Source : www.thehindu.com Date : 2022-07-06

THE WAY TO CONTROL TUBERCULOSIS

Relevant for: Science & Technology | Topic: Biotechnology, Genetics & Health related developments

TB | Photo Credit: istock photo

Tuberculosis is the worst among endemic diseases, killing 1.5 million people every year (WHO). TB affects adults in their most productive years and therefore impoverishes the family and the nation. In India, the TB capital of the world, the disease kills some 1,400 persons every day. These are gross estimates, for our health management system has no method to count the exact numbers.

In the 1950s and ’60s, India was the global leader in research in epidemiology, transmission and domiciliary treatment of TB. The National TB Control Programme of 1962 was a district-based one with public-private participation. However, upscaling the model proved unsuccessful and the programme failed to control TB. With that we lost self-confidence and began doing what we were told to do by the WHO under the Revised National TB Control Programme (RNTCP). WHO experts, without factoring in the differences between the TB epidemiology of poor and rich countries, used a theoretical construct of TB control to design RNTCP. By 2018, India realised that light at the end of the tunnel was still elusive.

There are obvious flaws in the RNTCP. First, for a programme that is heavily funded by the government, there is no prescribed method of monitoring the trajectory of TB control. Contrast this with the National AIDS Control Programme. Before the National AIDS Control Organization was established, the Indian Council of Medical Research-managed AIDS Control Task Force had a unique method of monitoring the control trajectory, popularly called ‘sentinel surveillance’. Through it, we have data on infection prevalence that can be compared across years, starting from 1986 to date. There was pressure from WHO experts to abandon it, but credit must be given to Dr. Sriram P Tripathy, the then Director General of ICMR, for politely but firmly refusing to oblige.

Recently India confronted the WHO’s estimates on COVID-19 deaths in India. That the government could publicly stand up to WHO was a good sign. We must now boldly point out the flaws of the WHO-designed RNTCP and design our own comprehensive strategy.

Second, the assumption that treating pulmonary TB patients alone would control TB was epidemiologically fallacious in India. The theoretical principle is ‘source reduction’. If one patient is the proximate source of infection and disease to another in the community, early diagnosis and treatment would work as source reduction. India is a high-burden country. Large proportions of adults carry TB infection in the lung in a dormant condition for life (latent TB). Some among them deteriorate and develop overt TB disease (reactivation TB). HIV infection, diabetes, undernutrition, lung damage due to pollution, tobacco smoking, fall in immune functions due to chronic diseases, alcoholism, etc. accelerate reactivation TB.

Third, RNTCP has failed to elicit people’s partnership in TB control. In India’s AIDS Control Programme, public education was given high priority. Red ribbon clubs in schools and colleges are its legacy. Without people’s informed participation, stigma and delay in seeking help will continue.

Realising that TB was not under control, WHO called for another programme revision through a World Health Assembly Resolution in 2014 to eliminate TB by 2035. Emboldened by the promise of an effective strategy, the Prime Minister announced in 2018 that India would

eliminate TB by 2025.

Epidemiologically, human mastery over microbes includes control, elimination and eradication. Control refers to the reduction of disease burden through specific interventions to a pre-determined level in a pre-stated time period. Evidence will have to show that reduction was due to those interventions and not due to a ‘secular trend’. Diseases that have social determinants tend to decline over time with better housing, nutrition, education and income — this is what a ‘secular trend’ is. Globally, by this ‘secular trend’, the burden of TB had been falling by 1% or 1.5% per year.

Elimination refers to achieving zero frequency of new cases. As we have a huge backlog of latent TB, we cannot eliminate TB, but we must aim for a high level of control (lowering from 200 per lakh cases per year to 50 per lakh per year) and document it with measurement. That will do justice to the Prime Minister’s vision. High control is achievable as we have major assets by way of the RNTCP. Trained State and District TB officers are already on the job and we have an extensive network of TB clinics and an army of community and field workers. Once the deficiencies listed above are corrected, we can control TB.

T. Jacob John is Chairman, Rotary Club of Vellore TB Control Society, and Sushil Mathew John is Professor of Community Health, Christian Medical College, Vellore

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