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USAID/ETHIOPIA PEPFAR MID-TERM EVALUATION OF THE INTEGRATED MANAGEMENT OF ADOLESCENT AND ADULT ILLNESS PROJECT

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USAID/Ethiopia PEPFAR Mid-term Evaluation of the Integrated Management of Adolescent and Adult Illness Project

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ACRONYMS

AIDS	Acquired immune deficiency syndrome
ANC	Antenatal care
ART	Antiretroviral therapy
CDC	[U.S.] Centers for Disease Control and Prevention
C&T	Counseling and testing
DOTS	Directly observed treatment, short course
EDHS	Ethiopia Demographic and Health Survey
FHI	Family Health International
FP	Family planning
HAPCO	HIV/AIDS Prevention and Control Coordinating Office
HC	Health center
HCSP	HIV/AIDS Care and Support Program
HEW	Health extension worker
HIV	Human immunodeficiency virus
ICAP	International Center for AIDS Care and Treatment Programs
IMAI	Integrated Management of Adolescent and Adult Illness
IMCI	Integrated Management of Childhood Illness
I-TECH	International Training and Education Center on HIV
L&D	Labor and delivery
M&E	Monitoring and evaluation
MOH	Ministry of Health
MSH	Management Sciences for Health
NGO	Nongovernmental organization
OI	Opportunistic infection
PEPFAR	[U.S.] President's Emergency Plan for AIDS Relief
PIHCT	Provider-initiated HIV counseling and testing
PLHA, PLWHA	People living with HIV/AIDS
PMTCT	Prevention of mother-to-child transmission
RHB	Regional Health Bureau
RPR	Rapid plasma reagin
SNNPR	Southern Nations and Nationalities Peoples Region
SOW	Scope of Work
STI	Sexually transmitted infection
TB	Tuberculosis
UNAIDS	Joint United Nations Program on HIV/AIDS
USAID	U.S. Agency for International Development
VCT	Voluntary counseling and testing
VDRL	Venereal Disease Research Laboratory
WHO	World Health Organization

Note on terms:

Woreda is an administrative division of Ethiopia managed by a local government, equivalent to a district. *Woredas* are composed of a number of *kebeles*, or neighborhood associations, which are the smallest unit of local government in Ethiopia. *Woredas* are typically collected together into zones.

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EXECUTIVE SUMMARY

This assessment represented a mid-term project evaluation of the Integrated Management of Adolescent and Adult Illness (IMAI) Project, which has been implemented in nine regions and two city administrations of Ethiopia since 2005. The IMAI Project has the overall goal of reducing the transmission and impact of HIV/ AIDS by strengthening treatment and care services, with the objective of utilizing IMAI to build the capacity for decentralized antiretroviral therapy (ART) services, including chronic disease management, within the ART network. The overall objective of this evaluation was to evaluate IMAI implementation (including successes and challenges) and the contribution of IMAI to the efficiency of HIV/ AIDS clinical teams at the health center (HC) level.

Based on the Scope of Work, review of key background documents, initial discussions with staff of the U.S. Agency for International Development (USAID), and priorities articulated during these discussions, the team focused on seven primary areas related to IMAI at the HC level:

- Integration of services within HCs, including integration of HIV prevention and care with other clinical services, such as tuberculosis (TB) care, sexually transmitted infection (STI) care, and care for pregnant women
- The Health Network Model, focusing on the establishment of effective linkages with higher medical levels (particularly local hospitals) and the community (home care, outreach, and other activities)
- Training, including the most recent National Comprehensive HIV Care and Treatment Course, previous IMAI training, and other HIV-related training
- Supportive supervision and mentoring, with a particular focus on the roles and contributions of the clinical mentors working with specific HCs and HIV care staff
- Staffing and provision of decentralized care, including issues related to task shifting, and human resource issues imposed by attrition and other challenges
- Data management, including the ability of the HCs to collect, analyze, and evaluate relevant data for monitoring and evaluation purposes
- Overall quality of HIV/ ART care at the HC level, with an assessment of both benefits and challenges related to the IMAI Project and recommendations for improvement

As part of this assessment, the team visited 20 HCs throughout Ethiopia selected by USAID and located in the Amhara, Harari, Oromia, and Tigray regions, the Southern Nations and Nationalities Peoples Region, and the city administrations of Addis Ababa and Dire Dawa. Several structured survey instruments were developed to collect both quantitative and qualitative data. These instruments collected information on HIV services offered after IMAI was introduced; the level of integration of HIV services within the HC; linkages with the referral hospital and the community; mechanisms of supportive supervision and mentoring; essential laboratory tests; the number of staff trained in IMAI (previous and current training versions); the attrition rate at each health facility among those trained; the number of clients seen for counseling and testing, prevention of mother-to-child transmission (PMTCT), HIV care, and receipt of ART; outcomes of patients on ART, including loss to follow-up; and organization and utilization of the monitoring system. Observations were made of clinical management of HIV patients at each HC in order to help assess the quality of HIV/ AIDS treatment services. Finally, a focused group discussion among those trained in IMAI asked participants for their opinion and understanding of the IMAI approach; their evaluation of the

training and IMAI tools; their assessment of post-training mentoring and supervision; and their recommendations for additional actions needed to implement IMAI at the HC level.

A summary of conclusions, lessons learned, and recommendations by specific areas is as follows:

A. Impact of IMAI on HIV Care, Treatment, and Support Services at the Health Center Level

IMAI has had many positive benefits for HIV-infected patients, including improved HIV care and access to ART, and in most HCs has been associated with significant increases in client utilization. IMAI has also had many positive benefits for HCs and their staff. At the same time, the clinical skills of most health workers at the HC level need significant improvement and support in order to provide quality HIV care and optimally implement the goals of IMAI. To provide quality care, clinicians at HCs need continued clinical mentoring, supervision and consultation to help identify and manage complications, side effects, and opportunistic infections (OIs), and to their improve clinical skills. Additional assessment of clinical skills and the quality of care provided at the HC level should be performed. To provide quality care will also require addressing the important issues of defaulters and ART adherence. Additional assessment of rates of and reasons for defaulters and loss to follow-up should be conducted.

B. HIV Care and Treatment Service Delivery at the Health Center Level

The level of integration of different services at HCs was variable. As a policy, provider-initiated HIV counseling and testing (PIHCT) is in general integrated throughout the HCs; however, voluntary counseling and testing services are not well integrated with PIHCT. As a policy, STI and HIV screening services are integrated. PMTCT services are well integrated in antenatal clinics, but implementation in the labor and delivery and postnatal settings is variable. The integration of TB and HIV services at the HC level is also variable. HIV education and prevention are provided for all HC patients. The medical management of OIs is not well integrated into the general HC, nor is ART management.

To improve HIV care and treatment service delivery at the HC, a multidisciplinary HIV team at the HC level should be encouraged and strengthened, and a designated focal person should be in charge of coordinating HIV services at the HC. Linkages between TB and HIV services should be strengthened, and PMTCT needs to be reinforced at all HC-related settings, including labor and delivery and under-5 child clinics. Although HIV and STI services are well integrated at HCs, all HIV patients should be screened routinely for syphilis with a non-treponemal assay. Finally, all clinicians working at should be able to recognize and provide basic management of OIs and other HIV-related conditions.

C. Linkage of Health Center Services with Other Levels of Care (Health Network Model)

The Health Network Model involves linkages between the HC and both the hospital and the community. In terms of linkages between the HC and the hospital, the evaluation team concluded that HCs have different criteria and standards for referring patients to local hospitals, and that hospitals have different criteria and standards for transferring patients to HCs. Some patients are reluctant to go to the HC instead of hospitals for HIV care because of stigma and fear they will be recognized. In general, there is poor communication between the HCs and hospitals on patient care issues. To help improve linkages between these levels of the health system, greater opportunities should be explored for interaction between clinicians at the HC and hospital. Criteria for transfer of hospital patients to HCs should be clarified, and hospital staff should be sensitized about the availability of ART at the HC. Factors that influence the low flow of patients at certain HCs should

be analyzed. Hospitals should provide written feedback on patients sent back to HCs, and catchment area or other meetings should include case discussions on problem patients and clinical situations.

In terms of linkages between the HC and the community, the team concluded that HCs have good relationships with their local communities and are interested in community outreach. In support of the Health Network Model, respondents strongly felt that HCs provide an appropriate and valuable link with the health posts and communities they serve. By providing closer linkage to the community, provision of ART through the HC is beneficial for promoting adherence and reducing the number of defaulters. Community counselors, case managers, and mother-to-mother support groups play an important role in linking the HC with the community and with defaulter tracing. However, the actual ability of HCs to conduct community outreach and home-based care is highly variable and depends upon the availability of community outreach workers and community volunteers. Community outreach staff lack adequate and sustainable support, and health extension workers have a large number of responsibilities and tasks and are not all sufficiently familiar with HIV care and outreach issues. To strengthen linkages between HCs and the community, all HC staff who interact with the community need additional and sustainable support in multiple areas. Community workers should be fully integrated into the HIV team. Continued supervision, mentoring, and training should be provided for those who provide home-based care. Community awareness about the availability of ART at HCs should be increased. Finally, greater involvement of HEWs in providing linkages with the health posts and community is recommended; this will require additional training and support.

D. Human Resource Development and Capacity Building

1. Staffing at the HC Level

In most HCs, the overall numbers of health officers, nurses, and pharmacy technicians were adequate for the number of patients currently receiving ART. However, attrition and turnover of staff, including those trained in HIV care, continue to be major challenges. HCs and the health system in general therefore need to do everything possible to recognize, support, and validate the work of all cadres at the HC who are part of the multidisciplinary team. For those staff who are already trained and working at HCs, additional strategies to avoid attrition of IMAI-trained staff should be explored and implemented.

Task shifting is an appropriate goal, with nurses and health officers providing primary ART/HIV care; multidisciplinary teams and teamwork are critical components of HIV care at the HC level. Task-shifting practices within an HC for HIV care should be encouraged. Comprehensive HIV training should be provided for new staff who will be involved in HIV care, and refresher training should be periodically offered for those who have previously received IMAI training. Greater support (including training and resources) needs to be provided to those who conduct community outreach, including case managers and other adherence supporters, as well as health extension workers. In order to help inform and empower those responsible for HIV prevention and care, HCs should have access to and analyze their local data. Finally, IMAI, Integrated Management of Child Illness, PMTCT, STI treatment, and other aspects of HIV prevention and care should be incorporated into the pre-service education curriculum/ training.

2. Training of HC Staff

Training is an integral part of IMAI. Clinicians who received the IMAI training felt that it was very beneficial and a positive experience. However, within a given cadre, only one or two staff typically were trained in IMAI, with no provision or diffusion of knowledge to other HC staff. There is a wide range of non-IMAI HIV training courses offered by different partners, and some clinicians (including nurses) received training in HIV care other than the National Comprehensive HIV Care and Treatment Course. In addition, those who have been trained in IMAI may no longer be providing comprehensive HIV care at the HC level. Besides clinicians, there is a need for training of other job classifications. Pharmacists and laboratory technicians felt that the training they received was insufficient.

The evaluation team had a number of recommendations concerning training. To better characterize training needs and gaps, training information should be routinely collected and reported every six months by HCs in order to focus on gap filling. The National Comprehensive HIV Care and Treatment Course training should be repeated on a regular basis for new staff; this course should be divided into three two-week modules. Training should include infection prevention and post-exposure prophylaxis. Training is an ongoing activity that should be continually reinforced. Refresher training should be offered to all previous trainees to update them on the latest information and guidelines. Of particular note, all clinical mentors should receive update training every six months for the latest on HIV care and treatment. Training content and IMAI tools should be periodically reviewed to ensure they are consistent with the latest information and guidelines. Standardization of HIV courses and training materials beside those offered as part of the IMAI program should be encouraged. Besides those clinicians directly involved in HIV care, all HC clinical staff should receive some basic training in HIV. In addition, pharmacists and laboratory technicians need comprehensive training from those experienced in their respective areas. Supervisors and managers from the health system and woreda also need training in both management skills and HIV technical skills.

3. Clinical Mentoring and Supervision:

Clinical mentoring plays a critical role in the scale-up and decentralization of ART to the HC level. Mentors need access to the latest information on HIV care and treatment. Clinical mentors have been difficult to recruit and retain. Those clinical mentors that are currently employed are stretched too thin, and the number of mentors is inadequate compared with need. Although eventually the HIV care system should be self-sustainable and HCs will need to transition to a system of greater internal mentoring, at present clinical mentors are still needed to scale-up and support HIV care at the HC level. During the scale-up phase, the clinical mentoring system should be strengthened, with greater numbers of clinical mentors, more resources, and decreased workloads. Clinical mentors should be at every ART site for approximately two days every two weeks and also be available by phone. The primary function of the clinical mentor should be mentoring and training; clinical mentoring should focus on problem-based clinical issues. Clinical mentors should have standardized supervision and a clearly defined work schedule, and should receive update training every six months to ensure that their knowledge and experience are current.

E. Availability of Resources and Commodities

To provide quality HIV care, HCs have many resource needs, including better access to drugs, test kits, lab reagents, and other supplies, IMAI tools and educational materials, computers and communications equipment, and space. Shortages of drugs and supplies are critical issues that need

to be addressed, and access to more free and low-cost available drugs at HCs needs to be expanded. HCs should have increased access to wall charts with the most recent IMAI guidelines, patient education materials, pocket guides, and other educational tools. HCs also should have improved computer and communications access.

F. Monitoring and Evaluation of HIV Care and Treatment

The evaluation team concluded that data management at the HC level needs significant improvement. HC data are hand-recorded and not computerized, leading to a limited ability at the HC level to summarize data and generate reports. Basic standard data need to be regularly analyzed at the local level, with reports routinely generated by and for the HC. To meet these needs, HCs need trained data managers. Data entry and management at the HC level also should be computerized. In addition, in some HCs, there are multiple reporting requirements, including those of donors/ external funders.

In follow-up planning discussions of issues raised in this evaluation, USAID will need to work closely with multiple partners to determine how to best collaboratively address the many critical issues that IMAI HIV/ AIDS in Ethiopia present, and maximize available resources. Fortunately, USAID is joined by a number of partner organizations in Ethiopia that are also interested in expanding HIV prevention, care and treatment. These include (but are not limited to) WHO and UNAIDS, other U.S. organizations such as CDC and the National Alliance of State and Territorial AIDS Directors, European and other organizations, the International Center for AIDS Care and Treatment Programs (Columbia University), Johns Hopkins University, the International Training and Education Center on HIV (University of Washington), implementing organizations such as MSH, Ethiopian and other nongovernmental and community-based organizations, and most importantly, the Ethiopian government and Ministry of Health. WHO is clearly a critical partner in implementing IMAI, and USAID should work closely with WHO as a full partner in follow-up evaluation and implementation discussions. USAID should also work closely with other implementing partners, including the Ethiopian Ministry of Health, MSH, and CDC. If this report helps to define what the most important challenges are for IMAI, and assists with the continued development of comprehensive and collaborative national strategies to address these critical health needs, then our team will have made a contribution to the overarching goal of improving the health and well-being of the Ethiopian people in meeting the challenge of this pandemic.

I. INTRODUCTION

This document represents a mid-term evaluation of the Integrated Management of Adolescent & Adult Illness (IMAI) Program in Ethiopia. All members of the evaluation team fully contributed to all aspects of this assessment, and actively participated in data collection as well as development of the conclusions and recommendations.

IMAI is intended to: integrate HIV care and prevention at all health care levels; strengthen health systems by providing training, tools for patient monitoring, clinical team building, clinical mentoring, and local planning; and support a team approach to patient care, with rapid expansion of human resources for HIV care. The conclusions and recommendations contained within this evaluation are directly related to improving the overall goals of IMAI as immediate or longer-term strategies.

When the team received the original Scope of Work, we expressed the need to prioritize among the many broad general questions that were raised, to assist us with our planning and reading of the background documentation. Two members of the team participated in a pre-departure conference call. When we arrived in Ethiopia, the entire evaluation team also participated in a one-hour briefing with the USAID, to identify which of many potential issues the team should focus on. Based upon the priorities articulated during this initial meeting, the team focused on the seven primary areas described in the Background section (Scope of Work). Additional areas of importance, such as a detailed cost-effectiveness analysis, may be the subject of future consultations.

The team was also asked to prioritize its evaluation on those HIV-related activities being conducted at the health clinic level. Visits were specifically scheduled at twenty health centers selected by USAID, and at which IMAI had already been introduced and was currently being implemented. As described in the report, health clinics visited by the team were asked to quantify performance in a number of areas, including in the year before and the year after IMAI was introduced. In terms of IMAI implementation at the hospital level, the specific focus of this evaluation requested by USAID was at the health center level; however, observations and recommendations were made by the team in terms of improving linkages between the health center and hospital.

IMAI represents the priorities of the government of Ethiopia, as well as a global strategy articulated by the World Health Organization, as part of national efforts to scale up HIV care and provision of antiretroviral therapy in Ethiopia. Since the President's Emergency Plan for AIDS Relief seeks to promote comprehensive responses to HIV/AIDS at the country level through coordinated action with local governments and international partners such as UNAIDS and WHO, the overall IMAI strategy is part of this coordinated response.

Ultimately, the question of whether IMAI is a good intervention is integrally related to the fundamental questions of how IMAI is being implemented in practice, and the barriers to successfully achieving its goals. This is the focus of our report, including our conclusions and recommendations concerning specific challenges to and strategies to improve IMAI implementation. As we describe throughout this evaluation, there are multiple issues related to IMAI that need to be addressed to optimize the ability of this important and critically needed approach to be successful. Thoughtful follow-up planning discussions will need to focus on how USAID can best address these issues. As one of the implementing partners of PEPFAR, USAID, by being aware of what these barriers are, can work with partner agencies to most effectively address them.

II. BACKGROUND

A. Scope of Work and Focus Areas of Investigation

In the full Scope of Work, the USAID/Ethiopia office of the President's Emergency Plan for AIDS Relief (PEPFAR) requested technical assistance to design and implement an independent mid-term project evaluation of the Integrated Management of Adolescent and Adult Illness (IMAI) Project. This project has been implemented since 2005 in nine regions (Amhara, Oromia, the Southern Nations and Nationalities Peoples Region [SNNPR], Tigray, Benishangul Gumuz, Harari, Gambella, Afar, and Somali), as well as two city administrations (Dire Dawa and Addis Ababa). As described in more detail below, the IMAI Project has the overall goal of reducing the transmission and impact of HIV/AIDS by strengthening treatment and care services, with the objective of utilizing IMAI to build the capacity for decentralized antiretroviral therapy (ART) services, including chronic disease management, within the ART network.

The overall objective of this evaluation was to evaluate IMAI implementation (including successes and challenges) and the contribution of IMAI to the efficiency of HIV/AIDS clinical teams at the health center (HC) level. The evaluation team was asked to collect information about and assess the contribution of IMAI training to improving the quality of HIV/AIDS care, support, and treatment services at the HC level, as well as the success and impact of IMAI in strengthening decentralized ART services and increasing access to care, support, and treatment services for persons living with HIV/AIDS. The team was also asked to formulate recommendations for program strengthening, program scale-up, and follow-on programs. Questions of interest included those related to program management, program accomplishments (including contributions of clinical mentors and linkages of HCs with the community and hospitals), quality of care and services, capacity building and sustainability, impact, monitoring and evaluation (M&E), and lessons learned.

Based upon the Scope of Work, review of key background documents, initial discussions with USAID staff, and priorities articulated during these discussions, the team focused on seven primary areas:

- Integration of services within HCs, including integration of HIV prevention and care with other clinical services, such as tuberculosis (TB) care, sexually transmitted infection (STI) care, and care for pregnant women.
- The Health Network Model, focusing on establishment of effective linkages with higher medical levels (particularly local hospitals) and with the community (home care, outreach, and other activities)
- Training, including the most recent National Comprehensive HIV Care and Treatment Course training, previous IMAI training, and other HIV-related training
- Supportive supervision and mentoring, with a particular focus on the roles and contributions of the clinical mentors working with specific HCs and HIV care staff
- Staffing and provision of decentralized care, including issues related to task shifting, and human resource issues imposed by attrition and other challenges
- Data management, including the ability of HCs to collect, analyze, and evaluate relevant data for M&E purposes
- Overall quality of HIV/ART care at the HC level, with an assessment of both benefits and challenges related to the IMAI Project and recommendations for improvement

B. Epidemiology of HIV/AIDS in Ethiopia

HIV/AIDS was first reported in Ethiopia in 1986. Since then, different estimates of the prevalence of HIV infection derived from Demographic and Health Surveys and antenatal sentinel surveillance have been reconciled into single-point HIV prevalence estimates. According to the estimates published in June 2007, the overall adult HIV prevalence for 2007 was 2.1%, including 1.7% in men and 2.6% in women. This translated to a total HIV-infected population in 2007 of almost 1 million (977,394) people, including 399,376 males and 578,018 females. By 2010, the estimated adult HIV prevalence will be 2.4% (1.9% in men and 2.9% in women), resulting in an estimated 1,216,908 HIV-infected persons. The 2007 estimated national HIV prevalence rate was 7.7% for urban areas (6.2% male and 9.2% female) and 0.9% for rural areas (0.7% male and 1.1% female). Although rates are higher in urban areas, the greater numbers of Ethiopians living in rural areas (about 84% of the total population) results in a significant number of HIV-infected persons living in both urban and rural areas. In 2007, an estimated 602,740 HIV-infected Ethiopians were living in urban areas and 374,654 in rural areas. By 2010, an estimated 760,475 HIV-infected Ethiopians will be living in urban areas and 456,432 in rural areas. HIV infection is located in every region of Ethiopia, in both urban and rural areas. The numbers of people currently living with HIV/AIDS (2007 estimates) by region/ municipality are as follows: Amhara: 318,291; Oromia: 236,808; Addis Ababa: 156,577; SNNPR: 132,410; Tigray: 69,662; Somalia: 21,279; Afar: 16,445; Dire Dawa: 10,999; Benishangul: 7,129; Harari: 3,911; and Gambella: 3,885. In 2007, there were an estimated 125,528 new HIV infections, including 77,557 in urban areas and 47,971 in rural areas; of all new infections, 14,148 were in newborns. An estimated 137,494 new infections will occur in 2010, including 58,056 in men and 79,438 in women. The greatest numbers of new infections are expected to occur in the Amhara (38,491) and Oromia (28,523) regions; Addis Ababa (21,585); and SNNPR (18,739).

HIV has a particularly significant impact on young women in Ethiopia. The group with the highest HIV prevalence in Ethiopia is women aged 15 to 24 years (compared with 25 to 29 as the highest-prevalence age range for men), and the peak age for AIDS cases in women is 20 to 29 years (compared with 25 to 34 years for men). In 2007, there were an estimated 75,420 HIV-positive pregnant women, who gave birth to an estimated 14,148 HIV-infected children. The greatest numbers of HIV-infected women are in the Amhara (26,206) and Oromia (20,798) regions. By 2010, there will be an estimated 90,311 HIV-infected pregnant women. Ethiopia currently has an estimated 64,136 HIV-infected children aged 0 to 14 years, including 38,988 in urban areas and 25,825 in rural areas. By 2010, the country will have an estimated 79,871 HIV-infected children.

Among the infected, HIV continues to exact a significant toll in terms of morbidity and mortality. An estimated 71,902 persons died of HIV/AIDS in 2007, including 31,518 men and 40,744 women; 27,217 deaths were in Amhara region and 17,570 in Oromia region. As one reflection of the impact of HIV-related mortality, in 2007 Ethiopia had 898,350 AIDS orphans who had lost one or both parents to AIDS. In order to reduce the number of HIV-infected people who die of AIDS, Ethiopia has made a major commitment to scaling up provision of ART. In 2007, an estimated 258,264 Ethiopians needed ART, including 242,548 adults and 15,716 children. By 2010, an estimated 397,818 persons will need ART, including 26,053 children. The estimated total ART needs by region/ municipality for 2007 were as follows: Amhara: 87,484; Oromia: 61,795; Addis Ababa: 41,433; SNNPR: 34,254; Tigray: 16,632; Somalia: 5,448; Afar: 4,339; Dire Dawa: 3,028; Benishangul: 1,716; Harari: 1,083; and Gambella: 1,052. Free HIV care, including ART, was launched in January 2005. By May 2008, 140,390 persons had been started on ART (representing about 48% of the national need), and 103,145 were still on ART. Of those on ART, 95% were adults and 5% were children.

C. IMAI Overview

IMAI is a health care strategy promoted by the World Health Organization (WHO) that stresses that HIV/AIDS services must be integrated into the public health system in order to increase access for patients and communities. IMAI promotes a chronic care model that includes the overall health of the patient. ART, prevention, and other HIV-related needs are in many cases transitioned down to primary health care facilities with limited resources, with referral and back-referral to local hospitals as indicated. IMAI is intended to integrate HIV care and prevention, increasing the provision and uptake of preventive interventions. The system is intended to strengthen health systems by providing training, tools for patient monitoring, clinical team building, clinical mentoring, and local planning. IMAI supports a team approach to patient care, along with patient partnership, inclusion of “expert patients”/peer support staff on the clinical team, and effective adherence support. This approach is intended to permit rapid expansion of human resources for HIV care while providing the skills and clinic capacity for effective management of other chronic illnesses. WHO supports these efforts with training materials, technical assistance, and M&E. Other components of IMAI include:

- Acute care, with a syndromic approach to the most common adult illnesses, including most opportunistic infections (OIs), and clear instructions so that health workers know which patients can be managed at the first-level facility and which require referral to higher levels.
- Chronic HIV care, which includes patient education, psychosocial support, “prevention for positives,” clinical staging, OI prophylaxis, preparation for ART, clinical monitoring, management of ART side effects, adherence preparation and support, management of other chronic problems, and data collection based on a simple treatment card.
- Palliative care, with management of symptoms during acute or chronic illness; education of the patient, family, and community caregiver to provide care at home; and end-of-life care. The IMAI approach assumes that much of the care will be given by the patient’s family with backup by multipurpose health workers at first-level facilities.
- Integration of HIV with other health issues. One area of particular emphasis is integration of HIV and TB, including HIV testing in TB patients and co-management of TB-HIV, including ART and adherence to both TB and HIV treatments.

