

KINGDOM OF CAMBODIA



Ministry of Health

**Standard Operating Procedures (SOP)
for Implementing the Three I's in Continuum of
Care (CoC) Settings**

**National Center for HIV/AIDS Dermatology and STD and
National Center for Tuberculosis and Leprosy Control**

April 2010



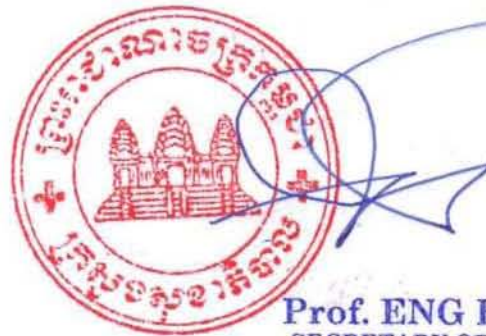
Foreword

Since 2000, the National Centre for Tuberculosis and Leprosy Control (CENAT) and the National Centre for HIV/AIDS, Dermatology and STD (NCHADS) together with partners have been working to define the key activities necessary to reduce the impact of TB/HIV co-infection and develop the National Framework for TB/HIV in Cambodia as well as Standard Operational Procedures (SOP) for prompt HIV testing of TB patients. However, the implementation of TB/HIV activities in Cambodia has been slow. More intensified efforts are required to scale up intensified TB case finding (ICF) among PLHIV and their household contacts, isoniazid preventive therapy (IPT) for PLHIV unlikely to have active TB, and to strengthen TB infection control (IC) measures at Continuum of Care (CoC) settings, known as 3 Is Strategy.

These Standard Operating Procedures (SOP) for Implementing the 3Is in Continuum of Care Settings have been developed by the Technical Working Group on TB/HIV to provide guidance to managers and health care providers working at the Operational District (OD) level and all partners in implementing the Strategy.

The Ministry of Health endorses Standard Operating Procedures (SOP) for implementing the 3Is in Continuum of Care Settings. The Ministry of Health expects that all partners will work closely together to strongly support the implementation and monitoring of these SOP.

Phnom Penh, ...23/04/2010 *HS*




Prof. ENG HUOT
SECRETARY OF STATE

Acknowledgements

On behalf of the National Center for HIV/AIDS, Dermatology and STD (NCHADS) and the National Center for Tuberculosis and Leprosy Control (CENAT), we would like to express our gratitude to those who participated in the development of the Standard Operating Procedures (SOP) for Implementing the 3Is in CoC Setting:


- National Center for HIV/AIDS Dermatology and STD (NCHADS)
- National Centre for Tuberculosis and Leprosy Control (CENAT)
- United States Centers for Disease Control
- Clinton Health Access Initiative
- World Health Organization
- Family Health International
- Khmer HIV/AIDS NGO Alliance

Director
National Center for HIV/AIDS
Dermatology and STD (NCHADS)



Dr. Mean Chhi Vun

Director
Center for Tuberculosis
and Leprosy Control (CENAT)



Dr. Mao Tan Eang

Contents

Foreword	1
Acknowledgements	2
List of Abbreviations	4
1. Introduction and background	5
1.1. General	5
1.2. The Three I's strategy	5
2. Objectives of the Three I's SOPs	6
3. Intensified TB case finding among PLHIV	6
3.1. Who should be screened, when and where?	6
3.2. What screening and diagnostic workup should be performed?	6
4. Isoniazid Preventive Therapy (IPT) for PLHIV	7
4.1. Who should receive IPT, when and where?	7
4.2. Routine Clinical monitoring and follow-up:	8
4.3. Tuberculin Skin Test (TST)	9
4.4. Children	9
5. TB Infection Control in CoC Settings	14
5.1. Managerial Arrangements and Coordination:	14
5.2. Process for implementation	15
6. Monitoring & Evaluation	19
7. Targets	22
8. 3I scale up plan by OD for 2010 and 2011	23
9. Annexes	24
Annex 1: Assessment for TB Infection Control	
Annex 2: Revised Referral form	
Annex 3: TB Symptom Screening Card Among PLHIV	
Annex 4: Revised pre-ART register	
Annex 5: Revised ART register	
Annex 6: Revised facility quarterly pre-ART report	
Annex 7: Revised facility ART quarterly report	
Annex 8: IPT Algorithm where TST is available	

List of Abbreviations

ALT	Alanine Transaminase
ART	Anti-retroviral Therapy
ARV	Anti-retroviral
AST	Aspartate Transaminase
CENAT	National Centre for Tuberculosis and Leprosy Control
CoC	Continuum of Care
CPT	Cotrimoxazole Preventive Therapy
CQI	Continuous Quality Improvement
DOTS	Directly Observed Treatment, Short-course
GF	Global Fund
HBC	Home-based Care
HC	Health Center
IC	Infection Control
ICF	Intensified TB Case Finding
IPT	Isoniazid Preventive Therapy
LFT	Liver Function Tests
MMM	Mondul Mith Chuoy Mith (Friends Helping Friends) Support Group
NCHADS	National Centre for HIV/AIDS, Dermatology and STD
OD	Operational District
OI	Opportunistic Infections
PLHIV	People Living with HIV
RH	Referral Hospital
SOP	Standard Operating Procedures
SS	Sputum Smear
TB	Tuberculosis
TS-	TB Symptom Screen Negative
TS+	TB Symptom Screen Positive
TST	Tuberculin Skin Test
UA	Universal Access
ULN	Upper Limit of Normal
VCCT	Voluntary Confidential Counseling and Testing
WHO	World Health Organization

Standard Operating Procedures (SOP) for Implementing the 3Is in Continuum of Care Setting

1. Introduction and background

1.1. General

Worldwide, tuberculosis (TB) is the leading cause of death among HIV-infected persons. HIV is the most potent risk factor for the development of active tuberculosis. HIV-infected persons with TB are far more likely to die before completing their 6-month TB treatment course than TB patients who are not co-infected with HIV. While HIV is known to increase susceptibility to new infection with *Mycobacterium tuberculosis*, it also fuels the TB epidemic by increasing susceptibility to reactivation of recent and latent *M. tuberculosis* infection and increasing the risk of recurrent TB. While an HIV-negative person infected with *M. tuberculosis* has a 10% **lifetime** risk of developing active TB, an HIV-positive person who is co-infected with *M. tuberculosis* has a 10% **annual** risk of developing active TB. According to a World Health Organization (WHO) estimate, 64% of the Cambodian population was infected with *M. tuberculosis* in 1997. TB is the most common AIDS-related illness in Cambodia as it is observed in up to 40% of People Living with HIV (PLHIV) enrolled in OI/ART cohorts. In addition, the mortality rate among TB-HIV co-infected patients is high with 37% of deaths within two months of TB treatment among TB HIV co-infected patients with CD4 cell counts less than 200 not yet receiving anti-retroviral therapy (ART) (CENAT, August 2005).

