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Ministry of Health

NATIONAL STRATEGIC PLAN FOR PREVENTING MOTHER-TO-CHILD TRANSMISSION OF HIV 2008 - 2015

2008

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National Strategic Plan for Preventing Mother-to-Child Transmission of HIV 2008 - 2015

2008

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ACRONYMS

AFASS	Acceptable, Feasible, Afordable, Sustainable, Safe
AIDS	Acquired Immunodeficiency Syndrome
ANC	Ante-natal Care
ART	Anti-Retroviral Therapy
ARV	Anti-Retroviral drug
AZT	Azydothymidine
CBOs	Community-Based Organizations
CDHS	Cambodia Demographic and Health Survey
CoC	Continuum of Care
CPA	Complementary Package of Activities
GFATM	Global Fund to fight AIDS, TB, and Malaria
HAART	Highly Active Antiretroviral Therapy
HBC	Home-Based Care
HC	Health Center
HIV	Human Immunodeficiency Virus
HPITC	Health Provider-initiated Testing and Counseling
HSS	HIV Sentinel Surveillance
IYCF	Infant and Young Child Feeding
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MoH	Ministry of Health
MPA	Minimum Package of Activities
MTCT	Mother to Child Transmission (of HIV)
NAA	National AIDS Authority
NCHADS	National Centre for HIV/AIDS, Dermatology and STD
NGOs	Non-Governmental Organizations
NMCHC	National Maternal and Child Health Centre
NNP	National Nutrition Program
NRHP	National Reproductive Health Program
NSP	National Strategic Plan
NVP	Nevirapine
OD	Operational District
OI	Opportunistic Infection
PEP	Post Exposure Prophylaxis
PLHA	People Living with HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission (of HIV)
RH	Referral Hospital
RHAC	Reproductive Health Association Cambodia
SOP	Standard Operating Procedures
STI/STDs	Sexually Transmitted Infection/diseases
ToR	Terms of Reference
TWG	Technical Working Group
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session
UNICEF	United Nations Children's Fund
US CDC	United States Center for Disease Control and Prevention
VCCT	Voluntary and Confidential Counseling and Testing
VHSG	Village Health Support Group
WHO	World Health Organization

FOREWORD

Transmission of HIV from infected mothers to their children currently accounts for one-third of all new HIV infections in Cambodia. Currently, effective antiretroviral treatment is available to successfully prevent this transmission. The Ministry of Health of the Royal Government of Cambodia, in partnership with civil society and international agencies commit to eliminate transmission of HIV from mothers to their children so that children born to HIV-infected women can live healthy, productive lives free of HIV infection.

AIDS is a fatal disease that no medicine can cure. Though anti-retroviral drugs are now used for prolonging the lives of people living with HIV/AIDS. Most women who get infected with HIV from their husbands or their partners do not know their HIV status because HIV can stay in the human body for many years after infection without producing symptoms. Unfortunately, when infected women get pregnant, HIV can pass from the mother to the baby during the pregnancy, at delivery, and while breast feeding. Antiretroviral drug therapy to extend the life of people living with HIV can also prevent the virus from passing from mother to child. Therefore, it is important to encourage all pregnant women to have an HIV test during pregnancy or at the latest during labor before delivery so that those infected can receive treatment in time to prevent mother-to-child transmission.

On behalf of the Ministry of Health, I strongly support the National Strategic Plan for PMTCT which is contributing to the reduction of the HIV epidemic in Cambodia and improving the health of mothers and children. I believe that children born to HIV-infected mothers will have good health and be free of HIV infection as a result of effective guidance provided by this NSP-PMTCT.

However, this is only the first step. To make our dream become true we have to work together to widely implement the National Strategic Plan for PMTCT. I believe that we will achieve the goal because of the commitment and close collaboration of the Royal Government, health officers, and civil society leaders.

Phnom Penh, 15 July 2008

Prof. Eng Huot
Secretary of State
Ministry of Health

ACKNOWLEDGEMENTS

National Strategic Plan for Preventing Mother-to-Child Transmission of HIV 2008-2015 has been developed by the National Maternal and Child Health Center in collaboration with all key partners that are implementing PMTCT and support from WHO, UNICEF, and US-CDC. The NSP-PMTCT will be a good guide to make the PMTCT program move forward with better quality.

The National Maternal and Child Health Centre wishes to express its appreciation to everyone who contributed to the development of this National Strategic Plan for Prevention of Mother to Child Transmission of HIV (2008-2015) especially Technical Working Group members for their valuable feedback and recommendations contributing greatly to the final product.

Phnom Penh, May, 2008

Prof. Koum Kanal
Director of NMCHC

1 BACKGROUND

1.1 Purpose

The National Strategic Plan for Prevention of Mother-to-Child Transmission of HIV 2008-2015 (NSP-PMTCT 2008-2015) aims to lay down a roadmap for improving reproductive health service provision for pregnant women and their children by defining a package of PMTCT objectives, strategies, and activities to be scaled up to approach the UNGASS goal of reducing the percentage of HIV-infected babies born to HIV-infected women by 50% by 2010 and to achieve further targeted reductions thereafter.

1.2 Development of NSP-PMTCT 2008-2015

In response to limited success in screening pregnant women in Cambodia for HIV and providing prophylaxis and treatment services for those identified HIV-positive, the National PMTCT Secretariat called for a Joint Review of the national program, utilizing technical advice from international consultants from UNICEF, WHO, US CDC, and the World Bank. This Joint Review was conducted in August-September, 2007, and included participation of all key in-country partners involved in supporting PMTCT services. A report of its recommendations was presented, approved, and published by the Ministry of Health (PMTCT Program Cambodia Joint Review Report, 2007).

The first of four primary recommendations made by that Review team was to "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 (Cambodia PMTCT Program Joint Review Report, 2007).

Following dissemination of the Review team's findings, the PMTCT Technical Working Group prioritized the specific recommendations made in the Review report and linked them to specific strategies, activities, indicators and targets in preparation for development of Cambodia's NSP-PMTCT. With the help of an international consultant who prepared an initial NSP-PMTCT draft, a consensus building process was initiated including a national meeting in which key stakeholders and government staff charged with implementing PMTCT services in the field provided input, followed by further revisions by members of the PMTCT Technical Working Group in collaboration with the National Secretariat.

This development process was intended to make maximum use of available external expertise, while at the same time allowing for full participation of all in-country stakeholders. The result is a national strategic plan that will provide effective guidance for the achievement of national and UNGASS goals for the prevention of mother-to-child transmission of HIV.

2 SITUATION AND RESPONSE ANALYSIS

2.1 Magnitude of the burden of HIV in women and children in Cambodia

HIV was first detected in Cambodia in 1991, and the first AIDS patient was diagnosed in 1993. The prevalence of HIV in 1998 was calculated to be 2% of the population aged 15-49 years, probably the highest in Asia[1]. The transmission of HIV was primarily due to transmission from infected commercial sex workers to their clients. Between 1998 and 2006, the overall HIV prevalence rate gradually declined to 0.9%[2], in part due to high

[1] Consensus Workshop on Estimation of HIV Prevalence,2007, NCHADS/MoH
[2] Ibid.

death rates prior to the availability of ARV treatment services, but also in large part due to a successful 100% condom use program (CUP) and other prevention efforts by the Royal Government of Cambodia in close collaboration with international agencies, non-governmental organizations, and civil society. Also HIV prevalence among pregnant women attending government ANC sites has declined from 2.1% in 1998 to 1.1% in 2006[3].

However, while the prevalence and incidence of HIV infection have decreased in high risk groups most often associated with the epidemic (direct and indirect commercial sex workers, military and police), the face of the epidemic has become more feminine. The proportion of women among the total number of people HIV-infected rose from 35% in 1998 to 52.1% in 2006 (HSS 1998; HIV Estimates and Projections 2006-2012, 2007, NCHADS.). This signals a change in the epidemic from the "first wave", in which the infection was concentrated among commercial sex workers and their clients to the "second wave", in which HIV infection is spreading to the wives (and then the children). 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.