WHO promotes similar principles for Integrated Management of Childhood Illness (IMCI), including integrated HIV prevention, care, and treatment within basic primary care.

D. National Ethiopian Plan for Comprehensive HIV Care and IMAI

In January 2005, the government of Ethiopia launched a program to provide free ART. The “Accelerating Access to HIV/AIDS Treatment in Ethiopia Road Map for 2004-2006” was finalized in May 2005 and stressed the importance of embedding ART into a comprehensive HIV/AIDS treatment and care approach. Central to this national plan was a network model that included linkages among national and regional hospitals, district hospitals, HCs, and health posts/ community health services. The road map also proposed to strengthen and expand entry points and linkages among HIV services, including counseling and testing (C&T) and prevention of mother-to-child transmission (PMTCT) services; TB clinics; STI services; other outpatient clinics; and inpatient services. A strengthened and trained group of health workers was also seen as critical to this expansion. A second road map for 2007-2008 continued this focus, with guiding principles that included:

- Social mobilization and communication
- Effective implementation of the Health Network Model, resulting in a continuum of care
- Prevention
- Building the ART pipeline for universal access by 2010
- Capacity building with a specific emphasis on human resources
- Supply management of drugs and medical supplies
- Strengthened laboratory capacity and supply management
- M&E, information technology management, and quality assurance
- Management and coordination
- A more sustainable approach with a specific emphasis on financial management

Scaling up the ability of HCs to provide ART and the transfer of ART patients from hospitals to HCs were important priorities in terms of the Health Network Model and the continuum of care. To strengthen community linkages, the national plan also relied upon health extension workers (HEWs), community volunteers, and referrals from facilities back to community-based organizations. Also key to this strategic objective was human resource strengthening, including task shifting and training. Quality assurance mechanisms included establishing national standards/ systems for clinical mentoring situated within the Health Network Model, integrated with other primary health care and communicable disease mentoring systems, and deployment of clinical mentors, including at the HC level. The road map also called for accelerated enrollment in comprehensive HIV/ AIDS care and treatment through established mechanisms for intra- and interfacility linkages. Key activities to implement comprehensive HIV/ AIDS care and treatment included developing guidelines that facilitated appropriate OI diagnosis, treatment, and prophylaxis, and ensuring linkage back to the community to foster adherence and trace those lost to follow-up. Additional priority areas included identification of patients requiring change to second-line ART, provision of integrated palliative care, and expansion of pediatric HIV care and treatment. Critical to expanded HIV/ AIDS service delivery capacity were human resource development, requiring both in-service and pre-service training, and implementation of a retention strategy for health professionals as part of a national “Treat, Train, and Retain” initiative.

The HIV/ AIDS Care and Support Program (HCSP) in Ethiopia is committed to coordinating with PEPFAR activities to expand comprehensive HIV and TB diagnostic and treatment services to 550 HCs throughout the country; of these, 393 will provide basic HIV-TB services plus symptomatic and palliative care, and 300 will provide a full range of ART services. As of 2007, ART was offered at 272 sites, including 117 hospitals and 148 HCs. From 2006 to 2007, the number of HCs offering ART almost doubled (from 77 to 148), indicating the rapid pace of scale-up of HIV care and treatment at HCs. As of June 2008, comprehensive HIV and TB C&T services were available at 398 HCs (target = 450) and 239 HCs offered comprehensive ART services (target = 240); of these HCs, 124 began offering ART services within the previous year.

Ethiopia’s HCSP was awarded to Management Sciences for Health (MSH) and its partners on June 15, 2007. MSH has been working with USAID, WHO, and other partners on this project, and is building upon work previously done in this area by Family Health International (FHI). To support rapid scale-up, 1,446 health workers were trained in HIV and TB C&T curricula, and 1,907 health workers were trained with IMAI/ clinical care and ART curricula. The program has deployed 232 case managers to support care and strengthen referrals among HCs, hospitals, and community

services. An additional 1,402 outreach workers were trained in community and household HIV prevention, care, and treatment promotion. HCSP has been providing technical support to the HCs, including mentoring, multidisciplinary teams and catchment area meetings for HCs where ART is provided. The goal is an ART network that fosters a smooth transition of patients from hospitals to HCs to community-level care and support services and back again as needed by individual patients and families.

III. METHODOLOGY

A. Data Collection: Institutions/Sites Visited

After initial introductory and orientation meetings with USAID, WHO, and MSH, the six members of the evaluation team divided into three groups of two. Collectively, the team visited 20 HCs throughout Ethiopia. These HCs had previously been identified by USAID as sites where IMAI had been implemented and were located in the regions of Amhara, Harari, Oromia, SNNPR, and Tigray, and the city administrations of Addis Ababa and Dire Dawa. Data collection was conducted by the three different teams during a period of eight days in order to be able to spend one full day with each facility. The majority of HCs were located in urban settings and the catchment areas for these centers varied from populations of approximately 17,000 to more than 150,000. A complete itinerary of sites visited and a map of the locations of these HCs are included in the Appendix. These are summarized in the table below.

Table 1: Sites visited by IMAI evaluation team

Health Center	Woreda*
Addis Ababa	
Yeka	Addis Ababa
Woreda 24	Addis Ababa
Amhara	
Debre Markos	Debre Markos
Bahir Dar	Bahir Dar
Injibara	Injibara
Addis Zemen	Libokemkem
Kemise	Kemise
Kombolcha	Kalu
Dire Dawa	
Legehare	Legehare
Melka Jebdu	
Harari	
Haramaya	Haramaya
Oromia	
Gerbe Gurach	
Hirna	Tulo
Sendafa	Sendafa
Sheno	Noshoagum

SNNPR	
Areka	Areka town
Hossana	Hidya
Worabe	Werabe
Tigray	
Alamata	
Mekele	Qedamai, Woyane

[Woreda is an administrative division of Ethiopia (managed by a local government), equivalent to a district. Woredas are composed of a number of Kebele, or neighborhood associations, which are the smallest unit of local government in Ethiopia. Woredas are typically collected together into zones.]

B. Summary of Data Collection Instruments Used

The methodology for this project included collection of both quantitative and qualitative data. In order to help assess the process of scaling up IMAI at the HC level and to determine the success of this scale-up in strengthening ART services, several structured questionnaires were developed. Copies of all survey instruments and other data collection materials are included in the Appendix. Each survey instrument is briefly summarized below. All information collected was compiled on a daily basis, using synthesis tables and spreadsheets developed for this purpose.

Form A -- General Assessment of Health Facility: This survey instrument asked about HIV services offered at the HC after IMAI was introduced; the level of integration of HIV services within the HC; and linkages of the HC with the referral hospital and community. The survey also asked about existing mechanisms of supportive supervision and mentoring, supply management, and availability of essential laboratory tests at the HC since the IMAI approach was implemented.

Form B -- WHO/IMAI Training: This instrument asked about the number of staff trained, including the number trained on the previous IMAI and the number trained with the new National Comprehensive HIV Care and Treatment Course. Information was collected by job category or cadre, and different categories of trainees were asked about their current responsibilities for HIV care. Information was also collected at each health facility on the attrition rate among those trained.

Form C -- Monitoring of HIV Care and ART: This survey instrument collected specific data on the numbers of patients accessing specific HIV services. This included the volume of clients seen for C&T, PMTCT, pre-ART evaluation, and ART treatment. In each of these areas, HCS were asked to supply the numbers of clients seen for the year before and the year after the introduction of IMAI. Data were also collected on outcomes of patients on ART, including the number lost to follow-up. Questions also asked about the organization and utilization of the data monitoring system at the HC level.

Form D -- Evaluation of Clinical Care: Observation Checklist: At each HC, observations were made of clinical management of HIV patients. This helped the team assess the contribution of IMAI to improved quality of HIV/AIDS care, support, and treatment services. Team members filled out a checklist on various aspects of clinical management at the HC and also recorded their more qualitative observations on the quality of patient care.

Form E -- Group Discussion: At each HC, a group discussion was held with all staff trained on IMAI. A focused interview with open-ended qualitative questions was conducted asking participants for their opinion and understanding of the IMAI approach; their evaluation of the IMAI training courses (including what they liked and disliked); their opinion about IMAI tools; their assessment of mentoring and supervision received after training; and their recommendations for additional actions needed to help implement and improve IMAI.

C. Comment on Quality of Data from Sites

Although sites in general tried to be as helpful as possible, the team encountered a number of problems in obtaining data for this evaluation. There were multiple reasons for these difficulties. Some data were not compiled (as in monthly reports) and had to be extracted from registration books or other handwritten records by manual counting. Although the evaluation team strongly supports the overall conclusions and recommendations in this report, specific numerical totals for specific questions need to be interpreted with some caution. In some cases, numbers reported in various subcategories did not add up to the total. For example, although the numbers currently on ART should reflect the number started on ART minus losses to follow-up, deaths, and transfers, these figures did not always add up. Finally, although both qualitative and quantitative data were collected, in some cases the quantitative data did not support what was reported qualitatively. For example, an HC might report that it was their policy to perform HIV screening on all TB patients, but a review of the actual records in selected HCs revealed that not all TB patients had been screened. Recommendations for improvement of data collection and ways to improve M&E at the HC level are included as part of the team's recommendations.

IV. RESULTS

A. Decentralization Process to Deliver HIV Services/ART at the Health Center Level

The public health approach to ART and OI management, based on simplified clinical decision making, standardized treatment guidelines, a limited set of laboratory options, and a limited set of therapeutic options, was found in all the facilities visited.

1. HIV services offered at HC level since the introduction of IMAI:

IMAI was introduced into the majority of HCs approximately two years ago; the maximum period of implementation of IMAI in the HCs visited was 26 months (at Kemisse and Injibara HCs in the Amhara region). Services provided in the majority of facilities after the IMAI training or the National Comprehensive HIV Care and Treatment Course included prophylaxis and management of OIs, TB-HIV co-management, palliative care, and ART in adults, including adherence counseling. Although in general HIV clinical management started with the introduction of IMAI, five out of the 20 HCs were already offering HIV care before the introduction of IMAI; Kombolcha HC (Amhara) was the only HC providing ART before IMAI. In those facilities offering HIV care before IMAI, health officers and nurses were trained in basic ART by FHI in 2005 and the International Training and Education Center on HIV (I-TECH) in 2006. Palliative care and psychological support was not present in all the HCs visited. The HIV care team at many HCs expressed concern about the lack of nutritional support, very much demanded by HIV patients. Although C&T generally preceded IMAI by some time period, the Areka HC (SNNPR) had offered C&T for only two years, since the time IMAI was introduced.

IMCI was also present in all HCs. None of the facilities were able to manage HIV-infected children before IMAI. Pediatric ART was present in six out of the 20 HCs visited, and 10 were offering pediatric HIV care, with a total of nine and 94 children respectively. Although a PMTCT program was present in most HCs, five did not have one.

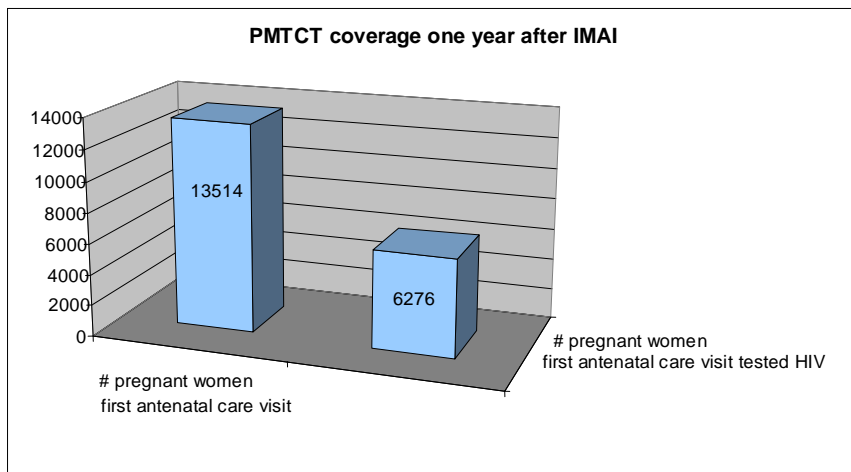
2. Access and coverage of HIV prevention, care, and treatment:

Ethiopia is trying to accelerate the scale-up of comprehensive HIV prevention, care, and treatment under the national theme of “Speed-Volume-Quality.” The number of HIV patients receiving acute and chronic HIV care (including ART) varied a great deal among HCs. For example, Addis Zemen (Amhara region), where IMAI was implemented two years ago, had evaluated 12,940 HIV-infected patients, with 370 started on ART. In contrast, Melka Jebdu (Dire Dawa), where IMAI was introduced one year ago, had evaluated only 44 HIV patients, with 30 started on ART. In fact, all sites visited in SNNPR and Harari had about 60 patients or fewer on ART (with only eight patients at the Hossana HC). This may in part be because of the nearby locations (ranging from 14 km to 500 meters away) of referral hospitals also providing HIV care and ART. In contrast, all sites in the Amhara region had more than 100 patients on ART, with a maximum of 476 patients having been started on ART at the Injibara HC. The volume of patients receiving HIV care at nine clinics already managing OIs increased from 15,048 the year before IMAI was introduced to 33,155 one year later.

Although HCs qualitatively reported widespread availability of PMTCT at their sites, a review of the actual data suggested that this coverage was more variable. As shown in figure 1, less than 50% of pregnant women attending their first antenatal care visit were tested for HIV; among HIV-positive mothers, only 31.5% received ART prophylaxis. Two areas of particular concern where coverage was lacking were labor and delivery (L&D) and postnatal settings. For example, in some HCs,

although routine screening at L&D was done during the day, it was not done at night because laboratory technicians to perform the test were not available. In some HCs, it does not appear that women and children seen in postnatal settings (such as immunization and under-5 clinics) are tested.

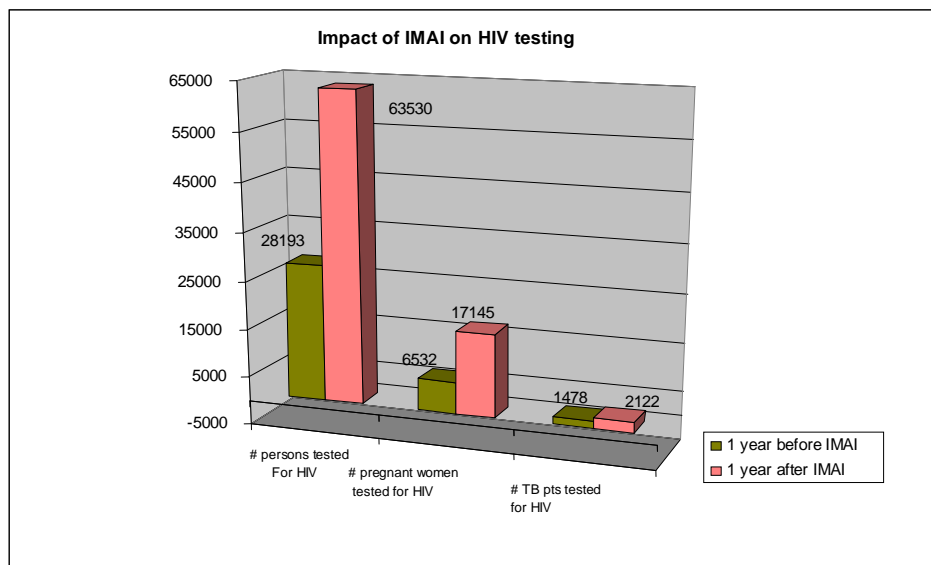
Figure 1. Pregnant women tested for HIV after introduction of IMAI



3. Integration of HIV care with other services at HC level:

HIV services that were in general well integrated within the HCs included prevention of HIV transmission through HIV education and C&T. Activities related to control and management of STIs were also generally well integrated. All HCs have policies and procedures for providing HIV prevention education to their general clinic patients. Typically, this is done by showing a video or giving a talk on HIV prevention in the general waiting areas before patients are seen for their individual clinic appointments. HIV C&T was offered as both client-initiated VCT and provider-initiated C&T. As shown in figure 2, since the introduction of IMAI, the number of people tested for HIV has significantly increased.

Figure 2. Volume of HIV testing before and after introduction of IMAI



In the majority of HCs, there was poor linkage between the VCT unit and other services offering C&T. HC policies are for provider-initiated HIV counseling and testing (PIHCT) to be widely available throughout HCs and offered in conjunction with multiple different clinical services. HCs typically reported that it was their policy for HIV C&T to be routinely offered to those diagnosed with TB, STIs, and other indicator diseases, as well as to all women seen in antenatal clinics. However, data from some sites indicated that not all such patients were being routinely screened. A number of clinics (but not all) indicated that it was their policy for PIHCT to also be offered to all clients seen at family planning clinics and to children seen at immunization and under-5 clinics. Some, but not all, clinics indicated that it was their policy for PIHCT to also be offered on an opt-out basis to all clients attending any outpatient clinic; however, the frequency and consistency with which this was done was uncertain. In most locations, blood was drawn in the clinic, but the actual rapid test was done in the main laboratory.

The management of STIs through a syndromic approach was fully integrated into HC outpatient departments. The majority of facilities mentioned that it was their policy to screen all HIV patients for STIs (asking about signs and symptoms of illness), and conversely, for HIV testing to be routinely offered to all patients with STIs. Laboratory screening for asymptomatic STIs is not performed at HCs; with several exceptions, HCs do not routinely screen HIV-infected patients with a serologic test for syphilis.

HC policies are for all HIV patients to be screened for TB symptoms at the initial visit and for diagnostic tests (such as sputum smears for acid-fast bacilli) to be performed on those with a positive symptom screen. HC policies are also for all TB patients to be screened for HIV, although a review of actual HC records indicated that in some clinics, some TB patients did not have a record of having been screened for HIV. Data collected by the evaluation team at some HCs found that 65% or fewer of TB patients were screened for HIV. Tuberculin skin testing and/or provision of isoniazid preventive therapy are not done at HCs due to the large numbers of people who have latent TB infection (a resource issue) and to concerns that placing people with unrecognized active TB on an isoniazid-only drug regimen would lead to the emergence of TB drug resistance. Some clinics also reported shortages of key TB drugs, including isoniazid. HIV and TB care is typically provided at the HC level by different providers and at different clinics. HIV-positive patients who develop TB are placed on TB drug regimens in accordance with national treatment recommendations. In some HCs, especially for those patients who are already on ART or who are eligible for ART, the HIV and TB clinical services consult on the provision of drug regimens. However, once patients are placed in TB treatment, they are very typically followed by the TB clinic and the nurse administering directly observed treatment, short course (DOTS) TB therapy. In most HCs, this nurse is a member of the HIV multidisciplinary team.

Clinical management of other OIs was not integrated into the general HC. Respondents at a majority of HCs indicated that if an HIV-infected patient presented with a suspected OI, they would be either be referred to the HIV clinic for medical management or (in the case of more severe OIs) to the nearby hospital. For the small number of HCs where there was a physician, such cases were more often referred to the physician for medical management.

B. Availability of Supplies and Commodities

At virtually every HC visited by the evaluation team, a shortage of drugs was cited as a significant concern. HCs are able to provide free ART to patients who need these drugs. In all but two HCs (which had low numbers of patients on ART), antiretroviral drugs were dispensed at a designated ART pharmacy. Some HCs were not yet using fixed-combination ART drugs only because

individually packaged drugs were about to expire and were being used first. In some sites, ART syrups for children were also lacking. In terms of OI prophylaxis, only cotrimoxazole is covered for free in the ART pharmacy. Other drugs for OI prevention and treatment, including fluconazole, acyclovir, and routine antibiotics (such as those needed for treatment of bacterial pneumonia) must be purchased from the general HC pharmacy (if available). Because of stock-outs or lack of availability of these drugs, patients are sometimes given prescriptions for them and must purchase them from private pharmacies. Lack of STI treatment drugs represented another frequent concern.

In the laboratory, it was reported that there were frequent shortages of laboratory reagents and sometimes even HIV testing kits. Stock-outs of the Uni-Gold rapid HIV test were identified as a problem. The team was told that if this “tie breaker” test was not available, some HC laboratories would not perform any HIV testing at all (despite the fact that the percentage of all HIV tests performed in which Uni-Gold is required was also very small). Other commodities that were sometimes in short supply were gloves, syringes, alcohol, micropipettes, and equipment to help maintain the cold chain. Some other essential laboratory tests not available in around half of the HCs were hematocrit and total lymphocyte count determinations. The majority of HCs were not able to perform rapid syphilis tests, and only one site could perform liver function tests. All HCs were sending samples for CD4+ count determinations to the referral hospital; some were also sending dried blood spot specimens (for diagnosis of HIV infection in newborns) to referral laboratories. No HC had the capacity to perform these tests locally.

C. Referral System and Linkages with the Hospital and Community

1. Linkage with the hospital:

In general, the interaction between HCs and the referral hospitals was limited; this did not seem to have any relationship with the distance, which ranged from as little as 500 meters to as much as 120 km. In general, HCs refer to local hospitals patients with severe or complex acute illnesses (such as those associated with change in mental status) and acute or complicated opportunistic infections (including suspected smear negative or extrapulmonary TB), as well as other Stage IV HIV disease. Other reasons for referral included chronic medical problems (such as chronic pain, fever or diarrhea) which are refractory to initial medical management at the local HC. HCs also refer to hospitals those patients for whom the initial ART regimen is suspected to be failing, since second-line ART therapy is not available at the HC level; all of the ART patients served in the HCs were on first-line therapy, either the original (88%) or an alternative course. Many HCs also refer for evaluation and management those patients suspected of having ART side effects and other drug-related complications. Additional reasons given by one or more clinics for referral included: other acute, complex and/or severe illness; the need for pediatric HIV care and ART; the need for lab tests, X-rays, or other diagnostic work-up not available to the health clinic; suspected immune reconstitution syndrome; and the need for other advanced HIV/ AIDS case management. The threshold for referral varies somewhat between sites and depends upon a variety of factors, such as clinician experience managing HIV and clinical capacity (including presence of a physician) to manage some of the more complicated conditions. Among facilities that had been delivering ART for at least one year, an average of 5.6% of patients were transferred from HCs that had a physician, compared with 8.8% from HCs with health officers or nurses only (although there was a wide range from 0% to 22.5%). The lack of some critical laboratory tests was considered to create many unnecessary referrals.

One of the main constraints mentioned by almost all the HCs was the poor feedback received about patients sent to the hospital. Patients who were referred to hospitals were sent back to the HC with

no record of what diagnostic tests were performed, what treatment the patient had received, what the hospital physicians had concluded, and what management course was recommended.

HCs initiate first-line ART for uncomplicated adult patients and follow stable patients on ART who have been transferred from hospitals. There are well-defined standard operating procedures in each of the regions for initiating first-line ART at HCs and for transferring patients on ART from hospitals to HCs. However, the actual practice varied a great deal from site to site. Concerning transfers from hospital to HCs, some HCs reported that up to half of their HIV patients had been transferred from the local hospital, while others were not even getting a single stable case. Some of the possible reasons suggested by HC staff for the low number of patients being transferred (including those started on ART at the hospital) were the lack of trust of hospital staff toward the HCs, the unwillingness to “offload” patients in order to maintain a high client flow at the hospital, and the availability of laboratory/ diagnostic capabilities at the hospital that are not available at the HC. Key informant interviews at HCs also indicated that some patients are reluctant to go to their local HC because of stigma and the fear that they will be seen attending an HIV clinic. Catchment-area HIV/ AIDS coordinating teams that could facilitate linkage between different levels of care were not functional yet, and in some HCs the catchment area meetings to discuss technical and administrative issues were not regular.

2. Linkage with the community:

In general, HCs have good communication and relations with the community, and all HCs are involved to some degree with outreach programs. The major community linkage activities offered by the HC include HIV education, C&T, defaulter tracing, and adherence counseling. Community outreach concerning PMTCT, home-based care, palliative care, and nutritional counseling were present in only about 50% of the HCs visited. The ability of the HCs to do community outreach and home-based care was highly variable, and depended upon availability of community outreach workers and community volunteers, who often had limited support. Staff involved in outreach activities variously included health officers, nurses, community counselors, laboratory staff, and/or case managers. In one urban HC, environmental health workers were responsible for coordinating community activities. At the community level, HC staff often work with kebele workers, community mobilizers, home-based care givers, mother-to-mother groups and (in a few cases) HE Ws. One urban site even had a kebele HIV committee.

Almost all the facilities relied upon support from nongovernmental organizations (NGOs) for their community outreach activities. Nutrition counseling was a major unmet need expressed by patients and HCs as part of their outreach services. Defaulter tracing was done mainly through case managers but could also involve kebele-oriented outreach service workers. Major problem in defaulter tracing included lack of communication (tracing options like telephone calls essentially did not exist in any of the HCs visited) and difficulties with transportation. Other common reasons for loss to follow-up included change of address or homelessness, poor nutrition, and a religious belief held by some patients that "holy water" can be substituted for ART.

