

**ORIGINAL ARTICLE:*****ASSESSMENT OF THE STATUS OF PMTCT SERVICES IN PRIVATE FOR-PROFIT HEALTH INSTITUTIONS IN ETHIOPIA******Eyasu Mesfin<sup>1</sup>, Tigist G/Egziabher<sup>2</sup>, Abdulfetha Abdulkadir Abdosh<sup>3</sup>*****Abstract**

Background: Private health institutions are rapidly expanding in our country, making significant contributions to improve access to health care, particularly to the urban population. Provision of comprehensive PMTCT services by the sector is one potential and crucial area in the fight against HIV/AIDS. However, the involvement of the sector in the national PMTCT program is negligible.

**Objective:** to assess the status of PMTCT service provision in private for-profit maternal and child health (MCH) special clinics, MCH hospitals and general hospitals in Ethiopia.

**Methods:** A descriptive cross-sectional study was conducted from February to March 2008 in private health institutions in all regions and two city administrations of Ethiopia.

**Result:** A total of 40 eligible health institutions were visited with a response rate of 97.5% Most facilities, 27 (69.2%), were located in Addis Ababa, None of the facilities were providing comprehensive PMTCT service package of the 172 service providers directly involved in at least one of the reproductive health care services in the target facilities, none were providing a complete package of the PMTCT services to their clients and only 64(37.2%) of them had ever taken in service training on PMTCT. All institution, however, were willing to participate in future efforts and activates to initiate or improve the PMTCT services according to the national guideline.

**Conclusion and recommendations:** the findings reflect the huge missed opportunity in addressing PMTCT service needs among the increasing number of women visiting private health facilities. It could have been also a good entry point to reach not only pregnant women who come for antenatal follow up but other family members who are in need of HIV/AIDS care/services also. There is high need and strong commitment for providing PMTCT services in the private health institutions. Immediate action, by all concerned governmental nongovernmental stake holders, should be taken to work together and meet the badly needed support if we are to achieve the national shared vision.

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## Introduction

Ethiopia is one of the countries that are most severely affected by the HIV/AIDS pandemic. According to the 2008 calibrated single point estimates 1,037,267 Ethiopians are living with HIV/AIDS anticipated during the year (1). The most significant source of HIV infection in children and infants is transmission of HIV from mother to child during pregnancy, labor and delivery, or breastfeeding (2-5). According to UNICEF; in the absence of preventive measures the risk of a baby acquiring the virus from an infect mother ranges from 15-25 percent in industrialized countries (3). Prevention of there to child transmission (PMTCT) of HIV is one of the most important intervention strategies in preventing new infections and in providing the services needed to ease the burden on HIV in faceted women. Effective comprehensive PMTCT services have been shown to decrease this rate to less than 2% (6-8) therefore PMTCT must be held as one of the priorities in the collaborative effort against the HIV/ADIS pandemic and to save our future generation.

In most developing countries, all the health needs of the population cannot be addressed by the government alone and as a result there is a big gap between the public's demand and service delivery. One increasingly important sector in filling this gap is the private for profit health sector. In Uganda, for example, 46 percent of the estimated 4,639 health facilities in 2005 were private for profit (9). In Ethiopia as well the private sector is rapidly expanding in recent years making significant contributions to improve access to health care particularly to the urban populations.

According to the national health indicators (199 Ethiopian Calendar (EC)) report, nationwide there were 1756 private health institutions including 31 private hospitals, 161 private higher clinics and 111 private special clinics.

In Addis Ababa alone, there were 22 private hospitals, 5 special maternity clinics and 932 higher clinics (10). In addition, out of a total of 1806 physicians registered in the country, 788 (43.6%) were practicing in the private health sectors. Nationwide there were 58 (50.8% of the total in the

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country) Gynecologists, 50 (66.7%) pediatricians, 254 (30.5%) general practitioners, 53 (5.2%) midwives and 448 general nurses practicing in the sector (10).

One of the important public health problems that mandate the active participation of the private health sector is the fight against HIV/AIDS pandemic. PMTCT is one of the crucial interventions to help win this deadly fight. PMTCT plays a central role by preventing new infections and by providing the services needed to ease the burden on HIV infected women. World health Organization (WHO) promotes a comprehensive strategic approach to the prevention of HIV infection in infants and young children (3).

