

## XDR TB (Extreme Drug-Resistant Tuberculosis)

The World Health Organization (WHO) recently issued a warning that deadly new strains of tuberculosis appear to be spreading around the globe.<sup>1</sup> An analysis by the United Nations organization found that new strains, known as **extreme drug-resistant tuberculosis**(XDR TB) have been found in every continent.<sup>1</sup> The worldwide emergence of XDR TB was first reported in November 2005.<sup>2</sup> The WHO convened an Emergency Global Task Force on **XDR TB** in 2006, which revised XDR's definition to specify resistance to at least isoniazid and rifampin among first-line anti-TB drugs, resistance to any fluoroquinolone, and resistance to at least one second-line injectable drug (amikacin, capreomycin, or kanamycin).<sup>3</sup>

The biggest areas of XDR TB strains are in Asia and the former Soviet Union.<sup>1</sup> About two percent of all tuberculosis cases are XDR.<sup>1</sup> The drug-resistant strains, which are virtually untreatable, have killed people in the United States, Eastern Europe, and Africa. HIV sufferers are particularly vulnerable because of their weakened immune systems. In people with a compromised immune system, such as HIV-positive people, XDR TB is fatal in about 25 days.<sup>4</sup>

Extreme drug resistance is caused by poor TB control, through taking the wrong types of drugs for the incorrect duration. XDR TB spreads like regular TB, by droplets. Anyone who coughs, sneezes, sings or shouts into the air produces droplets that float in the air and can be inhaled by anyone in the area. The cost for a single round of drugs to treat XDR TB can be \$10,000.<sup>1</sup> To prevent spread of XDR TB, renewed vigilance is needed through drug-susceptibility testing, case reporting, specialized care, infection control, and expanded capacity for outbreak detection and response. To ensure proper action is taken worldwide to limit the spread of XDR TB the World Health Organization convened a Global XDR TB Task Force devoted to this public health threat.<sup>3</sup>

<sup>1</sup> "A Deadly Combination: TB and AIDS by Karla Adam; Newsweek Sept 2006 <http://www.msnbc.msn.com>

<sup>2</sup> Shah NS, Wright A, Drobniewski F, et al .Extreme drug resistance inTB9XDR-TB) Int J Tuberc Lung Dis 2005;9(suppl 1);S77

<sup>3</sup> CDC. Revised definition of extensively drug-resistant tuberculosis MMWR 2006; 55:1176

<sup>4</sup> "XDR TB" by Peter Macinnis, 2006 <http://www.Greypath.com>