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PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV

**PMTCT PROGRAM  
CAMBODIA  
JOINT REVIEW REPORT**

*26 August-3 September, 2007*

*Findings and Recommendations*

## CO-SPONSORS



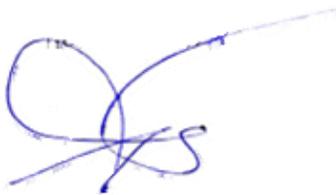
## ENDORSEMENT:

The importance of PMTCT services in contributing to the fight against HIV/AIDS in Cambodia is increasing as the proportion of women amongst HIV-infected people and of new HIV infections attributable to mother-to-child transmission also increase. The National PMTCT Program has introduced services in all except two provinces in Cambodia since it was established in 2000. In 2006, 7.4% of Cambodia's pregnant women accessed HIV testing at a PMTCT site. However, in order that all Cambodia's HIV-positive pregnant women can receive interventions to minimize the risk of transmission of HIV infection to their infants, all pregnant women throughout the country, should have the opportunity to access HIV counseling and testing and related PMTCT services.

The Joint External Review of the PMTCT Program took place at a critical time in Cambodia's continued fight against HIV infection. The Review brought together individuals with broad expertise in the field of PMTCT from both within and outside Cambodia, representing a wide variety of organizations and partners, and it involved a representative selection of provinces and health facilities which are currently implementing PMTCT services. This has resulted in a meaningful set of findings and recommendations which will lead to the development of a national strategic plan for PMTCT, more rapid expansion of high quality PMTCT services and which will contribute to the strengthening of Maternal and Child Health services across the whole country.

The Ministry of Health for Cambodia is very pleased to endorse this report of the Joint Review of the PMTCT Program.

Phnom Penh  
November, 2007



Professor Eng Huot  
Secretary of State for Health

## ACKNOWLEDGEMENTS:

The National Maternal Child Health Center of the Ministry of Health would like to extend grateful thanks to everyone who contributed to the Joint Review of the PMTCT Program, 27 August – 3 September, 2007, in particular to:

Ministry of Health

NMCHC

PMTCT Secretariat

ANC and Maternity staff

National Nutrition Program

National Reproductive Health Program

NCHADS

Calmette Hospital

National Paediatric Hospital

NAA

CARE Cambodia

Catholic Relief Services

Clinton Foundation

Family Health International

KHANA

MAGNA Children at Risk

Maryknoll

Medecins Sans Frontières Belgium

Medecins Sans Frontières France

RACHA

Red Cross Health Center

RHAC

UNAIDS

UNFPA

UNICEF

US CDC

USAID

USAID-HSSC

WHO

World Bank

World Relief

World Vision Cambodia

### Provinces and Sites visited during Review:

#### Battambang Province

PHD

Battambang RH and Svay Por HC

Chrey HC

Morng Russey OD

Morng Russey RH and HC

Prey Tauch HC

#### Kampong Cham Province

PHD

Kampong Cham RH and Boeung Kok HC

Memut OD

Memut RH and HC

Samrorng HC

#### Kampong Speu Province

PHD

Kampong Speu RH and HC

#### Kampong Thom Province

PHD

Kampong Thom RH and HC

Sray Yov HC

#### Kandal Province

PHD

Takmao RH and HC

Siem Reap HC

Koh Thom OD

Koh Thom RH and HC

Koh Thom B HC

#### Prey Veng Province

PHD

Neak Loeung RH and HC

#### Pursat Province

PHD

Sampov Meas RH and HC

#### Svay Rieng Province

PHD

Svay Rieng RH and HC

Cham Lang HC

Romeas Hek OD

Romeas Hek RH and HC

Chan Trey HC

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**ACRONYMS:**

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral drug
CBDs	Community-based Distributors
CBO	Community-based Organization
CMS	Central Medical Store
CoC	Continuum of Care
CPA	Complementary Package of Activities
FHI	Family Health International
FP	Family Planning
HAART	Highly Active Antiretroviral Therapy
HBC	Home-based Care
HC	Health Center
HIV	Human Immunodeficiency Virus
HPITC	Health Provider-initiated Testing and Counseling
IEC	Information, Education and Communication
IMCI	Integrated Management of Childhood Illness
IYCF	Infant and Young Child Feeding
KHANA	Khmer HIV/AIDS NGO Alliance
MAGNA	
MCH	Maternal and Child Health
MMM	Mondul Mith Chuoy Mith (Friends help Friends HIV/AIDS support group)
MoH	Ministry of Health
MPA	Minimum Package of Activities
NAA	National AIDS Authority
NCHADS	National Centre for HIV/AIDS, Dermatology and STD
NGO	Non-Governmental Organization
NMCHC	National Maternal and Child Health Centre
NRHP	National Reproductive Health Program

NVP	Nevirapine
OD	Operational District
OI	Opportunistic Infection
PHD	Provincial Health Department
PLHA	People Living with HIV/AIDS
PMTCT	Prevention of Mother-to-child HIV Transmission
RACHA	Reproductive and Child Health Alliance
Rep H	Reproductive Health
RH	Referral Hospital
RHAC	Reproductive Health Association Cambodia
SOP	Standard Operating Procedures
STI	Sexually Transmitted Infection
TA	Technical Assistance
TBA	Traditional Birth Attendant
ToR	Terms of Reference
TWG	Technical Working Group
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
US CDC	United States Centers for Disease Control and Prevention
USAID	United States Agency for International Development
USAID-HSSC	USAID Health System Strengthening in Cambodia, implemented by University Research Co. LLC.
VCCT	Voluntary and Confidential Counseling and Testing
VHSG	Village Health Support Group
WHO	World Health Organization

## EXECUTIVE SUMMARY:

A Joint Review of Cambodia's national PMTCT program was conducted from 26 August - 3 September, 2007, to provide recommendations for improving services and accelerating expansion of the national PMTCT program. The review team included local and external representatives from:

- National PMTCT Secretariat
- Clinton Foundation
- FHI
- UNAIDS
- UNFPA
- UNICEF
- USAID-HSSC
- US CDC
- WHO
- World Bank

The following were undertaken as part of the Joint Review:

- A local planning team provided background documents and organized and coordinated the Review.
- A Joint Review team was formed.
- Meetings were conducted with Ministry of Health representatives, partners and stakeholders.
- The Review team conducted site visits to 8 provinces and conducted
  - Meetings with provincial, operational district, health facility and HBC staff and PLHA
  - Visits to PMTCT sites with and without OI/ ART services and non-PMTCT sites
- The Review team synthesized findings and developed recommendations and action steps according to 4 major thematic areas:
  - Program management and partnership
  - PMTCT services
  - Infant and young child feeding
  - Monitoring and evaluation
- A debriefing and consensus-building meeting was conducted with MoH, partners and stakeholders.

In order to rapidly improve and accelerate expansion of PMTCT in Cambodia, the following priority recommendations and action steps are proposed:

### **1. Develop and implement a comprehensive national PMTCT strategy and costed time-bound scale-up plan with population-based targets which allows for application of innovations**

The strategy should include the following components:

- Integrate the PMTCT Secretariat within the core functions of MCH with provision of TA to improve MCH services and their management
- Establish / strengthen a dedicated PMTCT advisory position within NCHADS supported with defined TA
- Revise the structure and ToRs of the PMTCT TWG
- Set up a time-bound task force with external TA to fast-track development of a national PMTCT scale-up plan

- Translate the national plan into provincial and OD level operational plans, building on existing planning mechanisms and aligning partner support
- Support implementation of innovative approaches for comprehensive service delivery in selected areas with built in operational research for evaluation

## **2. Scale up the provision of PMTCT services to reach the majority of pregnant women towards achievement of Universal Access**

Specific action steps should include the following:

- Define PMTCT services which should be offered at different levels of the health system, including those which should be part of the MCH MPA and CPA
- Clarify and orient staff on operational procedures related to HPITC
- Update mother books and child health cards to include PMTCT and HIV information in a confidential manner
- Expand HIV testing opportunities to include ANC and maternity settings
- Accelerate the integration of HIV and PMTCT into the Safe Motherhood protocol
- Explore and pilot avenues and approaches for packaging and providing mother and infant peripartum PMTCT ARVs antenatally to ensure full compliance with the regimens during home deliveries while at the same time trying to improve rates of facility deliveries
- Expand the role of CBOs, including HBC teams, to fully support PMTCT activities within the continuum of care
- Complete a comprehensive protocol for rolling out early infant diagnosis
- Use existing linkages between the CoC and prevention services for all population groups, including high risk groups, to maximize access to PMTCT services

## **3. Ensure compliance with national policies and guidelines on IYCF and HIV and strengthen their implementation and monitoring at all levels of service delivery and by all partners**

Action steps should include:

- Designate focal points for infant feeding from the PMTCT and IYCF TWGs to accelerate implementation of policies and guidelines
- Evaluate current infant feeding practices in the context of HIV
- Hold a technical consultation on infant feeding to review new research and programmatic evidence and to build consensus on standardizing practice within the broader context of child survival
- Accelerate development of skills and competencies of providers, including NGOs, on optimal feeding practices

## **4. Improve collection and analysis of routine program monitoring data, address key data gaps and effectively share data between programs and among stakeholders**

Action steps:

- Review, simplify and update PMTCT and adult and pediatric OI/ART data collection and reporting tools and indicators to capture all components of PMTCT services to monitor program performance and quality

