

CALL TO ACTION

End of Project Report for Malawi

USAID Funding Period: October 2005 – September 2010



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**ELIZABETH GLASER
PEDIATRIC AIDS
FOUNDATION**

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ABBREVIATIONS AND ACRONYMS

3TC	Lamivudine	NGO	Nongovernmental Organization
AIDS	Acquired Immune Deficiency Syndrome	NVP	Nevirapine
ANC	Antenatal Care	OPD	Outpatient Department
ART	Antiretroviral Therapy	PCR	Polymerase Chain Reaction
ARV	Antiretroviral	PMTCT	Prevention of Mother-to-Child Transmission (of HIV)
AZT	Zidovudine	RH	Reproductive Health
BASICS	Basic Support for Institutionalizing Child Survival	STI	Sexually Transmitted Infection
BCC	Behavior Change Communication	TWG	Technical Working Group
CPT	Cotrimoxazole Prophylaxis Therapy	UNICEF	United Nations Children's Fund
CTA	Call to Action	USAID	United States Agency for International Development
DBS	Dried Blood Spot	WHO	World Health Organization
DHO	District Health Officer	ZMP	Zonal Mentorship Program
DNO	District Nursing Officer		
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation		
EID	Early Infant Diagnosis		
EPI	Expanded Program on Immunization		
FP	Family Planning		
FY	Fiscal Year		
HIV	Human Immunodeficiency Virus		
HIVNET 012	HIV Network for Prevention Trial		
HSA	Health Surveillance Assistant		
HTC	HIV Testing and Counseling		
IYCF	Infant and Young Child Feeding		
IYCN	Infant and Young Child Nutrition		
L&D	Labor and Delivery		
LMRFT	Lilongwe Medical Relief Fund Trust		
M&E	Monitoring and Evaluation		
M2M	mothers2mothers		
MCH	Maternal and Child Health		
MOH	Ministry of Health		
MTCT	Mother-to-Child Transmission		



EXECUTIVE SUMMARY

Malawi has made tremendous progress in achieving national prevention of mother-to-child transmission (PMTCT) services coverage between October 2005 (Q1 FY06) and March 2010 (Q2 FY10); nearly 100% of antenatal care (ANC) and labor and delivery (L&D) sites provide at least partial PMTCT services (e.g., HIV testing and counseling) as of January 2010.² The numbers of pregnant women tested for HIV and receiving antiretroviral (ARV) prophylaxis to reduce the risk of transmitting HIV to their infants during pregnancy, during L&D, and through breastfeeding have greatly improved during this period, but only an estimated 39% of HIV-positive pregnant women received ARV prophylaxis for prevention of HIV transmission to their infants in 2009.² Access to improved PMTCT services continues to rise as more sites begin providing more efficacious combination ARV regimens to women and infants.

The Elizabeth Glaser Pediatric AIDS Foundation (the Foundation), through the United States Agency for International Development–funded Call to Action (CTA) project, has significantly contributed to these national PMTCT achievements. Over the past five years, the CTA technical assistance project has assisted the Ministry of Health (MOH) in establishing PMTCT service provision at 42 ANC sites and expanded to provide direct technical support to 91 PMTCT sites in three districts, providing more than 203,000 pregnant women with counseling and testing services and approaching 100% ARV uptake among HIV-positive pregnant women over the life of the project. Efforts to scale up infant ARV provision have reached 71% of HIV-exposed infants at supported sites over the life of the project.

Efforts to increase male partner testing have seen substantive gains during the course of the CTA project: Pregnant women have been encouraged to bring their partner to ANC to be tested, and couples attending PMTCT together have been given priority for HIV testing. As a result of strong community engagement, the number of male partners tested across supported sites grew from 44 in Q3 FY07 to 4,066 in Q2 FY10.

The Foundation has worked at site, district, zonal, and national levels to support quality clinical services, performance reporting, and efficient and effective management of an ever more complex PMTCT program through the creation of the Zonal Mentorship Program (ZMP) in collaboration with MOH and nongovernmental organization partners. Since the

initiation of the ZMP, the Foundation has advised the MOH on national PMTCT-supportive supervision and has facilitated zonal mentorship and training across the maternal and child health (MCH) spectrum, bringing district pharmacy technicians, PMTCT, and family planning and safe motherhood coordinators together to discuss HIV, MCH, and supply chain issues—and their proposed solutions. Over the course of the ZMP to date (February 2009 to August 2010), MOH district coordinators for PMTCT have made gains in accountability and ownership and have improved their capacity to mentor and supervise PMTCT service providers throughout their districts. Additionally, there is strong initiative for integrated management of PMTCT across the MCH spectrum.

Several challenges have been encountered over the course of the CTA project, including too few trained PMTCT staff and too high of a workload in MCH sectors to allow the provision of HIV counseling and testing and combination ARV prophylaxis for women and children; poor infrastructure and inadequate logistics for district-level supervision of PMTCT sites; inadequate coordination of partners in the management of the national PMTCT program; and weak supply chain management. Through the ongoing commitment of the MOH, the Foundation, the Lilongwe Medical Relief Fund Trust, and other CTA partners, the ongoing needs of families affected by HIV in Malawi will continue to be addressed so that the overall goal of the national program, “To reduce pediatric HIV infection and improve the quality of life of parents living with HIV,” can ultimately be realized.



MALAWI CONTEXT



Figure 1. Malawi district map, 2010

Malawi is a nation of approximately 13.9 million people¹ and consists of three regions—Northern, Central, and Southern—split into five zones, with 87% of the population living in the Central and Southern regions. As of 2009, an estimated 950,000 people in the country were living with HIV, approximately 11% of them children under 15 years of age.² HIV prevalence in the Southern Region (at 20.5%) is twice that in the Central and Northern regions (10.7% and 10.2%, respectively).² An estimated 84,818 people were newly infected with HIV in 2009 (19,791 of them children younger than 15), and in that same year an estimated 68,000 people died from HIV-related illnesses.³ Since the start of the HIV epidemic in Malawi, more than half a million children have lost one or both parents to AIDS.¹

There have been steady reductions in national HIV prevalence, particularly among persons aged 15 to 49, from 16.2% in 1999 to 12.3% in 2007.^{2,4} HIV prevalence in the 15–49 age group is higher among women (13.3%) than men (10.2%) and higher in urban centers (17.1%) than in rural areas (10.8%).⁵ An estimated 197,000 to 296,000 infants are exposed to HIV annually.⁴

The Government of Malawi's national 2012 target for the percentage of infants born to HIV-positive women who are infected is 14%. This target was calculated based on a spectrum estimate of the number of newly infected children 0–14 years in 2009 (11,799) over the estimated number of pregnant women in need of PMTCT services in 2009 (85,488), including those currently receiving antiretroviral (ARV) prophylaxis or treatment. However, a recent progress report stated the number of women in need includes an overly optimistic assumption about the number of women on PMTCT due to frequent double-counting of women actually receiving ARVs.²

ARV prophylaxis distribution to HIV-positive pregnant women in the country was reported to be only 38.8% at both antenatal centers and maternity facilities in 2009, despite tremendous scale-up of access to PMTCT services at facilities nationwide.² In 2007, a protocol for implementation of combination ARV prophylaxis was introduced; however, in 2009, single-dose nevirapine was still the only prophylaxis drug provided to 70% of pregnant women who received any kind of PMTCT prophylaxis.² Stock-outs of ARVs are a consistent problem; a 2009 assessment of 253 sites, including hospitals, found that only 47% had any stocks of ARVs for PMTCT on hand.²

Nearly half of all Malawian women continue to give birth at home,³ which has impeded more widespread uptake of optimal prophylactic interventions. Transportation issues present an ongoing challenge, not only for increasing the use of labor and delivery (L&D) facilities, but also for timely receipt and reporting of laboratory tests (particularly for early infant diagnosis [EID]) and clinical follow-up of mother–infant pairs. Pediatric HIV care services have lagged due to poor mother–baby follow-up and weak integration of HIV services in MCH settings. Health passports for women and children are not routinely checked for HIV status in any of the four primary MCH service delivery points—antenatal care (ANC), postnatal care, family planning (FP), and under-five, missing opportunities to identify HIV-exposed infants and children. A reported 3% of HIV-infected infants and children accessed antiretroviral therapy (ART) between 2006 and 2009.⁴



THE FOUNDATION, CALL TO ACTION, AND THE NATIONAL PMTCT PROGRAM

The Elizabeth Glaser Pediatric AIDS Foundation (the Foundation), cofounded in 1988 by Elizabeth Glaser, Susan DeLaurentis, and Susie Zeegen in the United States, emerged at the beginning of the global HIV pandemic and remains a global leader at the forefront of efforts to eliminate HIV infection in children and provide comprehensive HIV care, treatment, and support to children and families living with and affected by HIV. The Foundation's first multinational PMTCT initiative, named Call to Action (CTA), was launched in 1999 with the help of private funding. It initially funded eight sites in several African nations and Thailand. The impetus for CTA came from the results of the HIV Network for Prevention (HIVNET 012) clinical trial conducted in Uganda,⁶ which demonstrated the efficacy of ARV medication (nevirapine) to reduce the risk of mother-to-child HIV transmission (MTCT), thereby showing that relatively simple and inexpensive interventions can significantly impact MTCT.

