



Zambia HIV/AIDS Prevention, Care and Treatment (ZPCT) Partnership
Cooperative Agreement No. 690-A-00-04-00319-00
Quarterly Report for April 1 – June 30, 2007
Submitted by Family Health International (FHI)
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1. EXECUTIVE SUMMARY

The Zambia HIV/AIDS Prevention, Care and Treatment (ZPCT) Partnership works with the Ministry of Health (MOH), the Provincial Health Offices (PHOs), and District Health Management Teams (DHMTs) to strengthen and expand HIV/AIDS related services in five provinces: Central, Copperbelt, Luapula, Northern and North Western. The Partnership supports the Government of the Republic of Zambia (GRZ) goals of reducing prevalence rates and providing antiretroviral therapy (ART) by implementing technical, program and management strategies to initiate, improve and scale-up prevention of mother-to-child transmission (PMTCT), counseling and testing (CT) and clinical care services for people living with HIV/AIDS (PLHA), including ART.

This quarter, ZPCT continued supporting implementation of HIV/AIDS services in 87 health facilities in 25 districts in the five target provinces. Services were initiated and/or strengthened in 43 facilities in nine districts in April 2005, expanded to an additional 39 facilities in October 2005, and expanded to five additional health facilities in August 2006. During this quarter, ZPCT initiated support to nine health facilities in Nchelenge District, Luapula Province. Data from the Nchelenge health facilities will be reported next quarter. Key activities and achievements for this reporting period include:

- CT services are ongoing in 87 health facilities. 29,428 individuals received CT services in ZPCT-supported facilities this quarter.
- PMTCT services were provided in 86 ZPCT-supported facilities. 16,050 women were provided with PMTCT services (including CT), and 1,920 were provided with a complete course of ARV prophylaxis.
- Ongoing assistance (training, technical assistance visits, and/or renovation) was provided to expand and improve clinical palliative care services in 87 health facilities. 48,051 individuals received palliative care in ZPCT-supported health facilities during this quarter.
- ART services were available in all 25 districts supported by ZPCT. A total of 5,068 new clients (including 403 children) were initiated on antiretroviral therapy through 52 ART centers (including 24 outreach sites) this quarter. Two of these sites (Solwezi Urban and Saint Dorothy) report their results through Solwezi General Hospital and are not included as independent sites in the indicator reporting matrix. By the end of this reporting period, 36,464 individuals were receiving antiretroviral therapy at ZPCT-supported sites; of these, 2,484 were children.
- Eight technical training courses were conducted:
 - 40 HCWs were trained in two, two-week courses in basic CT and 30 HCWs were trained in child counseling.
 - 50 HCWs were trained in two, two-week courses in provision of PMTCT services. Three data entry clerks joined the PMTCT training for one-day to review data collection tools.
 - 21 HCWs were trained in a five-day refresher course on ART and Management of Opportunistic Infections (OI) in Luapula Province.
 - 78 HCWs from 29 health facilities were trained in Management of Pediatric of ART/OIs in five, three-day trainings in Luapula and Copperbelt provinces.
 - 52 community volunteers were trained in adherence support and 64 trained lay counselors were trained in HIV testing.
 - 13 pharmacy and laboratory staff from Copperbelt and North Western provinces were trained in commodity management.
- Implementation of quality assurance and quality improvement (QA/QI) tools in CT, PMTCT, ART, clinical palliative care, laboratory and pharmacy (developed by ZPCT with the MOH) are ongoing in all five

provinces. Data from implementation of the tools are being entered and analyzed using the CSPro software package.

- ZPCT staff have developed a Facility Graduation Sustainability Plan to use QA/QI tools to determine when a facility has achieved and sustained a high level of technical quality in implementation of HIV/AIDS services and requires minimal support from ZPCT. On-going monitoring and supervision will continue to be provided by the PHO or DHMT. This is part of the ZPCT strategy to ensure lasting impact and sustainability of activities beyond the ZPCT program.
- Provincial staff are continuing to strengthen referral networks in ten districts, and have initiated referral network activities in six districts this quarter.
- ZPCT has identified and worked with 27 community groups to implement community purchase orders (CPOs) to enable the groups to conduct mobilization activities in communities surrounding ZPCT-supported facilities. Community mobilization activities are underway in all five ZPCT-supported provinces.
- ZPCT identified an additional 113 health facilities to be supported by ZPCT in the next year, including seven additional districts throughout the five target provinces. Assessments are underway in all five provinces and will be completed by July. New recipient agreements and amendments to existing recipient agreements will be completed in the next quarter.
- Amendments were executed for seven recipient agreements, extending the period of performance through September 30, 2008, as well as including support for new health facilities as well as ongoing support for existing health facilities. One new recipient agreement was signed to provide support to nine health facilities in the district. Funds for data entry clerks and technical trainings have been included in the new recipient agreements/amendments.
- ZPCT hired three consultants to conduct a mid-term program evaluation of the program in May 2007. The consultants reviewed program documents, met with ZPCT staff and partners, and conducted site visits ZPCT-supported facilities. The consultants debriefed USAID, ZPCT and the MOH after completing the evaluation. A final report will be available in the next quarter.
- ZPCT participated in the planning and implementation of activities in support of National CT Day, on June 30, 2007. ZPCT supported mobile CT activities during the week prior to the day, as well as on National CT Day itself in five districts, [providing CT services to 2,608 clients](#).
- ZPCT staff members continue to provide assistance and leadership on technical and programmatic issues in all key areas at the central level. ZPCT actively participates on eight national technical working groups, as well as several ad-hoc implementation groups.
- ZPCT continued to participate in planning for the roll-out of the Continuity of Care Patient Tracking System (CCPTS), including training of 12 ZPCT staff as trainers.

Results for the quarter are summarized in the following table:

Services in 87 Facilities Receiving ZPCT Support							
Indicator	Achievements (May 1, 2005 to June 30, 2007)						
	Workplan (1 Apr 06 to 30 Sep 07)	Quarterly Achievements (1 Apr 07 to 30 Jun 07)			Achievements (1 Apr 06 to 30 Jun 07)	Percent Achievement	Cumulative LOP Achievements (1 May 05 to 30 Jun 07)
		TARGET	FEMALE	MALE			
CT							
Service outlets providing CT							87
Persons trained in CT	402			70	469	117%	849
Persons receive CT services	52,512	15,657	13,771	29,428	101,804	194%	135,187
PMTCT							
Service outlets providing PMTCT							86
Persons trained in PMTCT	200			50	191	96%	439
Pregnant women provided with PMTCT services, including CT	35,851	16,050		16,050	73,959	206%	100,763
Pregnant women provided with a complete course of ART prophylaxis	8,963	1,920		1,920	6,802	76%	8,665
Basic Health Care and Support							
Service outlets providing clinical palliative care services							87
Service outlets providing general HIV-related palliative care							87
Persons provided with OI management and/or prophylaxis		28,836	19,215	48,051			51,494
Persons provided with general HIV-related palliative care		28,836	19,215	48,051			51,494
Persons trained to provide general HIV- related care	100			21	248	248%	631
Treatment							
Service outlets providing ART services							50
Health workers trained in ART	100			21	248	248%	631
New clients receiving ART	16,300	3,002	2,066	5,068	24,018	147%	34,833
Total clients receiving ART	28,410	21,668	14,796	36,464	36,464	128%	36,464
Pediatric Treatment							
Health workers trained in pediatric care	150			78	347	231%	347
New pediatric clients receiving ART	660	202	201	403	1,696	257%	2,420
Total pediatric clients receiving ART	1,151	1,249	1,235	2,484	2,484	216%	2,484
TB and Care							
TB infected clients receiving CT services	5,000	566	584	1,150	5,271	105%	5,271
HIV-infected clients attending HIV care/treatment services that are receiving treatment for TB disease (new cases)	2,188	414	432	846	2,409	110%	2,409

2. INTRODUCTION

The Zambia Prevention, Care and Treatment (ZPCT) Partnership works with the Ministry of Health (MOH), the Provincial Health Offices (PHOs), and District Health Management Teams (DHMTs) to strengthen and expand HIV/AIDS related services in five provinces: Central, Copperbelt, Luapula, Northern and North Western. The Partnership supports the Government of the Republic of Zambia (GRZ) goals of reducing prevalence rates and providing antiretroviral treatment (ART), by implementing program and management strategies to initiate, improve and scale up prevention of mother-to-child transmission (PMTCT), counseling and testing (CT) and clinical care services for people living with HIV/AIDS (PLHA), including ART programs in all ZPCT-supported districts in these five provinces. ZPCT collaborates with the PHOs and DHMTs to strengthen service delivery at public sector facilities and to strengthen networks for referral between these and other public sector health services and communities. The Partnership also collaborates actively with other donor agencies and partner organizations to build on, rather than duplicate, ongoing HIV/AIDS projects.

ZPCT has a national policy focus with interventions at national, provincial, district and community levels utilizing health clinics, hospitals and community service delivery programs. At the national level, the program offers technical assistance and coordination to the MOH and the National AIDS Council (NAC), as requested. At the provincial level, the program supports the GRZ through technical assistance and coordination in five provinces, and at the district level ZPCT assists the DHMTs and selected health facilities to provide, improve, and expand HIV/AIDS services. The Partnership also works with and in communities to create demand for services and strengthen linkages between facilities and communities.

ZPCT activities have been created in a flexible manner so that GRZ requests can be accommodated as needs arise. Furthermore, all activities and related monitoring and evaluation processes and indicators are designed to meet USAID and the President's Emergency Plan for AIDS Relief requirements, and to be compatible with established government health management information systems (HMIS).

3. OBJECTIVES

The specific objectives of the ZPCT Partnership are to:

- Increase access to and use of HIV counseling and testing (CT)
- Increase access to and use of interventions for preventing mother-to-child transmission (PMTCT)
- Increase access to and strengthen delivery of clinical care for HIV/AIDS, including diagnosis, prevention and management of opportunistic infections (OIs), and other HIV related conditions and symptoms
- Increase access to and strengthen delivery of ART services at the provincial and district levels

These objectives will be met within the framework of the GRZ plan for scale up of ART programs and in full partnership with the MOH at all levels.

4. ACTIVITIES AND ACCOMPLISHMENTS FOR THE QUARTER

4.1. Program Management

4.1.1. ZPCT Partners

Management Sciences for Health (MSH) continues, as the partner responsible for laboratory and pharmaceutical assistance, to provide technical leadership within ZPCT and nationally in these areas.

Churches Health Association of Zambia (CHAZ) is continuing to support four mission health facilities: St. Kalemba Health Center in Kabompo District (North Western Province), Chilubula Mission Health Center in Kasama District (Northern Province), Mambilima Mission Health Center in Mwense District (Luapula Province) and Lubwe Mission Health Center in Samfya District (Luapula Province).

ZPCT and CHAZ developed and finalized an amendment to the subagreement, extending the period of performance through September 30, 2008 and amending the scope of work. The subagreement will include support for three additional health facilities: Luwi Health Center in Mwinilunga District, Chitokoloki Mission Hospital in Zambezi District, and St. Paul's Mission Hospital in Nchelenge District. In addition, needs for the four existing health facilities supported by CHAZ/ZPCT were reviewed and additional equipment and renovations included in the amendment in support of HIV/AIDS services. A

list of medical equipment for the current and new sites was compiled, with orders to be placed and completed next quarter.

CHAZ is still working with the Mwense DHMT and hospital management to identify a medical officer to be placed at Mambilima Mission Hospital.

The CHAZ Program Officer conducted monitoring and support visits to the four ZPCT-supported CHAZ facilities to monitor implementation progress. In addition, the Program Officer scheduled orientation meetings to discuss ZPCT/CHAZ support to the three additional facilities (Luwi, Chitokoloki and St. Paul's) for the next quarter.

Kara Counseling and Training Trust (KCTT) is responsible for training of counselor supervisors at ZPCT-supported health facilities and at the district level. There were no trainings conducted this quarter – all trainings under the contract were completed by March 31, 2007. Participants were followed-up and certified, and KCTT will follow-up on the participants that were not available during the previous visits. ZPCT will review training needs and discuss a new contract with KCTT next quarter.

Expanded Church Response (ECR) is working through church communities to increase knowledge and demand for HIV/AIDS services. ECR provides technical support to the church coordinating committees around Makululu and Mahatma Gandhi Health Centers in Kabwe, and around Chibefwe and Chalata Health Centers in Mkushi (Central Province). In Chingola, ECR is implementing activities for communities around Chiwempala, Chawama and Kabundi East Clinics.

During this reporting period, ZPCT and ECR met several times to review progress against the activities supported through the subagreement. Both parties identified that activities have not progressed according to the plan, targets are not being met, and there continue to be issues related to data collection, as well financial reporting issues. As a result, it was decided that ECR should focus activities in Kabwe District. A two-month no-cost extension to the subagreement was developed to define activities through August 2007. At the end of this period, ZPCT and ECR will review progress, and identify the way forward.

ECR worked with the churches in Kabwe to conduct mobile CT activities in Makululu and Mahatma Gandhi Health Center catchment areas in support of National CT Day.

4.1.2. Facility Support

Recipient Agreements

At the end of this quarter, ZPCT was working with MOH staff to improve HIV/AIDS services in 96 facilities in 26 districts through 37 recipient agreements. This includes the new recipient agreement with Nchelenge District executed this quarter to provide support to nine health facilities in the district. In addition, amendments were developed for seven recipient agreements, extending the period of performance through September 30, 2008, as well as including support for new health facilities as well as ongoing support for existing health facilities. Funds for data entry clerks and technical trainings have been included in the new recipient agreements/amendments.

Site Expansion

ZPCT will be expanding to additional facilities in existing districts as well as to seven new districts in the five target provinces. This quarter, ZPCT identified health facilities for expansion, and updated tools and a timeline for completion of assessments. The ZPCT provincial offices developed a list of proposed sites in collaboration with PHOs and DHMTs. These proposals were discussed with Lusaka staff, and a plan for expansion developed. There are additional 113 health facilities proposed to be supported by ZPCT: 44 in Luapula Province, 33 in Copperbelt Province, 19 in Central Province, 9 in North Western Province, and 8 in Northern Province. Assessments are underway in all five provinces and will be completed by July. New recipient agreements and amendments to existing recipient agreements will be completed in the next quarter.

Renovations, Environmental Site Assessments and Procurement

Renovations to Phase 1 facilities are complete with the exception of facilities with additional renovations that have been added in recent amendments. For the newly added renovations, the works have either been completed or nearing completion and are expected to be complete by July 31 2007.

Renovations for Phase 2 health facilities and ART Plus-Up sites are progressing, with many completed or near completion. Identification and selection of contractors in rural provinces continues to be a

challenge. ZPCT provincial office staff work closely with the DHMTs and facility management in the vendor selection process as well as ongoing monitoring of refurbishments.

As renovations are completed, certification of quality and completeness of works is an ongoing follow-up activity by a ZPCT-hired architect in collaboration with the relevant provincial Public Works and Supply Department. ZPCT has engaged a consulting firm to conduct Environmental Site Assessments (ESAs) in facilities under going major renovations funded by ZPCT, as per USAID guidelines.

During this quarter, ZPCT completed procurement of pending equipment from all recipient agreements.

Training

As part of the site preparation that ZPCT conducted jointly with the PHOs, DHMTs and facilities, training needs were determined for each facility. Training for facilities is planned and participants selected with the PHOs and DHMTs, and facility management. Maintaining an adequate number of trained staff in the face of frequent staff transfers is an ongoing challenge in all districts.

During this quarter, staff from ZPCT-supported health facilities attended courses in CT (40 HCWs), PMTCT (50 HCWs), ART/OI (21 HCWs), Pediatric ART/OI (78 HCWs), commodity management (13 HCWs) and monitoring and evaluation in PMTCT (3 data entry clerks).

In addition, 52 community volunteers were trained in adherence counseling and 64 lay counselors were trained in HIV testing. ZPCT also conducted two trainings in child counseling for 30 HCWs in Central and Copperbelt provinces, with funding from the Clinton Foundation HIV/AIDS Initiative.

Details of training for each program area are provided in Section 4.2 and in Attachment B, *ZPCT Training Courses*.

4.1.3. Strategies to Supplement Human Resources at ZPCT-supported Facilities

Original plans to attach staff members to ZPCT-supported facilities will not be implemented due to the limited availability of health care workers in Zambia, delays in reaching agreement on terms and conditions with the MOH and budget constraints. Instead, ZPCT has developed other approaches, described below, to supplement key human resources.

Health Care Workers in Facilities: ZPCT provincial offices have continued to work with DHMTs and facilities on implementation of transport cost reimbursement plans. This initiative has been implemented at most health facilities and has helped in alleviating staff shortages. ZPCT provincial staff have continued to monitor this initiative closely to determine its effectiveness and feasibility and ensure that health facility staff adhere to the policy and procedures.

Lay Counselors and Adherence Support Workers: ZPCT continues to train and place lay counselors and adherence support workers in facilities to relieve some of the burden on HCWs in the facilities, and to improve services and the well-being of PLHA (in the case of ASWs).

Data Entry Clerks: The work of the 49 data entry clerks trained and placed by ZPCT at ART facilities has resulted in improved timeliness and quality of HIV/AIDS data at these sites. To further improve data quality, these data entry clerks will assist in the compilation of ZPCT data from sites in addition to the ART sites where they are assigned. Data entry clerks will work one day a month in selected additional facilities. The data entry clerks will be employed as FHI employees at GRZ rates starting next quarter through the appropriate recipient agreements.

Outreach: Transport allowances for ART outreach have been included in all recipient agreements, as well as amendments/recipient agreements supported by ART Plus-Up funds. This includes support for staff from the DHMT or other facilities to provide services at selected health facilities that lack a medical doctor, laboratory staff and/or pharmacy staff to initiate and monitor clients on ART.

4.1.4. Other Program Management Activities

This quarter, the following additional program management activities took place:

- Mid-Term Evaluation: ZPCT hired three consultants to conduct a mid-term program evaluation, from May 2 to 18, 2007. The objectives of the evaluation were to: 1) review progress made by ZPCT in the scaled-up services and its contribution to the MOH scale-up strategy, 2) review technical strategies for suitability, completeness and implementation within supported facilities, 3)

review partnership with MOH, PHOs, DHMTs and facilities and how best it can be further improved, 4) identify best practices in the relevant technical areas, 5) identify areas requiring further strengthening, and 6) identify sustainability options for districts, provinces and ZPCT.

The consultants reviewed program documents, met with ZPCT in Lusaka and three provincial offices, met with partners in Lusaka (including USG, MOH, WHO, NAC, CRS, RAPIDS, CDC, CIDRZ, SFH, JSI, KCTT, ECR, CHAZ, Clinton Foundation), conducted site visits to 18 ZPCT-supported facilities in North Western, Copperbelt and Central provinces, plus an Ndola Catholic Diocese site, and met with the PHO and DHMTs in the three provinces. The consultants debriefed USAID, ZPCT and the MOH after completing the evaluation. A final report will be available in the next quarter.

