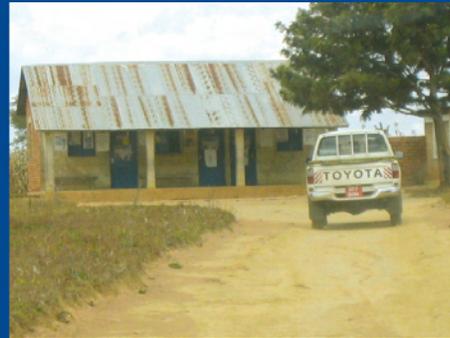




TANZANIANS AND AMERICANS
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Report of a Pediatric HIV/AIDS Care and Treatment Assessment in the Kilimanjaro, Iringa, and Mbeya Regions of Tanzania

December 2006



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BASICS



ELIZABETH GLASER PEDIATRIC AIDS FOUNDATION

Report of a Pediatric HIV/AIDS Care and Treatment
Assessment in the Kilimanjaro, Iringa, and Mbeya
Regions of Tanzania

December 2006

Abstract

This report provides findings from an assessment, conducted between June 6 and July 19, 2006 to assess and document the current status of pediatric HIV care and treatment services at the facility and community levels in three regions of Tanzania; document missed opportunities for identification and care and treatment of HIV-exposed and/or infected infants and children; and make recommendations to increase access to pediatric HIV care and treatment services.

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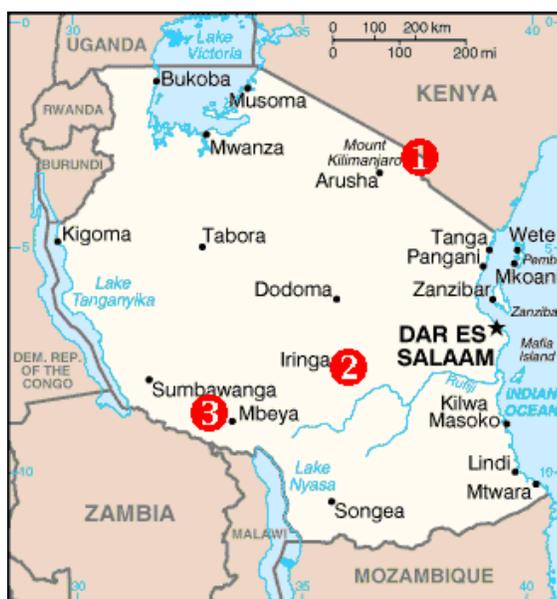


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Table of Contents

Site Visits.....	iii
Assessment Teams.....	iii
Acronyms.....	v
Executive Summary	vii
Introduction, Purpose, and Objectives.....	1
Scope of Work.....	2
Methodology	2
Team Composition and Sites Visited.....	3
Context of Pediatric HIV/AIDS in Tanzania	4
Findings.....	5
Discussion.....	11
Recommendations.....	12
Conclusion	17
Appendices.....	19
Appendix A—Contacts	21
Appendix B—Interview Notes, National Perspective.....	25
Appendix C—Region-Specific Findings	33
Appendix D—Pediatric HIV/AIDS Assessment Tools, Version 2	59

Site Visits



Assessment Teams

1 Kilimanjaro Region (June 6-8, 2006)

- Mary Pat Kieffer, Senior Regional Advisor for PMTCT and Pediatric AIDS, and Deputy Director, Office for Regional HIV/AIDS Programs, USAID/East Africa
- Youssef Tawfik, Child Health Advisor, USAID, Office of Health Infectious Diseases and Nutrition, Washington
- Mary Lyn Field-Nguer, Pediatric HIV/AIDS Advisor, BASICS/Washington
- Werner Schimana, Regional Advisor, Pediatric AIDS, Elizabeth Glaser Pediatric AIDS Foundation, Tanzania

2 Iringa Region (July 17-19, 2006)

- Mary Lyn Field-Nguer, Pediatric HIV/AIDS Advisor, BASICS/Washington
- Eunice Mmari, Senior Program Manager, HIV/AIDS Care and Treatment, CDC, Tanzania
- Werner Schimana, Regional Advisor, Pediatric AIDS, Elizabeth Glaser Pediatric AIDS Foundation, Tanzania
- Gloria Ekpo, Technical Officer, Pediatric HIV and Newborn/Child Health, BASICS/Washington

3 Mbeya Region (July 17-19, 2006)

- Patrick Swai, Senior Project Management Specialist [HIV], HIV Office, USAID/Tanzania
- Ruslan Malyuta, Consultant, BASICS
- Thomas Finkbeiner, CDC Tanzania
- Christina Mwangi, Program Director, Laboratory Infrastructure, CDC Tanzania

Acronyms

AIDS	Acquired Immune Deficiency Syndrome
AMREF	African Medical Research Foundation
ANC	Antenatal Care
ART	Antiretroviral Treatment
ARV	Antiretroviral (Drugs)
BASICS	Basic Support for Institutionalizing Child Survival
CBO	Community Based Organization
CDC	U.S. Centers for Disease Control and Prevention
CORPS	Community-Owned Resource Persons
CTC	Care and Treatment Clinics
CTX	Cotrimoxazole
DACC	District AIDS Control Coordinator
DBS	Dried Blood Spot
DOD	Department of Defense
DPT	Diphtheria, Pertussis, and Tetanus
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
ELISA	Enzyme-linked immunosorbent assay
FBO	Faith-Based Organization
HBC	Home-Based Care
HCW	Health Care Worker
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
ILS	Integrated Logistics Systems
IMAI	Integrated Management of Adult Illnesses
IMCI	Integrated Management of Childhood Illnesses
IPD	Inpatient Department
IPT	Intermittent Preventive Therapy
KCMC	Kilimanjaro Christian Medical Center
MCH	Maternal and Child Health
MOHSW	Ministry of Health and Social Welfare
MTUHA	Swahili term (<i>Mfumo wa Taarifa za Uendeshaji wa Huduma za Afya</i>) for HMIS in Tanzania
NACP	National AIDS Control Program
NGO	Non-Governmental Organization
NVP	Nevirapine
OI	Opportunistic Infection
OPD	Outpatient Department
OR	Operations Research
OVC	Orphans and Vulnerable Children
PCR	Polymerase Chain Reaction
PLHA/PLWHA	People Living With HIV and AIDS
PMTCT	Prevention of Mother to Child Transmission (of HIV)
RACC	Regional AIDS Control Coordinator
RCHS	Reproductive and Child Health Services
RCM	Reference Care Manual
STI	Sexually Transmitted Infection
TB	Tuberculosis

TBA	Traditional Birth Attendant
TZ	Tanzania
UNAIDS	The Joint United Nations Program on HIV/AIDS
UNICEF	United Nations Children's Fund
URC	University Research Corporation
USAID	United States Agency for International Development
USG	United States government
VCT	Voluntary Counseling and Testing
VHW	Village Health Worker
WHO	World Health Organization

Executive Summary

Worldwide, efforts are increasing to provide HIV/AIDS care and treatment services to infants and children, who are still largely underserved by antiretroviral (ARV) treatment efforts. Tanzania is beginning to address this challenge. The Tanzanian Ministry of Health and Social Welfare (MOHSW) has committed itself to ensuring that 20% of those on antiretroviral treatment will be infants and children. This target has not yet been achieved, although significant progress has been made. It is in this context that the United States government (USG) and the National AIDS Control Program (NACP) in Tanzania decided to undertake an assessment of current pediatric identification, testing, and care and treatment services in the Kilimanjaro, Iringa, and Mbeya regions.

The specific objectives of the assessment were to: (1) assess and document the current status of pediatric HIV care and treatment services at the facility and community levels in three regions of Tanzania; (2) document missed opportunities for identification and care and treatment of HIV-exposed and/or infected infants and children; and (3) make recommendations to increase access to pediatric HIV care and treatment services.

The team conducted an initial assessment in the Kilimanjaro region to field test the assessment tools. As part of that effort, the team conducted site visits, observations, and interviews between June 7-9, 2006, in two districts in the Kilimanjaro region and provided a report of findings to the USG team in Tanzania (TZ) on June 30, 2006. Following the basic framework of the initial assessment, an expanded team comprised of USAID/TZ, U.S. Centers for Disease Control and Prevention (CDC)/TZ, Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) and Basic Support for Institutionalizing Child Survival (BASICS) staff convened in Dar es Salaam in July to refine the tools and focus the scope of the assessment more clearly on pediatric issues such as identification and referral of infants and children for care and treatment. The teams, accompanied by local regional and district health officials, visited the Iringa and Mbeya regions on July 17-19, 2006. Visits were made to referral, regional, health center and dispensary levels in each region, observations made, records reviewed, interviews conducted, and a stakeholder meeting held with community and health facility representatives.

Key findings from the assessment include the following:

- Maternal and child health (MCH) services, also referred to as reproductive and child health services (RCHS), are the most accessible health services in Tanzania. The units are accessible, free, attended by most mothers and children, and provide a variety of services (family planning, antenatal care [ANC], immunization, outpatient department [OPD], often labor and delivery, prevention of mother to child transmission of HIV [PMTCT], and voluntary counseling and testing [VCT]).
 - Immunization coverage is high in Tanzania, e.g., 84% coverage of diphtheria, pertussis, and tetanus (DPT) I, II, and III in Mbeya region.
 - MCH services are an ideal entry point to HIV prevention, care and treatment for mothers and infants, and can serve as an excellent link to other services.

- Laboratory capacity is generally adequate at the regional and referral levels to do HIV tests, including ELISA and rapid tests, and to monitor patients on antiretroviral treatment (ART) using biochemistry measures and CD4 counts.
- Most regional and district hospitals have functioning pharmacies. Several regions are currently undergoing training in Integrated Logistics Systems (ILS).
- Extremely few staff are trained in pediatric HIV and most health care workers (HCWs) lack confidence in pediatric care in general, and more so with pediatric HIV.
- Infants and children known to be exposed and even those with signs and symptoms suggestive of HIV infection are not being tested on inpatient wards, at MCH visits, in OPD, etc.
- Rapid HIV tests are not being used in infants and children even though the *National Guidelines for the Clinical Management of HIV and AIDS* indicate that rapid tests can be used for children.
- While several services cater to children, no one service has clear responsibility for HIV-exposed children. Many services, such as PMTCT, MCH, and care and treatment clinics (CTC) function vertically, with weak “bridges” or linkages between them. No one service has the child “at the center” when it comes to HIV services. In addition, there are multiple steps involved when mothers seek HIV diagnosis and care and treatment for their infants and children.
- There are multiple opportunities to identify and refer infants and children with HIV that should be more fully utilized. These occur at MCH visits for growth monitoring, immunization, and outpatient services, during hospitalization in pediatric inpatient wards, following deliveries by mothers who have attended/not attended PMTCT programs. For example, there is little systematic monitoring of whether or not mothers follow through on referrals for themselves and their infants, e.g., from PMTCT to CTC. Other opportunities occur when parents make CTC visits, during visits by HBC workers to households affected by AIDS in the community, and through school health and OVC programs.
- PMTCT coverage in Tanzania is low (as of March 2006, there are about 544 PMTCT sites out of 4,112+ health facilities = ~13%) Furthermore, because infants born to mothers who participate in PMTCT programs are often lost to follow-up, only 10% are tested for HIV by age 15 months. Therefore, HIV-exposed and -infected infants and children are not identified when they attend MCH services (including immunization and growth monitoring services) leading to low numbers accessing the needed care and treatment services.

- There is no routine offer of HIV testing for infants and children, even in the presence of multiple symptoms suggestive of HIV infection (failure to thrive, recurrent pneumonia, etc.), and diagnostic HIV testing is not often ordered for children at MCH/RCH, OPD, and inpatient department (IPD) settings. This is true for all children and is more of a problem in infants under 18 months.
- Use of cotrimoxazole to prevent opportunistic infections in infants and children is limited, both in facilities and through home-based care programs.
- The Health Management Information System (HMIS)/MTUHA¹ does not yet capture HIV-related information and age-related data in the categories of <5 years old and >5 years old. Disaggregating the data according to more discrete age categories is needed to track treatment responses in infants and other parameters.
- There are several factors limiting access by older children who are HIV infected and not yet receiving care and treatment services. Among these are issues unique to orphaned children, such as testing for HIV in children who are being raised by foster families. There are reports of children being abandoned when foster families learn of their HIV infection. There are also issues of consent and comprehension of the implications of HIV testing for households that are headed by children.
- Communities are not being reached with pediatric HIV/AIDS education and community mobilization activities. There are currently no clear messages reaching parents, caregivers, and community leaders to say that there is hope for children with HIV—that treatment works.
- Stigma, fear, and lack of knowledge continue to act as barriers to the identification, testing referral, and care and treatment of infants and children. This can be effectively addressed through interventions to reduce stigma as well as other community education and mobilization initiatives to increase participation in pediatric HIV/AIDS services.

Key recommendations of the team are offered with recognition that the Tanzanian government and its partners have invested an intense effort and have made great progress in increasing access to care and treatment for adults. Expansion of access to HIV care and treatment services for infants and children has begun but poses significant challenges. The team proposes the following recommendations and considers them feasible for implementation. These recommendations are based on the team's assessment that there is a solid foundation for service expansion, with significant health care worker and health system assets in place for these services. While many of the recommendations may require a long-term effort, there are several that can be implemented immediately. This will require strong leadership and clear guidance from the NACP to the regions and the districts. Selected key recommendations include the following:

¹ Swahili term—*Mfumo wa Taarifa za Uendeshaji wa Huduma za Afya*—for HMIS in Tanzania.

- As an **immediate action step**, the MOHSW should develop and disseminate a memo to all facilities that clearly spells out steps to increase pediatric HIV identification and care and treatment. The steps would direct program managers and HCWs to:
 - Ensure that the HIV status of the mother is recorded on the mother's MCH card (MCH card #4) and that the information is transferred to the child's MCH card (MCH card #1) so that HIV-exposed infants can be tracked through MCH clinics and other units.
 - Introduce similar codes for the care and treatment card (CTC #1).
 - Provide cotrimoxazole prophylaxis at 6 weeks of age to all HIV-exposed infants and HIV+ children.
 - Offer HIV tests to all children exposed and/or presenting with HIV-related signs and symptoms in both in- and out-patient settings.
 - Establish clinical stage and commence ART in infants and children found to be HIV positive according to the *National Care and Treatment Guidelines*.

- The MOHSW should outline a specific and detailed document to address the gaps in pediatric HIV programs for both infants and children. The document should form a substantial component of the care and treatment section of a broader national HIV strategy and build on the strengths of existing programs.

- Expand testing for infants and children by: harmonizing all guidelines regarding HIV testing in children, ensuring that all infants born to HIV-infected mothers are tested, and expanding the cadre of HCWs trained to counsel and test within and outside of the VCT unit, e.g., on pediatric in- and out-patient settings, MCH clinics, etc.

- Train more HCWs at all levels in pediatric HIV and AIDS care and treatment. Some HCWs need sensitization and others need training to be prescribers, but all must be sensitized to ensure that HIV-exposed and infected children are identified and ensured access to services. Provide mentorship and mobile teams, if necessary, to improve the ability of providers at lower levels of care to diagnose and manage pediatric HIV patients and to rapidly scale up the number of infants and children identified and reached with services.

- Maximize opportunities to identify exposed and infected infants and children at multiple entry points (MCH/RCH, PMTCT, CTCs, home-based care [HBC], and orphans and vulnerable [OVC] programs) to provide or refer for necessary care and treatment.

- Improve linkages and systematize referrals between all services that see mothers and children.

- Consider options for streamlining current ART services so that CTCs have the capacity to take on treatment for children. One possibility would be to devolve routine follow-up of stable ART patients to lower-level facilities so that CTCs can take on new patients.

- Consider expanding the CTC team to include providers/prescribers in the RCH/ANC/MCH clinic setting so that women and children attending the RCH/MCH services (ANC, prenatal care, immunization, etc.) access care and treatment services.
- Educate and mobilize communities about pediatric HIV and link community and facility services for referrals, follow up, and adherence support to families.

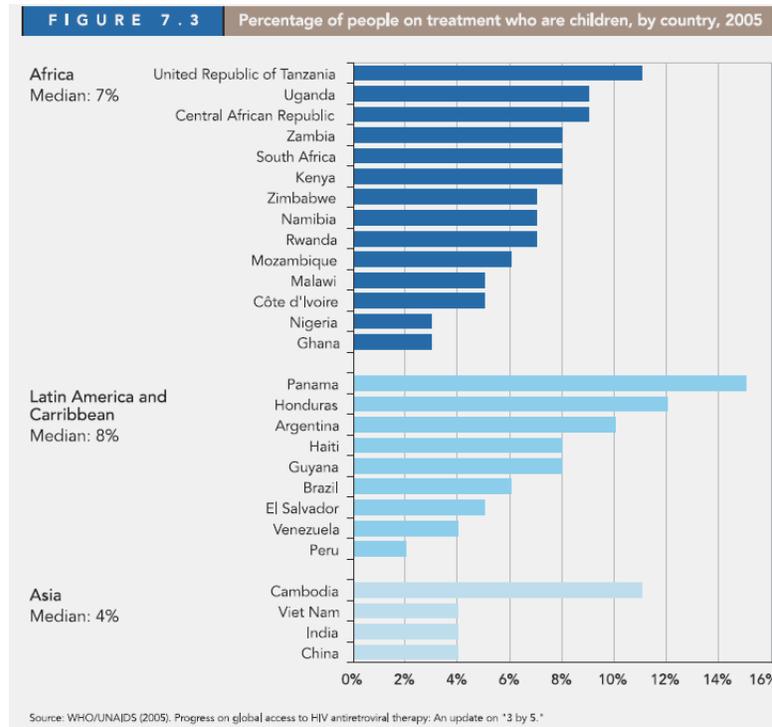
Introduction, Purpose, and Objectives

Worldwide, the care and treatment of infants and children with HIV/AIDS lags behind the progress that has been made in the care and treatment of adults. Globally, children account for only a small proportion of the total number of people on treatment (figure 7.3, World Health Organization/The Joint United Nations Program on HIV/AIDS [WHO/UNAIDS] 2005B).

There are many reasons—biological, technical, and psychosocial— why fewer children than adults are on treatment. Because of the persistence of maternal antibodies in infants up to 9-18 months of age, it is more difficult to confirm HIV in infants. Dried Blood Spot (DNA-DBS) tests are the most effective tests for infants to date, but they are more expensive and are generally only available in urban centers and referral hospitals in the developing world. There is also a problem of lack of understanding on the part of parents, communities, and health workers about HIV infection in infants. Denial and stigma on the part of parents negatively influences both the willingness of health workers to offer HIV testing and the seeking of testing of infants and children by parents.