The Foundation began supporting PMTCT efforts in Malawi in 2001 through CTA with the support of private funds. The project initially was carried out through an implementation partnership with the Lilongwe Medical Relief Fund Trust/University of North Carolina–Chapel Hill (LMRFT). At the time, no national PMTCT program existed in Malawi, and the Foundation–LMRFT collaboration was one of the first projects to provide PMTCT services in the country. In October 2005, USAID began supporting CTA in Malawi, with goals of building Ministry of Health (MOH) staff capacity in PMTCT, rolling out the use of combination prophylaxis regimens, and improving postnatal care. USAID funds also facilitated the identification of, advocacy for, and enactment of key policies related to PMTCT (such as opt-out HIV testing for pregnant women, take-home ARV prophylaxis doses, and HIV counseling and testing in L&D wards).

By late 2006, the Foundation–LMRFT partnership had scaled up support to six technical assistance sites in Lilongwe District and was providing direct patient services for PMTCT at four urban sites in Lilongwe District, which at the time made up more than half of all PMTCT services available nationwide.

In 2006, the MOH developed a national PMTCT program with a goal of reaching 80% of pregnant women nationwide with high-quality PMTCT services in ANC and maternity facilities by December 2010. Since then, the provision of PMTCT services in Malawi has grown from pockets of non-governmental organizations (NGOs) working independently in isolated districts to nationwide MOH coverage, with the number of sites providing some PMTCT services increasing from 140 in April 2007 to 518 by January 2010—establishing at least partial PMTCT services at 95% of ANC facilities nationwide.

In 2007, the MOH created a five-year PMTCT Scale-up Plan (2008–2012), and in 2008, the PMTCT and Pediatric HIV Care subgroup issued a four-year Pediatric HIV Care Scale-up Plan (2009–2013) as an addendum, in recognition of the need to improve pediatric HIV care in Malawi.

In 2008, the MOH and USAID invited the Foundation to establish an expanded presence in Malawi and requested more focused technical assistance in additional districts. In late 2008, the Foundation opened an office in Lilongwe with a small technical team, and in 2009, it began providing district-level technical support to neighboring Dedza and Ntcheu districts, in close collaboration with District Health Officers (DHOs) and coordinators, while continuing to support Lilongwe District through the Foundation–LMRFT partnership.



PROJECT GOALS AND OBJECTIVES

The CTA project's immediate objective in Malawi was to increase access to quality services that would prevent the transmission of HIV from mother to child, with a longer-term goal of strengthening the capacity of health care facilities and national health care service delivery systems. Integrating PMTCT with existing maternal, neonatal, and child health services and linkage of PMTCT to ART became an increasing priority as the project in Malawi matured, bringing programs together to actively enroll HIV-positive pregnant women and their exposed infants in HIV care and treatment and to improve follow-up of mother–infant pairs. Specifically, the Foundation established three key goals for the CTA project in Malawi:

MALAWI CTA PROJECT GOALS

Goal 1: Increase pregnant women's access to services that will prevent mother-to-child transmission of HIV.

Goal 2: Strengthen the capacity of health care systems and facilities to provide comprehensive PMTCT services in Malawi.

Goal 3: Serve a prime advisory role to the MOH in the national PMTCT scale-up campaign.

Over the life of CTA in Malawi, the project's objectives have evolved from the initial provision of direct PMTCT services to a focus on capacity-building efforts within the MOH. Components include the assurance of quality clinical services, performance reporting, and efficient and effective management of an ever more complex PMTCT program.

KEY OBJECTIVES OF CALL TO ACTION IN MALAWI

- Establish PMTCT service delivery at ANC and maternity service points, in support of the MOH's goal to achieve 80% to 100% national coverage of pregnant women, children, and families with comprehensive PMTCT services.
- Train health workers in PMTCT service delivery to keep pace with the growing national demand for PMTCT services.
- Increase technical assistance and support to newly established PMTCT sites to build capacity, increase quality, and share best practices across sites.
- Increase male involvement and psychosocial support for HIV-positive women.
- Supporting scale-up in the provision of combination ARV prophylaxis for PMTCT.
- Support integration of PMTCT into other points of MCH care.
- Document and distribute best practices in PMTCT.
- Support the continuum of care through improved mother–infant pair follow-up.
- Strengthen district-level management capacity of the MOH through training, technical support, and mentorship.



PROJECT ACHIEVEMENTS

By March 2010, CTA was providing TA and mentorship to the MOH in three districts in Malawi's Central West zone (Lilongwe, Dedza, and Ntcheu) and was supporting delivery of high-quality PMTCT services at 91 sites (Table 1). More than 1,200 nurses, medical assistants, and Health Surveillance Assistants (HSAs) were trained in PMTCT service delivery and pediatric diagnosis through CTA. A total of 203,567 pregnant women were counseled and tested under the CTA project; 16,549 (8.13%) tested HIV-positive over the life of the project.

A total of 20,413 HIV-positive women were reported to have received ARV prophylaxis. As shown in Table 1, the percentage of women receiving ARV prophylaxis exceeds 100%; this discrepancy between women receiving ARVs and the total number of HIV-positive women is due to observed double counting of nevirapine uptake at some sites. Though 33 CTA-supported sites are now providing combination regimens, many continue to indicate in ANC registers that women are receiving nevirapine as a single dose as well as part of a combination regimen, resulting in a higher overall ARV uptake number. Additionally, zidovudine (AZT) is a component of combination prophylaxis and ART; double counting of women receiving AZT as prophylaxis and as ART has been observed at some sites, which has resulted in inflated ART uptake figures.

A total of 13,595 infant doses of ARV prophylaxis were given over the life of the project, resulting in a cumulative uptake of 71.2%. Between FY07 and FY10, only the four urban facilities (Table 3) were distributing infant doses (e.g., nevirapine syrup, Baxa syringes, and foil pouches) to HIV-positive pregnant women attending ANC. Maternity registers distinguish between infant doses brought to L&D by women who received it in ANC versus infants who receive the dose in L&D, though some instances of confusion between "receiving" and "ingesting" were observed during supervisory visits. Precise calculation of the extent of double counting of infant dosing is challenging to determine; however, because most infant doses are given in L&D, double counting is not believed to be a significant problem.

After modest increases in the number of HIV-exposed infants testing positive at six months through FY09 (Table 2), only four infants were reported to have tested positive during the first half of FY10. It is believed that this is not entirely due to effective prophylaxis, but rather a result of bottlenecks in the analysis of dried blood spot (DBS) test samples sent to one of Malawi's three central laboratories, as well as delays in delivery of test results to the sites. Once full FY10 data are received, a more comprehensive analysis of changes in HIV infection rates among infants can be conducted.