- Exchange MCH and HIV data from ANC, maternity and adult and pediatric OI/ART sites at national and provincial levels for program planning and management
- Use existing resources, networks and meetings at provincial and OD levels to more effectively use data for PMTCT performance improvement
- Support initiation of demonstration projects / operational research to provide local evidence on innovative approaches to improving PMTCT services, uptake and coverage

## INTRODUCTION AND BACKGROUND:

### *A. Burden of HIV in women and children in Cambodia*

HIV was first detected in Cambodia's blood supply in 1991, and the first AIDS patient was diagnosed in 1993. The prevalence of HIV in 1997 was calculated to be 3% of the population aged 15-49 years, the highest in Asia, and was primarily due to transmission from infected commercial sex workers to their clients (HIV Sentinel Surveillance - HSS - 1998). As a result of a successful 100% condom use program and other prevention efforts by the Royal Government of Cambodia, overall prevalence was reported to have declined to 1.9 % (2.1 % among pregnant women attending ANC clinics) in 2003 (HSS 2003). Data recently released from HSS 2006 show that prevalence declined to 0.9% (1.1% in ANC clinics) in 2006 (HSS 2006); HSS 2006 findings also resulted in revision of previous prevalence estimates with generalized population prevalence peaking at 2.0% in 1998 (2.1% in ANC) and dropping to 1.2% in 2003 (1.6% in ANC).

While the prevalence and incidence of HIV infection have decreased for risk groups most often associated with the epidemic (direct and indirect commercial sex workers, military, police), estimates modeled from HSS 2003 data suggested that 79% of new adult infections were occurring in women of childbearing age (15-49 years). The face of the epidemic has clearly become more female. The proportion of women HIV-infected rose from 35% in 1998 to 46.7% in 2003 (HSS 1998, 2003). This shift in the gender distribution of the epidemic underlines the importance of having an effective PMTCT program in Cambodia to minimize the number of children infected from their mothers. An estimated 402,000 women delivered in Cambodia in 2006<sup>1</sup>, including ~ 4,420 HIV-positive women. With no PMTCT interventions 35% (1,547) infants would be expected to be HIV infected.

### *B. Health sector response*

The PMTCT Program started in 2000 with the formation of a Technical Working Group and the PMTCT Secretariat. In 2001, a pilot PMTCT service was established at the National Maternal and Child Health Center (NMCHC) in Phnom Penh, offering opt-in HIV counseling and testing to pregnant women and their partners, and single dose Nevirapine to HIV-positive mothers during labor and to their infants after delivery. The pilot project was scaled up to eight sites in 2003, and further scale-up of training activities and clinic sites followed. In September 2005, the ARV prophylaxis guidelines were revised in line with WHO recommendations<sup>2</sup>, and in August 2006 HIV testing was changed to an opt-out approach (initially at NMCHC and later at other sites).

<sup>1</sup> 402,000 births based on a population of 14.1 M for 2006 and a Crude Birth Rate of 28.5/1,000 (Population Projections for Cambodia 1998-2020, 2004, medium fertility variant).

Note also: CDHS 2005 CBR: 25.6/1,000; UN Population Division (<http://esa.un.org/unpp/p2k0data.asp> accessed 29.06.07: population 2006: 14.2 M, CBR 26.4/1,000, births/year 2005-2010 386,000); UNICEF State of the World's Children 2006: 422,000 births in 2004.

<sup>2</sup> Pregnant women with CD4<250 cells/μl receive HAART; AZT is started at 28 weeks of gestation in women with CD4 >250 cells/μl, and given q 3 hrs throughout labor together with single dose Nevirapine. Mothers who receive NVP in labor are given AZT+3TC for one week after delivery. Infants receive one dose of NVP and AZT for one or four weeks depending on whether their mother was on AZT > or < 4 weeks

Pregnant women found to be HIV-positive at PMTCT ANC sites are referred to the nearest OI/ART clinic to receive either ART or ARV prophylaxis and encouraged to go to the nearest PMTCT maternity service for delivery. Primary prevention information is given to women and their partners who test negative. By the first quarter of 2007 all PMTCT sites were using the revised prophylaxis protocol and 80% of women identified as HIV-positive at PMTCT maternity sites were either taking AZT or HAART prior to delivery.

By August 2007, 112 health facilities in 42 ODs were providing PMTCT services, including 2 National Hospitals, 36 Referral Hospitals and 74 Health Centers<sup>3</sup>. Of the country's 966 public ANC clinics, 74 had the capacity to counsel and test pregnant women for HIV; the 36 Referral Hospitals were able to provide ARV prophylaxis at maternity to HIV-positive mothers and their infants; the two National Hospitals were offering a full package of PMTCT services at both ANC and maternity. A total of 768 health workers - mostly midwives - had received training in PMTCT. In 2006, a total of 308,277<sup>4</sup> women were seen for a first ANC visit at a government ANC clinic of whom 29,677 (9.6%) received an HIV test at a PMTCT site (almost double the number tested in 2005). A total of 644 HIV-positive women were enrolled for antenatal care at PMTCT sites (392 found to be HIV-positive at PMTCT ANC sites and 252 previously known to be HIV-positive who were referred for antenatal care to PMTCT sites) of whom 311 delivered at a PMTCT site. Using total number of births of 402,000 in 2006 and HIV prevalence of 1.1% among women of child-bearing age, NMCHC has estimated that in 2006 the PMTCT program tested 7.4% of Cambodia's pregnant women for HIV and provided prophylaxis for 7.3% of the total number of HIV-exposed newborns.

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<sup>3</sup> Cambodia has 76 ODs, 69 Referral Hospitals and 966 Health Centers, Health Coverage Plan 2004-2005

<sup>4</sup> Department of Planning and Health Information 2006, unpublished

## JOINT REVIEW:

### A. Goals and Objectives

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The purpose of the Joint Review was to provide recommendations to support continued improvement of Cambodia's PMTCT services and to accelerate the expansion of national PMTCT services. Specific objectives of the review were to identify:

- technical, operational and managerial aspects of the program that are working well and need to be reinforced or replicated;
- challenges or weaknesses that exist in terms of population coverage and quality of services, why they exist and how they may be overcome;
- additional strategies and practical measures required to meet or exceed identified targets for 2010 and 2012 in the context of relatively low HIV prevalence and how these strategies should be implemented;
- practical steps to promote greater integration of PMTCT services into maternal and child health (MCH) services and to optimize the use of PMTCT to strengthen MCH services;
- roles partners should play to ensure that recommendations of the Joint Review are carried out.

### B. Methodology

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- A local planning team provided background documents and organized and coordinated the Review.
- A Joint Review team was formed, including local and external representatives from:
  - National PMTCT Secretariat
  - Clinton Foundation
  - FHI
  - UNAIDS
  - UNICEF
  - UNFPA
  - USAID-HSSC
  - US CDC
  - WHO
  - World Bank
- Meetings were conducted with Ministry of Health representatives, partners and stakeholders.
- The Review team conducted site visits to 8 provinces and conducted
  - Meetings with provincial, operational district, health facility and HBC staff and PLHA
  - Visits to PMTCT sites with and without OI/ ART and non-PMTCT sites
- The review team synthesized findings and developed recommendations and action steps according to 4 major thematic areas:
  - Program management and partnership
  - PMTCT services
  - Infant and young child feeding
  - Monitoring and evaluation
- A debriefing and consensus-building meeting was conducted with MoH, partners and stakeholders.

## FINDINGS:

### A. Program Management and Partnerships

#### Current Situation

Cambodia has demonstrated remarkable leadership and tremendous progress in its national prevention and treatment of HIV/AIDS efforts and is one of a few countries in the world to meet national “3 by 5” treatment targets. It is also on-track to meet the Millennium Development Goals for HIV/AIDS.

In addition to establishing the necessary institutional structures and developing strategic frameworks to guide the HIV/AIDS response, implementation is guided by a number of key legal frameworks as well as policies, guidelines and standard operating procedures. These include:

#### **Legislation and Policies:**

- Law on prevention and control of HIV/AIDS, 2002
- National Strategic Plan for a Comprehensive & Multisectoral Response to HIV/AIDS 2006-2010 (under revision)
- Strategic Plan for HIV/AIDS and STI Prevention and Care 2004-2007
- National Strategy for Reproductive and Sexual Health in Cambodia 2006-2010
- PMTCT Policy, 2005
- Policy, Strategy and Guidelines for HIV Counseling and Testing, 2002

#### **Guidelines and SOPs:**

- PMTCT guidelines, 2005
- SOPs for PMTCT at Health Centers and Referral Hospitals, 2007
- ARV guidelines, 2005
- VCCT for HIV, A Guide for Implementation, 2004
- National indicators for M&E of PMTCT
- Complementary Package of Activities for Referral Hospitals, 2006
- Minimum Package of Activities for Health Centers (under development)
- Implementing Guidelines of the Law on the Prevention and Control of HIV/AIDS, 2005

The Cambodia PMTCT policy stipulates that PMTCT services should be based on the recommended UN 4 pronged strategy:

1. Primary prevention of HIV among women and their partners
2. Prevention of unwanted pregnancies among HIV-infected women
3. PMTCT through MCH / Reproductive Health / IMCI / STI services, including: antiretroviral prophylaxis, safe delivery practice, and safe infant feeding practice
4. Access to HIV/AIDS care and support for HIV-infected women, their infants and families

To implement this strategy, NMCHC is supporting implementation of PMTCT interventions within MCH services, with links to the Continuum of Care for HIV for antiretroviral prophylaxis and therapy. In the absence of clearly articulated medium- and long-term population goals and targets defined at the national level to guide resource mobilization, implementation of integrated PMTCT services to date has been primarily project-driven, supported by several partners.