2.2 Response for PMTCT in Cambodia

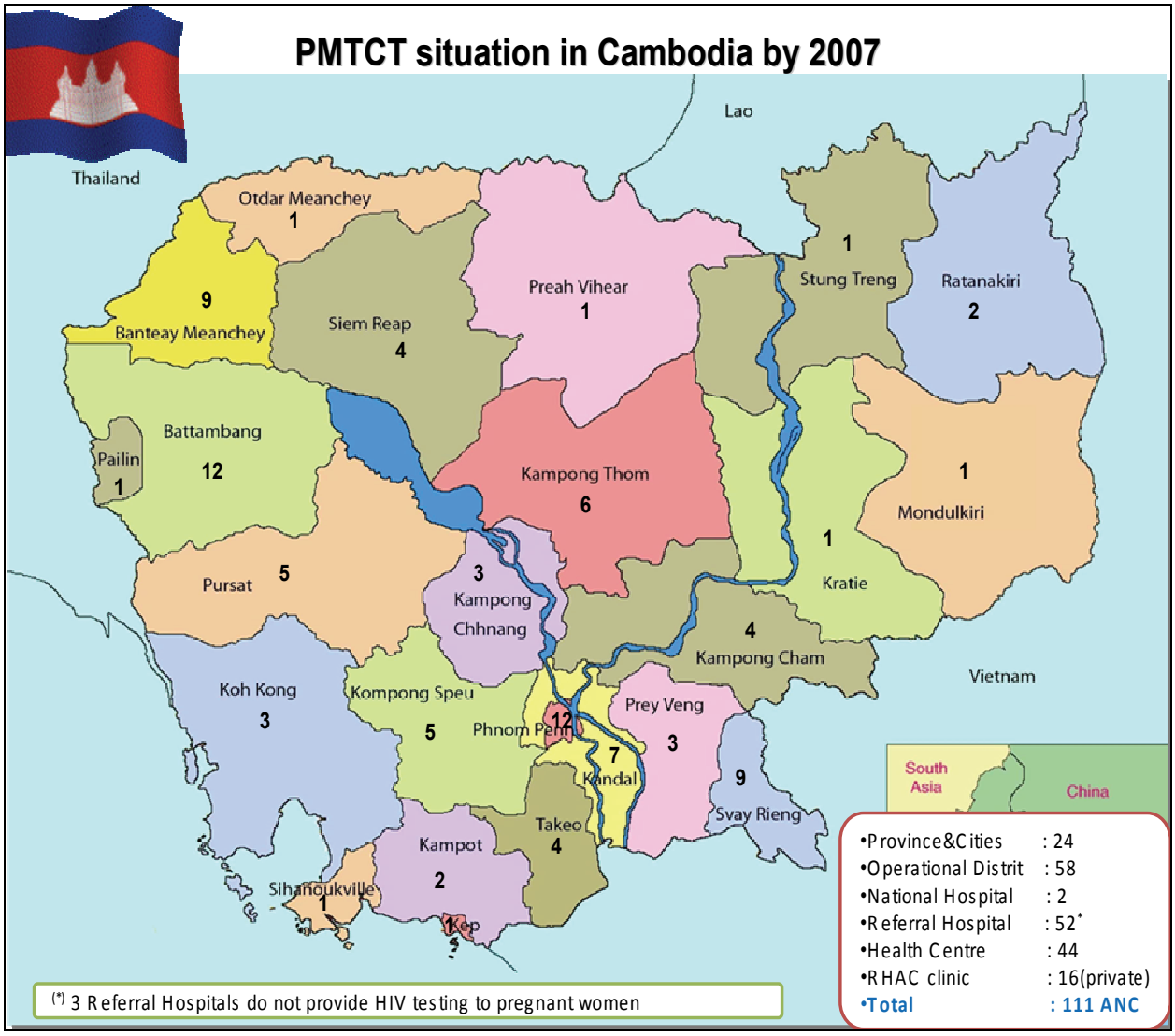
In response to the transmission of HIV from mother-to-child, in 1999 the Ministry of Health established the PMTCT Technical Working Group, co-chaired by the National Maternal and Child Health Center and the National Center for HIV/AIDS, Dermatology, and STDs. In 2000, the Policy for PMTCT was developed. 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 up to ninety-eight sites by December 2007. Of the country's 956[4] public ANC clinics, 95 have the capacity to counsel and test pregnant women for HIV including 2 National Hospitals; 49 Referral Hospitals (3 RHs do not have ANC), 23 health centers (HCs outside the RHs), 21 former district hospitals. In addition to the Public ANC clinics, 16 RHAC Clinics also provide counseling and testing to pregnant women. Hence, by the end of 2007 there were a total of 111 ANC clinics able to provide HIV testing and counseling to pregnant women and their partners.

In September 2005, the ARV prophylaxis guidelines were revised in line with WHO recommendations from single dose Nevirapine to an ARV drug combination in order to increase the effectiveness of prophylactic treatment. To improve the uptake of testing within PMTCT ANC sites, HIV testing was changed from Opt-in to a health provider initiated testing and counseling *(HPITC)* approach initiated at NMCHC in May 2006 and later at other sites. The approach is intended to address the problem of missed opportunities for HIV testing of pregnant women attending ANC clinics at all Health Centers-including both those with and without PMTCT services. 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. Infant feeding options are also discussed with HIV-infected women.

[3] ibid

[4] Department of Planning and Information, MoH,2007.

Map of Cambodia PMTCT sites



2.3 Performance of the PMTCT Program in 2007

Over the last few years of the PMTCT Program implementation, there has been a significant increase in the percentage of pregnant women obtaining an HIV test and receiving the test result among the 1st visit ANC clients at the PMTCT sites as well as an improvement in the percentage of HIV-infected pregnant women receiving ARV treatment or prophylaxis at OI/ART and at maternity services. It is a remarkable achievement of the Ministry of Health. However, while introduction of HPITC has been extremely successful in improving testing rates at health facilities with PMTCT services on-site, it has yet to be successfully implemented at the approximately 900 functioning health centers where ANC is provided but where PMTCT services are not available on-site.

The following data gives a picture of Cambodia's MTCT load and the performance of Cambodia's PMTCT Program in the year 2007.

In 2007, a total of 91,021 first ANC patients visited ANC clinics with PMTCT services (including RHAC clinics), 72,455 (79.6%) accepted HIV test and 66,186 (72.7%)

returned for their test result. A total of 769 HIV-positive pregnant women were identified at PMTCT antenatal care sites including 512 HIV-tested at government or RHAC clinics and 257 known HIV-positive women referred from OI/ART, NGO's, VCCT and other clinics without PMTCT services.

In the same year, 530 HIV-infected women delivered at health facilities offering PMTCT services. Of those women, only 505 received ARV prophylaxis together with their babies. Twenty five HIV- positive women did not receive any ARV prophylaxis during pregnancy and delivery due to late arrival at the PMTCT sites. 517 babies born to HIV-infected mothers received ARV prophylaxis including the babies of mothers who did not receive ARV during pregnancy or labor.

Based on the figures above, in 2007, 73% of 1st ANC clients at PMTCT sites received HIV test and post-test counseling; and 66% of HIV-infected women identified at these ANC clinics received ARV prophylaxis during pregnancy and delivery at the health facility.

