

Kingdom of Cambodia

Nation Religion King



Ministry of Health

**Standard Operating Procedure for
Implementation of the Boosted Linked Response between HIV and
SRH for Elimination of New Pediatric HIV
Infections and Congenital Syphilis in Cambodia**

April 2013



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Abbreviations

3TC	Lamivudine
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral drug
AZT	Zidovudine
CD4	CD4+T- Lymphocyte (Cluster of Differentiation 4)
CBPCS	Community-Based Prevention, Care and Support
CHAI	Clinton Health Access Initiative
CoC	Continuum of Care
CQI	Continuous Quality Improvement
D4T	Stavudine
EFV	Efavirenz
Hb	Hemoglobin
HEI	HIV-Exposed Infant
LR	Linked Response
MCH	Maternal and Child Health
NCHADS	National Centre for HIV/AIDS, Dermatology and STDs
NMCHC	National Maternal and Child Health Centre
NPH	National Pediatric Hospital
NVP	Nevirapine
NGO	Non-Governmental Organization
OD	Operational District
OI	Opportunistic Infection
PAC	Pediatric AIDS Care
PASP	Provincial AIDS and STI Programme
SRH	Sexual and Reproductive Health
TWG	Technical Working Group
TDF	Tenofovir
TB	Tuberculosis
UNICEF	United Nations Children's Fund
US-CDC	United States Centers for Disease Control
VL	Viral Load
WHO	World Health Organization

Acknowledgements

The development of this standard operating procedure (SOP) was made possible through the intensive collaboration between the National Center for HIV/AIDS, Dermatology and STDs (NCHADS), National Maternal and Child Health Center (NMCHC) and many partners in the national HIV/AIDS response including US-Centers for Disease Control (US-CDC), FHI360, Khmer HIV/AIDS National Alliance (KHANA), Clinton Health Access Initiative (CHAI), UNICEF, WHO, UNAIDS, and CPN+ as well as other NGO partners who are members of Core Groups responsible for coordination and monitoring of the Boosted Linked Response. This active involvement and contribution of the Core Groups reflect their invaluable commitment in supporting the development and implementation of this important SOP to contribute to the elimination of new HIV infection in Cambodia by 2020 (Cambodia 3.0).

NCHADS and NMCHC are grateful for the support and commitment of partners to develop new strategies to achieve the goal of virtual elimination of new pediatric HIV infection in Cambodia. Through this continued cooperation between national and international partners the national program can achieve improved MCH and HIV prevention, care, and treatment service provision and more robust monitoring, evaluation and learning required to monitor progress toward the elimination goal.

Phnom Penh, 05 / April / 2013

Director of National
Maternal and Child Health Center



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Dr. MEAN-CHHI VUN

Forward

The Linked Response approach was developed in cooperation with many close partners of the national program in 2008. Since that time the Royal Government of Cambodia has succeeded in scaling up access to key sexual and reproductive health services, HIV testing and prophylaxis, and Early Infant Diagnosis through improved linkages between the National Maternal and Child Health program and the national HIV program under the leadership of the National Center for Maternal and Child Health and National Center for HIV/AIDS, Dermatology and STDs.

Through the Linked Response approach, the programs have reached a large proportion of the population with the services needed to prevent mother to child transmission of HIV and syphilis (PMTCT). However, still higher levels of coverage of PMTCT services will be required to achieve elimination of new pediatric HIV infections. Cambodia is developing improved programmatic responses to increase access and retention in services in order to eliminate new infections through MTCT. The Boosted Linked Response will employ strategies to increase PMTCT service uptake, reduce loss to follow up and death among HIV-infected mothers and their HIV-exposed infants, and improve quality of services and clinical outcomes among mothers and infants to facilitate Cambodia's virtual elimination of pediatric HIV infection.

This SOP for implementation of the Boosted Linked Response will rely on strategies including more robust adherence counseling by health workers and PLHIV peer counselors, active follow-up mechanisms to improve retention in care, further decentralization of HIV and syphilis testing using rapid tests at Health Centers, a consolidated management and coordination mechanism, availability of birth spacing services at a greater number of ART sites, and demonstration of the latest ARV prophylactic regimen, Option B+, for PMTCT as part of the new treatment as prevention strategy planned for demonstration in Cambodia.

With the continued strong collaboration between NCHADS, NMCHC, and partners of the Royal Government of Cambodia, elimination of new pediatric HIV infections is possible. The Boosted Linked Response is part of the overarching Cambodia 3.0 strategy to eliminate new HIV infections, AIDS-related mortality and HIV-related stigma. ១

Phnom Penh, 19 April 2013

Minister for Health



Prof. ENG HUOT
SECRETARY OF STATE

1. Background

In the mid-1990s Cambodia faced one of the highest HIV rate in South East Asia, but in a little over a decade became one of the few countries to reverse the spread of the epidemic. By 2012, the estimated HIV prevalence rate shrank to a projected 0.7%, down from almost 2% in 1998.²⁴ While great strides have been made in reducing HIV prevalence, there is still work to be done to reduce transmission of the virus to acceptably low levels.

In June 2011, Cambodia declared its commitment to eliminating mother to child transmission (eMTCT) of HIV and congenital syphilis. As of 2011, women of child bearing age comprise an estimated 44.5% (590/1326) of new HIV infections.²⁵ Among all HIV infected women in Cambodia, an estimated 1,461 became pregnant, exposing their infants to HIV and, in 2011 alone, as many as 172 infants were estimated to be vertically infected.²⁶ Among pregnant women infected with syphilis, an estimated 69% will experience one of a series of adverse events including neonatal infection.²⁷ Among high risk pregnant women in Cambodia, the 2001 STI sentinel surveillance showed a syphilis prevalence rate of 0.7%, reduced from 4.0% in 1996.²⁸ There is little data available on the prevalence of congenital syphilis in Cambodia, but the prevention efforts are feasible and well aligned with the eMTCT of HIV goals.

The majority of pediatric HIV infections and congenital syphilis can be averted through implementation of a comprehensive sexual and reproductive health (SRH) service package comprising HIV/AIDS care and treatment (including ARV prophylaxis), maternal and child health (MCH) services, birth spacing and Positive Prevention among PLHIV, and STI prevention and treatment. Delivering triple ARV regimen to the HIV-infected mother can reduce the probability of transmission to as little as 0.5% during the peripartum period and 0.2% per month of breastfeeding during the postpartum period.²⁹ By the same token, inexpensive and effective syphilis treatment is available for infected pregnant women to prevent transmission of congenital syphilis to their infant. Ensuring that there is no unmet need for family planning will further reduce the rate of vertical transmission of both HIV and congenital syphilis.

Since the beginning of 2008, the Royal Government of Cambodia has worked to introduce a comprehensive, scalable solution to PMTCT relying on linkages between HIV, Sexual and Reproductive Health services delivered by the National Center for HIV/AIDS, Dermatology and STD (NCHADS) and the National Maternal and Child Health Center (NMCHC), known as the Linked Response approach. The

²⁴ NCHADS. Report from the HIV prevalence estimations workshop, NCHADS/NIPH, 2011.

²⁵ Ibid.

²⁶ Ibid.

²⁷ The Global Elimination of congenital syphilis: rationale and strategy for action, 2007.

²⁸ NCHADS. STI Sentinel Surveillance, 2001.

²⁹ UNAIDS Reference Group on Estimations. Working Paper on Mother-to-Child Transmission Rates for Use in Spectrum. May 2011.

Linked Response aims to reach all pregnant women by developing and utilizing linkages between existing HIV/STI and Sexual and Reproductive Health (SRH) services, mobilization of existing community-based entities, and localization of key services including HIV testing and counseling provided at the health center level.

Impressive gains have been made through the Linked Response approach since the initial demonstration in four operational districts (OD) of Prey Veng Province and one OD in Takeo Province in 2008 through the scale up to 71 ODs by the end of 2011. The number and percentage of women accessing HIV testing increased from just 11% in 2007 to 79.6% in 2011 (Figure 1). Coverage of ARV prophylaxis or ART among HIV-infected pregnant women has climbed from just 11% in 2007 to 49% in 2010 and to 63% in the 2011 data³⁰.

Even in the context of the successful scale up of the Linked Response, service coverage and retention in services is too low. A study of routine PMTCT cohort data among 11 ODs in Cambodia demonstrated that 70.3% of mother-infant pairs did not receive at least one service in the PMTCT cascade, and 33.3% missed at least 2 services.³¹ Existing follow up mechanisms are proving insufficient to reduce loss to follow up of pregnant women and exposed infants. In view of the remaining service coverage gaps NCHADS seeks to implement an active follow up mechanism for pregnant women and exposed infants building on existing community-based care networks while increasing engagement with village chiefs and local authorities to close these gaps.

As part of national efforts to reduce child mortality and to improve reproductive health outcomes more broadly, the Ministry of Health launched efforts to eliminate congenital syphilis starting in 2008. The percentage of pregnant women accessing syphilis testing at ANC had reached only 39% as of 2011. Among these women, less than 0.1% tested positive for syphilis. Scale up of syphilis testing has been slow, in part due to challenges in providing sufficient testing materials for the initial rapid test and confirmatory RPR. At the same time, additional sensitization and training may be required for clinicians at STI services who may hesitate to draw blood among patients. Finally, among infants exposed to syphilis *in utero*, there is no clear case definition for congenital syphilis allowing to estimate current rates in Cambodia.

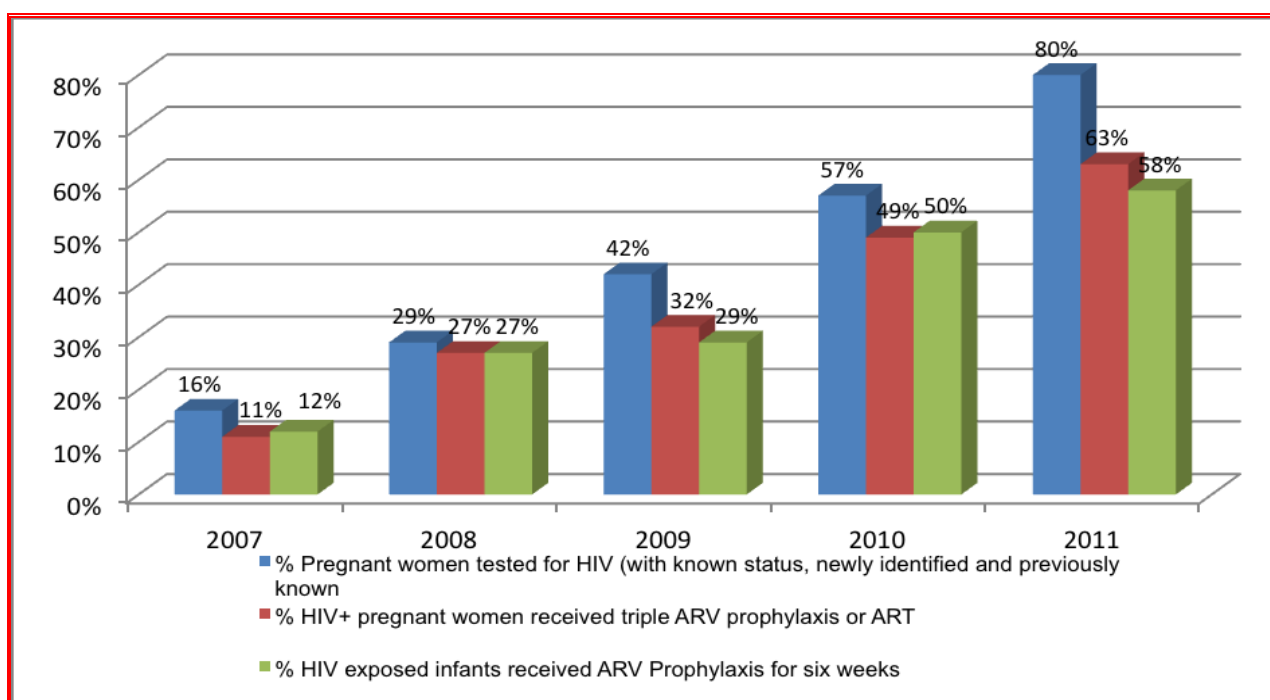
In parallel with the Linked Response scale up and syphilis screening, among other SRH efforts, the national programs developed and implemented new strategies for delivering modern birth spacing services to HIV positive women through Positive Prevention. Providing birth spacing services to HIV

³⁰ Linked Response and PMTCT data reports, Data Management Unit, 2011.

³¹ Samreth S et al. Uptake of interventions for preventing mother-to-child HIV transmission in Cambodia. *Western Pacific Surveillance and Reporting*, 2012 (in press).

positive women and their partners as part of the comprehensive service package can help to reduce new HIV infections among infants, rates of unwanted pregnancy and unsafe abortion. Positive prevention for PW and EW was launched in 2010 and has been implemented in twenty two operational districts through 2011. There is still a particular need to increase positive prevention among entertainment workers as revealed by a recent study indicating that 77% of entertainment workers had ever had an abortion³². In view of this, elimination strategies must also link with the Boosted Continuum of Prevention to Care and Treatment among MARPs (Boosted CoPCT).

Figure 1: Gains in HIV testing and PMTCT service coverage during scale up of Linked Response



Cambodia is now working towards the goal of virtual elimination of new pediatric HIV infections and congenital syphilis in line with the Asia Pacific strategic vision. This work underpins the broader strategic vision of Cambodia 3.0 which includes the goals to eliminate new HIV infections and AIDS related deaths. This national SOP for implementation describes the Boosted Linked Response, building on the existing model, with updated objectives and strategies to achieve these goals.

³² Report on Baseline assessment for “Continuum of Prevention to Care and Treatment” approach among women working in the entertainment industry in Siem Reap Province, Cambodia (2011).

2. Rationale

Building on the success of the Linked Response and the wide access to ART for adults and children, Cambodia is uniquely positioned in the world to attempt to virtually eliminate pediatric HIV and congenital syphilis and drastically decrease mortality for HIV positive children. The Boosted Linked Response strategy is intended to respond to the global commitment to **virtual elimination of new pediatric HIV infections to less than 5% in 2015 and to less than 2% by 2020**, and to reduce the incidence of congenital syphilis to 0.5 cases per 1,000 live births³³.