- Deputy Chief of Party (DCOP)/ Director of Programs: Asha Basnyat joined ZPCT in June 2007 as the DCOP/Director of Programs. Ms. Basnyat came from Nepal where she had been working for FHI for 12 years, most recently as Country Director.
- Information Technology (IT) Capacity Building and System Maintenance: IT staff continued to provide technical assistance to provincial offices on computer hardware, software, and use of applications. This quarter, two interns have been attached to the IT unit for a six-month period. The interns were oriented to support the IT operations of ZPCT, and traveled with the IT staff for quarterly visits to the provincial offices. ZPCT is working with the MOH to develop a computer support strategy. The IT unit, with the help of the interns, administered a questionnaire in all supported facilities to determine how best to support the MOH and donated computers. The IT activities are funded by FHI general and administrative funds, rather than program funds.
- Decentralization of Provincial Offices: ZPCT has continued to monitor activities that will determine the decentralization of provincial offices in selected program, technical and financial areas. Two provinces have been decentralized for monthly reports and one for community purchase orders.
- National CT Day: ZPCT participated in the planning and implementation of activities in support of National CT Day (June 30, 2007). ZPCT supported mobile CT activities during the week prior to the day, as well as on National CT Day itself. Activities included drama performances intended to encourage people to know their HIV status, mobile CT services, and referral to follow-on services.

4.2. Technical Program Areas

The major activities undertaken during this quarter in each of the technical components of the ZPCT Partnership are described below. For more details on the strategies in each area, refer to Attachment C: *ZPCT Technical Strategies*.

4.2.1 Counseling and Testing (CT)

ZPCT provided support for counseling and testing services at 87 health facilities in the 25 ZPCT-supported districts during this quarter. In addition, ZPCT began to support nine health facilities in Nchelenge District, Luapula Province in June – data for these facilities will be reported next quarter.

4.2.1.1 CT Training

During this quarter, ZPCT supported the following training courses for health care workers and 'lay' counselors:

- Eight HIV testing training courses for qualified 'lay' counselors were held in all five provinces, training 64 lay counselors from 36 facilities in 12 districts.
- Two basic CT trainings were conducted for 40 HCWs from three districts in Copperbelt Province. A training was conducted exclusively for 21 HCWs from Arthur Davison Children's Hospital in Ndola to facilitate expansion of HIV testing for children.
- Two basic child counseling courses were conducted in Central and Copperbelt provinces, reaching 30 HCWs from 14 health facilities. These trainings were supported with funding from the Clinton Foundation HIV/AIDS Initiative, leveraged with ZPCT program funding.

4.2.1.2 CT Services

ZPCT provided technical assistance to strengthen CT in 87 health facilities in the 25 ZPCT-supported districts. For the general CT services, the uptake for testing and collection of results has been almost 100% across all the provinces with good linkages to care. With the training of

additional lay counselors in HIV testing, as well as the use of a simpler confirmatory HIV test (Unigold), there are more trained people able to conduct the CT services.

During this period, the technical assistance focused on:

- Strengthening routine counseling and testing in TB, sexually transmitted infections (STI), Family Planning (FP) services as well as in-patient wards: Counselors and other HCWs were mentored to integrate CT services within TB and STI services using the opt-out strategy, with an emphasis on providing CT services within the TB rooms and by continuing to create “testing corners” where feasible. Six more testing corners were established within medical wards in hospitals in Central and Copperbelt provinces.

ZPCT staff has continued to mentor HCWs working in family planning services on the importance of ensuring that all FP clients have access to CT, preferably within the FP unit or referred to a CT room.

- CT services for children admitted in care in ten selected hospitals: Routine CT for children in care has continued in the ten selected hospitals. Four out of the ten sites are still offering these services through the main CT rooms because of lack of space within the children’s wards and/or pending procurement of furniture. Routine CT for children has been extended to eight other hospitals as well.

Routine CT in under-five clinics in five selected facilities in four districts in three provinces has been initiated with support from Clinton Foundation. Implementation of this strategy will continue to be strengthened in the coming months.

As a result of strengthening CT services for children, the number of children counseled and tested per month has more than doubled in the past 12 months, from 984 children counseled and tested in April-June 2006 period to 2,440 during this quarter. Most of this increase can be attributed to the initiation of routine CT services for children admitted in care. To facilitate provision of CT services for children in care, ZPCT is providing transport reimbursements for HCWs to work extra shifts when off-duty to meet this demand.

- Mobile CT services: ZPCT has continued to support mobile CT services in all five ZPCT-supported provinces. This quarter, 4,483 people were provided with CT services through the mobile activities. Additional information and data on these activities is included in the community mobilization section of the report (Section 4.3.3).
- Implementation of QA/QI tools: QA/QI tools continue to be used at the ZPCT-supported facilities to monitor quality of services. In addition, counselors’ support meetings are ongoing, providing a forum for counselors to share experiences, discuss ways of managing stress, burn-out, difficult situations, and addressing other issues as a group. ZPCT provides technical assistance and limited financial support in this area.
- Linkages of all HIV positive clients: ZPCT has continued to improve linkages to ART services in the 87 ZPCT-supported facilities with CT services.

4.2.1.3 National Level Activities in CT

ZPCT continues to provide technical assistance on counseling and testing issues at the national level, and collaborates and participates in a variety of partner meetings relating to CT.

- Finalization of the National QA Strategy: Building on the ZPCT QA/QI tools, NAC, MOH and other cooperating partners have finalized the draft national quality assurance strategy. This draft will be sent to the Permanent Secretary for review.
- Participation in the National CT Day Preparatory Meetings at NAC: Several meetings were held to plan for this day which included planning for publicity, IEC materials, guidance to provinces and districts, program for the launch of the CT day, other logistics required and identifying sources of support for operations for the day
- NAC Meetings to Finalize the Finger-prick HIV Testing Training Package: ZPCT staff participated in meetings to review final presentation slides and finalize training timetables.
- Civil Society Workshop on Male Circumcision (April 13, 2007): The male circumcision sub-committee of the MOH organized a meeting to present the latest information on male circumcision and HIV, including the recent WHO recommendations, to civil society groups, including traditional chiefs from four provinces.
- UNFPA/NAC Feedback Meeting on “Drivers” of HIV Epidemic in Zambia (May 22, 2007): UNFPA provided technical assistance to NAC in conducting national consultations on drivers of the HIV epidemic in Zambia from May 14 to 24, 2007. The regional consultant visited Northern,

Southern, Central and Lusaka provinces for the review. The findings from this consultancy were presented at the feedback meeting organized by UNFPA and NAC.

- Launch of the CHAMP Mobile HIV Services (CT, ART): CHAMP launched their public-private partnership in Mkushi, Solwezi and Katete to provide CT and ART services on a mobile basis within the catchment areas of the selected districts.

4.2.1.4 Key Issues/Constraints in CT

- Limited human resources: This remains a challenge, increasing with the expansion of entry points for CT to TB, STI, FP and children's services. However, ZPCT continues to address this issue by training additional existing staff in the facilities to provide CT services, as well as training lay counselors to supplement HCWs. ZPCT provides limited support for transportation to HCWs working extra shifts for CT.
- Inadequate space for CT: ZPCT is addressing this issue with technical assistance in patient flow and linkages, and limited infrastructural refurbishments. However, as ZPCT expands entry points to CT through TB, STI, FP and children's services, the issue of space must continue to be addressed.
- Availability of Confirmatory Test: Unigold, a confirmatory HIV test, is still not readily available in all facilities. As a result, lay counselors have to wait for HCWs to draw blood for confirmation of a positive client, which often delays provision of results to clients.

4.2.2 Prevention of Mother-to-Child Transmission (PMTCT) of HIV

During this quarter, all 86 health facilities targeted for ZPCT assistance in this area are providing PMTCT services. In addition, ZPCT began to support nine health facilities in Nchelenge District, Luapula Province in June – data for these facilities will be reported next quarter.

4.2.2.1 PMTCT Training

During this reporting period, 50 HCWs from 36 health facilities in Copperbelt, Northern and Luapula provinces were trained in PMTCT.

Ten ZPCT technical officers were trained as trainers in two-day TOT courses organized by the Clinton Foundation HIV/AIDS Initiative. These trained technical staff will conduct trainings at the district level to train HCWs at ZPCT-supported facilities in collection of DBS samples for HIV diagnosis of children less than 18 months.

4.2.2.2 PMTCT Services

By the end of this reporting period, services were being provided in 86 ZPCT-supported facilities targeted for PMTCT.

Uptake of routine CT within ANC is now well established, with over 90% of pregnant accepting HIV testing and receiving results. This has been achieved through the implementation of the national opt-out strategy. Only about 24% of pregnant women were being counseled and tested at the start of the program in May 2005. Mentoring the trained PMTCT providers in HIV testing skills, as well as establishing testing corners within ANC, has contributed to ensuring same-day testing and results in all ZPCT-supported facilities.

The areas of focus in technical assistance PMTCT during this report period were:

- Strengthening mother-baby follow-ups, as part of pediatric HIV efforts: ZPCT has assisted with establishing a strong follow-up system for babies exposed to HIV, in order to provide them Septrin to prevent *Pneumocystis Carinii Pneumonia* (PCP), as well as HIV testing at the appropriate age. Babies exposed to HIV are identified as soon as possible after birth, either at the first and or second (six-week) postnatal visit. HIV positive mothers are reminded of the need for follow-up visits for herself and the baby for the initiation of Septrin. The data is entered in provisional registers developed by ZPCT, as there are no national tools to capture this information. Through this system, babies exposed to HIV are being tested at 9 months and 18 months. With the establishment of the PCR laboratory at Arthur Davison Children's Hospital next quarter, HIV testing for HIV exposed babies will be done as early as six weeks after birth.
- Provision of more efficacious ARVs for HIV positive pregnant women: Through the sample referral system, all pregnant women testing HIV positive have their blood drawn for a CD4

count, to assess eligibility for ART. As per the WHO three-tiered approach to ZPCT, women eligible for ART are initiated immediately. In addition, ZPCT is supporting implementation of dual therapy (AZT and NVP) as the minimum standard for ARVs prophylaxis for PMTCT for anyone who is not eligible for full ART or has not yet been assessed for eligibility. This is in line with WHO guidelines, as well as the National PMTCT Protocol Guidelines.

- Integration of family planning in PMTCT: ZPCT has been providing technical assistance on linkages to family planning services through family planning counseling in the ANC period as well as provision of the selected FP method at the appropriate time after delivery. All women are being linked to family planning services within PMTCT, as well as women who are not pregnant attending CT services.

ZPCT continues to provide technical assistance and mentorship to HCWs to strengthen linkages of all HIV positive women under PMTCT to follow-up care and treatment services.

4.2.2.3 National Level Activities in PMTCT

ZPCT continued to participate on national committees on PMTCT at MOH as well as the PMTCT Technical Working Group of the NAC. During this quarter, ZPCT participated in the following national and regional level activities:

- Joint Annual Program Review Meeting (April 12, 2007): ZPCT participated in a JAPR meeting at National AIDS Council to review the terms of reference of an annual review of HIV/AIDS programs in Zambia.
- Zambia Exclusive Breastfeeding Study (ZEBS) Dissemination Meeting (April 13, 2007): ZPCT attended the dissemination findings and recommendations from the ZEBS study.
- JAPR Follow-up Meeting (April 18, 2007): ZPCT attended a follow-up meeting to review the consultants' report before submission to the main JAPR team.
- Meeting to Finalize the National Action Plan for PMTCT and Pediatric HIV Care (April 25, 2007): The MOH scale-up plan for PMTCT and pediatric HIV care was reviewed at this meeting. The next step is for the MOH to finalize the plan and disseminate.
- Consensus Meeting on the Finalization of the Under-5 card (April 26, 2007): The objective of this meeting was to review the under five children's card and procedures manual. The participants agreed on the format and contents including new elements to cater for HIV and cotrimoxazole. Once the card is revised, it will be sent to all participants for review, followed by printing and pre-testing at clinics in Lusaka and Chongwe. The card and procedures manual will be finalized following the pretest and launched nationally. This whole process is expected to take about 6 months.
- Field visit to Kanyama Clinic in Lusaka, supported by CIDRZ (May 4, 2007): Two ZPCT staff visited a CIDRZ-supported clinic in Lusaka to learn more on the implementation of dual therapy prophylaxis for PMTCT, Septrin for prophylaxis and PCR testing.
- Finalization of the PMTCT Training Package for Community PMTCT Lay Counselors (May 10, 2007): The package was finalized and is now ready to be used by MOH and partners
- UNITAID Meeting (May 24, 2007): ZPCT staff participated in a meeting to review the Zambia Country Plan under UNITAID. UNITAID, an international drug purchase facility, will provide support for PMTCT and pediatric HIV programs in Zambia through the Clinton Foundation, funded primarily by innovative financing mechanisms such as the tax contribution on air tickets.
- Clinton Foundation/MOH DBS meetings: ZPCT has been attending meetings to develop a national DBS training package, as well as to develop a transportation system for DBS samples.

4.2.2.4 Key Issues/Constraints in PMTCT

- Human resources: Staff shortages have persisted and have been coupled with high staff turnover through rotation, transfers, retirements and death. However, ZPCT is working with DHMTs/PHOs to continue providing limited support for transport reimbursements for off-duty facility staff who work extra shifts to provide services.
- Lack of Septrin for HIV positive mothers in all facilities. This is a problem at the national level, being addressed by MOH.

4.2.3 Antiretroviral Therapy (ART)

During this quarter, ZPCT continued to support ART services at 52 health facilities (28 static sites and 24 outreach sites). Two of these outreach sites (Solwezi Urban Clinic and St Dorothy HC) continued to report data through Solwezi General Hospital, but are expected to start reporting their data directly by the end of the next quarter. The North Western Provincial Health Office has conducted the assessment to certify these two sites as ART sites.

ZPCT has identified additional sites in the five provinces for ART service provision, as part of the expansion and scale-up of ART services. Site assessments were conducted and completed at most facilities. Services will be supported next quarter at these additional facilities. ZPCT began to support ART services at nine health facilities in Nchelenge District, Luapula Province. Data from these sites will be reported next quarter.

4.2.3.1 ART Training

ZPCT conducted eight trainings in ART/OI and pediatric ART, as follows:

- A 5-day ART refresher course was conducted in Luapula Province training 21 HCWs from 7 facilities in Mansa, Kawambwa, Samfya and Mwense districts
- 78 HCWs were trained through five three-day trainings in pediatric ART/OI management in Central, North Western and Northern provinces.
- 52 community volunteers were trained in adherence counseling through two 10-day trainings in Luapula and Central provinces.

4.2.3.2 ART Services

ZPCT staff provided technical assistance to 52 facilities providing ART services. Two of these sites (Solwezi Urban and Saint Dorothy) report their results through Solwezi General Hospital and are not included as independent sites in the indicator reporting matrix. ZPCT continues to focus on the issues outlined below:

- SmartCare training for roll-out: ZPCT has developed a plan to roll-out the SmartCare health information system in ZPCT-supported facilities, which was piloted in Central Province in the last quarter. ZPCT staff will ensure that the appropriate SmartCare forms are used and used correctly each time an HIV+ client visits the ART Clinic. This is the backbone to the success of the entire SmartCare system. The roll-out exercise is due to begin in the next quarter.
- Collaboration with home-based care (HBC) programs: ZPCT continued to strengthen collaboration with Ndola Catholic Diocese home-based care centers in Copperbelt Province (Chishilano in Ndola, Twatasha Trakk in Kitwe, and Iseni in Chingola). Through this collaboration, 183 new clients were initiated on ART and 855 clients were monitored this quarter. ZPCT has also signed an MOU with the Mpatamatu Home-Based Care program in Luanshya District in Copperbelt Province to provide ART outreach services at the home-based care center. Clients will eventually be transferred to Mpatamatu Clinic once it is upgraded to an ART site with ZPCT support.
- Progress on Pediatric HIV/AIDS care and treatment
Ready to Use Therapeutic Food Supplements (RUTFs), also known as Plumpy Nuts, have arrived in the country and will be distributed through Medical Stores Limited to children on ART. The RUTFs have been provided by Clinton Foundation – ZPCT will distribute these to children on ART at ten health facilities providing pediatric ART services.
- Provision of reference materials: ZPCT has developed, reviewed and revised job aids in line with the recently released national protocols on ART. The following job aids will be printed for distribution in the next quarter:
 - ARV Adherence Counseling Flow Chart
 - Ten Step Adherence Counseling Guide
 - Approved Antiretroviral Agents included in the National ARV Guideline (Adult / Adolescent Dosage)
 - Antiretroviral Drugs for Adults – Dosing Guidelines and Side Effects
 - WHO Recommendations for Initiating ART in HIV-infected Infants and Children
 - HIV Post-Exposure Prophylaxis (PEP)
 - WHO Staging System for HIV Infection & Disease / Recommendations for Initiating ARV (Adults and Adolescents)
 - WHO Staging System for HIV Infection and Disease in Children

- Cotrimoxazole Prophylaxis for Adults and Children
- Table on Monitoring Patients on ART
- Initiation of ART in TB patients
- Tables on the WHO T-staging
- Quality assurance/quality improvement: ZPCT continues to focus on quality assurance and quality improvement issues during the technical assistance visits to health facilities. The results of the recently completed assessment study on the effectiveness of ASWs are being finalized.

