Hanging in the Balance
the Global Fight against Tuberculosis

| BY CHRISSELLA SAGERS |

In the age of the war against infectious diseases, the battle against tuberculosis (TB) is beginning to show signs of victory. The World Health Organization (WHO) reported in October that rates of infection and mortality from the airborne bacterial infection have been decreasing since 2006. According to the WHO’s 2011 Global Tuberculosis Control Report, the number of people with TB dropped from a peak of nine million in 2005 to 8.8 million in 2010, the lowest level in a decade; meanwhile, deaths fell to 1.4 million in 2010 from 1.8 million in 2003.

However, this great news, they cautioned, means we are at the most dangerous point in the battle against TB.

“We tend, when we make an advance in [fighting] an infectious disease...to think that we’re making progress, and we can turn our attention to something else,” said Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases.

A confluence of budget crunches and the false perception that we may be able to ease up on the fight against TB may result in a decrease in aid, education programs, diagnostic and treatment tools, and attention diverted from the world’s second most deadly infectious disease.

The growing incidence of TB cases worldwide was declared to be a global health emergency by the WHO in 1993. In 2000, all 193 countries of the United Nations committed to decreasing the rate of TB when they signed the Millennium Development Goals (MDGs). However, cases of TB continued to rise, especially in High Burden Countries, until 2006 when the WHO initiated its Stop TB Strategy. The program’s goals were to reduce the prevalence and mortality rates of TB to 50 percent of their 1990 levels by 2015, and to reduce the global incidence of active TB cases to less than 1 per 1 million people per year by 2050.

TB has plagued humans for hundreds of years, attacking the most vulnerable and often the poorest segments of society. However, much of the progress made in recent years against the spread of TB has only been because of its deadly relationship with HIV. Globally, a full one-third of HIV positive individuals are also infected with TB. In 2010, 1.1 million HIV positive patients were also infected with new cases of TB. Of these new cases, 82 percent were in Africa, where the rate of test for co-infection hovered only around 59 percent; only 40 percent of co-infected patients are undergoing antiretroviral treatment.

Research and development for TB has a somewhat jealous attitude toward HIV research, because the attention that the HIV’s 30 years of existence has garnered is perceived as taking away resources to fight TB. What Dr. Fauci politely calls the “relative imbalance of resources”—experts are hopeful that TB donor funding will reach $0.6 billion in 2012, while HIV funding will likely reach an excess of $6.9 billion—underlies a drastic problem: cases of TB are only dropping in absolute terms because the incidence of HIV is also dropping, and TB research is operating under the scientific principles of another century.

The most common TB diagnostic tool—called a sputum smear microscopy—was developed 100 years ago; the anti-TB drugs on the market were developed in the 1940s and 1950s. The advances in molecular biology, DNA, and drug technology that we take for granted today are not being widely applied to TB research. Because funding levels are only one-third of the amount
needed to reach any breakthrough research, there simply is not enough funding.

One of the most dangerous results of this lack of new developments is the rise of multi-drug resistant tuberculosis (MDR TB), which results from a bacteria strain that does not respond to standard treatment.

While scientists are sure they have found new, effective treatments for this strain of TB, the medication is costly: treating a patient for MDR TB costs a total $22,000 per patient. Comparatively, the cost of latent or normal cases of TB is only about $78 for a course of first-line drugs.

Dr. Mario Raviglione, Director of WHO’s Stop TB Department, predicts there will be a $200 million gap between available funds and the total cost of effectively treating MDR TB. The most vulnerable areas will not be able to properly test for—and alone treat—MDR TB cases, and its incidence levels could rise sharply. As funding shortfalls increase with budget cuts on the horizon for global aid projects, there may be more stories headlines of MDR TB cases reaching crisis levels, as they did at the end of last November in Papua New Guinea.

“The promise of testing more people for MDR TB must be met now with a commitment to treat all of those who are diagnosed,” said Dr. Raviglione at a press conference discussing the details of WHO’s 2011 Global Tuberculosis Control report. “In fact, it would be a real scandal if we left people diagnosed with MDR TB without drugs, without treatment.”

Katherine Floyd, coordinator of TB monitoring and evaluation for WHO’s Stop TB Department, said, “If the fight against TB [were] fully funded in the next four years in line with the Stop TB Partnership’s Global Plan...about 30 million people with TB would have been successfully treated between 2011 and 2015, and there would be much better diagnosis and treatment of MDR-TB and much better treatment for TB patients co-infected with HIV.”

As governments struggle to make up the shortfall from lost global NGO aid, the cost of treatment is increasingly coming out of the patient’s pocket, or the patient is going untreated. WHO experts are expecting $1 billion shortfall in funding for TB programs in 2012, putting in serious jeopardy the chance to eliminate TB as a leading cause of death globally.