



5

Tuberculosis/HIV Checklist

5.1 Background

In sub-Saharan Africa, tuberculosis (TB) is the leading cause of death among people living with HIV (PLHIV), and parental deaths due to TB have resulted in almost 10 million orphan children worldwide by 2009 [1-2]. As the number of women living with HIV has increased, TB incidence among women in their childbearing years has also increased, leading to an increased risk of TB- and HIV-related morbidity and mortality for mothers and their children [3-4]. In high HIV prevalence settings, such as sub-Saharan Africa, TB is reported to cause up to 15% of all maternal mortality [5]. Maternal TB presents a risk not only to the pregnant woman, but also to her newborn and young children. HIV-infected pregnant women with TB disease are at increased risk of transmitting *both* TB and HIV to their infants [3-4]. Focusing efforts on prevention, identification, and treatment of TB disease in HIV-infected pregnant women has the potential to improve health outcomes not just for women, but for their children as well.

5.2 Purpose and Intended Use of the Tool

In countries implementing lifelong antiretroviral treatment (ART) for pregnant and breast-feeding women (commonly referred to as “Option B+”), prevention of mother-to-child HIV transmission (PMTCT) sites will effectively function as HIV care and treatment centers for women and, often, for their children and families as well. As national PMTCT programs are revising guidelines, training curricula, and recording and reporting tools for Option B+, this is a unique opportunity to incorporate TB/HIV activities into program planning efforts. TB/HIV services should also be integrated into the broader continuum of maternal, newborn, and child (MNCH) settings, including community and facility-based sites providing postpartum services, immunizations, and other child health interventions.

In order to reduce the impact of TB among mothers and children, it is essential that PMTCT and MNCH programs adopt the World Health Organization (WHO) recommendations for TB/HIV, including implementing TB intensified case finding (e.g. screening of all PLHIV and systematic evaluation of contacts of people with potentially infectious TB), infection control measures, and isoniazid preventive therapy (IPT) [6-8].

5.3 Audience

The checklist below is intended to assist national program managers, clinic administrators, and other public health officials as they work towards integration of TB/HIV services in PMTCT and MNCH programs.

Readiness Assessment: Integration of TB/HIV Activities in PMTCT Sites

Key: Before implementation Early in implementation During implementation

POLITICAL COMMITMENT & POLICY ENDORSEMENT	COMPLETED	IN PROCESS	NOT YET STARTED
National-Level Activities			
PMTCT/MNCH, pediatric HIV, and TB stakeholders are included in national TB/HIV committee membership			
National PMTCT guidelines emphasize the impact of TB on women and their children and the importance of implementing TB/HIV activities including intensified TB case finding, infection control measures and IPT at ANC/PMTCT sites			
National TB/HIV guidelines specifically address the needs of pregnant and breastfeeding women and children			
National policies support use of IPT in HIV-infected pregnant and breastfeeding women in accordance with WHO recommendations			
National TB and HIV guidelines specifically recommend contact tracing for children less than 5 years old and all PLHIV who are exposed to a sputum smear-positive TB case			
Site-Level Activities			
Site-level policies are developed to promote linkage between PMTCT/MNCH and TB clinical services			
TRAINING	COMPLETED	IN PROCESS	NOT YET STARTED
National-Level Activities			
National PMTCT/MNCH training curriculum is revised to include principles of TB intensified case finding, infection control, and IPT			
National TB/HIV training curriculum is revised to emphasize the needs of pregnant and breastfeeding women and their children			
Site-Level Activities			
Each PMTCT/MNCH site designates one staff person to attend training on TB/HIV (either as part of PMTCT training or through separate TB/HIV training program)			
INFECTION CONTROL	COMPLETED	IN PROCESS	NOT YET STARTED
Site-Level Activities			
Site-level infection control focal person or committee is identified			
Site-level infection control policy is developed, including plans for regular review and updating			
Site-level infection control policy and plans are implemented and monitored by the designated focal person			
Triage policies are implemented to rapidly identify patients suspected of having TB (e.g. coughing patients) and separate them from other patients for rapid evaluation			
Patient waiting areas and medical examination rooms are well-ventilated, e.g. with open windows/doors and fans			
Healthcare workers are trained to use personal protective measures when examining patients with presumptive TB or when overseeing sputum production			
Healthcare workers are offered regular TB screening and those identified with TB are followed to ensure they receive appropriate TB treatment			
Patient educational materials about TB signs and symptoms and cough etiquette are visibly displayed in the clinic			
INTENSIFIED CASE FINDING	COMPLETED	IN PROCESS	NOT YET STARTED
Site-Level Activities			
Referral mechanisms for evaluation of women and children who are suspected of having TB are established			
A standardized TB symptom screening tool ^a for PLHIV is available and is used to screen pregnant and breastfeeding women at every clinical visit			
All infants or children living with HIV who are seen in MNCH services are screened for TB disease using a standardized symptom screening tool ^b			
Women and children with presumptive TB are actively followed to ensure that they are appropriately evaluated, including access to Xpert MTB/RIF as the initial diagnostic test for PLHIV			