Since 2000, the National Centre for Tuberculosis and Leprosy Control (CENAT) and the National Centre for HIV/AIDS, Dermatology and STD (NCHADS) together with partners have been working to define the key activities necessary to reduce the impact of TB-HIV co-infection and develop the Framework for TB/HIV in Cambodia as well as Standard Operational Procedure (SOP) for prompt HIV testing of TB patients.

1.2. The Three I's strategy

In recognition of slow implementation of TB HIV control measures recommended by WHO in 2004 in the Western Pacific Region, WHO introduced a revised TB HIV framework in 2008 calling for more specific interventions to reduce TB-related mortality among PLHIV and to reduce TB transmission. The three following key elements of the strategy, called the **Three I's**, were derived from the revised framework:

- Intensified TB case finding (ICF) among PLHIV and their household contacts,
- Isoniazid Preventive Therapy (IPT) for PLHIV unlikely to have active TB,
- Improved TB infection control (IC) measures at Continuum of Care (CoC) and home-base care (HBC) settings.

The following SOPs aim to facilitate the implementation of the Three I's at Cambodian Continuum of Care (CoC) sites by managers and health care providers working at the Operational District (OD) level. These SOPs are following WHO recommendations and the recently revised Cambodian TB HIV framework.

2. Objectives of the Three I's SOPs

The objectives of these SOPs are:

- 1) to provide evidence based algorithms to aid in the screening and diagnosis of TB in HIV infected patients to maximize the opportunity to diagnose and treat TB as early as possible among HIV patient at enrollment and at each visit;
- 2) to reduce TB incidence among PLHIV by providing at least a 6 month course of IPT to PLHIV unlikely to have active TB;
- 3) to reduce the risks of TB transmission within CoC and HBC settings by implementing systematic IC measures.

3. Intensified TB case finding among PLHIV

Patients co-infected with both TB and HIV have a high risk of death. Accurately diagnosing and treating TB in PLHIVs increases the safety of ART initiation, while excluding TB identifies patients who are eligible for IPT. The emphasis of intensified case finding should be not only on the diagnosis of smear-positive disease, but also on the early detection of all forms of TB, since all forms of TB in PLHIV result in increased case-fatality rates. Patients with active TB should receive TB treatment, not IPT.

3.1. Who should be screened, when and where?

Tuberculosis is most commonly found at initial HIV diagnosis, during the period prior to ART initiation, and shortly after ART initiation.

- HIV-infected patients should be screened for TB at the OI/ART clinic during their initial visit, prior to initiating ART, and at every follow-up visit thereafter.
- Voluntary Confidential Counseling and Testing (VCCT) counselors and HBC staff can also screen PLHIV for symptoms suggestive of TB and refer to the OI/ART clinics for further diagnosis if the symptom screening is positive (at least one symptom present).

While TB symptom screening of PLHIV will be performed at OI/ART clinics, VCCT, and HBC, those suspected of having TB will have the diagnostic workup performed by the TB care clinicians who will be co-located in the OI/ART site or at TB service.

3.2. What screening and diagnostic workup should be performed?

Based on the findings of an evidence-based study performed in three countries including Cambodia, health care providers should use a two step algorithm:

1) a verbal **TB symptom screening** for a combination of 3 symptoms:

Counselors, nurses or doctors should ask PLHIV about the following 3 symptoms for TB screening:

In the last 4 weeks:

- **fever**, anytime of any duration
- **cough**, anytime of any duration
- Two weeks or more of **drenching night sweats**

If patients have none of the three symptoms, they are considered unlikely to have active TB (without the need of further examination) and are eligible for IPT if they have no contraindications (see section 4.1).

2) a **TB diagnostic workup** for those whose symptom screening is positive.

PLHIV who have **any of the above three symptoms** require further diagnostic workup (see Figure 1 for algorithm) in addition to potential diagnosis workup for other opportunistic infections (OI). The diagnostic evaluation for TB will be performed by TB clinicians.

- Any PLHIV diagnosed with active tuberculosis should immediately be registered for TB treatment and placed on appropriate therapy according to the National TB Guidelines.
- All patients co-infected with TB and HIV should begin ART immediately 2 weeks after TB treatment initiation **regardless of CD4 count**.
- In addition, for **ALL** patients co-infected with both TB and HIV **regardless of CD4 count**, OI/ART staff will supply Cotrimoxazole Preventive Therapy (CPT) (Trimethoprim 160 mg/Sulfamethoxazole 800mg = Cotrimoxazole 960mg) once daily until the end of TB treatment and then continue until the patient's CD4 count is maintained above 350 for at least 6 months. CPT has been shown to significantly reduce mortality from TB in co-infected patients. OI/ART staff will write the prescription of cotrimoxazole prophylaxis (CTX) in the patient's booklet.
- Patients will be reminded to bring their booklet to the TB Directly Observed Treatment (DOT) staff to appropriately fill the TB register.

4. Isoniazid Preventive Therapy (IPT) for PLHIV

4.1. Who should receive IPT, when and where?

PLHIV with none of the three TB screening symptoms are considered unlikely to have active TB and are eligible for IPT, which should be started as soon as possible. However, IPT should not be started in case of the following contraindications:

- AST or ALT > 3 times the Upper Limit of Normal (ULN), or a single elevation > 250, or lower elevations of AST or ALT with symptoms (nausea, vomiting, abdominal pain, anorexia or jaundice). Patients with evidence of active liver disease with baseline ALT or AST > 3x ULN should not be started on IPT until their enzymes have dropped well below this level. A positive hepatitis serology is not itself a contraindication to IPT, but warrants monthly monitoring of liver function tests (LFTs) until it is clear that the drug is well tolerated.
- Active alcohol abuse.
- Past history of severe adverse side effects to Isoniazid.

IPT will be prescribed by the OI/ART clinician:

- For at least a 6 month duration.
- Pyridoxine is given to prevent peripheral neuropathy.
- The patient should be provided a one month drug supply at the OI/ART clinic visit.
- The patient should be closely monitored.

Isoniazid 5 mg/ kg (standard adult dose of **300 mg***) once daily for at least 6 months total duration, * *Patient weighing < 40 kg should be given 200 mg/day*

Pyridoxine (vitamin B6) 50 mg once daily for 6 months total duration

CENAT is responsible for the supply of Pyridoxine and Isoniazid which will be stored at the OI/ART Pharmacy.