This Joint Review provides an opportunity to draw lessons from the initial phase of PMTCT implementation, and to inform the development of a national strategic plan which is needed to guide expansion and to build on the remarkable progress of the HIV/AIDS response. The findings and recommendations of the Joint Review will also contribute to the development of the next Health Sector Strategic Plan 2008 – 2015.

### **Strengths and Opportunities**

The commitment of the Royal Government of Cambodia to PMTCT is demonstrated by the management, coordination and implementation structures that have been established at all levels, including the establishment of staff management positions. The Cambodia PMTCT program also benefits from support from a number of partners, including UN agencies, US government and international and national NGOs. The majority of government resources are from the Round 4 Global Fund allocation. The current Round 7 country proposal under review also includes elements of PMTCT, though total funding for PMTCT in the proposal is limited.

#### *At national level:*

- There is a PMTCT Secretariat within NMCHC with 8 full-time government and 2 contract staff leading service implementation
- The secretariat function is supported by a multi-disciplinary TWG that includes all key implementing partners and is co-chaired by the directors of NMCHC and NCHADS and charged with development of policies, guidelines and SOPs
- In 2006, NMCHC and NCHADS agreed on a joint statement and SOPs to work together to effectively link reproductive health services for HIV-positive women with the Continuum of Care for HIV/AIDS.
- Annual reports are produced at the national level using the routine reporting mechanism
- The Ministry of Health has recently allocated financial resources to support institutional deliveries (funds are to support additional incentives to health workers and community groups)

#### *At provincial and district level:*

- There is a designated PMTCT focal point at provincial, OD and health facility levels
- Various PMTCT service management, coordination and implementation mechanisms exist, including:
  - A multi-disciplinary working group involving the PHD Director and key program managers at all levels as well as all implementing partners and counselors.
  - A multidisciplinary Continuum of Care Coordinating Committee at the OD level chaired by the district governor
  - The PMTCT coordinator-led site meetings
  - OI/ART fora involving PLHAs and representatives from the different programs and NGOs

- MMM and home-based care fora which offer active linkages with community groups, including TBAs, CBDs, community health volunteers and midwives.
- There are well-established mechanisms for decentralized annual planning, review and reporting, including finance planning and management.

### **Bottlenecks**

Despite the remarkable program investments and PMTCT expansion to 112 health facilities, the proportion of women benefiting from the services remains low. There are key management bottlenecks contributing to the low coverage:

- Disbursement of funds, particularly those provided through Global Fund grants, has been slow, causing substantial delays in the expansion of PMTCT services.
- Although there is a joint statement and SOPs for programmatic collaboration and joint planning, co-signed by NMCHC and NCHADS and approved by the Minister of Health, these have not yet resulted in any substantive coordination of joint program activities at national and sub-national levels where gaps remain in linkages between different service delivery points.
- The program is operating without a national work plan and lacks clearly defined population-based targets for the number of pregnant women to be reached, as well as strategies and activities to reach them. Likewise, most of the provinces and districts are operating without defined targets, to effectively guide results-oriented selection of implementation facilities and the roll-out of interventions. Implementation is largely centralized and driven by NMCHC and donors, and PHDs do not have budgets allocated for PMTCT activities in their work plans.
- Selection of PMTCT sites follows criteria set by the national level with a focus on HIV prevalence and the capacity of facilities (human resources and co-location of VCCT services). As a result lower-level facilities with poor infrastructure and capacity, including lack of human resources, have largely been neglected. The HIV/AIDS program does not articulate how available resources can help improve MCH services, e.g., through subsidies for deliveries.
- PMTCT coordinators appointed at provincial and OD level do not operate with well-defined ToRs, resulting in an unclear understanding of their roles and responsibilities, particularly their links with HIV/AIDS provincial coordinators.
- There is widespread practice of topping-up salaries through the provision of incentives from different sources. This practice is driven by donors and often lacks coherence.
- Interventions have not taken into consideration the fact that the population accessing ANC is not always the same population accessing maternity services, resulting in missed opportunities for delivering a comprehensive PMTCT package. Although the management is aware that not all pregnant women identified as HIV-positive at ANC are coming to deliver at PMTCT maternity sites, no strategies for improving access to health facility deliveries have been developed despite regular management review meetings. Similarly, a large number of women delivering at PMTCT sites do not know their HIV status, and current national guidelines do not include HIV testing at maternity.
- Management of ARV drugs and supplies is problematic, especially in maternity units. The management currently lacks clarity on where they should be ordering supplies from, and communication lines are weak. In some cases, even when facilities order the drugs from the PHD, they either get no response or they do not get all the drugs.

- Links to the community are not well-coordinated and structured to address the needs of pregnant women. Many of the activities which are conducted are focused on awareness-raising. The management does not fully indicate how home-based care teams, VHVs, CBDs and TBAs could contribute to improved ANC access and intervention adherence, and how they could support HIV-positive pregnant women to deliver in a PMTCT maternity facility. Many sites are charging HIV-positive women for delivery, with the result that many HIV-positive women do not deliver in a health facility and thus many HIV-exposed infants do not receive ARVs“
- PMTCT services are provided at a limited number of sites around the country, which is reasonable and cost effective as only 1.1% of pregnant women in Cambodia are HIV infected. However, offering HIV counseling and testing to pregnant women at PMTCT ANC sites alone rather than including it as a component of routine antenatal care at all ANC sites, severely restricts the number of pregnant women who access HIV testing
- The program lacks linkages and coordination with the private sector.

## ***B. PMTCT Services***

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### **Current situation**

PMTCT service implementation was initiated as a pilot project using an "opt in" testing approach and single dose Nevirapine, starting in a few sites in 2001. Scale-up is now underway, and in 2006, the Cambodia PMTCT guidelines were revised in line with the 2006 WHO PMTCT recommendations and emerging scientific evidence to include more efficacious combination ARV prophylaxis regimens for women who do not need ART for their own health, and ART for women with more advanced HIV disease. In 2006, the MoH also introduced Health Provider-Initiated Testing and Counseling (HPITC) in PMTCT services.

In order to scale-up PMTCT services in Cambodia more rapidly, the following strategies are needed:

1. Expand current criteria for selecting new sites to include a larger pool of service points;
2. Strengthen operational linkages between PMTCT and OI/ART management and service provision, and
3. Establish avenues for improving access to ANC and institutional deliveries.

### **Strengths and Opportunities**

- PMTCT services are offered within existing maternal child health services.
- Pregnant women are willing to be HIV tested where PMTCT services are available, as evidenced by the high testing rates and the high proportion of women returning to receive their results. Routine data also indicate that testing rates have increased over time.
- A few facilities have and are using the national PMTCT counseling support tools.
- The roll-out of VCCT to 176 (August 2007) sites creates an opportunity for rapid expansion of PMTCT services from the current 74 facilities offering HIV testing at ANC.
- A strong HIV Continuum of Care has been established, and PMTCT mothers and their babies are being referred to receive care and support.

- There is high-level interest to identify new strategies to build on existing infrastructure and capacity to expand services.
- Given the low rate of hospital deliveries, the recent commitment by the national government to allocate resources to provide incentives to health providers for conducting institutional deliveries and the expansion of the Health Equity Fund together have the potential of increasing the proportion of women delivering at health facilities.
- There is a large network of community groups including home-based care, CBDs and TBAs which the PMTCT Program could utilize to better inform the community about PMTCT as well as to mobilize and support mothers to access PMTCT services.
- MMM offers FP promotion and makes condoms available, contributing to prevention of secondary transmission and linking to MCH services.

### **Bottlenecks**

- Despite an increasing number of sites providing PMTCT services, the great majority of health facilities still do not provide any form of intervention for PMTCT.
- The serious midwife shortage (in Prey Veng province 40% of health centers have no midwives) impairs access of all pregnant women to ANC services.
- Many HIV-positive women deliver at home, and current guidelines do not allow mothers to be provided with the ARV drugs needed in case of home delivery. User fees pose a significant barrier to accessing facility-based delivery.
- The vast majority of women who deliver at health facilities are of unknown HIV status.
- The provincial PMTCT coordinator and counselors are not consistently integrated into the Continuum of Care and there is a lack of coordination between the different PMTCT service points (VCCT, ANC, OI/ART, maternity, pediatric follow-up).
- Although OI/ART managers have received PMTCT training, most OI/ART clinicians and counselors have not been trained in provision of or referral for family planning services, nor have they received specific training in management of the pregnant HIV-positive woman. The OI/ART training curriculum does not reflect the current national PMTCT guidelines on ARVs.
- There is a lack of coordinated postpartum care and infant follow-up at many sites
- Existing guidelines have not fully defined the role of home-based care teams and other community groups in supporting pregnant women to seek HIV and MCH services.
- Existing guidelines regarding the roles of home-based care teams to support and monitor HIV-positive women and their infants have not been fully implemented.
- Not all NGOs have budgeted monies to support transportation of pregnant women for HIV testing.
- Stock-outs of PMTCT ARVs are common, particularly in the maternity units.
- While lab strengthening activities are well underway, there is as yet no comprehensive plan for rolling out early infant diagnosis.