4.2.3.3 National Level Activities in ART

During this quarter, ZPCT staff participated in the following meetings:

- Joint Annual Program Review Meeting (April 12, 2007): ZPCT participated in a JAPR meeting at National AIDS Council to review the terms of reference of an annual review of HIV/AIDS programs in Zambia.
- JAPR Follow-up Meeting (April 18, 2007): ZPCT attended a follow-up meeting to review the consultants' report before submission to the main JAPR team.
- Finalization of the Integrated Pediatric/PMTCT HIV Scale-up Plan (April 23-24, 2007): ZPCT participated in a workshop, convened by the MOH in collaboration with UNICEF, to finalize the national pediatric/PMTCT HIV scale-up plan.
- ART Quality Improvement Meeting (May 2, 2007): ZPCT staff attended a meeting, sponsored by JHPIEGO, to review what partners are doing in the area of QA/QI for ART and how to harmonize the approaches.
- Abbott Meeting (May 3, 2007): ZPCT staff attended a presentation sponsored by Abbott, introducing a heat-stable tablet formulation of Kaletra known as Alluvia to clinicians.
- Strengthening Coordination Mechanisms for HIV/AIDS Service Provision in Health Institutions Meeting (May 11, 2007): ZPCT attended a workshop, sponsored by the MOH through Health Services and Systems Program (HSSP), to develop a document to strengthen the Coordination Mechanisms for HIV/AIDS Service Provision. This document will harness and strengthen coordination and collaboration and also effectively improve the flow of HIV information through central, provincial, district and facility levels including partners and stakeholders both private and NGOs involved in HIV program.
- UNITAID Meeting (May 24, 2007): ZPCT staff participated in a meeting to review the Zambia Country Plan under UNITAID. UNITAID, an international drug purchase facility, will provide support for PMTCT and pediatric HIV programs in Zambia through the Clinton Foundation, funded primarily by innovative financing mechanisms such as the tax contribution on air tickets.
- Preparatory Meeting for Dried Blood Spot Training of Trainers (DBS TOT) (June 5, 2007): ZPCT staff participated in a meeting to prepare for the DBS TOT. The meeting involved MOH, ZPCT, Clinton Foundation, JICA, Boston University, and CDC/UTH. The meeting resolved to hold several meetings to finalize the training logistics and materials.
- Meeting with UNICEF (June 6, 2007): ZPCT met with UNICEF to identify areas of collaboration in PMTCT and pediatric HIV service provision.
- Meeting to Finalize DBS Health Facility Handbook (June 6, 2007): ZPCT staff met with MOH, Clinton Foundation and UNICEF to finalize the DBS Facility Handbook and to discuss the budget for the national TOTs.
- Merging of the PMTCT- Pediatric Prevention Care, Treatment and Support (PPCTS) Technical Working Group: ZPCT staff participated in the development of terms of reference for this new working group, which will play an advisory role to the MOH, providing an overall view and technical oversight of the issues around the PMTCT-PPCTS to the public in order to effectively plan, implement, monitor and evaluate these programs for Zambia. The TWG working group will review new approaches, projects or programs related to these technical areas and make recommendations on new initiatives, including a review of the literature.

4.2.3.4 Key Issues/Constraints in ART

The following constraints were faced in ART service provision:

- Patient monitoring: The regular monitoring of patients on ART according to national guidelines has been a challenge due to inadequate reagents for CD4 testing this quarter and the inability

of the FACSCount machines to test more than 50 to 60 samples a day. However, ZPCT assisted with the improvement of clinical and laboratory monitoring of patients on ART through technical visits, mentorship and provision of reference materials. Newly developed job aids for the monitoring of patients on ART will be printed and distributed next quarter.

- Pediatric ART challenges: Though the number of pediatric patients being tested for HIV has increased significantly, this has not resulted in a corresponding increase in the number of pediatric clients initiated on ART. This may be due the limited ability of laboratory staff to correctly calculate CD4 counts or limited staff skills in the management of pediatric ART cases. ZPCT continues to provide technical assistance and training in pediatric ART. ZPCT will initiate a pediatric HIV/AIDS management preceptorship program, through funding from the Clinton Foundation. Through this initiative, consultants will be deployed to high density facilities to offer hands-on technical support to HCWs in the management of pediatric HIV/AIDS cases.
- Patients lost to follow-up: Tracing defaulters in the community still remains a challenge. Insufficient logistical arrangements and the increased patient load pose a challenge for ASWs conducting home visits to follow-up on patients in need. ZPCT will consider increasing the number of ASWs in high density sites, as well as increasing the number of bicycles allocated per site. ZPCT is also allocating funds for bicycle maintenance and repair in the recipient agreements. The feasibility of using telephone communication to enquire on these patients is being evaluated. The collection of data on trans-ins and trans-outs from neighboring health facilities to trace some of these patients is being implemented and is showing some positive results. ZPCT has also put in place a mechanism to check mortuary records from the hospitals to collect data on those that might have died.

4.2.4 Clinical Palliative Care

ZPCT is working with staff in 87 facilities to strengthen and improve palliative care for PLHA.

4.2.4.1 Clinical Palliative Care Training

The national training curriculum for ART and OI management is combined. As described in Section 4.2.3.1, six trainings were conducted this quarter in the areas of ART/OI and pediatric ART/OI, reaching a total of 99 HCWs.

4.2.4.2 Clinical Palliative Care Services

ZPCT staff provided technical assistance in clinical care to the 87 sites in the five provinces. During the quarter under review, technical assistance focused on the following issues:

- ZPCT has mentored and supervised HCWs in the management of opportunistic infections and pediatric HIV/AIDS cases, identification and documentation of adverse drug reactions, and the scaling-up of cotrimoxazole prophylaxis in both adults and children.
- ZPCT developed a half-day orientation package for nurses in all facilities in order to enhance their skills in the early identification of OIs in children. This orientation package has been piloted in three health facilities and will be rolled-out widely in all provinces next quarter.
- ZPCT is strengthening routine HIV testing for all pediatric admissions and CD4 testing of all HIV positive TB patients, to facilitate clinical care and ART as required.

4.2.4.3 National Level Activities in Clinical Palliative Care

ZPCT staff continue to work with the NAC Treatment, Care and Support Technical Working Group. In addition, ZPCT remains an active member of the Palliative Care Forum (PCF) led by USAID and the Palliative Care Association of Zambia.

- Pfizer Meeting on Diflucan (May 16-18, 2007): ZPCT staff attended a meeting on Diflucan (fluconazole), also attended by representatives from Provincial Health Offices, health facilities, MOH, and other partners working in HIV/AIDS management. The meeting aimed to develop a mechanism to facilitate the distribution and effective use of Diflucan in the treatment of cryptococcal meningitis and oesophageal candidiasis. This program will be supported by Pfizer.
- Meeting with Dr. Tim Cote the OGAC TB Laboratory Coordinator (May 3, 2007): ZPCT staff attended a meeting with Dr. Tim Cote, OGAC TB Laboratory Coordinator at CDC. At this meeting partners presented an overview of their TB activities and plans in relation to laboratory diagnostic services. Partners present were CDC, CIDRZ, ZPCT, CDL, MOH and UTH.

- Global Fund/CCM Steering Committee Meeting (June 12, 2007): ZPCT staff attended Global Fund/CCM Steering Committee meeting at NAC on behalf of the COP. The meeting reviewed presentations made by the TB and Malaria Teams working on the Round 7 GF proposal.
- Meeting with World Food Program (June 28, 2007): ZPCT staff attended one of a series of meetings on “*ART Food Security Screening Tool*” sponsored by the World Food Program. The meeting was tasked to develop a tool that will be used as guide/criteria by facilities and organizations in selecting children and adults with HIV/AIDS and or TB who need, among other aspects of care, food supplements.

4.2.4.4 Key Issues/Constraints in Clinical Palliative Care

- Referral Linkages: The inadequate feedback mechanisms and insufficient documentation of referral process in referral notes and registers cause the collection of incorrect data and difficulties in the follow up of patients. However, ZPCT through technical visits and mentorship is working towards ensuring that all referral documents used (referral notes and registers) are adequately filled out with all the relevant information as is required. ZPCT will also continue to encourage feedback from clinicians.
- Erratic Supply of Drugs for Ols: This still remains a challenge in some sites, though with the support of JSI/Deliver to the Medical Stores Limited, the situation is expected to continue improving. .
- Palliative Care Data: There has been an improvement in the collection of palliative care data after the review of the HMIS through the MOH and HSSP.

4.2.5 Pharmacy Services

During this quarter, ZPCT provided support for pharmacy services to 87 health facilities. Ongoing activities include the provision of basic pharmacy equipment/furniture, renovations to enhance pharmaceutical service delivery, training and technical assistance.

4.2.5.1 Pharmacy Training

ZPCT conducted a training in commodity management for 13 health facility staff from five districts in North Western and Copperbelt provinces.

4.2.5.2 Technical Assistance in Pharmacy

ZPCT continued to provide technical support on the use of the updated ARTServ Dispensing Tool, a tool used by pharmacy staff to record data on clients on ART, including drug regimen, side effects, and drug dispensing dates at 46 sites. Two facilities, Senama Health Center and Samfya Stage II Clinic in Luapula Province began using the tool during this quarter. Fourteen staff were oriented on its use. In addition, ongoing training of additional pharmacy staff in use of ARTServ is planned, to allow for rotation and reduction of workload.

Technical assistance visits were conducted to strengthen commodity management information systems in facilities offering ART services. ZPCT staff provided guidance on improving stores management including stock status update, storage space and conditions, timely ordering and collection, aggregation and proper use of consumption data of commodities. The commodity inventory tracking tool, developed by ZPCT to assist in inventory control and tracking of commodities, is functioning well. In addition, technical assistance was provided to ensure that all facilities adhere to the ordering procedures as defined by the new ARV logistics management system. Each quarter, JSI/Deliver performs an analysis of all facilities that report using the new ARV logistics system for ordering ARV – 98% of ZPCT-supported ART sites reported back using this system this quarter.

Technical assistance visits were also focused on mentoring facility staff to facilitate good pharmacy practice including good dispensing practices, medication use, and enforcing adherence counseling to ensure better patient outcomes.

ZPCT also continued to provide technical assistance to address non-submission of returns and data, which contribute to shortages of critical supplies and stock-outs.

4.2.5.3 Guidelines and SOPs

ZPCT continues to distribute and promote the use of the Zambia ART Pharmacy SOPs to the facilities, and focuses on providing technical assistance to sites to ensure that work is being done according to the guidelines and SOPs. ZPCT facilitates the site-specific adaptation of these SOPs in line with GRZ policy. This quarter, the planning process to continue the adaptations in each facility was finalized and the activity will be conducted during the next quarter. In addition, the SOPs are due for review and discussions are underway with the MOH to conduct this exercise to include the new ARV logistics system procedures and forms and to update the patient care section to reflect the recent changes in guidelines. Once this process is complete, the new SOPs will be distributed and site specific adaptations are planned for all static ART sites, and selected outreach ART sites.

The revised pharmacy services QA/QI tools continue to be administered at ZPCT-supported sites. Implementation of the tools plays a key role in continually monitoring the quality and sustainability of services, as well as building capacity within health facilities and DHMTs.

4.2.5.4 National Level Activities in Pharmacy Services

ZPCT staff are actively engaged in a range of issues and discussions at the national level. Participation in national meetings and workshops ensures ZPCT input into national activities and enhances continued collaboration with the MOH and other partners. Meetings and workshops during this quarter included:

- Public-Private Partnership Meeting (April 4, 2007): This meeting was convened by the Ministry of Health to discuss the integration of the private sector into the current National ARV Logistics Management System. The private sector was represented by the mining industry and the defense forces, while the public sector was represented by all major stakeholders. The discussion centered around the MOH's plan to incorporate private sector partners to enable them access ARVs free-of-charge, and to benefit from the current ordering, storage and distribution system managed by Medical Stores Limited.
- Review Meeting on Drugs and Medical Supplies Reports for ARVs, Antifungal, Antimalarial and TB Drugs and RHCs (May 16-18, 2007): The purpose of this meeting, convened by MOH, was to review how the supply system for these commodities was functioning, problems encountered and possible solutions. The focus was on the reporting formats and process. The main highlight was the discussion with the Pfizer representative for the reintroduction of the Diflucan donation program in Zambia. Of the nine facilities to be targeted in the first phase of the donation program, five facilities (Ndola Central Hospital, Kitwe Central Hospital, Kasama General Hospital, Solwezi General Hospital and Mansa General Hospital) are being supported by ZPCT. These facilities will access the commodity from the allocation given to the MOH in the interim, but discussions are underway between ZPCT and Pfizer to enable ZPCT to access Diflucan directly for all eligible facilities.
- National Quantification of Antiretroviral Drugs Workshop (May 21-24, 2007): This workshop, convened by the MOH, was conducted to review the previous national quantification of ARVs, as well as to conduct a new forecast for 2007-2009 to facilitate the rational procurement of ARVs using available resources.
- Zambia HIV/AIDS Commodity Security Workshop (May 24, 2007): This was a consultative meeting convened by the MOH to discuss the methodology and approach for ensuring HIV/AIDS commodity security in Zambia. The MOH is leading the development of a "National HIV/AIDS Commodity Security (HACS) Strategic Plan", based on an assessment of the systems and policies involved in commodity security guided by the input of Zambian stakeholders. This activity was conducted by SCMS on behalf of the MOH. A debrief of the findings of this initial assessment was held on June 1, 2007.

4.2.5.5 Key Issues/Constraints in Pharmacy Services

ZPCT is committed to working with partners in the provinces, districts, and facilities to ensure an adequate supply of HIV-related commodities for provision of services. There are many challenges in meeting this goal.

- Medical Stores Limited logistics constraints: Occasional lapses in the transport system at MSL have led to requests to ZPCT to assist in transporting critical supplies to support sites. However, this is only possible when there is pre-arranged travel to these destination sites.

ZPCT is constantly working with facility staff to ensure that orders are submitted according to the delivery schedule requirements that MSL has issued.

- Lack of qualified staff in the facilities: Shortages of trained staff greatly compromise the quality of service delivery in the facilities. ZPCT is working with DHMTs and facilities to improve this situation through implementation of the transport reimbursement system for staff working extra shifts.
- Inadequate supply of commodities: The erratic supply of commodities affects service delivery across all elements of care. While there has been an improvement in the national level supply chain for ARVs and selected OI drugs, ZPCT continues to employ multiple strategies, including training and technical assistance, to ensure an uninterrupted supply of essential commodities. Also, by actively participating in national level forecasting and quantification activities, ZPCT ensures that the facilities' needs are taken into account.
- Storage space: As ART services expand, there is an increased need for space in pharmacies to store ARVs and other commodities under proper storage conditions. ZPCT continues to assist through the provision of minor refurbishments to facilities, such as adding shelves and air conditioners.
- Equipment Maintenance: The availability of fully functional equipment, such as computers and air conditioners, is an important aspect to achieving our objectives. Breakdown of this critical equipment often leads to a disruption of service and affects the quality of service delivery. ZPCT either repairs or replaces this equipment and is working on instituting equipment maintenance contracts with the vendors of this equipment.

4.2.6 Laboratory Services

ZPCT is strengthening laboratory services at 68 facilities by providing technical assistance, supporting renovations and procurement of equipment. ZPCT is also implementing PCR testing activities to increase early infant diagnosis of HIV. ZPCT is recruiting two biomedical scientists to be based at the PCR laboratory at Arthur Davison Children's Hospital. The laboratory will be operational next quarter.

Technical assistance is routinely provided to support laboratory needs at additional ART sites (both static and outreach) added with ART Plus-Up funds.

4.2.6.1 Laboratory Services Training

ZPCT conducted a training in pharmacy and laboratory commodity management for 13 health facility staff from five districts in North Western and Copperbelt provinces.

In addition, as reported in the PMTCT section, ten ZPCT technical officers were trained as trainers in dry blood spot collection (DBS) used in PCR examination. ZPCT staff will then train HCWs in the collection, preparation, transportation and referral of the DBS samples.

Three laboratory technologists from Arthur Davison Children's Hospital, Ndola Central Hospital and the Biomedical Science College in Ndola were trained in PCR laboratory techniques at the University Teaching Hospital. These staff will support the ADCH PCR laboratory once operational.

4.2.6.2 Technical Assistance in Laboratory Services

ZPCT staff provided technical assistance in laboratory services to 46 health facilities in 24 districts throughout the five target provinces. The specimen referral is operating well in all sites for both CT and PMTCT resulting in an increase in the number of ART clients. The use of equipment has greatly improved in all facilities with few centers experiencing breakdowns. These breakdowns were serviced by the equipment vendors. Special attention is being paid to performing internal quality control when the materials are available. Often time facilities prepare in-house QC materials in the absence of commercial materials.

In the last quarter, health facilities throughout the country received laboratory equipments from ZANARA/MOH. ZPCT will review the equipment that is distributed and may reallocate equipment across health facilities to avoid duplication.

ZPCT continues to provide technical support to improve commodity management systems for laboratory services at all ZPCT-supported health facilities providing ART services. Technical assistance in this area focused on storage, stock status and consumption of commodities.

ZPCT continued to provide technical support on the use of the recently developed Laboratory Management Information Systems (LMIS), a tool used to record data on clients on ART and adopted by the MOH, at seven health facilities. The LMIS will be installed at two additional ART sites next quarter. The tool is working well and is being regularly modified with feedback from users. Shortage of laboratory staff poses a challenge in the use of this tool – data is not entered and updated as required.

The QA/QI tool for laboratory continues to be implemented at all ZPCT-supported hospital sites. A recurrent issue confirmed by the QA/QI tool is the critical shortage of trained laboratory technologists in nearly all health facility laboratories. These results were shared with the DHMTs and hospital management. ZPCT will continue to provide transport reimbursements to partially alleviate this problem.

4.2.6.3 Guidelines/SOPs

ZPCT continues to promote and monitor the use of the Zambia ART Laboratory SOPs to facilities with laboratories, providing CT, PMTCT and/or ART services.

The revised Internal Quality Control (IQC) guidelines will be implemented in Ndola District health facilities next quarter. Following the pilot, the recommendations will be shared with the MOH for adoption and roll out.

4.2.6.4 Specimen Referral System

ZPCT has developed and implemented a specimen referral system to provide off-site support to facilities with limited or no laboratory capacity. The specimen referral system, with an initial focus on CD4 count testing for PMTCT and ART outreach clients, is functional at 53 health facilities. ZPCT staff continue to monitor and strengthen the specimen referral systems. ART sites without CD4 equipment, primarily the outreach sites, also refer specimens to the nearest facility with FACSCount equipment.

The specimen referral system will be expanded to transport dry blood spot samples from health facilities offering MCH services in the five target provinces to Arthur Davison Children's Hospital for HIV diagnosis for children less than 18 months. Samples will be batched at the district level and transported by Express Mail Service (EMS) operated by the Zambia Postal Service.

This quarter, there was a national shortage of CD4 reagents due to a stock-out at MSL. For ZPCT-supported facilities that were affected, ZPCT reallocated CD4 reagents within health facilities to minimize interruption of services. ZPCT is working to ensure additional CD4 reagents are brought into the country to normalize the situation.

4.2.6.5 Procurement, Installation and Maintenance

Equipment

During the quarter under review, the following is the status of laboratory equipment:

- CD4 Count Equipment (FACSCount): FACSCount equipment is functional in all facilities.
- Hematocrit Centrifuge: The readers and heparinized tubes for the seven Jouan A13 Hematocrit centrifuges were received from the vendor and taken to the facilities for installation and training.
- Chemistry Analyzer: Three Humalyzer 2000 for Central Province are awaiting installation once laboratory renovations are complete. Two Humalyzer 2000 machines in Copperbelt Province experienced functional problems and will be serviced next quarter.

ZANARA and the MOH are distributing the Cobas Integra, a high-volume chemistry analyzer, to the following ZPCT-supported facilities: Nchanga North General Hospital, Ronald Ross Hospital, Thomson District Hospital, Solwezi General Hospital, Kabompo District Hospital, Kabwe General Hospital, Mansa General Hospital, Kasama General Hospital, Mbala General Hospital and St. Paul's Mission Hospital). ZPCT will provide a laboratory benchtop to these facilities in preparation for this equipment, as requested by the MOH.

