



**The Global Coalition  
on Women and AIDS**

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## Tackling TB and HIV in Women: **An Urgent Agenda**

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## TACKLING TB AND HIV IN WOMEN: AN URGENT AGENDA<sup>1</sup>

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The interlinked tuberculosis (TB) and human immunodeficiency virus (HIV) epidemics are taking a dramatic toll on women's lives, notably in countries with high HIV prevalence. While TB is now the third leading cause of death among women aged 15-44, killing some 700,000 women every year and causing illness in millions more, it is particularly lethal for women living with HIV. Yet the burden of the dual TB/HIV epidemic on women, and the gender-related barriers to detection and treatment, are not being addressed explicitly by global donors, national health systems, or community groups. The urgency of this situation demands that TB be elevated as a key women's health issue, and that TB screening, prevention and treatment be made a routine part of HIV, reproductive health and maternal and child health services. The lives of millions of women depend on our ability to move this agenda forward.

While it is not clear if women and men have different levels of biological susceptibility to TB, gender roles and norms in many societies affect a woman's ability to access health information and services and to obtain appropriate treatment.<sup>i</sup> The TB epidemic is being fueled by the AIDS epidemic in many parts of the world, and in the worst affected parts of Africa, women of reproductive age are disproportionately affected. In addition, the impact of stigma and fear related to TB and to perceptions about the overlap between TB and HIV often result in women being tested and diagnosed at later stages of disease, which can severely limit the chances for successful treatment and increase risks of transmission to others.

This paper is part of a series of briefing papers being published by the Global Coalition on Women and AIDS (GCWA) designed to deepen the agenda on women and AIDS, to build consensus among a larger group of AIDS and women's health advocates on key messages and evidence, and to set out clear recommendations and calls for next steps and actions. By highlighting the impact of TB and HIV on women, this paper seeks to galvanize forces on the international, national, and community levels to press for greater integration of TB and HIV in programmes and services reaching women and girls.

### Quick Facts:

- TB is an airborne, contagious disease transmitted through coughing, sneezing, talking, or spitting. If untreated, a person with active TB disease infects an estimated 10-15 other people every year.<sup>ii</sup> TB can affect many organs of the body, but only those with TB in the lungs can infect others. Persons with compromised immune systems due to malnutrition or other reasons, such as HIV infection, are at greatly increased risk of falling ill.
- In 2008, there were an estimated 9.4 million new cases of TB. Women account for an estimated 3.6 million cases.
- TB can be cured with appropriate drug therapy.<sup>iii</sup> The global treatment success rate for TB is 87 percent. Between 1995 and 2008, 36 million people were

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<sup>1</sup> This paper was written by Janet Fleischman, senior consultant to the Global Coalition for Women and AIDS

treated successfully under DOTS, with over 6 million lives saved to date. However, in 2008 only about 61 percent of estimated TB cases were notified under DOTS-based programmes. The lowest rate of case detection is in Africa.<sup>iv</sup>

- TB is the leading cause of death for people living with HIV in Africa. The majority of people living with HIV who are infected with TB do not know their HIV status, and most of those who do know their HIV status are not yet accessing antiretroviral therapy (ART).<sup>v</sup>
- Multi-drug resistant TB (MDR-TB) is a rising global threat, with particularly serious implications for people living with HIV. MDR-TB requires costly chemotherapy for up to two years, which often produce adverse drug reactions. Extensively drug-resistant TB (XDR-TB), which occurs when there is resistance to all the major classes of ant-TB drugs, has also emerged and is associated with even higher risk of death.<sup>vi</sup>

### **TB and Women Living with HIV: A Lethal Combination**

TB is complicated by and intertwined with the HIV epidemic. With over 60 percent of those living with HIV in Africa being females, they face acute risks of TB/HIV co-infection and subsequent TB disease. Pregnant women living with HIV and active TB face far higher risks of maternal mortality than women without HIV infection.<sup>vii</sup> Accordingly, universal access to TB prevention, diagnosis, and treatment services is critical for women living with HIV. Yet despite the importance of early diagnosis and treatment of TB for successful outcomes, few mechanisms are in place to target women of reproductive age with TB services, especially for women living with HIV. Too often, these women face the lethal combination of living with HIV and having poor access to health services, making them particularly vulnerable to poorer outcomes linked to undetected or late detected TB disease.