## ***C. Infant and Young Child Feeding***

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### **Current Situation**

Breastfeeding is the norm in Cambodia and 96% of mothers breastfeed with approximately 46% breastfeeding their babies over 2 years of age. Approximately 36% of children under five years are underweight, and the prevalence of wasting is 7%. Recognizing the importance of optimal infant feeding practices for child health, the Government of Cambodia developed the National Policy on Infant and Young Child Feeding Practices in 2002. This policy clearly articulates the benefits of exclusive breastfeeding up to six months and appropriate complementary feeding in preventing disease and death among Cambodian children. The National Nutrition Program under the Ministry of Health has the primary responsibility for coordinating implementation of this policy by government institutions and NGOs. The Cambodian Demographic and Health Survey conducted in 2005 reported that 46% of children 4-5 months of age were exclusively breastfed, an increase from 7% in 2000.

The transmission of HIV through breast milk has created a dilemma for mothers and policy makers as the benefits of breastfeeding and the risks of morbidity and mortality due to not breastfeeding have to be weighed against the risk of HIV transmission through breastfeeding. Whilst intra-uterine and intra-partum transmission can be reduced through ARVs, modifying infant feeding practices in order to reduce postnatal transmission is complex. The National Policy on Prevention of Mother-to-child Transmission of HIV (2005) reiterates the importance of optimal infant feeding. It recommends that HIV-positive women should be given the full facts about breastfeeding and alternative infant-feeding options in order to make an informed decision. This policy recommends providing support to mothers who choose to breast-feed and that formula-feeding should be used only in instances where it demonstrates adherence to evidence-informed international standards (i.e. *acceptable, feasible, affordable, sustainable and safe - AFASS*).

### **Strengths and Opportunities**

- The Mother Class conducted regularly in ANC gives some attention to exclusive breastfeeding for six months and complementary feeding as part of the MCH package, though greater use could be made of this opportunity.
- There is general awareness about the importance of breastfeeding for HIV-uninfected women, who comprise 99% of pregnant women.
- Community-based networks (HBC networks, village health volunteers, Baby-friendly Community Initiative etc.) exist and can be enlisted for providing infant feeding counseling to HIV-positive women.
- Increasing rates of exclusive breastfeeding and the decreasing trend in under-nutrition reflects the success of awareness generation and behavior change communication messages in Cambodia.

## **Bottlenecks**

### **Weak implementation of the infant feeding components of the national PMTCT policy:**

There is a lack of clear direction, programming and management capacity within the PMTCT Secretariat to implement the national guidelines. One consequence is misinterpretation by partners, including NGOs, some of whom appear to be promoting infant feeding practices that are biased toward the formula feeding option which negates the mother's opportunity to make an informed choice, based on her individual needs and that of her infant. This has resulted in increased use of formula feeding by HIV-positive mothers as seen from the PMTCT data (close to 95% of HIV-positive mothers in Phnom Penh and approximately 45% of HIV-positive mothers outside Phnom Penh).

### **Inadequate understanding by PMTCT service providers of the importance of optimal infant feeding as an essential intervention for reducing postnatal transmission of HIV:**

Counselors who have been trained to provide PMTCT services, including infant feeding counseling, do not fully understand the role of optimal infant feeding in reducing HIV transmission. Support provided for HIV-positive mothers to choose an option that is appropriate for their circumstances is inconsistent and inadequate. Most counselors lack the knowledge and skills to help mothers make an informed choice, nor are they able to ensure that all HIV-positive mothers who choose formula feeding are truly able to meet the AFASS criteria of being *accessible, feasible, affordable, sustainable and safe*

**Inadequate support to HIV-positive mothers at key time points when decisions on infant feeding are likely to be made:** Counseling and support on infant feeding are not consistently provided to HIV-positive mothers during the post-partum period or at the time of early infant diagnosis (6 weeks of age). Mothers who choose to exclusively breastfeed their infants are not provided with information and appropriate IEC materials on breast health or how risks of transmission of HIV can be reduced even if the mother is breastfeeding.

**Lack of systematic follow-up of children born to HIV-positive mothers to monitor their infant feeding practices and nutritional status:** Existing policies (PMTCT and IYCF) do not adequately address infant feeding practices and protocols for follow-up of HIV-positive mothers and their infants. Prospective data on actual infant feeding practices or nutritional status of children born to HIV-positive mothers are inadequate and not collated or analyzed for program assessment and adjustment. Anecdotal reports from hospitals within and outside Phnom Penh suggest high rates (close to 70%) of malnutrition among both breastfed and formula-fed children born to HIV-positive mothers.

### **Inadequate monitoring of the International Code of Marketing of Breast Milk Substitutes:**

There is no clear monitoring and enforcement mechanism for the 2005 Cambodia sub-decree on marketing of products for infant and young child feeding.

## ***D. Monitoring and Evaluation***

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### **Current Situation**

The NAA coordinates monitoring and evaluation of Cambodia's multi-sectoral response to the HIV/AIDS epidemic and recently issued the National HIV/AIDS Monitoring and Evaluation Guidelines, which include PMTCT service and impact indicators.

The national PMTCT Secretariat coordinates data collection, reporting, data management and dissemination of PMTCT data. PMTCT data are recorded daily into PMTCT registers kept at ANC and maternity wards. These data are aggregated at provincial level and reported monthly using the national PMTCT reporting forms. Information on the number of pregnant women tested at VCCT sites is reported quarterly to NCHADS.

### **Strengths and Opportunities**

- National MCH registers exist, are consistently used and are up-to-date.
- PMTCT registers are in place in ANC and maternity wards at PMTCT sites and are generally appropriately completed and up-to-date.
- The national PMTCT training curriculum includes a module on M&E, and staff are trained on completing PMTCT registers and summary forms.
- All levels report timely submission of monthly summary forms with few errors and PMTCT program monitoring data are accessible at health facilities through to the national level.
- At most sites, mother books and child immunization cards are well-used and carried by the patient to each appointment.
- Standard PMTCT supervision tools exist and are included in the national PMTCT guidelines.

### **Bottlenecks**

**Data are not well utilized at any level for program planning, program improvement and patient tracking:** Although PMTCT program monitoring data are accessible at all levels, there is little regular review and use of the data. Currently, there are no national goals for PMTCT, though a small proportion of provinces are developing their own targets for PMTCT performance and expansion. Data sharing, dissemination and feedback are lacking. There are no ongoing M&E working groups for planning and review of PMTCT data. At OD level there is a lack of tools for tracking patients across the service points of PMTCT, OI/ART, maternity and infant follow-up.

**The PMTCT program monitoring system does not reflect the continuum of care and the 4 PMTCT prongs and there are data gaps in terms of local evidence-based approaches for improving PMTCT services and uptake:** The national PMTCT program monitoring system does not include comprehensive information from PMTCT ANC, OI/ART, PMTCT maternity and pediatric OI/ART sites to reflect all information from HIV testing of pregnant women through follow-up of HIV-exposed infants. Key data on the number of HIV-positive pregnant and postpartum women and HIV-exposed infants accessing HIV care and treatment are not routinely reported or included in the national PMTCT database. The current envelope system for reporting

HIV results does not allow health care workers to identify clients who are HIV-positive if they do not return to collect their results. In addition, the PMTCT program is lacking information on prongs 1 - primary prevention of HIV infection and 2 - prevention of unintended pregnancies, and on community-based support. There are few national demonstration projects to model innovative approaches to optimizing PMTCT services.

**PMTCT and HIV information is not adequately integrated within standard MCH registers, mother books, and child immunization cards:** Multiple MCH and PMTCT registers and forms create an extra recording burden for health care workers and increase the likelihood of mistakes being made during compilation of monthly reports. Newly integrated ANC/PMTCT registers were only observed in a small number of provinces. Lack of HIV and PMTCT information in mother books and child immunization cards results in missed opportunities for providing services across multiple service delivery points. There is currently no way for health staff at each site to readily assess a patient's HIV status or which services and interventions HIV-infected pregnant and postpartum women and HIV-exposed children are receiving or need.