- Hematology Analyzer: All Sysmex pocH-100i and the ABX Micros are working well.

- Autoclaves: Five autoclaves, received last quarter, were installed at ZPCT-supported health facilities.
- PCR Equipment: The bulk of the equipment for the PCR laboratory at Arthur Davison Children's Hospital has arrived and has been installed. ZPCT is following-up on the final pieces of equipment that have been procured and are in transit.

Reagents and Consumables

ZPCT-supported sites access reagents procured by GRZ and stored at MSL. Most reagents are available in sufficient quantities. There was a complete stock out of CD4 reagents at MSL but the MOH/SCMS/JSI quickly mobilized resources for an emergency procurement. This resulted in our stop-gap procurement from Becton Dickinson to be scheduled earlier, in the next quarter, to cater for national needs.

ZPCT continues to receive reagents for the Sysmex Pochi from CDC through the vendor, Biogroup, for distribution to ZPCT sites. In addition, CDC provides controls for the Sysmex, ABX Micros 60 and Pentra 60 for selected facilities. Quality control materials need to be quantified and plans put in place to order and deliver to sites, taking into account short expiration dates. ZPCT will work with the MOH and CDC to address this issue.

This quarter, ZPCT procured specimen containers (EDTA bottles) as a stop-gap measure and distributed to all ART site for specimen referral.

4.2.6.6 National Level Activities in Laboratory Services

ZPCT staff continues to be actively engaged in a range of issues and discussions at the national level, including collaboration with the MOH and CDC on harmonization of training plans for laboratory services. Issues of quality assurance and quality improvement are also being dealt with continuously. Meetings are ongoing with representatives from ZPCT, MOH, and CDC on these issues.

In addition, ZPCT staff continue to collaborate with Clinton Foundation representatives in planning assistance to the MOH. Information is provided to ensure that ZPCT support to GRZ sites is noted and considered in planning.

Participation in national meetings and workshops ensures ZPCT input into national activities and continued collaboration with the MOH and other partners. ZPCT participated in various meetings of the Strengthening Laboratory Services National Technical Working Group.

One of the major activities during this quarter has been ZPCT's participation in the DNA PCR stakeholders meetings. The purpose of these meetings is to coordinate national scale-up efforts for DNA PCR – and in particular to discuss timelines, review potential training materials, and identify strategies for dry blood spot sample transport networks. Several meetings and consultations have been held during the quarter.

4.2.6.7 Key Issues/Constraints in Laboratory Services

ZPCT is committed to working with our partners in the provinces, districts, and facilities to ensure an adequate supply of HIV and ART-related commodities for provision of services. There are many challenges in meeting this goal.

- Late submission of aggregated data: Submission of aggregated data on HIV-related commodities (e.g. HIV rapid test kits) from DHMTs to central level continues to be a challenge due to non-submission of data from sites that ZPCT does not support. This delays the re-supply of these commodities to the sites since this is linked to district-level data submission. Stock outs have reduced but are still experienced at some facilities, hindering service provision. ZPCT is working with DHMTs to build capacity at the district level to reduce the delays.
- Lack of qualified staff in the facilities: Shortages of trained staff have compromised the quality of service delivery in the facilities. ZPCT is working with DHMTs and facilities to improve this situation by providing transport reimbursements to staff who work extra shifts.
- Inadequate supply of commodities: There has been a great improvement in the availability of reagents and most facilities are accessing supplies. However, the lack of laboratory consumables, specifically specimen containers, continues to challenge service delivery across

all elements of care. ZPCT is procuring some consumables to fill the gaps created by these shortages for our sites.

- **Maintenance of diagnostic equipment:** Routine preventive maintenance of diagnostic equipment is an issue in assuring uninterrupted laboratory testing in the facilities. ZPCT is collaborating with the MOH and CDC to address this problem. Vendors such as Scientific Group and Becton Dickinson continue to service the equipments and retrain the users.
- **Specimen referral systems:** Challenges continue to interrupt the smooth implementation of the specimen referral system set up by ZPCT. Overall, the specimen referral is working well, but has occasionally been affected by breakdown of motorbikes, CD4 reagent stock-outs, and lack of specimen containers. ZPCT continues to find innovative ways of addressing these gaps, including using DHMT vehicles to transport specimens and refer samples to where CD4 reagents are available.

4.2.7 Monitoring and Evaluation (M&E)

4.2.7.1 M&E Training

As part of the roll-out strategy of the SmartCare Patient Tracking System, 12 ZPCT staff underwent training as trainers for the system in Lusaka. The staff were also trained in the new GRZ CT/PMTCT data collection tools. Two ZPCT staff participated in the National Training of Trainers (ToT) for District Health Information Officers and Maternal and Child Health Coordinators, conducted in Kabwe with support from MOH, WHO, HSSP and CDC.

4.2.7.2 Technical Assistance in M&E

ZPCT staff continued to provide technical assistance to DHMTs and health facilities in the area of data management through mentorship, in collaboration with the respective PHO/DHMT staff. The focus of the site visits included working with the PHO and DHMTs to strengthen data collection on the TB linkage to CT in all ZPCT-supported facilities.

A data audit was carried out in May 2007, with a sample of health facilities audit. The audit report was completed in June 2007. Data for the October 2006 to March 2007 period was submitted to USAID for the semi-annual report.

The piloted SmartCare software at Kabwe Mine Hospital was updated, with correction of bugs in the software developed by CDC. ZPCT has added a reporting module to SmartCare, which is currently being tested using Kabwe Mine Hospital data. Preparations for the SmartCare roll-out in all provinces are underway.

4.2.7.3 National Level Activities in M&E

During this quarter, SmartCare became ready for implementation at national level. ZPCT will target five districts for implementation and then expand in the next quarter. ZPCT continued to participate in the MOH and NAC M&E sub-committees.

4.2.7.4 Key Issues/Constraints in M&E

The pending piloting of the revised HMIS by the MOH poses planning challenges for ZPCT, as the same MOH staff at both provincial and district levels will be required for the SmartCare roll-out.

4.2.7.5 ZPCT Indicators/Results

The following table shows service statistics and related data for the period May 1, 2005 to June 30, 2007 from ZPCT-supported sites. It is a summary of key indicators for all ZPCT activities from all facilities. The training statistics for health care workers and lay counselors who directly provide services in all the program areas are also presented.

Services in 87 Facilities Receiving ZPCT Support							
Indicator	Achievements (May 1, 2005 to June 30, 2007)						
	Workplan (1 Apr 06 to 30 Sep 07)	Quarterly Achievements (1 Apr 07 to 30 Jun 07)			Achievements (1 Apr 06 to 30 Jun 07)	Percent Achievement	Cumulative LOP Achievements (1 May 05 to 30 Jun 07)
	TARGET	FEMALE	MALE	TOTAL			
CT							
Service outlets providing CT							87
Persons trained in CT	402			70	469	117%	849
Persons receive CT services	52,512	15,657	13,771	29,428	101,804	194%	135,187
PMTCT							
Service outlets providing PMTCT							86
Persons trained in PMTCT	200			50	191	96%	439
Pregnant women provided with PMTCT services, including CT	35,851	16,050		16,050	73,959	206%	100,763
Pregnant women provided with a complete course of ART prophylaxis	8,963	1,920		1,920	6,802	76%	8,665
Basic Health Care and Support							
Service outlets providing clinical palliative care services							87
Service outlets providing general HIV-related palliative care							87
Persons provided with OI management and/or prophylaxis		28,836	19,215	48,051			51,494
Persons provided with general HIV-related palliative care		28,836	19,215	48,051			51,494
Persons trained to provide general HIV-related care	100			21	248	248%	631
Treatment							
Service outlets providing ART services							50
Health workers trained in ART	100			21	248	248%	631
New clients receiving ART	16,300	3,002	2,066	5,068	24,018	147%	34,833
Total clients receiving ART	28,410	21,668	14,796	36,464	36,464	128%	36,464
Pediatric Treatment							
Health workers trained in pediatric care	150			78	347	231%	347
New pediatric clients receiving ART	660	202	201	403	1,696	257%	2,420
Total pediatric clients receiving ART	1,151	1,249	1,235	2,484	2,484	216%	2,484
TB and Care							
TB infected clients receiving CT services	5,000	566	584	1,150	5,271	105%	5,271
HIV-infected clients attending HIV care/treatment services that are receiving treatment for TB disease (new cases)	2,188	414	432	846	2,409	110%	2,409

4.3. Community Mobilization and Developing Referral Networks

During the reporting period, ZPCT participated in district-wide meetings held in Kabwe, Kasama, Ndola, Mansa and Solwezi in preparation for the National CT Day. The National CT Day is commemorated on June 30 every year as part of Zambia's strategy to increase the number of people who know their HIV status.

The Kabwe DHMT applied to the World Food Program for nutritional support for clients on ART. As a key partner of Kabwe DHMT, ZPCT staff attended a meeting held at WFP on June 28, 2007 to develop eligibility criteria for patients on ART to receive food supplements within the clinic setting. The meeting was attended by staff from Centre for Infectious Disease Research in Zambia (CIDRZ), Project Concern International and Community Home Based Care (Archdiocese of Lusaka).

ZPCT staff attended the dissemination of the national home based care standards, developed by Care International, on June 24 and 25, 2007. The purpose of the minimum standards for home and community-based care is to provide bench marks for the care and support of people living with HIV in the home and the community.

ZPCT began planning for the Stigma Trainer-of-Trainers (TOT) workshop, to be held in July 2007. A national trainer was recruited by ZPCT to develop a compressed TOT workshop that will include the development of activities to address stigma among health care workers in ZPCT-supported facilities. Seven ZPCT staff will be trained in this workshop.

4.3.1 Community Mobilization Program

During the reporting period, ZPCT staff met to review service statistics from ZPCT-supported health facilities and identify technical areas that require more targeted community mobilization. Data indicated that the uptake of nevirapine by pregnant women receiving PMTCT services is low. Strategies explored to address this issue included working with traditional birth attendants, community leaders and church groups. The team also discussed strategies to increase male involvement within PMTCT, including the roll-out of an approach used in Mansa District, Luapula Province. In Mansa, the Chembe Neighborhood Health Committee, after being trained in community mobilization by the Health Communication Partnership (HCP), educated traditional leaders to mobilize their male subjects to accompany their spouse to ANC services. These new strategies will be integrated into the program in the next year.

In Mansa, ZPCT will begin to disseminate messages around the benefits of CT and PMTCT in partnership with HCP. HCP will provide airtime during the radio program 'Living and Loving' for these messages, including information on where and when to access the HIV/AIDS services in the district.

In Northern Province, it became imperative to further engage traditional leadership in the community mobilization efforts. Women who were seen accessing services during mobile CT events in Nakonde district were asked to leave the marital home because local customs do not allow women to make such decisions without the husband's consent. ZPCT staff met with village headmen to explain the benefits of CT, particularly for couples, and followed up by supporting village meetings to address these issues.

4.3.1.1 Associate Partners - Community Mobilization

Churches Health Association of Zambia (CHAZ)

The staff and communities around St Kalemba, Chilubula and Lubwe Mission Hospitals have actively participated in their respective district referral networks. The Samfya District referral network was established during the reporting period. Lubwe Mission hospital offered to host the next quarter's referral network meeting for Samfya district. The Community Mobilization and Referral Officers in Northern and North Western province have provided technical support to the health care workers at St Kalemba and Chilubula Mission hospitals to strengthen referrals from the communities in the catchment areas of the two health facilities.

Expanded Church Response (ECR)

A mass mobilization event was facilitated by ECR with the churches in Kabwe district. Church leaders were oriented in their role as spiritual leaders. Orientation to the community job aid and the use of referral network tools was also provided. During the National CT week, ECR supported CT activities held in churches in Kabwe. 330 people accessed CT services having been mobilized through church meetings.

4.3.1.2 Working with Local Community Groups

During the reporting period, 27 Community Purchase Orders (CPOs) were developed and executed, including with new community level partners. ZPCT staff involved facility staff in the development and monitoring of CPOs. The following table provides a list of the CPOs implemented during the reporting period:

Province	District	Facility	Group
Copperbelt	Chingola	Kabundi Clinic	Kabundi NHC
	Chingola	Chawama Clinic	Chawama NHC
	Chingola	Chiwempala Clinic	Chiwempala NHC
	Ndola	Chipulukusu Clinic	Chipulukusu NHC
	Ndola	Ndeke Clinic	Ndeke NHC
	Ndola	Ndeke Clinic	Ndeke Youth
	Ndola	Mushili Clinic	Mushili NHC
	Ndola	Kawama Clinic	Kawama NHC
Central	Mkushi	Mkushi District Hospital	ZANAEED
	Mkushi	Mkushi District Hospital	Bonanza Katulya Toonse Theatre Group
	Mkushi	Chibefwe Clinic	Bazibe Kansama Drama Group
	Serenje	Mpelembe Clinic	Mpelembe NHC
	Kabwe	Makululu Health Centre	Lilyvale NHC
	Kabwe	Bwacha Clinic	Bwacha NHC
	Kabwe	Mahatma Gandhi	Le Plato Theatre Group
	Kabwe	Mahatma Gandhi	Mahatma Gandhi NHC
Luapula	Kabwe	Kasanda Health Centre	Kasanda Support Group
	Mansa	Chembe Clinic	Chembe NHC
	Mansa	Senama Clinic	Senama NHC
	Mwense	Mwense Stage II	Mwense HBC
	Mwense	Mwense Stage II	Lukwesa CBO
Northern	Mwense	Mambilima Mission Hospital	Mambilima Drama Group
	Kasama	Lukupa Rural Health Centre	Lukupa Mobilization Group
	Nakonde	Nakonde District Hospital	Nakonde Mobilization Group
North Western	Nakonde	Mwenzon RHC	Mwenzon Mobilization Group
	Solwezi	Mapunga RHC	Mapunga NHC
	Mwinilunga	Mwinilunga District Hospital	Mwinilunga NZP+

In Copperbelt Province, a community purchase order was developed with the Zambia Association for the Education and Employment of the Disabled (ZANAEED) to mobilize people who are disabled to access CT services.

ZPCT has found that orientation of community groups who do not work closely with the health facility is labor intensive. One approach that the Kabwe team is trying is to pair new groups with groups already implementing CPOs.

During the reporting period the ZPCT Copperbelt Office was decentralized on community purchase orders following the successful development and implementation of eight CPOs. Decentralization on the CPOs means that CPOs under K3,000,000 will be generated and approved by the provincial requiring review and approval from the Lusaka office.

4.3.2 Lay Counselors

ZPCT continued providing support to lay counselors who support HIV CT services at health facilities. This quarter, 57 lay counselors were placed in the health facilities by respective DHMTs across the five provinces, bringing the total placed to date to 140. The remaining lay counselors will be placed at health facilities next quarter. As part of their ongoing professional development, lay counselors have continued to attend counseling supervision meetings organized by health facility staff in ZPCT-supported sites.

During this reporting period, 64 lay counselors have been trained in HIV testing using rapid tests.

This quarter, ZPCT began to support a study on the contribution of lay counselors to HIV counseling and testing services at ZPCT-supported sites. The research is being conducted by a graduate intern from the Mailman School of Public Health at Columbia University in New York City. During this reporting

period, the study tools were finalized and ethical approval obtained from the Research Ethics Committee of the University of Zambia.

The intern implemented the data review and client exit interview component of the study in Mansa District, Luapula Province and Ndola District, Copperbelt Province. Once the study protocol is approved by the Protection of Human Subjects Committee at FHI, the intern will complete the final component of the study next quarter, interviewing health care workers, lay counselors and PLHA.

4.3.3 Mobile Counseling and Testing

During the reporting period, ZPCT conducted 17 mobile CT events across the five provinces. In order to create demand for the mobile CT activities, ZPCT developed CPOs with theater groups. This included activities in support of National CT Day in Kabwe, Mpulungu, Ndola, Mwense and Mwinilunga districts.

Tents and folding tables were procured and distributed to Central, Northern and North Western provinces in support of the mobile CT activities. Tents and tables for Copperbelt and Luapula provinces will be procured in the next quarter.

The table below indicates the number of people provided with CT services through mobile activities this quarter, including the activities conducted by ECR:

District	Males Counseled and Tested			Females Counseled and Tested		
	Total	Positive	% positive	Total	Positive	% positive
Chingola	132	12	9%	41	9	22%
Mwinilunga	182	8	4%	93	6	6%
Kasama*	927	N/A	N/A	920	N/A	N/A
Kabwe	1051	148	14%	526	116	22%
Mpulungu	22	2	9%	16	3	19%
Ndola	107	12	11%	100	20	20%
Samfya	162	13	8%	204	15	7%
Total	2583			1900		

* Data on test results for Kasama District are not available yet.

4.3.4 Referral Network Development

Referral network activities were initiated in Samfya, Mwense, Kitwe, Mwinilunga, Mpulungu and Zambezi districts during this reporting period. ZPCT conducted institutional mapping exercises to identify HIV/AIDS service providers working within these districts. Meetings were held with the respective DHMTs to obtain buy-in for the development of the district referral network. Initial stakeholders meetings were held in these districts, facilitated by members of the DHMT and other partners.

The initiation of referral networks in the Phase 2 districts has progressed well as most district stakeholders have adopted the tools being used in ZPCT-supported districts that already have functional networks. ZPCT provincial staff are providing technical support to other provincial offices to support the initiation of referral networks.

In addition, ZPCT continued to strengthen already existing referral networks. ZPCT will provide more hands-on technical assistance to community volunteers in the use of the referral tools, a need identified this quarter.

The Kabwe DHMT conducted a client satisfaction survey for the referral network at Mahatma Gandhi Health Center. Clients who had been referred to the facility were interviewed to determine the benefits of the referral system. The report for this client satisfaction survey will be completed next quarter.

4.3.5 Key Issues/Constraints for Community Mobilization and Referral Networks

- **Mobile CT:** The demand for mobile CT services has increased, including requests for such services from communities that have limited access to health facilities. This has led to challenges in referring clients to follow-up treatment and care. In districts like Kabwe, referral network members are supporting transport costs for clients who are in need of facility based treatment and care services.

- **Forecasting and Quantification for Mobile CT events:** Due to the high numbers of people accessing CT services during mobile CT, it is challenging for the respective DHMTs to plan for HIV test kits to ensure adequate supply for both the mobile and static sites. ZPCT staff are assisting the DHMTs in planning for mobile CT events, to assist with quantification and ordering of adequate stocks of HIV test kits based on previous consumption data.
- **Referral Networks Coordinating Units:** In some districts, the referral network coordinating units have not engaged in their leadership role of the district wide referral networks. This has led to delays in the development of referral tools, particularly the operations manual.

