

DRUG-RESISTANT TUBERCULOSIS: Worth the investment

Why Drug-Resistant Tuberculosis?

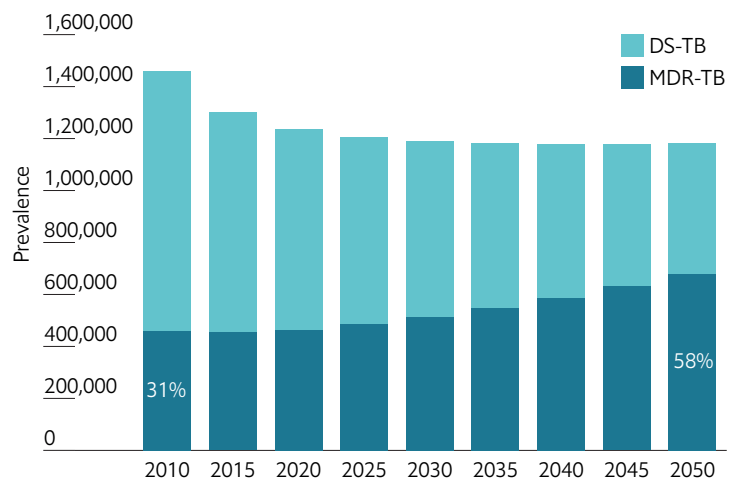
Drug-resistant tuberculosis (DR-TB) is a major global public health problem. In 2017, the WHO estimated that 558,000 people developed TB which was resistant to the most effective first-line TB drug (rifampicin), and there were 230,000 associated deaths. **DR-TB is more expensive and difficult to treat than drug-sensitive TB (DS-TB), and threatens progress made in combatting TB.**

The UN High Level Meeting on TB this year represents an **unprecedented opportunity to galvanise action** to defeat this disease. In this context, the Economist Intelligence Unit (EIU) is conducting a research and engagement programme looking at DR-TB specifically: **its impact on people and economies, the case for investment in ending it, and new ideas on how to achieve this.**

The DR-TB problem is growing...

In high incidence countries, data suggests that the burden of multidrug-resistant (MDR) TB is either increasing faster or decreasing more slowly than overall TB burden. (WHO 2018)

MDR-TB is predicted to overtake DS-TB in China by 2050 (Mehra 2013)



“The reason it is serious is because it is transmissible from human to human. If we don’t tackle it now what’s going to happen (and models have shown this) is that over time the proportion of DR-TB keeps increasing, and it becomes more and more difficult and more and more expensive to treat.”

Dr Soumya Swaminathan, Deputy Director-General for Programmes, WHO

...and has economic repercussions...

Up to 22 million households in India alone could incur **catastrophic costs** related to TB in 2016-2035. (Verguet 2017)

Treating a case of MDR-TB can be **8-25x more expensive** than treating a case of DS-TB. (Marks 2016)

The lowest income countries could **lose 2.45% of their Gross Domestic Product** by 2050 due to MDR-TB. (TB Europe Coalition 2015)

In the next 35 years, MDR-TB will cost the global economy **\$16.7 trillion**. (UK Parliamentary Group on Global TB 2015)

...as well as threatening global health security.

DR-TB is the world’s only major **airborne drug-resistant epidemic**. (TB Europe Coalition 2015)

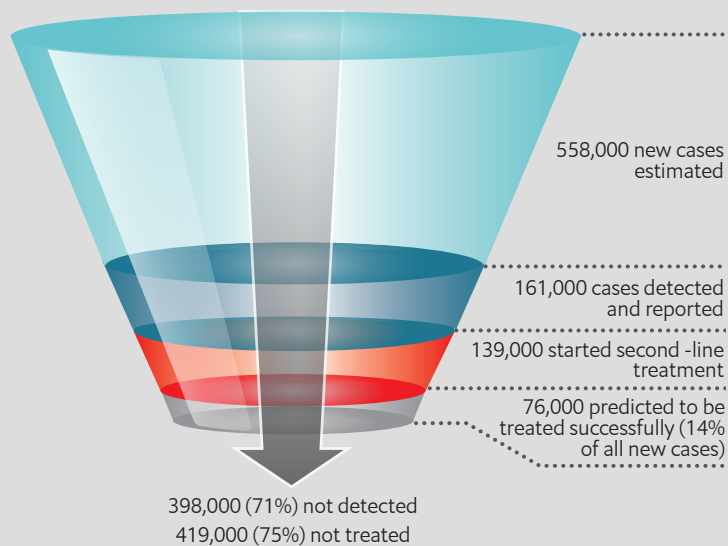
DR-TB is ranked in the US as a **serious threat**, the highest hazard category. (US CDC 2013)