4.2. Routine Clinical monitoring and follow-up:

Isoniazid is generally safe. The primary toxicities of Isoniazid are peripheral neuropathy and hepatotoxicity (incidence of significant hepatotoxicity is 0.1%). With the high prevalence of viral hepatitis co-infection among PLHIV and risk of hepatotoxicity and neuropathy from ARV's, it is reasonable to monitor closely for these side effects.

Patients should be monitored every 4 weeks. Clinicians should inquire about:

- Adherence to daily doses of Isoniazid and Pyridoxine
- Possible side effects (numbness or tingling in the hands or feet, nausea, vomiting, abdominal pain, anorexia, dark urine, or jaundice). Patients with pre-existing peripheral neuropathy should be monitored regularly for worsening of these symptoms. If the patient has worsening of severe peripheral neuropathy, Isoniazid should be discontinued.
- Symptoms suggestive of active TB (Fever, cough or drenching night sweats). If so, start the diagnostic workup to rule out active TB.

- Liver enzymes (AST and ALT) should be checked at baseline and at month 1 and month 2. If normal, LFT's should be repeated only if symptoms of hepatitis are noted on follow-up. If the patient has abnormal LFT's at baseline, or Hepatitis B or C, then check LFT's monthly for the first 4 months.
 - If AST or ALT are not $\leq 3 \times$ ULN, at 4 months, repeat only if symptomatic,
 - If AST or ALT still $\geq 3 \times$ ULN, continue monthly LFT monitoring,
 - If AST or ALT $> 5 \times$ ULN or if lower elevations are associated with symptoms, then discontinue Isoniazid.

4.3. Tuberculin Skin Test (TST)

- Unavailability of TST should not be a barrier to IPT.
- If TST is available, PLHIV unlikely to have active TB with a positive TST should receive IPT for 36 months.
- It is not recommended to provide IPT to PLHIV with a negative TST.

4.4. Children

Children living with HIV should be screened for TB at the paediatric AIDS care (PAC) services during their initial visit, prior to initiating ART and at every follow-up visit thereafter. Symptom screening should take place regardless of TB treatment history. Counselors, nurses or doctors should screen children living with HIV for the following five symptoms and risk factors:

- Living with active TB patients or ex-patients
- Failure to thrive¹
- Fever
- Current cough
- Enlarged cervical lymph node

If children living with HIV have none of these symptoms or risk factors, they are considered unlikely to have active TB and those over 12 months of age are eligible for IPT. In addition, children living with HIV less than 12 months old who had a household contact with a case of TB or who successfully completed TB disease treatment should receive IPT.

However, IPT should not be started in case of the following contraindications:

- active hepatitis (acute or chronic);
- symptoms of peripheral neuropathy.

IPT will be prescribed by the OI/ ART clinician for at least a 6 month duration. Pyridoxine will be given to prevent peripheral neuropathy. The patient should be provided a one month drug supply at the PAC service visit and closely monitored.

Isoniazid 10 mg/ kg once daily for at least 6 months total duration

Pyridoxine (vitamin B6) 25 mg once daily for 6 months total duration

¹ Failure to thrive is defined as a child not gaining weight and his/her growth curve is flattening or the child is losing weight and the growth curve is dropping downwards.

CENAT is responsible for supply Pyridoxine and Isoniazid which will be stored at the OI/ART pharmacy.

If the children have any of the five symptoms and risk factors above, they should be referred to TB services for diagnostic workup or exclusion of active TB.

Support IPT Adherence

'Adherence' is taking medication continuously; not missing or delaying doses. It is the key factor in successful IPT. Poor adherence could lead to ineffectiveness of IPT. Adherence to daily medication for months is hard work. Keep in mind that:

- No one can achieve perfect adherence all the time.
- The assessment of an individual's adherence by health care workers is difficult and often inaccurate.
- It is important to spend more time supporting adherence than trying to assess it.
- The best way to support adherence is to focus on the needs of the person taking the medicine.

Practical ways to support adherence include:

- Providing adherence counseling (**OI/ART Counselor**)
- Including discussion and education about IPT in Mondul Mith Chuoy Mith (Friends Helping Friends) Support Group (MMM) meetings (**MMM**)
- Encouraging people to find an 'adherence supporter' or 'buddy'
- Linking PLHIV with HBC teams (**HBC**) and Community TB-DOT Watchers²

Role of OI/ART Physician and OI/ART Counselors

- Before beginning course of IPT, spend time giving information and answering questions about IPT
- Evaluate adherence to IPT along with OI or ART regimen at every visit (use ART adherence evaluation tools)
- Since drug side effects can reduce adherence:
 - Encourage PLHIV to report at each visit new symptoms whenever they develop
 - Check for side effects at each visit and deal with them promptly
- Encourage PLHIV to become actively involved in his or her own care
- Assist PLHIV to understand IPT and to identify his or her own barriers to adherence and to find ways to overcome these barriers
- Identify and address mental health issues, particularly depression, and harmful substance use