Table 1. Call to Action/Malawi PMTCT Results

INDICATOR	FY06	FY07	FY08	FY09	FY10 (through Q2 March 2010)	Cumulative Totals
PMTCT DATA						
Cumulative number of CTA-supported health facilities providing PMTCT	6	10	25	35	91	91
Cumulative number of health care workers trained	60	217	619	920	1,217	1,217
New ANC clients	18,126	28,205	43,114	61,897	53,345	204,687
Number of pregnant women counseled ^a	16,082	28,959	45,952	67,213	41,021	199,227
Number of pregnant women tested ^b	16,043	28,461	43,342	67,037	48,684	203,567
Number of pregnant women receiving results ^a	15,989	28,456	42,815	67,037	39,763	194,060
Total number of pregnant women testing positive	2,134	3,675	3,990	4,106	2,644	16,549
Total number of HIV-positive pregnant women ^c	2,134	4,011	4,690	4,924	3,328	19,087
Number of HIV-positive pregnant women who received any type of ARV prophylaxis for PMTCT ^d	2,233	5,109	4,676	4,979	3,416	20,413
Number of HIV-positive pregnant women who received combination ARV prophylaxis for PMTCT ^d	N/A	0	41	1,737	2,161	3,939
Number of infant ARV prophylaxis doses given	1,282	2,078	2,668	4,444	3,123	13,595
Percentage of pregnant women counseled ^{a,e}	89%	102%	107%	109%	77% ^a	97%
Percentage of pregnant women tested and received results ^{a,e}	100%	100%	99%	100%	82% ^a	95%
Total percentage of pregnant women testing HIV-positive ^f	13.3%	14.1%	10.8%	7.3%	6.8%	9.4%
Percentage of HIV-positive pregnant women who received any type of ARV prophylaxis ^{d,g}	105%	127%	100%	101%	103%	106%
Percentage of HIV-positive pregnant women who received combination ARV prophylaxis ^{d,h}	N/A	0%	0.8%	34.8%	63.2%	19.2%
Percentage of HIV-positive pregnant women given infant ARV prophylaxis doses ⁱ	60%	51.8%	56.9%	90.3%	93.8%	71.2%

^a As of early 2010, the revised MOH ANC register no longer records women receiving individual or group pre-test counseling or receiving their HIV test results. Some sites have continued to record these results, while others have stopped, resulting in a distorted percentage for FY10.

^b Number tested may exceed number counseled due to repeat testing during pregnancy, in line with MOH guidelines.

^c Includes pregnant women who tested positive or arrived in ANC with known HIV-positive status.

^d ARV prophylaxis number sometimes exceeds HIV-positive number due to double counting of individuals receiving nevirapine or AZT.

^e Calculated as total number of women counseled or tested over total number of new ANC clients.

^f Calculated as total number of women testing positive over total number of women tested.

^g Calculated as total number of women receiving any type of ARV prophylaxis over total number of HIV-positive pregnant women.

^h Calculated as total number of women receiving combination ARV prophylaxis over total number of women receiving any type of ARV prophylaxis.

ⁱ Calculated as total number of infant ARV prophylaxis doses given over total number of HIV-positive pregnant women.



Table 2. Malawi Continuum of Care Results

INDICATOR	FY06	FY07	FY08	FY09	FY10 (through Q2 March 2010)	Cumulative Totals
CONTINUUM OF CARE DATA						
Number of HIV-positive pregnant women receiving ART for their own health ^a	181	451	308	441	379	1,760
HIV-exposed infants receiving cotrimoxazole prophylaxis therapy (CPT) at 6 weeks	483	715	808	987	395	3,388
HIV-exposed infants tested at < 6 months	631	712	803	1,008	436	3,590
HIV-exposed infants testing positive	55	64	61	130	4	314
HIV-positive pregnant and lactating women initiating/planning exclusive breastfeeding	1,283	1,890	1,795	N/A ^b	N/A ^b	N/A ^b
Weaned, HIV-exposed children receiving supplemental foods ^c	N/A	N/A	500 ^c	500 ^c	500 ^c	500
Percentage of pregnant women receiving ART ^{a,d}	8.4%	11.2%	6.6%	9.0%	11.3%	9.2%
Percentage of HIV-exposed infants receiving CPT at 6 weeks	22.6%	17.8%	17.2%	20%	11.9%	17.8%
Percentage of HIV-exposed infants tested at < 6 months ^e	29.5%	17.8%	17.1%	20.5%	13.1%	18.8%
Percentage of HIV-exposed infants testing positive at < 6 months	8.7%	9.0%	7.6%	12.9%	0.9%	8.7%

^a AZT is a component of combination prophylaxis and ART; double counting of women receiving AZT—as ARV prophylaxis and as ART—has been observed at some sites.

^b The MOH no longer segregates this indicator by HIV status, and thus it cannot be accurately reported as a cumulative total.

^c A total of 500 HIV-exposed infants between the ages of 6 and 18 months were given supplemental VitaMeal and followed as part of a two-year pilot project in partnership with Feed the Children.

^d Calculated as total number of pregnant women receiving ART over total number of HIV-positive pregnant women.

^e Calculated as total number of HIV-exposed infants tested at < 6 months over total number of HIV-positive pregnant women.



The CTA project is supporting 99% (91 of 92) of ANC facilities providing PMTCT services in three of the four districts in the Central West zone, which represents 17% of all sites providing PMTCT nationwide. Four of these sites are urban, including one hospital, Bwaila (Table 3); the remaining are semi-urban to rural health centers, community hospitals, and district hospitals.

Table 3. CTA-Supported Sites in Malawi (as of Q2 FY10)

Current Sites		
Lilongwe District		
Area 18 Health Center	Area 25 Health Center	Bwaila Hospital
Kawale Health Center	Mitundu Health Center	Nathenje Health Center
Kabudula Health Center	Chitedze Health Center	Maluwa Health Center
Lumbadzi Health Center	Matapira Health Center	Katchale Health Center
Diamphwi Health Center	Chikowa Health Center	Malingunde Health Center
Chimbalanga Health Center	Mbang'ombe Health Center	Dickson Health Center
Mtentera Health Center	Nkhoma Hospital	Chadza Health Center
Chiunjiza Health Center	Chileka Health Center	Chilobwe Health Center
Nthondo Health Center	Malembo Health Center	Nsalu Health Center
Ming'ongo Health Center	Nambuma Health Center	Ukwe Health Center
Ngoni Health Center	Mbawatalika Health Center	Ndaula Health Center
Chilombe Health Center	Chiwamba Health Center	Area 30 Clinic
Khongoni Health Center	David Livingstone Clinic	Kamuzu Barracks Clinic
Mbavi Health Center	Mlare Health Center	
Ntcheu District		
Mlanda Health Center	Lakeview Health Center	Biriwiri Health Center
Lizulu Health Center	Mlangeni Health Center	Mzamba Health Center
Tsangano Health Center	Katsekera Health Center	Manjawira Health Center
Matanda Health Center	Nsipe Health Center	Ganya Health Center
Gowa Health Center	Nsiyaludzu Health Center	Kasinje Health Center
Chigodi Health Center	Chikande Health Center	Sharpe Valley Health Center
Bwanje Health Center	Kapeni Health Center	Ntcheu District Hospital
Bilira Health Center	Sr. Teresa (Mikoke) Community Hospital	Mlanda Health Center
Chikuse Health Center		
Dedza District		
Mua Hospital	Mtakataka Health Center	Police College Health Center
Ng'anja Health Center	Golomoti Health Center	Nakalazi Health Center
Kaunda Health Center	Mlangali Health Center	Mphunzi Health Center
Bembeke Health Center	Maonde Health Center	Lobi Health Center
Chimoto Health Center	Mikondo Health Center	Mtendere Health Center
Matumba Health Center	Kafere Health Center	Chitowo Health Center
Kaphuka Health Center	Mayani Health Center	Mjini Health Center
Kasina Health Center	Chiphwanya Health Center	Kalulu Health Center
Kanyama Health Center		

Note: Red text denotes urban sites.



The rapid expansion of supported sites in 2009–2010 (Figure 2) is the result of a shift in the CTA project’s technical assistance model, in which the Foundation continued to support LMRFT in providing nurse-to-nurse, site-level technical assistance at sites in Lilongwe District, while also initiating a district-level training, mentoring, and supportive supervision protocol through the Zonal Mentorship Program (ZMP). This shift enabled the Foundation to provide sustainable technical training and support to many more facilities simultaneously by working within the existing MOH site management structure. Michael Eliya, the National PMTCT Coordinator, praised the Foundation’s zonal mentorship work, stating, “Knowing that [the Foundation] was taking care of Dedza and Ntcheu has permitted us to free up resources that we can then employ in other areas that require our attention.”

