

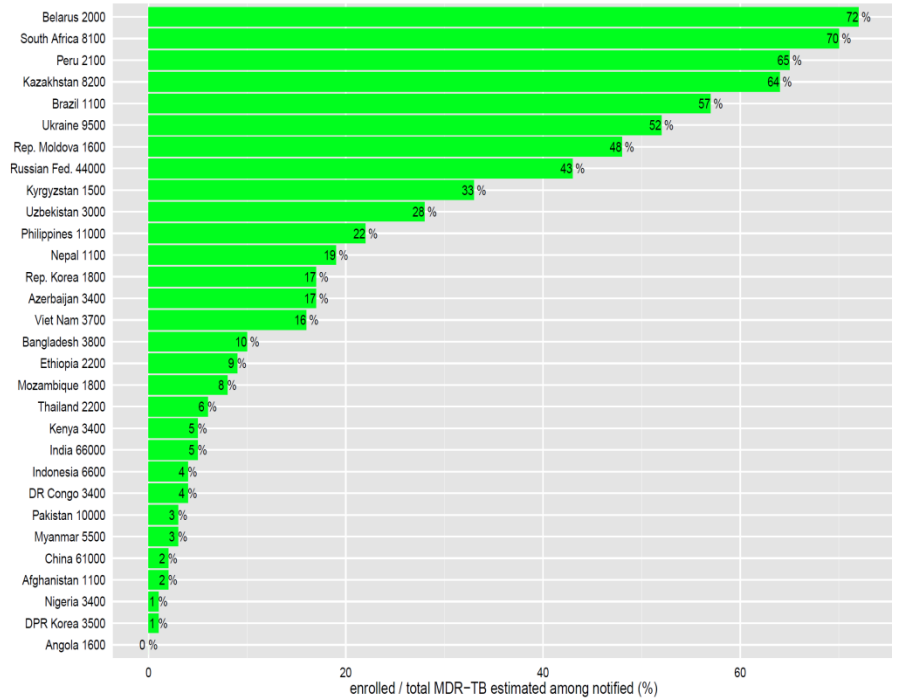


# Multidrug-resistant tuberculosis (MDR-TB) 2013 Update

## Key findings:

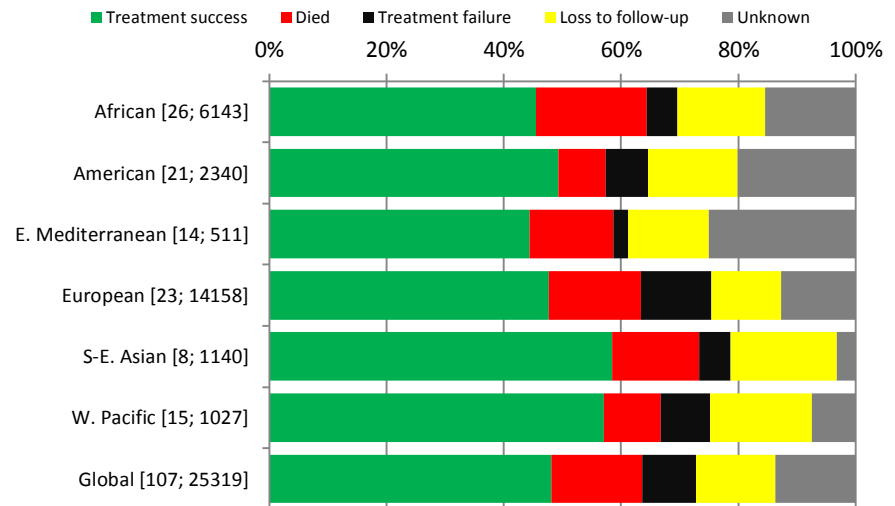
- **Proportion of TB cases with drug-resistance:** about 3.7% of new tuberculosis (TB) patients in the world have multidrug-resistant strains (MDR-TB). Levels are much higher in those previously treated – about 20%. The frequency of MDR-TB varies substantially between countries. About 9% of MDR-TB cases also have resistance to two other classes of drugs, or extensively drug-resistant TB (XDR-TB). By March 2013, 84 countries had reported at least one XDR-TB case.
- **MDR-TB case-loads:** WHO estimates that there were about 0.5 million new MDR-TB cases in the world in 2011. About 60% of these cases occurred in Brazil, China, India, the Russian Federation and South Africa alone (“BRICS” countries).
- **Detection & diagnosis:** of MDR-TB patients is increasing given the availability of rapid diagnostics. The Xpert MTB/RIF assay has been rolled out in 77 countries in 2012, while the EXPAND-TB<sup>1</sup> project has reported about 25,000 cases from 24 countries in 2012.
- **One in five** of the estimated MDR-TB cases among pulmonary TB patients notified in the world in 2011 were reported to have been enrolled on treatment (from about 1 in 9 in 2009). In certain high burden countries, the proportion was much higher (upper graphic).
- **Treatment Success:** 48% of patients with MDR-TB enrolled on treatment in 2009 were reported to have been successfully treated (lower graphic).