## RECOMMENDATIONS:

### A. *Program Management and Partnerships*

1. **At national level, develop and implement a population-based and comprehensive national PMTCT strategy and time-bound scale up plan, while allowing for testing of innovations**

#### **Key Actions:**

- Position the PMTCT Secretariat within the core functions and structure of the NMCHC and strengthen its capacity through technical assistance in order to effectively link PMTCT implementation to MCH activities and to provide oversight for the implementation of the scale up plan at provincial and OD level.
- Build and/or strengthen a dedicated advisory function for PMTCT within NCHADS, supported by an appropriate technical input, to operationalize and monitor implementation of the joint NMCHC and NCHADS SOPs for PMTCT implementation at Health Centers and Referral Hospitals including:
  - Providing oversight for phasing in new innovations and approaches, such as expanding HIV testing to ANC and maternity units
  - Supporting the work of the PMTCT and CoC TWGs by ensuring coherence and timely implementation of recommendations
  - Exploring and analyzing avenues for broadening impacts of HIV/AIDS financing
- Revise the structure and the ToRs of the PMTCT technical working group to include:
  - The overall objective of the national vision of intervention scale up and the strengthening of linkages to ensure a continuum of care
  - Support for the MoH joint statement and SOPs for PMTCT implementation at Health Centers and Referral Hospitals
  - The co-chair function and accountability of NMCHC and NCHADS
  - Expanded membership to reflect all the key components – OI/ART, nutrition; laboratory; reproductive health; family planning
  - Representation of PMTCT in the CoC working group
  - Establishment of sub-working groups for IYCF and M&E
- As a matter of urgency, establish a national multidisciplinary task force, with representation from the PMTCT TWG and external technical assistance to finalize the development of a population-based and comprehensive national PMTCT strategy and scale-up plan with clearly defined time-bound targets, budgets and accountabilities. This plan should be linked with the National HIV/AIDS Strategic Plan currently under review (NSPII) and the National Strategy for Reproductive and Sexual Health 2006 -2010.
- Include in the scale-up plan clear linkages to existing logistics support mechanisms and specific measures to strengthen the supply chain so that an uninterrupted stock of HIV test kits and PMTCT ARVs can be maintained at all sites.
- The PMTCT Secretariat should support the PHD to translate the national plan into provincial plans and budgets that take into account existing provincial resources and partnerships and that support decentralization of key activities that are currently conducted exclusively at the national level, such as PMTCT training

- To fully integrate PMTCT interventions in the broader health system as a long-term vision, the PMTCT Secretariat should work with the MoH to ensure PMTCT components are included in the revision of the MPA.

## **2. At provincial level, realign the functions of the PMTCT coordinators to work with the Provincial AIDS Office:**

### **Key Actions:**

- To develop joint plans for PMTCT, VCCT, 100% condom use, STI, OI/ART services to be included in the annual provincial plan;
- To conduct joint supervisory visits;
- To facilitate joint reporting and program reviews;
- To streamline logistical issues; including clarification and orientation on supply management process for PMTCT implementers, including PMTCT coordinators
- To strongly position PMTCT issues in COC meetings.

## **3. At OD and health facility level:**

### **Key Actions:**

- Add to existing roles of community groups (HBC teams; TBAs; VHSGs, CBDs, community health volunteers) and define a standard system of incentives for their effective community engagement in support of PMTCT to:
  - Promote prongs 1 and 2
  - Encourage and assist pregnant women to seek ANC and institutional deliveries;
  - Provide support to HIV-positive pregnant and postpartum women;
  - Provide support to HIV-exposed children, including infant feeding support.
- Integrate PMTCT components into existing health center outreach activities
- Eliminate out-of-pocket expenses for delivery services by HIV-positive women by finding alternative sources (e.g., equity funds, NGO support) to cover user fees.

## ***B. PMTCT Services***

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**Scale-up the provision of PMTCT services to reach the majority of pregnant women towards the achievement of universal access.** *This requires a clear vision of PMTCT program expansion with definition of a minimum package of services at each level of the health care system including non-PMTCT sites. It also requires defined linkages and referrals within the existing CoC framework.*

### **Key Actions:**

- 1. The PMTCT Secretariat, in consultation with NCHADS and the NRHP, should, as part of the scale-up plan, define a minimum package of PMTCT interventions (taking into account all 4 prongs) to be delivered at the different levels of health care and in the community, to include in the MPA/CPA guidelines and Safe Motherhood protocol**

- Explore opportunities for conducting rapid HIV testing in ANC and maternity units as part of the expansion plan.
  1. Perform rapid HIV screening at ANC clinics and confirm all HIV-positive results at VCCT centers.
  2. Perform rapid HIV screening on all women of unknown status presenting to maternity sites and provide ARV prophylaxis to women who screen positive, and to their babies. Confirm all HIV-positive results at VCCT centers.

*Both these activities will need to be scaled-up gradually, starting with one geographic area where appropriate training of midwives would first be conducted along with development of logistics management mechanisms, quality assurance plan, and proper evaluation before expanding to scale. External support and technical assistance will be required during an initial demonstration period and initial scale-up phase.*

- Strengthen linkages and referrals to improve access to PMTCT services for women at higher risk for HIV.
  - Clarify procedures at all sites for systematic follow-up of children born to HIV-positive mothers
  - Complete a comprehensive protocol for rolling out early infant diagnosis, which includes a defined demonstration phase; quality assurance and monitoring plan; monitoring tools, such as information added to child health cards, registers to track HIV-exposed infants and HIV testing, a lab database, etc.; guidance to health facilities in providing results, counseling and support; and roles of stakeholders.
  - Fully disseminate the national PMTCT testing and counseling support tools.
- 2. Maximize the number of identified HIV-positive women who deliver at a PMTCT maternity site**
- To ensure adequate support and follow-up at each point of care from testing through delivery to postpartum follow-up, train and utilize home-based care, including CBDs, as well as OI/ART staff and midwives (where appropriate) to provide emotional support, monitor side effects to ARVs, help with birth planning, provide infant feeding counseling, encourage delivery at a PMTCT maternity site, help in establishing linkage of (e.g., accompany) mother to postpartum follow-up and baby to pediatric HIV services, monitor health status of baby
  - Expand government scheme to finance facility-based births and expand the implementation of Health Equity Funds and Social Health Insurance schemes
- 3. Explore and pilot avenues and approaches for packaging and providing mother and infant peripartum PMTCT ARVs antenatally to ensure compliance with the full drug regimen during the delivery and postpartum period, while continuing to encourage facility-based deliveries**
- Train OI/ART teams to provide the peripartum ARV doses antenatally and HBC teams to support adherence

- Develop the appropriate logistics management system to support provision of the mother's and infant's peripartum PMTCT ARV doses antenatally, with special attention to procurement and logistics related to provision of the infant's doses
- Develop / adapt IEC materials to support mothers and caregivers
- Plan, implement and evaluate a demonstration project to provide local programmatic experience of this approach and then expand using a phased approach

**4. Develop more detailed SOPs delineating the roles of community groups including HBC and CBDs and fully integrate these components in the CoC Coordinating Committee:**

- The terms of reference and content of CoC Coordinating Committee meetings should include review of all clients known to PMTCT who are more than 28 weeks gestation with a report from OI/ART as to whether they are enrolled and receiving care, a report from HBC to detail woman's readiness for facility-based delivery and other issues that could impact safe delivery
- The meetings should also detail deliveries that are expected in the ensuing month and outcomes from the prior month

### ***C. Infant and Young Child Feeding***

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**1. National PMTCT Secretariat should ensure that national guidelines and policies on IYCF in the context of HIV-positive mothers and their infants are understood and implemented at all levels of PMTCT service delivery and by all partners including NGOs.**

**Key Actions:**

- The Director of NMCHC should convene a meeting of the PMTCT TWG to make recommendations on optimal infant feeding for improved HIV-free child survival within the PMTCT program
- The Director of NMCHC should designate focal points from the National Nutrition Program and the PMTCT TWG to attend each other's TWG meetings
- Set up a smaller Task Force on HIV and Infant Feeding drawing representation from the TWGs on PMTCT and IYCF and selected partners, with a specific objective to establish targets for HIV-positive mothers and Infant Feeding and include these in the national strategic plan
- The Task Force on HIV and Infant Feeding should convene a technical consultation with stakeholders to undertake evidence-based national adaptation of the recommendations from the Global WHO expert consultation on HIV and Infant Feeding held in Geneva in October 2006
- The PMTCT Secretariat should hold a technical consultation with all partners, including NGOs, supplying infant formula at PMTCT sites to disseminate and build understanding of the national policy on IYCF. It should also monitor operations and programming, ensuring groups are adhering to evidence-informed national and international recommendations on provision and use of infant formula to HIV-positive mothers
- The Director of NMCHC should support and monitor responsible technical staff to establish and maintain operational mechanisms between the PMTCT Secretariat and the

National Nutrition Program, and to ensure joint communications, planning, training and monitoring with PHD and OD management on IYCF for HIV-positive mothers and their infants

**2. Ministry of Health (NMCHC and NCHADS) should ensure that PHD, OD and health facility level capacity is strengthened to implement IYCF within the context of PMTCT and Pediatric AIDS**

**Key Actions:**

The recommended Task Force on HIV and Infant Feeding should develop:

- a national training plan to strengthen the infant feeding component of PMTCT and pediatric AIDS services with specific recommendations for infant feeding counselors and community based groups, particularly HBC workers, village health support groups and mothers support group leaders within the Baby-friendly Community Initiative
- an advocacy, communications and information package on evidence-informed national and international standards on Infant Feeding for use by responsible health providers at the national, provincial, OD and health center levels, including local implementers and partners engaged in PMTCT, HIV and pediatric AIDS service delivery

**3. Ensure consistent and frequent follow-up of HIV-exposed children to monitor infant feeding practices and nutritional status.**

**Key Actions:**

- Include assessment of infant feeding practices and nutritional status into the OI/ART clinical management guidelines at the health centre and Pediatric HIV clinics
- Strengthen growth monitoring in the Yellow Card with assessment of Infant Feeding and appropriate counseling and advice provided to HIV-positive mothers at each facility visit.
- Incorporate guidance on clinical management of severe acute malnutrition in HIV pediatric cases into the national pediatric care protocol
- Prioritize infant feeding counseling and conduct counseling consistently at:
  1. time of early infant diagnosis and;
  2. start of complementary feeding at the age of 6 months.