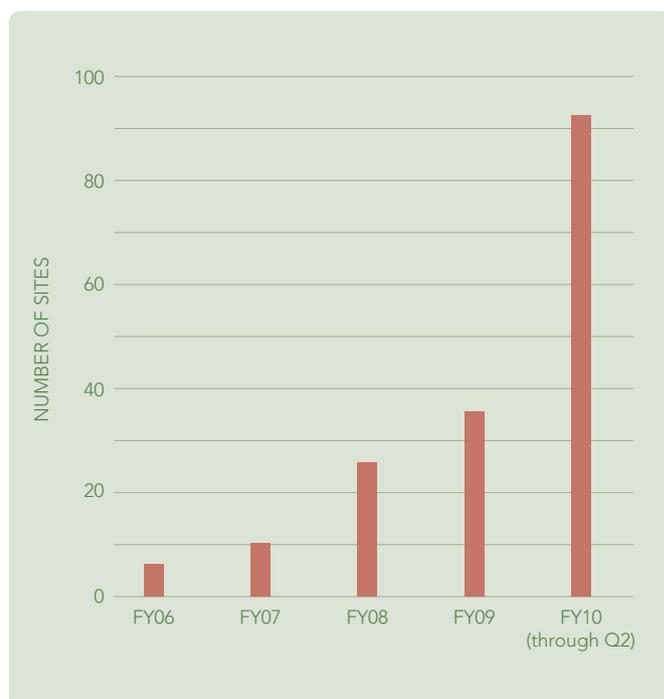


Figure 2. Cumulative CTA-supported sites providing PMTCT services

Increasing Counseling and Testing Services and ARV Uptake

Substantial progress has been made in the counseling and testing of pregnant women at CTA-supported sites over the life of the project (see Figure 3). Once the national PMTCT plan was established in 2006, the project met or surpassed annual targets for HIV counseling, testing, and women receiving results, partly due to the initiation of group counseling and education for women attending ANC, as well as a strong campaign by the MOH to promote PMTCT through ANC sites. The introduction of universal counseling and opt-out testing in Malawi in 2005–2006 for all women during ANC visits helped substantially increase the number of women accepting testing.⁷

The CTA testing target for FY10 was 76,985 women; at the FY10 midway point (March 2010), the project was on track to surpass that target. However, as of early 2010, the revised MOH ANC register no longer records the “counseling” (women receiving individual or group pre-test counseling) and “received results” (women receiving their HIV test results) indicators, resulting in a perceived drop in uptake for FY10

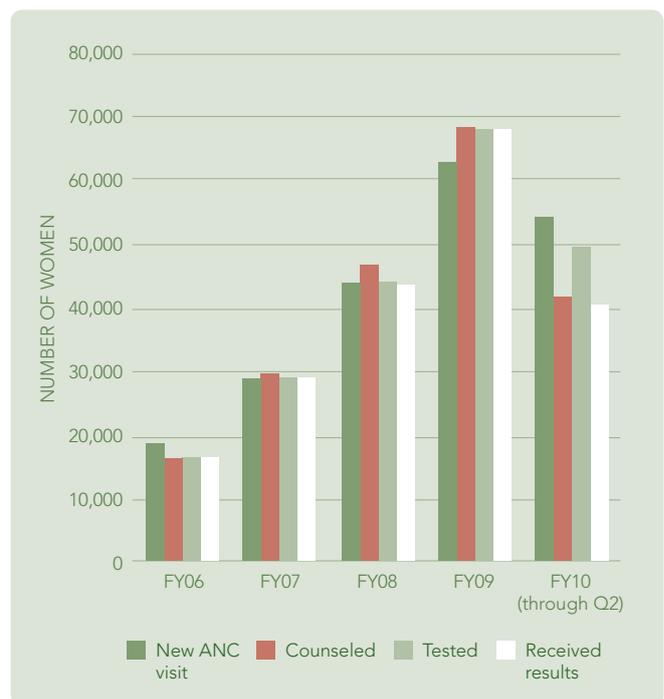


Figure 3. PMTCT counseling and testing cascade at CTA-supported sites over the life of the project



(Figure 3). Some sites have continued to record these results, while others have stopped, resulting in a distorted percentage for FY10. Over the life of the CTA project, virtually 100% of women accepted counseling and testing and received their results at supported sites (Table 1).

The number of pregnant women testing HIV-positive has remained fairly stable despite expansion to more sites, partly due to lower prevalence of HIV in rural sites. Of 91 CTA-supported sites, only four are urban; but collectively, they account for more than 51% of women tested through the CTA project (104,242 tested in four urban sites; 203,567 total tested at all CTA-supported sites).

Increasing uptake of ARVs among women and children at CTA-supported sites has also been an achievement of the CTA project; however, precise calculations of uptake have been hampered by chronic double counting of nevirapine and, later, AZT. Nevirapine was initially given as a single-dose regimen for women at all sites. Beginning in 2008, a national policy shift enabled women to receive their nevirapine at the time of diagnosis to ensure receipt of prophylaxis, regardless of whether women returned for ANC follow-up or delivery in a facility. (Prior to this policy change, nevirapine was only given at 32 weeks gestation.) Women who did deliver in a facility were often counted twice due to reporting confusion at the site level on “receiving” versus “ingesting” nevirapine at the onset of labor. Though CTA program data suggest more than 100% of women in need of ARVs received prophylaxis (Table 1 and Figure 4), it is more likely that CTA-supported activities resulted in ARV uptake approaching 100% over the life of the project. This success is attributable to a number of factors, including high-quality post-test counseling at supported sites, establishment of support groups for HIV-positive women in urban and rural areas, and the active and rapid roll-out of the national policy providing ARV dosing at the time of diagnosis through regular mentorship and supportive supervision. Nurses at PMTCT sites are allowed to prescribe ARVs, the norm at most primary-level facilities.

Additionally, the Foundation has supported a collective effort by LMRFT, mothers2mothers (m2m), HSAs, traditional birth attendants, and community leaders to increase the number of women delivering in health facilities and to track HIV-positive pregnant women to encourage them to bring home-birthing infants to clinics for infant ARV doses shortly after delivery.

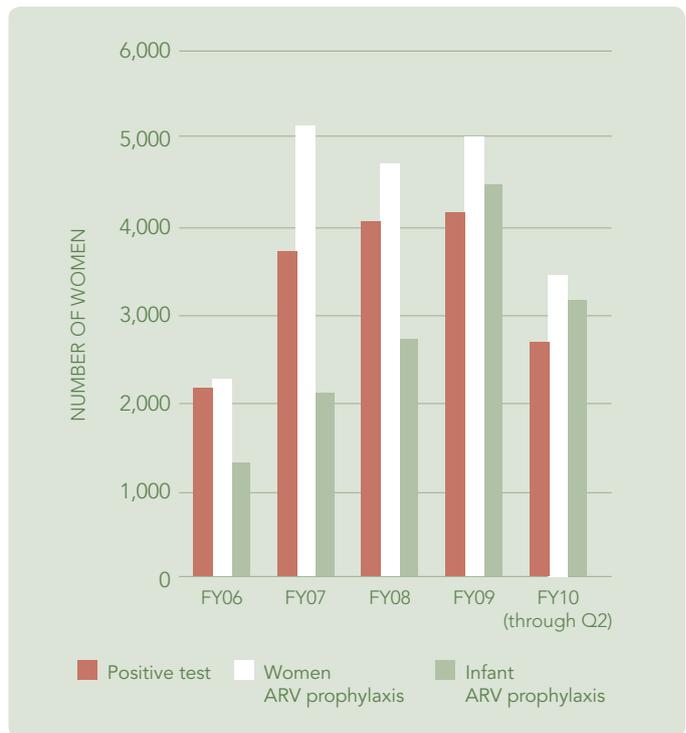


Figure 4. ARV uptake for PMTCT over the life of the project at CTA-supported sites



Roll-Out of Combination ARV Prophylaxis

The number of HIV-positive women receiving combination ARV prophylaxis in CTA-supported ANC and L&D facilities in the first half of FY10 has already exceeded the number of women receiving combination ARV prophylaxis under CTA for all of FY09 (Figure 5). After a protocol for combination ARV prophylaxis was introduced by the MOH in 2007, the CTA project began supporting training of service providers in expanded PMTCT services. This was done in order to rapidly increase the number of sites able to provide combination ARV prophylaxis regimens (AZT+NVP+3TC), in alignment with the 2006 World Health Organization (WHO) global PMTCT guidance. Combination regimens were piloted at three supported sites in 2008, which expanded to 15 sites in 2009, reaching 33 supported sites in early 2010. Those 33 sites represent 20% of all PMTCT sites nationwide providing combination regimens (165, as of June 2010).