D. Monitoring of HIV Care and Treatment

1. Data management:

In general, data management is very poor. Data were collected for this evaluation in part by reviewing different Ministry of Health (MOH) record forms, including patient tracking charts, register books for pre-ART and ART patients, intake forms, VCT registration books, and PIHCT

registration books. Data from these various sources are compiled as part of standardized reports sent to the Zonal Health Bureaus on a monthly basis and quarterly to the Regional Health Bureau (RHB). However, there is no feedback from these higher levels back to the local level, and no annual reports are made available to the local HC. In addition to reporting to the MOH, some HCs also have to compile data and send reports to donor organizations such as the International Center for AIDS Care and Treatment Programs (ICAP); these organizations might have different reporting systems and ways of compiling data. The person in charge of the monitoring system was typically a data clerk, although two HCs had no data clerk. Health officers, nurses, case managers, and laboratory technicians also participate in data collection. Data clerks are generally not data managers, and they had difficulty in compiling even basic summary data for the evaluation team; in some cases, totals did not add up correctly for there were other evident errors.

Although some data are discussed during multidisciplinary team or catchment area meetings, data in general are not analyzed at the HC level, and HCs do not work with indicators for monitoring the progress of their HIV care/ART programs. The data clerk and the case manager are not involved in the catchment area meetings. The evaluation found that at HCs there was no facility-based integrated HIV information system that included both HIV care and ART data. For example, information on HIV testing through VCT, PIHCT, PMTCT, or evaluation of TB patients is kept in separate locations, and there are no linkages between these various sources. Only four out of the 20 HCs reported having a computer, and only two were using a software system to analyze HIV data (these two sites analyzed data mainly for the ICAP program).

2. Treatment outcomes:

Table 2 summarizes data on treatment outcomes based on the period of time HCs had been delivering ART, and information from those HCs where data were available on at least 100 patients. At initiation of ART, approximately 65% of the patients were at WHO clinical stage III or IV, and a similar percentage had a CD4+ count of less than 200 cells/mm³. Of all patients who ever started ART (including those transferred in), approximately 80% were still on treatment. Treatment outcomes for facilities that had been delivering ART for less than and more than one year differed in terms of percent of patients lost to follow-up or who died. Overall, the mortality rate was higher during the first six months of treatment. These summary statistics do not reflect important differences between sites; for example, in one of the Oromia HCs, 38% of patients were lost to follow-up, and fewer than 50% were still on ART.

Table 2. Monitoring ART outcomes at HCs

Treatment outcomes	HC delivering ART less than 12 months	HC delivering ART at least 12 months	HC with more than 100 patients ever started ART
Number visited	4	16	11
WHO staging at ART initiation			
Clinical stage I	13.2%	11.9%	11.7%
Clinical stage II	14%	23.6%	23.1%
Clinical stage III	45.2%	51.9%	50.1%
Clinical stage IV	30%	5.6%	15.1%
CD4 count at ART initiation			
< 50 cells/mm ³	27.3%	13.8%	10.6%

50-200 cells/mm ³	52.3%	57.2%	52.9%
>200-350 cells/mm ³	16.6%	22.1%	27.8%
> 350 cells/mm ³	9.6%	6.8%	5.6%
Patients ever started currently on ART	81.8%	79.6%	78.9%
Lost to follow-up	2.6%	7.5%	9.8%
Stopped	0%	0.7%	0.4%
Patients who died	1%	7%	7.2%
< 6 months	1%	4.3%	4.6%
At 6 months	0%	1.2%	1.6%
At 12 months	0%	1.1%	1.3%
At 24 months	0%	0.3%	0.45%
Transferred out	10.3%	8%	8.2%
Transferred in	16.8%	19.9%	16.8%

E. Human Resources for Health at Health Centers

1. Composition of HC staff:

The staff at all HCs visited included a health officer or a physician. The only four HCs with a physician were in Addis Ababa and at an urban area near Dire Dawa. On average, there were 25 people working in each facility, including health workers, pharmacy and laboratory staff, health assistants, community counselors, data clerks, health extension workers, ART aides, expert patients and other trained lay providers. In general, each HC had two health officers, approximately 10 to 12 nurses, two to three laboratory staff, two to three pharmacy staff, and one data clerk; the number of HE Ws, people with HIV/AIDS, and lay providers differed considerably among the different sites. Among the pool of nurses in each HC, only around 29% were working at the HIV clinic. Even in HCs where there were physicians, not all of them were dealing with HIV clinical care and ART. HE Ws also did not have much involvement in providing HIV care. Table 3 shows by cadre how the number of staff involved in HIV services varied among sites.

Table 3. Human resources for health at HCs by cadre

20 HCs visited	Addis Ababa	Amhara	Dire Dawa	Harari	Oromia	SNNPR	Tigray	Total staff	% involved in HIV
# patients on ART	381	2921	275	41	395	95	327	4435	
# staff	82	142	80	25	60	63	60	512	
Average # physicians/ health officers per HC	4	2-3	2	2	2	2	1-2	45	98%
Average # nurses per HC	24	9	15-16	13	5-6	10-11	15	228	29%
Average # pharmacy staff per HC	2-3	2-3	2-3	2	2-3	7	2-3	48	83%
Average # laboratory staff per HC	4	3	4-5	3	2	2-3	2	58	81%

Average # data clerks per HC	1	1-2	1	1	1	1	1	21	95%
Average # community counselors per HC	1	1	0-1	0	1	1	1	19	95%
Average # HEWs, PLHAs, lay providers per HC	4-5	3	10	4	1-2	7	5	99	65%

2. Training of HC staff:

FHI and MSH were responsible for implementing the IMAI training in a number of locations throughout Ethiopia, including Addis Ababa, Amhara, Oromia, and SNNPR. FHI and MSH both used WHO materials and tools in their training.

All HCs had staff trained on the previous IMAI two-week course, and many also had staff who had taken the new National Comprehensive HIV/ ART Care and Treatment Course introduced in December 2007 in the government framework. Two HCs, one from Dire Dawa and one from Tigray region, had not yet started with the Comprehensive Course. An average of four individuals at each HC (14.3% of total staff) had the Comprehensive Course training, and an average of five (18.6%) were trained on the previous IMAI; some individuals participated in both trainings. In total, 181 persons, representing 56.4% of the total number of physicians, health officers, nurses, and pharmacy staff available, were trained in IMAI (see figure 3). A typical trained IMAI team at each HC included two health officers, three or more nurses and two pharmacists/ pharmacy technicians.

Figure 3. Categories of staff trained at HC level

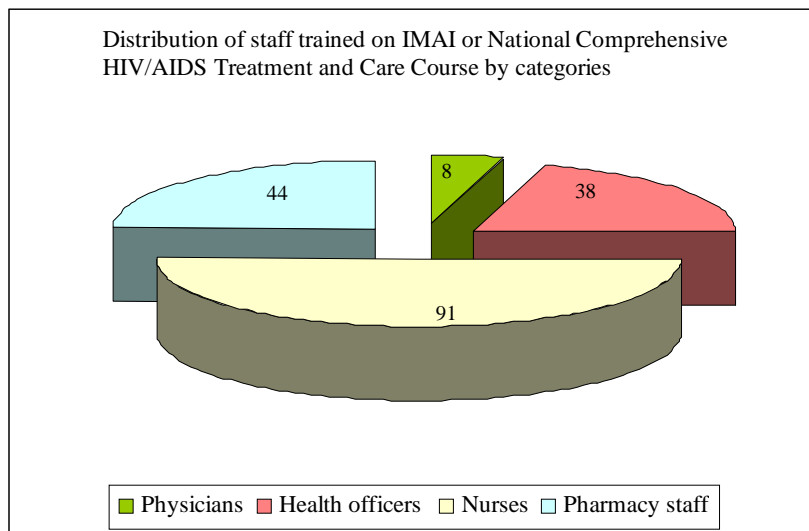


Table 4. Training on IMAI, National Comprehensive HIV/AIDS Treatment and Care Course, and other HIV courses

20 HCs visited	Addis Ababa	Amhara	Dire Dawa	Harari	Oromia	SNNPR	Tigray	Total	%
# patients on ART	381	2921	275	41	395	95	327	4435	
# staff	82	142	80	25	60	63	60	512	
Previous IMAI									
# staff trained	3	41	8	5	15	9	14	95	18.6%
# trained still at HC	3	33	6	3	10	4	10	69	72.6%
Comprehensive Course									
# staff trained	16	27	4	2	16	6	2	73	14.3%
# staff trained still at HC	16	27	2	2	15	5	2	69	94.5%
Proportion of staff trained in any IMAI course									
Staff at HC	23.2%	47.9%	15%	28%	51.7%	23.8%	26.7%	32.8%	
Physicians/health officers	100%	100%	75%	100%	100%	66.7%	100%	91.7%	
Nurses at HC	12.5%	69.8%	29%	38.5%	63.6%	45.2%	20%	38.2%	
Pharmacy staff at HC	80%	76.9%	20%	50%	88.9%	85.7%	100%	76.1%	
Number of staff trained/100 ART patients									
Total staff	5.0	2.3	4.4	17.1	7.8	15.8	4.9	3.9	
Physicians/health officers	2.4	0.5	1.1	4.9	2.3	4.2	1.2	1.0	
Nurses	0.5	1.3	3.3	12.2	3.5	14.7	1.8	2.1	
Pharmacy staff	1.0	0.3	0.4	2.4	2.0	6.3	1.5	0.8	
Other HIV courses									
# staff trained	43	87	63	20	53	28	22	316	61.7%

Table 4 presents data on health workers trained in IMAI at the HCs visited, as well as the ratio of staff trained in IMAI/HIV care per 100 ART patients at the HC. As depicted in the table, almost all physicians and health officers had been trained but the staffing pattern regarding trained nurses and pharmacy staff differed a great deal from region to region. For example, in the HCs visited in Addis Ababa, fewer than 15% of nurses had been trained. The estimations of the availability of the different categories of staff trained on IMAI for ART show on average a ratio of one physician/health officer, one pharmacist/ pharmacy technician, and two nurses per 100 ART patients. The high figures registered in Harari and SNNPR regions were mainly due to the low volume of ART patients.

Table 5. HIV training courses other than IMAI received by nurses

Title of course	Sponsor	N° Days	Date
STI syndromic approach	FHI	7	2007
	Save the Children	5	2007
	ICAP, CDC	5	2007
	CARE Ethiopia	5	2008
	MSH	7	2008
PICT	FHI	3	2007
	MSH	2	2008
	RHB	3	2006, 2008
	Unknown	7	2007
VCT	RHB	15	2007
	WHO	21	2007
	FHI	17	2005, 2007
TB-HIV	FHI	15	2006
	MSH	7	2007, 2008
	MSH	30	2008
	Intrahealth/RHB	3	2007, 2008
	WHO	5	
PMTCT	MSH	15	2006, 2007, 2008
	Intrahealth	10	2005, 2008
	Unknown	7	2007
	Intrahealth-on the job	15	2007, 2008
Infection prevention	CDC	14	2007
	MSH	5	2008
ART and OI management	FHI	14	2007
Basic ART	FHI	10	2005
Pediatric ART	MSH	12	2008

In addition to the IMAI training, the various categories of staff in the HCs received a wide range of other HIV training courses of different durations and methodologies depending on the different partners. Table 5 illustrates the numerous trainings that nurses attended from 2005 to 2008, reflecting differences in training partners and the duration of the training.

3. Quality of IMAI training:

All staff felt that the training they received was extremely important to enable them to implement IMAI at their HCs. Clinicians felt that receiving this training helped strengthen team work, since multiple individuals within the HIV care team received training. Respondents indicated that training made it easier to manage patients and helped improve patient care and quality of life. Staff felt that the training program facilitated task shifting, integration of HIV care within the HC, and scale-up of ART at the local level. Respondents also felt that training built confidence among the HC staff and improved the credibility of the HC staff within the community. In general, the organization and content of the IMAI courses were appreciated. The involvement of expert patients, case studies, and discussions all helped participants better apply the knowledge and practical skills they learned in their health facilities. The training materials were considered to be up-to-date, user-friendly, and easy to read and understand. In the past, the IMAI training was approximately two weeks in duration. More recently (in the past year), the four-week National Comprehensive HIV Care and Treatment

Course training has been offered through MSH. The previous course was considered too short, given the content and large amount of material to assimilate. The new course is longer but also challenging because it requires staff to be away from their facility for a full month. For some areas such as pediatric ART, it was mentioned that there was a delay between the training and the ability to implement the knowledge acquired. Overall, staff expressed the need and desire for additional training, including refresher courses on ART, OI management, pediatric care, infection prevention, and the new Comprehensive Course training (for those who had the previous IMAI training) in order to increase their confidence and skills.

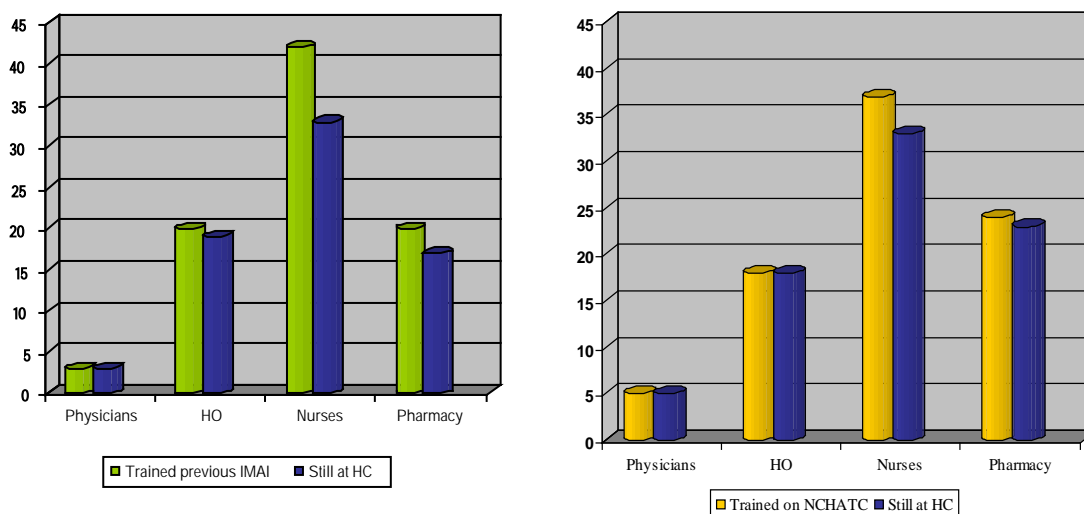
In contrast to health officers and nurses, pharmacists and laboratory technicians felt that the training they received was too short and superficial. Their training was generally one week or less and did not allow participants to get into more detailed areas of expertise related to the specific cadre. For pharmacists, this included a desire for additional training on issues such as mechanisms of action, drug dosing (especially for pediatric patients), ART side effects, adherence, and drug interactions.

4. Attrition rate:

Attrition among staff trained was identified at a number of facilities; turnover among nurses and pharmacy staff was especially a problem. Staff who received the previous IMAI training (which took place mainly from 2006 to 2007) were more likely to have left the HC compared with those who had received the new comprehensive course (offered from December 2007 through 2008). For instance, 9 out of 42 (21%) of nurses and 3 of 20 (15% of pharmacists trained in the older course were no longer working at the HC, compared with 11% of nurses and 4% of pharmacists who had received the more recent training (figure 4). This may simply reflect the longer time period between the previous training and this evaluation compared with the shorter time period between the comprehensive training (offered very recently) and this evaluation, so continued follow-up of attrition among those who received the more recent training will be important. Even at this stage, it is important to notice that 28% of nurses trained in IMAI were no longer at the HC.

In addition to attrition, some health workers (including physicians and health officers) who were trained on IMAI were no longer involved in HIV-related clinical care activities. The evaluation team also found that in general there is no system for sharing the information and knowledge acquired after the training, and no formal system for handover of responsibilities when the person in charge of a particular service is absent. Therefore, it becomes very difficult for new staff who may not be trained to ensure continuity of HIV care.

Figure 4. Number of staff trained in previous IMAI and National Comprehensive HIV/AIDS Care and Treatment Course who are still at HCs



5. Distribution of competencies: Task shifting:

The IMAI approach in general facilitated the broad delivery of simplified and standardized HIV services through teams headed by health officers and nurses (although it was found that in some facilities such as Areka HC these cadres of staff were present but not trained). In general, there was a good commitment from the staff trained to providing HIV care. Task shifting from physician to health officer and nurses was being fully practiced in all the HCs visited, although there were different models. In some HCs, there was a clear distribution of responsibilities between staff. For example, at some sites health officers were managing OIs and initiating ART, while nurses were mainly in charge of refilling drugs and follow-up of stable patients for adherence. In other facilities, clinical management tasks were shared among the different cadres, and health officers and nurses were performing similar tasks. If a physician was present, the degree of task shifting to nurses seemed to be higher, since there was immediate back up for management of complicated cases. Case managers and community counselors were also playing an important role in the task shifting of job responsibilities, particularly in adherence counseling and VCT.

F. Clinical Mentoring and Supportive Supervision

The national continuum of education planning and standard operating procedures for IMAI call for follow-up mentoring to be performed at each site after IMAI or Comprehensive Course training. Clinical mentoring for provision of HIV/AIDS care and treatment has been provided to various facilities by assigned mentors from partners such as WHO, FHI, ICAP, I-TECH and MSH, with MSH now responsible for the clinical mentor program at HCs. Clinical mentors received a variety of training, including those related to comprehensive HIV care (e.g., the National Comprehensive HIV Care and Treatment Course and the 15-day Train the Trainer course) as well as targeted training specifically related to clinical mentoring (lasting one to two weeks, depending on the implementers). Mentors typically visit HCs once a month, although mentors occasionally visit HCs every two weeks. Clinical mentors have a large number of assigned duties. One clinical mentor listed his responsibilities in visiting ART HCs as including the following tasks: (1) meet with head of clinic; (2) visit and review performance at ART HCs, including treatment of patients; (3) visit and review

performance at clinics where PMTCT is provided; (4) visit and review performance at TB clinics (for TB-HIV integration); (5) visit and review performance at VCT sites; (6) review intake forms and select three to five to see if they are filled out properly; (7) conduct case reviews for staff meetings; (8) review registers to see if they are copied correctly and have necessary information; and (9) conduct multidisciplinary team meetings. In addition to these multiple tasks, the mentor indicated that he was responsible for covering nine HCs providing ART, as well as four others providing PMTCT and eight others providing TB-HIV services, with visits to each of these sites typically for half day per month. Given the need for travel time to different sites, this mentor had a very busy schedule. This mentor's schedule and multiple responsibilities were very typical. The evaluation team was also told that at some HCs the clinical mentors were providing ART treatment services directly to patients rather than mentoring other staff working at the HC to provide this care. The team was also told that there was quite a high turnover of mentors, due to factors including burnout and availability of other job opportunities. The number of mentors was felt to be inadequate compared with the overall need.

Supportive supervision to HIV/ ART services was implemented by the Regional/ Zonal/ Woreda Health Offices and partners (WHO, MSH, ICAP, the Rational Pharmaceutical Management Plus project) to provide technical and management support on a planned and regular basis. However, in some HCs this supervision was not regular and the frequency was variable (quarterly in some locations and biannually in the rest). The supervisory team often had other full-time duties, and the team composition was not consistent in every HC. In some regions, many of the managers originally trained in the district coordinator's course were no longer there.

In group discussions, all HCs stressed the importance of clinical mentoring and supportive supervision, and recommended that there be stronger and more regular supervision and mentoring. Staff generally valued the clinical mentor and typically were in favor of more frequent mentoring (at least twice a month). Some staff wanted mentoring to be supplemented by more case reviews, case-based discussions, and more teaching/ training on the latest information concerning HIV/ ART. Some sites mentioned that the catchment area meetings should include more discussion of clinical issues as well as administrative ones. Pharmacists and pharmacy technicians felt that they were not receiving sufficient mentoring and supervision, and requested the need and desire for more mentoring and supervision by those experienced in this area.

G. Impressions of IMAI and Barriers to Care from Group Discussions

Responses in the group discussions among those who were part of the HIV care team included the following:

1. Strengths of IMAI approach:

IMAI was considered by HC staff to be a very useful approach to decentralize HIV/ AIDS prevention, care, and treatment to lower-level health facilities and to enhance task shifting from physicians to health officers and nurses. Staff felt that it helped build the capacity and confidence of mid-level health care providers to provide HIV comprehensive services. As for some of its strengths, IMAI was seen as:

- Providing a vital approach toward integrating HIV/ AIDS services
- Facilitating linkages between different services
- Simplifying the clinical management of patients

- Avoiding missed opportunities for HIV care by utilizing different services
- Improving the registering, reporting, and data management processes at HCs, as well as increasing the efficiency and standardization of these processes
- Encouraging team work
- Improving awareness of HIV/ AIDS services
- Increasing use of condoms and other preventive methods among the community
- Increasing the number of clients served by the different clinics in the HCs
- Increasing the number of clients tested for TB-HIV
- Increasing access to ART
- Increasing voluntary disclosure of individuals' serostatus
- Contributing to reduction of stigma and discrimination due to HIV/ AIDS
- Providing the opportunity to reach more needy people through outreach programs involving case managers, community counselors, and other community outreach staff

All materials, flow charts, guidelines, registers, and other IMAI tools were found very useful and important as reference guides and working tools to help improve HIV care and treatment in the HCs.

2. Weaknesses/limitations of IMAI approach and problems with implementation of IMAI at the HC level:

One perceived weakness of the IMAI approach reported by respondents was that the demands of the IMAI approach are not compatible with HC resources and capacities to meet the IMAI standards and expectations. Perceived barriers to implementing IMAI at HCs included lack of human resources as well as lack of drugs, reagents, supplies, and other needed materials. In all the HCs visited, there were high workloads among staff, and the need to provide additional HIV clinical services further intensified this already heavy burden. Because of the health worker shortage, IMAI-trained providers must often serve in different clinical services and capacities at HCs other than the clinic where HIV treatment is provided. Trained staff may therefore not be assigned to clinics for which they have received training. Additional specific problems reported by group respondents in implementing IMAI at the HC included high staff turnover after the training, including a high attrition rate of trained staff; delays in applying knowledge and skills after the IMAI training; limitation of IMAI training to just a few staff; the need for additional IMAI training at most HCs; and the lack of an adequate incentive package after the training and during service delivery for the trained staff.

Frequently reported barriers to implementation of IMAI at the HC level involved a variety of resource limitations. These included shortages of health education materials, drugs, test kits, and reagents. The inadequate supply of OI and STI drugs made the IMAI approach difficult to fully implement; patients were required to purchase OI drugs from the general pharmacy or private pharmacies, but in many cases were unable to afford these drugs. Lack of trained staff, equipment and supplies also led to lack of local capacity at many sites for complete blood counts, liver function tests, or other important laboratory assays; the requirement to have some of these assays performed at local or referral hospitals posed an additional barrier to patient management. Frequently reported barriers to implementation of IMAI at the HC level included lack of a common TB-HIV reporting and data analysis format; lack of essential communication and transportation facilities for office and

community outreach services (including computers and telephone lines); data report forms that are not aligned with register forms; lack of continuous clinical mentoring and supportive supervision; lack of coverage for patient needs such as nutritional and adherence support, social problems, and transportation; poor infrastructure; inability to ensure confidentiality (for example, because of inadequate space), which promotes stigma and discrimination; low pay for staff; and HIV/AIDS-related services that are not prioritized at local and higher levels.

3. Suggestions for sustainability of the program:

Group respondents made a number of suggestions and recommendations to help facilitate sustainability of the IMAI program. These included the following:

- IMAI requires involvement and commitment from all policy and decision makers, including heads of concerned bodies, managers and all technical staff. RHBs and Zonal/ Woreda Health Offices should give priority to adopting the IMAI approach to the health system in terms of planning, supervision, and budget allocation, so that there is a greater sense of ownership and investment.
- Trained staff need to transfer their knowledge and skills and share their experience with other staff after the training.
- Gaps in staff due to high turnover need to be filled.
- The selection criteria of staff to be trained from the RHBs should be revised and made more strict, in order to help reduce turnover of trained staff.
- Effective use of the IMAI guidelines, tools, and standard operation procedures at health facilities should be encouraged. There should be continuous and efficient distribution of updated guidelines and tools during and after the training programs.
- Continuous mentoring and regular supervision at HCs should be increased, by integrating mentoring and supervision in the RHBs and by allocating additional mentors. Internal mentorship should be incorporated into the system.
- Donors and funding agencies should support training of more health care providers. Donors should also design an exit strategy to allow the HIV care system to become more self-sustainable.
- Necessary supplies and commodities need to be available to HCs.
- All staff should be trained, and the IMAI approach should be incorporated into in-service trainings. More refresher training should be offered for already trained staff, and more training should be offered to the untrained at different levels, including the woreda and facility levels. IMAI training should be introduced at the secondary and health post levels
- In the future, when provision of ART becomes more consolidated, HIV treatment should be integrated with other clinical care services at the HC.