**4. Undertake monitoring and evaluation of infant feeding practices in the PMTCT program to inform local policy.**

**Key Actions:**

- The Task Force on HIV and Infant Feeding should ensure evidence-informed targets and training in the PMTCT Program
- National Institute of Public Health, in close consultation with NMCHC and NCHADS, should undertake a participatory evaluation of outcomes amongst children in the PMTCT program focusing on HIV-free survival
- A national consultation should be convened to discuss the findings of this evaluation to inform national policy and implementation of Infant Feeding practices in HIV and PMTCT services

## D. Monitoring and Evaluation

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### 1. Develop capacity and guidance at all levels to effectively use data for program planning, program improvement and patient tracking.

#### **Key Actions:**

##### *National Level*

- Institute a PMTCT M&E sub-committee under the PMTCT TWG, comprised of representatives of: PMTCT Secretariat, MCH, NAA, NCHADS, Dept. of Planning and Health Information, PMTCT TWG, etc.
- Develop national targets for PMTCT expansion
- Develop and disseminate guidance, including performance and quality improvement indicators, to the provincial and OD levels on use of data for program improvement
- The PMTCT TWG should review national PMTCT program data quarterly and provide recommendations and support for program improvement
- In support of the Joint Statement on PMTCT, the PMTCT Secretariat and NCHADS data management unit should regularly share PMTCT program data
- The PMTCT Secretariat should produce an annual report on PMTCT progress and convene an annual meeting of stakeholders to disseminate the information and solicit input for program improvement. Such a report should be used to input to the multi-stakeholder review and operational planning
- The M&E sub-committee should collaborate with the Department of Planning and Health Information to identify PMTCT indicators which should be included in the national health information system
- The M&E Unit of the PMTCT Secretariat should provide at least quarterly feedback to provincial PMTCT coordinators on provincial progress and performance on key indicators measured against national targets

##### *Provincial Level*

- Provincial health teams should develop population-based PMTCT expansion targets, based on the national PMTCT goals and national guidance on key data on which plans should be based (e.g., annual deliveries, HIV prevalence, MCH service statistics, etc.).
- PMTCT data from all service delivery points (ANC, maternity, adult and pediatric OI/ART sites) should be exchanged between MCH and provincial data management units, where they exist, to support provincial program planning.

##### *Operational District Level*

- OD and health facilities should develop PMTCT targets based on the provincial work plan.
- ODs should develop local tools for tracking patients across the service points of PMTCT, OI/ART, maternity and infant follow-up.
- Regular OD team meetings should be used to review PMTCT data collected at ANC and maternity sites, OI/ART sites and by community-based programs and to identify progress both in terms of performance and quality of services, challenges and solutions and to ensure patient tracking.

## 2. Review the current PMTCT program monitoring system and address key data gaps

### Key Actions:

- Review emerging international PMTCT indicators and tools, with focused attention to family planning and infant feeding which are not currently included in national PMTCT data collection. Consideration should be given to how infant feeding practices can be determined and routinely reported and to reporting of nutritional status of HIV-exposed infants.
- Review current post-test counseling and recording procedures at ANC to ensure that all identified HIV-positive women are reported and tracked, rather than only HIV-positive women who receive post-test counseling.
- The PMTCT M&E sub-committee should convene a meeting to:
  - Review data currently collected at adult and pediatric OI/ART sites and identify information on HIV-infected women and -exposed children which should be routinely collected and reported from OI/ART sites such as:
    - Number of HIV-positive pregnant and postpartum women:
      - Newly enrolled in HIV care
      - Assessed for ART eligibility
      - ART eligible
      - Initiating ARV prophylaxis
      - Initiating ART
    - Number of HIV-exposed children:
      - Initiating CTX
      - HIV tested
      - Determined to be HIV-infected and -uninfected
  - Review and revise current HBC SOP performance indicators and tools to include data on PMTCT-related activities.
  - Revise and finalize standard data collection tools and reporting forms.
  - Disseminate updated data collection and reporting tools, train health staff on their use and provide close monitoring support during the initial implementation phase.
- Provincial level data management unit and PMTCT coordinators should ensure that all PMTCT-related data from both MCH/PMTCT and OI/ART sites are forwarded monthly or quarterly to the PMTCT Secretariat.
- Partners should provide support and TA to the PMTCT M&E Unit to update the national PMTCT database, with specific consideration to software packages, to reflect changes in tools and reporting forms.
- The PMTCT TWG should support the initiation of demonstration projects / operational research to model local evidence-based approaches to optimize PMTCT services.

**3. Integrate PMTCT and HIV information into standard maternity registers, mother books and child immunization cards and ensure the newly integrated ANC registers reflect updates to the national program monitoring system**

**Key Actions:**

- The PMTCT M&E sub-committee, in collaboration with MCH, should conduct a stakeholders workshop to:
  - Review and adapt emerging international recommendations on HIV and PMTCT information to include in the standard national MCH registers, mother books and child immunization cards. Also review and learn from examples of registers and maternal and child health cards from other countries which have undergone the same process (e.g., Botswana, Zimbabwe, Lesotho, etc.).
  - Revise and finalize ANC and Maternity registers, mother books and child immunization cards to include PMTCT information in a confidential manner
  - Disseminate registers, mother books and child immunization cards, train health staff on their use and provide close monitoring support during the initial implementation phase

## APPENDIX 1:

### Joint Review Participants:

NAME	ORGANIZATION
External Consultants	
Chewe Luo	UNICEF New York
Anirban Chatterjee	UNICEF New York
Wing-Sie Cheng	UNICEF Regional Office
Andrea Swartzendruber	US CDC Atlanta
Massimo Ghidinelli	WHO/ Western Pacific Regional Office
Robert Oelrichs	World Bank Washington
In-country Team	
Vong Sathiarany	PMTCT Secretariat
Toun Sovanna	PMTCT Secretariat
Kim Rattana	PMTCT Secretariat
Deng Kheang	PMTCT Secretariat
Sean Souchetra	PMTCT Secretariat
Matthew Magenheim	Clinton Foundation
Dana Morrissey	Clinton Foundation
Song Ngak	FHI
Tony Lisle	UNAIDS
Sok Sokun	UNFPA
Haritiana Rakotomamonjy	UNICEF
Chin Sedtha	UNICEF
Mean Reatanak Sambath	USAID-HSSC
Ly Vanthy	US CDC
Tom Heller	US CDC
Kunthea Soch	US CDC
Nicole Seguy	WHO
Anne Brink	WHO

## APPENDIX 2:

### Schedule for PMTCT JOINT REVIEW Sunday 26 August to Tuesday 28 August 2007 Phnom Penh City

<b>Sunday, 26 August 2007</b>	
2:00-5:30pm	Orientation Session at US-CDC office, NIPH campus (review team members only)
<b>Monday, 27 August 2007</b>	
8:00am	HE. Dr. Mean Chhivun, NCHADS Director (Teams A&B)
10:00-10:40am	Dr. Vong Sathiarany and PMTCT Staff members (External consultants only)
	Dr. Ou Kevanna, National Nutrition Program Manager (Team B)
11:00-11:30am	HE. Prof. Eng Huot, Secretary of State for Health (Team A)
<b>Lunch</b>	
2:30pm	Dr. Hor Bun Leng, Vice general Director for NAA (Team B)
3:00pm	HE. Dr. Mam Bun Heng, Secretary of State for Health (Team A)
4:30pm	Prof. Koum Kanal, NMCHC Director (Teams A&B)
6:30-7:00 pm	Matt Magenheim and Dana Morrissey, Clinton Foundation (Teams A&B)
<b>Dinner</b>	
7:10-9:00pm	Wrap up Monday session (Teams A&B)
<b>Tuesday, 28 August 2007</b>	
8:30am	Visit PMTCT services at NMCHC (Team A)
8:30am	Visit PMTCT services at Calmette Hospital Meeting Prof. Kruey Leang Sim (Team B)
10:30am	Visit NPH (HIV exposed infant F/U, HIV pediatric care, and Malnutrition Unit)(Te Visit Maryknoll PMTCT site at Psar Deum Tkov (Team B)
<b>Lunch</b>	
2:00pm	Visit Red Cross HC (Teams A&B) M&E Meeting
4:00pm	Visit USAID Office with its partners: RACHA, RHAC, KHANA, CARE, URC, FHI, CRS (Teams A&B)
<b>Dinner</b>	
6:30-8:30pm	Wrap up Tuesday Session (Teams A&B)

Note: the above schedule is tentative and is subject to change.