Under 2010 levels of coverage the MTCT rate of HIV infection in Cambodia is estimated to be around 13%.³⁴ Syphilis prevalence among pregnant women tested was 0.1%. To achieve the above ambitious elimination targets it will be necessary to ensure that the majority of pregnant women know their HIV and syphilis infection status and receive appropriate PMTCT interventions for both HIV and syphilis. Modeling exercises conducted in Cambodia in 2011 indicate that testing coverage of at least 95% may be required to achieve such eliminations. To achieve the ultimate pediatric HIV elimination targets, coverage of services in the PMTCT cascade must exceed 97%. Regional estimates indicate that screening and treatment coverage for syphilis must exceed 90%³⁵ by 2020.

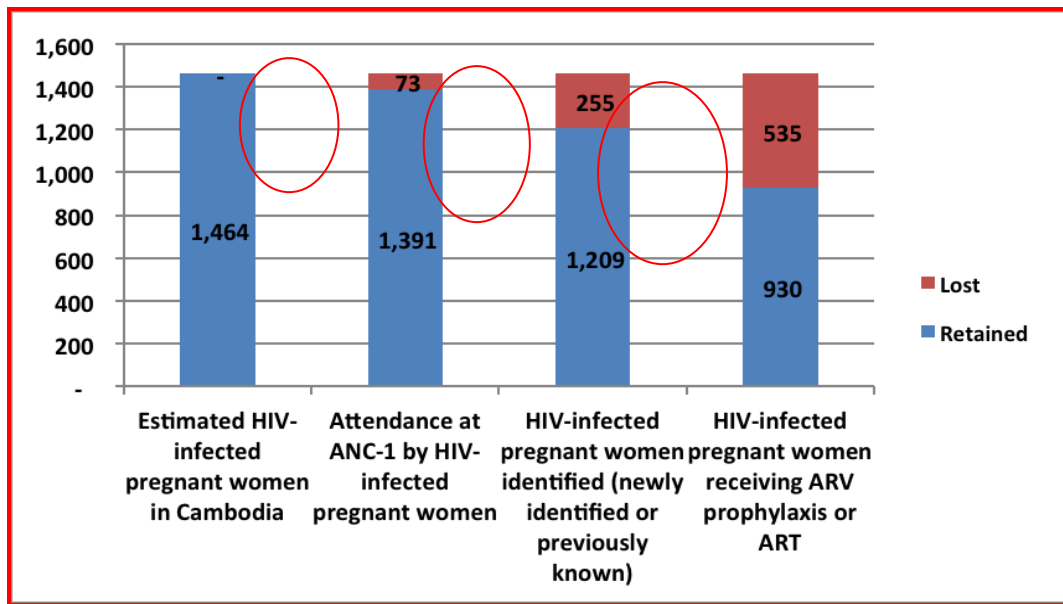
Despite the success of the Linked Response in scaling up service access, significant gaps remain in coverage HIV testing and ARV prophylaxis (now exclusively ART in Cambodia) for mother-infant pairs (Figure 2). Only 79.6% of pregnant women attending ANC in 2011 were tested for HIV and received their results; syphilis screening was only provided for an estimated 39% of these women. These coverage levels must be improved to reach the elimination goals. In addition, Loss-to-follow-up at each stage of the PMTCT cascade leads to significant overall loss to follow-up of mother-infant pairs leading to additional gaps in PMTCT coverage and increased risk of MTCT and HIV infection in infants (Figure 2).

Figure 2: Estimated Gaps in HIV testing and ARV Prophylaxis coverage (Universal Access, 2011)

³³ Elimination of new pediatric HIV infections and congenital syphilis in Asia Pacific 2011-2015 (2011).

³⁴ HIV prevalence estimations workshop (2011).

³⁵ Elimination of Pediatric HIV Infection and Congenital Syphilis in Asia Pacific, 2011.



Importantly, Linked Response program data indicates that as many as 55.8% of HIV-infected pregnant women accessing PMTCT services already knew their HIV status before their current pregnancy.³⁶ Thus, targeting women already aware of their HIV infection status through community and pre-ART/ART service interventions will be critical to ensure that these women have access to ANC and PMTCT according to current guidelines and recommendations.

Under the new national strategy planning to implement ART as prevention, ART will be made available to all HIV-positive pregnant women not yet on ART regardless of CD4 counts and will be maintained for life (Option B+ described in Section 4 and Annex 1). Indeed, early initiation on ART can lead to a significant reduction of the viral load with a drastic reduction of HIV transmission to the infant. However, adherence to ART remains a critical factor to ensure such a control of the viral load and specific strengthened adherence counseling interventions to ensure optimal adherence are necessary.

Now that the Linked Response is being implemented on a national scale, the program is shifting focus to remaining gaps in service coverage and aims to further enhance the linkages between the national HIV and MCH programs to provide additional services.

3. Objectives

The overarching goal of the Boosted Linked Response is to achieve virtual elimination of new pediatric HIV and congenital syphilis infections to improve maternal and child health outcomes. The programmatic objectives are to:

³⁶ Universal Access Report, Linked Response/PMTCT data (2011.).

3.1- Reduce morbidity and mortality among pregnant women with unknown HIV-infection status through HIV test screening, OI treatment (including TB) and early initiation of ART,

3.2- Improve critical service provision for known HIV-infected women of reproductive age, including positive prevention and early ART initiation,

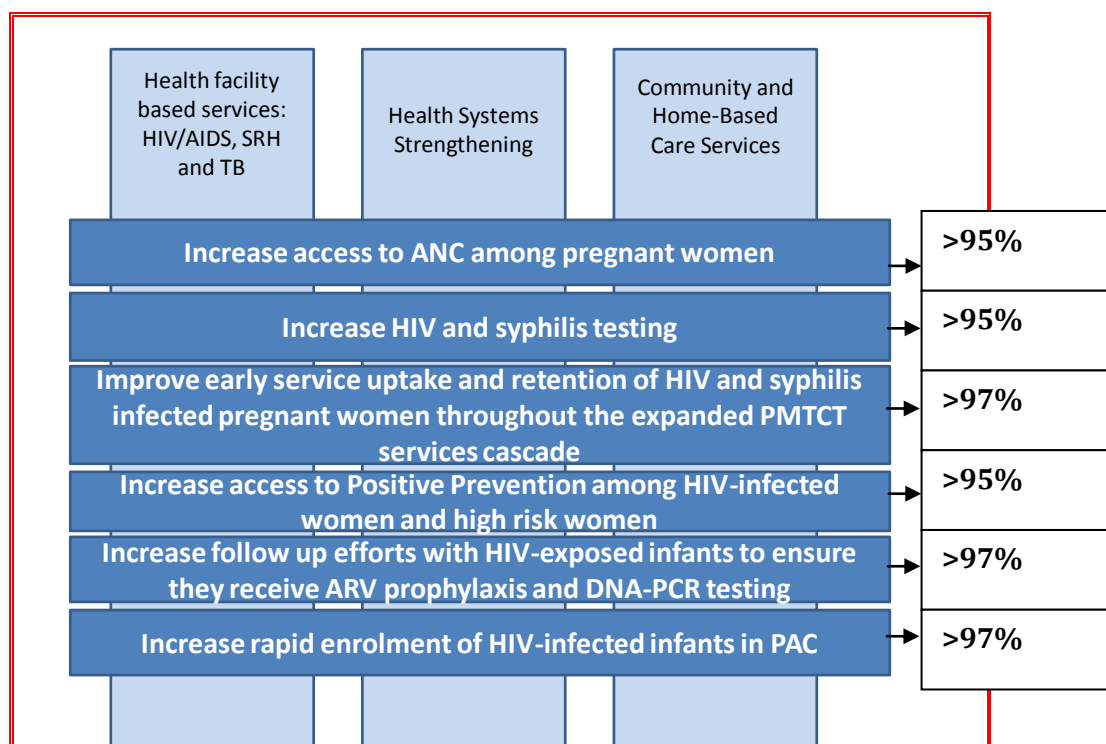
3.3- Strengthen health system and community ownership to improve health service provision and linkages between services, with focus on increasing early access, follow up and retention along the full PMTCT service cascade.

4. Strategic Framework and Activities

To fulfill these goals and objectives, the Boosted Linked Response approach will focus on the following programmatic target areas (Figure 3):

- Increase access to ANC for pregnant women;
- Increase HIV and syphilis testing ;
- Improve early service uptake and retention of HIV and syphilis infected pregnant women throughout the full PMTCT services cascade;
- Increase access to Positive Prevention among known HIV-infected women and high risk women;
- Reduce loss-to-follow-up HIV-exposed infants to ensure optimum ARV prophylaxis and early infant diagnosis through HIV DNA-PCR testing ;
- Increase rapid enrollment of HIV-infected infants in Pediatric AIDS Care.

Figure 3: Building Blocks for Elimination of New HIV Pediatric Infections and Congenital Syphilis through the Boosted Linked Response



The strategic activities are centered around the six target areas outlined in section 4.

4.1. Increase access to ANC among pregnant women at the community:

- Village and community members might have knowledge of new pregnancies in their areas. Village chiefs will be called on to contribute to increase ANC coverage by sharing information with new pregnant women and facilitate their attendance at the nearby health facility.
- Women with already known HIV status should be already enrolled at pre-ART/ART services and referred to ANC on a voluntary basis once their pregnancy is known.
- HIV-infected pregnant women must be and be referred either to ANC (for full package of MCH services) or pre-ART/ART services without delay.

4.2. Increased HIV and syphilis testing at ANC and Health Centers:

- At ANC service delivery points, all women with unknown HIV status must be proposed to be immediately tested for HIV and if positive be referred to expanded PMTCT services. The same blood sample drawn for the purpose of HIV testing should then be used to conduct a syphilis test or other test as recommended in the Safe Motherhood protocol.
- Under the updated Boosted Linked Response model, Linked Health Centers without VCCT will provide counseling or information of rapid HIV testing to all patients, including for pregnant women, to facilitate scale up of HIV testing to the target groups (refer to revised HTC SOP, July 2012 revision). Couples HIV testing and counseling will be offered to pregnant women in order to strengthen serodiscordant couples identification.

- HIV testing strategies must also link with the Boosted Continuum of Prevention to Care and Treatment among MARPs (Boosted CoPCT).
- Most-at-risk women should be targeted through the Boosted CoPCT to ensure that they are also linked into services when they become pregnant.
- For women presenting at labor with unknown HIV status, HIV testing should be conducted using a rapid test during labor. For additional detail, refer to Annex 2: Instructions for HIV Testing at Labor and Delivery.

4.3. Improve early service uptake, retention and adherence of HIV and syphilis infected pregnant women throughout the PMTCT cascade

- All newly identified HIV-infected pregnant women will be given a CD4 test and enrolled within 1-2 weeks in pre-ART/ART services where systematic TB screening will be performed in accordance with the TB-HIV 3I's SOP.³⁷
- The HIV and MCH Focal Points will be responsible for ensuring that women who test positive for syphilis receive appropriate treatment as described in the latest SOP for scaling up access to syphilis testing and treatment among pregnant women.³⁸ Infants born to women testing positive should be treated immediately at maternity services. Partners of positive pregnant women should also be referred for treatment at family health clinic.
- All HIV-infected pregnant women not already on ART will be offered immediate ART initiation regardless of their CD4 count and gestation age according to the new PMTCT Option B+ policy (recommended in the 2012 Concept Note on ART as Prevention).
- Treatment as Prevention will be offered to the HIV-infected partner of serodiscordant couples as recommended in the revised concept note on Treatment as Prevention.
- Once an HIV+ pregnant woman is enrolled at pre-ART/ART sites, the Cambodia 3.0 Cambodia 3.0 Focal Point at the pre-ART/ART site will be in charge of case management to help them access relevant services, including ANC and maternity where the delivery will be carefully planned to ensure immediate access to ARV prophylaxis to the infant. Once a woman is in care, Cambodia 3.0 Focal Points at each pre-ART/ART site will be in charge of follow-up with each HIV+ pregnant women and their infant even after delivery in order to minimized the lost to follow-up along the PMTCT cascade (see below).
- Community education campaigns will also serve to increase knowledge of and access to services. Transportation support will be provided for NGOs to bring women to the Health Center or Referral Hospital.

³⁷ When ART as prevention is launched nationwide in Cambodia all HIV-infected individuals should be immediately initiated on ART.

³⁸ <http://nchads.org/SOPs/Concept%20paper%20for%20syphilis%20screening.pdf>

4.4. Increase access to Positive Prevention among HIV-infected women and high risk women;

- HIV-infected women attending pre-ART/ART services must be counseled on positive prevention messages and birth spacing methods according to the recent Positive Prevention guidance³⁹ in order to reduce the rate of unwanted pregnancies.
- HIV-infected women attending pre-ART/ART services where birth spacing (BS) methods are not available should be referred to the MCH program for accessing BS services.

4.5. Increase follow up of HIV-exposed infants to ensure optimum ARV prophylaxis and Early Infant Diagnosis

- The designated Cambodia 3.0 Focal Point will be responsible for close and active monitoring of pregnant women. Key dates for follow up will be identified and the delivery organized with the maternity using the Linked Response Follow Up sheet (Annex 4) which collects data related to pregnancy age and infant age.
- Once loss to follow-up of a woman or infant has been identified along, the PMTCT cascade, the Cambodia 3.0 Focal Point will be responsible for contacting the woman directly and/or activating the community based follow up mechanisms to encourage her to return to the HC for ANC, to the pre-ART/ART site for adherence and/or maternity services for safe delivery mechanism.
- The Cambodia 3.0 Focal Point will be responsible to follow-up HIV-exposed children after delivery to check and ensure they have access to proper ARV prophylaxis and early infant diagnosis by 6-8 weeks of age through HIV DNA-PCR testing according to the current National Guidelines for the Use of Pediatric Antiretroviral Therapy in Cambodia.
- Village chiefs and other representatives of community and home-based care networks which access to HIV+ pregnant women and their infant can be used to tailor follow up and referrals to increase service uptake among them.

4.6. Increase rapid enrolment of HIV-infected Infants in Pediatric AIDS Care

- The Cambodia 3.0 Focal Point will be responsible to ensure that all HIV-exposed infants diagnosed HIV positive are being enrolled at nearby PAC and initiated on ART without delay (within 2 weeks of diagnosis) regardless of their CD4 count according to the current National Guidelines for the Use of Pediatric Antiretroviral Therapy in Cambodia (2011 revision).

³⁹ Guide for Implementation of Positive Prevention Among PLHIV in Cambodia 2010, 2010.

- Infants who have been exposed to Nevirapine through PMTCT services should be enrolled on an ART regimen containing LPV/r.