As mentioned earlier, double counting of women receiving nevirapine has hampered precise calculation of total ARV uptake as well as of combination regimens. AZT has presented a complementary challenge, as it is a component of combination prophylaxis and ART. At several sites, women have been recorded as receiving AZT as part of a combination regimen and as a component of ART. During supervisory visits, Foundation technical staff have reviewed ANC registers to determine which regimen the woman has received by the number of pills received; 60 AZT tablets, for example, and a checkbox for ART would indicate double counting and that the woman is not on ART. With the encouragement and support of the MOH, the Foundation has made monitoring and evaluation of PMTCT a key focus of training, mentoring and supervision at the site and district level. Though life-of-project achievements are evident, it has been difficult to ascertain precise successes due to continuing challenges with ARV data management.

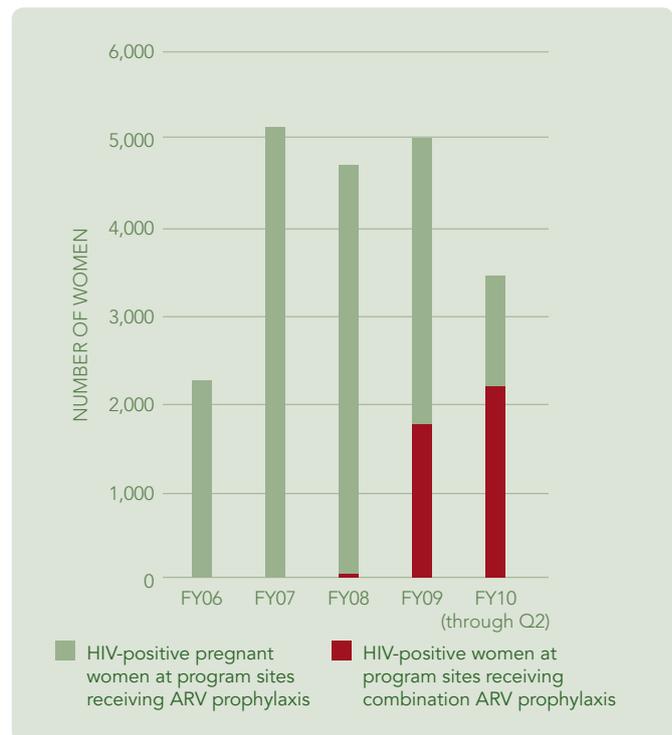


Figure 5. Number of HIV-positive pregnant women receiving ARV prophylaxis and combination ARV prophylaxis at CTA-supported sites

As sites have increased their capacity to provide combination regimens, supply chain problems have arisen. The Foundation has been actively involved in returning data reports to the site and district level to assist site staff in using performance data for decision making, including forecasting needs for HIV test kits, reagents, and ARVs. As the MOH gains capacity to manage site and district performance, sites have reported periodic widespread stock-outs of test kits and ARVs, in particular AZT and nevirapine.



ACHIEVEMENTS ALONG THE CONTINUUM OF CARE

Stable Uptake of ART

The percentage of HIV-positive pregnant and lactating women receiving ART has remained relatively stable at roughly 7% to 11% at CTA-supported sites (Figure 6); however, determining the number of women in need of ART in the absence of sample transport for CD4 testing, especially in rural sites, has been challenging. CD4 testing is currently available at district hospitals and a few NGO-supported research centers. Nurses receiving refresher training on combination ARV prophylaxis, which includes linkage to ART, have improved their skills in disease staging and ensuring CD4 testing. Additionally, a CD4 sample transport system was established in 2009 in Lilongwe District with the active involvement of the DHO. However, in rural areas, World Health Organization (WHO) staging practices have been inconsistent. In 2010, the MOH rolled out new staging documentation requirements in ANC registers; it is anticipated that this will increase the number of women eligible for and referred to ART services.

Where CD4 testing is available, sites have begun using a CD4 count threshold of less than or equal to 350 to identify HIV-positive pregnant women eligible for treatment, in line with revised 2010 WHO guidelines for PMTCT⁸ and the MOH policy enacted in 2009. As mentioned earlier, precise quantification and comparison of women on ART is complicated by observed double counting of AZT uptake in ANC registers at some sites. The Foundation is continuing to mentor and supervise ANC and maternity staff on accurate register reporting and has stressed the need for only trained staff to manage reporting in registers and monthly data forms.

Malawi has proposed to implement “Option B-plus” in 2011, mandating the provision of lifetime ART for all HIV-positive pregnant and lactating women, regardless of CD4 count or WHO disease stage and without stopping breastfeeding. This option was developed by an ART-PMTCT joint technical working group (TWG), of which the Foundation is a member, after reviewing the WHO recommendations regarding Option A and Option B for PMTCT. Option B-plus builds on the strength of the existing ART program in Malawi, which has strong adherence rates and patient-tracking systems to reduce loss to follow-up, and is expected to eliminate challenges with determining CD4 levels. Additionally, with a national total fertility rate of 5.5,⁹ lifetime ART for women of reproductive age would provide optimal prevention

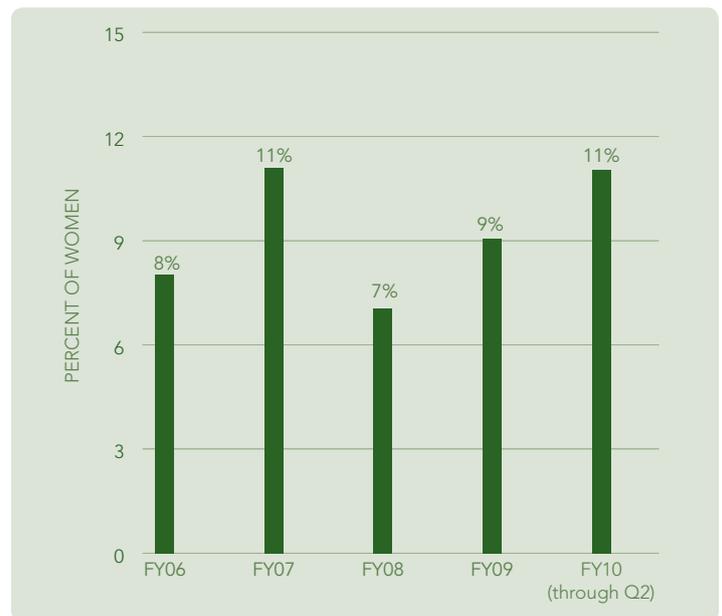


Figure 6. Percentage of HIV-positive pregnant women receiving ART at CTA sites

of vertical transmission and move Malawi many steps closer to creating a generation free of HIV.

The MOH recognizes that Option B-plus will be expensive to implement and will require a considerable scale-up in infrastructure; a task force is currently finalizing analyses of cost and feasibility, and the Foundation has begun conducting a situation analysis exploring facilitating factors and barriers to roll-out of Option B-plus. Phase one is underway and is examining existing MCH-HIV integration policy and activities; infrastructural needs, including facility space, supply chain, and M&E systems; and provider attitudes about ART provision at all ANC sites. Phase two will explore client attitudes about lifetime ART and factors including stigma, male involvement, and community support needs. A preliminary report will be prepared by the end of CTA and shared with the TWG, MOH, USAID, and partners to assist in creating an environment conducive to a smooth roll-out of this innovative program.

In the meantime, Malawi will continue with current national PMTCT combination regimen roll-out plans while taking steps to adopt Option B-plus. ART-PMTCT guidelines have been developed and the first draft has been shared with TWG members; key components of the roll-out will include full integration of ART services with PMTCT and antenatal care.