Contact person: Dr. Vong Sathiarany, PMTCT Program Coordinator, NMCHC  
Tel: 012 331905  
Office: 023 723993

**THANKS FOR YOUR PARTICIPATION**

## List of Team Members 27-28 August, 2007

Monday, 27 August 2007	
<b>Team A</b>	<ol style="list-style-type: none"> <li>1. <b>Andrea Swartzendruber</b>, MPH, PMTCT team of the Global AIDS Program, US-CDC Atlanta</li> <li>2. <b>Chewe Luo</b>, UNICEF, Senior Advisor, HIV/AIDS &amp; Health, New York office</li> <li>3. <b>Massimo Ghidinelli</b>, MD. WHO WPRO Regional Advisor, HIV/AIDS and STI, Manila</li> <li>4. <b>Nicole Seguy</b>, WHO Cambodia</li> <li>5. <b>Ly Vanthy</b>, US-CDC Cambodia</li> </ol>
<b>Team B</b>	<ol style="list-style-type: none"> <li>1. <b>Anirban Charttergee</b>, MD, DSc. UNICEF, Advisor on Nutrition and HIV Care and Support, New York office</li> <li>2. <b>Ms. Wing-Sie Cheng</b>, UNICEF, HIV/AIDS Regional Advisor, Bangkok office</li> <li>3. <b>Robert Oelrichs</b>, World Bank</li> <li>4. <b>Sedtha Chin</b>, UNICEF Cambodia</li> <li>5. <b>Tom Heller</b>, US-CDC Cambodia</li> <li>6. <b>Anne Brink</b>, WHO Cambodia</li> <li>7. <b>Sok Sokun</b>, UNFPA</li> </ol>
Tuesday, 28 August 2007	
<b>Team A</b>	<ol style="list-style-type: none"> <li>1. <b>Andrea Swartzendruber</b>, MPH, PMTCT team of the Global AIDS Program, US-CDC Atlanta</li> <li>2. <b>Anirban Charttergee</b>, MD, DSc. UNICEF, Advisor on Nutrition and HIV Care and Support, New York office</li> <li>3. <b>Massimo Ghidinelli</b>, MD. WHO WPRO Regional Advisor, HIV/AIDS and STI, Manila</li> <li>4. <b>Nicole Seguy</b>, WHO Cambodia</li> <li>5. <b>Ly Vanthy</b>, US-CDC Cambodia</li> <li>6. <b>Mean Rattanak Sambath</b>, USAID-HSSC, Cambodia</li> <li>7. <b>Matt Magenheim</b>, Clinton Foundation, Cambodia</li> </ol>
<b>Team B</b>	<ol style="list-style-type: none"> <li>1. <b>Chewe Luo</b>, UNICEF, Senior Advisor, HIV/AIDS &amp; Health, New York office</li> <li>2. <b>Ms. Wing-Sie Cheng</b>, UNICEF, HIV/AIDS Regional Advisor, Bangkok office</li> <li>3. <b>Robert Oelrichs</b>, World Bank</li> <li>4. <b>Sedtha Chin</b>, UNICEF Cambodia</li> <li>5. <b>Tom Heller</b>, US-CDC Cambodia</li> <li>6. <b>Anne Brink</b>, Advisor to PMTCT, WHO Cambodia</li> <li>7. <b>Ngak Song</b>, FHI Cambodia</li> <li>8. <b>Sok Sokun</b>, UNFPA</li> </ol>

Note: all details are tentative and subject to change.

Contact person: Dr. Vong Sathiarany, PMTCT Program Coordinator, NMCHC  
 Tel: 012 331905  
 Office: 023 723993

**THANKS FOR YOUR PARTICIPATION**

**Schedule for PMTCT JOINT REVIEW**  
**Wednesday 29 August to Friday 31 August 2007**

<b>BATTAMBANG AND PURSAT (TEAM I)</b>	
<b>29-8-07: BATTAMBANG PROVINCE</b>	
9:30-10:00am	Meet OD Key Persons in Mornng Russey (OD Director, MCH Manager, AIDS Manager, and others)
10:10-11:25am 11:30-12:00am	<ul style="list-style-type: none"> <li>▪ Visit Mornng Russey RH and Health Center</li> <li>▪ Meet PLHA women (2)</li> </ul>
<b>Lunch</b>	
2:00-4:00pm	Visit Prey Tauch Health Center
4:20-6:00pm	Leave for Battambang Province
<b>30-8-07: BATTAMBANG PROVINCE</b>	
8:30-9:30am	Meet Key Persons at PHD (PHD Director, MCH manager, PMTCT Coordinator, PAO Manager, and others)
9:40-11:25am 11:30-12:00am	<ul style="list-style-type: none"> <li>▪ Visit Battambang RH and Svay Por Health Center</li> <li>▪ Meet HBC (2)</li> </ul>
<b>Lunch</b>	
2:00-4:00pm	Visit Chrey Health Center
4:30-6:00pm	Leave for Pursat
<b>31-8-07: PURSAT PROVINCE</b>	
8:30-9:30	Meet Key Persons at PHD (PHD Director, MCH manager, PMTCT Coordinator, PAO Manager, and others)
9:35-11:25am 11:30-12:00am	<ul style="list-style-type: none"> <li>▪ Visit Sampov Meas RH and Health Center and key persons</li> <li>▪ Meet HBC team (2)</li> </ul>
<b>Lunch = Back to PP</b>	
3:00-5:00pm	Debriefing meeting for all teams at US-CDC

Note: the schedule is subject to change depending on the availability of the key officials.

ក្នុងដំណើរទស្សនៈកិច្ចនៅក្នុងមន្ទីរពេទ្យបង្អែក សូមលោកប្រធានមន្ទីរសុខាភិបាលខេត្តជួយរៀបចំចាត់ចែងអោយក្រុមការងារ:

- ពិនិត្យគ្លីនិក OI/ART និងជួបពិភាក្សាជាមួយប្រធានគ្លីនិកនិងក្រុមការងាររបស់គាត់
- ពិនិត្យមន្ទីរសម្ភព និង ជួបពិភាក្សាជាមួយប្រធានផ្នែកសំរាល និងបុគ្គលិករបស់គាត់
- ជួបជាមួយក្រុមថែទាំអ្នកផ្ទុកមេរោគអេដស៍/អ្នកជំងឺអេដស៍តាមផ្ទះ
- ជួបជាមួយអង្គការមិនមែនរដ្ឋាភិបាលជាដៃគូដែលគាំទ្រសកម្មភាពបង្ការការចម្លងមេរោគអេដស៍ពីម្តាយទៅកូន
- និង ជួបជាមួយក្រុមស្រ្តីអ្នកផ្ទុកមេរោគអេដស៍ ដើម្បីពិភាក្សាពីឥរិយាបថរបស់គាត់ចំពោះការមានកូន ពិទ្ធិកន្លែងដែលគាត់នឹងជ្រើសរើសធ្វើការសំរាលកូន ពិជីវិតនៃការចិញ្ចឹមកូន ពិធីនៃការគ្រួសារ និងពិបទពិសោធន៍ក្នុងការទទួលសេវារបស់គាត់កន្លងមក បើសិនជាអាច ។

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**Schedule for PMTCT JOINT REVIEW**  
**Wednesday 29 August to Friday 31 August 2007**

<b>SVAY RIENG AND PREY VENG (TEAM II)</b>	
<b>29-8-07: SVAY RIENG PROVINCE</b>	
9:30-10:30am	Meet OD Key Persons in Romeas Hek (OD Director, MCH Manager, AIDS Manager, and others)
10:35-11:25am 11:30-12:00am	<ul style="list-style-type: none"> <li>▪ Visit Romeas Hek RH and Health Center</li> <li>▪ HBC (2)</li> </ul>
<b>Lunch</b>	
2:00-4:00pm	Visit Chan Trey Health Center
4:30-6:00pm	Leave for Svay Rieng Province
<b>30-8-07: SVAY RIENG PROVINCE</b>	
8:30-9:30am	Meet Key Persons at Svay Rieng PHD (PHD Director, MCH manager, PMTCT Coordinator, PAO Manager, and others)
9:35-11:20am 11:25-12:00am	<ul style="list-style-type: none"> <li>▪ Visit Svay Rieng RH and Health Center</li> <li>▪ PLHA women (2)</li> </ul>
<b>Lunch</b>	
2:00-4:00pm	Visit Cham Lang Health Center
4:30-6:00pm	Leave for Prey Veng
<b>31-8-07: PREY VENG PROVINCE</b>	
8:30-9:30am	Meet Key Persons at Prey Veng PHD (PHD Director, MCH manager, PMTCT Coordinator, PAO Manager, and others)
9:35-12:00am	Visit Neak Loeung RH and HC
<b>Lunch = Back to PP</b>	
3:00-5:00pm	Debriefing meeting for all teams at US-CDC

Note: the schedule is subject to change depending on the availability of the key officials.