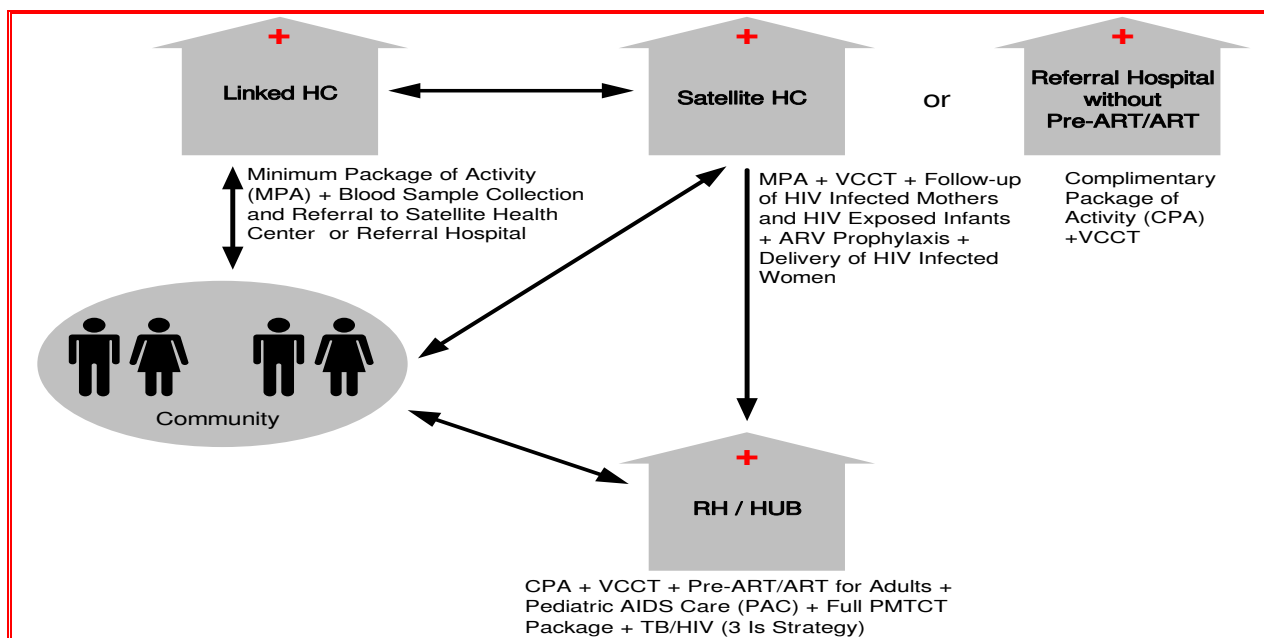
5. Implementation of the Boosted Linked Response

The demonstration of the Boosted Linked Response will take place in 5 initial target ODs and will be expanded into a total of 30 targeted Operational Districts in the following periods. The strategies, activities and implementation plan to reduce the vertical transmission rate nationally to below 5% in 2015 and below 2% by 2020, in line with the global and regional targets for the virtual elimination of new pediatric HIV infections.

5.1. Updating the Linked Response Model

The Linked Response model in its original form aims to improve linkages of services at the operational district level by strengthening referral mechanisms within and between community-based support and facility-based services. This strategy will ensure that patients can receive comprehensive reproductive health and HIV/AIDS prevention, care, and treatment, while paying special attention to strengthening and scaling-up PMTCT services.

Figure 4: Linked Response Model



Under the previous Linked Response model there was a special designation for Health Centers and Referral Hospitals that were not pre-ART/ART sites but provided ARVs. These facilities will not provide ARVs for PMTCT anymore and health center staff will refer HIV positive pregnant women to Referral

Hospitals with ART. Therefore the updated model reflects only interaction between community, health centers, HIV testing facilities, and hospital with pre-ART/ART services.

Figure 5: Boosted Linked Response Model

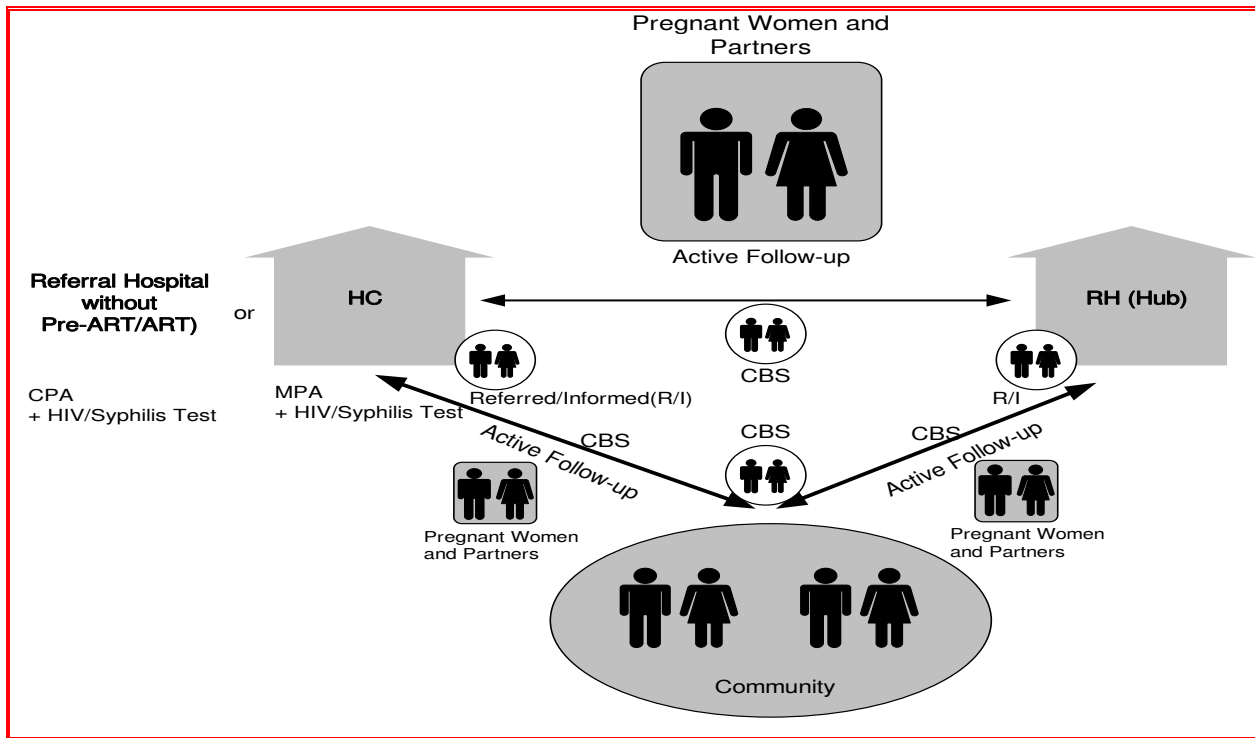
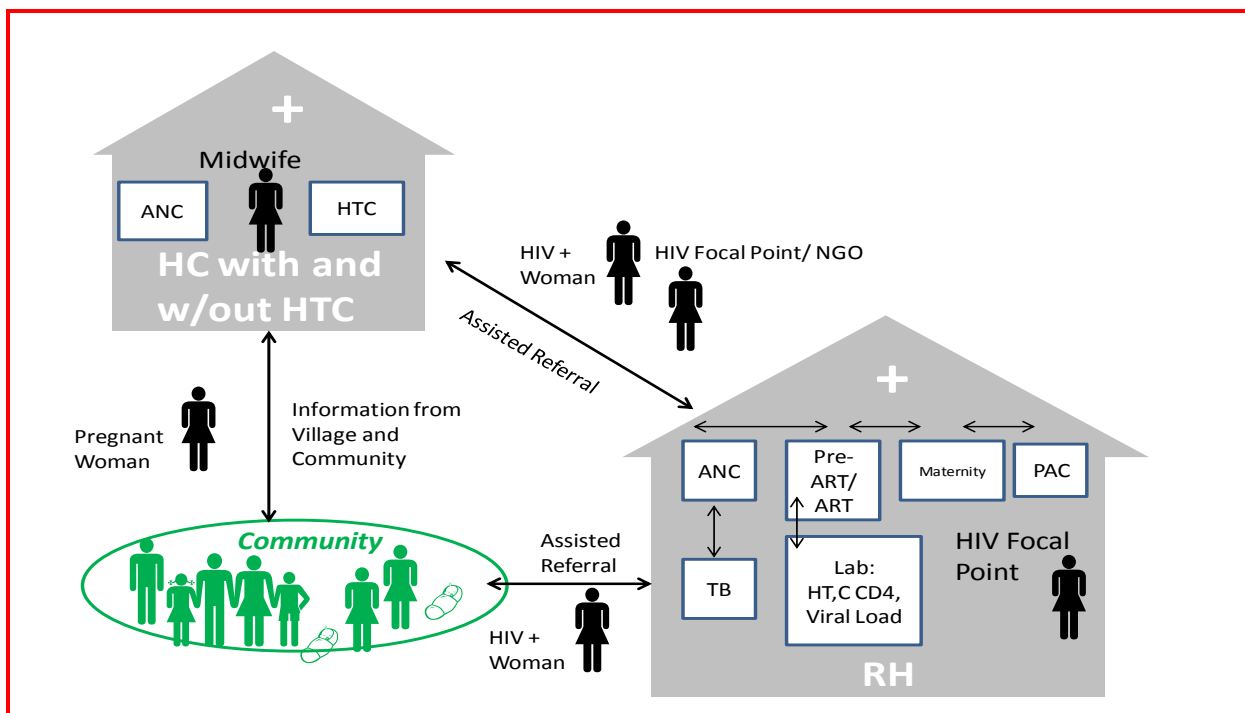


Figure 6: Active follow up mechanism with community support



Using the existing model with increased community involvement, the Boosted Linked Response will also improve referrals and service delivery for birth spacing, while increasing syphilis testing by targeting VCCT and STI services with additional technical support to provide the rapid screening test and confirmatory RPR, as well as treatment for Syphilis infected women and their exposed partners and infants.

As shown in Figure 6, under the boosted strategy the Cambodia 3.0 Focal Point will be responsible for activating Community and home-based care networks to provide the necessary follow up to bring HIV+ pregnant women back into services in case of loss to follow-up. Special consideration will be given for HIV-infected women who do not wish to disclose their status to protect their privacy in order to allow them to maintain their relationship with their personal physicians and achieve proper adherence to PMTCT.

5.2. Case Studies

5.2.1. Case study 1: A pregnant woman with a known HIV infection status

Mme Sopheak⁴⁰ has recently become pregnant. She knows she has been infected with HIV since 2008. At her last visit to the pre-ART/ART site, her CD4 count was found >500 cells/mm³ and she remained in pre-ART care (not yet on ART). When she felt that she may be pregnant, she decided to return to the at the pre-ART/ART site before her routine follow up visit. The attending clinician diagnosed her pregnancy, which was approaching 14 weeks of gestation.

At the pre-ART/ART site, despite her high CD4 count and according to PMTCT recommendations ART site, Sopheak was prescribed ART as per Option B+ guidance (see Annex 1: Instructions for administering Option B+) and the health care provider performed cautious TB symptom screening. ART adherence counseling was provided and an overview of risks of vertical transmission to the infant was performed; the counselor also provided an overview of the services available to prevent transmission to her infant. Sopheak was informed of the date of her next appointment and was advised that she can receive some support from a local NGO in case of trouble attending this second appointment. She was also informed that this local NGO and the Cambodia 3.0 Focal Point at pre-ART/ART site will be in touch with her if she does not attend her follow-up visits.

Sopheak was referred to ANC services and PLHIV peers working at MMM accompanied her to ANC service within the RH. They called MCH staff on her behalf and brought Sopheak to be enrolled at ANC service and receive her first ANC consultation. During this visit she also received a syphilis test. PMTCT

⁴⁰ Names and cases described in the SOP are fictional.

midwife at ANC service informed her how to reduce the risk of HIV transmission to her infant, provided information about infant feeding and calculated the expected date of delivery.

Reporting and coordination: For already known HIV+ women, any newly diagnosed pregnancy should be reported the same-day by health facility staff to the Cambodia 3.0 Focal Point at pre-ART/ART site. The Cambodia 3.0 Focal Point is responsible for tracking HIV+ pregnant women during their follow up using the Follow Up Sheet. For ODs with full CoC (including ART facility) the Cambodia 3.0 Focal Point will be responsible for following-up with HIV+ pregnant women in the whole OD. In areas where CoC is available for a Cluster of ODs, the Cambodia 3.0 Focal Point will be responsible for following- up of HIV+ pregnant women in the whole cluster of ODs.

5.2.2. Case Study 2: A pregnant women attending ANC services and newly identified as HIV infected

Mme. Sopianavy is pregnant and has never been tested for HIV. She has received advice from her sister to visit the health center for ANC. Sopianavy attends her first ANC visit (ANC 1) with support from HC staff and community networks. Her husband joins her at the health center for this ANC visit. Her pregnancy is approaching 15 weeks of gestation.

At the HC, both she and her husband are offered to be tested for HIV and they accept it. At the same time, Sopianavy is offered a syphilis test. When the test results return, both Sopianavy and her husband are found infected with HIV and are provided appropriate post-test counseling. They are referred for CD4 testing and enrollment at the nearest ART sites at the Referral Hospital. Transportation support may be available from the community for this service.

Sopianavy is informed about the need to receive ARV treatment in order to protect her infant from being HIV infected. Sopianavy is informed that she can return to the health facility if she feels unwell and is given a next appointment date. She is further advised that she can receive some support from a local NGO in case she will have trouble attending the second appointment. She is also informed that the local NGO and Cambodia 3.0 Focal Point will be in touch with her if she does not attend her follow-up visits.

Reporting and coordination are as described under Case Study 1.

5.2.3. Case Study 3: A pregnant women receiving her HIV-positive result and not willing to disclose her status to her family

Ms. Bopha is pregnant and she comes to the health centre for her first ANC service. At that time, she is offered HIV testing which turns out to be positive revealing she is infected by HIV. She is really shocked to know she has HIV infection. She tells the midwife counselor at the ANC service that she is afraid and not ready to disclose it to her family. She doesn't want anybody to know that she is living with HIV as she has

fears about the negative impact it may have on her life. During post-test counseling, the midwife also informs her she can access home based care services which might help her. However, after a long conversation with the counselor, she still wants to keep her HIV status confidentially. Fortunately, she is pleased to allow ANC midwife to visit her at home through ANC outreach service.

Coordination and reporting: As the woman trusts the midwife counselor to support her through pregnancy, delivery and post-delivery, active follow-up should be conducted during outreach activity, or home visit arranged by the midwife, or make follow-up appointment by telephone if the woman has her own contact number. Regarding ARV treatment for PMTCT, the counselor should accompany her to enroll at pre-ART/ART site or call ahead to facilitate her enrolment.