However, looking at national estimates for the number of pregnant women with HIV infection, we observe that the impact of the PMTCT program on mitigating the transmission of HIV from mother to child has been limited. Using the total number of births ((410,000) see table below)) estimated in 2007 and HIV prevalence among women attending ANC sites, as measured in 2006 (1.1%), it is estimated that there were 4,510 HIV-infected pregnant women in Cambodia in 2007. Without any intervention to prevent mother-to-child transmission of HIV, 1578 babies born to HIV-infected mothers would be expected to be HIV-infected. The PMTCT Program tested and provided post-test counseling for only 16.1% of Cambodian's pregnant women and provided ARV prophylaxis for only 11.2% of the estimated total number of HIV-positive pregnant women and a similar percentage of HIV exposed newborns (517 out of estimated 4,510). Conversely, 83.9% of all pregnant women did not have the opportunity to know their HIV status and around 88% of all infants born to HIV-infected mothers did not receive any interventions to prevent the transmission of HIV. In addition to this shortfall, 59% of all women delivering at PMTCT facilities were unaware of their HIV status.

Prior to the development of this National Strategic Plan, the expansion of the PMTCT services has been focused mainly on training staff at the PMTCT sites and also required building renovations to assure a place for private and confidential counseling. Less emphasis has been placed on increasing awareness of HIV and its risk to newborns at "non-PMTCT sites"; and developing linkages and referral systems between "non-PMTCT" and nearby PMTCT sites to maximize catchment areas and "reach" of established PMTCT sites. Moreover, while a standard operating procedure has been written directing at ANC staff at non-PMTCT sites to encourage their pregnant clients to be tested for HIV, this has not yet been widely implemented.

Hence, it is critical that Cambodia have an effective PMTCT program, widely available throughout the country and fully integrated into existing ANC services, while also covering pregnant women from most-at risk population groups in order to reduce transmission of HIV from infected women to their infants. To meet the needs of having the effective PMTCT program, the National Strategic Plan for PMTCT in Cambodia is required to be developed.

The table summaries data and sources of data collected in 2007:

Demographic Parameter	Estimate	Source of Estimate
Total Population	14.364 million	Population Projections for Cambodia 1998-2020, National Institute of Statistics, Ministry of Planning, 2004
Crude Birth Rate	28.54 births/ 1000 population	same as above; medium fertility variant for 2007
Prevalence of HIV among ANC attendees	1.1%	Report of a Consensus Workshop: HIV Estimates and Projections for Cambodia 2006-2012, Surveillance Unit, National Center for HIV/AIDS, Dermatology and STD, June 2007
Mother-to-Child HIV transmission rate estimated in the absence of prophylaxis	35%	DeCock KM, Fowler MG, Mercier E, et. al,, Prevention of Mother-to-Child HIV Transmission in Resource-Poor Countries: Translating Research into Policy and Practice, JAMA 2000: 283:1175-1182 (cites range of 25-48%)
# of 1st ANC visit client at HC with PMTCT services or RHAC clinics.	91,021 (73,012 at HCs and 18,009 at RHAC sites)	National Maternal and Child Health Center, 2008.
# of pregnant women tested.	72,455 (55,994 at HCs and 16,461 at RHAC clinics)	National Maternal and Child Health Center, 2008.
# of pregnant women received post-test counseling.	66,186 (50,186 at HCs and 15,582 at RHAC clinics)	National Maternal and Child Health Center, 2008.
# of HIV positive identified at ANC clinic.	769 (512 at HCs and RHAC and 257 referred from other places)	National Maternal and Child Health Center, 2008.
# of HIV-infected women received ARV Prophylaxis for PMTC	505	National Maternal and Child Health Center, 2008.
# of HIV infected babies born to HIV infected mothers received ARV prophylaxis.	517	National Maternal and Child Health Center, 2008.

Total number of births = Total population X Crude Birth Rate
= 14,364,000 X 28.54/ 1000 = 409,949 (rounded to 410,000)
Total number of pregnant HIV-infected women in Cambodia = 410,000 x 0.011 = 4,510.
Number of Cambodia's HIV-exposed infants expected to become HIV-infected in the absence of ARV prophylaxis = 4,510 X 0.35 = 1,578

2.4 Additional constraints on assuring safe motherhood

The maternal mortality rate remains high, at 472/100,000 live births and there has been no reduction in it since 2000 (CDHS 2005).

While about 71.4 % of all pregnant women had at least one contact with ante-natal care, only about 24% had 4 or more visits to the ANC. Still, majority of births (78 %) occur at home or in other non-medical facilities; only 22 % occur at health facilities (CDHS 2005). Only 44%of mothers are delivered with the assistance of a trained health care provider.

Non-availability of a health centers with skilled birth attendants close to the homes of pregnant women, poverty, lack of resources and transport to go to a maternity site, poor referral system, and poor incentives for health staff are amongst the reasons cited for poor utilization of maternity services (UNFPA Cambodia, 2006).

Practically, there are acute shortages of midwives at many health centers; at sites where midwives are sufficiently supplied, they are called upon to multi-task, often providing immunization and general health services in addition to reproductive health services. Thus they have limited capacity to expand their work load.

Finally, overall awareness of the risk of transmission of HIV from mother to her unborn child among general population is low. According to CDHS 2005, only one-third of women and about one-fourth of men knew that the risk of mother-to-child transmission of HIV could be reduced through the use of certain drugs during pregnancy; and only 69% of women and 60% of men knew that a healthy-looking person can have HIV and thus can transmit the virus. Knowledge was strongly associated with both education and socioeconomic status with the poor and uneducated having the least understanding.

2.5 Summary of lessons learned from the national response

- Insufficient emphasis has been placed on improving community awareness of PMTCT to drive consumer demand for PMTCT services.
- A strategy solely focused on a scale-up of the number of health centers with PMTCT sites and staff training has not proven to be an effective approach to rapidly increasing HIV testing uptake.
- Full implementation of HPITC offers the opportunity to greatly expand access to HIV testing for pregnant women. The standard operating procedure of HPITC offers HIV testing by either referral of the patient or referral of a blood specimen. Arrangement of such activities involves the coordination of many stakeholders including facilities offering HIV testing services, health centers with and without PMTCT services, and community based NGOs that may have funds to support

transport costs. The person responsible for this coordination activity has not been clearly articulated, which may be a contributor to slow implementation of HPITC.

- Testing during labor at PMTCT maternity sites represents another opportunity to identify HIV-infected pregnant women and to reduce mother-to-child transmission of HIV through timely administration of prophylactic ARV drugs during and after delivery. However, this activity has not been yet widely implemented.
- To date, the PMTCT program has been centrally controlled with all activities, including training and supervision, managed by the National PMTCT Secretariat, limiting the capacity of management teams at the provincial and operational district levels to implement national PMTCT guidelines at the local level. As a result of PMTCT Program expansion, this centralized approach is no longer feasible

3 Key recommendations identified by the National Program Review 2007

New core strategies identified by a large cross-section of international consultants from WHO, UNICEF, US-CDC, and the World Bank as well as in-country stakeholders, described in the Cambodia PMTCT Program Joint Review Report (2007), have identified clear objectives that warrant implementation as rapidly as possible. Four key recommendations include the following:

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*
2. *Scale up the provision of PMTCT services to reach the majority of pregnant women towards achievement of Universal Access*
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*
4. *Improve collection and analysis of routine program monitoring data, address key data gaps and effectively share data between programs and among stakeholders*

Based on these recommendations, the Ministry of Health has adopted a National Strategic Plan for PMTCT as described in the rest of this document.

4 THE NSP-PMTCT 2008-2015

The PMTCT Program is integrated into the existing health system and aims to prevent new HIV infections amongst women and children while at the same time strengthening MCH services.

Vision Statement:

In accordance with the National Strategic Plan for HIV/AIDS 2007-2010; the National PMTCT Policy (2005) and National PMTCT Guidelines (2005), the vision of the NSP-PMTCT 2008–2015 is a Cambodian society where vertical transmission of HIV is eliminated.