A deadly synergy exists between HIV and TB. HIV weakens the immune system, which makes a person infected with TB much more likely to progress to TB disease. HIV alters the way TB presents, with higher proportions of smear-negative pulmonary TB and extra-pulmonary TB making diagnosis more difficult.<sup>viii</sup> The patient's immune response to TB may also accelerate the progression of HIV.<sup>ix</sup> In 2008, there were an estimated 1.4 million cases of TB among people living with HIV, accounting for 15 percent of all TB cases, with 78 percent of HIV-positive TB cases being in Africa, and 13 percent in Southeast Asia.<sup>x</sup> TB is the most common related illness of those on antiretroviral treatment (ART). People living with HIV are 20-30 times more likely to develop TB than those without HIV, and one-quarter of those with HIV ultimately die of TB.<sup>xi</sup> This underscores the risk that many women living with HIV will fall ill, remain untreated and often contagious, and ultimately die without being diagnosed with TB.

### **Impact of TB-HIV Co-Infection on Maternal and Child Health**

Studies are increasingly revealing the important implications of TB/HIV co-infection for maternal and child health. South Africa, for example, has one of the world's highest rates of TB/HIV co-infection. For pregnant women in communities with HIV prevalence rates about 30 percent, TB notification rates reached 1,468 per 100,000 in 2004, and have

continued to increase. TB rates are now peaking for women in their 20s and men in their 30s, reflecting the impact of the AIDS epidemic.<sup>xii</sup> Other studies of HIV-positive pregnant women in South Africa have also found very high rates of TB, over 2 percent. One study found HIV-positive pregnant women were 10 times more likely to have TB than HIV-negative pregnant women.<sup>xiii</sup> A study in Pune, India, found that TB increased the probability of death for HIV-infected women and their infants.<sup>xiv</sup>

Under-diagnosis of TB among women and the broader neglect of the impact of this dual epidemic also affect children, especially since women are hit hardest in their peak reproductive and economically productive years. Increasingly, researchers have noted the emergence of perinatal TB with the HIV epidemic. Mother-to-child transmission of TB is estimated to be 15 percent within three weeks of birth,<sup>xv</sup> and some studies suggest that TB in pregnant women living with HIV may increase the risk of HIV *in utero* transmission.<sup>xvi</sup> When combined with the high burden of undiagnosed active TB among pregnant women in areas with high HIV prevalence rates, these findings are leading to calls for increasing provider-initiated screening for TB among pregnant women in antenatal clinics.<sup>xvii</sup>

Children are also at risk of infection from their main caregivers, almost always women, and are often pulled out of school to help care for sick family members or to provide additional income for the family. Children who are infected with HIV are especially vulnerable to TB disease, which increases the risk of child mortality.<sup>xviii</sup> TB accounts for some 20 percent of all deaths in HIV-infected children.<sup>xix</sup>

### **Gender Dynamics of TB and Women**

TB is associated with and exacerbated by poverty, overcrowding, and malnutrition, conditions commonly faced by women in resource-limited countries. In 2008, 700,000 women died of TB, including 200,000 women living with HIV, and 3.6 million women fell sick with active TB.<sup>xx</sup> A study by Harvard University, WHO and the World Bank found that TB is a leading cause of “healthy years lost” for women of reproductive age.<sup>xxi</sup> These startling statistics clearly show that TB has become a major women’s health issue, with particularly serious implications for women living with HIV.

Women are often affected differently by TB than men. In particular, TB progresses more quickly in women of reproductive age than in men in that age group.<sup>xxii</sup> Growing evidence also suggests that TB has implications for women’s reproductive health, including links with infertility, risks of prematurity, obstetric morbidity, and low birth weight.<sup>xxiii</sup>

The impact of gender dynamics on TB detection and treatment has not been studied extensively, but there are some clear links. To begin with, gender-related barriers can impact women’s access to TB information and services, which contribute to late or missed case detection in women. Where women do not control family resources, they often delay seeking medical care for themselves. Where women are not permitted to leave the home without permission, and are fearful of being seen going to a TB clinic, they often miss health promotion programs and remain unaware of TB symptoms. Where women suffer stigma and discrimination related to their HIV or TB status, they may not seek treatment

for fear of rejection. Some studies have shown that women wait up to twice as long as men to seek treatment for TB, which can increase the severity of their illness, decrease the success of treatment, and raise the risks that they will infect others.<sup>xxiv</sup> Evidence suggests, however, that once in treatment, women in many settings are more likely than male counterparts to complete treatment.