The counselor midwife from ANC should inform to the Cambodia 3.0 Focal Point for this specific case and seek support/advice from him/her for further action. Continued counseling on disclosure is needed in each visit for this case in order to build self-confidence and readiness.

5.3. Roles and Responsibilities in Service Delivery in the Boosted Linked Response

Antenatal Care (ANC): ANC is one of the entry points for PMTCT services. Antenatal care will be provided through both the public and private sectors. Pregnant women will be registered at ANC near to her pre-ART/ART site. NMCHC will be responsible for provision of antenatal care in the public sector and ensuring that during ANC visits the patient receives and has a blood sample collected for lab analysis for HIV test, syphilis test, hemoglobin test etc.

- A woman with unknown HIV status attending ANC will be referred to services in the public sector for HIV testing as well as STI prevention, care and treatment, TB screening, diagnostic workup and treatment as required.
- All pregnant women newly identified as HIV-positive should be referred immediately to pre-ART/ART services to receive CD4 testing and be prescribed ART according to PMTCT recommendations (Option B+).
- On arrival at ANC a known HIV-infected pregnant woman can be enrolled in care, her details recorded in the cohort follow-up sheet and her ARV treatment status confirmed. If she is not yet enrolled in pre-ART/ART services, she should be referred to the closer pre-ART/ART site for CD4 testing and prescription of appropriate ARV regimen according to PMTCT recommendations (Option B+).

5.3.1. HIV and syphilis testing (HTC, including VCCT and PITC): NCHADS and NMCHC will be responsible for managing the scale up of HIV and syphilis testing using innovative strategies including use of rapid testing methods. Health counseling will be provided as a key component of HIV and syphilis testing.

5.3.1.1. HIV testing will be provided at ANC, Labor and Delivery (see below), VCCT, Linked Health Centers, NGO clinics and private sector clinics. Under the Boosted Linked Response, the same blood sample drawn or finger pricked to test for HIV infection will be used to conduct syphilis testing. At ANC Health Centers without capacity to conduct the rapid HIV and syphilis test, midwife or female nurse will draw the blood and send the blood sample for testing at the nearest to VCCT site.

5.3.1.2. HIV rapid testing will be conducted at Linked Health Centers. Only one sample will be taken for testing for both HIV and syphilis using rapid test kits. A Hemoglobin test should also be provided.

5.3.1.3. If the HIV test is positive, the pregnant woman should be referred to the pre-ART/ART site for CD4 testing and enrollment for PMTCT.

5.3.1.4. If If the rapid syphilis test is positive, the pregnant woman should be referred for diagnostic confirmation by RPR at family health clinic and treatment according to the 2012 revised_Concept note for Scaling up Syphilis Screening among Pregnant Women from 2010 to 2015 in Cambodia.⁴¹ Her spouse/partner should also be referred for RPR test and treatment, and her exposed infant must be tested for RPR and provided treatment.

5.3.2. HIV testing at Labor and Delivery: MCH and maternity staff will be responsible for HIV testing at Labor and Delivery for women with unknown status at labor.

- For women with unknown HIV status at labor and delivery, maternity staff should use a rapid HIV test kits to determine the woman's serostatus.
- Maternity staff should request rapid HIV test kits from the collocated VCCT sites at the health facility.
- For women testing positive during labor and delivery, ARVs should be administered according to the new PMTCT Option B+ policy.
- ARVs required for prophylaxis for women identified HIV-positive should be requested from the pharmacy at the ART site.

5.3.3. Pre-ART/ART: Staff at the pre-ART/ART facility will be responsible for providing ART to HIV-infected woman ART and also linking with laboratory, TB STI , ANC and maternity services.

5.3.3.1. At pre-ART/ ART facilities, clinical staff will initiate ART regimen to HIV-positive pregnant women according to PMTCT recommendations (option B+).

⁴¹ Concept note for Scaling up Syphilis Screening Among Pregnant Women from 2010 to 2015 in Cambodia. NCHADS, 2012.

5.3.3.2. For HIV+ women already on ART who become pregnant, clinician at pre-ART/ART site should adapt the ART regimen according to PMTCT (option B+) recommendations and refer them to ANC service.

5.3.3.3. Staff at pre-ART/ART facilities should also provide positive prevention services to HIV-infected women according to positive prevention SOPs.

5.3.3.4. HIV-infected pregnant women who are enrolled at pre-ART/ART sites that do not provide birth spacing service should be referred to the nearest birth spacing services.

5.3.4. PMTCT Counseling: HIV positive pregnant women will receive PMTCT counseling by health care workers and peer counselors (PLHIV counselors) at ANC and pre-ART/ART-PMTCT sites.

5.3.4.1. PMTCT counseling skills will be reinforced through updated trainings of counseling staff at ANC and using the module 4 (PMTCT counseling) of the recent Comprehensive Counseling Curriculum.

5.3.4.2. PMTCT counseling will be conducted by health workers for pregnant women and couples attending ANC and HIV testing. Couples counseling will be encouraged for new positives to support voluntary disclosure of HIV seropositive status.

5.3.4.3. Partner HIV testing will be encouraged through PMTCT counseling. Each woman attending ANC services will be encouraged to bring her partner for HIV testing. If the woman attends ANC service with her partner, she and her partner will be advised to attend a couple counseling session. HIV-infected pregnant women will be informed and counseled about the PMTCT (Option B+). Under this option, the importance of treatment adherence will also be a focus.

5.3.4.4. ARV adherence counseling skills of drug and peer counselors will be reinforced using the module 7 of the the new Comprehensive Counseling Curriculum.

5.3.5. Laboratory services: NCHADS Laboratory and VCCT Units are responsible for the provision of HIV DNA-PCR testing (for EID), and of HIV and Syphilis testing at Linked HC and other concerned sites

5.3.5.1. ART follow-up of HIV+ pregnant women will be performed at pre-ART/ART site according to the revised National ART Guideline for Adults and adolescents in 2012.

5.3.5.2. Monitoring of hemoglobin levels at the RH laboratory will be provided to assess anemia in HIV+ pregnant women, especially when AZT is part of their ART regimen.

- 5.3.5.3. All HIV exposed infants should receive an HIV DNA PCR test (using Dried Blood Spot) between 6 and 8 weeks of age and results should be sent back to the PAC and returned and given to the mother/care giver as soon as possible, but at the very latest within four weeks to enable prompt ART initiation of HIV+ infants.
- 5.3.5.4. Lab and VCCT staff must keep detailed lab test and patient logs and ensure rapid provision of test results to clinicians.

5.3.6. Delivery services (maternity): NMCHC is responsible for provision of delivery and maternity services.

- 5.3.6.1. See Section III and Annex 2 for details on HIV testing at Labor and Delivery.
- 5.3.6.2. All maternity and safe delivery services will administer infant ARV prophylaxis at birth and for the six following weeks according to 2011 PMTCT national guidelines.
- 5.3.6.3. OD level MCH Focal Points will be responsible for coordinating with private sector and NGO facilities to improve the reporting and referral of HIV+ pregnant women across the public and private sectors.
- 5.3.6.4. Prior to being discharged from the hospital following delivery, the HIV+ mother and HIV-exposed infant should be accompanied under Cambodia 3.0 Focal Point or MCH Focal Point supervision to be enrolled to the Pediatric AIDs Care (PAC) site to be reported in the HIV-exposed infant database and be given a six week follow up appointment for early infant diagnosis.. Cambodia 3.0 Focal Point should contact directly the PAC staff eventually through phone call to alert them about the enrolment of this new HIV-exposed infant patient.

5.3.7. Pediatric AIDS Care (PAC): PAC staff at pre-ART/ART are responsible for care and treatment of the HIV-exposed infant after his enrolment at PAC site after delivery.

- 5.3.7.1. The HIV+ mothers should be given counseling on appropriate feeding practices and encouraged to follow the exclusive breastfeeding according to current policy of the Ministry of Health. The 2011 national guidelines for implementation of PMTCT states that if alternative feeding options are chosen, expert advice and potential support from CBOs should be given.
- 5.3.7.2. HIV-exposed infants should receive the same immunizations as non HIV-exposed infants and should return to the health facility nearby PAC services, at six weeks, for routine immunizations as per the National Immunization Program's Vaccination Policy Recommendations.

5.3.7.3. Also at six weeks, the mother-infant pair should return to PAC for Early Infant Diagnostic services, further breastfeeding and adherence counseling.. With the mother's consent, the infant should receive HIV DNA-PCR test according to the National Guidelines for PMTCT of HIV:

- Non-breastfeeding infants: one negative result is enough to exclude HIV infection.
- Breastfeeding infants: need a second HIV-DNA PCR test, performed 6 weeks after ending breastfeeding.
- A confirmatory HIV antibody test should be considered after 18 months if necessary, as in cases of prolonged breastfeeding. All HIV-exposed infants are to be given cotrimoxazole by staff at PAC or pre-ART/ART, according to the 2011 National Guidelines for PMTCT and for pediatric use of ARVs, from 6 weeks till the infant is confirmed HIV uninfected. If the infant is HIV infected, he or she should continue on cotrimoxazole prophylaxis till age five, regardless of clinical symptoms or CD4 count.

5.3.7.4. If infant is HIV infected, they should be immediately initiated on ART (all children aged ≤24 months should be immediately initiated on ART regardless of CD4 count)⁴². Cambodia 3.0 Focal Points should follow up to ensure that the newly diagnosed infant starts ART immediately. All infants who were exposed to Nevirapine through PMTCT should receive an ART regimen containing LPV/r⁴³ (refer to 2011 National Guidelines for Use of Pediatric Antiretroviral Therapy in Cambodia for more detail).

5.3.8. Community support: The community mechanism that was used in Linked Response to support follow up and service uptake among HIV-infected pregnant women must be expanded to further improve coverage, early uptake and retention in services. To go beyond the reach and knowledge level of the previous community and home-based care networks, other community representatives and networks will be leveraged to improve follow up.

5.3.8.1. The Cambodia 3.0 Focal Point at pre-ART/ART clinic stands out as the natural coordinator or manager of care and support from the antenatal period, through delivery and into the HIV-exposed infant follow-up period. He will work closely with community partners to follow up HIV-infected pregnant women and their infant with the main goal of reducing loss to follow-up .

5.3.8.2. Under the current boosted Linked Response, Village chiefs will be designated as community focal points with the responsibilities for active detection of pregnant women

⁴² Pp. 20 National Guidelines for Use of Pediatric Antiretroviral Therapy in Cambodia, NCHADS (2011).

⁴³ Pp. 24 Ibid.

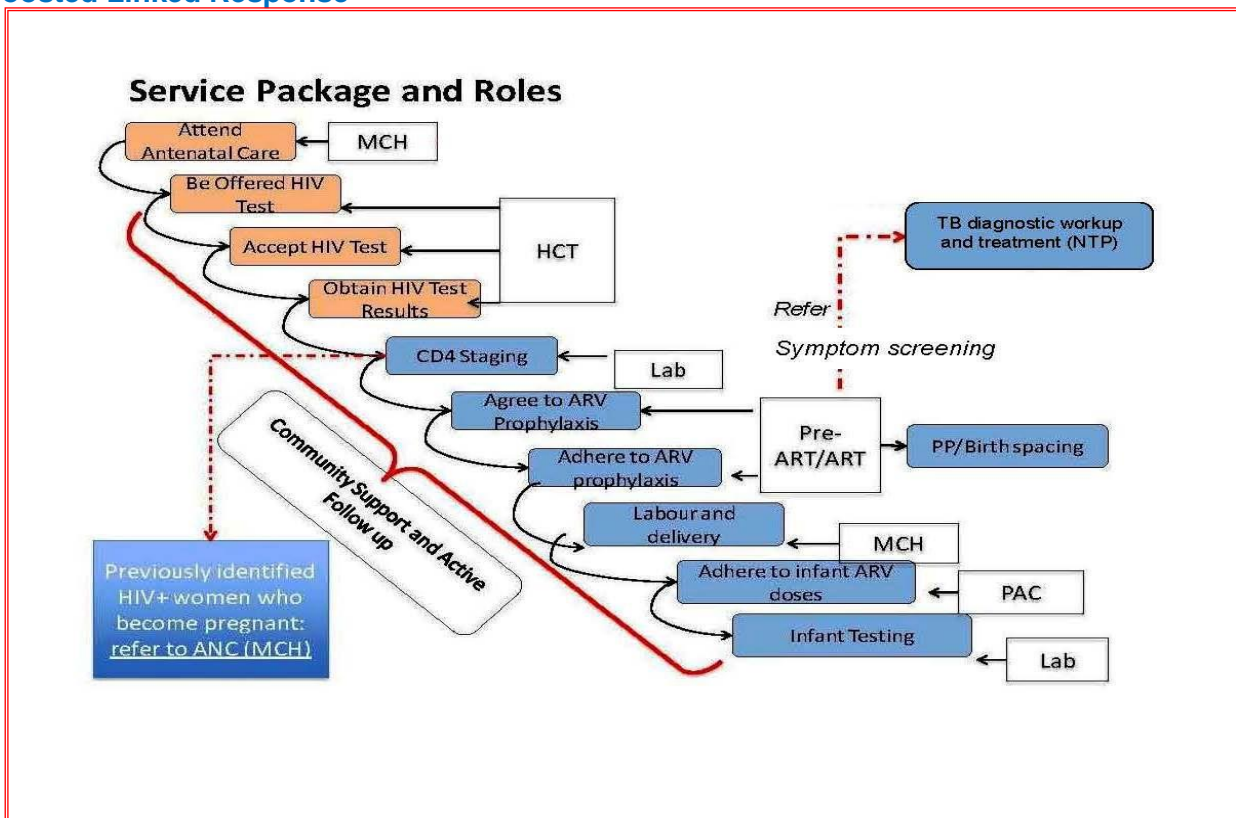
in the community and their referral to ANC, as well as responsibility for active follow up efforts working in collaboration with the Cambodia 3.0 Focal Points from the pre-ART/ART site.

Table 1: Roles and Responsibilities

Services	Health Care Workers				Community			MOH	
	MCH Focal Point	Cambodia 3.0 Focal Point	Clinician/ Nurse Counselor	Midwife/ Nurse	Village Health Support Group	PLHIV Self Help Groups	NGOs/ CBPCS	NCHADS	NMCHC
ANC	✓		✓	✓	✓	✓	✓		✓
HCT		✓	✓	✓		✓	✓	✓	
Pre-ART/ART		✓	✓			✓	✓	✓	
TB/HIV		✓	✓					✓	
Lab services		✓	✓					✓	
Delivery	✓				✓	✓	✓		✓
Pediatric AIDS Care	✓	✓	✓			✓	✓	✓	
Community Support	✓	✓		✓	✓	✓	✓		

*Each OD nominates a responsible focal person who will be responsible for coordination.