Working Toward Routine Early Infant PCR Testing and Diagnosis

As the MOH worked to rapidly scale up PMTCT services since 2006, the primary focus was on providing counseling, testing, and ARV prophylaxis to women attending ANC services. The establishment of the Pediatric HIV Care Scale-up Plan (2009–2013) in 2009 has helped the MOH to prioritize early identification of children exposed to HIV and to improve access to pediatric HIV care. As an active member of the national PMTCT and Pediatric HIV Care TWGs, the Foundation has supported the MOH in the design, implementation, and expansion of early infant diagnosis (EID) services toward increasing identification and testing of HIV-exposed children nationwide. Policies are very conducive for pediatric HIV testing, care, and treatment. Service providers are encouraged to test HIV-exposed children, malnourished children, and children admitted to hospital. They are also allowed to test children routinely, and doctors, clinical officers, medical assistants, and nurses are allowed to prescribe ART.

However, in practice, pediatric HIV testing, care, and treatment are not adequately provided in the facilities. Reasons include shortages of trained staff, a lack of provider confidence to deliver pediatric ART, inadequate supervision, inadequate transport mechanism for dried blood spot (DBS) samples for EID, insufficient numbers of DNA polymerase chain reaction (PCR) machines at government facilities (currently two nationwide), and in general, a lack of integration of HIV in pediatric services such as under-five, Expanded Program on Immunization (EPI), and pediatric outpatient department (OPD).

Since establishing a technical team in Malawi in late 2008, the Foundation has worked closely with the MOH to expand integration of EID provision into EPI and programs for children under age five. In particular, the Foundation has facilitated the training of HSAs working in well-child facilities in the identification of exposed infants; collection of DBS samples; pre- and post-test counseling of the mother/guardian; community mobilization; tracking of women lost to follow-up; and use of EID cards, registers, and related tools. HSAs are also offered practical sessions on DBS collection and rapid HIV testing. Nurses at CTA-supported facilities have also been trained in EID; they supervise and support the HSAs to ensure high-quality service provision and prescribe cotrimoxazole prophylaxis therapy (CPT) to the exposed child once identified by the HSAs.

The nurses follow the HIV-positive pregnant and lactating women and HIV-exposed children as part of the mother–infant pair follow-up within ANC. At several sites, HSAs play an active role in tracking mother–infant pairs lost to follow-up through well-child services and through home- and community-based activities. The Foundation is embarking on a new initiative to assist sites without active follow-up mechanisms to improve linkages with community leaders and to create community-based tracking systems.

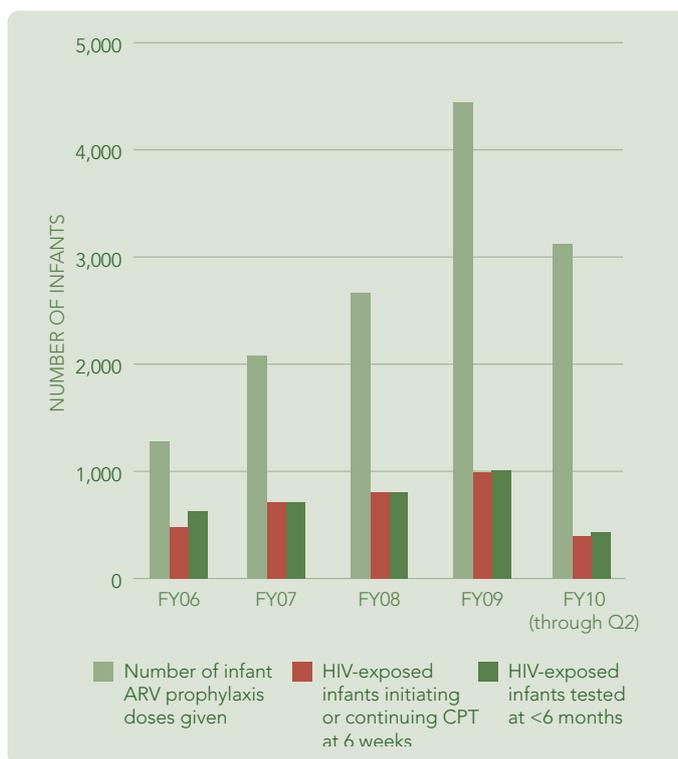


Figure 7. Infant ARV, CPT provision, and HIV testing uptake at CTA-supported sites

Over the life of the CTA project, the percentage of infants tested via DNA PCR using DBS has slowly increased as more sites have developed capacity to perform EID (Figure 7), but EID is still reaching only about 20% of HIV-exposed infants

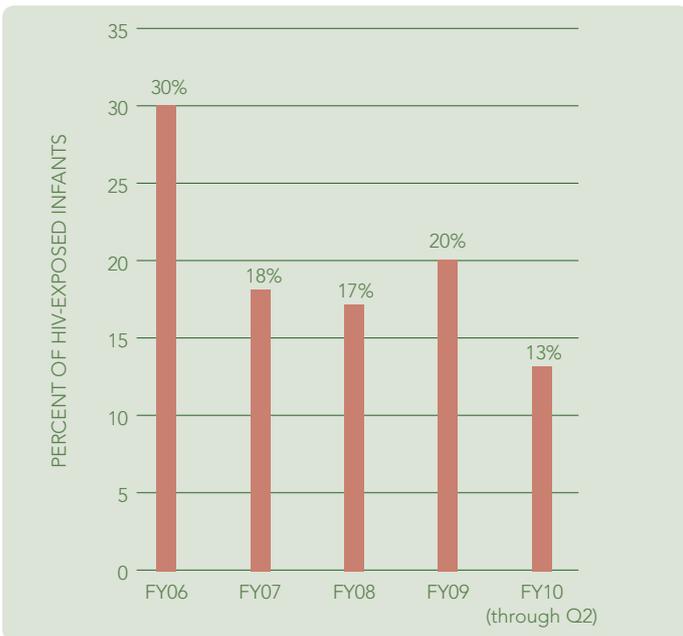


Figure 8. Percentage of HIV-exposed infants tested for HIV at less than six months of age at CTA-supported sites

(Figure 8). Likewise, the percentage of HIV-exposed infants receiving CPT continues to fall short of CTA targets, reaching 17% to 20% coverage at supported sites. As the new ANC and maternity register and reporting forms do not include infants on CPT and infant testing, sites have stopped reporting on these indicators as of January 2010. Though lower than desired, the CTA percentages exceed the country's estimated average coverage of 12%.¹ Diversion of CPT supplies for other uses within hospitals and health facilities has also led to occasional stock-outs, most notably in Ntcheu District (Ntcheu District PMTCT Coordinator, personal communication with the author, July 2010).

It is believed that the drop in the number and percentage of HIV-exposed infants reported as testing positive in the first two quarters of FY10 (Table 2) is due to bottlenecks in DBS sample transport, analysis, and return of results to sites. In July 2010, to mitigate these bottlenecks as more sites began providing infant testing without a reliable mechanism to transport samples to referral laboratories, the Foundation began providing motorbikes to DHOs in CTA-supported districts to enable sample transport from health centers and community hospitals to district hospitals, and to return the results back to facilities. The samples collected at the district level are then transported to and from Kamuzu Central Hospital in Lilongwe, one of two referral labs in Malawi. This pilot project is

expected to improve infant testing rates and to allow women to learn the HIV status of their child more rapidly than the one- to two-month turnaround previously experienced in a fashion that both encourages continued clinical follow-up and expedites referral of HIV-positive infants to ART services for care.

Infant Feeding Practices

The Foundation, while actively promoting current WHO guidelines of exclusive breastfeeding followed by complementary feeding, has continued to improve the ability of HIV-positive pregnant and lactating women to choose and practice the safest feeding method available through a number of PMTCT project interventions, undertaken in concert with the USAID-funded Infant and Young Child Feeding (IYCF) project.