Guiding Principles:

The NSP for PMTCT adheres to the following guiding principles:

1) It is evidence-based and follows international recommendations for PMTCT interventions.
2) Planning for PMTCT is decentralized to provinces to allow adaptation of planning, strategies, and targets to local situations.
3) PMTCT services are integrated into existing maternal and child health and HIV services.
4) Linkages between and within health facilities and the communities are strengthened with particular attention given to outreach to high risk groups within communities.
5) The implementation of a complete package of PMTCT activities relies on strong collaboration and coordination between the MCH and HIV programs, with a clear definition of roles and responsibilities of each program.

Cambodia embraces the globally accepted four prongs of prevention of mother-to-child transmission of HIV, which include:

1. Prevention of HIV infection in women of child bearing age;
2. Prevention of unintended pregnancies in HIV-infected women;
3. Prevention of transmission from an HIV-infected woman to her infant;
4. Care and support for HIV-infected mothers and their families.

To achieve the four prongs of PMTCT, it is required that Ministry of Health:

- Continues to promote the rights of all people- including persons living with HIV/AIDS- to live free of stigma and discrimination. This should begin with a welcoming, friendly attitude at ANC and extend to fighting stigma and discrimination in the community.
- Enhances community understanding of PMTCT to build consumer demand for HIV testing during pregnancy as part of a package of ANC and maternity services that help assure that all babies are born healthy.
- Assures universal access to testing services for pregnant women utilizing existing health care infrastructure;
- Assures that pregnant women identified as HIV positive access treatment needed to prevent transmission;
- Improves linkages and the referral mechanism between HIV care services, STI, Reproductive Health and Family Planning.

4.1 Goals

The goal of the National Strategic Plan for the PMTCT Program is to eliminate HIV transmission from Mother-to-Child in Cambodia through improving the coverage and overall quality of health services for all pregnant women, maximizing effective HIV prevention messages to expectant parents and offering care, treatment, and support services to HIV positive women, their infants and families.

4.2 Strategic Objectives

The National Strategic Plan for PMTCT has four main objectives:

1. Scale up the provision of quality, comprehensive PMTCT services to reach the majority of pregnant women and their infants, and particularly high risk groups

2. Strengthen PMTCT Program planning, management, coordination, implementation and supervision at all levels in order to reach national PMTCT targets from 2008 to 2015
3. Strengthen implementation and monitoring of policies and guidelines on Nutrition and IYCF in the context of HIV, at all levels of service delivery, as well as in communities, and by all partners
4. Effectively collect, manage, and use data at all levels for program planning, program performance, quality improvement, and patient tracking

4.3 Strategic activities

Details of the NSP activities are elaborated in the matrix on the following pages. The key objectives, strategies and **core activities** are summarized below:

4.3.1 Objective ONE

Scale-up the provision of quality, comprehensive PMTCT services to reach the majority of pregnant women and their infants, and particularly high risk groups.

Strategies:

- Enhance community understanding of PMTCT to increase demand for PMTCT services through community-based social mobilization and communications
- Integrate PMTCT components into health center and Referral Hospital activities and work in close collaboration with NCHADS to expand the roles of community groups
- Maximize opportunities for HIV testing for pregnant women and their partners
- Increase access to ARV prophylaxis or ART for HIV-positive mothers and their infants
- Ensure Universal Precautions and post exposure prophylaxis (PEP) for all health staff
- Improve linkages and referral mechanisms with HIV, STI, Reproductive Health and Family Planning services to maximize effectiveness of PMTCT prong 3 and link with prongs 1, 2 & 4

Ensure consistent and comprehensive follow-up of HIV-exposed children and promote early infant diagnosis.

Core activities:

1. Increase consumer demand by developing and implementing an evidence-based behaviour change communication strategy for PMTCT, in collaboration with the Ministry of Women's Affairs that includes the use of mass media and social mobilization through developing alliances with community leaders, trusted community care givers, and PLHA support groups;
2. Fully incorporate HIV/AIDS awareness and HPITC into MPA guidelines to ensure that all pregnant women at all ANC sites receive information about HIV and access to HIV testing.

3. Expand HIV testing locations for pregnant women at all existing VCCT sites and PMTCT maternity sites (for testing during labor), and evaluate the feasibility of performing HIV screening at HCs that are distant from the VCCT site.
4. Assure that pregnant women found to be HIV-infected receive appropriate ARV prophylaxis during pregnancy, labor and post-partum by implementing the following activities:

    a. The ART eligibility requirement will be changed from a CD4 count of <250 to <350 cells/µl; criteria for eligibility will be reviewed yearly and adjusted to conform with changing national and international recommendations;
    b. Women with CD4 counts >350, receive AZT during pregnancy from 28weeks of gestation. A single dose of NVP (200mg) will be provided to pregnant women who live in a very remote area, at an ANC visit, which they are to take at onset of labor, just prior to coming to health facility for delivery. This will assure that NVP, critical to successful prevention of vertical transmission, is taken in a timely fashion, avoiding the possibility of a delay caused by transport time to the hospital with resultant missed opportunity to benefit from this prevention measure. Provision of NVP for use at home is not intended to encourage delivery at home, but is rather seen as first step of successful facility based PMTCT intervention.
    c. CBOs (including HBC teams) will be strengthened to provide support to HIV-infected women during pregnancy, including facilitating access to ARV prophylaxis antenatally, facility-based delivery and appropriate follow-up for mothers and their infants after delivery;
    d. For poverty-stricken HIV-infected women any fees or costs associated with a facility based delivery will be waived, and PMTCT providers will actively promote this message to assure that financial obstacles do not prevent women accessing ARV prophylaxis and safe delivery.

5 Prioritize all provinces to expand PMTCT services as per population, crude birth rate and HIV sero-prevalence in pregnant women. Within the same province, give greater preference to ODs / areas with higher HIV sero-prevalence in ANC or pockets of people with high risk behaviour and those with higher number of pregnancies.

4.3.2 Objective TWO

Strengthen PMTCT Program planning, management, coordination, implementation and supervision at all levels in order to reach national PMTCT targets for the period 2008 to 2015

Strategies:

- Strengthen PMTCT Program planning at all levels through clear annual operations plans and population based targets
- Strengthen PMTCT Program management at national level by reinforcing the roles of the PMTCT TWG and PMTCT Secretariat and promoting coordination with NCHADS
- Strengthen PMTCT Program coordination at national and provincial levels

Decentralize key components of the PMTCT Program such as training and supervision

Core activities:

1. Decentralize the planning, implementation, supervision, monitoring and evaluation of the program, including training, to provincial / OD levels. Overall coordination, monitoring and evaluation of the PMTCT Program will remain the responsibility of the national level.
2. The provinces/ODs should calculate their own population-based and time-bound targets for the year (see Annex 1) and develop locally relevant strategies to achieve these targets, such as for example devising strategies to reach high-risk population groups.
3. Training of PMTCT clinical staff: staff at ANC and maternity services need to receive training of PMTCT (pre-test information, post test counseling, HIV testing, maternity management, IYCF, etc.) in addition to the staff at the existing PMTCT sites in order to accomplish targets. As there is growing expertise from cumulative experience of practitioners in the field, responsibility for training should be transferred as much as possible from the national PMTCT Secretariat office to regional and provincial staff, freeing staff of national office for other key management responsibilities. A pool of "Provincial PMTCT core Trainers" should be created who can undertake these trainings. Regional training should be considered by using the Regional Training Centers or provincial midwifery schools.
4. Training of PMTCT administrative staff: As planning, supervision, monitoring and evaluation activities are decentralized, formal training of administrative staff at the provincial and OD level in M&E and logistics management will be implemented.

4.3.3 Objective THREE

Strengthen implementation and monitoring of policies and guidelines on Nutrition and IYCF in the context of HIV, at all levels of service delivery, as well as in communities, and by all partners

Strategies:

- Strengthen the implementation of policies and guidelines on Nutrition and IYCF in context of HIV
- Strengthen capacity in Nutrition and IYCF in the context of HIV at all levels of the PMTCT Program

Core activities:

1. Clearly articulate IYCF policy for all levels of health care staff including counselors to avoid giving conflicting messages to the communities.
2. Conduct a national forum on infant feeding to review research done internationally and data collected locally to better understand risks and benefits of different feeding options and to inform national policy.
3. Develop IEC materials that help HIV-infected pregnant women choose appropriate infant feeding method either exclusive breast feeding or formula feeding.
4. Provide professional support with friendly environment to HIV positive women who opt for replacement feeding which is a priority strategy of PMTCT.