V. CONCLUSIONS AND LESSONS LEARNED

A. Impact of IMAI on HIV Care, Treatment, and Support Services at the Health Center Level

1. *IMAI has had many positive benefits for HIV-infected patients, including improved HIV care and access to ART.* Despite the many challenges inherent in the ambitious challenge of training thousands of health workers and implementing IMAI at hundreds of HCs throughout Ethiopia, it is without doubt a worthwhile undertaking. Decentralization and IMAI have already improved access to HIV care and services, including PMTCT and ART, for a large number of people in Ethiopia who either would not have access to such services or who would have to travel long distances to receive care at overcrowded hospital clinics. Benefit to HIV-infected patients is the most important contribution of this program and reason to continue to support it.
2. *IMAI has had many positive benefits for HCs and their staff.* In addition to the benefit for patients, health staff interviewed as part of this evaluation also felt that they had benefited from implementation of IMAI. Those who were interviewed largely felt that their knowledge and skills had increased, and that their capacity to provide HIV care had improved. National guidelines, national training curricula, and data recording tools have all been developed and are very useful in the actual implementation of IMAI and comprehensive HIV care. HC staff felt that their credibility as clinical care providers in the eyes of the community had been increased, improving both their own job satisfaction and the willingness of patients to seek care at HCs. Through realization of all these benefits, task shifting of health staff (a key component of the national plan to provide decentralized HIV care) has been reinforced. IMAI has had many positive benefits in capacity building of middle-level cadres to manage HIV/ AIDS patients.
3. *IMAI has in most HCs been associated with significant increases in client utilization.* The evaluation team requested information on the number of clients utilizing a variety of HIV-related services in the year before IMAI was implemented at the HC and in the year after. In the majority of HCs where these data were available, the team found that the number of clients seeking HIV services at HCs had significantly increased. Although there are multiple reasons for this doubling of clinical capacity and client utilization, these data support the benefits of and need for IMAI at the HC level. Although increased utilization was noted at the majority of HCs visited by the evaluation team, it was noted that some HCs were providing ART to very few patients, even after IMAI implementation.
4. *The clinical skills of most health workers at the HC level need significant improvement and support in order to provide quality HIV care.* Although the evaluation team found that most clinicians at the HC level were conscientious and dedicated, their actual abilities to provide clinical care and manage the many challenging issue related to ART and other HIV care were highly variable. Observation of nurses or health officers providing care found that these individuals were generally aware of and followed established protocols, such as guidelines concerning when to initiate ART. In 14 HCs where these data were specifically collected, about 56% of staff reported feeling confident and did not find any difficulty in providing HIV care. However, clinical observations of nurses and health officers providing HIV care found that their ability to provide follow-up of those on ART, to identify and manage complications of HIV and ART (including ART side effects), to monitor for treatment failure, and to recognize, evaluate, and manage OIs and other HIV-related diseases was often limited. History and physical examination skills were highly variable, and clinical observation revealed that not all individuals were aware of and followed guidelines for clinical and laboratory

monitoring of ART side effects (such as checking liver function tests for those on nevirapine). Patient monitoring and documentation was also found to be weak in a number of HCs.

The consequences of these limited skills can be serious for the patient, the health system, and public health. HIV-infected patients (especially those on ART) need to be appropriately monitored and managed to avoid morbidity and possibly mortality due to treatment failure, ART side effects, and development of HIV-related diseases. With suboptimal care, HCs risk losing credibility in the eyes of the community, HIV-infected patients, and the hospitals from which patients should be referred. Development of ART drug resistance in individual patients and transmission of resistant virus to others threaten the future utilization of the most inexpensive and accessible first-line therapies. The time to intervene to prevent all of these potential consequences is before instead of after these negative consequences begin to develop.

5. *Defaulters and adherence are significant issues.* ART treatment defaulters and sub-optimal adherence are important concerns for all facilities providing ART, including HCs. Virtually all HCs visited by the evaluation team had adherence counselors, as well as some measures for tracing those who were lost to follow-up. However, the success of these measures varied between sites and depended greatly on the availability of and support for community outreach staff. There were many different reasons cited for default, with different situations for HCs in rural and in urban locations. Despite multiple barriers, the ability of HCs to have close ties with the community allowed many of them to have better follow-up rates than those of larger higher-level facilities.

B. HIV Care and Treatment Service Delivery at the Health Center Level

1. *As a policy, provider-initiated HIV counseling and testing is in general integrated throughout the HCs.* HC policies are for PIHCT to be widely available throughout HCs and offered in conjunction with multiple different clinical services, including those for all patients diagnosed with TB, STIs, and other indicator diseases. However, it appears in practice that not all patients diagnosed with these conditions are being routinely screened for HIV.
2. *Voluntary counseling and testing services are not well integrated with PIHCT.* In contrast to relatively good integration of PIHCT and clinical services, VCT and PIHCT do not seem as well integrated. VCT and PIHCT record keeping systems and staff, for example, could be better integrated at the HC level.
3. *As a policy, STI and HIV screening services are integrated.* As noted above, HC policies are for HIV C&T to be provided for all patients diagnosed with STIs. Similarly, the routine initial evaluation of all HIV patients includes a clinical assessment for signs and symptoms of STIs, although this assessment does not appear to be routinely conducted in patients being seen for follow-up visits. As noted below, availability and stock-outs of STI drugs are a concern. Laboratory screening for asymptomatic STIs is not performed at HCs, and most do not screen for syphilis.
4. *PMTCT services are well integrated in antenatal clinics, but implementation in the labor and delivery and postnatal settings is variable.* PMTCT includes HIV testing of all pregnant women, as well as provision of ART drugs to infected women and their newborns to help prevent HIV transmission. Clinic policies are for HIV C&T to be provided to all women seen in antenatal clinics. For those women who test positive, short-course combination therapy is offered, consistent with current national guidelines. It appears, however, that the actual implementation of PMTCT throughout the HC system is variable. Two areas of particular concern are L&D and

postnatal settings. This is especially important since many Ethiopian women deliver at home and may not be captured by antenatal care or L&D services.

5. *HIV education and prevention are provided for all HC patients.* Although the content and effectiveness of these messages were not evaluated, all clinics have policies for presenting some prevention/education messages to their clients on a regular basis.
6. *The integration of TB and HIV services at the HC level is variable.* HC policies are for all HIV patients to be screened for symptoms of TB at the initial visit and for diagnostic tests to be performed on those with a positive symptom screen. HC policies are also for all TB patients to be screened at the TB clinic for HIV, although a review of actual HC records indicates that not all TB patients are actually receiving HIV tests. Although HIV and TB care are provided by different services and providers, in some locations the HIV and TB clinical services consult with each other on provision of drug regimens and collaborate on follow-up of co-infected patients. TB and HIV are typically organized as vertical programs, and in a number of HCs there are many missed opportunities for greater coordination and integration of both screening and care.
7. *The medical management of OIs is not well integrated into the general HC.* Patients who present to the primary care clinicians (not trained or specializing in HIV management) at HCs with OIs are typically either referred for medical management to the HIV clinic within that HC, or to the nearby hospital. One challenge for HCs in preventing and managing HIV-related OIs was the lack of availability of free drugs (aside from cotrimoxazole) for prophylaxis and treatment of OIs.
8. *ART management is not integrated into the general HC.* Management of patients on ART (including initiation of ART and follow-up) was uniformly done at a designated HIV clinic within the HC. If a patient presented to a primary care clinician at a HC (in the general medical clinic) with a suspected ART-related complication, they were referred to the HIV clinic for management. Given the more complicated issues and training required for ART management, the evaluation team felt such referrals were appropriate.

C. Linkage of Health Center Services with Other Levels of Care (Implementation of the Health Network Model)

1. Health Network Model and Linkage between HC and Hospital:

The Ethiopian network approach is intended to strengthen linkages between different levels of service to facilitate provision of comprehensive care. A number of problems in coordinating HC and hospital clinical care activities were identified.

- a. *HCs have different criteria and standards for referring patients to local hospitals.* The team found that HCs do not follow any standard operating procedures for referral and that there is no standardization in terms of what care should be provided at the HC level. In general, HCs refer to local hospitals patients with severe or complex acute illnesses and OIs, as well as patients with chronic medical problems that are refractory to initial medical management at the local HC. HCs also refer to hospitals those patients for whom the initial ART regimen is suspected to be failing, and those patients suspected of having ART-related side effects. In practice, the criteria and threshold for referral varies somewhat between sites and depends upon a variety of factors such as clinician experience caring for HIV-infected patients and clinical capacity to manage some of the more complicated conditions.

- b. Hospitals have different criteria and standards for transferring patients to HCs. An important component of the Health Network Model is the transfer of stable HIV patients, including those on ART, to HCs for chronic care and management. Patients may be started on ART at the hospital outpatient HIV clinic, or have their HIV first diagnosed (and treatment started) as an inpatient after they present with an acute medical problem. Hospital clinics are often overcrowded and may be at some distance from the patient's place of residence; this has given rise to the demand to "offload," or transfer, stable patients to their local HC. However, interviews suggest that some hospitals are reluctant to transfer such patients, preferring to retain them.
- c. Some patients are reluctant to receive HIV care at a local HC because of stigma and fear they will be recognized. If HIV care is offered at a separate designated HIV clinic within the HC, patients who go to this clinic are by definition identified as HIV positive or at risk for HIV infection. The team was told that some patients prefer attending a larger hospital to receive their HIV care, where they believe there is greater anonymity.
- d. There is poor communication between the HCs and hospitals on patient care issues. In general, communication between the HCs and hospital on patient care-related issues is poor. An often-expressed concern in terms of communication was poor feedback from the hospital to the HC concerning patients sent to the hospital for diagnosis and management of complex or acute medical problems. Virtually all HCs cited this as a major problem that made continuity of care extremely difficult. In a debriefing session, it was suggested that the hospitals and HCs have different "cultures" and approaches to patient care and limited understanding of how clinical issues are approached in each other's settings. Although hospitals and HCs participate in catchment area meetings, these typically focus more on administrative and policy issues, as opposed to patient management issues (especially those related to individual patients). Although clinic heads and senior administrative staff may attend catchment area meetings, the team was told that other clinical staff members often do not attend.

2. Health Network Model and Linkage between HC and the Community

As noted, the Ethiopian network approach is also intended to strengthen linkages between different levels of service to facilitate provision of comprehensive care, including community levels. A number of strengths and challenges in coordinating activities between the HC and the community were identified.

- a. HCs have good relationships with their local communities and are interested in community outreach. In support of the Health Network Model, respondents strongly felt that HCs provide an appropriate and valuable link with the health posts and communities they serve. Potential areas of linkage between the HC and the community include HIV education, C&T, PMTCT, home-based care, palliative care, and nutrition counseling and support. The majority of HCs that the evaluation team spoke with were very interested in providing or supporting such outreach activities.
- b. Provision of ART through the HC is beneficial for promoting adherence and reducing the number of defaulters. Virtually all HCs have some mechanism for defaulter tracing, although the specific mechanisms used are variable, and depend on such factors as which community outreach staff are available to the HC. As opposed to the larger and more anonymous hospital clinics, the HC (which is closer to the patient's community) provides improved opportunities for patient follow-up and defaulter tracing. This is especially the case in rural settings, where people tend to move less and place of residence can be more easily and reliably established.

- c. Community counselors, case managers, and mother-to-mother support groups play an important role in linking the HC with the community and defaulter tracing. The ability of the HC to conduct community outreach, including defaulter tracing and patient support in the home environment, depends upon active engagement of a variety of highly committed outreach workers. Different HCs utilize different community outreach staff in different situations, but there is no question that these individuals are essential to the Health Network Model and linkage of the health care system with the community.
- d. The actual ability of HCs to conduct community outreach and home-based care is highly variable and depends upon the availability of community outreach workers and community volunteers. Despite the interest of HCs in providing community outreach and home-based care, the actual capacity of the HCs to support such services in many settings was very limited. Many HCs could not support home-based care, palliative care, nutrition counseling, and other important activities because of a lack of trained and available community outreach staff.
- e. Community outreach staff lack adequate and sustainable support. Although staff persons providing linkage between the HC and the community are professionals who play a critical role in the Health Network Model, they typically have minimal support to accomplish their important responsibilities. Additional support is needed in multiple areas, including salary and stipends; the system can not solely rely upon the good will of volunteers to be sustainable. The team was told that staff who interact with community need more support with outreach-related expenses, such as those related to phone communications, meals, and transport. Although HIV training has been provided for many community outreach staff, this continues to be an important priority, given the large number of community outreach staff required. Current support for community outreach staff often depends on funding from NGOs and other external funders. Such funding may be temporary or subject to a change if there are changes in the funder's priorities. Lack of ongoing and steady support for community outreach workers and others working with communities is a major threat to the sustainability of the Health Network Model for providing decentralized HIV care.
- f. Health extension workers have a large number of responsibilities and tasks and are not all sufficiently familiar with HIV care and outreach issues. Ethiopia depends upon a system that includes thousands of HEWs who help deliver primary health care services to people living in rural areas. HEWs are recruited from the local communities in which they will work and are deployed to each village health post. The HEW program focuses on providing essential health interventions at the village and household level, with a focus on health prevention and increased health awareness. A challenge to the HEW role is the large and growing number of health issues that HEWs are being asked to address, including food hygiene, waste disposal, immunization, malaria prevention, and family planning. The ability of HEWs to also address HIV-related issues such as HIV prevention, C&T, PMTCT, and referral for HIV services may be significantly limited by the number of other tasks they must attend to with a specific household and by the shortages of HEWs to meet these multiple responsibilities. HEWs may also lack training on certain HIV-specific issues.

D. Human Resource Development and Capacity Building

1. Staffing at the HC Level:

- a. In most HCs, the overall numbers of health officers, nurses, and pharmacy technicians were adequate for the number of patients currently receiving ART. The staffing patterns per 100 patients on ART typically include once clinician (usually a health officer), two nurses, and one pharmacy technician. However, staffing patterns varied between HCs. In addition, although HIV care was offered on a daily basis

at many clinics, in a number of sites clinical staff were involved in other clinical services as well through a rotation system; in these sites, staff were not assigned full time to HIV/AIDS care.

b. *Attrition and turnover continue to be major challenge.* As noted throughout this evaluation, retention of trained and qualified health professionals at the HC level continues to be a major challenge. Challenges to retention of HC professionals at all levels include a heavy workload, lack of adequate and competitive compensation, lack of adequate resources, limited opportunities for continued education, and lack of other incentives. Finding those willing to live and work in rural areas is especially challenging.

c. *Task shifting is an appropriate goal, with nurses and health officers providing primary ART/HIV care.*

The evaluation team was in full support of the Ethiopian national strategy for decentralized care and task shifting to deal with the human resource crisis and need for rapid scale-up of ART. This strategy is based upon a public health model, as promoted by WHO, that includes simplified treatment regimens, standard clinical management protocols, and simplified/standardized record keeping. The team saw many examples of ART nurses and health officers who were highly motivated and interested in providing quality HIV care and eager to optimize their skills to do so.

d. *Multidisciplinary teams and teamwork are critical components of HIV and ART care at the HC level.*

At all levels, including the HC, provision of HIV care requires a skilled and dedicated multidisciplinary team. Members of the HIV team at a typical HC include health officers, ART nurses, VCT nurses, PMTCT nurses, TB nurses, pharmacy technicians, laboratory technicians, case managers, and community counselors. Each of these health professionals plays an essential role, and it is critical that there be communication and good working relationships between the different cadres. Although physicians are generally only available at HCs located in urban areas such as Addis Ababa, they play an important role in other settings where they are available in helping to manage more complex cases and decreasing the number of referrals to higher levels.

2. Training of HC Staff:

A significant portion of this evaluation is devoted to issues related to IMAI training. Since an important goal of this evaluation was to evaluate the impact of IMAI training at the HC level, our report includes feedback from those at HCs who participated in IMAI training on the quality of this training, including benefits and perceived limitations.

a. *Clinicians who received the IMAI training felt that it was very beneficial and a positive experience.* A large number of clinicians have been trained in IMAI, including physicians, health officers, and nurses. Clinicians who received this training, especially the IMAI and Comprehensive Course training, appreciated it and overall thought that it was a very good educational experience. Respondents felt that receiving this training helped to strengthen teamwork, made it easier to manage patients, helped to improve patient care, facilitated task shifting and scale-up of ART at the local level, and improved the credibility of the HC staff within the community.

b. *Pharmacists and laboratory technicians felt that the training they received was insufficient.* Although health officers and nurses were generally pleased with the longer training they received (especially those who received the comprehensive four-week training), pharmacists and laboratory technicians felt that the training they received was too short and superficial, not meeting their educational needs for more detailed cadre-specific information. (Although the team was informed that laboratory technicians are not yet included in IMAI training, information that the team received about the

needs and experience of laboratory technicians is included in this report in the interest of completeness).

- c. Within a given cadre, only one or two staff typically were trained in IMAI, with no provision or diffusion of knowledge to other HC staff. Within a given HC, there were typically a small number of nurses or health officers who received comprehensive training in IMAI and HIV care. This may have been very appropriate, especially during the initial phase of rapid scale-up of ART throughout the country. However, having only one or two members of a given cadre within a health facility who are trained in IMAI also poses challenges in terms of sustainability of HIV care. The evaluation team was told that within an HC, there is no system of transferring skills and knowledge related to HIV care and no diffusion of knowledge about ART and other aspects of clinical management from those who were trained to others. In terms of sustainability, if individuals who have been trained in comprehensive HIV care leave the HC or are reassigned, there will be an absence of trained individuals to replace them in essential clinical care positions, significantly compromising patient HIV care.
- d. There is a wide range of non-IMAI HIV training courses offered by different partners. Although IMAI and Comprehensive Course HIV training is now standardized with a national curriculum, there are a wide variety of other HIV-related courses offered by different partners with different content for different durations of time. Subjects covered by these courses include STI diagnosis and treatment, PIHCT, VCT, TB case management, and PMTCT.
- e. Those who have been trained in IMAI may no longer be providing comprehensive HIV care at the HC level. Individuals who have received the IMAI/ Comprehensive Course HIV training may no longer be providing HIV care/ ART at the local HC for a variety of reasons. Because of attrition and turnover, individuals who have been trained may leave the HC for other job opportunities. Others trained in HIV care and IMAI may remain at the HC but work in another non-HIV care capacity. As time goes on, the proportion of those who have received previously administered training and are still at the HC in HIV care positions may be expected to decrease.
- f. Some clinicians received training in HIV care other than the National Comprehensive HIV Care and Treatment Course. Given the rapid changes and explosion of information that have taken place related to HIV care and treatment, those who have been trained in ART and HIV care more than one or two years previously may not have the latest information related to recommended ART regimens and follow-up, current WHO protocols for HIV care, information about ART side effects, and other important information necessary to provide the best care.

3. Clinical Mentoring and Supervision:

- a. Clinical mentoring plays a critical role in the scale-up and decentralization of ART to the HC level. Given the complexity of HIV treatment, the expanding knowledge in this area, and the difficulty of covering all topics related to HIV prevention and care even in a four-week training, clinical mentoring is absolutely essential to both learning how to provide HIV care (e.g. performing histories, physical examinations, and management of patient follow-up) and ensuring ongoing quality of care in those who have received training. Even with the best of trainings, there is a difference between knowledge acquired in the classroom and practical skills learned through “hands on” clinical experience. Although external mentors will not always be present and the HIV care system at some point must become self-sustainable, the success of decentralized HIV care requires ongoing clinical supervision, training, and mentoring while clinical skills are being developed during the rapid scale-up of ART. Efforts have been made by various implementing partners to standardize

clinical mentoring at the HC level. WHO and other guidelines related to clinical mentoring for HIV care and provision of ART will be very useful in this regard.

- b. *Clinical mentors are stretched too thin, and the number of mentors is inadequate compared with need.* Clinical mentors have been assigned multiple responsibilities, and have large numbers of clinics to visit every month in the performance of their duties. It is impossible for a single clinical mentor to do a quality job of addressing all his or her required responsibilities. Given limited time, mentors will need to assign different priorities to these various tasks. In discussions with HCs, the single biggest concern about clinical mentors was that they did not spend enough time at each site performing their primary responsibility of clinical mentoring and training.
- c. *Clinical mentors have been difficult to recruit and retain.* Because of the overall shortage of physicians in Ethiopia, especially those trained in HIV care, physicians who are potential candidates for the clinical mentor program are highly competitive and may also be recruited by private health facilities, NGOs, and other external funders. During the team's meeting with MSH, the current process for providing financial support to mentors was cited as a significant barrier in recruitment and retention. Without the ability to be financially competitive, clinical mentors will continue to have turnover, threatening the sustainability of this important component of the ART training and supervision process.
- d. *Mentors need access to the latest information on HIV care and treatment.* Knowledge about HIV care is a rapidly changing and expanding field. Clinical mentors should have the latest information about HIV and ART, so they can share this knowledge with HCs. Having ongoing access to the latest knowledge is another way of increasing job satisfaction for clinical mentors who assume this challenging position. In addition to IMAI, Comprehensive Course, and other classroom training, it is also important for clinical mentors to have ongoing practical clinical experience in managing HIV/AIDS patients.

E. Availability of Resources and Commodities

To provide quality HIV care, HCs have many resource needs, including better access to drugs, test kits, lab reagents, and other supplies; IMAI tools and educational materials; computers and communications equipment; and space.

1. *Shortage of drugs:* At virtually every HC visited by the evaluation team, a shortage of drugs was cited as a significant concern. With support from PEPFAR and other funders, HCs are able to provide free ART to HIV-infected patients who need these drugs. These drugs are provided at ART-designated pharmacies within the HC by trained pharmacy technicians. However, in terms of OI prophylaxis, only cotrimoxazole is covered for free in the ART pharmacy. Other drugs for OI prevention and treatment must be purchased from the general pharmacy (if available) or from private pharmacies in the community. Lack of drugs for STI treatment is another concern. STIs not only represent a significant health problem in their own right but increase the risk of both acquiring and transmitting HIV, threatening to undermine HIV prevention efforts at the community level.
2. *Test kits and lab reagents/supplies:* A number of HCs also reported periodic shortages of HIV test kits and other laboratory reagents. The Ethiopian protocol is for rapid testing to be done with one rapid test assay and results to be confirmed with a second. In the event of discrepant results on the first two assays, a third assay (Uni-Gold Recombigen HIV) is used as a "tie breaker." Although the number of times that the Uni-Gold assay is needed is fairly limited, some HCs

reported that if they lacked this test kit, they would not perform any HIV testing. Other reagents that were sometimes in short supply included those for routine hematology, chemistry, and/or microbiology assays. These are essential for diagnosis of HIV-related diseases and/or ART side effects.

3. *IMAI tools and materials*: A number of tools and educational materials have been developed to support IMAI and comprehensive HIV care, including wall charts (e.g., with WHO guidelines and recommendations), flip charts and other patient education materials, and pocket guides. Virtually all HCs reported a shortage of these materials and a desire to have more of them at their facility. Among clinicians, there was particular interest in HIV pocket guides that include essential information on ART and OI treatment recommendations, drug dosing, drug interactions, and ART side effects.
4. *Computers and communication*: As described above, the lack of computers at the HC level represents a significant barrier to HCs being able to summarize and analyze their local HC data, necessary for M&E. Requirements include not only the computers themselves, but also software and computer supplies. HCs, especially those in rural areas, also have a number of communication needs. At the most basic level, a number of HCs had limited telephones, including phones for their community outreach staff. HCs were also very interested in access to the Internet. Not only would this allow health facilities such as HCs and local hospitals to more efficiently communicate with each other via e-mail, but Internet and e-mail access would allow HCs to have greater access to HIV treatment guidelines and updates on the latest information to improve quality of care.
5. *Space*: A number of HC visited by the evaluation team expressed a strong need for additional space, including space for HIV treatment and confidential HIV counseling. In some centers, there was limited patient waiting space, requiring patients to sit outside, and rooms for health staff were often very limited. Other facilities were old and outdated. With support from USAID and other funders, renovation at some HCs is taking place, although physical infrastructure needs remain great.

F. Monitoring and Evaluation of HIV Care and Treatment

It is critical to the successful implementation of IMAI for the HC to be able to retrieve, summarize and evaluate data at the local level, in order to conduct internal monitoring and evaluation. As detailed below, we conclude that data management at the HC level needs significant development and enhancement.

1. *Data management at the HC level needs significant improvement*. Data management involves more than recording selected data in logbooks and filling out forms to send to higher levels; it includes the ability to retrieve and summarize data at the local level to enable HCs to conduct internal M&E. When the evaluation team tried to work with HCs to collect summary data, it found this to be a task of considerable difficulty. Often the team was not able to retrieve important data concerning HIV testing or treatment from the HC data clerks. The team concluded that data clerks are not adequately trained in data management, and found that they were often unable to compile basic summary data from their records. The lack of quality data from HCs posed a significant challenge for this evaluation and pointed out what the team considered to be a serious and important deficiency at the HC level.
2. *HC data are hand-recorded and not computerized, leading to a limited ability to summarize data and generate reports*. Typically, obtaining even the most basic data from HCs (including those related to

numbers of patients tested for HIV or numbers on ART) required counting and hand tabulation from logbooks. These data are critical not only for external evaluations but also to help the HC evaluate its own performance. Lack of computerization poses a significant barrier to the ability of HCs to summarize and analyze locally generated data, including data that may be needed for establishing local program priorities and monitoring HC performance.

3. *In some HCs, there are multiple reporting requirements, including those of donors/external funders.* A key component of the public health model for providing ART at the local level is simplified and standardized record keeping to be used for program M&E. At some sites, external funders imposed additional reporting requirements, increasing the amount and complexity of information that had to be recorded.