Children who are HIV infected should be put on cotrimoxazole prophylaxis even though they may not yet be in need of ARV treatment. In most places, this is not yet a priority strategy for pediatric HIV care. Even the medications are more complicated for children than they are for adults. There is a need for simple pediatric ARV formulations such as fixed-dose combinations in palatable concentrated syrups that do not require refrigeration for infants and scored, half-dose tablets for children. This would make it easier for both parents and health care workers, many of whom are not trained and confident in pediatric HIV care.

Globally, the challenges are many, and these challenges apply to Tanzania as well. This assessment addressed these factors and others in the context of the pediatric HIV situation, the policy environment, and health and community service factors specific to Tanzania.



The USG team, through the United States Agency for International Development (USAID), requested an assessment of pediatric HIV care and treatment in Tanzania in the Kilimanjaro, Iringa, and Mbeya regions, as part of the development of the USG/Tanzania's upcoming fiscal year '07 Country Operational Plan, the Government of Tanzania's new National HIV/AIDS Strategy document, and a pediatric framework for early infant diagnosis. The specific objectives of the assessments were to (1) assess and document the current status of pediatric HIV care and treatment services at the facility and community levels in three regions of Tanzania; (2) document missed opportunities for identification and care and treatment of HIV-exposed and/or -infected infants and children; and (3) make recommendations to increase access to pediatric HIV care and treatment services in Tanzania.

Scope of Work

The team conducted an initial assessment to elucidate the major issues affecting the delivery of pediatric HIV care and treatment services, to refine tools to facilitate the assessment, and to provide input to the development of a family care center at the Kilimanjaro Christian Medical Center in Moshi. The team visited two districts in the Kilimanjaro region between June 7th and 9th, debriefed USAID and CDC, and provided a report of findings to the USG/TZ on June 30, 2006.

In July, a team met in Dar es Salaam to further refine the tools and undertake a similar assessment of pediatric HIV care and treatment services in the Iringa and Mbeya regions. The assessment focused primarily on the pediatric aspects of care and treatment services and on the patterns of identification and referrals of infants and children for HIV testing and treatment. It was agreed that the general structure of the initial assessment would apply, using revised tools aimed at gathering data in the areas of regional and district level program planning and management, facility services (at the regional, district, and dispensary levels), and community services for child health, HIV in general, and pediatric HIV.

This report presents the major findings of the Kilimanjaro, Iringa, and Mbeya assessments, with specific data about program planning, and facility and community services in the regions, and districts documented in appendixes C, E, F, and G. The templates of the tools that the team used are found in appendix D.

Methodology

The assessment utilized several approaches to gain a clear understanding of the current status of services—the challenges, gaps, and prospects for solutions. The methods and sample included:

- Interviews with: MOHSW staff members; NACP management and care and treatment program technical staff; the RCHS Integrated Management of Childhood Illnesses (IMCI) coordinator; WHO/Tanzania ART technical staff (appendix B)

- Review of documents, including policies, guidelines, and reports.
- Site visits and record reviews at one referral hospital, three regional hospitals, four district facilities, five health centers, and two dispensaries.
- Interviews with regional and district level health team medical officers and health care workers.
- Interviews with 9 non-governmental organizations (NGOs) in Iringa, Mbeya, and Kilimanjaro.
- Stakeholder meetings of health facility, regional and district management, NGOs, and people living with HIV and AIDS (PLHAs) in Iringa and Mbeya.

The three assessment tools that were piloted and then revised (appendix D) included:

- Pediatric Services at the Regional/District Level: included sections on general management such as planning, coordination, supervision, and referral; human resources and training; logistics management; and health information systems.
- Health Facility Survey: included site organization; guidelines; services available; staff and staff training; laboratory monitoring; clinical practice; and patient records and management.
- Pediatric HIV Case Identification, Referral, and Care at the Community Level.

Team Composition and Sites Visited

Kilimanjaro: The team included Youssef Tawfik, USAID/Washington, Division of Child Health; Mary Pat Kieffer, USAID/East Africa Regional Office (Mwanga District); Werner Schimana, EGPAF; and Mary Lyn Field-Nguer, BASICS (Same District).

Sites visited:

Kilimanjaro regional and district health management offices

- Mawenzi Regional Hospital
- Same District (Schimana and Field)
 - Same District Hospital
 - Makanya Health Center
- Mwanga District (Tawfik and Kieffer)
 - Usangi District Hospital
 - Kifula Health Center

Iringa: The team included Eunice Mmari, CDC/TZ; Werner Schimana, EGPAF; Gloria Ekpo, BASICS; and Mary Lyn Field-Nguer, BASICS.

Sites visited:

- Iringa regional and Mufindi district health management offices
- Iringa Regional Hospital
- Mufindi District
 - Mafinga District Hospital
 - Ngome Health Center
 - Isalavanu Dispensary

Mbeya:

The team included: Patrick Swai, USAID/TZ; Thomas Finkbeiner, CDC/TZ; Christina Mwangi, CDC/TZ; and Ruslan Malyuta, BASICS.

Sites visited:

- Mbeya Regional and Tukuyu and Rungwe District Medical Officers
- Mbeya Regional Hospital
- Mbeya Referral Hospital
- Rungwe District
 - Tukuyu District Hospital
 - Ruanda Health Center
 - Itende Dispensary

Context of Pediatric HIV/AIDS in Tanzania

HIV prevalence in adults 15 to 49 years of age in Tanzania is estimated at 7%. (Tanzania HIV Indicator Survey, THIS 2004). There are currently 1,400,000 persons living with HIV, including an estimated 110,000 children aged 0 to 14. (“2006 Report of the Global AIDS Epidemic,” UNAIDS 2006).

In March 2003, the Tanzanian Ministry of Health developed the *National Care and Treatment Plan for HIV/AIDS for 2003-2008*. The plan set the goal of providing ART to 100,000 people by the end of 2006 and to approximately 440,000 people by 2008. The targets include an expansion in the number of treatment centers from 96 sites to 200 designated sites countrywide. The MOHSW set a target that 20% of all of those on ART will be children.

According to the NACP, as of July 2006, 83,403 persons had enrolled for HIV/AIDS care and 42,692 persons had been treated with ART, with an estimate that 10% of these are children (oral communication, Dr. Bwijo Bwijo, Care and Treatment Manager, NACP, Tanzania) The estimated 10% of ART patients that are children is higher than the 7% level in most sub-Saharan African countries (“2006 Report of the Global AIDS Epidemic,” UNAIDS 2006). There are no data available on the numbers of children receiving or needing cotrimoxazole (CTX) prophylaxis.

Findings

The findings of the pediatric HIV/AIDS assessment are organized by national level perspectives on pediatric HIV care and treatment services in Tanzania and findings from the site visits to the regions. Specific details about the regional findings can be found in appendixes C, E, F, and G.

A. National Perspectives on Pediatric HIV Activities in Tanzania

Prior to conducting the initial assessment visits in Kilimanjaro, the first team visited USG agencies and partners, as well as the MOHSW and the National AIDS Control Program, and reviewed key documents pertaining to PMTCT and pediatric HIV care and treatment. Notes from the interviews with key stakeholders are summarized in appendix B.

Several recurrent themes formed the background for the recent assessment. In general, strategies are being developed in Tanzania to increase the number of children receiving HIV/AIDS care and treatment, including using the MCH/RCH clinic platform to take the program “where the children are.”

It is important to acknowledge up front that the MOHSW and the NACP have recognized the barriers to access to pediatric HIV care and treatment in Tanzania for some time now. Several barriers that are identified in this report are clearly spelled out in the notes from a “Forum on Pediatric HIV/AIDS Care and Treatment Scale-up” held in Tanzania on June 21, 2005. Several observations and recommendations from the June 2005 meeting are consistent with those of the recent assessment team, including the following:

“We have had difficulty identifying HIV+ children and getting them into ARV programs. At the moment, the drugs are available but the children are not being brought in for treatment in the numbers that were anticipated, based on numbers of HIV+ children estimated. Some potential barriers include limited VCT and/or “opt out” testing for children, stigma among health care workers, poor referral mechanisms between CTC and other areas of hospital where children present, lack of knowledge in public about available treatment for children, and weakness in clinical diagnosis skills. It was also noted that most children that are identified and treated are over three years and that 2/3 of children with HIV die before three years old, so we need to be particularly aggressive in targeting children under 3 year . . .

. . . CTC-adult attendees of CTC clinics should be pushed to bring in all their children for testing and counseling; (conduct an) education campaign for parents in the community that ARVs are being offered for children (this information is still widely unknown) and publicize that ‘if your child has X, Y, Z, symptoms- bring them in to see a doctor’; liaise between IMCI project and NACP to disseminate IMCI algorithm more widely in primary levels. This should improve recognition of potential pediatric patients by non pediatricians; NACP should develop a specific pediatric HIV training module for health care workers; urgently develop training materials for counseling and training for pediatric VCT; and implement routine offering of HIV test at all entry points.”

Several of those interviewed for the assessment have the same perceptions as those noted above. In addition, they observed that children do not seem to be coming into the CTCs. Pediatric clinics have also not been well utilized as an entry point to HIV care and treatment. The NACP is recommending a family-centered approach, and there are several partners who are beginning to launch efforts to reach communities with information and services. The MOHSW has recently modified the MCH card (# 4) to include a code that identifies mothers who have been tested for HIV, although the codes are not yet being used in a consistent way in all facilities.

Attention to pediatric HIV by those providing more general child health services would contribute significantly to increasing the numbers of infants and children receiving care and treatment services at lower-level facilities and in the community. The MOHSW has begun community IMCI in 29 districts and is promoting 17 key practices. Thirteen out of 29 districts are covered completely and supported by the United Nations Children's Fund (UNICEF).

University Research Corporation (URC) has conducted infant feeding training, and there are plans to train health care workers at all levels in infant feeding and HIV. The preventive care package for pediatric HIV could form the basis for expanding integration of child survival and HIV activities through EGPAF and other partners. URC is also working with the IMCI unit on a Reference Care Manual (RCM) that includes the IMCI/HIV referral recommendations that will be introduced at the national level.

Efforts are being made to train the health staff of lower-level facilities in child health management through IMCI, and more recently, WHO is undertaking the adaptation of the Integrated Management of Adult Illnesses (IMAI), which now includes PMTCT and pediatric HIV sections. Training has been completed in 11 health centers in Arusha, and is being completed in six of the health centers in Lindi and six in Mtwara, at present. Three staff from each health center team participate in theory-based and skills training that includes visits to acute care wards. The IMCI algorithms are used as part of the training, and there are plans to translate the Tanzania-adapted materials into Swahili.

There are efforts by the USG and several implementing partners to improve early infant diagnosis. DNA-polymerase chain reaction (DNA-PCR) has been recommended as one of the methods of choice, and the plans are to have DNA-PCR in four referral (zonal) hospitals by September. There is a USG partner at each zonal hospital to support this effort. The USG-zonal hospital pairings include: Harvard at Muhimbili; Department of Defense (DOD) in Mbeya; EGPAF at the Kilimanjaro Christian Medical Center (KCMC); and Columbia University at Bugando. Due to the challenges such as the cost of setting up the services and cost-benefit issues of this approach, a USG team recently cautioned against relying too heavily on this technology as the primary means of HIV diagnosis in infants. However, the national plan is to use this approach to the fullest extent possible at existing sites that are set up to do DNA-PCR and to maximize the use of other strategies of early identification elsewhere.

B. Findings from the Kilimanjaro, Iringa, and Mbeya Regions

There are remarkable similarities in the key findings across the three regions assessed. This is important to note since these similarities are the basis for the recommendations. If it can be assumed that the regions assessed are roughly representative of other regions in Tanzania, it could well mean that the recommendations of this report could serve as a catalyst to pediatric HIV care and treatment nationally, if implemented.

The findings fall into the categories of program planning and management at the regional and district levels; health facility services; and community services. In each of these areas, the assessment looked closely at issues related to the identification and referral of infants and children suspected or known to be exposed and/or infected; the care and treatment they receive; and referral systems to support this. The **key findings** from Kilimanjaro, Iringa, and Mbeya include the following:

Policies and Guidelines

1. Guidelines are not standardized or specific regarding identification, testing, and care and treatment of HIV-exposed infants and children. Different programs (PMTCT, VCT, clinical management, and HBC) have developed HIV/AIDS guidelines, all of which have a section on pediatric care, but do not present a uniform set of instructions that are standardized across units. HCWs may have access to several sets of guidelines within a facility, and problems occur when there are inconsistencies among the guidelines.

Service Delivery

Access of Mothers and Children to Current HIV/AIDS Services

2. Referral, regional, and district facilities offer a wide range of health services. MCH clinics, a part of what is referred to as Reproductive and Child Health Services, are among the most accessible health services for children. They are available at all levels of health facilities and provide a variety of services, including immunization, growth monitoring, family planning, HIV counseling and testing, PMTCT, labor and delivery, and sexually transmitted infection (STI) management.

Immunization coverage is high in Tanzania, e.g., 84% coverage of DPT I, II, and III in Mbeya region. MCH sites are an ideal entry point to HIV prevention, care and treatment for mothers and infants, and can serve as an excellent link to other services.

Particulars	National	PMTCT Coverage	Percent
No. Regions	21	20	95.24
No. Districts	124	116	93.54
No. of Health Facilities	4,112	544	12.06

3. PMTCT coverage is, however, still low. Only 12.06% of facilities in Tanzania offer PMTCT services (see table from CDC presentation, August 2006). In addition, the effectiveness of PMTCT is hampered by the fact that there is a serious lack of follow-up and referral between PMTCT services and other MCH services, with the result that:
 - Infants born to HIV-positive mothers are frequently lost to follow-up;
 - HIV-exposed infants seen at other entry points are not identified as HIV-exposed;
 - Many of these infants are not getting the CTX prophylaxis that they need.
4. Adult ART services have significantly scaled up in Tanzania, including the regions visited, over the past year. Most CTCs are found at the regional or district level hospitals in the OPD section of the facility. Due to good uptake, limited sessions per week and the fact that there is currently low capacity to monitor stable ART patients at lower-level facilities, it was noted the CTCs visited have long waiting lines. As CTCs are not integrated into the overall /routine health care system, attendance at the CTC could potentially contribute to stigma.
5. Some mothers who are referred to these crowded CTC sites with their infants are reported to be put off by the long lines and crowded conditions. This is acting as a disincentive for the mothers to seek treatment for themselves and their children.

HIV Counseling and Testing

6. Routine HIV testing of infants and children is not the norm and, in general, rapid tests are not being used for testing children (or their parents).
7. Health care workers find it very difficult to counsel parents and children about HIV/AIDS. This is especially true when it is not clear whether the mother is aware of or has disclosed her own HIV status. Even when mothers know their own status, HCWs report that mothers and fathers have a very difficult time agreeing to HIV testing for their children.
8. There are several factors limiting access by older children who are HIV infected and not yet receiving care and treatment services. Among these are issues unique to orphaned children, such as testing children for HIV who are being raised by foster families. There are reports of children being abandoned when foster families learn of their HIV infection. There are also issues of consent and comprehension of the implications of HIV testing for households that are headed by children.

Missed Opportunities for Identification and Referrals

9. As described earlier, there are multiple opportunities to identify and refer infants and children with HIV. These occur at adult CTC visits, at MCH visits, during hospitalization in pediatric inpatient wards, following deliveries by mothers who have attended PMTCT programs, and during visits by HBC workers to PLHAs in the community. Most HCWs have a very low index of suspicion so infants and children who might be infected with HIV and opportunities at these entry points are missed for early identification and referral to appropriate care and treatment.

Missing or not working are systems that could ensure that infected mothers and their infants and children on pediatric wards and in MCH/RCH clinics are tested and seen when referred for care. Two factors complicate the referral process: (a) referrals are not always documented and failed referrals cannot be tracked through the system, so that mothers cannot be reached when they miss postpartum or MCH visits; and, (b) there are no standard referral guidelines or forms from higher-level to lower-level facilities. There is inconsistent use of referral forms that do exist. This makes it difficult to track test results, diagnoses, and care provided to patients.

10. HIV-infected infants are not identified and referred from immunization clinic, a real lost opportunity since immunization rates are high. This is partly due to the fact that the documentation of maternal HIV status on the mother's MCH card (MCH card #4) is usually not marked and the code/status (if marked) is not transferred onto the child's MCH clinic card (MCH card #1). The MOHSW has recently introduced these codes; however, they are not consistently adopted and followed. Codes for care and treatment on the CTC-1 card are yet to be introduced.

Infrastructure Support for Service Delivery

11. Laboratory capacity is adequate at the regional and referral levels to do HIV tests, including ELISA and rapid tests, and to monitor patients on ART using biochemistry measures and CD4 counts. Rapid tests are also used at the health center and dispensary levels, though more consistently with adults than with infants and children, and are performed by non-laboratory personnel who are trained to do the test. PCR capacity is concentrated at the consultant hospital level. CD4percentage, important for monitoring infants, is not yet available at most regional and district level sites.

12. Most regional and district hospitals have functioning pharmacies. Several regions are currently undergoing ILS training.
 - a. ARV stocks appear to be current and monitored with fair consistency. First-line pediatric ARV formulations were in stock.
 - b. While most sites have CTX in tablet and syrup form, access to CTX for prophylaxis by RCH clinic staff is not consistent. Pharmacists often question the order because of a lack of training in the use of CTX for opportunistic infection (OI) prophylaxis.
 - c. There is variability in the availability of CTX syrup in HBC worker kits, depending on the donor that provides the kits.
 - d. Health centers and dispensaries rely on their receipt of essential drug kits, which provide limited quantities of CTX syrups.

Human Resources: Training and Performance

13. While several health care providers in each region have attended an ART training, health care workers in the regions visited have not attended training on pediatric HIV care and treatment. Even those who have attended training are not comfortable caring for HIV-infected children and pediatric patients in general. Mentorship is required by these HCWs. To date, training has reached mostly those at the regional and district hospital levels. Plans are underway to extend WHO's IMAI training with IMCI-HIV content to the health center and dispensary levels. IMCI-HIV training, which could facilitate early identification and increased referrals for pediatric HIV testing and care and treatment, has also reached only a few health care workers.
14. The level of suspicion of HIV, and thus follow-up action, in infants and children are low. This was evidenced by examples such as a child presenting to an MCH/RCH clinic with failure to thrive, documented through growth monitoring, but for whom no referral for HIV testing was made. A second example is a child on a pediatric inpatient ward with advanced HIV disease symptoms who was not tested for HIV and whose medical records did not list HIV as a possible diagnosis.