A comprehensive PMTCT is the prevention of transmission of HIV from mother to child by routine offering of HIV counseling and testing, safe and quality obstetrical services, provision of HIV care/anti-retroviral therapy (ART) for mothers and infants, infant feeding counseling, family planning (FP) counseling and functional referral linkage (1-4) with these interventions the risk of mother to child transmission (MTCT) can be reduced to under 2% and new HIV infections in children are becoming in caressingly rare in many parts of the world, particularly in high income countries.

To implement these effective intervention strategies in our set up the Federal Ministry of Health (FMOH) has developed a PMTCT management guideline and is expanding and is expanding the service in governmental health facilities all over the country.

According to the Annual HIV/AIDS Monitoring and evaluation 2<sup>nd</sup> report 1999 E.C. (2006/07) of the National HIV/AIDS prevention and control office (HAPCO); the number of PMTCT sites in the country increased from 4 in 1994 EC to 408 sites (public hospitals and health centers) in 1999 EC health and health related indicators report of FMOH has indicated that only 38.2% of health facilities in the country supposed to deliver PMTCT care were actually providing the service,. This showed that actually providing the service. This showed that much had to be done to further expand the service in both public and private facilities in the country:

Although the private health institutions and their health professionals are providing obstetric and neonatal care for a significant proportion of the population, there were no studies done to evaluate

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the situation related to PMTCT services in these facilities. This survey was intended to assess the status of the existing practice and service delivery set up in private health institutions for PMTCT services; and to describe the profile of the health professionals practicing in these institutions.

It is expected to identify gaps from the recommended practice, assess technical support needs (e.g. training needs,) and measure personal and institutional commitments. The results of the survey will help in devising effective training and technical support to the sector to enable them implement the national PMTCT strategies and contribute their crucial share in the fight against HIV/AIDS.

The survey was sponsored by the United States Centers for Disease Control and Prevention (CDC) in accordance with the Ethiopian public Health Association (EPHA) – CDC Cooperative Agreement No. 5U22/PSO22179-05) the content of the survey are solely the responsibility of the authors and do not necessarily represent the official views of CDC.

### **Methodology**

This is a cross-sectional descriptive study conducted on private for profit health institutions in all region and two city administration of Ethiopia. It was conducted from February to March 2008. The study population was: all private hospitals and special maternal and child health (MCH) clinics in Ethiopia, which are providing antenatal care, delivery, postpartum and other reproductive health (RH) care services and all health professionals practicing in these facilities.

Data was collected using a structured pretested questionnaire prepared in English. Ethical clearance was obtained from the Ethiopia Society of Obstetricians & Gynecologists (ESOG), public health research review committee of EPHA and ethical committee of Addis Ababa Regional health Burea (AARHB). The data was collected by midwives and supervised by obstetricians/gynecologists. Training was give on the questionnaires and the data collection process. Letter of support from ESOG was taken to the regional health bureaus; which subsequently wrote letters of cooperation to the private health institutions.

Data was collected by interviewing the facility owners/heads and health care providers and assessing the service delivery setup for PMTCT of the facilities using a structured pre-tested questionnaire and an observation checklist respectively prepared in English.

Confidentiality was assured and informed verbal consent was obtained from each health institution and study subjects. The questionnaires were coded after completeness was checked; then the data were entered and analyzed using SPSS version 13.0 software program.

## Results

Of the 40 eligible private health institutions in the country, 39 consented to participate in the study, which is a response rate of 97.5%.

Table 1: Distribution of the health facilities by region, April 2008

Regions	Number	Percent
Addis Ababa	27	69.3
Tigray	2	5.1
Amhara	2	5.1
Oromia	2	5.1
SNNPR	2	5.1
Dire Dawa	2	5.1
Harari	1	2.6
Somali	1	2.6
Total	39	100

Twenty-six (66.7%) of the studied health facilities were general hospitals while 7(17.9%) were maternity hospitals and 6(15.4%) were special maternity clinics (Table 2). In this study, there were 10,641 clients seen for antenatal care (ANC) monthly.

Table 2: Distribution of health establishments by their type, April 2008

Type of health establishment	Number	Percent
General Hospital	26	66.7
Special maternity hospital	7	17.9
Special maternity clinic	6	15.4
Total	39	100

At least one of the HIV/AIDS care services was provided in 33(84.6%) of the study health institutions. ART service was provided in 15(38.5%) and management of opportunistic infections in 29(74.4%) of the study facilities. At least one of the PMTCT services was provided in 20(54.1%) of the facilities. When looking at all the patient population, voluntary counseling and testing (VCT) service was provided in 33(84.6%), routine HIV counseling and testing (HCT) was Offered in 18(46.1%) for ANC clients, in 13(33.3%) during labor and delivery and in 12(30.8%) for postpartum clients (Table 3). ARV prophylaxis for the mother was given in 15 (40.5%) and for the newborn 10(27%) of the institutions. Infant feeding counseling was given in 17(85%) and family planning counseling in 19(95%) of the institutions with PMTCT services.