Role of HBC in adherence support for PLHIV

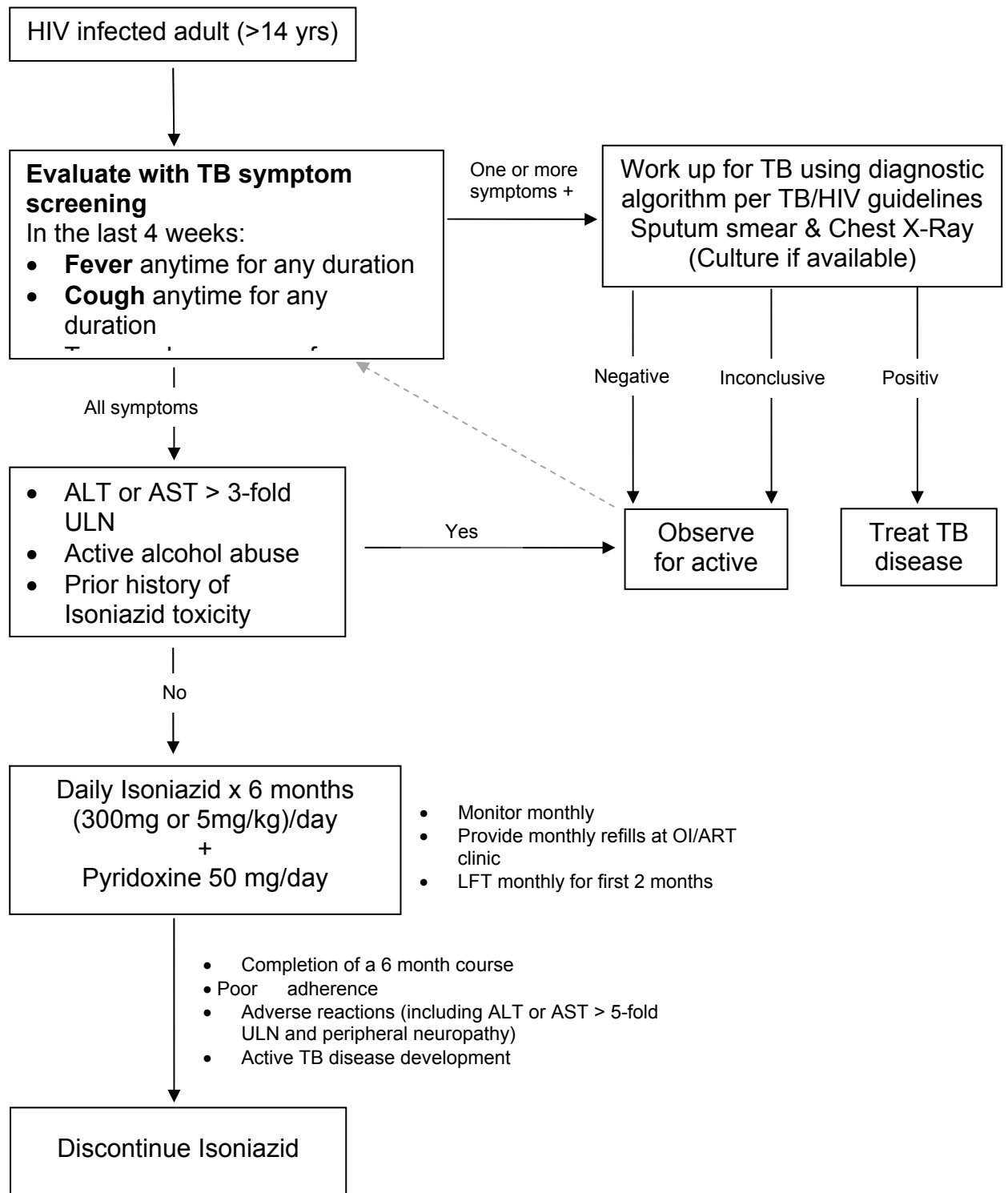
² These are usually Village Health Support Groups (VHSG), or other community members who are trained to supervise treatment of TB patients through Direct Observation of Treatment (DOT).

- Provide information and counseling (group or individual) about IPT
- Support and encourage adherence of PLHIV to IPT
- Support PLHIV in monitoring and coping with mild side effects of Isoniazid, and facilitate referral to health facility services for management of adverse reactions
- facilitate referral to nearest OI/ART for monthly follow up visits and Isoniazid refill

Role of MMM

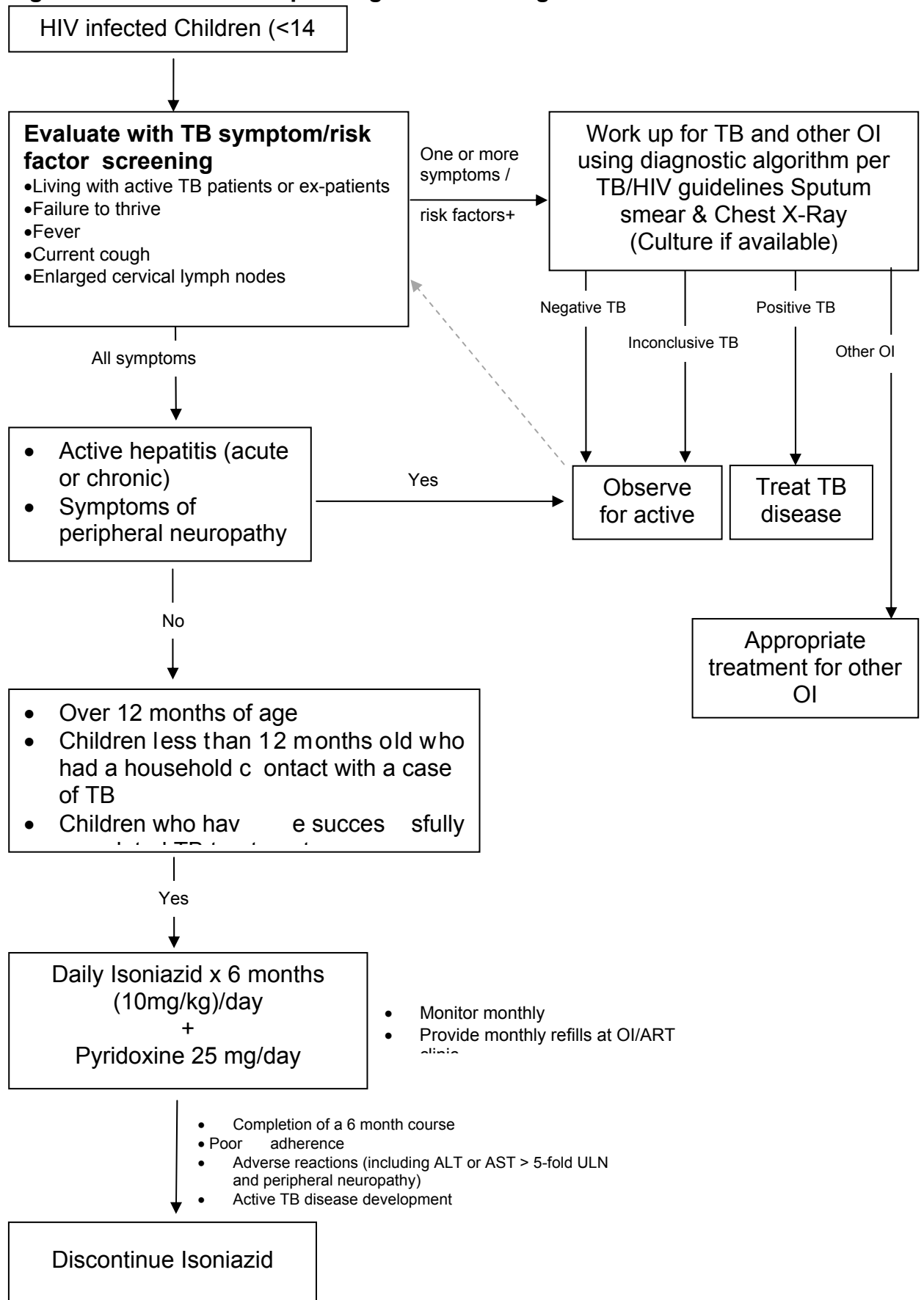
- Include IPT in agenda of MMM meetings
- Foster sharing of PLHIV experience with taking Isoniazid therapy, and with TB

Figure 1: IPT Standard Operating Procedure Algorithm for Adults and Adolescents (where TST is not available)³



³ See Annex 8 for IPT Algorithm where TST is available

Figure 2: IPT Standard Operating Procedure Algorithm for Children



5. TB Infection Control in CoC Settings

TB infection control (IC) measures in CoC settings are essential to prevent the spread of *M. tuberculosis* to vulnerable patients, health care workers, the community and those living in congregated settings. Fundamentally, TB IC is about safety: people receiving or offering HIV care should not have to worry about being exposed to and infected with TB within the CoC.

