



## Editorial

### Accelerating progress towards ending tuberculosis in India

“I believe that when a task is being done for 10 or 20 years without the expected results, then we should think about changing our approach”<sup>1</sup>. This was expressed by our Hon’ble Prime Minister while addressing the Delhi End TB Summit in 2018. Indeed, significant change is needed in the way health system sees the disease, in the way a person with the disease is seen by the society and in the way attention is being given to the disease, which kills more people than any other infectious disease<sup>2</sup> globally and in-country.

Following the clarion call by the Head of the nation to end TB by 2025, five years ahead of the Sustainable Development Goal (SDG) 3.3 and in response to appeal to State/Union Territories (UTs), 10 States/UTs have committed themselves to end TB by or even before 2025 and more will follow soon<sup>3</sup>. Private healthcare providers have a pivotal role to play in all health interventions in the country, and efforts to engage with the private providers have yielded substantial gains by employing a blended approach of collaborative and regulatory measures. While the gazette notification<sup>4</sup> gave strength to implementing ‘mandatory TB notification’ in the country on the one hand, interventions such as patient-provider support agency and incentives provided a platform for enabling a sustainable relationship with private providers for enhancing the quality of TB care.

In 2019, the country notified more than 2.4 million TB patients<sup>5</sup>, accounting for nearly 24 per cent of the estimated global TB burden. An innovative approach of measuring the coverage of TB services through monitoring anti-TB drug sales data, indicates a long road ahead for achieving universal coverage of TB care. A latest report on anti-TB drugs sales in private sector showed equal proportion of TB patients seeking

care from the private sector<sup>6</sup>. The TB programme has an opportunity to leverage interventions like *Pradhan Mantri Jan Arogya Yojana* (PMJAY) to become more cost-effective.

When Ms Venkatesan (a former TB patient and now a TB champion) concluded her remarks at the first UN High-Level Meeting on TB by saying: “I can’t hear you today, but I’ll make sure you hear me - loud and clear” to the world leaders<sup>7</sup>, it marked the dawn of the community-led response for TB in India. Involvement of the community in health care services has been an integral part of the health system in India ever since Accredited Social Health Activists (ASHAs) at every 1000 population were introduced under the National Health Mission (NHM)<sup>8</sup>. The TB programme has been engaging ASHA and other community volunteers as treatment supporters for ensuring treatment adherence of TB patients. Nearly 60 per cent of TB patients were supported through community treatment supporters<sup>9</sup>. Empowering people with TB and their communities through effective social mobilization, is now being implemented systematically in the TB programme. The contribution of community has been recognized as a cost-effective intervention to improve coverage of health services and deliver people-centric integrated care. These interventions need to be taken to scale for India to achieve TB-free status.

Undernutrition has been identified as one of the key drivers of the epidemic (35% population attributable factor)<sup>10</sup> and NIKSHAY *Poshan Yojana*, a supplementary nutrition support scheme has been implemented (with cash transfer of ₹500/- per month)<sup>9</sup>. Moreover, co-morbidities such as HIV, diabetes, lifestyle factors such as smoking and alcohol abuse, ill ventilated housing and indoor air pollution also play a

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significant role in the breakdown of infection to disease and transmission. While there has been some success in addressing the medical risk factors, addressing non-health factors has been challenging and therefore, a multifaceted and multi-sectoral approach to address the social determinants of health has been initiated<sup>11</sup>.

The Multi-sectoral Accountability Framework to Accelerate Progress to End TB by 2030 (MAF-TB)<sup>12</sup> would have to be executed. It is an essential framework for ensuring commitments lead to measurable progress towards ending TB. The essential components of the MAF-TB are: commitments, actions, monitoring and reporting, and review, where monitoring and reporting are used to track progress and outcomes towards fulfilling commitments, and review is used to assess results and recommend future actions. Moreover, all Members of Parliament need to lead the multi-sectoral response with accountability for creating TB-free *Panchayats*, TB-free blocks and TB-free constituencies. All stakeholders *viz.*, government, affected communities, civil society, donors and partners need to take urgent steps to ensure accountability for fulfilling commitments to end TB.

Currently available BCG (*Bacillus Calmette-Guérin*) vaccine does not provide complete protection though it prevents disseminated disease in the paediatric age group. While the quest for a new effective vaccine is key for the elimination goal, we need to fast track the uptake of new diagnostics and drugs/regimen. In the absence of an effective TB vaccine (both infection and disease) the existing strategy of TB preventive treatment among children and people living with HIV (PLHIV) needs to be scaled up and expanded to cover more risk groups including household and workplace contacts.

In response to the global call for promoting research in TB, India has created a unique mechanism in the form of a well-funded India TB Research Consortium<sup>13</sup>. The Consortium is supporting the research in the areas of epidemiology, diagnostics, treatment and vaccine development. This in-country mechanism is envisaged to assist the Programme in rapid and early adoption of new tools and technologies towards ending TB. So far, the Consortium in less than three years has delivered new indigenous diagnostic tool which has been endorsed by the World Health Organization. In addition, the Consortium is conducting a phase III trial for the new recombinant BCG vaccine.