4.4. Quality Assurance and Quality Improvement (QA/QI)

4.4.1 Administration of QA/QI Tools

In an ongoing effort to develop a more systematic approach to ensuring quality, ZPCT has adapted a set of QA/QI tools for each technical area. The QA/QI tools have been adapted for use at ZPCT-supported sites and are administered on a quarterly basis to assess, monitor and improve the quality of HIV services.

- **CT/PMTCT Tools:** During this quarter, the CT/PMTCT facility checklist, CT provider, PMTCT provider and counselor reflection QA/QI tools were administered in all 87 health facilities. The CT/PMTCT facility tool was used to assess general aspects of site operations, staffing levels, adherence to standards in both CT and PMTCT, and availability of registers and test kits. The CT and PMTCT provider tools were used by supervisors to assess the quality of the provider-client interaction as clients actually receive services, while the counselor reflection tool was administered as a self reflection tool to identify areas of weakness. The tools were found to be useful in setting the agenda for technical assistance visits, CT/PMTCT supervision and counselor support meetings where experiences and other best practices are shared.
- **Antiretroviral Treatment (ART)/Clinical Care (CC) Tools:** During this quarter, the ART/CC tools comprising of the ART/CC essential elements checklist, ART facility checklist and ART provider questionnaire was administered in 43 of the 52 ZPCT-supported ART sites. The tools have been instrumental in identifying gaps in initiating and prescribing ART, monitoring clients and referral practices. Immediate feedback was provided to health facility staff on any critical deficiencies identified. Technical assistance and mentoring was tailored to address key issues identified during the administration of the QA/QI tools.
- **Pharmacy Tools:** In this quarter, the pharmacy ARV bulk store tool, dispensing and medication counseling process tool and ART pharmacy records tool were administered in 50 of the 52 ZPCT-supported ART pharmacies. This set of tools form a cardinal component of assessing and monitoring the quality of ART commodity management. More specifically, the tools were used to assess the general appearance and organization of the ARV bulk store and dispensing areas. In addition, the tools assess the adherence to the national standard operating procedures for pharmacy.
- **Laboratory Tool:** The health center and hospital laboratories QA/QI tools were administered in 52 of the 63 ZPCT-supported laboratories during this quarter. Some of the key areas assessed were health and safety, equipment and reagents management and use of internal and external quality assurance procedures.
- **M&E Tool:** The M&E facility checklist was administered in 75 ZPCT-supported sites during this quarter. The tool was used to check for the availability of ART/CC, CT and PMTCT registers and the consistency of data collected. The issue of late updates of registers continues to be a major weakness affecting the consistency of results and has become an area of emphasis during supportive visits and staff mentoring sessions.

4.4.2 Orientation of Staff to CSPro Software

ZPCT staff in collaboration with the Central Statistics Office (CSO) adapted the CSPro software package for use in quantitatively analyzing data collected using the QA/QI tools. ZPCT M&E staff continue to orient and support other technical staff on using the software for data entry. Once the data is entered, M&E staff will be able to analyze the data collected during the administration of the QA/QI tools on a quarterly basis.

4.4.3 Facility Graduation Sustainability Plan

Each of the five provincial offices identified ZPCT-supported sites that would be potential candidates for graduation. In an ongoing process, specific QA/QI tools continue to be administered in identified sites to ascertain the attainment of a high level of technical quality in the provision of HIV services. Graduated sites will receive monitoring and supervision from PHO and DHMT while ZPCT will offer minimal support. This is part of the ZPCT strategy to ensure lasting impact and sustainability of activities beyond the ZPCT program.

4.4.4 National Level Activities

A finalized draft of the national quality assurance strategy for CT services was developed by MOH, NAC, ZPCT, JICA and other partners, based primarily on the ZPCT CT QA/QI tools. This draft will be sent to the Permanent Secretary at the MOH for review.

4.4.5 Key Issues/ Constraints in QA/QI

- Human resource crisis: Zambia faces a serious crisis in human resources for health as a result of various factors, including high attrition rates, low morale in the health workforce, low productivity and the impact of HIV/AIDS on the workforce. This crisis has resulted in severe imbalances in terms of the number of staff, skill-mixes and the geographical distribution of the workforce, causing significant disparities in population-to-staff and urban-to-rural ratios. This has resulted in an overstretched workforce who at times do not avail themselves for the administration of the QA/QI tools. A lack of sufficient CT and PMTCT counselor supervisors in some sites has compromised the consistent administration of the CT and PMTCT provider QA/QI tool. However, ZPCT continues to support DHMTs and PHO by training lay counselors to supplement HCW and CT/PMTCT supervisors. In addition, refresher trainings are conducted as a way to motivate, avoid stress and burn out among HCWs in ZPCT-supported sites.
- Unclear Roles and Responsibilities: The current roles and responsibilities of MOH, provinces, DHMTs and facilities in QA/QI are currently not well defined. This has been a source of resistance and challenge to addressing key QA gaps identified by ZPCT staff. ZPCT will continue to sensitize and engage DHMT and PHOs on the benefits of QA/QI and will strive to communicate this during all Quarterly review meetings. In addition, ZPCT will continue to promote the QA/QI process by being active partners who lead by example. Furthermore, ZPCT will continue to work with MOH and other partners to streamline QA/QI efforts to develop national policy documents and activities.
- Lack of experience in QA/QI: Current efforts to develop a systematic and consistent national QA/QI system for HIV services are at nascent stage. Therefore there is generally a lack of experience in QA/QI which poses a challenge in prioritizing and securing the required commitment for the QA/QI process. ZPCT staff will continue to provide technical assistance, capacity building, orientation and mentorship in QA/QI.
- Lack of national QA/QI indicators: The lack of a national set of QA/QI indicators for HIV services makes it difficult to benchmark and compare performances across various facilities. ZPCT will endeavor to engage MOH and partners to develop a set of QA/QI indicators to be used to monitor quality of HIV services.

5. CHALLENGES

The ZPCT Partnership has a great opportunity to work with the GRZ and make a positive contribution to the scale up of HIV/AIDS services in Zambia, but there are still some challenges. These challenges will only be met through close collaboration with the MOH, USAID, other donor agencies, and partner organizations.

Notable challenges exist in the following areas:

- **Human Resources**
Staff capacity and availability at all levels within the provinces are below what is required, especially at the health center level. The addition or expansion of HIV-related services further strains the situation. In response, ZPCT has developed and implemented a transport reimbursement schedule to support HCWs who work extra shifts, as well as training and placing lay counselors and adherence support workers to relieve HCWs counseling duties.
- **Training and support for HCWs**
Several challenges are inherent in training in Zambia. Training for PMTCT and ART/OIs must follow the Zambia national training curricula. These are both two-week courses which take staff from already short-staffed facilities for a long period. In addition to the service-related issues, this is also a considerable burden on the ZPCT budget. ZPCT has conducted in-house training courses and continues to work with MOH and other partners on alternative strategies and models for training, as well as cost-savings for current trainings.
- **Inconsistent supplies of HIV commodities and drugs**
Although there have been improvements in supplies of HIV test kits, reagents, ARVs and other commodities, there are occasional interruptions to service provision due to erratic supplies. This situation is particularly challenging because there are so many points in the supply chain where a breakdown can occur. ZPCT works with staff in the facilities, and with the MOH, USAID/DELIVER and Supply Chain Management System (SCMS) at a national level, on quantification, record keeping, ordering, and commodity management. ZPCT continues to procure a stop-gap interim supply of reagents until the systems are fully stocked. ZPCT has included reagents in the next annual budget.
- **National Guidelines, Protocols, and SOPs**
ZPCT is disseminating key CT and PMTCT guidelines to facilities. Technical staff are working with the MOH and other partners on development of national SOPs for key procedures and has provided MOH approved job aids in CT, PMTCT, and ART/OI to ZPCT-supported facilities to enhance quality assurance and improvement.
- **Implementing M&E Systems in Government Facilities**
The MOH, both at the national and provincial level, is unwilling for projects to introduce additional reporting requirements in government health facilities. Most indicators required for ZPCT reports under PEPFAR are collected through the existing HMIS but the few missing indicators and need for more regular reports (monthly vs. quarterly) continue to require additional efforts. Data entry clerks were hired, oriented, and placed in ZPCT-supported ART centers. This has improved the quality of data and increased the sustainability of improved data collection methods being introduced. Additional data entry clerks are being recruited to provide support to the new ART sites. In the next quarter, data entry clerks will be hired through the recipient agreements under one-year contracts based on MOH salaries and benefits. The long term status of the data entry clerk positions is being discussed with the MOH.
- **Sustainability and Quality of Services**
As ZPCT expands into more districts and facilities quality assurance and sustainability become increasingly important and more challenging. ZPCT staff will continue to provide technical assistance and mentor staff to ensure quality. ZPCT piloted QA/QI tools for all technical areas in each of the provinces and are working with facility staff and the DHMTs to establish routine QA/QI.

Strategies to respond to these challenges have been incorporated into the ZPCT work plan and are being addressed as implementation progresses.

6. PLANS FOR THE NEXT QUARTER

Highlights from the plans for the next quarter are described below. In addition to the specific activities listed, ZPCT will continue to build a strong partnership with the MOH and other partner organizations at the provincial and district levels and with staff and management in facilities.

- Complete the site assessments of additional health facilities in the five provinces, including development of implementation plans and execution of recipient agreements and amendments outlining support to be provided by ZPCT.
- Amend all existing recipient agreements, identifying additional needs to strengthen HIV/AIDS services, and extend the period of performance through September 30, 2008.
- Initiate the procurement and renovation process for the additional health facilities to be supported by ZPCT in the next period.
- Identify staffing needs to support the program expansion activities and initiate recruitment process.
- Complete process to transition all existing data entry positions hired by ZPCT from consultancy agreements to employment contracts under the recipient agreements.
- Officially open the PCR laboratory and HIV/AIDS family care center at Arthur Davison Children's Hospital, and begin operations of both centers.
- Initiate training of HCWs in dry blood spot collection and operationalize implementation of early infant diagnosis using PCR technology at pilot facilities.
- Continue strengthening mother-baby follow-ups in ZPCT-supported PMTCT sites and link to HIV testing through PCR at six weeks.
- Monitor implementation of routine testing of children admitted in care and in the under-five clinics.
- Conduct three child counseling courses to facilitate CT services for children.
- Strengthen and integrate family planning services within all HIV services.
- Strengthen provision of more efficacious ARVs for PMTCT, including full ART for women who are eligible and dual therapy for those receiving prophylaxis only.
- Complete training of all lay counselors in HIV testing and complete certification and placement of all lay counselors trained to date.
- Work with MOH and partners to roll out the GRZ-recommended SmartCare Patient Tracking System and finalize related forms and SOPs. Roll-out is expected at selected facilities initially.
- Review and adapt the ART and adherence SOPs, following the finalization of SmartCare and the new national ART protocols by MOH and partners. Orient HCWs on the new protocols.
- Continue to strengthen specimen referral system at health facilities in the five target provinces and initiate system in the additional seven districts identified for ZPCT support.
- Train HCWs and staff in the new National PMTCT Drug Logistics System
- Compile and analyze data from a study conducted to evaluate the effectiveness of lay counselors in providing quality CT services and addressing the human resource issue at health facilities.
- Develop targeted community mobilization activities to strengthen PMTCT services, particularly uptake of nevirapine.
- Develop a referral network success story based on the client satisfaction survey conducted by the Kabwe DHMT at Mahatma Gandhi Health Center.
- Develop a strategy to monitor and assure quality at mobile counseling and testing services.
- Conduct a stigma training-of-trainers workshop for ZPCT staff and develop a plan to roll-out stigma reduction activities, including assessments, at ZPCT-supported health facilities.
- Continue to collaborate with associate partner organizations on management of agreements and implementation and reporting of project activities; provide support and monitoring to assure quality
- Review activity progress under current subagreement with ECR, scheduled to end next quarter, and discuss next steps.
- Conduct financial training for ZPCT sub-recipients and provincial staff.
- Conduct audit of the ZPCT program by external auditors, Ernst and Young.
- Continue to monitor and assist ZPCT provincial offices to be decentralized in selected program, technical and financial areas.
- Strengthen system and procedures for routine QA/QI in all technical areas, including technical assistance to provincial office on data collection and analysis, updating QA/QI tools to reflect changing strategies and standards in HIV care and services, and developing and disseminating guidelines for the administration of client exit interviews.

Attachment A: Status of ZPCT-Supported Services and Facilities

District	Health Facility	ART	PMTCT	CT	CC	Lab	Specimen Referral for CD4
Central Province (16 facilities)							
Kabwe	Kabwe General Hospital	◆	◆	◆	◆	◆ ³	
	Mahatma Gandhi Health Center	◆ ¹	◆	◆	◆	◆ ³	
	Kabwe Mine Hospital	◆	◆	◆	◆	◆	◆
	Bwacha Health Center		◆	◆	◆	◆	◆
	Makululu Health Center	◆ ¹	◆	◆	◆	◆	◆
	Pollen Health Center	◆ ¹	◆	◆	◆		◆
	Kasanda Urban Health Clinic	◆ ¹	◆	◆	◆	◆	◆
Mkushi	Mkushi District Hospital	◆	◆	◆	◆	◆ ³	
	Chibefwe Health Center		◆	◆	◆		◆
	Chalata Health Center		◆	◆	◆		❖
	Masansa Health Center	◆ ¹	◆	◆	◆	❖	◆
Serenje	Serenje District Hospital	◆	◆	◆	◆	◆ ³	
	Chitambo Hospital	◆	◆	◆	◆	◆	❖
Chibombo	Liteta District Hospital	◆	◆	◆	◆	◆	◆
	Chikobo Rural Health Center		◆	◆	◆		◆
	Mwachisompola Health Demonstration Zone		◆	◆	◆	◆	❖
Copperbelt Province (29 facilities)							
Ndola	Ndola Central Hospital	◆	◆	◆	◆	◆ ³	
	Arthur Davison Hospital	◆	◆	◆	◆	◆ ³	
	Lubuto Health Center	◆ ¹	◆	◆	◆	◆	◆
	Chipulukusu Health Center	◆ ¹	◆	◆	◆	◆	◆
	Chipokota Mayamba Health Center	◆ ¹	◆	◆	◆	◆	◆
	Mushili Clinic		◆	◆	◆		◆
	Nkwazi Clinic		◆	◆	◆		◆
	Kawama Health Center		◆	◆	◆	◆	◆
	Ndeke Health Center		◆	◆	◆	◆	◆
Chingola	Nchanga N. General Hospital	◆	◆	◆	◆	◆ ³	
	Chiwempala Health Center	◆ ¹	◆	◆	◆	◆	◆
	Kabundi East Clinic	◆ ¹	◆	◆	◆	◆	◆
	Chawama Health Center		◆	◆	◆	◆	◆
Kitwe	Kitwe Central Hospital	◆	◆	◆	◆	◆ ³	
	Ndeke Health Center	◆ ¹	◆	◆	◆	◆	◆
	Chimwemwe Clinic	◆ ¹	◆	◆	◆	◆	◆
	Buchi Health Center		◆	◆	◆	◆	◆
	Luangwa Health Center	◆ ¹	◆	◆	◆	◆	◆
	Ipusukilo Health Center	◆ ¹	◆	◆	◆	❖	◆
Luanshya	Thompson District Hospital	◆	◆	◆	◆	◆ ³	
	Roan General Hospital	◆	◆	◆	◆	◆	◆

District	Health Facility	ART	PMTCT	CT	CC	Lab	Specimen Referral for CD4
	Mikomfwa Health Center		◆	◆	◆		❖
	Mpatamatu Sec 26 Urban Clinic		◆	◆	◆	◆	❖
<i>Mufulira</i>	Kamuchanga District Hospital	◆	◆	◆	◆	◆	❖
	Ronald Ross General Hospital	◆	◆	◆	◆	◆ ³	
	Clinic 3 Mine Clinic		◆	◆	◆		❖
	Kansunswa Health Center		◆	◆	◆		❖
<i>Kalulushi</i>	Kalulushi Government Clinic	◆	◆	◆	◆	◆	◆
	Chambishi Health Center	◆ ¹	◆	◆	◆	◆	◆
Luapula Province (21 facilities)							
<i>Mansa</i>	Mansa General Hospital	◆	◆	◆	◆	◆ ³	
	Senama Health Center	◆ ¹	◆	◆	◆	◆	◆
	Central Clinic		◆	◆	◆	◆	◆
	Matanda Rural Health Center		◆	◆	◆		❖
	Chembe Rural Health Center		◆	◆	◆	❖ ²	◆
<i>Kawambwa</i>	Kawambwa District Hospital	◆	◆	◆	◆	◆ ³	
	Mbereshi Hospital	◆	◆	◆	◆	◆ ³	
	Kawambwa Health Center		◆	◆	◆		◆
<i>Mwense</i>	Mambilima Health Center (CHAZ)	◆ ¹	◆	◆	◆	◆	◆
	Mwense Health Center		◆	◆	◆	◆	◆
<i>Samfya</i>	Lubwe Mission Hospital (CHAZ)	◆	◆	◆	◆	◆ ³	
	Samfya Health Center	◆ ¹	◆	◆	◆	◆	◆
<i>Nchelenge</i>	Nchelenge Rural Health Center	◆	◆	◆	◆		❖
	Kashikishi Rural Health Center	◆	◆	◆	◆	❖	❖
	Chabilikila Rural Health Center	◆	◆	◆	◆		❖
	Kabuta Rural Health Center	◆	◆	◆	◆	❖	❖
	Kafutuma Rural Health Center	◆	◆	◆	◆		❖
	Kambwali Rural Health Center	◆	◆	◆	◆	❖	❖
	Kanyembo Rural Health Center	◆	◆	◆	◆	❖	❖
	Chisenga Rural Health Center	❖ ¹	◆	◆	◆		❖
	Kilwa Rural Health Center	❖ ¹	◆	◆	◆		❖
Northern Province (17 facilities)							
<i>Kasama</i>	Kasama General Hospital	◆	◆	◆	◆	◆ ³	
	Kasama Urban Health Center		◆	◆	◆	◆	◆
	Location Urban Health Center	◆ ¹	◆	◆	◆	◆	◆
	Chilubula Mission RHC (CHAZ)	◆ ¹	◆	◆	◆	◆	◆
	Lukupa Rural Health Center		◆	◆	◆	◆	◆
<i>Nakonde</i>	Nakonde Rural Health Center	◆	◆	◆	◆	◆ ³	
	Chilolwa Rural Health Center		◆	◆	◆		◆
	Waitwika Rural Health Center		◆	◆	◆		◆
	Mwenzu Rural Health Center		◆	◆	◆	❖ ²	◆
<i>Mpika</i>	Mpika District Hospital	◆	◆	◆	◆	◆ ³	

District	Health Facility	ART	PMTCT	CT	CC	Lab	Specimen Referral for CD4
	Mpika Health Center		◆	◆	◆		◆
Chinsali	Chinsali District Hospital	◆	◆	◆	◆	◆ ³	
	Chinsali Health Center		◆	◆	◆		◆
Mbala	Mbala General Hospital	◆	◆	◆	◆	◆ ³	
	Mbala Urban Health Center		◆	◆	◆		◆
	Tulemane Urban Health Center		◆	◆	◆	◆	◆
Mpulungu	Mpulungu Health Center	◆ ¹	◆	◆	◆	◆	◆
North Western Province (13 facilities)							
Solwezi	Solwezi General Hospital	◆	◆	◆	◆	◆ ³	
	Solwezi Urban Health Center	◆ ¹	◆	◆	◆	◆	◆
	Mapunga Rural Health Center		◆	◆	◆	◆	❖
	St. Dorothy Rural Health Center	◆ ¹	◆	◆	◆	◆	◆
	Mutanda Health Center		◆	◆	◆		❖
Zambezi	Zambezi District Hospital	◆	◆	◆	◆	◆ ³	
	Zambezi Urban Health Center			◆	◆		◆
	Mize Health Center		◆	◆	◆		◆
Kabompo	Kabompo District Hospital	◆	◆	◆	◆	◆ ³	
	St. Kalembe Rural Health Center (CHAZ)		◆	◆	◆	◆	◆
Mwinilunga	Mwinilunga District Hospital	◆	◆	◆	◆	◆ ³	
	Kanyihampa Health Center		◆	◆	◆		◆
Mufumbwe	Mufumbwe District Hospital	◆ ¹	◆	◆	◆	◆	◆

◆ Services have started	1 = Outreach ART Site
❖ Services are planned, but not yet started	2 = Facility has a laboratory but not yet functional
*Phase 1 Facilities are shaded	3 = Referral laboratory for CD4

**Attachment B: ZPCT Training Courses
April 1 to June 30, 2007**

Table 1: Counseling and Testing (CT)

Training Course	Dates	Province/District		Number of Facilities	Number Trained
CT*	23/4/07 to 4/5/07	Copperbelt	Ndola	1	21
CT*	18/5/07 to 30/6/07	Copperbelt	Kitwe Kalulushi	6 2	17 2
			Total	9	40

*The training included one-day on monitoring and evaluation.