VI. RECOMMENDATIONS

A. Impact of IMAI on HIV Care, Treatment, and Support Services at the Health Center Level

1. *Clinicians need continued clinical mentoring, supervision, and consultation to help identify and manage complications, side effects, and OIs, and to improve clinical skills.* Recommendations concerning the clinical mentors and other monitoring and supervision recommendations are detailed above. As noted, the clinical skills of most health workers at the HC level still need significant improvement and support in order to provide quality HIV care and avoid the development of a number of adverse consequences. Mentoring/supervision should emphasize multiple aspects of ART and HIV care, including laboratory and clinical monitoring for ART side effects and assessment and management of patients in whom treatment failure is suspected. These areas could also be addressed through case presentations, case discussions, and other training exercises.
2. *Additional assessment of clinical skills and the quality of care provided at the HC level should be performed.* The variability in clinical skills noted by the evaluation team represents an important issue for further assessment and intervention. As clinical mentoring and experience caring for HIV patients continue, clinical skills at the HC level are expected to improve. However, as part of ongoing assessment of the provision of decentralized care at the HC level, the team recommends a more in-depth evaluation and analysis of the main problems encountered by each cadre in the clinical management of HIV/ ART, possible factors that may be contributing to these problems, and additional interventions that could help improve local care. Factors that such an evaluation may wish to look at would include workload, supervision, and support after training; distribution of specific clinical care responsibilities among the different cadres; opportunities for clinical case discussions and review; the amount and quality of supervisory feedback; and the overall organization of the HIV/ ART care system within the HC.
3. *Additional assessment of rates of and reasons for defaulters and loss to follow-up should be conducted.* All HCs reported some proportion of patients who were lost to follow-up and suggested multiple potential reasons for patient default. However, the rates at different levels of the health system and determinants for patients default have not been well defined, and the proposed reasons for default are largely anecdotal. The national HIV/ AIDS Prevention and Control Coordinating Office (HAPCO), in coordination with a number of partners, is currently looking more rigorously at the entire issue of adherence and default. The evaluation team supports such assessments as very important to improving the quality of care at all levels, including at the HC.

B. HIV Care and Treatment Service Delivery at the Health Center Level

1. *A multidisciplinary HIV team at the HC level should be encouraged and strengthened.* The multiple tasks and responsibilities associated with HIV care are best accomplished through a multidisciplinary team, with division and allocation of responsibilities. This approach is supported as part of national and regional plans for HIV/ ART care, and the evaluation team strongly supports it. This team should include the head of the facility, health officers, physicians (if available), nurses (including those responsible for ART, PMTCT, VCT, and TB), pharmacists/ pharmacy technicians, laboratory technicians, data clerks/ data managers, case managers, community counselors, and expert patients. This team should have regular meetings to share information and issues of concern. The clinical mentor ideally should attend at least one multidisciplinary team meeting per month.

2. *A designated focal person should be in charge of coordinating HIV services at the HC.* To facilitate coordination of the multidisciplinary team as well as to ensure that HIV care and prevention services are being adequately addressed, a designated focal person should be identified and his or her role reinforced as team leader. The focal person may be the HC head, a health officer or nurse in charge of the HIV clinic within a HC or another designated individual. This person will regularly communicate with not only the HC team, but also the clinical mentor and other appropriate individuals. This person will also help reinforce intrafacility referrals and linkages related to HIV care, including linkages with TB, maternal and child health, and STI services.
3. *Linkages between TB and HIV services should be strengthened.* It is important to ensure that all HIV patients are screened for symptoms of TB and that appropriate diagnostic tests are performed on those with a positive symptom screen. This screening should be done not only at the initial visit but, as appropriate, during follow-up visits, especially on those with suggestive signs or symptoms. It is equally important that all TB patients are screened for HIV; local HC data need to be periodically monitored to ensure that this is occurring. It may be appropriate, especially in larger HCs, for HIV and TB care to be provided by different providers and clinics. If this is the case, the HIV and TB clinical services should consult with each other on provision of drug regimens, especially for those patients on both ART and TB drugs. Co-management will include monitoring patients for drug side effects such as hepatitis and having both teams reinforce the importance of complete adherence. Co-management may be facilitated by teams scheduling HIV and TB patient follow-up visits on the same day, with frequent communication between the ART and TB-DOTS nurses about patients followed in common.
4. *PMTCT needs to be reinforced at all settings, including labor and delivery and under-5 child clinics.* Although clinical policies are for all pregnant women to be tested for HIV in prenatal, perinatal, and postnatal settings, in practice this does not appear to be the case in all HCs. Clinic data need to be collected and reviewed to ensure that all pregnant women seen in prenatal settings are tested for HIV unless they opt out. In those HCs where testing in L&D settings is currently not performed at night, procedures need to be modified so that rapid HIV screening can be performed by one or more staff members at all hours. For those women who deliver at home and whose children are seen in postnatal settings, follow-up HIV testing needs to be integrated into these settings. Evaluating the ability of the clinic to achieve these goals will require improved data management so that local HC data can be routinely analyzed and evaluated at the clinic level to improve practice. Nurses and midwives who work in the delivery room should be sensitized to the importance of HIV screening and PMTCT, as well as traditional birth attendants and HEWs who assist women who deliver at home or elsewhere in the community.
5. *All HIV patients should be screened routinely for syphilis with a non-treponemal assay.* All HIV-infected patients, as part of their initial medical evaluation, should be screened for syphilis using a non-treponemal assay, such as the rapid plasma reagin (RPR) or Venereal Disease Research Laboratory (VDRL) assay. Untreated syphilis can have a variety of serious health consequences, including development of neurosyphilis, damage to the heart, and other potential complications of tertiary syphilis.
6. *All clinicians should be able to recognize and provide basic management of OIs and other HIV-related conditions.* Although the specific management of ART and HIV-related disease is done at the HIV clinic, there are times when HIV-infected patients will present to the non-IMAI trained general clinicians (not trained or specializing in HIV care) at the HC with signs or symptoms of illness. All clinicians should be able to recognize whether such presentations might be due to HIV disease

or complications of its treatment and know when to refer patients to their HIV clinic or their local hospital. For some common basic conditions, such as oral candidiasis, all clinicians (whether HIV care providers or not) should be able to diagnose this condition and provide appropriate medical therapy. This recommendation does not imply that all clinicians will become expert in HIV care, which requires more extensive training and follow-up mentoring. However, it should be the goal for all primary care clinicians, including those at the HC, to have some basic understanding of HIV.

C. Linkage of Health Center Services with Other Levels of Care (Implementation of Health Network Model)

1. Health Network Model and Linkage between HC and Hospital

- a. *Greater opportunities should be explored for interaction between clinicians at the HC and hospital.* One way to improve the generally poor communication between hospital and HC staff is to encourage greater interaction between clinicians at these different levels. This will help clinicians at each level gain a greater understanding of the problems and clinical situations of the other level. The evaluation team had several suggestions to foster this interchange. After training, staff from HCs could be attached for short-term periods to a nearby hospital. This would allow them to learn more about management of acute and more complex HIV problems and more about the clinical capacity of the referral hospital. Conversely, experienced hospital staff could help with mentoring at the HC; for example, HIV clinicians from the hospital may begin to “attend” at the HCs on a regular basis, helping to supervise, mentor, and train clinic staff. As such interactions continue, hospital staff may even begin to assume some of the roles currently occupied by the clinical mentors.
- b. *Hospitals should provide written feedback on patients sent back to HCs.* Patients who are sent from the hospital back to the HC after referral for management of an acute problem should have written summary documentation of their inpatient or outpatient consultation and management, including the results of tests performed, diagnoses established, treatments received, and recommendations for clinical management after transfer. This will improve continuity and quality of patient care and also help instruct HC staff in how such patients should be medically managed.
- c. *Catchment area or other meetings should include case discussions on problem patients and clinical situations.* Although it is very important for hospitals and HCs to discuss administrative and policy issues during their catchment meetings, opportunities should also be sought for clinicians at the hospital and HCs to meet on a regular basis to discuss management of complex clinical problems, possibly including those related to specific patients. Those attending such meetings should include clinicians with direct hospital and HC responsibility for ART and other HIV care.
- d. *Criteria for transfer of hospital patients to HCs should be clarified, and hospital staff should be sensitized about the availability of ART at the HC.* Although the Health Network Model recommends transferring medically stable patients from hospital clinics (which are often overcrowded) to HCs closer to the patient’s home, hospitals may be reluctant to transfer such patients, and hospital criteria for transfer to HCs may differ. Addressing these issues with standard guidelines will help provide more uniformity throughout the system, relieve congestion at some hospital HIV clinics, and allow patients to receive care physically closer to their home communities.
- e. *Factors that influence the low flow of patients at certain HCs should be analyzed.* There are a number of proposed hypothetical reasons why some clinics do not have greater numbers of HIV-infected patients seeking HIV care at the HC. These could include: reluctance of some patients to seek

HIV care at the HC because of stigma and fear of being recognized; concerns about the quality of care at the HC compared with the hospital; concerns about costs at the HC; a low number of HIV-infected patients in a specific HC's catchment area; and lack of availability of laboratory or diagnostic assays at the HC level. The actual reasons in HCs with low numbers of HIV-infected patients on ART should be further investigated, so that appropriate measures can be taken. For example, if laboratory availability is an issue, mechanisms for easier transport of specimens between the hospital and HC (rather than patients having to go to the hospital) should be explored.

2. Health Network Model and Linkage between HC and the Community

- a. All HC staff who interact with the community need additional and sustainable support in multiple areas. Persons who provide linkage between the HC and the community include case managers, community counselors, mother-to-mother counselors, and a variety of other health professionals. Because of their critical role in the Health Network Model, additional support is needed in multiple areas, including salaries, stipends, and outreach-related expenses, such as those for phone communications, meals, and transport. This support cannot be contingent on availability of temporary funds from NGOs or other external funders, and HCs cannot rely solely upon the good will of volunteers; financial support must be adequate, sustained, ongoing, and available to all HCs throughout the country. Lack of such support threatens the sustainability of decentralized HIV care and the Health Network Model.
- b. Community workers should be fully integrated into the HIV team. As noted, multidisciplinary teams at the HC level play a critical role in implementing comprehensive HIV care. Those persons who conduct community outreach play a valuable role in community linkage and should be fully recognized by and included in team meetings, planning/ priority setting, and evaluations of current activities.
- c. Continued supervision, mentoring, and training should be provided for those who provide home-based care. The evaluation team stressed the significance of home-based care as an important community outreach activity. Home-based care encompasses a variety of important health issues, such as nutrition, management of symptoms, prevention of continued HIV transmission, emotional support, and, if needed, palliative end-of-life care. These and other home care responsibilities require that community counselors providing these services have specialized supervision and training to optimize their skills.
- d. Greater involvement of HEWs in providing linkages with the health posts and community is recommended and will require additional training and support. Because HEWs are recruited from the local communities in which they work, they provide an invaluable connection with the village and household level in supporting the Health Network Model. The evaluation team felt that HEWs play a critical role in providing linkage between the HC and the health posts, and that HEWs have an important role to play in greater provision of HIV-related services. Examples of such services at the community level include support for C&T, PMTCT, and referral of patients who may have HIV infection or disease to local facilities for additional medical evaluation and care. Training is required to help the HEW adequately address HIV-specific issues, and the national plan for decentralized HIV care has made this one of the training priorities. However, HEWs are tasked with a large number of other health functions. Key informants told the evaluation team that the ability of HEWs to take on additional HIV prevention and referral responsibilities will require expanding the number of HEWs, allowing each HEW to spend additional time with each of his or her households and community-based clients.

- e. Community awareness about the availability of ART at HCs should be increased. Some patients may elect to go to the hospital rather than the HC for HIV care because they believe that ART treatment is only available at the hospital level. By increasing awareness in the community about ART availability, HEWs, others who work with the health posts, and other community outreach workers may help encourage HIV-infected patients to attend the HC for their primary HIV care and management. Through word of mouth, those who become aware of this availability can share this information with others in their villages and communities.

D. Human Resource Development and Capacity Building

1. Staffing at the HC level

The rationale for most of these recommendations is covered in other sections of this report. However, they are also summarized below as specific recommendations related to staffing at the HC level.

- a. The HCs and health system need to do everything possible to recognize, support, and validate the work of all cadres at the HC who are part of the multidisciplinary team.
- b. Comprehensive HIV training should be provided for new staff, and refresher training should be periodically offered for those who have previously received IMAI training.
- c. All HC staff should receive some basic training in HIV prevention and care.
- d. HCs should have access to and analyze their local data in order to help inform and empower those responsible for HIV prevention and HIV care.
- e. Greater involvement of HEWs in providing linkages with the health posts and community on HIV issues is recommended and will require additional training and support.
- f. Greater support (training and resources) needs to be provided to those who conduct community outreach, including case managers and other adherence supporters, as well as to those supporting mother-to-mother programs.
- g. Additional mechanisms to avoid attrition of IMAI-trained staff should be explored and implemented. The evaluation team supports the efforts of the national government, regional and local health bureaus, and various partners, including WHO, to address this issue. Potential strategies suggested to the evaluation team included revising the selection criteria for those receiving IMAI training and/ or requiring those who receive comprehensive training to work at the HC for a specified minimum period of time. Other measures to increase job satisfaction and increase resources available to those working in the HC are suggested throughout this consultation report.
- h. IMAI/IMCI, PMTCT, STI treatment, and other aspects of HIV prevention and care should be incorporated into the pre-service education curriculum/ training. Although the evaluation team focused on in-service HIV-related issues, an important aspect of responding to the human health worker resource shortage in Ethiopia is the training of additional health workers on HIV prevention and care issues at the pre-service level; this has been previously recommended as one of the multiple responses needed to help address the health worker shortage. Such pre-service training will not only help reduce the amount of first-time comprehensive training that needs to be offered to those currently at the HC but hopefully will also help attract additional health staff to working with HIV-infected patients.

i. Task-shifting practices within an HC for HIV care should be encouraged. As the number of HIV patients in care, including those on ART, continues to increase, it will be important to clearly define the role of each of the cadres involved in HIV care at the HC level. For example, it is reasonable for health officers and (when available) physicians to take care of more complicated management cases. Similarly, tasks such as refilling prescriptions for ART drugs and adherence counseling can be delegated to other staff, freeing up nurses for other types of patient care activities.

2. Training of HC staff

- a. Training information should be routinely collected and reported every six months by HCs in order to focus on gap filling. MSH, in coordination with the Government of Ethiopia and multiple partners, including USAID and PEPFAR, has made the initial training of clinicians and other health workers to provide comprehensive HIV care a major priority. However, due to attrition, staff turnover, and reassignment, new clinicians and other health workers may be present at the HC who have not completed this training. Additional health workers may have received older training or short courses that did not allow them to obtain a needed detailed understanding of current HIV knowledge relevant to their job responsibilities. The evaluation team found it difficult in some HCs to gather information on the number of health workers who had been trained in IMAI (including the current National Comprehensive HIV Care and Treatment Course training). In addition, the information gathered for this report represents the situation as of the time of this evaluation, and circumstances may rapidly change, given the unstable human resource situation in Ethiopia. The team recommends that training information should be recorded and reported by HCs every six months so that training gaps can be assessed and addressed in a timely fashion. This information should be part of the HIV program's routine monitoring data.
- b. National Comprehensive HIV Care and Treatment Course training should be repeated on a regular basis for new staff. The National Comprehensive HIV Care and Treatment Course training was very positively regarded by the great majority of clinicians who completed it. As trained HC staff assigned to ART clinics leave and new staff are hired to replace them, comprehensive HIV training needs to be provided on a regular basis to help ensure sustainability of a trained workforce able to provide quality HIV care with knowledge of current management and the latest recommendations. How often this training needs to be provided may depend on the rapidity of staff turnover, but having comprehensive training offered regionally on an annual basis seems a reasonable proposal.
- c. National Comprehensive HIV Care and Treatment Course training should be divided into three two-week modules. Although the National Comprehensive HIV Care and Treatment Course training was very positively regarded by those who completed it, some participants felt that four straight weeks of training was tiring and made it more difficult to absorb and retain all information. In addition, for many HCs, having one or more staff members away for an entire month imposes a hardship on the clinic and other health workers at that site. Also, there were some topics (such as infection control and pediatric HIV care) to which trainees wanted more time devoted. Having three two-week modules would help to accomplish all these goals. However, if this approach is used, the modules should be closely spaced in time (e.g., not months apart).
- d. Refresher training should be offered to all previous trainees to update them on the latest information and guidelines. Although many clinicians at HCs received the National Comprehensive HIV Care and Treatment training, some clinicians received training with older previous versions of the IMAI training. Given the rapid pace at which knowledge about HIV is evolving and the new guidelines that are developed to reflect updated information and recommendations, refresher training should be offered to those who received the older training. In addition, even for those who have received

the more comprehensive HIV training, refresher training should be provided after two years (if not sooner) to update health workers on the latest HIV treatment-related information.

- e. Training content and IMAI tools should be periodically reviewed to ensure they are consistent with the latest information and guidelines. Given the rapid change and increase in HIV-related information, the National Comprehensive HIV Care and Treatment Course training and IMAI tools used to support this information should be periodically reviewed to ensure they are current and up-to-date.
- f. Training should include infection prevention and post-exposure prophylaxis. Health workers need to know how to protect themselves against transmission of HIV, other blood borne agents, and other nosocomial infections that may be transmitted in health care settings. Post-exposure prophylaxis training as well as policies and procedures to support around-the-clock availability of post-exposure prophylaxis needs to be provided for all HCs. Not having this protection can be a major disincentive for health workers to work with HIV-infected patients; having this protection can help improve health workers' sense of working in a more supportive job environment.
- g. Pharmacists and laboratory technicians need comprehensive training from those experienced in their respective areas. Although clinicians received the four-week National Comprehensive HIV Care and Treatment Course training, pharmacists and laboratory technicians received a briefer introductory training of one week or less, which they felt was superficial and did not offer the necessary detail they needed to provide quality HIV services in their respective fields. A more comprehensive training, designed and taught in coordination with HIV-experienced pharmacy or laboratory workers, should be offered to those who are part of an HC's multidisciplinary HIV team. For pharmacists, this training would include more detailed information about dosing, drug-drug interactions, adherence, and ART side effects.
- h. All clinical mentors should receive update training every six months for the latest on HIV care and treatment. Clinical mentors should be among the most knowledgeable clinicians on HIV care and treatment. They therefore need access to the latest information on ART and HIV care so they can communicate this information to those they mentor and supervise. This training could be offered every six months at a central location (such as Addis Ababa), allowing clinical mentors to meet with others from their cohort and discuss problems and issues of mutual concern. Having a chance to meet with other clinical mentors and having access to the latest information is one way to increase job satisfaction in this challenging position.
- i. All HC clinical staff should receive some training in HIV. The evaluation team recommends that all clinicians should be able to recognize and provide basic management of OIs and other HIV-related conditions. As noted previously, this recommendation does not imply that all clinicians will become expert in HIV care, which requires more extensive training and mentoring. However, it should be the goal for all primary care clinicians at the HC to have a fundamental understanding of issues related to HIV and to receive training to support this understanding.
- j. Supervisors and managers from the health system and woreda need training in both management skills and HIV technical skills. Although the major focus of this consultation concerned training at the HC level, the Health Network Model requires that those who supervise and oversee this program have good management skills and some familiarity and knowledge with HIV issues. This will enable supervisors and managers to provide the most effective and informed leadership in helping to oversee the program, as well as in planning, implementing and evaluating the HIV-related activities of the various health levels.

k. Standardization of HIV courses and training materials besides those offered as part of the IMAI program should be encouraged. Although the IMAI/ Comprehensive Course training is now standardized with a national curriculum, there is a wide range of non-IMAI HIV training courses offered by different partners, including training on C&T, PMTCT, and STI management. Uniformity in these other courses should be encouraged, so that all training is consistent with the latest clinical information and with national guidelines. There should be agreement on a core of basic information that all such training programs would include.

l. Training is an ongoing activity that should be continually reinforced. Training does not conclude with taking a single comprehensive course but rather represents an ongoing activity. Instruction from the clinical mentor is one way for this activity to take place. Additional opportunities are through case discussions and case presentations, such as those that may take place during multidisciplinary team meetings or catchment area meetings. In addition, those in the HC who have already been trained should share their knowledge and experience with other HC staff to help promote diffusion of knowledge within the HC.

3. Clinical Mentoring and Supervision

a. Although eventually the HIV care system should be self-sustainable, at present clinical mentors are still needed. The health care system cannot rely on mentors forever to support HIV care and treatment, especially given the overall shortage of physicians in Ethiopia and the need for physicians in other clinical capacities. However, during the critical phase of rapid scale-up and decentralization of HIV care, the evaluation team does not believe that capacity exists at the local level for HIV care and treatment to be sustainable without the assistance of clinical mentors. Despite the initial comprehensive training that health workers received, additional supervision and mentoring are required to gain greater familiarity and practical experience with how to apply knowledge learned in the training and manage the many practical and sometimes complex issues related to ART and other HIV care.

b. During the scale-up phase, the clinical mentoring system should be strengthened, with greater numbers of clinical mentors, more resources, and decreased workloads. As noted, clinical mentors have a great number of tasks to accomplish, especially given the large number of sites they are responsible for overseeing. Not only does this mean that clinical mentors cannot adequately fulfill the tasks to which they have been assigned, but it also increases the risk of burnout and staff turnover. The fact that MSH is not able to pay salaries to clinical mentors that are competitive with other external funders is a major challenge to the sustainability of clinical mentors. Not having sufficient numbers of clinical mentors who can devote sufficient time at sites threatens the entire Health Network Model and the ability to provide decentralized ART and HIV care at the HC level. During the phase of rapid ART scale-up, the evaluation team recommends that additional mentors be hired and that discussions be held with MSH to develop ways to pay clinical mentors more competitive salaries. Other measures to encourage retention and promote staff satisfaction are suggested below.

c. The primary function of the clinical mentor should be mentoring and training. Clinical mentoring should focus on problem-based clinical issues. The evaluation team found that clinical mentors are assigned responsibilities including review of records and other supervisory activities. Although some of these may need to be performed by the mentor, their primary job should be observing, teaching, and mentoring clinicians (especially health officers and nurses) who are providing HIV/ ART care at the HC level. As indicated elsewhere, there are serious concerns about the skills of many clinicians to provide this care, including the ability of local clinicians to identify and manage common clinical problems. The clinical mentor is critical in this regard and needs to have

sufficient time to devote to these activities, including time and effort devoted to important clinical training.

- d. Clinical mentor should be at every ART site for approximately two days every two weeks and also available by phone. Almost every HC visited by the evaluation team reported that having a clinical mentor at their site for only one day a month was not sufficient time to provide a quality mentoring experience. During the rapid scale-up phase, ideally clinical mentors who focus on ART sites should spend two days every two weeks at a given site. As sites get greater experience and demonstrate more expertise, the frequency and length of visits could gradually decrease. This recommendation is currently impossible with current clinical mentor staffing levels and is integrally tied to other recommendations, including increasing the number of mentors.
- e. Clinical mentors should receive update training every six months. The rationale for this recommendation – allowing mentors to have the latest and most up-to-date information on HIV care – is discussed in the training section.
- f. Clinical mentors should have standardized supervision and a clearly defined work schedule. It is important for there to be standardized supervision of mentors to help ensure that they provide quality training and that their time at the HC is utilized most efficiently. The mentor's supervisor can help the mentor address specific problems that arise at the HC level, and time at each health facility can be utilized and allocated most effectively.
- g. HCs eventually need to transition to a system of greater internal mentoring. Although clinical mentoring is critical during the scale-up and decentralization of HIV care, it cannot be expected to continue indefinitely. As HIV/ART care continues at the local level, there should be greater involvement of internal mentors and supervision. Sources of such supervision include HIV-experienced clinicians in the HC, the hospital, and the woreda health office. Sustainability of the Health Network Model and decentralized HIV care requires creation of the ultimate capacity for internal monitoring. The evaluation team throughout this report has made a number of specific recommendations, but additional planning meetings should be held to discuss how to best realize this goal. For example, the team suggested that clinical staff at the HC should regularly have short-term attachments to a nearby hospital to increase their clinical experience, and that experienced clinicians and other health workers performing HIV-related tasks from the hospital should periodically attend the HC. Other collaborative interactions between HCs and different levels of the health system should also be explored.

E. Availability of Resources and Commodities

1. Shortages of drugs and supplies are a critical issue that needs to be addressed; access to more free and low-cost available drugs needs to be expanded. Shortages of some drugs and supplies were reported as a concern at every HC. Although ART is provided free, STI drugs and drugs for OI prophylaxis and treatment (with the exception of cotrimoxazole) must be purchased from the regular HC pharmacy or from private pharmacies outside the HC. The evaluation team recommends that for those patients who need them, STI and selected OI drugs should be provided free as part of IMAI. Since it may not be realistic in resource-limited settings to provide free drugs for all OIs, decisions will need to be made as to which essential drugs can be provided free (e.g., fluconazole) and which can be made available at reduced cost. Similarly, if HCs cannot perform HIV testing or other required diagnoses because of equipment shortages, this also needs to be addressed as an important national priority. Although Uni-Gold test kits should be available, in situations where they are not, it may be preferable to still perform the initial rapid tests. In the unusual situation in

which the initial two tests are discrepant and the Uni-gold kit is unavailable, samples can be collected and sent to another laboratory for final resolution. HAPCO and other groups should discuss how to best address these and other related issues.

2. HCs should have increased access to wall charts with the most recent IMAI guidelines, patient education materials, pocket guides, and other tools. Although a number of tools and educational materials have been developed to support IMAI and comprehensive HIV care, most HCs have limited access to these materials. Materials that should be made much more available to HCs include wall charts (including those with current guidelines and recommendations), flip charts and other patient education materials, and pocket guides with essential information such as ART and OI treatment recommendations, drug dosing, drug interactions, and ART side effects.
3. HCs should have improved computer and communications access. Computers will significantly improve the HC capacity for data entry and data management, necessary for M&E. Having access to the Internet will allow HCs to communicate by e-mail and facilitate access to the latest information and recommendations related to HIV care. Currently, the communications capacity (including telephone communication) of many HCs is limited. Greater availability of cell phones will allow clinicians to consult with clinical mentors, HCs to communicate with hospitals, and community outreach staff to communicate with patients. Especially in rural areas, access to cell phones is necessary to facilitate linkages between the different levels and help support decentralized care. To promote distance consultation and communication, the introduction of telemedicine and other electronic communication measures should be explored. Such measures would not only strengthen linkages within the Ethiopian health care system but would also allow for greater interactions between the HCs and HIV experts around the world, further improving the quality of HIV care.