INTENSIFIED CASE FINDING		COMPLETED	IN PROCESS	NOT YET STARTED
Site-Level Activities				
Women and children confirmed to have TB disease are followed to ensure that they are initiated on TB treatment as soon as possible				
Women and children identified with TB disease are encouraged to bring other household members to the clinic for TB screening and evaluation				
Infants born to mothers with known TB disease (or with other known household TB contact) are fully evaluated for TB disease and receive treatment or prophylaxis in accordance with national guidelines				
ISONIAZID PREVENTIVE THERAPY		COMPLETED	IN PROCESS	NOT YET STARTED
Site-Level Activities				
HIV-infected pregnant and breastfeeding women in whom active TB disease is excluded ^c are offered IPT				
HIV-infected children (age 1 year and older) in whom active TB disease is excluded ^c are offered IPT, regardless of TB contact history				
HIV-infected infants (age < 1 year) who have known contact with a TB case and in whom active TB disease ^c is excluded are offered IPT				
MONITORING AND EVALUATION (M&E)		COMPLETED	IN PROCESS	NOT YET STARTED
National- and Site-Level Activities				
Mechanism for communication between TB and PMTCT M&E systems is established				
PMTCT M&E tools are updated to capture data on TB screening, TB diagnosis, TB treatment, TB treatment outcomes, IPT initiation and IPT completion				
TB suspect registers are available to enhance follow-up women (or children) who need evaluation for TB disease				
IPT registers or other M & E tools are available to track adherence and outcomes of women (or children) initiated on IPT				
TB infection control measures and healthcare worker surveillance for TB are routinely documented				

^a WHO recommends the use of an evidence-based 4-symptom screen among all adults living with HIV, including pregnant women: current cough, fever, night sweats, or weight loss. An individual with one or more of these symptoms should be considered to have presumptive TB and referred for evaluation [6].

^b WHO recommends that children living with HIV be screened for TB by asking about fever, current cough, contact history with a TB case, or poor weight gain [defined as reported weight loss, or very low weight (weight-for-age less than -3 z-score), or underweight (weight-for-age less than -2 z-score), or confirmed weight loss (>5%) since the last visit, or growth curve flattening].

^c Active TB disease can be reliably excluded in people living with HIV who screen negative (i.e. answer no to all questions) by the WHO evidence-based TB screening tool. Patients should continue to be closely followed during the IPT course to assess for new TB symptoms.

Resources

- 1 World Health Organization. Global Tuberculosis Control: WHO Report 2013. Geneva, Switzerland: World Health Organization, 2013. Available at http://www.who.int/tb/publications/global_report/en/.
- 2 STOP TB Symposium 2011: Meeting the Unmet Needs of Women and Children for TB Prevention, Diagnosis and Care: Expanding Our Horizons. Available at http://www.stoptb.org/wg/dots_expansion/childhoodtb/new.asp.
- 3 Gupta A, Bhosale R, Kinikar A, et. al. Maternal Tuberculosis: A Risk Factor for Mother-to-Child Transmission of Human Immunodeficiency Virus. *The Journal of Infectious Diseases*. 2011; 203:358-363.
- 4 Gupta A, Nayak U, Ram M, et. al. Postpartum Tuberculosis Incidence and Mortality among HIV-infected Women and Their Infants in Pune, India, 2002-2005. *Clinical Infectious Diseases*. 2007; 45:241-249.
- 5 Getahun H, Sculier D, Sismanidis C, Grzemska M, Raviglione M. Prevention, Diagnosis, and Treatment of Tuberculosis in Children and Mothers: Evidence for Action for Maternal, Neonatal, and Child Health Services. *The Journal of Infectious Diseases*, 2012; 205 (supplement 2):S216-S227.
- 6 World Health Organization. Guidelines for Intensified TB Case-finding and Isoniazid Preventive Therapy for People Living with HIV in Resource-Constrained Settings. Geneva, Switzerland: World Health Organization, 2011. Available at http://whqlibdoc.who.int/publications/2011/9789241500708_eng.pdf.
- 7 World Health Organization. Recommendations for Investigating Contacts of Persons with Infectious Tuberculosis in Low- and Middle-Income Countries. Geneva, Switzerland: World Health Organization, 2012. Available at http://apps.who.int/iris/bitstream/10665/77741/1/9789241504492_eng.pdf.
- 8 World Health Organization. WHO Policy on TB Infection Control in Health-Care Facilities, Congregate Settings and Households. Geneva, Switzerland: World Health Organization, 2009. Available at: <http://www.who.int/tb/publications/2009/9789241598323/en/>

Point of Contact: Surbhi Modi, Centers for Disease Control and Prevention, Division of Global HIV/AIDS, Maternal and Child Health Branch; smodi@cdc.gov;