HMIS

15. Key health statistics are available via the HMIS/MTUHA system. It is, however, easier to find data at the district level than at the regional level. Data for pregnant women and children attending the RCH/MCH clinic services were available. HIV-related data are, however, not part of the HMIS/MTUHA yet, and summary statistics are sent directly to the national level. This is especially true of CTC and PMTCT data. Data disaggregated by age for children is not routinely collected apart from summarizing <5 and >5 age groups. This does not lend itself for useful detailed analysis.

Community Services

Education and Mobilization for Pediatric HIV/AIDS and Linkages between Facilities and Communities, NGOs and PLHA Groups

16. Community education and mobilization around pediatric HIV is not being undertaken in any of the regions visited.
17. There is very limited use of community-owned resource persons (CORPS) such as village health workers (VHWs), traditional birth attendants (TBAs), and NGOs to follow up when mothers and infants do not return for visits and to refer infants exposed and/or infected with HIV for testing and care and treatment. However, several HBC programs in Iringa and Mbeya are making some strides in referring pediatric HIV cases.
18. HCWs reported great difficulty counseling children about HIV, and there were few programs aimed at assisting HIV-infected orphans to access care and treatment services.

Discussion

There are significant strengths on which to build and expand access to pediatric HIV/AIDS care and treatment services in Tanzania. Most districts offer key health services, including reproductive and child health care, care and treatment services, voluntary counseling and testing, prevention of mother to child transmission, STI services, pediatric inpatient care, and outpatient care, among others. The regional and district level sites benefit from relationships with several international partners that support the sites in several ways, including renovations and procurement of equipment, mentorship, provision of drugs, and, in some cases, research activities. Rapid HIV testing is in place; there is the ability to conduct CD4 counts at most regional hospitals and by at least one hospital per district; there are national guidelines for PMTCT, VCT, and care and treatment in use at most of the facilities visited; and pediatric ART formulations are available at regional and district hospital facilities.

Tanzania has succeeded in setting up and attracting large numbers of patients to CTCs, which now operate in each region and district facility. These sites, which now serve small numbers of pediatric patients, have the necessary infrastructure and drugs to serve larger numbers of infants and children. However, there are several barriers that currently limit the ability of CTCs to expand.

Several factors influence the findings for each region. The teams operated independently of each other during the site visit phase of the assessment. Differences existed not only in the comparative areas of expertise of team members but also in the availability of various regional and district health managers and facility and community staff. This explains some degree of variability in the levels of detail and attention to the different assessment components across regions. The teams also noted that while there were many similarities in both opportunities and the barriers to effective HIV/AIDS care and treatment, there were also some important differences, which are detailed in the appendixes.

The teams' interpretations of the assessment findings are based on evidence from global best practices in developing interventions for HIV/AIDS, including PMTCT and, more recently, adult and pediatric care and treatment services. These evidence-based best practices include:

- All cadres of staff in multiple units within a facility and at several levels of care within a district/region need sensitization and varied training levels to suspect HIV in infants and children; be able prevent and treat OIs; know when and where to refer for testing and care and treatment; and be able to support adherence to ART regimens;
- A subset of all HCWs in each regional and district hospital should be trained, comfortable, and supported over time in managing pediatric HIV care, including ART;
- The success of pediatric HIV care and treatment services is more likely when there are clear national, regional, and district level targets, policies, and guidelines across program areas for pediatric HIV/AIDS care and treatment;
- Households, communities, NGOs, faith-based organizations (FBOs), village health workers, and others are more likely to utilize and appropriately refer patients to and access services such as PMTCT and pediatric HIV care and treatment services if they are educated about the services and mobilized to refer to them;
- The fewer the number of health facility visits required for testing and care and treatment, the more likely patients are to use the services offered; and,
- Patients are more likely to follow recommendations and return for follow up if HCWs do not exhibit stigmatizing behaviors and if services are free or inexpensive and physically accessible.

There still are many challenges to providing pediatric HIV care and treatment services in Tanzania, although much progress has also been made. Those challenges that are most significant relate to early identification and referral of exposed infants for testing and services, access to care and treatment, follow up and continued care and support while on treatment (ART), and community mobilization to support these services. Current health worker training programs, information systems and policies do not adequately support the routine identification, testing, and care and treatment of HIV-infected infants and children. Tanzania's commitment to pediatric HIV will be realized with a significant investment in tailored/strategic training, systems strengthening, and responsive policies.

Recommendations

The team's recommendations address the areas of policies, program planning and management; human resources; HMIS; supply chain systems; community linkages; and community education and mobilization. The team recognizes the intense effort that has been invested in increasing access to HIV/AIDS care and treatment for adults and the challenges in expanding HIV care and treatment services for infants and children. The assessment team considers the following recommendations feasible for implementation in Tanzania in that they build on the substantial foundation that has been built for the delivery of HIV care and treatment services, and the existing strengths of the health care workers and health system in Tanzania. While many of the recommendations require a long-

term effort, there are several that are achievable in the short term and appropriate for immediate implementation. This will require that the NACP provide strong leadership and clear guidance to the regions and the districts.

General Recommendation:

The general recommendation is that the MOHSW outline a specific and detailed document to address the gaps in pediatric HIV issues for both infants and children. This document should form a substantial component of the care and treatment section of a broader national HIV strategy and can build on the strengths of existing programs such as RCH, IMCI, PMTCT, VCT, care and treatment, and HBC.

Immediate Action Steps

The team recommends that the MOHSW develop and disseminate a memo to all facilities that clearly spells out a few key action steps to immediately increase pediatric identification and care and treatment. In general, these are steps already recommended in the Guidelines that currently are not widely or sufficiently implemented in most facilities. These include:

- Ensure that the mother's HIV status is recorded on the mother's MCH card (MCH card #4) and that the information is transferred to the child's MCH card (MCH card #1), so that HIV-exposed infants can be tracked through MCH clinics and other units.
- Similar codes for the care and treatment card (CTC #1) should be introduced.
- Provide cotrimoxazole prophylaxis at 6 weeks of age to all HIV-exposed infants and HIV+ children.
- Based on presenting opportunity, consider offering HIV tests to all children exposed and/or presenting with HIV-related signs and symptoms in both in- and out-patient settings. Country guidelines may need modifications to facilitate this in line with provider-initiated counseling and testing.
- Stage and commence ART to all infant and children found to be HIV+ as indicated in the *National Care and Treatment Guidelines*.

Specific Recommendations:

Policies, Program Planning, and Management

1. Provide clear guidance about the roles and referral linkages for each level of care for pediatric HIV services (identification, testing, care, treatment, monitoring, and follow-up).
 - a. To gain more support and adherence from health care providers in all levels of the system, and PLHAs, NGOs, FBOs, TBAs, and VHWs, they should be actively engaged in discussions and assist in documentation of the roles and linkages.
 - b. Include pediatric HIV service guidance in all regional and district health plans.

2. Clarify testing policies and enhance laboratory capacity to support the scaling up of early HIV diagnosis and care and treatment in infants and children.
 - a. Accelerate the progress in developing guidelines for testing infants and children.
 1. Include what tests to use, who should test and when to test, supporting existing use of DBS-PCR and expansion where feasible;
 2. Expand the capability of referral laboratories to calculate CD4 percentages, important in the monitoring of infants' and children's immune status and response to ART.
3. Expand the use of all entry points to test infants and children.
 - a. Design an approach to provider-initiated testing that takes into account issues of informed consent while facilitating increased testing of infants whose mothers want them tested.
 - b. Introduce detailed guidelines for counseling and testing infants and children in CTCs, OPD, IPD, and MCH units.
 - c. Add questions about the HIV status of family members to the CTC record. This will capitalize on parents and spouses as a means of identifying infants and children with HIV who might need care and treatment services.
 - d. Develop functional referral linkages between RCH, PMTCT, ART, VCT, and HBC programs and units.
4. Revise the *National Guidelines for VCT* (2005) and in the interim, issue a short guidance document to expand HIV counseling and testing for infants and children.

Section 5.3: Counseling for Special Groups – Children (p. 21) and *Pregnant Women* (p. 23) should be revised to reflect the following points: (1) the benefits of HIV testing in infants or children; (2) the use of antibody tests in infants; and, (3) testing the HIV-exposed infants of mothers who participate in PMTCT programs.

Section 7, *Diagnosis of HIV Infection in Infants* (p. 40), on testing infants born to infected mothers in the *National Guidelines for the Clinical Management of HIV and AIDS* could also be expanded to address the benefits of early HIV diagnosis. It should also elaborate on the use of clinical assessment when tests are not available.

5. Ensure the coordination, synergy, and progress of efforts that are currently underway to provide guidance, training, and resources to HCWs at different levels to provide HIV care and treatment services to infants and children. Examples include:
 - The rollout of IMAI training (which includes IMCI-HIV content) by WHO with the NACP and IMCI unit of the MOH, to 400 health centers and dispensaries in 2007;
 - A pediatric ART curriculum that is being developed with technical support from EGPAF and FHI;
 - A RCM that is being adapted by the IMCI unit of the RCH division of the MOHSW and URC and others. This includes a chapter on “Children with HIV,” which covers

HIV testing and cotrimoxazole prophylaxis in infants as well as a short section on ART. The section on clinical signs for starting ART and others must be consistent in the IMAI, RCM, and IMCI-HIV training and materials to avoid confusion for HCWs. Also, all sections on childhood illnesses in the RCM should be consistent in their mention of HIV as a possible cause of conditions, such as recurrent pneumonia and chronic diarrhea. This is currently not the case.

6. Improve the systems for pediatric HIV service delivery.
 - a. Expand and strengthen clinical treatment guidelines for pediatrics and finalize a pediatric ART curriculum that is consistent with the guidelines and supported by simple, practical job aids/tools to be used in units such as the MCH/RCH clinic.
 - b. Expand the CTC team to include ART prescribers in the MCH/RCH clinic.
 - c. Ensure collaboration between the IMCI unit of the MOH and WHO in implementation of expanded IMAI trainings at the health center and dispensary levels.
 - d. Ensure that infants in MCH clinics are counseled and tested and provided with CTX at the sixth week visit.
7. Unless and until mothers and infants are initiated on ART when needed in MCH/RCH units, consider strategies to decongest CTC sites to accommodate new patients, including infected women and children, by providing follow up for stable adult ART patients at peripheral sites for ART monitoring and ARV refills.
8. Establish functional referral mechanisms with standardized forms that include a feedback section and a tracking system for referrals made between RCH, PMTCT, VCT, and CTC units and sites.
9. Conduct a revision process within facilities to streamline access of mothers and infants to counseling and testing and care and treatment services. This will happen once several other recommendations (3-6) are implemented.
10. Increase PMTCT coverage. This is a critical intervention since even when pediatric treatment services are scaled up, it will be important to prevent new infant infections.
11. Ensure that mothers receive HIV care and treatment services as a means to ensure the health of infants and children.

Human Resources

12. Increase the numbers and types of staff prepared to offer HIV counseling and testing and treatment services to mothers, infants and children.
 - a. Train additional staff (beyond VCT counselors) in how to counsel parents/caregivers about testing infants and children for HIV

- b. Improve the skills of health care workers in pediatric HIV identification, care and treatment.
 - 1. Develop training tools tailored (duration, content, training methods) for the different levels and types of staff in different units.
- c. Because of the limited availability of sufficient numbers of HCWs trained in VCT and ART, consider the use of mobile teams to offer VCT/PMTCT and pediatric HIV counseling and testing at health centers regularly. In addition, mobile teams could assist with scale up of pediatric HIV by offering services at several sites side-by-side with the HCWs at those sites. This would serve to allow access to more children earlier in the course of their disease while also providing the needed mentorship to HCWs who are not yet confident in dealing with children with HIV.
- d. Provide opportunities for peripheral centers to benefit from clinical mentors who are experienced in pediatric HIV care and treatment.
 - 1. Provide supportive supervision visits on a regular basis; and,
 - 2. Establish a “hotline” for HCWs to call for case consultations by cell phone to a mentor team.

Supply Chain

- 13. Improve the use and supply of cotrimoxazole.
 - a. Anticipate a large demand for CTX and ensure sufficient quantities, and proper storage and distribution of tablets and syrups.
- 14. Ensure the supply of appropriate HIV test kits.
 - a. Anticipate a large demand and ensure selection of appropriate kits (no cold chain required, able to use whole blood) in sufficient quantities, with proper storage and timely distribution.
- 15. Ensure a consistent supply of pediatric ARVs, including a second line regimen.
 - a. Anticipate an increased demand and conduct quantification and forecasting based on clinical data.

Health Management Information Systems

- 16. Improve consistency of use of HIV codes on the *Patient Held Card* (MCH cards nos. 1 and 4) and the CTC card #1. The CTC card #1 (small blue card) should indicate the status of the child from MCH card #1 and vice versa. Ensure use by all facilities, and train and reinforce consistent use of the established codes.
- 17. Improve the design and use of facility records and referral systems.
 - a. Introduce an HIV HMIS that links existing PMTCT, VCT, ART, and RCH data.
 - b. Disaggregate the data by the age of the child, including categories for under 2s and under 5s.
 - c. Include care indicators such as the number of children on cotrimoxazole prophylaxis.

Community Education and Mobilization Strategy on Pediatric HIV/AIDS and Linkages between Facilities and Communities, NGOs and PLHA Groups

18. Train home-based care workers to identify and refer HIV-exposed and -infected children according to protocols and referral mechanisms developed in collaboration with the facilities that will receive the referrals.
19. Establish communication mechanisms between facility providers and community leaders, VHWs, TBAs, and NGOs about the needs of infected infants and children, the sources of care, and the mechanisms for using them. One suggestion was to use village level workers to improve identification, referral, and follow up of HIV-infected children by assigning a group of households for coverage through those trained in community IMCI.
20. Engage community groups in identifying, referring, and providing support and follow up to families with HIV-infected infants and children and to offer community education on pediatric HIV.
 - a. Train VHWs, CORPS, and others to support the efforts of HCWs in facilities through training in community IMCI-HIV; and,
 - b. Use treatment (theirs or their child's) experienced mothers and others living with HIV/AIDS to provide support to mothers of HIV-infected infants and children and to do outreach and adherence counseling.
21. Conduct an in-depth assessment of the best approaches to the HIV-infected orphan and other vulnerable children in communities.
22. Conduct formative research to provide data about the knowledge, attitudes, practices, and preferences of parents and communities about pediatric HIV. The information would provide the basis for the design of a communication strategy and supporting materials for an intensive effort to educate and mobilize communities around infants and children with HIV to meet their needs for care and treatment.

Conclusion

Tanzania has done much to expand treatment access for people living with HIV/AIDS. The country has the infrastructure, basics systems, human resource capacity, leadership, and political will to do much more for infants and children with HIV. The findings and recommendations of the teams are shared with gratitude to the regional and district medical officers, health care workers, and community NGOs and other groups as well as people living with HIV/AIDS in the regions. These busy professionals and community members made it possible to gather detailed data about health management and services in the facilities and communities in the regions assessed. Their time is

valuable, and their generosity in providing the teams with data and insights was critical to the assessment.

The findings and recommendations of the teams resemble those noted in the 2005 meeting of pediatric stakeholders. Progress on several of those recommendations has been made and many others have not yet been addressed. The main distinction between some of the recommendations at that meeting and what the teams concluded through this assessment is the need to expand the venues in which mothers and children can access treatment rather than simply expand the number referred for treatment. A patient focus that recognizes the demands of health facility visits on mothers and their children are the underpinning for many of the recommendations in this report. “Go where the children are” would be one way of summing up the philosophy herein. Along with this is the principle of family-centered care. Using home-based care visits and CTC visits by adults as a way to reach infants and children are critical approaches.

Assessments are helpful but not sufficient, and the need is urgent. The recommendations put forward here are intended to respect the need for long-term strategies to improve systems and result in sustainable outcomes while recognizing as well the need for simultaneous immediate actions that do not compromise sustainability. What is called for at this point in Tanzania is a pragmatic approach to the policy, program management, facility and community service delivery challenges that, if effectively addressed, will make an enormous difference in the lives of infants and children with HIV/AIDS.