Majority of the facilities, 27(69.2%), were in Addis Ababa (Table 1).

The median number of new clients who visited each health facility of ANC per month was 99. Labor and delivery services were provided for a total of 913 clients per month.

The PMTCT service they provide was considered adequate by 2(10%) of the institutions' heads. Unavailability of ARV drugs were the reason for not providing PMTCT services for 22(56.4%). No trained staff for 17(43.6%), not permitted to provide the service for 9(23.1%) and no VCT service for 7(17.9%) of the facilities.

The support they get from the government in implementing PMTCT service was rated as very good 2(5.4%), satisfactory 4(10.8%), unsatisfactory 5(13.5%), non-existent 19(51.4%) and

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7(18.9%) of them gave no response. Only 7(18.9%) of the institutions claimed that they ever received technical assistance from nongovernmental organizations (NGOs) for implementation of PMTCT services (fig.1).

Fig.1: Support from government in implementing PMTCT services in private for profit health sector

Majority of the facilities (36/39) are willing to strengthen or initiate PMTCT services if provided support in their problem areas. The assistance needed are infection prevention materials for 34(87.2%), staff training for 33(84.6%), ARV drugs for 33(84.6%) and HIV test kit supplement for 32(82.1%). Most of the institutions (36/39) were willing to send their staffs if invited for relevant trainings on PMTCT. Short age of staff and lack of interest in providing the service were reasons for two facilities for not willing to participate in the trainings.

Infrastructure: the infrastructure of the institutions was observed. It was revealed that counseling room with doors and windows to ensure auditory and visual privacy was available in 31 (83.8%) and separate room for counseling in labor and delivery ward in 18(48.6%) of the institutions. Internet access was found in 27(73%) of the health facilities. in all of the institutions running water and electricity supply were available. All except two health institutions had functional labor and delivery unit. Only one of the study facilities didn't have functional laboratory.

Logistics and Supplies: HIV test kits were available in 27(73%). Nevirapine syrup and nevirapine tablets were available in 10(27%) and 15(405%) facilities, respectively. Majority of the institutions (31/39) had goggles and plastic apron. Plastic boot was found in 24(64.9%) of the institutions and puncture proof sharp disposal containers in 25(67.6%). Lockable storage space for PMTCT ARVs in labor and delivery ward was available in only 12(32.4%) of the institutions. Reporting format was found in 24(64.9%) and a mechanism for documenting exposed infants was available in only 8(21.6%) of the institutions. PMTCT laboratory log book was seen in 5(13.5%) health institutions PMTCT cue card and PMTCT guideline were found in 3(8.1%) and 7(18.9%) of health facilities, respectively. PMTCT drug dosage wall chart was seen in 7(18.9%) client education materials were available in 8(21.6%) of health institutions. Seventeen (45.9%) of the health institutions had been supervised by responsible authorities once a year while 10(27%) of the institutions were supervised twice per year.

**Table 3: Proportion of facilities which provide routine HCT by category/type of clients.**

Category/type of clients	Number (Total=39)	Percent (%)
ANC clients	18	46.1
During labor and delivery	13	33.3
Postpartum clients	12	30.8
Clients who come for neonatal care	12	30.8
Clients coming for STI management	14	35.9
Family planning clients	12	30.8
Post abortion car.	12	30.8

Functional referral linkage was available in 17(45.9%) of the health institution. None of the facilities were providing a comprehensive PMTCT service package. Standard PMTCT ARV drug regimen according to the national PMTCT guideline was offered in 7(17.9%) of the health institutions. Referral for ART after completing staging was practiced in 4(10.2%)

While 7(17.9%) facilities practice immediate referral to ART clinic after confirming sero status. An exposed infant follow up was found in 8(20.5%) of the service sites. PMTCT focal person was available only in 6(15.4%) of the health institutions while PMTCT data manager was assigned in 3(7.7%) of the institutions Table-4

Available type of HIV/AIDS service	Number (n=39)	Percent
<b>At least one of the services</b>		
Yes	33	84.6
No	6	15.4
<b>VCT</b>		
Yes	33	84.6
No	6	15.4
<b>ART</b>		
Yes	15	38.5
No	24	61.5
<b>At least one of the PMTCT service</b>		
Yes	20	51.3
No	19	48.7
<b>Exposed infant follow up</b>		
Yes	8	20.5
No	31	79.5
<b>PMTCT focal person</b>		
Available	6	15.4
Not Available	33	84.6
<b>PMTCT data manager</b>		
Available	3	7.7
Not available	36	92.3

There forth of the supervised institution took the supervision as supportive. Client suggestion box to assess client's opinion was available in 25(67.6%) whereas staff suggestion box was available in only 5(13.5%) of health facilities.

