

## Tuberculosis in India: Road to Elimination

Dear Editor,

India has the highest burden of both tuberculosis (TB) and multidrug-resistant (MDR) TB based on estimates reported in Global TB Report 2016.<sup>[1]</sup> Although the available data suggest that the TB epidemic may be on the decline, the absolute number of new cases is still the highest. India accounts for about 24% of the global prevalence, 23% of the global incident cases, and 21% of the global TB deaths.<sup>[2]</sup> Taking into consideration the magnitude of the disease burden, the Government of India has announced its plan to eliminate TB by 2025 during the Union Budget 2017–2018.

Indian Government launched National Tuberculosis Programme in 1962. However, the desired outcome could not be achieved. The program was reviewed, and then, Revised National TB Control Program (RNTCP) was launched in 1993 on a pilot basis. Yet by 1998, it covered only 2% of the population. By 2006, entire nation was covered by the RNTCP.<sup>[3]</sup> Although RNTCP has made great strides in the last decade, but it is still facing challenges for example microscopy is still the mainstay of diagnosis, the disease is distributed unevenly throughout the country which makes it difficult to achieve the goals.<sup>[4]</sup> Moreover, India has been in the news because of the international attention around the emergence of “totally drug-resistant” TB in Mumbai and the growing concern that routine TB control (i.e., the directly observed treatment, short-course strategy) may not be sufficient for reducing TB incidence in the country.<sup>[5]</sup>

Over the last National Strategic plan (NSP 2012–2017) period, significant gains were made. This includes mandatory notification of all TB cases, integration of the program with the general health services (National Health Mission), national drug resistance surveillance, and many more. However, more needs to be done to drastically reduce the TB incidence in India. The NSP 2017–2025 focuses on consolidating the achievements of previous NSP. The new National Strategic Plan (NSP) for TB elimination has incorporated certain new features like: Provision of digital X-ray preferably enabled with Computer Aided Diagnosis (CAD) and teleradiology services across the health sector, Universal Drug Susceptibility Testing (DST) to at least Rifampicin for all diagnosed TB patients through offer of Cartridge-based nucleic acid amplification test (CBNAAT), a sentinel surveillance system in the country with National TB Institute, Bangalore as the nodal centre and setting up sentinel centres at 10 sites with additional human resource and sequencing equipment and reagents, establishment of 2 additional National Reference Laboratory (NRLs) (West and North-East), National TB Policy and TB Bill, National

TB Elimination Board: An apex body to facilitate policy development, implementation etc.<sup>[4]</sup>

Other new developments in the new NSP documents include:

1. Contact investigation
  - a. All close contacts, especially household contacts, will be screened for TB using chest X-rays
  - b. In case of pediatric TB patients, reverse contact tracing for search of any active TB case in the household of the child must be undertaken.
2. Nutritional support to TB patients and families, financial incentives to patients and providers, health system strengthening, and linking patients with existing social and financial support systems of the government, etc
3. Addressing poverty, malnutrition, urbanization, and indoor air pollution.
4. To address gender and other equity issues, special efforts by engaging concerned departments and agencies will be prioritized
5. National Airborne Infection Control guideline will be implemented at high-risk centers
6. Patient-centered approach to treatment
7. Reducing the out-of-pocket expenditure for TB patients
8. Linking Pradhan Mantri Jan-Dhan Yojana, Aadhaar, and Nikshay for direct cash benefits to patients
9. Active case finding in prisoners, screening at entry to the prison
10. TB control in hilly and difficult terrains
11. Universal DST before initiation of treatment.<sup>[4]</sup>

While the plan is a positive development, TB control in India is at a critical juncture; there are certain untouched issues such as inability of sputum microscopy to detect drug resistance, inadequate notification by private sector, different epidemiology of the disease in different parts of the country, and drug resistance amplification, which might interfere with the goals. Success can be claimed in terms of decline in incidence and mortality rates, but many cases remain either undiagnosed or ineffectively treated. There are no clear guidelines regarding extrapulmonary TB, the notification rate has plateaued, and a number of people suffering with MDR and extensively drug resistant are rising. By the time, TB cases are initiated on treatment in the RNTCP, and they likely have already infected many others in the community.<sup>[6]</sup> Delays in diagnosis or ineffective treatment lead to ongoing transmission, facilitating the spread of the disease. Association of TB with other conditions such as diabetes, HIV, and tobacco use may further complicate the situation.

### Way Forward

Measures which can be considered to intensify the existing initiatives by the government are as follows:

- Government of India should declare TB as a public health emergency and combat it in a campaign mode
- Increase budgetary provisions (at present, it is only 3%) and launch a national TB campaign engaging ambassadors at regional level to increase visibility
- Rebrand RNTCP (name/logo/slogan) to minimize the stigmatization
- Engage diverse stakeholders, especially elected representatives and civil society, and establish intersectoral coordination
- Empower and engage TB community – TB patients must not be seen as passive recipients of care, and they should be made key stakeholders at all stages of planning, decision making, implementation, and monitoring.

Over 80% of people with TB first attend the private sector, yet there are no strict guidelines to regulate the private sector which may lead to further amplification of drug resistance. In the NSP 2017–2025, there is a provision of incentives for private providers to promote TB case notification and ensure treatment adherence and treatment completion. The incentives will be provided upon notification in the TB reporting software, i.e., Nikshay through a smooth and program integrated direct beneficiary transfer.

The incentives to the private sector TB care provider are as follows:

- Rs. 250/- on notification of a TB case diagnosed as per Standards for TB Care in India (STCI)
- Rs. 250/- on completion of every month of treatment
- Rs. 500/- on completion of entire course of TB treatment
- For notification and management of a drug-sensitive patient over 6–9 months as per STCI, a private provider will be eligible to receive Rs. 2750/-
- For notification and correct management of a drug-resistant case over 24 months as per STCI, a private provider will be eligible to receive Rs. 6750/-
- Services provided by the private sector will be reimbursed considering market rates of diagnostic tests and drugs.<sup>[4]</sup>

Thus, this initiative is expected to greatly increase affordability for private sector patients and improve the quality of TB care in the country. It is also important to ensure that private sector patients get adequate support with treatment adherence. Only then will the benefits of accurate diagnosis and treatment be fully realized.

These strategies and interventions of this NSP are in addition to the processes and activities already ongoing in the country. The NSP period 2017–2025 is a time of immense potential with the hopes of seeing new drugs, regimens, and diagnostics. Wider application of information and communication technology tools and health financing methodologies carry with it a promise for a stronger and

rapid response to the TB epidemic. The ultimate impact of this NSP will be seen in terms of improvements in the end TB efforts of India, thereby contributing to the health and well-being of its population.

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### Conflicts of interest

There are no conflicts of interest.

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