4.3.4 Objective FOUR

Effectively collect, manage and use data at all levels for program planning, program performance and quality improvement and patient tracking

Strategies:

- Review and update the current PMTCT Program monitoring system and revise and disseminate PMTCT M&E guidelines as well as data collection and reporting tools to facilitate collection of information needed to track PMTCT core indicators
- Strengthen data recording (including data quality verification), reporting, and management at service delivery points and strengthen data management at OD, provincial, and national levels through M&E capacity building, supervision, and oversight
- Encourage use and exchange of PMTCT data (both MCH and HIV) at national and provincial levels to foster improvements in program planning, management, and coordination,
- Strengthen PMTCT monitoring and evaluation capacity across services and government levels through a sound mix of capacity building activities
- Actively encourage and support demonstration projects and associated operational research to assess impact of innovative approaches on performance of all four prongs of PMTCT services including nutrition and IYCF

Core activities:

1. Review PMTCT core indicators and refine indicator definitions, data collection and reporting systems, procedures and tools with emphasis on facilitating data collection from different sources and bidirectional sharing of data vertically between service delivery site, OD, provincial, and national levels, and horizontally among service delivery sites, enabling tracking of patients across different service points.
2. Develop and disseminate up-to-date PMTCT M&E guidelines, procedures and tools and train staff at OD, provincial, and national levels in their use, providing close support and supervision especially during the initial implementation phase.
3. Provide information feedback in a timely fashion a.) to PMTCT sites so that data can be incorporated into continuous quality improvement activities and b.) to program managers and coordinators at OD, provincial, and national levels so that data can be used to improve program planning, management, and coordination.
4. Support a decentralized supervision system for PMTCT by building M&E capacity at the provincial and OD levels based on local capacity needs assessment.
5. Encourage and support evaluations and operational research on specific PMTCT-related topics to identify best practices that can inform policy and promote improvements in the PMTCT Program.

(See Annex 2 for detailed suggestions regarding M&E activities from Joint National Program Review).

4.4 THEMATIC AREAS MATRIX FOR PMTCT NATIONAL STRATEGIC PLAN

PMTCT Services		
Objectives	**Strategies**	**Activities**
1. Scale-up the provision of quality, comprehensive PMTCT services to reach the majority of pregnant women and their infants, and particularly high risk groups.	1.1 Develop a communications strategy to enhance community understanding of PMTCT and to increase demand for PMTCT services through community-based social mobilization and communications	1.1.1. Identify and mobilize pregnant women in the community, (particularly those at high risk for HIV), and their partners, to attend ANC and test for HIV
		1.1.2. Establish functioning linkage with Ministry of Womens' Affairs to leverage strengths of both government institutions to increase effectiveness of communication strategy
		1.1.3. Provide information to communities, their leaders, families and individuals about PMTCT, in the context of maternal health, infant health and family planning outreach
		1.1.4. Develop and distribute IEC materials on PMTCT for the community to all HCs.
		1.1.5. Support initiatives that assist women and their partners to access VCCT and other follow-up services effectively and efficiently
		1.1.6. Mass media communication to create understanding and demand for PMTCT among communities, their leaders and individuals (e.g. TV, radio spots and TV soap opera, figuring PMTCT in the context of maternal health)
		1.1.7. Targeted communications for individuals with key messages to complement and reinforce social mobilization efforts
	1.2 Integrate PMTCT components into Health	1.2.1. Include PMTCT activities at ANC and maternity in MPA and CPA guidelines, as an integral component of MCH services provided at

	Center and Referral Hospital activities and work in close collaboration with NCHADS to expand the roles of community groups	all levels (including national hospitals): a. promote PMTCT prongs 1 and 2 in addition to 3 and 4 b. encourage and assist pregnant women to seek ANC and institutional deliveries c. provide support to HIV-positive pregnant and postpartum women d. provide support to HIV-exposed children, including infant feeding support
		1.2.2. Review the Safe Motherhood Guidelines and ensure PMTCT is an integral part of the guidelines.
		1.2.3. Include PMTCT in SOPs and training of HBC teams
		1.2.4. Expand activities and training of other CBOs to include PMTCT
	1.3 Maximize opportunities for HIV testing for pregnant women and their partners	1.3.1. Rapidly expand testing of pregnant women to ANC at health facilities where VCCT already exists. Add PMTCT/VCCT services preferentially in any areas where pockets of high risk activity are identified and which are distant from an existing HIV testing site. To assure maximum uptake of testing at PMTCT antenatal care sites: a. provide all pre-test information on HIV/PMTCT in the Mother Class (when numbers of clients allow) b. use pre-test counseling flip charts at all sites as a “job aide” c. provide individual pre-test counselling only when specifically requested by the pregnant woman or her partner
		1.3.2. Expand HPITC by ensuring that staff at all ANC facilities provide information on HIV/PMTCT to pregnant women and their partners and refer women (or blood samples - where this is more feasible) for HIV testing to the nearest PMTCT/VCCT site. At provincial level this will require coordination with Provincial MCH Coordinator, and

		at the national level, this may require establishing an SOP between Reproductive Health and the PMTCT program of NMCHC.
		1.3.3. Initiate demonstration project to evaluate feasibility and impact of HC staff providing pre-test information on HIV/PMTCT and "on site" rapid HIV screening tests with "HPITC" approach a. select ANC clinics which are not currently designated PMTCT sites and which are far from VCCT sites b. confirm all HIV-positive results at VCCT centers (by sending blood sample from those who screen HIV-positive to nearest VCCT lab) c. include QA/QC and streamline with national system
		1.3.4. Increase the number of partners of pregnant women who receive HIV testing at ANC. Testing of partners of women who are positive is likely to result in high HIV case detection rate. Testing of partners of women who are negative will help to assure that prevention message is effectively delivered, as husbands' participation in prevention is essential to preventing infection in their wives.
1. Scale-up the provision of services (cont'd)	1.4 Increase access to ARV prophylaxis or ART for HIV-positive mothers and their infants	1.4.1. Change CD4 criteria for HAART eligibility to <350 cells/µl and ensure quality provision of ARVs / HAART
		1.4.2. Perform "HPITC" rapid HIV screening on women of unknown status at PMTCT maternity sites during labor and confirm HIV-positive results at VCCT sites
		1.4.3. Increase Health Facility deliveries: a. ANC staff to collaborate with HBC teams and other CBOs to closely follow all identified HIV-positive pregnant women and facilitate deliveries at a health facility with PMTCT services, including supporting transportation and delivery costs

		b. through government incentive scheme c. exempt poor women, including poor HIV-infected women, from user fees and additional provider fees for delivery and support policy of free health care for the poor d. encourage NGOs supporting PMTCT activity to offer free stay at waiting home near PMTCT maternity site for all women living far from health facility e. These activities will be made easier if HIV counselling and testing information is included (in coded form) in the Mother Card and ANC and Maternity registers (see also M&E section) f. To assure that women with CD4 >350 delivering at health facility get full PMTCT regimen, provide a single dose of NVP for mother to keep at home to take at onset of labor prior to leaving for the maternity site. This will assure that she receives full PMTCT regimen even if she arrives less than two hours prior to anticipated birth. (National policy is to give NVP only if laboring woman arrives at maternity site at least two hours prior to anticipated birth). Measures will be taken to encourage facility based birth and discourage home birth.
	1.5 Ensure universal precautions and timely PEP access for all health staff	1.5.1. Ensure Universal Precautions and PEP for all health staff: a. Provide training on Universal Precautions and PEP to all health staff b. Make available all necessary materials and drugs c. At each site, identify clear procedures for whom to contact in case of an exposure
	1.6 Improve linkages and referral mechanisms with HIV, STI, Reproductive Health and FP services to maximize	1.6.1. Provide consistent HIV prevention messages to all clients during post-test counseling
		1.6.2. Refer all identified HIV+ pregnant women, from all HIV testing sites, for assessment for ARV prophylaxis eligibility, provision of ARV