Measurement is vital to track the progress and to understand variation in the disease distribution. A country-level estimate of TB is not sufficient for a country like India with significant variation in disease epidemiology (case notification ranging from 7 to 270 TB cases/yr). For the first time, the country received a sub-national TB disease estimate which was provided by the Indian Council of Medical Research (ICMR) in collaboration with International Health Metrics and Evaluation (IHME)<sup>14</sup>.

The country has moved from paper-based reporting to real-time online case-based reporting mechanism called NIKSHAY<sup>5,9</sup>. In addition to improved data for action, NIKSHAY also serves as a tool for routine surveillance and monitoring. For deeper insights on the disease distribution across geography and time, modern technologies of geo-spacing, data mining within the health system and artificial intelligence are required to be plugged-in to a vast data source of NIKSHAY to give back the Programme a measure of disease in a given geography, population and time on a continuous basis.

While all the above interventions will help the country to achieve the milestones and targets of SDGs, the goal of TB elimination is much more daunting as the infected pool of patients will remain in the community and likely to break down to disease at some point in their lifetime. Thus, the country will need continuous surveillance and constant vigil for any early sign of resurgence of disease and appropriate response thereof.

**Conflicts of Interest:** None.

**Kuldeep Singh Sachdeva**

Central TB Division, Nirman Bhavan,  
New Delhi 110 001, India  
drsachdevak@gmail.com

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## References

1. Ministry of Health & Family Welfare, Government of India. At the Delhi End TB Summit (Address by Prime Minister Narendra Modi). Available from: <http://www.stoptb.org/assets/documents/news/PM%20Modi%20speech%20on%2013%20March%202018%20in%20Vigyan%20Bhawan%20in%20Delhi.pdf>, accessed on February 17, 2019.
2. World Health Organization. *Global Tuberculosis Report 2019*. Licence: CC BY-NC-SA 3.0 IGO. Geneva: WHO; 2019.

3. Central TB Division. *State TB free strategy documents*. New Delhi: Ministry of Health & Family Welfare, Government of India. Available from: <https://tbcindia.gov.in/index1.php?lang=1&level=1&sublinkid=5216&lid=3351>, accessed on March 20, 2020.
4. The Gazette of India: Extraordinary. Available from: <http://egazette.nic.in/WriteReadData/2018/183924.pdf>, accessed on March 20, 2020.
5. Nikshay. *TB notification*. Available from: <https://reports.nikshay.in/>, accessed on February 17, 2020.
6. Arinaminpathy N, Batra D, Maheshwari N, Swaroop K, Sharma L, Sachdeva KS, *et al*. Tuberculosis treatment in the private healthcare sector in India: an analysis of recent trends and volumes using drug sales data. *BMC Infect Dis* 2019; 19 : 539.
7. India-West. TB survivor Nandita Venkateswar at UNGA: 'I can't hear you, but I'll make Sure You hear Me Loud and Clear. Available from: [https://www.indiawest.com/news/global\\_indian/tb-survivor-nandita-venkatesan-at-unga-i-can-t-hear/article\\_40f5e7e6-c753-11e8-9f27-57febabdc245.html?utm\\_medium](https://www.indiawest.com/news/global_indian/tb-survivor-nandita-venkatesan-at-unga-i-can-t-hear/article_40f5e7e6-c753-11e8-9f27-57febabdc245.html?utm_medium), accessed on February 17, 2019.
8. Centre for Development of Advanced Computing. *Accredited Social Health Activist (ASHA)*. Available from: <https://vikaspedia.in/health/nrhm/national-health-mission/initiatives-for-community-participation-under-nhm/accredited-social-health-activist-asha>, accessed on March 7, 2020.
9. Central TB Division. *India TB report 2019*. New Delhi: Ministry of Health & Family Welfare, Government of India; 2019. Available from: <https://tbcindia.gov.in/WriteReadData/India%20TB%20Report%202019.pdf>, accessed on March 20, 2020.
10. Bhargava A, Benedetti A, Oxlade O, Pai M, Menzies D. 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.
11. Nadda JP. India's leadership to end tuberculosis. *Lancet* 2019; 393 : 1270-2.
12. World Health Organization. *Multi-sectoral accountability framework to accelerate progress to end tuberculosis by 2030*. Geneva: WHO; 2019.
13. India TB Research Consortium, Indian Council of Medical Research. *About us, Vision*. Available from: <http://bmi.icmr.org.in/itrc/index.php>, accessed on March 5, 2020.
14. Indian Council of Medical Research, Public Health Foundation of India, and Institute for Health Metrics and Evaluation. *India: Health of the Nation's States*. Available from: [http://www.healthdata.org/sites/default/files/files/2017\\_India\\_State-Level\\_Disease\\_Burden\\_Initiative\\_-\\_Full\\_Report%5B1%5D.pdf](http://www.healthdata.org/sites/default/files/files/2017_India_State-Level_Disease_Burden_Initiative_-_Full_Report%5B1%5D.pdf), accessed on February 17, 2019.