Figure 8: Health facility based Service Package, Roles and Responsibilities under the Boosted Linked Response



6. Coordination Mechanism

To improve patient retention the Boosted Linked Response will involve community leaders who can effectively assist the health sector staff and HIV/MCH focal points to follow-up HIV(+) pregnant women, mothers and infants.

The existing coordination bodies for Linked Response, Continuum of Care and Continuum of Prevention to Care and Treatment will be merged into a single body responsible for reviewing the progress of the Cambodia 3.0 initiative. The new coordination bodies for the Boosted Linked Response and Boosted Continuum of Care is called the Steering Committees for Elimination of New HIV Infection at National, Provincial and District levels. A summary of roles and operations is provided below (Terms of Reference) in Annex 5.

6.1. The national Steering Committee and Technical Working Group will hold **semi-annual coordination** and accountability meetings will be held to jointly review patient attendance and status of follow up efforts with HIV-infected pregnant women and their HIV-exposed infants.

6.2. Provincial and District level coordination will be organized in the same way, with one joint body responsible for coordination, management and review of eMTCT and general care and treatment activities(Annex 5).

6.3. Provincial HIV and MCH Focal Points

- PHD should nominate focal points for MCH and HIV programs to play a role in:
 - Coordinate and follow up eMTCT and congenital syphilis activities.
 - Reporting to PHD and National Technical Working Group Secretariat (NCHADS AIDS Care Unit) and National PMTCT Program.
- The two focal points above are responsible for:
 - Periodic review of Boosted Linked Response indicators and Follow Up Sheets, with a view to accounting for all identified HIV-infected pregnant women and HIV exposed infants from all ODs.
 - Identify sites where mother-infant pairs have been lost to follow up at all ODs.
 - Look ahead each week to identify where mother-infant pairs are due to return to services and flag the date to be prepared to follow up if they do not return.
 - Engage with sites experiencing challenges retaining mother-infant pairs in services throughout the province.

6.4. OD Cambodia 3.0 Focal Point

- Appointment by OD director (MCH focal point may also be designated to play a role in following up eMTCT activities.)
- Reporting to OD Steering Committees, PHD, and National Technical Working Group (NCHADS AIDS Care Unit) and National PMTCT Program.
- Responsible for:
 - Periodic review of Boosted Linked Response data, with a view to accounting for all identified HIV-infected pregnant women and HIV exposed infants.
 - Identifying sites where mother-infant pairs have been lost to follow up or other issues have been identified through the data review.
 - Regular communication with all service providers to ensure that referrals have been successful and women-infant pairs have arrived at services and are retained in service throughout the cascade.
 - Ensure that HIV-infected and syphilis-infected pregnant women are promptly given ARVs and syphilis treatment.
 - Coordinate access for HIV-exposed babies to PAC for Cotrimoxazole and PCR testing.
 - Regular communication with OD and Provincial Steering Committees and the National Program Focal Points at NCHADS and NMCHC's PMTCT program. These stakeholders should be immediately notified when an HIV infected Pregnant Woman is identified.
 - Engage in problem solving with sites experiencing challenges retaining mother-infant pairs in services to improve retention and patient outcomes.
 - The Cambodia 3.0 Focal Point must be empowered to engage with community structures as needed in between coordination meetings is critical to ensure access for women to the updated service package under the Boosted Linked Response.

Initial follow up visits will be conducted by community-based support teams, second phase of follow up visits should be coordinated and potentially also attended by Cambodia 3.0 Focal Points. The focal point must report directly to PASP and PHD teams and to the Provincial PMTCT Coordinator, and also directly to the national program. The Cambodia 3.0 Focal Point is accountable to both the provincial and national level for implementing BLR and following up women and infants who are lost-to-follow-up. The MCH and HIV programs will promote partnerships with private maternity services to encourage early uptake and reporting of ANC, HIV testing and referral to pre-ART/ART services for HIV-infected women.

7. Monitoring and Evaluation

The objective of the Boosted Linked Response Core Indicators and Targets is to specify what data are to be collected, how and when they are to be collected, to provide information that will be used to:

- Track progress against set targets on implementation of all components of the Boosted Linked Response;
- Identify gaps and weaknesses in service provision;
- Support clinical management of patients;
- Plan, prioritize, allocate and manage resources; and
- Measure effectiveness of the program.

Monitoring implementation of the Boosted Linked Response requires addressing programmatic activities under NMCHC, and NCHADS. Programmatic indicators for MCH, TB, STI and HIV/AIDS activities are included in the monitoring and evaluation framework. The initial routine monitoring framework covers 2012 to 2015 in line with existing programmatic strategies. The mid-term review of the strategy will be conducted in 2015 and new targets set for the next implementation phase.

Monitoring and evaluation for certain indicators requires a longitudinal monitoring system. Under the Boosted Linked Response the programs and partners will support the implementation of the Linked Response/PMTCT Follow Up Sheet (Annex 3). Elimination requires that mother-infant pairs receive all services in the cascade and that Data Officers, PMTCT Coordinators and Cambodia 3.0 Focal Points complete the Follow Up Sheet in full and report on time to NCHADS and National PMTCT Program.

Table 1: Boosted Linked Response Coverage Indicators

	Indicator	Baseline ⁴⁴	Targets 2013	Targets 2015	Targets 2020	Comment
1	Proportion (%) of estimated pregnant women who attend ANC	95.9% (2011)	98%	>98%	>98%	NMCHC/HIS
2	Proportion (%) of HIV-infected women who are current users of modern contraceptive methods	N/A	60%	80%	>80%	NMCHC
3	Proportion (%) of pregnant women who know their HIV status (who are tested and received results)	82% (2012)	85%	90%	>95%	Linked Response and PMTCT Reports (NCHADS/NMCHC)
4	Proportion (%) of pregnant women identified as HIV positive	88% (2012)	90%	95%	>95%	NMCHC
5	Proportion (%) of partners of HIV positive pregnant women who know their status	N/A	50%	70%	90%	NMCHC

⁴⁴ Baseline is taken from 2010 unless otherwise specified.

6	Proportion (%) of pregnant women receiving rapid syphilis screening	41%	55%	70%	90%	Linked Response and PMTCT Reports (NCHADS/NMCHC)
7	Proportion (%) of PW who screened positive who received confirmatory syphilis test (RPR)	N/A	50%	70%	90%	Linked Response and PMTCT Reports (NCHADS/NMCHC)
8	Proportion of PW who tested RPR positive	0.7%	0.1%	<0.1%	<0.1%	Linked Response and PMTCT Reports (NCHADS/NMCHC)
9	Proportion of PW confirmed with syphilis infection (RPR positive) receiving syphilis treatment	N/A	50%	70%	90%	Linked Response and PMTCT Reports (NCHADS/NMCHC)
10	Proportion (%) of HIV positive pregnant women who received antiretrovirals to reduce the risk of mother-to-child treatment or treatment for their own health	65% (2012)	90%	95%	>98%	NCHADS - Pre-ART/ART report
11	Proportion (%) of HIV positive partners of HIV positive pregnant women who received antiretroviral medications	N/A	50%	70%	90%	Linked Response and PMTCT Reports (NCHADS/NMCHC)
12	Proportion (%) of HIV infected women delivering in a health facility	48.2%	61%	75%	90%	Linked Response and PMTCT Reports (NCHADS/NMCHC)
13	Proportion (%) of Infants born to HIV-infected women receiving ARV prophylaxis for prevention of mother-to-child-transmission	87.5%	93%	98%	>98%	Linked Response and PMTCT Reports (NCHADS/NMCHC)
14	Proportion (%) of HIV Exposed Infants receiving CTX within two months of birth	N/A	45%	70%	90%	NCHADS HEI Report
15	Proportion (%) of HIV Exposed Infants receiving DNA PCR test within two months of birth	61%	93%	98%	>98%	Exposed Infant Visit form. NCHADS HIV-exposed infant database or Follow up sheet
16	Proportion of HIV Exposed Infants identified positive	13%	7%	<5%	<2%	Exposed Infant Visit form. NCHADS HIV-exposed infant database, Follow up sheet or NIPH database
17	Proportion of HIV Positive Children (under 24 months) who receive immediate ART (within two weeks of diagnosis)	N/A	70%	80%	>95%	Exposed Infant Visit form. NCHADS HIV-exposed infant database or Follow up sheet
18	Proportion of HEI who died	N/A	<10%	<5%	<3%	Exposed Infant Visit form. NCHADS HIV-exposed infant database

						or Follow up sheet
19	Proportion of HEI who are lost to follow-up	N/A	<10%	<5%	<3%	Exposed Infant Visit form. NCHADS HIV-exposed infant database or Follow up sheet

NCHADS and NMCHC have jointly established coverage targets for services throughout the PMTCT cascade. The targets were established based on the modeled estimations of impact on the MTCT rate of multiple service coverage scenarios. The baseline MTCT rate in 2010 was estimated to be around 13%, down from an estimated 27% in 2006. The target MTCT rates under the goal of virtual elimination of new pediatric HIV infections are <5% in 2015 and <2% in 2020.

The following table summarizes the corresponding rate of MTCT based on the target service coverage levels. These indicators and targets represent milestones on the pathway to achievement of the virtual elimination targets of less than 5% by 2015 and less than 2% by 2020 and have been calculated using transmission probabilities taken from literature and endorsed by the Inter Agency Task Team on Prevention of Mother to Child transmission of HIV, scale-up projections and aspirational coverage scenarios. The assumptions in the MTCT models used to monitor progress include good adherence to ART, among others.

Table 2: Impact Targets for Reduction of Mother to Child Transmission				
	2012	2013	2014	2015
Mother to Child Transmission Rate	12%	10%	8%	<5%

The above MTCT targets are based on HIV prevalence estimations and projections produced using Spectrum. The curve reflecting new pediatric infections attributable to MTCT was modeled for the first time in 2011 using two models: 1) Spectrum and 2) the PMTCT and Pediatric Impact and Costing Model. Spectrum requires significant expertise and time investments to conduct impact modeling exercises, while the second tool is excel-based and is lighter and simpler to use. NCHADS will conduct routine modeling exercises using the second excel-based model and will use it to produce input tables that will inform future, comprehensive modeling exercises using Spectrum. NCHADS will incorporate the estimation of the impact indicator for mother-to-child-transmission of HIV in subsequent HIV prevalence estimations using Spectrum.

Over time aspects of the program may change, which will require updating assumptions behind the Spectrum projections conducted in 2011 and lead to changes in estimated MTCT rates. The next HIV prevalence estimations workshop is planned for 2015.

Future estimations of impact will be analyzed against the baseline curve to understand actual program impact. Projections are based on assumptions of program coverage and any quality of care that is modified during implementation, hence these assumptions will need to be updated regularly to reflect program realities.

8. Road Map

	Task	Timeframe	Responsibility
1	Development and finalisation of the English version of the SOP 13 March 2012: Version 1 of the three components of the SOP	March-August 2012	Core Group on Virtual Pediatric HIV Elimination by 2020
2	Development and finalisation of Khmer Version of the SOP	October 2012	NCHADS
3	Submission of the final SOP to MoH for approval	January 2013	NCHADS
4	Launch of the implementation of the SOP (together with the SOP on Comprehensive CoPCT for MARPS and ART as Prevention) in selected ODs	January 2013	NCHADS and NMCHC in partnership with partners (USCDC, CHAI, WHO, UNICEF, KHANA, FHI,PSI)
5	Implementation	January 2013 onwards	Selected ODs
6	Mid-year review of the implementation at Demonstration sites:	April –May 2013	Core Group on Virtual Pediatric HIV Elimination by 2020
7	Nationwide expansion	From June 2013	Core Group on Virtual Pediatric HIV Elimination by 2020
8	Annual review of the implementation	End of November every year	Core Group on Virtual Pediatric HIV Elimination by 2020
9	Mid-term review of the implementation and adjustment of the strategies	November-December 2015	Core Group on Virtual Pediatric HIV Elimination by 2020

Annex 1: Instructions for administering Option B+ for PMTCT

Woman receives:		Infant receives:
Option B	Treatment (for CD4 count <350 cells/mm ³)	Daily NVP or AZT from birth through age 4–6 weeks regardless of infant feeding method
	Prophylaxis (for CD4 count >350 350 cells/mm ³)	
Option B+	Regardless of CD4 count, triple ARVs starting as soon as diagnosed. Continued for life. Same for treatment and prophylaxis.	

What to start: For HIV-infected pregnant women who are not already on ART they should be started on **TDF/3TC/EFV**.⁴⁵

⁴⁵ WHO. Programmatic Update: Use of Antiretroviral Drugs for Treating Pregnant Women and Preventing HIV Infection in Infants, April 2012. pp.3.

Annex 2: Instructions for HIV Testing at Labor and Delivery

2.2.2. HIV testing in Labor

Even with improvements in access to antenatal HIV testing for pregnant women at ANC, there will always be women who present at health facilities in labour who do not know their HIV status, or who have been tested only in a previous pregnancy. If HIV-infected women are not identified, the opportunity for providing the mother and her infant with ARV drugs and other PMTCT services to reduce the risk of vertical transmission of HIV is missed.

In order to minimize these missed opportunities, National Hospitals, Referral Hospitals and selected HCs with large numbers of deliveries and essential PMTCT and pre-ART/ART services co-located or linked, should provide HIV testing in labour to those women with unknown HIV status.

Essential services include:

- Maternity Ward with staff trained in PMTCT and HIV rapid testing
- HIV testing services co-located with Pre-ART/ART services for confirming initial reactive first assays. Provision should be made for confirmatory testing at night or weekends
- Pharmacy co-located with Pre-ART/ART services which is stocked with appropriate ARVs for prophylaxis for both HIV-infected mothers and HIV-exposed infants and the ability either to
 - Dispense drugs out-of-hours to HIV-infected mothers at Maternity or
 - Keep the maternity ward appropriately stocked with ARV drugs

At health facilities meeting these conditions, if a pregnant woman with unknown HIV status presents in labour and her cervix is not more than 5 cm dilated, she should be counselled by the midwife and, after obtaining verbal consent, offered HIV rapid testing. If labour is already too advanced or the baby is already born, the woman should receive counselling and testing as soon as possible after delivery⁴⁶. If the initial rapid test is positive, confirmatory testing should be arranged as soon as possible at the laboratory. **While awaiting the confirmatory test result, the woman should be given appropriate ARV treatment according to the new PMTCT Option B+ policy.**

As soon as possible after delivery, staff at the OI/ART clinic and PAC should be informed about the newly-identified HIV-infected woman and her baby. CD4 testing should be arranged before the woman leaves the hospital to establish whether she needs lifelong ART or whether the infant should receive extended NVP prophylaxis to prevent MTCT until breastfeeding has ceased. In all cases, NVP should be provided to the HIV-exposed infant for a minimum of six weeks and active follow up (with support from CBOs) arranged for both mother and infant at the nearest pre-ART/ART and/or PAC site no later than six weeks after delivery.