F. Monitoring and Evaluation of HIV Care and Treatment

1. Basic standard data need to be regularly analyzed at the local level, with reports routinely generated by and for the HC. M&E is crucial to the provision of decentralized HIV care and IMAI. The evaluation team believes that it is critical to the successful implementation of IMAI for HCs to be able to retrieve, summarize, and evaluate data at the local level so they can conduct internal M&E. All HCs should have established systems at the local level for ongoing systematic collection, analysis, and interpretation of health-related data essential to the planning, implementation, and evaluation of clinical practice. Collecting data only for forwarding to higher levels without feedback to the level that generates them diminishes the data's benefit and the ability to use this information for action at the HC level. Allowing HCs to have access to and analyze their local data not only helps to inform them about their local situation but also helps empower those at the HC. Therefore collection and analysis of data needs to be closely integrated with the timely dissemination of these data to those responsible for planning and implementing HIV prevention, care, and treatment.

The data gathering tools used by the team and specific parameters evaluated as part of his evaluation offer one guide as to the types of information that could be collected and evaluated at the local level. Information available from WHO on IMAI and its implementation offers additional guidance on monitoring and evaluation of this program.

2. *HCs need trained data managers.* Data management involves more than recording information in logbooks and on reporting forms. The inability of many HCs to collect and summarize essential data for the evaluation team pointed out a serious deficiency in data management at the local level. In some cases, data clerks assigned to HCs had no idea how to summarize or evaluate the health data they were recording. Given the importance of data being collected, training in basic data management should be an essential component of IMAI.
3. *Data entry and management at the HC level should be computerized.* Obtaining data from HCs for the evaluation team required counting and hand tabulation from logbooks. Computerization of data will facilitate the ability of HCs to summarize and analyze locally generated data. Decisions will need to be made about the appropriate level of hardware and software supplied to HCs, which ideally should be uniform to allow for transfer of data to higher levels for reporting and analysis purposes. Moving toward computerization will also require the availability of information technology support staff, computer supplies, maintenance contracts, and other services to permit sustainability. The evaluation team believes that this is a worthwhile investment that should be encouraged throughout the HC system.

G. Partnering with Other Agencies and Organizations to Promote IMAI

USAID should partner with other agencies and organizations to promote IMAI and maximize available resources. It would be extremely difficult for any single agency, even with the generous support that the U.S. government has allocated to this program, to address all of the issues contained within this report. USAID is joined by a number of partner organizations in Ethiopia that are also interested in expanding HIV prevention, care and treatment. These include (but are not limited to) WHO and UNAIDS, other U.S. organizations such as CDC and the National Alliance of State and Territorial AIDS Directors, European and other organizations, the International Center for AIDS Care and Treatment Programs (Columbia University), Johns Hopkins University, the International Training and Education Center on HIV (University of Washington), implementing organizations such as MSH, Ethiopian and other nongovernmental and community-based organizations, and most importantly, the Ethiopian government and Ministry of Health. WHO is clearly a critical partner in implementing IMAI. IMAI represents a strategy developed in coordination with and promoted by WHO, and WHO has produced many of the tools and guides related to both IMAI and IMCI. The team spent a number of hours with WHO representatives in Addis as well as during its local visits to various regions, and was impressed by the knowledge of these representatives concerning IMAI and other issues related to HIV/ AIDS, as well as their overall commitment to ensuring its overall objectives. USAID should work closely with WHO as a full partner in follow-up discussions of how to best address the issues raised in this evaluation. USAID should also work closely with other implementing partners, including the Ethiopian Ministry of Health, MSH, and CDC. MSH is the currently identified implementing partner for many IMAI-related activities such as the clinical mentoring program.

To help maximize utilization of limited resources, USAID may want to evaluate how all funds related to PEPFAR (including those for staffing, foreign consultants, contracts, and direct support for local care and treatment activities) are allocated. It may be possible to identify additional funds that can be used to provide greater support for local activities to help implement some of the recommendations contained within this report. In follow-up discussions of how to best address the issues raised in this evaluation, USAID will also need to work closely with multiple partners to determine how to best collaboratively address the many critical issues that IMAI HIV/ AIDS in Ethiopia present. If this report helps to define what the most important challenges are for IMAI, and assists with the continued development of comprehensive and

collaborative national strategies to address these critical health needs, then our team will have made a contribution to the overarching goal of improving the health and well-being of the Ethiopian people.

APPENDIX A. SCOPE OF WORK

USAID/Ethiopia President's Emergency Program for AIDS Relief (PEPFAR) Statement of Work (SOW) for Mid-term Evaluation

Integrated Management of Adolescent and Adult Illness (IMAI)

(Draft 3 Revised 06-30-08 per GH Tech comments: 06-23-08)

PROJECT IDENTIFICATION DATA

- 1. Project Title: Integrated Management of Adolescent and Adult Illness (IMAI)**
- 2. Project Number: Grant to PIO No. 663-G-00-05-00424-00**
- 3. Project Dates: May 2005 – June 2009**
- 4. Project Funding: \$1,725,000**
- 5. Implementing Organization: World Health Organization (WHO)**
- 6. Cognizant Technical Officer (CTO): Dr. Abeje Zegeye**

I. Identification of the Task

The USAID/Ethiopia (USAID/E) PEPFAR office requests technical assistance from the Global Health Technical Assistance Project (GH Tech) to design and implement an independent mid-term project evaluation of the Integrated Management of Adolescent and Adult Illness (IMAI) Project. The IMAI Project has been implemented in nine (9) regions and two city administrations of the country, which includes: Amhara, Oromia, Southern Nations and Nationalities (SNNP), Tigray, Benishangul Gumuz, Harari, Gambella, Afar and Somali regions as well as the Dire Dawa and Addis Ababa city administrations. The IMAI Project has the overall goal of reducing the transmission and impact of HIV/AIDS by strengthening treatment and care services, with the objective of utilizing IMAI to build the capacity for decentralized ART services, including chronic disease management, within the antiretroviral treatment (ART) network. This external mid-term project evaluation will evaluate the contribution of IMAI to the efficiency of HIV/AIDS clinical teams at the health center level. WHO has trained more than 1,500 staff from health centers on IMAI. Since early 2007, the Ethiopia Federal HIV/AIDS Prevention and Control Office (FHAPCO) and the Ministry of Health (MOH) adopted a standard national HIV/AIDS clinical training module based on IMAI as well as the HIV/AIDS Clinical Guide developed by University of Washington I-TECH Project.

The USAID/E PEPFAR office requests that the in-country components of this evaluation be fielded by on or about (o/a) September 2, 2008 in order that the findings, conclusions and recommendations can be used to scale-up IMAI at health center level and the contribution of the trainings in improving the quality of delivery of HIV/AIDS care/support and treatment services.

II. Background

USAID/E Response to HIV/AIDS: From 2004 through 2006, an estimated 288,000 Ethiopians died from HIV/AIDS-related causes. The 2007 Federal estimate¹ of national HIV prevalence is 2.1%; 7.7% in urban areas and much lower in rural areas at 0.9% (FHAPCO 2007). As of 2008,

¹ *Federal HIV/AIDS Prevention and Control Office (FHAPCO), Single Point Estimates of HIV and OVC Indicators, April 5, 2007.*

more than one million (1,037,267) persons are estimated to be living with HIV and about 289,734 people living with HIV/AIDS (PLWHA) are in need of ART (FHAPCO 2008).

Recent antenatal care (ANC) and Ethiopia Demographic and Health Survey (EDHS) analyses reveal a more concentrated urban HIV epidemic in Ethiopia than previously believed. Representative survey data for Ethiopia imply a predominately urban epidemic that is likely to be concentrated among higher risk populations. Based on the new prevalence information and behavioral data, USAID/PEPFAR Ethiopia's prevention, care and treatment strategy prioritizes expansion of an integrated ART services at the health center and community-based services.

Despite the seriousness of the epidemic, there have nonetheless been some positive trends. EDHS 2000 and 2005 data on behavioral indicators related to abstinence, being faithful and condom use (ABC) have all shown significant improvement over the recent five year period. Reported premarital sex among men 15-19 decreased from 8% to 4%, and among men 20-24, it decreased from 21% to 13%. Reported premarital sex among women 15-19 decreased from 4.0% to 1.0%, and among women 20-24 it decreased from 16% to 3%. Reported condom use at last higher risk sex increased among men 15-49 from 30% to 52%, and among women 15-49, it increased from 13% to 24%. About 126,848 PLWHA has ever started ART (FHAPCO, February 10, 2008). Most of the ART sites are hospitals and some hospitals are already overburdened by clients on ART and chronic care. Therefore to offload already overburdened hospitals and to increase the coverage of ART services there is a need to decentralize the service to the health centers and community level.

The U.S. Mission to Ethiopia's HIV/AIDS interagency team, composed of the Department of State, the Department of Defense, the U.S. Centers for Disease Control and Prevention, and the U.S. Agency for International Development (USAID), began integrated HIV/AIDS programming in 2004 under the oversight of the Office of the Global AIDS Coordinator. Peace Corps joined the PEPFAR team in early 2007. The U.S. Mission collaborates with a number of Ethiopian government agencies - the HIV/AIDS Prevention and Control Office; the Ministry of Health; the Ministry of Finance and Economic Development; the Ministry of Youth and Sports; the Ministry of Women Affairs; the Ministry of Education; and the Ministry of Labour and Social Affairs.

USAID responds to HIV/AIDS as part of PEPFAR in collaboration with the Ethiopian Government and numerous other partners. USAID supports prevention, care and treatment activities with a combined FY06 program budget of over \$122 million.

USAID Integrated Strategic Plan FY 2004-2008 and the 2007 Foreign Assistance Framework: USAID/Ethiopia's HIV/AIDS programs were initiated under the USAID/E Integrated Strategic Plan (ISP) for the period FY 2004 to FY 2008 under the strategic objective (SO) **SO 14: Human Capacity and Social Resiliency Increased** and **SO 14.2 HIV/AIDS prevalence reduced and mitigation of the impact of HIV/AIDS increased**. In 2007, the SO14 was incorporated into the Foreign Assistance Framework (F-Framework) for the USAID 2007 Operation Plan. The activities under the HRCI now fit under the F-Framework Priority Objective, **Investing in People**, Health Program Area, Program Element HIV/AIDS, within the Program Sub-Elements for Condoms and Other Prevention Activities, Counseling and Testing, and Palliative Care: Basic Health Care Support.

III. Overview of the Integrated Management of Adolescent and Adult Illness (IMAI)

USAID Ethiopia issued a grant agreement (GA) in June 2005 to World Health Organization (WHO, PIO) to support a project entitled “Integrated Management of Adolescent and Adult Illness (IMAI)” linked with HIV/ AIDS prevention, care and support and treatment activities in Ethiopia. This program was planned as integrated service strengthening linked to prevention, care and support, ARV drugs, ART and laboratory services and IMAI. The IMAI program focuses on supporting health centers providing ART, HIV/ AIDS care and implementing palliative care services. Since 2005 the program has provided technical assistance for health center and community-based delivery of HIV prevention, care, and treatment services, with special emphasis on IMAI training for clinical teams. It has facilitated the adaptation, standardization and dissemination of training materials; it has also facilitated clinical care mentoring support for selected health centers on ART and chronic HIV/ AIDS care. A total of 240 health centers providing ART services and 500 health centers implement palliative care have benefited from this support. This approach to health system strengthening through the scale-up of HIV prevention, care and treatment using IMAI is also designed to improve case management of malaria, co-management of HIV and tuberculosis, and improved management of childhood illness through Integrated Management of Childhood Illness (IMCI)-HIV training. The IMAI program is also intended to improve maternal health services through the expansion of an integrated approach to Prevention of Mother-to- Child Transmission of HIV (PMTCT) with Intrahealth International. WHO is working with other key USAID/ Ethiopia care and support contractors, including the Management Sciences for Health/ HIV Care and Support Program (MSH/ HCSP). The IMAI initiative was modified in June 2007 to expand and strengthen its scope of services in the decentralized ART program.

The goal of the program is to reduce the transmission and impact of HIV/ AIDS through the utilization of an integrated service delivery approach i.e. IMAI and training of health workers at the health center level to build their capacity to ensure delivery of decentralized ART services, including chronic disease management, within the national ART network throughout the country. More specific objectives include:

- Normative standard development for integrated HIV/ AIDS treatment and care;
- Normative clinical mentoring standards development;
- Strengthen technical and supervisory capacity at federal, regional, zonal and woreda levels; and
- Monitoring and evaluation (M & E), including generation and utilization of data for quality improvement and decision-making.

The WHO/IMAI Project has used a two-pronged approach to achieve its objectives at the health center levels:

Normative standard development and training:

- Adaptation of IMAI training materials to address the nurse-centered approach for HIV/ AIDS care and treatment and train health workers;
- Antiretroviral (ARV) prophylaxis and ART for medically-eligible pregnant women; integration of the preventive care package within IMAI modules; adaptation and Amharic translation of IMAI materials for training of health extension workers(HEW), community volunteers and outreach workers;
- Printing and dissemination of these materials in partnership with the government of Ethiopia, the Ministry of Health (MOH) and other relevant PEPFAR partners;

- Supporting the development of a standard national operational plan for clinical mentoring;
- Supporting the Federal HIV/ AIDS Prevention and Control Office (FHAPCO) to place regional coordinators at regional referral hospitals to build regional capacity to facilitate clinical mentoring and train clinical mentors; and
- Supporting FHAPCO to create a pool of clinical mentors, in collaboration with PEPFAR partners.

Strengthen technical and supervisory capacity at Federal, Regional, Zonal and Woreda levels:

- Conduct in-service training for health workers deployed at newly-prepared health centers;
- Increase the supportive supervisory capacity of zonal and woreda management teams to undertake the supervision of health centers;
- In collaboration with other PEPFAR partners at health centers, to provide the necessary technical and logistic support for woredas to conduct supervisory site visits after IMAI training;
- In collaboration with MOH, regions, zones and woredas, WHO works in the adaptation, integration and utilization of IMAI tools for district HIV/ AIDS program coordination, including standardized case management observation and exit interviews; and
- Monitoring and evaluation, including generation/ utilization of data for quality improvement and decision-making.

The IMAI Program extended and modified for FY 2009: The IMAI Project was initially for a 31 month period, through June 20, 2005, for a total life-of-activity amount of US\$ 550,000 of USAID resources. Given the positive results of the IMAI program, the PEPFAR Ethiopia proposed an extension to the IMAI program. The proposal was approved in June 2007, with the understanding that USAID would include plans for further work under its longer-term PEPFAR 5-Year Plan and Country Operational Plan (COP 08). Under the grant agreement (GA) modification # 6 (06/30/07) four changes were made:

- i) provided \$ 1,175,000 in incremental funding;
- ii) amended the program to add a new component for follow-on HIV/ AIDS care and support and treatment in the training of clinical mentors and data clerks;
- iii) increased the total estimated life-of-activity amount to US\$1,725,000; and
- iv) To extend the completion date to June 30, 2009.

The geographical areas in which the IMAI works in Ethiopia have been integrated into the PEPFAR program. The WHO/ IMAI was asked to continue to work through partners, Federal and regions at the health center and community level. The country, regions, zones, and woredas were expected to get expanded access to the decentralized ART health centers services in line with the universal access and roadmap targets, which in turn, were to be linked into Health Network Model and hospitals providing ART services. By November 2007 (November 1st 2006- September 30th 2007) the USAID/ PEPFAR-funded IMAI activities in Ethiopia achieved results as shown in Table 1 below:

Table 1: The WHO/ IMAI Targets* and accomplishments for USAID/PEPFAR funding in FY 06.

Intervention areas	Targets *	WHO results achieved with PEPFAR/USAID funding** by Sept, 2007
Health centers to be covered	267	120
Woreda/Zone District coordinators trained	150	60
Expert Patients trained	130	24
Health workers trained	2223	548
Building IMAI facilitation and coordination capacity at RHB level Through supportive supervision, HC assessments and SOPs, etc.	No specific target	34 health centers reached with USAID funds only
Building IMAI facilitation and coordination capacity at national level through strengthening Health program Department at Federal HAPCO.	No specific target	2 WHO NPO and 4 National consultants

*The target represented is the overall national targets.

** Other sources of funding are from Italian Cooperation agency and other WHO sources of funding are intended to contribute.

The WHO/IMAI Project is expected to continue to apply integrated management of HIV/ AIDS, supporting decentralized ART services, complemented by the development of partnership strategies, to coordinate closely with other PEPFAR partners to ensure a standard approach to health center and community based care and support and treatment. This coordination is also expected to include active participation in the PEPFAR care and support and treatment technical working groups (TWG).

As outlined above, given the importance of the WHO/IMAI Project, the strong results achieved by the WHO/IMAI, and the endorsement by the Office of the Global AIDS Coordinator (OGAC) to integrate the WHO/IMAI into the Ethiopia Country Operation Plan (COP) for Year 1, USAID/E extended the WHO/IMAI through the PEPFAR planning period of FY2009, subject to continued availability of funds and satisfactory performance. The emphasis areas for this extension period are training and supportive supervision. Indicative targets for the extension are shown in Table 2 below:

Table 2: The WHO/ IMAI Targets (1/1/08-June 30, 09)

Intervention areas	Targets
Number of Health centers to be covered in the supportive supervision	200
Number of Woreda/Zone HIV program coordinators trained	200
Number of Expert Patients Trainers trained	100
Number of Health workers trained to deliver ART services according to national and international standards	300
Number of Adherence counselors (PLHIV and other lay providers) trained	100
Number of clinical mentors trained	150
Number of Data clerks trained	150

Monitoring, Evaluation and Reporting: WHO is expected to continue to provide comprehensive monitoring, evaluating, and reporting (MER) on achievements, results and/or outcomes throughout the extension period. Specific data required are of two types: (i) those that report on progress toward recipient-proposed milestones and targets under the Grant Agreement as shown above in Table 2; and (ii) those to measure the PEPFAR HIV/ AIDS indicators. All WHO/IMAI indicators are required to be disaggregated by gender.

Emerging Program Issues: Based on site visits and other sources over the past three years, four areas of concern have emerged in the operating environment:

- **Need for extreme effort and time demands during the national campaign at the Regional level:** On 25 November, 2006, Ethiopia launched the ambitious national campaign to increase VCT, ART, and PMTCT clients throughout the country, with its first phase spanning December and January 2007. During the preparation and launch of the campaign, there were extreme effort/ time demands imposed upon the regional health bureau staff. These extremely demands put at risk the timely coordination and facilitation inputs for IMAI (as well as for other activities).
- **Lack of capacity at regional, woreda, and facility level:** Regional capacity to support, prepare and supervise health centers for IMAI activities and to provide IMAI mentoring roles was severely constrained by pervasive deficiencies in the federal and regional health management team as well as by the high turnover of health center staff, to the extent that mentoring and supervision plans were severely disrupted.
- **High turnover in staff:** There is a subsequent high attrition of health workers at woreda health offices and health centers.
- **Poor involvement of the Health Extension Worker (HEW):** While it was hoped that HEWs would play a key role in linking facilities with community-based prevention, care and treatment services, the FMOH's inclination to avoid adding any tasks/ roles to HEW deprived the HIV/ AIDS national scale-up response of a significant additional health worker cadre.
- **Facility targets:** Achieving facility targets was constrained by the slower than expected rate at which new health centers were available for rolling out HIV care and ART services.
- **The effects of HAPCO/MOH revised IMAI curriculum with implementing partners (MSH, FHI, WHO, CDC/USG University partners):** The introduction of the revised IMAI curriculum has been somewhat problematic, including long absence of staff from duty (4-week training period), the validity of adoption, reaching targets, cost, lack of any evaluation of the course so far.

IV. Purpose of the Assignment

USAID/E requires a team of three independent consultants to conduct a mid-term project evaluation of the WHO/IMAI Project. GH Tech staff for this evaluation must be limited to GH Tech staff or sub-contractors that are not currently implementing HIV/ AIDS related programs in Ethiopia. This evaluation will collect information about WHO/IMAI implementation, efficiency of

HIV/AIDS clinical teams, progress, and challenges. This evaluation will assess the contribution of IMAI trainings to improve the quality of HIV/AIDS care/support and treatment services at the health center level. It will also assess the process used by WHO to scale-up IMAI at the health center level and the contribution of the trainings in improving the quality of delivery of HIV/AIDS care/support and treatment services. The evaluation will determine the success, results and/or outcomes of the WHO/IMAI in achieving the following key main objectives: strengthen decentralized ART services at health center and community based services; strengthen and expand accessibility to and availability of ART services; and increased access to care/support and treatment services for persons living with HIV/AIDS (PLWHA). It will formulate recommendations for strengthening, scale-up and follow-on programs. The evaluation will focus on the WHO/IMAI program performance period from June 2005 to the present. The evaluation report will be designed to help USAID/E and WHO address issues of management, scale-up, quality of services, and sustainability in IMAI modules and training. The evaluation will answer the following illustrative questions:

Program Management

- What is the contribution of IMAI training to the efficiency of HIV/AIDS clinical team at facility- and community-based care / support and treatment services?

Program accomplishments

- Develop a definitive summary of program accomplishments to date for key indicators such as:
 - Number of health workers trained on IMAI and working at health center level.
 - Number of health centers started ART program using IMAI trained staff and module.
 - Number of health centers that have IMAI and clinical mentoring guidelines and are actually using them.
 - Number of health centers, woredas and zones where capacity has been developed through training provided through the District Coordinator Course (DCC) and Supportive Supervision (for health centers and woredas).
- How can IMAI be further expanded to other health centers or hospitals?
- How can the linkages be improved between the IMAI Project and health centers; how can linkages be improved with care/support services at the facility and community level?
- How much functional synergy is there between the primary health care units (PHCU) and secondary level IMAI course?
- How many clinical mentors are trained at district hospital level? What is the level of their current engagement in the provision of comprehensive HIV/AIDS care, support and treatment services, including ART?

Quality of Care and Services

- What is the status of quality assurance for IMAI training and how can the IMAI training quality be improved?

Capacity Building and Sustainability

- How can IMAI trained clinical team attrition be reduced?

- Is IMAI facilitation and coordination capacity of RHBs built in such a way that supportive supervision, health center (HC) assessments, and reviews of standard operating procedures (SOP) are conducted regularly at health centers? If not, why not and what suggestions does the team have to modify that?

Impact

- Acknowledging the problem of attribution, is there evidence that utilization of an integrated service delivery approach using IMAI module of training of health workers at health center level and woreda and zones on DCC has:
 - improved quality of the decentralized ART services at health center level;
 - built the capacity of facilitation and coordination at RHB, zone and woreda levels;
 - improved the quality of chronic disease management within the ART network through training of expert patients at the health center?
 - If not, why not? What suggestions does the team have for improving integrated service delivery approach?

Monitoring and Evaluation

- Is the monitoring and evaluation system able to provide timely high quality data to build IMAI facilitation and coordination capacity at all levels? If not, why not? What suggestions does the team have for improving the M&E system?

Lessons Learned

- What are effective approaches for expanding the IMAI Project to additional health centers?
- How best to introduce IMAI approaches to hospitals and the community level?
- Identify lessons learned, successful interventions that merit continuation or replication, better practices, significant products and tools from the WHO/IMAI training for possible dissemination and replication.

V. Evaluation Methods

The evaluation will be carried out in Ethiopia by a team of three independent, external consultants over a three to four week period through multiple qualitative and quantitative methods. One or more USAID and one CDC staff and up to three GOE representatives may join the evaluation team during the team planning meetings, in briefing, site visits, debriefings, and report preparation. GH Tech will be responsible for covering the GOE travel costs based on estimates provided by USAID/Ethiopia. If feasible, USAID and CDC staff will be available for the full period of performance so that they are active and full participants in the entire assignment. Given other commitments on the part of GOE participants, it is unlikely that they will be available for the entire duration of the evaluation. About 50 health centers will be selected for this evaluation from among all the regional health facilities (HFs) and HCs supported by WHO in IMAI program using scientific methodology and based on the number of health centers/ facilities supported in each region. The evaluation methodology will be designed by the team in collaboration with USAID/E to include: key informant interviews, field observation, and facility and community level assessments to identify gaps and bottlenecks, and a review of WHO/IMAI reports, tools, and materials. Interviews will include the following (NB: the following list is not comprehensive, only illustrative):

- USAID Mission staff, including the HIV/ AIDS Team and staff from the Office of Financial Management (OFM);
- World Health Organization (WHO);
- CDC-Ethiopia
- Management Science for Health, HIV/ AIDS Care and Support Project (MSH/ HCSP);
- Government of Ethiopia representatives - regional HIV/ AIDS Prevention and Control Organization (HAPCO), and Regional Health Bureaus (Ministry of Health), Woredas (Health offices and/ or HAPCO);
- Beneficiaries (health center staff, expert patients, PLWHA) and
- Other PEPFAR partners.

VI. Information Sources

Consultants will be provided the following background documents in preparation of the assignment.

- WHO/IMAI Grant Agreement, including all major modifications
- WHO/IMAI PEPFAR Semi-Annual Report submissions
- WHO/IMAI 2005, 2006 and 2007 Annual Reports
- WHO/IMAI Quarterly Reports
- WHO/IMAI Internal Guidelines
- WHO/IMAI M&E Guidelines
- USAID trip reports summarizing past field visits to WHO/IMAI
- GOE Road Map for HIV/ AIDS Prevention, Care and Treatment
- Universal Access target documents
- Ethiopia Demographic and Health Survey 2005
- Federal HIV/ AIDS Prevention and Control Office (FHAPCO), Single Point Estimates of HIV and people needing ART therapy, April 5, 2007

VII. Tasks to be accomplished

Below is a list of the specific tasks to be accomplished by the consultant team, with an estimated level of effort for each task. (See Attachment 2: Level of Effort Timeline and Attachment 3: Planning Calendar for the exact schedule).