**Status of practice on PMTCT services of health professional in the target health institutions:**

A total of 172 health care providers of which 101(58.7%) were females who were directly involved in at least one of the RH care services in the study sites were interviewed.

Of these 35(20.3%) were gynecologists and 47(27.3%) midwives (Table 5). More than two third of the interviewed providers were practicing in hospitals while the remaining 31(18%) were working at special maternity clinics. The majority (119/172) of the providers were working in Addis Ababa.

There median service year of the health care providers was 11 years while the median MCH service provision was 7 years. Two third of the service providers replied that they provided at least one of the HIV/AIDS care services to their clients.

**Table 5: Distribution of the respondents by profession and sex, April 2008**

Respondents	Number	Percent
Profession (n=172)		
Registered nurses	52	30.2
Midwives	47	27.3
Gynecologists	35	20.3
Pediatricians	17	9.9
General practitioners	8	4.7
Other	13	7.6
Sex		
Female	101	58.7
Male	71	41.3

Out of these 92(71.3%) had less than five years of work experience in providing HIV/AIDS services. Eighty-two (49.7%) replied that they provided the service in the same institution, 66(40%) in governmental health institution and 17(10.3%) at one of the NGOs. None of the health providers were providing a complete package of the PMTCT services to their clients while only 80(46.5%) had ever provided at least one of the services.

Most service providers (92/172) were not able to provide any of the service for those clients who were in need. Of those who had experience in providing PMTCT service, 31(38.6%) were with experience above 12 months. The majority (111/172) of the respondents had ever received in-service training in HIV/AIDS care, prevention or treatment. Only 64(37.2%) of them replied they had ever taken in-service training on PMTCT care (Table 6).

Table 6: Distribution Health Professional with the service provision and training status, April 2008

Provider response (n=172)	Number	Percent
<b>Provided HIV/AIDS services</b>		
Yes	129	75
No	43	25
<b>Provided PMTCT services</b>		
Yes	80	46.5
No	92	53.5
<b>Received in-service training on HIV/AIDS</b>		
Yes	111	64.5
No	61	35.5
<b>Received in-service training on PMTCT</b>		
Yes	64	37.2
No	108	62.8
<b>Received training on VCT</b>		
Yes	113	65.7
No	58	33.7
<b>Received training on VCT</b>		
Yes	114	66.3
No	58	33.7

It was seen that there were 29 health care providers who were not formally trained on PMTCT but involved in giving the service (Table 7).

Almost all the interviewed health providers (170/172) expressed their willingness to participate in PMTCT training and be involved actively in providing the service.

Table 7: Distribution of health workers by their training status and PMTCT service provision, April

**Provide PMTCT services**

Received in- service training on PMTCT:	Yes	No	Total
No	51	13	64
Yes	29	79	108
<b>Total</b>	80	92	172

## Discussion

The most significant source of HIV infection in children and infants is transmission of HIV from mother-to-child during pregnancy, labor and delivery, or breastfeeding. According to UNICEF, in the absence of preventive measures, the risk of a baby acquiring the virus from an infected mother ranges from 15-25 percent in industrialized countries and 25-35 percent or higher in developing countries (2). Obviously, in the collaborative effort against the HIV/AIDS pandemic and to save our future generation, PMTCT plays a central role by preventing new infections and providing the services needed to ease the burden on HIV infected women.

Private health facilities serve a significant number of women who present for RH services. The share of the facilities health service delivery and coverage is obviously increasing from time to time. One major group of clients for the sector are women coming for different RH services/care which could be a good entry point for a comprehensive PMTCT services provision contributing significantly to the nation's effort in controlling the HIV/AIDS pandemic. Along with the growing number of facilities, the number of health providers in the sector increases.

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The high facility response rate (97.5%) makes the findings of the survey to be very representative of the real scenario in the private health institutions of the survey to be very representative of the real scenario in the private health institutions of all eligible facilities. There were, however, no similar studies done nationally to compare the results of this study. The availability and quality of PMTCT services in the study facilities was discouraging.

