



TUBERCULOSIS PROFILE



Tuberculosis (TB) remains an important public health problem in Brazil, which ranks 14th on the list of 22 high-burden TB countries in the world. Brazil accounts for 31 percent of all TB cases in the World Health Organization's (WHO's) Latin American Region. According to WHO's report *Global Tuberculosis Control 2009*, Brazil had an estimated 92,102 new TB cases in 2007 and an estimated incidence of 48 cases per 100,000 population, a 3.2 percent decline from the previous year. Brazil's budget for TB control more than doubled between 2002 and 2006 due to renewed political commitment to promote DOTS (the internationally recommended strategy for TB control) as the official TB policy. The DOTS case detection rate of sputum smear-positive (SS+) cases was 69 percent in 2007, just below WHO's target of 70 percent. WHO estimates that 14.1 percent of new adult TB patients are infected with HIV, although this varies from more than 20 percent in the port city of Santos in São Paulo State to less than 10 percent in other areas. Brazil was the first high-burden country to offer antiretroviral therapy to all TB-HIV co-infected patients. There were an estimated 1,056 cases of MDR-TB in 2007, 30 percent of whom received treatment, but as of March 2009, extensively-drug resistant TB has also been found in Brazil.

Country Population	191,791,000
Est. number of new TB cases	92,102
Est. TB incidence (all cases per 100,000 pop)	48
DOTS population coverage (%)	75
Rate of new SS+ cases (per 100,000 pop)	26
DOTS case detection rate (new SS+) (%)	69
DOTS treatment success rate, 2006 (new SS+) (%)	72
Est. new adult TB cases (HIV) + (%)	14.1
MDR-TB among all new TB cases (%)	0.9
All data are for 2007 except where otherwise noted.	
WHO Global TB Report 2009	

Brazil adopted DOT (directly observed treatment) in 1998, initially implementing it in demonstration areas in four states. Since then, it has increased from 7 percent in 2000 to 86 percent in 2006, but fell to 75 percent in 2007. The Ministry of Health (MOH) intends to implement DOT in 100 percent of 315 municipalities that are responsible for 70 percent of Brazil's TB disease burden. As of 2008, 87 percent of these priority municipalities have at least one SS+ TB patient in DOT. The greatest challenge for Brazil is not only to extend the coverage of the DOTS strategy to 100 percent of priority municipalities, but to also include more SS+ pulmonary patients in DOT during their entire treatment course in order to reach WHO's treatment success rate target of 85 percent.

USAID Approach and Key Activities

USAID is working with Brazil's National TB Control Program (NTCP), the Pan American Health Organization (PAHO), and Management Sciences for Health (MSH) to combat Brazil's TB epidemic. USAID is strategically focused on the states of Rio de Janeiro and São Paulo because they contribute more than 40 percent of new TB cases every year and because co-infection with HIV runs as high as 25 percent in some major cities in these two states. Moreover, because the threat of drug resistance is increasing in these areas due to immigration, detection and treatment must be both timely and complete. A primary goal of USAID's strategy in Brazil is to increase the number of SS+ patients in DOT throughout the whole course of treatment. In fiscal year 2008, USAID funds for TB programming in Brazil totaled \$3.2 million. USAID support includes the following activities:

- Enhancing monitoring and evaluation capacity through support to the TB information and registry system
- Supporting efforts to integrate TB into basic health care units and introducing the use of community-based DOTS
- Expanding and improving the management information system for MDR-TB
- Strengthening laboratory services and training at the National Public Health Laboratory and for TB Reference Laboratory managers in quality testing and new technologies for identifying MDR-TB
- Increasing the availability of drugs for TB treatment and improving re-treatment drug regimens

