

# WOMEN AND TUBERCULOSIS

Taking a look at a neglected issue



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Tuberculosis (TB), an airborne infectious disease, is the third leading cause of death for women worldwide.<sup>1</sup> Women experience different risk factors, social and economic consequences, and barriers to treatment than men. Yet little has been done to address the biological differences and gender disparities that present a unique challenge to the diagnosis and treatment of TB in women. In 2008, 3.6 million women developed TB<sup>2</sup> and approximately another 500,000 died as a result.<sup>3</sup> TB affects women mainly during their economically and reproductively active years, causing a substantial burden on children and families. Immediate action is needed to address the suffering TB causes and to eliminate the disease as a leading killer of women.

## WHAT IS TB, AND HOW IS IT TREATED?



TB is an infectious disease caused by bacteria that often attack the lungs. It is spread through the air when an infected person coughs or sneezes. When exposed to TB, most healthy people are able to fight the bacteria by sealing it off within a part of the body, usually the lungs. These people have *latent* TB infection, where they do not feel sick and cannot spread the bacteria to others. However, in some cases, the bacteria continue to multiply in the body making a person sick with active TB disease. If not treated properly, active TB can be fatal. Latent TB infection can be treated using only one drug over the course of nine months. Active TB infection is treated using numerous drugs taken over a 6–12 month period. It is crucial that infected persons take medication exactly as prescribed and complete the full course of treatment. If the drugs are taken incorrectly or stopped prematurely, TB disease can reemerge and become resistant to medication. These drug resistant strains of TB are much harder and more expensive to treat.

## WHAT IS THE NATURE AND MAGNITUDE OF TB AMONG WOMEN?

Diagnosis and treatment of TB has not been equal across genders. Fewer women who have TB are diagnosed with the disease, and stigma falls more heavily on women.<sup>4</sup> While men are more likely to have latent TB, women are more likely to develop active disease.<sup>5,6</sup> In developing countries TB remains the third leading cause of death among women of reproductive age (15–44 years), disproportionately affecting pregnant women and the poor.<sup>7</sup>

### TB DISPROPORTIONATELY AFFECTS POOR WOMEN ►

Poverty is a major factor for developing active TB disease. Of the 22 countries that are home to 80 percent of the world's people with active TB, 17 have an annual Gross Domestic Product (GDP) of less than US \$760.<sup>8</sup> Because women account for 70 percent of the world's poor, women in developing countries are disproportionately affected by the disease.<sup>9</sup> This poses a significant challenge to TB control, as poor women are less likely to seek medical care.<sup>10</sup>

Certain aspects of poverty make women more susceptible to developing active TB. Cramped living conditions, overcrowding, and poor ventilation facilitate the spread of TB bacteria. Furthermore, women living in poverty are at an increased risk of being sold into the sex trade. Millions of women and girls are forced into commercial sex work each year; over one million girls are from India alone.<sup>11</sup> Women and girls who engage in sex work are at an increased risk of contracting TB from clients. This risk is exacerbated by their confined living conditions and susceptibility to HIV.<sup>12</sup>

### TB PLACES PREGNANT WOMEN & THEIR BABIES AT RISK ►

TB poses a considerable risk for pregnant women and their babies. Delayed TB diagnosis in pregnant women heightens the chance of death during childbirth and causes danger to the child. Studies from Mexico and India indicate that TB positive women are twice as likely to give birth to a premature or low-birth-weight baby and four times more likely to die during childbirth. The risk of infant death also greatly increases.<sup>13</sup>

Pregnant women may take certain TB medications during pregnancy and while breastfeeding without any harmful effects to their baby.<sup>14</sup> Even so, some women stop taking their medication because they fear it will affect their breast milk and/or unborn baby.<sup>15</sup> Discontinuing TB medication prematurely is hazardous to pregnant women and their babies and can lead to the development of drug resistant TB. If left untreated, women may transmit TB to their infant or other children and family members.

**“[Millennium Development Goals] 4 and 5 will not be reached without additional emphasis on tuberculosis care and control”**

—Pamela Das and Richard Horton, *The Lancet* 33

## WHAT RISK FACTORS FOR TB ARE SPECIFIC TO WOMEN?

### WOMEN'S SOCIAL ROLES MAKE THEM MORE SUSCEPTIBLE TO DEVELOPING ACTIVE DISEASE ►

Women's social roles place them at a higher risk of contracting TB. Indoor food preparation is particularly concerning. In developing countries, women often cook indoors in very confined spaces using biomass fuel such as wood or animal dung. Studies show that women who cook with biomass fuel are more likely to develop active TB.<sup>16</sup> Evidence suggests these fuels can weaken women's respiratory systems and impair the immune system's ability to fight off bacteria.

### WOMEN FACE BARRIERS TO PROPER HEALTH SERVICES FOR DIAGNOSIS AND TREATMENT ►

In low-income countries women often have a lower socio-economic status, reduced access to economic resources, and fewer educational opportunities as compared to men. As a result, many women are unable to locate and reach qualified health services.<sup>17</sup> Furthermore, the stigma attached to a positive TB diagnosis leads many women to forgo seeking necessary medical attention. In low income countries women tend to self medicate or seek out traditional healers instead of accessing public TB clinics because they are afraid of being recognized as a TB patient by members of the community.<sup>18</sup>

These factors of stigma, low socio-economic status, and lack of education cause significant delays in the diagnosis and treatment of TB in women. A study in Vietnam found women waited nearly twice as long to visit a hospital from the onset of a cough when compared to men.<sup>19</sup> In some cases women neglected their illness until they became too sick to lead normal lives and, in some case, too sick to seek medical attention.<sup>20</sup> Delayed TB diagnosis and treatment increases chance of death and leads to further spread of the disease.

