

India's plan to eliminate tuberculosis by 2025: converting rhetoric into reality

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The Government of India announced its plan to eliminate tuberculosis (TB) by 2025 during the Union Budget address last month.¹ The declaration is extraordinarily ambitious, considering that India accounts for 27% of the world's 10.4 million new TB cases, and 29% of the 1.8 million TB deaths globally.² India also accounts for 16% of the estimated 480 000 new cases of multidrug-resistant TB. The End TB Strategy by WHO aims to end the global TB epidemic, with targets to reduce TB deaths by 95% and to cut new cases by 90% by 2035.³

While high-level political commitment is welcome and necessary, the real question now is how India can go from rhetoric to real progress? We offer some suggestions that might help bridge the gap between ambition and reality.

First and foremost, India needs to give priority to and begin investing in health. For decades, governmental expenditure on health has been one of the lowest in the world at 1.4% of the GDP (but even lower in the previous years).⁴ While the 2017 Union Budget has allocated additional funding for health, the allocation will substantially fall short of the 2.5% of the GDP that has been considered a realistic goal in the draft National Health Policy 2015.⁵

The budget for India's Revised National TB Control Program (RNTCP) also needs to see an increase. Despite being a highly cost-effective programme, RNTCP has struggled to receive funding that is commensurate with the scale of India's epidemic.⁶ There was anticipation of a tripling of the budget for the period 2012–2017, but this did not happen.

In February 2017, the RNTCP published a draft of a new National Strategic Plan (NSP) for TB Elimination 2017–2025.⁷ It is expected that the cost of implementing the new NSP will be nearly US\$2.5 billion, a significant increase over the 2012–2017 NSP budget. In the 2017 Union Budget, there is some indication that TB will get a higher

allocation, but a recent analysis suggests that, after adjusting for purchasing power parity, the funds available for RNTCP could be even lower, at a time when the new NSP aims for TB elimination by 2025.⁸

India must start to seriously tackle key determinants of TB, especially poverty, undernutrition and tobacco smoking, which have been clearly linked with TB and mortality due to TB.^{9–11} This will require intersectoral collaboration between multiple ministries, agencies and civil society. There is also significant opportunity for inclusion of TB in social protection programmes, which can focus on prevention as well as protect patients from impoverishment.

Additionally, India must address the major gaps that have already been identified in the TB cascade of care in the public system.¹² About half million TB patients reach public health facilities but are either not successfully diagnosed, or not started on treatment.¹² To address these gaps, RNTCP will need to modernise its TB standard of care and control system.¹³ India relies heavily on antiquated approaches, including smear microscopy, intermittent drug regimens and paper-based reporting. In order to improve this system, India needs to scale-up rapid molecular diagnostics such as Xpert MTB/RIF (Cepheid, California), make drug-susceptibility testing (DST) more widely accessible and switch to daily drug regimens, combined with tools for adherence support.¹³ In fact, in January 2017, responding to activist petitions, the Indian Supreme Court ordered the RNTCP to switch from intermittent therapy to an internationally accepted daily regimen.¹⁴

India's TB control programme must begin to recognise the role of the private sector and start engaging with it more meaningfully. Enormous quantities of anti-TB drugs are used in the private sector, underscoring their importance and scale.¹⁵ Although implementation of the RNTCP resulted in an increase in patients seeking care in public facilities,

several patients still initially seek care in the private and/or informal sector or get bounced between the private and public sectors. Studies show complicated, long care-seeking pathways, widespread empirical management and poor quality of care.^{16–18} India is conducting pilot projects with Private Provider Interface Agencies in Mehsana, Mumbai and Patna and have shown that notifications from the private sector can be dramatically increased, with improvements in quality and patient outcomes.¹⁹ Lessons from these projects can be used to develop a comprehensive plan to engage with the private sector to improve quality of care and better regulate this sector. At the very least, the government should ensure that private providers fulfil their requirement to notify all TB cases to the RNTCP.

Furthermore, India must invest in research and surveillance. Research will need to focus on development and/or validation of new tools, including rapid point of care diagnostics, new TB drugs and vaccines. Surveillance will require periodic prevalence surveys, nationwide TB drug-resistance surveillance (as part of a more comprehensive antimicrobial resistance surveillance programme), improved public health informatics, better tracking of TB deaths and implementation science to identify and treat missing TB patients. The creation of the India TB Research and Development Corporation, in November 2016, is a promising step forward, but it will require partnerships as well as sustainable funding to succeed.²⁰

TB advocacy and patient groups in India need to be more active and empowered,²¹ and the RNTCP needs to engage further with civil society. Pressure from civil society and patient groups can help keep the spotlight on TB and help the Ministry of Health garner more resources. Advocacy will also help tackle stigma, delayed care seeking and other barriers that patients face.