### **Moving Forward: Developing Gender-Sensitive TB Programs**

TB/HIV co-infection in women has become a public health crisis in many high burden countries, requiring new strategies, sustained national and international attention, and appropriate resources. International donors, multilateral agencies, national-level policymakers, healthcare providers, and women's health and TB and HIV advocates all have important roles to play in addressing the gaps that women face in accessing TB testing and treatment. They can help to ensure that TB screening and information exchange is made a routine part of HIV clinics, reproductive health and maternal and child health services in high burden countries. The following areas require particular attention:

- Improve case detection of TB among women by routinely integrating TB screening, isoniazid preventive therapy, and TB treatment into ante-natal care and HIV services, including in prevention of mother-to-child-transmission (PMTCT) services. Identify and disseminate "best practices" in this area as part of the PMTCT scale up.
- In high HIV-burden areas, integrate TB screening, isoniazid preventive therapy, TB treatment, and education into key entry points to the health system for women, notably antenatal care, family planning services, and child immunization clinics.
- Identify gender-related barriers that women face in accessing TB screening, diagnosis, and treatment services, in order to effectively empower them to seek services and complete treatment. Support research on gender-related factors that increase women's vulnerability to TB and impede their diagnosis and successful treatment. Include TB as an area of interest within research related to HIV and women as well.
- Promote better monitoring and evaluation of TB and HIV programs to ensure that gender-related barriers are identified and addressed, that sex and age disaggregated data on TB is collected and fully utilized to improve prevention and care, and that indicators are harmonized.
- Strengthen the capacity of healthcare providers, HIV testing counselors, and community health workers to provide women with TB prevention, screening, treatment and treatment literacy as a routine part of their work with women in areas with high HIV burden.
- Mobilize women's organizations and women's health advocates to work on TB/HIV co-infection in women and better link these groups with communities working in TB, HIV and women's health. Ensure TB-HIV integration is a core feature of national strategies and donor policies on women and AIDS.

