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# Executive Summary

The World Health Organization (WHO) *Global Tuberculosis Report 2012* provides the latest information and analysis about the tuberculosis (TB) epidemic and progress in TB care and control at global, regional and country levels. It is based primarily on data reported by WHO's Member States in annual rounds of global TB data collection. In 2012, 182 Member States and a total of 204 countries and territories that collectively have more than 99% of the world's TB cases reported data.

## Key findings

- **Progress towards global targets for reductions in TB cases and deaths continues.** The Millennium Development Goal (MDG) target to halt and reverse the TB epidemic by 2015 has already been achieved. New cases of TB have been falling for several years and fell at a rate of 2.2% between 2010 and 2011. The TB mortality rate has decreased 41% since 1990 and the world is on track to achieve the global target of a 50% reduction by 2015. Mortality and incidence rates are also falling in all of WHO's six regions and in most of the 22 high-burden countries that account for over 80% of the world's TB cases. At country level, Cambodia demonstrates what can be achieved in a low-income and high-burden country: new data show a 45% decrease in TB prevalence since 2002.
- **However, the global burden of TB remains enormous.** In 2011, there were an estimated 8.7 million new cases of TB (13% co-infected with HIV) and 1.4 million people died from TB, including almost one million deaths among HIV-negative individuals and 430 000 among people who were HIV-positive. TB is one of the top killers of women, with 300 000 deaths among HIV-negative women and 200 000 deaths among HIV-positive women in 2011. Global progress also conceals regional variations: the African and European regions are not on track to halve 1990 levels of mortality by 2015.
- **Access to TB care has expanded substantially** since the mid-1990s, when WHO launched a new global TB strategy and began systematically monitoring progress. Between 1995 and 2011, 51 million people were successfully treated for TB in countries that had adopted the WHO strategy, saving 20 million lives.
- **Progress in responding to multidrug-resistant TB (MDR-TB) remains slow.** While the number of cases of MDR-TB notified in the 27 high MDR-TB burden countries is increasing and reached almost 60 000 worldwide in 2011, this is only one in five (19%) of the notified TB patients estimated to have MDR-TB. In the two countries with the largest number of cases, India and China, the figure is less than one in ten; scale-up is expected in these countries in the next three years.
- **There has been further progress in implementing collaborative TB/HIV activities** (first recommended by WHO in 2004). These saved an estimated 1.3 million lives between 2005 and the end of 2011. In 2011, 69% of TB patients were tested for HIV in the African Region, up from 3% in 2004. Globally, 48% of the TB patients known to be living with HIV in 2011 were started on antiretroviral therapy (ART); coverage needs to double to meet WHO's recommendation that all TB patients living with HIV are promptly started on ART. Kenya and Rwanda are top performers in HIV testing and provision of ART.
- **Innovations in diagnostics are being implemented.** The roll-out of Xpert MTB/RIF, a rapid molecular test that can diagnose TB and rifampicin resistance within 100 minutes, has been impressive. Between its endorsement by WHO in December 2010 and the end of June 2012, 1.1 million tests had been purchased by 67 low- and middle-income countries; South Africa (37% of purchased tests) is the leading adopter. A 41% price reduction (from US\$ 16.86 to US\$ 9.98) in August 2012 should accelerate uptake.
- **The development of new drugs and new vaccines is also progressing.** New or re-purposed TB drugs and novel TB regimens to treat drug-sensitive or drug-resistant TB are advancing in clinical trials and regulatory review. Eleven vaccines to prevent TB are moving through development stages.
- **There are critical funding gaps for TB care and control.** Between 2013 and 2015 up to US\$ 8 billion per year is needed in low- and middle-income countries, with a funding gap of up to US\$ 3 billion per year. International donor funding is especially critical to sustain recent gains and make further progress in 35 low-income countries (25 in Africa), where donors provide more than 60% of current funding.
- **There are also critical funding gaps for research and development.** US\$ 2 billion per year is needed; the funding gap was US\$ 1.4 billion in 2010.