- ក្នុងដំណើរទស្សនៈកិច្ចនៅក្នុងមន្ទីរពេទ្យបង្អែក សូមលោកប្រធានមន្ទីរសុខាភិបាលខេត្តជួយរៀបចំចាត់ចែងអោយក្រុមការងារ:
- ពិនិត្យគ្លីនិក OI/ART និងជួបពិភាក្សាជាមួយប្រធានគ្លីនិកនិងក្រុមការងាររបស់គាត់
  - ពិនិត្យមន្ទីរសម្ភព និង ជួបពិភាក្សាជាមួយប្រធានផ្នែកសំរាល និងបុគ្គលិករបស់គាត់
  - ជួបជាមួយក្រុមថែទាំអ្នកផ្ទុកមេរោគអេដស៍/អ្នកជំងឺអេដស៍តាមផ្ទះ
  - ជួបជាមួយអង្គការមិនមែនរដ្ឋាភិបាលជាដៃគូដែលគាំទ្រសកម្មភាពបង្ការការចម្លងមេរោគអេដស៍ពីម្តាយទៅកូន
  - និង ជួបជាមួយក្រុមស្ត្រីអ្នកផ្ទុកមេរោគអេដស៍ ដើម្បីពិភាក្សាពីឥរិយាបថរបស់គាត់ចំពោះការមានកូន ពិធីកន្លែងដែលគាត់នឹងជ្រើសរើសធ្វើការសំរាលកូន ពិធីរើសនៃការចិញ្ចឹមកូន ពិធីនៃការគ្រួសារ និងពីបទពិសោធន៍ក្នុងការទទួលសេវារបស់គាត់កន្លងមក បើសិនជាអាច ។

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**Schedule for PMTCT JOINT REVIEW**  
**Wednesday 29 August to Friday 31 August 2007**

<b>KANDAL AND KAMPONG SPEU (TEAM III)</b>	
<b>29-8-07: KANDAL PROVINCE</b>	
8:30-9:30am	Meet Key Persons at Koh Thom OD (OD Director, MCH manager, PMTCT Coordinator, AIDS Manager, and others)
9:40-11:20am	Visit Koh Thom RH and Health Center
11:30-12:00am	Meet HBC (2) and PLHA women (1)
<b>Lunch</b>	
2:00-4:00pm	Visit Koh Thom B Health Center (5km away from RH)
4:10-6:00pm	Go back to PP
<b>30-8-07: KANDAL PROVINCE</b>	
8:30-9:30am	Meet OD and PHD Key Persons in Kandal Province (PHD Director, OD Director, MCH Manager, AIDS Manager, and others)
9:40-11:20am	Visit Takmao Referral Hospital and Health Center
11:30-12:00am	Meet HBC team (2) and PLHA women (2)
<b>Lunch</b>	
2:00-4:00pm	Visit Siem Reap Health Center
4:10-6:00pm	Go back to PP
<b>31-8-07: KAMPONG SPEU PROVINCE</b>	
8:30-9:30am	Meet Key Persons at Kampong Speu PHD (PHD Director, MCH manager, PMTCT Coordinator, PAO Manager, and others)
9:40-11:20am	Visit Kampong Speu RH, HC and key persons
11:30-12:00am	Meet PLHA (2)
<b>Lunch = Back to PP</b>	
3:00-5:00pm	Debriefing meeting for all teams at US-CDC

Note: the schedule is subject to change depending on the availability of the key officials.

- ក្នុងដំណើរទស្សនៈកិច្ចនៅក្នុងមន្ទីរពេទ្យបង្អែក សូមលោកប្រធានមន្ទីរសុខាភិបាលខេត្តជួយរៀបចំចាត់ចែងអោយក្រុមការងារ:
- ពិនិត្យគ្លីនិក OI/ART និងជួបពិភាក្សាជាមួយប្រធានគ្លីនិកនិងក្រុមការងាររបស់គាត់
  - ពិនិត្យមន្ទីរសម្ភព និង ជួបពិភាក្សាជាមួយប្រធានផ្នែកសំរាល និងបុគ្គលិករបស់គាត់
  - ជួបជាមួយក្រុមថែទាំអ្នកផ្ទុកមេរោគអេដស៍/អ្នកជំងឺអេដស៍តាមផ្ទះ
  - ជួបជាមួយអង្គការមិនមែនរដ្ឋាភិបាលជាដៃគូដែលគាំទ្រសកម្មភាពបង្ការការចម្លងមេរោគអេដស៍ពីម្តាយទៅកូន
  - និង ជួបជាមួយក្រុមស្រ្តីអ្នកផ្ទុកមេរោគអេដស៍ ដើម្បីពិភាក្សាពីវិធានការរបស់គាត់ចំពោះការមានកូន ពីទីកន្លែងដែលគាត់នឹងជ្រើសរើសធ្វើការសំរាលកូន ពីជំរើសនៃការចិញ្ចឹមកូន ពីផែនការគ្រួសារ និងពីបទពិសោធន៍ក្នុងការទទួលសេវារបស់គាត់កន្លងមក បើសិនជាអាច ។

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**Schedule for PMTCT JOINT REVIEW**  
**Wednesday 29 August to Friday 31 August 2007**

<b>KAMPONG CHAM AND KAMPONG THOM (TEAM IV)</b>	
<b>29-8-07: KAMPONG CHAM</b>	
8:30-9:30am	Meet OD and PHD Key Persons in Kampong Cham (PHD Director, OD Director, MCH Manager, AIDS Manager, and others)
9:40-11:25am 11:30-12:00am	<ul style="list-style-type: none"> <li>▪ Visit Kg. Cham RH and Boeung Kok Health Center</li> <li>▪ Meet HBC team (2)</li> </ul>
<b>Lunch</b>	
2:00-4:00pm	Visit Koh Roka Health Center
4:10-5:00pm	Go to the Hotel
<b>30-8-07: KAMPONG CHAM PROVINCE</b>	
8:30-9:00am	Meet Key Persons at Memut OD (OD Director, MCH manager, PMTCT Coordinator, AIDS Manager, and others)
9:10-11:25am 11:30-12:00am	Visit Memut RH and Health Center Meet PLHA women (2)
<b>Lunch</b>	
2:00-4:00pm	Visit Samrorn Health Center
4:10-6:00pm	Leave for Kg. Thom Province
<b>31-8-07: KAMPONG THOM PROVINCE</b>	
8:00-9:00am	Meet Key Persons at PHD Kampong Thom (PHD Director, MCH manager, PMTCT Coordinator, PAO Manager, and others)
9:10-11:25am 11:30-12:00am	<ul style="list-style-type: none"> <li>▪ Visit Kampong Thom Referral Hospital, HC and key persons</li> <li>▪ Meet HBC team (2) and PLHA woman (1)</li> </ul>
<b>Lunch = Back to PP</b>	
3:00-5:00pm	Debriefing meeting for all teams at US-CDC

Note: the schedule is subject to change depending on the availability of the key officials.

- ក្នុងដំណើរទស្សនៈកិច្ចនៅក្នុងមន្ទីរពេទ្យបង្អែក សូមលោកប្រធានមន្ទីរសុខាភិបាលខេត្តជួយរៀបចំចាត់ចែងអោយក្រុមការងារ:
- ពិនិត្យគ្លីនិក OI/ART និងជួបពិភាក្សាជាមួយប្រធានគ្លីនិកនិងក្រុមការងាររបស់គាត់
  - ពិនិត្យមន្ទីរសម្ភព និង ជួបពិភាក្សាជាមួយប្រធានផ្នែកសំរាល និងបុគ្គលិករបស់គាត់
  - ជួបជាមួយក្រុមថែទាំអ្នកផ្ទុកមេរោគអេដស៍/អ្នកជំងឺអេដស៍តាមផ្ទះ
  - ជួបជាមួយអង្គការមិនមែនរដ្ឋាភិបាលជាដៃគូដែលគាំទ្រសកម្មភាពបង្ការការចម្លងមេរោគអេដស៍ពីម្តាយទៅកូន
  - និង ជួបជាមួយក្រុមស្ត្រីអ្នកផ្ទុកមេរោគអេដស៍ ដើម្បីពិភាក្សាពីឥរិយាបថរបស់គាត់ចំពោះការមានកូន ពីទីកន្លែងដែលគាត់នឹងជ្រើសរើសធ្វើការសំរាលកូន ពីជំរើសនៃការចិញ្ចឹមកូន ពីផែនការគ្រួសារ និងពីបទពិសោធន៍ក្នុងការទទួលសេវារបស់គាត់កន្លងមក បើសិនជាអាច ។

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**TEAM MEMBERS FOR THE FIELD VISITS  
29-31 August 2007**

<b>Team I: BATTAMBANG AND PURSAT</b>		
1	Massimo Ghidinelli (TL)	WHO, Manila
2	Wing-Sie Cheng (Rapporteur)	UNICEF, Bangkok
3	Toun Sovanna	PMTCT Secretariat
4	Mean Rattanak Sambath	URC, Cambodia
5	Song Ngak	FHI, Cambodia
6	Eng Bunthoeun	US-CDC GAP, Translator
<b>Team II: SVAY RIENG AND PREY VENG</b>		
1	Anirban Chatterjee (TL)	UNICEF, New York
2	Matthew Magenheimer (Rapporteur)	Clinton Foundation, Cambodia
3	Dana Morrissey	Clinton Foundation, Cambodia
4	Tom Heller	US-CDC GAP, Cambodia
5	Vong Sathiarany	PMTCT Secretariat
6	Kunthea Soch	US-CDC GAP, Cambodia
7	Chan Chhuong	Translator
8	Huot Saoda	NMCHC
<b>Team III: KANDAL AND KAMPONG SPEU</b>		
1	Andrea Swartzendruber (TL)	US-CDS, Atlanta
2	Nicole Seguy (Rapporteur)	WHO, Cambodia
3	Deng Kheang	PMTCT Secretariat
4	Tony Lisle	UNAIDS, Cambodia
5	Ly Vanthy	US-CDC, Cambodia
6	Ben Visnow	Translator
<b>Team IV: KAMPONG CHAM AND KAMPONG THOM</b>		
1	Chewe Luo (TL)	UNICEF, New York
2	Anne Brink (Rapporteur)	WHO, Cambodia
3	Chin Sedtha	UNICEF, Cambodia
4	Sean Souchetra	PMTCT Secretariat
5	Robert Oelrichs	World Bank, Washington
6	Touch Thavrith	Translator

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