MDR-TB **could kill about 75 million people by 2050** if current trends continue. (UK Parliamentary Group on Global TB 2015)

Over a year, each untreated person can spread the disease to 10-15 others. (WHO 2018)

More needs to be done: the time to act is now.

In 2017, only a fraction of DR-TB cases were detected and treated (WHO 2018)



From 2016 to 2020, an estimated **US \$58 billion is needed for implementing TB programmes globally**, to reach 90% of people who need TB treatment, and achieve at least 90% treatment success (the targets for the Global Plan to End TB 2015). Another **US \$9 billion is needed for R&D** to develop new tools.

By 2030, these investments could result in:

- 8.4 million fewer TB cases
- 1.4 million fewer TB deaths
- US \$181 billion in productivity gains
- US \$5.3 billion reduction in TB treatment costs.

(Stop TB Partnership 2015)

The Stop TB Partnership has estimated that if sufficient investment is made to achieve their Global Plan targets by 2025 this would give a return on investment (ROI) of \$530 billion overall, or \$27 per dollar invested. If this investment is accelerated, and targets are achieved by 2020, this could achieve an ROI of \$1.2 trillion, or **\$85 for every dollar invested**.

(Stop TB Partnership 2015)

“One in two TB patients who could be easily saved is dying today, in 2018, because of missed or late diagnosis, missed treatment, not getting the right drugs on time, or not getting the support they need to complete TB treatment. This is just absolutely unacceptable. ***This is the lowest hanging fruit anyone can hope to find in global health.***”

Professor Madhukar Pai, Director, McGill International TB Centre

It has been estimated that, among the Sustainable Development Goals, **the benefit-to-cost ratio of investing** in appropriate case finding and treatment for TB, including dealing with MDR-TB, is **“excellent”**. Investment in reducing TB incidence by 90% and deaths by 95% was estimated to provide \$43 of social and economic benefits for every dollar spent. (Copenhagen Consensus Centre 2015)

What the EIU is doing to invigorate the fight against DR-TB

Over the coming months, the EIU is taking on DR-TB with an independent research program that explores the burden, economic impact, health security implications, and other key issues:



Phase 1: Review of literature, data analysis, and expert interviews to capture existing knowledge.



Phase 2: Global advisory board of key stakeholders to stimulate dialogue and capture new ideas.



Phase 3: A final report that captures the economic case for tackling DR-TB and charts a path forward for elimination.

To register your interest email us at drugresistantTB@eiu.com

References

1. WHO. Tuberculosis Report. 2018.
2. Mehra M et al. Int J Tuberc Lung Dis 2013; 17(9): 1186-1194.
3. Verguet S et al. Lancet Glob Health 2017; 5(11): e1123-e1132.
4. Marks SM et al. Int J Tuberc Lung Dis 2016; 20(4): 435-441.
5. UK All-Party Parliamentary Group on Global TB. The Price of a Pandemic: Counting the cost of MDR-TB. 2015.
6. WHO. Tuberculosis key facts. 2018
7. TB Europe Coalition. Tuberculosis – the cornerstone of the AMR threat. 2015.
8. US CDC. Antibiotic resistance threats in the United States. 2013.
9. Stop TB Partnership. Global Plan to End TB. 2015.
10. Copenhagen Consensus Centre. The smartest targets for the world 2016-2030. 2015.