The present SOPs for TB IC are in line with the National IC Policy and aim to help OD health care providers to implement it as soon as possible at CoC sites.

5.1. Managerial Arrangements and Coordination:

At National and Provincial levels

At the National and provincial levels, the management and coordination of TB IC in CoC settings will follow the National IC Policy recently disseminated on the 12th December 2009.

At OD level

- The OD IC Committee will have the following tasks:
 - Appoint an OI/ART nurse counselor/PLHIV volunteer to be responsible for IC at the CoC settings.
 - Conduct the TB IC in CoC settings assessment and design the TB IC in CoC settings plan at the facility level with the support of OD committee.
 - Coordinate implementation of the TB IC in CoC settings plan at the OD level
 - Responsible for the implementation of TB IC in CoC settings activities at health center (HC), VCCT sites, TB laboratory, as well as in the community through HBC, DOTS in the communities and MMM.
 - Responsible for the implementation of the surveillance of active TB among health care workers.

At the Referral Hospital (RH) level

- Assign a focal point of TB IC in CoC settings. This person will be working in collaboration with both the OI/ART team and chief of the TB ward.
- Structure of the RH TB IC in CoC settings team: OI/ART team leader, chief of the TB ward, OI/ART team members and chief of TB lab
- The RH team has the following tasks:
 - Implement the TB IC in CoC settings plan at the facility level
 - Monitor of TB IC in CoC settings plan activities on routine everyday basis
 - Report on TB IC in CoC settings activities.

5.2. Process for implementation

Depending of the CoC sites, the TB Infection Control at CoC settings should take into consideration the following measures and instruct all health care providers and staff accordingly.

No.	ACTIVITIES	Areas to be implemented	Responsible Person	Monitoring/supervision	Remarks
1	Minimize referrals of PLHIV to TB clinics/ward. Instead, provide TB symptom screening or appropriate referrals	OI/ART sites and VCCT	OI/ART staff, VCCT staff	Nurse counselor at OI/ART site, HC chief at VCCT	
2	Diagnose and treat TB as early as possible through TB ICF	OI/ART sites or TB ward	TB physician either at the OI/ART clinic or TB ward	TB physician either at the OI/ART clinic or TB ward	If TB staff not part of OI/ART team, then refer to TB services
3	Ensure good ventilation within all rooms in which TB suspects and TB patients could be present	OI/ART sites: Waiting room, consultation room for PLHIV, counseling room, VCCT, MMM meeting room	Nurse counselor	IC OD committee	Open windows and doors as much as possible; fans directed towards opened windows; opened space (outside waiting room for TB patients, outside sputum collection space)
4	Assign a OI/ART nurse counselor to be in charge of detecting and separating coughing TB suspects and known sputum smear-positive pulmonary TB patients	OI/ART sites: Entrance/triage, waiting room during outpatient department time and	Nurse counselor	IC OD committee	At some sites, PLHIV volunteers working at the OI/ART clinic can be in charge of identifying

	from PLHIV	during MMM meeting			coughing TB suspects.
5	Organize patient flow. Make sure that coughing patients do not wait in the waiting room with other patients but at an outside space dedicated to them	OI/ART sites: OI/ART consultation and waiting rooms, VCCT sites	Nurse counselor at OI/ART site, HC chief at VCCT sites	IC OD committee	Such outside waiting space should be set-up when not yet available
6	Provide TB patients with masks (or if not available encourage using kramar or moto mask) to be used when coughing	OI/ART sites: in an outside dedicated space, MMM meeting room, VCCT	Nurse counselor at OI/ART site, HC chief at VCCT sites	IC OD committee	
7	Make sure that free masks are available for coughing patients and sputum smear (SS)+ TB HIV patients at the facility level and when referred to any other facility including TB lab for sputum collection	OI/ART site: consultation and waiting rooms, VCCT, MMM meeting room	Nurse counselor at OI/ART site, HC chief at VCCT sites TB health workers	IC OD committee	In time order, supply control and stock monitoring should be performed by nurse IC supervisor at OI/ART site or chief of the facility at other sites
8	Educate patients to cough/sneeze with mask and to spit sputum or saliva in a lavabo or antiseptic containers if possible	OI/ART consultation and waiting rooms, VCCT, MMM	Nurse counselor at OI/ART site, TB ward chief, HBC team, Community DOTS Workers	IC OD committee	
9	Ensure that HIV-infected peer staff will not be assigned in close contact with known SS+ TB patients or coughing TB suspects	OI/ART consultation and waiting rooms, VCCT, HBC, MMM meeting room	Nurse counselor at OI/ART site, HC chief at VCCT sites, HBC team leader, Community DOTS Workers	IC OD committee	
10	Ensure yearly systematic TB screening for all health care staff and provide prompt	TB services	TB Health Workers	IC OD committee	According to TB National Program SOPs. Includes

	evaluation if TB symptoms develop				baseline chest X-ray and then regular symptom screening and annual X-ray.
11	IC measure module should be integrated in the MMM curriculum to educate PLHIV about TB-HIV infection control and contact tracing	MMM meetings	MMM coordinator in collaboration with the nurse counselor, TB Health Workers	IC OD committee	
12	Minimize referral of TB patients to VCCT and instead send patient blood (option 2) when possible for all TB patients	All HC	HC staff in charge of TB	IC OD committee	Pre and post-test counseling are being provided at the TB wards or health center
13	HIV infected TB patients and TB suspects with pending sputum test results should be managed at home as much as possible to avoid unnecessary hospitalizations or referrals	HBC settings	HBC team leader	IC OD committee	
14	When needed, SS+ HIV/TB patients should be hospitalized in TB ward and isolated from SS negative or treated TB patients at least during the first 3 weeks of treatment	TB ward	OI/ART clinic doctors for referral to TB ward, TB ward chief	IC OD committee	
15	At integrated laboratories, a separate TB room should be dedicated to sputum smear processing and examination performed away from patient contact	TB lab	TB coordinator	IC OD committee	
16	HBC teams should be informed by OI/ART team about patients with SS+ pulmonary TB in order to provide appropriate counseling on IC to TB	OI/ART coordination meetings	HIV and TB coordinators	IC OD committee	

	patients				
17	Inform patients with SS+ pulmonary TB that they should wear a mask at home and in public places until the SS becomes negative	OI/ART site and HBC settings	HBC team	IC OD committee	
18	Inform patients with SS+ pulmonary TB not to attend MMM or PLHIV support group meetings until they SS become negative	HBC settings	HBC team	IC OD committee	

6. Monitoring & Evaluation

TB HIV data related to National AIDS Program will be collected and reported by the head of each OI/ART site to the OD managers and CoC/Linked Response coordinator. TB HIV data will be used at OD level to assess coverage and performance and improve quality of services. TB HIV data will also be reported to the provincial Data Management Unit that will check for completeness and quality and forward to the NCHADS Data Management Unit. At the national level, TB HIV data will be compiled and integrated into the comprehensive national HIV/AIDS quarterly report. The performance against TB HIV indicators will be shared with all concerned stakeholders.

