

"TB Anywhere is TB Everywhere."

*In the global fight to stop tuberculosis,
emergent strains require urgent attention.*

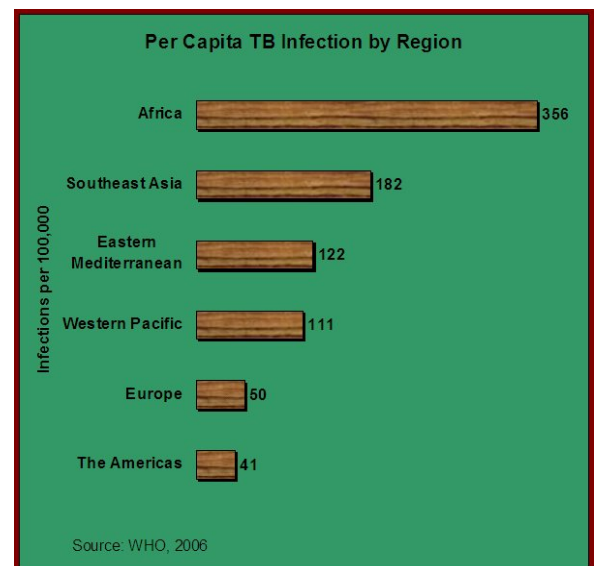
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It begins with a cough, fever ensues, night sweats, weight loss. The cough persists, and months later you begin to cough up blood. As the bacteria leave the lungs, infection spreads to the lymph nodes, the liver, the brain, and finally, if left untreated, death. More than 2 billion people across the globe are infected with the bacteria that cause tuberculosis – almost one in every three people. That's scary. Fortunately, due to the bacteria's tendency to stay dormant, most of these cases show no symptoms and have almost zero risk of death. For this reason, and the fact that vaccines and medicines are readily available for Americans, there were fewer than a thousand TB-related deaths in the United States last year. Compared to the 1.7 million deaths caused by TB each year, it would seem that Americans have little reason to worry.

But tuberculosis has quickly become something that Western countries need to be concerned with, and for more than altruistic reasons. In the past few months, clusters of extensively drug resistant tuberculosis (XDR-TB) have cropped up in China, Russia, and South Africa – points of contact to the western world. XDR-TB is treatable, but the patients require expensive treatment and hospital stays lasting many months. In South Africa, where more than 300 hundred cases have been identified, over half of the patients died within a few weeks. Because acquiring XDR-TB is tantamount to a death sentence, one hundred patients recently fled a South African hospital when a group of XDR-TB patients were admitted.

What causes these new strains of TB? Basically, anti-TB drugs have been mismanaged in so many cases that new drug-resistant strains, known as multi-drug resistant TB (MDR-TB) have emerged. Because MDR-TB is resistant to the two basic anti-TB drugs, treatment involves a lengthy course of expensive and toxic second-line drugs. Due to the difficulties of administering and insuring completion of TB treatment in the

hardest-hit regions of the world, MDR-TB has evolved into the even more drug-resistant version, XDR-TB, which has popped up in several countries over the past year. It only costs \$20 to treat a patient with common TB, while treating XDR-TB can cost between \$800 and \$10,000. The cost of treating XDR-TB is one example of the consequences of failing to address these emerging strains.



In the past we've seen emerging diseases take an economic toll on every level of society. Although short-lived, SARS caused a panic that threatened to destabilize the entire regional

economy of the affected area. Disease also has an economic toll at the micro level. One consequence of the AIDS epidemics in sub-Saharan Africa has been that children are often removed from schools and put to work when their parents fall ill. This is one way that AIDS has pushed some of the poorest regions of the world into a generational cycle of illness and poverty. Given the high prevalence of TB, the probability of it having a similar economic impact as it continues to spread is high. And while global AIDS programs are heavily under-funded, Tuberculosis has received even less attention. In the past six State of the Union addresses, President Bush has never mentioned fighting tuberculosis and its deadly drug-resistant strains.

Nevertheless, efforts are under way to stop the disease. The Global Plan to Stop TB is a plan set forth by the Stop TB Partnership to meet the UN Millennium Goal of halting the spread of TB by 2015. The Plan calls for an additional \$56 billion dollars in funding over the ten years between 2006 and 2015.

Founded in 2002, the Global Fund to Fight AIDS, TB, and Malaria (GFATM) has served as the primary mechanism for raising and distributing these funds. It is an independent organization that works closely with multinational organizations,

national governments, and private donors to insure that funds are being dispensed to regions according to need. The Fund has managed to raise nearly 7 billion dollars since 2002, and through its fund raising efforts, contributions have risen each year. However, funding must increase *three fold* in order to implement the Global.

The largest contributors to the Fund have been governments in Europe and North America. The US alone has given over \$1.8 billion. This is a strong start, but unless these contributions increase to meet the requests of the Global Plan, the largest economic burden will fall on the governments of the most heavily hit countries. These are some of the poorest countries in the world to begin with, and the economic toll of massive TB infections, combined with the costs of combating the illness will only serve to slow development and keeps people in poverty.

The theme of this World TB Day (March 24th) is “TB Anywhere is TB Everywhere.” Our best chance to stop TB everywhere is to insure that the Global Plan to Stop TB is funded and implemented. While some may argue that implementing the Plan is too costly, the rise of drug-resistant strains of TB and expensive treatments they require mean that we can't afford not to. □

The Roosevelt Institution Center on Health Care at the University of Michigan, 3/7/2007

For more information about current efforts to halt the spread of TB and events for World TB Day, visit the following sites:

- [The Stop TB Partnership](#)
- [The Global Fund to Fight AIDS, TB, and Malaria](#)
- [WHO](#)
- [Partners in Health](#)
- [Bill & Melinda Gates Foundation](#)
- [Roosevelt Institution Center on Health Care at U. of M.](#)