Review background documents/develop evaluation methodology/ and complete field visit and interview schedule in consultation with CTO and Evaluation Coordinator (<u>one month prior to departure</u>)	3 days
Travel Day for international consultants	2 day
Team Leader and team members advance planning in country	3 days
Participate in team planning meeting and in-briefing with USAID/E HIV/AIDS technical staff	2 days
Conduct field visits and interviews (3 teams in 3 regions)	10 days
Team analysis and synthesis of site visit findings	2 days
Conduct primary stakeholder interviews in Addis/Prepare for debriefings/	2 days
Conduct debriefings for USAID/E and WHO (separately)	1 day
Draft and submit report to USAID/E in-country	4 days
Travel Day for international consultants	2 days
Finalize Report – Team leader incorporate Mission comments and submits report electronically to CTO	4 days

Total LOE – 35 days of LOE for team leader and up to 29 days for team members, including four travel days each for the international consultants. A six-day work week is authorized for work in Ethiopia.

VIII. Team Composition and Participation

USAID/E seeks three consultants – a senior expatriate team leader experienced evaluating USAID HIV/AIDS programs with in-depth knowledge and experience in care/support and treatment using WHO/IMAI modules as well as palliative care, a senior expatriate ART/IMAI specialist team member, and a local evaluation logistics assistant. In addition to one or more USAID staff and up to three GOE representatives, the evaluation may include PEPFAR Ethiopia and Washington-based CDC participation (NB: it is assumed USAID and CDC staff will cover their own travel and per diem costs).

1. The team leader will be an international consultant with extensive PEPFAR program implementation and evaluation experience, with particular focus on care and support, treatment and palliative care. S/he will agree to fulfill his/her responsibilities in over five weeks, spending three weeks in-country, and will play a central role in guiding the evaluation process. The consultant will hold conference calls with core team members and USAID/E representatives before and after the visit to Ethiopia, in-brief USAID/E on arrival, debrief USAID/E and WHO on evaluation findings, and produce a draft report to be left with USAID/E prior to departure, followed by a final report for USAID/E.

The team leader will:

- Finalize and negotiate with client for the team work plan for the assignment;
- Establish assignment roles, responsibilities, and tasks for each team member;
- Ensure that the logistics arrangements in the field are complete;
- Facilitate the team planning meeting or work with a facilitator to set the agenda and other elements of the TPM;
- Take the lead on preparing, coordinating team member input, submitting, revising and finalizing the assignment report;
- Manage the process of report writing;
- Manage team coordination meetings in the field;
- Coordinate the workflow and tasks and ensure that team members are working to schedule; and
- Ensure that team field logistics are arranged (e.g., administrative/ clerical support is engaged, ensuring that payment is made for services, car/driver hire or other travel and transport is arranged, etc.).

2. The ART/IMAI specialist team member will be an international consultant with extensive implementation and evaluation experience of ART services IMAI training programs in sub-Saharan Africa. Knowledge of HIV/AIDS programming and PEPFAR is essential. The consultant will be responsible for writing some sections of the report to be determined during the TPM in consultation with the team leader. The consultant will assist the team leader in the development of any qualitative and quantitative instruments to be used during site visits as well as the analysis of any data collected.

3. The evaluation logistics assistant will be a local consultant, preferably fluent in Amharic, with a demonstrated: ability to be resourceful and to successfully execute complex logistical coordination; ability to multi-task, work well in stressful environments and perform tasks independently with minimal supervision; ability to work collaboratively with a range of professional counterparts at all levels. The evaluation logistics assistant will be responsible for logistics, coordination and administrative support, and ensuring all aspects of the evaluation are carried out seamlessly. He/ she will assist the team leader and the implementing agencies in facilitating meetings, coordinating logistics and organizing site visits. The evaluation logistics assistant will collect and disseminate background documentation to the evaluation team.

In addition to senior Government of Ethiopia experts from Regional Health Bureaus (RHBs) and the Federal Ministry of Health (FMOH), one or more USAID/E (local) and CDC staff (one international and one local) may join the evaluation team during the site visits. WHO/ IMAI staff may accompany the team on site visits as appropriate, but will not be present during interviews with the stakeholders and beneficiaries.

Selection Criteria for Evaluation Team

Senior Team Leader (Maximum 100%) distributed as follows:

- 1. Education: (25%)** An advanced degree (MD, RN, MPH, PhD, MA, MS or MBA) from a reputable accredited institution in medicine, public health, or any of the social sciences pertinent to work with care and support and palliative care.
- 2. Work Experience: (35%) – Minimum 10 years** of progressively responsible experience with recognized organization(s) in the design, implementation and evaluation of HIV/ AIDS programs with demonstrated technical expertise and skills in HIV/ AIDS care/ support, treatment and palliative care.
- 3. Skills and Abilities: (40%):** Demonstration of strong analytical, managerial and writing skills is very critical for the evaluation work. Exceptional leadership in coordinating, assigning the team with the appropriate responsibilities, communication, and interpersonal skills is absolutely critical. In addition, the team leader must be able to interact effectively with a broad range of internal and external partners, including international organizations, host country government officials, and NGOs counterparts. Must be fluent in English and have proven ability to communicate clearly, concisely and effectively both orally and in writing. Must be able to produce a succinct quality document that gives direction and facilitates improvement for WHO/ IMAI programs in the country.

Senior ART/ IMAI Specialist (Maximum 100%) distributed as follows:

- 1. Education: (25%)** MD, RN, MPH, Ph.D., MA, MS, MBA, or BA from a reputable accredited institution in medicine, public health, or any of the social sciences pertinent to working in HIV/ AIDS programs with special emphasis on ART/ IMAI and health human development.
- 2. Work Experience: (35%) – Minimum 6 years** of progressively responsible experience with recognized organization(s) in the design, implementation and evaluation of ART/ IMAI programs with demonstrated technical expertise and skills in HIV/ AIDS in sub-Saharan African countries.
- 3. Skills and Abilities: (40%):** Demonstration of strong analytical, managerial and writing skills. Able to interact effectively with a broad range of internal and external partners, including international organizations, host country government officials, and NGO counterparts. Must be

fluent in English and have proven ability to communicate clearly, concisely and effectively both orally and in writing.

Mid-Level Evaluation Logistics Assistant (Maximum 100%) distributed as follows:

- 4. Education: (25%)** MA, MS, MBA or BA. Four years of work experience may be substituted for the degree.
- 5. Work Experience: (35%) – Minimum 6 years** of progressively responsible experience within GOE and/or NGO work settings handling complex logistics, such as coordinating business travel and meetings.
- 6. Skills and Abilities: (40%):** Must have a demonstrated: ability to be resourceful and to successfully execute complex logistical coordination; ability to multi-task, work well in stressful environments and perform tasks independently with minimal supervision; ability to work collaboratively with a range of professional counterparts at all levels, including those from host country governmental and non-governmental organization, U.S. Government agencies and other donors; capacity for effective time management and flexibility. Must be able to interact effectively with a broad range of internal and external partners, including international organizations, host country government officials, and NGOs counterparts. Must be fluent in English and preferably Amharic and have proven ability to communicate clearly, concisely and effectively both orally and in writing.

IX. Schedule and Logistics

The in-country phase of the evaluation will be conducted over a period of up to 24 days with a desired start date on or about September 2, 2008. The evaluation logistics assistant, in collaboration with the USAID/E evaluation coordinator and WHO, will arrange all of the partner meetings, site visits and debriefings in advance. Meeting space will be provided at USAID/E, but the agency cannot provide access to fax and email. All associated travel and per diem costs for non-USAID staff will be covered by GH Tech under the contract with USAID/E (See Attachment 2: Level of Effort Timeline and Attachment 3: Planning Calendar for the exact schedule).

Time Line

3 Days	Review of background reading materials. Develop evaluation methodology, field visit and interview schedule in consultation with the USAID/E CTO and evaluation coordinator (one month prior to departure).
2 Days	Travel Day - En route to Ethiopia.
3 Days	Team leader in-country for advance planning.
2 Days	Team planning meeting; in-briefing with USAID/E.
10 Days	Interviews and field visits outside of Addis Ababa (3 teams in 3 regions).
2 Days	Team synthesis and analysis meetings
2 Days	Interviews with primary stakeholders in Addis/ prep for debrief.
1 Day	Debrief USG and WHO (separately).
4 Days	Draft and submit report USAID/E.
2 Day	Travel Day - Departure from Ethiopia
10 Days	USAID/E review of draft report.
4 Days	Final report completed by team leader and delivered to USAID/E
3 Weeks	GH Tech prepares final edited evaluation report

X. Period of Performance

Work is to be carried out over a period of approximately ten weeks, beginning on or about (o/a) September 2, 2008, with field work completed o/a September 28, 2008 and final report and close out concluding o/a October/November 2008.

X. Financial Plan

A budget plan agreement between the USAID/E PEPFAR and GH Tech will be reached and USAID/E will process a MAARD to transfer funding for the evaluation activity into the GH Tech Indefinite Quantity Contract (IQC).

XI. Deliverables

Approximately one month prior to arrival: Team leader will develop an evaluation methodology and field visit and interview schedule in consultation with the USAID/E CTO, USAID/E evaluation coordinator, and WHO.

Four days after Team Leader arrival: Team meeting and in-briefing with USAID/E. USAID/E HIV/AIDS technical staff to review and comment on evaluation methods.

Prior to departure: Team makes a presentation to USG PEPFAR staff, a separate presentation to WHO, and team leader submits a draft report. The report will be appropriately edited/formatted after the final draft is approved by the mission, (See separate MS Word file for GH Tech Evaluation Report Guidelines), to USAID/E CTO - two hard copies and one electronic copy on CD ROM or flash drive.

After departure: Team leader submits final unedited content to USAID/E within one week of receiving comments from USAID/E. The report (not including attachments) will be no longer than 30 pages with an Executive Summary, Introduction, Methodology, Findings, Lessons Learned, Conclusions, and Recommendations in English in the exact format specified by the USAID/E Evaluation Coordinator.

Upon final approval of the content by USAID/E, GH Tech will have the report edited and formatted. This process takes approximately 3-4 weeks. The final report will be submitted electronically to USAID/E CTO and Contract Officer.

GH Tech makes the results of its evaluations public on the Development Experience Clearinghouse and on its project web site unless there is a compelling reason (such as procurement sensitivities) to keep the document internal.

WHO/IMAI indicators from the WHO/IMAI Annual Report as of 09/2007

Intervention areas	Overall WHO planned targets*	Overall WHO achievement	WHO results achieved with PEPFAR/USAID funding**
Health centers to be covered	267	316	120
Woreda/Zone District coordinators trained	150	230	60
Expert Patients trained	130	206	24
Health workers trained	2,223	1,437	548
Building IMAI facilitation and coordination capacity at RHB level, through supportive supervision, HC	No specific target	75 health centers reached	34 health centers reached

assessments and SOPs, etc.			
Building IMAI facilitation and coordination capacity at national level through strengthening Health program Department at Federal HAPCO.	No specific target	2 WHO Nat. program Officers(NPO) and 4 Nat. consultants	2 WHO NPO 4 Nat. consultants

*The target represented is the overall national target to which the PEPFAR/USAID, the Italian Cooperation agency, and other WHO sources of the fund contribute. There is no separate target or proportion for PEPFAR/USAID targeted through USG funding.

** Other sources of funding are from Italian Cooperation agency and other WHO sources of funding.

**Level of Effort (LOE) for WHO/IMAI mid-term Project Evaluation Timeline
Draft 18 April 2008**

Activity	Team Member(s)	Total Days	Proposed Date(s) – illustrative (will be revised based on consultant availability)
Mission sends background documents to Evaluation Team Members	Evaluation coordinator.	1 day	July 25
Review of Documents; Completion of Draft Work Plan, initial determination of Site Visit approach and Schedule and Evaluation Methods;	Team leader, USAID/E in collaboration with implementing partners.	3 days (approx one month prior to team leader arrival in country)	July 28-30
Team Leader arrives in country			10 August
Team Leader evaluation prep/ pre evaluation informational interviews with stakeholders.	Team Leader and Team Members	3 days	11-13 August
In-Brief USAID/E approval of Work Plan	Core Team	PM: 2 hours	13 August
Team Planning Meeting in Country/	Full Team (w GOE Experts)	2 days	14-15 August
Fieldwork	Five sub-teams in up to 50 cities in collaboration with WHO/IMAI	9-10 days	16-25 August
Information Analysis and Synthesis	Full Team (w GOE Experts)	2 days	26-27 August
Addis Ababa Meetings and Interviews with Key Addis Stakeholders/ Prep for debriefing	Team Leader and team members	2 Days	28 &29, August
Oral Debriefing of Mission staff.	Team Leader and team members	Morning	2, September
Stakeholders Presentation.	Team Leader and team members	Afternoon	2, September
Completion of Draft Report	Team Leader and selected team members	4 days	3- September- 6- September
Team Leader submits report and departs Addis	Team Leader	1 Day	8 September
HAPN USAID/E review draft report	HAPN and other USAID/Ethiopia staff	10 Days	9-23 September
Team Leader responds to HAPN USAID/E comments	Team Leader	4 Days	24-29 September
GH Tech complete final report editing	GH Tech	3 Weeks	20 October, 08

Planning Calendar for WHO/IMAI Evaluation (All dates illustrative, subject to change) Draft 3 June 30, '08						
Monday	Tuesday	Wed	Thurs	Fri	Sat	Sunday
Aug. 3	Aug. 4	Aug. 5	Aug. 6	Aug. 7	Aug. 9	Aug. 10 TL Arrives
Aug. 11 TL planning in Addis/ Pre-evaluation meetings with stakeholders	Aug. 12 Core team planning in Addis/Pre-evaluation meetings with stakeholders	Aug. 13 Core team planning in Addis/Pre-eval. meetings with stakeholders PM In-briefing w USAID/Ethiopia	Aug. 14 Full team (w GOE Experts) planning meeting in Addis	Aug. 15 Full team (w GOE Experts) planning meeting in Addis	Aug. 16 Outside Addis. 3 teams field work in 50 HF in cities w WHO	Aug. 17 Outside Addis Rest/Travel Day
Aug. 18 Outside of Addis. 3 teams field work in 50 HF in cities w WHO	Aug. 19 Outside of Addis. 3 teams field work in 50 HF in cities w WHO	Aug. 20 Outside of Addis. 3 teams field work in 50 HF in cities w WHO	Aug. 21 Outside of Addis. 3 teams field work in 50 HF in cities w WHO	Aug. 22 Outside of Addis. 3 teams field work in 50 HF in cities w WHO	Aug. 23 Outside of Addis. 3 teams field work in 50 HF in cities w WHO	Aug. 24 Rest in/out of Addis. 3 teams field work in 50 HF in cities w WHO
Aug. 25 out/in Addis Full team 3 teams field work in 50 HF in cities w WHO	Aug. 26 in Addis Full team information analysis and Synthesis	Aug. 27 in Addis Full team information analysis and Synthesis	Aug. 28 in Addis TL and core team final stakeholder interviews/prep for debriefing	Aug. 29 in Addis TL and core team final stakeholder interviews/ prep for debriefing	Aug. 30 prep for debriefing Core team draft report/ Team members depart.	Aug. 31 Rest
Sept. 1 Holiday	Sept. 2 AM Core Team Oral Debrief to USAID/Ethiopia PM Core team Oral Debriefing to WHO & Stakeholders	Sept. 3 TL completion of Draft report	Sept. 4 TL completion of Draft report	Sept. 5 TL completion of Draft report	Sept. 6 TL completion of Draft report.	Sept. 7 Rest
Sept. 8 TL submits draft report and Departs from Addis	Sept. 9 Onwards HAPN USAID/E review draft report	Sept. 10	Sept. 11	Sept. 12	Sept. 13	Sept. 14

APPENDIX B. Itinerary

Sat, Sept. 6	Alan Lifson arrives in Addis at 9:05pm
Sun, Sept. 7	Anna Cirera arrives in Addis 8:30am
Sun, Sept. 7	<i>Sinidu Bekele arrives in Addis from Bahir Dar</i>
Mon, Sept. 8	Hilton pick up at 7:30am to arrive at USAID-E @ 7:45am ² 8:00am - 9:00am - In briefing at USAID -E (Alan Lifson, Anna Cirera, Kuleni Berhanu, Dr. Assefa Woyessa, Dr. Esmael Wabela, Sinidu Bekele, Petros Faltamo hereon after referred to as <i>The Team</i>) 9:30am – 12:00 pm – In briefing at WHO 1:30pm – 2:30pm - - Meeting with EHNRI at Yoli Hotel, VIP Room 2:24 - 5:30pm Planning meeting at Yoli Hotel, VIP Room
Tues, Sept. 9	Hilton Hotel pick up at 7:30am 8:00am – 9:15 am - - Meeting with all core FMoH departments (HRD, HSP, FHD, TLCT) at Yoli Hotel, VIP Room 9:30am-5:00pm - - Team planning meeting at the Yoli Hotel, VIP Room
Wed, Sept. 10	Yoli Hotel pick up at 7:10am, Hilton Hotel pick up at 7:30am 8:00am – 12:00pm - simultaneous site visit - - Tekle Haimanot HC and Woreda 23 HC in Addis 1:30 – 3:00pm - - meeting to discuss morning site visits at the Hilton
Thur., Sept. 11	Ethiopian New Year
Friday, Sept. 12	10:00am – 11:00am - - meeting with MSH (<i>Dr. Bannet Ndyanabangi</i> , COP and <i>Dr. Haile Wubneh</i> , Deputy COP) at Hilton Hotel 11:15am – 12:30pm - - meeting at FHI (Dr. Altaye, 091-140-5530)
Sat, Sept. 13	Yoli Hotel pick up at 8:30am 9:00am – 5:00pm - - Planning/ strategizing meeting at Hilton Hotel, Abay Salon
Sun, Sept. 14	All teams depart Addis on respective site visits (See Annex A, B & C) *****
Wed., Sept 24	Hilton Hotel pick up at 7:30am 8:30am – 9:45pm -- meeting with FHAPCO (TBC) at Yoli Hotel, VIP Room 10:00am – 12:00pm - - Information analysis and synthesis (Full team)
Thurs., Sept 25	Hilton Hotel pick up at 7:30am 8:00am – 12:00pm - - Information analysis and synthesis (Full team) at the Yoli Hotel, VIP Room 1:00pm – 3:00pm Preparation for debriefing 3:30pm – 5:00pm Debriefing at WHO
Fri., Sept 26	Hilton pick up at 9:15am to arrive at USAID-E @ 9:30am 9:30am – 10:00am - Debriefing with USAID-E Mission Director Mr. Glenn Anders 10:00am – 11:00am - Debriefing at USAID-E 1:00pm – 5:00pm Team drafts report Sinidu Bekele departs for Bahir Dar. Flight # ET 124, departs Addis 3:10pm arrives in Bahridar 4:10pm. <i>Hotel pick up by Mider Travel at 1:30 pm.</i>
Sat., Sept 27	Alan scheduled to depart Addis at 10:35pm (Hilton Airport Shuttle)
Sun., Sept 28	Ana scheduled to depart Addis at 12:25am (Hilton Airport Shuttle)

Itinerary for Team One
Dr. Alan Lifson and Dr. Assefa Woyessa

Sun, Sep 14	Depart to Bahir Dar Flight # ET122, Departure time 7:10am, Arrival time 8:10am (TBC) Medir Tour will pick up Dr. Assefa from his home (DebreZeit) at 4:30am and then will pick up Dr. Alan at 5:30am from Hilton Overnight in Bahir Dar, Summerland Hotel
Mon, Sep 15	7:00am - - WHO Amhara Region HIV focal person, Dr. Ghion Tirsite , will meet arriving team at the RHB and join them thereafter in Team One's itinerary. Drive to Addis Zemen (85kms) 8:30 – 4:30 Addis Zemen site visit 4:40 – Drive back to Bahir Dar Overnight in Bahir Dar, Summerland Hotel
Tues, Sept 16	8:00am - - Drive to Han (in Bahir Dar) 8:30am – 4:30 pm – Han site visit Overnight in Bahir Dar, Summerland Hotel
Wed, Sept 17	7:00am – Drive to Injibara (125 Kms) 9:00am – 3:00pm Injibara site visit 3:05pm – drive to DebreMarkos (162 kms) Overnight in DebreMarkos, Shebel Hotel
Thurs, Sept 18	8:00am - 4:30pm DebreMarkos site visit Overnight in Debre Markos, Shebel Hotel
Fri, Sept 19	7:00am – Drive to GebreGuracha (104kms) 9:00am – 5:00pm GebreGuracha site visit Overnight in GebreGuracha, Beza Hotel
Sat, Sept 20	9:00am – drive to Addis Ababa (156 kms)
Sun, Sept 21	Rest
Mon, Sept 22	8:00am – 4:30pm Yeka Site Visit
Tues, Sept 23	8:00am – 4:30pm Woreda 24 site visit

Itinerary for Team Two
Petros Faltamo and Dr. Esmael Wabela

Sun, Sep 14	Depart to Mekele Flight # ET100, Departure time 6:30am, Arrival time 7:30am (TBC) Medir Tour will pick up Dr. Esmael from his home at 4:15am and then will pick up Dr. Alan at 4:45am from Hilton Overnight in Mekele, Axum Hotel
Mon, Sep 15	8:00am – 2:00pm - - WHO Tigray Region HIV focal person, Dr. Teweldebrhan Haile , will meet arriving Team at RHB office and join them thereafter for Team Two itinerary. Mekele site visit 2:05 – Drive to Alamata (183 kms) Overnight in Alamata, Meaza Hotel
Tues, Sept 16	8:00am – 1:00pm Alamata site visit 1:05pm – Drive to Kombolcha (224 kms) Overnight in Kombolcha, Tekle Hotel
Wed, Sept 17	8:00am – 4:00pm Kombolcha site visit 4:05pm – drive to Kemissie (51 kms) Overnight in Kemissie, Oasis Hotel
Thurs, Sept 18	8:00am - 3:0pm Kemissie site visit 3:05pm - - Drive to Debre Berhan (155 kms)

Overnight in **Debre Berhan, Akal Hotel**

Fri, Sept 19 7:00am Drive to **Dherra** (around 35 Kms)
8:30am – 3:30pm Dherra site visit
3:35pm - Drive back to **Addis Ababa**
Overnight in **Addis Ababa**

Sat, Sept 20 Rest

Sun, Sept 21 Rest

Mon, Sept 22 8:00am – 4:30pm **Sendafa** Site Visit

Tues, Sept 23 8:00am – 4:30pm (TBD)

**Itinerary for Team Three
Anna Cirera and Senidu Bekele**

Sun, Sep 14 9:00am - - Drive to **Hosanna** (200 kms)
Overnight in **Hosanna, Hemi Hotel**

Mon, Sep 15 WHO SNNPR HIV focal person, **Dr. Kassu Ketemma** will join this Team in Hosanna.
8:00am - 4:30pm **Hosanna** site visit
Overnight in **Hosanna, Hemi Hotel**

Tues, Sept 16 7:00am – Drive to **Areka** (70km)
9:00am – 3:30pm - - **Areka** site visit
3:05pm - - Drive back to **Hosanna**
Overnight in **Hosanna, Hemi Hotel**

Wed, Sept 17 7:00am - - Drive to **Worabe**, (60 Km)
1:00 pm - - Drive back to **Addis Ababa**
Overnight in **Addis Ababa**

Thurs, Sept 18 Depart to **Dire Dawa**, Flight # ET200, Departure time 7:00am, Arrival time 8:10am
Medir Tour will pick up Senidu from Yoli Hotel at 5:00am and then will pick up Anna at 5:20am from Hilton
WHO Dire Dawa/Harar/Somali Regions HIV focal person, **Dr. Endris Mohammed**, will join the Team in their flight from Addis Ababa.
9:00am – 4:30pm - - **Melka Jebdu** site visit
Overnight in **Dire Dawa, Selam Hotel**

Fri, Sept 19 7:00am - Drive to **Haramaya** (around 20 kms)
8:45am – 4:00pm **Haramaya** site visit
4:15pm - Drive to **Dire Dawa**,
Overnight in **Dire Dawa, Selam Hotel**