In conclusion, India's plan to eliminate TB by 2025 demonstrates much needed ambition and intent. We call on the Government of India to ensure that the declaration is followed through by ensuring adequate funding and implementation support to execute the new NSP for 2017–2025.

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REFERENCES

1. Kumar S. Winners and losers in India's science budget. *Science* 2017. <http://www.sciencemag.org/news/2017/02/winners-and-losers-india-s-science-budget> (accessed 14 Feb 2017).
2. World Health Organization. *Global Tuberculosis Report 2016*. Geneva: WHO, 2016:1–192.
3. Uplekar M, Weil D, Lonnroth K, *et al*. WHO's new end TB strategy. *Lancet* 2015;385:1799–801.
4. The Lancet. Health in India, 2017. *Lancet* 2017;389:127.
5. Ministry of Health and Family Welfare. National Health Policy 2015 (draft). In: India Go. New Delhi, India: Government of India, 2015. <http://www.mohfw.nic.in/showfile.php?lid=3014> (accessed 14 Feb 2017).
6. Babu R, Sagili K, Jacob A, *et al*. Resource optimisation for tuberculosis elimination in India. *Econ Political Wkly* 2016;L1:26–7.
7. Central TB Division; Ministry of Health & Family Welfare; Government of India. National Strategic Plan for Tuberculosis Elimination 2017–2025 (draft). In: Program RNTCP. New Delhi, India: RNTCP, 2017. <http://tbcindia.gov.in/WriteReadData/NSP%20Draft%2020.02.2017%201.pdf> (accessed 27 Feb 2017).
8. Mohan P. Rs 10,290 Cr boost for health hides funding cuts for key programmes. *IndiaSpend* 2017. <http://www.indiaspend.com/cover-story/rs-10290-cr-boost-for-health-hides-funding-cuts-for-key-programmes-33876> (accessed 27 Feb 2017).
9. Bhargava A, Benedetti A, Oxlade O, *et al*. Undernutrition and the incidence of tuberculosis in India: national and subnational estimates of the population-attributable fraction related to undernutrition. *Natl Med J India* 2014;27:128–33.
10. Jha P, Jacob B, Gajalakshmi V, *et al*. A nationally representative case-control study of smoking and death in India. *N Engl J Med* 2008;358:1137–47.
11. Oxlade O, Murray M. Tuberculosis and poverty: why are the poor at greater risk in India? *PLoS One* 2012;7:e47533.
12. Subbaraman R, Nathavitharana RR, Satyanarayana S, *et al*. The tuberculosis cascade of care in India's public sector: recent estimates and gaps in knowledge. *PLoS Med* 2016;13:e1002149.
13. Pai M. The end TB strategy: India can blaze the trail. *Indian J Med Res* 2015;141:259–62.
14. SC asks govt to provide daily drug doses to TB patients. *Indian Express* 2017. <http://indianexpress.com/article/india/sc-asks-govt-to-provide-daily-drug-doses-to-tb-patients-4488068> (accessed 16 Feb 2017).
15. Arinaminpathy N, Batra D, Khaparde S, *et al*. The number of privately treated tuberculosis cases in India: an estimation from drug sales data. *Lancet Infect Dis* 2016;16:1255–60.
16. Sreeramareddy CT, Qin ZZ, Satyanarayana S, *et al*. Delays in diagnosis and treatment of pulmonary tuberculosis in India: a systematic review. *Int J Tuberc Lung Dis* 2014;18:255–66.
17. Das J, Kwan A, Daniels B, *et al*. Use of standardised patients to assess quality of tuberculosis care: a pilot, cross-sectional study. *Lancet Infect Dis* 2015;15:1305–13.
18. McDowell A, Pai M. Treatment as diagnosis and diagnosis as treatment: empirical management of presumptive tuberculosis in India. *Int J Tuberc Lung Dis* 2016;20:536–43.
19. Pai M, Arinaminpathy N. *How can India overcome tuberculosis?* The BMJ Blogs. London, UK: The BMJ, 2016. <http://blogs.bmj.com/bmj/2016/10/03/how-can-india-overcome-tuberculosis/>.
20. Press Information Bureau; Government of India. *India takes a lead in TB research in a unique mission mode to End TB*. 2016. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=153473> (accessed 16 Feb 2017).
21. Chavan D. Fighting TB requires empowered patients. *BMJ* 2017;356:i6344. <https://doi.org/10.1136/bmj.i6344>.



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