NCHADS will incorporate TB-HIV information into existing reporting and monitoring tools at facility level. In order to allow the collection of the TB-HIV indicators, new tools will be added at VCCT and OI/ART sites.

- **The referral form** used at CoC sites will be revised to include **TB symptom screening tool** (see **Annex 2**).
- A **TB symptom screening card** (see **Annex 3**) will be added into the OI/ART individual patient forms. In the long term the TB symptom screening and diagnosis information may be integrated into the individual patient form. The OI/ART electronic database will also have to be revised on the long term to include this new TB HIV information.
- **The pre-ART register** will be revised (see **Annex 4**) with new columns added to each visit to allow the recording of the following codes: TS + for positive TB symptom screening or TS – for negative TB symptom screening and check marks to record if the patient is receiving IPT, CPT and/or TB treatment. The ART register will be revised (see Annex 5) with larger boxes for each visit to allow the recording of the following codes: TS+ for positive TB symptom screening or TS – for negative TB symptom screening. Some columns will be added for transcribing the dates of IPT start and stop, date of CPT start and stop and the date of TB treatment start and stop.
- **Pre-ART and ART facility quarterly reports** will be revised to include TB symptom screening, CPT and IPT information (see **Annexes 6&7**). The TB HIV data collected in the pre-ART and ART registers will be used to fill the revised facility pre-ART and ART quarterly reports. The facility pre-ART and ART quarterly report will include the number of new adult patients screened for TB symptoms, the number of new adult patients started on IPT and the number of new adult patients started on TB treatment. The facility pre-ART and ART quarterly report will also include the number of new patients (adults and children started on CPT) and the number of patients already in OI or ART care started on TB treatment. During Continuous Quality Improvement (CQI) visits, it will be possible to extract additional information from the electronic database such as the results of TB symptom screening.

The following indicators will be collected on a quarterly basis:

Number and percentage of adults newly enrolled in HIV care who were screened* for TB at the first visit (Global Fund [GF] round 7 indicator)

Numerator= Number of adults newly enrolled in HIV care (new OI) who were recorded as screened for TB at the first visit * *Numerator will be all patients with a documented 3 symptoms screening performed*

Denominator=Total number of adults newly enrolled in HIV care (new OI)

This indicator can be disaggregated by:

of individuals with negative symptom screening result

of individuals with positive symptom screening result

Data source: The data will be obtained from the pre-ART register and reported into the facility pre-ART quarterly report (see Annex 6).

Number and percentage of adults newly enrolled in HIV care starting IPT (WHO Universal Access [UA] indicator)

Numerator= Number of adults newly enrolled in HIV care (new OI) started on IPT

Denominator= Total number of adults newly enrolled in HIV care (total new OI)

Data source: The data will be obtained from the pre-ART register and reported into the facility pre-ART quarterly report (see Annex 6).

Number and percentage of adults enrolled in HIV care who were screened for TB at last follow up visit (WHO UA indicator)

Numerator= Number of adults in HIV care who had TB symptom screening completed during their last visit

Denominator= Total number of last follow up visits

The denominator should be disaggregated by patients on OI care and patients on ART.

Data source: The data will be obtained from the pre-ART and ART registers on an annual basis during CQI visits.

Number and percentage of OI/ART staff who were detected with active TB

This indicator measures the impact of IC on preventing TB transmission on health staff.

Numerator= Number of staff detected with active TB in the past 12 months.

Denominator= Number of staff screened for active TB (as part of yearly systematic TB screening)

Data source= Annual staff screening report.

This indicator will be monitored on a yearly basis.

7. Targets

	2009 (baseline)	2010	2011	2012	2013	2014	2015
Number and percentage of OI/ART sites implementing ICF, IPT and TB infection control	0	20	35	52	55 (all)	55 (all)	55 (all)
Number and percentage of adults newly enrolled in HIV care who were screened* for TB at the first visit <i>(at sites where 3Is is implemented)</i>	80% <i>(GFr7 reports)</i>	85%	90%	95%	95%	95%	95%
Number and percentage of adults newly enrolled in HIV care starting IPT <i>(at sites where 3Is is implemented)</i>	12% (FHI pilot study, Battambang)	12%	20%	25%	30%	30%	30%
Number and percentage of adults enrolled in HIV care who were screened* for TB at last visit <i>(at sites where 3Is is implemented)</i>	not available	85%	90%	95%	95%	95%	95%
Percentage of OI/ART staff detected with active TB.	unknown	0%	0%	0%	0%	0%	0%

* symptom screened

8. 3I scale up plan by OD for 2010 and 2011

2010		2011	
I	Battambang	I	Prey Veng
1	Provincial hospital	21	Pearang
2	Mong Russey	II	Takeo
3	Tmor Kol	22	Donkeo
4	Sampeou Loun	III	Kandal
II	Bantey Mancheay	23	Koh Thom
5	Monkol Borey	IV	K. Speu
6	Sisophon	24	Odong
7	Poipet	V	Sihanoukville
III	Pursat	25	Provincial hospital
8	Sampeou Meas	VI	Koh Kong
IV	Pailin	26	Smach Mean Chey
9	Provincial hospital	27	Sre Ambel
V	Kandal	VII	Kampot
10	Chey Chumneas	28	Provincial hospital
VI	Prey Veng	29	Kampong Trach
11	Neak Loeung	VIII	Kg Thom
12	Provincial hospital	30	Kampong Thom RH
VII	Svay Rieng	IX	Kg Chnang
13	Provincial hospital	31	Kampong Chhnang RH
VIII	K. Cham	X	Kratie
14	Provincial hospital	32	Kratie RH
15	Tbong Khmom	XI	Siem reap
16	Memut	33	Siem Reap RH
17	Cheung Prey	34	Sotnikum RH
IX	K. Speu	35	Kralanh
18	Provincial hospital		
X	Takeo		
19	Kirivong		
20	Ang Rokar		

9. Annexes

Annex 1: Assessment for TB Infection Control

Annex 2: Revised Referral form

Annex 3: TB Symptom Screening Card Among PLHIV

Annex 4: Revised pre-ART register

Annex 5: Revised ART register

Annex 6: Revised facility quarterly pre-ART report

Annex 7: Revised facility ART quarterly report

Annex 8: IPT Algorithm where TST is available

Assessment on TB Infection Control

Name of the facility:

Services provided in this facility

At the OI/ART clinic?