⁴⁶ This is in accordance with government policy, based on the concern that providing ARV prophylaxis less than two hours before delivery exposes the mother to a significant risk of NVP drug resistance while affording no reduction in the risk of HIV transmission to the exposed infant.

Annex 3: Joint Supervision Checklist (NMCHC and NCHADS)

Kingdom of Cambodia



Nation Religion King

PMTCT/LR SUPERVISION CHECKLIST



Kingdom of Cambodia

Nation Religion King

1. Date of supervision:
2. Name of Location : facility:.....District:.....City/Province:.....
3. Purposes of the visit: *(write the specific objective that you have planned to conduct supervision)*
4. Supervisory team :
-
-
5. Participatory team (Name and occupation / position):
-
-

Note: Two copies of the checklist should be completed. Leave one at the site for record and file one at central level for future reference.

6. Summary Table of **Current** Supervision Visit:

Observation Problems	Action to be taken	Action taken	Objectives for the next supervision visit

Signed:.....

Supervisor

CHECKLIST FOR REFERRAL HOSPITAL WITH PRE-ART/ART SERVICE

Scoring scale: 2=Meet national standard, 1=Needs improvement, 0=Needs urgent remediation

No	Activities	2	1	0	Facility Score
1	Antenatal Care				
1	Appropriate facility (mother class, ANC, Delivery, Drawing blood) and equipment	Room has appropriate space and is maintained in a clean, organized, and hygienic manner. AND Perform mother class with 9 recommended topics including HIV/AIDS	Room has enough space but is dirty, disorganized or unhygienic. AND/OR Perform mother class with some recommended topics including HIV/AIDS	Room has enough space and is unclean, disorganized or unhygienic. AND Not performing mother class	
2	Adequate staff (MW, counselor)	Has at least two midwives/counselors who perform counseling, MCH work, and HIV testing	Has at least one midwife/ counselor who does work for MCH and HIV testing	Has one midwife/counselor but she does not perform or is careless on HIV testing.	
3	Staff trained in specific skill (HIV, syphilis testing and counseling)	All relevant staff/counselors have knowledge of HIV, syphilis counseling and drawing blood for testing.	Some relevant staff/counselors have knowledge of HIV, syphilis counseling and drawing blood for testing.	No staff/counselor has knowledge or have been trained on HIV, syphilis counseling and testing.	
<p>Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.</p>					

2	HIV, Syphilis Counseling and Testing/Laboratory					
	4	Drawing blood following HIV testing and Counseling SoP	<p>SoP of how to draw blood for HIV, syphilis test is in place</p> <p>AND</p> <p>Perform professionally including changing gloves between clients</p>	<p>SoP of how to draw blood for HIV, syphilis test is in place</p> <p>AND</p> <p>Perform unprofessional practice</p> <p>OR</p> <p>Perform without changing gloves between clients</p>	<p>SoP of how to draw blood for HIV, syphilis test is not in place</p> <p>OR</p> <p>Perform risky practice; not following the national guideline</p>	
	5	Performing vacutainer system or finger prick (material preparation, volume, label)	<p>Laboratory equipment for venipuncture and finger prick are arranged in order</p> <p>EITHER</p> <p>Draw blood volume drawn 2-5 ml, OR</p> <p>Take blood from finger by lancet with adequate two drops on HIV and syphilis test.</p> <p>AND</p> <p>Label client' s code number on tube</p>	<p>Laboratory equipment for venipuncture and finger prick are arranged in order</p> <p>EITHER</p> <p>Draw blood volume drawn 2-5 ml, OR</p> <p>Take blood from finger by lancet with adequate two drops on HIV and syphilis test.</p> <p>AND</p> <p>Did label client' s code number on tube in some cases</p>	<p>Laboratory equipment for taking blood is disordered</p> <p>AND</p> <p>Blood volume drawn less than 2 ml</p> <p>OR</p> <p>Did not label client' s code number on tube</p>	

6	Verifying and recording blood specimen received from LHCs (quality, volume, labeling)	<p>Blood samples are received weekly, all lists of blood samples are in filing</p> <p>AND</p> <p>All serum are taken from whole blood and ready stored in refrigerator prior to test</p> <p>AND</p> <p>All samples are good quality and filled out with code numbers.</p>	<p>Whole blood are received weekly, some lists of blood samples are in filing</p> <p>AND</p> <p>Some serum are taken from whole blood and ready stored in refrigerator prior to test</p> <p>AND</p> <p>Some samples are good quality and filled out with code numbers.</p>	<p>Whole blood samples are received late from some HCs, list of blood samples is disorganized.</p> <p>OR</p> <p>Some tubes are disqualify and no labels.</p>
7	Performing HIV testing: material preparation, test-control performance, sample testing, incubation and interpretation of result following the national testing algorithm	<p>Guideline or SoP of performing venipuncture and finger prick is available on site</p> <p>AND</p> <p>National algorithm perform professional.</p>	<p>Guideline or SoP of performing venipuncture and finger prick is available on site</p> <p>AND</p> <p>National algorithm perform unprofessionally.</p>	<p>Guideline or SoP of performing venipuncture and finger prick is not available on site</p> <p>AND</p> <p>Perform risky practice.</p>
8	Internal and external QC systems in place for HIV testing that include the use of standardized laboratory logbooks and participation in proficiency panel testing.	<p>Internal and external QC systems are in place</p> <p>AND</p> <p>Results of the control are kept in</p>	<p>Internal and external QC systems are in place</p> <p>AND</p> <p>Results of the control are disorganized or do not practice internal quality</p>	<p>Internal QC systems are in place but there is no practice and no external quality control</p> <p>OR</p> <p>Do not perform internal quality</p>

			secure and proper filing.	control very often.	control.	
9	Providing syphilis testing in accordance with Concept Note for Scaling up Syphilis Screening Among Pregnant Women from 2010 to 2015 in Cambodia	Perform correctly syphilis testing following the national SoP AND Having concept note for Scaling up Syphilis Screening Among Pregnant Women on site	Perform syphilis testing incorrectly AND Having concept note for Scaling up Syphilis Screening Among Pregnant Women on site	Perform syphilis testing incorrectly AND Do not have concept note for Scaling up Syphilis Screening Among Pregnant Women on site		
10	Adequate supply of rapid test kits for syphilis and HIV testing	Rapid test kits for HIV and syphilis are adequate and organized AND All test kits are stored in good condition AND Turn-over requests are organized and well documented	Rapid test kits for HIV and syphilis are inadequate and organized AND Some test kits are not stored in good condition AND Turn-over requests are organized and well documented	Three are sometimes shortages of rapid test kits for HIV and syphilis AND All test kits are not stored in good condition OR Turn-over requests are disorganized, or lost		
11	Adequate supply of lab consumables, DBS collection materials, DNA-PCR reagents, CD4	Lab consumable, DBS, collection materials, DNA-HIV-PCR reagents, CD4 reagents are adequate and organized	Lab consumable, DBS, collection materials, DNA-HIV-PCR reagents, CD4 reagents are adequate but disorganized	Lab consumable, DBS, collection materials, DNA-HIV-PCR reagents, CD4 reagents sometimes in shortage and		

		reagents	AND Turn-over requests are organized and well documented	AND Some turn-over requests are filed	disorganized AND Some turn-over requests are missing	
Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.						
3	Pre ART/ART service					
12	Providing ARV prophylaxis to HIV positive pregnant women at first appointment regardless of CD4 test results (option B+)	ARV prophylaxis is given to every HIV-infected PW at the first visit AND Comprehensive counseling of the importance of PMTCT service and pre ART/ART service is appropriately provided AND	ARV prophylaxis is given to not every HIV-infected PW at the first visit AND Comprehensive counseling of the importance of PMTCT service and pre ART/ART service is provided AND Filing on HIV-infected PW is disorganized. Some patients’ files are not well organized.	ARV prophylaxis is not given to every HIV-infected PW at the first visit AND Counseling of the importance of PMTCT service and pre ART/ART service is done incompletely AND Patients are not well documented or listed as LTF, death and		

			All HIV-infected PW are well documented, clear noted as LTF, Death, and Delivery.		delivery cases.	
13	All known HIV-positive pregnant women being registered for ANC	List of known HIV-infected pregnant women who are sent out to PMTCT is well organized and documented. AND List with the information of receiving ANC service, delivery status with her baby.	List of known HIV-infected pregnant women who are sent out to PMTCT is organized and documented. AND List with missing information of receiving ANC service, delivery status of her baby.	No list of known HIV-infected pregnant women who are sent out to PMTCT is available on site AND No information on receiving ANC service, or delivery status of her baby is available.		
14	Providing CD4 and other tests to HIV-positive women as soon as their pregnancy is confirmed	List of HIV-infected women known pregnant who received CD4 test and other tests is organized and documented. AND List with the complete results of CD4 test, ARV prophylaxis or ART is provided if pregnancy is confirmed.	List of HIV-infected women known pregnant who received CD4 test and other tests is documented. AND List with the incomplete results of CD4 test, ARV prophylaxis or ART is provided if pregnancy is confirmed.	No list of HIV-infected women known pregnant who received CD4 test is available on site. AND No list with the complete results of CD4 test, ARV prophylaxis or ART is available.		
Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.						
4	Maternity					

15	Counseling, documenting of HIV testing and its results	<p>All women presenting at maternity ward have their HIV test results documented.</p> <p>AND</p> <p>Every unknown HIV-status women presenting at maternity ward is provided counseling and have their HIV test results documented.</p>	<p>All women presenting at maternity ward are have their HIV test results documented.</p> <p>AND</p> <p>Some unknown HIV-status women presenting at maternity ward are provided counseling and have their HIV test results documented.</p>	<p>Not all women presenting at maternity ward are have their HIV test results documented.</p> <p>AND</p> <p>Do not provide HIV counseling to unknown HIV-status women presenting at maternity ward.</p>
16	Performing HIV testing on unknown HIV status PW presenting during L, D, 72 hours PNC following the national testing guideline	<p>Perform HIV testing either by sending blood to VCCT or finger prick on site in a professional manner</p> <p>AND</p> <p>Correct documentation of duration of testing and testing result</p>	<p>Perform HIV testing either by sending blood to VCCT or finger prick on site in a professional manner</p> <p>AND</p> <p>Poor documentation of duration of testing and testing result</p>	<p>Do not perform HIV test during L& D and 72 hours after delivery</p> <p>OR</p> <p>Perform HIV testing in some cases but they do not document the testing/results well</p>
17	Providing ARV prophylaxis to HIV-infected women and ARV prophylaxis to HIV-exposed infants in accordance with recommended regimen	<p>Documenting ARV regimen for every HIV-infected PW, providing ARV prophylaxis to those PWs who are not yet on ARV.</p> <p>AND</p>	<p>Documenting ARV regimen for some HIV-infected PW, providing ARV prophylaxis to some women who are not yet on ARV.</p> <p>AND</p> <p>Provide ARV prophylaxis to some</p>	<p>Do not document ARV regimen for HIV-infected PW, and are providing ARV prophylaxis to only some women who are not yet on ARV.</p> <p>AND</p>

			<p>Provide ARV prophylaxis to all newly screened HIV-positive prior to send blood for positive confirmation following the national PMTCT guideline.</p> <p>AND</p> <p>Provide ARV prophylaxis (NVP) for 6 weeks to all HIV-exposed babies who are born to HIV-infected mothers.</p>	<p>newly screened HIV-positive prior to send blood for positive confirmation following the national PMTCT guideline.</p> <p>AND</p> <p>Provide ARV prophylaxis (NVP) for 6 weeks to some HIV-exposed babies who born to HIV-infected mothers.</p>	<p>Provide ARV prophylaxis (NVP) for 6 weeks to some HIV-exposed babies who born to HIV-infected mothers.</p>	
18	<p>Providing syphilis treatment in accordance with Concept note for Scaling up Syphilis Screening Among Pregnant Women from 2010 to 2015 in Cambodia</p>	<p>Document all syphilis-infected PW delivering at RH and recording the treatment status of women and their husbands.</p> <p>AND</p> <p>Provide syphilis treatment following the national algorithm to all syphilis-exposed infants who are born to syphilis positive mothers, and documenting the treatment status.</p>	<p>Document some syphilis-infected PW delivering at RH and recording the treatment status of women and their husbands.</p> <p>AND</p> <p>Provide syphilis treatment following the national algorithm to some syphilis-exposed infants who are born to syphilis positive mothers, and documenting the treatment status.</p>	<p>Do not document syphilis-infected PW delivering at RH or record the treatment status of women and their husbands.</p> <p>AND</p> <p>Do not provide syphilis treatment following the national algorithm to syphilis-exposed infants who are born to syphilis positive mothers, or document the treatment status.</p>		
19	<p>Infection control application following the national standard</p>	<p>Have a guideline of SoP of universal precaution in place</p> <p>AND</p> <p>Having PEP guideline or</p>	<p>Have a guideline of SoP of universal precaution in place</p> <p>AND</p> <p>Having PEP guideline or flowchart, or</p>	<p>Neither have guideline of SoP of universal precaution in place</p> <p>Nor</p> <p>Perform professional manner.</p>		

			<p>flowchart, or other SoP</p> <p>AND</p> <p>Have contaminated material disposal is organized and efficient</p>	<p>other SoP</p> <p>But do not follow the guideline or SoP.</p>		
	20	<p>Providing post-delivery counseling including family planning, infant feeding, vaccination, and the importance of registration at pre-ART/ART clinic for mother and infant.</p>	<p>Post-test counseling is provided to every HIV-positive mother on ARV adherence, follow ups, vaccination, HIV testing on babies, and baby feeding.</p> <p>AND</p> <p>Individual data is proper recorded.</p>	<p>Post-test counseling is provided to every HIV-positive mother on ARV adherence, follow ups, vaccination, HIV testing on babies, and baby feeding.</p> <p>AND</p> <p>Individual data is improperly recorded or not recorded at all.</p>	<p>No post-test counseling is provided</p> <p>AND</p> <p>No proper record of individual information.</p>	
	21	<p>Registering and referring HIV-infected women found during L&D for CD4 test at pre-ART service, and register HIV-exposed baby at PAC for PCR test and Cotrimoxazole.</p>	<p>Referring and follow up mechanism is in place, HIV-infected women identified during L&D, post delivery.</p> <p>AND</p> <p>Individual data is properly recorded.</p>	<p>Referring and follow up mechanism is in place for HIV-infected women and their babies identified during L&D, post-delivery, but some were missing opportunity at delivery ward.</p> <p>AND</p> <p>Individual data is improperly recorded.</p>	<p>There is no reference system in place to complement care and treatment to women.</p> <p>OR</p> <p>There is no recorded.</p>	

Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.