Table 2: Basic Child Counseling

Training Course	Dates	Province/District		Number of Facilities	Number Trained
Basic Child Counseling**	7/5/07 to 12/5/07	Central	Kabwe	7	15
Basic Child Counseling**	21/5/07 to 26/5/07	Copperbelt	Mufulira Kitwe Ndola Chingola Luanshya	1 2 2 1 1	2 4 5 2 2
			Total	14	30

**These trainings were supported with funding from the Clinton Foundation HIV/AIDS Initiative.

Table 3: Prevention of Mother-to-Child Transmission (PMTCT)

Training Course	Dates	Province/District		Number of Facilities	Number Trained
PMTCT*	23/4/07 to 4/5/07	Copperbelt	Kitwe Ndola Chingola Luanshya Kalulushi Mufulira	6 1 4 2 2 1	9 3 4 4 2 3
PMTCT*	4/6/07 to 16/6/07	Northern Luapula	Kasama Nakonde Mpika Mbala Chinsali Mansa Kawambwa Samfya Mwense	2 3 1 2 2 3 3 2 2	4 3 1 3 3 3 4 2 2
			Total	36	50

*The training included one-day on monitoring and evaluation.

Table 4: ART/OIs Refresher

Training Course	Dates	Province/District		Number of Facilities	Number Trained
ART/OIs Refresher	16/4/07 to 22/4/07	Luapula	Mansa	2	7
			Kawambwa	2	7
			Samfya	1	2
			Mwense	2	5
			Total	7	21

Table 5: Pediatric ART/OIs

Training Course	Dates	Province/District		Number of Facilities	Number Trained
Pediatric ART /OIs	21/5/07 to 23/5/07	North Western	Solwezi	3	16
			Mufumbwe	1	3
			Mwinilunga	1	2
			Zambezi	1	2
			Kabompo	1	2
Pediatric ART /OIs	21/5/07 to 23/5/07	Northern	Mpulungu	1	2
			Mbala	3	11
Pediatric ART /OIs	24/5/07 to 26/5/07	Northern	Kasama	4	14
Pediatric ART /OIs	29/5/07 to 31/5/07	Northern	Nakonde	3	3
			Mpika	1	4
			Chinsali	2	4
Pediatric ART /OIs	29/5/07 to 31/5/07	Central	Kabwe	5	11
			Serenje	2	2
			Chibombo	1	2
			Total	29	78

Table 6: Adherence Support Workers

Training Course	Dates	Province/District		Number of Facilities	Number Trained
Adherence Support Workers	29/5/07 to 31/5/07	Northern Luapula Central	Kasama	1	4
			Nakonde	1	1
			Chinsali	1	2
			Mpulungu	1	1
			Mansa	2	4
			Mwense	1	2
			Kabwe	2	3
			Serenje	2	2
			Chibombo	1	1
			Mkushi	1	1
			Kawambwa	1	2
Adherence Support Workers	18/6/07 to 30/6/07	Luapula	Nchelenge	9	29
			Total	23	52

Table 7: HIV Testing for Lay Counselors (Community Volunteers)

Training Course	Dates	Province/District		Number of Facilities	Number Trained
HIV Testing	14/5/07 to 16/5/07	Copperbelt	Ndola	9	12
HIV Testing	17/5/07 to 18/5/07	North Western	Kabompo Mufumbwe Zambezi	2 1 2	4 2 4
HIV Testing	30/5/07 to 1/6/07	Northern	Chinsali	2	3
HIV Testing	4/6/07 to 6/6/07	Copperbelt	Kitwe	5	12
HIV Testing	11/6/07 to 13/6/07	Luapula	Mansa	4	7
HIV Testing	12/6/07 to 14/6/07	Central	Mkushi	4	8
HIV Testing	18/6/07 to 20/6/07	Central	Chibombo	2	4
HIV Testing	25/6/07 to 27/6/07	Northern	Kasama Mpulungu Mbala	1 1 3	2 2 4
			Total	36	64

Table 8: Laboratory/Pharmacy

Training Course	Dates	Province/District		Number of Facilities	Number Trained
Commodity Management	29/5/07 to 1/6/07	North Western Copperbelt	Kitwe Ndola Chingola Kalulushi Solwezi	4 3 2 1 1	5 3 3 1 1
			Total	11	13

Table 9: Monitoring & Evaluation

Training Course	Dates	Province/District		Number of Facilities	Number Trained
Monitoring and Evaluation in PMTCT	15/6/07	Northern	Kasama Nakonde Chinsali	3	3
			Total	3	3

*Three data entry clerks joined the PMTCT training (Table 3) for one day to review data collection tools.

**ATTACHMENT C:
ZPCT TECHNICAL STRATEGIES
June 30, 2007**

Counseling and Testing
Prevention of Mother-to-Child Transmission
Clinical Care and Antiretroviral Therapy (ART/OI)
Pharmacy
Laboratory
Training
Community Mobilization
Referral Network
Monitoring and Evaluation

Technical Overview

HIV counseling and testing (CT) is the entry point to comprehensive HIV/AIDS services including treatment, care and support. However, only 11.4% of males and 15.3% of females in Zambia have been tested for HIV (Zambia Sexual Behavior Survey, 2005). In addition, although there are increasing numbers of infected children due to high prevalence among pregnant women and low national prevention of mother-to-child transmission (PMTCT) coverage and uptake, there has been limited focus on children. If Zambia is to achieve the goal of making HIV/AIDS services accessible to all that need them, CT must be made easily accessible and acceptable to communities.

ZPCT will assist the Government of Zambia (GRZ) to expand geographical coverage for CT, increase the number of clients seen in some of the existing underutilized CT services, promote male access and uptake, and broaden the range of services provided at CT sites to include both client-initiated and provider-initiated services and PMTCT, including diagnosis of pediatric HIV.

High standards of CT are critical, and providers are trained to uphold these standards which include the voluntary nature of HIV testing, the need to obtain informed consent, confidentiality of the process, and access to high-quality supportive counseling.

Technical Strategy

The ZPCT Partnership, in collaboration with the GRZ, will facilitate expansion and strengthening of CT in the five northern provinces of Zambia - Central, Copperbelt, Luapula, Northern and North Western. By June 2007, CT services were initiated or strengthened in 87 CT sites in the target provinces. To expand access and coverage as rapidly as possible, ZPCT is working with the District Health Management Teams (DHMTs) and facility staff to identify and broaden entry points to testing. In each of the health facilities, space has been identified and dedicated to CT services.

To facilitate rapid scale up of CT services, including expanding access and coverage as rapidly as possible, ZPCT in collaboration with the Provincial Health Offices (PHOs), DHMTs and facility management has been broadening entry points for testing by:

- Expanding testing to clinical areas such as sexually transmitted infections (STI) and tuberculosis (TB) family planning (FP) clinics, in-patient and general outpatient departments, home care programs, and in post-exposure situations
- Expanding CT to children in by initiating routine counselling and testing for children in selected hospitals and under-five clinics
- Expanding and integrating CT services linked to all antenatal clinic (ANC) services
- Establishing CT rooms within the health facilities for those who just want to know their status
- Use of lay counselors in health facilities and communities
- Innovations such as use of multidisciplinary mobile outreach counseling teams
- Working to ensure same day testing and results; provision of testing corners in CT rooms
- Provision of testing corners to provide same day results in TB and FP clinics where possible
- Developing and adapting quality assurance tools for CT and supporting the systems in the facilities
- Developing and/or adapting job aids for use by health care workers (HCWs)
- Providing on-going mentoring, supervision and monitoring and evaluation of CT services
- Sensitizing trained health care workers to make deliberate efforts to refer clients who are positive to care and treatment

Key Activities

At facility level:

- Infrastructure improvement: Refurbishment of identified CT rooms within facility.
- Human resources: Training of health care workers and community cadres in basic counseling and testing, training qualified counselors in couple counseling, counselor supervision and child counseling skills to support CT services.
- Distribution of national HIV CT guidelines to all facilities and orientation of staff in their use, development of standardized and tailored standard operating procedures for CT for the different levels of facilities and cadres (rural health center, peri-urban health center, and hospital; HCW use vs. lay counselor).
- Test kits and supplies: ZPCT will ensure that facility and DHMT staff is trained in forecasting and procurement of HIV test kits and supplies to ensure an uninterrupted supply.
- Strengthen CT services in clinical areas such as TB, STI and ANC clinics.
- Operationalizing quality assurance systems for CT in all facilities through regular individual and group supervision for counselors.
- Distribution of job aids and information, education and communication materials to all facilities.
- Regular supportive supervisory visits to facilities to ensure quality.

At community level:

- Increase awareness and mobilize the community for increased access to and use of CT services.
- Establish strong, workable referral networks to and from facilities/community with DHMT.
- Implement mobile CT services for hard to reach areas.

At PHO/DHMT level, ZPCT will support their HIV/AIDS activities by:

- Participating in annual planning meetings and ensure integration of ZPCT activities into PHO and DHMT annual plans.
- Participating in the quarterly supportive supervision and assessment visits to all ZPCT sites.
- Providing management and supervisory training as needed for DHMT staff.

List of Indicators and Targets

Indicator	Targets (1 April 2006 to 30 Sept 2007)	Achievements (1 April 2007 to 30 June 2007)	Achieved to Date (1 May 2005 to 30 June 2007)
Health care providers trained in CT (basic & refresher CT, couple counseling, counseling supervision)	290	70 (40 basic CT, 30 child counseling)	663 (356 basic CT, 82 refresher CT, 171 counseling supervision, 24 couple counselors, 30 child counseling)
Lay counselors trained in CT	112	64 trained in HIV testing	186 (89 trained in HIV testing)
Number of service outlets providing CT	N/A	87	87
Number of clients tested and received results	52,512	29,428	135,187

Challenges

- **Human resource constraints:** ZPCT will continue to train lay counselors and place them at facilities to help with the counseling and testing services and also provide on-going supportive counseling.
- **Inadequate counseling space** in some of the facilities.
- **Lack of community awareness** of the availability of comprehensive HIV/AIDS care packages. ZPCT is promoting community mobilization by different community groups such as neighborhood health committees (NHCs), CBOs, NGOs, and faith-based groups to increase awareness and demand.
- **Shortages of test kits and supplies** due to non availability at central level or due to poor forecasting and procurement practices. There is ongoing training of staff in forecasting, procurement to make sure the district procurement needs are correctly identified.

For additional information in this technical area, please contact:
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Technical Overview

According to the Ministry of Health (MOH) in 2005, an estimated 25% of pregnant women were HIV positive and approximately 40% of babies born to HIV-positive mothers were infected with the HIV virus. There are increasing numbers of infected children due to the high prevalence among pregnant women and low national prevention of mother-to-child transmission (PMTCT) coverage and uptake. ZPCT is working with the MOH to integrate PMTCT into existing maternal and child health services at national, provincial and district levels in Central, Copperbelt, Luapula, Northern and North Western Provinces to:

- Prevent HIV infection in women of childbearing age through risk reduction counseling of ANC and Maternal and Child Health (MCH) clients and their partners and promote PMTCT services at the community and facility levels.
- Prevent unintended pregnancies among HIV-infected women through referrals to family planning (FP) services.
- Prevent peri-natal HIV infection through universal counseling and testing, short-course ARV prophylaxis for mothers and infants, good obstetric practices and safe infant feeding counseling and support.
- Ensure follow-up care and support for mother-infant pairs and their families through provision of and referrals to comprehensive HIV/AIDS care, treatment and support services.

ZPCT's Technical Strategy

ZPCT is working closely with the Government of Zambia (GRZ) to scale-up PMTCT activities as part of a comprehensive HIV prevention, care and support program. The PMTCT component is being integrated and closely coordinated with MCH and FP services, and linked to other HIV prevention, care, treatment and support efforts in the facilities and community. The minimum PMTCT package is being offered, strengthened, and monitored at all ZPCT-supported PMTCT sites. ZPCT's technical approach includes:

- Integration of counseling and testing (CT) for women and their partners in ANC settings using the 'opt out' approach which is in the national PMTCT guidelines.
- Facilitate CD4 estimation for all pregnant women who test HIV positive, followed by provision of either full ART or chemoprophylaxis based on CD4 count as per national protocol.
- Strengthening linkages between PMTCT services and FP as part of the continuum of care.
- Providing comprehensive care and support to mothers, children and their families (PMTCT-Plus).
- Strengthening of PMTCT services and follow-up care and support through: post-natal counseling; infant feeding counseling; community follow-up and support; mother-infant tracking through the under-five clinics at MCH to facilitate co-trimoxazole prophylaxis for all HIV-exposed babies from six weeks, infant HIV testing at the appropriate age and linkage to care.
- Implement early infant diagnosis using PCR testing at six weeks of age
- Development of a mobilization and sensitization plan to initiate or strengthen male partner involvement to maximize utilization of all aspects of PMTCT services (from HIV testing, infant feeding choices to pediatric HIV testing, care and treatment). This will be achieved through:
 - Scaling up existing outreach programs to support male involvement in ANC through traditional, church and other opinion leaders in rural areas
 - Promoting couple counseling
 - Piloting model approaches to improve male involvement in ANC in urban settings.

Key Activities

In each of the facilities that ZPCT supports, the following are the activities:

- **Infrastructure:** refurbishment of identified PMTCT rooms within the facilities, as needed.
- **Capacity building:** training of health care workers (doctors, midwives, nurses, clinical officers, and laboratory and pharmacy staff) in PMTCT, and mentoring trained staff by provincial ZPCT CT and PMTCT staff as they provide services. This also includes training of non-health workers as PMTCT motivators.
- **Laboratory and pharmacy support:** training of facility and DHMT staff in forecasting and procurement of HIV test kits, supplies and NVP to ensure an uninterrupted supply.
- **Quality Assurance systems:** developing and adapting QA tools for CT and supporting the initiation of QA systems in the facilities.
- **Job aids:** developing and/or adapting job aids for use by HCWs, and distributing newly produced job aids on opt-out strategy developed by MOH and CDC.
- **Monitoring and evaluation:** ensure correct entry of data by the counselors to ensure that the program is running effectively and reaching its intended goals.
- **Supportive supervision** to the supported sites.
- **Strengthening referral systems** for both clients as well as laboratory samples.

At community level, ZPCT will focus on creating demand in the ZPCT-supported health catchment areas by:

- Increasing awareness and mobilizing the community for increased access to and use of PMTCT services.
- Establishing strong, workable referral networks to and from facilities/community in collaboration with DHMTs.
- Developing a referral model that provides care and support by linking HIV-infected women receiving PMTCT services and their families to ART services.
- Mobilizing for male involvement in PMTCT activities.

List of Indicators and Targets

Indicator	Targets (1 April 2006 to 30 Sept 2007)	Achievements (1 April 2007 to 30 June 2007)	Achieved to Date (1 May 2005 to 30 June 2007)
Number of service outlets providing PMTCT	N/A	86	86
Health care providers trained in PMTCT (Full PMTCT & refresher PMTCT)	200 (150 in full PMTCT & 50 in refresher)	50 (full PMTCT)	439 (400 Full PMTCT & 39 Refresher)
Pregnant women provided with PMTCT services	35,851	16,050	100,763
Pregnant women provided with Nevirapine	8,963	1,920	8,665

Challenges

- **Human resource constraints:** ZPCT has initiated limited support for health care workers who work additional shifts beyond their regular hours.
- **Inadequate space for counseling** in the ANC, labor and delivery and postnatal wards
- **Lack of awareness** of the availability of comprehensive HIV/AIDS care packages – PMTCT motivators have been trained in some of the communities to mobilize around PMTCT. Other identified community groups, such as neighborhood health committees and faith-based organizations, will also be involved.
- **Male involvement:** There is very limited male involvement in ANC and postnatal care while men are normally the decision makers even on matters of health for a pregnant woman. It is therefore critical that they are involved. PMTCT motivators will assist with this activity.
- **Stigma & discrimination:** ZPCT conducts health care worker sensitization on stigma reduction.
- **Shortages of test kits and supplies hinder the smooth running of services:** ZPCT is procuring emergency test kits to fill current gaps while working with JSI/Deliver and the MOH for ongoing procurement.

For additional information in this technical area, please contact:
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Technical Overview

ZPCT, through USAID and PEPFAR, is working with the Ministry of Health (MOH) of the Government of Zambia (GRZ) to scale up counseling and testing (CT), prevention of mother-to-child transmission (PMTCT), clinical care and antiretroviral therapy (ART) in Central, Copperbelt, Luapula, Northern and North Western provinces. Zambia has an estimated one million people living with HIV/AIDS (PLHAs) of which 280,000 may require treatment.