	effectiveness of PMTCT prong 3 and link with prongs 1, 2 & 4	drugs and follow-up care at OI/ART
		1.6.3. Refer all pregnant entertainment workers & other high-risk women identified in the community and at STI clinics for HIV testing, and to PMTCT services if necessary
		1.6.4. Provide all women, including all HIV-infected pregnant women and their partners with information about FP and referral to FP services, with particular attention to post-partum women **Note:** Family Planning needs to be strongly promoted amongst HIV-infected women already under care and treatment
		1.6.5. Refer all pregnant women to STI services as appropriate
		1.6.6. Refer all HIV-positive women to HBC or other CBOs for follow-up and support, including infant feeding support for all women, whether they choose breastfeeding or replacement feeding for their infant
	1.7 Ensure consistent and comprehensive follow-up of HIV-exposed children and promote early infant diagnosis	1.7.1. Refer all HIV-exposed infants to pediatric HIV care sites for CTX prophylaxis and early infant diagnosis, with the help of HBC or other CBOs **Note:** Following 6 week assessment at pediatric HIV care site, on-going monitoring and prescribing of CTX refills can be provided by PMTCT midwife (after appropriate training) if Pediatric HIV care site is far away, though referral back to Pediatric HIV Clinic is mandatory if infant is ill or if adverse drug reaction is suspected. HBC and other outreach services should be continued until infant is determined to no longer be at risk for HIV or continued indefinitely if child is diagnosed with HIV.

		1.7.2. Prioritize IYCF assessment and counseling for HIV-positive mothers, particularly at a. time of early infant diagnosis b. start of complementary feeding at 6 months
		1.7.3. Link follow-up at HCs to care & support provided by CBOs (HBC, VHSGs, Mother Support Groups…)
		1.7.4. Strengthen growth promotion and monitoring at health centers using child health card
Program Management and Partnerships		
Objectives	**Strategies**	**Activities**
2 Strengthen PMTCT Program planning, management, coordination, implementation and supervision at all levels in order to reach National PMTCT targets from 2008 to 2015	2.1. Strengthen PMTCT Program planning at all levels through clear annual operations plans and targets	2.1.1. Develop annual national, provincial and OD facility (RH & HC) targets (based on national targets and including the private sector where appropriate) to optimize utilization of existing PMTCT services and guide PMTCT Program expansion, initially targeting priority provinces
		2.1.2. Develop Annual Operations Plan
		2.1.3. Develop 3 year rolling plan
		2.1.4. Hold annual stakeholders workshop
		2.1.5. Produce and disseminate Quarterly and Annual Reports which include national, provincial and private sector performance
		2.1.6. Decentralize annual planning to provincial level based on national targets

		a. build on existing planning mechanisms, align partner support b. take into account the specific local situation, including existing provincial resources and partnerships c. support decentralization of key activities currently conducted at the national level, such as PMTCT training and supervision d. PMTCT Secretariat to develop guidance and performance / quality improvement indicators for province and OD levels on use of data for program planning and improvement e. PMTCT Secretariat to provide quarterly feedback to provincial PMTCT coordinators on provincial progress and performance on key indicators measured against national targets; and provincial coordinators to provide quarterly feedback on OD progress and performance f. Support resource mobilization and link to GFATM, include consideration of staff recruitment and incentives
	2.2. Strengthen PMTCT Program management at national level by reinforcing the roles of the PMTCT TWG and PMTCT Secretariat and promoting coordination with NCHADS	2.2.1. Revise the structure and ToRs of the PMTCT TWG to reflect the objective of national intervention scale-up and strengthening of linkages to ensure a comprehensive continuum of care. Include: a. the co-chair function + accountability of NMCHC & NCHADS b. revised membership to reflect all relevant stakeholders c. authorization to invite representatives from other institutions, as appropriate, for discussion of specific issues d. support for PMTCT Program development and implementation, including innovative approaches for service delivery in selected areas e. reinforce participation of PMTCT in the CoC TWG f. M&E roles & responsibilities g. Establish sub-working groups as appropriate
		2.2.2. Reinforce the PMTCT Program and Secretariat as a core function of MCH a. Strengthen collaboration between different MCH programs

		b. Strengthen PMTCT Secretariat capacity c. Bring PMTCT agenda items to national sub-TWG for Health and other TWGs & sub-TWGs as appropriate d. Link PMTCT implementation to MCH activities
		2.2.3. Establish a PMTCT technical / liaison position in NCHADS, to a. Operationalize and monitor implementation of joint NMCHC / NCHADS PMTCT activities b. Oversee / collaborate on innovations c. Support the PMTCT / CoC TWGs d. Explore / analyze avenues for broadening impacts of HIV/AIDS financing
	2.3. Strengthen PMTCT Program coordination at national and provincial levels	2.3.1. Reinforce participation of PMTCT in the CoC TWG
		2.3.2. Coordinate with NCHADS, NRHP and NNP
		2.3.3. Facilitate joint reporting and program reviews at provincial and OD levels
		2.3.4. Streamline logistics management at provincial level; clarify and orient on the supply management process for PMTCT implementers, including PMTCT coordinators
		2.3.5. Strongly position PMTCT issues in CoC meetings or other forum at OD level in which coordination of PMTCT and CoC activities can be maximized - e.g. M&E, patient tracking (including identifying needy women), planning, referrals across services
2 Strengthen PMTCT Program planning, management, coordination (Cont..)	2.4. Decentralize key components of the PMTCT Program such as training and supervision	2.4.1. Include PMTCT in the pre-service training of midwives, nurses and medical doctors
		2.4.2. Decentralize in-service training of PMTCT staff:

		a. establish a pool of trainers in each province b. each province to develop annual training plan and budget
		2.4.3. Decentralize supervision of PMTCT sites to provinces
Nutrition and IYCF		
Objectives	**Strategies**	**Activities**
3. Strengthen implementation and monitoring of policies and guidelines in the context of HIV, at all levels of service delivery and by all partners	3.1. Strengthen the implementation of policies and guidelines on Nutrition and IYCF in the context of HIV	3.1.1. Hold a technical consultation on nutrition and PMTCT, including maternal nutrition and IYCF a. review new research and programmatic evidence from both within and outside Cambodia b. build consensus on optimizing infant feeding practices within the broader context of child survival c. inform national policy, update guidelines and implementation of IYCF in HIV and PMTCT services
	3.2. Strengthen capacity in Nutrition and IYCF in the context of HIV at all levels of the PMTCT Program	3.2.1. Designate focal points for infant feeding from the PMTCT and IYCF TWGs at central level and appropriate persons at provincial level
		3.2.2. Establish targets for nutrition for HIV-positive pregnant mothers / IYCF to include in PMTCT strategic plan
		3.2.3. Ensure joint communication, planning, training and monitoring with PHD / OD management on IYCF for HIV
		3.2.4. At each PMTCT site, identify key person among HC / PMTCT counselors as focal point for nutrition and IYCF
		3.2.5. Develop advocacy, communications and information package on IYCF by linking up with NCHP