Activities conducted during the CTA project included training of health providers in IYCF counseling, nutrition education projects implemented through family support groups, collaborating with partners in the development of IYCF job aids, revision of the IYCF training manual, and distribution of supplemental food to HIV-affected families. Over the past two years, the Foundation has supported the implementation of a pilot project in partnership with LMRFT and Feed the Children to distribute VitaMeal, a soya-maize-blend food, to 500 weaned, HIV-exposed infants starting from 6 months of age until they reach 18 months. This project has provided nutritious food supplementation to 500 infants attending well-child visits and undergoing HIV testing and has encouraged women to bring their children to well-child clinical and support services for EPI and EID. The project has been especially helpful in sustaining follow-up of infants older than nine months at well-child facilities after completion of their final vaccinations (measles).

Training Health Care Workers

One of the project's core strategies over the past five years has been the scaling up and cascading down to district level of the national PMTCT training program, in an effort to encourage government service providers and coordinators to manage the PMTCT program with a minimum of external support. The Foundation, in partnership with LMRFT, has made a significant impact on PMTCT capacity in Malawi, having trained more than 1,200 nurses, medical assistants, and HSAs in PMTCT service delivery over the life of the CTA project (see Table 1).



The CTA training model has been two-pronged. Initially, LMRFT carried out practical training of nurses assigned by the MOH from around the country, using the four urban Lilongwe sites as training facilities. PMTCT training sessions under CTA have been comprehensive and include clinical topics in addition to other aspects of PMTCT program management (Table 4).

Table 4. PMTCT Training Components

- Refresher PMTCT clinical training, based on revised guidelines
- Combination ARV prophylaxis, including ART
- Pediatric HIV care, including EID (DBS sample collection) and use of EID cards
- Adherence support
- Clinical staging and CD4 tests; HIV testing laboratory services
- Monitoring and evaluation; use of data for program decision making
- Community mobilization and mother–baby pair tracking
- Supply chain management

In late 2008, the Foundation and LMRFT phased out the approach of bringing nurses from around the country to Lilongwe training facilities, reducing the number of practical training sites to one, at Bwaila Hospital. A programmatic shift was made by LMRFT to a specific, site-level technical assistance model, which scaled up direct supervision, mentorship, and training of individual providers at their place of work. Between 2008 and 2010, the LMRFT model expanded the provision of direct technical assistance from 25 to 41 sites in Lilongwe District.

The second training prong was initiated in 2009, after the Foundation conducted a baseline PMTCT capacity assessment of Dedza and Ntcheu districts, which revealed the small number of PMTCT-trained staff to be one of the major limiting factors to broader scale-up of PMTCT/combination ARV prophylaxis provision and pediatric HIV care services. The Foundation then began facilitating MOH-led clinical and practical training sessions for nurses and HSAs in those districts, in close collaboration with the DHOs. In this model, the Foundation has assisted the MOH with training sites, materials, participant transport, other

training-related needs, and technical expertise, while the MOH provided the certified trainers and carried out the training sessions. The Foundation then worked with the MOH to conduct training evaluations and follow-up with participants to ensure skills were put to appropriate practice.

The success of the district-focused trainings has led to a rapid expansion of sites able to provide combination ARV prophylaxis (increasing from 15 to 33 supported sites by Q2 2010) and pediatric HIV care services, including broader access to infant DNA PCR testing. Additional benefits of district-focused training have included improved use of M&E tools, including revised ANC and L&D registers and reporting forms.

TECHNICAL LEADERSHIP

Zonal Mentorship Technical Assistance Program

The CTA technical assistance project is now structured so that the Foundation provides higher-level technical and mentoring support to DHOs, district nursing officers (DNOs), and PMTCT coordinators for Lilongwe, Dedza, and Ntcheu districts, as well as to the MOH through a national PMTCT site-supportive supervision program. This Zonal Mentorship Program (ZMP) was established in early 2009 by the Foundation, in partnership with the MOH, USAID, United Nations Children’s Fund (UNICEF), and Management Sciences for Health/Basic Support for Institutionalizing Child Survival (BASICS), to assist the MOH in scaling up the quality of PMTCT service provision by building the capacity of district and zonal supervisory teams to manage service delivery programs in their districts. The Foundation, MOH, and partners developed the following goals for the ZMP:

- To improve the quality of program implementation at multiple levels, through joint and regular review of program performance, in collaboration with national PMTCT program technical partners; and
- To help prepare PMTCT, HIV testing and counseling (HTC), and reproductive health (RH) coordinators to manage quarterly district-level performance reviews.

Through the ZMP, three to four facilities in each district (84 to 112 facilities nationally per round) are visited by teams comprising district PMTCT and ART coordinators, M&E focal persons, and technical partners performing PMTCT site-supportive supervision visits. The Foundation’s work is primarily focused in



the Central West zone (see Figure 1); Dr. Aida Yemaneberhan, the Foundation's Technical Advisor, serves a PMTCT advisory role on national-level supervision exercises.

Following national-level supportive supervision, district coordinators receive zonal mentorship training across the maternal and child health (MCH) spectrum, facilitated by partners including the Foundation; three such zonal mentorship trainings were carried out nationally in 2009 and 2010. The principal focus of the trainings was improved integration of HIV services within MCH and effective supply chain management. District pharmacy technicians, PMTCT, and family planning (FP) and safe motherhood coordinators all participated in the trainings, which was the first time coordinators from different zones were brought together in one place to discuss HIV, MCH, and supply chain issues—and their proposed solutions.

Most recently, the focus was on implementation of the new ANC and maternity registers and reporting forms, data on EID, supply chain issues with drugs and test kits, and the role of PMTCT coordinators. Findings of the supportive supervisions are summarized and shared among NGO and MOH partners to engender discussion, shared problem solving, and exchange of best practices. Quarterly meetings are then held with other coordinators to share program successes, program performance improvement plans, and updates on PMTCT and pediatric HIV care and to receive feedback on supportive supervision efforts.

Following national zonal mentorship training, the Foundation works closely with other PMTCT partners, DHOs, DNOs, and district coordinators for PMTCT, FP, RH, ART, and safe motherhood to provide supportive supervision at the site level within the Central West zone. All CTA-supported PMTCT sites are supervised with a focus on human resources-capacity development, integration of PMTCT into MCH, mother–baby pair follow-up, EID, data recording and reporting, and other identified issues. Rounds of site supervision are set based on the level of progression of PMTCT service delivery and in consultation with the DHO. Supervision results are compared quarter to quarter to monitor progress made on benchmarks set by each district coordinator.

From February 2009 to August 2010, district PMTCT coordinators improved their capacity to mentor and supervise PMTCT service providers by setting benchmarks, following up with sites to ensure those benchmarks are met, then reporting on results to wider audiences at quarterly meetings. There is also strong initiative for integrated management of PMTCT among safe motherhood and FP coordinators. Coordination will be extended to other HIV-linked programs, including ART, HTC, and sexually transmitted infections (STIs). To date, the ZMP has contributed to improvements in

PMTCT and pediatric HIV care delivery, especially in M&E, and in the scale-up of combination ARV regimens.

Peer Mentorship and Support

Approximately 94% of women in Malawi attend at least one ANC visit during pregnancy, yet only approximately 50% return to deliver in a health facility.³ To address this challenge, in 2009 the Foundation and LMRFT began working with mothers2mothers (m2m) to offer comprehensive support for HIV-positive pregnant and lactating women and new mothers through the training of mother mentors and peer educators to encourage women to deliver at health facilities and to bring their infants to health facilities to receive ARV prophylaxis, attend well-child visits, and receive vaccinations.

Women who are HIV-positive and have benefited from the PMTCT services serve as mentors and examples for other women, encouraging them to join support groups and helping them to see the value of delivering in a health facility. They provide psychosocial support, adherence support, counseling on infant feeding, follow-up through the mother support group, and an individual support system. A participant in a psychosocial group at the Area 25 Health Center commented, “This group has helped us to become more self-reliant. We realize we cannot depend on outside groups to aid us forever and that we must learn to help ourselves.” (Personal communication with the author, July 2010).

Jacqueline Murotha, a nurse educator from Area 25, said, “From the trainings, we identified natural leaders in the groups and gave them extra training so that they could lead groups themselves, back in their villages. This helps make the groups sustainable long-term because provision of snacks and transportation stipends are no longer necessary.” A peer counselor at Mtenthela stated, “People helped me, so now I feel a duty to help others.”

