Maichew Hospital	Tigray	Y	N	N
250	Maji Health Center	SNNP	Y	N	N
251	Marie Stops Higher Clinic	Addis Ababa	Y	N	N
252	Markos Higher Clinic	Tigray	Y	N	N
253	Masha Health Center	Amhara	Y	N	N
254	Masha Health Center	SNNP	Y	N	N
255	Medhanialem Higher Clinic	Oromia	Y	N	N
256	Mehal Amba Health Center	SNNP	Y	N	N
257	Mehal Meda Hospital	Amhara	Y	N	N
258	Mejo /Aroressa/ Health Center	SNNP	Y	N	N
259	Mekaneselam Health Center	Amhara	Y	N	N
260	Mekele Health Center	Tigray	Y	N	N
261	Mekele Hospital	Tigray	Y	N	Y
262	Mekoy Health Center	Amhara	Y	N	N
263	Melge Wondo Health Center	SNNP	Y	N	N
264	Melka Worer Health Center	Afar	N	N	N
265	Menge Health Center	Ben-Gumz	N	N	N
266	Menilik II Hospital	Addis Ababa	Y	N	Y
267	Merti Hospital	Oromia	Y	N	N
268	Mertolemariam Health Center	Amhara	Y	N	Y
269	Mesele Medium Hospital	Tigray	Y	N	Y
270	Metema Health Center	Amhara	Y	N	N
271	Metema Hospital	Amhara	Y	N	N
272	Meti /Godere/Health Center	Gambela	N	N	N
273	Metu Karl Hospital	Oromia	Y	N	Y
274	Midre Genet /Shire/ Hospital	Tigray	Y	N	N
275	Misrak Arbegnoch Hospital	Harari	Y	N	Y
276	Mizan Health Center	SNNP	Y	N	N

277	Mizan/Aman/ Hospital.	SNNP	Y	N	Y
278	MMD General Hospital .	Addis Ababa	Y	N	Y
279	Molale Health Center	Amhara	Y	N	N
280	Mota Health Center	Amhara	Y	N	N
281	Mota Rural Hospital	Amhara	Y	N	N
282	Mudula Health Center	SNNP	Y	N	N
283	Mulu Higher Clinic No 1	Addis Ababa	Y	N	N
284	My Semri Health Center	Tigray	Y	N	N
285	National/Sidhafagi/ Hospital	Afar	N	N	N
286	Nefas Mewcha Health Center	Amhara	Y	N	N
287	NefasSelk Lafto/Woreda19/Health Center	Addis Ababa	Y	N	N
288	Negela-Borena Hosipital	Oromia	Y	N	Y
289	Nekemte Hospital	Oromia	Y	Y	Y
290	Nolekaba Health Center	Oromia	Y	N	N
291	Olympic Higher Clinic	Addis Ababa	Y	N	N
292	Omochera Health Center	SNNP	Y	N	N
293	Oraga Health Center/Solema/	Oromia	Y	N	N
294	Pawe Hospital	Ben-Gumz	Y	N	N
295	Police Hospital	Addis Ababa	Y	N	Y
296	Oobo Health Center	Amhara	Y	N	N
297	Rabie Higher Clinic	Addis Ababa	N	N	N
298	Ras Desta Hospital	Addis Ababa	Y	N	N
299	Sagure Health Center	Oromia	Y	Y	N
300	Sayint Health Center	Amhara	Y	N	N
301	Selam Higher Clinic	Amhara	Y	N	N
302	Selkleka Health Center	Tigray	N	N	N
303	Senaye Higher Clinic	Addis Ababa	Y	Y	N
304	Shabe Health Center	Oromia	Y	N	N
305	Shamboo Hospital	Oromia	Y	Y	N
306	Shashemena Hospital	Oromia	Y	N	N
307	Sheraro Health Center	Tigray	Y	N	N
308	Shire /Endeselasie/ Health Center	Tigray	Y	N	N
309	Shiromeda health center	Addis Ababa	Y	N	N
310	Shishidina Health Center	SNNP	Y	N	N
311	Sodo Government Health Center	SNNP	Y	N	N
312	Sodo Government Hospital	SNNP	Y	N	N