Appendices

Appendix A

Contacts

Baseline Assessment Visit: National Level and Kilimanjaro

Roland O. Swai, Programme Manager, NACP, MOHSW/Tanzania
Neema Rusabamaila, IMCI Coordinator, RCHS, MOHSW/Tanzania
Sekela Mwakyusa, Pediatric HIV/AIDS, NACP
Stella Challe, Focal Person, Care and Treatment, WHO/Tanzania
Emma Lekashingo, Pharmacist and Acting Care and Treatment Program Manager, NACP
Mark Swai, Pediatrician, Director, Hospital Services, Kilimanjaro Christian Medical Centre
Tim Rosche, Chief of Party, John Snow Inc. (JSI), DELIVER Project Tanzania
Johnnie Amenyah, Senior Pharmaceutical and Logistics Advisor
Bazghinawerq Semo, Director of Clinical Programs, International Centre for AIDS Care and Treatment Programs, Columbia University, Mailman School of Public Health
Yohana Abraham, Programme Officer, International Center for AIDS Care and Treatment Programs, Columbia University, Mailman School of Public Health
Dorothy Muroki, Deputy Director, ECA ROADS Project, Family Health International
Deborah Ash, Senior Quality Assurance Advisor, Quality Assurance Project, URC Tanzania
Festus Kalokola, Consultant Pediatrician and Director, Quality Assurance Project, URC Tanzania
Christina W. Mwangi, Program Director and Laboratory Team Lead, CDC-Tanzania
Nnemdi Kamanu, Director of Care and Treatment, CDC-Tanzania
Eunice Mmari, Senior Program Manager, HIV/AIDS Care and Treatment, CDC-Tanzania
Raz Stevenson, Quality of Care and Services Delivery Specialist, USAID/Tanzania
Patrick Swai, Senior Project Management Specialist, HIV, USAID/Tanzania
Susan Monaghan, HIV/AIDS Advisor and Deputy Director, HIV Team, USAID/Tanzania
James Allman, Health Advisor, Health Team, USAID/Tanzania
Mosile Eligy, Regional AIDS Control Coordinator (RACC), Mawenzi Regional Hospital
Dayness Alexander, RCHS Coordinator, Mawenzi Regional Hospital
Luciana Maruma, Assistant Medical Officer and CTC Site Coordinator, Mawenzi Regional Hospital
Elizabeth Mushihiri, Usangi District Hospital
Alson Semoka, Kifula Health Center
Kawawa Jonas, Clinical Officer, Makanya Health Center, Same District
Urasa, IMCI, Medicine and Pediatrics CTC, Same District Hospital
WJ Semarundi, Medical Officer in Charge, Same District Hospital
Thomas Masawe, District AIDS Control Coordinator, Same District

Iringa Region Visit

Iringa District Hospital

Dr. Oscar Gaborne, Hospital Director Incharge
Dr. Paul Luvanda, Care and Treatment Coordinator (CTC) and Acting Regional AIDS
Coordinator
Dr. Ngallas Mwalusamba, Medical Officer Incharge
Dr. Florida Kwosi, Medical Officer Pediatric Ward
Dionicia Ngata, Assistant RCH Coordinator
Olipa Madeha, MCH Coordinator
Neema Inpela Jumanne, Clinical Officer
Paulina Sasala, Public Health Nurse, PMTCT
Mariam Tangalile, Nursing Officer, PMTCT
Josephina Mbembe, Public Health Nurse, CTC

Ngombe Health Center

Mary Makindi, Medical Officer-In-Charge
Sophia Mlabwa, Public Health Nurse
Esther Nyimbo

Mafinga District Hospital

Dr. Subi, District Medical Officer Incharge
Dr. Augustino Hela, Medical Officer Incharge
Hamza Lubugo, District AIDS Control Coordinator
Dr. Peter Mwenda, IMCI/Malaria Coordinator
Zena Mkumba, CTC Coordinator
Bernadeta Kilala, RCH Incharge
Rehema Kingilo, District RCH Coordinator
Santina W. Chengula, PMTCT Public Health Nurse
Lilian Sanga, Clinical Officer at MCH
Juliana Tagalile, Hospital Matron
Elinika B. Mbona, Nurse Midwife and HIV Counselor

Isalavanu Dispensary

Tobiasi Nyakunga, Clinical Officer
Geofery Mwamalumbili, Medical Assistant

Local NGOs

CUAMM
Dr. Michael Mwakajile, Project Coordinator

ALAMANO Center

Rhoida Kimbe, Assistant Director and Counsellor

Alpha Dancing Group

Elitha Chusi, Project Manager
Severin Mtitu, Field Officer
Happiness Kombecuba, HBC Nurse

Global Fund

Samson Lusumu, Project Officer for Community Mobilization for Tuberculosis (TB)/HIV
Rose Matovu, CARE
Andrew Chambers, Organizational Development Advisor

AMREF (African Medical Research Foundation)
Owen Wimbo, Project Coordinator for Care and Support

SHIDEPHA
Fausina Nsilu, Community Mobilization Coordinator for Post Test Clubs

Mbeya Region Visit

Mbeya Region Medical Office

Fred Minja, Acting Regional Medical Officer
Julius Sewanga, RACC Mbeya
Isabela Nyalusi, Regional RCHS Coordinator
Paulina Mbezi, PMTCT Coordinator Mbeya
Peter L Meleki, Regional Health Officer (RHO)

Mbeya Referral Hospital

Peace Shannon Harrison, Director, Henry Jackson Foundation
Maduhu, Consultant Pediatrician, Mbeya Referral Hospital

Tukuyu District Hospital

Dr. Frank, Acting District Medical officer
Lazaro Mwaihojo, CTC Coordinator
Charles Hinju, District AIDS Control Coordinator
Magret Chitanda, District RCHS and PMTCT Coordinator
Issac Soka, Voluntary Counseling and Testing Coordinator

Luanda Health Center

Salama Mgonja MO i/c Ruanda Health Center
Kalumuna, Nursing Officer and Senior-in-charge RCHS
Kibopile Clinical CTC/STI

Itende Dispensary

Queen Mwakijambile, Medical Officer-in-charge, Medical Assistant

Mbeya NGOs

KIHUMBE
SHIDEPHA

Appendix B

Interview Notes—National Perspective

Baseline Assessment Visit Meetings

CDC GAP (Global AIDS Program)

CDC is working closely with the Ministry of Health, Columbia University, Harvard, and EGPAF to improve early infant HIV diagnosis. One focus will be on reaching infants through immunization clinics. DBS PCR will be the method of choice. Each zonal hospital currently has a USG partner working there: Harvard is at Muhimbili; DOD is in Mbeya; EGPAF is at KCMC; and Columbia is at Bugando, with CDC collaboration.

CDC is spearheading a group working on a pediatric framework that focuses on early infant diagnosis, linking lab and programmatic elements. The pediatric assessment should help this process by identifying where infants are coming from for care. There will be a meeting in mid- to late July to produce the framework through a workshop to review the document. With stakeholder buy-in, this document can then be used to inform the national HIV strategy.

At the facility level, there is a unique ID number used for ART patients that is being adapted for pediatric cases as well. This number should follow mothers and infants from ANC through care services. The number indicates the region, the district, and a unique individual identifier number.

The Ministry is planning to come out with guidelines regarding diagnosis in infants, awaiting a final report from Entebbe that requires CDC and WHO consensus. It now looks Mwanza will be ready to start first with the use of DBS PCR for early infant diagnosis.

The current strategies for increasing the numbers of children getting care and treatment include using the PMTCT platform in MCH. Going outside of MCH to the community is becoming part of Columbia's program. It is plausible to use TBAs (EGPAF is doing this), CORPS, and community health workers. KIWAKKUKI is a woman's organization that works on HIV that could be of use and expanding the work of groups such as CARE and AMREF to do more than malaria is another approach.

It is problematic that pediatric patients do not seem to be coming in for care and that the counseling and testing seem to be an issue for health care workers and parents.

NACP

Dr. Roland Swai, NACP program manager, believes that pediatric uptake, while better in Tanzania than in many other African countries, bears analysis such as what is currently proposed by EGPAF as an operations research (OR) project. Since children are dying quickly, the perspective is that PMTCT strengthening is critical and there is concern that nevirapine is not the right drug. There are currently over 400 PMTCT sites in the country that need to be tracked more closely. The issue of pediatricians' discomfort with pediatric treatment is of concern. Integrating the perspectives of a person with a broad child health background on the team in July will be critical to better understanding the issues with pediatric uptake, partly because pediatric clinics have not been well utilized as an entry point to HIV care and treatment. Taking a family-centered approach is also an NACP recommendation.

MOH/IMCI

The three main components the IMCI program in Tanzania include: improving health worker skills through case management training; strengthening health systems through supervision and in areas such as drug management, training, and infrastructure; and improving the quality of care at the hospital level. There is work being done using the collaborative approach in this area.

WHO and UNICEF have developed referral care guidelines, and WHO has a hospital assessment tool for outpatient, laboratory, and pediatric services. There is also training in emergency triage, assessment, and treatment (ETAT). Tanzania has adapted the chapter on referral care guidelines from the *WHO Pocketbook*.

There are five regions using the Referral Care Package through work with URC; these include Dar, Tanga, Arusha, and Iringa.

IMCI coverage is defined as conducting at least one case management training for 16,018 HCWs in a district. Using this indicator, 115 of 126 districts have been covered in Tanzania. Some have more than two people trained, and some have one per health facility. There are fewer nurses than assistant medical officers and clinical officers trained. In some sites it is an MCH aide who provides most of the care for children. These need 3 weeks' instead of 2 weeks' training because of their limited background preparation.

The last health facility survey was conducted in 2003. It showed that those who are trained do better prescribing, more appropriate management and classification, and more counseling.

Health workers keep a chart booklet with the IMCI algorithms and the mother's card plus the usual MCH card.

In terms of community components, they have started community IMCI in 29 districts and are promoting 17 key practices. Thirteen out of 29 districts are covered completely and supported by

UNICEF. They use a cascade approach, moving from tertiary centers to the CORPS. There are 10 CORPS per village at the minimum. There are village meetings at which village leaders choose the CORPS. The criteria are that there are five men and five women with a standard seven education. The CORPS include TBAs and VHWs. They are volunteers who receive incentives in the form of t-shirts, bicycles, etc. The trainers are the ward supervisors who are supported by the Districts. There are also extension workers who do get a salary. Those taking care of children are the community IMCI CORPS and the CBDs (community based distributors).for which there is a child health component.

A suggestion as to how to use village level workers to improve identification, referral, and follow up of HIV-infected children is to assign a group of households for coverage through those trained in community IMCI. They could report quarterly on households where there is HIV, and the reports would be compiled monthly followed by meetings of the CORPS. The executive officer compiles the village reports. Those households with HIV could be contacted re: status and needs of the children. Stigma would have to be addressed.

NACP and WHO

While Tanzania is doing somewhat better in reaching children with pediatric HIV than some surrounding countries, it is clear that many infants and children who need care and treatment services are not making it into the CTCs. There is a need to sensitize MCH workers where children attend for other services and to work with PMTCT programs as well. There was a pediatric training in May and there will be four more before the end of the year. The trainings will target staff working in the CTCs but will also include those on pediatric wards and in MCH sites. Initial trainings in the country targeted primarily those who would be ART prescribers, but will now expand beyond them to other staff. The training is five days in length and includes a little about IMCI-HIV. The attitude re: the IMCI-HIV algorithm is that it would limit the kids identified to those are very sick, and there is a need to get children in earlier. The current care and treatment plan does not include enough pediatrics but the pediatric framework that is being developed will be a part of the overall national HIV strategy.

There is a lack of a strong pediatric HIV counseling component in the country program and in any training programs being offered in Tanzania. Christian Relief is organizing a training of trainers in February that targets six counselors for a one-week training but no follow up is integrated. There is a need for more funding and assistance. The training includes issues of disclosure and adherence. Providers find disclosure to be particularly difficult.

Also, I-TECH is currently doing a more general training needs assessment in the country.

URC Quality Assurance Project (QAP) Pediatric Hospital and HIV Collaborative and HIV and Infant Feeding Project

URC is working through MCH sites to identify children with HIV in five hospitals in Dar es Salaam and at the regional hospital in Morogoro. They are helping the MOH in the North at six facilities in Tanga and six in Arusha, and are planning to move to the South. The work is in response to the small numbers of pediatric patients on treatment. There is an IMCI algorithm adapted to identify HIV patients, and there are plans to validate the algorithm. Community IMCI is being implemented in Morogoro under the Tanzania Essential Health Program and in UNICEF-supported regions.

Over 90% of women in the country attend ANC and about 40% tend to deliver at home. An issue highlighted by URC is the loss to follow up of women who participated in PMTCT programs once they deliver their babies. An MCH card at delivery that is labeled to identify the mother as exposed is proposed, though there is the issue of these cards being lost. The focus is on the mother with little focus or awareness on the part of fathers. URC is planning to take a more community-/family-centered approach.

A finding about under 5's who are sick is that health care workers do not want to discuss the possibility of HIV infection if the mother has not disclosed her status, or if she has not yet been tested.

Another aspect of URC's work is its development of job aids and patient education materials on infant feeding and HIV. These have reached lower-level facilities, as noted by the assessment team during their visits. In Same, URC also conducted infant feeding training, and there are plans to train health care workers at all levels in infant feeding and HIV. One finding thus far is that health care workers tend to overestimate the risk of HIV transmission through breastfeeding. The Baby Friendly Hospital initiative in Tanzania that was so successful in the past is no longer succeeding because they cannot adhere to the 10 required steps. The infant feeding initiative is now being evaluated. Findings such as the one from Uganda whereby women are discontinuing breastfeeding upon being told the results of the infant's PCR test results reveals the need for counseling of women whose infants are part of a program that provides infant HIV testing. Groups also working on infant feeding and pediatric HIV issues include Counsenuth and Twumaine (CARE project consortium). There are no known efforts in community education about pediatric HIV in Tanzania at present.

USAID/Child Health

In Tanzania the total fertility rate has stabilized but maternal mortality has increased while under-five mortality decreased by 30% during the same time period. The Academy for Educational Development (AED) is working on a zinc supplementation project, and the Access to Clinical and Community Maternal, Neonatal, and Women's Health Services (ACCESS) Program is working under the AIDS and Health strategic objectives and is pushing to go national with IPT. Key partners in child health have been the Johns Hopkins Program for International Education in Reproductive

Health (JHPIEGO), which has focused on ANC through which program they have engaged the MOH in working on malaria and syphilis in pregnancy, and PMTCT. IPT will now be a part of their program. The Access, Quality, and Use in Reproductive Health (ACQUIRE) Project strategy in Tanzania involves both national level policy work and the scaling up of services in 10 focus regions to improve RH/FP service delivery.

There is a need for cooperation among the different cooperating agencies working in these areas.

Over time, HIV/AIDS and PMTCT have become focus areas because of increased funding. It is important that a basic or preventive care package for pediatric HIV engage different partners. Other recommendations are that EGPAF take its interventions to scale and linking child survival with HIV IMCI needs to move forward as coverage is reported to be good but it stalled a few years ago. Too few people are working on it now. The government has an IMCI and malaria focal point in each district and has trained 80 out of 120 focal points. IFACARA is doing OR on ACTs and fever; there is a designated district hospital, and they are training medical assistants. In Pemba there were 400 cases of children in a one-month period of whom only 60% had malaria.

In January 2005, Tanzania launched the Global Partnership for Child Survival with the World Bank. Since the elections, this has not progressed. The heads of many departments have been in flux so it is hard to make progress. A period of over 6 months has passed, and many appointments have not yet been made. Malaria questions have been added to the DHS, and there is hope to work with the AIDS survey and to add family planning questions. There has been an increased uptake of family planning methods at PMTCT sites because of recently refurbished FP commodities.

Columbia Program

In Kilimanjaro, an MCH platform is being used to increase pediatric HIV care. Each mother is encouraged to bring in her partner, infant, and other children for care at one site; this began in October, and another site started in December using this model. Enrollment rates are good given the convenience of the “one-stop” shopping approach. There are over 150 women in care and 30,040 pediatric patients at the Harumba and Same sites. Harumba also has home-based care services. This will be replicated in Mwanza and at another regional hospital. It is true that only about 1-2% of women bring their partners, even at these sites. As to the question of barriers to identifying children with HIV through well child clinics, no insights were offered. Follow up of HIV-exposed infants with cotrimoxazole is a problem. The cost for transport seems to be an issue. Staffing is also an issue at many sites. Home-based care is a mechanism that can be used to track defaulters. The NGO KIWAKKUKI seems to operate more in urban areas and has not proven to be as strong a linkage to track children in their households.

Columbia will be taking the lead in establishing DBS PCR as a method for early diagnosis. In Same there is currently no infant diagnosis and EGPAF is working on this at KCMC. In Harumba and Same they are using a network model to link the health center, dispensary, and hospital; this is working

well with PMTCT. PCR equipment has arrived at Buganda in the Lake Zone, and there are two lab technicians that were trained in Rwanda. Luis Rodriguez is scheduled to come to assist in setting up this service as he has done at the National Research Laboratory (NRL) in Rwanda. There will be four DBS pilot sites. In one year the project identified all HIV-exposed infants and used HBC teams to identify them in communities. They found 67 babies to be HIV positive. In the future they will offer testing to the mothers of under-18 month infants on return or immunization visits, and use this to determine the need for the baby to be tested. There are plans to have PCR in all zonal hospitals by September. A nurse has been hired as the logistics coordinator for infant diagnosis, and she has been trained in Rwanda to do forecasting, etc.

There is not much communication between the different partners working on pediatric HIV because of the designation of partners to specific regions. There is no contact with child health projects or with IMCI inputs.

Columbia currently runs 14 sites, with 25 planned by the end of September.

JSI/DELIVER

In terms of possible future assessment sites, noted that Mbeya has a very committed person from the DOD at what is a high-tech referral site from which they are doing supportive supervision to lower-level facilities. There is the sense that overall, the country service providers are not yet prepared to provide pediatric HIV care and treatment services.

Currently the quantification of ARV needs is done based on the percentage of total cases will be pediatrics and what percentage of the pediatricians' cases are over-5 years old, etc. The country started with a figure of 20% to be pediatrics but this has been revised downward to 10% based on current uptake for pediatric treatment.

There are gaps in training and clinical supervision in pediatric care. PharmAccess has zonal supervisors and no facility gets ARVs until they meet certain requirements. Strengthening plans are on file, and DELIVER will also have a zonal person assigned for logistics. There are currently serious issues with stock keeping, documentation, etc. Currently there is a serious issue with the confidence that current data provides in terms of the ability of DELIVER to help with projections of need. DELIVER has helped to design the reporting and request forms. There are currently up to 20 parallel systems, and there are attempts at integrating these. There will soon be an electronic system for ordering drugs online. Fifty percent of ARVs are currently used by the 19 sites in Dar es Salaam. Paper-based reporting is not going well.

There is currently no policy-level decision regarding cotrimoxazole prophylaxis. Supply, however, does not seem to be an issue. For HIV, there is color-coded CTMZ for HIV, and this could cause a problem, as some CTMZ is bought with revolving drug funds for STIs, HIV specifically.

Kilimanjaro Christian Medical Center

As a referral hospital, the level of care in the region depends heavily not only on the quality of service delivery at the site but on the quality of the care delivered at lower levels. This determines the appropriateness and timing of referrals to this level as well as to the ability to do follow-up care. The staff knowledge of pediatrics at those sites that refer to KCMC needs strengthening. In the past there was a program for pediatric continuing education that linked KCMC with other areas. This was supported by a Netherlands group and included outreach to hospitals to do rounds and bedside teaching as well as continuing education seminars and the like at KCMC. Follow up of ART patients at the lower levels, including adherence support, is now a major challenge. There are clinical conditions that develop that require follow up. The Family Care Center that is in the planning phase will address linkage issues. Human resources and time constraints are also lower-level issues. Supervision at these levels requires fuel, transport, and personnel skilled in supervision. The plan is to look at the gaps, develop solutions, and replicate the model in other regions.

As a specific example, a mother with HIV might be seen at KCMC and then return to her village. The issue is whether there is someone at the village to talk to about how she is doing over time. VCT sites refer directly to KCMC. Outpatient visits technically require a referral, but patients who prefer KCMC to other facilities often come directly, which then poses a challenge for follow up. PMCT is linked to health centers in Moshi. Some go to Mawenzi, and some bypass Mawenzi to come to KCMC. Patients come from all over Tanzania for some specialized services such as eye surgery.

- Daily census is 500/day, and average occupancy rate is 150% for 450 beds. They often have 600 patients in-house.
- Outpatient clinics see new 20,100 patients/year and 85,000 return patients to total 106,660 total visits a year.

The HIV-testing policy at KCMC is voluntary counseling and testing; they are doing provider-initiated testing. The CTC uses one card with the date and drugs dispensed on it that is brought back at each return visit by the patient, along with a card that is kept in-house.

Appendix C

Region-Specific Findings

Kilimanjaro Region

Program Planning and Management

In the Kilimanjaro region, regional and district work plans ranked HIV as a priority with efforts focusing primarily on HIV prevention without specific mention of pediatric HIV in either plan. Also, there were no regional or district targets specific to pediatric HIV.