At the TB ward?

Other departments of the RH? (Specify:)

Responsible person:.....

of staff: Physician:.....

Nurse:.....

1. Was an infection control committee set up?

Y N

- If yes, describe the composition of the committee?

2. Is there a person responsible for TB infection Control?

At the OI/ART clinic? Y N

At the TB ward? Y N

In the hospital? Y N

3. Are there policies and an SOP for TB infection control?

Y N

4. How many staff have acquired TB in the last 12 months at your service?

of staff who have TB:.....

5. Is there an internal policy to reassign the health staff that become HIV-positive to another service to prevent him/her from TB contamination? Y N

- If yes, do you implement this policy at your service? Y N

6. Is there an internal policy to prevent PLHIV volunteers from TB contamination?

Y N

7. Have all health staff working at OI/ART and TB Unit ever been screened for TB?

Y N

8. Have staff been trained for TB infection control:

at OI/ART clinic? Y N

at the TB ward ? Y N

in the Hospital? Y N

9. The number of TB patients (all forms) registered in last 5 years (OI/ART and TB wards only)

Name of service	2005	2006	2007	2008	2009

10. The flowchart of the patient flow through the facility ?

11. Where are PLHIV symptom screened for TB? (OI/ART Clinic only)

- OI/ART Y N
- TB wards? Y N

12. Where are PLHIV diagnosed with TB? (OI/ART Clinic only)

- OI/ART Y N
- TB wards? Y N

13. Is TB symptom screening performed to all new PLHIV in general department other than OI/ART or the TB ward?

- Y N

14. Are there TB staff working as members of OI/ART teams? (OI/ART Clinic only)

- Y N

15. Is there a person responsible for identifying coughing patients at:

- entrance/triage of OI/ART OPD? Y N
- MMM meetings? Y N
- entrance of general consultation Y N

16. If yes, does the staff identify and separate suspected (coughing) or known sputum smear-positive pulmonary TB patients from other patients at:

- entrance/triage of OI/ART OPD? Y N
- MMM meetings? Y N
- entrance of general consultation? Y N

OI/ART consultation rooms								
TB-HIV consultation rooms								
Counseling room								
Drug dispensation room								
Sputum smear area								
Sputum collection								
TB ward								

Summary of the assessment visit

Strengths	Weaknesses
-	-
-	-
-	-
-	-
Problems identified	

-
-
-
-
-

Prioritization Table for IC Assessment

	Priority	Description	How to implement?	When?	Budget	Comment
--	----------	-------------	-------------------	-------	--------	---------

Managerial activities						
------------------------------	--	--	--	--	--	--

Administrative controls						
--------------------------------	--	--	--	--	--	--

1						
2						
3						

Environmental controls						
-------------------------------	--	--	--	--	--	--

1						
2						
3						

Personal Protective Equipment						
--------------------------------------	--	--	--	--	--	--

1						
2						
3						

Date of Assessment:	
----------------------------	--

Date of next assessment:	
---------------------------------	--

លេខរៀង:.....

លិខិតបញ្ជូន (REFERRAL CARD)

១. លេខកូដ រឿងរ៉ាវអតិថិជន :..... ភេទ អាយុ

២. បញ្ជូនមកពី (Refer from): ឈ្មោះកន្លែង :

មណ្ឌលផ្តល់ប្រឹក្សា និងធ្វើតេស្តឈាមរកមេរោគអេដស៍ (VCCT) សេវា OI/ART ក្រុមថែទាំតាមផ្ទះ

កម្មវិធីការពារការចម្លងពីម្តាយទៅកូន (PMTCT) កម្មវិធីរបេង (TB) គ្លីនិកកាមរោគ

សេវាព្យាបាលជំងឺកុមារ ផ្នែកព្យាបាលជំងឺឆ្លង (ជំងឺទូទៅ) ផ្នែកព្យាបាលជំងឺសើស្បែក ផ្នែកសម្ភព

សេវាពន្យារកំណើត ផ្នែកវះកាត់ សេវាព្យាបាលជំងឺមាត់ធ្មេញ

សេវាព្យាបាលផ្សេងទៀត (សូមបញ្ជាក់)

៣. បញ្ជូនទៅកាន់ (Refer to): ឈ្មោះកន្លែង:

មណ្ឌលផ្តល់ប្រឹក្សា និងធ្វើតេស្តឈាមរកមេរោគអេដស៍ (VCCT) សេវា OI/ART ក្រុមថែទាំតាមផ្ទះ

កម្មវិធីការពារការចម្លងពីម្តាយទៅកូន (PMTCT) កម្មវិធីរបេង (TB) គ្លីនិកកាមរោគ

Pediatric AIDS Care សេវាព្យាបាលផ្សេងទៀត (សូមបញ្ជាក់)

ហត្ថលេខានិង ឈ្មោះអ្នកបញ្ជូន

ថ្ងៃ ខែ.....ឆ្នាំ.....

សំរាប់ PMTCT តែប៉ុណ្ណោះ	Tuberculosis
<p>1. រដូវចុងក្រោយ: ថ្ងៃ ខែ.....ឆ្នាំ.....</p> <p>2. ថ្ងៃប្រហាក់ប្រហែលសំរាល: ថ្ងៃ ខែ.....ឆ្នាំ.....</p> <p>3. ការព្យាបាល:</p> <p>បង្ការដោយ ARV <input type="checkbox"/> ថ្ងៃខែឆ្នាំចាប់ផ្តើមប្រើ:.....</p> <p>ART <input type="checkbox"/> ថ្ងៃខែឆ្នាំចាប់ផ្តើមប្រើ:.....</p>	<p>TB Symptom Screening In the last 4 weeks:</p> <p><input type="checkbox"/> fever, anytime of any duration</p> <p><input type="checkbox"/> cough, anytime of any duration</p> <p><input type="checkbox"/> Two weeks or more of drenching night sweats</p> <p>TB History: <input type="checkbox"/> PTB <input type="checkbox"/> SS+ <input type="checkbox"/> SS- <input type="checkbox"/> EPTB</p> <p>Date of TB diagnosis: _____ / _____ / _____</p> <p>Date of TB treatment initiation: _____ / _____ / _____</p> <p>TB treatment: _____</p>

**ប័ណ្ណសម្រាប់ស្រាវជ្រាវរោគសញ្ញាជំងឺរមេងទៅលើអ្នកជំងឺរមេង
TB Symptom Screening Card Among PLHIV**

១- ឈ្មោះ RH/OI&ART :..... Date of TB Screening:

២- ព័ត៌មានពាក់ព័ន្ធនឹងអតិថិជន (Client's Information) :

- លេខកូដ ឬ ឈ្មោះ (Name or Code #) :..... អាយុ (Age) :..... ភេទ (Sex) :.....
- អាសយដ្ឋាន (Address) : ភូមិ (Village) :..... ឃុំ (Commune) :..... ស្រុក (District) :.....