5	Pediatric Services (HIV-exposed infants and HIV-infected infants)					
	22	Conducting infant feeding counseling including risk of HIV transmission through breastfeeding	<p>Document information on all HIV-exposed babies on completion 6 weeks ARV prophylaxis</p> <p>AND</p> <p>Provide counseling on infant feedings including risk of HIV transmission through breastfeeding to all infants</p> <p>AND</p> <p>Recording the infants feeding choice</p>	<p>Document information on all HIV-exposed babies on completion 6 weeks ARV prophylaxis</p> <p>AND</p> <p>Provide counseling on infant feedings including risk of HIV transmission through breastfeeding to some infants</p> <p>AND</p> <p>Recording the infants feeding choice in some cases</p>	<p>Incomplete documentation of ARV regimen for HIV-exposed infants</p> <p>OR</p> <p>Do not provide counseling on infant feeding</p> <p>OR</p> <p>Do not record the infant feeding choice</p>	
	23	Offering HIV-DNA-PCR testing and Cotrimoxazole to infant at 6 weeks	<p>Provide counseling on testing for HEI and the importance of conducting PCR test at 6 week (or within 2 months of age)</p> <p>AND</p> <p>Document date of testing and results for all HIV-exposed</p>	<p>Provide counseling on testing and the importance of conducting PCR test at 6 week (or within 2 months of age) for some HEI</p> <p>AND</p> <p>Document some HIV-exposed babies with the information of completion</p>	<p>Do not provide counseling on testing and the importance of conduct PCR test at 6 week (or within 2 months of age)</p> <p>AND</p> <p>Do not document some HIV-exposed babies with the</p>	

			babies	PCR test result	information of completion PCR test result	
	24	Counseling on the necessity of immunizations at 6 weeks and on follow up immunizations	Provide counseling on the necessity of immunizations at 6 weeks and on follow up immunizations AND Document all HIV-exposed babies with the updated information of immunization	Provide counseling on the necessity of immunizations at 6 weeks and on follow up immunizations AND Document some HIV-exposed babies with the updated information of immunization	Do not provide clear counseling on the necessity of immunizations at 6 weeks and on follow up immunizations AND Do not document HIV-exposed babies with the updated information of immunization	
	25	Providing monitoring and counseling on nutrition and growth for HIV-exposed infants and identified HIV-infected infants	Providing monitoring and counseling on nutrition and growth for HIV-exposed infants and identified HIV-infected infants AND Document all HIV-exposed infants with updated and complete information.	Providing monitoring and counseling on nutrition and growth for HIV-exposed infants and identified HIV-infected infants AND Document some HIV-exposed infants with updated and complete information.	Do not providing monitoring and counseling on nutrition and growth for HIV-exposed infants and identified HIV-infected infants AND Do not document some HIV-exposed infants with updated and complete information.	
Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.						
6	Data management					

26	Reviewing data on logs and forms (standard forms, registration book). For lab, record carefully lot No, and expired date.	All requirement standard forms and logs are available on site and properly used. AND Spot checking indicated correct and consistent recording.	Some requirement standard forms and logs are available on site with the completion recording. AND Spot checking indicated few incorrect and inconsistent manners.	Incomplete, inconsistent, incorrect records on registration books, forms.
27	Reviewing data on reports following tools for all nationally required indicators, and checking for correct submission.	Data is accurate, matched to what had been submitted AND All reports are submitted on time and well documented	Data has some inaccuracy, closely matched to what had been submitted AND Most reports are submitted on time and well documented	Data does not match what had been submitted OR Always late to submit to OD/PHD
28	Checking the completeness and quality of patient records, secure storage space and organized filing system	Individual patient records are maintained and updated at each patient encounter AND There is adequate and secure storage space for medical records AND An organized filing system is maintained so that specific charts are easily accessible.	Individual patient records are poorly maintained and inconsistently updated OR The space for medical records is suboptimal in size or security OR The filing system is disorganized or not standardized, and timely accessibility of specific charts is difficult.	Individual patient records are not maintained OR Space is highly inadequate and insecure OR There is no standardized filing system and lack of accessibility of specific charts impeded patient care
29	Reviewing cohort follow-up sheet all information correctly updated a for	Contact list of HBC or other community group lists are in place, have system in place to	Contact list of HBC or other community group list are in place, but do not have system in place to send	Neither a contract list of HBC/other community group nor a referral system of follow-

	HIV-infected mothers and their infants	<p>send and ensure patients access to referral services</p> <p>AND</p> <p>The numbers reported in the PMTCT/LR report match up</p> <p>AND</p> <p>Cohort follow-up sheet is always updated regarding service they receive</p>	<p>and ensure patients access to referral services</p> <p>AND</p> <p>The numbers reported in the PMTCT/LR report match up</p> <p>AND</p> <p>Cohort follow-up sheet is updated some cases regarding service they receive</p>	up patient, is in place	
30	Review database reports if available at site	<p>Available computer that is fully functional and used for PMTCT data entry</p> <p>AND</p> <p>PMTCT/LR and other database is accessible and accurate on computer</p>	<p>Available computer that is fully functional but is not used for PMTCT/LR data entry</p> <p>AND</p> <p>Use computer to enter PMTCT data with some minor inaccuracy</p>	<p>Available computer that is fully functional but not used for PMTCT/LR data entry</p> <p>OR</p> <p>Use computer to entry PMTCT data but disorganized and inaccurate</p>	
<p>Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.</p>					

CHECKLIST FOR HEALTH CENTER WITH LAB

Scoring scale: 2=Meet national standard, 1=Needs improvement, 0=Needs urgent remediation

No	Activities	2	1	0	Facility Score
1	Antenatal Care				
1	Appropriate facility (mother class, ANC, Delivery, Drawing blood)	Room has appropriate space and is maintained in a clean, organized, and hygienic manner AND Perform mother class with 9 recommended topics including HIV/AIDS	Room has enough space but is dirty, disorganized or unhygienic AND/OR Perform mother class with some recommended topics including HIV/AIDS	Room has tiny space and is unclean, disorganized or unhygienic AND Do not perform mother class	
2	Adequate staff (MW, counselor)	Has at least two midwives/counselors who perform counseling, MCH work, and HIV testing	Has at least one midwife/counselor who worked for MCH and HIV testing	Has one midwife/counselor but she does not perform or is careless in performing HIV testing	
3	Staff trained in specific skill (e.g: on HIV, syphilis testing and counseling)	All relevant staff/counselors have knowledge of HIV, syphilis counseling and drawing blood for testing	Some relevant staff/counselors have knowledge of HIV, syphilis counseling and drawing blood for testing	No staff/counselor have knowledge or have been trained on HIV, syphilis counseling and testing	
<p>Comment/follow up: write down "what" specific issue explaining really key highlighted and indicated "how" it happened; and action that will be following up</p>					

next.					
2	HIV, Syphilis Counseling and Testing /Laboratory				
	4	Drawing blood following HIV Testing and Counseling SoP	SoP of how to draw blood for HIV, syphilis test is in place AND Perform professionally, changing gloves between clients	SoP of how to draw blood for HIV, syphilis test is in place AND Perform unprofessionally OR Do not change gloves between clients	SoP of how to draw blood for HIV, syphilis test is not in place OR Perform risky practice; not following the national guideline
	5	Performing vacutainer system or finger prick (material preparation, volume, label)	Laboratory equipment for venipuncture and finger prick are arranged in order EITHER Draw blood volume drawn 2-5 ml, OR Take blood from finger by lancet with adequate two drops on HIV and syphilis test. AND Label client's code number on tube	Laboratory equipment for venipuncture and finger prick are arranged in order EITHER Draw blood volume drawn 2-5 ml, OR Take blood from finger by lancet with adequate two drops on HIV and syphilis test. AND Did label client's code number on tube in some cases	Laboratory equipment for taking blood are disordered AND Blood volume drawn less than 2 ml OR Did not label client's code number on tube

6	Verifying and recording blood specimen received from LHCs (quality, volume, labeling)	<p>Blood sample are received weekly, all lists of blood samples are in filing</p> <p>AND</p> <p>All serum are taken from whole blood and ready stored in refrigerator prior to test</p> <p>AND</p> <p>All samples are good quality and filled out with code numbers</p>	<p>Whole blood are received weekly, some lists of blood samples are in filing</p> <p>AND</p> <p>Some serum are taken from whole blood and ready stored in refrigerator prior to test</p> <p>AND</p> <p>Not all samples are good quality or filled out with code numbers</p>	<p>Whole blood samples are received late from some HCs, list of blood samples is disorganized.</p> <p>OR</p> <p>Some tubes are disqualified and no label</p>
7	Performing HIV testing: material preparation, test- control performance, sample testing, incubation and interpretation of result following the national testing algorithm	<p>Guideline or SoP of performing venipuncture and finger prick is available on site</p> <p>AND</p> <p>Perform national algorithm professionally</p>	<p>Guideline or SoP of performing venipuncture and finger prick is available on site</p> <p>AND</p> <p>Performance of the national algorithm is not professional</p>	<p>Guideline or SoP of performing venipuncture and finger prick is not available on site</p> <p>AND</p> <p>Perform risky practice</p>
8	Internal and external QC systems in place for HIV testing that include the use of standardized laboratory logbooks and participation in proficiency panel testing	<p>Internal and external QC systems is in place</p> <p>AND</p> <p>Results of the control are kept</p>	<p>Internal and external QC systems is in place</p> <p>AND</p> <p>Results of the control are</p>	<p>Internal QC systems is in place but there is no practice and no external quality control</p> <p>OR</p>

			in secure and proper filing	disorganized or do not practice internal quality control very often.	Do not perform internal quality control.	
9	Syphilis testing conducted at same time as HIV test in accordance with syphilis testing and treatment SOP	<p>Either perform venipuncture or finger prick, syphilis test is done in conjunction with HIV test</p> <p>AND</p> <p>Follow the national SoP for Syphilis Testing procedure</p> <p>AND</p> <p>Well-organize waste management as part of the testing process</p>	<p>Either perform venipuncture or finger prick, syphilis test is done in conjunction with HIV test</p> <p>AND</p> <p>Do not follow the national SoP for procedure perform test and QC</p> <p>OR</p> <p>Disorganize waste disposal</p>	<p>Perform test carelessness</p> <p>OR</p> <p>Do not follow the SoP for testing procedure</p> <p>OR</p> <p>Waste control is risky</p>		
10	HIV antibody test performed for HIV-exposed infants after 18 months	<p>Take blood from HIV-exposed infants and perform antibody test following the SoP of HIV testing</p> <p>AND</p> <p>Document the results into a log</p> <p>AND</p> <p>update the information to</p>	<p>Take blood from HIV-exposed infants and perform antibody test following the SoP of HIV testing</p> <p>AND</p> <p>Do not document the results into a log</p> <p>AND</p> <p>Do not update the information</p>	<p>Do not perform antibody testing</p> <p>OR</p> <p>Do not update the information in cohort follow up sheet</p>		

			cohort follow up sheet	in cohort follow up sheet		
11	Adequate supply of rapid test kits for syphilis and HIV testing	<p>Rapid test kits for HIV and syphilis are adequate and organized</p> <p>AND</p> <p>All test kits are stored in good condition</p> <p>AND</p> <p>Turn-over requests are organized and well documented</p>	<p>Rapid test kits for HIV and syphilis are inadequate or poorly organized</p> <p>AND</p> <p>Some test kits are not stored in good condition</p> <p>AND</p> <p>Turn-over requests are organized and well documented</p>	<p>Occasional Shortages of rapid test kits for HIV and syphilis</p> <p>AND</p> <p>Not all test kits are stored in good condition</p> <p>OR</p> <p>Turn-over requests are disorganized, or lost</p>		
12	Adequate supply of lab consumables and reagents	<p>Lab consumable, DBS, collection materials, DNA-HIV-PCR reagents, CD4 reagents are adequate and organized</p> <p>AND</p> <p>Turn-over requests are organized and well documented</p>	<p>Lab consumable, DBS, collection materials, DNA-HIV-PCR reagents, CD4 reagents are adequate but disorganized</p> <p>AND</p> <p>Some turn-over requests are filed</p>	<p>There are occasional shortages of lab consumable, DBS, collection materials, DNA-HIV-PCR reagents, CD4 reagents and they are disorganized</p> <p>AND</p> <p>Some turn-over requests are missing</p>		
<p>Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.</p>						
3	Maternity					

13	Counseling, documenting of HIV testing and results	<p>All women presenting at maternity ward have their HIV test results documented</p> <p>AND</p> <p>Every unknown HIV-status women presenting at maternity ward is provided counseling and their HIV test results are documented</p>	<p>All women presenting at maternity ward have their HIV test results documented</p> <p>AND</p> <p>Some unknown HIV-status women presenting at maternity ward are provided counseling and have their HIV test results documented</p>	<p>Not all women presenting at maternity ward have their HIV test results documented</p> <p>AND</p> <p>Do not provide HIV counseling to unknown HIV-status women presenting at maternity ward.</p>	
14	Providing ARV prophylaxis to HIV-infected women, ARV prophylaxis to HIV-exposed babies in appropriate dosage and counseling.	<p>All women presenting at maternity ward are documented HIV test results.</p> <p>AND</p> <p>Every unknown HIV-status women presenting at maternity ward are provided counseling and documented HIV test results.</p>	<p>All women presenting at maternity ward are documented HIV test results.</p> <p>AND</p> <p>Some unknown HIV-status women presenting at maternity ward are provided counseling and documented HIV test results.</p>	<p>Not all women presenting at maternity ward are documented HIV test results.</p> <p>AND</p> <p>Do not provide HIV counseling to unknown HIV-status women presenting at maternity ward.</p>	
15	Infection control application following the national standard	<p>Have a guideline of SoP of universal precaution in place</p> <p>AND</p> <p>Having PEP guideline or</p>	<p>Have a guideline of SoP of universal precaution in place</p> <p>AND</p> <p>Having PEP guideline or</p>	<p>Neither have guideline of SoP of universal precaution in place</p> <p>Nor</p>	

			flowchart, or other SoP AND Have contaminated material disposal that is organized and efficient	flowchart, or other SoP But do not follow the guideline or SoP	Perform in a professional manner	
	16	Providing post-delivery counseling including family planning, infant feeding, vaccination, and the importance of registration at pre ART clinic for HIV-infected mothers and their babies.	Post-test counseling is provided to every HIV-positive mother on ARV adherence, follow ups, vaccination, HIV testing on babies, and baby feeding AND Individual data is proper recorded	Post-test counseling is provided to every HIV-positive mother on ARV adherence, follow ups, vaccination, HIV testing on babies, and baby feeding AND Individual data is improperly recorded or not recorded at all	No post-test counseling is provided AND No proper record of individual information is kept	
Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.						
4	Data management					
	17	Reviewing data on logs and forms (standard forms, registration book). For lab, record carefully lot No, and expired date.	All requirement standard forms and logs are available on site and are completely recorded AND	Some requirement standard forms and logs are available on site and are completely recorded AND	Incomplete, inconsistent, incorrect records on registration books or forms	