Technical Strategy

The ZPCT Partnership is supporting the MOH to scale up HIV services through:

- Development or adaptation of policies, guidelines, job aids and standard operating procedures (SOPs) in line with MOH requirements;
- Facilitating training of health care workers (HCWs) in adult and pediatric ART, including post-exposure prophylaxis (PEP), effective management of OIs in line with national guidelines, and adherence counseling;
- Providing training on the ART information system in collaboration with the monitoring and evaluation staff, as part of ART/OI trainings;
- Initiating or strengthening ART services in government health facilities in the five targeted provinces;
- Strengthening pediatric HIV services, particularly improvement of infant diagnosis through DNA PCR (sample referral of dried blood spots using filter paper), as well as routine CT for children in care with the goal to reach 15% of all clients on ART to be children under 15;
- Establishing strong linkages between clinical care and CT/PMTCT/TB/STI/Youth-friendly services;
- Establishing systems to manage laboratory sample transfers from remote areas and health centers to facilities that have CD4 count machines;
- Facilitating outreach programs for ART trained medical doctors to health centers to support ART services;
- Strengthen TB/HIV collaborative activities through routine HIV testing of all TB clients and routine CD4 counts for all HIV+ TB clients, and;
- Providing supportive supervision for trained staff to ensure delivery of quality health services.

Key Activities

Technical assistance and mentoring will continue at the 52 ZPCT-supported sites targeted for ART services (28 static ART centers and 24 ART outreach sites) to include an increased focus on outreach and expansion of pediatric ART services. Key areas of technical support will include:

- Support for the roll-out of the SmartCare (Electronic Patient Tracking System) for ART patients, including orientation and support of staff and management in ZPCT-supported facilities in the use of the new system;
- Implementation of QA/QI systems for ART and Clinical Care, in collaboration with Provincial Health Offices (PHOs), District Health Management Teams (DHMTs), and facility partners;
- Establishing a Family Care Center at Arthur Davison Children's Hospital; improving infrastructure, with provision of diagnostic and monitoring equipment (including a PCR machine) and training in Pediatric OI/ART management, DBS collection, storage and transportation to enhance early HIV diagnosis and effective management;
- Providing technical assistance and mentoring in all aspects of ART including pediatric AIDS treatment, implementation of the transition to New National Treatment Protocols;
- Ensuring children exposed to HIV infection are provided with clinical care and co-trimoxazole prophylaxis, and those tested HIV positive by PCR and eligible for ART are provided with appropriate treatment ;
- Strengthening linkage of pediatric HIV programs to PMTCT, including intra- and inter-facility referral of perinatally exposed children for DNA PCR and CT in all ZPCT-supported facilities;
- Strengthening ART outreach services at 24 health facilities, as well as three home-based care centers operated by the Ndola Catholic Diocese;
- Training HCWs in ART/OI management, early diagnosis and effective management of pediatric HIV/AIDS in all ART sites, adherence counseling for HCWs and training community members as adherence support workers, and orientation of nursing staff in the identification of OI's in children for further referral to CT and care, and;

- Integrating and strengthening the TB/HIV links through opt-out provider-initiated HIV testing and CD4 testing for all HIV positive TB patients to ensure effective management of co-infections through early and appropriate referral to ART.

List of Indicators and Targets

Indicator	Target (April 1 2006 to September 30, 2007)	Achievements (April 1, 2007 to June 30, 2007)	Achieved to Date (May 1, 2005 to June 30, 2007)
Health care providers trained in ART/OI	100	21	631
Adherence Support Workers Trained	145	52	224
Number of health providers trained in Pediatric HIV/AIDS management	150	78	347
Number of service outlets strengthened/expanded to provide clinical palliative care services	N/A	87	87
Number of service outlets providing ART services and reporting data directly	N/A	50	50
Number of clients provided with clinical care services including management of OIs and/or prophylaxis	N/A	48,051	51,494
New HIV+ clients on ART	16,300	5,068	34,833
Persons currently receiving ART	28,410	36,464	36,464
New pediatric clients on ART	660	403	2,420
Pediatric patients currently receiving treatment	1,151	2,484	2,484
TB infected clients receiving CT services	5,000	1,150	5,271
HIV-infected clients attending HIV care/treatment services that are receiving treatment for TB disease (New Cases)	2,188	846	2,409

Challenges

- Maintaining laboratory equipment:** Equipment breakdowns continue to be a challenge, although the frequency of breakdowns has greatly reduced. This is largely due to the collaboration between ZPCT, the Ministry of Health and other partners with the Scientific Group who have put in place a maintenance program for laboratory equipment.
- Patient monitoring:** The regular monitoring of patients on ART according to national guidelines has been a challenge due to limited reagents for CD4 testing and human resource shortages. However, ZPCT has supported the improvement of the clinical and laboratory monitoring of patients on ART through consistent technical visits, mentorship and provision of reference materials. Newly developed job aids for the monitoring of patients on ART will be printed and distributed in the next quarter.
- Pediatric ART Challenges:** Though the number of pediatric patients being tested for HIV has increased significantly, this has not resulted in a corresponding increase in the number of pediatric clients initiated on ART. This may be due the limited ability of laboratory staff to correctly calculate CD4 counts or limited staff skills in the management of pediatric ART cases. ZPCT continues to provide technical assistance and training in Pediatric ART. ZPCT will initiate a pediatric HIV/AIDS management preceptorship program, through funding from the Clinton Foundation. Through this initiative, consultants will be deployed to high density facilities to offer hands-on technical support to HCWs in the management of pediatric HIV/AIDS cases.
- Patients Lost to Follow-up:** Tracing defaulters in the community still remains a challenge. Insufficient logistical arrangements and the increased patient load poses a challenge for ASWs conducting home visits to follow-up on patients in need. ZPCT will consider increasing the number of ASWs in high density sites, as well as increasing the number of bicycles allocated per site. ZPCT is also allocating funds for bicycle maintenance and repair in the recipient agreements. The feasibility of using telephone communication to enquire on these patients is being evaluated. The collection of data on trans-ins and trans-outs from neighboring health facilities to trace some of these patients is being implemented and is showing some positive results. ZPCT has also put in place a mechanism to check mortuary records from the hospitals to collect data on those that might have died.
- Referral linkages:** The inadequate feedback mechanisms and insufficient documentation of the referral process contribute to the collection of incorrect data and difficulties in following-up patients. ZPCT is providing technical assistance on correctly completing referral notes and registers, and will continue to encourage feedback from clinicians.

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Technical Overview

ZPCT is working with the Ministry of Health (MOH) of the Government of Zambia (GRZ) to increase access and utilization of HIV/AIDS prevention, care and treatment services in Central, Copperbelt, Luapula, Northern and North Western Provinces. Critical to this endeavor is the availability and management of needed commodities to support pharmaceutical services and the qualified staff to deliver these services.

Technical Strategy

Pharmacy support activities are a part of a comprehensive HIV prevention, care and support program. The component is integrated and closely coordinated with counseling and testing (CT), prevention of mother-to-child transmission (PMTCT), antiretroviral therapy (ART) and clinical care services, and linked to other HIV support efforts in the facilities and community. ART pharmacy services will be strengthened and monitored at all ZPCT-supported ART, PMTCT and CT sites. ZPCT's technical approach includes:

- Train staff at the facility level to effectively forecast, quantify, order, procure, and store antiretroviral drugs (ARVs), opportunistic infection (OI) drugs, and other drugs and supplies (training and management support) in order to eliminate stock outs.
- Improve storage (identify space, refurbish/renovate rooms) and enhance storage conditions for pharmacy stores at health centers.
- Provide pharmacies with essential equipment to support pharmaceutical management.
- Strengthen the inventory management systems, logistics, commodities and security for ARVs, OIs, and drugs for palliative care as well as strengthening logistics, delivery procedures, and distribution subsystems at the facility level.
- Assist the GRZ in the formulation and implementation of Standard Operating Procedures (SOPs) for inventory management systems, supervision and technical assistance, record keeping, good dispensing practices.

Key Activities

Training of pharmacy staff:

- In the use of the automated Zambia Pharmacy ART program (ARTServ Dispensing Tool);
- Product selection and quantification (procurement);
- Commodity management, including forecasting, timely ordering of needed stock, maintaining minimum/maximum stock levels, rotating stock and the new ARV logistics management supply system;
- Dispensing practices, medication use counseling, adherence counseling, Adverse Drug Reactions (ADR) reporting, rational and irrational drug use, and ;
- SOPs and site specific adaptation.

Providing supervisory support and technical assistance to pharmacies to:

- Ensure appropriate use of the ARTServ Dispensing Tool to monitor and improve patient care;
- Improve/strengthen logistics and delivery procedures/distribution subsystems for ARVs, drugs for OIs and palliative care and other drugs;
- Strengthen rational drug use and reporting system for drugs, including for ARVs;
- Strengthen adverse drug reaction (ADR) reporting, ADR monitoring, and feedback systems including for ARVs;
- Ensure timely distribution of ARVs, OIs and medical/surgical supplies to relevant health centers to avoid stock outs;
- Increase pharmacy staff expertise and improve delivery of medication use counseling and patient follow up particularly on ADRs and therapy adherence;
- Strengthen the new Ministry of Health ARV logistics system that has been implemented in Zambia, and;
- Introduce automated systems to selected health centers to enhance the process of accurate inventory management of commodities.

For pharmaceutical services, ZPCT collaborates with and works within the GRZ national systems and programs and works closely with other cooperating partners on key issues at all levels. ZPCT collaborates with JSI/Deliver on quantification and forecasting issues, including providing information about the status of service provision and stocks at ZPCT-supported sites and facilities. In addition, ZPCT communicates with Medical Stores Limited (MSL) on commodity stock levels and the timely placement of orders from the facilities with MSL to fall in with their delivery schedules.

Challenges

- **Human resources:** There is a critical shortage of pharmacy staff in most facilities. ZPCT is working with the MOH to set up a mechanism to assist staff working extra shifts.
- **Infrastructure:** ZPCT recognizes the need to have an optimal work environment and storage conditions and is assisting the GRZ to refurbish pharmacies.
- **ARVs, OI drugs & drugs for palliative care supply:** There is a vital need for an uninterrupted supply of these commodities and ZPCT is working closely with GRZ and JSI/Deliver to ensure that ZPCT sites are catered for in the national quota.
- **Distribution:** Distribution at provincial and district level is vital for an uninterrupted supply of commodities. ZPCT is assisting at these levels and coordinating with MSL at national level to coordinate distribution of supplies to support ZPCT sites.
- **Quality of services:** ZPCT is implementing SOPs, conducting ongoing training, and providing supportive supervision and mentorship to staff to ensure continuous quality of pharmaceutical service delivery.
- **Equipment maintenance:** Availability of fully functional equipment such as computers and air conditioners is an important aspect in the provision of good quality services. ZPCT either repairs or replaces this equipment, and is currently negotiating maintenance contracts with vendors for this equipment.

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Technical Overview

ZPCT is working with the Ministry of Health (MOH) of the Government of the Republic of Zambia (GRZ) to increase access and utilization of HIV/AIDS prevention, care and treatment services in the Central, Copperbelt, Luapula, Northern and North Western Provinces. Critical to this endeavor is the availability and management of needed equipment and commodities to provide high quality laboratory services to establish diagnosis of HIV and opportunistic infections, monitor treatment, disease progression and surveillance. ZPCT recognizes the importance of maintaining quality and reliable laboratory services while scaling up HIV/AIDS services.

Technical Strategy

Laboratory service activities are part of a comprehensive HIV prevention, care and treatment program which is integrated and closely coordinated with counseling and testing (CT), prevention of mother-to-child transmission (PMTCT), antiretroviral therapy (ART) and clinical care services (including TB/HIV). Laboratory services are also linked to other HIV support efforts in the facilities and community. Laboratory services will be strengthened and monitored at all ZPCT-supported ART, PMTCT and CT sites. ZPCT's technical approach includes:

- Training staff at the facility level to effectively forecast, quantify, order, procure, and store laboratory supplies in order to eliminate stock outs/overstocking of reagents;
- Improving working area and storage facilities (identify space, refurbish/renovate rooms) to enhance the environment in laboratories at health centers/ hospitals;
- Providing essential standard equipment to enable laboratories carry out critical diagnostic tests required for ART, HIV clinical care, PMTCT and CT services;
- Setting up testing corners in PMTCT, CT, and TB areas manned by counselors to promote same-day testing with results. These are supervised by laboratory staff to ensure quality of testing;
- Establishment of a Polymerase Chain Reaction (PCR) laboratory at Arthur Davison Children's Hospital in Ndola to facilitate HIV diagnosis of children less than 18 months and in order to strengthen pediatric ART services;
- Ensuring that quality laboratory services are provided at all facilities by using and strengthening sample referral systems;
- Strengthening the inventory management systems (logistics and security for laboratory supplies) as well as strengthening delivery procedures, and distribution subsystems at the facility level;
- Assisting the GRZ in the formulation, review and implementation of Standard Operating Procedures (SOPs);
- Initiating and/or strengthening internal quality control (QC) and quality assurance (QA) in order to promote quality results and promote confidence in laboratory services, and;
- Training and mentoring laboratory staff to use and routinely maintain laboratory equipment.

Key Activities

Training of laboratory staff in:

- Product selection and quantification (procurement);
- Commodity management, including forecasting, timely ordering of needed stock, maintaining minimum/maximum stock levels and rotating stock;
- Virology and immunology of HIV, HIV diagnosis, monitoring and follow-up;

- Equipment use and routine preventive maintenance of equipment;
- Specifics of HIV DNA PCR testing;
- Specimen collection, including handling and processing dry blood spot (DBS) for PCR test;
- Equipping laboratory staff with knowledge and skills to perform the PCR test;
- Practice of laboratory safety and ethics;
- Use of SOPs and QA (internal and external) systems, and;
- Use of Logistics Management Information Systems.

Providing supervisory support and technical assistance to laboratories to:

- Improve/strengthen logistics and storage of supplies;
- Strengthen rational use and reporting system for laboratory supplies/reagents;
- Ensure timely performance of tests and release of results;
- Ensure timely distribution of laboratory supplies/reagents to relevant health facilities to avoid stock outs;
- Pilot an Internal Quality Control (IQC) system for HIV and ART testing to monitor the quality of laboratory services provided;
- Strengthen the use of batch internal QC for ART tests, and;
- Introduce automated Laboratory Information Systems to selected facilities to enhance the process of accurate inventory management of commodities and patient test profiles.

ZPCT follows the MOH national laboratory policies and works closely with other cooperating partners on key issues at all levels. ZPCT collaborates with JSI/Deliver on quantification and forecasting issues, including providing information about the status of service provision and stocks at ZPCT-supported facilities and coordinates key laboratory support efforts with CDC. This includes providing input and collaborating on the laboratory information system, training materials, and the national laboratory quality assurance system being established by CDC with the GRZ. ZPCT also communicates with Medical Stores Limited (MSL) on commodity stock levels of commodities and timely placement of orders by the facilities in line with MSL delivery schedules.

Challenges

- **Human resources:** There is a critical shortage of laboratory staff in most facilities. ZPCT is working with the MOH to set up a mechanism to assist staff working extra shifts.
- **HIV Testing Policy:** Due to shortages of laboratory staff, other HCWs and lay counselors are being trained to perform the HIV test. ZPCT will assist with the development of quality control guidelines for HCWs performing HIV tests in accordance with GRZ standards. ZPCT will assist in developing training packages and training HCWs in the collection, preparation, handling and transportation of DBS.
- **Infrastructure:** ZPCT recognizes the need to have an optimal work environment and is assisting the GRZ to refurbish laboratories to enhance work and storage space.
- **HIV test kit / reagent supply:** There is a vital need for an uninterrupted supply of HIV test kits and other reagents. ZPCT is assisting with stop-gap procurements of these commodities including quality control materials.
- **Distribution:** Distribution at provincial and district level is vital for an uninterrupted supply of commodities. ZPCT is assisting at these levels and coordinating with MSL at the national level to coordinate timely distribution of supplies to ZPCT-supported sites.
- **Diagnostic Equipment Use and Maintenance:** ZPCT is working closely with GRZ and suppliers to ensure that equipment (FACSCount, hematology and chemistry equipment) at ZPCT sites are maintained to provide the high quality service. This includes ensuring equipment calibration and routine preventive maintenance.

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Technical Overview

With the HIV prevalence currently estimated at 16% among the 15- 49 year old age group and estimated 280,000 eligible for antiretroviral therapy (ART), the Government of Zambia (GRZ) is grappling with the challenge of training health care workers to provide effective, quality services as the ART program is expanded. Training and retention of adequate human resources is central to the successful scale up of HIV/AIDS prevention, care and treatment programs, to meet the national goal of reducing prevalence rates and expanding provision of ART to the high rate of people currently infected with HIV. However, critical shortages of health staff, partly due to the high rate of qualified health staff migration to other countries, continue to be a challenge for the GRZ.

Technical Strategy

ZPCT is assisting the GRZ to train health care workers (HCWs) in counseling and testing (CT), prevention of mother-to-child transmission (PMTCT), clinical care for opportunistic infections (OI), pharmacy and laboratory services to facilitate scale up of the ART, CT and PMTCT programs in Central, Copperbelt, Luapula, Northern and North Western provinces. National training packages and national trainers are being used where available and ZPCT is working with the Ministry of Health (MOH) to develop and adapt national training packages for technical areas where none are available.

- ZPCT works closely with the MOH at the national level to build the corps of national trainers in ART, OIs, CT and PMTCT. Program training activities are planned and implemented in partnership with the MOH and the Provincial Health Offices (PHO).
- ZPCT is working with the PHOs and the district health management teams (DHMT) to ensure that training supported by ZPCT is integrated into the relevant action and training plans.
- Capacity building efforts include monitoring and supervision. ZPCT will work with the MOH, Health Services and Systems Program (HSSP), and other relevant partners to expand and improve tools used in the provinces, districts, and health centers to guide supervision and monitoring of service provision.
- ZPCT will work with DHMTs and PHOs to provide consistent and timely follow up of issues noted during supervisory and performance assessment visits. Assistance will be provided through visits, during routine monthly and quarterly meetings, and other continuing education opportunities.

Key Accomplishments

Activities	Achievements to Date (1 May 2005 to 30 June 2007)
<p>Provincial level trainings in various technical areas</p>	<p>The following numbers of HCWs were trained in each technical area:</p> <ul style="list-style-type: none"> ➤ Counseling & Testing (CT): 356 ➤ CT refresher: 82 ➤ Counseling supervision: 171 ➤ Couple counseling: 24 ➤ *Basic child counseling: 30 ➤ Lay counselors: 186 ➤ HIV Testing for Lay Counselors: 89 ➤ PMTCT: 400 ➤ PMTCT Refresher: 39 ➤ ART/OI: 559 ➤ ART/OI Refresher: 72 ➤ ART/Pediatric: 347 ➤ Adherence Support Workers: 224 ➤ Adherence Counseling (HCWs): 273 ➤ Laboratory and Pharmacy: 243 ➤ Monitoring & Evaluation: 52 (36 data entry clerks and 16 health information officers) ➤ Monitoring & Evaluation for HCWs: 1,220

*These trainings were supported with funding from the Clinton Foundation HIV/AIDS Initiative.