## Percentage of estimated MDR-TB cases enrolled on treatment in 2011



Showing countries with >1000 estimated MDR-TB cases among pulmonary TB patients notified in 2011. The estimate of MDR-TB cases is shown beside the country names.

## Treatment outcomes for MDR-TB patients started on treatment in 2009, by WHO Region and Global



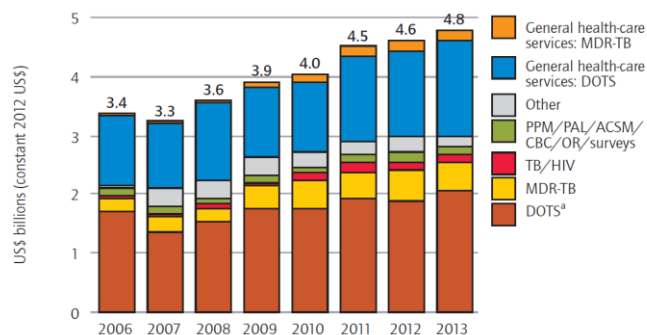
The number of countries reporting outcomes for at least one MDR-TB case, followed by the total cases with outcome results, shown beside each bar.

<sup>1</sup>EXPAND-TB is a project to accelerate access to diagnostics for patients at risk of multidrug-resistant tuberculosis in 27 countries. (see [www.who.int/tb/publications/factsheet\\_expand\\_tb.pdf](http://www.who.int/tb/publications/factsheet_expand_tb.pdf))

## FUNDING FOR MDR-TB

In 2015, it is estimated that USD 2 billion will be required for the diagnosis and treatment of MDR-TB. Funding available for MDR-TB has increased from USD 0.5 billion in 2009 to USD 0.6 billion in 2011 in countries with data (representing 75% of estimated MDR-TB cases in the world). Costs for second-line drugs alone amount to USD 0.3 billion a year.

**Funding for TB care and control in 104 countries reporting 94% of global cases, by line item, 2006-2013**

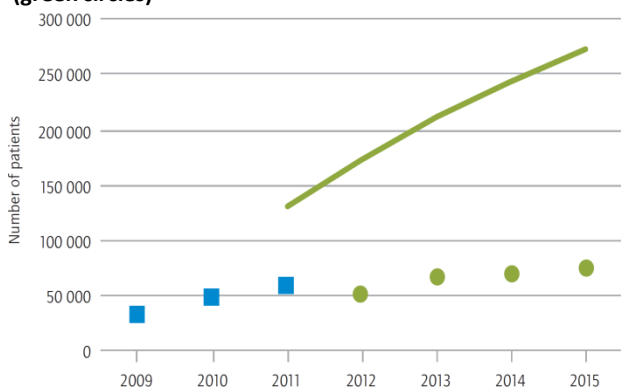


<sup>a</sup> DOTS includes funding available for first-line drugs, NTP staff, programme management and supervision, and laboratory equipment and supplies.

## THE GLOBAL RESPONSE TO MDR-TB AND XDR-TB

In 2009, a World Health Assembly resolution urged WHO Member States *"to achieve universal access to diagnosis and treatment of MDR-TB and XDR-TB"*

**Enrolment on MDR-TB treatment (blue squares, 2009–2011), compared with the targets in the Global Plan to Stop TB, 2011–2015 (green line) and projections provided by countries (green circles)**



The Stop TB Partnership Global Plan estimates that between 2011 and 2015 about one million MDR-TB patients will need to be detected and placed on treatment. This Plan also aims that by 2015 at least 75% of MDR-TB patients will be treated successfully. In 2011, about 18% of cases were placed on treatment and the 75% treatment success target was achieved by 30 countries (MDR cases starting treatment in 2009).

## WHAT ARE MDR-TB & XDR-TB ?

- TB organisms resistant to the antibiotics used in its treatment are widespread and occur in all countries surveyed. Drug resistance emerges as a result of inadequate treatment and once TB organisms acquire resistance they can spread from person to person in the same way as drug-sensitive TB.
- **Multidrug-resistant TB (MDR-TB)** is caused by organisms that are resistant to the most effective anti-TB drugs (isoniazid and rifampicin). MDR-TB results from either infection with organisms which are already drug-resistant or may develop in the course of a patient's treatment.
- **Extensively drug-resistant TB (XDR-TB)** is a form of TB caused by organisms that are resistant to isoniazid and rifampicin (i.e. MDR-TB) as well as any fluoroquinolone and any of the second-line anti-TB injectable drugs (amikacin, kanamycin or capreomycin).
- These forms of TB do not respond to the standard six month treatment with first-line anti-TB drugs and can take two years or more to treat with drugs that are less potent, more toxic and much more expensive.