The team was unable to verify the existence of guidelines specifying which facility level should provide which care and treatment components and, similarly, there were no clear guidelines about HIV testing for infants and children. Neither were there clear linkages between facilities, nor between communities and facilities for referrals.

There are multiple unfilled posts at all levels of the district health system and these have a significant impact on the ability of facilities to provide services.

Cotrimoxazole supply is part of the essential drug kit system. While cotrimoxazole appeared to be readily and consistently available, guidelines for its use for prophylaxis in HIV-exposed infants and in people living with HIV were not evident at the district level and thus had not been communicated to the health facilities in the district.

The HMIS/MTUHA system does not include HIV indicators such as numbers of children tested for HIV, number of hospital admissions of HIV-infected adults or children, numbers on ART, etc.

Health Facility Services

Delivery Model

Pediatric ART is available at Mawenzi Regional Hospital and Same District Hospital; ART is not yet available at Usangi District Hospital, although VCT and PMTCT services are operational. The mode of service delivery varies from integration into an MCH clinic, services offered through an outpatient department, and other services offered in the CTC (ART-specific clinic). Pediatric HIV care capabilities are extremely limited in the non-ART sites.

Pediatric HIV Case Identification and HIV Testing

Training in HIV diagnosis and pediatric HIV care has not extended beyond the CTC sites and there it is also limited. In several sites, the staff had no knowledge of what could be done for a child with HIV except to refer them to a higher level facility.

The most common admission diagnoses for under-5s in the sites include malaria, pneumonia, diarrhea, and upper respiratory infections. There was little indication from interviews or from records

that these diagnoses are followed up with any assessment as to whether the conditions are HIV related. Testing is not offered to caregivers of infants or children with severe or recurrent cases of these common illnesses. In general, pediatric HIV infection is not included as a differential diagnosis.

Approaches to HIV testing for children and adults varied across sites, but it was consistently found that routine offers of HIV testing to caregivers of infants and children with HIV-related clinical signs such as malaria, severe pneumonia, chronic diarrhea, etc. were not made. Reasons for this include: lack of awareness of the clinical stages of pediatric HIV infection, clear discomfort on the part of health care workers around discussing, much less counseling, parents about HIV in their children, and lack of training of staff in general HIV care and treatment. Inpatient and outpatient wards were similar in this respect. Staff in one site reported that they never test a child under-5 years of age

Routine Child Health and Management of Common Childhood Illnesses

Growth monitoring is routinely performed. In many cases, though, HCWs are checking either the height or the weight, but not both. IMCI and IMCI-HIV training had not reached all sites and, where it had, there was little evidence of its application.

Cotrimoxazole Prophylaxis

Of immediate interest and significance is the lack of knowledge about the benefits of cotrimoxazole prophylaxis in infants and children. While the drug itself appeared to be well stocked and available in pediatric dosages and formulations, the staff at several facilities were not aware of the indications for its use for OI prophylaxis in adults or in children, nor were they aware of Tanzanian national guidelines that exist.

In addition, staff in PMTCT programs and MCH sites were unaware that cotrimoxazole could be given to HIV-infected women. One staff person in a PMTCT program said, “Tell us what we can do for these women. We don’t know and we want to help.”

Nutritional Support and Psychosocial Services and Support

Services such as nutritional support and psychosocial support are very limited, and there is little engagement of people living with HIV/AIDS or PLHA support groups at the sites or even in the communities to assist with adherence counseling and similar support services to families on ART.

Patient Education

The sites where services have been in place for a period of time offered patient education materials; newer sites had none of these materials. No sites offered pediatric HIV-specific information.

Record Keeping and Referral Systems

There seem to be multiple parallel records for individual children that fail to include anything related to HIV. In one case, a CTC record of a positive HIV test in a 10-month old was found, but no follow-up visit or outreach could be tracked through the CTC records or elsewhere. When asked about

follow up for appointment no-shows, we were told that the clinical officer calls the dispensary and asks that they find the child, but there is no system for follow up of this request.

At one district hospital, the referral form does include a feedback section, but the providers said it is rarely completed. Patients have little or no support in their efforts to comply with referrals in terms of transport, clear instructions, or follow up.

A systematic description of responsibilities at each level along the continuum of pediatric HIV care and treatment does not exist. What responsibilities fall at the health center, the district hospital, and regional levels are not spelled out, and there is not a clear system for referral and feedback within departments and between the different levels.

Community Services

In one district in Kilimanjaro, it was not possible to identify community groups working on child health or HIV/AIDS and definitely not pediatric HIV/AIDS. There is a women's group (KIWAKKUKI) in one district that works on HIV and orphan issues. There was no evidence of community education and mobilization around the issues of infants and children with HIV/AIDS. Services such as home-based care and psychosocial support to families/households with HIV/AIDS were not evidenced except for a small home-based program in the early stages in one district.

There was no evidence that village health workers or CORPS were being engaged in education or follow up or support to families being seen in the CTC, to mothers in PMTCT programs, or in general child health activities that might lead to identifying suspected cases of pediatric HIV/AIDS. Some evidence indicates parents and health workers are mutually reluctant to identify infants and children with HIV.

Iringa Region

Regional Profile

Iringa is one of the 26 regions in South East Tanzania and shares borders with Mbeya in the south, Dodoma in the north, Morogoro in the east, and Sumbawanga in the west. It is accessible primarily by road and is approximately 800 kilometers away from Dar es Salaam. The districts in the region include Iringa rural, Iringa urban, Mufindi, Makete, Njombe, Ludewa, and Kikolo. The population in 2005 was 1,490,892 with a growth rate of 1.5%; it is predominantly rural (82.8%), with only 17.2% urban dwellers. The total population of children less than 5 years in 2005 was 225,583, contributing to 15.1% of the population.

HIV prevalence in Iringa is 13.4% compared to an estimated national HIV prevalence of 7%. Iringa has the second highest HIV prevalence rate in the country after Mbeya District.

Health Infrastructure

Many NGOs in the region support a variety of HIV services and in many cases the services are linked with CTC sites. These organizations include AMREF, ALPHA Dancing Group, ALLAMANO, UMATI, CUAMM, ELCT/ELCB, IDYC (Iringa Development Youth Club), SPW, PSI, Santa Viana, Migoli RCM, FHI, CARE/Tumaini, and Deloitte and Touche. The services provided range from HBC, care for orphans and vulnerable children, condom distribution, behavior change communications, nutritional support, and direct support to people living with HIV/AIDS. There are no specific services or outreach to infants and children infected with HIV.

HIV-related health services available at the regional and district hospitals include VCT, PMTCT, ART, CTX prophylaxis, measurement of CD4 count, HBC, and referrals for community services. Most of the services listed are available at the majority of the sites, including the sites that were assessed. Nutritional counseling and especially nutritional support are limited, and on-site psychosocial support is also very limited. CD4 counts are available only at the regional hospital level, and PCR tests are not available in any of the facilities in the region. There are a total of 18 PMTCT and 16 ART sites in the region.

Findings in the following sections are based on interviews, observations, and record reviews at the health facilities and with the following local groups:

- Iringa Regional Hospital
- Mafinga District Hospital
- Ngome Health Centre
- Isalavanu Dispensary
- Local NGOs
 - CUAMM
 - ALLAMANO
 - ALPHA Dancing Group
 - AMREF
 - SHIDEPHA
- Stakeholders meeting of 35 participants from the health facilities, NGOs and the community.

Program Planning and Management

There is committed leadership in the regional and district health management teams, with coordination of activities between the regional and district levels of care, including the CTCs. Specific to pediatric HIV care and treatment, there are currently no specific targets and plans to expand coverage. In terms of pediatric HIV targets, each facility is responsible for targets set in conjunction with the national program and partners. There were no reports or records of meetings organized at the regional or district level on pediatric HIV/AIDS related issues.

Human Resources, Training and Pediatric HIV Care and Treatment Capacity

Dedicated and hard working personnel staff most of the sites. There were no reports of staff shortages in the facilities, although in fact sanctioned positions are not all filled. While there are health workers in the region who have been trained in general ART, none have been trained in pediatric HIV care and treatment.

Of the 167 staff at Mafinga District hospital, only 10 (5.9%) had training in general HIV/ART, and only 8 (4.8%) had training in PMTCT. At Iringa Regional hospital, of 270 staff, only 12 (4 medical officers, 4 clinical officers, 4 triage nurses) had been trained in general HIV, and two of those trained in ART and posted to the CTC have now been posted to other wards. None of the staff at either facility had been trained in pediatric HIV/AIDS

In interviews, health care workers expressed the feeling that they did not have much training in pediatrics, in addition to having not been trained specifically on pediatric HIV care and treatment. However, the majority of the health care workers at facilities visited expressed interest in learning new skills in managing infants and children with HIV/AIDS as well as skills in VCT and PMTCT.

Guidelines, Job Aids, and Patient Educational Materials

Most sites could produce the *National Guidelines for PMTCT, Care and Treatment and VCT and Malaria*; in some cases, the copy of the Guidelines was not immediately available, being locked in another office or the like.

Job aids and charts and algorithms to facilitate pediatric HIV diagnosis and management were not available, though one IMCI chart was found in one dispensary. Also, there were no materials about pediatric HIV for families and communities.

Health Facility Services

General Findings

A wide range of services are offered at the regional, district, health center and dispensary levels. The services include counseling and testing, care and treatment (16 facilities), HBC, and PMTCT (18 facilities). Others include MCH services (immunization, growth monitoring, focused antenatal care, etc).

As in the other regions, MCH/RCH services are accessible, universal, and multi-faceted, including immunization, growth monitoring, family planning, PMTCT, and labor and delivery. MCH and RCH services are available at the regional and district level. In all the sites visited, clinical officers in the MCH settings see sick infants and children. However, there is little emphasis on identifying exposed and infected infants and children in this setting, and the provision of OI prophylaxis is not at the level that it should be. Services for children under 5 years of age are free, with fees for those over 5 years old.

A missed opportunity for identifying HIV-infected infants occurs when infected mothers are referred to a CTC. Though the mother's infant might have been exposed, this is not addressed when the mother is referred.

Patient Flow

Adult patients suspected of being HIV infected are referred to CTC or VCT. At the CTC, the patient is examined and sent to VCT for confirmation of status. The patient flow for management of pediatric patients varies from site to site.

If an infant is suspected of being HIV infected, in some cases a provider will provide the infant with CTX and advise the mother to return with the baby at 18 months for HIV testing. There is no active follow up to ensure that the mother returns with the baby. In some cases, infants with TB or failure to thrive are placed on ARVs.

Health care workers reported that if a child is 5 years old or older and is sick, they refer the child for HIV testing and, if positive, refer the child to the CTC for care. However, for children under 5 years, most health care providers are reluctant to suggest or refer for HIV testing.

Counseling and Testing

HIV counseling and testing services are available in all districts in the region at designated VCT sites. Rapid tests, with same-day results, are widely available. The Capillus test is used for initial screening, and the Determine test is used for confirmation. At the time of the assessment, the Determine test kits had been out of stock at the regional hospital since May 2006. Most HIV care and treatment is limited to what is performed at the VCT sites within the health facilities.

There is no routine offer of HIV testing for children nor is diagnostic testing routinely carried out in the MCH, OPD, and IPD. One reason for this that emerged from discussions is that the *National Guidelines on Voluntary Counseling and Testing* require that a trained counselor provide all offers of testing. As every unit of the hospital does not have a trained counselor, a referral to the VCT site is usually necessary. This adds a step in attempts to diagnose infants and children, especially if they are exposed but still asymptomatic. On inpatient wards, a counselor might be called to the ward, and the blood drawn at the bedside and sent to the laboratory with results available the following day.

The *National Guidelines on Voluntary Counseling and Testing* do not note the value of rapid testing in children under 18 months old as a way to document HIV exposure; however, the *Clinical Care Guidelines* and the *PMTCT guidelines* do note this.

During the interviews and the stakeholder meeting, health care workers and NGO staff said that they are uncomfortable discussing HIV in infants and children with parents. Health care workers also indicated that getting a mother's permission to test a child for HIV is a function of the mother's understanding, knowledge, and attitudes. Most mothers fear that testing their children will

indirectly reveal their own status. In the presence of stigma and discrimination within the community, this is not an easy option for mothers. More details about issues affecting access to care are in the stakeholder meeting notes.

CTX Prophylaxis

In three out of the four facilities visited, the clinical officers had knowledge of the indications for CTX prophylaxis for HIV-exposed and -infected infants. The stock of CTX was adequate at three facilities, with a report of a shortage in only one of the facilities. No reports at any level in the region document the number of children on CTX prophylaxis.

HIV Care and Treatment for Pediatric Patients

There are CTCs at the regional hospital and at 15 other sites in the region. Churches or private organizations operate six of these. The major source of referral to CTCs is from outpatient departments (65%). Only 1% of CTC patients were referred from PMTCT programs.

The CTC clinic at Iringa Regional hospital runs only twice a week (Tuesdays and Thursdays); the space is used for STI clinic on the other three days. Plans are underway to expand the facility so that the CTC can run more frequently. In addition to those trained in ART being deployed to other positions outside CTC, they reported a staff shortage.

On arrival patients (provider or self-referred) are registered at the CTC, where the triage nurse reviews referral forms (if applicable) and asks patients with unknown HIV status about this. He/she is then referred to the VCT unit where the HIV status is confirmed as positive prior to the enrollment of the patient in the CTC. The patient then returns to the CTC for a physical and lab work, including CD4 testing and liver and renal function tests. After 7 days, the triage nurse sees the patient again, checks the patient's height and weight, and takes the history.

The CTC forms are now completed, and an Assistant Medical Officer or Medical Officer assesses the patient. H/she is referred for adherence counseling by the ART Nurse and attends 2-3 preparatory classes before commencing CTX or ART.

PMTCT

There are 18 PMTCT facilities in the region. All except four are government-operated and supported by CDC. The other four are run by FBOs and private care providers.

The opt-in approach to HIV testing at ANC site PMTCT programs seems to be the operating mode in the region. The common pattern of patient care at the PMTCT sites is for the pregnant women to be offered PMTCT services at the first ANC visit. If the woman refuses, she is counseled at subsequent

Sources of Patient Referrals to Iringa Regional CTC	
65%	OPD
12%	Private Clinics
8%	TB
5%	HBC
2%	IPD
2%	Self-Referral
2%	Others

visits. About 50% of women accept the offer of HIV testing. Consenting clients are tested using a rapid test and provided with results on the same day. Positive tests are confirmed, and clients with a negative test are asked to return for a repeat test in three months. Those with a confirmed positive HIV test result are referred to the CTC.

At 28 weeks of pregnancy, women are provided with nevirapine (NVP) tablets and instructed to take these at the onset of labor and to bring their babies for a dose of NVP syrup after delivery, if they deliver outside of the facility. Within 72 hours, women return with their babies for BCG and OPV vaccinations, an ideal opportunity to counsel the HIV-infected mother about the need for the baby to be tested and receive CTX prophylaxis at 6 weeks. At 40 days postpartum, the mothers attend the postpartum clinic and are referred to CTC. The follow-up rates of mothers referred to the CTC during pregnancy and in the postpartum period are unclear. Regarding the testing of the infants, the mother is told to bring their infants for testing at 18 months. There is no consistent documentation as to whether the infant returns at 18 months for testing. What is clear is that many of the HIV-infected mothers and their infants are lost to follow up at this point in their care. This is clearly a missed opportunity for identifying HIV-infected infants and getting them into treatment. Indeed, even though a small (~10% of pregnant women) percentage of women attend PMTCT, at least those who do are known to be infected and thus their infants are in the category of “exposed,” which means they can be followed and provided with CTX prophylaxis. It is clear that there is much improvement needed in the Iringa region and in other regions to forge an effective linkage between PMTCT and CTC services.

Referral Process

There is no clear guideline in the region for referrals within and between facilities and between the community and facilities. The referral process in the facilities is often not very “user-friendly.” A patient seeking HIV care often has to work his or her way between multiple units within a facility, if not between facilities, and must keep appointments on several different days before finally accessing treatment. This applies to mothers with infants who started their “pathway to care” at an ANC site, and then a PMTCT site, perhaps, followed by MCH visits and then when she or her infant gets sick, with a visit to OPD and perhaps a referral to a VCT site, and then a referral to CTC with the multiple visits there prior to getting ART for herself or her infant. Throughout the process, should the mother decide at any time not to go to the next appointment, there is no record of or ability to track her failure to follow through, except perhaps for a return visit to the CTC, and then it is in only a few sites that there is a group of HBC workers who might follow up on the mother in the community.

HCWs and mothers report that when they are referred to the CTC they often cannot stay long enough to be seen because of the long waiting times due to packed CTCs. As such, both they and their children are not evaluated and treated when they attempt to be seen. The lack of a follow-up mechanism means they are likely to return to the community, only to return when mother and/or baby are in the advanced stages of HIV disease.

At some sites, patients needing psychosocial support and other non-clinical needs are referred to HBC services in the community. At some sites, the programs have only weak linkages to the health facilities.

There were inconsistencies in the availability and use of referral forms, both at the district and at lower levels of care. Some districts had referral forms to CTC that were not widely utilized. Feedback is not often received regarding the referred patients and, as such, it is difficult to know how many were actually reached by HBC services or how many received care.

Monitoring and Tracking

The health workers acknowledged that it was a challenge to track and follow up patients on treatment, including pediatric patients. The regional and district facilities do not have monitoring and tracking systems for patients receiving care, particularly in terms of appointment keeping. No specific mechanism has been designed for pediatric care and treatment. Mothers who are advised to bring their infants for HIV testing at 18 months might or might not return for this testing, and there is no mechanism to track the infant from birth to this point. In fact, follow up should not be delayed till 18 months, but clinical assessment and provision of CTX prophylaxis should be done 6 weeks after delivery of exposed infants and documented so that the child is followed for HIV clinical signs throughout the first year of life. Similarly, infants of HIV-positive mothers are not consistently identified when they attend MCH/RCH clinic for growth monitoring and immunizations. This is largely due to the failure to use MCH cards #1 and #4 according to guidelines.

Record keeping

Statistics regarding care were more readily available at the lower levels of care than at the regional and district levels. CTC data is kept electronically at the district and regional levels, whereas lower levels of care manually recorded data.

The patient-held card records data from MCH/RCH visits. The hand-held card (MCH #1) has information about the caretaker (mother's name), but maternal HIV status is not recorded. On ANC cards (#4), there were no uniform codes used to indicate status of HIV in the mother. The interpretation of the codes varied from provider to provider.