		3.2.6. Promote community-based social mobilization and communications around national accepted standards of nutrition and IYCF
		3.2.7. Disseminate and build understanding of policy on IYCF
		3.2.8. Develop national training plan to strengthen IYCF for HIV
		3.2.9. Accelerate development of skills and competencies of providers, including NGOs, on optimal feeding practices and neutral infant feeding counseling
		3.2.10. Roll-out integrated course on IYCF to all PMTCT Management team, counseling staff, follow up with monitoring of implementation of training
Monitoring and Evaluation		
Objectives	**Strategies**	**Activities**
4. Effectively collect, manage and use data at all levels for program planning, program performance and quality improvement and patient tracking	4.1 Review and update the current PMTCT Program monitoring system and revise and disseminate PMTCT M&E guidelines as well as data collection and reporting tools to facilitate collection of information needed to track PMTCT core indicators	4.1.1. Review PMTCT core indicators and refine indicator definitions in line with national HIV/AIDS M&E system and guidelines as well as with key international PMTCT reporting requirements with emphasis on facilitating data collection from different sources and enabling tracking of patients and exchanges of information across different service points and levels
		4.1.2. Revise data collection and reporting tools accordingly and ensure they are simple and effective in enabling the tracking of patients (e.g., integrate HIV-test information into standard MCH Registers and Mother Books)

		4.1.3. Revise and refine PMTCT M&E guidelines to provide clear written procedures/instructions to staff as guidance for compiling PMTCT-related data from ANC, maternity, adult and pediatric OI/ART sites across reporting centers at different levels
	4.2. Strengthen data recording (including data quality verification), reporting, and management at service delivery points and strengthen data management at OD, provincial, and national levels through M&E capacity building, supervision, and oversight	4.2.1. Strengthen data recording, management, and transfer in line with M&E guidelines/procedures through capacity building, supervision and oversight at all levels.
		4.2.2. Ensure data quality controls are performed and are reflected in written M&E guidelines/procedures and staff's job descriptions and are enhanced through feedback to data providers and onsite supervision
	4.3. Encourage use and exchange of PMTCT data (both MCH and HIV) at national and provincial levels to foster improvements in program planning, management, and coordination.	4.3.1. Establish mechanisms and regular platforms for exchange/review of PMTCT-related data among various levels and service points (e.g., ANC/maternity/adult & pediatric OI/ART sites) to support OD, provincial and national program planning and management
		4.3.2. Present and analyze data at OD, provincial and national meetings involving M&E staff along with program planning staff to inform program planning and management, document progress, and identify challenges and potential solutions related to program performance and monitoring
	4.4. Strengthen PMTCT M&E monitoring and evaluation capacity across services	4.4.1. Conduct an M&E capacity assessment to identify needs and to prioritize capacity building measures in line with decentralization plans

	and government levels through a sound mix of capacity building activities	4.4.2. Develop a longer term, costed M&E capacity building plan and design relevant training curriculum making use of high yielding methodologies for applied learning by using a mix of capacity building measures (on-the-job/learning by doing and more formal/workshop training)
		4.4.3. Introduce initiatives leading staff from different sites to gather routine data, share and analyze it jointly on a regular basis and take remedial actions (e.g., quality of service delivery)
	4.5. Actively encourage and support demonstration projects and associated operational research to assess impact of innovative approaches on performance of all four prongs of PMTCT services including nutrition and IYCF	4.5.1. Conduct evaluations mid-term and at the conclusion of any approved demonstration project to assess performance and cost-effectiveness and to measure impact and sustainability of interventions
		4.5.2. Undertake efforts to test validity of existing assumptions and develop new hypotheses underlying the PMTCT Program's design and encourage operational research to draw lessons and to improve interventions

5 CROSS-SECTOR LINKAGES

To maximize coordination of multi-sector governmental efforts to reduce mother to child transmission of HIV, it is recommended that the National Maternal and Child Health Center engage appropriate representatives of the Ministry of Women's Affairs and the Ministry of Interior to leverage their combined resources to promote HIV prevention activities directed to women of child bearing age and their partners.

6 MONITORING AND EVALUATION

The establishment of national targets as described in this National Strategic Plan is expected to stimulate monitoring and evaluation activity from the national level to the operational district to the site level. Until now performance on key indicators has been measured only against prior years' performance and not against actual program targets because no such time-based program targets had been established. The development of program targets provides a roadmap by which the program and stakeholders can evaluate its success and plan its resource allocation.

Until recently, the PMTCT Program measured its success using indicators with denominators based on clients seen at the PMTCT sites. While these indicators help assess quality of service within the sites, measuring the impact of a site in the community requires use of indicators with population based estimates for the denominator. In response to the absence of indicators measuring coverage of the PMTCT program and impact on the prevention of transmission from mother to child in the country, the M&E Advisory Group of the National AIDS Authority added additional Core Indicators to better assess the program's progress toward achieving Universal Access.

.The present set of core indicators include the following:

- # (%) of ANC facilities that provide HIV testing
- # (%) of ODs with at least one PMTCT site
- # (%) of pregnant women attending ANC at PMTCT sites tested for HIV and received their result
- # (%) of pregnant women in Cambodia tested for HIV (PMTCT sites and RHAC clinics) and received their result
- # (%) of partners who received results of their HIV test
- # (%) HIV-positive pregnant women who receive ARV prophylaxis or ART for PMTCT
- # (%) of HIV-exposed infants who start CTX prophylaxis within 2 months of birth
- # (%) of infants born to HIV-infected mothers who receive an HIV test within 12 months.
- # (%) of infants born to HIV-infected women who report practicing exclusive feeding (either exclusive breast feeding or exclusive formula feeding) at 6 months of age
- % of HIV infected infants born to HIV-infected mothers

This list does not include an indicator to monitor proportion of women identified antenatally as HIV-infected, who fail to return for delivery at the PMTCT maternity site, nor does it identify an indicator that monitors proportion of women who present to maternity site who fail to get full package of labor and post-natal ARV prophylaxis

(women are not to be given NVP if they are judged to be likely to give birth less than two hours from the time of their arrival at the facility).

Finally, as linkages are strengthened between PMTCT sites and different components of CoC and community agencies, and as testing opportunities are decentralized, reporting tools may need to be refined to clearly distinguish between women referred into antenatal care with an established HIV diagnosis and women who are diagnosed with HIV while pursuing care for pregnancy. In order to minimize the possibility of "double counting" women as being both referred in and identified through antenatal care process, a mechanism should be established to minimize this problem, such as a box on all referral forms indicating whether HIV diagnosis was established during this pregnancy or was known prior to pregnancy.

The PMTCT Program Cambodia Joint Review Report (2007) lists of key action steps related to M&E. These are listed in Annex 2. This level of detail does not appear in the Thematic Areas Matrix above, but should be included as part of the overall M&E strategy and included in work plans and progress reports from the PMTCT Secretariat

7 PMTCT CORE INDICATOR TARGETS FOR 2008-2015

It is anticipated that with the recommendations made in this National Strategic Plan, the PMTCT Program will be able to achieve the following targets for 2008 through 2015. Rolling three year targets will be established annually, based on accomplishments of the prior year.

National Strategic Indicators (2008 – 2015): PMTCT

Indicator	Baseline	Date	Targets			
			2008	2009	2010	2015
1) # (%) of ANC facilities that provide HIV testing	95/956 10%	End 2007	193 20%	289 30%	386 40%	500 51%
2) # (%) of ODs with at least one PMTCT site	58/77 (75%)	End 2007	85%	90%	100%	100%
3) # (%) of pregnant women attending ANC at PMTCT sites tested for HIV and received their result	66,186/ 91,021 72.7%	End 2007	75%	80%	85%	95%
4) # (%) of pregnant women in Cambodia tested for HIV and received their result	66,186/ 410,000 14.9%.	End 2007	25%	35%	50%	75%
5) # (%) of partners who received results of their HIV test	10,670/ 50,604 21.10%	End 2007	25%	30%	35%	40%

6) # (%) HIV-positive pregnant women who receive ARV prophylaxis or ART for PMTCT	505/4509 11.20%	End 2007	30%	40%	50%	75%
7) # (%) of HIV-exposed infants who start CTX prophylaxis within 2 months of birth	n/a		25%	35%	45%	70%
8) # (%) of HIV-exposed infants who receive an HIV test within 12 months of birth.	n/a		25%	35%	45%	70%
9) # (%) of infants born to HIV-infected women who report practicing exclusive feeding (either exclusive breast feeding or exclusive formula feeding) at 6 months of age	n/a		100%	100%	100%	100%
10) % of HIV-infected infants born to HIV-infected mothers	31.1%	2007	27.5%	25%	22.5%	16.3%

8 ANNEX

8.1 ANNEX 1: Calculation of population based targets for provinces / ODs

Population based targets for an OD or province can be calculated using the table below:

AREA: PROVINCE / OD:_____

P = Total Population

CBR = Crude Birth Rate (# of births per 1000 population)—nationally the rate is 28.54 per 1000, but province specific rates are available through Department of Planning

ANC HIV-Positive Rate (proportion of ANC clients found to be HIV-positive in most recent national HIV Sentinel Surveillance (2006)) = 0.011 (this number should be used until national surveillance is repeated).