Challenges

- **Critical shortage of staff in health facilities:** There is a shortage of staff at health facilities and existing staff are over stretched to provide services. While trainings are essential, on-going services are disrupted when health care workers are away from health facilities for trainings. Innovative training approaches such as on-site training and continuing education seminars are being implemented where possible.
- **Cost of Training:** Training requires development of national training packages, guidelines, training of trainers and provision of logistics to facilitate training. ZPCT is exploring training ZPCT staff and MOH provincial staff as national trainers, using government training institutions and holding on-site trainings to reduce costs while maintaining a high level of quality.
- **Retention of trained staff:** Once trained it is important that the health care workers remain at the facility where possible or at least stay within the MOH system.
- **Lack of national training packages in some technical areas:** ZPCT is working with the MOH and other partners to develop training materials in areas such as CT and Adherence counseling.

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Technical Overview

The Zambia HIV and AIDS Communication Strategy (May 2005) outlines a comprehensive set of objectives to improve knowledge, change behavior for safer sexual practices, and increase access to HIV counseling and testing (CT), care, treatment, and support services. In 2005, despite the availability of 597 CT sites country wide, only 13% of the population knew their HIV status (National HIV and AIDS Strategic Framework 2006-2010). Today there are over 700 CT sites in Zambia but indications are that uptake of CT services still remains low.

The goal of community mobilization within ZPCT is to increase awareness of and create demand for HIV/AIDS services, particularly counseling and testing (CT) and prevention of mother-to-child transmission (PMTCT) in Central, Copperbelt, Luapula, Northern and North Western provinces.

Technical Strategy

ZPCT's approach to community mobilization is to strengthen and support the mobilization activities of community-based organizations (CBOs) and structures operating within the catchment areas of ZPCT-supported health facilities.

- **Community-Based Structures**

ZPCT is working with community-based organizations and structures within the catchment areas of ZPCT-supported facilities to increase awareness of and access to HIV/AIDS services. This includes neighborhood health committees, people living with HIV/AIDS (PLHA) support groups, community leaders, lay counselors and home-based care groups that work around targeted sites. These partners receive limited financial support for structured mobilization and referral activities to increase uptake of CT and PMTCT services. In addition, the Expanded Church Response on HIV/AIDS (ECR), a ZPCT associate partner, mobilizes church communities in selected districts to access HIV/AIDS services in ZPCT-supported sites. This is achieved by mobilizing church leaders, training community motivators and organizing HIV testing days within churches.

- **Lay Counselors:**

In order to increase community acceptance of HIV/AIDS services and address the shortage of health care workers in health facilities, ZPCT has trained community volunteers in counseling and testing. This has freed up the time of overburdened health care workers. The lay counselors offer pre- and post- test counseling at the health facility as well as provide information and referral in the community. Following changes on the national guidelines for HIV CT, ZPCT has begun providing on-site training in HIV testing for lay counselors.

- **Adherence Support Workers (ASWs):**

ZPCT has trained community volunteers to support PLHA in adherence related issues including pre-treatment counseling, the basics of CT, ethics and professional behavior, the roles and responsibilities of ASWs and referral. The ASWs provide services at the health facilities and also follow-up clients in the community.

- **Reducing Stigma and Discrimination Levels:**

Stigma and discrimination among health care workers (HCWs) contribute to reduced uptake of CT and PMTCT. Low staff morale and poor working conditions, coupled with staff shortages and erratic drug supplies contribute to HCWs feeling frustrated, exhausted and powerless to help patients. In addition, HCWs' behavior towards PLHA and perceptions of HIV/AIDS may alienate clients. If exhibited, stigmatizing behavior may lead to clients feeling neglected, ignored, insulted or mishandled and care and treatment are compromised. ZPCT is training HCWs in stigma issues, the rights of PLHA and actions that address stigma.

- **Mobile CT Services:**

ZPCT is implementing mobile services to increase access to CT in remote areas and to increase uptake by community members who would not ordinarily visit a health facility. Mobile activities are

focused on moving out of the facilities to reach people with CT before they are ill and to provide services in districts where distance to the CT site is an issue in accessing services.

Key Activities

- **Support to Targeted Community Mobilization Activities:** ZPCT is providing direct support to CBOs through community purchase orders - a simple funding mechanism designed by ZPCT to fund discrete, results-focused and defined community mobilization activities such as door-to-door campaigns, focus group discussions, motivational talks and drama performances. Community purchase orders have been developed with community groups around ZPCT-supported sites in the five target provinces. Community level partners have been oriented in CT, PMTCT and conducting referrals as a means of ensuring effective mobilization. ECR has oriented church leaders in HIV/AIDS and community mobilization. ECR has established church coordinating committees around health centers in Chingola, Kabwe and Mkushi districts. Through the church structures community members will be motivated to access CT and PMTCT services and then referred to ZPCT-supported health facilities for these services. The mobilization activities being implemented by ECR will be linked to the district-wide referral network.
- **Accurate Messages During Mobilization:** ZPCT is working with community leaders and facility staff to monitor mobilization activities and ensure that accurate and adequate information about CT and PMTCT services are being disseminated. The focus of the messages disseminated during mobilization activities include the benefits of CT and PMTCT, availability of services, and the times/days services are offered. Community partners are using the CT and PMTCT community job aid developed by ZPCT to implement mobilization activities. Each job aid is a double-sided card which has key messages explaining what CT and PMTCT are and the benefits of knowing one's status. The cards have space for the community volunteer using the card to input where and when services are offered within their catchment area.
- **Training and Placement of Lay Counselors:** 186 lay counselors have been trained to provide CT services in the ZPCT-supported facilities in the five provinces. 89 lay counselors have been trained in HIV testing using rapid tests. In conjunction with the local DHMT, lay counselors are being placed in the health facilities and provide CT services as well as ongoing supportive counseling.
- **Adherence Support Workers:** 224 ASWs have been trained by ZPCT and are providing adherence counseling both in the health facilities and in the community. ZPCT has provided bicycles to the ASWs to facilitate follow up of clients in the community.
- **Mobile Counseling and Testing:** ZPCT's guidelines for the implementation of mobile CT activities has been piloted in Kabwe, Kasama and Solwezi districts, reaching a total of 1051 clients with CT services. The mobile CT pilot was documented by observers using tools developed by FHI headquarters. The ZPCT Provincial Teams in the three pilot provinces will meet with district partners to plan for the roll-out of mobile CT, using lessons learnt by observers during the pilot. In addition, ECR, through the coordinating committees, will offer counseling and testing services during CT days in local churches.

Challenges

- **Mobile CT:** Through mobile CT services, ZPCT and the DHMTs have been able to provide services to large numbers of clients. It is challenging to adequately plan for logistics such as HIV test kits and counselors to provide the service, as well as to monitor the quality of the mobile services. ZPCT has worked closely with the DHMT and health facility staff to plan joint outreach activities, involving lay counselors, to ensure that the demand for CT services is met and that the client-counselor ratio is not too high.
- **Provision of CT Services by Lay Counselors:** In some ZPCT-supported facilities, health care workers are overwhelmed by other clinical duties and rely heavily on lay counselors to provide services. Lay counselors often feel obliged to spend the whole week at the facility providing services, which poses the risk of burnout.
- **Incentives for Lay Counselors:** In some districts, other partners are requesting that lay counselors trained and supported by ZPCT, support their mobile CT services. Often, the incentives provided are higher than the monthly transport reimbursements provided by ZPCT. This may compromise the CT services provided at ZPCT-supported health facilities if lay counselors divert their support to these other services.

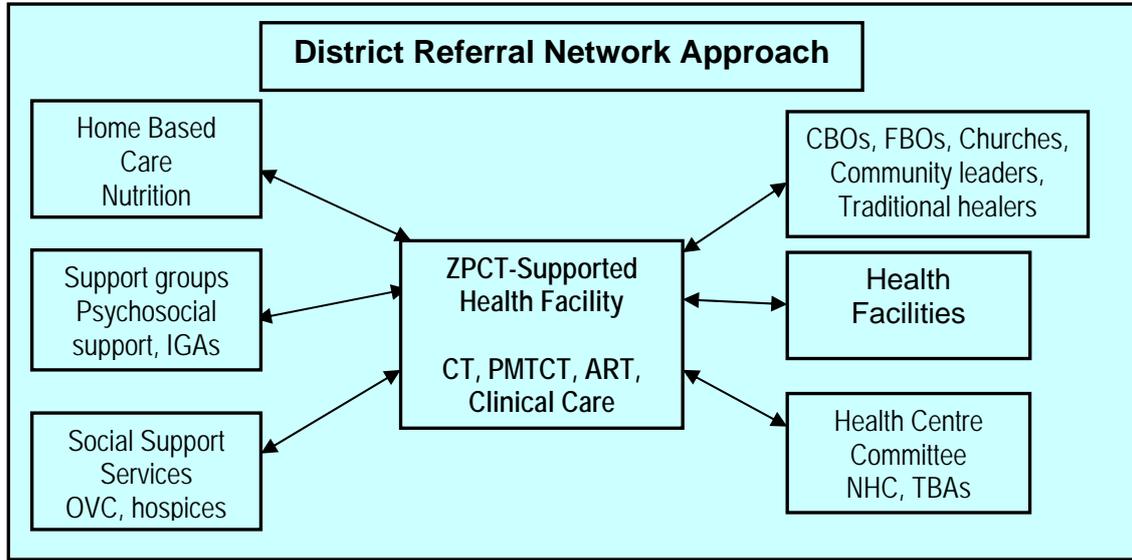
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Technical Overview

People living with HIV/AIDS (PLHA) have a broad spectrum of needs including medical care, psychosocial support, nutritional, financial, legal, material and spiritual support. It is often not possible for one organization to meet all these needs. This makes it important for service providers to coordinate service provision to increase the quality of life for PLHA. In order to provide a continuum of care for PLHA and address their diverse needs, ZPCT is working with the Provincial Health Offices (PHOs), District Health Management Teams (DHMTs), District AIDS Task Forces (DATFs), and a range of other partners in Central, Copperbelt, Luapula, Northern and North Western provinces to establish or strengthen district-wide referral networks in ZPCT-supported districts. The goal of these referral networks is to increase access of comprehensive HIV care and support services and to facilitate the systematic and formal linking of HIV/AIDS related services to ensure that clients receive the available services.

Technical Strategy

ZPCT's strategy is to support the initiation and ongoing functioning of a referral network comprised of organizations providing HIV/AIDS-related services within a district. The network is managed at the district level by the DHMT or the DATF to allow for coordination among service providers and the community. ZPCT's contribution to the network is focused on the referral activities around the health facilities it supports. ZPCT provides orientation to community level partners on the use of standard referral tools which are used to refer community members to ZPCT-supported sites for HIV/AIDS services. Health care workers are also oriented in the use of the tools to allow records of referrals received to be filed at the facility and to refer clients to ongoing support services in the community. ZPCT, along with the other Network members, provides limited funds to the DHMT in support of meetings, stationary and printing expenses around its sites. ZPCT is supporting this effort in nine districts and has expanded to six additional districts.



Key Activities

- **Initial Planning Meetings:** In order to initiate the referral network, ZPCT provincial teams have developed a district wide referral network plan in collaboration with the DHMT.

- **Initial Meeting of Service Providers:** ZPCT held meetings of all service providers in the initial districts to introduce the concept of the network and obtain buy-in and facilitate selection of a referral coordinating unit.
- **Identification of a Referral Coordinating Unit:** The referral coordinating unit, selected through a participatory process by network members, is responsible for convening meetings of network members, coordinating activities, mobilizing resources and providing technical assistance to new members. The referral coordinating unit takes the lead in the development of standard referral tools to be used by network members. The referral coordinating unit also provides a mechanism for the distribution of feedback on services provided by the receiving organization.
- **Development of Referral Tools:** The referral network in each participating district has gathered information on existing referral forms and facilitated the development of a standardized form.
 - **Referral Form:** The referral form is a tool that is used to introduce the client being referred to the receiving organization and identifies the services required as well as the referring organization. The second half of the form is completed by the receiving organization with information on what services were provided to the client and what his/her ongoing needs are. This section of the form is returned to the referring organization with the permission of the client. To date referral forms are in use in nine districts.
 - **Referral Register:** The referral register is a tool used to document all referrals made and received. The registers are filled in by referral focal persons in member organizations. Referral registers are currently in use in eight districts.
 - **Directory of Services:** The directory of services is an inventory of organizations providing HIV-related services for PLHA and their families within the district. This allows for the referring organization to identify other organizations that would best fulfill the clients' needs. Directories have been finalized in eight districts and are being used by referral network members.
 - **Referral Operations Manual:** The referral operations manual is a document developed by all network members to guide the functioning of the network. The manual defines the principles and processes for the referral network. The referral tools are appended to the manual.
- **Monitoring of Referrals:** Referral focal point persons are identified at each ZPCT-supported facility and in community partner groups to document referrals. In all agreements with community partners funded by ZPCT, indicators, targets, and mechanisms for gathering data on referrals are defined before implementation. ZPCT staff ensure that forms are being filled out correctly and that data on referrals is collected and aggregated, both from facilities and from community groups supported by ZPCT.
- **Meetings:** After the network is established, meetings are held on a monthly basis with facility staff and community volunteers at ZPCT facilities to review use of the referral tools. District-wide referral meetings are held on a quarterly basis to share experiences around the referral process, address challenges and update the directory of services.

Challenges

- **Documentation:** Changes in staff at both health facilities and CBOs pose a challenge in documenting referrals as new staff and volunteers need to be oriented to the referral system and the use of referral tools. ZPCT provincial staff continue to provide support in documentation of referral forms and registers to address this challenge.
- **Use of the Referral Forms:** During ZPCT-supported community mobilization activities, community members willing to access CT or PMTCT services are given referral forms to present at the health facility. Community members often do not understand the relevance of this form and report to the facility without them. As part of the orientation for community partners, the importance of the referral form is being emphasized.
- **Use of Standardized Tools:** In some cases, referral network members have continued to use their own referral forms to facilitate reporting to various donors. This results in a situation where there are different forms in use within the district. Some referral forms being used by network partners do not have a feedback mechanism. ZPCT is working with referral network members on these issues during the quarterly meetings.

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Technical Overview

ZPCT is working with the Ministry of Health (MOH) of the Government of Zambia (GRZ) to support implementation of a monitoring and evaluation (M&E) system that facilitates real-time, evidence-based decision-making to guide rapid scale-up, as well as respond to the information needs of the MOH, the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), USAID/Zambia and the National AIDS Committee (NAC). ZPCT is working with all partners to harmonize the information systems of different HIV/AIDS data systems to avoid duplication of efforts in support of the "three ones" principle of one M&E system in the country.

Technical Strategy

The ZPCT M&E system focuses on activities and results achieved at the facility, district and provincial levels in the five target provinces of Central, Copperbelt, Luapula, Northern and North Western and provide a basis for:

- Monitoring performance in achieving rapid scale-up of quality HIV-related services;
- Ensuring that best practices for antiretroviral therapy (ART), clinical care, counseling and testing (CT) and prevention of mother-to-child transmission (PMTCT) service provision are documented and shared with other stakeholders;
- Ensuring that best practices for ART are developed through evidence-based approaches and implemented properly by monitoring adherence, immunologic and clinical response, and applying results from program activities;
- Measuring the contribution of program efforts to the achievement of the MOH, PEPFAR, USAID/Zambia and the NAC objectives; and
- Strengthening M&E capacity at the national, provincial and district levels.

ZPCT M&E activities will:

- Ensure that the ZPCT M&E system is consistent with national M&E plans and requirements, that all the M&E indicators, data sources, baselines, targets, data collection activities and timeframes for data reporting are consistent between partners without creating a duplication of activities at all levels.
- Ensure utilization of the results from M&E activities to improve the implementation of project activities. The ZPCT M&E unit will document and disseminate to relevant partners ZPCT's progress towards targets during project implementation and ensure that M&E results are presented in ways/formats that will facilitate critical programmatic decision-making at the facility, district, provincial and national levels.
- Ensure sustainability of the M&E efforts. The ZPCT M&E unit will provide technical assistance on M&E to partners, sub-grantees and relevant national, provincial, and district level staff to strengthen their M&E activities. The unit conducts workshops, refresher in-service training, on-the-job training, and mentoring to strengthen local capacities on M&E to ensure sustainability of all these activities even beyond the project's lifespan.

Key Activities

- Recruitment and placement of 49 data entry clerks for ZPCT-supported ART sites in the five target provinces.
- Training all health care and health information staff in ZPCT-supported ART facilities in the GRZ's ART Information System (ARTIS) and all ZPCT-supported facilities in GRZ's CT/PMTCT Information System. All training activities carried out by ZPCT include one or two days reserved for data collection tools and reporting so that all facility staff are aware of the reporting requirements.
- Provide on-site technical assistance and mentoring of the health information staff at all levels (for district, hospital and provincial staff) in MOH and ZPCT.
- Supply of essential equipment (such as computers) for data storage and reporting in ART clinics and District Health Offices where needed.
- The development and adoption of a standardized patient tracking system (for all ART clinics) in collaboration with MOH and other partners has reached an advanced stage with the initial training of trainers workshop held.
- Strengthen all clinical care support services in information management - laboratory, pharmacy and logistics management.
- Conduct data audits for all ZPCT-supported sites building on the three previous audits which covered May to September 2005, October 2005 to March 2006, and July to September 2006. The audit process and results have continued to show a high level of data reliability as well as consistent improvement in the quality of data.

Challenges

- **Human Resources:** A critical bottleneck to collecting data for M&E activities has always been staff shortages. The recruitment of Data Entry Clerks at facility level is addressing the reporting needs. Thus, ZPCT-supported sites are now able to submit their monthly and quarterly returns to the DHMT and subsequently to ZPCT on time.
- **Patient Information Management System/Patient Tracking System:** ZPCT is working with other partners to develop a Continuity of Care Patient Tracking System (CCPTS) for ART program monitoring and reporting. The CCPTS will be a part of the national HMIS. An HMIS system—apart from ensuring accurate data collection—must be able to provide data for patient clinical management and answer operational questions and mainstream lessons learned into national ART programming. The current HMIS for ART (ARTIS) is being reviewed at the national level since health facility staff report that the system is time consuming and involves substantial duplication.
- **Infrastructure/Equipment:** Functioning computers, printers and data backup systems are required to support an electronic information management system such as the CCPTS. ZPCT will ensure that all facilities providing ART have a computer to host the CCPTS database and necessary support to ensure continuous data entry and reporting. Almost all ART facilities have these computers in place and only await the introduction of the CCPTS once the MOH has finalized the harmonization process with all participating partners (CDC, HSSP, CIDRZ, CRS and ZPCT).

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