Laboratory Services

All sites visited had laboratory facilities with the services provided varying according to the level of care. All sites were able to perform rapid HIV test. Other services performed include haemoglobin estimation, total lymphocyte count, urinalysis, sputum for AFB, and stool microscopy. Only district hospitals could perform renal and liver function tests, and only the regional hospital could perform CD4 counts. CD4 percentages and PCR are not available at any of the sites in the region. At one district hospital, the machine used for renal and liver functions tests was not functioning.

CD4 testing for all districts is conducted at the regional CTC. Thirteen facilities send samples on a weekly schedule for examination. The maximum number of samples processed each day using a FACSCOUNT machine is 40. Sites are actually rationed as to the number of tests they can send per week, based on this limitation. Stockouts of CD4 reagents have lasted as long as three months in the recent past. Of 420 specimens noted in the logbook, the team observed that 38 showed a CD4 count of <350. Results of the tests are provided to the facility at the time that the next set of specimens are dropped off, meaning a lag time from test to report of about 7 days.

Pharmacies

The pharmacies at the regional and district hospitals report getting their drugs from MSD and dispensing at the CTC and OPD. The pharmacies did have a good stock of D4T tablets in 30 and 40 mg strengths, but no syrup as well as AZT, NVP, 3TC in suspension form, and efavirenz (EFV_ tablets of 200 mg, but not 50 mg strength. Stock cards were complete, though at one facility the supply card for NVP documented a different stock on hand than was found on the shelf. In the same facility, the CTC gets its stock from a locked closet of pharmaceuticals.

HCW Perspectives on the Challenges of Providing Pediatric HIV Care and Treatment

Some concerns expressed by health care workers in delivery of HIV care and treatment to children included the following:

- Lack of pre-service training in general pediatrics and lack of in-service training in pediatric HIV care;
 - Health workers report that they lack confidence in pediatric patients, mainly due to a lack of training
 - They report difficulty in making a diagnosis of HIV in an infant or child and report that they do not know when to initiate care in children
- Adherence to care, tracking, and follow up for patients who do not turn up for care is challenging;
- Convincing women to go for VCT due to issues of stigma;
- Stock outs of reagents for HIV testing;
- Staff in the CTCs feel over worked; and,
- Staff burn-out and lack of care for the care giver;
 - Excess reporting needs for the facilities
 - Difficulty getting CTX for prophylaxis from pharmacists who do not know it is indicated for this use.

Community Services

Five NGOs providing support for people living with HIV/AIDS were visited. These were CUAMM, ALLAMANO, ALPHA Dancing Group, AMREF, and SUDHEFA.

Services provided by these groups include VCT, HBC, training in HBC, provision of the HBC kit, nutritional support, provision of ARVs, OVC, psychosocial counseling and support, and other direct support to PLHA. None of the groups visited provided pediatric-specific services.

The most common health problems of children cited by the community members and by HCWs included malaria, diarrheal diseases, cough, typhoid, malnutrition, and HIV. The most common practice of mothers seeking care for their sick child is to consult a traditional healer or to go to the nearest dispensary. Some barriers cited by parents for not accessing care at the health facilities include the distance from the hospital, services said not to be suitable for children, and fees for services for a child over five years old.

The NGOs also network with other groups providing services in the community and link patients to services at CTC. HBC programs link with providers at the hospital. Nurses in health facilities are trained in HBC and provide supervision to the community HBC workers and other services for PLHAs in the communities. However, there is no involvement of PLHA in hospital and HBC outreach activities.

In terms of pediatric HIV, some HBC providers reported that they are finding and referring exposed and symptomatic infants to facilities. Some are providing CTX prophylaxis to those infants that they know have been exposed. They reported that they do not routinely ask parents that they visit about the HIV status of the children in the family. However, they might ask if a child in the household is “sickly.” They report that it is easier to talk to mothers about counseling and to test an infant or child for HIV when infants are sick than when they are well.

There are currently no organized activities to educate communities about pediatric HIV/AIDS care and treatment.

Community Challenges Related to HIV Care and Treatment

Challenges noted by HCWs and community members regarding HIV testing, care and treatment for mothers and children included, among others:

- Most mothers are reluctant to disclose their HIV status for fear of stigma, discrimination, and marital conflict;
- There are too few HBC programs and providers;
- Mothers tend to treat children with various remedies before seeking care at a health facility;
- Patients tend to deny their HIV status early in the disease as well as when they experience improvement while on ART;
- There is a lack of nutritional support for PLHA;
- Mothers often take on the burden of care of orphaned children who might also be sick with HIV, which can be overwhelming;
- Fear, stigma, and discrimination towards PLHA are still very common in the community;
- PLHA living far away from support groups may not have access to care and support.

Stakeholder Meeting: Insights

Thirty-five district and regional medical officers, and health care workers from the regional and district hospitals and from the health center and dispensary visited by the team, NGOs groups, and a mother with a child living with HIV/AIDS attended a stakeholder meeting to discuss pediatric HIV care and treatment in the Iringa Region; they were invited by the assessment team, through the Regional Medical Officer.

Community Response to HIV-Exposed Children

“A 5 year old girl was abandoned by family members after the death of her mother and grandmother due to HIV/AIDS. A counselor at an HIV NGO adopted the child, got her tested for HIV, and treated, and she is now 7 years old, doing well, and attending school.”

—Reported by a counselor at the ALLMANO Center in Iringa

This was the first meeting to take place with the group of participants gathered together in Iringa region to focus on pediatric HIV care and treatment. The meeting was held in both English and Swahili with cross-translation.

The meeting objectives were to: (1) gather the major providers of HIV/AIDS care at all levels of the health care system and the community in the district to describe how current systems meet the needs of infants and children across the continuum of care—from identification through palliative care; (2) highlight observations and clarify further questions of the assessment team; and (3) elicit insights into how the district system and the community could address gaps along the continuum of care that interfere with meeting the needs of HIV-infected infants and children and their families.

The team provided a general introduction to the issue of pediatric HIV, some general observations from the assessment team, a brief natural history of pediatric HIV, and a case example of successful treatment of a woman and child born with HIV. In a quick survey, 21 participants reported a total of 96 children that they know personally or through patient care were HIV positive.

The barriers cited for women not taking a baby for testing, whether the baby was sick or well, included the following:

1. Money for transport (mentioned several times)
2. Lack of knowledge
3. Stigma
4. Fear of husband's reaction to baby being HIV positive
5. Distance to facility
6. Despair
7. Belief that a child cannot get HIV
8. Belief that a healthy child need not seek care

9. Fear of exposing her own HIV status to her husband
10. Fear of what will happen next
11. Not understanding the importance of learning the HIV status of the child
One respondent who is an HIV-positive mother of an HIV-positive child said, “It is possible. If you are taught to go, you go.” She then shared a story of how when she had a sick child and was advised to go for testing when the child was two-years old. She went and the child is now 5-years old and on treatment.
12. Fear of the test result
13. Lack of money
14. Fear of community knowing the result
15. If people believe the child is bewitched, they go to a witch doctor
16. The attitude of health care workers;
17. Feel shy and wonder what will people say
18. Does not want to know
19. Misconceptions about HIV disease
20. Economic dependency of women on men and thus fear of marital rejection.

The facilitator asked: “What happens if a woman with HIV takes a sick child to a dispensary in this region and she is wondering if the baby has HIV but is afraid to ask?” The respondents said that many women do not know that HIV is transmitted from mother to child, so it is always up to the clinician to suggest HIV testing. They said “Thorough history taking and physical examination will reveal if the baby has HIV.”

When asked the hypothetical question—out of 10 dispensaries in this region, in how many would the clinician check with the mother and suggest a test for the mother and the baby? The responses ranged from 0-7, with three people saying that 3 out of 10 dispensaries would broach the issue and two saying that none of them would. Participants provided the following reasons for the lack of response by dispensary HCWs:

1. It is hard to tell the mother to do this.
2. National policy does not allow counseling by non-counselors regarding HIV testing.
3. Dispensaries cover a small catchment area, so the HCW at the dispensary is likely to know the patients and be embarrassed bringing up this subject.
4. Maybe the providers do not know their own serostatus.

Experience of a Mother with Pediatric HIV Patient

“The mother of the child on ART related that she took one and a half years for her to get her child tested for HIV. The child was treated for pneumonia, diarrhea, etc. Then she saw a pediatric specialist who gave her a paper to go to a room and did not tell her what for. She saw the word counseling above the door and then knew. She had never, before that point, considered that the problem was HIV. She was tested during pregnancy and one card said ‘negative’ and nothing else was documented. Another participant pointed out that at that time, there was research on HIV. The mother was told not to breastfeed, having never been told she was HIV positive. So she did breastfeed, thinking she was HIV negative. After the child tested positive, she herself got tested and was found to be positive. “

- HIV positive mother at stakeholders meeting at Iringa

One respondent said that it was important to first treat the baby's illness before addressing HIV issues or the mother will not return to that dispensary for care—he suggested never addressing HIV testing at the first contact with the mother. A discussion ensued around this issue and the pros and cons of not addressing this early. One of the team members asked participants whether they asked mothers if they had been tested for HIV. Most participants felt they would likely not ask this of the mother.

The facilitator then moved the participants on to a discussion of what would happen at the health center level, asking how many women, if they were referred to a CTC for treatment, would go. Most answered that only 3 out of 10 women would go. A woman living with HIV/AIDS responded that what she has heard is that it takes too much time to be seen because of long queues at the CTCs and that the women have to meet a different HCW each time and retell their story at each visit. At this point, the women walk away.

Mbeya Region

Regional and District Level Planning for Pediatric HIV/AIDS Services

The findings of the assessment of HIV/AIDS efforts in the Mbeya region made it clear to the team that pediatric HIV care and treatment is a relatively new activity. Scaling up of pediatric ART is considered by the Mbeya Regional AIDS Committee to be a priority.

HIV/AIDS programs in the Mbeya region have three interacting components: research, prevention, and care and treatment. The component “prevention” is implemented under the supervision of the Regional AIDS Coordinator with support from the MOHSW, and multiple donors and international organizations and agencies (DOD, GTZ, AXIOS, UNICEF, and WHO).

Uptake of VCT is increasing, from 27,000 persons seen by VCT sites in 2003 to 42,000 in 2005. Recent sentinel surveillance studies have shown HIV prevalence in the region to be declining, with an ANC prevalence of 20% in 1990 to a prevalence in ANC clients of 9% in 2005. Counselors who pass a 6-week training course provide HIV counseling and testing.

Health Facility Services

Care and treatment have expanded significantly within the past two years. Four hospitals in Mbeya region provide ARV treatment: Mbeya Referral, Mbeya Regional, Tukuyu, and Kyela. As of July 2006, 2,596 patients have been started on ARV treatment; 314 of these are children.

There is leadership for pediatric HIV care and treatment in the Mbeya region. This leadership exists at both the regional and district management levels as well as at the facility level where pediatric ARV treatment is offered. The referral hospital has developed a plan to take a more family centered approach, linking pediatric and adult care and treatment. The DOD-supported outpatient clinic at the Mbeya Referral Hospital provides one-stop HIV treatment services for mothers and their children. The DOD is planning to expand its services via a network of satellite clinics in six district

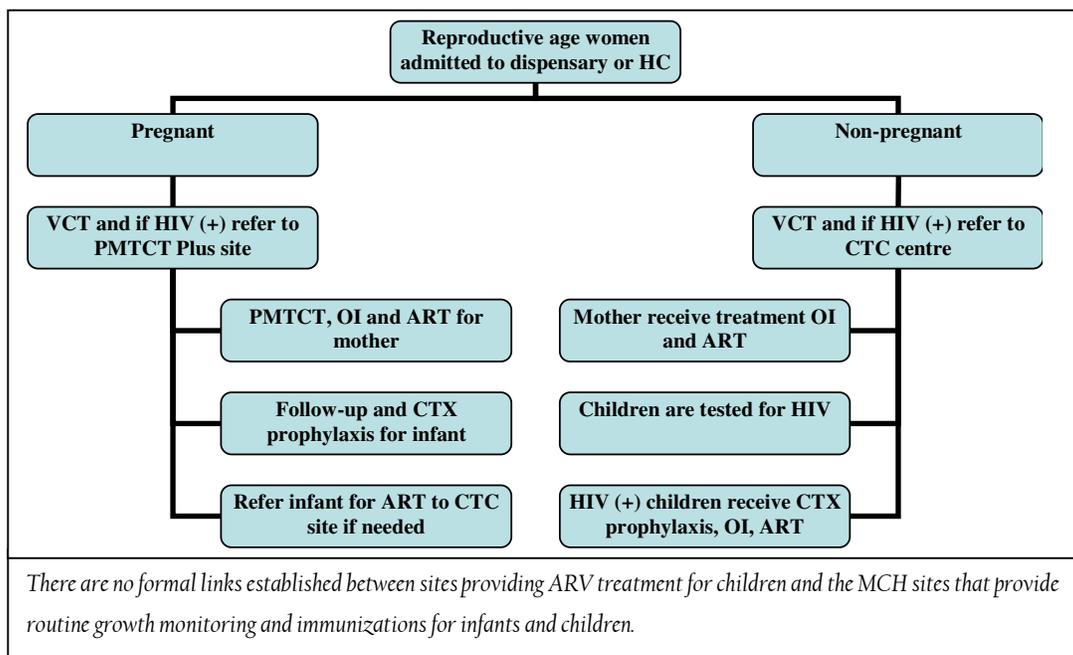
hospitals. The Referral Hospital in Mbeya region is the flagship pediatric ARV treatment in the region. At this point, they have enrolled 442 HIV-positive children and 229 of them receive ARV treatment. This accounts for 17% of all HIV patients receiving ARV treatment in this site.

Identification of Infants and Children with HIV/AIDS

Most of the children who are currently being treated with ART are identified through the referral hospital when they present with symptoms of advanced HIV disease. Some of them are brought by parents who are receiving ART. Available statistics do not disaggregate the treatment data by age of initiation. Interviews with health care providers indicated that most of children on treatment are older than 18 months.

PMTCT sites are not the major referral source of infants and children to HIV care and treatment, including ARV. Less than 10% of 340 health facilities that offer ANC also provide PMTCT services. Of the 340 ANC sites, 115 provide VCT service and refer HIV positives to PMTCT sites. There is a trend for increasing numbers of sites to offer PMTCT services. Expansion has been from one facility in 2001 to 29 facilities in 2005. Not all PMTCT sites offer continuous HIV treatment and care for mothers and children. With support from GTZ, a network of 14 PMTCT Plus sites was established consisting of a referral site, two district level sites, and 11 health center level sites. There is an established referral system for HIV-infected women and children.

Provision of care for HIV-infected women is based on whether women are pregnant or not and whether or not the site is linked to a PMTCT Plus program (figure 1). CTCs provide ART for adults and for symptomatic children with known HIV status.



Guidelines

The *National Guidelines for Clinical Management of HIV and AIDS* provides guidance on the care and treatment of pediatric HIV. Examples of content include:

- Protocols for the care of HIV-infected children and management of most common bacterial and opportunistic infections in pediatric AIDS (PCP, bacterial pneumonias, lymphoid interstitial pneumonitis, TB, etc.), and CTX prophylaxis for HIV-exposed children starting at 6 weeks of age.
- Protocols for the initiation of ARV treatment for HIV-exposed children younger than 18 months, based on virological status, CD4 cell count, or clinical HIV disease stage.
- ARV protocols for first and second line treatment for children with an established diagnosis of HIV infection are well defined and updated.
- Adherence support protocols are available for adults only, without specifying the pediatric needs.

The *National Guidelines for the Clinical Management of HIV and AIDS* contains the protocols for laboratory diagnosis of HIV exposure and infection of infants under 18 months old, as well as for older children. The definition of infant exposure to HIV infection is based on maternal HIV status without any suggestion of doing a rapid HIV test for infants younger than 18 months when maternal HIV status is unknown (mother rejected testing or was not offered an HIV test in the antenatal period or during

labor, or in the case of orphans). Key information about the HIV status of the mother is not on the maternal antenatal card and is not available on the infant MCH card.

Linkages between Services: MCH and Care and Treatment

Overall, pediatric HIV care is handled using a vertical approach and in a fragmented manner, which may overburden already stretched providers and weak health systems. Despite the fact that sites have MCH services that provide pediatric follow up during infancy, their role and involvement in pediatric HIV is limited to referral to specialized HIV care. Communication between the CTC and the MCH clinic is not well defined. There is no relationship established between documentation of the HIV status of the mother on the antenatal card as well as on the card of the infant. Thus, there is no feedback from the CTC to the MCH clinic.

Mbeya region reports good coverage with DPT I, II, and III (84%). However, routine pediatric visits for immunization and growth monitoring are not utilized as an opportunity to identify the exposed infant and to ensure early recognition of HIV disease progression. As a result, HIV-infected children are identified only via the network of CTC centers, assuming their mothers were referred from the PMTCT program or if the infant or child presents with AIDS symptoms to a CTC department. Even CTX prophylaxis is initiated only after several visits to the CTC. At the CTC site at the referral hospital, children benefit from implementation of a family-focused approach, which allows mother and child joint appointments for treatment initiation and follow-up.

Recommendations in the *National Guidelines for the Clinical Management of HIV and AIDS* regarding the identification of infants needing HIV care is centered on referrals from PMTCT services. The alternative entry points for identification of HIV-infected/-exposed children are not noted and explained. Even in the context of the recent scale up of PMTCT services, the coverage with PMTCT interventions in Mbeya region has not yet exceeded 10%. Uptake of PMTCT interventions varies between the sites: it is 5% at the dispensary level and up to 60% at health centers that have a PMTCT Plus program. The approach to offering an HIV test in antenatal clinics is “opt-in,” despite recommendations globally to use an opt-out approach. Factors limiting uptake of HIV testing when offered to pregnant women through PMTCT programs include fear of stigma, especially that directed at women by their male partners. Evidence of the likelihood of this is clear from the reluctance of male partners to participate, when invited, in antenatal HIV counseling and testing sessions.

From the interviews with health care providers working in pediatric inpatient wards, it is clear that the policy that requires the mother’s informed consent to test an infant or child for HIV infection hinders the ability of the HCW to proceed with diagnosing the child. Diagnostic testing of children on inpatient wards has yielded a rate of 80% HIV-positive results. The availability of ARV treatment presents an opportunity for HIV-infected children to survive. However, an HIV test is a prerequisite to treatment. The need for VCT training that takes into account the special issues of mothers and infants is in demand by health care workers on pediatric wards where children present with symptoms.