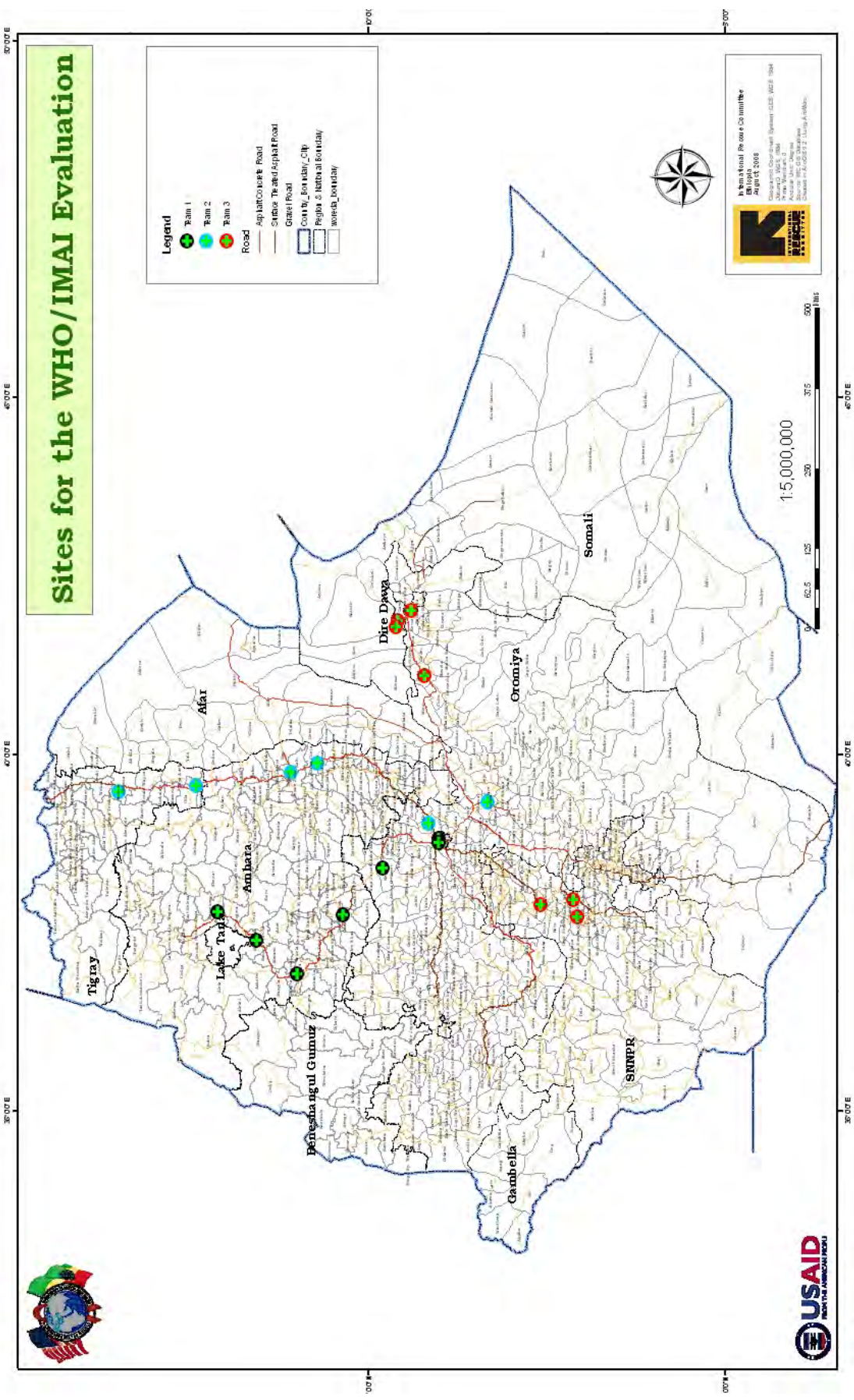
Sat, Sept 20 In **Dire Dawa**
Overnight in **Dire Dawa**

Sun, Sept 21 Rest
Overnight in **Dire Dawa**

Mon, Sept 22 7:00am - - Drive to **Hirna** (130 Kms)
9:00am - 3:00pm - - **Hirna** Site visit
3:15pm - - Drive back to **Dire Dawa**
Overnight in **Dire Dawa, Selam Hotel**

Tues, Sept 23 8:00pm – Drive to **Legehare**
8:30 am – 2:00pm **Legehare site visit**
Depart to Addis Ababa - - Flight # ET200, Departure time 17:00, Arrival time in Addis 18.00
Overnight in **Addis Ababa**

Sites for the WHO/IMAI Evaluation



APPENDIX C: ASSESSMENT INSTRUMENTS

A. GENERAL ASSESSMENT OF THE HEALTH FACILITY

Name of HC: Level: Catchment's area population:	Rural/urban: Woreda: Region:
Contact person name: Phone n°:	Position in the facility:
Name of interviewer:	Team n°:

Observations/Remarks:

C&T : counseling & testing ; CITC: client-initiated testing and counseling ; PITC: provider-initiated testing and counseling ; OIs :OIs ; ART: antiretroviral therapy ; PMTCT: prevention mother to child transmission

* Not provided now= 0
Before IMAI = 1
After IMAI = 2

4.	<p>Acute care for HIV positive patients</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Y= Yes N= No </div>	<p>Is the HC able to manage the following medical problems?</p> <p>Fever <input type="checkbox"/> Cough <input type="checkbox"/> Acute weight loss <input type="checkbox"/></p> <p>Diarrhea <input type="checkbox"/> Change in mental status <input type="checkbox"/></p>
5.	<p>Chronic care for HIV positive patients</p>	<p>Is the HC able to manage the following medical problems?</p> <p>Chronic Pain <input type="checkbox"/> Prolonged Nausea & vomiting <input type="checkbox"/></p> <p>Chronic diarrhea <input type="checkbox"/></p>
6.	<p>Prevention & treatment HIV-associated TB</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Y= Yes N= No </div>	<p>Link between HIV and TB care:</p> <ul style="list-style-type: none"> - Is the provider the same? <input type="checkbox"/> - Is the service area the same? <input type="checkbox"/> - Is there a common TB/HIV reporting format? <input type="checkbox"/> - Is the TB/HIV data analyzed together? <input type="checkbox"/> - If an HIV positive patient also has TB, which service follows him/her up? <p>Other comments:</p> <p>Intensified case finding TB for HIV patients <input type="checkbox"/></p> <p>Screening for HIV in TB patients <input type="checkbox"/></p> <p>IPT (Isoniazid preventive therapy) to HIV patients <input type="checkbox"/></p>

<p>7. Integrated service delivery approach</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Y= Yes N= No </div> <hr style="width: 20%; margin: 10px auto;"/> <p>Sexually transmitted infections</p>		<p>Is prevention of HIV transmission integrated into general services? <input type="checkbox"/></p> <p>Which ones?</p> <p>Is STI clinical management integrated with HIV? <input type="checkbox"/></p> <p>Is STI service based on etiological approach, clinical, SCM ? <input type="checkbox"/></p> <p>(syndromic case management)</p> <p>Routine screening of STIs for HIV positive patients <input type="checkbox"/></p> <p>Do you offer HIV testing to all STI patients? <input type="checkbox"/></p>
	<p>PMTCT</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Y= Yes N= No </div>	<p>Do you offer routinely C&T for pregnant women? <input type="checkbox"/></p> <p>Where is C&T for pregnant women conducted? C&T room <input type="checkbox"/></p> <p style="padding-left: 100px;">ANC <input type="checkbox"/></p> <p style="padding-left: 100px;">FP <input type="checkbox"/></p> <p style="padding-left: 100px;">Delivery room <input type="checkbox"/></p> <p style="padding-left: 100px;">Post-delivery <input type="checkbox"/></p> <p style="padding-left: 100px;">Main laboratory <input type="checkbox"/></p> <p>Is PMTCT offered in the following services?:</p> <p>ANC <input type="checkbox"/></p> <p>FP <input type="checkbox"/></p> <p>Delivery services <input type="checkbox"/></p> <p>Post-delivery services <input type="checkbox"/></p> <p>Under-five clinic <input type="checkbox"/></p>

	<p>HIV clinical management</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto; margin-right: auto;"> Y= Yes N= No </div>	<p>If a patient is identified HIV positive are they referred to HIV clinic? [__] From which services?</p> <p>Is the clinical management of OIs integrated into existing health services? [__] How?</p> <p>Is ART integrated into existing health services? [__] How?</p>
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<p>8. Linkage with the community level</p>	<p>Are there HIV outreach activities? [__] When did you begin (month/year) _____</p> <p><u>Which HIV services are delivered? Who conducts them? How often?</u></p> <p>HIV education [__]</p> <p>C&T [__]</p> <p>PMTCT [__]</p> <p>Management of OIs [__]</p> <p>Home-based care [__]</p>
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		<p>Palliative care <input type="checkbox"/></p> <p>Nutrition counseling & support <input type="checkbox"/></p> <p>Defaulter tracing <input type="checkbox"/></p> <p>Adherence counseling <input type="checkbox"/></p> <p>Others:</p> <p>What are the challenges you are facing?</p> <p>If there is a system of defaulter tracing, how is it organized?</p>
	<p>9. Referral system</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-top: 20px;"> <p>Y= Yes N= No</p> </div>	<p>Are patients followed at the HC referred to a higher level? <input type="checkbox"/></p> <p>Why?</p> <p>What is the distance (kms)?</p> <p>Is there any feedback? <input type="checkbox"/></p> <p>Are HIV patients referred from the health post/ community <input type="checkbox"/></p> <p>to the HC for HIV care?</p>

11	<p>Mechanisms of supportive supervision & mentoring*</p>	<p>Is there any supportive supervision and mentoring for services provided? [___]</p> <p><u>What type? How often? Who is in charge?</u></p> <p>Has it been any change since the introduction of IMAI?</p>
	<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;"> <p>Y= Yes N= No</p> </div>	

A.II- Drug supply & laboratory commodities

12	<p>Type of ARVs available</p>	<p>Adults Children</p> <p>First line:</p> <p>Second line:</p>
13	<p>Type of ARV protocol for PMTCT (women who are not on ART)</p>	<p>Single dose NVP [___]</p> <p>Combination ARVs [___]</p>
14	<p>Delivery of drugs</p>	<p>Where are ARVs dispensed?</p> <p>ART clinic [___]</p> <p>ART pharmacy [___]</p> <p>General pharmacy [___]</p> <p>Other places: _</p> <p>By whom?</p> <p>Where are OI prevention and treatment drugs dispensed?</p>

		By whom?
15	<p>Supply management since the WHO/IMAI approach was introduced</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin-top: 20px;"> Y= Yes N= No </div>	<p>Did you have problems of stock out ?</p> <p>If yes Frequently Sometimes Rarely</p> <p>Drugs for STIs <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Drugs for OIs <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>TB drugs <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>ARVs <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>HIV testing kits <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Lab. Reagents <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Other drugs/supplies <input type="checkbox"/></p> <p>If yes, specify which ones and how often:</p>
16	<p>Essential laboratory tests at HC</p> <p>HIV diagnostics: Rapid HIV antibody tests</p> <p>DBS for infant diagnosis</p> <p>DBS back up</p> <p>Haemoglobin or Hematocrit determination</p> <p>Total lymphocyte count</p> <p>CD4 count</p> <p>Blood collection CD4 (send out)</p>	<p>Availability* Comments</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p> <p><input type="checkbox"/> _____</p>

TB microscopy (AFB)	[] _____
CBC (Complete blood count)	[] _____
Liver function test/LFT	[] _____
Malaria lab/rapid tests	[] _____
Rapid syphilis test VDRL/RPR	[] _____
Pregnancy test (HCG)	[] _____
Urine dipstick (sugar & protein)	[] _____
Others: viral load, etc (specify)	[] _____
<div style="border: 1px solid black; padding: 2px; display: inline-block;"> *Y= Yes N= No </div>	

A.III- WHO/IMAI IMPLEMENTATION PROCESS

Position in the facility of the person/ s interviewed _____

Phone n°:

1. What are the mechanisms to deliver integrated services? Which are the linkages between HIV/ AIDS services and general services? What about between C&T, PMTCT, OI management and ART services?
2. How is the flow of HIV patients organized to and from different services? Draw a diagram if possible.
3. How is your district network model for health organized at the community, HC and hospital levels?
4. How is the process to decentralize ART at HC level? Is ART initiated at the HC or/ and stable patients transferred from hospitals? Is there any criteria?

WHO/IMAI TRAINING

Name of HC:	Woreda:
Contact person name: Phone n°:	Position in the facility:
Name of interviewer:	Team n°:

Remarks:

- Staff must be counted only once under the main category
- PLHAs: consider only the ones trained and who have specific tasks
- The majority of information to be filled corresponds to staff trained on IMAI only

HC level

Category of staff	N° of staff at HC	Previous IMAI		NCHT Course		N° staff trained other HIV courses	Date IMAI training (month/year)	Title IMAI training	N° days	Sponsored by
Physicians	[]	[]	[]	[]	[]	[]			[]	
Health officers	[]	[]	[]	[]	[]	[]			[]	
Nurses	[]	[]	[]	[]	[]	[]			[]	
Health assistants	[]	[]	[]	[]	[]	[]			[]	
Lab technicians/technologist	[]	[]	[]	[]	[]	[]			[]	
Pharmacy technician/druggist Pharmacist	[]	[]	[]	[]	[]	[]			[]	
Community counselors	[]	[]	[]	[]	[]	[]			[]	
Data clerks/data managers	[]	[]	[]	[]	[]	[]			[]	
Health extension workers	[]	[]	[]	[]	[]	[]			[]	
ART aides/case managers	[]	[]	[]	[]	[]	[]			[]	
Expert patients	[]	[]	[]	[]	[]	[]			[]	
Other PLHAs	[]	[]	[]	[]	[]	[]			[]	

*NCHTC: National Comprehensive HIV and treatment course

Woreda/Zonal level

Category of staff	Level (Woreda, Zone, etc)	N° staff trained IMAI	N° trained IMAI still at zone, woreda	Date IMAI training (month/year)	Title IMAI training	N° days	Sponsored by
Clinical mentors		[]	[]			[]	
Woreda/Zone HIV coordinator		[]	[]			[]	

OVERVIEW OF STAFF TRAINED ON IMAI

Category of staff (health officer, nurse, etc.): _____

HIV training courses other than IMAI

Title	N° days	Date (month/year)	Sponsored by

Responsibilities/Tasks

HIV tasks at HC	Tasks in other services at HC

Supervision/mentoring since IMAI training

Type of visits/support activities	N° since IMAI training	Frequency	By whom	Methodology

C- MONITORING OF HIV CARE AND ART

Name of HC:	Woreda:
Contact person name: Phone n°:	Position in the facility:
Name of interviewer:	Team n°:

Note to Interviewer:

(1) Pre-IMAI period: If data not available for 12 months pre-IMAI, record dates for which data are available

(2) Post IMAI data: If data through August 2008 are not available, record date of last data available

(3) If HC has new data collection forms, please collect a copy

I. Date when **IMAI was introduced** at HC (Month/Year) [] / []

II. Number of persons ever tested for HIV	Adults	Children	Total
Total (since testing started)	[]	[]	[]
In the 12 months before IMAI introduced	[]	[]	[]
From August 2007 through August 2008	[]	[]	[]

III. Number of persons tested positive for HIV	Adults	Children	Total
Total (since testing started)	[]	[]	[]
In the 12 months before IMAI introduced	[]	[]	[]
From August 2007 through August 2008	[]	[]	[]

IV. Number of persons seen by HIV clinic (whether or not on ART)	Adults	Children	Total
Total seen by HIV Clinic	[]	[]	[]
In the 12 months before IMAI introduced	[]	[]	[]
From August 2007 through August 2008	[]	[]	[]

VI. Number on cotrimoxazole prophylaxis	Adults	Children	Total
Total	[]	[]	[]
In the 12 months before IMAI introduced	[]	[]	[]
From August 2007 through August 2008	[]	[]	[]

V. Number of persons started on ART	Adults	Children	Total
Total on ART	[]	[]	[]
In the 12 months before IMAI introduced	[]	[]	[]
From August 2007 through August 2008	[]	[]	[]

VII. Among persons started on ART	Adults	Children	Total
Number on original first-line therapy	[]	[]	[]
Number on alternate first-line therapy (substitute)	[]	[]	[]
Number on second-line therapy (switch)	[]	[]	[]

VIII. Among persons started on ART	Adults	Children	Total
Number currently on ART	[]	[]	[]
Number who transferred out	[]	[]	[]
Number who stopped	[]	[]	[]
Number lost to follow-up	[]	[]	[]
Number died	[]	[]	[]

IX. Number of persons who picked up ART	Adults	Children	Total
Each month for 6 months	[]	[]	[]
Each month for 12 months	[]	[]	[]
Each month for 24 months	[]	[]	[]

X. Number of persons died who started ART	Adults	Children	Total
On ART less than 6 month	[]	[]	[]
On ART 6 to less than 12 months	[]	[]	[]
On ART 12 to less than 24 months	[]	[]	[]
On ART 24 or more months	[]	[]	[]

XI. WHO Stage at initiation of ART	Adults	Children	Total
WHO Stage I	[]	[]	[]
WHO Stage II	[]	[]	[]
WHO Stage III	[]	[]	[]
WHO Stage IV	[]	[]	[]

XII. CD4 count at initiation of ART	Adults	Children	Total
Less than 50	[]	[]	[]
50-200	[]	[]	[]
201 to 350	[]	[]	[]
More than 350	[]	[]	[]

XIII. Number of **pregnant women ever tested for HIV**
(tested during first antenatal visit)

Total (since testing started)	[]
In the 12 months before IMAI introduced	[]
From August 2007 through August 2008	[]

XIV. Number of **pregnant women tested positive for HIV**

Total (since testing started)	[]
In the 12 months before IMAI introduced	[]
From August 2007 through August 2008	[]

XV. Number of **pregnant women started on ART**

Total	[]
In the 12 months before IMAI introduced	[]
From August 2007 through August 2008	[]

XVI. Number of **infants tested for HIV** (among infants born to HIV-infected mothers)

Total	[]
In the 12 months before IMAI introduced	[]
From August 2007 through August 2008	[]

XVII. Number of **TB patients tested for HIV**

Total	[]
In the 12 months before IMAI introduced	[]
From August 2007 through August 2008	[]

C.II- Monitoring system

I. Organization of Monitoring System:

A. Describe the tools being used to collect data on and monitor the following:

1. Patients tested for HIV:
2. HIV patients seen (pre-ART) by the clinic:
3. Patients started on ART:
4. Current status of patients on ART:
5. Results of initial and follow-up clinical evaluation of HIV patients:

B. Who is responsible for the monitoring system?

C. Does your HC have a computer?

If yes, is your monitoring data entered into a computer?

Does your facility have internet connection, including web and e-mail access?

II. Use of Monitoring Data:

A. Is data from the HC reported to a higher level? How is it done? How often? Is there any additional analysis or feedback of these data from the higher levels back to the local level?

B. Do you analyze data at the HC level? If yes, which data and how is this done?

III. Challenges and Recommendations:

A. What problems and barriers do you see with monitoring and assessment?

B. What kind of additional information do you think should be collected, which is not?

C. Do you have any additional comments or suggestions?

IV. Interviewer Assessment:

Specify the main problems encountered by the interviewers to collect the data

D- QUALITY OF HIV CARE: OBSERVATION CHECKLIST

Name of HC:	Level:
Woreda:	Region:
Contact person name:	Category of staff:
Name of interviewer:	Team n°:

Methodology:

- The interviewer will observe how the clinicians, nurses, pharmacy personnel, expert patients and other staff trained on WHO/ IMAI and involved in ART are performing their duties.
- At least a number of 5 patients should be followed
- The evaluation of each of the cadres will be performed by using a checklist
- Please, try to use only one form for each member of the staff observed
- There is some information to be filled in by answering the questions on the left column or by marking with an “X” what corresponds to; the results of the evaluation will be scored by using the following codes:

NA- Not applicable
 0- None
 1- Limited
 2- Good
 3- Excellent

- Please, try to note important comments and observations in the column on the right.

Please note that it is very important not to make the health staff uncomfortable, so try to fill the information in after the observation and avoid writing the results in front of them.

D- Quality of care (vFF)

Knowledge and Skills Checklist

	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Comments
Status of the patients:						
- Non eligible for ART						
- Eligible for ART:						
. Preparation patients						
. ART initiation						
. Follow up						
Time spend during consultation						
Self-confidence						
Assessment of competencies						
Physical examination						
Signs & symptoms interpretation						
Identification of OIs						
WHO clinical staging						
HIV management & ART skills						
Management of OIs (OIs)						
OI Prophylaxis						
TB/HIV co-management						Note: revise the patient card to record % HIV patients screened for TB
Eligibility criteria for ART						
Drug prescription, drug management						
Management of ARV side effects						
Identification & management of ART failure						
Paediatric care						
Follow up & patient monitoring						
Patient monitoring & documentation						
Adherence assessment & counseling						

Questions that could be used to evaluate knowledge (use only one or two if necessary):

1. What is your clinic protocol for deciding when to start ART in adults?

2. What is your clinic protocol for deciding when to start ART in children?
3. What is your clinic protocol for deciding when to change ART in adults? In children?
4. For patients who started ART, how do you decide when are they failing therapy?
5. What is your clinic protocol for deciding when to start cotrimoxazole prophylaxis in adults?
Children?
What is your clinic protocol for deciding when to start other OI prophylaxis in HIV-positive adults?
What therapy?
6. What is your clinic protocol for deciding when to start other OI prophylaxis in HIV-positive children? What therapy?

Conclusions:

GROUP DISCUSSION WHO/IMAI PERCEPTION FROM THE STAFF

Position in the facility of the person/ s interviewed _____

Phone N°:

1. What do you think is the aim of the “Integrated Management of Adult and Adolescent Illness” approach? Do you think it exists in your facility? What about the “Integrated Management of Childhood Illness”?
2. What do you think about the **WHO/IMAI training** you received? What sort of training do you feel you need and would like to receive in the coming year? What topics would you like to see covered, and what training would you like to see more of?"
3. What is your opinion about the **tools** to implement WHO/IMAI (eg guidelines, charts, registers)?
4. What are the major **strengths of the IMAI training** you have received so far?
5. What are the major **limitations or problems of the IMAI training** you have received so far? What are the main problems you encountered to implement the IMAI approach at the HC?
6. Did you get enough support after the training (e.g. supervision, mentoring)?
7. What is your opinion about the **process of decentralization** of ART services at HC level through the WHO/IMAI implementation?
8. Which are the **strengths of the WHO/IMAI approach**?
9. Which are the **limitations and challenges of the WHO/IMAI approach**?
10. What suggestions do you have for the **sustainability** of the program after the IMAI training?
11. Do you have anything else to suggest or comment on?
Thank you very much for your assistance

APPENDIX D: Documents Reviewed

- Amhara Regional State. Draft proposal for the roll out of IMAI in Amhara Regional State, 2006.
- DDRHB/CU-ICAP. Standard Operating Procedure for Catchment's Area meeting HIV/AIDS Committee MDAT. May 2008.
- FHAPCO. Report on Progress Towards Implementation of the UN Declaration of Commitment on HIV/AIDS. Federal republic of Ethiopia, March 2008.
- FHI/IMPACT Ethiopia. Final Evaluation Report, May 30, 2006.
- HAPCO. Guideline for HIV Care/ART Clinical Mentoring in Ethiopia, August 2007.
- HAPCO. Guidelines for HIV Counseling and Testing in Ethiopia, July 2007.
- HAPCO. Guidelines for Implementation of the Antiretroviral Therapy Programme in Ethiopia, July 2007.
- HAPCO. Guidelines for Pediatric HIV/AIDS Care and Treatment in Ethiopia, July 2007.
- HAPCO. HIV/AIDS Status Update, September 2008.
- HAPCO. Integrated Supportive Supervision, 2nd Round Report. June 2008.
- HAPCO. Multisectoral Plan of Action for Universal Access to HIV Prevention, Treatment, Care and Support in Ethiopia, 2007-2010, December 2007.
- HAPCO. National Monitoring and Evaluation Framework for the Multi-sectorial Response to HIV/AIDS in Ethiopia, December 2003.
- HAPCO. Quality Management Framework for HIV/AIDS Services on Ethiopia, July 2008.
- MOH Disease Prevention and Control. Accelerating Access to HIV/AIDS Treatment in Ethiopia, Road Map for 2004-2006.
- MOH/HAPCO. Accelerated Access to HIV/AIDS Prevention, Care, and Treatment in Ethiopia, Road Map 2007-2008/ 10.
- MOH/HAPCO. Single Point Prevalence Estimates, July 2007.
- MSH-HCSP/Oromia RHB. Executive Report of National Comprehensive HIV care/ Antiretroviral (ART) Training for Health Workers of Oromia Region, March 2008.
- MSH. HIV Care and Support Program, Annual Report. June 15, 2007 - June 30, 2008, Ethiopia, July 2008.
- MSH/ Amhara RHB/ RHAPCO. Report on National Comprehensive HIV care/ Antiretroviral (ART) Training for Health Workers of Amhara Region, March 2008.
- MSH/HCSP: The Fully Functional Service Delivery Point in Ethiopia: Results of a pilot Study in 30 HCs. July 2008.
- PEPFAR Ethiopia In-Country Reporting System (IRS). Quarterly, Semi-Annual Reporting Templates 2006-2008.
- SNNPR Health Bureau. Draft Standard Operation Procedure (SOP) for ART Decentralization in SNNPR, Final Draft, July 2008.
- UNAIDS. The UN Joint Programme of Support on AIDS in Ethiopia, 2007-2011, March 2008.

UNAIDS. Towards Universal Access: Scaling Up Priority Intervention in the Health Sector, Progress Report, 2008.

USAID. Ethiopia Semi-Annual Review Sheets 2006-2008.

WHO IMAI. Acute Care: Interim Guidelines for First-Level Facility Health Workers at HC and District Outpatient Clinic, October, 2005.

WHO IMAI. Chronic HIV Care with ARV Therapy and Prevention: Interim Guidelines for Health Workers at HC and District Outpatient Clinic, July 2006.

WHO IMAI. General Principles of Good Chronic Care: Interim Guidelines for First-Level Facility Health Workers, August 2004.

WHO IMAI. Palliative Care: Symptom Management and End-of-life Care: Interim Guidelines for First-Level Facility Health Workers, June 2004.

WHO. Essential Prevention and Care Interventions for Adults and Adolescents Living with HIV in Resource-Limited Settings, 2008.

WHO. Ethiopia's HIV/IMAI Experience. XVII International AIDS Conference, Satellite, August 2008.

WHO. Patient Monitoring Guidelines for HIV Care and Antiretroviral Therapy (ART), 2006.

WHO. Priority Interventions. HIV/ AIDS Prevention, Treatment and Care in the Health Sector. August 2008.

WHO. Proposal for Integrated ART Service Strengthening in Ethiopia. September 2006.

WHO. WHO Recommendations for Clinical Mentoring to Support Scale-up of HIV Care, Antiretroviral Therapy and Prevention in Resource-Constrained Settings, 2006.

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