### WOMEN DO NOT RECEIVE PROPER TB DIAGNOSIS ►

Women are less likely to be screened for TB than men.<sup>21</sup> While this may be due to biological differences in symptoms, it is also likely because of the gender bias of physicians who often consider TB a "male disease."<sup>22</sup> This potential lack of screening amplifies the amount of undiagnosed cases, leading to further spread of disease.

Even when screened for TB, women are less likely to test positive for the disease than men. Studies in several countries, including Malawi, South Africa, and Bangladesh, indicate that TB is more difficult to diagnose in women.<sup>23,24,25</sup> This disparity may be attributed to biological differences, including the possibility that women have a different immune response to TB than men.<sup>26,27</sup> As a result, women may have different symptoms, signs, and outcomes. One study indicated that TB lung lesions might not be as severe in females as compared to males, which may lessen the symptoms in women and make for a more difficult diagnosis.<sup>28</sup>

Social factors also contribute to the disparity in case detection between men and women. A study in Pakistan reported that women felt uncomfortable producing the mucus needed for sputum-smear microscopy, the standard diagnostic test for TB in resource-limited settings.<sup>29</sup> The study also found that some women did not understand it was necessary to produce a mucus sample for proper diagnosis. Some women used saliva instead, which greatly affected test results. This misunderstanding led doctors to provide women instructions on how to produce a mucus sample, which resulted in a significant improvement in TB case detection. This stresses the need for increased effective patient education for women in some settings.

### TB TREATMENT OPTIONS ARE NOT GENDER SENSITIVE ►

In addition to diagnostic inadequacies, TB treatment options are not gender sensitive. The preferred method for TB treatment is Directly Observed Therapy, Short course (DOTS), a strategy where healthcare workers observe patients as they take their medicine.<sup>30</sup> While very effective, this approach depends on a woman's ability to recognize symptoms of TB and access a proper health care facility. As previously mentioned, fear of stigma and lack of education often prevent women from accessing national TB clinics, causing delays in treatment and the continued spread of disease.

## WHAT SOCIAL & ECONOMIC CONSEQUENCES DO WOMEN & TB FACE?

Positive TB diagnoses have damaging consequences for women. Socially, the stigma of having TB falls more heavily on women than men. In some communities, a positive TB diagnosis may force women into divorce or, if unmarried, create difficulty in finding a marriage partner.<sup>31</sup> In addition to stigma, TB has a profound affect on women and their families. Because TB mostly affects women in their economically and reproductively active years, the impact of the disease is strongly felt at home. Women suffering from TB are often unable to care for their children and have trouble performing household chores. The health of children with an infected mother

is also greatly affected. Research suggests children are more likely to become infected with TB if their mother has TB than if their father has the disease.<sup>32</sup> In some fatal TB cases women leave behind orphaned children.

The social and economic consequences of TB often overlap. In addition to household chores and caring for children, many women engage in work outside the home. Many women work in the agricultural or domestic sector, providing necessary additional household income. As a result, TB disease leads to a loss of work and loss of wages.<sup>33</sup>



**“As women, we usually carry the dual burden of being infected and at the same time caring for our infected and affected family members and loved ones”**

—Carol Nawina Nyirenda,  
Patient Advocate

## TB AND WOMEN: A CALL TO ACTION

A lack of political will, inadequate financing, and intense stigma remain barriers to reducing the burden of TB among women. To date, little has been done to address gender disparities of TB and eliminate this disease as a leading killer of women. It is crucial that we act now to save the lives of millions of women and reduce the burden the disease has on their families. In order to accomplish these goals, immediate action is required:

- TB programs should work to remove barriers to access, reduce delays, and improve the diagnosis and treatment of TB in women.
- Further research and investigation is needed to understand the inadequacies of diagnosing and treating TB in women, including research on gender sensitive treatment options.
- All pregnant women should be screened for TB and provided appropriate treatment and care in countries where TB is endemic.
- Routine TB screening should be incorporated into maternal and child health programs in countries where TB is endemic.
- TB and infectious disease advocates and maternal and child health advocates must work better together on a common agenda to eliminate stigma, impact policies and programming, mobilize resources, and ultimately eliminate TB's impact on women.



## Endnotes

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## THE “WHO” OF ACTION

ACTION (Advocacy to Control TB Internationally) is an international partnership of civil society advocates working to mobilize resources to treat and prevent the spread of tuberculosis (TB), a global disease that kills one person every 20 seconds.

ACTION’s mission is to build support for increased resources for effective TB control, especially among key policymakers and other opinion leaders in both high TB burden countries and donor countries. With effective policy advocacy and greater political will, rapid progress can be made against the global TB epidemic.

To learn more about ACTION’s advocacy strategies and tactics, go to: <http://www.action.org/>

You can also access ACTION’s Best Practices for Advocacy at: [http://www.action.org/best\\_practices](http://www.action.org/best_practices)

### ACTION PARTNERS ►

#### AIDES

Global Health Advocates France

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