Ninety-eight percent (98%) of children on ART are on a first-line ARV regimen. From the reports there are no major adherence problems among 314 children receiving ARVs in Mbeya region. No children were reported to drop the treatment or be lost to follow up. Current protocol requires a monthly visit for children with a refill of ARVs at that time. Prior to initiating ARVs in children, parents undergo 3 weeks' adherence counseling and training. Also there is no pill-swallow protocol in the site. Follow up of children started on ARV is organized on monthly basis after the first follow-up visit at 2 weeks.

There is a well-established lab in the referral hospital supported by the DOD. It has all HIV diagnostic and monitoring tests: CD4 lymphocytes absolute number (FACS count), Sysmex hematology analyzer (to calculate the CD4 lymphocytes percentage), and a biochemistry analyzer.

Among the other challenges for the provision of treatment and care for HIV-infected children and children with symptoms are poor health-seeking behaviors of parents and the use of services provided by traditional healers. As a result, children present with an advanced stage of disease making it more difficult to ensure their survival.

Supplies, including refills of ARV drugs, are kept in the CTC centers, many of which are located far from the place where patients live. Patients often have to spend the whole day to travel to the CTC site to receive drugs on a monthly basis.

Children under 5 years old receive free medical service, and those older than 5 years have to pay a fee. ARV medications are free, but there is a cost for any other medications. Some in the community believe that a child might die if he is brought to the hospital.

CTC centers have on-site pharmacies with reliable storage and stock management. Site pharmacists are comfortable with providing children with pediatric formulations (syrups, suspensions). Dosing calculations for children are based on body weight.

During the visits to CTC sites, the team observed long lines of patients waiting for hours before a health care provider admits them. It is a threat that when the number of patients on ARV increases, it will be difficult for the sites to handle a big flow of patients with available resources. Some sites have already started to double refill ARV for a two-month supply.

Human Resources and Training

Staff turnover at the Regional Hospital is approximately 25%. Except Referral Hospital, there are limited health workers skills to assess, classify, treat, and follow up HIV-exposed infants and children. Skills of district health officers in pediatric HIV care are limited to administration of CTX prophylaxis and to initiation of first-line ARV regimen. VCT counselors available at the district hospitals have no skills in addressing pediatric HIV and pediatric adherence support. Social workers

are not available for discussion of family/caregiver situation of an individual child on ARV treatment. Linkages with home-based care could be more proactive to provide extra support for pediatric HIV care as they do for adult supplying with CTX. To date in the Mbeya region, 3,500 clients are covered with HBC. District hospitals have outreach services for adults on ARV treatment. The important role of family and community in supporting families with HIV-infected children is not well recognized by health care providers, and HBC is mostly used for adults, not considering the needs of children.

IMCI training in Mbeya region covered 20% of sites. There are continuous efforts to expand IMCI in other sites at the district level. The IMCI complementary course on HIV/AIDS is not adapted yet for Tanzania and hasn't been implemented in any of the sites. There are limited numbers of physicians trained in general pediatrics. Except Referral Hospital where HIV care provided with the involvement of a pediatrician trained in provision of ARV for children in other centers for treatment and care, an adult medical officer, without pediatric background, follows children.

All HIV-positive women and children are referred from dispensary to health center or district hospital. But it seems that information flow is only one side. The feedback from the referral hospital about women's status is not provided in most circumstances. For example, out of 30 HIV-positive children, 10 developed AIDS and were referred to CTC, but there is no feedback about whether these children receive ARV treatment or not.

Drug Supply

The public and private sectors provide ARV drugs. The assessment team assessed only the provision of ARVs by the public sector. ARV drugs in the public sector are available via PEPFAR and donation mechanisms. Both brand and generics are available. Pediatric formulations in syrup are part of the ARV procurement. The most common first-line regimen is d4T/3TC/NVP. ARV drugs are distributed in the Mbeya region using a national LMIS system that is also used for essential drugs with a separate reporting system for the two categories of drugs. District hospitals are supplied on a monthly basis. There is no clarity about how forecasting for pediatric ARV is done. ARVs for PMTCT are limited to one dose of NVP for the mother in labor, followed by one dose of NVP syrup for the infant. Pregnant women who are followed at PMTCT Plus sites are able to get HAART if and when they meet clinical criteria.

Cotrimoxazole is distributed to the sites as part of an essential drug supply package. There are shortages of supplies due to the logistics model being used whereby districts try to say how much of the drug they need. The LMIS coordinator reports that within the next couple of months, there will be a switch to a consumption-based model that will prevent the shortages of drugs in the hospitals.

Patient Follow-Up and Support Systems

Very little has been done with regard to support groups for patients on ARV treatment. The management of side effects of ARVs is available on CTC sites, often located far from where patients

live. It is not clear how patients in remote areas get care when they develop severe side effects, especially if this occurs during a weekend when there is no follow up of HIV patients in CTC sites.

Communication between health care providers and patients is available via cell phones. There is coverage by a network in the Mbeya region. Mbeya Referral Hospital has access to Internet, fax, and email communication.

Patient Records

Clinical records of patients receiving ARVs are well standardized and comprehensive. The records document a unique patient identifier, weight, WHO clinical stage of disease, CTX prophylaxis, date of start and change of ARV, names of ARV drugs, lab tests, including CD4 cell count, biochemistry results, and TB diagnosis. Although there are records about the mother and the father, there is no clear indication of who is the main caregiver for the child and who is in charge of the ARV treatment.

Community Services

Despite more than 300 children already started on ARV treatment Mbeya region, it is not yet highly promoted within communities to sensitize them that treatment exists and treatment is effective and that treatment is free.

Among the top diseases and syndromes perceived by communities as a major burden are malaria, HIV/AIDS, diarrhea, skin problems, coughing, malnutrition, pneumonia, worm infestations, eye problems, asthma, and abdominal distension.

When infants get sick, some families start home therapy with traditional medicines or a drug vendor, some families go with a child to prayers, and some to the medical clinic. But in case of severe illness, majority parents would bring their child to hospital. In many cases, they bypass the dispensary or health center and go directly to the district or referral hospital. The reports from the Referral Hospital confirm this; only 10% of patients are referred by other clinics, and 90% are walk-in patients. Patients prefer the public hospital to private, mainly because of price. Among the reasons not to bring for care sick child are the cost of service (only children under five could receive free medical services). Other factors that affect patient attendance to the clinic are availability of clinic health care workers, cost and availability of drugs, long waiting time, and distance to travel. On average, it takes 2-3 days of child disease before parents bring the child to a health care facility. Initially they would try medications that were self-procured in local shops. Sometimes in the cases of severe illness (e.g., severe watery diarrhea, difficulty in breathing), parents/guardians will take the child to a health care facility immediately. Denial of HIV status of children is common.

There is low awareness in communities (rural doing worse than urban) about available PMTCT services as well as opportunities for continuum of care for HIV-infected mother and infants. Even when a mother received NVP prophylaxis, she often will not bring her child for CTX prophylaxis due to denial and stigma, as well as perception of lack of services for infant.

HBC workers and PLHAs in the community who identify infants and children whom they suspect might be HIV infected are trying to refer them to health care workers for care and to link families with HIV/AIDS service NGOs. Pregnant women are provided with contacts of PMTCT sites available in the district. PLWA groups are trying to use every opportunity to reach more people at risk of being infected for prevention through community meetings, funerals, and other community gatherings.

Some NGOs provide VCT services for adults. There is a limited knowledge about pediatric AIDS and the needs of children with HIV infection. There is lack of information, education, and communication materials on pediatric HIV/AIDS. Limited capacity of local NGOs is a barrier to effective community education and mobilization around pediatric HIV care and treatment.

One of the constraints mentioned by PLHAs is the long waiting lines at CTCs and the multiple appointments that are required prior to starting ART. They report that, at times, it seems that treatment is unnecessarily delayed for very sick patients. They report that some patients have died while waiting to start treatment, even after being seen for an initial visit at the CTC.

Iringa Region: Health Facilities and the HIV Services provided.

#s	Name of facility	HIV services provided								
		HIV testing and counseling	PMTC	DC4 count	PCR test (type)	CTX prophylaxis	ART	HBC	Re-ferrals for community	IMCI
1	Iringa Regional Hospital	✓	✓	✓		✓	✓	✓	✓	✓
2	Mafinga District Hospital	✓	✓			✓	✓	✓	✓	
3	Makete	✓	✓			✓	✓	✓	✓	
4	Njombe HC	✓	✓			✓	✓	✓	✓	
5	Ludewa DH	✓	✓			✓	✓	✓	✓	
6	Tosamaganga	✓	✓			✓	✓	✓	✓	
7	Ilula Luth HC	✓				✓	✓	✓	✓	
8	Lugoda TEA Company	✓	✓			✓	✓	✓	✓	
9	Bulongwa	✓	✓			✓	✓	✓	✓	
10	Ikonda	✓	✓	✓		✓	✓	✓	✓	
11	Ilembula	✓	✓			✓	✓	✓	✓	
12	Tanzania Wattle Comp	✓	✓			✓	✓	✓	✓	
13	Lugalawa	✓	✓			✓	✓	✓	✓	
14	Milo	✓				✓	✓	✓	✓	
15	IMECC	✓	✓			✓	✓	✓	✓	

Key Health Statistics Iringa Region

	Facilities			
	Iringa Regional Hospital	Mafinga District Hospital	Ngome Health Center	Isalavanu Dispensary
Total Population served	1,490,892	295,054	111,565	9,794
Population under 5 years old	225,583	59,010	22,313	2,129
Immunization coverage BCG DPT3 Measles	88%	91% 93.5%	77%	
Infant Mortality Rate	-	32/1000 live births	-	-
HIV prevalence	13.4%	12%	-	-
Total # VCT-adult	1,693	-	90	-
# Tested - adult	1,625	1,430	90	-
# HIV positive	949		22	-
# VCT in children < 15 years	198	No data	No data	-
# of children < 15 years tested	120	20	No data	-
# of children < 15 years HIV positive	59	No data	No data	-
# VCT in children < 5 years of age	No data	No data	No data	-
# tested < 18 months	No data	No data	No data	-
# tested after 18months	No data	No data	No data	-
# children on CTX prophylaxis	Not documented	15	-	-

Key Health Statistics Iringa Region (cont.)

	Facilities			
	Iringa Regional Hospital	Mafinga District Hospital	Ngome Health Center	Isalavanu Dispensary
# children < 15 yrs on ART	29	4	-	-
# children in follow-up care	No data	No data	14	-
# children in HBC	No data	No data	No data	-
# of women in PMTCT	4,744	1,022	847	-
# of women tested in PMTCT	2502	528	626	-
# of pregnant women testing HIV positive		110	93	-
# women received NVP	88	63	14	-
# babies received NVP	88	15	14	-
# mother-child pair followed up	0	0	14	-
Staff strength	270	167	33	-
Number trained in ART	12	10	0	-
Number trained in PMTCT		8	0	-

Iringa Region-PMTCT Sites (NACP-Tanzania March 2006)

S/No	Name of Service Delivery Site	Type of facility	Government / Private	Region where located	District where located	Organization
1	Iringa Regional Hospital		Government	Iringa	Iringa Urban	MoH/ CDC
2	Ipogoro Health Centre		Government	Iringa	Iringa Urban	MoH/ CDC
3	Ngome Health Centre		Government	Iringa	Iringa Urban	MoH/ CDC
4	Makete District Hospital		Government	Iringa	Makete	MoH/ CDC
5	Bulongwa Lutheran Hospital	Hospital	FBO	Iringa	Makete	AMREF
6	Njombe (Kibena District Hospital)	Hospital	Government	Iringa	Njombe	MoH/ CDC
7	Kiponzelo Health Centre	H/C	Government	Iringa	Njombe	MoH/ CDC
8	Ilembula Lutheran Hospital	Hospital	FBO	Iringa	Njombe	AMREF
9	Mafinga Hospital	Hospital	Government	Iringa	Mfindi	MoH/ CDC
10	Ludewa Hospital	Hospital	Government	Iringa	Ludewa	MoH/ CDC
11	Kilolo Kidabaga Health Centre	H/C	Government	Iringa	Kilolo	MoH/ CDC
12	Ilula Health Centre	H/C	Government	Iringa	Kilolo	MoH/ CDC
13	Kidabaga Health Centre	H/C	Government	Iringa	Kilolo	MoH/ CDC
14	Isman Heath Centre	H/C	Government	Iringa	Iringa Rural	MoH/ CDC
15	Migoli Health Centre	H/C	Government	Iringa	Iringa Rural	MoH/ CDC
16	Idodi Health Centre	H/C	Government	Iringa	Iringa Rural	MoH/ CDC
17	Lugarawa Hospital	Hospital	Private	Iringa	Iringa Rural	MoH/ CDC
18	Tosamaganga Hospital	Hospital	Private	Iringa	Iringa Rural	MoH/ CDC

Iringa Region- ART Sites (NACP-Tanzania March 2006)

S/No	Districts	ART Sites
1	Iringa Urban	Iringa
2		Iringa Medical Consultation C.
3		Allamano Dispensary
4	Makete	Makete
5		Bulongwa Ruth. Hospital
6	Njombe	Ikonda
7		Njombe DH
8		Ilembura Mission H.
9		Tanzania Wattle Company
10	Ludewa	Ludewa
11		Lugarawa Mission H
12		St. Lukes Hospital-Milo
13	Mufindi	Mufindi DH
14	Iringa (Rural)	Ipamba Tosamaganga
15	Kilolo	Kilolo
16	Mafinga	Usokami Health Centre

Iringa Region: Profile of services provided by NGOs

S/No	NGO Groups	Services					
		VCT	HBC	ART	OVC	Nutrition	Psychosocial support
1	ALLAMANO	✓	✓	✓	✓	✓	✓
2	ALPHA Dancing Group	✓	✓				✓
3	AMREF	✓	✓				
4	CUAMM	✓	✓				
5	SHIDEPHA						✓

Appendix D

Pediatric HIV/AIDS Assessment Tools, Version 2

Interview Guide
Pediatric HIV Case Identification, Referral and Care
at the Community Level

Date: _____
 Interviewer(s) _____

Interviewees		Name of District
Name		Title
Name		Title
Name		Title

1. What do you think are the key health problems of children in this community?
List what is mentioned spontaneously:

- a. _____
- b. _____
- c. _____
- d. _____

Probe: Pneumonia? Diarrhea? HIV?

2. Where do parents and caretakers take infants and children for treatment in this community?

First _____
 Second _____

Probe -? govt. clinic, govt. hosp, private doctors, faith healers, traditional healers

3. What are the reasons that a parent might not go to a health facility when a child has symptoms?

Probe for transport, cost reasons.

4. Please describe what you know or what you have heard happens to babies who are born to HIV-infected mothers in this community.

(**Probe** for reasons if there is lack of identification or quick deterioration without care; for stigma; for lack of knowledge that babies can be treated, etc.)

OVERVIEW OF GROUPS (NGOs, FBOs) WORKING IN THE COMMUNITY

A

Groups (NGOs, FBOs) working on child health in the district						
Names of Groups/NGOs,FBOs						
Child health activities (check those that apply for each group)						
IMCI (malaria, ARI, CDD, malnutrition)						
Home Mgt of Malaria						
Nutrition						
Other						

Comments:

B.

Groups (NGOs, FBOs) Working on HIV/AIDS in the District						
Names of Groups/NGOs, FBOs						
HIV/AIDS Activities						
Home based care						
Behavior change communications						
Youth education						
Condom social mktg/distribution						
OVC						
PLWHA groups						
Other						

Comments:

C.

Groups (NGOs, FBOs) working on pediatric HIV						
Names of Groups/ NGO, FBO						
Activities related to Pediatric HIV (check those that apply for each group)						
IMCI-HIV						
Nutrition						
Infant feeding						
ART						
Care (CTX, etc.)						
Referral						
PMTCT follow up						
OVC						
Family support						
Psychosocial support/counseling						
Other						

Comments:

8. Identification and referral of infants suspected of HIV or exposed to HIV:

a. Who usually identifies and refers infants suspected of being infected with HIV?

b. What does this person/these groups do when they suspect a baby might have or been exposed to HIV?

c. To where are infants referred if they are known or suspected of being exposed to HIV?

9. What are the barriers to care and treatment that community members experience when they seek care for a child who might have HIV?

List all and probe regarding stigma, transport, cost, HCW attitudes, capacity of HCWs to recognize HIV in infants and children.

10. What is the attitude of parents towards getting an infant or child tested for HIV?

11. How are community members learning about pediatric HIV/AIDS, ways to get babies tested, treated, etc.

12. How many infants or children do you know of in this community who are HIV infected?

Are being treated for HIV?

13. Are there any community services for families with infants or children with HIV?

Adherence support?

Counseling?

14. How many CORPS or VHWs or TBAs live in your community?

CORPS _____

VHWs _____

TBAs _____

15. Please check all that apply in your surrounding community.

___ When a child is referred from the household to a health facility, there is a form that the provider gives to the parent to take with the child to the facility or organization to which the child is being referred.

Comment:

___ There are clear messages to the community about pediatric HIV, such as where to get care, what the signs and symptoms are, etc.

Comment:

___ There are village/community health workers who talk to mothers about common childhood illnesses, and HIV symptoms, care and treatment.

Comment:

___ Adults in the community commonly get tested for HIV.

Comment:

15., continued

___ People know about HIV disease, such as how people get sick, who needs ART and who does not.

Comment:

___ People know where to go for treatment.

Comment:

___ People trust health care workers to treat them well if they have HIV/AIDS.

Comment:

**Interview Guide:
Program Planning/Management for Pediatric HIV Services:
District Level**

Date: _____

Interviewer(s) _____

Interviewees	Name of District
Name _____	Title _____
Name _____	Title _____
Name _____	Title _____

I. Basic Health Statistics			
Total District Population:			
No. of Children under 15 years			
No. of Children under 5 years			
No. of Children under 2 years			
Child mortality Rate:			
Infant mortality Rate:			
Immunization coverage			
		BCG	
		DPT 1-3	
HIV prevalence			
ANC sites			
General population			
Care and Treatment Targets and Actuals (District)			
<i>Note: if no targets are set for the item at district level, put N/A</i>			
	Target	Actual	
Number of Adults on Cotrimoxazole prophylaxis		Total	
		M	F
Number of Children on Cotrimoxazole prophylaxis		(<15)	
		(<2)	
		M	F
Number of adults on ART		Total	
		M	F
Total number of children < 15 yrs on ART		Total	
		M	F
Total number of children < 2 years on ART		Total	
		M	F
Number of Adults tested		Total	
		M	F

Total number of Adults HIV +	M	F
Number of Children <15 yrs tested	Total	
	M	F
Number of Children <15 HIV +	M	F
Number of Children < 2 years tested (PCR)	Total	
	M	F
Number of Children < 2 years positive	M	F

II. Health Facilities in the District and the HIV Services Provided

Name of facility	HIV testing and counsel.	PMTCT	CD4 count	PCR test (type)	CTX prophyl-axis	ART	HBC	Referrals for community services	IMCI
Name of facility	HIV testing and counsel.	PMTCT	CD4 count	PCR test (type)	CTX prophyl-axis	ART	HBC	Referrals for community services	IMCI

SEE Community Assessment Form:

The following questions can be answered through an interview with a community group or group of community health workers. If the district can provide this information, use what they provide here and add additional groups/information during the community visit.