- <sup>i</sup> See M.J. Weiss, J. Sommerfeld, M.W. Upekar, "Social and cultural dimensions of gender and tuberculosis," *the International Journal and Tuberculosis and Lung Disease*, 2008, 12(7); 829-830,
- <sup>ii</sup> WHO and Stop TB Partnership, "2009 Update: Tuberculosis Facts," [http://www.who.int/tb/publications/2009/factsheet\\_tb\\_2009update\\_dec09.pdf](http://www.who.int/tb/publications/2009/factsheet_tb_2009update_dec09.pdf)
- <sup>iii</sup> The standard TB therapy involves two months of treatment with four antimicrobial drugs given with treatment supervision every day and then two microbial drugs for four months ideally every day but at least three times per week under as close supervision as possible. ART should be initiated for *all* people living with HIV with active TB disease irrespective of CD4 cell count. Anti-TB treatment should be started first, followed by ART as soon as possible and within the first 8 weeks of starting TB treatment. Isoniazid is a single anti-TB drug for those infected with TB, especially for those living with HIV, to prevent TB infection from progressing into TB disease.
- <sup>iv</sup> WHO, "Global Tuberculosis Control: A Short Update to the 2009 Report," [http://whqlibdoc.who.int/publications/2009/9789241598866\\_eng.pdf](http://whqlibdoc.who.int/publications/2009/9789241598866_eng.pdf), p. 10.
- <sup>v</sup> *Ibid*, p. 31.
- <sup>vi</sup> WHO, "Tuberculosis," <http://www.who.int/mediacentre/factsheets/fs104/en/index.html>.
- <sup>vii</sup> Andrea DeLuca, MHS, Richard E. Chaisson, MD, and Neil A. Martinson, MBBCh, MPH, "Intensified Case Finding for Tuberculosis in Prevention of Mother-to-Child Transmission Programs: A Simple and Potentially Vital Addition for Maternal and Child Health," *Acquir Immune Defic Syndr*, Volume 50, Number 2, February 1 2009, p. 196.
- <sup>viii</sup> Haileyesus Getahun MD, Mark Harrington MA, Rick O'Brien MD, Paul Nunn FRCP, "Diagnosis of smear-negative pulmonary tuberculosis in people with HIV infection or AIDS in resource-constrained settings: informing urgent policy changes," *The Lancet*, Volume 369, Issue 9578, June 16, 2007.
- <sup>ix</sup> D.S. MacDougall, "TB & HIV: the deadly intersection," *J Int Assoc Physicians AIDS Care*. 1999 May;5(5):20-7, <http://www.ncbi.nlm.nih.gov/pubmed/11367039?dopt=AbstractPlus&holding=f1000,f1000m,isrcn>
- <sup>x</sup> The World Health Organization, "Global Tuberculosis Control: A Short Update to the 2009 Report," [http://whqlibdoc.who.int/publications/2009/9789241598866\\_eng.pdf](http://whqlibdoc.who.int/publications/2009/9789241598866_eng.pdf).
- <sup>xi</sup> The World Health Organization, "TB/HIV Facts 2009," [http://www.stoptb.org/wg/tb\\_hiv/assets/documents/Fact%20sheet%20HIV%20TB%202009%20Update.pdf](http://www.stoptb.org/wg/tb_hiv/assets/documents/Fact%20sheet%20HIV%20TB%202009%20Update.pdf).
- <sup>xii</sup> Salim S. Abdool Karim, Gavin J. Churchyard, Quarraisha Abdool Karim, Stephen D. Lawn, "HIV infection and tuberculosis in South Africa: an urgent need to escalate the public health response," *The Lancet*, August 2009, <http://press.thelancet.com/saser3.pdf>.
- <sup>xiii</sup> Paula Kali, Glenda Gray, et, al, "Combining PMTCT with active case finding for tuberculosis," *JAIDS*, Volume 2, Issue 3, July 2006, [http://journals.lww.com/jaids/Fulltext/2006/07000/Combining\\_PMTCT\\_With\\_Active\\_Case\\_Finding\\_for.18.aspx#P15](http://journals.lww.com/jaids/Fulltext/2006/07000/Combining_PMTCT_With_Active_Case_Finding_for.18.aspx#P15).
- <sup>xiv</sup> A. Gupta, U. Nayak, et. al., "Postpartum tuberculosis incidence and mortality among HIV-infected women and their infants in Pune, India, 2002-2005," *Clin Infect Dis*. 2007 Jul 15;45(2):250-3, <http://www.ncbi.nlm.nih.gov/pubmed/17578786>.
- <sup>xv</sup> T. Pillay, M. Khan, J. Moodley, M. Adhikari, and H. Coovadia, "Perinatal tuberculosis and HIV-1: considerations for resource-limited settings," *The Lancet*, Vol. 4, March 2004, p. 155.
- <sup>xvi</sup> Amita Gupta, MD, MHS, "Mother to child transmission of TB: what do we know?" Presentation at conference in Cape Town, South Africa, "Catalyzing HIV/TB Research: innovation, funding, networking," July 19, 2009.
- <sup>xvii</sup> Celine Gunder, MD, ScM, "TB/HIV co-infection in pregnant women," presentation at the John Hopkins University Division of Infectious Diseases, March 29, 2010.
- <sup>xviii</sup> Andrea DeLuca, et. al., op. cit., p. 196.
- <sup>xix</sup> Richard E. Chaisson, MD, and Neil A. Martinson, M.B., B. Ch., MPH, "Tuberculosis in Africa – Combating an HIV-Driven Crisis," *The New England Journal of Medicine*, 358;11, March 13, 2008, p. 1089.
- <sup>xx</sup> WHO and Stop TB Partnership, "2009 Tuberculosis: Women and TB," <http://www.who.int/tb/womenandtb.pdf>.
- <sup>xxi</sup> WHO, "Frequently Asked Questions about TB and HIV," <http://www.who.int/tb/challenges/hiv/faq/en/print.html>
- <sup>xxii</sup> WHO, *Ibid*.
- <sup>xxiii</sup> USAID, "Lantos-Hyde United States Government Tuberculosis Strategy," March 24, 2010, [http://www.usaid.gov/our\\_work/global\\_health/id/tuberculosis/publications/usg-tb\\_strategy2010.pdf](http://www.usaid.gov/our_work/global_health/id/tuberculosis/publications/usg-tb_strategy2010.pdf).
- <sup>xxiv</sup> <http://www.tbalert.org/worldwide/TBAndwomen.php>.

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The Global Coalition on Women and AIDS (GCWA) is a worldwide alliance of civil society groups, networks of women living with HIV, women's organizations, AIDS service organizations, and the United Nations system, committed to strengthening AIDS programming for women and girls.

Our mission is to mobilize leadership and political will to influence laws, policies, programmes, and funding to promote action that gives girls and women the power to prevent HIV infection, and to live fulfilling and productive lives when living with HIV.