

# Time to Switch Off the TB



**Soumya Swaminathan**

People mistakenly believe tuberculosis (TB) to be a disease of the past. But if we look closer, we will find that people suffering from TB are part of our personal, professional and social networks. It is a scenario in which very few are left untouched or unaffected in India.

About one-third of the world's population and about half of India's adult population has latent TB. This means people have been infected by the bacteria but are not (yet) ill with the disease and cannot transmit it.

TB is spread via aerosol infection. The bacilli enter the body through the lungs, usually establishing a pulmonary infection that can flare up much later when the conditions are right. If left untreated, a person with active disease can infect up to 15 people simply by coughing or sneezing.

The BCG (Bacillus Calmette-Guérin) vaccine provides protection against severe TB disease in infants. But it is ineffective against adolescent and adult pulmonary TB. Only one in 10 Indians infected will develop TB disease in their lifetime. But this risk is much higher at a very young and old age and when the immune system is weak.

India accounts for 18% of the world's population and 27% of the global TB burden. So, 2.8 million of the 10.4 million new TB cases in 2016 occurred in India, according to the WHO Global TB Report, which revised and raised its global estimates in 2016 using improved surveillance data. Deaths due to TB stood at 480,000 in 2015. This, despite the government providing free diagnosis and treatment services. Around nine million people were screened for TB and 1.4 million patients were put on treatment by GoI in 2015.

The problem is further exacerbated by the emergence of multi-drug-resistant TB (MDR-TB). India is estimated to have the highest number of MDR-TB and second-highest number of HIV-co-infected TB patients. Growing drug resistance is slowing cure rates.

The MDR-TB treatment success rate globally was an abysmal 52% in 2013. About 2.5% of all new TB cases in India are resistant to rifampicin, or to both rifampicin and isoniazid, the two most commonly used anti-TB drugs. In end-2015, India had 79,000 cases of MDR-TB, 11% more than in 2014.

Worldwide, the rate of decline in TB incidence remained at only 1.5% in 2014-15. However, to achieve the Sustainable Development Goals (SDGs) and End-TB strategy targets, India needs to have a decline in TB incidence by about 15-20% a year. For this, we need better tools that incorporate the latest scientific breakthroughs.

The key immediate priorities we must pursue are:

- ▶ Introduce newer rapid diagnostics and point-of-care tests for TB.
- ▶ Introduce new drugs with shorter, simpler and more effective drug combinations, especially for MDR-TB.
- ▶ Introduce newer vaccines.
- ▶ Test and scale-up innovative implementation models to improve patient

outcomes and reduce the economic burden of TB.

- ▶ Strengthen ICT-based programme management and surveillance.
- ▶ Increase awareness and engage communities to reduce stigma.

Energised by the recent successes with polio and maternal and neonatal tetanus elimination, India has agreed to fast-track TB elimination. There is strong political commitment to tackle TB head-on and finance minister Arun Jaitley, while presenting Budget 2017, spoke of the government's action plan to eliminate TB by 2025.

The groundwork is being laid out as GoI is gearing up to implement a well-defined national strategic plan to eliminate TB. Partnership forms a key pillar of this strategy. To ramp up India's response to TB elimination, the India TB Research and Development Corporation has been formed to align all efforts in TB care and prevention. It is a coalition of diverse stakeholders, who will adopt and implement a fresh approach to TB elimination.

The Industrial Toxicology Research Centre has already formed strong partnerships with the ministry of health and family welfare, the department of biotechnology, the department of science and technology, the Council of Scientific and Industrial Research, corporate foundations and several national and international organisations.

The science to treat TB is available. What's required is a new approach of working with strong and diverse partners. Partners bring in a diversity of thought, an eclectic mix of ideas that can change our whole approach to TB.

Areas that need strengthening are private sector engagement, use of technology and mobile health, patient support and incentives, strong advocacy, communication and community outreach. TB presents a tough social and scientific challenge. We must join hands to eliminate the menace.



FILE PHOTO

**Don't spare the rods**

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