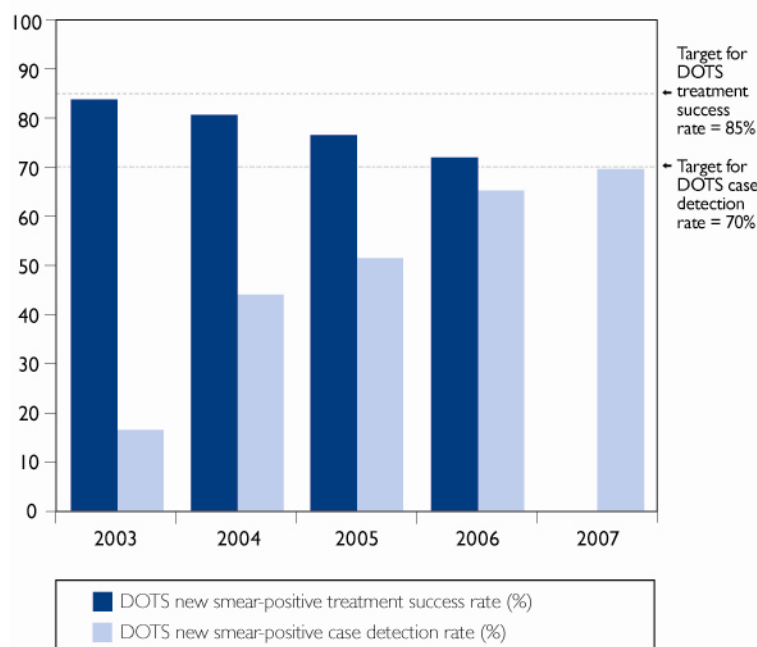
- Adjusting the development of fixed-drug combination products to include ethambutol as a fourth drug for the first-line treatment regimen
- Aiding information, education, and communication activities
- Supporting an innovative border partnership between Brazil and Peru that focuses on preventing and treating communicable and vector-borne diseases such as TB, malaria, and HIV/AIDS
- Introducing DOT in four large HIV/AIDS clinics – two in Rio de Janeiro State and two in the city of São Paulo – and expanding culture capacity at these clinics by implementing drug susceptibility testing at initial diagnosis to address challenges of HIV-associated TB and MDR-TB

USAID Program Achievements

USAID has worked closely with the MOH at the national, state, and municipal levels, as well as the PAHO, the U.S. CDC, and MSH. USAID initially worked with the Tuberculosis Coalition for Technical Assistance to accelerate DOTS expansion and now supports the Tuberculosis Control Assistance Program (TB CAP). When USAID's program to expand DOTS began, only 7 percent of Brazilians had access to health services that provided DOT. Now, 87 percent of Brazil's 315 priority municipalities are offering directly observed treatment. USAID support has contributed to the following achievements:

- Trained more than 32,000 health professionals at all levels of the health care system
- Increased the national pulmonary SS+ case detection rate in DOTS services from 8 percent in 2002 to 55 percent in 2006 through support for training in TB microscopy and quality control and management of information systems
- Expanded DOTS in USAID target areas, which increased the percentage of SS+ patients receiving DOT from 0 to 73 percent in newly implemented municipalities
- Provided mobilization and training activities in an additional 20 priority municipalities, which increased the percentage of health centers providing DOT from 32 to 81
- Increased access to DOT through primary health care services using family health and community outreach workers in poor communities
- Increased the number of MDR-TB treatment centers using a drug management information system from 63 in 2004 to 122 in 2007
- Reduced sputum smear examination turnaround time for outpatients and emergency room patients in project areas
- Provided intensive training in sputum smear microscopy in three municipalities, which led to a correct diagnosis rate of 95 percent

Case Detection and Treatment Success Rates Under DOTS



Note: DOTS treatment success rate for 2007 will be reported in WHO Report 2010.
Source: Global Tuberculosis Control WHO Report 2009

- Ensured the use of the TB registry at the health service level and accurate reporting to the national health information system, resulting in an increase in known treatment outcomes
- Supported the use of a management tool for state laboratory quality control and a laboratory commodity management information system to be used in the TB drug quality testing program
- Developed a joint NTCP-National HIV/AIDS Coordination Committee action plan that includes measures for testing TB patients for HIV infection and screening HIV/AIDS patients for TB
- Assisted the Brazilian National Tuberculosis Reference Laboratory in evaluating the currently used drug regimen for TB treatment failures
- Leveraged \$12 million in air time from major television networks to raise public awareness

Partnerships

Partnerships are an important element in combating TB in Brazil. USAID works with the state and municipal health secretariats of Rio de Janeiro and São Paulo, TB CAP, and MSH. The TB CAP members are the KNCV Tuberculosis Foundation, WHO/PAHO, the U.S. CDC, the International Union Against Tuberculosis and Lung Disease, and the American Thoracic Society. The Damien Foundation helped provide training, supervision, equipment, and supported information, education, and communication activities in 2008. The Brazilian Stop Tuberculosis Partnership formed in 2004 has supported social mobilization efforts for TB control. The Professor Hélio Fraga National Reference Laboratory and the Brazilian Society of Pneumology and Respiratory Medicine also have key technical roles. In May 2007, Brazil received the first parcel of funding, \$8.8 million, from the Global Fund to Fight AIDS, Tuberculosis and Malaria, part of a \$27 million grant for DOTS expansion in the 11 metropolitan areas with the greatest disease burden.

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