There was no single target institution which was providing a complete package of PMTCT services in line with the national strategies for reasons beyond their control. In a study done in Uganda in 2005, 12 percent of PHP facilities provide PMTCT and only 2 percent offer ART services, which is an opposite scenario as compared to the situation in Ethiopia (9). The service delivery set up for PMTCT was also poor. The majority of the health institutions didn't have basic equipment and supplies for PMTCT service provision. Only 5.4% of the institutions rated the support they get from the governmental bodies in implementing PMTCT service as 'good' while only 18.9% reported to have ever received technical assistance from NGOs. This finding should alert concerned bodies to contribute their assistance for strengthening these sites.

HCT has been shown to have a crucial role in HIV prevention and serve as an entry point to care for people with HIV infection including PMTCT. It greatly influences the acceptance and use of PMTCT services (11, 12). However; the routine offering of HCT during ANC and intra-partum care (46% and 33%, respectively) was low in the sector with obvious consequences expected. IEC materials which are important source of information for the clients and their families were not available adequately in the study institutions.

This study also tried to examine practice of health professional on PMTCT service provision private at private for-profit healthy institutions in Ethiopia.

Effective and comprehensive PMTCT service delivery requires training of actively involved health providers on up-to-date intervention strategies and proper organization of the facilities. According to the study, however, majority of the health providers in the study have never received in-service training on PMTCT of HIV.

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It was observed that none of the health providers were providing a complete package of the PMTCT services to their clients; while only 80(46.5%) had ever provided at least one

This reflects the huge missed opportunity not only to address the PMTCT service needs of an increasing number of women served in the facilities but also the good entry point to reach the family members HIV/AIDS care/service needs. In addition, there were 29 service providers who were actively involved in the provision of PMTCT services without having in service training which could lead to inappropriate or substandard care and ultimately failure to achieve the required target.

Inadequate supervision by responsible authorities was noted as an area of weakness. A strong supportive supervision system should be implemented to ensure quality of care. It was, however, encouraging to discover that all the interviewed institutions and health care providers were willing and committed to participate in future efforts to improve the PMTCT services in their institutions according to the national guideline.

Almost all facilities were ready to facilitate for their staff to attend if relevant trainings are arranged.

Considering the non-practice of comprehensive PMTCT service delivery, the high training demand and the strong commitment to be involved in the national fight against HIV/AIDS; it is recommended to initiate a comprehensive program to address the provider's needs, fill the gaps and to standardize their service delivery set up for PMTCT.

This calls for immediate action by all concerned governmental and nongovernmental stake holders to work together to meet the support they badly need and reverse this tragic scenario if we have to achieve the national shared vision. For a better assessment and devising sustainable implementation strategies further study involving the clients is recommended.

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**References:**

1. Federal HIV/AIDS prevention and Control Office Ministry of Health: Guidelines for prevention of mother to child transmission of HIV in Ethiopia. Federal Ministry of Health; July 2007.
2. UNICEF: prevention of Mother to child Transmission of HIV (PMTCT), checklist for developing a supply management strategy; 2004.
3. World health Organization: Strategic Approaches to the prevention of HIV infection in infants; report of a WHO meeting. Geneva, 2003.
4. World health Organization: Prevention of Mother to Child Transmission of HIV generic training package; 2004.
5. Steven G. Gabbe: Obstetrics, Normal and problem pregnancies. 2002.
6. Read J et al: A prospective cohort study of HIV 1 infected pregnant women and their infants in Latin America and the Caribbean; the NICHD international site development initiative prenatal study. 12<sup>th</sup> Conference on Retroviruses and Opportunistic Infections. Boston, MA, USA. 22-25 February 2005 (Abstract 790).
7. Mother to child transmission of HIV infection in the era of highly active antiretroviral therapy. *Clinical infectious Disease*; 2005, 40(3):458-465.
8. Dorenbaum A et al: Two dose intrapartum/newborn nevirapine and standard antiretroviral therapy to reduce perinatal HIV transmission: a randomized trial. *Journal of the American Medical Association*; 2002, 288(23):189-198.
9. Partners for health reform-plus: Survey of Private Health facilities in Uganda; September, 2005.
10. Federal Ministry of health: National health indicators; 199 E.C.
11. Elizabeth A. Ellen G. Piwoz: Prevention of mother to child transmission of HIV in Africa. Practical guidance for programs; June 2002.
12. UNAIDS: Voluntary counseling and testing (VCT) Technical Update; 2000.