			Spot checking indicated correct and consistent recording.	Spot checking indicated few incorrect and inconsistent recording instances		
18	Reviewing data on reports following tools for all nationally required indicators, and checking submission manner.	<p>Data is accurate and matches what had been submitted</p> <p>AND</p> <p>All reports are submitted on time and are well documented</p>	<p>Data has some slight inaccuracies in matching what had been submitted</p> <p>AND</p> <p>Most reports are submitted on time and are well documented</p>	<p>Data does not match what has been submitted</p> <p>OR</p> <p>Always late to submit to OD/PHD</p>		
19	Checking the completeness and quality of patient records, secure storage space and organized filing system	<p>Individual patient records are maintained and updated at each patient encounter</p> <p>AND</p> <p>There is adequate and secure storage space for medical records</p> <p>AND</p> <p>An organized filing system is maintained so that specific charts are easily accessible</p>	<p>Individual patient records are maintained inconsistently</p> <p>OR</p> <p>The space for medical records is suboptimal in size or security</p> <p>OR</p> <p>The filing system is disorganized or not standardized, and timely accessibility of specific charts is difficult</p>	<p>Individual patient records are not maintained.</p> <p>OR</p> <p>Space is highly inadequate and insecure</p> <p>OR</p> <p>There is no standard filing system and lack of accessibility of specific charts impeded patient care</p>		
20	Reviewing the cohort follow-up sheet to ensure it is correctly updated with all information for mothers and infants	<p>Contact list of HBC or other community group lists are in place, and a system is in place to ensure patients are sent to referral services</p>	<p>Contact list of HBC or other community group lists are in place, but do not have system in place to ensure patients are sent and have access to referral services</p>	<p>Neither contract list of HBC/other community groups nor a referral system to follow-up with patients is in place</p>		

			<p>AND</p> <p>The numbers reported in the PMTCT/LR report match up</p> <p>AND</p> <p>Cohort follow-up sheets are always updated regarding received services</p>	<p>AND</p> <p>The numbers reported in the PMTCT/LR report do not match up</p> <p>AND</p> <p>Cohort follow-up sheets are only sometimes updated regarding received services</p>		
21	Reviewing database reports if available at site	<p>Available computer that is fully functional and used for PMTCT data entry</p> <p>AND</p> <p>PMTCT/LR and other databases are accessible and accurate on the computer</p>	<p>Available computer that is fully functional but is not used for PMTCT/LR data entry</p> <p>AND</p> <p>Use computer to enter PMTCT data, but data is sometimes inaccurate</p>	<p>Available computer that is fully functional but is not use for PMTCT/LR data entry</p> <p>OR</p> <p>Use computer to entry PMTCT data but the data is disorganized and inaccurate</p>		
<p>Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.</p>						

CHECKLIST FOR HEALTH CENTER WITHOUT LAB

Scoring scale: 2=Meet national standard, 1=Needs improvement, 0=Needs urgent remediation

No	Activities	2	1	0	Facility Score
1	Antenatal Care				
1	Appropriate facility (mother class, ANC, Delivery, Drawing blood)	Room has appropriate space and is maintained in a clean, organized, and hygienic manner. AND Perform mother class with 9 recommended topics including HIV/AIDS	Room has enough space but is dirty, disorganized or unhygienic AND/OR Perform mother class with some recommended topics including HIV/AIDS	Room has tiny space and is unclean, disorganized or unhygienic. AND Do not perform mother class	
2	Adequate staff (MW, counselor)	Has at least two midwives/counselors who perform counseling, MCH work, and HIV testing	Has at least one midwife/counselor who works for MCH and performs HIV testing	Has one midwife/counselor but she does not perform or is careless in performing HIV tests	
3	Staff trained in specific skill (e.g. on HIV, syphilis testing and counseling)	All relevant staff/counselors have knowledge of HIV, syphilis counseling and drawing blood for testing.	Some relevant staff/counselors have knowledge of HIV, syphilis counseling and drawing blood for testing.	No staff/counselor has knowledge or have been trained on HIV, syphilis counseling and testing	
<p>Comment/follow up: write down "what" specific issue explaining really key highlighted and indicated "how" it happened; and action that will be following up</p>					

next.					
2	HIV, Syphilis Counseling and Testing /Laboratory				
	4	Drawing blood following HIV Testing and Counseling SoP	<p>SoP of how to draw blood for HIV, syphilis test is in place</p> <p>AND</p> <p>Perform professionally including changing gloves between clients</p>	<p>SoP of how to draw blood for HIV, syphilis test is in place</p> <p>AND</p> <p>Performed unprofessional</p> <p>OR</p> <p>Performed without changing gloves between clients</p>	<p>SoP of how to draw blood for HIV, syphilis test is not in place</p> <p>OR</p> <p>Perform risky practice; not following the national guideline</p>
	5	Syphilis testing conducted at same time as HIV test in accordance with syphilis testing and treatment SOP	<p>Either perform venipuncture or finger prick, syphilis test is performed in conjunction with HIV test</p> <p>AND</p> <p>Follow the national SoP for Syphilis Testing procedure</p> <p>AND</p> <p>Well organize waste management as part of the testing process</p>	<p>Either perform venipuncture or finger prick, syphilis test is performed in conjunction with HIV test</p> <p>AND</p> <p>Do not follow the national SoP for procedure perform test and QC</p> <p>OR</p> <p>Disorganized waste disposal</p>	<p>Perform test carelessly</p> <p>OR</p> <p>Do not follow the SoP for testing procedure</p> <p>OR</p> <p>Waste control is risky</p>

	6	Performing vacutainer system or finger prick (material preparation, volume, label)	<p>Laboratory equipment for venipuncture and finger prick are arranged in order</p> <p>EITHER</p> <p>Draw blood volume drawn 2-5 ml, OR</p> <p>Take blood from finger by lancet with adequate two drops for HIV and syphilis test</p> <p>AND</p> <p>Label client's code number on tube</p> <p>AND</p> <p>Do internal and external QC systems if performing finger prick</p>	<p>Laboratory equipment for venipuncture and finger prick are arranged in order</p> <p>EITHER</p> <p>Draw blood volume drawn 2-5 ml, OR</p> <p>Take blood from finger by lancet with adequate two drops for HIV and syphilis test</p> <p>AND</p> <p>Label client's code number on tube in some but not all cases</p> <p>AND</p> <p>Do not perform internal and external QC systems if performing finger prick</p>	<p>Laboratory equipment for taking blood is disorderly</p> <p>AND</p> <p>Blood volume drawn less than 2 ml</p> <p>OR</p> <p>Did not label client's code number on tube</p>	
	7	Waste control	<p>Material disposal and waste is organized properly in recommended containers including safety box, infectious containers, and non-infectious containers</p>	<p>Material disposal and waste is disorganized</p>	<p>Material disposal and waste is disorganized</p> <p>AND</p> <p>Contaminated material disposal discarded into non-infectious container or on the carpet</p>	

	8	Testing material/consumable management	Testing material and consumables are well-prepared and kept in a clean and hygienic place	The testing material and consumable are prepared but kept in a dirty place.	Testing material are not prepared OR Testing materials are kept in a risky environment	
	9	Specimen storage and transference	Blood sample is properly stored in cold box in recommended condition (ice inside) AND Blood samples are sent out weekly at proper temperature	Blood sample is improper stored OR There is no ice inside cold box	Did not store blood samples in cold box OR Blood sample is kept in cold box for more than a week.	
<p>Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.</p>						
3	Maternity					
	10	Safe delivery materials available and correctly used	Either Safe Motherhood or flowchart of safe delivery is in place ANC Perform professionally before, during, and after delivery following the national guidelines	Either Safe Motherhood or flowchart of safe delivery is in place ANC Perform unprofessionally before, during, or after delivery by not following the national guideline	Either Safe Motherhood or flowchart of safe delivery is not in place ANC Perform unprofessionally before, during, and after delivery following the national guideline	

			AND All delivery instruments are sterilized and organized in safe and clean place	AND Not all delivery instruments are sterilized or organized in safe and clean place	AND Delivery material are disorganized and unclean	
11	Infection control performance (correct hand washing, gloves)	Guideline or SoP of universal precaution is in place AND PEP guideline or flowchart is in place AND Contaminated material disposal is organized and efficient	Guideline or SoP of universal precaution is in place AND PEP guideline or flowchart is not in place AND Contaminated material disposal is disorganized	Guideline or SoP of universal precaution and PEP is not in place OR Perform unprofessionally		
12	Documenting HIV status among delivering mothers presenting at HC	Standardized delivery registration log is in place AND HIV status of all women presenting for delivery is recorded	Standardized delivery registration log is in place AND Improper recording of the status of some women presenting for delivery	Standardized delivery registration log is not available AND HIV status among women presenting for delivery is not recorded		

Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.

4	Data management					
	13	Reviewing data on logs and forms (standard forms, registration book). For lab, record lot number and expiration date carefully	All required standard forms and logs are available on site and are completely recorded AND Spot checking indicated correct and consistent recording	Some required standard forms and logs are available on site and are completely recorded AND Spot checking indicated a few minor recording inconsistent		Incomplete, inconsistent, incorrect records on registration books, forms
	14	Reviewing data on reports following tools for all nationally required indicators, and checking for the submission manner.	Data is accuracy, matched to what had been submitted. AND All reports are submitted on time and well documented	Data has slightly accuracy, matched to what had been submitted. AND Most reports are submitted on time and well documented		Data is unmatched to what had been submitted. OR Always late to submit to OD/PHD
	15	Check completeness and quality of patient records, secure storage space and organized filing system	Individual patient records are maintained and updated at each patient encounter AND There is adequate and secure storage space for medical records AND An organized filing system is maintained so that specific	Individual patient records are maintained inconsistently OR The space for medical records is suboptimal in size or security OR The filing system is disorganized or not standardized, and timely accessibility of specific charts is		Individual patient records are not maintained. OR Space is highly inadequate and insecure OR There is no standard filing system and lack of accessibility of specific charts impeded patient care.

			charts are easily accessible.	difficult.		
	16	Cohort follow-up sheet is correctly updated with all information for mothers and infants	Contact list of HBC or other community groups are in place, and there is a system in place to send patients to referral services AND The numbers reported in the PMTCT/LR match up AND Cohort follow-up sheets are always updated regarding received services	Contact list of HBC or other community groups are in place, but do not have a system to send patients access to referral services AND The numbers reported in the PMTCT/LR match up AND Cohort follow-up sheets are sometimes updated regarding received services		contract list of HBC/other community groups is not available and they do not have a referral system in place
Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.						
5	Supply Management					
	17	Maintaining a reliable supply and securing adequate stock	HIV testing material and consumables are adequately stored AND Request and approval papers	HIV testing materials and consumables are adequately stored AND Request and approval papers		Shortages or stock outs happen often OR Inadequate storage of materials and consumables

			are saved in appropriate files AND Requests are done in timely fashion	are disorganized AND Requests are done late	OR No requested forms are available	
	18	Available reference materials for HIV testing (written document, SoP, Guideline)	A basic minimum set of national guidelines, job aids, and other reference materials are available to facility staff	A minimum amount of national guidelines are available and although some job aids or reference materials exist, some are outdated.	No national guidelines, job aids, or other reference materials are available to facility staff.	
	19	Available IEC for HIV testing (wall chart, flipchart, TV-VCD)	Adequate amount of IEC materials such as flipchart, video, short spot are in place AND Male condoms are available	Some IEC materials are available on site But There is are no available condoms	Neither IEC material nor condoms are available.	
<p>Comment/follow up: write down “what” specific issue explaining really key highlighted and indicated “how” it happened; and action that will be following up next.</p>						

Annex 4: Linked Response/PMTCT Follow Up Sheet

Name of Health Facility:OD:Province:

No	PMTCT Code	OI/ART Code No	Name of HIV-positive pregnant woman	Age	Address/Telephone number	Date enrolled in PMTCT/LR	Date of HIV Test	Where was HIV test done?	Date of 1st ANC	Age of Pregnancy at 1st ANC	Date of Last ANC	Total Number of ANC Visits
1	2	3	4	5	6	7	8	9	10	11	12	13

Estimated Date of Delivery	Follow-up Contact	1st CD4 Test		Last CD4 Test		Date ARVs Initiated	ARV Regimen			Labor Testing		Place of Delivery	Actual Delivery Date
		Date	Result	Date	Result		ART	Triple ARV-P	No ARV	In Labor	After Delivery		
14	15	16	17	18	19	20	21	22	23	24	25	26	27

Infant code	NAME (Infant)	Infant Sex	Birth Outcome	Provision of 6 wk supply of NVP (date)	Date Started Cotrimoxazol	DNA PCR-1			Confirm DNA PCR-1			DNA PCR-2		
						Date of Sample Collection	Result		Date of Sample Collection	Result		Date of Sample Collection	Result	
							Date	Result		Date	Result		Date	Result
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42

Confirm DNA PCR-2			DNA PCR (Symtom)			Confirm DNA PCR (Symtom)			Antibody test		Reported Feeding Choice at 6 months	Child Status	Notes
Date of Sample Collection	Result		Date of Sample Collection	Result		Date of Sample Collection	Result		Date	Result			
	Date	Result		Date	Result		Date	Result			Date	Result	
43	44	45	46	47	48	49	50	51	52	53	54	55	56