៣- រោគសញ្ញាក្នុងរយៈពេល៤សប្តាហ៍ចុងក្រោយ (Symptoms in the last 4 weeks) :

- ធ្លាប់មានក្អក (cough, anytime of any duration?) : មាន (Yes) គ្មាន (No)
- ធ្លាប់មានក្តៅខ្លួន (fever, anytime of any duration?): មាន (Yes) គ្មាន (No)
- មានបែកញើសជោកខុសធម្មតានៅពេលយប់ រយៈពេល២សប្តាហ៍ ឬលើស : មាន (Yes) គ្មាន (No)
(two weeks or more of drenching night sweats?)

- ប្រសិនបើគ្មានរោគសញ្ញាណាមួយទេ ត្រូវពិចារណាដើម្បីចាប់ផ្តើមព្យាបាលបង្ការ IPT (if no symptom, **IPT** can be initiated by OI/ART clinician)
- ប្រសិនបើមានរោគសញ្ញាណាមួយ ក្នុងចំណោមរោគសញ្ញាខាងលើ ត្រូវបញ្ជូនអ្នកជំងឺទៅផ្នែកព្យាបាលជំងឺរមេង ដើម្បីពិនិត្យកំហក និង ថតស្រូត ដោយប្រើប្រាស់លិខិតបញ្ជូនបន្ទាប់ពីបានបំពេញផ្នែកស្រាវជ្រាវរោគសញ្ញាជំងឺរមេង (if yes, **refer client to TB service** for sputum smear and chest X-Ray and using the Referral card with after filling the TB symptom screening part)

National Center for HIV/AIDS,
Dermatology and STD

Facility Pre-ART (OI) report

ឆ្នាំ (year)		ត្រីមាស(Quarter)			
ប្រភេទ (Category)	អាយុ Age	ភេទ (Sex)		សរុប Total	
		ប្រុស Male	ស្រី Female		
ចំនួនអ្នកជំងឺដែលសកម្មទទួលបានការព្យាបាល OI រហូតដល់ចុងត្រីមាសមុន Number of Active Patients at the end of Preceding quarter	>14				
	5 to 14				
	1 to 4				
	<1				
ចំនួនអ្នកជំងឺថ្មី ព្យាបាល OI លើកដំបូងក្នុងត្រីមាសនេះ Number of New Patients (First OI Care visit) during quarter	>14	Total			
		TB screen +			
		TB screen -			
		IPT Started			
		CPT Started			
		TB Tx Started			
		Pregnant			
	PP (at least 3)				
	5 to 14	Total			
		CPT Started			
	1 to 4	Total			
		CPT Started			
	<1	Total			
		CPT Started			
Total CPT					
សរុប Total					
ចំនួនអ្នកជំងឺដែលចាកចេញពី ការព្យាបាល OI ក្នុងត្រីមាសនេះ (Number of Patients who left OI Care during quarter)	បាត់មុខ (Lost)	>14			
		5 to 14			
		1 to 4			
		<1			
	ស្លាប់ (Died)	>14			
		5 to 14			
		1 to 4			
		<1			
	ចាប់ផ្តើម (Start ART)	>14			
		5 to 14			
		1 to 4			
		<1			
សរុប Total					
ចំនួនអ្នកជំងឺដែលសកម្មព្យាបាល OI រហូតដល់ចុងត្រីមាសនេះ (Number of Active Patients at the end of the quarter)	>14	Total			
		Pregnant			
		PP (at least 3)			
	5 to 14	Total			
		1 to 4			
		<1			
	>14	Total			
		Pregnant			
		5 to 14			
	1 to 4	Total			
1 to 4					
<1					

Date:
signature:

Name Facility				
ឆ្នាំ (year)	ត្រីមាស(Quarter)			
ប្រភេទ (Category)	អាយុ Age	ភេទ (Sex)		សរុប Total
		ប្រុស Male	ស្រី Female	
ចំនួនអ្នកជំងឺដែលសកម្ម ទទួលបានការព្យាបាលដោយ ART នៅចុងត្រីមាសមុន Number of Active Patients on ART at the end of Preceding quarter	>14			
	5 to 14			
	1 to 4			
	<1			
A				
ចំនួនអ្នកជំងឺថ្មីចាប់ផ្តើមព្យាបាលដោយ ART នៅក្នុងមន្ទីរពេទ្យបង្អែក/ គ្លីនិក នៅក្នុងត្រីមាស Number of New Patients started in ART Care at this facility during this quarter	>14	Total		
		TB screen +		
		TB screen -		
		IPT Started		
		CPT Started		
		TB Tx Started		
		Pregnant		
	PP (at least 3)			
	5 to 14	Total		
		CPT Started		
	1 to 4	Total		
		CPT Started		
	<1	Total		
CPT Started				
Total CPT				
សរុប Total				
B				
ចំនួនអ្នកជំងឺដែលបានបញ្ជូនចូល នៅក្នុងរយៈពេលត្រីមាស (Number of Patients transferred in during this quarter)	>14			
	5 to 14			
	1 to 4			
	<1			
	សរុប Total			
C				
ចំនួនអ្នកជំងឺដែលចាកចេញពីការ ព្យាបាលដោយ ART ក្នុងត្រីមាស (Number of Patients Who Left ART Care during this quarter)	បញ្ជូនចេញ (Transferred Out)	>14		
		5 to 14		
		1 to 4		
		<1		
	លះបង់ការព្យាបាល (Lost)	>14		
		5 to 14		
		1 to 4		
		<1		
	ស្លាប់ (Died)	>14		
		5 to 14		
		1 to 4		
		<1		
សរុប Total				
D				
ចំនួនអ្នកជំងឺដែលសកម្ម ទទួលបានការព្យាបាលដោយ ART រហូតដល់ចុងត្រីមាស (Number of Active Patients at end of quarter)	>14	All		
		Pregnant		
		TB Tx Started		
		PP (at least 3)		
		5 to 14		
		1 to 4		
		<1		
សរុប Total				
E				
(Number of Patients Active on ART who have TB)	>14			
	5 to 14			
	1 to 4			
	<1			
	សរុប Total			

Annex8: IPT Standard Operating Procedure Algorithm for Adults and Adolescents (where TST is available)