The CTA project received input from a community advisory board on issues concerning community mobilization, education, and research. Additionally, the program trains community nurses, community health workers, and peer educators to help increase public awareness of and support for HTC through such activities as marketplace theater and village education sessions. These community-based workers also promote treatment adherence and trace patients with low CD4 counts who do not return to a facility to receive their results. CTA works with the active involvement of community leaders, district health management teams, the Christian Health Association of Malawi, faith-based organizations, and HSAs in order to increase awareness of and demand for PMTCT services and EID, reduce loss to follow-up of mother–infant pairs, and increase involvement of fathers/husbands in pediatric care.



Greater Male Involvement

LMRFT, with Foundation support, has worked to encourage greater male involvement in PMTCT and to strengthen counseling and testing of male partners through the Male Championship Program. Because men make crucial decisions in most families in Malawi, and because PMTCT is an entry point for all pregnant women and family members into HIV care and treatment services, this program was initiated in 2006 as a pilot, with the goal that increased male involvement could:

- Foster family-oriented PMTCT;
- Reduce disclosure problems faced by women; and
- Encourage men to be involved in the care of their wives during pregnancy.

Activities to target men have included:

- Community mobilization;
- Giving invitation letters to all women attending ANC to invite their spouses to accompany them during the next visit;
- Promoting HIV testing in spouses and providing CD4 counts for men found to be HIV-infected (in urban areas);
- Encouraging couples who come to PMTCT services to be peer educators in their communities; and
- Targeting male workplaces for intensive ANC/PMTCT education to create awareness.

This program was piloted in a few urban sites initially, with the assistance of an MOH-led outreach campaign. Pregnant women are encouraged to bring their partner to ANC to be tested, and couples attending PMTCT together are given priority for testing. Women and their partners are sensitized on PMTCT services and RH issues targeting men, particularly STIs, stigma, and responsibility to their partner(s) and family. Sensitization meetings are held with community leaders on the importance of men participating in MCH activities, and communities are encouraged to be proactive. For example, the head nurse at the Mtenthela ANC clinic reported that after discussions with local chiefs about encouraging male partners to attend PMTCT services, “The chiefs, community, and facility agreed that every woman who comes to the antenatal clinic (for her first visit) needs to be escorted by her husband if she has one. Our success in getting men to accompany their wives when they come here is a result of our having worked directly with the chiefs back in their villages. This is very much a collaborative effort.”

As a result of strong community engagement, the CTA project has seen a tremendous increase in the number of male partners tested across supported sites, from 44 in Q3 FY07 to 4,066 in Q2 FY10. The nurse at Mtenthela also stated that in that village, the divorce rate has declined notably since the policy was implemented. She felt Mtenthela’s success could be translated to other communities, but only with the help of the chiefs.

FUTURE DIRECTIONS AND CHALLENGES

The lack of substantial success to date of HIV vaccine candidates and the recognition that we cannot “treat our way out of the epidemic” continue to make prevention programs, including PMTCT, even more critical for child survival. Globally, approximately 16% of all new HIV infections each year occur in children, predominantly through MTCT.¹⁰ PMTCT is among the greatest prevention successes of the AIDS pandemic, and studies now confirm that new pediatric HIV infections can be virtually eliminated with appropriate interventions.

Several challenges have been encountered over the course of the CTA project in Malawi, including the following:

- There are too few trained PMTCT staff, and there is too high of a workload in MCH sectors (especially maternity) to allow the provision of HIV counseling and testing for all women and children.
- Poor infrastructure and inadequate logistics exist for district-level supervision of PMTCT sites.
- Too frequent revisions of M&E tools take place with minimal orientation or training (including refresher training and onsite follow-up supervision) for service providers in the new tools.
- There is inadequate coordination of partners in the management of the national PMTCT program.
- Supply chain management for PMTCT is weak, leading to chronic stock-outs of HIV test kits, condoms, CD4 reagents, DBS supplies, and medications, including cotrimoxazole.
- Two central laboratories cannot keep up with demand for DBS processing and EID results reporting.
- Child-health passports have not been distributed and implemented.



- M&E tools available for PMTCT do not allow for collection of data on the integration of PMTCT in under-five and FP clinics.
- Health facilities providing PMTCT lack sufficient behavior change communication (BCC) materials.

Advocacy efforts by the Foundation and partnerships with other NGOs have helped mitigate some of these challenges, but frequently only at the district or zonal level, not at the national level. The MOH still requires considerable technical and logistical support to more effectively address MTCT through integration with other health programs, particularly with the pending roll-out of the new enhanced PMTCT program that will provide ART to all HIV-positive pregnant women (“Option B-plus”). Program population coverage and quality across the entire PMTCT cascade remain inadequate to achieve PMTCT goals. Achieving scale-up in the future will require the following:

1. **Expansion of PMTCT-trained staff throughout the MCH spectrum via task-sharing.** HSAs are already involved in HTC services in most health facilities, so further training on identification of exposed children, DBS sample collection for EID, and basic concepts of PMTCT and ARVs would enable them to provide improved PMTCT services at all MCH facilities. Additionally, having more personnel qualified to provide PMTCT services will reduce dependence on one or two staff persons, typically nurses, for the provision of all PMTCT interventions and will enable more women and children to be counseled and tested.
2. **Expanded provision of combination ARV prophylaxis and ART to HIV-positive women in all MCH points of care.** This should be planned and implemented through close collaboration with the DHO, in preparation for Option B-plus. Training of service providers on combination ARV regimens, followed by mentorship, and supportive supervision should be expanded nationwide.
3. **Strengthening of supply chain logistics to minimize interruptions in PMTCT service delivery due to stock-outs of drugs, reagents, and HIV test kits.**
4. **Expansion of EID services and mother–infant pair follow-up.** The MOH, the DHO, and partners need to assess gaps for EID, such as DBS sample transport, laboratory supply, and community involvement to support pregnant and lactating women. DBS sample transport systems should be designed by the DHO in close collaboration with local partners.

5. **Strengthened and standardized M&E systems.** Standardized data collection tools, developed by the MOH, must be made available at all sites immediately, not in a rolled-out manner. Service providers need to be adequately trained on new tools before roll-out, and they should be mentored by DHOs, in close collaboration with partners, on record keeping, reporting, and using data for programmatic decision making.
6. **Support for site-level data use for better decision making in program planning and implementation.** Population-based target setting, planning to achieve targets, appraisal of best-performing sites, and supporting weak-performing sites should be considered for improvement of evidence-based programming.
7. **Strengthened and integrated BCC programs with community MCH services.** Currently, some facilities have a few posters on PMTCT and IYCF; largely, staff persons are forced to rely on their initial training and suggestions from peers on providing BCC education, and they receive little support from their coordinators to be innovative.

In preparation for closing out the CTA award in September 2010, the Foundation has systematically sought out other U.S. government funding mechanisms and donors to continue CTA’s work following the end of this USAID global agreement. The Foundation anticipates continuing to provide technical support and leadership to the MOH through other project opportunities, building on the progress made and momentum achieved during CTA.



LESSONS LEARNED

Through the CTA project in Malawi, the Foundation has gained extensive expertise in supporting the implementation of HIV services for women and children on a national scale, including the development of the Zonal Mentorship Program for PMTCT. Several lessons have been learned over the course of this project:

Collaboration

- Collaboration with the MOH is crucial—their strong political will has made the Foundation’s work possible and has led to thousands of babies being born HIV-free.
- Building and maintaining strong relationships between public health programs and community partners is crucial. If members of the community feel they have a stake in the program’s success, it is more likely to succeed.
- Adaptation of lessons learned from the Foundation’s 16 other country programs brings innovation to the Malawi national project.

Building Ownership

- A zonal approach is effective and efficient for building capacity and scaling up service support. It also enables the zonal and district staff to manage their program, which is a key element to ownership and sustainability.
- Post-training and supervision reviews build accountability, allow for feedback on current program gaps, and encourage creative planning solutions.

Male Involvement

- As sites have become more male-friendly, attendance, clinical follow-up, and adherence have all improved. Potentially difficult discussions of HIV status are also greatly facilitated when couples attend counseling and testing sessions together.

Psychosocial Support

- The creation and use of peer support groups enhances adherence to ARV medicines, follow-up, and treatment and lets HIV-affected families know they are not alone.

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