TR = HIV transmission rate without intervention = 35% (estimate)

TRP = HIV transmission rate with PMTCT intervention = 10% (this will vary depending on whether ARVs were started more or less than 4 weeks prior to birth, whether full labor dose is given, whether infant gets full ARV prophylaxis regimen following birth,

and whether baby breastfeeds, but for simplicity will use 10% as estimated transmission rate if mother/baby pair receive full or partial PMTCT services.

A = # of births = P x CBR

B = # of births of HIV-exposed infants = A x 0.011

C = # of infants expected to be HIV-infected if no prophylaxis is provided = B x TR = B x 0.35

D = # of HIV-infected mother-exposed infant pairs in province (or OD) who received antenatal and labor ARVs or only labor ARVs plus full treatment for infant

E = Infections averted = D x (1-TRP) = D x 0.9

F = % of infections averted = E/C x 100

UNGASS Goal for 2010: 50% of infections averted

Shortfall from UNGASS 2010 target: **50 – F %**

# of additional infections that need to be averted to meet UNGASS 2010 target: **(0.5 x C) - F**
GUIDE: Note that the ARV regimen used in the National PMTCT Program provides approximately 90% protection to babies against MTCT of HIV; with no treatment at all 65% of babies will be free of HIV infection despite their exposure. The difference is 25%. Of 100 babies born without prophylaxis, 35 will become infected; of 100 babies born with prophylaxis only 10 will be infected. So treating 100 mother/baby pairs averts 25 infections, or stated another way, for every four mother/baby pairs treated, one infection is averted. To avert one infection, one must treat four infected women-exposed baby pairs. To find four HIV infected pregnant women (and thus avert one infection), it is necessary to counsel and test 364 pregant women (4 / 0.011) So, assuming that all the HIV infected mothers that are identified receive prophylaxis, 364 additional pregnant women must be screened for every additional infection that must be averted to meet the UNGASS target.

Clearly, additional strategies can be employed to avert infections, such as making sure all PREVIOUSLY KNOWN HIV-infected women who become pregnant receive prophylaxis, and making sure that all women DIAGNOSED during antenatal care receive prophylaxis

To fix targets for subsequent years, add 2 % to the previous year's population (= annual growth rate) and calculate accordingly. Also take into account any changes in CBR or ANC HIV sero-prevalence rate.

8.2 ANNEX 2: M&E-related Action Steps from Cambodia PMTCT Program Joint Review 2007

8.2.1 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.

8.2.2 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.

8.2.3 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.

8.3 ANNEX 3: Key components of HPITC Message that all ANC midwives must know to explain to pregnant women why HIV testing during pregnancy is important:

- Women and newborn children accounted for 71% of estimated "new" HIV infections in Cambodia in 2007 (HIV Estimates and Projections 2006-2012 (2007)), so we need to focus our attention on this population to find and prevent new cases.
- HIV causes no symptoms for many years, so a person could be infected that long and not knows it. This is why married couples are encouraged to be tested.
- The only way to know if one is infected is to be tested.
- A woman who is HIV infected can pass HIV to her baby during pregnancy, during labor, and while breast feeding.
- Testing is free and care and treatment for those infected is free as well.
- Treatment is effective both in helping prevent infection in the baby and in prolonging the life of the mother for many years.

In addition, the midwife must be able to identify the nearest testing site and be able to complete the appropriate referral form, and know of any NGO or community based organization that is providing transportation support to testing sites for pregnant women.

8.4 ANNEX 4: Definition of the Core National Indicators

Indicator	**Definition**	**Sources of reporting**
1- # (%) of ANC facilities that provide HIV testing		
Numerator	Number of ANC facilities that provide HIV testing	NMCHC Report
Denominator	Total number of health facilities with ANC services	NMCHC Report
2- # (%) of ODs with at least one PMTCT site		
Numerator	Number of Operational Health Districts with PMTCT service	NMCHC Report
Denominator	Total number of functioning Operational Health Districts in Cambodia	NMCHC Report

3- # (%) of pregnant women attending ANC at PMTCT sites tested for HIV and received their result		
Numerator	Number of pregnant women attending ANC at PMTCT sites tested for HIV and received their result in the last 12 months	NMCHC Report
Denominator	Total number of pregnant women attending ANC at least once at PMTCT sites in the last 12 months	NMCHC Report
4- # (%) of pregnant women in Cambodia tested for HIV and received their result		
Numerator	Number of pregnant women in Cambodia tested for HIV and received their result in the last 12 month	NMCHC Report
Denominator	Total number of Cambodian pregnant women estimated to give birth in the last 12 months	-Population Projection, Institute of Statistic, Ministry of Planning -CDHS
5- # (%) of partners who received results of their HIV test		
Numerator	Number of partners of pregnant women attending PMTCT sites tested for HIV and received their results in the last 12 months	NMCHC Report
Denominator	Total number of pregnant women attending ANC at least once in the last 12 months	NMCHC Report
6- # (%) HIV-positive pregnant women who receive antiretrovirals to reduce the risk of mother-to-child transmission		
Numerator	Number of HIV-infected pregnant women who receive antiretroviras during the last 12 months to reduce mother-to-child transmission	NMCHC Report
Denominator	Estimated number of HIV-infected pregnant women in the last 12 months.	-Population Projection, Institute of Statistic, Ministry of Planning -CDHS -HSS

7- # (%) of HIV-exposed infants who start CTX prophylaxis within 2 months of birth		
Numerator	Number of HIV-exposed infants who start CTX prophylaxis within 2 months of birth	NCHADS report
Denominator	Total number of HIV-exposed infants born to HIV infected women identified at maternity sites.	NMCHC Report
8- # (%) of infants born to HIV-infected mothers who receive an HIV test within 12 months.		
Numerator	Number of infants born to HIV-infected mothers who receive an HIV test within 12 months.	NCHADS report
Denominator	Estimated number of HIV-infected pregnant women giving birth in the proceeding 12 months[5].	-Population Projection, Institute of Statistic, Ministry of Planning -CDHS -HSS
9- # (%) of infants born to HIV-infected women who report practicing exclusive feeding (either exclusive breast feeding or exclusive formula feeding) at 6 months of age		
Numerator	Number of infants born to HIV-infected women who received exclusive breast feeding or formula feeding at 6 months of age	NMCHC Report
Denominator	Estimated number of HIV-infected pregnant women giving birth in the preceding 12 months	-Population Projection, Institute of Statistic, Ministry of Planning -CDHS -HSS
10- % of HIV-infected infants born to HIV-infected mothers		
It is an UNGASS indicator and is usually calculated through statistical modeling. There is no numerator or denominator. As indicated by UNGASS guidelines, the indicator is calculated by taking the weighted average of the probabilities of MTCT for pregnant women receiving and not receiving various prophylactic regimens.		

[5] Proxy for number of infants born to HIV-infected women.