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## Additional highlights by topic

### Burden of disease

Geographically, the burden of TB is highest in Asia and Africa. India and China together account for almost 40% of the world's TB cases. About 60% of cases are in the South-East Asia and Western Pacific regions. The African Region has 24% of the world's cases, and the highest rates of cases and deaths per capita.

Worldwide, 3.7% of new cases and 20% of previously treated cases were estimated to have MDR-TB.

India, China, the Russian Federation and South Africa have almost 60% of the world's cases of MDR-TB. The highest proportions of TB patients with MDR-TB are in eastern Europe and central Asia.

Almost 80% of TB cases among people living with HIV reside in Africa.

Estimating the burden of TB in children (aged less than 15) is difficult; estimates are included in the report for the first time. There were an estimated 0.5 million cases and 64 000 deaths among children in 2011.

### Case notifications and treatment success

In 2011, 5.8 million newly diagnosed cases were notified to national TB control programmes (NTPs) and reported to WHO, up from 3.4 million in 1995 but still only two-thirds of the estimated total of 8.7 million people who fell ill with TB in 2011.

Notifications of TB cases have stagnated in recent years. New policy measures, including mandatory case notification by all care providers via an electronic web-based system in India, could have a global impact on the number of TB cases notified in future years. Intensified efforts by NTPs to engage the full range of care providers using public-private mix (PPM) initiatives are also important; in most of the 21 countries that provided data, 10–40% of notifications were from non-NTP care providers.

Globally, treatment success rates have been maintained at high levels for several years. In 2010 (the latest year for which treatment outcome data are available), the treatment success rate among all newly-diagnosed cases was 85% and 87% among patients with smear-positive pulmonary TB (the most infectious cases).

### Responding to drug-resistant TB

Measurement of drug resistance has improved considerably. Data are available for 135 countries worldwide (70% of WHO's 194 Member States) and by the end of 2012 will be available from all 36 countries with a high burden of TB or MDR-TB.

Extensively drug-resistant TB, or XDR-TB, has been reported by 84 countries; the average proportion of MDR-TB cases with XDR-TB is 9.0%.

The target treatment success rate of 75% or higher for patients with MDR-TB was reached by only 30 of 107 countries that reported treatment outcomes.

### Scaling up TB-HIV collaboration

Globally, 40% of TB patients had a documented HIV test result and 79% of those living with HIV were provided with co-trimoxazole preventive therapy in 2011.

Interventions to detect TB promptly and to prevent TB among people living with HIV, that are usually the responsibility of HIV programmes and general primary health-care services, include regular screening for TB and isoniazid preventive therapy (IPT) for those without active TB. The number of people in HIV care who were screened for TB increased 39% (2.3 million to 3.2 million) between 2010 and 2011. Nearly half a million people without active TB were provided with IPT, more than double the number started in 2010 and mostly the result of progress in South Africa.

### Research and development to accelerate progress

Research to develop a point-of-care diagnostic test for TB and MDR-TB continues, and other diagnostic tests are in the pipeline.

Today, standard treatment for TB patients lasts six months and the regimen for most patients with drug-resistant TB takes 20 months. Treatment for MDR-TB is costly and can have serious side-effects. Of the 10 anti-TB drugs in clinical trials, two new drugs are being evaluated to boost the effectiveness of MDR-TB regimens. A novel regimen that could be used to treat both drug-sensitive TB and MDR-TB and shorten treatment duration has shown encouraging results in clinical trials.

There is no effective vaccine to prevent TB in adults. Progress in the past decade means that it is possible that at least one new vaccine could be licensed by 2020.

### Financing for TB care and control

About US\$ 1 billion per year of international donor funding is needed for TB care and control (excluding TB/HIV interventions) in low and middle-income countries from 2013 to 2015, double existing levels. Up to an additional US\$ 1 billion per year is needed for TB/HIV interventions, mostly for ART for HIV-positive TB patients.

National contributions provide the bulk of financing for TB care and control in Brazil, the Russian Federation, India, China and South Africa (BRICS). However, they remain insufficient for scaling up the diagnosis and treatment of MDR-TB; BRICS account for about 60% of the world's estimated cases of MDR-TB.

The Global Fund provides almost 90% of international donor funding for TB.