III. Community-Level Activities in HIV/AIDS, child health, and pediatric HIV in the District

A.

Groups (NGOs, FBOs) working on child health in the district						
Names of Groups/NGO,FBO						
Child health activities (check those that apply for each group)						
IMCI (malaria, ARI, CDD, malnutrition)						
Home Mgt of Malaria						
Nutrition						
Other						

Comments:

B.

Groups (NGOs, FBOs) Working on HIV/AIDS in the District						
Names of Groups/ NGO, FBO						
HIV/AIDS Activities						
Home based care						
Behavior change communications						
Youth education						
Condom social mktg/distribution						
OVC						
PLWHA groups						
Other						

Comments:

C.

Groups (NGOs, FBOs) working on pediatric HIV						
Names of Groups/ NGOs, FBOs						
Activities related to Pediatric HIV (check those that apply for each group)						
IMCI-HIV						
Nutrition						
Infant feeding						
ART						
Care (CTX, etc.)						
Referral						
PMTCT f/u						
OVC						
Family support						
Psychosocial support/counseling						
Other						

Comments:

IV. PROGRAM PLANNING AND MANAGEMENT

A. Planning:

1. Is there a Comprehensive District Health Plan? Yes ___ No ___
2. Are there child survival or MCH activities in the district health plan (annual)? Yes ___ No ___
3. In the health plan, is there a district HIV/AIDS plan? Yes ___ No ___
 - a. Is there a Pediatric HIV section with a plan of activities (work plan)? Yes ___ No ___
 - b. If yes, note major activities planned.

B. Coordination:

1. No. of RCH coordination meetings during the last 12 months. _____
2. No. of district AIDS coordination meetings during the last 12 months. _____

C. Supervision:

1. Is there a structured supervisory report/tool being used to guide supervision?
 - If yes, - is there a section on Pediatric HIV? ___ Yes ___ No
 - Is there a section on child health services? ___ Yes ___ No

D. Referral

1. Is there a described (written) referral system plan? ___ Yes ___ No
2. Are there forms for referral between different sites? (HC to District; Dispensary to HC)

E. HUMAN RESOURCES/TRAINING

Position	Positions		No. trained in MCH	No. trained in ART	HIV C&T	No. trained in ped ART	Communi-ty service delivery	Other
	<i>sanctioned</i>	<i>filled</i>						
Medical Officer.	..							
Asst MO								
Clinical Ofcr								
Nursing Ofcr								
Nurse Midwife								
Registered nurse								
Public Health nurse								
Nurse attendant								

Position	Positions		No. trained in MCH	No. trained in ART	HIV C&T	No. trained in ped ART	Community service delivery	Other
	sanctioned	filled						
VCT counselor								
Counselors								
Lab technician								
Lab. Technologist								
Lab assistant								
Pharmacist								
Pharm tech								
Pharm asst								
X Ray Tech								

B. Health Information System

1. Are there compiled performance data/reports sent from HC/dispensaries to district level?
 Yes _____ No _____ What is the frequency of reporting? _____

2. How is the data in the reports used?

2. Copy of report form secured. Yes _____ No _____

If there are such reports, what data is included?

Indicator	Yes (check)
No. of Children < 15 yrs tested?	
No. of Children < 15 yrs found HIV +?	
No. of Children < 2 yrs tested (PCR)?	
No. of Children < 2 years found HIV+?	
No. of Children <15 on ART?	
No. of Children < 2 on ART?	
No. of Children on Cotrimoxazole prophylaxis?	

Interview Guide: Facility Assessment of Pediatric HIV Services *(for use at regional and district hospital level and district health center and dispensary level)*

Name of District	
Interviewees	
Name	Title
Name	Title
Name	Title

Type of Facility:		Linked to:	
<input type="checkbox"/> Referral Hospital		Regional Hospital Name.....	
<input type="checkbox"/> Regional Hospital		District Hospital Name.....	
<input type="checkbox"/> District Hospital		Health Center (1).....	
<input type="checkbox"/> Health Center		Health Center (2).....	
<input type="checkbox"/> Dispensary		Health Center (3).....	
		Health Center (4).....	
		Dispensaries (Number).....	
Site Characteristics			
Type of site		<input type="checkbox"/> Public (government) <input type="checkbox"/> Private, (NGO) <input type="checkbox"/> Private, (FBO) <input type="checkbox"/> Other (specify: _____)	
Location of the site: Town:	__Urban __Rural __Semi-urban/peri-urban		
Services offered at the site	<input type="checkbox"/> Out-patient MCH <input type="checkbox"/> ANC <input type="checkbox"/> TB clinic <input type="checkbox"/> Labor and Delivery <input type="checkbox"/> Nutrition <input type="checkbox"/> Out-patient pediatric <input type="checkbox"/> In-patient pediatric <input type="checkbox"/> General/Family practice/OPD <input type="checkbox"/> Other (specify: _____)		

Service Statistics

- Population of catchment area (adult+children)....._____
- Number of hospital beds....._____
- Number of pediatric beds....._____
- Number of deliveries (2005)....._____
- Number of immunizations (DPT 1) (2005)....._____
- Number of women attending PMTCT (2005)....._____
- Number of women tested in the past year (2005)_____

Service Statistics

- Population of catchment area (adult+children)....._____
- Number of hospital beds....._____
- Number of pediatric beds....._____
- Number of deliveries (2005)....._____
- Number of immunizations (DPT 1) (2005)....._____
- Number of women attending PMTCT (2005)....._____
- Number of women tested in the past year (2005)_____
- Number of women who tested positive in the past year (2005)....._____
- Number of women receiving NVP (2005)....._____
- Number of babies receiving NVP ART (2005)....._____
- Number of HIV tests done (2005)....._____
- Number of children tested for HIV (2005)....._____
- Number of infants or children who tested positive for HIV (2005)....._____
- Number of children seen outpatient (2005)....._____
- Number of children enrolled in nutritional programs (2005)....._____

Services Available	
HIV counseling and Testing (check those that apply)	VCT ___ adults ___ children For infants and children: Routine offer of testing ___ inpatient ___ outpatient Diagnostic Testing & Counseling (DTC) inpatient outpatient
CTC/ART <input type="checkbox"/> Yes <input type="checkbox"/> No Since what dates? (mm/yyyy)	Adults <input type="checkbox"/> Yes <input type="checkbox"/> No Start Date: ___/___/___ Children <input type="checkbox"/> Yes <input type="checkbox"/> No Start Date: ___/___/___
PMTCT <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Referral of HIV-positive women to CTC If yes, when? _____ (postpartum or antenatal) <input type="checkbox"/> Partner counseling and testing
Pediatric/MCH/Child Health services	<input type="checkbox"/> Growth monitoring <input type="checkbox"/> Immunization <input type="checkbox"/> IMCI <input type="checkbox"/> Cotrimoxazole for HIV-exposed children <input type="checkbox"/> Bednets/ ITN
Psychosocial support to families with HIV? (check all that apply) ___ Individual counseling ___ Support groups ___ Outreach to community Other _____ Psychosocial support to families with HIV? (check all that apply) ___ Individual counseling ___ Support groups ___ Outreach to community Other _____ If outreach workers find a child in the home of a family who is sick/suspected of being HIV infected, what do they do? _____	
For infants and children exposed to HIV, who/which service is responsible for each of the following elements of care:	_____ Identification of exposed infants and children _____ Provide CTMZ prophylaxis _____ Refer for testing _____ Do clinical assessment _____ Prescribe ART _____ Monitor ART after 3 months _____ Provide adherence support

In the MCH clinic, when an infant or child has symptoms/is suspected of being HIV infected, what does the provider do?	<input type="checkbox"/> refer to CTC <input type="checkbox"/> refer to OPD <input type="checkbox"/> refer for testing – to where? _____ <input type="checkbox"/> provide testing <input type="checkbox"/> start cotrimoxazole <input type="checkbox"/> start ART
Where is pediatric HIV care located?	<input type="checkbox"/> MCH <input type="checkbox"/> OPD <input type="checkbox"/> CTC <input type="checkbox"/> Pediatric HIV specialty clinic <input type="checkbox"/> Other (specify: _____)
Is site engaged in pediatric HIV research activities	<input type="checkbox"/> Yes, please describe: <input type="checkbox"/> No

Organizations working in site	
<i>Name:</i>	<input type="radio"/> Child Health <input type="radio"/> Maternal Health <input type="radio"/> STI <input type="radio"/> Care and Treatment /Adults <input type="radio"/> Care and Treatment /Peds <input type="radio"/> PMTCT <input type="radio"/> VCT <input type="radio"/> HBC <input type="radio"/> OVC
<i>Name:</i>	<input type="radio"/> Child Health <input type="radio"/> Maternal Health <input type="radio"/> STI <input type="radio"/> Care and Treatment /Adults <input type="radio"/> Care and Treatment /Peds <input type="radio"/> PMTCT <input type="radio"/> VCT <input type="radio"/> HBC <input type="radio"/> OVC
<i>Name:</i>	<input type="radio"/> Child Health <input type="radio"/> Maternal Health <input type="radio"/> STI <input type="radio"/> Care and Treatment /Adults <input type="radio"/> Care and Treatment /Peds <input type="radio"/> PMTCT <input type="radio"/> VCT <input type="radio"/> HBC <input type="radio"/> OVC
<i>Name:</i>	<input type="radio"/> Child Health <input type="radio"/> Maternal Health <input type="radio"/> STI <input type="radio"/> Care and Treatment /Adults <input type="radio"/> Care and Treatment /Peds <input type="radio"/> PMTCT <input type="radio"/> VCT <input type="radio"/> HBC <input type="radio"/> OVC
<i>Name:</i>	<input type="radio"/> Child Health <input type="radio"/> Maternal Health <input type="radio"/> STI <input type="radio"/> Care and Treatment /Adults <input type="radio"/> Care and Treatment /Peds <input type="radio"/> PMTCT <input type="radio"/> VCT <input type="radio"/> HBC <input type="radio"/> OVC

Guidelines	
Guidelines present on site	Response
Guidelines for Clinical Management of HIV/AIDS (ART, OIs)	<input type="checkbox"/> Yes, specify: _____ <input type="checkbox"/> N/A <input type="checkbox"/> No <input type="checkbox"/> Observed
Guidelines for PMTCT	<input type="checkbox"/> Yes, specify: _____ <input type="checkbox"/> N/A <input type="checkbox"/> No <input type="checkbox"/> Observed
Guidelines for counseling and testing for adults	<input type="checkbox"/> Yes, specify: _____ <input type="checkbox"/> N/A <input type="checkbox"/> No <input type="checkbox"/> Observed
<i>Handbook on Pediatric AIDS in Africa (ANECCA)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Other relevant guidelines
Are there information, education and communication (IEC) materials available for the patients	<input type="checkbox"/> General HIV education <input type="checkbox"/> General ART issues <input type="checkbox"/> ARV side effects and their management <input type="checkbox"/> Opportunistic infections <input type="checkbox"/> Medication use

HUMAN RESOURCES

	Total Number	# of each type provider providing pediatric HIV Care	Number with relevant training				
			Specify #				
			MCH	IMCI	IMCI-HIV	Gen'l ART	Pediatric ART
Medical Officer							
Asst MO							
Clinical officer							
Health Officer							
Nursing Officer							
Nurse Midwife							
Trained Nurse (certificate)							
Public Health Nurse							
Nurse attendant or hospital assistant							
Health Assistant							
VCT counselor							
Counselors							
Lab technician							
Lab technologist							
Lab assistant							
Pharmacist							
Pharm tech							
Pharm assistant							

Please comment on staff experience and attitudes about caring for infants and children with HIV.

PHARMACY PRACTICE		
	# unexpired doses on hand	Stock card complete
AZT + 3TC + NVP		
AZT + 3TC + EFV		
D4T + 3TC + NVP		
D4T + 3TC + EFV		
Note if following suspensions present		
D4T		
3TC		
AZT		
NVP		
Cotrimoxazole		
D4T 30 mg tabs		

CLINICAL PRACTICE		
Condition	Mode of determining Diagnosis	Treat on Site or Refer
HIV in adults	<input type="checkbox"/> Rapid Test <input type="checkbox"/> ELISA <input type="checkbox"/> None	
HIV in children	<input type="checkbox"/> Rapid Test <input type="checkbox"/> ELISA <input type="checkbox"/> None	<input type="checkbox"/> Treat on site <input type="checkbox"/> Refer
HIV in children <18 m	<input type="checkbox"/> Rapid Test <input type="checkbox"/> DNA-PCR <input type="checkbox"/> None	<input type="checkbox"/> Treat on site <input type="checkbox"/> Refer
What opportunistic infections are you seeing in infants and children?	1. _____ 2. _____ 3. _____ 4. _____	1. <input type="checkbox"/> Treat on site <input type="checkbox"/> Refer 2. <input type="checkbox"/> Treat on site <input type="checkbox"/> Refer 3. <input type="checkbox"/> Treat on site <input type="checkbox"/> Refer 4. <input type="checkbox"/> Treat on site <input type="checkbox"/> Refer
Staging of HIV infection	<input type="checkbox"/> Done at baseline only <input type="checkbox"/> Done at each follow-up <input type="checkbox"/> Not done	
Staging system in use	<input type="checkbox"/> CDC <input type="checkbox"/> WHO	

SERVICE STATISTICS	
Question	Response
Number of infants born to HIV-positive mothers who return to the facility for follow-up	
Number of HIV-exposed infants on CTX prophylaxis	
Number of HIV-infected children who are currently on ART in the facility	_____ < 15 y.o _____ below 2 years _____ above 2 years
How many children (<15 y.o.) have been put on or referred for ART while on the in-patient ward (2005).	<input type="radio"/> None <input type="radio"/> Number: _____
How many children have been put on or referred for ART from the MCH/OPD/Ped OP clinic in last month?	<input type="radio"/> None <input type="radio"/> Number: _____
How many children have been put on or referred for ART because their parents are on ART?	<input type="radio"/> None <input type="radio"/> Number: _____

PATIENT RECORDS AND MANAGEMENT	
<i>Sample of 5 patient records/unit at the facility</i>	
MCH CARD #1 (kept by caretaker)	Item completed
Unique patient identifier	<input type="checkbox"/> Yes <input type="checkbox"/> No
Date of birth	<input type="checkbox"/> Yes <input type="checkbox"/> No
Sex of patient	<input type="checkbox"/> Yes <input type="checkbox"/> No
Weight at birth	<input type="checkbox"/> Yes <input type="checkbox"/> No
Weight *	<input type="checkbox"/> Yes <input type="checkbox"/> No
Height *	<input type="checkbox"/> Yes <input type="checkbox"/> No
Who is the caretaker? (Mum/dad/family member/institution...)*	<input type="checkbox"/> Yes <input type="checkbox"/> No
Mother's HIV serostatus (PMTCT Status)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Disclosure of HIV status of the child to caretaker	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Immunizations	
OPV 1 AND BCG	<input type="checkbox"/> Yes <input type="checkbox"/> No
OPV 2-4;DPT 1-3	<input type="checkbox"/> Yes <input type="checkbox"/> No
Measles	<input type="checkbox"/> Yes <input type="checkbox"/> No

Select 5 records of children suspected of being HIV infected who are currently on the inpatient ward	
Pediatric Inpatient Ward Medical Record	
Unique patient identifier	<input type="checkbox"/> Yes <input type="checkbox"/> No
Date of birth	<input type="checkbox"/> Yes <input type="checkbox"/> No
Sex of patient	<input type="checkbox"/> Yes <input type="checkbox"/> No
Weight at birth	<input type="checkbox"/> Yes <input type="checkbox"/> No
Weight *	<input type="checkbox"/> Yes <input type="checkbox"/> No
Height *	<input type="checkbox"/> Yes <input type="checkbox"/> No
Who is the caretaker? (Mum/dad/family member/institution...)*	<input type="checkbox"/> Yes <input type="checkbox"/> No
Mother's HIV serostatus (PMTCT Status)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Child's HIV status	<input type="checkbox"/> Yes <input type="checkbox"/> No
Disclosure of HIV status of the child to caretaker	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Clinical assessment findings and assignment of clinical stage (WHO/CDC staging) *	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Active opportunistic infection*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Cotrimoxazole prophylaxis*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Date of starting cotrimoxazole prophylaxis	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Tuberculosis treatment*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Antiretroviral therapy (ART)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Total lymphocyte count*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Hemoglobin *	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
CD4 cell count (cells/□L)*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
CD4 cell percentage (%)*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Severe Rash*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Document mother's death	<input type="checkbox"/> Yes <input type="checkbox"/> No
Document father's death	<input type="checkbox"/> Yes <input type="checkbox"/> No

Select 5 random charts of children under 5 years old	
CTC PEDIATRIC PATIENT RECORD	
Unique patient identifier	<input type="checkbox"/> Yes <input type="checkbox"/> No
Date of birth	<input type="checkbox"/> Yes <input type="checkbox"/> No
Sex of patient	<input type="checkbox"/> Yes <input type="checkbox"/> No
Weight at birth	<input type="checkbox"/> Yes <input type="checkbox"/> No
Weight *	<input type="checkbox"/> Yes <input type="checkbox"/> No
Height *	<input type="checkbox"/> Yes <input type="checkbox"/> No
Who is the caretaker? (Mum/dad/family member/institution...)*	<input type="checkbox"/> Yes <input type="checkbox"/> No
Mother's HIV serostatus (PMTCT Status)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Child's HIV status	<input type="checkbox"/> Yes <input type="checkbox"/> No
Disclosure of HIV status of the child to caretaker	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Clinical assessment findings and assignment of clinical stage (WHO/CDC staging) *	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Active opportunistic infection*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Cotrimoxazole prophylaxis*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Date of starting cotrimoxazole prophylaxis	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Tuberculosis treatment*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Antiretroviral therapy (ART)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Total lymphocyte count*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Hemoglobin *	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
CD4 cell count (cells/ \square L)*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
CD4 cell percentage (%)*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Severe Rash*	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Document mother's death If yes, date?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Document father's death If yes, date?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Comments