313	Sodo Private Hospital	SNNP	Y	N	N
314	St. Gabriel General Hospital	Addis Ababa	Y	N	Y
315	St. Paul's Specialized Hospital	Addis Ababa	Y	N	Y
316	St. Peter Hospital	Addis Ababa	Y	N	N
317	St. Luke Hospital	Oromia	Y	Y	N
318	Sunshine Higher Clinic	Addis Ababa	Y	N	N
319	Tatessa Health Center	SNNP	Y	Y	N
320	TB Center Hospital	Harari	Y	N	N
321	Teda Health Center	Amhara	Y	N	N
322	Teferra Hailu Hospital	Amhara	Y	N	N
323	Tekur Wuha Medical Center Awassa	SNNP	Y	N	N
324	Tercha /Waka/District Hospital	SNNP	Y	N	N
325	Tesfa Higher Clinic	Addis Ababa	Y	N	N
326	Tezena General Hospital	Addis Ababa	Y	N	Y
327	Tibebu General Hospital	Addis Ababa	Y	N	Y
328	Tikur Anbesa Specialized Hospital	Addis Ababa	Y	N	N
329	Tora Health Center	SNNP	Y	N	N
330	United Vision Higher Clinic	Addis Ababa	Y	N	N
331	Wagirat Health Center	Tigray	Y	N	N
332	Wahil Health Center	Dire Dawa	N	N	N
333	Walga Health Center	SNNP	Y	N	N
334	Water Health Center	Oromia	Y	N	N
335	Wokiye Health Center	SNNP	Y	N	N
336	Woldiya Hospital	Amhara	Y	N	N
337	Wolenchity Health Center	Oromia	Y	N	N
338	Wollo Higher Clinic	Amhara	Y	N	N
339	Wonbera Health Center	Ben-Gumz	N	N	N
340	Wonji Hospital	Oromia	Y	Y	Y
341	Woreda 13 Health Center	Addis Ababa	Y	N	N
342	Woreda 17 Health Center	Addis Ababa	Y	N	N
343	Woreda 18 Health Center	Addis Ababa	Y	N	N
344	Woreda 24 Health Center	Addis Ababa	Y	N	N
345	Woreda 25 Health Center	Addis Ababa	Y	N	N
346	Woreda 4/Beletshachew/	Addis Ababa	Y	N	N
347	Woreda 5 kebele18 Health Center	Addis Ababa	Y	N	N
348	Woreda 7 Health Center	Addis Ababa	Y	N	N

349	Woreta Health Center	Amhara	Y	N	N
350	Wukro Hospital	Tigray	Y	N	N
351	Yaye /Arbegona/ Health Center	SNNP	Y	N	N
352	Yeka Health Center	Addis Ababa	Y	N	N
353	Yekatit 12 Hospital	Addis Ababa	Y	N	N
354	Yemariamwork Higher Clinic	Dire Dawa	N	N	N
355	Yemoj Higher Clinic /Harrar/	Harari	Y	N	N
356	Yichila Health Center	Tigray	Y	N	N
357	Yirba Health Center	SNNP	Y	N	N
358	Yirgalem Hospital	SNNP	Y	N	Y
359	Yordanos Higher Clinic	Addis Ababa	Y	N	N
360	Zalanbesa Health Center	Tigray	Y	N	N
361	Zenbaba General Hospital	Addis Ababa	Y	N	Y
362	Zewditu Hospital	Addis Ababa	Y	N	Y

Remark: N= not available and Y=Available

Annex VII GPS Maps showing distribution of Surveyed Health Facilities (EHFS, 2005)

